



**COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS**
155 South 11th Street
El Centro, CA 92243
Phone: (442) 265-1818
Fax: (442) 265-1858

PROJECT MANUAL AND INVITATION FOR BID

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES
(BHS) EL CENTRO MENTAL HEALTH TRIAGE AND
ENGAGEMENT SERVICES EXPANSION LOCATED AT 202 N.
8TH STREET, EL CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)



Approved by: David Dale, P.E., P.L.S., Director of Public Works

David Dale 6/15/26
Signature Date

Contact person: Raul Carrasco, Senior CIP Project Technician

Pre-Bid Mandatory Conference Date: July 1st, 2026 at 9:00AM

Bid Opening Date: July 10, 2026, at 2:30PM

SPECIAL NOTICE

Pursuant to the requirements of Senate Bill 854 and California Labor Code section 1725.5, all contractors and subcontractors that wish to engage in public work through a public works contract must first register with the Department of Industrial Relation and pay all applicable fees.

Beginning March 1, 2015, no contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations, pursuant to Labor Code section 1725.5 (with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)).

Beginning April 1, 2015, no contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations, pursuant to Labor Code section 1725.5.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

For more information concerning Senate Bill 854 compliance, please visit: <http://www.dir.ca.gov/Public-Works/SB854.html>.

PUBLIC WORKS REFORMS (SB 854) FACT SHEET

Public works reforms (SB 854) were signed into law on June 20, 2014. The reforms made several significant changes to the administration and enforcement of prevailing wage requirements by the Department of Industrial Relations (DIR). Among other things, SB 854 established a public works contractor registration program to replace prior Compliance Monitoring Unit (CMU) and Labor Compliance Program (LCP) requirements for bond-funded and other specified public works projects. The fees collected through the program established by SB 854 are used to fund DIR's public works activities.

Essentials of public works contractor registration program:

- Contractors are subject to a registration and annual renewal fee set at \$400. This fee is non-refundable and applies to all contractors and subcontractors who intend to bid or perform work on public works projects (as defined under the Labor Code).
- Contractors apply and pay the fee online and must meet minimum qualifications to be registered as eligible to bid and work on public works projects:
 - Must have workers' compensation coverage for any employees and only use subcontractors who are registered public works contractors.
 - Must have Contractors State License Board license if applicable to trade.
 - Must not have any delinquent unpaid wage or penalty assessments owed to any employee or enforcement agency.
 - Must not be under federal or state debarment.
 - Must not be in prior violation of this registration requirement once it becomes effective. However, for the first violation in a 12-month period, a contractor may still qualify for registration by paying an additional penalty.
- The registration fee is not related to any project. It is more like a license that enables the registrant to bid on and perform public works.
- DIR provides a searchable database of registered contractors and subcontractors on its website, so that awarding bodies and contractors can comply with the requirement to only use registered contractors and subcontractors.
- Various protections are built in so that
 - A contractor won't be in violation for working on a private job that is later determined to be public work;
 - The inadvertent listing of an unregistered subcontractor on a bid doesn't necessarily invalidate that bid;
 - A contract with an unregistered contractor or subcontractor is subject to cancellation but is not void as to past work;
 - An unregistered contractor or subcontractor can be replaced with one who is registered;
 - A contractor whose registration lapses will have a 90-day grace period within which to pay a late fee and renew.
- Contractors and subcontractors register online. The preferred method of payment is by credit card.
- The requirement to list only registered contractors and subcontractors on bids became effective on March 1, 2015. The requirement to only use registered contractors and subcontractors on public works projects applies to all projects awarded on or after April 1, 2015.

Essentials of Public Works Enforcement Fund:

All contractor registration fees go into the State Public Works Enforcement Fund and are used to fund the following items:

- Administration of contractor registration requirement;
- All DIR costs for administering and enforcing public works laws;
- Labor Commissioner's enforcement of other Labor Code violations on monitored public works projects.

DIR no longer charges awarding bodies for prevailing wage compliance monitoring and enforcement on legacy CMU projects.

Related changes in DIR's administration and enforcement of public works requirements:

- Requirements to use CMU or specified alternative (labor compliance program or project labor agreement) for state bond-funded and other specified projects were eliminated and replaced by requirements that apply to *all* public works projects (as defined under the Labor Code).
- Awarding bodies are required to submit PWC-100 (contract award notice) for all public works projects.
- Contractors and subcontractors on *all* public works projects are required to submit certified payroll records (CPRs) to the Labor Commissioner unless excused from this requirement. -
 - CPRs are furnished to the Labor Commissioner online
 - This requirement phases in as follows:
 - Applied to public works projects that had been under CMU monitoring;
 - Applies to any new projects awarded on or after April 1, 2015;
 - May apply to other projects as determined by Labor Commissioner;
 - Applies to *all* public works projects, (except those listed under Exemptions just below), on and after January 1, 2016.
 - Exemptions: As of April 1, 2015, and even after January 1, 2016, the following projects are exempt from the requirement to have contractors and subcontractors furnish certified payroll records (CPRs) to the Labor Commissioner:

Small Project Exemption

Contractors who work exclusively on small public works projects are not required to register as a public works contractor or file electronic certified payroll reports for those projects. Contractors are still required to maintain certified payroll records on a continuous basis, and provide them to the Labor Commissioner's Office upon request. Additionally, awarding agencies are not required to submit the notice of contract award through DIR's PWC-100 system on projects that fall within the small project exemption. The small project exemption applies for all public works projects that do not exceed:

- \$25,000 for new construction, alteration, installation, demolition or repair
- \$15,000 for maintenance

Any projects monitored and enforced by the following legacy LCPs:

- California Department of Transportation (Caltrans)
- City of Los Angeles
- Los Angeles Unified School District
- County of Sacramento

Projects covered by qualifying project labor agreements, at the Labor Commissioner's discretion.

- Requirements for awarding bodies to adopt and enforce a DIR-approved LCP are now limited to: (1) ongoing public works projects awarded prior to January 1, 2012, that were under a pre-existing LCP requirement (see the four legacy LCPs listed above) and (2) projects funded in whole or in part by Proposition 84.

June 2017

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO
 MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED
 AT 202 N. 8TH STREET, EL CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)

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NOTICE TO CONTRACTOR CALLING FOR BIDS

NOTICE IS HEREBY GIVEN that the COUNTY OF IMPERIAL, California, acting by and through its Board of Supervisors (hereinafter referred to as "COUNTY"), will receive up to, but not later than **2:00pm on Friday, July 10, 2026**, sealed bids for the award of a contract for the proposed project:

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO
MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED
AT 202 N. 8TH STREET, EL CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)

The Contractor shall possess a **California Contractor's B – General Building Contractor License, EPA – Lead-Base Paint Abatement Certification** at the time this contract is awarded.

Project Description. Imperial County Behavioral Health Services (ICBHS) has occupied the building located at 202 N. 8th Street, El Centro since 2000. The first floor was originally dedicated for administrative offices and the west wing housed the Crisis Desk to admit and hold individuals placed on an involuntary hold. Over the years, with the need to expand services, staff who provided administrative services were relocated to other sites and additional clinical services were placed at this location. Despite staff relocations, this facility, built over two decades ago, no longer meets the structural needs to serve our community. ICBHS has made several efforts to remodel the facility, but the necessary changes have not been made due to high-cost estimates. On June 1, 2022, the California Department of Health Care Services, through its contractor Advocates for Human Potential, Inc. issued a Request for Applications (RFA) for the Behavioral Health Continuum Infrastructure Program Round 4: Children and Youth grant funds, pursuant to Welfare and Institutions Code Sections 5960 5960.45. The intent of this grant opportunity was to enhance infrastructure capacity. On June 31, 2022, ICBHS submitted a grant proposal for the remodel and rehabilitation of the Mental Health Triage Unit and on December 7, 2022, DHCS conditionally awarded Imperial County four million, eighty-five thousand, eight hundred sixteen dollars (\$4,085,816) for the proposed project.

The MHTES facility currently houses two essential programs: the Mental Health Triage Unit (MHTU) and Casa Serena. The intent is to relocate the Crisis Care Mobile Unit to this site to enhance the ICBHS Crisis Continuum of Care. The MHTU is a LantermanPetris-Short Act (LPS) outpatient designated facility for individuals placed on a 5150 hold, with 7 beds for adults and 2 beds for children/youth. The second program is Casa Serena, which offers an alternative to involuntary holds for individuals experiencing a psychiatric emergency by providing respite and therapeutic rooms where clinical staff provides crisis interventions and assists individuals with learning self-regulatory skills so they can cope and manage symptoms that led to the individual's crisis. The third program is the Crisis Care Mobile Units (CCMU), which deploys mobile teams to community locations to provide crisis interventions and prevent placement of individuals in involuntary holds and hospitalizations, when appropriate. Based on expansion of these services and programs, there is a need to increase the physical capacity within the MHTU to improve the service area and to create separate spaces for adults and children/youth. Re-designing the first floor of this building will foster safety in a least restrictive setting for children, youth and pregnant/postpartum women through a personalized approach that will promote recovery for individual during crisis and postcrisis phases. The rehabilitation is designed to

incorporate age appropriate spaces such as the children/youth multi-purpose room, restroom/shower facilities, and common area for staff to provide crisis interventions. Additionally, the common area will serve to provide additional services such as group and individual sessions, socialization, and rehabilitative activities to improve postcrisis outcomes. This project will also augment physical space for Casa Serena, increasing service capacity for children and youth.

ICBHS has worked with Sanders Inc. and staff from the Public Works Department to develop and approve the floor plan for this proposed project. Further detail concerning construction plans and technical specifications are attached as Exhibits to this Project Manual. This project consists of a mixed-development project to renovate and increase the square footage of the first floor of the ICHBS 3-story building located at 202 N.8th Street, El Centro, CA. The first floor currently consists of 5200 sq. ft. of dedicated office space, storage, and client rooms. The additional space will come from 1542 sq. ft. of currently enclosed area serving as a carport, drop-off zone, storage paddock and existing parking lot area.

Grant funds will be used to rehabilitate 5200 sq. ft. of existing clinic and storage space, adding service capacity to MHTU and Casa Serena, and creating additional office space to relocate the CCMU to this site. The renovations will consist of the following:

- i. Create a larger waiting area for clients by eliminating an existing office and include a break room for employees.
- ii. Expand to include four additional workstations for Casa Serena.
- iii. Renovation of the west wing for CCMU/MHTU to accommodate seven beds for adults and pregnant/postpartum women.
- iv. Create five additional office spaces for Program Supervisors, Behavioral Health Manager, Psychiatrist, and Behavioral Health Therapist.
- v. Create nine workstations for Mental Health Workers, Mental Health Rehabilitative Technicians/Specialists, and Community Services Workers.

Additionally, grant funds will be utilized to expand the overall clinical area by 1542 sq. ft. of which 991 sq. ft. will come from the current carport area and 551 sq. ft. from the parking lot area. The new proposed construction will consist of the following:

- i. Accommodate five new children/youth beds; one multi-purpose room; restroom/shower; temperature-controlled storage room; and a receiving area/waiting area.
- ii. Space for six workstations for Mental Health Workers, Mental Health Rehabilitative Technicians/Specialists, and Community Services Workers.
- iii. The new construction will provide an ADA access ramp and an enclosed emergency drop-off zone and client patio.

Estimated Cost. The estimated construction cost is **\$3,127,492.31**

Bids shall be received in the office of the Clerk of the Board of Supervisors, 940 Main Street, Suite 209, El Centro, California 92243, and shall be opened publicly and read aloud at the above stated time and place.

Each bid package must conform and be responsive to the contract documents, bid sets are available starting on **Wednesday, June 24, 2026** at the following <https://publicworks.imperialcounty.org/projects-out-to-bid/> "Projects out to bid" at no charge and at Public Works, 155 South Eleventh Street, El Centro, CA, 92243, Phone (442) 265-1818, Monday through Thursday 8:00 AM - 5:00 PM (PDT) for a hard copy set for a fee.

Those desiring to pick up bid sets shall call to reserve a copy of bid documents to ensure the availability.

A one hundred dollar (\$100) non-refundable fee for each hardcopy bid package set of the contract documents is required.

Only those firms who have purchased the bid documents will be mailed any addendums that may be issued for this project prior to the bid opening date.

Each bid shall be accompanied by the bid security referred to in this Project Manual and the list of proposed subcontractors in the form of a certified or cashier check or a bid bond for ten percent (10%) of the maximum bid amount being proposed.

In contracts involving expenditure in excess of ten thousand dollars (\$10,000), the successful bidder shall file a payment bond in a penal sum at least equal to the full contract value as awarded. The bond shall be approved by COUNTY and shall be in the form set forth in the contract documents. The successful bidder shall also file a performance bond in a penal sum at least equal to the full contract value as awarded.

A performance and payment bond must be filed for contracts involving expenditure in excess of twenty-five thousand dollars (\$25,000) and may be required for contracts involving smaller expenditures at the option of COUNTY.

Any potential bidder whom has been deemed ineligible to perform work on public works projects pursuant to Labor Code Sections 1777.1 or 1777.7 shall be prohibited from bidding on, being awarded a contract for, or performing work as a subcontractor on this project, or any other public works project within the state of California.

COUNTY reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding.

All information required by the bid forms must be completely and accurately provided. Numbers shall be stated in both words and figures where so indicated in the bid forms; conflicts between a number stated in words and in figures are governed by the words. Partially completed Bid Proposals, including bid forms with items left blank, or Bid Proposals submitted on other than the bid forms included herein are non-responsive and will be rejected. Bid Proposals not conforming to these instructions for bidders and the Notice to Contractors Calling for Bids may be deemed nonresponsive and rejected.

Pursuant to Section 20103.8 of the Public Contract Code, bids may include prices for items that may be added to, or deducted from, the applicable scope of work. If additive or deductive items are included in a bid, the bidder must clearly identify such items as additive or deductive, and explain: (i) why the addition or deduction of such items is recommended in light of the overall goals and requirements of the Project; and (ii) how the addition or deduction of such items will impact the value of the bidder's total base bid.

The lowest bid shall be the lowest bid price on the base contract without consideration of the prices on the additive or deductive items. A responsible bidder who submitted the lowest bid as defined by this section shall be awarded the contract, if it is awarded. Notwithstanding the foregoing, the COUNTY reserves the right to add or deduct from the contract any of the additive or deductive items after the lowest bid has been determined.

ENGINEER'S OPINION OF PROBABLE QUANTITY BASE BID

AL = Allowance
LF = Linear Foot

CF = Cubic Feet
LS = Lump Sump

CY = Cubic Yard
SF = Square Feet

EA = Each
TON = (2,000 lbs)

LBS = Pounds

ITEM No.	ITEM DESCRIPTION	UNIT	EST. QTY.
1.	Mobilization	LS	1
2.	Division 1 General Requirements	LS	1
3.	Division 2 Existing Conditions	LS	1
4.	Division 3 Concrete	LS	1
5.	Division 5 Metals	LS	1
6.	Division 6 Wood, Plastics, and Composites	LS	1
7.	Division 7 Thermal and Moisture Protection	LS	1
8.	Division 8 Openings	LS	1
9.	Division 9 Finishes	LS	1
10.	Division 10 Specialties	LS	1
11.	Division 21 Fire Suppression	LS	1
12.	Division 22 Plumbing	LS	1
13.	Division 23 Heating, Ventilating and Air Conditioning	LS	1
14.	Division 26 Electrical	LS	1
15.	Division 27 Communications	LS	1
16.	Division 28 Electronic Safety and Control	LS	1
17.	Division 32 Exterior Improvements	LS	1
18.	Lead Remediation	LS	1
19.	Time and Materials Allocation	LS	1
20.	Change Order Allocation	LS	1

Nothing in this section shall preclude the prequalification of subcontractors.

COUNTY hereby affirms and notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated on the grounds of race, sex, color, or national origin in consideration for an award.

Pursuant to section 1773 of the Labor Code, the general prevailing rate of wages in the County in which the work is to be done has been determined by the Director of the California Department of Industrial Relations and are on file and available from the Clerk of the Board of Supervisors located at the County Administration Center, 940 Main Street, El Centro, CA 92243.

The Director of Industrial Relations has determined the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the contract which will be awarded to the successful bidder.

Use the following internet access URL:

[Director's General Prevailing Wage Determinations \(ca.gov\)](#)

It shall be mandatory upon the Contractor to whom the contract is awarded, and upon any subcontractor under it, to pay not less than the said specified rates to all workers

employed by them in the execution of the contract. No bidder may withdraw their bid for a period of ninety (90) days after the date set for the opening of bids.

Bidders are advised that they may elect to substitute securities for any retention of funds by the County to ensure performance under the Contract. At the request and expense of Bidder, securities equivalent to the amount retained shall be deposited with the County, or with a state or federally chartered bank in this state as the escrow agent, who shall then return the securities to Bidder once the Project has been completed.

Alternatively, the Bidder may request, and the County shall make payment of retentions earned directly to the escrow agent at the expense of the Bidder. The Bidder, at its sole cost and expense, may direct the investment of the payments into securities, and the Bidder shall receive the interest earned on the investments. Once the Project has been completed, the Bidder shall receive from the escrow agent all securities, interest and payments received by the escrow agent from the County.

Securities eligible for investment include those listed in Cal Gov Code § 16430, 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 County and the Bidder. The Bidder shall be the beneficial owner of any securities substituted for retained funds and shall receive any interest thereon.

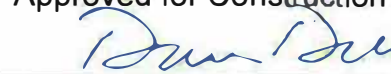
Substitution of securities shall be conducted through an Escrow Agreement substantially similar to that found in Cal Pub Contract Code § 22300(f).

PLEASE NOTE: Substitution of securities is prohibited where funding for the Project, in whole or in part, will be provided by the Farmers Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (7 U.S.C. Sec 1921 et seq.) or where otherwise disallowed by federal law.



Cynthia Medina.
Clerk of the Board of Supervisors

6-24-26
Date

Approved for Construction


David Dale, P.E., P.L.S.
Director of Public Works

6/24/26
Date

VICINITY MAP



IMPERIAL COUNTY
PUBLIC WORKS
DEPARTMENT
EL CENTRO, CA

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS)
EL CENTRO MENTAL HEALTH TRIAGE AND ENGAGEMENT
SERVICES EXPANSION LOCATED AT 202 N. 8TH STREET, EL
CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP - B4 236)

LOCATION MAP



IMPERIAL COUNTY
PUBLIC WORKS
DEPARTMENT
EL CENTRO, CA

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EL CENTRO MENTAL HEALTH TRIAGE AND ENGAGEMENT
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INFORMATION FOR BIDDERS

1. Preparation of Bid Form. COUNTY invites bids on the form attached to be submitted at such time and place as is stated in the form *Notice to Contractors Calling for Bids*. All blanks in the bid form must be appropriately completed, and all prices must be stated in both words and figures. All bids must be submitted in sealed envelopes bearing on the outside the name of the bidder, the bidder's address, and the name of the project for which the bid is submitted. It is the sole responsibility of the bidder to see that the bid is received by COUNTY prior to the date and time specified for opening bids. Any bid received after the scheduled closing time for receipt of bids will be returned to the bidder unopened.
2. Bid Security. Each bid shall be accompanied by a certified or cashier's check payable to COUNTY or a satisfactory bid bond in favor of COUNTY executed by the bidder as principal and a satisfactory surety company as surety, in an amount not less than ten percent (10%) of the maximum amount of the bid. The check or bid bond shall be given as guarantee that the bidder shall execute the contract if it be awarded to it in conformity with the contract documents and shall provide the surety bond or bonds as specified therein within ten (10) days after notification of the award of the contract to the bidder.
3. Signature. The bid must be signed in the name of the bidder and must bear the signature in longhand of the person or persons duly authorized to sign the bid.
4. Modifications. Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the contract documents may result in COUNTY's rejection of the bid as not being responsive to the invitation to bid. No oral or telephonic modification may be considered.

Any proposed modifications of a bidder's bid must be in writing and received by COUNTY prior to the date and time specified for opening bids.

5. Erasures. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction is suitably authenticated by affixing in the margin immediately opposite the correction and the surname, or surnames of the person or persons signing the bid.
6. Examination of Site and Contract Documents. Each bidder shall visit the site of the proposed work and fully acquaint itself with the conditions relating to the construction and labor so that it may fully understand the facilities, difficulties and restrictions attending the execution of the work under the contract. Bidders shall thoroughly examine and be familiar with the drawings and specifications. The failure or omission of any bidder to receive or examine any Contract Documents (which include this IFB, the General Conditions, and the Sample Agreement, the General Notes, the Construction Drawings, and any other Exhibits attached to this IFB), form, instrument, addendum or other document, or to visit the site and acquaint itself with conditions there existing, shall in no way relieve any bidder from obligations with

respect to its bid or to the contract. The submission of a bid shall be taken as *prima facie* evidence of compliance with this section.

7. Withdrawal of Bids. Any bidder may withdraw its bid either personally, by written request, or by telegraphic request confirmed in the manner specified above at any time prior to the scheduled closing time for receipt of bids.
8. Relief from Mistake in Bid. The attention of bidders is called to Public Contracts Code sections 5100 to 5104, particularly the requirements of section 5103 which requires that grounds for relief from a mistaken bid require written notice to the public entity within five (5) working days after the opening of the bids of mistake and such notice shall detail how the mistake occurred. Please note that a bidder shall not be relieved of its bid unless the elements of Public Contract Code section 5103 are met and the written consent of COUNTY is obtained and/or by order of a court of competent jurisdiction.
9. Agreements and Bonds. The agreement form which the successful bidder, as Contractor, will be required to execute, and the forms and amounts of the surety bonds which it will be required to furnish at the time of execution of the agreements, are included in the contract documents and should be carefully examined by the bidder. The required number of executed copies of the *Agreement*, the *Performance Bond*, and the *Payment Bond* for County Projects is as specified in the *Special Conditions*.
10. Interpretation of Plans and Documents. If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the drawings, specifications or other contract documents, or finds discrepancies in or omissions from the drawings and specifications, he or she shall submit to COUNTY a written request for an interpretation or correction thereof no less than ten (10) days prior to the bid opening. The person submitting the request will be responsible for its prompt delivery. Any interpretations or correction of the contract documents will be made only by addendum duly issued, and a copy of such addendum will be mailed or delivered to each person receiving a set of the contract documents. No oral interpretation of any provision in the contract documents will be made to any bidder. The interpretation of Plans and documents upon bid award shall be addressed in accordance with Article 2 of the "General Conditions."
11. Bidders Interested in More Than One Bid. No person, firm, or corporation shall be allowed to make, or file, or be interested in more than one bid for the same work unless alternate bids are specifically called for. A person, firm, or corporation that has submitted a sub-proposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders or make a prime proposal.
12. Award of Contract. COUNTY reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding. The award of the contract, if made by COUNTY, will be to the lowest responsible bidder therefore. Award of the contract may be on **July/August 2026** (tentative), and an Agreement shall be presented to the successful bidder at that time. A Sample Agreement is

included in this Project Manual for informational purposes only. COUNTY reserves the right to change or modify any terms or conditions set forth in the Sample Agreement or any Exhibits hereto prior to execution of an Agreement with the successful bidder. Successful bidder shall have ten (10) days to execute the Agreement and provide all payment and performance bonds required for this project. Please note that a posted tabulation may be a preliminary tabulation which has not been reviewed for responsiveness and responsibility. It is possible that the lowest bidder will not be awarded the contract because of non-responsiveness or non-responsibility.

13. Alternates. If alternate bids are called for, the contract may be awarded at the election of the governing board to the lowest responsible bidder on the base bid, or on the base bid and any alternate or combination of alternates.
14. Bidder Contact Information. The bidder shall submit complete name, address and phone listings, (including fax), and contact person at bidder's company, provide a complete list of all personnel, subcontractors, and other agencies that will be assigned to this project and the responsibility that each will have.
15. Listing Subcontractors. Each bidder shall submit with its sealed bid a list of the proposed subcontractors on this project as required by the Subletting and Subcontracting Fair Practices Act (Pub. Cont. Code, § 4100, et seq.). Forms for this purpose are furnished with the contract documents.
16. Substitution of Security. Contractors may substitute securities in place of retained funds withheld by COUNTY in accordance with the provisions of Cal. Pub. Contract Code Section 22300.
17. Contractor's Pre-Bid Conference.
 - 17.1. A Pre-Bid Conference will be held on the following date: **Wednesday, July 1st, 2026, at 9:00 AM** at:

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MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION
LOCATED AT 202 N. 8TH STREET, EL CENTRO, CA 92243
COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)**

Contact Persons: Raul Carrasco, Senior CIP Project Technician, Email:
raulcarrasco@co.imperial.ca.us and Carlos Garcia, Building Project Technician,
Email: carlosgarcia@co.imperial.ca.us
Telephone: (442) 265-1818

- 17.2. Attendance at the Pre-Bid Conference and Walkthrough is **MANDATORY**.
- 17.3. Before submitting a bid, ALL BIDDERS are required to examine the project site and fully inform themselves as to all existing site conditions and limitations. The bid proposal shall include the cost of all items necessary for the construction of the Project. Bidder shall not receive any additional compensation for costs resulting from conditions that Bidder could have

discovered with due diligence prior to submitting a bid.

17.4. In accordance with Paragraph 10 of the Information for Bidders, any questions to be presented at the Pre-Bid Conference must be in writing and received by COUNTY from General Contractor or subcontractor submitting a Bid on or before **Friday, July 3rd, 2026, at 4:00pm** in the Public Works office located at 155 South Eleventh Street, El Centro, California, 92243.

18. Calendar of Events.

	EVENT	DATE
1.	Bid packages available	Wednesday, June 24, 2026
2.	<u>MANDATORY</u> Pre-Bid Conference and Facility Walkthrough	Wednesday, July 1 st , 2026, at 9:00AM
3.	Return of Written Plans, Document Questions, and Substitution Requests. <u>Please be advised that Substitution Requests submitted after the due date may render this bid unresponsive.</u>	Friday, July 3 rd , 2026, at 4:00 PM
4.	Bid package, inclusive of completed bid forms, and bid bond required to be submitted hereunder must be received by COUNTY on or before at: Clerk of the Board 940 Main Street, Suite 209 El Centro, CA 92243 Phone: (760) 482- 4220	Friday, July 10, 2026, at 2:00 PM
5.	Bid Opening in Board Chambers	Friday, July 10, 2026, at 2:30 PM
6.	Board of Supervisors review and consideration of award on approximately	July/August 2026
7.	Execution of Contract	August 2026
8.	Commencement of construction on or before	Monday, August 31, 2026 (Tentative)
9.	Completion of construction on	Friday, April 23, 2027

BID FORM

1. Pursuant to and in compliance with your *IFB, Notice to Contractors Calling for Bids* and the other documents relating thereto, the undersigned bidder, having familiarized itself with the terms of the contract, the local conditions affecting the performance of the contract, and the cost of the work at the place where the work is to be done, and with the drawings and specifications and other contract documents, hereby proposes and agrees to perform, within the time stipulated by the contract, including all of its component parts and everything required to be performed, and to provide and furnish any and all of the labor, materials, tools, expendable equipment and all utility and transportation services necessary to perform the contract and complete it in a workmanlike manner, all of the work required in connection with the

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO
 MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED
 AT 202 N. 8TH STREET, EL CENTRO, CA 92243
 COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)**

All in strict conformity with the drawings and specifications and other contract documents, including addenda nos., _____, _____, _____, and _____, on file at the office of Public Works Facilities Management, for the total sum of _____ Dollars (\$_____), hereinafter called the *Base Bid Price*.

Warning - If an addendum or addenda have been issued by the Department and not noted above as being received by the bidder, this proposal may be rejected.

ENGINEER’S OPINION OF PROBABLE QUANTITY BASE BID

AL = Allowance CF = Cubic Feet CY = Cubic Yard EA = Each LB = Pounds
 LF = Linear Foot LS = Lump Sump SF = Square Feet TON = (2,000 lbs)

ITEM No.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL
1.	Mobilization	LS	1		
2.	Division 1 General Requirements	LS	1		
3.	Division 2 Existing Conditions	LS	1		
4.	Division 3 Concrete	LS	1		
5.	Division 5 Metals	LS	1		
6.	Division 6 Wood, Plastics, and Composites	LS	1		
7.	Division 7 Thermal and Moisture Protection	LS	1		
8.	Division 8 Openings	LS	1		
9.	Division 9 Finishes	LS	1		
10.	Division 10 Specialties	LS	1		

11.	Division 21 Fire Suppression	LS	1		
12.	Division 22 Plumbing	LS	1		
13.	Division 23 Heating, Ventilating and Air Conditioning	LS	1		
14.	Division 26 Electrical	LS	1		
15.	Division 27 Communications	LS	1		
16.	Division 28 Electronic Safety and Control	LS	1		
17.	Division 32 Exterior Improvements	LS	1		
18.	Lead Remediation	LS	1		
19.	Time and Materials Allocation	LS	1	\$312,749.23	\$312,749.23
20.	Change Order Allocation	LS	1	\$142,843.93	\$142,843.93

TOTAL BASE BID: \$ _____

Notes:

- *The amount entered as the “Total Base Bid” should be identical to the Base Bid amount entered in Section 1 of the Bid Proposal form.*
 - *For **Lead Remediation report**, please refer to Exhibit VI **POSITIVE XRF SUMMARY REPORT** by Allstate Services Lead Report dated 3/28/2018.*
2. It is understood that COUNTY reserves the right to reject this bid and that this bid shall remain open and not be withdrawn for the period specified in the Notice to Contractors Calling for Bids.
 3. The required bid security is hereto attached.
 4. The required list of proposed subcontractors is attached hereto.
 5. It is understood and agreed that if written notice of the acceptance of this bid is emailed, mailed or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to COUNTY a contract in the form attached hereto in accordance with the bid as accepted, and that it will also furnish and deliver to COUNTY the Performance Bond and Payment Bond for the Public Works as specified, all within ten (10) days after receipt of notification of award, and that the work under the contract shall be commenced by the undersigned bidder, if awarded the Contractor, on the date to be stated in COUNTY’s Notice to Contractors to Proceed, and shall be completed by the Contractor in the time specified in the contract documents.
 6. Notice of acceptance or requests for additional information should be addressed to the undersigned at the address identified in Paragraph 8 below.
 7. Print/type the names of all persons interested in the foregoing proposal as principals in the space provided below:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if bidder or other interested person is an individual, state first and last names in full.)

8. Licensed in accordance with act providing for the registration of Contractors:

Company Name: _____
Company Address: _____
Contact Name: _____
Contact Email #: _____
Phone #: _____
License #: _____ Expiration Date: _____
Classification (s): _____
DIR Registration #: _____ Expiration Date: _____
Gross Annual Receipts for the Firm: _____
Years in Business: _____
Age of Firm: _____

9. The undersigned certifies that he/she is now licensed in the appropriate trade 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____.

10. By my signature on this proposal I certify, under penalty or perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code sections 10162, 10232 and 10285.1 are true and correct and that the bidder has complied with the requirements of section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal I further certify, under penalty or perjury under the laws of the State of California and the United States of America, that the Non-collusion Affidavit required by Title 23 United States Code, section 112 and Public Contract Code section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Date: _____ By: _____
Proper Name of Bidder

(Signature of bidder)

(Print/type signator's name)

(Print/type title)

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signatures of authorized officers or agents, and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his/her signature shall be placed above.

Business Address: _____
Place of Residence: _____

Telephone: _____
Fax Number: _____

**NON-COLLUSION AFFIDAVIT TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID**

State of California

County of Imperial

_____ [name of individual], being first duly sworn,
deposes and says that he or she is _____ [title of individual] of
_____ [name of business] the party making the
foregoing bid 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, bid depository, or to any member or agent thereof to
effectuate a collusive or sham bid.

Signature

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (Ch. 4 (commencing at section 4100), Div. 2, part 1 of the Cal. Pub. Cont. Code) and any amendments thereof, each bidder shall set forth below:

(a) (1) The name, the location of the place of business, the California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater.

(b) the portion of the work which will be done by each subcontractor under this act. The prime Contractor shall list only one subcontractor for each such portion as is defined by the prime Contractor in this bid.

If a prime contractor fails to specify a subcontractor or if a prime contractor specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of 1 percent of the prime contractor's total bid, the prime contractor agrees that he or she is fully qualified to perform that portion himself or herself, and that the prime contractor shall perform that portion itself.

No prime Contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent (1/2%) of 1 percent of the prime Contractor's total bid as to which his original bid did not designate a subcontractor, except as authorized in *Subletting and Subcontracting Fair Practices Act*.

Subletting or subcontracting of any portion of the work in excess of one-half of one percent (1/2%) of 1 percent of the prime Contractor's total bid as to which no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding reduced to writing as a public record of the authority awarding this contract setting forth the facts constituting the emergency or necessity.

If all work is to be done without subcontractors, write "None" in the following space:

SUBCONTRACTOR LIST

For each Subcontractor that will perform a portion of the Work in an amount in excess of one-half of 1% of the Bidder's total contract Price, the bidder must list a description of the Work, the name of the Subcontractor, its California contractor license number, the location of its place of business, its DIR registration number, and the portion of the Work that the Subcontractor is performing based on a percentage of the Base Bid price.

TYPE OF WORK SUBCONTRACTOR WILL DO	NAME UNDER WHICH SUBCONTRACTOR	CALIFORNIA CONTRACTOR LICENSE NO.	ADDRESS	DIR REG. NO.	PERCE NT OF WORK

SUPPLIERS

NAME OF SUPPLIER	ADDRESS & TELEPHONE No.	TYPE OF MATERIAL

(Proper Name of Bidder)

By: _____

(Signature of bidder)

(Print/type signator's name)

(Print/type title)

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In accordance with Public Contract Code section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed or otherwise prevented from bidding on, or completing a federal, state or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space.

PUBLIC CONTRACT SECTION 10232 STATEMENT

In accordance with Public Contract Code section 10232, the Contractor hereby states, under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

TITLE 23, UNITED STATES CODE, SECTION 112 NON-COLLUSION AFFIDAVIT

In accordance with Title 23, United States Code, section 112, the bidder hereby states under penalty of perjury, that he has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract.

Note: The above Statement questionnaire, and Non-Collusion Affidavit are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute Signature of this Statement, Questionnaire, and Non-Collusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In accordance with Public Contract Code section 10285.1 (Chapter 376, Stat. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has _____, has not _____ been convicted within the preceding three (3) years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code section 1101, with any public entity, as defined in Public Contract Code section 1100, including the Regents of the University of California or the Trustees of

the California State University. The term “bidder” is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in section 10285.1

NOTE: THE BIDDER MUST PLACE A CHECK MARK AFTER “HAS” or “HAS NOT” IN ONE OF THE BLANK SPACES PROVIDED ABOVE.

(Proper Name of Bidder)

By: _____
(Signature of bidder)

(Print/type signator’s name)

(Print/type title)

CONTRACTOR'S CERTIFICATE

REGARDING WORKERS COMPENSATION

Labor Code section 3700 in relevant part provides:

"Every employer except the State shall secure the payment of compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this State.

- (b) By securing from the Director of Industrial Relations a *Certificate of Consent to Self-Insure*, either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to be self-insured and to pay any compensation that may become due to his or her employees."

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.

(Proper Name of Bidder)

By: _____
(Signature of bidder)

(Print/type signator's name)

(Print/type title)

(In accordance with Article 5 (commencing at section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under this contract.)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____ as Principal, and _____ as Surety, are held and firmly bound unto the _____ County, hereinafter called COUNTY, in the penal sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal submitted to COUNTY for the work described below for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid dated _____, 20____, for

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO
MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED
AT 202 N. 8TH STREET, EL CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period specified therein after the opening of the same, or, if no period be specified, within ninety (90) days after said opening, and if the Principal is awarded the contract, and shall within the period specified therefore, or, if no period be specified, within five (5) days after the prescribed forms are presented to it for signature, enter into the written contract with COUNTY in accordance with the bid as accepted and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract and for the payment for labor and materials used for the performance of the contract, or in the event of the withdrawal of said bid within the period specified or the failure to enter into such contract and give such bonds within the time specified, if the Principal shall pay COUNTY the difference between the amount specified in said bid and the amount for which COUNTY may procure the required work and/or supplies, if the latter amount be in excess of the former; together with all costs incurred by COUNTY in again calling for bids, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alterations or addition to the terms of the contract on the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in anywise affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of said contract or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by COUNTY and judgment is recovered, Surety shall pay all costs incurred by COUNTY in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this _____ day of _____, 20 _____, the

name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal)

(Proper Name of Principal)

By: _____
(Signature)

(Print/type signator's name)

(Print/type title)

(Corporate Seal)

(Proper Name of Surety)

By: _____
(Signature)

(Print/type signatory's name)

(Print/type title)

(Attached Attorney-In-Fact Certificate)

PERFORMANCE BOND

Whereas, The Board of Supervisors of the County of Imperial, State of California, and _____, (hereinafter designated as “principal”) have entered into an agreement whereby principal agrees to install and complete certain designated public improvements, which said agreement, dated _____, 20____, and identified as project **COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED AT 202 N. 8TH STREET, EL CENTRO, CA 92243 COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)**, is hereby referred to and made a part hereof; and

Whereas, said principal is required under the terms of said agreement to furnish a bond for the faithful performance of said agreement.

Now, therefore, we, the principal and _____ (hereinafter designated as “surety”), are held and firmly bound unto the County of Imperial (hereinafter designated as “County”) in the penal sum of _____ dollars (\$_____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded principal, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the said agreement and any alteration thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless County, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys’ fees, incurred by County in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications.

In witness whereof, this instrument has been duly executed by the principal and surety above named, on _____, 20_____.

Principal

By:

Surety

By:

Attorney-In-Fact

[Attach Required Acknowledgment]

PAYMENT BOND

Whereas, The Board of Supervisors of the County of Imperial, State of California, and _____ hereinafter designated as “the principal”) have entered into an agreement whereby the principal agrees to install and complete certain designated public improvements, which agreement, dated _____, 20____, and identified as project **COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL CENTRO MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES EXPANSION LOCATED AT 202 N. 8TH STREET, EL CENTRO, CA 92243 COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)**, is hereby referred to and made a part hereof; and

Whereas, Under the terms of the agreement, the principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the County of Imperial to secure the claims to which reference is made in Title 3 (commencing with section 9000) of Part 6 of Division 4 of the Civil Code.

Now, therefore, the principal and the undersigned as corporate surety, are held firmly bound unto the County of Imperial and all contractors, subcontractors, laborers, material suppliers, and other persons employed in the performance of the agreement and referred to in Title 3 (commencing with section 9000) of Part 6 of Division 4 of the Civil Code in the sum of _____ dollars (\$_____), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to this work or labor, that the surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys’ fees, incurred by the County of Imperial in successfully enforcing this obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Title 3 (commencing with section 9000) of Part 6 of Division 4 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the agreement or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

In witness whereof, this instrument has been duly executed by the principal and surety above named, on _____, 20_____.

Principal

By:

Surety

By:

[Attach Required Acknowledgment]

Attorney-In-Fact

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GENERAL CONDITIONS

Article 1. DEFINITIONS

- (a) COUNTY and Contractor are those mentioned as such in the Agreement. They are treated throughout the Agreement as if they are of singular number and neuter gender.
- (b) Subcontractor, as used herein, includes those having direct contract with Contractor and one who furnishes material work to a special design according to plans and specifications of this work, but does not include one who merely furnishes material not so worked.
- (c) Surety is the person, firm, or corporation that executes as surety the *Contractor's Performance Bond and Payment Bond for the Public Works*.
- (d) Provide shall include "provide complete in place," that is, "furnish and install."
- (e) As Shown, As Indicated, As Detailed, refer to drawings accompanying these specifications.
- (f) Work of the Contractor or subcontractor includes labor or materials, or both.

Article 2. DRAWINGS AND SPECIFICATIONS

Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intention of documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of work. Materials or work described in words which so apply have a well-known technical or trade meaning, and shall be deemed to refer to such recognized standards.

Interpretations. Figured dimensions on drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large-scale details shall take precedence over smaller scaled drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures. Drawings and specifications are intended to be fully cooperative and to agree. However, if Contractor observes that drawings and specifications are in conflict, it shall promptly notify the Architect in writing, and any necessary changes shall be adjusted as provided in the contract for changes in work.

Misunderstanding of drawings and specifications shall be clarified by the Architect, whose decision shall be final.

Standards, Rules, and Regulations referred to are recognized printed standards, and shall be considered as one and a part of these specifications within limits specified.

Article 3. COPIES FURNISHED

Contractor will be furnished, free of charge, copies of drawings and specifications as set

forth in *Special Conditions*. Additional copies may be obtained at cost of reproduction.

Article 4. OWNERSHIP OF DRAWINGS

All drawings, specifications, and copies thereof furnished by COUNTY are its property. They are not to be used on other work, and, with exception of signed contract sets, are to be returned to COUNTY on request at completion of work.

Article 5. DETAIL DRAWINGS AND INSTRUCTIONS

- (a) In case of ambiguity, conflict, or lack of information, Architect/Engineer shall furnish with reasonable promptness additional instructions, by means of drawings or otherwise, necessary for proper execution of work. All such drawings and instructions shall be consistent with contract documents, true developments thereof, and reasonably inferable therefrom.
- (b) Work shall be executed in conformity therewith, and Contractor shall do no work without proper drawings and instructions.

Article 6. TIME FOR COMPLETION AND DAMAGES FOR DELAY

The Parties recognize that time is of the essence of the Agreement and that COUNTY will suffer financial loss if the Work is not completed by the date set forth in paragraph 19.9 of the Information to Bidders section of this Agreement. The Parties also recognize the delays, expense and difficulties involved with proving in a legal proceeding the actual loss suffered by COUNTY if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as damages for delay (but not as a penalty), Contractor shall pay COUNTY the sum of **five thousand two hundred and 00/100 dollars (\$5,200.00)** for each calendar day the Work remains uncompleted after the time specified in this article or any written extension, whichever is later. Contractor agrees that the damages are not manifestly unreasonable under the circumstances and agree that such sum is not intended as a penalty against Contractor.

Article 7. PROGRESS SCHEDULE

Immediately after being awarded contract, Contractor shall prepare an estimated progress schedule (using the Critical Path Method (CPM) through a software program selected by COUNTY but at Contractor's sole expense) and submit the schedule for COUNTY's approval. Schedule shall indicate graphically the beginning and completion dates of all phases of construction. An updated progress schedule shall be submitted to COUNTY on a monthly basis.

Article 8. CONTRACT SECURITY

Unless otherwise specified, Contractor shall furnish a surety bond in an amount equal to one hundred percent (100%) of the contract price as security for faithful performance of this Agreement and shall furnish a separate bond in an amount equal to one hundred percent (100%) of the contract price as security for payment of persons performing labor and furnishing materials in connection with this Agreement. Aforesaid bonds shall be in form set forth in these contract documents. Upon request of Contractor, COUNTY will consider and accept multiple sureties on such bonds. COUNTY may reject at its discretion any bond issued by a surety that to COUNTY's satisfaction does not have a sufficient bond rating or history as a surety in the State of California to assure adequate security to COUNTY for the

default of Contractor.

Article 9. ASSIGNMENT

Contractor shall not assign this Agreement or any part thereof without prior written consent of COUNTY. As used here, an assignment shall include any assignment, hypothecation, transfer, sale, or other exchange of interests herein, directly or indirectly, by operation of law or otherwise, without the prior written consent of COUNTY. Any attempt to do so without the COUNTY's consent will be null and void, and any assignee, hypothecate, or transferee acquires no right or interest by reason of such attempted assignment, hypothecation, sale, or transfer. The sale, assignment, transfer, or other disposition of any of the issued and outstanding capital stock of Contractor or of any general partner or joint venturer or syndicate member of Contractor, if a partnership or joint venture or syndicate exists, which results in changing the control of Contractor, will be construed as an assignment of this Agreement. Control means 50% or more of the voting power of the corporation, partnership, joint venture or syndicate.

Any assignment of money due to or to become due under this Agreement shall be subject to a prior lien for services rendered or material supplied for performance of work called for under said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials to the extent that claims are filed pursuant to the Civil Code, the Code of Civil Procedure, Public Contract Code and/or the Government Code.

Article 10. PROHIBITED INTERESTS

Contractor shall immediately notify COUNTY if Contractor becomes aware of any COUNTY official or employee who appears to have any financial interest prohibited by this section.

Contractor shall not cause or allow any COUNTY official or employee to have a prohibited financial interest in the project, as defined below:

No official of COUNTY who is authorized on behalf of COUNTY to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving, any architectural, engineering, inspection, construction, or material supply contract or any subcontract in connection with construction or project shall become directly or indirectly interested financially in this Agreement or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for COUNTY who is authorized on behalf of COUNTY to exercise any executive, supervisory, or other similar functions in connection with construction of project shall become directly or indirectly interested financially in this Agreement or in any part thereof.

Article 11. SEPARATE CONTRACTS

COUNTY reserves the right to let other contracts in connection with this work. Contractor shall afford other Contractors reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly connect and coordinates its work with theirs.

If any part of Contractor's work depends for proper execution or results upon work of any other Contractor, the Contractor shall inspect and promptly report to Architect/Engineer any defects in such work that render it unsuitable for such proper execution and results.

Contractor's failure so to inspect and report shall constitute its acceptance of other Contractor's work as fit and proper for reception of Contractor's work, except as to defects which may develop in other Contractor's work after execution of Contractor's work.

To ensure proper execution of its subsequent work, Contractor shall measure and inspect work already in place, and shall at once report to Architect any discrepancy between executed work and contract documents.

Contractor shall ascertain to its own satisfaction the scope of the project and nature of any other contracts that have been or may be awarded by COUNTY in prosecution of the project to the end that Contractor may perform its contract in the light of such other contracts, if any. Nothing contained herein shall be interpreted as granting to Contractor exclusive occupancy at site of project. Contractor shall not cause any unnecessary hindrance or delay to any other Contractor working on project. If simultaneous execution of any contract for the project is likely to cause interference with performance of some other contract or contracts, COUNTY shall decide which Contractor shall cease work temporarily and which Contractor shall continue or whether work can be coordinated so that Contractors may proceed simultaneously. COUNTY shall not be responsible for any damages suffered or extra costs incurred by Contractor resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts on project, or caused by any decision or omission of COUNTY respecting the order of precedence in performance of contracts.

Article 12. SUBCONTRACTING

- (a) COUNTY reserves the right to approve or disapprove the selection of subcontractors and with advance written notice, require the substitution of subcontractors and require Contractor to terminate subcontracts entered into in support of this Agreement. Contractor agrees to bind every subcontractor by terms of this Agreement as far as such terms are applicable to subcontractor's work. If Contractor shall subcontract any part of this Agreement, Contractor shall be as fully responsible to COUNTY for acts and omissions of Contractor's subcontractor and of persons either directly or indirectly employed by Contractor's subcontractor as it is for acts and omissions of persons directly employed by itself. Nothing contained in the contract documents shall create any contractual relation between any subcontractor and COUNTY.
- (b) COUNTY's consent to or approval of any subcontractor under this Agreement shall not in any way relieve Contractor of its obligations under this Agreement, and no such consent or approval shall be deemed to waive any provision of this Agreement.
- (c) Substitution or addition of subcontractors shall be permitted only as authorized by California Public Contract Code sections 4100, et seq.
- (d) Contractor represents and warrants that it and its subcontractors are not ineligible to work for COUNTY due to violations of Labor Code sections 1777.1 and 1777.7.
- (e) Contractor shall maintain a copy of each subcontract entered into in support of this Agreement and shall, upon request by COUNTY, make copies available for approval, inspection, or audit.

- (f) COUNTY assumes no responsibility for the payment of subcontractors used in the performance of this Agreement. Contractor accepts sole responsibility for the payment of subcontractors used in the performance of this Agreement.

Article 13. DEFAULTS & REMEDIES

- (a) Default. In the event that (i) Contractor files a petition requesting relief under any bankruptcy act, or is adjudged as bankrupt, or makes a general assignment for the benefit of creditors or has a receiver appointed on account of its insolvency, or (ii) Contractor refuses or is unable, for whatever reason, to supply enough properly skilled workers or proper materials to complete the Project, or (iii) Contractor fails to follow the directions of COUNTY, or (iv) Contractor fails to make prompt payment to its subcontractors and suppliers for materials or labor supplied or permits any lien to be imposed upon all or any portion of the Project, or (v) Contractor disregards any laws or orders of any public or private authority having jurisdiction over the Work or the Project, or (vi) Contractor fails to perform in accordance with any of the terms of this Agreement or breaches any provision of this Agreement, COUNTY may give notice of such failure or breach to Contractor, identifying the failure or breach of this Agreement. Should any such failure or breach continue for twenty-four (24) hours after delivery of notice without a good faith effort on the part of Contractor to commence all necessary corrective action, or should such a breach continue despite Contractor's efforts for forty-eight (48) hours, then at that time such failure shall be deemed a default by Contractor under this Agreement and COUNTY shall have all rights and remedies available at law or in equity, including the right to terminate this Agreement. Without limiting its rights and remedies, COUNTY may then proceed as follows:

- (1) Without terminating this Agreement or the obligations of Contractor hereunder as to all of the Work required to be performed or furnished by Contractor pursuant to this Agreement, COUNTY may require Contractor, at Contractor's expense, to cure such default(s) as may exist in the performance of Contractor's obligations hereunder within forty-eight (48) hours after such default(s) has/have occurred including but not limited to repairing, replacing, and correcting material or Work determined by COUNTY to be defective or not complying with the requirements of this Agreement. Should Contractor fail to timely repair, replace, and/or correct non-complying or defective materials and workmanship or otherwise cure its default(s) hereunder, and in the case of emergencies in which case COUNTY may act immediately if Contractor is not available or is not responding, and without further notice, COUNTY may make required repairs, replacements and other corrections or otherwise remedy the default by Contractor pursuant to Paragraph (2) below.
- (2) Without terminating this Agreement or the obligations of Contractor hereunder as to all of the Work required to be performed or furnished by Contractor pursuant to this Agreement, COUNTY may engage another contractor to perform such portion of Contractor's Work required pursuant to this Agreement or furnish any materials or other items required hereunder as COUNTY in its sole discretion may deem necessary to avoid delay in the progress of the Work, and in connection therewith, COUNTY may perform such Work or any portion thereof

itself or have the same performed by others and COUNTY may procure all necessary materials, equipment or other items required for the continued progress of such Work. The costs incurred by COUNTY as a result of performing any such portion of the Work or of engaging another Contractor to do so shall be deducted from the compensation payable pursuant to this Agreement and if COUNTY's costs exceed or may reasonably be anticipated to exceed the balance of the compensation due to Contractor for such work, such excess, or anticipated excess, shall be immediately due and owing from Contractor to COUNTY and may be withheld from any funds due to Contractor pursuant to this Agreement or any other agreement.

- (3) COUNTY may terminate Contractor's right to perform upon written notice and COUNTY shall then have the option of completing the Work or any portion thereof by exercise of its interest under the performance bond issued in favor by Contractor, or having such Work in whole or in part be completed by others for Contractor's account. A calculation shall take place at the conclusion of the Project wherein to the degree the sum of COUNTY's costs and any amounts paid to complete the Project exceed the compensation payable pursuant to this Agreement, then any such excess shall be immediately due and owing from Contractor to COUNTY.
- (b) Damages. Contractor shall be liable for all damages suffered by COUNTY by reason of Contractor's default in any provision of this Agreement and the exercise of COUNTY of its option to terminate this Agreement shall not release Contractor of such liability. Contractor shall have no right to receive any further payment after a default has occurred until such time as the Work to be performed by Contractor pursuant hereto has been completed and accepted by COUNTY and damages suffered by COUNTY, if any, ascertained. Damages shall include by way of illustration, but not of exclusion, COUNTY's costs of completing the Work which exceeds the compensation payable pursuant to this Agreement, other general, liquidated, special or consequential damages, attorney fees, and costs.
- (c) Actions After Default. Should COUNTY exercise any of its options, remedies, or rights granted pursuant to the terms of this Agreement in the event of a default by Contractor, COUNTY at its sole election may, but shall not be obligated to, use any materials, supplies, tools or equipment on the work site which belong to CONTRACTOR to complete the Work required to be completed by Contractor, whether such work is completed by COUNTY or by others, and Contractor agrees that it shall not remove such materials, supplies, tools and equipment from the work site unless directed in writing by COUNTY to do so.
- (d) Limit on Force Majeure Damages. Contractor shall not be responsible for repairing or restoring damage to work caused by an act of God in excess of five (5) percent of the contracted amount, provided that the work damaged is built in accordance with accepted and applicable building standards and the plans and specifications of COUNTY. In the event of such damage, COUNTY may, at its option, elect to terminate this Agreement. For purposes of this Agreement, an "act of God" shall be defined as an earthquake in excess of 3.5 on the Richter scale and a tidal wave.

- (e) No Limitation of Rights. The options and rights granted to COUNTY herein shall not be deemed as limitations upon the other rights and remedies of COUNTY in the event of a failure of performance or breach by Contractor, and COUNTY shall be entitled to exercise the rights and remedies hereinabove specified and all other rights and remedies which may be provided in this Agreement or by law or in equity, either cumulatively or consecutively, and in such order as COUNTY in its sole discretion shall determine.
- (f) Resolution of Claims. COUNTY and Contractor agree to follow and comply with the mediation, arbitration, claim, civil action procedure and trial de novo provisions set forth in California Public Contracts Code §§ 9204 and 20104 – 20104.6.

Article 14. WARRANTIES

- (a) One-Year Warranty. Contractor agrees to provide a one-year warranty for all of its work and component parts and guarantees that all work shall be performed in a professional and workman-like manner and be free from defects. Contractor guarantees to timely correct all work performed by it under this Agreement which COUNTY determines to be defective in design, material, and/or workmanship within a period of one (1) year from the date of the completion of the Work. The warranties set forth in this Agreement shall be in addition to, and not in lieu of, all other statutory and case law warranties and obligations of Contractor. Contractor expressly agrees that all warranties made by Contractor, all obligations under this Agreement and all remedies for breach of such warranties shall survive this Agreement in the event it is terminated or expires for any reason prior to the running of the full warranty periods listed above.
- (b) Materials. All materials furnished by Contractor shall be new, manufactured during the current year, of first quality, and carrying full manufacturer's warranty. Contractor shall be responsible for any expiration of manufacturer or other warranties of material or equipment being supplied for this Agreement. Contractor guarantees that all warranties of material and equipment shall become effective when the project is accepted by COUNTY's Board of Supervisors, not at time of installation by Contractor.
- (c) Manufacturers' Warranty Information. Contractor agrees to promptly provide such information and maintenance recommendations to COUNTY at the inception of Contractor's work to the extent such information is reasonably available. In the event of failure of Contractor to comply with above-mentioned conditions within one (1) week after being notified in writing, COUNTY is hereby authorized to proceed to have defects repaired and made good at expense of Contractor, who hereby agrees to pay costs and charges therefore immediately on demand.

Article 15. NOTICES AND REPORTS

- (a) All notices and reports under this Agreement shall be in writing and must be given by personal delivery or by mailing by certified mail, or overnight mail, addressed as follows:

COUNTY
Imperial County Department of Public Works

CONTRACTOR
Business Name:

Attention: Director
155 South Eleventh Street
El Centro, CA 92243
Email: [CONTACT]

With Copies to:
Imperial County Executive Office
Attention: County Executive Officer
940 West Main Street, Suite 208
El Centro, CA 92243
Email: [CONTACT]

Address:

and:

Imperial County Department of Human
Resources and Risk Management
Attention: Director
940 West Main Street, Suite 101
El Centro, CA 92243
Email: [CONTACT]

Email:

In addition to delivery as described above, delivery shall be provided by email, deemed received when acknowledged, to the addressees above.

- (b) Notices and reports under this Agreement may be given by personal delivery or by mailing by certified mail at such other address as either Party may designate in a notice to the other Party given in such manner. Any notice given by mail shall be considered given when deposited in the United States Mail, postage prepaid, addressed as provided herein.

In addition to delivery as described above, delivery shall be provided by email, deemed received when acknowledged, to the addressees above.

Article 16. WORKERS

- (a) Contractor shall at all times enforce strict discipline and good order among its employees, and shall not employ on work any unfit person or anyone not skilled in work assigned to that person. Contractor shall at all times enforce rules and standards regarding Sensitive Information as defined below. Contractor shall not permit workers to touch or otherwise touch, read, review, copy, or access any sensitive or confidential information. Contractor shall be responsible for any worker violating sensitive information standards.
- (b) Any person in the employ of the Contractor whom COUNTY may deem incompetent or unfit shall be dismissed from work, and shall not again be employed on it except with written consent of COUNTY.
- (c) Contractor and each of its subcontractors, regardless of tier, shall use a skilled and trained workforce to perform all work on the Project that falls within an apprentice-able

occupation in the building and construction trades in accordance with Chapter 2.9 (commencing with § 2600) of Part 1 of Division 2 of the Public Contract Code § 2600 - §2603).

- (d) Contractor shall provide COUNTY with a list of all current employees. Contractor shall notify COUNTY of all new employees one week prior to their start date.
- (e) All Contractor's employees shall be required to comply with the work rules established for the Project site; and shall be identified while on the premises by picture identification card furnished at his/her expense, indicating their name or number; and by shirt, blouse or smock indicating the company name or logo in print large enough to be easily read. Contractor's employees shall have effective communication skills to perform such tasks and communicate with the COUNTY and its representatives.
- (f) It shall be the responsibility of Contractor to ensure Contractor employees do not access Sensitive Information. COUNTY shall have the right to perform a background check and clearance requirements of all Contractor employees that the COUNTY determines may require access to any area that contains or may provide access to Sensitive Information. Notwithstanding anything in this Agreement to the contrary, the Contractor and its employees must comply with background check and clearance requirements of the California Department of Justice (DOJ) and the California Department of Motor Vehicles (DMV) relating to any Contractor employee who has physical access to any area which is either connected to, or contains records from, the DOJ criminal computer database, including without limitation, the California Law Enforcement Telecommunications System and the Criminal Offender Record Information, or the DMV computer database (collectively, "the Databases"). If requested by the COUNTY, the Contractor must provide to the COUNTY suitable documentation evidencing the Contractor's compliance with the policies, practices, and procedures of the DOJ and the DMV regarding background check and clearance requirements relating to access to the Databases.
- (g) For purposes of this Article, "Sensitive Information" shall include but not be limited to any personal information or any personal health information ("PHI") of any COUNTY resident, employee, customer, patient or official; any trade secret or proprietary information belonging to the COUNTY or any COUNTY contractor; any information protected by any privilege belonging to the COUNTY, including but not limited to the attorney-client privilege; and any information otherwise labeled as sensitive or confidential.

Article 17. PREVAILING WAGE AND PAYROLL RECORDS

- (a) Contractor and its subcontractors shall pay all workers employed on the Project the higher of either the rates determined by the Director of the California Department of Industrial Relations ("DIR") or, when applicable, the Davis-Bacon Federal wage rates as supplemented by the Department of Labor regulations. The Davis-Bacon Federal wage rates are attached hereto. Copies of the State prevailing rate of per diem wages are on file with the Department of Industrial Relations, Division of Apprenticeship Standards, 445 Golden Gate Avenue, San Francisco, California, and at COUNTY's Department of Public Works, and are available to Contractor and any other interested party upon request. Contractor shall post the prevailing rate of per diem wages at the

Project site.

- (b) Contractor is responsible for compliance with the provisions herein.
- (c) Contractor agrees to comply with sections 1775 and 1776 of the California Labor Code relating to the payment of prevailing wage and the maintenance of certified payroll records and to make the certified payroll records available for inspection at all reasonable hours at Contractor's principal office. The responsibility for compliance with these provisions is fixed with Contractor. Contractor understands and agrees that it shall, as a penalty to COUNTY, forfeit specific monetary fines for each worker paid less than the prevailing wage rates as determined by the Labor Commissioner for the work or craft in which the worker is employed for any Work done pursuant to this Agreement.
- (d) For those Public Works Projects that are subject to the (DIR), Division of Labor Standards Enforcement (DLSE) compliance monitoring and enforcement it is the Contractor's responsibility to submit certified payroll records directly to the DLSE's Compliance Monitoring Unit (CMU). Contractor has reviewed and agrees to comply with any applicable provisions for those Projects subject to DIR Monitoring and Enforcement of prevailing wages. COUNTY hereby notifies Contractor that Contractor is responsible for complying with the requirements of Senate Bill 854 (SB854) regarding certified payroll record reporting. Further information concerning the requirements of SB854 is available on the DIR website located at: <http://www.dir.ca.gov/Public-Works/PublicWorksEnforcement.html>. More information concerning state compliance can be found at <https://www.dir.ca.gov/Public-Works/publicworks.html>.
- (e) Mandatory Registration (Requirements pursuant to SB 854):
 - (1) Contractor and its subcontractors shall register with the DIR and pay all applicable fees as set forth in Labor Code section 1725.5.
 - (2) Contractor and its subcontractors acknowledge that they shall not be listed on any bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the DIR pursuant to Labor Code section 1725.5. The requirements of this section shall apply unless one of the limited exceptions provided under Labor Code Section 1771.1(a) applies.
 - (3) Contractor and its subcontractors acknowledge that they shall not be awarded any contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the DIR pursuant to Labor Code section 1725.5.
 - (4) The Project described herein is subject to compliance monitoring and enforcement with the DIR.
 - (5) For further information concerning compliance with SB 854, please visit: <http://www.dir.ca.gov/Public-Works/SB854.html>.
- (f) Notwithstanding paragraph (c), Contractor is not liable for any penalties pursuant to

paragraph (c) when a subcontractor on the Project fails to pay its workers the general prevailing rate of per diem wages unless:

- (1) Contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers; or
- (2) Contractor fails to comply with all of the following requirements:
 - (A) The contract executed between Contractor and the subcontractor for the performance of Work on the Project shall include a copy of the provisions of California Labor Code sections 1771, 1775, 1776, 1777.5, 1813 and 1815; and
 - (B) Contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor; and
 - (C) Upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages, Contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project; and
 - (D) Prior to making final payment to the subcontractor for Work performed on the Project, Contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to his or her employees on the Project and any amounts due pursuant to California Labor Code Section 1813.
 - (E) Cognizance of Violations by County. Contractor understands and agrees that COUNTY shall take cognizance of violations of Chapter 1 of Part 7 of Division 2 of the California Labor Code committed in the course of the execution of this Agreement, and shall promptly report any suspected violations to the Labor Commissioner. If COUNTY determines as a result of its own investigation that there has been a violation of Chapter 1 of Part 7 of Division 2 of the California Labor Code and withholds payment to Contractor, the procedures in California Labor Code §1771.6 shall be followed. Contractor may bring an action in a court of competent jurisdiction to recover from COUNTY the difference between the wages actually paid to an employee and the wages that were required to be paid to an employee pursuant to Chapter 1 of Part 7 of Division 2 of the California Labor Code, any penalties required to be paid pursuant to Chapter 1 of Part 7 of Division 2 of the California Labor Code, and costs and attorney's fees related to the action, if either of the following is true:
 1. COUNTY previously affirmatively represented to Contractor in writing, in the call for bids, or otherwise, that the Work was not a "public work," as defined in Chapter 1 of Part 7 of Division 2 of the California Labor

Code; or

2. COUNTY received actual written notice from the Department of Industrial Relations that the Work is a “public work,” as defined in Chapter 1 of Part 7 of Division 2 of the California Labor Code, and failed to disclose that information to Contractor before the bid opening or award.

Article 18. APPRENTICES

- (a) Contractor agrees to comply with sections 1777.5, 1777.6 and 1777.7 of the California Labor Code relating to the employment of apprentices and to provide COUNTY with copies of any contract award information and verified statements of the journeyman and apprentice hours performed pursuant to this Agreement as required by section 1777.5(e). The responsibility for compliance with these provisions is fixed with Contractor for all apprenticeable occupations, where journeymen in the craft are employed on the public work, in a ratio of not less than one (1) apprentice for each five (5) journeymen (unless an exemption is granted in accordance with section 1777.5) and Contractor and its subcontractors shall not discriminate among otherwise qualified employees as indentured apprentices on any public work solely on the ground of race, religious creed, color, national origin, ancestry, sex, or age, except as provided in California Labor Code section 3077. Only apprentices, as defined in California Labor Code section 3077, who are in training under apprenticeship standards and who have signed written apprentice agreements will be employed on public works in apprenticeable occupations. This section shall not be enforced if the not-to-exceed amount of this Agreement is less than thirty thousand dollars (\$30,000).
- (b) If the Project falls within the jurisdiction of California Labor Code section 1777.5, COUNTY shall, within five (5) days of the award, send a copy of the award to the Division of Apprenticeship Standards. In addition, COUNTY shall notify the Division of Apprenticeship Standards of a finding of any discrepancy regarding the ratio of apprentices to journeymen within five (5) days of the finding.

Article 19. HOURS OF WORK

Contractor agrees to comply with sections 1810 through 1815 of the California Labor Code and, when applicable, the Contract Work Hours and Safety Standards Act (40 USC §327 et seq.; 29 CFR Part 5) which provide that Contractor’s workers and its subcontractor’s workers may not be required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week. Further, work performed by employees of Contractor or its subcontractor in excess of eight (8) hours per day, and forty (40) hours during any one (1) week, shall be compensated for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1½) times the basic rate of pay. The responsibility for compliance with these provisions is fixed with Contractor. Contractor understands and agrees that it shall, as a penalty to COUNTY, forfeit specific monetary fines to COUNTY should Contractor or its subcontractors fail to comply with the provisions contained within this paragraph.

Article 20. INSURANCE COVERAGES

Contractor hereby agrees at its own cost and expense to procure and maintain, during the

entire term of this Agreement and any extended term therefore, insurance in a sum acceptable to COUNTY and adequate to cover potential liabilities arising in connection with the performance of this Agreement and in any event not less than the minimum limit set forth as follows (and in any event not less than the minimum limit set forth in the “Minimum Insurance Amounts” attachment to the Plans and Specifications which are incorporated as if set forth fully herein):

INSURANCE	MINIMUM LIMIT
<u>Worker’s Compensation, Coverage A</u>	Statutory
<u>Employers Liability, Coverage B</u>	\$1,000,000.00 per accident for bodily injury or disease.
<u>Commercial General Liability Including Contractual Liability</u> Operations, Products and Completed Operations: Personal/Bodily Injury & Property Damage	\$5,000,000.00 / occurrence If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/ or the general aggregate limit shall be twice the required occurrence limit.
<u>Commercial Automobile Liability</u> (owned, hired, & non-owned vehicles) Personal/Bodily Injury & Property Damage	\$1,000,000.00 per accident for bodily injury and property damage.
Professional Liability (Errors and Omissions):	Appropriate to the Contractor’s profession, with limit no less than \$1,000,000 per occurrence or claim, \$1,000,000 aggregate.
Unemployment Insurance	To Be Determined by Scope of Work
Disability Insurance	To Be Determined by Scope of Work
Liability Insurance	To Be Determined by Scope of Work
Errors and Omissions	\$2,000,000.00 / aggregate
Builder’s Risk (Course of Construction) Insurance	“All Risk” (Special Perils) coverage with limits equal to the completed value of the project and no coinsurance penalty provisions.

Surety Bonds:

1. Bid Bond
2. Performance Bond
3. Payment Bond
4. Maintenance Bond

The Payment Bond & Performance Bond shall be in a sum equal to the contract price. If the Performance Bond provides for a one-year warranty a separate Maintenance Bond is not necessary.

Article 21. SPECIAL INSURANCE REQUIREMENTS

- (a) All insurance required under Article 20 shall:
- (1) Be procured from an insurer licensed to do business in California with a current rating by Best's Key Rating Guide, acceptable to COUNTY. A rating of at least A-VII shall be acceptable to COUNTY; lesser ratings must be approved in writing by COUNTY.
 - (2) Be primary coverage as respects COUNTY and any insurance or self-insurance maintained by COUNTY shall be in excess of Contractor's insurance coverage and shall not contribute to it.
 - (3) Name COUNTY as an additional insured on all policies, except Workers' Compensation, and provide that COUNTY may recover for any loss suffered by COUNTY by reason of Contractor's negligence.
 - (4) State that it is primary insurance and regards COUNTY as an additional insured and contains a cross-liability or severability of interest clause.
 - (5) Not be canceled, non-renewed, or reduced in scope of coverage until after thirty (30) days written notice has been given to COUNTY. However, Contractor may not terminate such coverage until it provides COUNTY with proof that equal or better insurance has been secured and is in place. Cancellation or change without the prior written consent of COUNTY shall, at the option of COUNTY, be grounds for termination of this Agreement.
 - (6) If this Agreement remains in effect more than one (1) year from the date of its original execution, COUNTY may, at its sole discretion, require an increase in the amount of liability insurance to the level then customary in similar COUNTY Agreements by giving sixty (60) days notice to Contractor.
- (b) Additional Insurance Requirements.
- (1) Complete copies of certificates of insurance for all required coverages including additional insured endorsements and thirty-day (30-day) notice of cancellation clause endorsements shall be attached hereto as Exhibit X and incorporated herein as though fully set forth.
 - (2) COUNTY is to be notified immediately of all insurance claims. COUNTY is also to be notified if any aggregate insurance limit is exceeded within five (5) working days of any such occurrence.
- (c) Nothing in this, or any other provision of this Agreement, shall be construed to preclude Contractor from obtaining and maintaining any additional insurance policies in addition to those required pursuant to this Agreement.
- (d) Should Contractor make any changes to its insurance, including but not limited to a change in carrier, change in deductible, or change in policy limits, Contractor must

provide notice of same to the COUNTY within five (5) working days, and any such changes shall not take effect for thirty (30) days. Under no circumstances shall Contractor make changes to its insurance coverage such that its insurance coverage does not meet the requirements set forth herein.

Article 22. INSURANCE ENDORSEMENTS, CLAUSES, & INFORMATION

- (a) The comprehensive/commercial general liability insurance shall contain a provision of endorsements stating that such insurance:
- (1) Includes contractual liability;
 - (2) Does not contain a "pro rata" provision which looks to limit the insurer's liability to the total proportion that its policy limits bear to the total coverage available to the insured;
 - (3) Does not contain an "excess only" clause which requires the exhaustion of other insurance prior to providing coverage;
 - (4) Does not contain an "escape clause" which extinguishes the insurer's liability if the loss is covered by other insurance;
 - (5) Includes COUNTY, architect, and the construction manager as additional insureds;
 - (6) States that it is primary insurance and regards COUNTY as an additional insured and contains a cross-liability or severability of interest clause; and
 - (7) Does not contain any exclusion as to loss or damage to property caused by explosion or resulting from collapse of buildings or structures or damage to property underground, commonly referred to by insurers as the "XCU Hazards."
- (b) Certificates and insurance policies shall include the following clause: "This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to COUNTY stating date of cancellation or reduction. Date of cancellation may not be less than thirty (30) days after date of mailing notice."
- (c) Certificates of insurance shall state, in particular, those insured, extent of insurance, location and operation to which insurance applies, expiration date, and cancellation and reduction notice.

Article 23. PROOF OF INSURANCE

Contractor shall not commence work nor shall it allow any subcontractor to commence work under this Agreement until Contractor has obtained all required insurance, certificates and endorsements, including but not limited to, Additional Insured Endorsements and thirty-days (30-days) Notice of Cancellation Clause endorsements have been delivered in duplicate to and approved by COUNTY. The above referenced insurance documents must be received by COUNTY on or before the effective date of this Agreement and shall be sent to the following addresses:

- (i) County of Imperial
Risk Management Department
940 Main Street, Suite 101
El Centro, CA 92243

and

- (ii) Department of Public Works
Attn: Director of Public Works
1002 State Street
El Centro, CA 92243

Complete copies of certificates of insurance for all required coverages including additional insured endorsements shall be attached hereto as Exhibit X and incorporated herein as though fully set forth.

Article 24. CHOICE OF LAW

The laws of the State of California shall govern this Agreement. This Agreement is made and entered into in Imperial County, California. Any action brought by either Party with respect to this Agreement shall be brought in a court of competent jurisdiction within said County.

Article 25. PERMITS AND LICENSES

Permits and licenses necessary for prosecution of work shall be secured and paid for by Contractor, unless otherwise specified.

Article 26. EASEMENTS

Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by COUNTY, unless otherwise specified.

Article 27. SURVEYS

Surveys to determine location of property lines and corners will be supplied by COUNTY. Surveys to determine locations of construction, grading, and site work shall be provided by Contractor.

Article 28. EXCISE TAXES

If under federal excise tax law any transaction hereunder constitutes a sale on which a federal excise tax is imposed and the sale is exempt from such excise tax because it is a sale to a state or local government for its exclusive use, COUNTY, upon request, will execute a certificate of exemption which will certify: (a) that COUNTY is a political subdivision of the state for the purpose of such exemption; and (b) that the sale is for the exclusive use of COUNTY. No excise tax for such materials shall be included in any bid price.

Article 29. PATENTS AND ROYALTIES

Contractor shall hold and save COUNTY and its officers, agents, and employees harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of this Agreement, including its use by COUNTY, unless otherwise

specifically stipulated in the contract documents.

Article 30. MATERIALS

Except as otherwise specifically stated in this Agreement, Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete this Agreement within the specified time.

Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of good quality.

Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of work, and shall be stored properly and protected as required. Contractor shall be entirely responsible for damage or loss by weather or other causes to materials or work under this Agreement. No material, supplies, or equipment for work under this Agreement shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest herein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in work, and agrees upon completion of all work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by Contractor, to COUNTY free from any claims, liens, or charges. Contractor further agrees that neither Contractor nor any person, firm, or corporation furnishing materials or labor for any work covered by this Agreement shall have any right to lien upon premises or any improvement or appurtenance thereon, except that Contractor may install metering devices or other equipment of utility companies or of political subdivisions title to which is commonly retained by utility company or political subdivision. In event of installation of any such metering device or equipment, Contractor shall advise COUNTY as to owner thereof. Nothing contained in this Article, however, shall defeat or impair the right of persons furnishing material or labor under any bond given by Contractor for their protection or any rights under any law permitting such persons to look to funds due Contractor in hands of COUNTY, and this provision shall be inserted in all subcontracts and material contracts, and notice of its provisions shall be given to all persons furnishing material for work when no formal contract is entered into for such material.

Article 31. SUBSTITUTIONS

Whenever specifications for any material, product, thing, service, or process is indicated or specified by grade, patent or propriety name or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating the description of material, product, thing, service, or process desired, and shall be deemed to be followed by the words "or equal", and Contractor may, unless otherwise stated, offer any material, product, thing, service or process which shall be equal or better in every respect to that so indicated or specified. If the material, product, thing, service, or process offered by Contractor is not, in the opinion of COUNTY and Architect/Engineer, equal or better in every respect to that specified, then Contractor shall furnish the material, product, thing, service, or process specified. The burden of proof as to equality of any material, product, thing, service, or process shall rest with Contractor. Contractor shall only be authorized to substitute any designated material, product, thing, service or process required under this Agreement if such request, together with substantiating data for substitution of an "or equal"

item is timely submitted in accordance with the Calendar of Events set forth under section 19.3 of the "INFORMATION FOR BIDDERS" form and approval thereof is authorized in writing by COUNTY within the time frame set forth under Public Contract Code section 4104.5(a). Notwithstanding, in the event Contractor discovers after the stated substitution request filing deadline that a designated material, product, thing, service or process is no longer available and/or the use of the same is necessary to complete the project, Contractor may within thirty (30) days after award of the contract submit a "late substitution request", together with substantiating data for substitution of an "or equal" item for COUNTY's review and consideration. However, COUNTY shall have the sole discretion in granting such a late substitution request and shall not be required to accept the same even if the material, product, thing, service or process is equal or better in every respect.

It should be emphasized that a Contractor's request to substitute an "equal" material, product, thing or service for one designated in the contract specifications and/or COUNTY's subsequent written approval thereof, shall not in any way authorize an extension of time for performance of this Agreement. Moreover, in event Contractor furnishes a material, product, thing or service that is more expensive than that specified, the difference in cost of such material, product, thing, service or process, so furnished shall be borne solely by Contractor.

Article 32. SHOP DRAWINGS

Contractor shall check and verify all field measurements, and shall submit with such promptness as to cause no delay in Contractor's own work or in that of any other Contractor three (3) copies, checked and approved by Contractor, of all shop or setting drawings, schedules and materials lists required for the work of various trades. Architect/Engineer shall check and approve within ten (10) working days such schedules and drawings only for conformance with design concept of project, and compliance with information given in contract documents. Contractor shall make any corrections required by Architect/Engineer; file with Architect/Engineer three (3) corrected copies, and furnish such other copies as may be needed for construction. Architect/Engineer's approval of such drawings or schedules shall not relieve Contractor from responsibility for deviations from drawings or specifications unless Contractor has in writing called Architect/Engineer's attention to such deviations at time of submission and secured Architect/Engineer's written approval, nor shall it relieve Contractor from responsibility for errors in shop drawings or schedule.

Article 33. SAMPLES

Contractor shall furnish for approval, within ten (10) days following award of contract, all samples as required in specifications together with catalogs and supporting data required by Architect/Engineer. This provision shall not authorize any extension of time for performance of this Agreement. Architect/Engineer will check and approve such samples, within five (5) working days from receipt of same, only for conformance with design concept of work and for compliance with information given in contract documents. Work shall be in accordance with approved samples.

Article 34. COST BREAKDOWN AND PERIODICAL ESTIMATES

Contractor shall furnish on forms provided by COUNTY:

- (a) Within ten (10) days of award of contract, a detailed estimate giving complete breakdown of contract price.
- (b) A periodical itemized estimate of work done for purpose of making partial payments thereon.
- (c) Within ten (10) days of request by COUNTY, a schedule of estimated monthly payments which shall be due Contractor under the contract.

Values employed in making up any of these schedules will be used only for determining basis of partial payments, and will not be considered as fixing a basis for additions to or deductions from contract price.

- (d) **Schedule of Values.** Prior to submitting the first application for payment, Contractor must prepare and submit to the County a schedule of values apportioned to the various divisions and phases of the Work, including mobilization and demobilization. If a Bid Schedule was submitted with Contractor's bid, the amounts in the schedule of values must be consistent with the Bid Schedule. Each line item contained in the schedule of values must be assigned a value such that the total of all items equals the Contract Price. The items must be sufficiently detailed to enable accurate evaluation of the percentage of completion claimed in each application for payment, and the assigned value consistent with any itemized or unit pricing submitted with Contractor's bid.

Article 35. INTENTIONALLY OMITTED

Article 36. PAYMENT WITHHELD

In addition to amount which COUNTY may retain under article entitled "Payments," COUNTY may withhold a sufficient amount of amounts of any payment or payments otherwise due to Contractor, as in COUNTY's judgment may be necessary to cover:

- (a) Payments which may be past due and payable for just claims against Contractor or any subcontractors for labor or materials furnished in and about the performance of work on the project under this Agreement.
- (b) Defective work not remedied.
- (c) Failure of Contractor to make proper payments to subcontractors or for material or labor.
- (d) Completion of contract, if there exists a reasonable doubt that contract can be completed for balance then unpaid.
- (e) Damage to another Contractor.
- (f) When the above grounds are removed, payment shall be made for amounts withheld because of them.

COUNTY may apply such withheld amount to payment of such claims or obligations at

COUNTY's discretion. In so doing, COUNTY shall be deemed the agent of Contractor, and any payment so made by COUNTY shall be considered as a payment made under contract by COUNTY to Contractor, and COUNTY shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. COUNTY will render Contractor a proper accounting of such funds disbursed on behalf of Contractor.

Article 37. CHANGES AND EXTRA WORK

All change orders shall be subject to the Public Contract Code, including but not limited to sections 20137 and 20142, *et seq.*

- (a) Change Orders. Contractor shall make no changes to the Work to be performed pursuant to this Agreement, including but not limited to additions, deletions, modifications or substitutions, nor shall Contractor perform any extra work (collectively, "Change Order Work") without the prior written consent of COUNTY. If Contractor seeks any such addition, deletion, modification, or substitution, Contractor may request a change order in conformance with COUNTY's standard procedure ("Change Order"). If COUNTY approves the request, Contractor will execute a Change Order and Contractor's execution of the Change Order shall confirm approval thereof. COUNTY may order additional work, and Contractor shall perform such changes in the Work as directed by COUNTY in any Change Order prepared by Contractor. COUNTY's rights to eliminate portions of the Work or to initiate a Change Order shall not be limited in any way. The Change Order shall be in writing and shall include:
- (1) Any and all supporting documents and drawings depicting the source and location of the desired change, and explain in detail the field conditions and reasons for the requested change;
 - (2) Any change or adjustment to the compensation set forth in this Agreement in Article 3 as a result of changes in the Work based on a lump sum or time and material basis, as may be directed by COUNTY; and
 - (3) Any request for adjustments to time for completion of the Project.
- (b) Payment for Change Order Work. Contractor shall not be entitled to receive any compensation for work, labor, materials or changes of any kind, regardless of whether ordered by COUNTY or any of its representatives, unless a Change Order has been submitted in writing and approved prior to the commencement of any Change Order Work as described above. If the changes are required by any inspecting governmental agencies or utility companies, or are otherwise required to comply with any codes, laws, rules or regulations, including those set forth in this Agreement, then Contractor shall not be entitled to any increases in the compensation set forth in this Agreement at Article 3 or other compensation as a result of the changes.
- (c) Disputed Change Order Work. Any dispute concerning the performance of such Change Order Work or the amount of compensation to be paid to Contractor by COUNTY shall not affect Contractor's obligation to perform such Change Order Work. Contractor agrees that it shall timely complete all Change Order Work even if there shall be a dispute between Contractor and COUNTY over the amount or scope of the Change

Order Work. Contractor shall have the right to be compensated for any undisputed Change Order Work amounts as determined to be undisputed in COUNTY's sole discretion.

- (d) Authorized Representative. No Change Order shall be valid or binding against COUNTY unless such Change Order has been executed by COUNTY's designated representative, who is the Director of Public Works. COUNTY shall notify Contractor in writing if the designated representative is changed. The authority to execute a Change Order on this project shall not exceed the amount allowed by law pursuant to Government Code sections 20137-20142, *et seq.*
- (e) Limits. When applicable, the authority to execute a Change Order on this Project shall not exceed the amount allowed by law pursuant to Public Contract Code sections 20137-20142 *et seq.* Where Change Orders are in an amount between ten percent (10%) and twenty-five percent (25%) of the amount set forth in this Agreement and based on a need for additional quantities due to an increase in the unit quantities required to complete the project in excess of the COUNTY's Engineer's estimate of unit quantities as set forth in the Invitation to Bid, CONTRACTOR shall be paid pursuant to Public Contract Code sections 20143 and 20139 and section 4 of the Standard Specifications, State of California, Business, Transportation and Housing Agency, May 2006 Issued by the Department of Transportation ("Caltrans Standard Specifications"), which is incorporated herein by reference.

Article 38. DEDUCTIONS FOR UNCORRECTED WORK

If COUNTY deems it inexpedient to correct work injured or done not in accordance with contract, an equitable deduction from contract price shall be made therefore.

Article 39. PAYMENTS BY CONTRACTOR

Contractor shall pay:

- (a) For all transportation and utility services not later than the twentieth (20th) day of the calendar month following that in which such services are rendered;
- (b) For all materials, tools and other expendable equipment to the extent of ninety-five percent (95%) of cost thereof, not later than the twentieth (20th) day of the calendar month following that in which such materials, tools and equipment are delivered at site of project and balance of cost thereof not later than the thirtieth (30th) day following completion of that part of the work in or on which such materials, tools and equipment are incorporated or used; and
- (c) To each of Contractor's subcontractors, not later than the fifth (5th) day following each payment to Contractor; the respective amounts allowed Contractor on account of work performed by respective subcontractor to the extent of such subcontractor's interest therein.

Article 40. CONTRACTOR'S SUPERVISION

Unless personally present on premises where work is being done, Contractor shall keep on the work, during its progress, a competent superintendent satisfactory to COUNTY.

Contractor represents and warrants that any superintendent, employee, subcontractor and agent who will be performing any of the duties and obligations of Contractor herein possess all required licenses and authorities, as well as the experience, training, and communication skills to perform such tasks and communicate with the COUNTY and its representatives.

Superintendent shall not be changed except with consent of COUNTY unless superintendent proves to be unsatisfactory to Contractor and ceases to be in his employ. Superintendent shall represent Contractor in Contractor's absence, and all directions given to superintendent shall be as binding as if given to Contractor. Other directions shall be so confirmed in written request in each case.

Contractor shall give efficient supervision to work, using Contractor's best skill and attention. Contractor shall carefully study and compare all drawings, specifications and other instructions, and shall at once report to Architect/Engineer any error, inconsistency or omission which Contractor may discover.

Article 41. INSPECTOR'S FIELD OFFICE

Contractor shall provide for use of COUNTY and its representative during construction working hours a temporary office of not less than seventy-five (75) square feet of floor area to be located as directed by COUNTY and its representative and to be maintained until removal is authorized by COUNTY and its representative. Office shall be of substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key, type walk, or padlock hasp.

A table satisfactory for study of plans and two chairs shall be provided by Contractor. Contractor shall provide and pay for adequate electric lights, local telephone service, and adequate air conditioning and heating for the field office until authorized removal.

Article 42. DOCUMENTS ON WORK

Contractor shall keep one copy of all contract documents, including addenda and change orders which are a part of contract documents, on job at all times. Said documents shall be kept in good order and available to Architect/Engineer representatives. Contractor shall be acquainted with and comply with all California Administrative Code provisions relating to this project, including, but not limited to, Title 19.

Article 43. UTILITIES AND RELOCATION

(a) All utilities, including, but not limited to, electricity, water, gas and telephone used on work, shall be furnished and paid for by Contractor. Contractor shall furnish and install necessary temporary distribution systems, including meters if necessary, from distribution points to points on site where utility is necessary to carry on the work. Upon completion of work, Contractor shall remove all temporary systems.

If contract is for addition to existing facility, Contractor may, with written permission of COUNTY, use COUNTY's existing utilities by making prearranged payments to COUNTY for utilities used by Contractor for construction.

- (b) Contractor shall not be assessed damages for delay in completion of the project when such delay was caused by the failure of the awarding authority of this Agreement or the owner of the utility to provide for removal or relocation of the existing main or trunkline utility facilities; however, when the Contractor is aware that removal or relocation of an existing utility has not been provided for, Contractor shall promptly notify the awarding authority and the utility in writing, so that provision for such removal or relocation may be made to avoid and minimize any delay which might be caused by the failure to remove or relocate the main or trunk line utility facilities, or to provide for its removal or relocation.

In accordance with section 4215 of the Government Code, if the Contractor, while performing the contract, discovers any existing main or trunkline utility facilities not identified by the public agency in the contract plans or specifications, Contractor shall immediately notify the public agency and utility in writing. The public utility, where they are the owner, shall have the sole discretion to perform repairs or relocation work at a reasonable price. The Contractor shall be compensated for the costs of locating and 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 specification with reasonable accuracy and for equipment on the project necessarily idled during such work. Such compensation shall be in accordance with the extra work provisions set out at Article 37 hereof.

Article 44. SANITARY FACILITIES

Contractor shall provide a sanitary, temporary, portable toilet facility as directed by the COUNTY and its representative for the use of all workers. The building shall be maintained in a sanitary condition at all times, and shall be left at the site until removal is directed by the COUNTY and its representative.

Article 45. TRENCHES

- (a) Trenching Requirements – Four Feet (4') Below the Surface. In the event the Project involves digging trenches or other excavations that extend deeper than four feet (4') below the surface, Contractor shall:

- (1) Promptly, and before the following conditions are disturbed, notify COUNTY, in writing, of any:
 - (A) Material that Contractor believes may be material that is hazardous waste, as defined in Health & Safety Code section 25117, 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 by information about the site made available to bidders prior to the deadline for submitting bids; and
 - (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 Agreement.

- (2) In response to any written notice generated pursuant to paragraph (a) above,

COUNTY 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 Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a change order under the procedures described in paragraph 37 of the General Conditions.

- (3) In the event that a dispute arises between COUNTY and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Contractor's cost of, or time required for, performance of any part of the Work, Contractor shall not be excused from any scheduled completion date provided for by this Agreement, but shall proceed with all Work to be performed under this Agreement. 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 Parties.
- (b) Trenching Requirements – Project in Excess of Twenty-Five Thousand Dollars (\$25,000) and Five Feet (5') Below the Surface. For projects involving both an estimated expenditure in excess of twenty-five thousand dollars (\$25,000) and the excavation of any trench five feet (5') or more in depth, Contractor shall submit 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. The plan must be accepted by COUNTY (or by a registered civil or structural engineer, employed by COUNTY, to whom authority to accept has been delegated) in advance of excavation. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this paragraph shall allow Contractor to use a shoring, sloping, or protective system less effective than that required by California Construction Safety Orders. Further, nothing in this paragraph shall be construed to impose tort liability on COUNTY or any of its employees.
- (c) Utilities Relocation. In the event that Contractor, in the scope of work, encounters utilities not shown on COUNTY'S plans, COUNTY shall compensate Contractor for utilities relocation work. COUNTY shall also waive liquidated damages for any delay that occurs as a direct result of said encounter and/or relocation of utilities.

Article 46. PROTECTION OF WORK AND PROPERTY

Contractor shall be responsible for all damages to persons or property that occur as a result of Contractor's fault or negligence in connection with the prosecution of this Agreement, and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by COUNTY. All work shall be solely at Contractor's risk. Contractor shall adequately protect adjacent property from settlement or loss of lateral support as provided by law and contract documents. Contractor shall take all necessary precautions for safety of employees on the work, and shall comply with all applicable safety laws and building codes to prevent accidents or injury to persons on; about or adjacent to premises where work is being performed. Contractor shall erect and properly maintain, at all times, as required by conditions and progress of work, all necessary safeguards, signs, barriers, lights and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction. Contractor shall designate a

responsible member of its organization on the work, whose duty shall be prevention of accidents. Name and position of person so designated shall be reported to COUNTY by Contractor.

In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization from COUNTY and its representative, is hereby permitted to act, at Contractor's discretion, to prevent such threatened loss or injury, and Contractor shall so act, without appeal, if so authorized or instructed by COUNTY and its representative. Any compensation claimed by Contractor on account of emergency work shall be determined by agreement.

Contractor shall provide such heat, covering, and enclosures as are necessary to protect all work, materials, equipment, appliances, and tools against damage by weather conditions.

Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, adjoining property and structures, and to avoid damage thereto, and repair any damage thereto caused by construction operations.

Contractor shall:

- (1) Enclose working area with a substantial dust reducing barrier and public safety barricade, and arrange work to cause minimum amount of inconvenience to public and COUNTY Staff in their regular business activities.
- (2) Provide substantial barricades around any shrubs or trees indicated to be preserved.
- (3) Deliver materials to building area over route designated by Architect.
- (4) When directed by COUNTY, take preventative measures to eliminate objectionable dust.
- (5) Confine Contractor's apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect, and shall not unreasonably encumber premises with materials, and enforce all instructions of COUNTY and Architect regarding signs, advertising, fires, danger signals, barricades and smoking, and require that all persons employed on work comply with all regulations while on construction site. Hazardous materials of any kind are not allowed on site, without prior written approval from COUNTY.
- (6) Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved civil engineer at no cost to COUNTY.

Article 47. LAY OUT AND FIELD ENGINEERING

All field engineering required for laying out Contractor's work and establishing grades for earthwork operations shall be furnished by Contractor at Contractor's expenses. Such work shall be done by a qualified civil engineer approved by Architect/Engineer. Any

required “As-Built” drawings of site development shall be prepared by the approved civil engineer.

Article 48. CUTTING AND PATCHING

Contractor shall do all cutting, fitting, or patching of work as required to make its several parts come together properly and fit it to receive or received by work of other Contractors showing upon, or reasonably implied by, the drawings and specifications for the completed structure, and Contractor shall make good after them as Architect/Engineer may direct. Contractor shall not endanger any work by cutting, excavating or otherwise altering work, and shall not cut or alter work of any other Contractor save with consent of Architect/Engineer.

Article 49. CLEANING UP

Contractor at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by work; debris shall be removed from premises. Contractor shall not leave debris under, in or about the premises. Upon completion of work, Contractor shall clean any areas where debris has collected. Contractor shall remove temporary fencing, barricades, and any temporary facilities from site.

Article 50. CORRECTION OF WORK

Contractor shall promptly remove from premises all work determined by COUNTY as failing to conform to contract, whether incorporated or not. Contractor shall promptly replace and re-execute his own work to comply with contract documents without additional expense to COUNTY, and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

If Contractor does not remove such work and materials within a reasonable time, fixed by written notice, COUNTY may remove the work and materials and may store the material at Contractor’s expense. If Contractor does not pay expenses of such removal within ten (10) days’ time thereafter, COUNTY may liquidate such work and materials upon private sale, and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by Contractor.

Article 51. ACCESS TO WORK

COUNTY and its representative shall at all times have access to work wherever it is in preparation or progress. Contractor shall provide safe and proper facilities for such access so that COUNTY's representative may perform their functions under contract.

Article 52. OCCUPANCY

COUNTY reserves the right to occupy buildings at any time before completion, and such occupancy shall not constitute final acceptance of any part of work covered by this Agreement.

Article 53. COUNTY'S INSPECTOR

COUNTY may assign a representative to oversee work. Such representative shall have access to Inspector’s Field Office and shall be fully informed of all progress and manner of work and character of materials. Representative shall have authority to stop work whenever provisions of the contract documents are not being complied with and Contractor

shall instruct Contractor's employees accordingly.

All work shall be under observation of said COUNTY and its representative. Such personnel shall have free access to any or all parts of work at any time. Contractor shall furnish COUNTY and its representative reasonable facilities "Inspector's Field Office" for obtaining such information as may be necessary to keep COUNTY and its representative fully informed respecting progress and manner of work and character of materials. Inspection of work shall not relieve Contractor from any obligation to fulfill Contractor's contract. COUNTY and its representative shall have authority to stop work whenever provisions of contract documents are not being complied with, and Contractor shall instruct Contractor's employees accordingly.

Article 54. TESTS AND INSPECTIONS

If contract, COUNTY's instructions, laws, ordinances or any public authority require any work to be specially tested or approved, Contractor shall give notice in accordance with such authority of its readiness for observation or inspection at least two (2) working days prior to being tested or covered up. If inspection is by authority other than COUNTY, Contractor shall inform COUNTY of the date fixed for such inspection. Required certificates of inspection shall be secured by Contractor. Observations by COUNTY, its representative and other public authority shall be promptly made, and where practicable, at source of supply. If any work should be covered up without approval or consent of COUNTY, its representative and public authority, it must, if required by COUNTY, its representative and public authority, be uncovered for examination and satisfactorily reconstruction at Contractor's expenses in compliance with contract.

Costs of tests of any material found to be not in compliance with contract shall be paid for by Contractor.

Where such inspection and testing are to be conducted by an independent laboratory or agency, such materials or samples of materials to be tested shall be selected by such laboratory or agency or COUNTY's representative, and not by Contractor.

Contractor shall notify COUNTY a sufficient time in advance of manufacture of materials to be supplied by Contractor under contract which must by terms of contract be tested, in order that COUNTY may arrange for testing of same at source of supply. Any materials shipped by Contractor from source of supply prior to having satisfactorily passed such testing and inspection, or prior to receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated in work without prior approval of COUNTY and subsequent testing and inspection.

Re-examination of questioned work may be ordered by COUNTY, and, if so ordered, work must be uncovered by Contractor. If such work be found in accordance with contract documents, COUNTY shall pay costs of re-examination and replacement. If such work be found not in accordance with contract documents, Contractor shall pay such costs.

Article 55. SOILS INVESTIGATION REPORT

When a soils investigation report obtained from test holes in site is available, such report shall not be part of this Agreement. Any information obtained from such report or any information given on drawings as to subsurface soil condition or to elevations of existing

grades or elevations of underlying rock is approximate only and is not guaranteed, and does not form a part of the contract. Contractor is required to make a visual examination of site, and must make whatever tests Contractor deems appropriate to determine underground condition of soil. Contractor agrees that it will make no claim against COUNTY for damages in the event that, during progress of the work, Contractor encounters subsurface or latent conditions at site materially differing from those shown on drawings or indicated in specifications, or for unknown conditions of an unusual nature which differ materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in plans and specifications.

Article 56. ARCHITECT/ENGINEER'S AND CONSTRUCTION MANAGER'S STATUS

The construction manager shall be COUNTY's representative during the construction period, and shall observe the progress and quality of the work on behalf of COUNTY. The construction manager shall have the authority to act on behalf of COUNTY only to the extent expressly provided in the contract documents. The construction manager shall have authority to stop work whenever such stoppage may be necessary in construction manager's reasonable opinion to insure the proper execution of the contracts.

The Architect/Engineer shall be, in the first instance, the judge of compliance with the design intent of the contract documents.

Article 57. INDEMNITIES

- (a) Contractor agrees to the fullest extent permitted by law to indemnify, defend, protect, and hold COUNTY and its representatives, officers, directors, designees, employees, agents, successors, and assigns harmless from any and all claims, expenses, liabilities, causes of action, demands, losses, penalties, attorney's fees and costs, in law or equity, of every kind and nature whatsoever arising out of or in connection with Contractor's negligent acts and omissions or willful misconduct under this Agreement ("Claims"), whether or not arising from the passive negligence of COUNTY, except for Claims that are finally determined to be the result of the sole negligence or willful misconduct of COUNTY.
- (b) Contractor agrees to defend with counsel acceptable to COUNTY, indemnify and hold COUNTY harmless from all Claims, including but not limited to:
 - (1) Personal injury, including but not limited to bodily injury, emotional injury, sickness or disease or death to persons including but not limited to COUNTY's representatives, officers, directors, designees, employees, agents, successors and assigns, subcontractors and other third parties and/or damage to property of anyone (including loss of use thereof) arising out of Contractor's negligent performance of, or willful misconduct surrounding, any of the terms contained in this Agreement, or anyone directly or indirectly employed by Contractor or anyone for whose acts Contractor may be liable;

Liability arising from injuries to Contractor and/or any of Contractor's employees or agents arising out of Contractor's negligent performance of, or willful misconduct surrounding, any of the terms contained in this Agreement, or anyone directly or indirectly employed by Contractor or anyone for whose acts Contractor may be liable;

- (2) Penalties imposed upon account of the violation of any law, order, citation, rule, regulation, standard, ordinance or statute caused by the negligent action or inaction, or willful misconduct of Contractor or anyone directly or indirectly employed by Contractor or anyone for whose acts Contractor may be liable including but not limited to:
 - (A) Any loss of funding, penalties, fees, or other costs resulting from Contractor's failure to adhere to Disadvantaged Business Enterprise requirements and/or goals, as determined by COUNTY or such other lawful entity in charge of monitoring Disadvantaged Business Enterprise compliance;
 - (B) Any loss of funding, penalties, fees, or other costs resulting from Contractor's failure to adhere to prevailing wage requirements, as determined by COUNTY, the California Department of Industrial Relations, or such other lawful entity in charge of monitoring prevailing wage compliance;
 - (3) Infringement of any patent rights which may be brought against COUNTY arising out of Contractor's work;
 - (4) Any violation or infraction by Contractor of any law, order, citation, rule, regulation, standard, ordinance or statute in any way relating to the occupational health or safety of employees; and
 - (5) Any breach by Contractor of the terms, requirements or covenants of this Agreement;
 - (6) Any failure to maintain the insurance policies required by this Agreement or the work performed. Insurance coverage that may be required shall in no way lessen or limit the liability of Contractor hereunder;
 - (7) Any failure on the part of Contractor to satisfy all claims for labor, equipment, materials, and other obligations relating to the performance of the work hereunder; and
 - (8) Any Claims related to the use, generation, storage, release, threatened release, discharge, disposal, or presence of hazardous materials on, under or about the property on which the Project is to be constructed or located.
- (c) The indemnification provisions set forth in this Article 57 shall survive the expiration or termination of the Agreement.

Article 58. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in the contract shall be deemed to be inserted herein, and the contract shall be read and enforced as though it were included herein, and if, through mistake or otherwise, any such provision is

not inserted, or is not correctly inserted, then upon application of either party, the contract shall forthwith be physically amended to make such insertion or correction.

Article 59. LABOR - EMPLOYMENT SAFETY

Contractor shall maintain emergency first aid treatment for Contractor's employees which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A. 651, *et seq.*).

Article 60. NOTICE OF TAXABLE POSSESSORY INTEREST

The terms of this document may result in the creation of a possessory interest. If such a possessory interest is vested in a private party to this document, the private party may be subjected to the payment of personal property taxes levied on such interest.

Article 61. ASSIGNMENT OF UNFAIR BUSINESS PRACTICES CLAIMS (CLAYTON ACT AND CARTWRIGHT ACT)

Bidder shall comply with the following:

"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 acknowledgment by the parties." Cal Pub Contract Code § 7103.5(b)

Article 62. INTENTIONALLY OMITTED

Article 63. NON-DISCRIMINATION AND DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

- (a) During the performance of this Agreement, Contractor and its subcontractors shall not unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition, age (over forty (40)), marital status or denial of family care leave. Contractor and its subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Contractor and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code section 12990 (a-f) *et seq.*) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 *et seq.*). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part hereof as if set forth in full. The applicable regulations of Section 504 of the Rehabilitation Act of 1973 (29

U.S.C. section 794 (a)) are incorporated into this Agreement by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform Work under this Agreement.

- (b) Contractor and its subcontractors shall reference and abide by the guidance and Disadvantaged Business Enterprise specifications contained in the California Department of Transportation's Local Programs Procedures 06-01 (which has been approved and released at <http://www.dot.ca.gov/> when working pursuant to this Agreement.
- (c) Contractor represents and warrants that is has fully read the applicable DBE requirements pertaining to this Project and has fully and accurately completed any and all required DBE forms.
- (d) Contractor represents and warrants that it will comply with all applicable DBE requirements for this Project.
- (e) Contractor shall comply with the applicable DBE provisions attached hereto as Exhibit D and incorporated by this reference as though fully set forth herein.
- (f) If any state or federal funds are withheld from COUNTY or not reimbursed to COUNTY due to Contractor's failure to either comply with the DBE requirements set forth in the RFP and this Agreement, or to meet the mandatory DBE goals as determined by COUNTY, Caltrans, the Federal Highway Administration, and/or any other state or federal agency contributing funds to the Project, then Contractor shall fully reimburse COUNTY the amount of funding lost. COUNTY reserves the right to deduct any such loss in funding from the amount of compensation due to Contractor under this Agreement.
- (g) In addition to the above, Contractor's failure to comply with DBE requirements/goals shall subject it to such sanctions as are permitted by law, which may include, but shall not be limited to the following:
 - a. Termination of this Agreement;
 - b. Withholding monthly progress payments;
 - c. Denial of payment for any portion of the Project that was committed at the time of the execution of this Agreement to be performed by a DBE subcontractor, but was completed by CONTRACTOR or a substitute non-DBE subcontractor;
 - d. Compensatory, special, incidental, liquidated and other damages; and/or
 - e. Designation of CONTRACTOR as "nonresponsible," and disqualification from bidding on future public works projects advertised by COUNTY.

Article 64. SPECIAL CONDITIONS

- (a) The work shall be commenced on the date stated in COUNTY's *Notice to the Contractor to Proceed* which date will not be greater than ten (10) consecutive calendar days from and after the date of execution of the contract, and shall be completed within **one hundred fifty-nine (159) working days** from and after the date stated in such notice. (See Article 2 of *Agreement* and Article 6 of *General Conditions*.)
- (b) The number of copies of drawings and specifications to be furnished to Contractor free of charge, per Article 3 of the *General Conditions* is three (3).
- (c) The number of executed copies of the *Agreement*, the *Performance Bond*, and the *Payment Bond* for the *Public Works* required is six (6).

Article 65. CONTRACT CONSTRUCTION

This Agreement has been reviewed by legal counsel for both COUNTY and Contractor, and no presumption or rule that ambiguities shall be construed against the drafting party shall apply to the interpretation or enforcement of this Agreement and/or any and all amendments thereto.

Article 66. COGNIZANCE OF VIOLATIONS BY COUNTY

- (a) Contractor understands and agrees that COUNTY shall take cognizance of violations of Chapter 1 of Part 7 of Division 2 of the California Labor Code committed in the course of the execution of this Agreement, and shall promptly report any suspected violations to the Labor Commissioner.
- (b) If COUNTY determines as a result of its own investigation that there has been a violation of Chapter 1 of Part 7 of Division 2 of the California Labor Code and withholds payment to Contractor, the procedures in California Labor Code section 1771.6 shall be followed.
- (c) COUNTY may bring an action in a court of competent jurisdiction to recover from Contractor the difference between the wages actually paid to an employee and the wages that were required to be paid to an employee pursuant to Chapter 1 of Part 7 of Division 2 of the California Labor Code, any penalties required to be paid pursuant to Chapter 1 of Part 7 of Division 2 of the California Labor Code, and costs and attorney's fees related to the action, if either of the following is true:
 - (1) COUNTY previously affirmatively represented to Contractor in writing, in the call for bids, or otherwise, that the Work was not a "public work," as defined in Chapter 1 of Part 7 of Division 2 of the California Labor Code; or
 - (2) COUNTY received actual written notice from the Department of Industrial Relations that the Work is a "public work," as defined in Chapter 1 of Part 7 of Division 2 of the California Labor Code, and failed to disclose that information to Contractor before the bid opening or award.

Article 67. LABOR STANDARDS COMPLIANCE REQUIREMENTS

- (a) It is Contractor's responsibility to provide all labor compliance documentation from its subcontractors completely and accurately in a timely manner. Contractor is responsible to review promptly and then forward on all required documentation to COUNTY per the time schedules in the Labor Compliance Handout. Included with the Labor Compliance Handout, COUNTY will provide training, documentation requirements, forms, etc., at the preconstruction conference or at a time designated by COUNTY.

For those Public Works Projects that are subject to the State Department of Industrial Relations (DIR), Division of Labor Standards Enforcement (DLSE) compliance monitoring and enforcement it is the Contractor's responsibility to submit certified payroll records directly to the state Compliance Monitoring Unit (CMU). More information concerning state compliance can be found at <https://www.dir.ca.gov/Public-Works/publicworks.html>. The responsibility for compliance with these provisions is fixed with the Contractor.

- (b) In the event, during the review process of labor compliance documentation from COUNTY's labor compliance monitor, inaccurate, missing or incomplete information was provided, the labor compliance monitor will request from Contractor the items, revisions and documentation needed. The cost of this additional labor compliance enforcement shall be borne by Contractor.

Article 68. CONFLICT OF INTEREST AND GRATUITIES

- (a) Contractor agrees that it presently has no interest and shall not acquire any interest, direct or indirect, which could conflict in any manner or degree with the performance of services required to be performed under this Agreement. Contractor further agrees that in the performance of this Agreement, no person having any such interest shall be employed.
- (b) Contractor agrees to designate such person or persons who have responsibility for carrying out the services under this Agreement and that such person or persons as may be designated shall take any and all actions necessary to comply with COUNTY's Conflict of Interest Code adopted pursuant to California Government Code section 81000 to the extent required thereunder.
- (c) If it is found, after notice and hearing by COUNTY, that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by Contractor, or any agent or representative of Contractor, to any officer, employee or agent of COUNTY with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performance of this Agreement, COUNTY may, by written notice to Contractor, terminate the right of Contractor to proceed under this Agreement and/or may pursue such other rights and remedies provided by law or under this Agreement.
- (d) In the event this Agreement is terminated as provided herein, COUNTY shall be entitled (1) to pursue the same remedies against Contractor as it could pursue in the event of a breach of the Agreement by Contractor, and (2) as a penalty in addition to

any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by COUNTY) which shall be not less than three (3) nor more than ten (10) times the costs incurred by Contractor in providing any such gratuities to any such officer, employee or agent.

Article 69. FEDERAL CONTRACT REQUIREMENTS

(a) Signage Requirements.

(1) Project Identity Signage. Contractor is required to provide and install the required project identity signage as detailed in the Plans and Specifications, in the size and at the location indicated by the Director of Public Works or his/her designee, and to maintain the signage in good condition for the duration of the Project. The signage may not be removed until the Notice of Completion is recorded or by written direction of the Director of Public Works or his/her designee.

(2) Required Employee Signage and Posters. Contractor is required to provide and install the Federal and State required employee posters and the required material pertaining to the required labor standards provisions are posted (including, but not limited to, WH-1321, OSHA 3165 and OFCCP-English, EFCCP-Spanish) at the worksite in a prominent and accessible place.

(3) Section 3 Compliant Signage. If required by COUNTY, Contractor is directed to provide and install the "Offer for Employment" signage as detailed in the Plans and Specifications in the size and at the location indicated by the Director of Public Works or his/her designee and to maintain the signage in good condition for the duration of the Project. The signage may not be removed until the Notice of Completion is recorded or by written direction of the Director of Public Works or his/her designee.

(b) Housing And Urban Development Act Compliance. When applicable, Contractor agrees to comply with Section 3 of the Housing and Urban Development Act of 1968 (42 U.S.C. 3601 *et seq.*) which provides that to the greatest extent feasible, Contractor shall provide job training, employment and contracting opportunities for low- or very-low income residents in connection with the Project. The responsibility for compliance with these provisions is fixed with Contractor.

(c) Copeland "Anti-Kickback" Act Compliance. When applicable, Contractor agrees to comply with the Copeland Act (18 USC §874 and 40 USC §276c; 29 CFR Part 3) which precludes Contractor and its subcontractors from in any way inducing an employee to give up any part of the compensation to which he or she is entitled under his or her contract of employment. Contractor and its subcontractors shall submit a weekly statement of the wages paid to each employee performing on covered work during the preceding payroll period. Contractor understands and agrees that should Contractor its subcontractors induce an employee working on a covered contract to give up any part of the compensation to which he or she is entitled, the inducing party may be subject to a five thousand dollar (\$5,000) fine, or imprisonment for up to five (5) years, or both. Contractor also understands and agrees that willful falsification of

the statement of compliance may subject the employer to civil or criminal prosecution and may be cause for contract termination or debarment. The responsibility for compliance with these provisions is fixed with Contractor.

- (d) Fair Labor Standards Act Compliance. When applicable, Contractor agrees to comply with the Fair Labor Standards Act of 1938 as amended (29 U.S.C. 201 *et seq.*) which establishes minimum wage, overtime pay, recordkeeping, and youth employment standards affecting full-time and part-time workers on the Project. The responsibility for compliance with these provisions is fixed with Contractor.
- (e) Certification Regarding Debarment, Suspension and Other Responsibility Matters. When applicable, Contractor agrees to execute a certification regarding debarment, suspension and other responsibility matters. The responsibility for compliance with this provision is fixed with Contractor.
- (f) Federal Equal Employment Opportunity Construction Contract Specifications. When applicable, Contractor agrees to incorporate the notice set forth in paragraph (d) of 41 C.F.R. 60-4.2 relating to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications." The responsibility for compliance with this provision is fixed with Contractor.
- (g) Clean Air Act and the Federal Water Pollution Control Act. When applicable, Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 *et seq.*), the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 *et seq.*), Presidential Executive Order 11738 and Environmental Protection Agency regulations set forth at 40 C.F.R. Part 15. Contractor understands and agrees that violations shall be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency. The responsibility for compliance with these provisions is fixed with Contractor.
- (h) Prohibition on the Use of Federal Funds for Lobbying. When applicable, Contractor shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. The responsibility for compliance with this provision is fixed with Contractor.
- (i) Federal Employment Eligibility Verification. Contractor shall verify name, date of birth and social security number, along with immigration information for non-citizens in order to verify the identity and employment eligibility of both citizen and non-citizen new hires. The responsibility for compliance with this provision is fixed with Contractor.
- (j) The Civil Rights, HCD and Age Discrimination Act Assurances. During the performance of this Agreement, Contractor assures that no otherwise qualified person

shall be excluded from participation or employment, denied program benefits or be subjected to discrimination based on race, color, national origin, gender, age or handicap, under any program or activity funded by this Agreement, as required by Title VI of the Civil Rights Act of 1964, Title I of the Housing and Community Development Act of 1974, as amended, and the Age Discrimination Act of 1975, and all implementing regulations. The responsibility for compliance with these provisions is fixed with Contractor.

(k) Standard Equal Opportunity Clause.

(1) Contractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause.

“During the performance of this Agreement, the Contractor agrees as follows:

- (A) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or disabilities. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (B) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin or disabilities.
- (C) The Contractor will send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers’ representatives of the Contractor’s commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (D) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

- (E) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (F) In the event of the Contractor's noncompliance with the discrimination clauses of this Agreement or with any of the said rules, regulations, or orders, this Agreement may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
- (G) The Contractor will include the portion of the sentence immediately preceding paragraph "1" and the provisions of paragraphs "1" through "7" in every contract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 504 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each contractor or vendor. The Contractor will take such action with respect to any contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a contractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States."
 - (1) Contractor further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally-assisted construction work; provided that if Contractor so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government which does not participate in work on or under the Agreement.
 - (2) Contractor agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the Department and HUD and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

- (3) Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, government contracts and federally-assisted construction contracts, pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, Contractor agrees that if it fails or refuses to comply with these undertakings, COUNTY may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this funding commitment (contract, loan, grant, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such Contractor; and refer the case to the Department of Justice for appropriate legal proceedings.

Article 70. INELIGIBILITY

If the Bidder has been deemed ineligible to perform work on public works projects pursuant to Labor Code Sections 1777.1 or 1777.7, then it shall be prohibited from bidding on, being awarded a contract for, or performing work as a subcontractor on this project, or any other public works project within the state of California.

Article 71. RESOLUTION OF CLAIMS

- (a) Compliance with all change order procedures is a prerequisite to filing a Public Contract Code Claim pursuant to this Section. Claims must be submitted no later than (a) 30 days after the dispute resolution process set forth in Section 5-1.43 is complete or (b) 30 days after the occurrence of the event giving rise to the claim.
- (b) In accordance with the procedures set forth in Public Contract Code Sections 9204 and 20104-20104.6, a Contractor may submit a claim by registered or certified mail with return receipt requested for one or more of the following: (a) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the County; (b) payment by the County of money or damages arising from work done by, or on behalf of, the Contractor pursuant to this Agreement and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled; or (c) payment of an amount that is disputed by the County.
- (c) The Contractor shall furnish reasonable documentation to support the claim, including, but not limited to: 1) a clear concise recital of the basis upon which the claim is asserted, including a designation of the provisions of the Contract upon which the claim is based. 2) a statement as to the amount of time and/or compensation sought pursuant to the claim; 3) whether the Contractor's claim arises from an ongoing occurrence, and if so a description of the specific work activities affected by the claim, 4) a time impact analysis in the event that Contractor request a time extension, 5) full and complete cost records supporting the amount of any claim for additional

compensation, and 6) a notarized certification by the Contractor as follows: "Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code Section 12650 et seq. The undersigned hereby certifies that the information contained herein is a true, accurate and complete statement of all features relating to the claim asserted." Failure by the Contractor to provide sufficient documentation will result in denial of the claim. The County reserves the right to request additional documentation, or clarification of the documentation provided.

- (d) Upon receipt of a claim, the County will conduct a reasonable review and provide a written statement to the Contractor identifying what portion of the claim is disputed and what portion is undisputed within 45 days of receipt of the claim. The County and Contractor may, by mutual agreement, extend the 45 day time period. For any undisputed portion of a claim, the County must make payment within 60 days of its issuance of the written statement.
- (e) If the Contractor disputes the County's written statement, or if the County fails to respond, the Contractor may demand an informal conference to meet and confer for the settlement of the issues in dispute. The County will then schedule the meet and confer conference within 30 days of the demand. Within 10 business days following the meet and confer conference. The County will provide a written statement identifying the portion of the claim that remain in dispute. Any payment due on an undisputed portion of the claim will be made within 60 days of the meet and confer conference.
- (f) After the meet and confer conference, any disputed portion of the claim shall be submitted to non-binding mediation. Alternatively, upon receipt of a claim, the parties may mutually agree to waive in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration as applicable, if mediation is unsuccessful, the parts of the claim that remain in dispute shall be subject to applicable procedures set forth below.
- (g) Failure of a public entity to respond to a claim within the time periods described above shall result in the claim being deemed rejected in its entirety. Additionally amounts not paid in a timely manner shall bear interest at 7 percent per year.
- (h) In the event that the mediation is unsuccessful, Contractor must file a government claim pursuant to Government Code Sections 910 et seq. in order to initiate a civil action.
- (i) In any civil action filed to resolve claims, the court shall submit the matter to nonbinding mediation within 60 days following the filing or responsive pleading provided that the parties have not already participated in mediation of the claim as outlined above. If the matter remains in dispute after nonbinding mediation, the court shall submit the matter to judicial arbitration pursuant to the Code of Civil Procedure Section 1141.10 et seq. If the matter remains in dispute after judicial arbitration, the County or the Contractor may request a trial de novo.

Article 72. ATTORNEYS FEES AND COSTS

If either Party herein brings an action to enforce the terms thereof or to declare rights hereunder, the prevailing Party in any such action, on trial or appeal, shall be entitled to reasonable attorneys' fees as fixed by the court and actual costs to be paid by the losing Party.

EXHIBIT “I”

SAMPLE AGREEMENT FOR CONSTRUCTION SERVICES

**COUNTY OF IMPERIAL BEHAVIORAL HEALTH SERVICES (BHS) EL
CENTRO MENTAL HEALTH TRIAGE AND ENGAGEMENT SERVICES
EXPANSION LOCATED AT 202 N. 8TH STREET, EL CENTRO, CA 92243**

COUNTY PROJECT NO: SR6309BH (BHCIP – B4 236)

1 **AGREEMENT FOR CONSTRUCTION SERVICES**

2 «Contractor_Business_Name»

3 THIS AGREEMENT FOR CONSTRUCTION SERVICES (“Agreement”), made and entered
4 into effective the ____ day of _____, 2026, by and between the COUNTY OF IMPERIAL, a
5 political subdivision of the State of California, through its Department of Public Works (“COUNTY”)
6 and «Contractor_Business_Name», a «Contractor_Business_Type» licensed to do business within
7 the state of California (“CONTRACTOR”) (individually, “Party;” collectively, “Parties”) shall be as
8 follows:

9 **RECITALS**

10 **WHEREAS**, COUNTY and Advocates for Human Potential, Inc., a Massachusetts corporation
11 (“AHP”), acting as program administrator for the California Department of Health Care Services
12 (“DHCS”), a public agency of the State of California, have entered into that certain Program Funding
13 Agreement dated **02/12/2024** (“PFA”), pursuant to which COUNTY was awarded Behavioral Health
14 Continuum Infrastructure Program (“BHCIP”) grant funds for the purposes of developing the El
15 Centro Mental Health Triage and Engagement Services Expansion Project located at 202 N. 8th Street,
16 El Centro, CA 92243; County Project No. SR6309BH (BHCIP – B4236) (“Project”); and

17 **WHEREAS**, COUNTY desires to retain a qualified individual, firm or business entity to
18 provide professional construction services for the construction of the Project; and

19 **WHEREAS**, COUNTY wishes to engage CONTRACTOR for performance of such services as
20 are provided for herein and CONTRACTOR is willing to accept such engagement.

21 **NOW, THEREFORE**, COUNTY and CONTRACTOR have and hereby agree to the
22 following:

23 **1. DEFINITIONS.**

24 **1.1.** “Invitation for Bid” or “IFB” shall mean the document entitled, “«Name_of_RFP»,”
25 dated «Date_of_RFP», which includes the Project Manual and all special notices,
26 addendums, exhibits thereto, and Plans and Specifications as defined in Paragraph 1.3.
27 The Invitation for Bid is attached hereto as **Exhibit “A”** and incorporated in the
28 Agreement as though fully set forth herein.

1 1.2. "Proposal" shall mean CONTRACTOR's document entitled "«Name_of_Proposal»,"
2 dated «Date_of_Proposal» and submitted to the Clerk of the Board. The Proposal is
3 attached hereto as **Exhibit "B"** and incorporated in the Agreement as though fully set
4 forth herein.

5 1.3. "Plans and Specifications" shall mean the plans and specifications approved by the
6 Director of Public Works, or his/her designee, for Project Number «Project_Number».
7 While COUNTY is responsible for the completeness and accuracy of the Plans and
8 Specifications for the Project, CONTRACTOR is required to review the Plans and
9 Specifications and promptly report any errors or omissions to COUNTY.

10 2. **CONTRACT COORDINATION.**

11 2.1. The Director of Public Works or his/her designee shall be the representative of
12 COUNTY for all purposes under this Agreement. The Director of Public Works or
13 his/her designee is hereby designated as the Contract Manager for COUNTY. He/she
14 shall supervise the progress and execution of this Agreement.

15 2.2. CONTRACTOR shall assign a single Contract Manager to have overall responsibility
16 for the progress and execution of this Agreement. The Contract Manager shall be
17 <<INSERT NAME>>. Should circumstances or conditions subsequent to the execution
18 of this Agreement require a substitute Contract Manager for any reason, the Contract
19 Manager designee shall be subject to the prior written acceptance and approval of
20 COUNTY's Contract Manager.

21 3. **SCOPE OF WORK TO BE PERFORMED BY CONTRACTOR.**

22 3.1. CONTRACTOR shall furnish all work, labor, tools, equipment, materials, supervision,
23 scheduling, coordination and contract administration necessary to construct and
24 complete the Project in a good, expeditious, workman-like and substantial manner
25 under the terms of and in full and complete compliance with this Agreement ("Work").
26 CONTRACTOR shall be responsible to COUNTY for the acts or omissions of its
27 consultants, engineers, subcontractors, suppliers, vendors, and employees with respect
28 to the Work performed hereunder.

1 **3.2.** CONTRACTOR shall comply with and perform work consistent with all terms,
2 conditions and requirements of the Plans, Specifications, the Invitation for Bids and this
3 Agreement.

4 **3.3.** All described work shall be constructed, installed, placed and performed in
5 conformance with the Plans and Specifications and all Special Provisions contained
6 therein and as directed by COUNTY’s engineer.

7 **3.4.** CONTRACTOR shall perform such other tasks as necessary and proper for the full
8 performance of the obligations assumed by CONTRACTOR hereunder; including but
9 not limited to any additional work or change orders agreed upon pursuant to written
10 authorization as described in Section 5. Proposed additional work or change order
11 requests, when applicable, will be attached and incorporated herein under **Exhibit “B”**
12 (as “B-1,” “B-2,” etc.).

13 **4. REPRESENTATIONS BY CONTRACTOR.**

14 **4.1.** CONTRACTOR understands and agrees that COUNTY has limited knowledge in the
15 construction specified in the description of work. CONTRACTOR has represented
16 itself to be expert in these fields and understands that COUNTY is relying upon such
17 representation.

18 **4.2.** CONTRACTOR represents and warrants that it is a lawful entity possessing all required
19 licenses and authorities to do business in the State of California and perform all aspects
20 of this Agreement.

21 **4.3.** CONTRACTOR shall not commence any work under this Agreement or provide any
22 other services, or materials, in connection therewith until CONTRACTOR has received
23 written authorization from the Director of Public Works, or his/her designee (“Notice to
24 Proceed”) to do so.

25 **4.4.** CONTRACTOR represents and warrants that the people executing this Agreement on
26 behalf of CONTRACTOR have the authority of CONTRACTOR to sign this
27 Agreement and bind CONTRACTOR to the performance of all duties and obligations
28 assumed by CONTRACTOR herein.

1 **4.5.** CONTRACTOR represents and warrants that any employee, contractor, subcontractor
2 and agent who will be performing any of the duties and obligations of CONTRACTOR
3 herein possess all required licenses and authorities, as well as the experience and
4 training, to perform such tasks.

5 **4.6.** CONTRACTOR represents and warrants that the information contained in its Proposal
6 are true and correct.

7 **4.7.** CONTRACTOR understands that COUNTY considers the representations made herein
8 to be material and would not enter into this Agreement with CONTRACTOR if such
9 representations were not made.

10 **4.8.** Retention and Access of Books and Records. CONTRACTOR represents and warrants
11 that it shall maintain books, records, documents, reports and other materials developed
12 under this Agreement as follows:

13 **4.8.1.** CONTRACTOR shall hold and possess as the property of COUNTY all papers,
14 books, files, correspondence and other records of all kinds which at any time
15 shall come into its possession or under its control relating only to services
16 performed by CONTRACTOR under this Agreement for a minimum period of
17 five (5) years, or for any longer period required by law, from the date said
18 papers came into the possession of CONTRACTOR pursuant to this Agreement.

19 **4.8.2.** Any records or documents required to be maintained by CONTRACTOR
20 pursuant to this Agreement shall be made available to COUNTY for inspection
21 or audit, at any time during CONTRACTOR's regular business hours provided
22 COUNTY provides CONTRACTOR with seven (7) days advanced written or
23 oral notice. Copies of such documents shall, at no cost to COUNTY, be
24 provided to COUNTY for inspection at CONTRACTOR's address indicated for
25 receipt of notices under this Agreement.

26 **4.8.3.** CONTRACTOR shall surrender all papers maintained by CONTRACTOR
27 pursuant to Subparagraph 6.8.1 of this Agreement within thirty (30) days of
28 termination of this Agreement.

1 **4.9.** CONTRACTOR represents and warrants that it has not been engaged by, nor will it be
2 engaged by and owes no duty of performance to any other person or entity that would
3 constitute a conflict. For breach or violation of this warranty, COUNTY shall amongst
4 other remedies at law, have the right to terminate this Agreement without liability, or at
5 its sole discretion, to deduct from the Agreement price or consideration, or otherwise
6 recover the full amount of such fee, commission, percentage brokerage fee, gift or
7 contingent fee paid or received from another entity or person.

8 **4.10.** CONTRACTOR shall perform pursuant to this Agreement in accordance with and in
9 full compliance with all applicable Federal, State and local statutes, rules, regulations
10 and policies and procedures, regardless of whether they are expressly set forth in this
11 Agreement. It is understood that in the event COUNTY is investigated or audited by
12 any State or Federal governmental agency, or any other recognized
13 investigative/auditing entity, CONTRACTOR shall fully cooperate with such agencies'
14 reasonable and lawful request for information.

15 **4.11.** CONTRACTOR represents and warrants that it will construct the Project in accordance
16 with general industry standards and shall use building materials of a quality suitable for
17 the requirements of the Project and conforming to general industry standards.

18 **5. TERM OF AGREEMENT.**

19 This Agreement shall commence on the date first written above and shall remain in effect until
20 the services provided as outlined in Section 3, (“SCOPE OF WORK TO BE PERFORMED BY
21 CONTRACTOR”), have been completed, unless otherwise terminated as provided for in this
22 Agreement.

23 **6. COMPENSATION.**

24 The total compensation payable under this Agreement shall be in accordance with the item
25 prices incorporated within the Proposal submitted by CONTRACTOR for labor, materials and all other
26 services related to the performance of this Agreement, attached hereto as **Exhibit “B”** and
27 incorporated herein as though fully set forth. The total compensation payable under this Agreement
28 shall not exceed «**Cost_of_Original_Contract**».

1 **7. PAYMENT AND RETENTION OF FUNDS.**

2 COUNTY shall pay CONTRACTOR for completed and approved services upon presentation
3 and approval of its itemized billing, subject to the following.

4 **7.1. Retention.**

5 **7.1.1.** In accordance with Cal. Pub. Contract Code §§ 7201 and 9203, COUNTY shall
6 generally retain five percent (5%) of the total compensation payable under this
7 Agreement until the Work to be performed has been completed in accordance
8 with this Agreement, as determined by COUNTY, and payment in full of all of
9 CONTRACTOR's subcontractors has been certified.

10 **7.1.2.** The 5% retention amount may be exceeded if the COUNTY's Board of
11 Supervisors has approved a finding, during a properly noticed and normally
12 scheduled public hearing conducted either prior to or concurrent with
13 authorizing this Project to go out to bid, that the Project is substantially complex
14 and therefore requires a higher retention amount than 5%. Should the retention
15 amount exceed 5% for this Project, then the actual retention amount will be
16 listed in the Plans and Specifications, along with the findings justifying the
17 increased retention amount.

18 **7.2. Substitution of Retention.**

19 **7.2.1.** CONTRACTOR may elect to substitute securities for any retention of funds by
20 COUNTY to ensure performance under this Agreement. At the request and
21 expense of CONTRACTOR, securities equivalent to the amount retained shall
22 be deposited with the COUNTY, or with a state or federally chartered bank in
23 this state as the escrow agent, who shall then return the securities to
24 CONTRACTOR once the Work to be performed has been completed in
25 accordance with this Agreement, as determined by COUNTY, and payment in
26 full of all of CONTRACTOR's subcontractors has been certified.

27 **7.2.2.** Alternatively, CONTRACTOR may request and COUNTY shall make payment
28 of retentions earned directly to the escrow agent at the expense of

1 CONTRACTOR. CONTRACTOR, at its sole cost and expense, may direct the
2 investment of the payments into securities, and CONTRACTOR shall receive
3 the interest earned on the investments upon the same terms provided for in this
4 Section for securities deposited by CONTRACTOR. Once the Work to be
5 performed has been completed in accordance with this Agreement, as
6 determined by COUNTY, and payment in full of all of CONTRACTOR's
7 subcontractors has been certified, CONTRACTOR shall receive from the
8 escrow agent all securities, interest, and payments received by the escrow agent
9 from COUNTY, pursuant to the terms of this Section.

10 **7.2.3.** Securities eligible for investment under this Section shall include those listed in
11 Cal. Gov. Code § 16430, bank or savings and loan certificates of deposit,
12 interest-bearing demand deposit accounts, standby letters of credit, or any other
13 security mutually agreed to by COUNTY and CONTRACTOR.
14 CONTRACTOR shall be the beneficial owner of any securities substituted for
15 retained funds and shall receive any interest thereon.

16 **7.2.4.** Substitution of securities shall be conducted through an Escrow Agreement
17 substantially similar to that found in Cal. Pub. Contract Code § 22300(f).

18 **7.2.5.** Notwithstanding any other provision in this Section, substitution of securities is
19 prohibited where funding for the Project, in whole or in part, will be provided by
20 the Farmers Home Administration of the United States Department of
21 Agriculture pursuant to the Consolidated Farm and Rural Development Act (7
22 U.S.C. Sec. 1921 et seq.), or where otherwise disallowed by federal law.

23 **8. METHOD OF PAYMENT.**

24 **8.1.** CONTRACTOR shall at any time prior to the fifth (5th) day of any month, submit to
25 COUNTY's Director of Public Works or his/her designee, a complete and accurate
26 written claim for compensation for services performed. The claim shall be in a format
27 approved by COUNTY. COUNTY shall make no payment prior to the claims being
28 approved in writing by the Director of Public Works or his/her designee.

1 **8.2.** After determining that the claim is a proper payment request, the Director of Public
2 Works, or his/her designee, shall submit to COUNTY's Auditor/Controller undisputed
3 and properly submitted claims approved for payment within ten (10) days following the
4 date the claim was submitted to his/her Department.

5 **8.3.** CONTRACTOR may expect to receive payment within a reasonable time thereafter and
6 in any event in the normal course of business within fifteen (15) days after the
7 undisputed and properly submitted claim is submitted. Notwithstanding the foregoing,
8 and due to the funding restrictions imposed pursuant to the PFA, in no event shall the
9 COUNTY have any obligation to make any payment after June 30, 2027.

10 **8.4.** Any claim determined to be an improper payment request shall be returned to
11 CONTRACTOR as soon as practicable, but not later than seven (7) days, after receipt
12 with a written explanation as to why the claim is an improper request for payment.

13 **8.5.** In order for prompt payment to be made by COUNTY pursuant to Public Contract Code
14 §20104.50, CONTRACTOR must properly fill out all written claims for compensation
15 for services performed.

16 **8.6.** COUNTY shall pay interest at the legal rate set forth in Code of Civil Procedure
17 §685.010 in the event payment is not made within thirty (30) days of an undisputed
18 properly submitted request.

19 **9. INDEPENDENT CONTRACTOR.**

20 **9.1.** In all situations and circumstances arising out of the terms and conditions of this
21 Agreement, CONTRACTOR is an independent contractor, and as an independent
22 contractor, the following shall apply:

23 **9.1.1.** CONTRACTOR is not an employee or agent of COUNTY and is only
24 responsible for the requirements and results specified by this Agreement.

25 **9.1.2.** CONTRACTOR shall be responsible to COUNTY only for the requirements
26 and results specified by this Agreement and except as specifically provided in
27 this Agreement, shall not be subject to COUNTY's control with respect to the
28 physical actions or activities of CONTRACTOR in fulfillment of the

1 requirements of this Agreement.

2 **9.1.3.** CONTRACTOR is not, and shall not be, entitled to receive from, or through,
3 COUNTY, and COUNTY shall not provide, or be obligated to provide,
4 CONTRACTOR with Worker's Compensation coverage or any other type of
5 employment or worker insurance or benefit coverage required or provided by
6 any Federal, State or local law or regulation for, or normally afforded to, an
7 employee of COUNTY.

8 **9.1.4.** CONTRACTOR shall not be entitled to have COUNTY withhold or pay, and
9 COUNTY shall not withhold or pay, on behalf of CONTRACTOR, any tax or
10 money relating to the Social Security Old Age Pension Program, Social Security
11 Disability Program, or any other type of pension, annuity, or disability program
12 required or provided by any Federal, State or local law or regulation.

13 **9.1.5.** CONTRACTOR shall not be entitled to participate in, or receive any benefit
14 from, or make any claim against any COUNTY fringe benefit program,
15 including, but not limited to, COUNTY's pension plan, medical and health care
16 plan, dental plan, life insurance plan, or any other type of benefit program, plan,
17 or coverage designated for, provided to, or offered to COUNTY's employee.

18 **9.1.6.** COUNTY shall not withhold or pay, on behalf of CONTRACTOR, any Federal,
19 State, or local tax, including, but not limited to, any personal income tax, owed
20 by CONTRACTOR.

21 **9.1.7.** CONTRACTOR is, and at all times during the term of this Agreement shall
22 represent and conduct itself as, an independent contractor, not an employee of
23 COUNTY.

24 **9.1.8.** CONTRACTOR shall not have the authority, express or implied, to act on
25 behalf of, bind or obligate COUNTY in any way without the written consent of
26 COUNTY.

27 **10. WORKERS' COMPENSATION CERTIFICATION.**

28 **10.1.** Prior to the commencement of work, CONTRACTOR shall sign and file with

1 COUNTY the following certification: “I am aware of the provisions of California Labor
2 Code §§3700 et seq. which require every employer to be insured against liability for
3 workers’ compensation or to undertake self-insurance in accordance with the provisions
4 of that code, and I will comply with such provisions before commencing the
5 performance of the work of this contract.”

6 **10.2.** This certification is included in this Agreement and signature of the Agreement shall
7 constitute signing and filing of the certificate.

8 **10.3.** CONTRACTOR understands and agrees that any and all employees, regardless of hire
9 date, shall be covered by Workers’ Compensation pursuant to statutory requirements
10 prior to beginning work on the Project.

11 **10.4.** If CONTRACTOR has no employees, initial here: _____.

12 **11. TERMINATION FOR CONVENIENCE.**

13 COUNTY may terminate this Agreement at any time by giving written notice at least thirty
14 (30) days in advance, In the event of termination hereunder, CONTRACTOR shall immediately stop
15 all Work and make reasonable efforts to incur no additional costs. CONTRACTOR shall be paid in
16 accordance with the terms of this Agreement for services provided and accepted by COUNTY prior to
17 the effective date of such termination.

18 **12. ENTIRE AGREEMENT.**

19 This Agreement contains the entire agreement between COUNTY and CONTRACTOR
20 relating to the transactions contemplated hereby and supersedes all prior or contemporaneous
21 agreements, understandings, provisions, negotiations, representations, or statements, either written or
22 verbal.

23 **13. MODIFICATION.**

24 No modification, waiver, amendment, discharge, or change of this Agreement shall be valid
25 unless the same is in writing and signed by the Party against whom the enforcement of such
26 modification, waiver, amendment, discharge, or change is or may be sought.

27 **14. CAPTIONS.**

28 Captions in this Agreement are inserted for convenience of reference only and do not define,

1 describe or limit the scope or the intent of this Agreement or any of the terms thereof.

2 **15. PARTIAL INVALIDITY.**

3 If any provision in this Agreement is held by a court of competent jurisdiction to be invalid,
4 void, or unenforceable, the remaining provisions will nevertheless continue in full force without being
5 impaired or invalidated in any way.

6 **16. GENDER AND INTERPRETATION OF TERMS AND PROVISIONS.**

7 Words and expressions in the masculine gender include the feminine and neuter genders.
8 Words and expressions in the singular include the plural and words and expressions in the plural
9 include the singular. CONTRACTOR as used in this Agreement or in any other document referred to
10 in or made a part of this Agreement shall likewise include both singular and the plural, a corporation, a
11 partnership, individual, firm or person acting in any fiduciary capacity as executor, administrator,
12 trustee or in any other representative capacity or any other entity. All covenants herein contained on
13 the part of CONTRACTOR shall be joint and several if more than one person, firm or entity executes
14 the Agreement.

15 **17. WAIVER.**

16 No waiver of any breach or of any of the covenants or conditions of this Agreement shall be
17 construed to be a waiver of any other breach or to be consent to any further or succeeding breach of the
18 same or any other covenant or condition.

19 **18. CHOICE OF LAW.**

20 The laws of the State of California shall govern this Agreement. This Agreement is made and
21 entered into in Imperial County, California. Any action brought by either Party with respect to this
22 Agreement shall be brought in a court of competent jurisdiction within said County.

23 **19. AUTHORITY.**

24 **19.1.** Each individual executing this Agreement on behalf of CONTRACTOR represents and
25 warrants that:

26 **19.1.1.** He/She is duly authorized to execute and deliver this Agreement on behalf of
27 CONTRACTOR;

28 **19.1.2.** Such execution and delivery is in accordance with the terms of the Articles of

1 Incorporation or Partnership, any by-laws or Resolutions of CONTRACTOR
2 and;

3 **19.1.3.** This Agreement is binding upon CONTRACTOR in accordance with its terms.

4 **19.2.** CONTRACTOR shall deliver to COUNTY evidence acceptable to COUNTY of the
5 foregoing within thirty days of execution of this Agreement.

6 **20. COUNTERPARTS.**

7 This Agreement and any subsequent modifications may be executed in any number of
8 counterparts, each of which when executed shall be an original, and all of which together shall
9 constitute one and the same Agreement. No counterparts shall be effective until all Parties have
10 executed a counterpart hereof.

11 **21. TIMING.**

12 The Parties agree that time is of the essence in the performance of this Agreement.

13 **22. REVIEW OF AGREEMENT TERMS.**

14 **22.1.** Each Party has had the opportunity to receive independent legal advice from its
15 attorneys with respect to the advisability of making the representations, warranties,
16 covenants and agreements provided for herein, and with respect to the advisability of
17 executing this Agreement.

18 **22.2.** Each Party represents and warrants to and covenants with the other Party that:

19 **22.2.1.** This Agreement in its reduction to final written form is a result of extensive
20 good faith negotiations between the Parties and/or their respective legal counsel;

21 and

22 **22.2.2.** The Parties and/or their legal counsel have carefully reviewed and examined this
23 Agreement for execution by said Parties.

24 **22.3.** Any statute or rule of construction that ambiguities are to be resolved against the
25 drafting party shall not be employed in the interpretation of this Agreement.

26 **23. INCORPORATION OF GENERAL TERMS AND EXHIBITS; ORDER OF**
27 **PRECEDENCE.**

28 **23.1.** The following documents, in addition to those documents incorporated by reference

1 above, are hereby incorporated into this Agreement as though set forth in their entirety
2 herein:

3 **23.1.1.** Any addenda issued in connection with the IFB; and

4 **23.1.2.** Any Change Order issued in compliance with this Agreement.

5 **23.1.3.** Exhibit II, General Contractor’s Certification No. 12 Prevailing Wage

6 **23.1.4.** Exhibit III, Sales Tax Condition

7 **23.1.5.** Exhibit IV, Limited Asbestos and Lead Paint Report

8 **23.1.6.** Exhibit V, Vapor Study Report

9 **23.1.7.** Exhibit VI, Technical Specs

10 **23.1.8.** Exhibit IX, Project Plans

11 **23.1.9.** Exhibit X, CONTRACTOR’s Certificates of Insurance

12 **23.2.** In the event of any conflict or inconsistency between any terms of the Agreement and
13 any document incorporated herein, the order of precedence shall be as follows:

14 **23.2.1.** The PFA

15 **23.2.2.** Exhibit II, California BHCIP Attachment 1

16 **23.2.3.** Any Change Order issued in compliance with this Agreement

17 **23.2.4.** This Agreement

18 **23.2.5.** Any addenda issued in connection with the IFB

19 **23.2.6.** Exhibit VI, Technical Specs

20 **23.2.7.** Exhibit B, CONTRACTOR’s Proposal

21 **24. APPENDIX E OF THE TITLE VI ASSURANCES.**

22 During the performance of this contract, the CONTRACTOR, for itself, its assignees, and successors
23 in interest agrees to comply with the following nondiscrimination statutes and authorities; including
24 but not limited to:

25 48.1. Pertinent Nondiscrimination Authorities:

- 26 (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq, 78 stat. 252),
27 (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part
28 21.

- 1 (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of
2 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose
3 property has been acquired because of Federal or Federal-Aid programs and projects);
- 4 (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), prohibits discrimination
5 on the basis of sex);
- 6 (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.) as amended,
7 (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- 8 (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits
9 discrimination on the basis of age);
- 10 (f) Airport and Airway Improvement Act of 1982, (949 U.S.C. § 471, Section 47123), as
11 amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- 12 (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope,
13 coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age
14 Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by
15 expanding the definition of the terms “programs or activities” to include all the
16 programs or activities of the Federal-aid recipients, subrecipients and contractors,
17 whether such programs or activities are Federally funded or not);
- 18 (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination
19 on the basis of disability in the operation of public entities, public and private
20 transportation systems, places of public accommodation, and certain testing entities (42
21 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations
22 at 49 C.F.R. parts 37 and 38;
- 23 (i) The Federal Aviation Administration’s Nondiscrimination statute (49 U.S.C. § 47123)
24 (prohibits discrimination on the basis of race, color, national origin, and sex);
- 25 (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority
26 Populations and Low-Income Populations, which ensures discrimination against
27 minority populations by discouraging programs, policies, and activities with
28 disproportionately high and adverse human health or environmental effects on minority

1 and low-income populations;

2 (k) Executive Order 13166, Improving Access to Services for persons with Limited English
3 Proficiency, and resulting agency guidance, national origin discrimination includes
4 discrimination because of limited English proficiency (LEP). To ensure compliance
5 with Title VI, you must take reasonable steps to ensure that LEP persons have
6 meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

7 (l) Title IX of the Education Amendment of 1972, as amended, which prohibits you from
8 discriminating because of sex in education programs or activities (20 U.S.C. 1681 et
9 seq).

10 **IN WITNESS WHEREOF**, the Parties have executed this Agreement on the day and year first
11 above written.

12
13 **County of Imperial**

12
13 **«Contractor_Business_Name»**

14
15
16 By: _____
17 Margarita "Peggy" Price, Chairwoman
18 Imperial County Board of Supervisors

14
15
16 By: _____
17 «Contractor_Name_for_Signature»

18
19 **ATTEST:**

20
21 By: _____
22 Cynthia Medina,
23 Clerk of the Board of Supervisors

24
25 **APPROVED AS TO FORM:**
26 Manatt Phelps & Phillips, LLP

27 By: _____
28 Randall Keen. Esq.
Attorney for the County of Imperial

EXHIBIT "II"
GENERAL CONTRACTOR'S CERTIFICATION NO. 12
PREVAILING WAGE COMPLIANCE

GENERAL CONTRACTOR'S CERTIFICATION NO. 12

PREVAILING WAGE COMPLIANCE
(to be completed by Sponsor's General Contractor)

I, _____, as an authorized representative of [insert name of General Contractor] (“General Contractor”), hereby certify that:

1. I possess the legal authority to submit this certification on behalf of the General Contractor and the information and statements set forth below are, to the best of my knowledge and belief, true and correct.
2. I am providing this information in connection with an application for funding from the State of California (“State”) pursuant to the Behavioral Health Continuum Infrastructure Program for the _____ (“Project”) [insert name or description of project to be funded] submitted by _____ [insert name of Sponsor] (“Sponsor”) and acknowledge that the State, its contract manager, Advocates for Human Potential, Inc. (“AHP”) and the Sponsor are relying on this information in awarding and disbursing Program Funds to the Sponsor.
3. General Contractor certifies that all construction work performed on the Project shall comply with California Labor Code Section 1720 *et seq.* and require the payment of prevailing wages.
4. General Contractor certifies that Sponsor has provided it with copies of California Labor Code Sections 1771, 1776, 1777.5, 1813 and 1815, that the construction contract includes those California Labor Code provisions and that such California Labor Code provisions shall be included in all subcontracts entered into by General Contractor for the Project.
5. General Contractor agrees to periodically review its subcontractors' payroll records to monitor compliance with California prevailing wage requirements and to take diligent action if General Contractor discovers any failure by a subcontractor to pay prevailing wages and to otherwise comply with the requirements of the California Labor Code.
6. General Contractor shall not release final payment to any subcontractors for work performed on the Project until the General Contractor has obtained an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing wage for all work performed on the Project as well as any other amounts due under the California Labor Code.
7. General Contractor agrees to keep accurate payroll records in compliance with California Labor Code Section 1776 and shall require all of its subcontractors to keep such records and to make such records available to the California Department of Industrial Relations (“DIR”) in accordance with California Labor Code Section 1771.4(a)(3).
8. General Contractor agrees to comply with any and all other requirements of the California Labor Code related to prevailing wages, all California wage and hours laws, and any applicable federal labor and wage and hours requirements for the duration of the Project.

9. General Contractor acknowledges that neither the State nor AHP shall be liable for any penalties or damages resulting from General Contractor's failure to comply with all requirements related to public works projects applicable to the Project.

I certify that the above information is true and correct and that General Contractor shall comply with all requirements set forth above in General Contractor's Certification No. 12, Prevailing Wage Compliance, as a condition of receiving the Program Funds.

Authorized Signature
(General Contractor)

Typed Name of Signatory
(General Contractor)

Title of Signatory

Date

EXHIBIT "III"
SALES TAX CONDITIONS

1.3. Sales Tax Condition.

- 1.3.1.** Sales Tax Condition: The permittee is required to have a Construction Site Permit reflecting the project site address, ensuring all eligible sales tax payments are allocated to the County of Imperial, Jurisdictional Code 13998. The permittee will provide the County of Imperial with a copy of the CDTFA account number and sub-permit for its contractor and subcontractors (if any) related to the job site. The permittee shall provide written verification to the County Executive Office that the necessary sales and use tax permits have been obtained prior to the issuance of any grading permits.
- 1.3.2.** Construction/Material Budget: Prior to a grading permit, the permittee will provide the County Executive Office with a construction materials budget, an official construction materials budget, or a detailed budget outlining the construction and materials cost for the processing facility on permittee letterhead.
- 1.3.3.** County of Imperial will require that all qualifying contractors and subcontractors exercise their option to obtain a California Department of Tax and Fee Administration (CDTFA) sub-permit for the jobsite and allocate all eligible use tax payments to Imperial County and LTA.
- 1.3.4.** Prior to commencement of any construction activity at the Project Site, County of Imperial shall require that the contractor or subcontractor provide County with a copy of their CDTFA account number and sub-permit. County of Imperial shall either cause its construction contractor to treat the Project in accordance with California Sales and Use Tax Regulation 1521(b)(2)(B), California Sales and Use Tax Regulation 1521(c)(13)(B), and California Sales and Use Tax Regulation 1826(b) for sales and use tax purposes, or form a “Buying Company” as defined in the California Sales and Use Tax Regulation 1699(h). County of Imperial may adopt an alternate methodology to accomplish this goal if such methodology is approved by the County’s Executive Officer, which approval shall not be unreasonably withheld or delayed, prior to issuance of any building permit.
- 1.3.5.** No later than forty-five (45) days after the due date for filing sales and use tax returns for each calendar quarter, occurring after the commencement of any construction activity on-site through and including the first anniversary of commercial operating date (“COD”), Contractor shall report to County of Imperial, the total amount of sales and use taxes related to the Project that are allocated to the County, and reported on County of Imperial’s,

general contractor's and subcontractors' applicable California sales and use tax returns.

1.3.6. Guarantee Amounts. Prior to the issuance of any building permit for the Project, Contractor shall provide County with a guarantee of the minimum sales and use taxes (based on a total construction and materials budget for the Project) that will be received by County and LTA under existing applicable sales and use tax laws. Contractor warrants that the sales/use tax guarantee amounts to be provided to County as mandated in this paragraph shall be true and accurate estimates of the projected sales and use taxes that will be generated for this Project. Contractor shall provide County with evidence of the projected sales/use taxes for the Project, including but not limited to sales tax receipts, and executed or anticipated engineering contracts, procurement contracts, and construction contracts. If the Parties are unable to agree upon a guarantee amount, then the dispute shall be referred to an independent accountant mutually acceptable to both Parties. The costs for such nonbinding mediation shall be borne by Contractor. Contractor warrants that the sales/use tax guarantee amounts to be provided to County as mandated in this paragraph will incorporate any and all sales/use tax exemptions that Contractor and/or its subcontractors intend to utilize, and that such exemptions will be disclosed to County fully and in good faith prior to the issuance of any building permit for this Project. Contractor understands and acknowledges that the sales/use tax guarantee amounts to be provided to County as mandated by this paragraph are a part of the consideration to be received by County in return for entering into this Agreement, and further understands and acknowledges that County would not enter into this Agreement but for said guarantee from Contractor. In the event that County and / or LTA receives less than the amount of sales / use taxes guaranteed pursuant to this paragraph, then Contractor shall pay, as and when provided below, to County or LTA as applicable, the amount of the applicable shortfall.

1.3.7. Adjustments to Guarantee Amounts.

- (a)** The amount of sales and use tax anticipated to be generated is based on the projected construction materials. Additional construction materials beyond the original contract now projected will require the sales / use tax guarantee amounts to be adjusted.
- (b)** To the extent of any reduction in the size of the Project as the result of any final ruling, stipulated judgment, or settlement, the sales / use tax guarantee amounts mandated under paragraph D shall be reduced pro rata based on the size of such reduction. To the extent of any reduction in the size of the Project as the result of any final ruling, stipulated judgment, or settlement, in accordance with Section V.C below, the not-to-exceed amounts set forth in Section III.B shall be reduced pro rata based on the size of such reduction.

- 1.3.8.** The complete amount due to County for the Project must be received within one (1) year after Project Closeout/Completion for this Project. If, within one (1) year after issuance of the final Certificate of Occupancy, the sales and use taxes received by the County are less than the amount guaranteed for that portion of the project, Contractor shall pay the difference to the County.
- 1.3.9.** Payments to County and LTA as a result of a shortfall shall be due within thirty days of County of Imperial's receipt of written notice of shortfall from the County. Payments received by County after the ninetieth (90th) day following County of Imperial's receipt of notice shall be deemed late. County of Imperial hereby agrees to pay interest at the rate of six percent (6%) per annum of the payment due for any payment received by County beyond the due date. Said interest shall be included with the late payment. The obligation to pay interest shall be stayed when such amounts are disputed in good faith, so long as Contractor submits the payments "under written protest." Upon determination of dispute, such interest may be assessed if it is determined that the dispute was not made in good faith.
- 1.3.10.** In the event that Contractor repowers or replaces the equipment onsite, each Site shall be designated as the "Point of Sale" so as to create an additional local tax-funding source for the County of Imperial.

EXHIBIT "IV"
LIMITED ASBESTOS AND LEAD REPORT



Limited Asbestos and Lead Paint Sampling Report

202 North 8th Street, El Centro, California

3/26/18

Prepared for:

Sanders Inc.

1102 Industry Way, Suite A, El Centro, California 92243

Report Prepared / Reviewed By:

David Christy

WEST - Sr. Partner

Certified Asbestos Consultant 92-0703



Asbestos Sampling Report - Table of Contents

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Attachment One - Asbestos Laboratory Sheets & Chains of Custodies

Attachment Two – Limited Lead Paint Sampling Report

Executive Summary

Sampling Date:	3/26/18 (Asbestos Sampling) – 3/26/18 (Lead Paint Sampling)
Survey Description:	Limited Interior Sampling – Based on Remodel Plans – Accessible Materials
Services Complete:	Conduct a limited (non-destructive) asbestos inspection, laboratory Analysis, Reporting
Laboratory Analysis:	EMSL Analytical, San Diego, California NVLAP and California Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM)
On-site Sampling:	David Christy, a State of California Certified Asbestos Consultant (92-0703)
Additional Sampling:	Lead Paint Testing (XRF Sampling) Completed by Allstate Services (report attached)
General Warrantee:	WEST warrants the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos inspection and evaluation methods for the referenced site.
Access Note:	WEST was given full access for areas outlined for sampling within the scope of inspection.

Materials discovered to contain asbestos during limited sampling (known)

- **No Asbestos was found as part of this limited inspection – based on the sample results attached to this report**

Assumed Asbestos:

All building materials not sampled with in this sampling report.

- **Any Building materials that not listed within this sampling report**

Any building materials **not listed** within this sampling report for the referenced locations, whether outside sampling scope of work or newly discovered, shall be assumed to be asbestos containing greater than 1%. Additional investigation and sampling is recommended for these types of unreported materials. Asbestos bulk sampling and inspection services must be completed by State of California Certified personnel (Site Surveillance Technician or Certified Asbestos Consultant). All laboratory analysis and reporting must be completed by a licensed and certified laboratory facility.

Materials discovered to contain Lead (known and assumed)

Lead paint was detected based on the on-site XRF sampling conducted by Allstate Services. (Please see attachment 2 of this inspection report for full details and materials found to contain lead.

Special Notation:

At the time of the survey, the site was active with normal activities Monday – Friday. Full access was not permitted, and WEST was limited to the type and location of samples collected due to the site will be active. The sampling as completed was **semi-destructive sampling** relating to asbestos bulk sampling within the building surveyed since the building was occupied (functioning building) at the time of the inspections. Samples were collected to the best of the inspector’s ability and access while causing minimum disturbance to surrounding areas. Only bulk sampling of exposed and accessible building materials was completed since demolition of building materials to review concealed spaces was outside the scope of work.

Asbestos Inspection – General Information

Any suspect building materials encountered by WEST during the asbestos inspection, found within the specific areas called out for inspection / sampling, were collected and analyzed for the presence of asbestos. The samples of the various building materials that were collected were analyzed using polarized light microscopy (PLM). A breakdown of laboratory analysis for each asbestos sample collected is included in the attached report. If any material containing asbestos will be disturbed, appropriate local, state, and federal regulations and guidelines must be followed.

WEST collected samples of suspect building materials that were accessible at the time of the inspection as found and noted by the on-site inspector. WEST utilized EMSL Analytical located in San Diego, California, a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy PLM). WEST warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos hazard evaluation methods for the site referenced in this report.

Asbestos Building Inspection Findings

Asbestos was not found as part of the asbestos inspection

There are assumptions made within this sampling report grouping similar building materials with similar age and appearance together for means of building material identification and grouping for sampling. This should also be followed while conducting asbestos removal of these materials. If any building material is discovered to be suspect of containing asbestos, and it was not accessible or identified in this building inspection report, additional samples should be collected and analyzed and the building inspection report and data should subsequently be updated. California Code of Regulations Title 8, Section 1529 states that asbestos containing material and presumed asbestos containing material that will be disturbed during demolition, construction, renovation, etc. must be handled according to the standard. The state of California states that a material that contains one-tenth of one percent asbestos is classified as a regulated asbestos material. Additional investigation and sampling is recommended if any newly discovered building material is identified that is not called out within this sampling report.

Survey Methodology

At the time of the survey, the site was active with weekend staff the day of the on-site inspection. Full access was not granted, and WEST was limited to the type and location of samples collected due to the site being active. The sampling as completed was **semi-destructive sampling** relating to asbestos bulk sampling within the building surveyed since the building was occupied (functioning building) at the time of the inspections. Samples were collected to the best of the inspector's ability and access while causing minimum disturbance to surrounding areas. Only bulk sampling of exposed and accessible building materials was completed since demolition of building materials to review concealed spaces was outside the scope of work.

There are assumptions made within this sampling report as it relates to building materials not accessible at the time of the inspections. Sampling of these areas was conducted at access points that were previously in place or in direct view of the on-site inspector. The surveyor proceeded to complete a visual inspection of the surrounding surfaces and the building components that were found at the building site as part of the asbestos sampling. Following the review of each inspection location that was remaining at the time of the inspection, the surveyor then made inspection notes while still in the field. These notes recorded data on the presence, type and general condition of any suspected ACMs encountered, and on a system-by-system basis as outlined in this report. The sampling inventory sheets and sample analysis breakdown are provided.

Asbestos Bulk Sampling Strategy

The collection of bulk samples was performed in sufficient frequency to obtain only a basic pattern as to the use of possible asbestos containing building materials (ACM, ACCM) within the areas of the buildings called out for inspections. It is known however, that inconsistencies within construction or later repair or renovation may result in deviation from this general pattern.

For this reason, it is not possible to positively identify the presence and extent of asbestos building materials associated with the areas sampled without inspecting and sampling every square foot of all building surfaces and components encountered during the inspection process. As this was outside of the scope of this assignment, identification of asbestos-suspect materials was based on the surveyor's own experience and knowledge of the use of asbestos in buildings, the age, and the general appearance of the materials encountered. A complete list of sampled materials is attached to this report.

Sampling Method – Bulk Sampling

Wherever the collection of a bulk sample became necessary, samples were collected using general hand tools and placed in plastic zip bags, which were individually labelled with a sample number and description of the sampling location. This information was also recorded on a transmittal form. One copy of this form remained with the samples when transported to the laboratory. The second copy was retained by the surveyor. Care was used by the surveyor (wherever possible) to collect samples at a location which produced the least visual impact or would be least objectionable to building occupants.

Asbestos Bulk Sample Analysis

Each of the bulk samples collected were analysed by EMSL Analytical located in San Diego, California, using a combination of dispersion staining and polarized light microscopy. Sample preparation and analytical procedures follow the protocol outlined for NIOSH Method 9002 for bulk asbestos analysis, and the US EPA Method 600/R-93/116 dated July, 1993. Each of these methods is recognized by both federal and provincial authorities. For quality control purposes, the laboratory used for the sample asbestos analysis is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples.

Deviations in Sample Results

Due to the removal and replacement of individual building materials over the course of a building's life or due to the installation of visually similar building products, it is possible that individual building surfaces may not be characteristic of the samples collected. Every effort was made to collect samples from typical building materials and components as found during the on-site sample collection. If any building material is discovered to be suspect of containing asbestos, and it was not accessible or identified in this building inspection report, additional samples should be collected and analyzed and the building inspection report and data should subsequently be updated.

Lead Paint / Lead Ceramic Tile

CAL-OSHA Regulations (Title 8 CCR Section 1532.1 and 29 CFR 1926.62) apply to all construction work where an employee may be occupationally exposed to lead, and therefore may be applicable to renovation or demolition projects involving paints with any concentration of lead.

When conducting construction activities, **which disturb lead in any amount or create an exposure to workers**, the employer is required to provide worker protection and conduct exposure assessments. All California employers should consult Cal-OSHA Regulations at Title 8, 1532.1, “Lead in Construction” standards for complete requirements.

Since the building listed above is undergoing renovation / demolition, **all construction personnel** performing the construction work should be properly trained in lead-related construction. California regulations define lead-related construction work as, “Construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential, public or commercial building, including preparation and cleanup, which, by using or disturbing lead containing material or soil, may result in significant exposure of individuals to lead.”

To also protect against this risk of lead exposure, on April 22, 2008, EPA issued the [Renovation, Repair and Painting Rule](#). It requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in pre-1978 homes, child care facilities and **schools** be certified by EPA and that they use certified renovators who are trained by EPA-approved training providers to follow lead-safe work practices. Individuals can become certified renovators by taking an eight-hour training course from an EPA-approved training provider.

Lead paint was detected based on the on-site XRF sampling conducted by Allstate Services on 3/26/18. (Please see attachment 2 of this inspection report for full details and materials found to contain lead.)

Definitions of ACM

Different regulatory agencies and different regulations contain different definitions for a material that contains asbestos. The definitions are similar but different based upon the context in which the definition was created.

Asbestos Containing Material (ACM): According to EPA, OSHA and Cal-OSHA, asbestos containing material is a material that has greater than 1% asbestos.

Asbestos Containing Building Material (ACBM): For purposes of AHERA, material with greater than 1% asbestos that was used on the interior construction of a school is called asbestos containing building material (ACBM).

Asbestos Containing Construction Material (ACCM): According to Title 8, Section 1529, asbestos containing construction material means any manufactured construction material which contains more than 0.1 % asbestos by weight.

Presumed Asbestos Containing Material (PACM): Any thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as PACM may be rebutted pursuant to Title 8, section 1529, subsection (k)(5).

Regulated Asbestos Containing Material (RACM): The EPA in the National Emission Standard for Hazardous Air Pollutants (NESHAP) defines RACM as (a) Friable asbestos containing material, (b) Category I non-friable asbestos containing material that has become friable, (c) Category I non-friable asbestos containing material that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable asbestos containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by Subpart M.

General Limitations

The survey as completed was of sufficient depth to provide a screening for the purpose of establishing the presence of asbestos containing materials (ACM), and asbestos containing construction materials (ACCM) within the limited areas inspected within the building. Due to the nature of building construction some limitations exist as to the possible extent and accuracy of this survey. Such limitations include any inconsistencies in the use of materials during construction or later repairs or renovations that result in deviations from the general pattern. However, without sampling every square foot of building materials, it is not possible to rule out such limitations.

As this is not a practical approach to sample every square foot of building material, the survey was completed based on the collection of a sufficient number of samples representing the building materials listed in this sampling report and visually encountered. Every effort was made to collect these samples from typical or representative materials as they were encountered.

The collection of data, quantification of any damage, and confirmation of existing conditions, is limited by the surveyor's ability to access and visually inspect conditions at each inspection location. The collection of data above fixed or mechanically fastened ceilings, or from within concealed cavities or shafts, is therefore limited by the availability and location of access points, hatches, etc. Areas that were not accessed include but not limited to inside wall cavities, above ceilings, above fixed ceiling tiles, areas behind security fences, areas behind security covered windows, and non-exposed mechanical equipment.

The survey, as completed, did not include demolition and dismantlement of equipment and building materials. The sampling was conducted to the best ability and safety of the on-site inspectors on-site.

The field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for asbestos containing materials (ACM) and asbestos containing construction materials (ACCM) overview of the building in question as it relates to the building systems. Western Environmental & Safety Technologies LLC (WEST) warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos hazard evaluation methods, for the site referenced in this report.

These evaluation methods have been developed to provide the client with information regarding apparent indications of existing or potentially hazardous asbestos conditions relating to the property and are necessarily limited to the conditions observed and information available at the time of the site visit and research. There is a distinct possibility that conditions may exist which could not be reasonably identified within the scope of the assessment or which were not apparent during the site visit.

Western Environmental & Safety Technologies LLC (WEST) believes that the information collected during the survey period concerning this property is reliable. However, Western Environmental & Safety Technologies LLC (WEST) cannot warrant or guarantee that the information provided is absolutely complete or accurate beyond the current asbestos consulting industry standards.

The conclusions and recommendations presented in this report are based upon reasonable visual inspection, site investigation, and bulk sampling of the property and research of available materials within the scope and budget of the contract. The information presented is relevant to the dates of our site visit and should not be relied upon to represent conditions at later dates. The opinions expressed herein are based on information obtained during our on-site inspection efforts and on our experience. If additional information becomes available, we request the opportunity to review the information and modify our opinions, if necessary.

Our services have been provided using that degree of care and skill ordinarily exercised, under similar circumstances, by environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional opinions presented in this report. Western Environmental & Safety Technologies LLC (WEST) is not responsible for the conclusions, opinions, or recommendations made by others based on this information.

Report Prepared By and Laboratory Sample Analysis Reviewed By:



4/3/18

David Christy

Review Dates

Certified Asbestos Consultant - CAC# 92-0703

Tel: (858) 271-1842 (office)

Tel: (619) 571-3987 (cell)

FAX: (858) 271-1856

Email: gowestdc@msn.com



202 North 8th Street, El Centro, California (Interior sampling and Limited Exterior Sampling)

Limited Asbestos Bulk Sampling Breakdown

Sample #	Sample Date	Area	Sample Location	Material Sampled	Results
01	3/26/18	Interior	Lobby Men’s Restroom	Drywall Wall Core	None Detected
02DW	3/26/18	Interior	Lobby	Drywall Wall Core (drywall)	None Detected
02JC	3/26/18	Interior	Lobby	Drywall Wall Core (joint compound)	None Detected
03BB	3/26/18	Interior	Lobby	Base Board	None Detected
03M	3/26/18	Interior	Lobby	Base Board Mastic	None Detected
04	3/26/18	Interior	Lobby	2x2 Ceiling Tile	None Detected
05	3/26/18	Interior	Lobby Women’s Restroom	Drywall Wall Core	None Detected
06DW	3/26/18	Interior	N.E. Office	Drywall Wall Core (drywall)	None Detected
06JC	3/26/18	Interior	N.E. Office	Drywall Wall Core (joint compound)	None Detected
07BB	3/26/18	Interior	N.E. Office	Base Board	None Detected
07M	3/26/18	Interior	N.E. Office	Base Board Mastic	None Detected
08	3/26/18	Interior	N.E. Office	2x4 Ceiling Tile	None Detected
09FT	3/26/18	Interior	N.E. Hallway	12x12 Floor Tile	None Detected
09M	3/26/18	Interior	N.E. Hallway	Floor Tile Mastic	None Detected
10DW	3/26/18	Interior	Pre-screen Office	Drywall Wall Core (drywall)	None Detected
10JC	3/26/18	Interior	Pre-screen Office	Drywall Wall Core (joint compound)	None Detected
11	3/26/18	Interior	Pre-screen Office	2x4 Ceiling Tile	None Detected
12BB	3/26/18	Interior	Pre-screen Office	Base Board	None Detected
12M	3/26/18	Interior	Pre-screen Office	Base Board Mastic	None Detected
13	3/26/18	Interior	Pre-screen Office	Carpet Glue	None Detected
14FT	3/26/18	Interior	Pre-screen Office	12x12 Floor Tile	None Detected
14M	3/26/18	Interior	Pre-screen Office	12x12 Floor Tile Mastic	None Detected
15	3/26/18	Interior	Room 102	Drywall Wall Core	None Detected
16	3/26/18	Interior	Room 102	2x4 Ceiling Tile	None Detected

None Detected = No asbestos found in the sample analyzed. Any sample reported at <1% asbestos is considered greater than 1% ACM until point count analysis is performed. The sample descriptions listed above represent the location of the individual sample collected. The building material that has been sampled as listed above may be present in other locations of the building and has been represented above as a homogeneous space. Asbestos results are reported in % using Polarized Light Microscopy (PLM) as reported by EMSL, San Diego, California. WEST utilized EMSL located in San Diego, California. a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM).”



202 North 8th Street, El Centro, California (Interior sampling and Limited Exterior Sampling)

Limited Asbestos Bulk Sampling Breakdown

Sample #	Sample Date	Area	Sample Location	Material Sampled	Results
17BB	3/26/18	Interior	Room 102	Base Board	None Detected
17M	3/26/18	Interior	Room 102	Base Board Mastic	None Detected
18	3/26/18	Interior	Room 102	Foam Pipe Insulation (above drop)	None Detected
19FT	3/26/18	Interior	Room 102	12x12 Floor Tile	None Detected
19M	3/26/18	Interior	Room 102	Floor Tile Mastic	None Detected
20	3/26/18	Exterior	Exterior Patio Enclosure	Concrete Slab	None Detected
21	3/26/18	Exterior	Exterior Patio Enclosure	Concrete Slab	None Detected
22	3/26/18	Exterior	Exterior Patio Enclosure	Cinder Block Wall	None Detected
23FT	3/26/18	Interior	Adult Shower Area	12x12 Floor Tile	None Detected
23M	3/26/18	Interior	Adult Shower Area	Floor Tile Mastic	None Detected
24	3/26/18	Interior	Adult Shower Area	Damaged wall joint compound	None Detected
25	3/26/18	Interior	Hallway near adult shower	Damaged wall joint compound	None Detected
26SF	3/26/18	Interior	Child shower area	Sheet Flooring	None Detected
26M	3/26/18	Interior	Child shower area	Sheet Flooring Mastic	None Detected

None Detected = No asbestos found in the sample analyzed. Any sample reported at <1% asbestos is considered greater than 1% ACM until point count analysis is performed. The sample descriptions listed above represent the location of the individual sample collected. The building material that has been sampled as listed above may be present in other locations of the building and has been represented above as a homogeneous space. Asbestos results are reported in % using Polarized Light Microscopy (PLM) as reported by EMSL, San Diego, California. WEST utilized EMSL located in San Diego, California. a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM).



WESTERN ENVIRONMENTAL & SAFETY TECHNOLOGIES LLC

“an environmental consulting firm”

Attachment One

Asbestos Laboratory Sheets & Chain of Custodies

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EMSL Analytical, Inc.

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EMSL Order: 431801727

Customer ID: WEST60

Customer PO:

Project ID:

Attention: David A Christy
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7676 Hazard Center Drive
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Phone: (619) 571-3987

Fax: (858) 271-1856

Received Date: 03/28/2018 3:05 PM

Analysis Date: 03/30/2018

Collected Date:

Project: CRISIS & ASSESSMENT EL CENTRO CA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01 <i>431801727-0001</i>	LOBBY MENS RR DW CORE	White Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
02-Drywall <i>431801727-0002</i>	LOBBY DW CORE	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
02-Joint Compound <i>431801727-0002A</i>	LOBBY DW CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03-Baseboard <i>431801727-0003</i>	LOBBY BASE BOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03-Mastic <i>431801727-0003A</i>	LOBBY BASE BOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04 <i>431801727-0004</i>	LOBBY 12X12 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
05 <i>431801727-0005</i> <i>No drywall present in sample.</i>	LOBBY RR WOMEN DW WALL CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06-Drywall <i>431801727-0006</i>	NE OFFICE DW WALL CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
06-Joint Compound <i>431801727-0006A</i>	NE OFFICE DW WALL CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-Baseboard <i>431801727-0007</i>	NE OFFICE BASEBOARD	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-Mastic <i>431801727-0007A</i>	NE OFFICE BASEBOARD	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08 <i>431801727-0008</i>	NE OFFICE 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
09-Floor Tile <i>431801727-0009</i>	NE HALLWAY 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09-Mastic <i>431801727-0009A</i>	NE HALLWAY 12X12 FLR TILE & MASTIC	Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10-Drywall <i>431801727-0010</i>	PRE SCREEN OFFICE DW CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
10-Joint Compound <i>431801727-0010A</i>	PRE SCREEN OFFICE DW CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 03/30/2018 16:19:48



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EMSL Order: 431801727
Customer ID: WEST60
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
11 431801727-0011	PRE SCREEN OFFICE 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
12-Baseboard 431801727-0012	PRE SCREEN OFFICE BASEBOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-Mastic 431801727-0012A	PRE SCREEN OFFICE BASEBOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13 431801727-0013	PRE SCREEN OFFICE CARPET GLUE	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Floor Tile 431801727-0014	PRE SCREEN OFFICE 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Mastic 431801727-0014A	PRE SCREEN OFFICE 12X12 FLR TILE & MASTIC	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15 431801727-0015	RM 102 DW WALL CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
16 431801727-0016	RM 102 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
17-Baseboard 431801727-0017	RM 102 BASEBOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17-Mastic 431801727-0017A	RM 102 BASEBOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18 431801727-0018	RM 102 ABOVE CEILING FOAM PIPE INSULATION	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Floor Tile 431801727-0019	RM 102 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Mastic 431801727-0019A	RM 102 12X12 FLR TILE & MASTIC	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20 431801727-0020	EXT PATIO CONCRETE SLAB	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21 431801727-0021	EXT PATIO CONCRETE SLAB	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22 431801727-0022	EXT PATIO CINDER BLOCK WALL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23-Floor Tile 431801727-0023	CRISIS SIDE ADULT SHOWER 12X12 FLR TILE & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23-Mastic 431801727-0023A	CRISIS SIDE ADULT SHOWER 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 03/30/2018 16:19:48



EMSL Analytical, Inc.

7916 Convoy Court, Building 4, Suite A San Diego, CA 92111

Tel/Fax: (858) 499-1303 / (858) 499-1304

<http://www.EMSL.com> / sandiegolab@emsl.com

EMSL Order: 431801727
Customer ID: WEST60
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
24 <i>431801727-0024</i>	CRISIS SIDE ADULT SHOWER DAMAGE WALL COMP	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25 <i>431801727-0025</i>	CRISIS SIDE HALLWAY DW/JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26-Sheet Flooring <i>431801727-0026</i>	CRISIS SIDE CHILD SHOWER SHEET FLR CORE	Blue Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
26-Mastic <i>431801727-0026A</i>	CRISIS SIDE CHILD SHOWER SHEET FLR CORE	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Ericka Lomibao (38)

Mariah Curran, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713

Initial report from: 03/30/2018 16:19:48

Asbestos Bulk Sampling - Chain of Custody

#431801727

WEST LLC 7966 Arjons Drive, #110 San Diego, CA 92115 Tel: 858.271.1842 Tel: 858.271.1856	Project Name: CRISIS & ASSESSMENT	Contact: David A. Christy (619) 571-3987 Fax Results: (858) 271-1856	Laboratory to be used: EMSL Analytical City/State: San Diego, California
	Project Location: E1 Centro, CA.		

Turn Around Time: 48

Relinquished By: (sign / print)	Company	Date / Time	Received By: (sign / print)	Date / Time
David Christy	WEST	3/26/18	[Signature]	3/28/18 1505

Sample #	Date	Area	Sample Location	Sample Description	Analysis Requested
			MINUS		
01	3/26/18	LOBBY	LOBBY RR	DRYWALL CORE	Asbestos - PLM
02		INT.	LOBBY	DRYWALL CORE	Asbestos - PLM
03			LOBBY	BASE BOARDS & MASTIC	Asbestos - PLM
04			LOBBY	2x2 Ceiling Tile	Asbestos - PLM
05			LOBBY RR - Women	DRYWALL WALL CORE	Asbestos - PLM
06			N.E. office	DRYWALL WALL CORE	Asbestos - PLM
07			↓ ↓	BASE BOARD	Asbestos - PLM
08			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
09			NE Hallway	12x12 Floor Tile & MASTIC	Asbestos - PLM
10			RR - Screen office	DRYWALL CORE	Asbestos - PLM
11			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
12			↓ ↓	BASE BOARDS & MASTIC	Asbestos - PLM
13			↓ ↓	Carpet Glue	Asbestos - PLM
14			↓ ↓	12x12 Floor Tile & MASTIC	Asbestos - PLM
15			Room 102	DRYWALL WALL CORE	Asbestos - PLM
16			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
17			↓ ↓	BASE BOARD & MASTIC	Asbestos - PLM
18			↓ ↓ ABOVE Ceiling	FOAM PIPE INSULATION	Asbestos - PLM
19			↓ ↓	12x12 Floor Tile & MASTIC	Asbestos - PLM
20		EXT	EXT. PATIO	Concrete Slab	Asbestos - PLM
21			↓ ↓	Concrete Slab	Asbestos - PLM
22			↓ ↓	Cinder Block Wall	Asbestos - PLM
23		CRISIS SIDE	ADULT Shower	12x12 Floor Tile & MASTIC	Asbestos - PLM
24			↓ ↓	DAMAGE WALL - Compound	Asbestos - PLM
25			HALLWAY	DW - Joint Compound	Asbestos - PLM
26			Child Shower	Sheet Floor Core	



WESTERN ENVIRONMENTAL & SAFETY TECHNOLOGIES LLC

“an environmental consulting firm”

Attachment Two

Limited Lead Paint Sampling Report

Professional Environmental Consulting
and Training
Asbestos
Lead
Mold/Healthy Homes



Working for a clean environment
1101 California Ave, Suite 100
Corona, CA 92881
(951) 273-3410
info@allstate-services.com
www.allstate-services.com

March 28, 2018

Western Environmental & Safety Tech.
Mr. David Christy
7966 Arjons Drive, Suite 110
San Diego, CA 92126

RE: Lead-based paint testing at 202 North 8th Street, El Centro, California

Dear Mr. David Christy:

In accordance with your request and authorization, Allstate Services conducted lead-based paint testing at 202 North 8th Street in El Centro, California on March 26, 2018. Please note that only selected areas were tested for lead at this time.

The on-site work was performed by John Castorini, California Certified Lead Inspector/Assessor # 13642 using an XRF Analyzer following all required protocols.

Lead-based paint was identified on the surfaces tested at the above-mentioned property. Please see the attached Positive XRF Summary Report for further details.

If you need any further assistance after reviewing your report, please do not hesitate to contact me. Allstate Services remains available to assist you in anyway possible.

Sincerely,

A handwritten signature in black ink that reads "Steven Travers". The signature is written in a cursive, slightly slanted style.

Steven J. Travers
Director of Operations

Attachments: Positive XRF Summary Report, Detailed XRF Testing Results, Calibration Log, Inspector Certification Copy, 8552 Form

POSITIVE XRF SUMMARY REPORT

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
1	Exterior	Building Exterior	A	Wall	Concrete	Tan	Intact	1.0	Positive	400 Ft ²	
4	Exterior	Building Exterior	D	Wall	Concrete	Tan	Intact	1.1	Positive	400 Ft ²	
5	Interior	Rm. 1-Lobby	B	Wall	Concrete	Tan	Intact	1.1	Positive	200 Ft ²	
6	Interior	Rm. 1-Lobby	D	Wall	Concrete	Tan	Intact	1.0	Positive	200 Ft ²	
**Quantity estimations of leaded materials are provided for budget considerations only and should be verified onsite by bidders.											

DETAILED XRF TESTING RESULTS

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
1	Exterior	Building Exterior	A	Wall	Concrete	Tan	Intact	1.0	Positive	400 Ft ²	
2	Exterior	Building Exterior	B	Wall	Concrete	Tan	Intact	0.1	Negative		
3	Exterior	Building Exterior	C	Wall	Concrete	Tan	Intact	0.3	Negative		
4	Exterior	Building Exterior	D	Wall	Concrete	Tan	Intact	1.1	Positive	400 Ft ²	
5	Interior	Rm. 1-Lobby	B	Wall	Concrete	Tan	Intact	1.1	Positive	200 Ft ²	
6	Interior	Rm. 1-Lobby	D	Wall	Concrete	Tan	Intact	1.0	Positive	200 Ft ²	
7	Interior	Rm. 1-Lobby	C	Door	Wood	Tan	Deteriorated	0.0	Negative		
8	Interior	Rm. 1-Lobby	C	Door Frame	Wood	White	Deteriorated	0.0	Negative		
9	Interior	Rm. 1-Lobby	---	Ceiling	Acoustic	White	Deteriorated	0.0	Negative		
10	Interior	Rm. 2-Women's Restroom	A	Wall	Drywall	Tan	Intact	0.0	Negative		
11	Interior	Rm. 2-Women's Restroom	B	Wall	Drywall	Tan	Intact	0.2	Negative		
12	Interior	Rm. 2-Women's Restroom	C	Wall	Drywall	Tan	Intact	0.0	Negative		
13	Interior	Rm. 2-Women's Restroom	D	Wall	Ceramic Tile	Grey	Intact	0.1	Negative		
14	Interior	Rm. 2-Women's Restroom	A	Door	Wood	Brown	Intact	0.1	Negative		
15	Interior	Rm. 2-Women's Restroom	A	Door Frame	Metal	Tan	Intact	0.2	Negative		
16	Interior	Rm. 2-Women's Restroom	---	Ceiling	Drywall	Tan	Intact	0.0	Negative		
17	Interior	Rm. 2-Women's Restroom	---	Floor	Ceramic Tile	Tan	Intact	0.1	Negative		
18	Interior	Rm. 3-Men's Restroom	A	Wall	Drywall	Tan	Intact	0.0	Negative		
19	Interior	Rm. 3-Men's Restroom	B	Wall	Drywall	Tan	Intact	0.2	Negative		
20	Interior	Rm. 3-Men's Restroom	C	Wall	Drywall	Tan	Intact	0.1	Negative		
21	Interior	Rm. 3-Men's Restroom	D	Wall	Ceramic Tile	Tan	Intact	0.2	Negative		
22	Interior	Rm. 3-Men's Restroom	D	Door	Wood	Brown	Intact	0.0	Negative		
23	Interior	Rm. 3-Men's Restroom	D	Door Frame	Metal	Tan	Intact	0.1	Negative		
24	Interior	Rm. 3-Men's Restroom	---	Ceiling	Drywall	Tan	Intact	0.0	Negative		
25	Interior	Rm. 4-Office	A	Wall	Drywall	Blue	Intact	0.0	Negative		
26	Interior	Rm. 4-Office	B	Wall	Drywall	Blue	Intact	0.2	Negative		
27	Interior	Rm. 4-Office	C	Wall	Drywall	Blue	Intact	0.0	Negative		
28	Interior	Rm. 4-Office	D	Wall	Drywall	Blue	Intact	0.1	Negative		
29	Interior	Rm. 4-Office	B	Door	Wood	Brown	Intact	0.0	Negative		
30	Interior	Rm. 4-Office	B	Door Frame	Metal	Brown	Deteriorated	0.1	Negative		
31	Interior	Rm. 4-Office	---	Ceiling	Acoustic	White	Intact	0.0	Negative		
32	Interior	Rm. 5-Men's Restroom	A	Wall	Drywall	Blue	Intact	0.2	Negative		
33	Interior	Rm. 5-Men's Restroom	B	Wall	Drywall	Blue	Intact	0.0	Negative		
34	Interior	Rm. 5-Men's Restroom	C	Wall	Drywall	Blue	Intact	0.1	Negative		
35	Interior	Rm. 5-Men's Restroom	D	Wall	Drywall	Blue	Intact	0.20	Negative		
36	Interior	Rm. 5-Men's Restroom	A	Door	Wood	Brown	Intact	0.0	Negative		
37	Interior	Rm. 5-Men's Restroom	A	Door Frame	Metal	White	Intact	0.2	Negative		
38	Interior	Rm. 5-Men's Restroom	---	Ceiling	Acoustic	White	Intact	0.1	Negative		
39	Interior	Rm. 6-Hall	A	Wall	Drywall	Blue	Intact	0.0	Negative		
40	Interior	Rm. 6-Hall	B	Wall	Drywall	Blue	Intact	0.2	Negative		
41	Interior	Rm. 6-Hall	C	Wall	Drywall	Blue	Intact	0.0	Negative		
42	Interior	Rm. 6-Hall	D	Wall	Drywall	Blue	Intact	0.1	Negative		
43	Interior	Rm. 6-Hall	D	Door	Wood	Brown	Intact	0.1	Negative		

DETAILED XRF TESTING RESULTS

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
44	Interior	Rm. 6-Hall	D	Door Frame	Metal	Brown	Intact	0.0	Negative		
45	Interior	Rm. 6-Hall	---	Ceiling	Acoustic	White	Intact	0.2	Negative		
46	Interior	Rm. 7-Office	A	Wall	Drywall	Blue	Intact	0.2	Negative		
47	Interior	Rm. 7-Office	B	Wall	Drywall	Blue	Intact	0.0	Negative		
48	Interior	Rm. 7-Office	C	Wall	Drywall	Blue	Intact	0.1	Negative		
49	Interior	Rm. 7-Office	D	Wall	Drywall	Blue	Intact	0.2	Negative		
50	Interior	Rm. 7-Office	C	Door	Wood	Brown	Intact	0.2	Negative		
51	Interior	Rm. 7-Office	C	Door Frame	Metal	Brown	Intact	0.2	Negative		
52	Interior	Rm. 7-Office	---	Ceiling	Acoustic	White	Intact	0.0	Negative		

ALLSTATE SERVICES
XRF CALIBRATION FORM

Address/Unit: 202 North 8th Street, El Centro, California

Device: RMD, LPA-1

Date: March 26, 2018

Inspector: John Castorini

Calibration Check Tolerance Used: 0.6 mg/cm² - 1.2 mg/cm² (Inclusive)
Use Level III (1.02 mg/cm²) NIST SRM Paint film

First Calibration Check

Time: 4:45 p.m.

1 st Reading	2 nd Reading	3 rd Reading	1 st Average
0.7	1.0	1.0	0.9

Second Calibration Check

Time: 5:40 p.m.

1 st Reading	2 nd Reading	3 rd Reading	2 nd Average
0.7	0.7	0.9	0.8

Third Calibration Check (If Needed)

Time:

1 st Reading	2 nd Reading	3 rd Reading	3 rd Average

- Use the Quick Test Mode Reading
- Tolerance Values for RMD, LPA-1: 0.6 mg/cm² - 1.2 mg/cm² (Inclusive)

State of California Department of Public Health

Lead-Related
Construction
Certificate

Certificate
Type

Expiration
Date



Inspector/Assessor	03/14/2018
Project Monitor	03/14/2018



John P. Castorini

ID #: 13642

LEAD HAZARD EVALUATION REPORT

Section 1 – Date of Lead Hazard Evaluation 3/26/2018

Section 2 – Type of Lead Hazard Evaluation (Check one box only)

Lead Inspection Risk assessment Clearance Inspection Other (specify)

Section 3 – Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]		City	County	Zip Code
202 North 8th Street-Selected Areas		El Centro	Imperial	
Construction date (year) of structure	Type of structure		Children living in structure?	
Prior to 1970s	<input type="checkbox"/> Multi-unit building <input checked="" type="checkbox"/> School or daycare <input type="checkbox"/> Single family dwelling <input type="checkbox"/> Other 		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

Section 4 – Owner of Structure (if business/agency, list contact person)

Name		Telephone number	
Contact: Western Environmental & Safety Tech. C/O Mr. Dave Christy		858-271-1842	
Address [number, street, apartment (if applicable)]		City	State
7966 Arjons Drive, Suite 110		San Diego	California
		Zip Code	
			92126

Section 5 – Results of Lead Hazard Evaluation (check all that apply)

No lead-based paint detected Intact lead-based paint detected Deteriorated lead-based paint detected
 No lead hazards detected Lead-contaminated dust found Lead-contaminated soil found Other

Section 6 – Individual Conducting Lead Hazard Evaluation

Name		Telephone number	
John Castorini		951-273-3410	
Address [number, street, apartment (if applicable)]		City	State
1101 California Avenue, Suite 100		Corona	California
		Zip Code	
			92883
CDPH certification number	Signature	Date	
I-13642	<i>John Castorini</i>	3/28/18	

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 – Attachments

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector
 Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:
 California Department of Public Health
 Childhood Lead Poisoning Prevention Branch Reports
 850 Marina Bay Parkway, Building P, Third Floor
 Richmond, CA 94804-6403
 Fax: (510) 620-5656

EXHIBIT "V"
VAPOR STUDY REPORT



4/25/2025

Phase II Environmental Site Assessment

202 North 8th Street
El Centro, California 92243

Prepared for:
Imperial County Department of Public Works
155 South 11th Street
El Centro, CA 92243



ADVANCED ENVIRONMENTAL GROUP, INC.
8 GOODYEAR, SUITE 125, IRVINE, CA 92618
(949) 361-7797

LIMITATIONS AND WARRANTIES

Advanced Environmental Group, Inc. (AEG) prepared this report for the exclusive use of the **Imperial County Department of Public Works** and assigned parties only. The services described within this document were performed in accordance with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made.

The information contained in this report was based on measurements performed in specific areas during a specific time period. AEG's professional opinions and conclusions are based in part on interpretation of data from discrete sampling or measurement locations that may not represent conditions at un-sampled or un-measured locations.

AEG assumes no responsibility for issues arising from changes in environmental standards, practices, or regulations subsequent to performance of site assessment work. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the conclusions and recommendations contained in this document should be reviewed and modified or verified in writing by AEG. AEG does not warrant the accuracy of information supplied by others, or the use of segregated portions of this document.



Ashley Flores
Project Manger



Mathew Michaelian, CIH, CSP
President



April 25, 2025

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Tables

Table 1: Soil Vapor Sampling Results for VOCs

Figures

Figure 1: Site Location Map

Figure 2: Sampling Locations

Appendix

Appendix A: Laboratory Report for Soil Vapor Samples

Appendix B: TPHg Chromatograms for Soil Vapor Samples

1 Introduction

Advanced Environmental Group, Inc. (AEG) prepared this report to document the methods and findings of a Phase II Environmental Site Assessment (ESA) performed for the Imperial County Behavioral Health Services Center located at 202 North 8th Street in El Centro, California (the Site, Figure 1). AEG was retained by the Imperial County Department of Public Works (ICDPW) to determine if there is a potential vapor intrusion risk within the building on the property.

2 Project Background

The Site is located at 202 North 8th Street in the City of El Centro, Imperial County, California. The property currently consists of a three-story building containing a mental health triage unit providing immediate response to individuals requiring psychiatric treatment. The building is located at the corner of Broadway and North 8th Street in El Centro, California.

Nicklaus Engineering, Inc. (NEI) prepared a Phase I ESA dated October 4th, 2024, titled *Phase I Environmental Site Assessment Report for 202 N Eighth Street, El Centro, CA 92243*. The Phase I ESA report identified a historic automotive repair facility at the Site, as a Recognized Environmental Condition (REC). Based on the presence of a historical automotive repair facility and the potential for soil, groundwater or soil vapor to be impacted on the Site, ICDPW requested a soil vapor study to be performed at the Site and work was awarded to AEG through competitive bid.

3 Scope of Work

The scope of work performed for this Phase II ESA is based on the findings from the NEI Phase I ESA prepared October 4th, 2024. AEG performed the following scope of work in completion of the Phase II ESA at the Site.

- Mark boring locations and notify Underground Service Alert (Dig Alert) of the proposed work.
- Prepare a Site Health and Safety Plan for work to be performed.
- Retain a licensed geophysical locating service to clear proposed boring locations of buried obstacles.
- Install eight (8) 5-foot borings and set temporary soil vapor probes at each location (**Figure 2**). Borings were only installed to a depth of 5-feet based on information in the NEI Phase I, which used U.S. Bureau of Reclamation data to estimate an approximate groundwater depth of 9 feet at the Site. The soil vapor probes were constructed of Nylaflo tubing, plastic implant tip and surface cap.
- Collect soil vapor samples for on-site chemical analysis of VOCs and Total Petroleum Hydrocarbons as Gasoline (TPHg) using a California ELAP Certified Mobile Laboratory according to EPA Method 8260B modified for soil gas. Soil vapor probe installation and

sampling were performed according to DTSC 2015 Advisory on Active Soil Gas Investigations.

- Prepare a report documenting the methods and findings of the Phase II ESA.

4 Soil Vapor Sample Collection and Chemical Analysis

4.1 Soil Vapor Probe Installation and Sampling

Soil vapor probes were installed on March 27, 2025, by our in-house drilling division, Environmental Support Technologies (EST) using a direct-push drilling rig and a jackhammer with a 2-man crew. EST is a General Engineering A licensed contractor with a C-57 drilling license (license number 1112073). EST used a Geoprobe 5400 direct-push drilling rig in the parking lot area of the property (SV-1 to SV-7). The soil vapor probe installed in the northeastern corner of the Site was installed using a jackhammer and rods as truck access was not possible (SV-8). Each boring was cleared of utilities prior to drilling and was moved slightly, as appropriate, to avoid underground utilities. Location SV-9 was proposed near the northwest corner of the Site but was removed due to the number of subsurface utilities marked out by GPRS and DigAlert. All soil borings installed on the property were completed as temporary soil vapor sampling probes (see **Figure 2**).

4.2 Soil Vapor Probe Installation and Sampling

EST installed temporary soil vapor probes at 5 foot depths at all locations. The soil vapor investigation activities were conducted in general accordance with the California Department of Toxic Substances Control's (DTSC) Advisory - Active Soil Gas Investigations dated July 2015. Each temporary soil vapor probe was installed from the bottom up. The soil vapor probes were installed using ¼-inch NylafloTM sampling tubing in the subsurface. A clean and new implant filter was placed on the end of the tubing. Approximately 12 inches of clean, graded (# 3), kiln dried, Lonestar Monterey sand was poured around the sample tip to allow for diffusion of soil vapors and 12 inches of dry bentonite was added above the sand pack. The remaining borehole was filled with a hydrated bentonite cement mixture to slightly below grade to perform as a leak proof seal.

Prior to soil vapor sample collection, a minimum of 120 minutes was allowed to elapse for soil vapor probe construction materials to set and equilibrate with the surrounding formation. A soil vapor sampling apparatus tray was equipped with a Magnehelic vacuum gauge, purge pump and valves and was used to perform a shut-in test and leak test of the sampling train.

Shut-in tests are performed to ensure all above ground sampling equipment is tight with no dilution of atmospheric air. A shut-in test was performed at each probe between the top of the probe and the inlet to the vacuum pump at a vacuum of at least 100 inches of water column for a period of at least one minute. No vacuum leaks were observed during the shut-in tests.

The leak test is performed to ensure that the sampled subsurface vapor originates from the subsurface without dilution of atmospheric air. Leak testing was performed by applying a liquid leak tracer (2-propanol) to cotton swabs placed at the points where the probes daylight from the subsurface, and at the connections to the sampling apparatus. 2-propanol was included in the list of soil vapor analytes.

Samples were collected in a laboratory clean, forty-centimeter gas-tight, glass syringe designed for soil vapor sampling. EST purged the sample probes at a rate of 200 milliliters a minute (mL/min) prior to sampling and purged a total of 3 volumes prior to sampling. Samples were analyzed on Site with a mobile laboratory certified by the State of California Environmental Laboratory Accreditation Program (ELAP, certificate number 2772).

Once sampled, each temporary soil vapor probe was removed, and the borehole was capped at the surface in concrete with a 2-inch diameter patch to match the existing surface.

4.3 Chemical Analysis of Samples

Soil vapor samples from each probe were analyzed on-site for VOCs using a California ELAP Certified Mobile Laboratory (California ELAP Number 2772) supplied by Environmental Support Technologies (EST) according to EPA Method 8260B modified for soil gas at environmental screening level reporting limits. The quantification of total petroleum hydrocarbons gasoline range (TPHg) is an approximation based on all detected VOCs with the gasoline range of C4 to C12. The certified laboratory report for soil vapor and TPHg chromatograms are provided in **Appendix A** and **B**, respectively. A summary of the laboratory data is provided in **Table 1**.

Soil vapor results are compared to the San Francisco Bay Area Regional Water Quality Control Board Environmental Screening Levels (ESLs) dated July 2019 (Rev.2) and EPA Region 9 Screening Levels (RSLs) dated November 2024 adjusted for soil vapor using an attenuation factor of 0.03 as per the Department of Toxic Substances Control (DTSC) February 2024 Draft Supplemental Guidance. Generally, these screening levels are a first point of comparison and evaluation to contaminant levels deemed significant enough by the State of California to warrant additional evaluation or investigation. These ESLs are not remediation cleanup target levels, nor are they considered levels that require environmental cleanup. They are provided by the State of California as guidance for evaluation of sites under investigation. It is generally considered that testing levels found to be at or below these ESLs do not warrant additional investigation or concern at this time.

VOCs detected in soil vapor samples included benzene, ethylbenzene, tetrachloroethene, toluene, trichloroethene, meta- and para-xylenes, ortho xylenes and total petroleum hydrocarbons gasoline range organics (TPHg). Sample location SV-4 was the only location that did not detect any VOCs above reporting limits.

According to the California Department of Toxic Substances Control, "Sensitive Receptor Land Use" includes residences, schools, daycare facilities, hospitals and hospices (DTSC, July 10, 2022). Mr. Raul E. Carrasco, who is the Sr. CIP Project Technician with ICDPW, informed AEG that the onsite building is a mental health triage unit and Ms. Priscilla Velez, who is the Administrative Analyst with the Mental Health Triage Unit & Engagement Services, informed AEG that the onsite building is not considered a hospital. Based on this information, it does not appear to meet the definition of a sensitive land use condition; therefore, soil vapor analytical data was compared to commercial land use health-based screening levels.

None of the VOCs detected exceeded ESLs or RSLs for commercial sites. The VOCs detected in soil vapor, number of detections, their concentration ranges and soil vapor screening levels for human health risk from potential vapor intrusion at commercial sites are listed in **Table 2**.

5 Laboratory Quality Assurance/Quality Control Review

The laboratory analytical reports were reviewed and evaluated to assess the overall quality and usability of the data. No quality assurance and quality control (QA/QC) deficiencies or data qualifiers were noted that would otherwise disqualify use of the data for the project purpose. Supporting QA/QC documentation that was evaluated for the soil vapor analytical reports included the following major items:

- Chain of Custody
- Sample Holding Times
- Surrogate Spike Recoveries
- Method Blanks (MB)
- Laboratory Control Samples (LCS)
- Laboratory Control Sample Duplicates (LCSD)
- Field Duplicates and Relative Percent Difference (RPD)
- Equipment Blanks
- Ambient Air Blanks
- Method Detection Level (MDL) and Reporting Limit (RL)
- Data Qualifiers

5.1 Data Qualifiers

Review of the final report for soil vapor sample analyses only identified "J" flag qualifiers. An analyte with a "J" flag qualifier signifies the analyte was detected below reporting limits and the result presented in the report is an estimated concentration.

5.2 Soil Vapor Probe Equipment Blanks

An equipment blank sample was prepared by collecting air samples from an assembled soil vapor probe and analyzing the samples on-Site by EPA Method 8260B modified for soil vapor. The purpose of this procedure was to confirm cleanliness of materials used for soil vapor probe construction as recommended by the DTSC 2015 Soil Gas Advisory. VOCs were not detected in the equipment blank sample.

5.3 Ambient Air Blanks

An ambient air blank sample was prepared by collecting an air sample outside of the mobile laboratory and analyzing the sample on-site using EPA Method 8260B modified for soil vapor. The purpose of this procedure was to test for VOCs in ambient air that may interfere with soil vapor and produce false-positive data. VOCs were not detected in the ambient air blank sample.

5.4 Soil Vapor Probe Shut-In and Tracer Leak Testing

The soil vapor sampling apparatus used by EST is equipped with a vacuum gauge and valves used to perform a shut-in leak test of the sampling train between the top of the probe and the inlet to the vacuum pump. Shut-in tests were performed for each probe at a vacuum of at least 100 inches of water column for a period of at least one minute. No visible movement of the vacuum gauge needle was observed during the tests. Leak testing was also performed by applying a liquid leak tracer (2-propanol) to cotton swabs placed at the points where the probes daylight from the subsurface, and at the connections to the sampling apparatus. 2-propanol (or isopropanol) was not detected in any of the soil vapor samples analyzed for this project by EPA Method 8260B. These results demonstrate that leakage of ambient air into the soil vapor probes did not occur during sampling.

6 Conclusions

AEG concludes the following regarding the findings of this Phase II ESA performed at 202 North 8th Street in El Centro, California:

- Benzene, ethylbenzene, tetrachloroethene, toluene, trichloroethene, meta- and para-xylenes, and ortho xylenes were the only VOCs detected above reporting limits (**Table 1**). Soil vapor probe SV-4 was the only sampling location that did not detect any VOCs above reporting limits.
- TPHg was detected above reporting limits in samples SV-1, SV-2, SV-3, SV-5 and SV-6. TPHg was detected below reporting limits but above minimum detection limits in sample SV-8.
- No VOCs exceeded their respective ESL or RSL for commercial/industrial sites.

7 Recommendations

AEG makes the following recommendations based on the findings of this investigation:

- VOCs were not detected above ESLs or RSLs for commercial industrial sites in any of the samples collected and analyzed (**Table 1**). Based on the VOC results from this sampling event it appears the building on the property should be considered a low priority for vapor intrusion risk.

8 References

California Environmental Protection Agency (CalEPA), California Department of Toxic Substances Control (DTSC), *Advisory – Active Soil Gas Investigations*, July 2015

Nicklaus Engineering, Inc., *Phase I Environmental Site Assessment for 202 N 8th Street, El Centro, CA 92243*, October 4, 2024

DTSC, California Regional Water Quality Control Board (RWQCB), *Supplemental Guidance: Screening and Evaluating Vapor Intrusion, Final Draft*, February 2023

Tables

TABLE 1
SOIL VAPOR SAMPLING RESULTS FOR VOCs
202 NORTH 8TH STREET, EL CENTRO, CA

Probe ID	Depth (ft)	Date	Benzene	Ethylbenzene	Tetrachloroethene	Toluene	Trichloroethene	meta- and para-Xylenes	ortho-Xylene	Total Petroleum Hydrocarbons (GRO)
			µg/m ³							
SV-1	5	3/27/2025	<2.5	<2.5	7.5	<2.5	<2.5	<5.0	<2.5	14,000
SV-2	5	3/27/2025	<2.5	<2.5	15	<2.5	<2.5	<5.0	<2.5	11,000
SV-3	5	3/27/2025	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	18,000
SV-4	5	3/27/2025	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<5,000
	Dup	3/27/2025	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<5,000
SV-5	5	3/27/2025	<2.5	<2.5	9.8	<2.5	<2.5	<5.0	<2.5	34,000
SV-6	5	3/27/2025	<2.5	<2.5	20	<2.5	<2.5	<5.0	<2.5	18,000
SV-7	5	3/27/2025	<2.5	<2.5	15	8.0	<2.5	<5.0	<2.5	<5,000
SV-8	5	3/27/2025	13	<2.5	17	54	9.5	12	<2.5	3,900J
QA/QC										
Equipment Blank	NA	3/27/2025	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	170J
Screening Level										
SFRWQCB ESL			14	160	67	44,000	100	15,000	15,000	83,000
RSL Region 9			53	163	1,567	7.3E+05	100	14,667	14,667	NA

Notes:

µg/ =m³ micrograms per cubic meter

NA = Not Applicable

GRO = Gasoline Range Organics

QA/QC = Quality Assurance/Quality Control

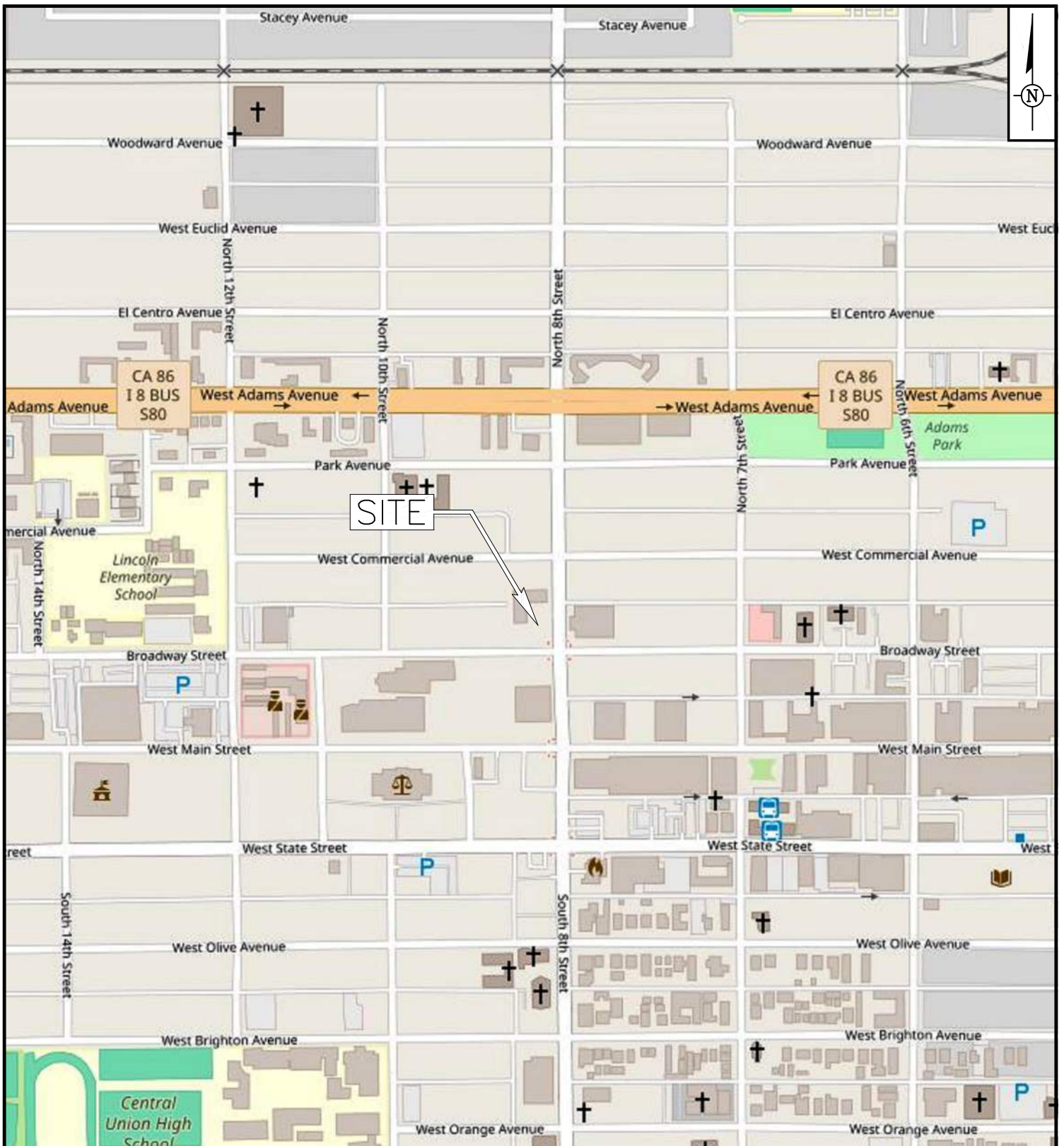
SFRWQCB ESL = San Francisco Regional Water Quality Control Board - Commercial/Industrial -

Environmental Screening Levels - January 2019



RSL Region 9 = Environmental Protection Agency Regional Screening Levels Region 9 -

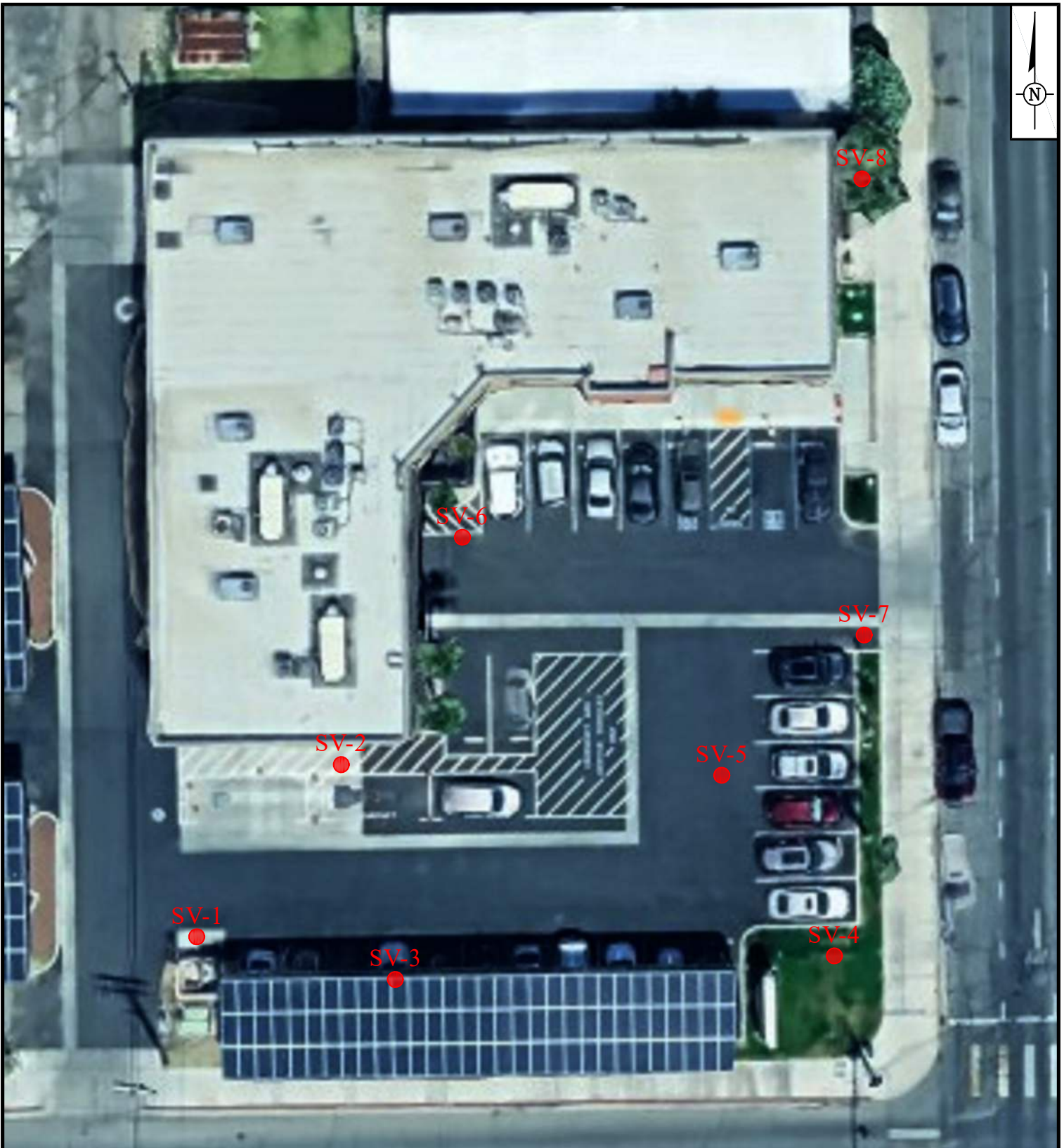
Commercial/Industrial - November 2024 - Adjusted for Soil Gas Using an Attenuation Factor of 0.03

Figures



Map Source: [Openstreetmap.org](https://www.openstreetmap.org)

NOT TO SCALE		SITE LOCATION MAP	
		202 North 8th Street El Centro, Ca	
Project Number		Phase II Environmental Site Assessment	
AEG24112			
Project Manager	Drafter		
MM	AF		
Date	04/09/2025		
		Figure 1	



Map Source: Google Earth

AEG Soil Vapor Probes	NOT TO SCALE		SITE MAP 202 North 8th Street El Centro	
	Project Number AEG24112		Phase II Environmental Site Assessment	
	Project Manager MM	Drafter AF		
Date 04/09/2025		Figure 2		

Appendix A

Laboratory Report for Soil Vapor Samples



April 04, 2025

Ashley Flores
Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618
RE: 202 North 8th Street El Centro, CA. 92243

Enclosed are the results of analyses for soil gas samples received by Environmental Support Technologies laboratory on 03/27/25 17:39. The analyses were performed according to the prescribed method as outlined by EPA 8260B. A shut in test was performed, leak test was performed, equipment blank was run, and selected purge volume was 3PV. If you have any questions concerning this report, please feel free to contact Project Manager.

Sincerely,

Ashley Flores

Ashley Flores
Project Manager

Environmental Support Technologies laboratories are certified by the State Water Resources Control Board (SWRCB),
Environmental Laboratory Accreditation Program (ELAP) No's. 2772.

8 Goodyear, Suite 125 , Irvine, CA. 92618
Telephone: (949) 679-9500



Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Analyzed
Equipment Blank	BC52701-01	Air	27-Mar-25 07:55	27-Mar-25 08:10
SV-4-5	BC52701-02	Air	27-Mar-25 10:00	27-Mar-25 10:12
SV-4-5-DUP	BC52701-03	Air	27-Mar-25 10:50	27-Mar-25 11:05
SV-8-5	BC52701-04	Air	27-Mar-25 11:20	27-Mar-25 11:32
SV-7-5	BC52701-05	Air	27-Mar-25 11:45	27-Mar-25 11:59
SV-6-5	BC52701-06	Air	27-Mar-25 12:10	27-Mar-25 12:26
SV-5-5	BC52701-07	Air	27-Mar-25 12:40	27-Mar-25 12:52
SV-3-5	BC52701-08	Air	27-Mar-25 13:05	27-Mar-25 13:19
SV-2-5	BC52701-09	Air	27-Mar-25 13:30	27-Mar-25 13:46
SV-1-5	BC52701-10	Air	27-Mar-25 14:00	27-Mar-25 14:13

The results in this report apply to the samples analyzed. This analytical report must be reproduced in its entirety.



Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

EXECUTIVE SUMMARY

Client ID: **Equipment Blank**

Lab ID: **BC52701-01**

No Results Detected

Client ID: **SV-4-5**

Lab ID: **BC52701-02**

No Results Detected

Client ID: **SV-4-5-DUP**

Lab ID: **BC52701-03**

No Results Detected

Client ID: **SV-3-5**

Lab ID: **BC52701-08**

No Results Detected

Environmental Support Technologies does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

EXECUTIVE SUMMARY

Client ID: **SV-8-5**

Lab ID: **BC52701-04**

Analyte	Results/Qual	DL	RL	Units	Method
Benzene	13	0.30	2.5	ug/m ³	EPA 8260B
meta- and para-Xylenes	12	0.30	5.0	ug/m ³	EPA 8260B
Tetrachloroethene	17	0.38	2.5	ug/m ³	EPA 8260B
Toluene	54	0.38	2.5	ug/m ³	EPA 8260B
Trichloroethene	9.5	0.60	2.5	ug/m ³	EPA 8260B

Client ID: **SV-7-5**

Lab ID: **BC52701-05**

Analyte	Results/Qual	DL	RL	Units	Method
Tetrachloroethene	15	0.38	2.5	ug/m ³	EPA 8260B
Toluene	8.0	0.38	2.5	ug/m ³	EPA 8260B

Client ID: **SV-6-5**

Lab ID: **BC52701-06**

Analyte	Results/Qual	DL	RL	Units	Method
Tetrachloroethene	20	0.38	2.5	ug/m ³	EPA 8260B

Client ID: **SV-5-5**

Lab ID: **BC52701-07**

Analyte	Results/Qual	DL	RL	Units	Method
Tetrachloroethene	9.8	0.38	2.5	ug/m ³	EPA 8260B

Client ID: **SV-2-5**

Lab ID: **BC52701-09**

Analyte	Results/Qual	DL	RL	Units	Method
Tetrachloroethene	15	0.38	2.5	ug/m ³	EPA 8260B

Client ID: **SV-1-5**

Lab ID: **BC52701-10**

Analyte	Results/Qual	DL	RL	Units	Method
Tetrachloroethene	7.5	0.38	2.5	ug/m ³	EPA 8260B

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

Volatile Organic Compounds Environmental Support Technologies-3

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Equipment Blank (BC52701-01) Air Sampled: 03/27/25 07:55 Analyzed: 03/27/25 08:10										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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8 Goodyear, Suite 125 , Irvine, CA. 92618
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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Equipment Blank (BC52701-01) Air Sampled: 03/27/25 07:55 Analyzed: 03/27/25 08:10										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	ND	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		<i>96.8 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: Toluene-d8</i>		<i>102 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>97.6 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds
 Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-4-5 (BC52701-02) Air Sampled: 03/27/25 10:00 Analyzed: 03/27/25 10:12										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

The results in this report apply to the samples analyzed. This analytical report must be reproduced in its entirety.



Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-4-5 (BC52701-02) Air Sampled: 03/27/25 10:00 Analyzed: 03/27/25 10:12										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	ND	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
Surrogate: Dibromofluoromethane		92.0 %		75-125		"	"	"	"	"
Surrogate: Toluene-d8		102 %		75-125		"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.6 %		75-125		"	"	"	"	"

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-4-5-DUP (BC52701-03) Air Sampled: 03/27/25 10:50 Analyzed: 03/27/25 11:05										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-4-5-DUP (BC52701-03) Air Sampled: 03/27/25 10:50 Analyzed: 03/27/25 11:05										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	ND	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		<i>92.8 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: Toluene-d8</i>		<i>102 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>93.6 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-8-5 (BC52701-04) Air Sampled: 03/27/25 11:20 Analyzed: 03/27/25 11:32										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	13	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-8-5 (BC52701-04) Air Sampled: 03/27/25 11:20 Analyzed: 03/27/25 11:32										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	12	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	17	2.5	0.38	"	"	"	"	"	"	"
Toluene	54	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	9.5	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		95.2 %			75-125	"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		102 %			75-125	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		94.4 %			75-125	"	"	"	"	"

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 8 Goodyear, Suite 125
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Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds
 Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-7-5 (BC52701-05) Air Sampled: 03/27/25 11:45 Analyzed: 03/27/25 11:59										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-7-5 (BC52701-05) Air Sampled: 03/27/25 11:45 Analyzed: 03/27/25 11:59										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	15	2.5	0.38	"	"	"	"	"	"	"
Toluene	8.0	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		92.8 %			75-125		"	"	"	"
<i>Surrogate: Toluene-d8</i>		103 %			75-125		"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		93.6 %			75-125		"	"	"	"

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds
 Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-6-5 (BC52701-06) Air Sampled: 03/27/25 12:10 Analyzed: 03/27/25 12:26										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-6-5 (BC52701-06) Air Sampled: 03/27/25 12:10 Analyzed: 03/27/25 12:26										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	20	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		96.8 %			75-125	"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		101 %			75-125	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		92.8 %			75-125	"	"	"	"	"

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Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-5-5 (BC52701-07) Air Sampled: 03/27/25 12:40 Analyzed: 03/27/25 12:52										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-5-5 (BC52701-07) Air Sampled: 03/27/25 12:40 Analyzed: 03/27/25 12:52										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	9.8	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		<i>94.4 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: Toluene-d8</i>		<i>103 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>96.8 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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8 Goodyear, Suite 125
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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-3-5 (BC52701-08) Air Sampled: 03/27/25 13:05 Analyzed: 03/27/25 13:19										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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8 Goodyear, Suite 125
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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-3-5 (BC52701-08) Air Sampled: 03/27/25 13:05 Analyzed: 03/27/25 13:19										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	ND	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		<i>94.4 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: Toluene-d8</i>		<i>102 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>95.2 %</i>		<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds
 Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-2-5 (BC52701-09) Air Sampled: 03/27/25 13:30 Analyzed: 03/27/25 13:46										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds
Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-2-5 (BC52701-09) Air Sampled: 03/27/25 13:30 Analyzed: 03/27/25 13:46										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	15	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		<i>94.4 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: Toluene-d8</i>		<i>101 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>93.6 %</i>			<i>75-125</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds
 Environmental Support Technologies-3**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-1-5 (BC52701-10) Air Sampled: 03/27/25 14:00 Analyzed: 03/27/25 14:13										
1,1,1,2-Tetrachloroethane	ND	2.5	0.54	ug/m ³	1	B5C2701	03/27/25	03/27/25	EPA 8260B	
1,1,1-Trichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	0.49	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	2.5	0.75	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	0.60	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	0.78	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	0.64	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	0.62	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.5	0.42	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.5	0.71	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	0.75	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	0.54	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	0.75	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	0.45	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	0.54	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	0.45	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	0.45	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	0.54	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	0.45	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	0.64	"	"	"	"	"	"	
Benzene	ND	2.5	0.30	"	"	"	"	"	"	
Bromobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Bromochloromethane	ND	2.5	0.60	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	0.42	"	"	"	"	"	"	
Bromoform	ND	2.5	0.78	"	"	"	"	"	"	
Bromomethane	ND	2.5	0.78	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	0.71	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	0.78	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	0.42	"	"	"	"	"	"	
Chloroethane	ND	2.5	0.62	"	"	"	"	"	"	

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Advanced Environmental Group, Inc.
8 Goodyear, Suite 125
Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

Volatile Organic Compounds Environmental Support Technologies-3

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SV-1-5 (BC52701-10) Air Sampled: 03/27/25 14:00 Analyzed: 03/27/25 14:13										
Chloroform	ND	2.5	0.54	"	"	"	"	"	"	"
Chloromethane	ND	2.5	0.59	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	0.64	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	2.5	0.42	"	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dibromomethane	ND	2.5	0.62	"	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	0.45	"	"	"	"	"	"	"
Ethylbenzene	ND	2.5	0.62	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	0.62	"	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	0.71	"	"	"	"	"	"	"
meta- and para-Xylenes	ND	5.0	0.30	"	"	"	"	"	"	"
Methylene Chloride	ND	2.5	0.60	"	"	"	"	"	"	"
Naphthalene	ND	2.5	0.54	"	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	0.54	"	"	"	"	"	"	"
ortho-Xylene	ND	2.5	0.45	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	0.45	"	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	0.64	"	"	"	"	"	"	"
Styrene	ND	2.5	0.71	"	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	0.60	"	"	"	"	"	"	"
Tetrachloroethene	7.5	2.5	0.38	"	"	"	"	"	"	"
Toluene	ND	2.5	0.38	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	0.71	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	2.5	0.75	"	"	"	"	"	"	"
Trichloroethene	ND	2.5	0.60	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	0.71	"	"	"	"	"	"	"
Vinyl Chloride	ND	2.5	0.30	"	"	"	"	"	"	"
2-Propanol	ND	2.5	0.60	"	"	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		96.0 %			75-125	"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		102 %			75-125	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		96.0 %			75-125	"	"	"	"	"

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Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds - Quality Control
Environmental Support Technologies-3**

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2701 - Volatiles

Blank (B5C2701-BLK1)

Prepared & Analyzed: 03/27/25

1,1,1,2-Tetrachloroethane	0.54	ND	2.5	ug/m ³							
1,1,1-Trichloroethane	0.54	ND	2.5	"							
1,1,2,2-Tetrachloroethane	0.75	ND	2.5	"							
1,1,2-Trichloroethane	0.49	ND	2.5	"							
1,1,2-Trichloro-trifluoroethane	0.75	ND	2.5	"							
1,1-Dichloroethane	0.60	ND	2.5	"							
1,1-Dichloroethene	0.78	ND	2.5	"							
1,1-Dichloropropene	0.42	ND	2.5	"							
1,2,3-Trichlorobenzene	0.45	ND	2.5	"							
1,2,3-Trichloropropane	0.64	ND	2.5	"							
1,2,4-Trichlorobenzene	0.62	ND	2.5	"							
1,2,4-Trimethylbenzene	0.54	ND	2.5	"							
1,2-Dibromo-3-chloropropane	0.42	ND	2.5	"							
1,2-Dibromoethane	0.71	ND	2.5	"							
1,2-Dichlorobenzene	0.75	ND	2.5	"							
1,2-Dichloroethane	0.54	ND	2.5	"							
1,2-Dichloropropane	0.75	ND	2.5	"							
1,3,5-Trimethylbenzene	0.45	ND	2.5	"							
1,3-Dichlorobenzene	0.54	ND	2.5	"							
1,3-Dichloropropane	0.45	ND	2.5	"							
1,4-Dichlorobenzene	0.45	ND	2.5	"							
2,2-Dichloropropane	0.54	ND	2.5	"							
2-Chlorotoluene	0.45	ND	2.5	"							
4-Chlorotoluene	0.64	ND	2.5	"							
Benzene	0.30	ND	2.5	"							
Bromobenzene	0.42	ND	2.5	"							
Bromochloromethane	0.60	ND	2.5	"							
Bromodichloromethane	0.42	ND	2.5	"							
Bromoform	0.78	ND	2.5	"							
Bromomethane	0.78	ND	2.5	"							
Carbon disulfide	0.71	ND	2.5	"							
Carbon tetrachloride	0.78	ND	2.5	"							
Chlorobenzene	0.42	ND	2.5	"							

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Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

**Volatile Organic Compounds - Quality Control
Environmental Support Technologies-3**

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2701 - Volatiles

Blank (B5C2701-BLK1)

Prepared & Analyzed: 03/27/25

Chloroethane	0.62	ND	2.5	ug/m ³							
Chloroform	0.54	ND	2.5	"							
Chloromethane	0.59	ND	2.5	"							
cis-1,2-Dichloroethene	0.64	ND	2.5	"							
cis-1,3-Dichloropropene	0.42	ND	2.5	"							
Dibromochloromethane	0.62	ND	2.5	"							
Dibromomethane	0.62	ND	2.5	"							
Dichlorodifluoromethane	0.45	ND	2.5	"							
Ethylbenzene	0.62	ND	2.5	"							
Hexachlorobutadiene	0.62	ND	2.5	"							
Isopropylbenzene	0.71	ND	2.5	"							
meta- and para-Xylenes	0.30	ND	5.0	"							
Methylene Chloride	0.60	ND	2.5	"							
Naphthalene	0.54	ND	2.5	"							
n-Butylbenzene	0.60	ND	2.5	"							
n-Propylbenzene	0.54	ND	2.5	"							
ortho-Xylene	0.45	ND	2.5	"							
p-Isopropyltoluene	0.45	ND	2.5	"							
sec-Butylbenzene	0.64	ND	2.5	"							
Styrene	0.71	ND	2.5	"							
tert-Butylbenzene	0.60	ND	2.5	"							
Tetrachloroethene	0.38	ND	2.5	"							
Toluene	0.38	ND	2.5	"							
trans-1,2-Dichloroethene	0.71	ND	2.5	"							
trans-1,3-Dichloropropene	0.75	ND	2.5	"							
Trichloroethene	0.60	ND	2.5	"							
Trichlorofluoromethane	0.71	ND	2.5	"							
Vinyl Chloride	0.30	ND	2.5	"							
2-Propanol	0.60	ND	2.5	"							
<i>Surrogate: Dibromofluoromethane</i>		5950		"	6250		95.2	75-125			
<i>Surrogate: Toluene-d8</i>		6500		"	6250		104	75-125			
<i>Surrogate: 4-Bromofluorobenzene</i>		6050		"	6250		96.8	75-125			

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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

Volatile Organic Compounds - Quality Control Environmental Support Technologies-3

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5C2701 - Volatiles											
LCS (B5C2701-BS1)					Prepared & Analyzed: 03/27/25						
1,1,1,2-Tetrachloroethane	0.54	240	2.5	ug/m ³	250		96.0	75-136			
1,1,1-Trichloroethane	0.54	220	2.5	"	250		88.0	73-134			
1,1,2,2-Tetrachloroethane	0.75	260	2.5	"	250		104	56-149			
1,1,2-Trichloroethane	0.49	230	2.5	"	250		92.0	67-137			
1,1,2-Trichloro-trifluoroethane	0.75	230	2.5	"	250		92.0	83-125			
1,1-Dichloroethane	0.60	260	2.5	"	250		104	80-121			
1,1-Dichloroethene	0.78	230	2.5	"	250		92.0	73-137			
1,1-Dichloropropene	0.42	250	2.5	"	250		100	77-122			
1,2,3-Trichlorobenzene	0.45	240	2.5	"	250		96.0	67-133			
1,2,3-Trichloropropane	0.64	250	2.5	"	250		100	56-145			
1,2,4-Trichlorobenzene	0.62	260	2.5	"	250		104	71-135			
1,2,4-Trimethylbenzene	0.54	230	2.5	"	250		92.0	76-140			
1,2-Dibromo-3-chloropropane	0.42	260	2.5	"	250		104	43-158			
1,2-Dibromoethane	0.71	220	2.5	"	250		88.0	80-130			
1,2-Dichlorobenzene	0.75	250	2.5	"	250		100	67-139			
1,2-Dichloroethane	0.54	260	2.5	"	250		104	75-131			
1,2-Dichloropropane	0.75	270	2.5	"	250		108	62-144			
1,3,5-Trimethylbenzene	0.45	240	2.5	"	250		96.0	78-125			
1,3-Dichlorobenzene	0.54	270	2.5	"	250		108	82-120			
1,3-Dichloropropane	0.45	240	2.5	"	250		96.0	61-145			
1,4-Dichlorobenzene	0.45	260	2.5	"	250		104	84-120			
2,2-Dichloropropane	0.54	260	2.5	"	250		104	68-134			
2-Chlorotoluene	0.45	260	2.5	"	250		104	65-127			
4-Chlorotoluene	0.64	260	2.5	"	250		104	65-127			
Benzene	0.30	260	2.5	"	250		104	79-118			
Bromobenzene	0.42	250	2.5	"	250		100	69-140			
Bromochloromethane	0.60	230	2.5	"	250		92.0	61-141			
Bromodichloromethane	0.42	250	2.5	"	250		100	67-137			
Bromoform	0.78	230	2.5	"	250		92.0	57-152			
Bromomethane	0.78	260	2.5	"	250		104	51-148			
Carbon disulfide	0.71	230	2.5	"	250		92.0	61-140			
Carbon tetrachloride	0.78	220	2.5	"	250		88.0	74-143			
Chlorobenzene	0.42	270	2.5	"	250		108	67-140			

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Advanced Environmental Group, Inc.
 8 Goodyear, Suite 125
 Irvine, CA. 92618

Project: 202 North 8th Street El Centro, CA. 92243
 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

Volatile Organic Compounds - Quality Control
Environmental Support Technologies-3

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2701 - Volatiles

LCS (B5C2701-BS1)

Prepared & Analyzed: 03/27/25

Chloroethane	0.62	250	2.5	ug/m ³	250		100	60-137			
Chloroform	0.54	240	2.5	"	250		96.0	82-140			
Chloromethane	0.59	240	2.5	"	250		96.0	58-139			
cis-1,2-Dichloroethene	0.64	240	2.5	"	250		96.0	85-116			
cis-1,3-Dichloropropene	0.42	230	2.5	"	250		92.0	66-142			
Dibromochloromethane	0.62	260	2.5	"	250		104	61-140			
Dibromomethane	0.62	260	2.5	"	250		104	66-143			
Dichlorodifluoromethane	0.45	260	2.5	"	250		104	47-129			
Ethylbenzene	0.62	250	2.5	"	250		100	70-125			
Hexachlorobutadiene	0.62	240	2.5	"	250		96.0	71-145			
Isopropylbenzene	0.71	230	2.5	"	250		92.0	85-116			
meta- and para-Xylenes	0.30	470	5.0	"	500		94.0	83-115			
Methylene Chloride	0.60	270	2.5	"	250		108	81-126			
Naphthalene	0.54	230	2.5	"	250		92.0	56-140			
n-Butylbenzene	0.60	250	2.5	"	250		100	60-149			
n-Propylbenzene	0.54	250	2.5	"	250		100	77-129			
ortho-Xylene	0.45	250	2.5	"	250		100	85-115			
p-Isopropyltoluene	0.45	220	2.5	"	250		88.0	63-144			
sec-Butylbenzene	0.64	260	2.5	"	250		104	68-128			
Styrene	0.71	230	2.5	"	250		92.0	65-142			
tert-Butylbenzene	0.60	230	2.5	"	250		92.0	60-128			
Tetrachloroethene	0.38	230	2.5	"	250		92.0	60-144			
Toluene	0.38	260	2.5	"	250		104	70-115			
trans-1,2-Dichloroethene	0.71	230	2.5	"	250		92.0	72-133			
trans-1,3-Dichloropropene	0.75	260	2.5	"	250		104	68-140			
Trichloroethene	0.60	230	2.5	"	250		92.0	68-132			
Trichlorofluoromethane	0.71	270	2.5	"	250		108	62-144			
Vinyl Chloride	0.30	250	2.5	"	250		100	66-137			
<i>Surrogate: Dibromofluoromethane</i>		24800		"	25000		99.2	75-125			
<i>Surrogate: Toluene-d8</i>		25800		"	25000		103	75-125			
<i>Surrogate: 4-Bromofluorobenzene</i>		24600		"	25000		98.4	75-125			

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 Project Number: AEG24112
 Project Manager: Ashley Flores

Reported:
 04-Apr-25 11:43

**Volatile Organic Compounds - Quality Control
 Environmental Support Technologies-3**

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2701 - Volatiles

Duplicate (B5C2701-DUP1)	Source: BC52701-02			Prepared & Analyzed: 03/27/25							
1,1,1,2-Tetrachloroethane	0.54	ND	2.5	ug/m ³		ND					50
1,1,1-Trichloroethane	0.54	ND	2.5	"		ND					50
1,1,2,2-Tetrachloroethane	0.75	ND	2.5	"		ND					50
1,1,2-Trichloroethane	0.49	ND	2.5	"		ND					50
1,1,2-Trichloro-trifluoroethane	0.75	ND	2.5	"		ND					50
1,1-Dichloroethane	0.60	ND	2.5	"		ND					50
1,1-Dichloroethene	0.78	ND	2.5	"		ND					50
1,1-Dichloropropene	0.42	ND	2.5	"		ND					50
1,2,3-Trichlorobenzene	0.45	ND	2.5	"		ND					50
1,2,3-Trichloropropane	0.64	ND	2.5	"		ND					50
1,2,4-Trichlorobenzene	0.62	ND	2.5	"		ND					50
1,2,4-Trimethylbenzene	0.54	ND	2.5	"		ND					50
1,2-Dibromo-3-chloropropane	0.42	ND	2.5	"		ND					50
1,2-Dibromoethane	0.71	ND	2.5	"		ND					50
1,2-Dichlorobenzene	0.75	ND	2.5	"		ND					50
1,2-Dichloroethane	0.54	ND	2.5	"		ND					50
1,2-Dichloropropane	0.75	ND	2.5	"		ND					50
1,3,5-Trimethylbenzene	0.45	ND	2.5	"		ND					50
1,3-Dichlorobenzene	0.54	ND	2.5	"		ND					50
1,3-Dichloropropane	0.45	ND	2.5	"		ND					50
1,4-Dichlorobenzene	0.45	ND	2.5	"		ND					50
2,2-Dichloropropane	0.54	ND	2.5	"		ND					50
2-Chlorotoluene	0.45	ND	2.5	"		ND					50
4-Chlorotoluene	0.64	ND	2.5	"		ND					50
Benzene	0.30	ND	2.5	"		ND					50
Bromobenzene	0.42	ND	2.5	"		ND					50
Bromochloromethane	0.60	ND	2.5	"		ND					50
Bromodichloromethane	0.42	ND	2.5	"		ND					50
Bromoform	0.78	ND	2.5	"		ND					50
Bromomethane	0.78	ND	2.5	"		ND					50
Carbon disulfide	0.71	ND	2.5	"		ND					50
Carbon tetrachloride	0.78	ND	2.5	"		ND					50
Chlorobenzene	0.42	ND	2.5	"		ND					50

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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

Volatile Organic Compounds - Quality Control Environmental Support Technologies-3

Analyte	MDL	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2701 - Volatiles

Duplicate (B5C2701-DUP1)	Source: BC52701-02				Prepared & Analyzed: 03/27/25					
Chloroethane	0.62	ND	2.5	ug/m ³		ND				50
Chloroform	0.54	ND	2.5	"		ND				50
Chloromethane	0.59	ND	2.5	"		ND				50
cis-1,2-Dichloroethene	0.64	ND	2.5	"		ND				50
cis-1,3-Dichloropropene	0.42	ND	2.5	"		ND				50
Dibromochloromethane	0.62	ND	2.5	"		ND				50
Dibromomethane	0.62	ND	2.5	"		ND				50
Dichlorodifluoromethane	0.45	ND	2.5	"		ND				50
Ethylbenzene	0.62	ND	2.5	"		ND				50
Hexachlorobutadiene	0.62	ND	2.5	"		ND				50
Isopropylbenzene	0.71	ND	2.5	"		ND				50
meta- and para-Xylenes	0.30	ND	5.0	"		ND				50
Methylene Chloride	0.60	ND	2.5	"		ND				50
Naphthalene	0.54	ND	2.5	"		ND				50
n-Butylbenzene	0.60	ND	2.5	"		ND				50
n-Propylbenzene	0.54	ND	2.5	"		ND				50
ortho-Xylene	0.45	ND	2.5	"		ND				50
p-Isopropyltoluene	0.45	ND	2.5	"		ND				50
sec-Butylbenzene	0.64	ND	2.5	"		ND				50
Styrene	0.71	ND	2.5	"		ND				50
tert-Butylbenzene	0.60	ND	2.5	"		ND				50
Tetrachloroethene	0.38	ND	2.5	"		ND				50
Toluene	0.38	ND	2.5	"		ND				50
trans-1,2-Dichloroethene	0.71	ND	2.5	"		ND				50
trans-1,3-Dichloropropene	0.75	ND	2.5	"		ND				50
Trichloroethene	0.60	ND	2.5	"		ND				50
Trichlorofluoromethane	0.71	ND	2.5	"		ND				50
Vinyl Chloride	0.30	ND	2.5	"		ND				50
2-Propanol	0.60	ND	2.5	"		ND				200
<i>Surrogate: Dibromofluoromethane</i>		5600		"	6250		89.6	75-125		
<i>Surrogate: Toluene-d8</i>		6550		"	6250		105	75-125		
<i>Surrogate: 4-Bromofluorobenzene</i>		6000		"	6250		96.0	75-125		

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Project: 202 North 8th Street El Centro, CA. 92243
Project Number: AEG24112
Project Manager: Ashley Flores

Reported:
04-Apr-25 11:43

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
RPD Relative Percent Difference

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Appendix B

TPHg Chromatograms for Soil Vapor Samples

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C527BLK01.D
 Acq On : 27 Mar 2025 07:43 am
 Operator : DN
 Sample : B5C2701-BLK1
 Misc : METHOD BLANK
 ALS Vial : 1 Sample Multiplier: 0.025

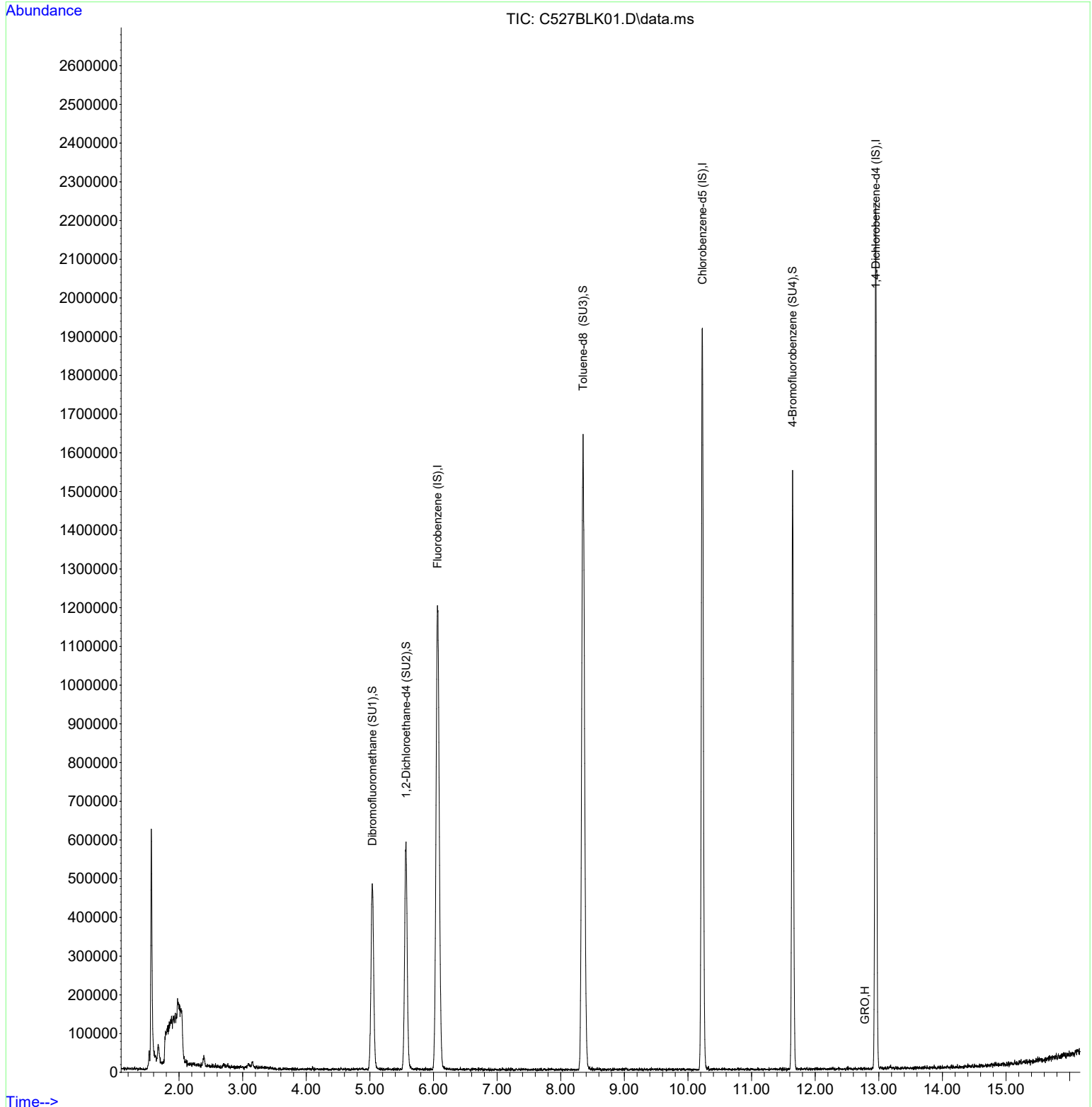
Quant Time: Apr 09 14:55:01 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.066	96	18975800	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.225	117	12146956	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.953	152	5556681	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.040	113	3907203	1.52	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	121.60%
3) 1,2-Dichloroethane-d4 ...	5.568	65	5189439	1.81	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	144.80%#
6) Toluene-d8 (SU3)	8.351	98	18068185	1.67	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	133.60%#
7) 4-Bromofluorobenzene (...)	11.646	95	5091539	1.55	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	124.00%
Target Compounds						
4) GRO	12.781	TIC	108802m	0.19	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C527BLK01.D
 Acq On : 27 Mar 2025 07:43 am
 Operator : DN
 Sample : B5C2701-BLK1
 Misc : METHOD BLANK
 ALS Vial : 1 Sample Multiplier: 0.025

Quant Time: Apr 09 14:55:01 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700001.D
 Acq On : 27 Mar 2025 08:10 am
 Operator : DN
 Sample : BC52701-01
 Misc : EQUIPMENT BLANK
 ALS Vial : 2 Sample Multiplier: 0.025

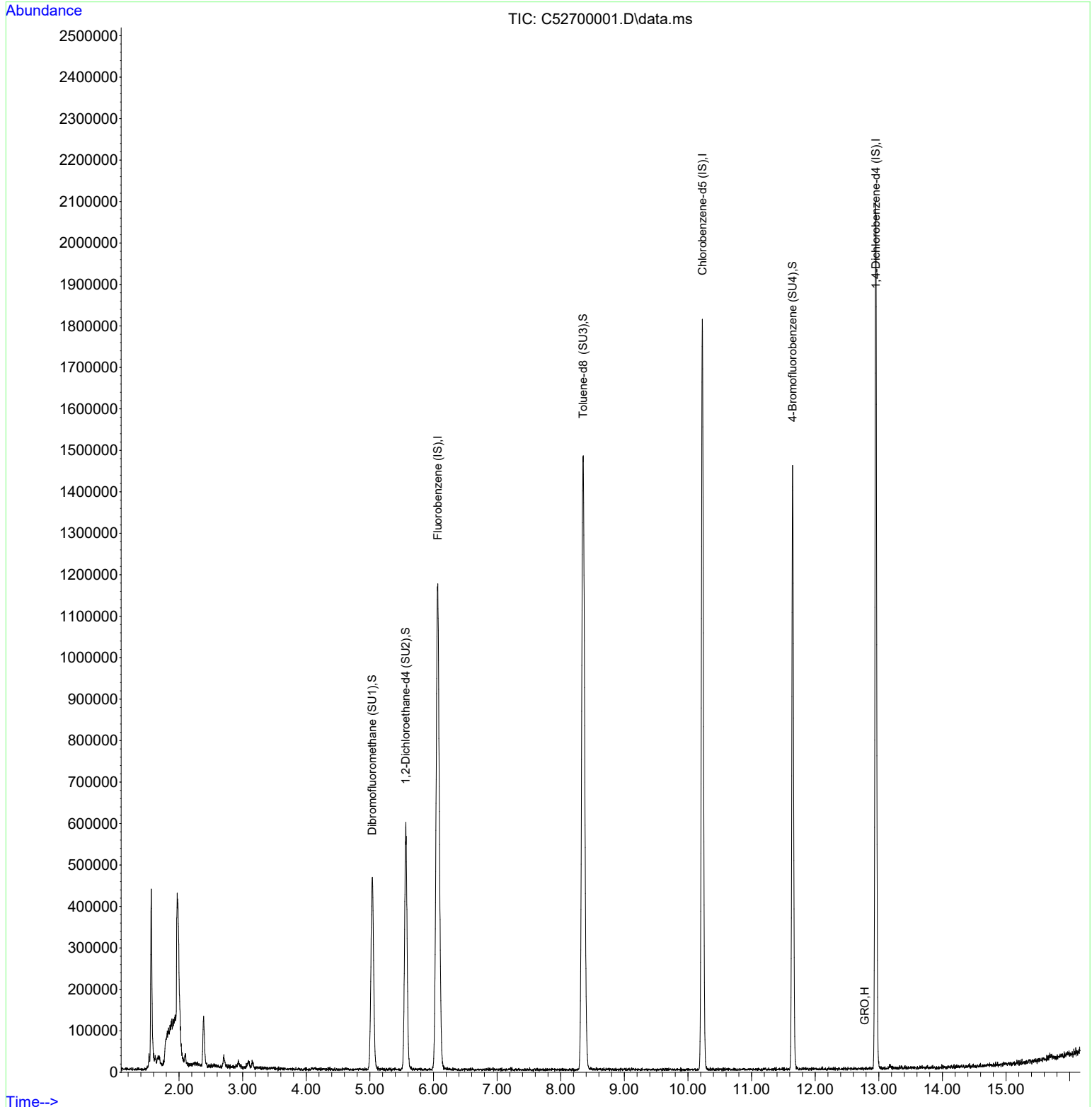
Quant Time: Apr 09 14:56:26 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.067	96	18695499	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.226	117	11903506	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.952	152	5305939	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.037	113	3879710	1.53	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	122.40%
3) 1,2-Dichloroethane-d4 ...	5.564	65	5077427	1.79	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	143.20%#
6) Toluene-d8 (SU3)	8.350	98	17281586	1.63	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	130.40%#
7) 4-Bromofluorobenzene (...)	11.646	95	5031076	1.56	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	124.80%
Target Compounds						
4) GRO	12.781	TIC	96274m	0.17	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C5270001.D
 Acq On : 27 Mar 2025 08:10 am
 Operator : DN
 Sample : BC52701-01
 Misc : EQUIPMENT BLANK
 ALS Vial : 2 Sample Multiplier: 0.025

Quant Time: Apr 09 14:56:26 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700003.D
 Acq On : 27 Mar 2025 10:38 am
 Operator : DN
 Sample : B5C2701-DUP1
 Misc : SV-4-5
 ALS Vial : 4 Sample Multiplier: 0.025

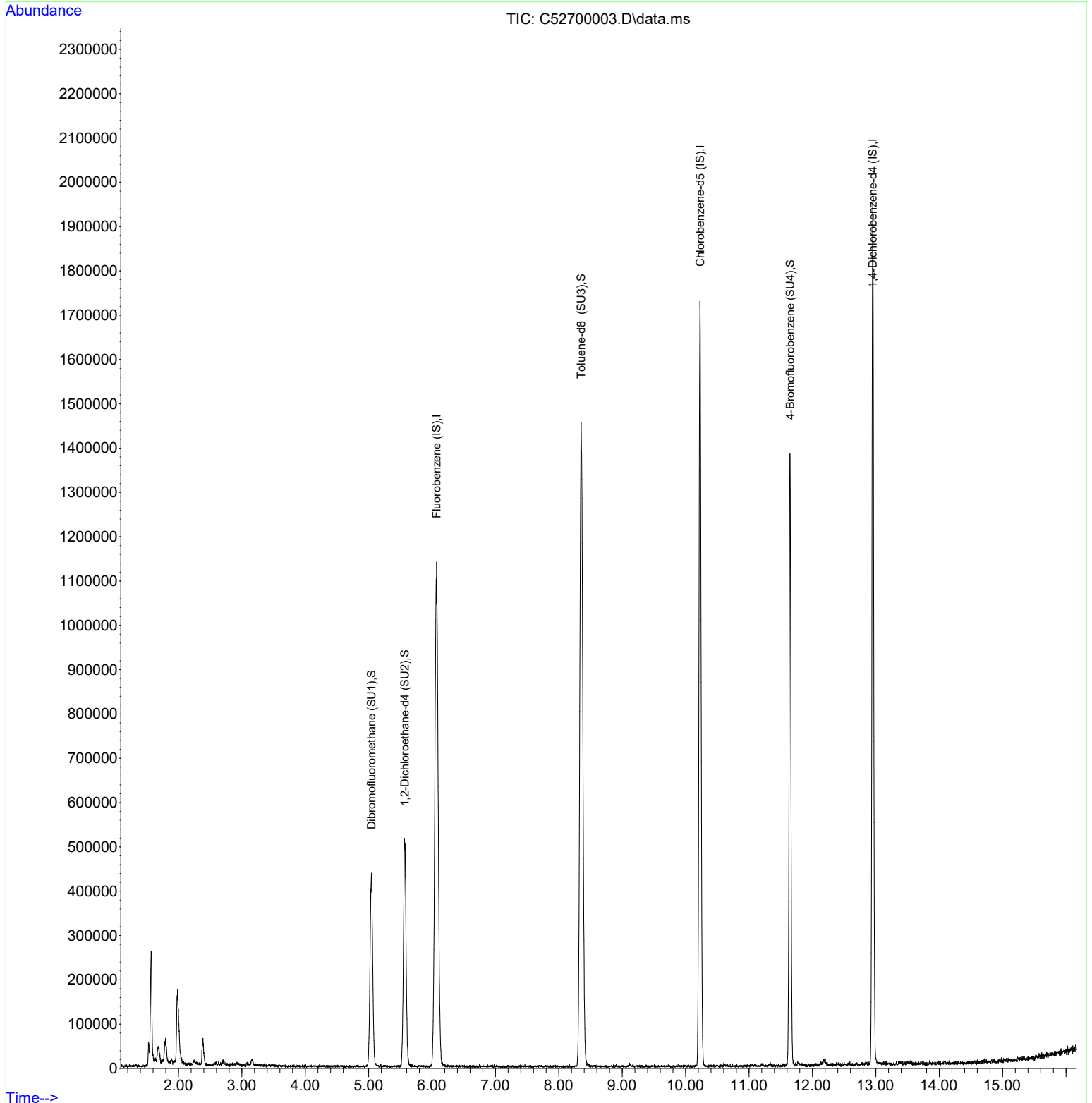
Quant Time: Apr 09 14:59:03 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.072	96	18505889	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.228	117	11432728	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.953	152	5090511	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.043	113	3557260	1.42	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	113.60%
3) 1,2-Dichloroethane-d4 ...	5.571	65	4668237	1.67	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	133.60%#
6) Toluene-d8 (SU3)	8.352	98	17069837	1.67	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	133.60%#
7) 4-Bromofluorobenzene (...)	11.647	95	4750262	1.53	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	122.40%
Target Compounds						
4) GRO	12.781	TIC	-1399978m	Below	Cal	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700003.D
 Acq On : 27 Mar 2025 10:38 am
 Operator : DN
 Sample : B5C2701-DUP1
 Misc : SV-4-5
 ALS Vial : 4 Sample Multiplier: 0.025

Quant Time: Apr 09 14:59:03 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700002.D
 Acq On : 27 Mar 2025 10:12 am
 Operator : DN
 Sample : BC52701-02
 Misc : SV-4-5
 ALS Vial : 3 Sample Multiplier: 0.025

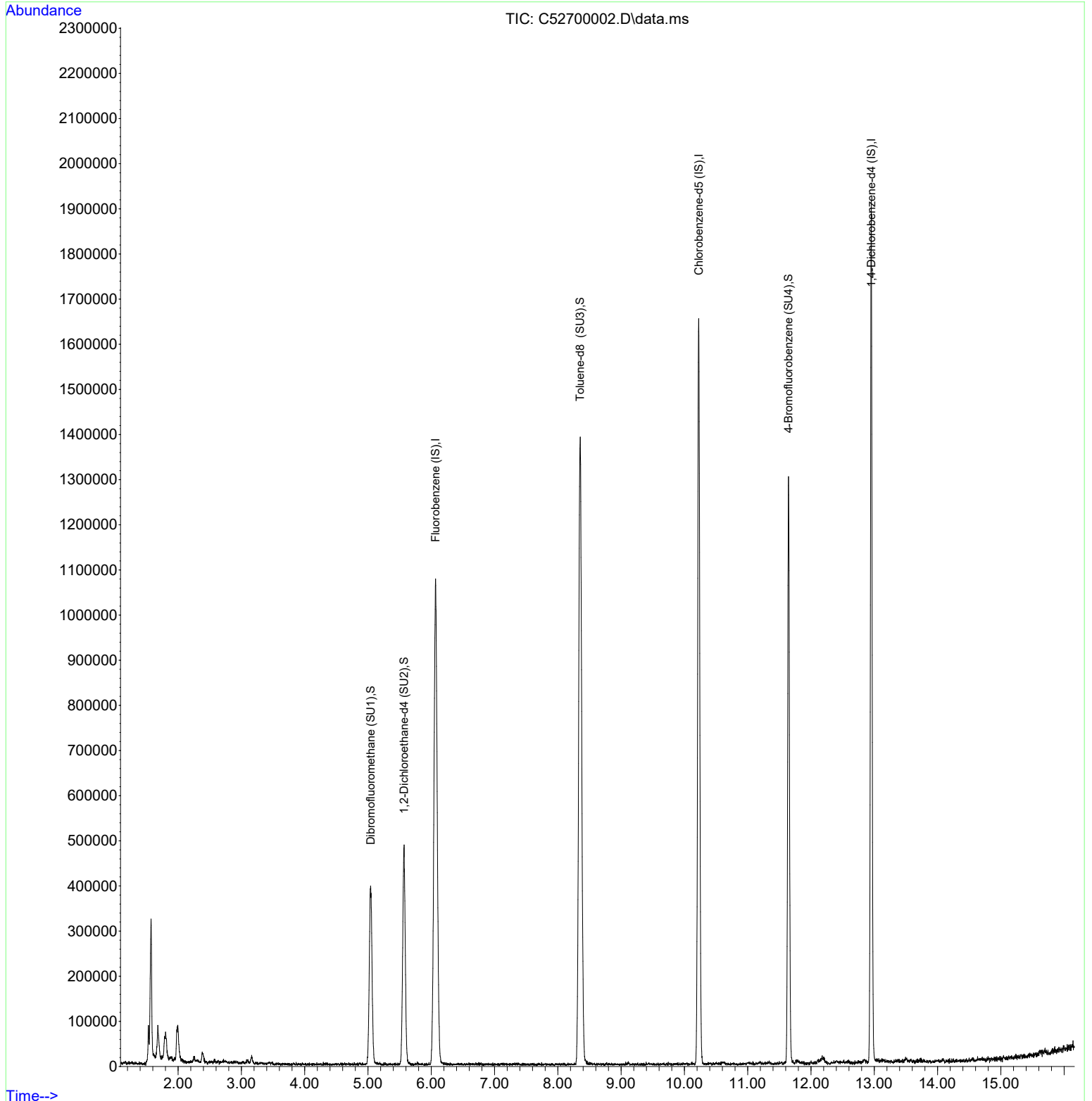
Quant Time: Apr 09 14:57:18 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.069	96	17119312	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.226	117	11025729	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.953	152	4645472	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.043	113	3388336	1.46	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	116.80%
3) 1,2-Dichloroethane-d4 ...	5.568	65	4319172	1.67	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	133.60%#
6) Toluene-d8 (SU3)	8.352	98	16067478	1.63	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	130.40%#
7) 4-Bromofluorobenzene (...)	11.644	95	4451304	1.49	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	119.20%
Target Compounds						
4) GRO	12.781	TIC	-7207036m	Below	Cal	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700002.D
 Acq On : 27 Mar 2025 10:12 am
 Operator : DN
 Sample : BC52701-02
 Misc : SV-4-5
 ALS Vial : 3 Sample Multiplier: 0.025

Quant Time: Apr 09 14:57:18 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700004.D
 Acq On : 27 Mar 2025 11:05 am
 Operator : DN
 Sample : BC52701-03
 Misc : SV-4-5-DUP
 ALS Vial : 5 Sample Multiplier: 0.025

Quant Time: Apr 09 14:59:45 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

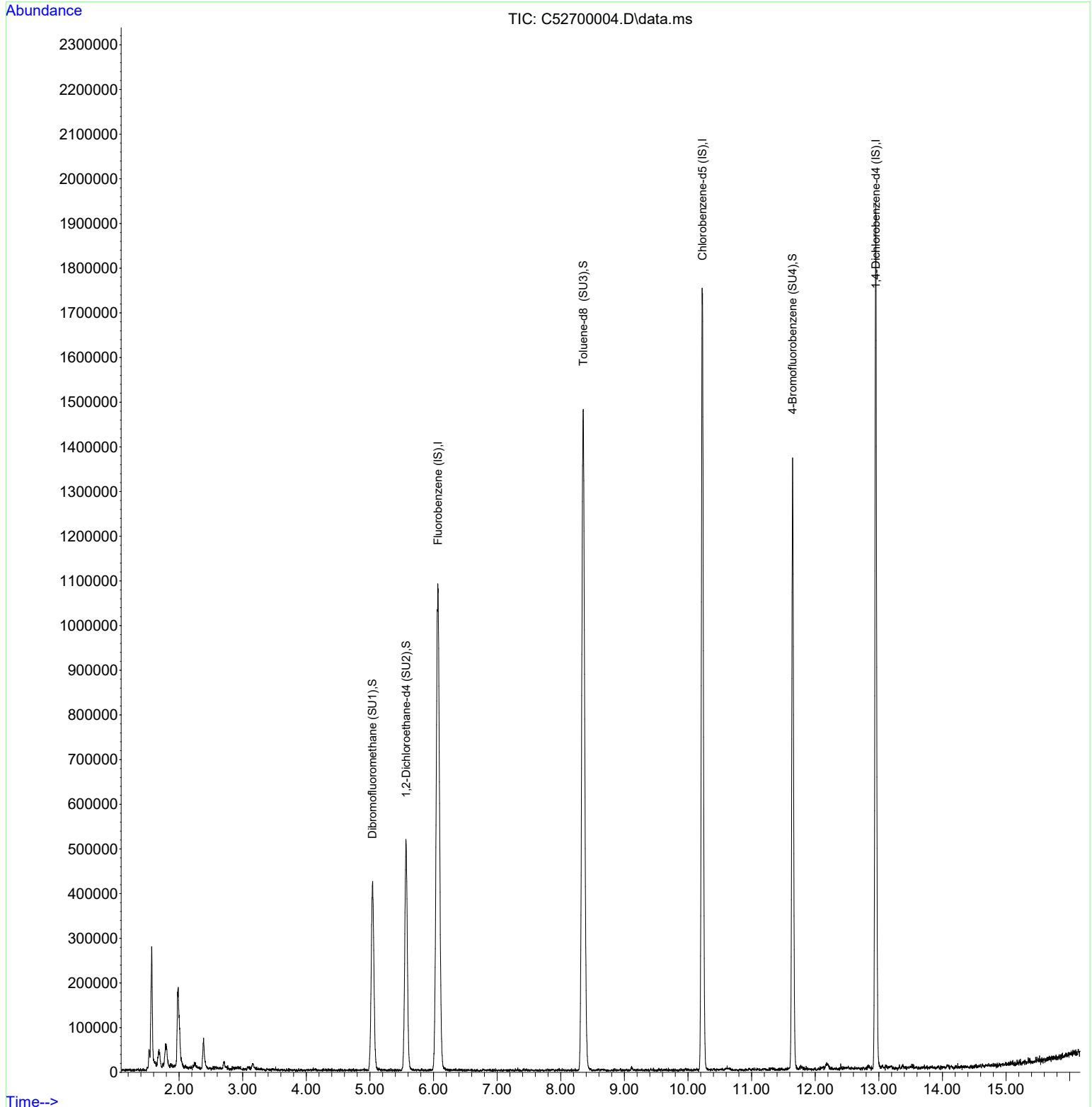
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene (IS)	6.072	96	17483592	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.226	117	11465451	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.951	152	4909612	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.041	113	3489695	1.47	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	117.60%
3) 1,2-Dichloroethane-d4 ...	5.568	65	4571438	1.73	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	138.40%#
6) Toluene-d8 (SU3)	8.354	98	16779544	1.64	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	131.20%#
7) 4-Bromofluorobenzene (...)	11.646	95	4637584	1.49	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	119.20%
Target Compounds						
4) GRO	12.781	TIC	-2416377m	Below	Cal	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700004.D
 Acq On : 27 Mar 2025 11:05 am
 Operator : DN
 Sample : BC52701-03
 Misc : SV-4-5-DUP
 ALS Vial : 5 Sample Multiplier: 0.025

Quant Time: Apr 09 14:59:45 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700005.D
 Acq On : 27 Mar 2025 11:32 am
 Operator : DN
 Sample : BC52701-04
 Misc : SV-8-5
 ALS Vial : 6 Sample Multiplier: 0.025

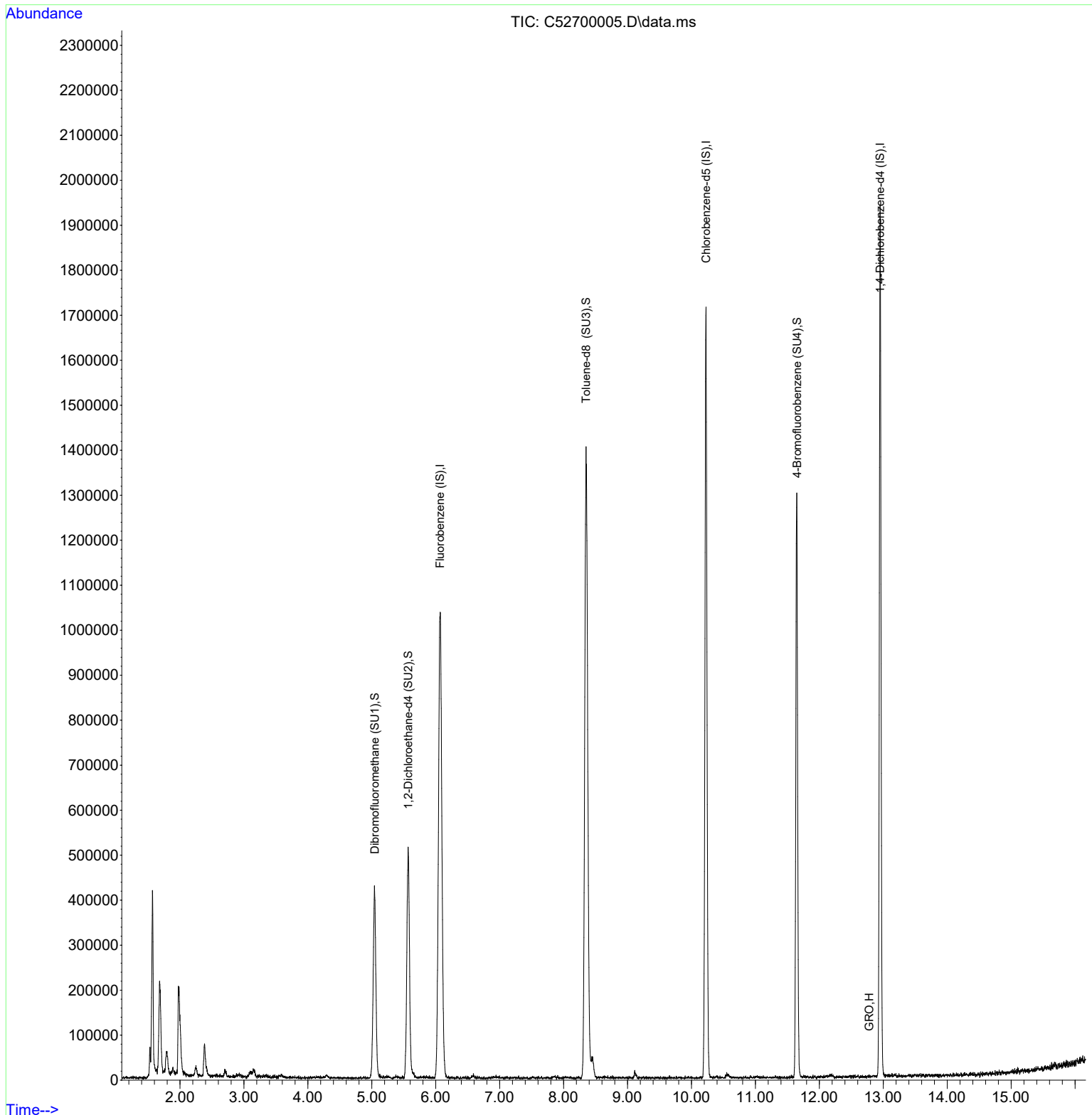
Quant Time: Apr 09 15:00:30 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.070	96	17022041	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.228	117	10822797	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.952	152	4891295	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.046	113	3465128	1.50	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	120.00%
3) 1,2-Dichloroethane-d4 ...	5.570	65	4637770	1.80	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	144.00%#
6) Toluene-d8 (SU3)	8.352	98	15821378	1.64	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	131.20%#
7) 4-Bromofluorobenzene (...)	11.649	95	4427492	1.51	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	120.80%
Target Compounds						
4) GRO	12.781	TIC	2043442m	3.90	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700005.D
 Acq On : 27 Mar 2025 11:32 am
 Operator : DN
 Sample : BC52701-04
 Misc : SV-8-5
 ALS Vial : 6 Sample Multiplier: 0.025

Quant Time: Apr 09 15:00:30 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700006.D
 Acq On : 27 Mar 2025 11:59 am
 Operator : DN
 Sample : BC52701-05
 Misc : SV-7-5
 ALS Vial : 7 Sample Multiplier: 0.025

Quant Time: Apr 09 15:01:16 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

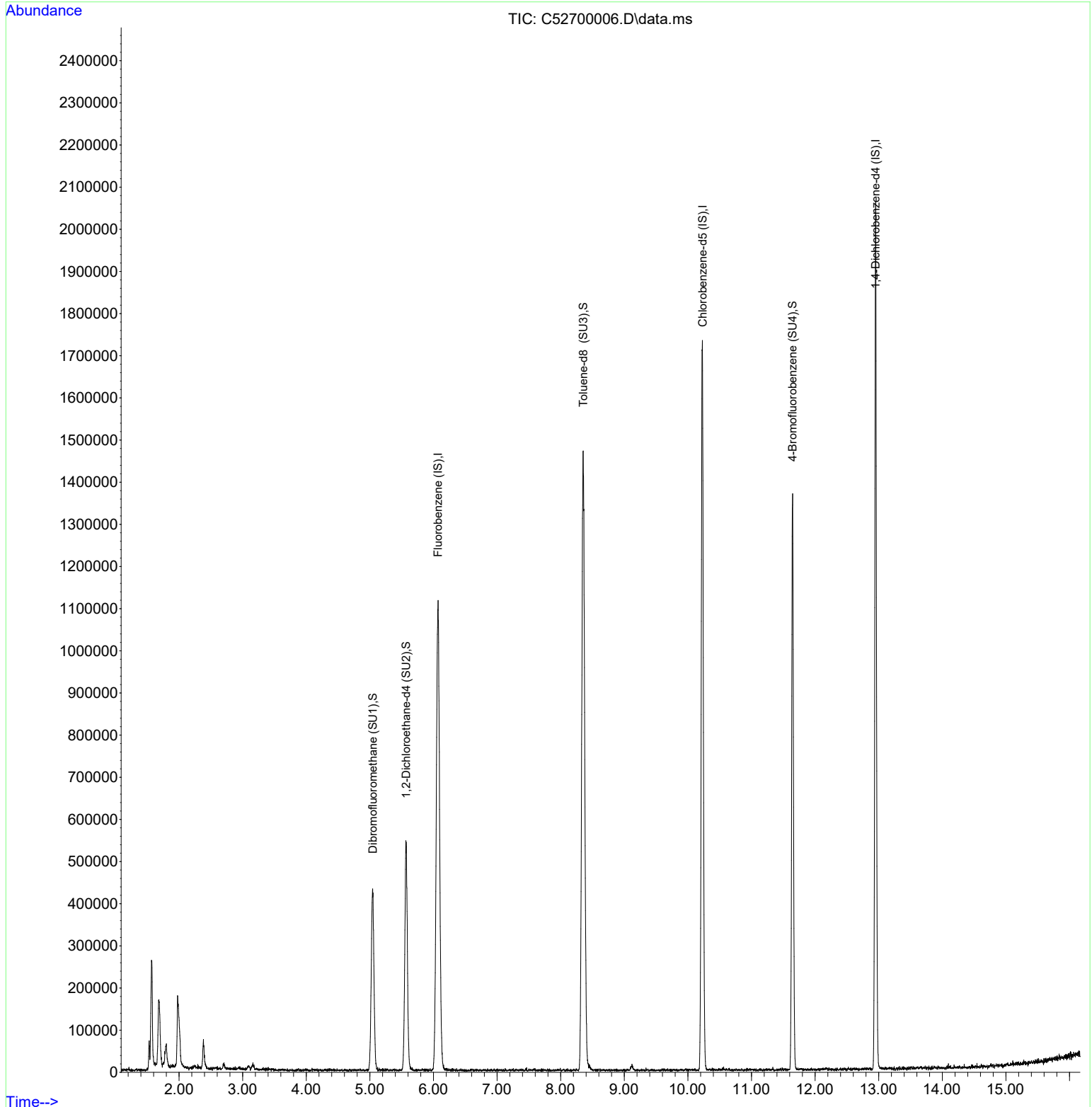
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene (IS)	6.073	96	17874686	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.229	117	11286375	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.953	152	5032740	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.046	113	3561059	1.47	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	117.60%
3) 1,2-Dichloroethane-d4 ...	5.571	65	4824231	1.78	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	142.40%#
6) Toluene-d8 (SU3)	8.354	98	16619181	1.65	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	132.00%#
7) 4-Bromofluorobenzene (...)	11.645	95	4562754	1.49	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	119.20%
Target Compounds						
4) GRO	12.781	TIC	-1324262m	Below	Cal	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700006.D
 Acq On : 27 Mar 2025 11:59 am
 Operator : DN
 Sample : BC52701-05
 Misc : SV-7-5
 ALS Vial : 7 Sample Multiplier: 0.025

Quant Time: Apr 09 15:01:16 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700007.D
 Acq On : 27 Mar 2025 12:26 pm
 Operator : DN
 Sample : BC52701-06
 Misc : SV-6-5
 ALS Vial : 8 Sample Multiplier: 0.025

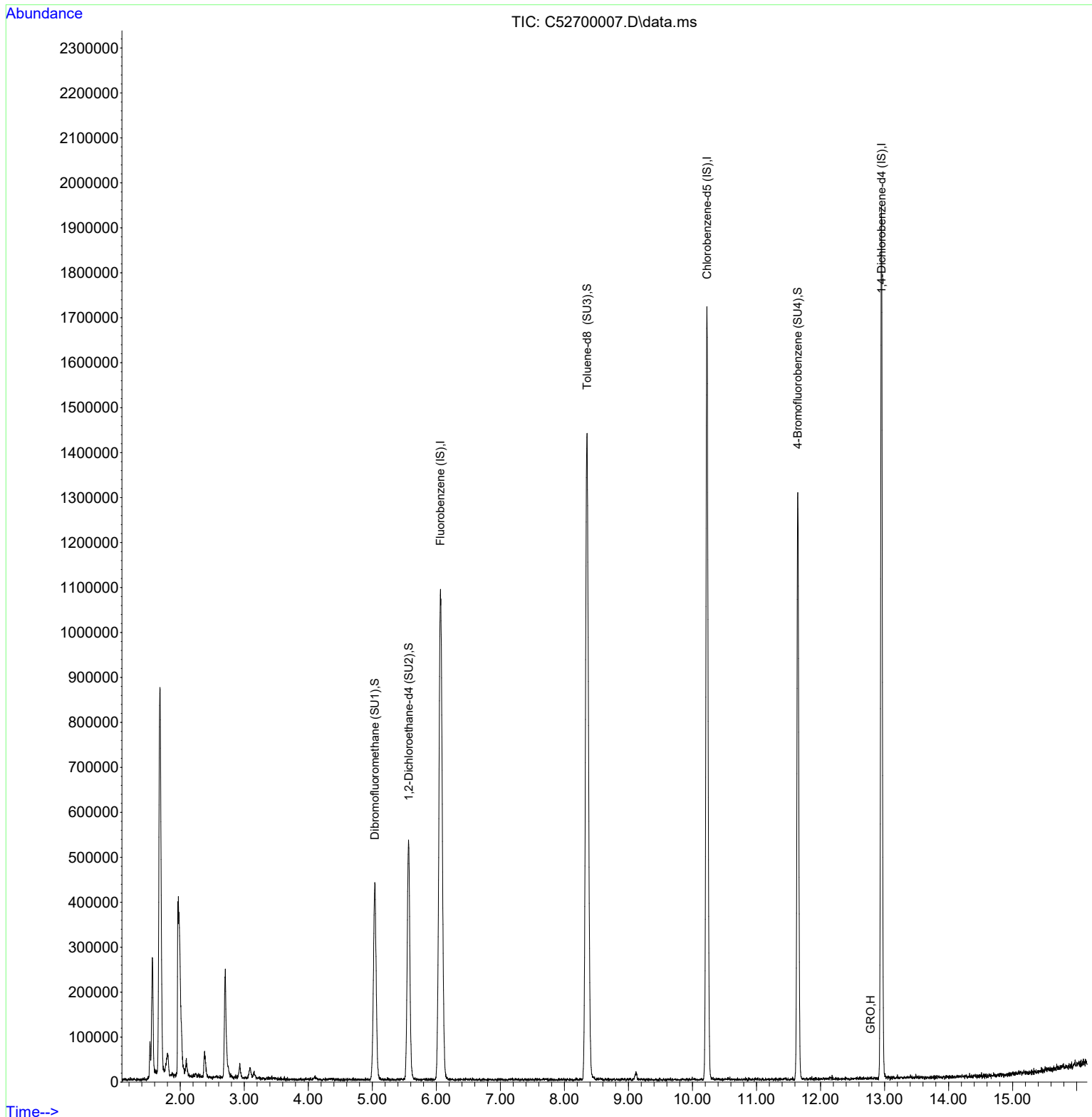
Quant Time: Apr 09 15:02:03 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.065	96	17651236	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.227	117	11419748	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.954	152	5033150	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.040	113	3654084	1.53	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	122.40%
3) 1,2-Dichloroethane-d4 ...	5.567	65	4858894	1.82	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	145.60%#
6) Toluene-d8 (SU3)	8.354	98	16366257	1.61	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	128.80%#
7) 4-Bromofluorobenzene (...)	11.646	95	4590201	1.48	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	118.40%
Target Compounds						
4) GRO	12.781	TIC	9515431m	17.51	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700007.D
 Acq On : 27 Mar 2025 12:26 pm
 Operator : DN
 Sample : BC52701-06
 Misc : SV-6-5
 ALS Vial : 8 Sample Multiplier: 0.025

Quant Time: Apr 09 15:02:03 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700008.D
 Acq On : 27 Mar 2025 12:52 pm
 Operator : DN
 Sample : BC52701-07
 Misc : SV-5-5
 ALS Vial : 9 Sample Multiplier: 0.025

Quant Time: Apr 09 15:02:29 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

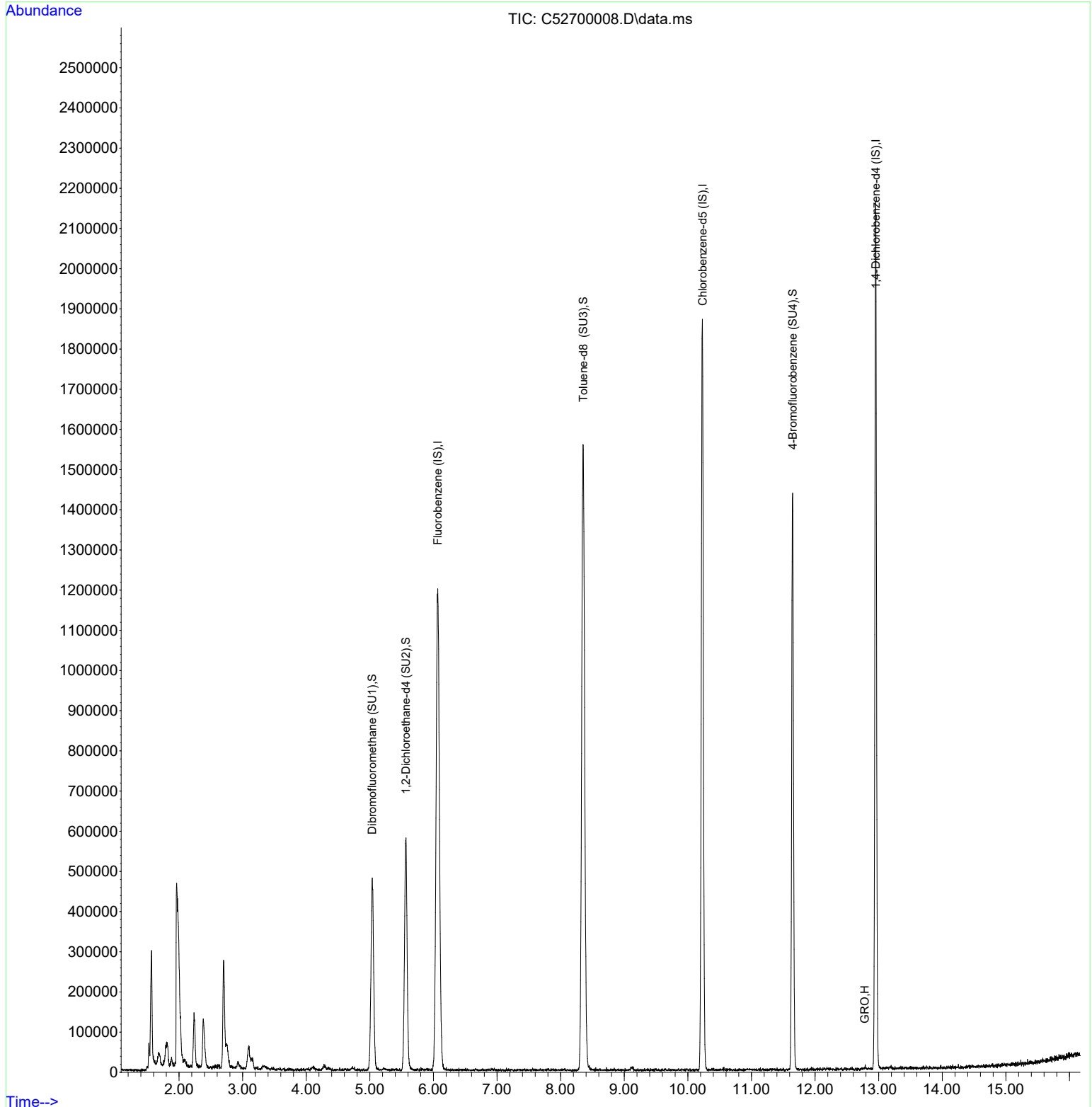
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene (IS)	6.068	96	19581285	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.230	117	12171635	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.954	152	5404152	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.039	113	3965021	1.49	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	119.20%
3) 1,2-Dichloroethane-d4 ...	5.568	65	5144057	1.74	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	139.20%#
6) Toluene-d8 (SU3)	8.354	98	17966410	1.65	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	132.00%#
7) 4-Bromofluorobenzene (...)	11.646	95	5112324	1.55	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	124.00%
Target Compounds						
4) GRO	12.781	TIC	20463233m	33.95	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700008.D
 Acq On : 27 Mar 2025 12:52 pm
 Operator : DN
 Sample : BC52701-07
 Misc : SV-5-5
 ALS Vial : 9 Sample Multiplier: 0.025

Quant Time: Apr 09 15:02:29 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700009.D
 Acq On : 27 Mar 2025 01:19 pm
 Operator : DN
 Sample : BC52701-08
 Misc : SV-3-5
 ALS Vial : 10 Sample Multiplier: 0.025

Quant Time: Apr 09 15:03:02 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

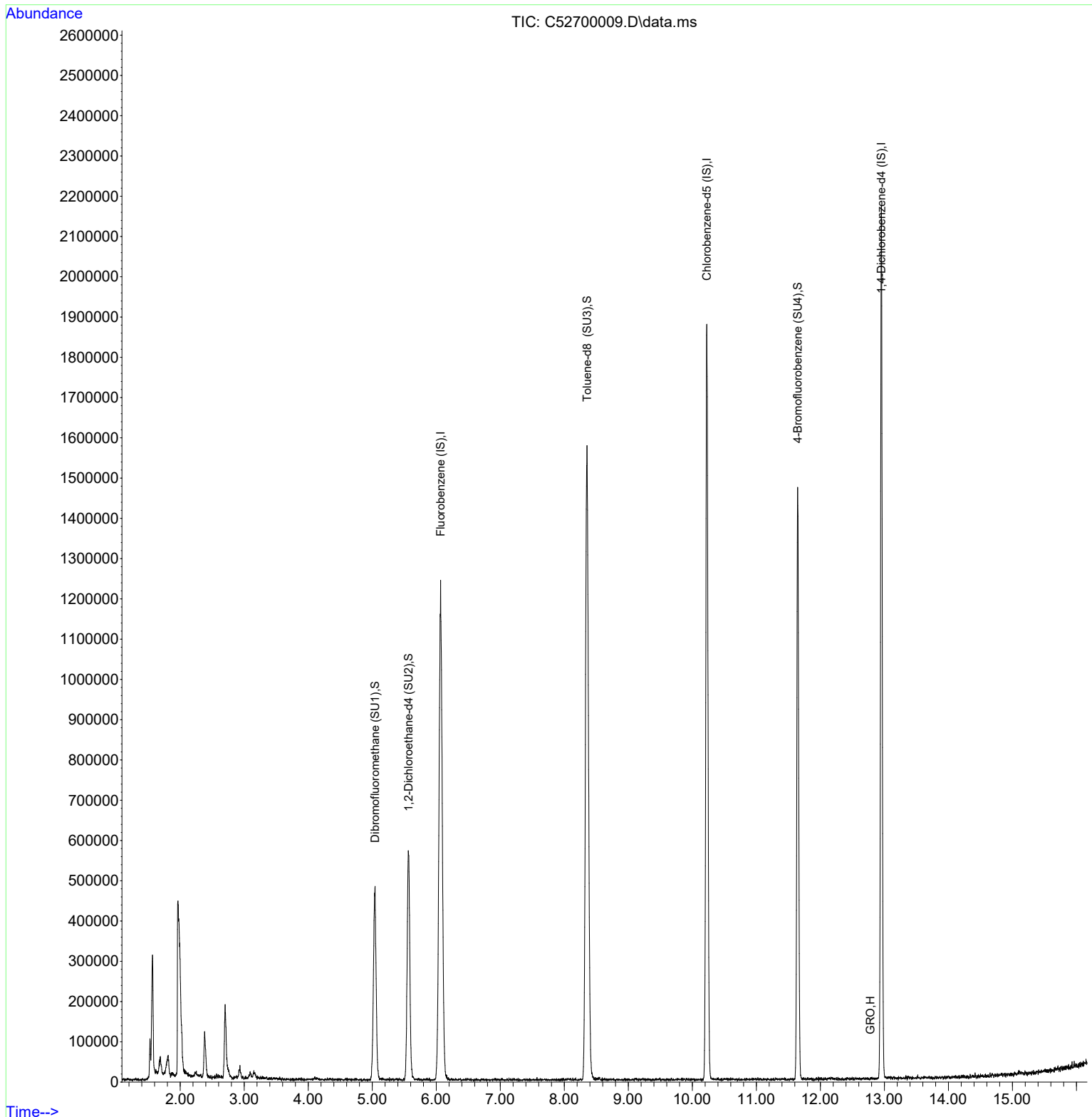
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene (IS)	6.067	96	19436305	12.50	ug/L	0.01
5) Chlorobenzene-d5 (IS)	10.226	117	12473719	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.954	152	5586206	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.043	113	3914348	1.48	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	118.40%
3) 1,2-Dichloroethane-d4 ...	5.569	65	5121653	1.74	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	139.20%#
6) Toluene-d8 (SU3)	8.354	98	18196772	1.63	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	130.40%#
7) 4-Bromofluorobenzene (...)	11.645	95	5116398	1.52	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	121.60%
Target Compounds						
4) GRO	12.781	TIC	11018108m	18.42	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700009.D
 Acq On : 27 Mar 2025 01:19 pm
 Operator : DN
 Sample : BC52701-08
 Misc : SV-3-5
 ALS Vial : 10 Sample Multiplier: 0.025

Quant Time: Apr 09 15:03:02 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700010.D
 Acq On : 27 Mar 2025 01:46 pm
 Operator : DN
 Sample : BC52701-09
 Misc : SV-2-5
 ALS Vial : 11 Sample Multiplier: 0.025

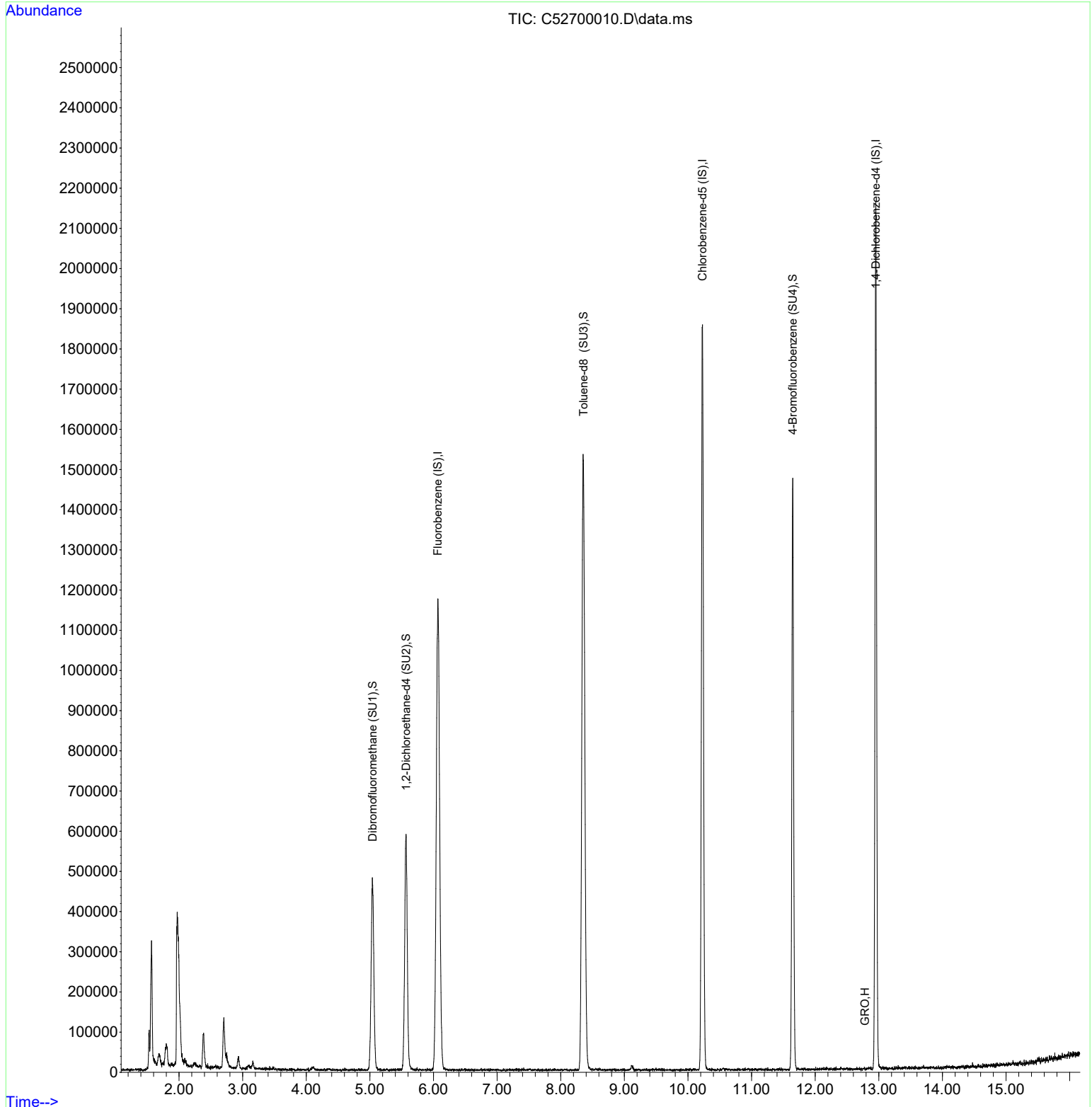
Quant Time: Apr 09 15:06:14 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene (IS)	6.070	96	19150993	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.229	117	12210701	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.954	152	5425608	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.044	113	3883768	1.49	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	119.20%
3) 1,2-Dichloroethane-d4 ...	5.568	65	5261191	1.82	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	145.60%#
6) Toluene-d8 (SU3)	8.356	98	17561420	1.61	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	128.80%#
7) 4-Bromofluorobenzene (...)	11.647	95	4954977	1.50	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	120.00%
Target Compounds						
4) GRO	12.781	TIC	6388931m	10.84	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700010.D
 Acq On : 27 Mar 2025 01:46 pm
 Operator : DN
 Sample : BC52701-09
 Misc : SV-2-5
 ALS Vial : 11 Sample Multiplier: 0.025

Quant Time: Apr 09 15:06:14 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700011.D
 Acq On : 27 Mar 2025 02:13 pm
 Operator : DN
 Sample : BC52701-10
 Misc : SV-1-5
 ALS Vial : 12 Sample Multiplier: 0.025

Quant Time: Apr 09 15:06:46 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GRO112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration

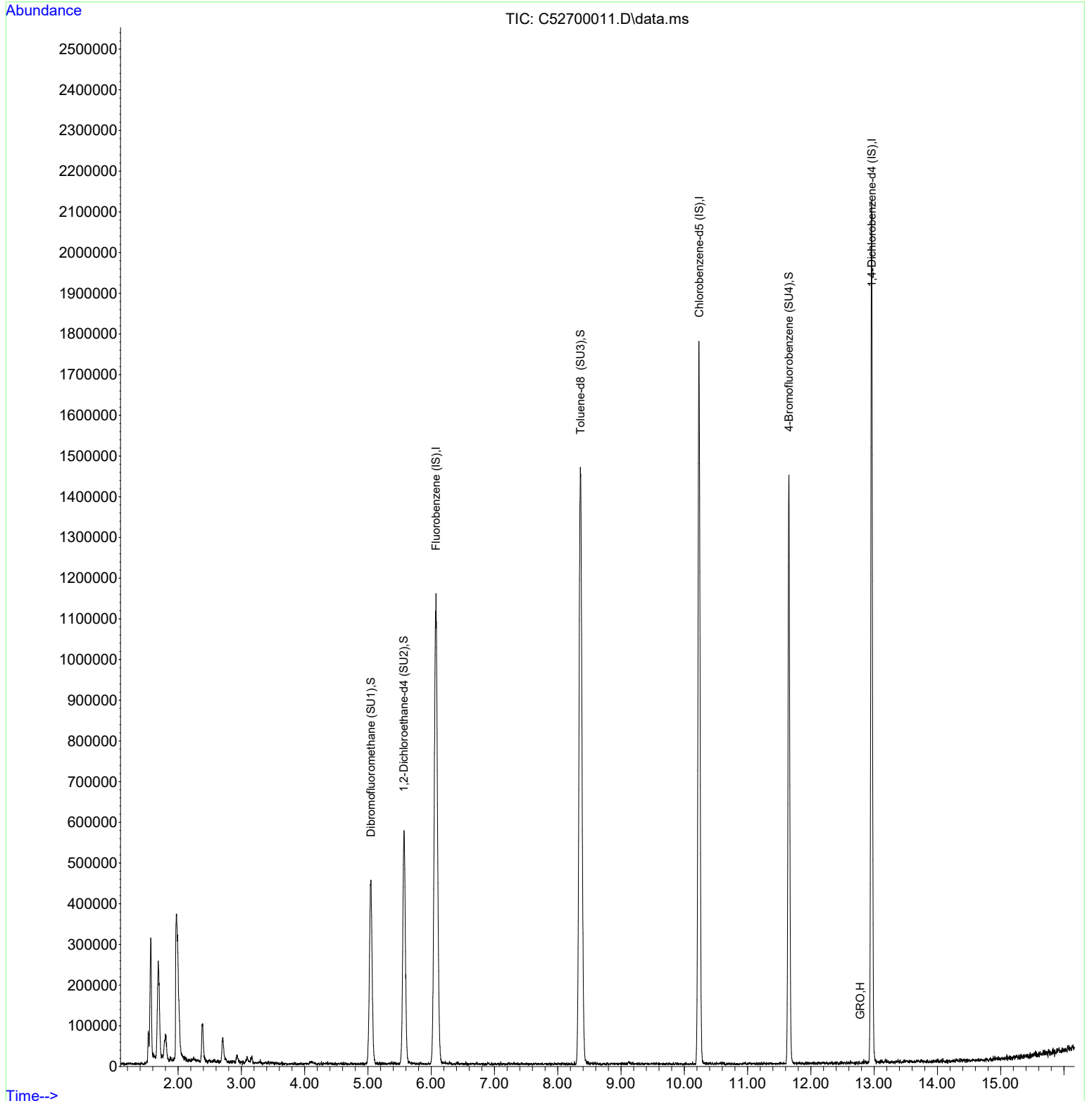
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Fluorobenzene (IS)	6.076	96	18258017	12.50	ug/L	0.02
5) Chlorobenzene-d5 (IS)	10.232	117	11712264	12.50	ug/L	0.00
8) 1,4-Dichlorobenzene-d4...	12.961	152	5414567	12.50	ug/L	0.00
System Monitoring Compounds						
2) Dibromofluoromethane (...)	5.046	113	3749638	1.51	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	120.80%
3) 1,2-Dichloroethane-d4 ...	5.569	65	5134778	1.86	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	148.80%#
6) Toluene-d8 (SU3)	8.359	98	16946357	1.62	ug/L	0.01
Spiked Amount	1.250	Range	75 - 125	Recovery	=	129.60%#
7) 4-Bromofluorobenzene (...)	11.653	95	4849881	1.53	ug/L	0.00
Spiked Amount	1.250	Range	75 - 125	Recovery	=	122.40%
Target Compounds						
4) GRO	12.781	TIC	7974547m	14.19	ug/L	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\032725\
 Data File : C52700011.D
 Acq On : 27 Mar 2025 02:13 pm
 Operator : DN
 Sample : BC52701-10
 Misc : SV-1-5
 ALS Vial : 12 Sample Multiplier: 0.025

Quant Time: Apr 09 15:06:46 2025
 Quant Method : C:\MassHunter\GCMS\1\methods\GR0112024.M
 Quant Title : 8260 GRO ICAL 09-09-2024
 QLast Update : Thu Nov 21 07:32:32 2024
 Response via : Initial Calibration



SCOPE OF WORK

Imperial County Department of Public Works Behavioral Health Services 202 North 8th Street, El Centro, California Lead Remediation Plan

General Information/Requirements

- Advanced Environmental Group, Inc. (AEG) was retained by the Imperial County Department of Public Works to create a lead remediation plan at the subject property referencing the attached Limited Asbestos & Lead Paint Sampling project performed and reported by Western Environmental & Safety Technologies LLC (WEST) on March 26, 2018.
- Based on the information provided in the abovementioned WEST report, AEG has identified two (2) areas where the XRF readings were equal to or greater than the Lead-Based Paint concentration threshold of 1.0 mg/cm² and thus will require lead remediation procedures in accordance with California Department of Public Health (CDPH) lead regulations.
- In addition, any painted surfaces are recommended to be sampled via paint chip collection to determine lead content. All workers performing trigger tasks with any detectable amounts of lead must adhere to California Occupational Safety and Health Administration (CAL/OSHA) Lead in Construction standard Title 8 CCR 1532.1.
- Contractor must be a certified abatement contractor with supervisors and workers trained in lead remediation procedures.
- Contractor to verify square footage in the field.
- Contractor to ensure as-built drawings are updated with all completed materials replaced.
- A third-party industrial hygienist (IH) is recommended to provide oversight on all remediation/abatement activities including final visual inspection, final wipe clearance sampling, and submission of a closeout report.
- Final Clearance Sampling will be required in each contained/enclosed area (see Post Remediation Evaluation Criteria section below).

Remediation Work Required

Building Exterior

- Stabilize and dispose of any loose or flakey paint throughout the exterior walls (tan paint).
- Encapsulate areas on the exterior walls to ensure paint is maintained intact.

Room 1 – Lobby

- Stabilize and dispose of any loose or flakey paint throughout the exterior walls (tan paint).
- Encapsulate areas on the exterior walls to ensure paint is maintained intact.

If any other deteriorated painted surfaces contain lead should be handled as per CAL/OSHA lead in construction standard.

Work Procedures for Lead Remediation

- The client or their designee must approve all contractor remediation specifications, SDSs and submittals prior to the start of the project.
- Use of appropriate PPE during remediation is required and at a minimum include the following:
 - Respiratory Protection consisting of a negative pressure air-purifying half-face respirator with P100. Employees must follow employers written respiratory protection program, and be trained, fit tested, and obtain medical clearance prior to use.
 - Use of safety glasses, goggles, or other appropriate eye protection
 - Disposable full-body coverall with head and foot coverings.

- Gloves to prevent skin contact and protect from physical hazards such as cuts during removal.
- Hard hats
- Adequate fall protection and procedures implemented as needed.
- Any other PPE deemed appropriate for the hazards present in the workplace.
- Regulated areas must be created and maintained in abatement areas.
- All contaminated materials are to be placed in airtight containers and removed from the facility for proper offsite disposal.
- Only HEPA filtered vacuum equipment shall be used during this project.
- Any air samples collected through the project should be submitted to an accredited laboratory for analysis.

Regulatory Requirements

- The California Department of Public Health (CDPH) regulates Lead under Title 17 CCR Division 1, Chapter 8 §35001 - §36100. This rule applies to firms and individuals conducting regulated lead inspection, assessment, project designing, project monitoring and/or abatement activities at target housing, childcare facilities, public facilities, and contract documents specifying certified abatement activities. The EPA and CDPH define paint or other coating with lead levels of 1.0 mg/cm² or 0.5%, Lead-Based Paint.
- Cal/OSHA and OSHA also regulates Lead in Construction and General Industry Safety Orders under the following regulations:
 - Title 8 CCR 1532.1 / 29 CFR 1926.62, Lead in Construction;
 - Title 8 CCR 5198 / 29 CFR 1910.1025, Lead in General Industry
 - These regulations address potential employee exposures when performing construction work on surfaces containing any concentration of Lead. Potential exposure to these metals may occur when performing work, referred to as trigger tasks, that create airborne particulates or fumes (such as sawing, sanding, torch cutting, etc.), or during handling of the waste materials.
- If performing construction work on such materials, OSHA regulations require initial exposure assessment (air monitoring) of employees to determine potential exposure. Until it is demonstrated that levels of airborne dust or fumes will not exceed the action limit of each specific metal, the use of personal protective equipment, including NIOSH approved respirators and Tyvek, should be used. In addition, a work clothing change area, hand washing facilities, biological monitoring (blood lead and zinc protoporphyrin levels), and awareness level training 29 CFR 1926.62 (l) (1) (i) should be provided during work involving disturbance of lead containing paints or other materials.
- Where Lead levels exceed regulatory guidelines, disposal of demolition waste as construction debris may not be exempt.

Owner Provided Items

- Power and water

Post-Remediation Evaluation Criteria:

- The client or their designee and the abatement contractor will visually inspect the work areas to ensure satisfactory completion of all aspects of the lead remediation scope of work and removal of all debris and waste generated during the project.
- Any air samples collected should be submitted to an accredited laboratory for analysis.
- Where required, post remediation wipe sampling will be performed prior to release the release to the client.
 - Lead wipe clearance sampling criteria:

- Interior floor surfaces - 10 micrograms (μg) of lead in dust per square foot (ft^2),
- Interior horizontal surfaces - $100 \mu\text{g}/\text{ft}^2$,
- Exterior floor and exterior horizontal surfaces - $400 \mu\text{g}/\text{ft}^2$.

Waste Disposal

The contractor is responsible for proper characterization, packaging, labeling, transport and disposal of all wastes generated during the work. Project wastes are likely regulated and will require manifesting.

Work Plan

The contractor shall prepare a work plan describing how lead remediation will be performed or conducted. The plan must cover work area preparation & controls (including a dust control plan), method(s) of remediation/abatement, air monitoring, work area cleanup, decontamination, waste disposal and clearance sampling and analysis.

Deliverables (Final Report)

The contractor shall provide a close out report documenting the remediation work. Final copy shall be submitted within 60 days to client. Report shall include details of what was removed— including size, depth, material, etc. for future clarification and regulatory requirements and a detailed description of work that was performed. Adequate detail shall be included in the narrative to prevent having to search through daily reports or scope of work. Simply stating that scope of work was completed is not adequate detail.



WESTERN ENVIRONMENTAL & SAFETY TECHNOLOGIES LLC

“an environmental consulting firm”

EXHIBIT D
SR6309BH - Limited Asbestos and Lead Paint Inspection Report (dated March 26, 2018)

Limited Asbestos and Lead Paint Sampling Report

202 North 8th Street, El Centro, California

3/26/18

Prepared for:
Sanders Inc.
1102 Industry Way, Suite A, El Centro, California 92243

Report Prepared / Reviewed By:
David Christy
WEST - Sr. Partner
Certified Asbestos Consultant 92-0703

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Attachment One - Asbestos Laboratory Sheets & Chains of Custodies

Attachment Two – Limited Lead Paint Sampling Report

Executive Summary

Sampling Date:	3/26/18 (Asbestos Sampling) – 3/26/18 (Lead Paint Sampling)
Survey Description:	Limited Interior Sampling – Based on Remodel Plans – Accessible Materials
Services Complete:	Conduct a limited (non-destructive) asbestos inspection, laboratory Analysis, Reporting
Laboratory Analysis:	EMSL Analytical, San Diego, California NVLAP and California Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM)
On-site Sampling:	David Christy, a State of California Certified Asbestos Consultant (92-0703)
Additional Sampling:	Lead Paint Testing (XRF Sampling) Completed by Allstate Services (report attached)
General Warrantee:	WEST warrants the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos inspection and evaluation methods for the referenced site.
Access Note:	WEST was given full access for areas outlined for sampling within the scope of inspection.

Materials discovered to contain asbestos during limited sampling (known)

- **No Asbestos was found as part of this limited inspection – based on the sample results attached to this report**

Assumed Asbestos:

All building materials not sampled with in this sampling report.

- **Any Building materials that not listed within this sampling report**

Any building materials **not listed** within this sampling report for the referenced locations, whether outside sampling scope of work or newly discovered, shall be assumed to be asbestos containing greater than 1%. Additional investigation and sampling is recommended for these types of unreported materials. Asbestos bulk sampling and inspection services must be completed by State of California Certified personnel (Site Surveillance Technician or Certified Asbestos Consultant). All laboratory analysis and reporting must be completed by a licensed and certified laboratory facility.

Materials discovered to contain Lead (known and assumed)

Lead paint was detected based on the on-site XRF sampling conducted by Allstate Services. (Please see attachment 2 of this inspection report for full details and materials found to contain lead.

Special Notation:

At the time of the survey, the site was active with normal activities Monday – Friday. Full access was not permitted, and WEST was limited to the type and location of samples collected due to the site will be active. The sampling as completed was **semi-destructive sampling** relating to asbestos bulk sampling within the building surveyed since the building was occupied (functioning building) at the time of the inspections. Samples were collected to the best of the inspector’s ability and access while causing minimum disturbance to surrounding areas. Only bulk sampling of exposed and accessible building materials was completed since demolition of building materials to review concealed spaces was outside the scope of work.

Asbestos Inspection – General Information

Any suspect building materials encountered by WEST during the asbestos inspection, found within the specific areas called out for inspection / sampling, were collected and analyzed for the presence of asbestos. The samples of the various building materials that were collected were analyzed using polarized light microscopy (PLM). A breakdown of laboratory analysis for each asbestos sample collected is included in the attached report. If any material containing asbestos will be disturbed, appropriate local, state, and federal regulations and guidelines must be followed.

WEST collected samples of suspect building materials that were accessible at the time of the inspection as found and noted by the on-site inspector. WEST utilized EMSL Analytical located in San Diego, California, a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy PLM). WEST warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos hazard evaluation methods for the site referenced in this report.

Asbestos Building Inspection Findings

Asbestos was not found as part of the asbestos inspection

There are assumptions made within this sampling report grouping similar building materials with similar age and appearance together for means of building material identification and grouping for sampling. This should also be followed while conducting asbestos removal of these materials. If any building material is discovered to be suspect of containing asbestos, and it was not accessible or identified in this building inspection report, additional samples should be collected and analyzed and the building inspection report and data should subsequently be updated. California Code of Regulations Title 8, Section 1529 states that asbestos containing material and presumed asbestos containing material that will be disturbed during demolition, construction, renovation, etc. must be handled according to the standard. The state of California states that a material that contains one-tenth of one percent asbestos is classified as a regulated asbestos material. Additional investigation and sampling is recommended if any newly discovered building material is identified that is not called out within this sampling report.

Survey Methodology

At the time of the survey, the site was active with weekend staff the day of the on-site inspection. Full access was not granted, and WEST was limited to the type and location of samples collected due to the site being active. The sampling as completed was **semi-destructive sampling** relating to asbestos bulk sampling within the building surveyed since the building was occupied (functioning building) at the time of the inspections. Samples were collected to the best of the inspector's ability and access while causing minimum disturbance to surrounding areas. Only bulk sampling of exposed and accessible building materials was completed since demolition of building materials to review concealed spaces was outside the scope of work.

There are assumptions made within this sampling report as it relates to building materials not accessible at the time of the inspections. Sampling of these areas was conducted at access points that were previously in place or in direct view of the on-site inspector. The surveyor proceeded to complete a visual inspection of the surrounding surfaces and the building components that were found at the building site as part of the asbestos sampling. Following the review of each inspection location that was remaining at the time of the inspection, the surveyor then made inspection notes while still in the field. These notes recorded data on the presence, type and general condition of any suspected ACMs encountered, and on a system-by-system basis as outlined in this report. The sampling inventory sheets and sample analysis breakdown are provided.

Asbestos Bulk Sampling Strategy

The collection of bulk samples was performed in sufficient frequency to obtain only a basic pattern as to the use of possible asbestos containing building materials (ACM, ACCM) within the areas of the buildings called out for inspections. It is known however, that inconsistencies within construction or later repair or renovation may result in deviation from this general pattern.

For this reason, it is not possible to positively identify the presence and extent of asbestos building materials associated with the areas sampled without inspecting and sampling every square foot of all building surfaces and components encountered during the inspection process. As this was outside of the scope of this assignment, identification of asbestos-suspect materials was based on the surveyor's own experience and knowledge of the use of asbestos in buildings, the age, and the general appearance of the materials encountered. A complete list of sampled materials is attached to this report.

Sampling Method – Bulk Sampling

Wherever the collection of a bulk sample became necessary, samples were collected using general hand tools and placed in plastic zip bags, which were individually labelled with a sample number and description of the sampling location. This information was also recorded on a transmittal form. One copy of this form remained with the samples when transported to the laboratory. The second copy was retained by the surveyor. Care was used by the surveyor (wherever possible) to collect samples at a location which produced the least visual impact or would be least objectionable to building occupants.

Asbestos Bulk Sample Analysis

Each of the bulk samples collected were analysed by EMSL Analytical located in San Diego, California, using a combination of dispersion staining and polarized light microscopy. Sample preparation and analytical procedures follow the protocol outlined for NIOSH Method 9002 for bulk asbestos analysis, and the US EPA Method 600/R-93/116 dated July, 1993. Each of these methods is recognized by both federal and provincial authorities. For quality control purposes, the laboratory used for the sample asbestos analysis is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples.

Deviations in Sample Results

Due to the removal and replacement of individual building materials over the course of a building's life or due to the installation of visually similar building products, it is possible that individual building surfaces may not be characteristic of the samples collected. Every effort was made to collect samples from typical building materials and components as found during the on-site sample collection. If any building material is discovered to be suspect of containing asbestos, and it was not accessible or identified in this building inspection report, additional samples should be collected and analyzed and the building inspection report and data should subsequently be updated.

Lead Paint / Lead Ceramic Tile

CAL-OSHA Regulations (Title 8 CCR Section 1532.1 and 29 CFR 1926.62) apply to all construction work where an employee may be occupationally exposed to lead, and therefore may be applicable to renovation or demolition projects involving paints with any concentration of lead.

When conducting construction activities, **which disturb lead in any amount or create an exposure to workers**, the employer is required to provide worker protection and conduct exposure assessments. All California employers should consult Cal-OSHA Regulations at Title 8, 1532.1, “Lead in Construction” standards for complete requirements.

Since the building listed above is undergoing renovation / demolition, **all construction personnel** performing the construction work should be properly trained in lead-related construction. California regulations define lead-related construction work as, “Construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential, public or commercial building, including preparation and cleanup, which, by using or disturbing lead containing material or soil, may result in significant exposure of individuals to lead.”

To also protect against this risk of lead exposure, on April 22, 2008, EPA issued the [Renovation, Repair and Painting Rule](#). It requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in pre-1978 homes, child care facilities and **schools** be certified by EPA and that they use certified renovators who are trained by EPA-approved training providers to follow lead-safe work practices. Individuals can become certified renovators by taking an eight-hour training course from an EPA-approved training provider.

Lead paint was detected based on the on-site XRF sampling conducted by Allstate Services on 3/26/18. (Please see attachment 2 of this inspection report for full details and materials found to contain lead.

Definitions of ACM

Different regulatory agencies and different regulations contain different definitions for a material that contains asbestos. The definitions are similar but different based upon the context in which the definition was created.

Asbestos Containing Material (ACM): According to EPA, OSHA and Cal-OSHA, asbestos containing material is a material that has greater than 1% asbestos.

Asbestos Containing Building Material (ACBM): For purposes of AHERA, material with greater than 1% asbestos that was used on the interior construction of a school is called asbestos containing building material (ACBM).

Asbestos Containing Construction Material (ACCM): According to Title 8, Section 1529, asbestos containing construction material means any manufactured construction material which contains more than 0.1 % asbestos by weight.

Presumed Asbestos Containing Material (PACM): Any thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as PACM may be rebutted pursuant to Title 8, section 1529, subsection (k)(5).

Regulated Asbestos Containing Material (RACM): The EPA in the National Emission Standard for Hazardous Air Pollutants (NESHAP) defines RACM as (a) Friable asbestos containing material, (b) Category I non-friable asbestos containing material that has become friable, (c) Category I non-friable asbestos containing material that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable asbestos containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by Subpart M.

General Limitations

The survey as completed was of sufficient depth to provide a screening for the purpose of establishing the presence of asbestos containing materials (ACM), and asbestos containing construction materials (ACCM) within the limited areas inspected within the building. Due to the nature of building construction some limitations exist as to the possible extent and accuracy of this survey. Such limitations include any inconsistencies in the use of materials during construction or later repairs or renovations that result in deviations from the general pattern. However, without sampling every square foot of building materials, it is not possible to rule out such limitations.

As this is not a practical approach to sample every square foot of building material, the survey was completed based on the collection of a sufficient number of samples representing the building materials listed in this sampling report and visually encountered. Every effort was made to collect these samples from typical or representative materials as they were encountered.

The collection of data, quantification of any damage, and confirmation of existing conditions, is limited by the surveyor's ability to access and visually inspect conditions at each inspection location. The collection of data above fixed or mechanically fastened ceilings, or from within concealed cavities or shafts, is therefore limited by the availability and location of access points, hatches, etc. Areas that were not accessed include but not limited to inside wall cavities, above ceilings, above fixed ceiling tiles, areas behind security fences, areas behind security covered windows, and non-exposed mechanical equipment.

The survey, as completed, did not include demolition and dismantlement of equipment and building materials. The sampling was conducted to the best ability and safety of the on-site inspectors on-site.

The field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for asbestos containing materials (ACM) and asbestos containing construction materials (ACCM) overview of the building in question as it relates to the building systems. Western Environmental & Safety Technologies LLC (WEST) warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos hazard evaluation methods, for the site referenced in this report.

These evaluation methods have been developed to provide the client with information regarding apparent indications of existing or potentially hazardous asbestos conditions relating to the property and are necessarily limited to the conditions observed and information available at the time of the site visit and research. There is a distinct possibility that conditions may exist which could not be reasonably identified within the scope of the assessment or which were not apparent during the site visit.

Western Environmental & Safety Technologies LLC (WEST) believes that the information collected during the survey period concerning this property is reliable. However, Western Environmental & Safety Technologies LLC (WEST) cannot warrant or guarantee that the information provided is absolutely complete or accurate beyond the current asbestos consulting industry standards.

The conclusions and recommendations presented in this report are based upon reasonable visual inspection, site investigation, and bulk sampling of the property and research of available materials within the scope and budget of the contract. The information presented is relevant to the dates of our site visit and should not be relied upon to represent conditions at later dates. The opinions expressed herein are based on information obtained during our on-site inspection efforts and on our experience. If additional information becomes available, we request the opportunity to review the information and modify our opinions, if necessary.

Our services have been provided using that degree of care and skill ordinarily exercised, under similar circumstances, by environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional opinions presented in this report. Western Environmental & Safety Technologies LLC (WEST) is not responsible for the conclusions, opinions, or recommendations made by others based on this information.

Report Prepared By and Laboratory Sample Analysis Reviewed By:



4/3/18

David Christy

Review Dates

Certified Asbestos Consultant - CAC# 92-0703

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202 North 8th Street, El Centro, California (Interior sampling and Limited Exterior Sampling)

Limited Asbestos Bulk Sampling Breakdown

Sample #	Sample Date	Area	Sample Location	Material Sampled	Results
01	3/26/18	Interior	Lobby Men’s Restroom	Drywall Wall Core	None Detected
02DW	3/26/18	Interior	Lobby	Drywall Wall Core (drywall)	None Detected
02JC	3/26/18	Interior	Lobby	Drywall Wall Core (joint compound)	None Detected
03BB	3/26/18	Interior	Lobby	Base Board	None Detected
03M	3/26/18	Interior	Lobby	Base Board Mastic	None Detected
04	3/26/18	Interior	Lobby	2x2 Ceiling Tile	None Detected
05	3/26/18	Interior	Lobby Women’s Restroom	Drywall Wall Core	None Detected
06DW	3/26/18	Interior	N.E. Office	Drywall Wall Core (drywall)	None Detected
06JC	3/26/18	Interior	N.E. Office	Drywall Wall Core (joint compound)	None Detected
07BB	3/26/18	Interior	N.E. Office	Base Board	None Detected
07M	3/26/18	Interior	N.E. Office	Base Board Mastic	None Detected
08	3/26/18	Interior	N.E. Office	2x4 Ceiling Tile	None Detected
09FT	3/26/18	Interior	N.E. Hallway	12x12 Floor Tile	None Detected
09M	3/26/18	Interior	N.E. Hallway	Floor Tile Mastic	None Detected
10DW	3/26/18	Interior	Pre-screen Office	Drywall Wall Core (drywall)	None Detected
10JC	3/26/18	Interior	Pre-screen Office	Drywall Wall Core (joint compound)	None Detected
11	3/26/18	Interior	Pre-screen Office	2x4 Ceiling Tile	None Detected
12BB	3/26/18	Interior	Pre-screen Office	Base Board	None Detected
12M	3/26/18	Interior	Pre-screen Office	Base Board Mastic	None Detected
13	3/26/18	Interior	Pre-screen Office	Carpet Glue	None Detected
14FT	3/26/18	Interior	Pre-screen Office	12x12 Floor Tile	None Detected
14M	3/26/18	Interior	Pre-screen Office	12x12 Floor Tile Mastic	None Detected
15	3/26/18	Interior	Room 102	Drywall Wall Core	None Detected
16	3/26/18	Interior	Room 102	2x4 Ceiling Tile	None Detected

None Detected = No asbestos found in the sample analyzed. Any sample reported at <1% asbestos is considered greater than 1% ACM until point count analysis is performed. The sample descriptions listed above represent the location of the individual sample collected. The building material that has been sampled as listed above may be present in other locations of the building and has been represented above as a homogeneous space. Asbestos results are reported in % using Polarized Light Microscopy (PLM) as reported by EMSL, San Diego, California. WEST utilized EMSL located in San Diego, California. a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM).”



202 North 8th Street, El Centro, California (Interior sampling and Limited Exterior Sampling)

Limited Asbestos Bulk Sampling Breakdown

Sample #	Sample Date	Area	Sample Location	Material Sampled	Results
17BB	3/26/18	Interior	Room 102	Base Board	None Detected
17M	3/26/18	Interior	Room 102	Base Board Mastic	None Detected
18	3/26/18	Interior	Room 102	Foam Pipe Insulation (above drop)	None Detected
19FT	3/26/18	Interior	Room 102	12x12 Floor Tile	None Detected
19M	3/26/18	Interior	Room 102	Floor Tile Mastic	None Detected
20	3/26/18	Exterior	Exterior Patio Enclosure	Concrete Slab	None Detected
21	3/26/18	Exterior	Exterior Patio Enclosure	Concrete Slab	None Detected
22	3/26/18	Exterior	Exterior Patio Enclosure	Cinder Block Wall	None Detected
23FT	3/26/18	Interior	Adult Shower Area	12x12 Floor Tile	None Detected
23M	3/26/18	Interior	Adult Shower Area	Floor Tile Mastic	None Detected
24	3/26/18	Interior	Adult Shower Area	Damaged wall joint compound	None Detected
25	3/26/18	Interior	Hallway near adult shower	Damaged wall joint compound	None Detected
26SF	3/26/18	Interior	Child shower area	Sheet Flooring	None Detected
26M	3/26/18	Interior	Child shower area	Sheet Flooring Mastic	None Detected

None Detected = No asbestos found in the sample analyzed. Any sample reported at <1% asbestos is considered greater than 1% ACM until point count analysis is performed. The sample descriptions listed above represent the location of the individual sample collected. The building material that has been sampled as listed above may be present in other locations of the building and has been represented above as a homogeneous space. Asbestos results are reported in % using Polarized Light Microscopy (PLM) as reported by EMSL, San Diego, California. WEST utilized EMSL located in San Diego, California, a NVLAP and California DHS Accredited Laboratory to provide: “Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM).”



WESTERN ENVIRONMENTAL & SAFETY TECHNOLOGIES LLC

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Attachment One

Asbestos Laboratory Sheets & Chain of Custodies

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EMSL Order: 431801727

Customer ID: WEST60

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Received Date: 03/28/2018 3:05 PM

Analysis Date: 03/30/2018

Collected Date:

Project: CRISIS & ASSESSMENT EL CENTRO CA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01 <i>431801727-0001</i>	LOBBY MENS RR DW CORE	White Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
02-Drywall <i>431801727-0002</i>	LOBBY DW CORE	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
02-Joint Compound <i>431801727-0002A</i>	LOBBY DW CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03-Baseboard <i>431801727-0003</i>	LOBBY BASE BOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03-Mastic <i>431801727-0003A</i>	LOBBY BASE BOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04 <i>431801727-0004</i>	LOBBY 12X12 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
05 <i>431801727-0005</i> <i>No drywall present in sample.</i>	LOBBY RR WOMEN DW WALL CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06-Drywall <i>431801727-0006</i>	NE OFFICE DW WALL CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
06-Joint Compound <i>431801727-0006A</i>	NE OFFICE DW WALL CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-Baseboard <i>431801727-0007</i>	NE OFFICE BASEBOARD	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-Mastic <i>431801727-0007A</i>	NE OFFICE BASEBOARD	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08 <i>431801727-0008</i>	NE OFFICE 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
09-Floor Tile <i>431801727-0009</i>	NE HALLWAY 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09-Mastic <i>431801727-0009A</i>	NE HALLWAY 12X12 FLR TILE & MASTIC	Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10-Drywall <i>431801727-0010</i>	PRE SCREEN OFFICE DW CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
10-Joint Compound <i>431801727-0010A</i>	PRE SCREEN OFFICE DW CORE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 03/30/2018 16:19:48



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EMSL Order: 431801727
Customer ID: WEST60
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
11 431801727-0011	PRE SCREEN OFFICE 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
12-Baseboard 431801727-0012	PRE SCREEN OFFICE BASEBOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-Mastic 431801727-0012A	PRE SCREEN OFFICE BASEBOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13 431801727-0013	PRE SCREEN OFFICE CARPET GLUE	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Floor Tile 431801727-0014	PRE SCREEN OFFICE 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Mastic 431801727-0014A	PRE SCREEN OFFICE 12X12 FLR TILE & MASTIC	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15 431801727-0015	RM 102 DW WALL CORE	White Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
16 431801727-0016	RM 102 2X4 CEILING TILE	White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
17-Baseboard 431801727-0017	RM 102 BASEBOARD & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17-Mastic 431801727-0017A	RM 102 BASEBOARD & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18 431801727-0018	RM 102 ABOVE CEILING FOAM PIPE INSULATION	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Floor Tile 431801727-0019	RM 102 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Mastic 431801727-0019A	RM 102 12X12 FLR TILE & MASTIC	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20 431801727-0020	EXT PATIO CONCRETE SLAB	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21 431801727-0021	EXT PATIO CONCRETE SLAB	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22 431801727-0022	EXT PATIO CINDER BLOCK WALL	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23-Floor Tile 431801727-0023	CRISIS SIDE ADULT SHOWER 12X12 FLR TILE & MASTIC	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23-Mastic 431801727-0023A	CRISIS SIDE ADULT SHOWER 12X12 FLR TILE & MASTIC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 03/30/2018 16:19:48



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EMSL Order: 431801727
Customer ID: WEST60
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
24 <i>431801727-0024</i>	CRISIS SIDE ADULT SHOWER DAMAGE WALL COMP	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25 <i>431801727-0025</i>	CRISIS SIDE HALLWAY DW/JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26-Sheet Flooring <i>431801727-0026</i>	CRISIS SIDE CHILD SHOWER SHEET FLR CORE	Blue Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
26-Mastic <i>431801727-0026A</i>	CRISIS SIDE CHILD SHOWER SHEET FLR CORE	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Ericka Lomibao (38)

Mariah Curran, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713

Initial report from: 03/30/2018 16:19:48

Asbestos Bulk Sampling - Chain of Custody

#431801727

WEST LLC 7966 Arjons Drive, #110 San Diego, CA 92115 Tel: 858.271.1842 Tel: 858.271.1856	Project Name: CRISIS & ASSESSMENT	Contact: David A. Christy (619) 571-3987 Fax Results: (858) 271-1856	Laboratory to be used: EMSL Analytical City/State: San Diego, California
	Project Location: E1 Centro, CA.		

Turn Around Time: 48

Relinquished By: (sign / print)	Company	Date / Time	Received By: (sign / print)	Date / Time
David Christy	WEST	3/26/18	[Signature]	3/28/18 1505

Sample #	Date	Area	Sample Location	Sample Description	Analysis Requested
01	3/26/18	LOBBY	LOBBY RR	DRYWALL CORE	Asbestos - PLM
02		INT.	LOBBY	DRYWALL CORE	Asbestos - PLM
03			LOBBY	BASE BOARDS & MASTIC	Asbestos - PLM
04			LOBBY	2x2 Ceiling Tile	Asbestos - PLM
05			LOBBY RR - Women	DRYWALL WALL CORE	Asbestos - PLM
06			N.E. office	DRYWALL WALL CORE	Asbestos - PLM
07			↓ ↓	BASE BOARD	Asbestos - PLM
08			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
09			NE Hallway	12x12 Floor Tile & Mastic	Asbestos - PLM
10			RR - Screen office	DRYWALL CORE	Asbestos - PLM
11			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
12			↓ ↓	BASE BOARDS & MASTIC	Asbestos - PLM
13			↓ ↓	Carpet Glue	Asbestos - PLM
14			↓ ↓	12x12 Floor Tile & Mastic	Asbestos - PLM
15			Room 102	DRYWALL WALL CORE	Asbestos - PLM
16			↓ ↓	2x4 Ceiling Tile	Asbestos - PLM
17			↓ ↓	BASE BOARD & MASTIC	Asbestos - PLM
18			↓ ↓ ABOVE Ceiling	FOAM PIPE INSULATION	Asbestos - PLM
19			↓ ↓	12x12 Floor Tile & Mastic	Asbestos - PLM
20		EXT	EXT. PATIO	Concrete Slab	Asbestos - PLM
21			↓ ↓	Concrete Slab	Asbestos - PLM
22			↓ ↓	Cinder Block Wall	Asbestos - PLM
23		CRISIS SIDE	ADULT Shower	12x12 Floor Tile & Mastic	Asbestos - PLM
24			↓ ↓	NAMEE WALL - Compound	Asbestos - PLM
25			HALLWAY	DW - Joint Compound	Asbestos - PLM
26			Child Shower	Sheet Floor Core	



WESTERN ENVIRONMENTAL & SAFETY TECHNOLOGIES LLC

“an environmental consulting firm”

Attachment Two

Limited Lead Paint Sampling Report

7676 Hazard Center Drive Suite #500 • San Diego • California • 92108
phone (858) 271-1842 • *fax* (858) 271-1856

gowestdc@msn.com
California • Arizona

Professional Environmental Consulting
and Training
Asbestos
Lead
Mold/Healthy Homes



Working for a clean environment
1101 California Ave, Suite 100
Corona, CA 92881
(951) 273-3410
info@allstate-services.com
www.allstate-services.com

March 28, 2018

Western Environmental & Safety Tech.
Mr. David Christy
7966 Arjons Drive, Suite 110
San Diego, CA 92126

RE: Lead-based paint testing at 202 North 8th Street, El Centro, California

Dear Mr. David Christy:

In accordance with your request and authorization, Allstate Services conducted lead-based paint testing at 202 North 8th Street in El Centro, California on March 26, 2018. Please note that only selected areas were tested for lead at this time.

The on-site work was performed by John Castorini, California Certified Lead Inspector/Assessor # 13642 using an XRF Analyzer following all required protocols.

Lead-based paint was identified on the surfaces tested at the above-mentioned property. Please see the attached Positive XRF Summary Report for further details.

If you need any further assistance after reviewing your report, please do not hesitate to contact me. Allstate Services remains available to assist you in anyway possible.

Sincerely,

A handwritten signature in black ink that reads "Steven Travers". The signature is written in a cursive, slightly slanted style.

Steven J. Travers
Director of Operations

Attachments: Positive XRF Summary Report, Detailed XRF Testing Results, Calibration Log, Inspector Certification Copy, 8552 Form

POSITIVE XRF SUMMARY REPORT

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
1	Exterior	Building Exterior	A	Wall	Concrete	Tan	Intact	1.0	Positive	400 Ft ²	
4	Exterior	Building Exterior	D	Wall	Concrete	Tan	Intact	1.1	Positive	400 Ft ²	
5	Interior	Rm. 1-Lobby	B	Wall	Concrete	Tan	Intact	1.1	Positive	200 Ft ²	
6	Interior	Rm. 1-Lobby	D	Wall	Concrete	Tan	Intact	1.0	Positive	200 Ft ²	
**Quantity estimations of leaded materials are provided for budget considerations only and should be verified onsite by bidders.											

DETAILED XRF TESTING RESULTS

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
1	Exterior	Building Exterior	A	Wall	Concrete	Tan	Intact	1.0	Positive	400 Ft ²	
2	Exterior	Building Exterior	B	Wall	Concrete	Tan	Intact	0.1	Negative		
3	Exterior	Building Exterior	C	Wall	Concrete	Tan	Intact	0.3	Negative		
4	Exterior	Building Exterior	D	Wall	Concrete	Tan	Intact	1.1	Positive	400 Ft ²	
5	Interior	Rm. 1-Lobby	B	Wall	Concrete	Tan	Intact	1.1	Positive	200 Ft ²	
6	Interior	Rm. 1-Lobby	D	Wall	Concrete	Tan	Intact	1.0	Positive	200 Ft ²	
7	Interior	Rm. 1-Lobby	C	Door	Wood	Tan	Deteriorated	0.0	Negative		
8	Interior	Rm. 1-Lobby	C	Door Frame	Wood	White	Deteriorated	0.0	Negative		
9	Interior	Rm. 1-Lobby	---	Ceiling	Acoustic	White	Deteriorated	0.0	Negative		
10	Interior	Rm. 2-Women's Restroom	A	Wall	Drywall	Tan	Intact	0.0	Negative		
11	Interior	Rm. 2-Women's Restroom	B	Wall	Drywall	Tan	Intact	0.2	Negative		
12	Interior	Rm. 2-Women's Restroom	C	Wall	Drywall	Tan	Intact	0.0	Negative		
13	Interior	Rm. 2-Women's Restroom	D	Wall	Ceramic Tile	Grey	Intact	0.1	Negative		
14	Interior	Rm. 2-Women's Restroom	A	Door	Wood	Brown	Intact	0.1	Negative		
15	Interior	Rm. 2-Women's Restroom	A	Door Frame	Metal	Tan	Intact	0.2	Negative		
16	Interior	Rm. 2-Women's Restroom	---	Ceiling	Drywall	Tan	Intact	0.0	Negative		
17	Interior	Rm. 2-Women's Restroom	---	Floor	Ceramic Tile	Tan	Intact	0.1	Negative		
18	Interior	Rm. 3-Men's Restroom	A	Wall	Drywall	Tan	Intact	0.0	Negative		
19	Interior	Rm. 3-Men's Restroom	B	Wall	Drywall	Tan	Intact	0.2	Negative		
20	Interior	Rm. 3-Men's Restroom	C	Wall	Drywall	Tan	Intact	0.1	Negative		
21	Interior	Rm. 3-Men's Restroom	D	Wall	Ceramic Tile	Tan	Intact	0.2	Negative		
22	Interior	Rm. 3-Men's Restroom	D	Door	Wood	Brown	Intact	0.0	Negative		
23	Interior	Rm. 3-Men's Restroom	D	Door Frame	Metal	Tan	Intact	0.1	Negative		
24	Interior	Rm. 3-Men's Restroom	---	Ceiling	Drywall	Tan	Intact	0.0	Negative		
25	Interior	Rm. 4-Office	A	Wall	Drywall	Blue	Intact	0.0	Negative		
26	Interior	Rm. 4-Office	B	Wall	Drywall	Blue	Intact	0.2	Negative		
27	Interior	Rm. 4-Office	C	Wall	Drywall	Blue	Intact	0.0	Negative		
28	Interior	Rm. 4-Office	D	Wall	Drywall	Blue	Intact	0.1	Negative		
29	Interior	Rm. 4-Office	B	Door	Wood	Brown	Intact	0.0	Negative		
30	Interior	Rm. 4-Office	B	Door Frame	Metal	Brown	Deteriorated	0.1	Negative		
31	Interior	Rm. 4-Office	---	Ceiling	Acoustic	White	Intact	0.0	Negative		
32	Interior	Rm. 5-Men's Restroom	A	Wall	Drywall	Blue	Intact	0.2	Negative		
33	Interior	Rm. 5-Men's Restroom	B	Wall	Drywall	Blue	Intact	0.0	Negative		
34	Interior	Rm. 5-Men's Restroom	C	Wall	Drywall	Blue	Intact	0.1	Negative		
35	Interior	Rm. 5-Men's Restroom	D	Wall	Drywall	Blue	Intact	0.20	Negative		
36	Interior	Rm. 5-Men's Restroom	A	Door	Wood	Brown	Intact	0.0	Negative		
37	Interior	Rm. 5-Men's Restroom	A	Door Frame	Metal	White	Intact	0.2	Negative		
38	Interior	Rm. 5-Men's Restroom	---	Ceiling	Acoustic	White	Intact	0.1	Negative		
39	Interior	Rm. 6-Hall	A	Wall	Drywall	Blue	Intact	0.0	Negative		
40	Interior	Rm. 6-Hall	B	Wall	Drywall	Blue	Intact	0.2	Negative		
41	Interior	Rm. 6-Hall	C	Wall	Drywall	Blue	Intact	0.0	Negative		
42	Interior	Rm. 6-Hall	D	Wall	Drywall	Blue	Intact	0.1	Negative		
43	Interior	Rm. 6-Hall	D	Door	Wood	Brown	Intact	0.1	Negative		

DETAILED XRF TESTING RESULTS

202 North 8th Street, El Centro, California

Sample	Area	Room Equivalent	Side Tested	Component	Substrate	Color	Condition	Lead (mg/cm ²)	Results	Quantities For Entire Area	Comments
44	Interior	Rm. 6-Hall	D	Door Frame	Metal	Brown	Intact	0.0	Negative		
45	Interior	Rm. 6-Hall	---	Ceiling	Acoustic	White	Intact	0.2	Negative		
46	Interior	Rm. 7-Office	A	Wall	Drywall	Blue	Intact	0.2	Negative		
47	Interior	Rm. 7-Office	B	Wall	Drywall	Blue	Intact	0.0	Negative		
48	Interior	Rm. 7-Office	C	Wall	Drywall	Blue	Intact	0.1	Negative		
49	Interior	Rm. 7-Office	D	Wall	Drywall	Blue	Intact	0.2	Negative		
50	Interior	Rm. 7-Office	C	Door	Wood	Brown	Intact	0.2	Negative		
51	Interior	Rm. 7-Office	C	Door Frame	Metal	Brown	Intact	0.2	Negative		
52	Interior	Rm. 7-Office	---	Ceiling	Acoustic	White	Intact	0.0	Negative		

ALLSTATE SERVICES
XRF CALIBRATION FORM

Address/Unit: 202 North 8th Street, El Centro, California

Device: RMD, LPA-1

Date: March 26, 2018

Inspector: John Castorini

Calibration Check Tolerance Used: 0.6 mg/cm² - 1.2 mg/cm² (Inclusive)
Use Level III (1.02 mg/cm²) NIST SRM Paint film

First Calibration Check

Time: 4:45 p.m.

1 st Reading	2 nd Reading	3 rd Reading	1 st Average
0.7	1.0	1.0	0.9

Second Calibration Check

Time: 5:40 p.m.

1 st Reading	2 nd Reading	3 rd Reading	2 nd Average
0.7	0.7	0.9	0.8

Third Calibration Check (If Needed)

Time:

1 st Reading	2 nd Reading	3 rd Reading	3 rd Average

- Use the Quick Test Mode Reading
- Tolerance Values for RMD, LPA-1: 0.6 mg/cm² - 1.2 mg/cm² (Inclusive)

State of California Department of Public Health

Lead-Related
Construction
Certificate

Certificate
Type

Expiration
Date



Inspector/Assessor	03/14/2018
Project Monitor	03/14/2018



John P. Castorini

ID #: 13642

LEAD HAZARD EVALUATION REPORT

Section 1 – Date of Lead Hazard Evaluation 3/26/2018

Section 2 – Type of Lead Hazard Evaluation (Check one box only)

Lead Inspection Risk assessment Clearance Inspection Other (specify)

Section 3 – Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)] 202 North 8th Street-Selected Areas		City El Centro	County Imperial	Zip Code
Construction date (year) of structure Prior to 1970s	Type of structure <input type="checkbox"/> Multi-unit building <input checked="" type="checkbox"/> School or daycare <input type="checkbox"/> Single family dwelling <input type="checkbox"/> Other 		Children living in structure? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

Section 4 – Owner of Structure (if business/agency, list contact person)

Name Contact: Western Environmental & Safety Tech. C/O Mr. Dave Christy		Telephone number 858-271-1842	
Address [number, street, apartment (if applicable)] 7966 Arjons Drive, Suite 110		City San Diego	State California
		Zip Code 92126	

Section 5 – Results of Lead Hazard Evaluation (check all that apply)

No lead-based paint detected Intact lead-based paint detected Deteriorated lead-based paint detected
 No lead hazards detected Lead-contaminated dust found Lead-contaminated soil found Other

Section 6 – Individual Conducting Lead Hazard Evaluation

Name John Castorini		Telephone number 951-273-3410	
Address [number, street, apartment (if applicable)] 1101 California Avenue, Suite 100		City Corona	State California
		Zip Code 92883	
CDPH certification number I-13642	Signature 		Date 3/28/18

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 – Attachments

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector
 Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:
 California Department of Public Health
 Childhood Lead Poisoning Prevention Branch Reports
 850 Marina Bay Parkway, Building P, Third Floor
 Richmond, CA 94804-6403
 Fax: (510) 620-5656

**EXHIBIT "VI"
TECHNICAL SPECS**



Structured Cabling / Communications Standards

Goals

County of Imperial has a cabling infrastructure standard for all new and existing facilities. This standard applies to all data and voice solutions. The data cabling shall support Ethernet, Fast Ethernet, Gigabit Ethernet, VOIP, and Video over IP solutions. The Structured Cabling will facilitate Voice (VOIP), Data, Copiers, Fax's, WiFi, Kronos Clocks, Cameras, Access Control Devices and Wireless Network Antennas for our connected County Network. The traditional voice cabling shall support traditional phone systems, as well as fax communications. This standard ensures the county will receive a quality installation, guaranteed performance, and reduce on-going maintenance costs.

1. Standards and Codes

All aspects of the installation must follow Telecommunication Industry standards including the ANSI/EIA/TIA 568 (Telecommunication Cabling Standard), ANSI/EIA/TIA 569 (Pathways and Spaces), ANSI/EIA/TIA 607-B (Bonding and Grounding), and the ANSI/EIA/TIA 942 (Standard for Data Centers); as well as federal, state, and local codes.

2. Cable Design

2a. If the building will connect to our Voice over IP phone system (ShoreTel), then the default Configuration for each workstation outlet shall be 2 data connections. The data connections shall be Category 6 rated. All Category 6 cables shall terminate in the telecommunications room on patch panels. The Category 6 cables and connectors shall be 'White' in, color. The following locations shall be included in every project. See Communications Plans for quantities and locations.

- | | |
|---|--|
| 1 | 2 per workstation (VOIP) / 3 per workstation (Traditional Voice) |
| 2 | 2 per copier/fax location |
| 3 | 1 per WiFi location |
| 4 | 1 per Kronos / Time Clock location |
| 5 | 1 per Camera Location |
| 6 | 1 per KP – Keypad Location |
| 7 | 2 per Wireless Antenna Exterior (Outdoor Rated Shielded cable) |

2b. If the building supports a traditional voice system, then the default configuration for each workstation outlet shall be one (2) data connection and one (1) traditional voice connection. All cabling and connections shall be same as above.

2c. Backbone cables supporting the traditional voice solutions shall be a high-pair Category 3 cable, which shall be terminated in the telecommunications rooms on 110-blocks.

2d. Backbone cables supporting data applications shall use Multimode or Single Mode fiber (specified on drawings). The selection of fiber shall depend on the actual distance and network performance requirements. The default fiber optic connector for Multimode and Single mode cabling is the 'LC' connector.

3. Cable Performance

All data and voice drops shall be tested to the Category 6 permanent-link performance specifications. All fiber drops shall be tested to the performance standards defined in ANSI/EIA/TIA 802.3z.

4. Conditioned Space

All data closets must be air-conditioned space. IDF and MDF spaces should maintain positive air pressure and should be designed for a minimum of one air change per hour. Recommended equipment would be a dedicated mini-split air-conditioner inside of the data closet, the temperature range should be maintained at a range of 65 and 75 degrees F. Alternate Air flow distribution within the IDF and MDF should be accomplished via the use of supply and return ducts, the temperature range should be maintained at a range of 65 and 75 degrees F. Please refer to final construction drawings for details.

5. Kronos Clock Locations

All locations noted by TC (Time Clock / Kronos) require (1) Category 6 cable to each location. Cable at noted Keypad location may be terminated on CAT 6 jack in a biscuit and left within single gang box with 1' pigtail, the other end shall be terminated on patch panel. Cable must be terminated on both ends and tested as any other Category 6 cable. The outlet for the clock will need to be at 45" to center. See Communications Plans or Attachment for more details.

6. Access Control

All locations noted by KP (Keypad) require (1) Category 6 cable to each location. Cable at noted Keypad location may be terminated on CAT 6 jack in a biscuit and left within single gang box with 1' pigtail, the other end shall be terminated on patch panel. Cable must be terminated on both ends and tested as any other Category 6 cable. Keypad height to be 52" to Center of single gang box. If noted in lease documents for contractor to supply hardware, the Access Control System must be Isonas. Detailed parts list must be submitted as part of submittal package for review. See Communications Plans or Attachment for more details.

7. Video Surveillance

All locations noted on plans with the camera symbol require (1) Category 6 cable to each location. Cable at noted camera location may be terminated on CAT 6 jack in a biscuit and left with a 10' coil above ceiling; the other end shall be terminated on patch panel. Cable must be terminated on both ends and tested as any other Category 6 cable. If noted in lease documents for contractor to supply hardware, the Video Surveillance System must be Detailed parts list must be submitted as part of submittal package for review. See Communications Plans or Attachment for more details.

8. Racks. Cabinets. and Pathways Design

At least one rack, cabinet or wall mount cabinet shall be securely mounted in each telecommunication space to support the data cabling and network equipment. The fiber optic housing shall be mounted at the top of the rack or cabinet. The data patch panels and cable management will be mounted just below the fiber optic housing. 2U Horizontal management shall

be installed above and below all panels installed on the rack. 6" double sided Vertical management shall be install on both sides of any open rack design. Cable shall enter from the top, and be cleanly dressed. Overhead cabling shall be independently supported, and never laid on ceiling tiles, tied to any conduit, or attached to ceiling supports. Overhead pathways are required for large cable bundles. J-Hooks may be installed to support small cable bundles. All outside plant cables shall be placed in conduit. Each fiber optic cable shall be placed within an inner duct. See Communications Plans or Attachment for more details.

9. Firestop and Grounding

Firestops materials shall be installed to re-establish the integrity of each through-wall or through-floor penetration as required by local code. All firestop products shall be installed in accordance with the manufacturer recommendations. All equipment racks, cabinets, and raceway systems shall be bonded and grounded per ANSI/EIA/TIA 607-B

10. Products

All products shall be installed in compliance with the manufactures instructions. County of Imperial standard equipment, hardware, cable and connectivity products must be the following Approved Manufactures.

- All Fiber products to be Corning
- All Structured Cabling to be CommScope (Systimax)
- All Racks to be APC or Tripp Lite Products
- All Access Control equipment to be Isonas
- All Electric strikes to be HESS

11. Documentation

The contractor is required to provide cable test results for each data and fiber optic cable. As-built drawings are required, which identify the label of each Category 6 jack, telecommunication space locations, workstation outlet locations, cabling pathways, firestop and grounding components. All manufacture warranties must be provided from manufactures. All documentation must be provided in hard (2 copies) and soft copy as well as AutoCAD .dwg format.

12. Warranties

Every installation shall provide a 25-year extended warranty on the horizontal and backbone cabling solutions by the product manufactures. The extended warranty shall include (but not limited to), product, performance, and application guarantees. If hardware is provided all hardware product warranties shall be attached in closeout documentation.

13. Contractor Qualifications

Contractor qualifications shall include proven experience, certified staff, multiple customer references, and their ability to offer the extended warranty available by the Approved Product Manufactures that are listed above (See Sec 9).

The standard hardware used throughout the county is as follows:

Small format Falcon and Everest I.C. cores

Marks Grade 1 Leversets to include:

- Entry style Model 195RAB/26D
- Privacy style Model 195L/26D
- Passage style Model 195N/26D
- Storage style Model 195RF/26D
- Asylum style Model 195RDW/26D
- Classroom style Model 195RS/26D

Door closer Grade 1 Model LCN 1261Rw/PA

Heavy duty ball bearing hinges Model Hager BB1168 NRP

Exit/Fire hardware VonDuprin Models:

- Concealed vertical rod w/ flat trim and I.C. housing 3347L
- Rim Exit Device(exit only) 99EO
- Fire Rated Device(exit only) 99EO-F
- Rim Exit Device(w/ lever trim) 99L
- Fire Rated Device(w/ lever trim) 99L-F
- Narrow styles are all 33EO, 33EO-F, 33L, or 33L-F

Schlage Deadbolts Model:

- B660BD single sided
- B662BD double sided

Master Weather Tough Model 6421

All hardware is Grade 1 Hardware and comes with a minimum 5 yr mechanical warranty.

County of Imperial – Door Hardware Specifications

- Marks Leversets Series 195 Grade 1
- LCN Model 1261 High Traffic closers
- VonDuprin 33 & 99 series exit devices – Panic Hardware Devices for exterior doors.
- Schlage 600 series Grade 1 deadbolts – With small format for I.C. Core prep.
- HES 6000 & 9000 series electrified strikes

**HAZARDOUS MATERIALS
PROCEDURES & REQUIREMENTS**

1. Summary

This document includes information applicable to hazardous materials and hazardous waste abatement.

2. Notice of Hazardous Waste or Materials

- a. Contractor shall give notice in writing immediately to the Owner, the Construction Manager, and the Architect promptly, before any of the following materials are disturbed, of any:
 - (1) Material that Contractor believes may be a material that is hazardous waste or hazardous material, 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;
 - (2) Other material that may present a substantial danger to persons or property exposed thereto in connection with Work at the site.
- b. Contractor's written notice shall indicate whether the hazardous waste or material was shown or indicated in the Contract Documents to be within the scope of Work, and whether the materials were brought to the site by Contractor, its Subcontractors, suppliers, or anyone else for whom Contractor is responsible. As used in this section the term "hazardous materials" shall include, without limitation, asbestos, lead, Polychlorinated biphenyl (PCB), petroleum and related hydrocarbons, and radioactive material.
- c. In response to Contractor's written notice, the Owner shall investigate the identified conditions.
- d. If the Owner determines that conditions do not involve hazardous materials or that no change in terms of Contract is justified, the Owner shall so notify Contractor in writing, stating reasons. If the Owner and Contractor cannot agree on whether conditions justify an adjustment in Contract Price or Contract Time, or on the extent of any adjustment, Contractor shall proceed with the Work as directed by the Owner.
- e. If after receipt of notice from the Owner, Contractor does not agree to resume Work based on a reasonable belief it is unsafe, or does not agree to resume Work under special conditions, then Owner may order such portion of Work that is in connection with such hazardous condition or such affected area to be deleted from the Work, or performed by others, or Owner may invoke its rights to terminate the Contract in whole or in part. Owner will determine entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Time as a result of the Contractor's refusal to resume Work hereunder and Owner's performing the Work by others.
- f. If Contractor stops Work in connection with any hazardous condition and in any area affected thereby, Contractor shall immediately redeploy its workers, equipment, and materials, as necessary, to other portions of the Work to minimize delay and disruption to the greatest extent commercially feasible.

3. Additional Warranties and Representations

- a. Contractor represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have the required levels of familiarity with the Site and the Work, training, and ability to comply fully with all applicable laws and contractual requirements for safe and expeditious performance of the Work, including whatever training is or may be required regarding the activities to be performed (including, but not limited to, all training required to address adequately the actual or potential dangers of Contract performance).
- b. Contractor represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have and maintain in good standing any and all certifications and licenses required by applicable federal, state, and other governmental and quasi-governmental requirements applicable to the Work.

4. Monitoring and Testing

- a. The Owner reserves the right, in its sole discretion, to conduct air monitoring, earth monitoring, Work monitoring, and any other tests (in addition to testing required under the contract or applicable law), to monitor Contract requirements of safe and statutorily compliant work methods and (where applicable) safe re-entry level air standards under state and federal law upon completion of the job, and compliance of the work with periodic and final inspection by public and quasi-public entities having jurisdiction.
- b. Contractor acknowledges that the Owner has the right to perform, or cause to be performed, various activities and tests including, but not limited to, pre-abatement, during abatement, and post-abatement air monitoring, that Owner shall have no obligation to perform said activities and tests, and that a portion of said activities and tests may take place prior to the completion of the Work by Contractor. In the event Owner elects to perform these activities and tests, Contractor shall afford Owner ample access to the Site and all areas of the Work as may be necessary for the performance of these activities and tests. Contractor will include the potential impact of these activities or tests by Owner in the Contract Price and the Scheduled Completion Date.
- c. Notwithstanding Owner's rights granted by this paragraph, Contractor may retain its own industrial hygiene consultant at Contractor's own expense and may collect samples and may perform tests including, but not limited to, pre-abatement, during abatement, and post-abatement personal air monitoring, and Owner reserves the right to request documentation of all such activities and tests performed by Contractor relating to the Work and Contractor shall immediately provide that documentation upon request.

5. Compliance with Laws

- a. Contractor shall perform safe, expeditious, and orderly work in accordance with the best practices and the highest standards in the hazardous waste abatement, removal, and disposal industry, the

- (2) Storage, handling, or use of asbestos, PCB, lead, petroleum based products, radioactive material, or other hazardous materials;
- (3) The generation, processing, treatment, storage, transport, disposal, destruction, or other management of asbestos, PCB, lead, petroleum, radioactive material, or hazardous waste materials or other waste materials of any kind; and
- (4) The protection of environmentally sensitive areas such as wetlands and coastal areas.

6. Disposal

- a. Contractor has the sole responsibility for identifying current waste storage, handling, transportation, and disposal regulations for the job Site and for each waste disposal facility. Contractor must comply fully at its sole cost and expense with these regulations and any applicable law. Owner may, but is not obligated to, require submittals with this information for it to review consistent with the Contract Documents.
- b. Contractor shall develop and implement a system acceptable to Owner to track hazardous waste from the Site to disposal, including appropriate "Hazardous Waste Manifests" on the EPA form, so that Owner may track the volume of hazardous waste disposal in each landfill. Contractor shall obtain certificate of receipt from each landfill in which hazardous waste is deposited, and Contractor shall submit such reports to the Owner.
- c. Contractor shall provide Owner with the name and address of each waste disposal facility prior to any disposal, and Owner shall have the express right to reject any proposed disposal facility. Contractor shall not use any disposal facility to which Owner has objected.

7. Permits

- a. Before performing any of the Work, and at such other times as may be required by applicable law, Contractor shall deliver all requisite notices and obtain the approval of all governmental and quasi-governmental authorities having jurisdiction over the Work. Contractor shall submit evidence satisfactory to Owner that it and any disposal facility:
 - (1) have obtained all required permits, approvals, and the like in a timely manner both prior to commencement of the Work and thereafter as and when required by applicable law; and
 - (2) are in compliance with all such permits, approvals and the regulations.

For example, before commencing any work in connection with the Work involving asbestos-containing materials, or PCBs, or other hazardous materials subject to regulation, Contractor agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to Owner. Contractor shall not conduct any Work involving asbestos-containing materials or PCBs unless Contractor has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, and bonds that are required by governmental or quasi-governmental authorities, and all fees, deposits, tap fees, offsite easements, and asbestos and PCB disposal facilities expenses necessary for the prosecution of the Work, shall be procured and paid for by Contractor. Contractor shall give all notices and comply with the all applicable laws bearing on the conduct of the Work as drawn and specified. If

For example, before commencing any work in connection with the Work involving asbestos-containing materials, or PCBs, or other hazardous materials subject to regulation, Contractor agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to Owner. Contractor shall not conduct any Work involving asbestos-containing materials or PCBs unless Contractor has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, and bonds that are required by governmental or quasi-governmental authorities, and all fees, deposits, tap fees, offsite easements, and asbestos and PCB disposal facilities expenses necessary for the prosecution of the Work, shall be procured and paid for by Contractor. Contractor shall give all notices and comply with the all applicable laws bearing on the conduct of the Work as drawn and specified. If Contractor observes or reasonably should have observed that Plans and Specifications and other Contract Documents are at variance therewith, it shall be responsible for promptly notifying Owner in writing of such fact. If Contractor performs any Work contrary to applicable laws, it shall bear responsibility therefrom.

- b. In the case of any permits or notices held in Owner's name or of necessity to be made in Owner's name, Owner shall cooperate with Contractor in securing the permit or giving the notice, but the Contractor shall prepare for Owner review and execution upon approval, all necessary applications, notices, and other materials.

8. Indemnification

To the fullest extent permitted by law, the indemnities and limitations of liability expressed throughout the Contract Documents apply with equal force and effect to any claims or liabilities imposed or existing by virtue of the removal, abatement, and disposal of hazardous waste. This includes, but is not limited to, liabilities connected to the selection and use of a waste disposal facility, a waste transporter, personal injury, property damage, loss of use of property, damage to the environment or natural resources, or “disposal” and “release” of materials associated with the Work (as defined in 42 U.S.C. § 9601 *et seq.*).

9. Termination

Owner shall have an absolute right to terminate for default immediately without notice and without an opportunity to cure should Contractor knowingly or recklessly commit a material breach of the terms of the Contract Documents, or any applicable law, on any matter involving the exposure of persons or property to hazardous waste. However, if the breach of contract exposing persons or property to hazardous waste is due solely to an ordinary, unintentional, and non-reckless failure to exercise reasonable care, then the procedures for termination for cause shall apply without modification.

END OF DOCUMENT

SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Site Access Conditions and Requirements;
- B. Special Conditions.

1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

The Work of this Contract consists of the following: The contractor shall remodel the interior space of an existing shell building consisting of 7,261 sq ft.. The existing 1,328 sf carport shall be removed and converted to B occupancy, for a total area of 8,593 sq ft for the new tenant space. The scope of work will require new interior partition walls, reflected ceilings, flooring, and the addition of new restrooms and showers, as shown on the plans. The existing fire sprinkler and fire alarm systems of the existing building shall be modified to accommodate the new tenant space.

The use of this facility is a mental health triage unit that provides immediate response to individuals exhibiting psychiatric symptoms during regular working hours. The individuals occupying the clinic are capable of self-preservation.

This facility does not have a licence, nor does it qualify as an institutional group i-3, a correctional mental health facility, as described in Section 408.1 of the CBC (California Building Code).

1.03 CONTRACTS

- A. Perform the Work under a single, fixed-price Contract.

1.04 CODES, REGULATIONS, AND STANDARDS

- A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern minimum requirements for this Project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the Owner and the Architect.
- B. Codes, regulations, and standards shall be as published, effective as of the date of bid opening, unless otherwise specified or indicated.

1.05 PROJECT RECORD DOCUMENTS

- A. Contractor shall maintain the construction project documents at the site and shall record actual revisions performed to the scope of Work in the following documents:

- (1) Contract Drawings.

OWNER OF IMPERIAL BEHAVIORAL HEALTH SERVICES
(BHS)
EL CENTRO MENTAL HEALTH TRIAGE AND
ENGAGEMENT SERVICES EXPANSION OWNER PROJECT
NO. SR6309BH(BHCIP-B4 236)

SUMMARY OF WORK
DOCUMENT 01 11 00-3

- (2) Specifications.
 - (3) Addenda.
 - (4) Change Orders and other modifications to the Contract.
 - (5) Reviewed shop drawings, product data, and samples.
 - (6) Field test records.
 - (7) Inspection certificates.
 - (8) Manufacturer's certificates.
- B. Contractor shall store Record Documents separate from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples.
 - C. Contractor shall record information concurrent with construction progress.
 - D. Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:
 - (1) Manufacturer's name and product model and number.
 - (2) Product substitutions or alternates utilized.
 - (3) Changes made by Addenda and Change Orders and written directives.

1.06 EXAMINATION OF EXISTING CONDITIONS

- A. Prior to commencing the Work Contractor shall examine the Project Site.
- B. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.
- C. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the Owner and the Architect.

1.07 CONTRACTOR'S USE OF PREMISES

- A. If unoccupied and only with Owner's prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the Owner chooses to beneficially occupy any building(s), Contractor must obtain the Owner's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.
- B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.

- C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.
- D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.
- E. No one other than those directly involved in the demolition and construction, or specifically designated by the Owner or the Architect shall be permitted in the areas of work during demolition and construction activities.
- F. The Contractor shall install the construction fence and maintain that it will be locked when not in use. Keys to this fencing will be provided to the Owner.

1.08 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the Owner's satisfaction.
- B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the Owner for disposition of same as indicated in the General Conditions.

1.09 UTILITY SHUTDOWNS AND INTERRUPTIONS

- A. Contractor shall give the Owner a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The Owner will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.
- B. Contractor shall obtain Owner's written approval in advance of deliveries of material or equipment or other activities that may conflict with Owner's use of the building(s) or adjacent facilities.

1.10 STRUCTURAL INTEGRITY

- A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.
- B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

SCHEDULING OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions;
- C. Summary of Work; and
- D. Submittals.

1.02 SECTION INCLUDES

- A. Scheduling of Work under this Contract shall be performed by Contractor in accordance with requirements of this Section.
 - (1) Development of schedule, cost and resource loading of the schedule, monthly payment requests, and project status reporting requirements of the Contract shall employ computerized Critical Path Method (“CPM”) scheduling (“CPM Schedule”).
 - (2) CPM Schedule shall be cost loaded based on Schedule of Values as approved by County of Imperial.
 - (3) Submit schedules and reports as specified in the General Conditions.
- B. Upon Award of Contract, Contractor shall immediately commence development of Initial and Original CPM Schedules to ensure compliance with CPM Schedule submittal requirements.

1.03 CONSTRUCTION SCHEDULE

- A. Within ten (10) days of issuance of the Notice to Proceed and before request for first progress payment, the Contractor shall prepare and submit to the Project Manager a construction progress schedule conforming to the Milestone Schedule below.
- B. The Construction Schedule shall be continuously updated, and an updated schedule shall be submitted with each application for progress payment. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.
- C. Milestone Schedule:

ACTIVITY DESCRIPTION

REQUIRED COMPLETION

1.04 QUALIFICATIONS

- A. Contractor shall employ experienced scheduling personnel qualified to use the latest version of [i.e., Primavera Project Planner]. Experience level required is set forth below. Contractor may employ such personnel directly or may employ a consultant for this purpose.
 - (1) The written statement shall identify the individual who will perform CPM scheduling.
 - (2) Capability and experience shall be verified by description of construction projects on which individual has successfully applied computerized CPM.
 - (3) Required level of experience shall include at least two (2) projects of similar nature and scope with value not less than three fourths ($\frac{3}{4}$) of the Total Bid Price of this Project. The written statement shall provide contact persons for referenced projects with current telephone and address information.
- B. County of Imperial reserves the right to approve or reject Contractor's scheduler or consultant at any time. County of Imperial reserves the right to refuse replacing of Contractor's scheduler or consultant, if County of Imperial believes replacement will negatively affect the scheduling of Work under this Contract.

1.05 GENERAL

- A. Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in the Contract, unless an earlier (advanced) time of completion is requested by Contractor and agreed to by County of Imperial. Any such agreement shall be formalized by a Change Order.
 - (1) County of Imperial is not required to accept an early completion schedule, i.e., one that shows an earlier completion date than the Contract Time.
 - (2) Contractor shall not be entitled to extra compensation in event agreement is reached on an earlier completion schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in its early completion schedule but within the Contract Time.
 - (3) A schedule showing the work completed in less than the Contract Time, and that has been accepted by County of Imperial, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and the Completion Date. Project Float is a resource available to both County of Imperial and the Contractor.
- C. Ownership Project Float: Neither the County of Imperial nor Contractor owns Project Float. The Project owns the Project Float. As such, liability for delay of the Completion Date rests with the party whose actions, last in time, actually cause delay to the Completion Date.

- (1) For example, if Party A uses some, but not all of the Project Float and Party B later uses remainder of the Project Float as well as additional time beyond the Project Float, Party B shall be liable for the time that represents a delay to the Completion Date.
 - (2) Party A would not be responsible for the time since it did not consume the entire Project Float and additional Project Float remained; therefore, the Completion Date was unaffected by Party A.
- D. Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract CPM Schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.
 - E. Failure of Progress Schedule to include any element of the Work, or any inaccuracy in Progress Schedule, will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. County of Imperial's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests and shall not, in any manner, impose a duty of care upon County of Imperial, or act to relieve Contractor of its responsibility for means and methods of construction.
 - F. Transmit each item under the form approved by County of Imperial.
 - (1) Identify Project with County of Imperial Contract number and name of Contractor.
 - (2) Provide space for Contractor's approval stamp and County of Imperial's review stamps.
 - (3) Submittals received from sources other than Contractor will be returned to the Contractor without County of Imperial's review.

1.06 INITIAL CPM SCHEDULE

- A. Initial CPM Schedule submitted for review at the pre-construction conference shall serve as Contractor's schedule for up to ninety (90) calendar days after the Notice to Proceed.
- B. Indicate detailed plan for the Work to be completed in first ninety (90) days of the Contract; details of planned mobilization of plant and equipment; sequence of early operations; procurement of materials and equipment. Show Work beyond ninety (90) calendar days in summary form.
- C. Initial CPM Schedule shall be time scaled.
- D. Initial CPM Schedule shall be cost and resource loaded. Accepted cost and resource loaded schedule will be used as basis for monthly progress payments until acceptance of the Original CPM Schedule. Use of Initial CPM Schedule for progress payments shall not exceed ninety (90) calendar days.
- E. County of Imperial and Contractor shall meet to review and discuss the Initial CPM Schedule within seven (7) calendar days after it has been submitted to County of Imperial.
 - (1) County of Imperial's review and comment on the schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).
 - (2) Contractor shall make corrections to schedule necessary to comply with Contract requirements and shall adjust schedule to incorporate any missing information requested

by County of Imperial. Contractor shall resubmit Initial CPM Schedule if requested by County of Imperial.

- F. If, during the first ninety (90) days after Notice to Proceed, the Contractor is of the opinion that any of the Work included on its Initial CPM Schedule has been impacted, the Contractor shall submit to County of Imperial a written Time Impact Evaluation (“TIE”) in accordance with Article 1.12 of this Section. The TIE shall be based on the most current update of the Initial CPM Schedule.

1.07 ORIGINAL CPM SCHEDULE

- A. Submit a detailed proposed Original CPM Schedule presenting an orderly and realistic plan for completion of the Work in conformance with requirements as specified herein.
- B. Progress Schedule shall include or comply with following requirements:
- (1) Time scaled, cost and resource (labor and major equipment) loaded CPM schedule.
 - (2) No activity on schedule shall have duration longer than fifteen (15) work days, with exception of submittal, approval, fabrication and procurement activities, unless otherwise approved by County of Imperial.
 - (a) Activity durations shall be total number of actual work days required to perform that activity.
 - (3) The start and completion dates of all items of Work, their major components, and milestone completion dates, if any.
 - (4) County of Imperial furnished materials and equipment, if any, identified as separate activities.
 - (5) Activities for maintaining Project Record Documents.
 - (6) Dependencies (or relationships) between activities.
 - (7) Processing/approval of submittals and shop drawings for all material and equipment required per the Contract. Activities that are dependent on submittal acceptance or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.
 - (a) Include time for submittals, re-submittals and reviews by County of Imperial. Coordinate with accepted schedule for submission of Shop Drawings, samples, and other submittals.
 - (b) Contractor shall be responsible for all impacts resulting from re-submittal of Shop Drawings and submittals.
 - (8) Procurement of major equipment, through receipt and inspection at jobsite, identified as separate activity.
 - (a) Include time for fabrication and delivery of manufactured products for the Work.

- (b) Show dependencies between procurement and construction.
- (9) Activity description; what Work is to be accomplished and where.
 - (10) The total cost of performing each activity shall be total of labor, material, and equipment, excluding overhead and profit of Contractor. Overhead and profit of the General Contractor shall be shown as a separate activity in the schedule. Sum of cost for all activities shall equal total Contract value.
 - (11) Resources required (labor and major equipment) to perform each activity.
 - (12) Responsibility code for each activity corresponding to Contractor or Subcontractor responsible for performing the Work.
 - (13) Identify the activities which constitute the controlling operations or critical path. No more than twenty-five (25%) of the activities shall be critical or near critical. Near critical is defined as float in the range of one (1) to (10) days.
 - (14) Twenty (20) workdays for developing punch list(s), completion of punch-list items, and final clean up for the Work or any designated portion thereof. No other activities shall be scheduled during this period.
 - (15) Interface with the work of other contractors, County of Imperial, and agencies such as, but not limited to, utility companies.
 - (16) Show detailed Subcontractor Work activities. In addition, furnish copies of Subcontractor schedules upon which CPM was built.
 - (a) Also furnish for each Subcontractor, as determined by County of Imperial, submitted on Subcontractor letterhead, a statement certifying that Subcontractor concurs with Contractor's Original CPM Schedule and that Subcontractor's related schedules have been incorporated, including activity duration, cost and resource loading.
 - (b) Subcontractor schedules shall be independently derived and not a copy of Contractor's schedule.
 - (c) In addition to Contractor's schedule and resource loading, obtain from electrical, mechanical, and plumbing Subcontractors, and other Subcontractors as required by County of Imperial, productivity calculations common to their trades, such as units per person day, feet of pipe per day per person, feet of wiring per day per person, and similar information.
 - (d) Furnish schedule for Contractor/Subcontractor CPM schedule meetings which shall be held prior to submission of Original CPM schedule to County of Imperial. County of Imperial shall be permitted to attend scheduled meetings as an observer.
 - (17) Activity durations shall be in Work days.

- (18) Submit with the schedule a list of anticipated non-Work days, such as weekends and holidays. The Progress Schedule shall exclude in its Work day calendar all non-Work days on which Contractor anticipates critical Work will not be performed.
- C. Original CPM Schedule Review Meeting: Contractor shall, within sixty (60) days from the Notice to Proceed date, meet with County of Imperial to review the Original CPM Schedule submittal.
- (1) Contractor shall have its Project Manager, Project Superintendent, Project Scheduler, and key Subcontractor representatives, as required by County of Imperial, in attendance. The meeting will take place over a continuous one (1) day period.
 - (2) County of Imperial's review will be limited to submittal's conformance to Contract requirements including, but not limited to, coordination requirements. However, review may also include:
 - (a) Clarifications of Contract Requirements.
 - (b) Directions to include activities and information missing from submittal.
 - (c) Requests to Contractor to clarify its schedule.
 - (3) Within five (5) days of the Schedule Review Meeting, Contractor shall respond in writing to all questions and comments expressed by County of Imperial at the Meeting.

1.08 ADJUSTMENTS TO CPM SCHEDULE

- A. Adjustments to Original CPM Schedule: Contractor shall have adjusted the Original CPM Schedule submittal to address all review comments from original CPM Schedule review meeting and resubmit network diagrams and reports for County of Imperial's review.
- (1) County of Imperial, within ten (10) days from date that Contractor submitted the revised schedule, will either:
 - (a) Accept schedule and cost and resource loaded activities as submitted, or
 - (b) Advise Contractor in writing to review any part or parts of schedule which either do not meet Contract requirements or are unsatisfactory for County of Imperial to monitor Project's progress, resources, and status or evaluate monthly payment request by Contractor.
 - (2) County of Imperial may accept schedule with conditions that the first monthly CPM Schedule update be revised to correct deficiencies identified.
 - (3) When schedule is accepted, it shall be considered the "Original CPM Schedule" which will then be immediately updated to reflect the current status of the work.
 - (4) County of Imperial reserves right to require Contractor to adjust, add to, or clarify any portion of schedule which may later be discovered to be insufficient for monitoring of Work or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions, or clarifications.

- B. Acceptance of Contractor's schedule by County of Imperial will be based solely upon schedule's compliance with Contract requirements.
 - (1) By way of Contractor assigning activity durations and proposing sequence of Work, Contractor agrees to utilize sufficient and necessary management and other resources to perform work in accordance with the schedule.
 - (2) Upon submittal of schedule update, updated schedule shall be considered "current" CPM Schedule.
 - (3) Submission of Contractor's schedule to County of Imperial shall not relieve Contractor of total responsibility for scheduling, sequencing, and pursuing Work to comply with requirements of Contract Documents, including adverse effects such as delays resulting from ill-timed Work.
- C. Submittal of Original CPM Schedule, and subsequent schedule updates, shall be understood to be Contractor's representation that the Schedule meets requirements of Contract Documents and that Work shall be executed in sequence indicated on the schedule.
- D. Contractor shall distribute Original CPM Schedule to Subcontractors for review and written acceptance, which shall be noted on Subcontractors' letterheads to Contractor and transmitted to County of Imperial for the record.

1.09 MONTHLY CPM SCHEDULE UPDATE SUBMITTALS

- A. Following acceptance of Contractor's Original CPM Schedule, Contractor shall monitor progress of Work and adjust schedule each month to reflect actual progress and any anticipated changes to planned activities.
 - (1) Each schedule update submitted shall be complete, including all information requested for the Original CPM Schedule submittal.
 - (2) Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed.
- B. A meeting will be held on approximately the twenty-fifth (25th) of each month to review the schedule update submittal and progress payment application.
 - (1) At this meeting, at a minimum, the following items will be reviewed: Percent (%) complete of each activity; Time Impact Evaluations for Change Orders and Time Extension Request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated Contractor delays.
 - (2) These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, these meetings shall be attended by Contractor's General Superintendent and Scheduler.
 - (3) Contractor shall plan on the meeting taking no less than four (4) hours.
- C. Within five (5) working days after monthly schedule update meeting, Contractor shall submit the updated CPM Schedule update.

- D. Within five (5) work days of receipt of above noted revised submittals, County of Imperial will either accept or reject monthly schedule update submittal.
 - (1) If accepted, percent (%) complete shown in monthly update will be basis for Application for Payment by the Contractor. The schedule update shall be submitted as part of the Contractor's Application for Payment.
 - (2) If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.
- E. Neither updating, changing or revising of any report, curve, schedule, or narrative submitted to County of Imperial by Contractor under this Contract, nor County of Imperial's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or modifying in any way the Completion Date or milestone dates or of modifying or limiting in any way Contractor's obligations under this Contract.

1.10 SCHEDULE REVISIONS

- A. Updating the Schedule to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, revisions to activity durations and sequences are expected on a monthly basis.
- B. To reflect revisions to the Schedule, the Contractor shall provide County of Imperial with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of work, the Contractor shall provide a schedule diagram which compares the original sequence to the revised sequence of work. The Contractor shall provide the written narrative and schedule diagram for revisions two (2) working days in advance of the monthly schedule update meeting.
- C. Schedule revisions shall not be incorporated into any schedule update until the revisions have been reviewed by County of Imperial. County of Imperial may request further information and justification for schedule revisions and Contractor shall, within three (3) days, provide County of Imperial with a complete written narrative response to County of Imperial's request.
- D. If the Contractor's revision is still not accepted by County of Imperial, and the Contractor disagrees with County of Imperial's position, the Contractor has seven (7) calendar days from receipt of County of Imperial's letter rejecting the revision to provide a written narrative providing full justification and explanation for the revision. The Contractor's failure to respond in writing within seven (7) calendar days of County of Imperial's written rejection of a schedule revision shall be contractually interpreted as acceptance of County of Imperial's position, and the Contractor waives its rights to subsequently dispute or file a claim regarding County of Imperial's position.
- E. At County of Imperial's discretion, the Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

1.11 RECOVERY SCHEDULE

- A. If the Schedule Update shows a completion date twenty-one (21) calendar days beyond the Contract Completion Date, or individual milestone completion dates, the Contractor shall submit to County of Imperial the proposed revisions to recover the lost time within seven (7) calendar days. As part of this submittal, the Contractor shall provide a written narrative for each revision

made to recapture the lost time. If the revisions include sequence changes, the Contractor shall provide a schedule diagram comparing the original sequence to the revised sequence of work.

- B. The revisions shall not be incorporated into any schedule update until the revisions have been reviewed by County of Imperial.
- C. If the Contractor's revisions are not accepted by County of Imperial, County of Imperial and the Contractor shall follow the procedures in paragraph 1.09.C, 1.09.D and 1.09.E above.
- D. At County of Imperial's discretion, the Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

1.12 TIME IMPACT EVALUATION ("TIE") FOR CHANGE ORDERS, AND OTHER DELAYS

- A. When Contractor is directed to proceed with changed Work, the Contractor shall prepare and submit within fourteen (14) calendar days from the Notice to Proceed a TIE which includes both a written narrative and a schedule diagram depicting how the changed Work affects other schedule activities. The schedule diagram shall show how the Contractor proposes to incorporate the changed Work in the schedule and how it impacts the current schedule-update critical path. The Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram must be tied to the main sequence of schedule activities to enable County of Imperial to evaluate the impact of changed Work to the scheduled critical path.
- B. Contractor shall be required to comply with the requirements of Paragraph 1.09.A for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.
- C. Contractor shall be responsible for all costs associated with the preparation of TIEs, and the process of incorporating them into the current schedule update. The Contractor shall provide County of Imperial with four (4) copies of each TIE.
- D. Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount County of Imperial allows, and the Contractor may submit a claim for additional time claimed by contractor.

1.13 TIME EXTENSIONS

- A. The Contractor is responsible for requesting time extensions for time impacts that, in the opinion of the Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accord with the General Conditions.
- B. Where an event for which County of Imperial is responsible impacts the projected Completion Date, the Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. The Contractor shall also include a detailed cost breakdown of the labor, equipment, and material the Contractor would expend to mitigate County of Imperial-caused time impact. The Contractor shall submit its mitigation plan to County of Imperial within fourteen (14) calendar days from the date of discovery of the impact. The Contractor is responsible for the cost to prepare the mitigation plan.
- C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.

- D. No time will be granted under this Contract for cumulative effect of changes.
- E. County of Imperial will not be obligated to consider any time extension request unless the Contractor complies with the requirements of Contract Documents.
- F. Failure of the Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.
- G. If the Contractor does not submit a TIE within the required fourteen (14) calendar days for any issue, it is mutually agreed that the Contractor does not require a time extension for said issue.

1.14 SCHEDULE REPORTS

- A. Submit four (4) copies of the following reports with the Initial CPM Schedule, the Original CPM Schedule, and each monthly update.
- B. Required Reports:
 - (1) Two activity listing reports: one sorted by activity number and one by total Project Float. These reports shall also include each activity's early/late and actual start and finish dates, original and remaining duration, Project Float, responsibility code, and the logic relationship of activities.
 - (2) Cost report sorted by activity number including each activity's associated cost, percentage of Work accomplished, earned value- to date, previous payments, and amount earned for current update period.
 - (3) Schedule plots presenting time-scaled network diagram showing activities and their relationships with the controlling operations or critical path clearly highlighted.
 - (4) Cash flow report calculated by early start, late start, and indicating actual progress. Provide an exhibit depicting this information in graphic form.
 - (5) Planned versus actual resource (i.e., labor) histogram calculated by early start and late start.
- C. Other Reports:

In addition to above reports, County of Imperial may request, from month to month, any two of the following reports. Submit four (4) copies of all reports.

 - (1) Activities by early start.
 - (2) Activities by late start.
 - (3) Activities grouped by Subcontractors or selected trades.
 - (4) Activities with scheduled early start dates in a given time frame, such as fifteen (15) or thirty (30) day outlook.
- D. Furnish County of Imperial with report files on compact disks containing all schedule files for each report generated.

1.15 PROJECT STATUS REPORTING

- A. In addition to submittal requirements for CPM scheduling identified in this Section, Contractor shall provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each CPM Schedule as specified herein. Status reporting shall be in form specified below.
- B. Contractor shall prepare monthly written narrative reports of status of Project for submission to County of Imperial. Written status reports shall include:
- (1) Status of major Project components (percent (%) complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.
 - (2) Progress made on critical activities indicated on CPM Schedule.
 - (3) Explanations for any lack of work on critical path activities planned to be performed during last month.
 - (4) Explanations for any schedule changes, including changes to logic or to activity durations.
 - (5) List of critical activities scheduled to be performed next month.
 - (6) Status of major material and equipment procurement.
 - (7) Any delays encountered during reporting period.
 - (8) Contractor shall provide printed report indicating actual versus planned resource loading for each trade and each activity. This report shall be provided on weekly and monthly basis.
 - (a) Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in computer-generated monthly and weekly printed reports.
 - (b) Contractor shall explain all variances and mitigation measures.
 - (9) Contractor may include any other information pertinent to status of Project. Contractor shall include additional status information requested by County of Imperial at no additional cost.
 - (10) Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.

1.16 WEEKLY SCHEDULE REPORT

At the Weekly Progress Meeting, the Contractor shall provide and present a time-scaled three (3) week look-ahead schedule that is based and correlated by activity number to the current schedule (i.e., Initial, Original CPM, or Schedule Update).

1.17 DAILY CONSTRUCTION REPORTS

On a daily basis, Contractor shall submit a daily activity report to County of Imperial for each workday, including weekends and holidays when worked. Contractor shall develop the daily construction reports on a computer-generated database capable of sorting daily Work, manpower, and man-hours by Contractor, Subcontractor, area, sub-area, and Change Order Work. Upon request of County of Imperial, furnish computer disk of this data base. Obtain County of Imperial's written approval of daily construction report data base format prior to implementation. Include in report:

- A. Project name and Project number.
- B. Contractor's name and address.
- C. Weather, temperature, and any unusual site conditions.
- D. Brief description and location of the day's scheduled activities and any special problems and accidents, including Work of Subcontractors. Descriptions shall be referenced to CPM scheduled activities.
- E. Worker quantities for its own Work force and for Subcontractors of any tier.
- F. Equipment, other than hand tools, utilized by Contractor and Subcontractors.

1.18 PERIODIC VERIFIED REPORTS

Contractor shall complete and verify construction reports on a form prescribed by the Division of the State Architect and file reports on the first day of February, May, August, and November during the preceding quarter year; at the completion of the Contract; at the completion of the Work; at the suspension of Work for a period of more than one (1) month; whenever the services of Contractor or any of Contractor's Subcontractors are terminated for any reason; and at any time a special verified report is required by the Division of the State Architect. Refer to section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

PART 2 – PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Contractor's Submittals and Schedules, Drawings and Specifications;
- B. Special Conditions.

1.02 SECTION INCLUDES:

- A. Definitions:
 - (1) Shop Drawings and Product Data are as indicated in the General Conditions and include, but are not limited to, fabrication, erection, layout and setting drawings, formwork and falsework drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams. In addition, there are other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment or systems and all positions conform to the requirement of the Contract Documents, including, without limitation, the Drawings.
 - (2) "Manufactured" applies to standard units usually mass-produced; "fabricated" means specifically assembled or made out of selected materials to meet design requirements. Shop Drawings shall establish the actual detail of manufactured or fabricated items, indicated proper relation to adjoining work and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
 - (3) Manufacturer's Instructions: Where any item of Work is required by the Contract Documents to be furnished, installed, or performed, at a minimum, in accordance with a specified product manufacturer's instructions, the Contractor shall procure and distribute copies of these to the County of Imperial, the Architect, and all other concerned parties and shall furnish, install, or perform the work, at a minimum, in accordance with those instructions.
- B. Samples, Shop Drawings, Product Data, and other items as specified, in accordance with the following requirements:
 - (1) Contractor shall submit all Shop Drawings, Product Data, and Samples to the County of Imperial, the Architect, the Project Inspector, and the Construction Manager.
 - (2) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall submit required information in sufficient time to permit proper consideration and action before ordering any materials or items represented by such Shop Drawings, Product Data, and/or Samples.

- (3) Contractor shall allow sufficient time so that no delay occurs due to required lead time in ordering or delivery of any item to the Site. Contractor shall be responsible for any delay in progress of Work due to its failure to observe these requirements.
- (4) Time for completion of Work shall not be extended on account of Contractor's failure to promptly submit Shop Drawings, Product Data, and/or Samples.
- (5) Reference numbers on Shop Drawings shall have Architectural and/or Engineering Contract Drawings reference numbers for details, sections, and "cuts" shown on Shop Drawings. These reference numbers shall be in addition to any numbering system that Contractor chooses to use or has adopted as standard.
- (6) When the magnitude or complexity of submittal material prevents a complete review within the stated time frame, Contractor shall make this submittal in increments to avoid extended delays.
- (7) Contractor shall certify on submittals for review that submittals conform to Contract requirements. Also certify that Contractor-furnished equipment can be installed in allocated space. In event of any variance, Contractor shall specifically state in transmittal and on Shop Drawings, portions vary and require approval of a substitute. Submittals shall not be used as a means of requesting a substitution.
- (8) Unless specified otherwise, sampling, preparation of samples, and tests shall be in accordance with the latest standard of the American Society for Testing and Materials.
- (9) Upon demand by Architect or County of Imperial, Contractor shall submit samples of materials and/or articles for tests or examinations and consideration before Contractor incorporates same in Work. Contractor shall be solely responsible for delays due to sample(s) not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work shall be equal to approved samples in every respect. Samples that are of value after testing will remain the property of Contractor.

C. Submittal Schedule:

- (1) Contractor shall prepare its proposed submittal schedule that is coordinated with the proposed construction schedule and submit both to the County of Imperial within ten (10) days after the date of the Notice to Proceed. Contractor's proposed schedules shall become the Project Construction Schedule and the Project Submittal Schedule after each is approved by the County of Imperial.
- (2) Contractor is responsible for all lost time should the initial submittal be rejected, marked "revise and resubmit", etc.
- (3) All Submittals shall be forwarded to the County of Imperial by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those Submittals shall be forwarded to the County of Imperial so as not to delay the Construction Schedule.
- (4) Contractor may be assessed \$100 a day for each day it is late in submitting a shop drawing or sample. No extensions of time will be granted to Trade Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule.

1.03 SHOP DRAWINGS:

- A. Contractor shall submit one reproducible transparency and six (6) opaque reproductions. The County of Imperial will review and return the reproducible copy and one (1) opaque reproduction to Contractor.
- B. Before commencing installation of any Work, the Contractor shall submit and receive approval of all drawings, descriptive data, and material list(s) as required to accomplish Work.
- C. Review of Shop Drawings is regarded as a service to assist Contractor and in all cases original Contract Documents shall take precedence as outlined under General Conditions.
- D. No claim for extra time or payment shall be based on work shown on Shop Drawings unless the claim is (1) noted on Contractor's transmittal letter accompanying Shop Drawings and (2) Contractor has complied with all applicable provisions of the General Conditions, including, without limitation, provisions regarding changes and payment, and all required written approvals.
- E. County of Imperial shall not review Shop Drawings for quantities of materials or number of items supplied.
- F. County of Imperial's and/or Architect's review of Shop Drawing will be general. County of Imperial and/or Architect review does not relieve Contractor of responsibility for dimensions, accuracy, proper fitting, construction of Work, furnishing of materials, or Work required by Contract Documents and not indicated on Shop Drawings. The County of Imperial's and/or Architect's review of Shop Drawings is not to be construed as approving departures from Contract Documents.
- G. Review of Shop Drawings and Schedules does not relieve Contractor from responsibility for any aspect of those Drawings or Schedules that is a violation of local, County of Imperial, State, or Federal laws, rules, ordinances, or rules and regulations of commissions, boards, or other authorities or utilities having jurisdiction.
- H. Before submitting Shop Drawings for review, Contractor shall check Shop Drawings of its subcontractors for accuracy, and confirm that all Work contiguous with and having bearing on other work shown on Shop Drawings is accurately drawn and in conformance with Contract Documents.
- I. Submitted drawings and details must bear stamp of approval of Contractor:
 - (1) Stamp and signature shall clearly certify that Contractor has checked Shop Drawings for compliance with Drawings.
 - (2) If Contractor submits a Shop Drawing without an executed stamp of approval, or whenever it is evident (despite stamp) that Drawings have not been checked, the County of Imperial and/or Architect will not consider them and will return them to the Contractor for revision and resubmission. In that event, it will be deemed that Contractor has not complied with this provision and Contractor shall bear risk of all delays to same extent as if it had not submitted any Shop Drawings or details.
- J. Submission of Shop Drawings (in either original submission or when resubmitted with correction) constitutes evidence that Contractor has checked all information thereon and that it accepts and is willing to perform Work as shown.
- K. Contractor shall pay for cost of any changes in construction due to improper checking and coordination. Contractor shall be responsible for all additional costs, including coordination.

Contractor shall be responsible for costs incurred by itself, the County of Imperial, the Architect, the Project Inspector, the Construction Manager, any other Subcontractor or contractor, etc., due to improperly checked and/or coordination of submittals.

L. Shop Drawings must clearly delineate the following information:

- (1) Project name and address.
- (2) Specification number and description.
- (3) Architect's name and project number.
- (4) Shop Drawing title, number, date, and scale.
- (5) Names of Contractor, Subcontractor(s) and fabricator.
- (6) Working and erection dimensions.
- (7) Arrangements and sectional views.
- (8) Necessary details, including complete information for making connections with other Work.
- (9) Kinds of materials and finishes.
- (10) Descriptive names of materials and equipment, classified item numbers, and locations at which materials or equipment are to be installed in the Work. Contractor shall use same reference identification(s) as shown on Contract Drawings.

M. Contractor shall prepare composite drawings and installation layouts when required to solve tight field conditions.

- (1) Shop Drawings shall consist of dimensioned plans and elevations and must give complete information, particularly as to size and location of sleeves, inserts, attachments, openings, conduits, ducts, boxes, structural interferences, etc.
- (2) Contractor shall coordinate these composite Shop Drawings and installation layouts in the field between itself and its Subcontractor(s) for proper relationship to the Work, the work of other trades, and the field conditions. The Contractor shall check and approve all submittal(s) before submitting them for final review.

1.04 PRODUCT DATA OR NON REPRODUCIBLE SUBMITTALS:

- A. Contractor shall submit manufacturer's printed literature in original form. Any fading type of reproduction will not be accepted. Contractor must submit a minimum of six (6) each, to the County of Imperial. County of Imperial shall return one (1) to the Contractor, who shall reproduce whatever additional copies it requires for distribution.
- B. Contractor shall submit six (6) copies of a complete list of all major items of mechanical, plumbing, and electrical equipment and materials in accordance with the approved Submittal Schedule, except as required earlier to comply with the approved Construction Schedule. Other items specified are to be submitted prior to commencing Work. Contractor shall submit items of like kind at one time in a neat and orderly manner. Partial lists will not be acceptable.

- C. Submittals shall include manufacturer's specifications, physical dimensions, and ratings of all equipment. Contractor shall furnish performance curves for all pumps and fans. Where printed literature describes items in addition to that item being submitted, submitted item shall be clearly marked on sheet and superfluous information shall be crossed out. If highlighting is used, Contractor shall mark all copies.
- D. Equipment submittals shall be complete and include space requirements, weight, electrical and mechanical requirements, performance data, and supplemental information that may be requested.
- E. Imported Materials Certification must be submitted at least ten (10) days before material is delivered.

1.05 SAMPLES:

- A. Contractor shall submit for approval Samples as required and within the time frame in the Contract Documents. Materials such as concrete, mortar, etc., which require on-site testing will be obtained from Project Site.
- B. Contractor shall submit four (4) samples except where greater or lesser number is specifically required by Contract Documents including, without limitation, the Specifications.
 - (1) Samples must be of sufficient size and quality to clearly illustrate functional characteristics, with integrally related parts and attachment devices.
 - (2) Samples must show full range of texture, color, and pattern.
- C. Contractor shall make all Submittals, unless it has authorized Subcontractor(s) to submit and Contractor has notified the County of Imperial in writing to this effect.
- D. Samples to be shipped prepaid or hand-delivered to the County of Imperial.
- E. Contractor shall mark samples to show name of Project, name of Contractor submitting, Contract number and segment of Work where representative Sample will be used, all applicable Specifications Sections and documents, Contract Drawing Number and detail, and ASTM or FS reference, if applicable.
- F. Contractor shall not deliver any material to Site prior to receipt of County of Imperial's and/or Architect's completed written review and approval. Contractor shall furnish materials equal in every respect to approved Samples and execute Work in conformance therewith.
- G. County of Imperial's and/or Architect's review, acceptance, and/or approval of Sample(s) will not preclude rejections of any material upon discovery of defects in same prior to final acceptance of completed Work.
- H. After a material has been approved, no change in brand or make will be permitted.
- I. Contractor shall prepare its Submittal Schedule and submit Samples of materials requiring laboratory tests to specified laboratory for testing not less than ninety (90) days before such materials are required to be used in Work.
- J. Samples which are rejected must be resubmitted promptly after notification of rejection and be marked "Resubmitted Sample" in addition to other information required.
- K. Field Samples and Mock-Ups are to be removed by Contractor at County of Imperial's direction:

- (1) Size: As Specified.
- (2) Furnish catalog numbers and similar data, as requested.

1.06 REVIEW AND RESUBMISSION REQUIREMENTS:

- A. The County of Imperial will arrange for review of Sample(s), Shop Drawing(s), Product Data, and other submittal(s) by appropriate reviewer and return to Contractor as provided below within twenty-one (21) days after receipt or within twenty-one (21) days after receipt of all related information necessary for such review, whichever is later.
- B. One (1) copy of product or materials data will be returned to Contractor with the review status.
- C. Samples to be incorporated into the Work will be returned to Contractor, together with a written notice designating the Sample with the appropriate review status and indicating errors discovered on review, if any. Other Samples will not be returned, but the same notice will be given with respect thereto, and that notice shall be considered a return of the Sample.
- D. Contractor shall revise and resubmit any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) as required by the reviewer. Such resubmittals will be reviewed and returned in the same manner as original Sample(s), Shop Drawing(s), Product Data, and other submittal(s), within fourteen (14) days after receipt thereof or within fourteen (14) days after receipt of all related information necessary for such review. Such resubmittal shall not delay the Work.
- E. Contractor may proceed with any of the Work covered by Sample(s), Shop Drawing(s), Product Data, and other submittal(s) upon its return if designated as no exception taken, or revise as noted, provided the Contractor proceeds in accordance with the County of Imperial and/or the Architect's notes and comments.
- F. Contractor shall not begin any of the work covered by a Sample(s), Shop Drawing(s), Product Data, and other submittal(s), designated as revise and resubmit or rejected, until a revision or correction thereof has been reviewed and returned to Contractor.
- G. Sample(s), Shop Drawing(s), Product Data, and other submittal(s) designated as revise and resubmit or rejected and requiring resubmittal, shall be revised or corrected and resubmitted to the County of Imperial no later than fourteen (14) days or a shorter period as required to comply with the approved Construction Schedule, after its return to Contractor.
- H. Neither the review nor the lack of review of any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) shall waive any of the requirements of the Contract Documents, or relieve Contractor of any obligation thereunder.
- I. County of Imperial's and/or Architect's review of Shop Drawings does not relieve the Contractor of responsibility for any errors that may exist. Contractor is responsible for the dimensions and design of adequate connections and details and for satisfactory construction of all the Work.

PART 2 – PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including, without limitation:

- A. General Conditions, including, without limitation, Obtaining of Permits, Licenses and Registrations and Work to Comply with All Applicable Laws and Regulations;
- B. Special Conditions; and
- C. Quality Control.

1.02 DESCRIPTION:

This section covers the general requirements for regulatory requirements pertaining to the Work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the Contract Documents.

1.03 REQUIREMENTS OF REGULATORY AGENCIES:

- A. All statutes, ordinances, laws, rules, codes, regulations, standards, and the lawful orders of all public authorities having jurisdiction over the Work, are hereby incorporated into these Contract Documents as if repeated in full herein and are intended to be included in any reference to Code or Building Code, unless otherwise specified, including, without limitation, the references in the list below. Contractor shall make available at the Site copies of all the listed documents applicable to the Work as the County of Imperial and/or Architect may request, including, without limitation, applicable portions of the California Code of Regulations ("CCR").
 - (1) California Building Standards Administrative Code, Part 1, Title 24, CCR.
 - (2) California Building Code (CBC), Part 2, Title 24, CCR; (International Building Code volumes 1-2 and California Amendments).
 - (3) California Electrical Code (CEC), Part 3, Title 24, CCR; (National Electrical Code and California Amendments).
 - (4) California Mechanical Code (CMC), Part 4, Title 24, CCR; (Uniform Mechanical Code and California Amendments).
 - (5) California Plumbing Code (CPC), Part 5, Title 24, CCR; (Uniform Plumbing Code and California Amendments).
 - (6) California Fire Code (CFC), Part 9, Title 24, CCR; (International Fire Code and California Amendments).

- (7) California Green Building Standards Code (CALGreen), Part 11, Title 24, CCR.
- (8) California Referenced Standards Code, Part 12, Title 24, CCR.
- (9) State Fire Marshal Regulations, Public Safety, Title 19, CCR.
- (10) Partial List of Applicable National Fire Protection Association (NFPA) Standards:
 - (a) NFPA 13 - Automatic Sprinkler System.
 - (b) NFPA 14 - Standpipe Systems.
 - (c) NFPA 17A - Wet Chemical System
 - (d) NFPA 24 - Private Fire Mains.
 - (e) (California Amended) NFPA 72 - National Fire Alarm Codes.
 - (f) NFPA 253 - Critical Radiant Flux of Floor Covering System.
 - (g) NFPA 2001 - Clean Agent Fire Extinguishing Systems.

B. This Project shall be governed by applicable regulations, including, without limitation, the State of California's Administrative Regulations, and the most current version on the date the bids are opened, and as it pertains to school construction, including, without limitation:

- (1) Test and testing laboratory per Section 4-335. The County of Imperial shall pay for the testing laboratory.
- (2) Special inspections per Section 4-333(c).

- (3) Deferred Approvals per section 4-317(g).
- (4) Verified reports per Sections 4-336 & 4-343(c).
- (5) Duties of the Architect & Engineers shall be per Sections 4-333(a) and 4-341.
- (6) Duties of the Contractor shall be per Section 4-343.
- (7) Duties of Project Inspector shall be per Section 4-334.
- (8) Addenda and Construction Change Documents per Section 4-338.

Contractor shall keep and make available all applicable parts of the most current version of Title 24 referred to in the plans and specifications at the Site during construction.

C. Items of deferred approval shall be clearly marked on the first sheet of the Architect's and/or Engineer's approved Drawings. All items later submitted for approval shall be per Title 24 requirements.

- (1) Contractor shall submit the following to the Architect for review and endorsement:
 - (a) Product information on proposed material/system supplier.
 - (b) Drawings, specifications, and calculations prepared, signed, and stamped by an architect or Engineer licensed in the State of California for that portion of the Work.
- (2) Contractor shall not begin fabrication and installation of deferred approval items without first obtaining approval of Drawings and Specifications.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions;
- C. Site Standards; and
- D. Construction Waste Management and Disposal.

1.02 TEMPORARY UTILITIES:

- A. Electric Power and Lighting:
 - (1) Contractor will pay for power during the course of the Work. To the extent power is available in the building(s) or on the Site, Contractor may use the County of Imperial's existing utilities by making prearranged payments to the County of Imperial for the utilities used by Contractor and all Subcontractors. Contractor shall be responsible for providing temporary facilities required to deliver that power service from its existing location in the building(s) or on the Site to point of intended use.
 - (2) Contractor shall verify characteristics of power available in building(s) or on the Site. Contractor shall take all actions required to make modifications where power of higher voltage or different phases of current are required. Contractor shall be fully responsible for providing that service and shall pay all costs required therefor.
 - (3) Contractor shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.
 - (4) Contractor shall be responsible for maintaining existing lighting levels in the project vicinity should temporary outages or service interruptions occur.
- B. Heat and Ventilation:
 - (1) Contractor shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to protect materials and finishes from damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.

- (2) Contractor shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, and gases.
- (3) Contractor shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

C. Water:

- (1) Contractor shall pay for water used during the course of the Work. Contractor shall coordinate and pay for installation or use of water meter in compliance with local water agency requirements. To the extent water is then available in the building(s) or on the Site, Contractor may use the County of Imperial's existing utilities by making prearranged payments to the County of Imperial for the utilities used by Contractor and all Subcontractors. Contractor shall be responsible for providing temporary facilities required to deliver such utility service from its existing location in the building(s), on the Site, or other location approved by the local water agency, to point of intended use.
- (2) Contractor shall use backflow preventers on water lines at point of connection to County of Imperial's water supply. Backflow preventers shall comply with requirements of Uniform Plumbing Code.
- (3) Contractor shall make potable water available for human consumption.

D. Sanitary Facilities:

- (1) Contractor shall provide sanitary temporary facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the Inspector or Contractor completes all other work at the Site.
- (2) Use of toilet facilities in the Work under construction shall not be permitted except by consent of the Inspector and the County of Imperial.

E. Telephone Service:

- (1) Contractor shall arrange with local telephone service company for telephone service as required for the performance of the Work. Contractor shall, at a minimum, provide in its field office one line for telephone and one line for fax machine.
- (2) Contractor shall pay the costs for telephone and fax lines installation, maintenance, service, and removal.

F. Fire Protection:

- (1) Contractor shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire Marshall and/or its designee.
- (2) Where on-site welding and burning of steel is unavoidable, Contractor shall provide protection for adjacent surfaces.

G. Trash Removal:

- (1) Contractor shall provide trash removal on a timely basis. Under no circumstance shall Contractor use County of Imperial trash service.

H. Field Office:

- (1) If Contractor chooses to provide a field office, it shall be an acceptable construction trailer that is well-lit and ventilated. The construction trailer shall be equipped with shelves, desks, filing cabinet, chairs, and such other items of equipment needed. Trailer and equipment are the property of the Contractor and must be removed from the Site upon completion of the Work. Contractor may use the corridor adjacent to the construction area for an office area, if approved in writing by County of Imperial.
- (2) Contractor shall provide any additional electric lighting and power required for the trailer. Contractor shall make adequate provisions for heating and cooling as required.

I. Temporary Facilities:

- (1)

1.03 CONSTRUCTION AIDS:

A. Plant and Equipment:

- (1) Contractor shall furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting materials and equipment; and for conveyances for transporting workers. Include elevators, hoists, debris chutes, and other equipment, tools, and appliances necessary for performance of the Work.
- (2) Contractor shall maintain plant and equipment in safe and efficient operating condition. Damages due to defective plant and equipment, and uses made thereof, shall be repaired by Contractor at no expense to the County of Imperial.

B. None of the County of Imperial's tools and equipment shall be used by Contractor for the performance of the Work.

1.04 BARRIERS AND ENCLOSURES:

A. Contractor shall obtain the County of Imperial's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.

- B. Contractor shall provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises, the public, and workers. Contractor shall also protect the Work and existing facilities from the elements, and adjacent construction and improvements, persons, and trees and plants from damage and injury from demolition and construction operations.
- C. Contractor shall provide site access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services and activities.
- D. Tree and Plant Protection:
- (1) Contractor shall preserve and protect existing trees and plants on the Premises that are not designated or required to be removed, and those adjacent to the Premises.
 - (2) Contractor shall provide barriers to a minimum height of 4'-0" around drip line of each tree and plant, around each group of trees and plants, as applicable, in the proximity of demolition and construction operations, or as denoted on the Plans.
 - (3) Contractor shall not park trucks, store materials, perform Work or cross over landscaped areas. Contractor shall not dispose of paint thinners, water from cleaning, plastering or concrete operations, or other deleterious materials in landscaped areas, storm drain systems, or sewers. Plant materials damaged as a result of the performance of the Work shall, at the option of the County of Imperial and at Contractor's expense, either be replaced with new plant materials equal in size to those damaged or by payment of an amount representing the value of the damaged materials as determined by the County of Imperial.
 - (4) Contractor shall remove soil that has been contaminated during the performance of the Work by oil, solvents, and other materials which could be harmful to trees and plants, and replace with good soil, at Contractor's expense.
 - (5) Excavation around Trees:
 - (a) Excavation within drip lines of trees shall be done only where absolutely necessary and with written permission from the County of Imperial.
 - (b) Where trenching for utilities is required within drip lines, tunneling under and around roots shall be by hand digging and shall be approved by the County of Imperial. Main lateral roots and taproots shall not be cut. All roots 2 inches in diameter and larger shall be tunneled under and heavily wrapped with wet burlap so as to prevent scarring or excessive drying. Smaller roots that interfere with installation of new work may be cut with prior approval by the County of Imperial. Roots must first be cut with a Vermeer, or equivalent, root cutter prior to any trenching.
 - (c) Where excavation for new construction is required within drip line of trees, hand excavation shall be employed to minimize damage to root system. Roots shall be relocated in backfill areas wherever possible. If encountered immediately adjacent to location of new construction, roots shall be cut approximately 6 inches back from new construction.
 - (d) Approved excavations shall be carefully backfilled with the excavated materials approved for backfilling. Backfill shall conform to adjacent grades without

dips, sunken areas, humps, or other surface irregularities. Do not use mechanical equipment to compact backfill. Tamp carefully using hand tools, refilling and tamping until Final Acceptance as necessary to offset settlement.

- (e) Exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be wrapped with four layers of wet, untreated burlap and temporarily supported and protected from damage until permanently relocated and covered with backfill.
- (f) Accidentally broken roots should be sawed cleanly 3 inches behind ragged end.

1.05 SECURITY:

The Contractor shall be responsible for project security for materials, tools, equipment, supplies, and completed and partially completed Work.

1.06 TEMPORARY CONTROLS:

A. Noise Control:

- (1) Contractor acknowledges that adjacent facilities may remain in operation during all or a portion of the Work period, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.
- (2) Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to the County of Imperial a minimum of forty-eight (48) hours in advance of their performance.

B. Noise and Vibration:

- (1) Equipment and impact tools shall have intake and exhaust mufflers.
- (2) Contractor shall cooperate with County of Imperial to minimize and/or cease the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.

C. Dust and Dirt:

- (1) Contractor shall conduct demolition and construction operations to minimize the generation of dust and dirt, and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas including, without limitation, occupied facilities.
- (2) Contractor shall periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.
- (3) Contractor shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.
- (4) Contractor shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

D. Water:

- (1) Contractor shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, Contractor shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

E. Pollution:

- (1) No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.
- (2) Contractor shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

F. Lighting:

- (1) If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

1.07 JOB SIGN(S):

A. General:

- (1) Contractor shall provide and maintain a Project identification sign with the design, text, and colors designated by the County of Imperial and/or the Design Professional; locate sign as approved by the County of Imperial.
- (2) Signs other than the specified Project sign and or signs required by law, for safety, or for egress, shall not be permitted, unless otherwise approved in advance by the County of Imperial.

B. Materials:

- (1) Structure and Framing: Structurally sound, new or used wood or metal; wood shall be nominal 3/4-inch exterior grade plywood.
- (2) Sign Surface: Minimum 3/4-inch exterior grade plywood.
- (3) Rough Hardware: Galvanized.
- (4) Paint: Exterior quality, of type and colors selected by the County of Imperial and/or the Design Professional.

C. Fabrication:

- (1) Contractor shall fabricate to provide smooth, even surface for painting.
- (2) Size: 4'-0" x 8'-0", unless otherwise indicated.
- (3) Contractor shall paint exposed surfaces of supports, framing, and surface material with exterior grade paint: one coat of primer and one coat of finish paint.
- (4) Text and Graphics: As indicated.

1.08 PUBLICITY RELEASES:

- A. Contractor shall not release any information, story, photograph, plan, or drawing relating information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s) without the written permission of the County of Imperial.

PART 2 – PRODUCTS Not used.

PART 3 – EXECUTION Not used.

END OF DOCUMENT

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions; and
- C. Temporary Facilities and Controls.

1.02 SECTION INCLUDES:

- A. Administrative and procedural requirements for the following:
 - (1) Salvaging non-hazardous construction waste.
 - (2) Recycling non-hazardous construction waste.
 - (3) Disposing of non-hazardous construction waste.

1.03 DEFINITIONS:

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 PERFORMANCE REQUIREMENTS:

- A. General: Develop waste management plan that results in end-of Project rates for salvage/recycling of sixty-five percent (65%) by weight (or by volume, but not a combination) of total waste generated by the Work.

1.05 SUBMITTALS:

- A. Waste Management Plan: Submit waste management plan within 30 days of date established for commencement of the Work.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit copies of report. Include the following information:
 - (1) Material category.
 - (2) Generation point of waste.
 - (3) Total quantity of waste in tons or cubic yards.
 - (4) Quantity of waste salvaged, both estimated and actual in tons or cubic yards.
 - (5) Quantity of waste recycled, both estimated and actual in tons or cubic yards.
 - (6) Total quantity of waste recovered (salvaged plus recycled) in tons or cubic yards.
 - (7) Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for final payment, submit copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Qualification Data: For Waste Management Coordinator.
- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

J. Submittal procedures and quantities are specified in Document 01 33 00.

1.06 QUALITY ASSURANCE:

- A. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements. Review methods and procedures related to waste management including, but not limited to, the following:
 - (1) Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - (2) Review requirements for documenting quantities of each type of waste and its disposition.
 - (3) Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - (4) Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - (5) Review waste management requirements for each trade.

1.07 WASTE MANAGEMENT PLAN:

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measurement throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - (1) Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 - (2) Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - (3) Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - (4) Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

- (5) Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
- (6) Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION:

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - (1) Comply with Document 01 50 00 for operation, termination, and removal requirements.
- B. [Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.]
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - (1) Distribute waste management plan to everyone concerned within 3 days of submittal return.
 - (2) Distribute waste management plan to entities when they first begin work on site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - (1) Designate and label specific areas of Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - (2) Comply with Document 01 50 00 for controlling dust and dirt, environmental protection, and noise control.

3.02 RECYCLING CONSTRUCTION WASTE:

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to the Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.

- (1) Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project Site. Include list of acceptable and unacceptable materials at each container and bin.
 - (a) Inspect containers and bins for contamination and remove contaminated materials if found.
- (2) Stockpile processed materials on site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
- (3) Stockpile materials away from construction area. Do not store within drip line of remaining trees.
- (4) Store components off the ground and protect from the weather.
- (5) Remove recyclable waste off County of Imperial property and transport to recycling receiver or processor.

D. Packaging:

- (1) Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
- (2) Polystyrene Packaging: Separate and bag material.
- (3) Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site. For pallets that remain on Site, break down pallets into component wood pieces and comply with requirements for recycling wood.
- (4) Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

E. Site-Clearing Wastes: Chip brush, branches, and trees on site.

F. Wood Materials:

- (1) Clean Cut-Offs of Lumber: Grind or chip into small pieces.
- (2) Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.

- (1) Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.03 DISPOSAL OF WASTE:

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

- (1) Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on site.

- (2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off County of Imperial property and legally dispose of them.

END OF DOCUMENT

OWNER-FURNISHED PRODUCTS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions; and
- C. Materials and Equipment.

1.02 SECTION INCLUDES

- A. Requirements for the following:
 - (1) Installing Owner-furnished materials and equipment.
 - (2) Providing necessary utilities, connections and rough-ins.

1.03 DEFINITIONS

- A. Owner: County of Imperial, who is providing/furnishing materials and equipment.
- B. Installing Contactor: Contractor, who is installing the materials and equipment furnished by the Owner.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Receive, store and handle products in accordance with the manufacturer's instructions.
- B. Protect equipment items as required to prevent damage during storage and construction.

PART 2 – PRODUCTS

2.01 GENERAL PRODUCT REQUIREMENTS

- A. Installing Contractor's Responsibilities:
 - (1) Verify mounting and utility requirements for Owner-furnished materials and equipment items.
 - (2) Provide mounting and utility rough in for all items where required.
 - (a) Rough in locations, sizes, capacities, and similar type items shall be as indicated and required by product manufacturer.

B. Owner and Installing Contractor(s) Responsibilities:

- (1) Owner-Furnished/Contractor Installed (“OFCI”): Furnished by the Owner; installed by the Installing Contractor.
 - (a) General: Owner and Installing Contractor(s) will coordinate deliveries of materials and equipment to coincide with the construction schedule.
 - (b) Owner will furnish specified materials and equipment delivered to the site. Owner/vendor’s representative shall be present on Site at the time of delivery to comply with the contract requirements and Specifications Section 01 43 00, Materials and Equipment, Article 1.04.
 - (c) The Owner furnishing specified materials and equipment is responsible to provide manufacturer guarantees as required by the Contract to the Installing Contractor.
 - (d) The Installing Contractor shall:
 - 1) Review, verify and accept the approved manufacturer’s submittal/Shop Drawings for all materials and equipment required to be installed by the Installer Contractor and furnished by the Owner. Any discrepancies, including but not limited to possible space conflicts, should be brought to the attention of the Project Manager and/or Program Manager, if applicable.
 - 2) Coordinate timely delivery. Installing Contractor shall receive materials and equipment at Site when delivered and give written receipt at time of delivery, noting visible defects or omissions; if such declaration is not given, the Installing Contractor shall assume responsibility for such defects and omissions.
 - 3) Store materials and equipment until ready for installation and protect from loss and damage. Installing Contractor is responsible for providing adequate storage space.
 - 4) Coordinate with other bid package contractors and field measurement to ensure complete installation.
 - 5) Uncrate, assemble, and set in place.
 - 6) Provide adequate supports.
 - 7) Install materials and equipment in accordance with manufacturer’s recommendations, instructions, and Shop Drawings, supply labor and material required, and make mechanical, plumbing, and electrical connections required to operate equipment.
 - 8) Be certified by equipment manufacturer for installation of the specific equipment supplied by the Owner.
 - 9) Provide anchorage and/or bracing as required for seismic restraint per Title 24, UBC Standard 27-11 and all other applicable codes.

- 10) Provide the contract-required warranty and guarantee for all work, materials and equipment, and installation upon its completion and acceptance by the County of Imperial. Guarantee includes all costs associated with the removal, shipping to and from the Site, and re-installation of any equipment found to be defective.

C. Compatibility with Space and Service Requirements:

- (1) Equipment items shall be compatible with space limitations indicated and as shown on the Contract Documents and specified in other sections of the Specifications.
- (2) Modifications to equipment items required to conform to space limitations specified for rough in shall not cause additional cost to the County of Imperial.

D. Manufacturer's printed descriptions, specifications, and instructions shall govern the Work unless specifically indicated or specified otherwise.

2.02 FURNISHED MATERIALS AND EQUIPMENT

- A. All furnished materials and equipment are indicated or scheduled on the Contract Documents.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Install equipment items in accordance with the manufacturer's instructions.
- B. Set equipment items securely in place, rigidly or flexibly mounted in accordance with manufacturers' directions.
- C. Make electrical and mechanical connections as indicated and required.
- D. Touch-up and restore damaged or defaced finishes to the Owner's satisfaction.

3.02 CLEANING AND PROTECTION

- A. Repair or replace items not acceptable to the Architect or Owner.
- B. Upon completion of installation, clean equipment items in accordance with manufacturer's recommendations, and protect from damage until final acceptance of the Work by the Owner.

END OF DOCUMENT

SECTION 01 66 00

PRODUCT DELIVERY, STORAGE AND HANDLING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Site Access, Conditions and Requirements;
- B. Special Conditions.

1.02 PRODUCTS

- A. Products are as defined in the General Conditions.
- B. Contractor shall not use and/or reuse materials and/or equipment removed from existing Premises, except as specifically permitted by the Contract Documents.
- C. Contractor shall provide interchangeable components of the same manufacturer, for similar components.

1.03 TRANSPORTATION AND HANDLING

- A. Contractor shall transport and handle Products in accordance with manufacturer's instructions.
- B. Contractor shall promptly inspect shipments to confirm that Products comply with requirements, quantities are correct, and products are undamaged.
- C. Contractor shall provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.04 STORAGE AND PROTECTION

- A. Contractor shall store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Contractor shall store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated Products, Contractor shall place on sloped supports, above ground.
- C. Contractor shall provide off-site storage and protection when Site does not permit on-site storage or protection.
- D. Contractor shall cover products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.
- E. Contractor shall store loose granular materials on solid flat surfaces in a well-drained area and prevent mixing with foreign matter.

- F. Contractor shall provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- G. Contractor shall arrange storage of Products to permit access for inspection and periodically inspect to assure Products are undamaged and are maintained under specified conditions.

PART 2 – PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

CUTTING AND PATCHING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Inspector, Inspections, and Tests, Integration of Work, Nonconforming Work, and Correction of Work, and Uncovering Work;
- B. Special Conditions;
- C. Hazardous Materials Procedures and Requirements;
- D. Hazardous Materials Certification;
- E. Lead-Based Paint Certification;
- F. Imported Materials Certification.

1.02 CUTTING AND PATCHING:

- A. Contractor shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:
 - (1) Make several parts fit together properly.
 - (2) Uncover portions of Work to provide for installation of ill-timed Work.
 - (3) Remove and replace defective Work.
 - (4) Remove and replace Work not conforming to requirements of Contract Documents.
 - (5) Remove Samples of installed Work as specified for testing.
 - (6) Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
 - (7) Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.
- B. In addition to Contract requirements, upon written instructions from the County of Imperial, Contractor shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents; remove samples of installed materials for testing as directed by County of Imperial; and remove Work to provide for alteration of existing Work.

- C. Contractor shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

1.03 SUBMITTALS:

- A. Prior to any cutting or alterations that may affect the structural safety of Project, or work of others, and well in advance of executing such cutting or alterations, Contractor shall submit written notice to County of Imperial pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration, including the following:

- (1) The work of the County of Imperial or other trades.
- (2) Structural value or integrity of any element of Project.
- (3) Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
- (4) Efficiency, operational life, maintenance or safety of operational elements.
- (5) Visual qualities of sight-exposed elements.

- B. Contractor's Request shall also include:

- (1) Identification of Project.
- (2) Description of affected Work.
- (3) Necessity for cutting, alteration, or excavations.
- (4) Effects of Work on County of Imperial, other trades, or structural or weatherproof integrity of Project.
- (5) Description of proposed Work:
 - (a) Scope of cutting, patching, alteration, or excavation.
 - (b) Trades that will execute Work.
 - (c) Products proposed to be used.
 - (d) Extent of refinishing to be done.
- (6) Alternates to cutting and patching.
- (7) Cost proposal, when applicable.
- (8) The scheduled date the Contractor intends to perform the Work and the duration of time to complete the Work.
- (9) Written permission of County of Imperial or other County of Imperial contractor(s) whose work will be affected.

1.04 QUALITY ASSURANCE:

- A. Contractor shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.
- B. Contractor shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the County of Imperial's decision shall be final.

1.05 PAYMENT FOR COSTS:

- A. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the County of Imperial, its consultants, including but not limited to the Construction Manager, the Architect, the Project Inspector(s), Engineers, and Agents, will be paid by Contractor and/or deducted from the Contract by the County of Imperial.
- B. County of Imperial shall only pay for cost of Work if it is part of the original Contract Price or if a change has been made to the contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the County of Imperial, other than defective or nonconforming Work, will be paid by County of Imperial on approval of written Change Order. Contractor shall provide written cost proposals prior to proceeding with cutting and patching.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Contractor shall provide for replacement and restoration of Work removed. Contractor shall comply with the Contract Documents and with the Industry Standard(s), for the type of Work, and the Specification requirements for each specific product involved. If not specified, Contractor shall first recommend a product of a manufacturer or appropriate trade association for approval by the County of Imperial.
- B. Materials to be cut and patched include those damaged by the performance of the Work.

PART 3 – EXECUTION

3.01 INSPECTION:

- A. Contractor shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, Contractor shall inspect conditions affecting installation of new products.
- B. Contractor shall report unsatisfactory or questionable conditions in writing to County of Imperial as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by County of Imperial.

3.02 PREPARATION:

- A. Contractor shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.

- B. Contractor shall provide devices and methods to protect other portions of Project from damage.
- C. Contractor shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. Contractor shall keep excavations free from water.

3.03 ERECTION, INSTALLATION AND APPLICATION:

- A. With respect to performance, Contractor shall:
 - (1) Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
 - (2) Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.
 - (3) Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.
- B. Contractor shall employ original installer or fabricator to perform cutting and patching for:
 - (1) Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.
 - (2) Sight-exposed finished surfaces.
- C. Contractor shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.
- D. Contractor shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Contractor shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Contractor shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.
- E. Contractor shall restore Work which has been cut or removed. Contractor shall install new products to provide completed Work in accordance with requirements of the Contract Documents and as required to match surrounding areas and surfaces.
- F. Contractor shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT

ALTERATION PROJECT PROCEDURES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Integration of Work, Purchase of Materials and Equipment, Uncovering of Work and Non-conforming Work and Correction of Work and Trenches;
- B. Special Conditions.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK:

- A. New Materials: As specified in the Contract Documents including, without limitation, in the Specifications, Contractor shall match existing products, conditions, and work for patching and extending work.
- B. Type and Quality of Existing Products: Contractor shall determine by inspection, by testing products where necessary, by referring to existing conditions and to the Work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Contractor shall verify that demolition is complete and that areas are ready for installation of new Work.
- B. By beginning restoration Work, Contractor acknowledges and accepts the existing conditions.

3.02 PREPARATION:

- A. Contractor shall cut, move, or remove items as necessary for access to alterations and renovation Work. Contractor shall replace and restore these at completion.
- B. Contractor shall remove unsuitable material not as salvage unless otherwise indicated in the Contract Documents. Unsuitable material may include, without limitation, rotted wood, corroded metals, and deteriorated masonry and concrete. Contractor shall replace materials as specified for finished Work.
- C. Contractor shall remove debris and abandoned items from all areas of the Site and from concealed spaces.
- D. Contractor shall prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.

- E. Contractor shall close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity. Contractor shall insulate ductwork and piping to prevent condensation in exposed areas. Contractor shall insulate building cavities for thermal and/or acoustical protection, as detailed.

3.03 INSTALLATION:

- A. Contractor shall coordinate Work of all alternations and renovations to expedite completion and to accommodate County of Imperial occupancy.
- B. Designated Areas and Finishes: Contractor shall complete all installations in all respects, including operational, mechanical work and electrical work.
- C. Contractor shall remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- D. Contractor shall refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat and square or straight transition to adjacent finishes.
- E. Contractor shall install products as specified in the Contract Documents, including without limitation, the Specifications.

3.04 TRANSITIONS:

- A. Where new Work abuts or aligns with existing, Contractor shall perform a smooth and even transition. Patched Work must match existing adjacent work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, Contractor shall terminate existing surface along a straight line at a natural line of division and make a recommendation for resolution to the County of Imperial and the Architect for review and approval.

3.05 ADJUSTMENTS:

- A. Where removal of partitions or walls results in adjacent spaces becoming one, Contractor shall rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of 1/4 inch or more occurs, Contractor shall submit a recommendation for providing a smooth transition to the County of Imperial and the Architect for review and approval.
- C. Contractor shall trim and seal existing wood doors and shall trim and paint metal doors as necessary to clear new floor finish and refinish trim as required.
- D. Contractor shall fit Work at penetrations of surfaces.

3.06 REPAIR OF DAMAGED SURFACES:

- A. Contractor shall patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections, in the area where the Work is performed.
- B. Contractor shall repair substrate prior to patching finish.

3.07 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS:

- A. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored by Contractor to their original condition or better, where indicated.
- B. Contractor shall protect and replace, if damaged, all existing guard posts, barricades, and fences.
- C. Contractor shall give special attention to avoid damaging or killing trees, bushes and/or shrubs on the Premises and/or identified in the Contract Documents, including without limitation, the Drawings.

3.08 FINISHES:

- A. Contractor shall finish surfaces as specified in the Contract Documents, including without limitations, the provisions of all Divisions of the Specifications.
- B. Contractor shall finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, Contractor shall refinish entire surface to nearest intersections.

3.09 CLEANING:

- A. Contractor shall continually clean the Site and the Premises as indicated in the Contract Documents, including without limitation, the provisions in the General Conditions and the Specifications regarding cleaning.

END OF DOCUMENT

CONTRACT CLOSEOUT AND FINAL CLEANING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Completion of Work;
- B. Special Conditions;
- C. Temporary Facilities and Controls.

1.02 CLOSEOUT PROCEDURES

Contractor shall comply with all closeout provisions as indicated in the General Conditions.

1.03 FINAL CLEANING

- A. Contractor shall execute final cleaning prior to final inspection.
- B. Contractor shall clean interior and exterior glass and all surfaces exposed to view; remove temporary labels, tape, stains, and foreign substances, polish transparent and glossy surfaces, wax and polish new vinyl floor surfaces, vacuum carpeted and soft surfaces.
- C. Contractor shall clean equipment and fixtures to a sanitary condition.
- D. Contractor shall replace filters of operating equipment.
- E. Contractor shall clean debris from roofs, gutters, down spouts, and drainage systems.
- F. Contractor shall clean Site, sweep paved areas, and rake clean landscaped surfaces.
- G. Contractor shall remove waste and surplus materials, rubbish, and construction facilities from the Site and surrounding areas.

1.04 ADJUSTING

Contractor shall adjust operating products and equipment to ensure smooth and unhindered operation.

1.05 RECORD DOCUMENTS AND SHOP DRAWINGS

- A. Contractor shall legibly mark each item to record actual construction, including:
 - (1) Measured depths of foundation in relation to finish floor datum.

- (2) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permit surface improvements.
 - (3) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - (4) Field changes of dimension and detail.
 - (5) Details not on original Contract Drawings
 - (6) Changes made by modification(s).
 - (7) References to related Shop Drawings and modifications.
- B. Contractor will provide one set of Record Drawings to County of Imperial.
 - C. Contractor shall submit all required documents to County of Imperial and/or Architect prior to or with its final Application for Payment.

1.06 INSTRUCTION OF COUNTY OF IMPERIAL PERSONNEL

- A. Before final inspection, at agreed upon times, Contractor shall instruct County of Imperial's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. For equipment requiring seasonal operation, Contractor shall perform instructions for other seasons within six months or by the change of season.
- C. Contractor shall use operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- D. Contractor shall prepare and insert additional data in Operation and Maintenance Manual when the need for such data becomes apparent during instruction.
- E. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Contractor shall provide products, spare parts, maintenance, and extra materials in quantities specified in the Specifications and in Manufacturer's recommendations.
- B. Contractor shall provide County of Imperial with all required Operation and Maintenance Data at one time. Partial or piecemeal submissions of Operation and Maintenance Data will not be accepted.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

OPERATION AND MAINTENANCE DATA

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Completion of the Work;
- B. Special Conditions.

1.02 QUALITY ASSURANCE:

Contractor shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.03 FORMAT:

- A. Contractor shall prepare data in the form of an instructional manual entitled "OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS" ("Manual").
- B. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size. When multiple binders are used, Contractor shall correlate data into related consistent groupings.
- C. Cover: Contractor shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.
- D. Contractor shall arrange content by systems process flow under section numbers and sequence of Table of Contents of the Contract Documents.
- E. Contractor shall provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: The content shall include Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Contractor shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

1.04 CONTENTS, EACH VOLUME:

- A. Table of Contents: Contractor shall provide title of Project; names, addresses, and telephone numbers of the Architect, any engineers, subconsultants, Subcontractor(s), and Contractor with name of responsible parties; and schedule of products and systems, indexed to content of the volume.

- B. For Each Product or System: Contractor shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Contractor shall mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Contractor shall supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Contractor shall not use Project Record Documents as maintenance drawings.
- E. Text: Contractor shall include any and all information as required to supplement product data. Contractor shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- F. Warranties and Bonds: Contractor shall bind in one copy of each.

1.05 MANUAL FOR MATERIALS AND FINISHES:

- A. Building Products, Applied Materials, and Finishes: Contractor shall include product data, with catalog number, size, composition, and color and texture designations. Contractor shall provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Contractor shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products: Contractor shall include product data listing applicable reference standards, chemical composition, and details of installation. Contractor shall provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements: Contractor shall include all additional requirements as specified in the Specifications.
- E. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.06 MANUAL FOR EQUIPMENT AND SYSTEMS:

- A. Each Item of Equipment and Each System: Contractor shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. Contractor shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.
- B. Panelboard Circuit Directories: Contractor shall provide electrical service characteristics, controls, and communications.
- C. Contractor shall include color coded wiring diagrams as installed.
- D. Operating Procedures: Contractor shall include start-up, break-in, and routine normal operating instructions and sequences. Contractor shall include regulation, control, stopping, shut-down, and emergency instructions. Contractor shall include summer, winter, and any special operating instructions.

- E. Maintenance Requirements: Contractor shall include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Contractor shall provide servicing and lubrication schedule, and list of lubricants required.
- G. Contractor shall include manufacturer's printed operation and maintenance instructions.
- H. Contractor shall include sequence of operation by controls manufacturer.
- I. Contractor shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Contractor shall provide control diagrams by controls manufacturer as installed.
- K. Contractor shall provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Contractor shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Contractor shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Additional Requirements: Contractor shall include all additional requirements as specified in Specification(s).
- O. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.07 SUBMITTAL:

- A. Contractor shall submit to the County of Imperial for review two (2) copies of preliminary draft or proposed formats and outlines of the contents of the Manual within thirty (30) days of Contractor's start of Work.
- B. For equipment, or component parts of equipment put into service during construction and to be operated by County of Imperial, Contractor shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.
- C. Contractor shall submit two (2) copies of a complete Manual in final form prior to final Application for Payment. Copy will be returned with Architect/Engineer comments. Contractor must revise the content of the Manual as required by County of Imperial prior to County of Imperial's approval of Contractor's final Application for Payment.
- D. Contractor must submit two (2) copies of revised Manual in final form within ten (10) days after final inspection.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

ABBREVIATIONS AND ACRONYMS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions including without limitation, Definitions;
- B. Special Conditions.

1.02 DOCUMENT INCLUDES:

- A. Abbreviations used throughout the Contract Documents.
- B. Reference to a technical society, organization, or body is by abbreviation, as follows:

1.	AA	The Aluminum Association
2.	AASHTO	American Association of State Highway and Transportation Officials
3.	ABPA	Acoustical and Board Products Association
4.	ACI	American Concrete Institute
5.	AGA	American Gas Association
6.	AGC	Associated General Contractors of America
7.	AHC	Architectural Hardware Consultant
8.	AHRI	Air Conditioning, Heating, Refrigeration Institute
9.	AI	Asphalt Institute
10.	AIA	American Institute of Architects
11.	AISC	American Institute of Steel Construction
12.	AISI	American Iron and Steel Institute
13.	AMCA	Air Movement and Control Association
14.	ANSI	American National Standards Institute
15.	APA	APA – The Engineered Wood Association
16.	ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
17.	ASSE	American Society of Civil Engineers
18.	ASME	American Society of Mechanical Engineers
19.	ASTM	American Society of Testing and Materials
20.	AWPA	American Wood Protection Association
21.	AWPI	American Wood preservers Institute
22.	AWS	American Welding Society
23.	AWSC	American Welding Society Code
24.	AWI	Architectural Woodwork Institute
25.	AWWA	American Water Works Association
26.	BIA	The Brick Industry Association
27.	CCR	California Code of Regulations
28.	CLFMI	Chain Link Fence Manufacturers Institute
29.	CRA	California Redwood Association

30.	CRSI	Concrete Reinforcing Steel Institute
31.	CS	Commercial Standards
32.	CSI	Construction Specifications Institute
33.	CTI	Cooling Technology Institute
34.	FGIA	Fenestration and Glazing Industry Alliance
35.	FGMA	Flat Glass Manufacturer's Association
36.	FIA	Factory Insurance Association
37.	FM	Factory Mutual Global
38.	FS/FED SPEC	Federal Specification
39.	FTI	Facing Title Institute
40.	GA	Gypsum Association
41.	IAPMO	International Association of Plumbing and Mechanical Officials
42.	ICC	International Code Council
43.	IEEE	Institute of Electrical and Electronic Engineers
44.	IES	Illuminating Engineering Society
45.	MCAC	Mason Contractors Association of California
46.	MIMA	Mineral Wool Insulation Manufacturers Association
47.	MLMA	Metal Lath Manufacturers Association
48.	MS/MIL SPEC	Military Specifications
49.	NAAMM	National Association of Architectural Metal Manufacturers
50.	NBHA	National Builders Hardware Association
51.	NCMA	National Concrete Masonry Association
52.	NCSEA	National Council of Structural Engineers Associations
53.	NEC	National Electrical Code
54.	NEMA	National Electrical Manufacturers Association
55.	NIST	National Institute of Standards and Technology
56.	NSI	Natural Stone Institute
57.	NTMA	National Terrazzo and Mosaic Association
58.	ORS	Office of Regulatory Services (California)
59.	OSHA	Occupational Safety and Health Act
60.	PCI	Precast Concrete Institute
61.	PCA	Portland Cement Association
62.	PCA	Painting Contractors Association
63.	PDI	Plumbing Drainage Institute
64.	PEI	Porcelain Enamel Institute
65.	PG&E	Pacific Gas & Electric Company
66.	PS	Product Standards
67.	SDI	Steel Door Institute; Steel Deck Institute
68.	SJI	Steel Joist Institute
69.	SSPC	Society for Protective Coatings
70.	TCNA	Tile Council of North America
71.	TPI	Truss Plate Institute
72.	UBC	Uniform Building Code
73.	UL	Underwriters Laboratories Code
74.	UMC	Uniform Mechanical Code
75.	USDA	United States Department of Agriculture
76.	VI	Vermiculite Institute
77.	WCLIB	West Coast Lumber Inspection Bureau
78.	WDMA	Window and Door Manufacturers Association
79.	WEUSER	Western Electric Utilities Service Engineering Requirements
80.	WIC	Woodwork Institute of California

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

WARRANTIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Warranty/Guarantee Information;
- B. Special Conditions.

1.02 FORMAT

- A. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size.
- B. Cover: Contractor shall identify each binder with typed or printed title "WARRANTIES" and shall list title of Project.
- C. Table of Contents: Contractor shall provide title of Project; name, address, and telephone number of Contractor and equipment supplier; and name of responsible principal. Contractor shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the product or work item is specified.
- D. Contractor shall separate each warranty with index tab sheets keyed to the Table of Contents listing, providing full information and using separate typed sheets as necessary. Contractor shall list each applicable and/or responsible Subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).

1.03 PREPARATION:

- A. Contractor shall obtain warranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or work. Except for items put into use with County of Imperial's permission, Contractor shall leave date of beginning of time of warranty blank until the date of completion is determined.
- B. Contractor shall verify that documents are in proper form, contain full information, and are notarized, when required.
- C. Contractor shall co-execute submittals when required.
- D. Contractor shall retain warranties until time specified for submittal.

1.04 TIME OF SUBMITTALS:

- A. For equipment or component parts of equipment put into service during construction with County of Imperial's permission, Contractor shall submit a draft warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.
- B. Contractor shall submit for County of Imperial approval all warranties and related documents within ten (10) days after date of completion. Contractor must revise the warranties as required by the County of Imperial prior to County of Imperial's approval of Contractor's final Application for Payment.
- C. For items of work delayed beyond date of completion, Contractor shall provide an updated submittal within ten (10) days after acceptance, listing the date of acceptance as start of warranty period.

PART 2 - PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

RECORD DOCUMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Documents on Work;
- B. Special Conditions.

PART 2 - RECORD DRAWINGS

2.01 GENERAL:

- A. As indicated in the Contract Documents, the County of Imperial will provide Contractor with one set of reproducible, full size original Contract Drawings (mylars).
- B. Contractor shall maintain at each Project Site one set of marked-up plans and shall transfer all changes and information to those marked-up plans, as often as required in the Contract Documents, but in no case less than once each month. Contractor shall submit to the Project Inspector one set of reproducible vellums of the Project Record Drawings ("As-Builts") showing all changes incorporated into the Work since the preceding monthly submittal. The As-Builts shall be available at the Project Site. The Contractor shall submit reproducible vellums at the conclusion of the Project following review of the blueline prints.
- C. Label and date each Record Drawing "RECORD DOCUMENT" in legibly printed letters.
- D. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused by without limitation Change Orders, Construction Claim Directives, RFI's, and Addenda, shall be accurately and legibly recorded by Contractor.
- E. Locations and changes shall be done by Contractor in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

2.02 RECORD DRAWING INFORMATION:

- A. Contractor shall record the following information:
 - (1) Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.
 - (2) Actual numbering of each electrical circuit to match panel schedule.
 - (3) Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Contract Drawings.

- (4) Locations of all items, not necessarily concealed, which vary from the Contract Documents.
- (5) Installed location of all cathodic protection anodes.
- (6) Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.
- (7) Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.
- (8) Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.

In some instances, this information may be recorded by dimension. In other instances, it may be recorded in relation to the spaces in the building near which it was installed.

- B. Contractor shall provide additional drawings as necessary for clarification.
- C. Contractor shall provide reproducible record drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."
- D. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide electronic copies of the drawings (in PDF format) with one file with all of the sheets and one set of individual sheet files at the conclusion of the Project.

PART 3 - RECORD SPECIFICATIONS

3.01 GENERAL:

- A. Contractor shall mark each section legibly to record manufacturer, trade name, catalog number, and supplier of each Product and item of equipment actually installed.
- B. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide one electronic copy of the specifications (in PDF format) at the conclusion of the Project.

PART 4 - MAINTENANCE OF RECORD DOCUMENTS

4.01 GENERAL

- A. Contractor shall store Record Documents apart from documents used for construction as follows:
 - (1) Provide files and racks for storage of Record Documents.
 - (2) Maintain Record Documents in a clean, dry, legible condition and in good order.
- B. Contractor shall not use Record Documents for construction purposes.

PART 5 – PRODUCTS Not Used.

END OF DOCUMENT

SECTION 02 41 31 SELECTIVE SITE DEMOLITION

PART 1 – GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.

Scope of work: Complete all demolition work as shown on contract documents or as required to permit the installation of new construction, including but not limited to the following

1. Remove existing site concrete and misc. site improvements.
2. Remove existing trees as required for completion of new construction.

1.02 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.
- B. Record drawings at Project closeout according to Section 01 77 19 "Contract Closeout."
 1. Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.

1.03 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed demolition work similar to that indicated for this project.
- B. Public Utilities: Give all required notices, pay fees and charges, and arrange for disconnection and removal of abandoned public utilities and meters.
- C. Photographic and Video Documentation: Refer to Section 01380. Before starting work of this section, provide one set of photographs and one video of existing conditions to be affected by the demolition work. Provide progress videos as the work of demolition progresses, at intervals as approved, illustrating substrates, connections, concealed conditions, preservation of historic construction, and other conditions which will benefit subsequent work.

1.04 DEFINITIONS: The following terms have the meanings indicated when used in this section and on related drawings.

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.
- B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.
- C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated.

- D. Existing to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during demolition and then cleaned and reinstalled in their original locations.

1.05 ENVIRONMENTAL CONDITIONS

- A. Hazardous Materials: Prior to starting work, obtain from the Owner certification that hazardous materials have been removed. In the event additional material which is suspected to be friable asbestos or other regulated hazardous material is encountered during the demolition work, the Contractor shall stop work in such areas and notify the Owner. The materials will be inspected and tested, if necessary, by the Owner. If the material is found to be friable asbestos or other hazardous material, the Owner will provide for its removal or encapsulation without delay at Owner's expense. After treatment the Owner will test and certify that the contamination has been removed or controlled to within legal requirements and Contractor will be notified to proceed with the work in writing.
- B. Noise Control: Perform all work in a manner and at times which will keep production of objectionable noise to a minimum amount of noise. Instruct all workers in noise control procedures. Noise that adversely affects adjacent properties will not be tolerated. Such conditions shall be the Owner's determination.
- C. Dust Control: Take appropriate action to check the spread of dust, and to avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as flooding or pollution. Comply with all dust regulations imposed by local air pollution agencies. Remove dust and dirt from work area at least daily or more frequently as needed or directed.
- D. Pest Control: Take appropriate measures to prevent the spread of pests and vermin from areas where work is being performed to other areas including the site and adjacent buildings.

1.06 PROJECT SITE CONDITIONS

- A. The intent of the drawings is to show existing site and building conditions with information developed from the original construction documents, field surveys, and Owner's records, and to generally show the amount and types of demolition and removals required to prepare existing areas for new work. Contractor shall make a detailed survey of existing conditions pertaining to the work before commencing demolition.
- B. Extent: perform removals to extent required plus such additional removals as are necessary for completion even though not indicated or specified.

1.07 PROTECTION

- A. Existing Work: Protect existing work which is to remain in place.
- B. Trees: Protect trees within the project site which might be damaged during demolition.

1.08 EXPLOSIVES: Use of explosives will not be permitted.

1.09 BURNING: Burning will not be permitted.

PART 2 – PRODUCTS (Not Applicable)

PART 3 - EXECUTION

- 3.01 EXAMINATION: Verify that utilities have been disconnected and capped.
- 3.02 PREPARATION: Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- 3.03 UTILITIES
- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.
 - B. Prior to demolition or in the event unrecorded utilities are encountered, notify Owner or serving utility companies, as applicable, for work necessary and scheduled to be performed. Coordinate responsibility for limits of utility removals and be responsible for the removal of all utility installations both above and below grade except for those installations the utility companies agree to remove. Use care to protect utility lines to remain in service, repair all damage which does occur, and remove those not to remain in service.
 - C. Interruption of Service: In the event existing utility service requires interruption to accomplish the demolition work, obtain written approval by the Owner for interruption of service. Request approval not less than 48 hours prior to proposed scheduled interruption. State the exact services involved and the expected duration. Except in an emergency affecting life and limb, do not cause any interruption of utility service without written authorization from the Owner.
 - D. Provide for protection of utility lines to remain in service. Repair damage done to these facilities as a result of the work of this section, to the satisfaction of the Owner. Locations of existing utilities to remain shall be identified on record drawings, and their physical location shall be indicated by tags or stakes as applicable.
- 3.04 WORKMANSHIP
- A. Partial demolition and removal: When portions of pavement, slabs, sidewalks, curbs, curb and gutters and cross-gutters are to be removed, cut with a concrete saw full depth along all joint lines. Provide additional saw cut 2" away from saw cut on joint line, on the demolition side. Provide double saw cut at all areas to be demolished. All saw cuts shall be full depth.
- 3.05 DEMOLITION OF SITE IMPROVEMENTS
- A. Site Improvements: Remove walks and pavement, including base courses and miscellaneous improvements.
 - B. Paving and Slabs: Remove asphaltic concrete paving and slabs including aggregate base as indicated.
 - C. Underground Utilities: Expose pipe and conduit and cap at property line with permanent waterproof plugs or seals of concrete or metal. Except for items indicated to be abandoned in place, remove on-site abandoned pipe and conduit, cap and seal remaining pipe or conduit ends, and backfill the excavations as specified for new construction.
- 3.06 SALVAGE AND DISPOSAL
- A. General: Existing items Owner intends to retain will be designated by the Owner prior to start of work. Contractor shall carefully remove, salvage, box or bundle as approved, and deliver such items to storage as directed.

- B. Disposal: All removed material other than items to be salvaged or reused shall become Contractor's property and be removed from Owner's property. Clean up and dispose of debris promptly and continuously as the work progresses, and do not allow to accumulate. Sprinkle water on the surface to prevent dust nuisance. Secure and pay for required hauling permits and pay dumping fees and charges.

END OF SECTION 02 41 31

SECTION 03 31 13

STRUCTURAL CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment, and performing all operations in connection with Structural Concrete, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. All cast-in-place concrete, including footings and slab on grade.
 - 2. Concrete Mix Designs.
 - 3. Equipment bases.
 - 4. Setting anchor bolts, inserts, dowels, and accessories cast in concrete, which are specified under this and other sections.
 - 5. Vapor barrier under interior floor slabs on grade.
 - 6. Grout and drypack.
 - 7. Formwork, shoring, bracing and anchorage.
 - 8. Concrete reinforcement and accessories.
- C. Related Sections
 - 1. Section 01 45 24 Testing and Inspection Requirements for School Construction
 - 2. Section 03 35 00 Concrete Floor Finishing

1.02 DEFINITIONS AND REFERENCES

- A. Definitions
 - 1. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.
- B. References
 - 1. ACI 318-2014 Building Code Requirements for Structural Concrete.
 - 2. ASTM A615 – Deformed and Plain Carbon – Steel Bars for Concrete Reinforcement.
 - 3. ASTM C33 – Concrete Aggregates.
 - 4. ASTM C94 – Ready-Mixed Concrete.
 - 5. ASTM C150 – Portland Cement.
 - 6. ASTM C309 – Liquid Membrane – Forming compounds for Curing Concrete.
 - 7. Chapter 19A, California Building Code.

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Design Mixtures: Provide design mix for each concrete mixture. Design mix shall include data substantiating the reliability of the proposed mix. Submit alternate design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Each design mixture shall be stamped and signed by a registered professional engineer licensed in the state of California.
 - 2. Indicate amounts of mixing water to be withheld for later addition at project site.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

1.04 QUALITY ASSURANCE

- A. Specified cement and aggregates shall be from single sources only.
- B. Regulatory Requirements: Conform to Chapter 19A, California Building Code.
- C. Tests: Testing and analysis of concrete will be performed in accordance with the provisions of Section 01 45 24, Testing and Inspection Requirements for School Construction.
- D. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- E. Evaluation and acceptance of concrete shall conform to ACI 318, Section 26.12. Samples for strength testing shall be taken at least once a day or not less than once for each 50 cubic yards of concrete or not less than once for each 2,000 square feet of surface area for slabs or walls.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

- A. Conform to ACI 318, Section 26.11.
- B. Plywood Forms: Douglas Fir species; solid one side sound undamaged sheets.
- C. Lumber: Douglas Fir species; construction grade with grade stamp clearly visible.
- D. Form Ties: Removable metal of adjustable length, cone ends.

2.02 REINFORCING STEEL

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade billet steel deformed bars. Welded bars shall be ASTM A706, 60 ksi yield grade.
- B. Welded Steel Wire Fabric: Plain type, ASTM A1064; in flat sheets.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type V, Portland Type, conforming to Section 1903A.1, California Building Code.
- B. Aggregates: ASTM C33, conforming to Section 1903A.5, California Building Code.
- C. Fly Ash: Shall conform to Section 1903A.6, California Building Code.
- D. Water: Provide water per ASTM C1602. Clean and not detrimental to concrete.

2.04 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ACI 318 Sections 4.8, 19.3, and 26.4.
 - 1. Selection of Concrete Proportions: Concrete proportions shall be determined in accordance with the provisions of ACI 318, Section 26.4.
 - 2. A registered civil engineer with experience in concrete mix design shall select the relative amounts of ingredients to be used as basic proportions of the concrete mixes proposed for use under this provision.
 - 3. Do not exceed a 0.45 water-cement ratio, by weight.
 - 4. Concrete shall be mixed by transit mixers only.

- B. Provide concrete examples of the following criteria:

Element	Min 28-day Strength PSI	Max Slump	Max Size Aggregate	Type
Foundation	4,500	4 inch	1 inch	Reg.
Slabs	4,500	4 inch	3/4 inch	Reg.

- C. Admixtures may be added to the concrete to control the set, effect water reduction and increase in workability at the contractor's option, or at the request of the Engineer, but in either case at the expense of the contractor. Except as otherwise specified, such admixtures shall be a water reducing normal retarding admixture conforming to ASTM C 494 and may be either a hydroxylated carboxylic acid type or a hydroxylated polymer type, but shall contain no calcium chloride. The required quantities of cement shall be used. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer's printed instructions.
 - 1. Superplasticizers shall not be used without permission of the Engineer. If used, superplasticizers shall conform to ASTM C-494, Type F or G; batch plant added using second or third generation only.
 - 2. Admixtures shall be subject to the approval of the Architect.

2.05 ACCESSORIES

- A. Bonding Agent: Polyvinyl Acetate; HIBOND, manufactured by Lambert Corporation, Orlando, FL, LOCK BOND NO. 906, manufactured by MacklanBurg-Duncan Co., City of Industry, CA, or equal as approved in accordance with Section 01 25 00 for Substitutions.

2.06 REINFORCED VAPOR BARRIER

- A. Manufacturer: Reef Industries, Inc. 9209 Alameda Genoa Road, Houston Texas 77075. Phone (800) 231 6074. Web Site www.reefindustries.com.
- B. Reinforced Vapor Retarder under wood flooring: Griffolyn Vaporguard, 3-ply laminate, with aluminum core surrounded by (2) layers of multi-axially oriented, high density polyethylene sheets.
- C. Reinforced Vapor Retarder under VCT and carpet: Griffolyn Type 85, 5-ply laminate, combing (3) layers of high density polyethylene and (2) high strength non-woven cord grids.

2.07 CURING MATERIALS

- A. Water: Clean from a source suitable for domestic consumption.
- B. Curing Compound: ASTM C309, SHUR-CURE manufactured by Paul M. Wolff Co. water based membrane forming concrete curing compound. White pigmented.

2.08 DRY PACK AND NON-SHRINK GROUT

- A. Drypack: Field mixture of 1 part Portland Cement to 2 ½ parts fine aggregate conforming to ASTM C-33 mixed to a damp consistency such that a ball molded in the hand will stick together and hold its shape. In lieu of field mixing Contractor may use factory mixed drypack material, EUCLID Dry Pack Grout or equal.
- B. Non-Shrink Grout: EUCLID Hi-Flow Grout or equal.
- C. Epoxy Grout: Mult-component, premeasured, fast-curing combination of thermosetting resins and inert fillers. EUCLID Euco High Strength Grout or equal.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 318 Section 26.11.
- B. Verify lines, levels and measurement before proceeding with formwork.
- C. Hand trip sides and bottom of earth forms; remove loose dirt.
- D. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.
- E. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- F. Align joints and make watertight. Keep form joints to a minimum.
- G. Obtain approval before framing openings in structural members which are not indicated on Drawings.

3.02 REINFORCED VAPOR BARRIER

- A. Install reinforced vapor retarders in accordance with ASTM E 1643 and manufacturer's written instructions.

3.03 PROTECTION

- A. Adequately protect staff, personnel and public from harm and accident during formwork. Conform to California Code of Regulations, Title 8, Subchapter 4, Construction Safety Orders.

3.04 REINFORCEMENT

- A. Place, support and secure reinforcement against displacement.

3.05 PREPARATION FOR CONCRETE WORK

- A. Weather Provisions: Make Provisions for weather conditions in accordance with ACI Specifications ACI 318 , the recommendation of the Testing Laboratory, and acceptable to the Architect
 - 1. Hot Weather Requirements: Concrete to be placed during hot weather shall comply with the requirements of ACI Section 26.5.5.
- B. Excavations: Before placing of concrete for foundations, insure that the excavations have been inspected and approved by the Soils Engineer. Remove loose dirt from excavations.
- C. Before concrete is placed upon or against concrete that has taken its initial set or has hardened, remove encrustations from the forms and reinforcement, and mechanically roughen hardened concrete to minimum ¼ inch coarseness amplitude.
- D. Prepare previously placed concrete by cleaning with sandblasting to remove laitance and expose clean aggregate.
- E. In locations where new concrete is doweled to existing work, drill holes in existing concrete, epoxy set 12 inch long No. 4 steel dowels at 18 inches oc.

3.06 PLACING CONCRETE

- A. Place concrete in accordance with ACI 318 Section 26.5.2.
- B. Notify Architect minimum 24 hours prior to commencement of operations. All excavations, forms and reinforcing shall be inspected and approved by the Architect prior to placement.
- C. Ensure reinforcement, inserts, embedded parts and accessories are not disturbed during concrete placement.
- D. When detailed on the drawings, separate slabs on grade from vertical surfaces with ½ inch thick joint filler.
- E. Extend joint filler from bottom of slab to within ½ inch of finished slab surface using one-component polyurethane sealant as specified in Section 07 92 00.
- F. Place concrete continuously between predetermined expansion, control and construction joints.
- G. Do not interrupt successive placement; do not permit cold joints to occur.
- H. Avoid segregation of materials. Perform tamping and vibrating so as to produce a dense, smooth application free of rock pockets and voids. Do not use vibrators to move concrete horizontally.

- I. Provide special mix prepared by the Testing Laboratory and approved by the Architect utilizing smaller aggregates in areas of reinforcing congestion to prevent the formation of rock pockets.
- J. Do not allow concrete to fall free from any height which will cause materials to segregate. Maximum height of free fall permitted in any case: 4 feet. Utilize trunks or additional chutes where doubt occurs.
- K. Construction Joints: Wash surface of each joint shortly after pouring to expose clean, sound aggregate. Sandblast surface to remove laitance remaining or loose aggregate as approved by the Architect. Conform to ACI 318, Section 26.5.6. Apply bonding agent in accordance with manufacturer's instructions.

3.07 CONCRETE FINISHING

- A. Provide formed concrete surfaces to be left exposed with smooth rubbed finish.
- B. Provide smooth trowel finish at flat surfaces.

3.08 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury.
- B. Maintain concrete with minimal moisture loss at above 50 degrees F temperature for period necessary for hydration of cement and hardening of concrete. Dusting with dry cement to absorb excess water is prohibited.
- C. Cure only as specified herein and in accordance with ACI 318, Section 26.5.3. Membrane curing compound method not permitted for interior cast-in-place concrete slabs.
- D. Moisture Cure: Spray water over floor slab areas and maintain wet for minimum of seven (7) days or spread polyethylene film over floor slab areas, lapping edges and sides, minimum 6 inches and sealing with pressure sensitive tape; cover with plywood or otherwise protect film from damage; maintain in place for minimum of seven (7) days. Do not permit traffic over floor slabs during the seven (7) day curing period.
- E. Vertical Surfaces: Spray water over surfaces and maintain wet for 10 days.
- F. Quality Control: Proper curing of concrete surfaces shall be the responsibility of the Contractor under this section.

3.09 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Sections 01 45 24 Testing and Inspection Requirements for School Construction.
- B. Provide free access to work and cooperate with Testing Laboratory.

3.10 PATCHING

- A. Clean all exposed concrete surfaces and all adjoining work stained by leakage of concrete. Remove all fins, butts and projections by grinding. Patch voids, rock pockets, holes, cracks and similar imperfections by chipping loose concrete and exposing clean, sound aggregate.

3.11 DEFECTIVE CONCRETE

- A. Remove concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect.
- C. Do not patch, fill, touch-up, repair or replace exposed concrete except upon express approval of Architect for each individual area.

3.12 MOISTURE TEST FOR CONCRETE FLOORS

- A. It shall be the Contractor's responsibility to provide a concrete floor slab meeting the maximum moisture vapor emissions herein specified and the contractor shall exercise care in all aspects of mixing, placing and curing the concrete floor slabs so that a minimum of mitigation treatment will be required.
- B. Prior to ordering floor materials that are adhesive applied, contractor shall conduct Calcium-Chloride "Dome" tests to verify that concrete floor slabs are dry with maximum moisture vapor emissions of five lbs. Per 1,000 s.f. in 24 hours and that slabs exhibit negative alkalinity, carbonization or dusting. Apply the moisture test in four (4) different areas of each floor location, with at least one test for each 1,000 s.f. of floor area.
- C. Should the moisture emissions exceed five lbs. Per 1,000 s.f. in 24 hours as specified herein at the time of installation of adhesive applied floor coverings, and the Petrographic Analysis, ASTM C856, confirms that the placement of concrete slabs was not in conformance with requirements of this section and that the water cement ratio exceeded 0.45 or the concrete was cured less than 7 days, the General Contractor, at no additional cost to the Owner, shall reduce the moisture emission level to that specified by use of a vapor emission treatment system.

3.13 DRY PACK AND GROUTING

- A. Drypacking: Mix materials thoroughly with minimum amount of water. Install drypack by forcing and rodding to fill voids and provide complete bearing under plates. Finish exposed surfaces smooth and cure with damp burlap or liquid curing compound.
- B. Non-Shrink Grouting: Mix grout material per manufacturer's instructions. Surfaces to receive the non-shrink grout shall be clean, and shall be moistened thoroughly immediately before placing the mortar. Before grouting, surfaces to be in contact shall be roughened and cleaned thoroughly, loose particles shall be removed and the surface flushed thoroughly with neat cement grout immediately before the grouting mortar is placed. Place fluid grout from one side only and puddle, chain, or pump for complete filling of voids; do not remove the dams or forms until grout attains initial set. Finish exposed surfaces smooth, and cure as recommended by grout manufacturer.

END OF SECTION 03 31 13

SECTION 08 11 13

STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Steel Doors and Frames, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Provide hollow metal doors.
 - 2. Provide hollow metal door frames.

1.02 REFERENCES

- A. SDI – Steel Door Institute
- B. HMMA – Hollow Metal Manufacture’s Association
- C. SDI 100 – Recommended Specifications for Standard Steel Doors and Frames
- D. SDI 105 – Recommended Erection Standards for Steel Frames
- E. SDI 111 – Recommended Standard Details for Steel Doors and Frames
- F. SDI 117 – Manufacturing Tolerances Standard Steel Doors and Frames
- G. HMMA 810 – Hollow Metal Doors
- H. HMMA 820 – Hollow Metal Frames
- I. HMMA 830 – Hardware Preparation and locations for Hollow Metal Doors and Frames
- J. HMMA 840 – Installation and Storage of Hollow Metal Doors and Frames
- K. NFPA 80 – Fire Doors and Windows

1.03 SUBMITTALS: Submit as per Section 01 33 00.

- A. Submit shop drawings for frames indicating frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcements for hardware and finish.
- B. Submit shop drawings for doors indicating core material, location of cutouts for hardware, reinforcements for hardware and finish.
- C. Submit product data.
- D. Submit manufacturer’s installation instructions.

1.04 QUALITY ASSURANCE

- A. Frames and doors to conform to SDI and HMMA standards except where exceeded by this specification.
- B. Manufacturer: Company specializing in manufacturing the products specified in this section having minimum five years experience.

1.05 DELIVERY, STORAGE AND PROTECTION

- A. Deliver and protect doors and frames with manufacturer's shipping safeguards.
- B. Attach spreader bars on welded frames to preclude warping or bending during delivery and storage.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, provide products by one of the following:
 - 1. Curries.
 - 2. Stiles.
 - 3. Ceco Door Products.
 - 4. Steelcraft.

2.02 FIRE-RATED DOOR ASSEMBLIES

- A. NFPA 80, identical to assemblies tested per ASTM E 152, and labeled and listed by UL

2.03 WELDED FRAMES

- A. Type: Combination buck frame and integral stop and flat trim, double rabbit profiles as indicated on the drawings. Cold rolled steel as per ASTM A336.
- B. Exterior Frames: 14 gauge
- C. Interior Frames: 16 gauge
- D. Provide profiles as per drawings.
- E. Anchors: Provide (2) anchors at head for openings up to 48 inches, maximum 30" on center. Provide (3) anchors per jamb for doors up to 84" in height, additional anchors at maximum 30" on center for higher doors.
 - 1. Provide appropriate type of anchors consistent with type of wall construction for each installation and in conformance with HMMA 820 and SDI 111.
- F. Floor Attachment: Provide metal anchor with provision for expansion anchor attachment to concrete floor.
- G. Hardware Attachment: Mortise, reinforce, drill and tap at factory to receive specified hardware. Install minimum 10 gage reinforcing welded to frame for typical surface mounted hardware. Install minimum 7 gage reinforcing for hinges in accordance with HMMA 820. Tap to templates.

H. Galvanized: A-60.

2.04 WELDED FRAME FABRICATION

- A. Fabricate exterior welded steel frames as saw mitered and full inside welded unit type or machine-mitered and full welded unit type, in accordance with HMMA 820. Weld and grind smooth. No intermittent welds or plate splices permitted at intersections.
- B. Fabricate interior welded steel frames as machine mitered face-welded unit type in accordance with HMMA 820. Weld and grind smooth.
- C. Where cross mullions or T intersections occur, frames shall be fabricated as butted and face-welded assembly joints, in accordance with HMMA 820.
- D. Machine mitered faces and butt-joined integral stops permitted with continuous welds.
- E. Fabricate frames with hardware reinforcements plates welded in place.
- F. Fabricate frames to accept anchors as described in HMMA 820 and SDI 111 for type of wall construction.

2.05 EXTERIOR DOORS

- A. SDI 100 Level / Model: 3/2
- B. Door Thickness: 1 3/4"
- C. Face Skin: 16 gauge face sheets
- D. Material: Galvanized A-60
- E. Door Edges: 1/8" bevel on lock side
- F. Edge Construction: Continuous weld and ground smooth the full height of door, seamless.
- G. Core: Polyurethane
- H. Top Channel: 16 Gauge minimum. Provide flush top channel.
- I. Bottom Channel: 16 Gauge minimum.
- J. Size: As per drawings.
- K. Hinge Rail and Reinforcement: Full height channel, 14 gauge extruded to 10 gauge equivalent at tapped holes.
- L. Lock Rail: Full height channel, 14 gauge.
- M. Closer Reinforcement: 12 gauge.

2.06 INTERIOR DOORS

- A. SDI 100 Level / Model: 3/2
- B. Door Thickness: 1 3/4"

- C. Face Skin: 16 gauge face sheets
- D. Material: Galvanized A-60
- E. Door Edges: 1/8" bevel on lock side
- F. Edge Construction: Continuous weld and ground smooth the full height of door, seamless.
- G. Core: Polyurethane
- H. Top Channel: 16 Gauge minimum. Provide flush top channel.
- I. Bottom Channel: 16 Gauge minimum.
- J. Size: As per drawings.
- K. Hinge Rail and Reinforcement: Full height channel, 14 gauge extruded to 10 gauge equivalent at tapped holes.
- L. Lock Rail: Full height channel, 14 gauge.
- M. Closer Reinforcement: 12 gauge.

2.07 DOOR FABRICATION

- A. Fabricate doors from cold rolled steel conforming to ASTM A366 or ASTM A527.
- B. Non-handed doors are not permitted.
- C. Hinge fillers are not permitted.
- D. Fabricate doors with cutouts sized for hardware and openings as indicated.
- E. Reinforce, drill and tap doors to receive mortise hinges, locks, latches, flush bolts and closures. Use reinforcing gauges as listed in Table V of SDI 100.

2.08 PROTECTIVE COATING

- A. Frames: Pretreat and shop prime with modified alkyd, air dried conforming to ANSI-A224.1, approved primer. Series P10-1009, Gray, TNEMEC or equal.
- B. Doors: Pretreat and shop prime with modified alkyd, air dried conforming to ANSI-A224.1, approved primer. Series P10-1009, Gray, TNEMEC or equal.

2.09 VISION LIGHT FRAMES

- A. Provided under Section 08 81 00.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.

3.02 FRAME INSTALLATION

- A. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set.
 - 1. Install frames in accordance with HMMA 840 and SDI 105.
 - 2. Conform to standard of tolerances as required in HMMA 840 and SDI 117
 - 3. Coordinate anchor placement with type of wall construction.
 - 4. Install fire-rated frames according to NFPA 80, product UL listing and manufacturers recommendations.

3.03 DOOR INSTALLATION

- A. Fit hollow-metal doors accurately in frames.
 - 1. Install Doors in accordance with SDI 100.
 - 2. Fire-Rated Doors: Install fire rated doors according to NFPA 80, product UL listing and manufacturers recommendations. Install with clearances specified in NFPA 80.
 - 3. Smoke-Control Doors: Comply with NFPA 105.

END OF SECTION 08 11 13

DOCUMENT
08 14 16 FLUSH WOOD DOORS

PART 1 – GENERAL

1.01 SUMMARY

- A. The work under this section includes furnishing all labor, materials, and equipment, and performing all operations in connection with Flush Wood Doors, as indicated on the Drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Non-rated wood doors with prefinished flush faces.
 - 2. Fire-rated wood doors with prefinished flush faces.

1.02 REFERENCES

- A. NFPA-80 – Standards for Fire Doors Edition.
- B. AWI – Architectural Woodwork Institute.
- C. WDMA – Window and Door Manufacturers Association: IS 1-A Industry Standard for Architectural Flush Wood Doors.
- D. ANSI/NWMA I.S.1 – Industry Standard for Wood Flush Doors.
- E. ANSI A208.1 – Wood Particle Board.
- F. ASTM C612 – Mineral Fiber Block and Board Thermal Insulation.
- G. ASTM E152 – Fire Tests of Door Assemblies.
- H. California Building Code – Conform to Section 1005.8 for fire rated doors.
- I. Underwriters Laboratories – UL 10c, Positive Pressure Fire Door Test Method.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Submit shop drawings indicating door elevations and sections, materials, thickness, door swing, stile and rail dimensions, veneers, undercuts, storage and erection details, locations of finish hardware by dimension and locations / details of all openings.
- C. Do not proceed with any fabrication until all details are approved.
- D. Submit certification that doors and frames comply with UL10c, Positive Pressure Fire Door Test Method.
- E. Submit manufacturer's product data and installation instructions.
- F. Submit three samples of each door type specified, illustrating each face veneer and door construction specified.

1.04 WARRANTY

- A. Provide manufacturer's signed guarantee for all wood doors. Guarantee period: Lifetime of original installation. Door exhibiting defects in materials or workmanship within guarantee period shall be replaced (including hanging and finishing) with new doors. These terms shall be part of the manufacturer's standard warranty.
- B. Replace defective doors which have:
 - 1. Delamination in any degree.
 - 2. Warp or twist of 1/4" or more in any 3' – 6" x 7' plane of door face.

1.05 QUALITY ASSURANCE

- A. Fire-Rated Wood Doors:
 - 1. Provide wood doors which are identical in materials and construction to units tested in door and frame assemblies in accordance UL10c, Positive Pressure Fire Door Test Method and which are labeled and listed for ratings indicated by UL testing and inspection agency.
 - 2. Doors: Comply with UL10c where required.
 - 3. Provide smoke gaskets as required by manufacturers' individual authorities in compliance with UL10c.
 - 4. Conform to ASTM E152.
 - 5. Conform to NFPA 80 for fire rated class indicated.
- B. Provide doors from one manufacturer to ensure uniformity in quality of appearance and construction. All materials supplied for this project to conform to the AWI Section 200 and 1300 for custom wood doors.
- C. Wood door supplier to be a qualified direct distributor of products to be furnished.

1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Protect doors during transit, storage and handling to help prevent damage, soiling and deterioration.
- B. Comply with manufacturer's instructions and with on-site-care requirements of AWI Section 1300-G-23 Care and installation at site.
- C. Deliver prefinished components in manufacturer's original unopened protective covering or container, clearly marked with manufacturer's name, brand name and identifying number on covering.
- D. Do not walk or stack other materials on top of stacked doors. Do not drag doors across one another.
- E. Exposed wood at tops, bottoms and cutouts for hardware and accessories shall be sealed prior to shipment.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. GRAHAM
 - 1. <http://www.grahamdoors.com>
- B. Acceptable Substitutions
 - 1. Marshfield Door Systems

- a. <http://www.marshfielddoorsystems.com>
- 2. VT Industries
 - a. <http://www.vtindustries.com>

2.02 STANDARD DOORS

A. Interior Non-Rated Doors

- 1. Type: Graham GPD-PC.
- 2. Construction: 7-Ply Construction.
- 3. Thickness: 1-3/4 inches.
- 4. Core: Solid bonded particle core (PC).
- 5. Vertical Edges: Hardwood to match face veneer over structural composite lumber (SCL), glued to core.
- 6. Horizontal Edges: Structural composite lumber (SCL), glued to core.
- 7. Duty Level: Extra-Heavy Duty.
- 8. Adhesives: Type I per WDMA TM-6.
- 9. Facing:
 - a. Grade: Grade "A" per WDMA I.S. 1-A.
 - b. Adhesive: Type 1
 - c. Thickness: 1/50" minimum at 12% moisture content after finish sanding.
 - d. Species: Hardrock Maple.
 - e. Cut: Plain Sliced.
 - f. Assembly: Book Match.
 - g. Symmetry: Running Match.

2.03 FIRE-RATED DOORS

A. Interior 20-Minute Doors

- 1. Type: Graham GPD-PC.
- 2. Construction: 7-Ply Construction.
- 3. Thickness: 1-3/4 inches.
- 4. Core: Solid bonded particle core (PC).
- 5. Vertical Edges: Hardwood to match face veneer over structural composite lumber (SCL), glued to core.
- 6. Horizontal Edges: Structural composite lumber (SCL), glued to core.
- 7. Duty Level: Extra-Heavy Duty.
- 8. Adhesives: Type I per WDMA TM-6.
- 9. Facing:
 - a. Grade: Grade "A" per WDMA I.S. 1-A.
 - b. Adhesive: Type 1
 - c. Thickness: 1/50" minimum at 12% moisture content after finish sanding.
 - d. Species: Hardrock Maple.
 - e. Cut: Plain Sliced.
 - f. Assembly: Book Match.
 - g. Symmetry: Running Match.

B. Interior 60-Minute Doors

- 1. Type: Graham GPD-FD.

2. Construction: 7-Ply Construction.
3. Thickness: 1-3/4 inches.
4. Core: Bonded Fire Resistive Composite (FD) containing no asbestos.
5. Vertical Edges: Hardwood to match face veneer over fire resistive composite, glued to core.
6. Horizontal Edges: Fire resistive composite, glued to core.
7. Duty Level: Extra-Heavy Duty.
8. Adhesives: Type I per WDMA TM-6.
9. Facing:
 - a. Grade: Grade "A" per WDMA I.S. 1-A.
 - b. Adhesive: Type 1
 - c. Thickness: 1/50" minimum at 12% moisture content after finish sanding.
 - d. Species: Hardrock Maple.
 - e. Cut: Plain Sliced.
 - f. Assembly: Book Match.
 - g. Symmetry: Running Match.

2.04 FABRICATION

- A. Fabricate wood doors in accordance with requirements of WDMA I.S. 1-A Quality Standards.
- B. Fabricate fire rated doors in accordance with requirements of Underwriters' Laboratories, with metal label on each door including UL-10c.
 1. Attach permanent metal fire rating label to door on top edge.
- C. Premachine doors at factory for finish hardware.
- D. Veneer: Face veneer grain shall run vertically.

2.05 FINISH

- A. Provide factory applied finish as per manufacturer.

2.06 VISION LITE FRAMES

- A. Provided under Section 08 81 00.
- B. Fire-rated doors: to have UL approved glazing system.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Adjusting:
 1. Adjust and check each door to ensure proper operating and function.
 2. Replace or rehang doors which are hinge bound and do not swing or operate freely. Replace or rehang doors which are warped, twisted or which are not in true planes.
- B. Fire doors and frames shall be installed in accordance with their listing, NFPA No. 80 and the manufacturer's instructions.

- C. Condition doors to average temperature and humidity in area of installation for not less than 48 hours prior to installation. Store doors per recommendations of WDMA I.S. 1-A, "Care and Installation at Job Site."
- D. Ensure that smoke gaskets are in-place before prefinished door installation.

3.02 PROTECTING AND CLEANING

- A. Clean prefinished doors and hardware per manufacture's recommendations.
- B. Protect doors as directed under Section 01 74 00.
- C. Replace prefinished doors damaged during installation.

END OF SECTION 08 14 16

SECTION 08 81 00

GLAZING

PART 1 – GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Glazing, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Provide glazing at hollow metal framed door sidelites.
 - 2. Provide glazing in vision light doors.

1.02 REFERENCES

- A. All glazing shall meet the minimum requirements of the CBC, Chapter 24.
- B. All glazing in hazardous locations as per CBC, Section 2406.3 shall pass the test requirements of UBC Standard 24-2, Part I.
- C. Tempered / Heat-Treated Glass shall comply with ASTM C 1048; Type I; Quality q3.

1.03 SUBMITTALS

- A. Submit as per Section 01 33 00.
 - 1. Submit product data on glass type specified: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
 - 2. Setting blocks and glazing tape.
- B. Submit (3) 12”x12” samples of each type of material specified illustrating color, tint and design.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with FGMA Glazing Manuel and FGMA Sealant Manual.
- B. All tint shall be integral part of glazing, vinyl coated tint not allowed.

1.05 WARRANTY

- A. Provide ten year manufacturer’s warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Insulated and Laminated Glazing

1. PPG Industries, Inc.
 - a. <http://www.ppg.com>

B. Security Vision Lite Frames

1. Air Louvers, Inc.
 - a. <http://www.airlouvers.com>

2.02 STANDARD GLAZING

A. Insulated Glass

1. Product: PPG Commercial One-Inch Insulating Glass Unit.
2. Construction: 1" total thickness: 1/4" tempered glass + 1/2" airspace + 1/4" tempered glass.
3. Low-e Coating: Solarban 70XL (on surface 3).
4. Tint: Bronze (on surface 2).
5. Locations: Exterior Doors and Windows, see door and window schedules.

B. Security Vision Lites

1. Product
 - a. Frame: Air Louvers, Inc. model VLF-S10.
 - b. Glazing: PPG Monolithic Laminated Glass.
2. Construction: 1/2" total thickness: 1/4" float glass + 0.060" clear PVB + 1/4" float glass.
3. Low-e Coating: None.
4. Tint: None (clear glass).
5. Locations: Interior Doors, see door schedule.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation.
- C. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- D. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

3.02 PROTECTING AND CLEANING

- A. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter.

1. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents, and vandalism, during construction period.
- B. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

END OF SECTION 08 81 00

SECTION 09 22 16

NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Non-Structural Metal Framing, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Provide metal stud framing at interior partition walls and furred walls.
 - 2. Provide metal stud framing at exterior furred walls.
 - 3. Provide metal ceiling joists and soffits.
 - 4. Provide framing accessories.

1.02 REFERENCES

- A. ASTM C 645 – 98 Standard Specification for Nonstructural Steel Framing Members.

1.03 SUBMITTALS

- A. Submit product data describing standard framing member materials and finish, product criteria, load charts, limitations and accessories.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: ICC Approved.
- B. Manufacturer: Company specializing in non-bearing metal studs with minimum 5 years experience.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Stud Framing Materials:
 - 1. Studs: ASTM C 645, minimum yield 33 ksi, hot dip galvanized or electro galvanized sheet steel, C type, 16 gage thick, 6" minimum width.
 - 2. Track: Formed Sheet Steel; channel shaped; same width as studs; tight fit; 16 gage thick; solid web; long leg at ceilings
 - 3. Fasteners: ASTM C954 self drilling, self tapping screws, Type S-12 pan head, ½" long.
 - 4. Stiffeners: 3/4", .3 lbs per lin. ft., cold or hot rolled channel, 16 gage.
 - 5. Anchorage Devices: Drilled expansion anchors, minimum 3/8" diameter x 2 ¼" embedment.
- B. Ceiling Framing Materials:

1. Joist: ASTM C 645, minimum yield 33 ksi, hot dip galvanized or electro galvanized sheet steel, C type, 18 gage thick, 6" minimum width.
2. Track: Formed Sheet Steel; oversized channel; same width as studs; tight fit; 16 gage thick.
3. Fasteners: ASTM C954 self drilling, self tapping screws, Type S-12 pan head, ½" long.
4. Mid Span Support: As per contract documents.
5. Anchorage Devices: As per contract documents.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Perform work in accordance with ASTM C754.
- B. Install prefabricated slip track at top of wall. Attach to supporting structure above.
- C. Align and fasten top and bottom runners at maximum 32" O.C.
- D. Construct corners and intersections as per contract documents.
- E. Stud splicing not permissible.
- F. Provide all backing as required.
- G. Wall Tolerances:
 1. Maximum Variation from true position: 1/8"
 2. Maximum variation of any member from plane: 1/8"
 3. Maximum variation between parallel walls: 1/8"

END OF SECTION 09 22 16

SECTION 09 24 00

PORTLAND CEMENT PLASTER

PART 1 – GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Portland Cement Plaster, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Metal furring and lathing.
 - 2. Portland cement plaster system

1.02 SUBMITTALS

- A. Product Data for each product specified and samples for each type of finish indicated.

1.03 ENVIRONMENTAL REQUIREMENTS

- A. Comply with the minimum requirements of Section 2510 and 2512 of The California Building Code, minimum requirements of referenced plaster application standards and recommendations of plaster manufacturer for environmental conditions before, during and after application of plaster.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Metal Lath
 - 1. Plaster walls with solid plywood substrate: Expanded diamond mesh, self furred, (dimpled, ¼” offset), 3.4 lbs. per sq. yd., galvanized, manufactured by Western Metal Lath and Steel Framing.
- B. Metal Accessories
 - 1. Casing Bead: 7/8”, 26 gauge, manufactured by Western Metal Lath and Steel Framing.
 - 2. Base Screed: Casing Bead with weep holes: 7/8”, 26 gauge, manufactured by Western Metal Lath and Steel Framing.
 - 3. Corner: welded wire, Wescorner, manufactured by Western Metal Lath and Steel Framing.
 - 4. Control Joint: 7/8”, 28 gauge, No. XJ15-3, manufactured by Western Metal Lath and Steel Framing
- C. Paper Backing: Asphalt-impregnated paper complying with Federal Standard UU-B-790a, Type I, Grade D (vapor permeable), Style 2, Jumbo Tex, manufactured by Fortifiber Corporation.
- D. Base-Coat Cements: White or gray, as required.
 - 1. Portland cement, ASTM C 150, Type I.

- E. Base-Coat Aggregate: ASTM C 897, sand.
- F. Finish Coat: Material and color as indicated below:
 - 1. Acrylic-Based Finish Coat: Factory-mixed formulation of acrylic emulsion, colorfast mineral pigments, and fine aggregates specifically recommended by acrylic-based finish manufacturer for use over portland cement plaster base coats.
 - 1. Acrylic Color: as selected by Architect
 - 2. Acrylic Texture: Fine sand float finish
- G. Water: Potable water shall be used for mixing
- H. Mixing: Mechanically mix proportioned cementitious and aggregate materials with water to comply with applicable referenced application standard and with recommendations of plaster manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Lathing and Furring: Install lath and furring indicated to comply with ML/SFA 920, "Guide Specifications for Metal Lathing and Furring," and with ASTM C 1063.
- B. Isolation: Where lathing and metal support systems abut building structure horizontally and where partition or wall abuts overhead structure, sufficiently isolate from structural movement to prevent transfer of loading from building structure. Install slip- or cushion-type joints to absorb deflections but maintain lateral support.
 - 1. Frame both sides of control joints independently and do not bridge joints with furring and lath or accessories.
- C. Metal Lath: Install metal lath at all plaster finishes. Provide appropriate type, configuration, and weight of metal lath selected from materials indicated that comply with ML/SFA 920, "Guide Specifications for Metal Lathing and Furring," and with ASTM C 1063.
 - 1. Plaster walls with solid plywood substrate: Expanded diamond-mesh lath, 3.4-lb/sq. yd. minimum weight.
 - 2. Metal lath shall stand away from the support ¼ inch.
- D. Paper backing shall be installed at all wall surfaces. Install two layers of building paper over all solid plywood substrate. Punctures or breaks shall be entirely covered with a second layer before application of metal lath.
- E. Preparing Solid Surfaces for Plastering: Clean plaster bases and substrates for direct application of plaster, removing loose material and substances that may impair the Work.
 - 1. Etch concrete and concrete unit masonry surfaces indicated for direct plaster application to obtain adequate suction and mechanical bond of plaster (where dash coat, bonding agent, or additive is not used).
 - 2. Apply bonding agent on concrete and concrete unit masonry surfaces indicated for direct plaster application; comply with manufacturer's written instructions for application.
 - 3. Apply dash coat on concrete surfaces indicated for direct plaster application. Moist-cure dash coat for at least 24 hours after application and before plastering.

4. Install temporary grounds and screeds to ensure accurate rodding of plaster to true surfaces; coordinate with scratch-coat work.
 5. Surface Conditioning: Immediately before plastering, dampen surfaces indicated for direct plaster application, except where a bonding agent has been applied. Moisten to obtain optimum suction for plastering.
- F. Installation of Plastering Accessories: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Install accessories of type indicated at following locations:
1. External Corners: Install corner reinforcement at external corners.
 2. Casing bead: Install casing beads at all places where plaster abuts dissimilar material, or as per details.
 3. Control Joints: Install at locations indicated on plans.
- G. Plaster Application: Apply plaster in accordance with Section 2507 and 2512 of the California Building Code.
1. Sequence plaster application with installation and protection of other work so that neither will be damaged by installation of other. Do not use materials that are frozen, caked, lumpy, dirty, or contaminated by foreign materials. Do not use excessive water in mixing and applying plaster materials.
 2. Base Coat Application: Apply in accordance with Section 2507 and 2512 of the California Building Code.
 - a. Base Coat 1 (scratch): Apply with sufficient material and pressure to completely embed into metal lath and develop a thickness of 3/8" and shall be scratched horizontally to form a key.
 - b. Base Coat 2 (brown): The second coat shall be brought out to proper thickness, rodded and floated sufficiently rough to provide adequate bond for the finish coat.
 3. Tolerances: Do not deviate more than plus or minus 1/8 inch in 10 feet from a true plane in finished plaster surfaces, as measured by a 10-foot straightedge placed at any location on surface.
 4. Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, before lathing where necessary. Except where full grouting is indicated or required for fire-resistance rating, grout at least 6 inches at each jamb anchor.
 5. Corners: Make internal corners and angles square; finish external corners flush with cornerbeads on interior work, square and true with plaster faces on exterior work.
 6. Thickness: Apply in accordance with Section 2512 of The California Building Code and ASTM C 926. Total of 7/8".
 7. Number of Coats: Apply plaster in 2 or 3 coats as indicated below or as shown.
 - a. Three Coats: Over the following plaster base:
 - 1) Metal lath.
 - b. Two Coats: Over the following bases:
 - 1) Concrete unit masonry.
- H. Base Coat Proportions: The proportion of aggregate to cementitious materials shall be as set forth in Table 2507.2 of The California Building Code.

1. Measuring Ingredients: Proportion and measure ingredients by means of calibrated boxes or containers of such nature that quantities measured can be readily and accurately checked at any time. Proportioning by shovel is not acceptable.
 2. Mixing Plaster: Mix plaster by machine for a minimum of 2 minutes. Mix no more plaster than can be properly placed within ½ hour after mixing.
- I. Moist-cure plaster base and finish coats to comply with the minimum requirements Table 2507.2 of The California Building Code. Keep scratch and brown coat moist. Continued water spraying shall be maintained, including weekends and holidays.
1. Cure time between base coat 1 (scratch) and base coat 2 (brown) shall be 7 days.
 2. Cure time between base coat 2 (brown) and finish coat shall be 14 days.
- J. Finish Coats: As follows:
1. Float Finish: Apply finish coat to a minimum thickness of 1/8 inch to completely cover base coat, uniformly floated to a true even plane with fine-textured float sand finish.
- K. Finish Coat Sample: The Contractor shall execute a 8' x 8' sample of each type of finish in texture and color as required, for approval by the Architect before proceeding with finish coats. Finish work shall match approved sample.
- L. Cutting and Patching: Repair cracks and indented surfaces. Point-up finish plaster surfaces around items that are built into or penetrate plaster surfaces. Repair or replace work to eliminate blisters, buckles, check cracking, dry outs, efflorescence, excessive pinholes, and similar defects. Repair or replace work as necessary to comply with required visual effects.
- M. Cleaning and Protecting: Remove plaster from other surfaces not to be plastered. When plastering is completed, remove unused materials, containers, equipment, and plaster debris. Protect plaster work from damage or deterioration until Substantial Completion.

END OF SECTION 09 24 00

SECTION 09 29 00

GYPSUM BOARD

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Gypsum Board Assemblies, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Gypsum Board at ceilings.
 - 2. Gypsum Board at walls.
 - 3. Taped and sanded joint treatment.
 - 4. Texture

1.02 SUBMITTALS

- A. Submit product data for gypsum board, joint tape and fasteners as per Section 01 33 00.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Gypsum Wallboard: ASTM C 36, United States Gypsum Company, Sheetrock brand Gypsum Panels, 5/8" Type X, tapered edge.
- B. Gypsum Wallboard Joint Treatment Materials: Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.
 - 1. Joint Tape: Sheetrock Joint Tape, cross fibered paper.
 - 2. Joint Compound: United States Gypsum Company, Sheetrock All Purpose Joint Compound Ready Mixed.
- C. Gypsum Board Accessories:
 - 1. Corner Bead: United States Gypsum Company, Sheetrock Brand Paper Faced Metal 3/4" Bullnose.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Commencement of work constitutes acceptance of substrate. All framing members shall be true and straight. Any framing or furring member that varies more than 1/8" from the plane of adjacent framing or furring members shall be corrected under the rough carpentry section before gypsum

wallboard is installed. Inspect all substrate and report all conditions which will jeopardize smooth satisfactory finish.

- B. Tolerances: Maximum variation from true flatness shall be 1/8" in 10 feet in any direction.

3.02 INSTALLATION

- A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840, GA-216 and Section 2508 of The California Building Code.
- B. Installing Gypsum Board Trim Accessories: For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.
 - 1. Install cornerbead at external corners.
 - 2. Install edge trim where edge of gypsum panels would otherwise be exposed.
- C. Finishing Gypsum Board Assemblies: Treat gypsum board joints, interior angles, flanges of cornerbead, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.
 - 1. Prefill open joints and damaged areas using All Purpose Joint Compound.
 - 2. Apply joint tape over gypsum board joints, including over trim accessories with flanges. Embed joint tape in joint compound.
 - 3. Apply two coats of joint compound or finishing compound over all joints and dimples from fasteners. Sand between coats as required.
- D. Apply Gypsum Board Texture Finishes as follows:
 - 1. Provide texture as per finish schedule.
- E. Ceilings: Provide minimum 5/8" gypsum board at ceilings.
- F. Walls: Provide minimum 5/8" gypsum board full height of all walls, to bottom chord of truss, unless noted otherwise.

END OF SECTION 09 29 00

SECTION 09 30 13

CERAMIC TILE

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Ceramic Tile, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following.
 - 1. Provide ceramic tile at toilet rooms.
 - 2. Provide 5/8" cementitious backer board over 1/2" OSB at all toilet room walls.
 - 3. Provide exterior tile wainscoat.

1.02 REFERENCES

- A. Handbook for Ceramic Tile Installation

1.03 SUBMITTALS

- A. In addition to Product Data for each type of tile and setting material indicated, submit the following:
 - 1. Samples of each type and composition of tile and for each color and texture required.
 - 2. Product data indicating manufacturer's specifications instructions for using mortar and grout.

1.04 REGULATORY REQUIREMENTS

- A. Ceramic tile flooring shall be stable, firm, and slip resistant. CBC Section 11B-302.1
- B. Static Coefficient of Friction: Tile shall be non-slip, with static coefficient of friction, wet or dry as per ASTM C 1028:
 - 1. Level Surfaces: Minimum 0.6.
 - 2. Step Treads: Minimum 0.6.

1.05 ADDITIONAL MATERIAL

- A. Contractor shall provide 3 % additional tile and trim pieces of each type, color and size used for this project. Deliver to Owner in securely packaged and labeled boxes.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Tile Products Manufacturers: Dal-Tile Corporation, or Equal.
- B. Tile-Setting and Grouting Materials Manufacturers:
 - 1. Laticrete International, Inc.
 - 2. Custom Building Products

- C. ANSI Ceramic Tile Standard: Provide tile that complies with Standard Grade requirements of ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.
- D. Factory Blending: For tile exhibiting color variations within the ranges selected during sample submittals, blend tile in the factory and package so tile units taken from one package show the same range in colors as those taken from other packages and match approved Samples.
- E. INTERIOR FLOOR TILE at RESTROOMS
 - 1. Field Tile: DAL TILE VERANDA SOLIDS Colorbody Porcelain
 - a. Composition: Porcelain
 - b. Size: 13" x 13"
 - c. Nominal Thickness: 3/8"
- F. INTERIOR WALL TILE at RESTROOMS
 - 1. Field Tile: DAL TILE VERANDA SOLIDS Colorbody Porcelain
 - a. Composition: Porcelain
 - b. Module Size: 13" x 20"
 - c. Nominal Thickness: 3/8"
 - 2. Wall Accent: DAL TILE COLOR WAVE Glass Mosaics
 - a. Composition: Glass
 - b. Module Size: 1" x 1"
 - c. Nominal Thickness: 5/16"
- G. INTERIOR WALL TILE at CLASSROOM WALLS and CORRIDOR
 - 1. Field Tile: DAL TILE VERANDA SOLIDS Colorbody Porcelain
 - a. Composition: Porcelain
 - b. Module Size: 13" x 20"
 - c. Nominal Thickness: 3/8"
- H. EXTERIOR TILE WAINSCOAT
 - 1. Wall Tile: DAL TILE FORMULA Colorbody Porcelain Tile
 - a. Composition: Porcelain
 - b. Module Size: 24"x48"
 - c. Finish: unpolished
 - d. Nominal Thickness: 7/16"
 - e. Color: as selected by architect
 - f. Provide chamfer at top and bottom edge and all outside corners.
- I. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with the following requirements:
 - 1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.

2. Provide radius at all inside corners, provide bullnose at all outside corners, provide cove base at all wall tile that abuts floor tile.
- J. Thin Bed Setting Material: Provide materials complying with ANSI A118.4.
1. LatiCrete 254 Platinum
- K. Grouting and Sealing Materials, as follows:
1. Walls
 - a. LATICRETE LATAPOXY 2000 Industrial Grout
 - b. LATICRETE Latasil 9118 Primer
 2. Floors
 - a. Laticrete LATAPOXY 2000 Industrial Grout
 - b. LATICRETE Latasil 9118 Primer

PART 3 - EXECUTION

3.01 PREPARATION

- A. Provide concrete substrates for tile floors installed with dry-set or latex-portland cement mortars that comply with flatness tolerances specified in referenced ANSI A108 series of tile installation standards for installations indicated.
1. Use trowelable leveling and patching compounds per tile-setting material manufacturer's written instructions to fill cracks, holes, and depressions.
 2. Remove protrusions, bumps, and ridges by sanding or grinding.
- B. Blending: For tile exhibiting color variations within the ranges selected during Sample submittals, verify that tile has been blended in the factory and packaged so tile units taken from one package show the same range in colors as those taken from other packages and match approved Samples.
- C. ANSI Tile Installation Standards: Comply with parts of ANSI A108 series of tile installation standards in "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated.
- D. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated.
1. Interior wall tile: W244C-07
 2. Interior Floor tile at toilet rooms: F113-07
- E. Extend tile work into recesses and under or behind equipment and fixtures to form a complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- F. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

- G. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints where adjoining tiles on floor, base, walls, and trim are the same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.
- H. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
1. Locate joints in tile surfaces directly above joints in concrete substrates.
 2. Prepare joints and apply sealants to comply with requirements of Division 7 Section "Joint Sealants."
- I. Mixing:
1. Mix Latex Portland Cement Mortar in accordance with manufacturer's instructions.
 2. The proper mortar consistency is such that when applied with the recommended notched trowel to the backing, the ridges formed in the mortar will not flow or slump.
- J. Installation of Setting Beds at Floors:
1. Install setting bed in accordance with TCA Handbook for Ceramic Tile Installation.
- K. Mortar Application:
1. Clean surface thoroughly. Dampen if dry, but do not saturate.
 2. Apply mortar with flat side of trowel, comb mortar using a notched trowel to obtain even setting bed. Tile shall not be applied to skinned over mortar.
- L. Floor Tile Installation: Install tile to comply with requirements indicated, including those referencing TCA installation methods and ANSI A108 series of tile installation standards.
1. Joint Widths: Install tile on floors with the following joint widths:
 - a. Porcelain Tile: 1/4"
 2. Back Buttering: For installations indicated, obtain 100 percent mortar coverage by complying with applicable special requirements for back buttering of tile in referenced ANSI A108 series of tile installation standards.
 3. Metal Edge Strips: Install at locations indicated or where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.
 4. Sound tile after setting. Replace hollow sounding units.
 5. Provide water proofing / anti-fracture membrane on all floors
- M. Wall Tile Installation: Install types of tile designated for wall installations to comply with requirements indicated, including those referencing TCA installation methods and ANSI setting-bed standards.
1. Joint Widths: Install tile on walls with the following joint widths:
 - a. Ceramic Mosaic Tile: 1/16 inch (1.6 mm).
 - b. Wall Tile: 1/16 inch (1.6 mm).

2. Back Buttering: For installations indicated, obtain 100 percent mortar coverage by complying with applicable special requirements for back buttering of tile in referenced ANSI A108 series of tile installation standards.

N. Installation of Grout:

1. Remove all mortar from face and edges of tile.
2. Force a maximum amount of grout into the joints. Cushioned edge tile shall be finished evenly to the depth of the cushion. Square edge tile shall be finished flush with the tile surface. Finished joint shall be uniform in color, smooth and without pinholes, voids or low spots.
3. Grout tile to comply with the requirements of the following tile installation standards:
 - a. For ceramic tile grouts (sand-portland cement, dry-set, commercial portland cement, and latex-portland cement grouts), comply with ANSI A108.10.
 - b. For chemical-resistant epoxy grouts, comply with ANSI A108.6.
 - c. For chemical-resistant furan grouts, comply with ANSI A108.8.

O. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter. Use cleaning materials and methods that comply with tile and grout manufacturers' written instructions.

1. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to brick and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

END OF SECTION 09 30 13

SECTION 09 51 13

ACOUSTICAL PANEL CEILINGS – LAY-IN

PART 1 – GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, and equipment, and performing all operations in connection with Acoustical Panel Ceilings as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Provide Acoustic Panels for Standard Ceilings.

1.02 SUBMITTALS

- A. Product Data.
- B. Samples: Submit three samples of each panel type.

1.03 ADDITIONAL MATERIALS

- A. Provide ten cartons of each of each type of material specified.

1.04 QUALITY ASSURANCE

- A. Interior wet work shall be completed prior to installation of panels. Windows and doors shall be in place. HVAC system shall be installed and operable to maintain a temperature range of 60 to 90 degrees F and maximum 70 percent relative humidity.
- B. Fire Classification Requirements: ASTM E84; All materials shall have flame spread of less than 25 and a smoke density rating of less than 450.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. USG Corporation
- B. Or approved equal

2.02 STANDARD CEILING Type 1

- C. Acoustical Panel: USG "F" Fissured
 - 1. Location: all suspended ceilings
 - 2. Size: 24" x 24".

3. Thickness: 3/4".
4. Light Reflectance: 0.70.
5. Weight: 1.45 lbs/SF.
6. Edge Detail: SL, Angled Tegular.
7. Material: Cast mineral fiber.
8. Color: White.
9. Acoustics: NRC 0.70, CAC Min. 35

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install panels when all work above grid is complete.
- B. Install panels in place free from damaged edges or other defects detrimental to appearance and function.
- C. Replace all soiled panels.

END OF SECTION 09 51 13

**Altro Wood Comfort
Commercial Smooth Sheet Vinyl Flooring
SECTION 09 65 16.23
RESILIENT SHEET FLOORING
(Commercial Smooth Sheet Vinyl Flooring)**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: This section includes labor, materials and other services necessary to complete resilient sheet flooring and accessories work. Conform with requirements of all Sections of Division 1, General Requirements, as it applies to the work of this Section.
- B. Related Sections:
 - 1. Section 03300 - Cast-in-Place Concrete: Concrete finishing.
 - 2. Section 06100 - Rough Carpentry: Plywood floor sheathing.
 - 3. Division 7 - Thermal and Moisture Protection.
 - 4. Division 15 - Mechanical.

1.02 REFERENCES

- A. **ASTM D 2047**, Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- B. **ASTM E 648/NFPA 253**, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
- C. **ASTM E662**, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- D. **ASTM F710**, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- E. **ASTM F 970**, Standard Test Method for Static Load Limit.
- F. **ASTM F1482**, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring.
- G. **ASTM F1303**, Standard Specification for Sheet Vinyl Floor Covering with Backing.
- H. **ASTM F2170**, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
- I. (RFCI) Resilient Floor Covering Institute
 - 1. RFCI Standard Slab Moisture Test Method (Calcium Chloride Method)

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's current printed product literature, specifications, installation instructions, and field reports in accordance with Section 01330 - Submittal Procedures.
- B. Shop Drawings: Submit shop drawings to indicate materials, details, and accessories in accordance with Section 01330 - Submittal Procedures including but limited to the following:
 - 1. Submit a cut diagram indicating seam locations and roll direction. Use mitered seam layouts for corners when changing directions 180 degrees (e.g. when running material down corridors which bisect at a right angle), unless approved otherwise.
- C. Samples: Submit duplicate 12" x 12" (300 mm x 300 mm) sample pieces of sheet material, 12" (300 mm) long [gully edge] [cap strip] [joint cover strip] [cove former] in accordance with Section 01330 - Submittal Procedures.
- D. Closeout Submittals: Submit the following:
 - 1. Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
 - 1. Training: Installer who has attended an Altro flooring installation training clinic.
- B. Regulatory Requirements: Provide sheet vinyl flooring in compliance with the following:
 - 1. Americans with Disabilities Act Architectural Guidelines (ADAAG).
 - 2. Occupational Safety & Health Administration (OSHA).

- C. Mock-ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods, including concrete substrate testing.
 - 1. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 - 2. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- D. Pre-installation Meeting: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, manufacturer's warranty requirements, and installer qualifications.

1.05 SITE CONDITIONS

- A. Temperature Requirements: If storage temperature is below 65F (18C) or the floor temperature is below 50F (10C), the Altro safety flooring product must be moved to a warmer place and allowed to reach this temperature before unrolling or installation. For further information, refer to current Altro Installation Practices and Quick Facts.
- B. Maintain air temperature and structural base temperature at flooring installation area between 68F (20C) and 80F (26C) for 48 hours before, during and 24 hours after installation.

1.06 WARRANTY

- A. Warranty period for Altro Wood Comfort shall be 10 years commencing on date of substantial completion. Refer to conditions of the contract for project warranty provisions.

1.07 BACKING

- A. Altro Wood Comfort uses non-woven polyester/cellulose, glass fiber reinforcement.

PART 2 PRODUCTS

2.01 FLOORING

- A. Sheet Vinyl Manufacturer: Wood Comfort by Altro, Telephone 800.377.5597, E-Mail Assistance: support@altrofloors.com
- B. Acceptable material: Altro Wood Comfort (measurements and product weights given below are approximate): Slip Resistance ASTM 2047 >.6 dry >.7 wet

COLORS

- 2. **Vintage Cherry Comfort WSMSC2803:** Thickness: 0.11" (2.85 mm); Roll Width: 6' 7" (2 m); Roll Length 65'5" (20 m); Roll Weight: 230 lb (102 kg);

2.02 ACCESSORIES

- A. **Vinyl welding rod:** Acceptable material:
 - 1. Altro weld rod
- B. **Cove former:** Acceptable material, sized to suit application:
 - 1. Altro Cove former [20R - 24 mm (1") radius] [38R - 45 mm (1.75") radius].
- C. **Gulley edge:** Acceptable material, vinyl, sized to suit application:
 - 1. Altro Gulley Edge [GA 35/25] [GE 35RE] [GE 25RE].
- D. **Cap strip:** Acceptable material, sized to suit application, [Vinyl] [stainless steel]:
 - 1. Altro Cap Strip [C4] [C7] [C8] [C11].
- E. **Subfloor Filler and Leveler:** Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
- F. **Metal edge strips:**
 - 1. Aluminum extruded, smooth, [mill finish] stainless steel with lip to extend over flooring.
- G. **Adhesives**
 - 1. Ecofix 20- Hard set for heavy rolling loads

PART 3 EXECUTION

3.01 EXAMINATION

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog, installation instructions.
- B. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.02 PREPARATION

- A. Flooring shall be installed over subfloors conforming to ASTM F710 for concrete and other monolithic floors or ASTM F1482 for wood subfloors.
- B. Always conduct moisture tests per ASTM F-2170 on all concrete slabs regardless of age or grade level. ASTM F-2170 Relative Humidity (RH) test results must not exceed 90%.
- C. Do not proceed with work until results of moisture condition tests are acceptable.
- D. When patching, a moisture tolerant patching compound must always be used.

3.03 INSTALLATION

- A. Wood Comfort Installation: Install Altro flooring in accordance with the current posted Altro Installation Practices and Quick Facts Guide. All Seams shall be heat welded with Altro Weldrod™ only. Failure to install Altro flooring in accordance with recommended procedures will void the Altro Limited Product Warranty.
- B. Coved Installation: Where Altro flooring is coved up wall surfaces and other abutments, installation shall be in accordance with Altro flooring Installation Practices using the following accessories:
 - 1. At standard wall finishes: Use Altro C7 vinyl cap strip to accommodate sheet vinyl to a height as indicated.
 - 2. At ceramic tile, Altro Whiterock semi-rigid wall cladding or FRP paneling: Use Altro C8 Vinyl Captile Strip or C4 cap, respectively.
 - 3. At 0.75" (19.1 mm) radius coving at juncture of vertical and horizontal surfaces: Use Altro Vinyl Cove Former 20R.
 - 4. At 1.5" (38 mm) radius coving at juncture of vertical and horizontal surfaces: Use Altro Vinyl Cove Former 38R.
 - 5. Top set cove base: Install in accordance with manufacturer's instructions.

3.04 SOUND INSULATION

- 1. Altro Wood Comfort provides 15dB of sound insulation.

3.05 CLEANING

Specifier Note: Altro flooring is unaffected by surface water and most chemicals which do not have a solvent action on vinyl. Certain organic solvents and chemicals, including asphalt, can cause staining. Acids and dyes may affect the color, which should be selected accordingly. Contact Altro for information about the effect of chemicals on Altro flooring.

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas.
 - 1. Repair or replace damaged installed products.
 - 2. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
- B. Protection:
 - 1. Sweep or vacuum all construction debris and dust first, then clean the flooring with Altro Clean 44 using an auto scrubber.

3.06 PROTECTION

- A. Cover and protect finished installation from damage from other trades using a non-staining, temporary floor protection

system, such as a reusable textured plastic sheeting.

Wood Comfort should be covered and protected from all other trades during construction with a suitable non-staining protective covering without taping to the surface of the flooring.

----- END OF SECTION -----

SECTION 10 14 00 SIGNS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Signage, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Room identification signs.
 - 2. Restroom signs
 - 3. Occupancy signs
 - 4. Accessibility signs

1.02 REFERENCES

- A. ASTM A53 – Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- B. ASTM A500 – Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- C. FED-STD-595 – Colors used in Government Procurement.
- D. ASTM D4802 – Poly (Methyl Methacrylate) Acrylic Plastic Sheet.
- E. Chapters 10, 11B and 30 of California Building Code.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 33 00, Submittal Procedures.
- B. Submit shop drawings listing sign styles, lettering and locations and overall dimensions of each sign.
- C. Submit samples illustrating full size sample sign of each type, style and color specified.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. All Signage shall conform to CBC Section 1007.9 and 11B-703.
 - 2. Tactile exit signage shall be provided per CBC 1011.3.
 - 3. Raised characters shall comply with CBC Section 11B-703.2
 - a. Depth: It shall be 1/32 inch minimum above their background.
 - b. Tactile Character type. Tactile characters on signs shall be sans serif uppercase characters and be duplicated Contracted (Grade 2) Braille.
 - c. Tactile Character size. Raised characters shall be a minimum of 5/8 inch and a maximum of 2 inches high based on the letter “I”. CBC Section 11B-703.2.5.
 - d. Finish and contrast: Contrast between characters, symbols and their backgrounds shall have a non glare finish. Character shall contrast with their background with either light

- characters on a dark background or dark characters on a light background. CBC Section 11B-703.5.1.
- e. Proportions: Raised characters on signs shall be selected from fonts where the width of the uppercase letter "O" is 60% minimum and 110% maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character. CBC 11B-703.4 and 11B-703.6
 - f. Character Spacing: Spacing between individual tactile characters shall comply with CBC Section 11B-703.2.7 and 11B-703.2.8
 - g. Braille: It shall be contracted (Grade 2) and shall comply with CBC Section 11B703.3 and 11B-703.4. Braille dots shall have adomed and rounded shape and shall comply with CBC Table and Figure 11B-703.3.1.
4. Mounting height: A tactile sign shall be located 48" minimum to the baseline of the lowest Braille cells and 60" maximum to the baseline of the highest line of raised characters above the finish floor or ground surface.
 5. Mounting location: A tactile sign shall be located on the approach side, as one enters or exits rooms or spaces, and be reached within 0" of the required clear floor space per CBC Section and Figure 11B-703.4.2 as follows
 - a. a clear floor space of 18"x18" minimum, centered on the tactile characters, shall be provided beyond the arc of any door swings between the closed position and 45 degree open position.
 - b. On the wall at the latch side of a single door.
 - c. On the inactive leaf of a double door with one active leaf.
 - d. On the nearest adjacent wall where there is no wall space at the latch side of a single door or no space at the right side of a double door with two active leaves.
 6. Visual characters shall comply with CBC Section 11B-703.5 and shall be 40" minimum above finish floor or ground.
 7. Pictograms shall comply with CBC Section 11B-703.6
 8. Symbol of accessibility shall comply with CBC Section 11B-703.7

PART 2 - PRODUCTS

2.01 GENERAL

- A. Room Identification Signage: Provide room identification signs where indicated. Install on wall adjacent to door latch, on latch side, 60 inches above finished floor to bottom of tactile lettering.
 1. Materials: Laminated acrylic Plastic Sheet, ASTM D4802, ¼ inch thick
 - a. Upper Layer: Non-glare clear acrylic, 1/8 inch thick.
 - b. Lower Layer: Opaque acrylic, 1/8 inch thick.
 2. Fasteners: stainless steel mechanical mounting, vandal / tamper resistant.
 3. Color: As selected by Architect
 4. Lettering Type Style: Helvetica Medium, caps only
- B. Restroom Signage: Doorways leading to restrooms shall be identified with sign as detailed on drawings.
 1. Materials: Laminated acrylic Plastic Sheet, ASTM D4802.
 2. Male Restroom Signage: As per detail on drawings.
 3. Female Restroom Signage: As per detail on drawings.

4. Unisex Restroom Signage: As per detail on drawings.
 5. Fasteners: stainless steel mechanical mounting, vandal / tamper resistant.
 6. Color: As selected by Architect.
 7. Lettering Type Style: sans serif, caps only.
- C. Occupant Load Sign: Provide maximum occupancy load signs where indicated.
1. Materials: Laminated acrylic Plastice Sheet, ASTM D4802, clear ¼ inch thick.
 - a. Upper Layer: Non-glare clear acrylic, 1/8 inch thick.
 - b. Lower Layer: Opaque acrylic, 1/8 inch thick.
 2. Fasteners: stainless steel mechanical mounting, vandal / tamper resistant.
 3. Color: As selected by Architect.
 4. Lettering Type Style: Helvetica Medium.
 5. Obtain occupant load number from Architect.
- D. Accessibility Sign: Provide at each accessible building entrance.
1. Sign shall be visible to persons along approaching pedestrian ways. Provide additional directional signs as indicated on drawings.
 2. Fasteners: stainless steel mechanical mounting, vandal / tamper resistant.
- E. Parking Area Signs:
1. Materials:
 - a. Post mounted and wall mounted signs shall be fabricated from 16 guage enameling iron with porcelain enamel finish.
 - b. Mount signs to post with minimum two 3/16 inch diameter round head bolts with tamperproof nuts, galvanized.
 - c. Posts: 2” diameter galvanized steel pipe weighing a minimum of 3.65 lbs per foot and conforming to ASTM A53, Schedule or 2 inch x 2 inch galvanized steel tubing, weighing a minimum of 4.32 lbs per foot and conforming to ASTM A500, Grade B, 3/16 inch wall thickness.
 2. Traffic Entry Warning Signs: As per drawings.
 3. Parking Stall Signs: As per drawings.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means installer accepts existing surfaces.

3.02 INSTALLATION

- A. Locate signs where indicated, using mounting methods specified. Install level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
 1. Post mounted signs: Set post in concrete base minimum 12 inch diameter and 18 inches deep. Signs set in paving shall be mounted in core drilled holes minimum 8 inch diameter and 18 inches deep with top of concrete fill flush to paving.

2. Wall mounted signs shall be installed after painting of wall surface.

3.03 CLEANING

A. After installation, clean soiled surfaces. Protect units from damage until acceptance by the Owner.

END OF SECTION 10 14 00

SECTION 10 28 13

TOILET ROOM ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Toilet Room Accessories, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following.
 - 1. Provide paper and soap dispensers.
 - 2. Provide waste receptacles.
 - 3. Provide warm air dryers
 - 4. Provide mirrors.
 - 5. Provide grab bars
 - 6. Provide underlavatory guards

1.02 SUBMITTALS

- A. Manufacturer's Product Data. Include construction details, material descriptions and thicknesses, dimensions, profiles, fastening and mounting methods, specified options, and finishes for each type of accessory specified.

1.03 ACCESSIBILITY REQUIREMENTS

- A. Toilet accessories required to be accessible shall be mounted at heights according to CBC Section 11B-602 through 11B-612.
- B. Grab bars in toilet facilities and bathing facilities shall comply with CBC Section 11B-609. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges. The space around the grab bars shall be as follows.
 - 1. 1-1/2" between grab bar and the wall
 - 2. 1-1/2" minimum between the grab bar and projecting objects below and at the ends.
 - 3. 12" minimum between the grab bar and projecting objects above.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Manufacturers: Provide accessories by one of the following:
 - 1. Bradley, (basis for design)
 - 2. Bobrick
- B. Toilet Paper Dispensers:
 - 1. Model: Bradley 522

2. Quantity: Provide (1) at each toilet
 3. Location: Verify with Architect.
 4. Accessible stall: Bradley 5412
- C. Paper towel dispenser and waste receptacle:
1. Model: Bradley 2017-10, semi-recessed Bradex.
 2. Quantity: Provide (1) at single use toilet rooms. Provide (2) at joint use toilet rooms.
 3. Location: Verify with Architect.
- D. Feminine Napkin Disposal:
1. Model: Bradley 4731-15, recessed.
 2. Quantity: Provide (1) at each female toilet.
 3. Location: Verify with Architect.
- E. Toilet Seat Cover:
1. Model: Bradley 584.
 2. Quantity: Provide (1) at each toilet.
 3. Location: Verify with Architect.
- F. Soap Dispenser:
1. Model: Bradley 6562.
 2. Quantity: Provide (1) at each lavatory.
 3. Location: Install above lavatory.
- G. Mirrors:
1. Model: Bobrick B-290, 18" x 36".
 2. Quantity: Provide (1) at each lavatory.
 3. Location: See interior elevations.
- H. Hand Dryers:
1. Manufacturer: Saniflow
 2. Description: Speedflow, cast iron white enameled coating, surface mounted, 4" projection
 3. Model: M06AF-UL.
 4. Quantity: Provide (1) at each lavatory
 5. Location: See interior elevations.
 6. Electrical: verify voltage with electrical drawings
- I. Grab Bars:
1. Model: Bobrick B-490 Series
 2. Quantity and Configuration: As per drawings
 3. Location: As per drawings.
- J. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer.
- B. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- C. Secure mirrors to walls in concealed, tamper-resistant screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated.
- D. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.
- E. Verify all dimensions shown on drawings by taking field measurements.
- F. Coordinate with all other trades whose work relates to the items specified herein for the placing of all required backing and furring to ensure proper anchorage and proper fit.
- G. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 10 28 13

SECTION 12 32 16 PLASTIC LAMINATE – CLAD CASEWORK

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Plastic Laminate – Clad Casework, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following.
 - 1. Provide base cabinet units.
 - 2. Provide upper cabinet units.
 - 3. Provide wall units.
 - 4. Provide countertops.
- C. Casework located at the following locations are included in this section
 - 1. All casework as per floor plan

1.02 REFERENCES

- A. NEMA LD-3 High Pressure Decorative Laminates
- B. PS 1 – Construction and Industrial Plywood
- C. PS 20 – American Softwood Lumber Standard
- D. PS 51 Hardwood and Decorative Plywood
- E. WI – Woodwork Institute
- F. AWS – Architectural Woodwork Standard
- G. Chapter 16A, California Building Code
- H. ANSI A208.1 Wood Particle Board
- I. AQMD – Local Air Quality Management County of Imperial Regulations

1.03 ACCESSIBILITY REQUIREMENTS

- A. Operable parts all accessible casework shall comply with CBC Section 11B-309.
- B. MDF: Medium Density Fiberboard
- C. Exposed Portions of Cabinets: Surfaces visible when doors and drawers are closed, including bottoms of cabinets more than 48” above floor, and surfaces visible in open cabinets

- D. Semi-exposed Portions of Cabinets: Surfaces behind solid doors, such as interiors of cabinets, shelves, dividers, interiors and sides of drawers, and interior faces of doors. Tops of cases 78 inches or more above floor are defined as semi-exposed.
- E. Concealed Portions of Cabinets: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, and ends and backs that are placed directly against walls or other cabinets.
- F. Hardwood Plywood: A panel product composed of layers or plies of veneer, or of veneers in combination with lumber core, hardboard core, MDF core, or particleboard core, joined with adhesive, and faced both front and back with hardwood veneers.

1.04 SUBMITTALS

- A. Submit as per Section 01 33 00, Submittal Procedures.
- B. LEED Submittals:
 - 1. Product Data for Credit MR 4.1 and MR 4.2: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
 - a. Include statement indicating costs for each product having recycled content.
 - 2. Certificates for Credit MR 7: Chain-of-custody certificates certifying that wood used to produce cabinets and countertops complies with forest certification requirements. Include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
 - b. Include statement indicating costs for each certified wood product.
 - 3. Product Data for Credit EQ 4.4: For adhesives and composite wood products, documentation indicating that product contains no urea formaldehyde.
- C. Submit Shop drawings showing location of each item, dimensioned plans and elevations and large-scale details.
- D. Shop drawings shall include materials, components profiles, fastening methods, assembly methods, joint details, accessory listings and schedule of finishes.
- E. Product Data:
 - 1. For each type of product indicated.
 - 2. All hardware.
- F. Submit a complete line of plastic laminate chips, in wood grains and solid colors, identified with manufacturer's name and chip number.
- G. Submit 6 inch sample of PVC edge banding.
- H. Cabinet Samples:

1. Provide full size base cabinet with countertop and upper cabinet of each casework type indicated, in specified finish with hardware installed. Include pair of doors and at least one drawer.
2. Approved sample unit may be used as part of the Work.

1.05 QUALITY ASSURANCE

- A. Cabinets and countertops shall be manufactured in accordance with the latest edition of the Architectural Woodworks Standards (AWS) for Grade specified herein or to higher standards as specified herein or shown on drawings.
- B. Before delivery to the jobsite, the casework supplier shall submit a Woodwork Institute (WI) Certified Compliance Certificate indicating the products he will furnish for this project, and certifying that they will fully meet all the requirements of the Grade specified.
- C. Confirmation of all WI inspections shall be submitted.
- D. All WI cost shall be included.
- E. All Casework construction shall comply with the structural requirements of Table 16A-O, California Building Code for required horizontal force factor for anchorage of non-structural items.
- F. Forest Certification: Fabricate cabinets and countertops with wood and wood-based products produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- G. Coordination: Coordinate layout and installation of framing and reinforcements in walls and partitions for support of manufactured wood casework

1.06 DELIVERY, STORAGE AND HANDLING

- A. Conform to Section 26, WIC Manuel of Millwork and WIC Technical.
- B. Deliver manufactured wood casework only after painting, utility roughing-in, and similar operations that could damage, soil, or deteriorate casework have been completed in installation areas. If casework must be stored in other than installation areas, store only in areas where environmental conditions meet are equal to conditions that will be maintained when building is occupied.
- C. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

1.07 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install manufactured wood casework until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Verify actual dimensions of construction contiguous with manufactured wood casework by field measurements before fabrication.

1.08 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of manufactured wood casework that fails in material or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Delamination of components or other failures of glue bond.
 - b. Warping of components.
 - c. Failure of operating hardware.
 - d. Deterioration of finishes.
 - 2. Warranty Period: Five years from date of substantial completion.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Grade:
 - 1. Laboratory Grade in accordance with WIC Manual of Millwork, Section 15.
 - 2. Grade Rules Modifications:
 - a. Interior surfaces of open cabinets shall be Premium Grade.
 - b. Interior surfaces of hinged doors shall be Premium Grade.

2.02 MATERIALS, GENERAL

- A. Plastic Laminate: High pressure decorative laminate complying with NEMA LD-3.
 - 1. Cabinet Surfaces:
 - a. Vertical surfaces: Decorative high pressure laminate, general purpose type, .028 inch thick
 - b. Horizontal surfaces: Decorative high pressure laminate, .050 inches thick
 - c. Post formed: Decorative high pressure laminate, .042 inch thick
 - 2. Countertops:
 - a. Horizontal surfaces: Decorative high pressure laminate, .050 inches thick
 - b. Post formed: Decorative high pressure laminate, .042 inch thick
 - 3. Countertops (Chemical and Stain Resistant):
 - a. Horizontal surfaces: Decorative high pressure laminate, .050 inches thick
 - b. Post formed: Decorative high pressure laminate, .042 inch thick
 - 4. Laminate Backing Sheet: NEMA LD-3 BKS/-91 Backing grade, undercoated plastic laminate, with face material of .028 inches or BKS/-92 with face material of .042 or .050 inches.
 - 5. Laminate Manufacturers: Products of the following manufacturer or supplier form the basis for design and quality intended.

- a. Formica Corporation.
 - b. Ralph Wilson Plastics Co.
 - c. Nevamar Corporation.
- B. Thermoset Decorative Panel: Particle Board or MDF finished with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.
 - C. Wood Materials: Mahogany or other close grain hardwood
 - D. Sheet Materials:
 - 1. Wood Particleboard: Industrial Grade, ANSI A208.1, Table I, Grade 1-M-2, composed of wood chips, medium density made with water-resistant binder.
 - 2. MDF: ANSI A208.2, Grade 130.
 - A. Hardwood Plywood PS 51; rotary cut Philippine mahogany, or other close-grain hardwood. All plywood shall be laminated on both sides for a balanced panel.
 - B. Edgebanding for Plastic Laminate: Rigid PVC extrusions, through color with satin finish.
 - 1. 3 mm thick at doors and drawer fronts and face of casework.
 - 2. 1 mm thick elsewhere.
 - C. Edgebanding for Thermoset Decorative Panels: PVC or polyester edge banding complying with LMA EDG-1 and matching thermoset decorative panels.
 - D. Low-Emitting Materials: Provide manufactured wood casework, including countertops, made with adhesives and composite wood products containing no urea formaldehyde.

2.03 CABINET MATERIALS

- A. Exposed Cabinet Materials:
 - 1. Plastic Laminate: NEMA Grade VGS.
 - 2. Provide specified edgebanding on all exposed edges.
- B. Semi-exposed Cabinet Materials:
 - 1. Thermoset Decorative Panels: Provide thermoset decorative panels for semi-exposed surfaces unless otherwise indicated.
 - 2. Plastic Laminate at interior surfaces of open cabinets
 - 3. Plastic Laminate at interior surface of hinged doors
- C. Concealed Cabinet Materials:
 - 1. Plastic Laminate: Grade BKL.

2.04 DESIGN, COLOR, AND FINISH

- A. Design: Provide manufactured wood casework of the following design:

1. Construction Style: Style A frameless
 2. Construction Type: Type I, multiple self-supporting units rigidly joined together.
 3. Door and Drawer Front Style: Flush overlay with wire pulls.
- B. Thermoset Decorative Panel Colors, Patterns, and Finishes: As selected by Architect from casework manufacturer's full range.
- C. Plastic-Laminate Colors, Patterns, and Finishes: As selected by Architect from plastic-laminate manufacturer's full range.
- D. PVC Edgebanding Color: As selected from casework manufacturer's full range.

2.05 COUNTERTOPS

- A. Countertops, General: Provide smooth, clean exposed tops and edges in uniform plane free of defects. Provide front and end overhand of 1 inch over base cabinets.
- B. Plastic-Laminate Tops: Plastic-laminate sheet, shop bonded to both sides of 1-1/8-inch plywood or particleboard. Sand surfaces to which plastic laminate is to be bonded.
1. Plastic Laminate for Flat Tops: NEMA Grade HGS.
 2. Plastic Laminate for Backing: NEMA Grade BKL.

2.06 DRAWERS

- A. Drawer Manufacturers: Products of the following manufacturer or supplier form the basis for design and quality intended.
1. DBS Drawer Box Specialties, (800) 422 9881.
- B. Drawer Specifications:
1. Material: Prefinished Hardwood Maple Plywood
 2. Sides: 15 mm", Prefinished Hardwood Maple Plywood, 11 ply
 3. Bottom: 1/2", Prefinished Hardwood Maple Plywood, 9 ply
 4. Bottom detail: DBS Option A.
 5. Corner detail: Dovetail
 6. Top edge detail: Bullnose, pre-finished plywood
 7. Face: 3/4" plastic laminate anchored to drawer box

2.07 CABINET HARDWARE

- A. Drawer Slides: Minimum 100 lb capacity for all drawers. Full extension ball bearing type only. ACCURIDE A3832 or equal.
- B. File Drawer Slides: Minimum 150 lb capacity for all drawers. Full extension ball bearing type only. ACCURIDE A417 or equal.
- C. Hinges: Heavy duty wrap around, non-removal type pin butts, ROCKFORD 851. Minimum of 2 hinges on doors under 42 inches in height, minimum of 3 hinges on doors over 42 inches in height.
- D. Shelf Seismic Restraint Clip: Hettich #1005082, Provide at all open shelves.

- E. Magnetic Catches: EPCO 592. Provide at all cabinet doors.
- F. Elbow Catches: EPCO 1018 Stainless Steel. Provide at inactive cabinet door leaf.
- G. Pulls: Builders No. 9054, 4 inch center to center, stainless steel, U shaped wire pull.
- H. Door Locks: Minimum 5 pin tumbler, OLYMPUS-700SC Schlage keyway, integrated with key system specified in Section 08 71 00 Door Hardware
- I. Drawers Locks: Minimum 5 pin tumbler, OLYMPUS-800SC Schlage keyway, integrated with key system specified in Section 08 71 00 Door Hardware
- J. Keying for Door and Drawer Locks: Each room keyed differently, all locks keyed to master key, integrated with key system specified in Section 08 71 00 Door Hardware
- K. Padlockable Cam Lock: OLYMPUS DCP with DCNP-500-ARP Anti-rotation plate.

2.08 CABINET FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Apply plastic laminate in full uninterrupted sheets consistent with manufactured sizes. Make corners and joints hairline.
- C. Countertop Backsplash: Coved
- D. Countertop Edge: Rolled, no drip bullnose where sink occurs
- E. Plastic Laminate Faced Cabinet Construction: As required by referenced quality standard, but not less than the following:
 - 1. Semi-Exposed Surfaces: Low pressure decorative melamine overlay, except as specified herein.
 - a. Provide high pressure laminate to all visible surfaces from a seated or standing position, including interior surfaces of open casework, shelving and surfaces behind glass doors.
 - b. Provide high pressure laminate to interior surfaces of hinged doors.
 - 2. Bottoms and Ends of Cabinets, and Tops of Wall Cabinets and Tall Cabinets: 3/4-inch particleboard, plastic-laminate faced on exposed surfaces, thermoset decorative panels on semi-exposed surfaces.
 - 3. Shelves: Thermoset decorative panels.
 - a. 3/4 inch thick for shelves less than 32 inches in length
 - b. 1 inch thick for shelves over 32 inches in length
 - 4. Backs of Cabinets: 1/2-inch particleboard, plastic-laminate faced [on exposed surfaces, thermoset decorative panels on semi-exposed surfaces].
 - 5. Drawer Fronts: 3/4-inch particleboard, plastic-laminate faced.
 - 6. Doors: 3/4-inch particleboard or MDF with wood stiles and rails, plastic-laminate faced.

- F. Drawer lock anchor: Provide ¾" x 4" backer for cam of padlockable cam lock
- G. TOEKICK: Provide ¾" Hardwood Plywood, 9 ply, detached.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify adequacy of backing and support framing.

3.02 EXAMINATION

- A. Examine areas, with installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements, and other conditions affecting performance of manufactured wood casework.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 INSTALLATION, GENERAL

- C. Set and secure casework in strict accordance with Section 26, WIC Manual of Millwork.
- D. Casework shall be anchored to wall or floors to conform to the minimum requirements of Section 1613A and 1614A, California Building Code.

3.04 CASEWORK INSTALLATION

- A. Install level, plumb, and true; shim as required, using concealed shims. Where manufactured wood casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.
- B. Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16-inch of a single plane. Fasten cabinets to masonry or framing, wood blocking, or reinforcements in walls and partitions with fasteners spaced 24 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16 inch.
 - 1. Where base cabinets are not installed adjacent to walls, fasten to floor at toe space with fasteners spaced 16 inches o.c. Secure sides of cabinets to floor, where they do not adjoin other cabinets, with not less than two fasteners.
- C. Wall Cabinets: Hang cabinets straight, level, and plumb. Adjust fronts and bottoms within 1/16 inch of a single plane. Fasten to hanging strips, masonry, or framing, blocking, or reinforcements in walls or partitions. Align similar adjoining doors to a tolerance of 1/16 inch.
 - 1. Fasten through back, near top and bottom, at ends, and not more than 16 inches o.c.
 - 2. Use toggle bolts at hollow masonry.
 - 3. Use expansion anchors at solid masonry.
 - 4. Use No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish at metal-framed partitions.

- 5. Use toggle bolts at plaster on metal lath.
- D. Install hardware uniformly and precisely. Set hinges snug and flat in mortises unless otherwise indicated. Adjust and align hardware so moving parts operate freely and contact points meet accurately. Allow for final adjustment after installation.
- E. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.05 INSTALLATION OF TOPS

- A. Field Jointing: Where possible, make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so project-site processing of top and edge surfaces is not required. Locate field joints where shown on shop drawings.
 - 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- B. Secure tops to cabinets with Z-or L-type fasteners or equivalent, using two or more fasteners at each front, end, and back.
- C. About top and edge surfaces in one true plane, with internal supports placed to prevent deflection.
- D. Secure backsplashes and end splashes to walls with adhesives.
- E. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.06 CLEANING AND PROTECTING

- A. Repair or remove and replace defective work as directed on completion of installation.
- B. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.
- C. Protection: Provide 6-mil plastic or other suitable water-resistant covering over countertop surfaces. Tape to underside of countertop at a minimum of 48-inches o.c. Remove protection at substantial completion.

END OF SECTION 12 32 16

SECTION 21 13 13 – WET-PIPE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, equipment, appliances, and necessary incidentals for the complete installation of all fire protection systems as indicated and as specified herein. These specifications are intended to describe, generally, the scope of work to be performed under this contract. All work necessary for a complete operating fire protection system in areas indicated, including but not limited to:
 - 1. Fixtures and equipment.
 - 2. Trenching and compaction of underground piping.
 - 3. Fire sprinkler piping.
 - 4. New fire sprinkler riser for Clinic and new riser for each existing tenant.
- C. Areas to be provided with sprinklers shall be:
 - 1. Entire structure
- D. Related Work not in this section:
 - 1. The following work, although similar in nature or relevant to the work of the section, is required in other sections or is to be furnished by others:
 - a. Underground dedicated water line for private fire hydrants and building sprinkler system. See Fire Protection Drawings.
 - b. Interior riser stubbed 18” above finished floor with flange. See Fire Protection Drawings.
- E. Guarantees: Furnish a written guarantee form, required under Division 1, against defects in materials and workmanship for 1 year. Guarantee shall include repair of damage to, or replacement if so required of any part of premises caused by water leaks or breaks in pipe, fixtures, or equipment provide under this Division, except when damage is caused by abuse.
- F. Permits and Fees: Contractor shall coordinate for all permits required by all governing agencies. Owner shall pay all permit fees.

1.02 REFERENCES

- A. National Fire Protection Association (NFPA):
 - 1. NFPA 13, Installation of Sprinkler Systems
 - 2. NFPA 25, Care & Maintenance of Sprinkler Systems
 - 3. NFPA 14, Installation of Standpipe and Hose Systems
 - 4. NFPA 24, Private Fire Service Mains and Their Appurtenances
- B. American Society for Testing & Materials (ASTM)
- C. American Welding Society (AWS): Standard Qualifications of Welding Procedures and Welders for Piping and Tubing

- D. California Building Code
- E. California Fire Code

1.03 SUBMITTALS

- A. Submit product data as per section 01 33 00 - Submittals.

1.04 QUALITY ASSURANCE

- A. Applicator Qualifications: Contractor shall provide evidence of having a minimum of five (5) years experience in the fabrication and installation of fire protection systems and must possess a valid C-16 California Fire Sprinkler Contractor's License.
- B. Requirements of Governing Agencies: Conform to all requirements of the agencies listed below in addition to all other agencies having jurisdiction.
 - 1. Governing Agency
 - 2. California State Fire Marshall
 - 3. Local Fire Marshal

1.05 PERMITTING

- A. The fire sprinkler system is a deferred approval item. Contractor shall be responsible to provide a complete design and drawings for submittal to governing agency for review and approval. Drawings shall be stamped and signed by a licensed engineer.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials to be used in this project shall be new and shall have U.L. or F.M. and CSFM approval.
- B. Pipe and fittings Above Ground:
 - 1. Branch piping: Schedule 40 black steel pipe, ASTM A53 with Class 125 Standard cast-iron screwed fittings, ANSI B16.4. Thin Wall Pipe and Light Wall Pipe are approved for this project in all areas out of reach of students.
 - 2. Main Piping: Schedule 40 black steel pipe, ASTM A53, threaded, welded, rolled groove without metal removal or grooved end in accordance with manufacturer's instructions, Victaulic's, Gustin-Bacon or equal. Fittings shall be standard weight weld or Class 125 Standard cast-iron screwed fittings, ANSI B16.4 or Victaulic fittings with grade E gaskets. Thin Wall Pipe and Light Wall Pipe are approved for this project in all areas out of reach of students.
 - 3. Mechanical couplings and fittings shall be of same manufacturer.
 - 4. Victaulic type or equal, Hookers and FIT fittings are not acceptable.
- C. Pipe and fittings Below Ground:
 - 1. Class 51 ductile iron pipe cement-lined, ANSI A21.51 and ANSI A21.4. Fittings shall be 250-lb. cast-iron cement-lined, ANSI 21.10 and ANSI A21.4. Joints shall be restrained type,

consisting of bolted mechanical joint, with joint retainer gland, ANSI A21.11. Refer to pipe protection as specified herein.

2. As approved by Code Authorities, approved PVC piping may be used as an option on-site, beyond 5-feet of building boundary.

D. Valves (Provide supervisory switches at all control valves):

1. O.S. & Y. Valves; 175 lb. WWP 2 inch and smaller: Stockham B-133, Crane 459 or Nibco T-104-0 or equal, bronze body, screwed.
2. O.S. & Y. Valves; 175 lb. WWP 2-1/2 inch and larger: Stockham G-634, Crane 467 or Nibco F-607-0, or equal, iron body, flanged.
3. Butterfly Valves: 175 psig, ductile iron body; nickel plated ductile iron disc; stainless steel stem; integral tamper switch; slow close gear operator.
4. Angle Valves: 175 lb. WWP, Nibco T-301, or equal, bronze screwed.
5. Check Valves; 2-1/2 inch and larger: 175 lb. WWP, Victaulic Series 717 or Gruvlok Series 7800 FP, or equal.
6. Check Valves (Non-Slam): Muessco 101 AP, 125 lb. ANSI iron body, bronze seats and discs and stainless steel spring.
7. Alarm Bell: Water operated motor gong with guard. Provide signage "Sprinkler Fire Alarm".
8. Pressure Switches: U.L. listed, automatic recycle retard with DPDT contacts, Potter-Roemer 6200 series, Viking VSR-D or equal.
9. Alarm Check Valve Assembly: Grinnell Model H-2, Viking model F-1 or G-1 or equal, completed with retard chamber and all necessary appurtenances.

E. Fire Sprinkler Heads:

1. Sprinkler heads for all other finished areas shall be recessed type with chrome finish head and white color finish for escutcheon; Viking Micromatic Model M, Central or equal.
2. In areas where there are no finished ceilings, upright or pendant type shall be provide as required to suit installation; Viking Model M, with brass finish, Central or equal.
3. Provide 6 spare sprinkler heads of each type with wrench in cabinet per NFPA 13.
4. All sprinkler heads shall be quick response type.

F. Pressure Gauges: U.L. approved equivalent to Potter-Roemer 6240 or equal, 0-300 PSI rating.

G. Fire Department Connections: Two (2) way inlet connection with caps and chains, rough brass, Standard S133 (4 x 2-1/2 x 2-1/2), post type and labeled "Auto-Sprk", with local fire department hose thread, Potter Roemer 5730 or equal.

H. Post indicator and Valve: 175 psig cast-iron body bronze mounted, double disc, non-rising stem gate valve with indicating post flange and round, full length adjustable cast iron body indicator post. Handle shall be secured with pad break-a-way type and lock. Control operator nut shall be 36 to 42 inches above grade, Stockham F-635-O valve and G-91 post, Kennedy or equal (provide supervisory switch).

PART 3 - EXECUTION

3.01 INSPECTIONS

- A. Inspections: Prior to commencing work required by this section, inspect all work of other trades and verify that such work has been properly completed and installed to allow for proper installation of all materials and methods required of this section.

1. All fire protection system shall be installed in accordance with the requirements of all governing authorities and the referenced standards.

3.02 INSTALLATION

A. Discrepancies:

1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
3. Interferences between installed work and various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades, at no extra cost to the Owner, when so directed by the Architect.

B. Conform to all requirements of agencies having jurisdiction.

C. Attention is called to requirements that air conditioning, plumbing and electrical systems are to be installed in locations adjacent to sprinkler system piping.

1. Coordinate efforts with other trades doing work on site to avoid interference.
2. When limited space conditions exist above ceilings due to installation of combined trades, penetrations through the structural beams will be provided at designated locations mid-height of the beam and at one third intervals of beam span. Verify and coordinate all locations per structural drawings and Structural Engineer.
3. Work specified shall be installed and arranged as directed in a satisfactory manner.
4. Check conditions at site and examine pertinent drawings before preparing working drawings. Take measurements for this work, verify drawings of other trades and be responsible for proper installation in available space for appurtenances herein specified or indicated.
5. Before making any changes considered necessary, secure approval from the Architect for such variations.

D. Sleeves: All sleeves in concealed and exterior walls shall be 20 gauge galvanized iron 1 inch O.D. larger than the pipe, caulking in a moisture proof manner.

E. Flexible Connections:

1. Flexible connections shall be of approved design and installed where, when or deemed necessary.
2. Where piping crosses seismic joints, install a flexible pipe expansion joint of approved design to absorb the specified seismic movement in any direction. Shop drawings of proposed joint shall be submitted.

F. Penetrations through fire rated walls or floors shall be U.L. listed through penetration firestop system assemblies for fire separation rating as required and installed per manufacturers printed instructions. Provide and install polished chromium plated brass floor ceiling or wall plates for all pipes, exposed in finished portions of the building.

G. For buried cast iron and ductile iron valves, pipe and fittings: Install inside a 9 mil polyethylene sleeve in accordance with AWWA Standard C-105. Any steel parts, such as bolts, nuts, clamps, tie-rods, etc., shall be coated with Koppers Bitumastic 505 before encasing in polyethylene sleeve.

3.03 FLASHING INSTALLATION

- A. Provide flashing for all pipe and tubing extending through the roof. Extend the base flashing at least 8-inches in all directions from the pipe and turn the cap flashing down into the pipe. Flashing shall be installed as to be watertight.

3.04 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Test system in accordance with NFPA #13, #14, #24, CSFM and local Fire requirements. Attention is called to NFPA pamphlets 13 and 24 requiring flushing and testing in the presence of Architect, Owner's Insurance Underwriter and IOR.
- C. Certification: Upon completion, subcontractor and general contractor's representatives shall jointly inspect work of this Section and deliver a written certification to the Architect, that installed materials and workmanship conform to specifications. Provide the NFPA certificate (under ground and above ground) to the Owner, the Architect, the local fire official, and Governing Agency.
- D. All labeling of valves and equipment shall be done as required.

END OF SECTION 21 13 13

SECTION 22 00 00 PLUMBING

PART 1 – GENERAL

1.01 SUMMARY

- A. The drawings and general provisions of the Contract, including General and Special Conditions and Division 1 Specification Sections, shall govern the work in this section the same as though written herein in full. It is the intent to provide a complete, tested, and operating plumbing system.
- B. Scope of Work: The work to be done under this heading shall include furnishing all labor, materials, fixtures and services together with the demolition, installation, testing and adjusting necessary to the acceptable completion of all the plumbing work shown on the drawings or as herein specified.
- C. Description Of Work
 - 1. The following list is intended to generally describe the various plumbing systems to be installed, but shall not be considered as a limit of the work to be performed under this section of the specifications:
 - a. Provide classrooms sinks

1.02 SUBMITTALS

- A. The Plumbing Contractor shall provide submittal data for all fixtures and material being furnished by him to the Architect for approval. Submit the following according to the Conditions of the Contract and Division 1 Specifications Sections: 01 33 00.
 - 1. Product data for:
 - a. Classroom sink package
- B. Each submittal brochure shall contain all of the items listed above and shall be bound with covers, indexed with tabs and have a table of contents. Submittals shall indicate make, specific model and size, accessories, dimensional drawings, diagrams and other pertinent information. Submit all items at one time. Partial submittals are not acceptable. Substitutions of materials and fixtures from that specified herein, noted on the drawings or as outlined in the General or Supplementary Conditions shall be clearly identified as substitutes. Deviation data to clearly demonstrate equivalency and comparisons between specified items and proposed substitutions shall be provided by the Plumbing Contractor unless prior arrangements are made to compensate the Architect for researching this data. “Equivalent” submittals lacking this information will be returned “not reviewed”. Approval of substitutions shall in no way relieve the Plumbing Contractor from the responsibility of complying with the plans and specifications and installation in the space available.
- C. The following submittals for closing out the job shall be a prerequisite to the issuance of Final Certificate of Payment.
 - 1. Certificates of water quality
 - 2. Reproducible “As-built” (record) drawings
 - 3. Approved inspection reports
 - 4. Guarantee

1.03 QUALITY ASSURANCE

- A. Work of the contract shall satisfy the requirements of:
 - 1. IAPMO, ASME, ANSI, ASTM, CISPI standards for base materials.
 - 2. N.F.P.A.- 13
 - 3. American Gas Association (A.G.A.)
 - 4. 2013 California Building Code (CBC) Title 24, Part 2, CCR
 - 5. 2013 California Electric Code (CEC) Title 24, Part 3, CCR
 - 6. 2013 California Mechanical Code (CMC) Title 24, Part 4, CCR
 - 7. 2013 California Plumbing Code (CPC) Title 24, Part 5, CCR
 - 8. OSHPD OPM
- B. All brazers and welders shall be qualified with the brazing and welding procedures set forth in ASME Boiler and Pressure Vessel Code – current edition. If the work of any welder or brazer creates a reasonable doubt as to his skill, the Architect/Engineer may require the welder to be requalified.
- C. Provide manufacturer’s certificate that materials and fixtures meet or exceed minimum requirements as specified.
- D. Where these drawings and specifications call for or describe materials or construction of a better quality or larger sizes than required by all laws, codes ordinances, regulations and orders of any public authority bearing on the performance of the work, the drawings and specifications shall take precedence.
- E. Testing and Inspections: Contractor shall arrange for inspections required by authority having jurisdiction and deliver any certificates of such inspections to the Owner. Owner shall pay for all inspections required.
- F. Permits: Owner shall apply and pay for all permits required by any public authority having jurisdiction.

1.04 PRODUCT AND FIXTURE DELIVERY, STORAGE AND HANDLING

- A. Exercise care in transporting and handling to avoid damage to and contamination of materials and fixtures.
- B. Materials and fixtures kept at the job site shall be stored in enclosures or under protective covering. Material and fixtures shall be stored above grade in manufacturer’s original, unopened protective packaging and kept as clean and dry as possible.
- C. Damage to materials and/or fixtures due to negligence in handling, storage or delivery shall be cause to reject and replace all such damaged material and/or fixtures at the Contractor’s own expense with no additional cost to the Project.

1.05 PROJECT CONDITIONS, SUPERVISION AND WORKMANSHIP

- A. The Plumbing Contractor shall examine the complete project drawings and make a preliminary examination of the site. The Plumbing Contractor shall also examine in advance methods for installation, means to be provided for getting fixtures and equipment into place, routing of piping and any other requirements of the work. This shall include verification that all systems and all fixtures

will fit spaces allotted. Work shall be installed so that indicated ceiling heights are maintained, with no portion of the work requiring excessive furring.

- B. The Plumbing Contractor must consider and include any additional cost involved in verifying and coordinating the work with existing conditions and points of connection. If situations arise where the work cannot be installed as intended, the Owner's representative must be informed to assist in resolving the problem.
- C. Fixtures shall be located within rooms as indicated on Architectural and Plumbing drawings. In the event these drawings do not indicate locations by exact dimension, such locations shall be obtained from the Architect prior to installation. Should the Plumbing Contractor elect to install such fixtures without prior instruction, he shall be subject to removal and reinstallation of such fixtures at the discretion of the Architect without additional cost to the project.
- D. The Plumbing Contractor shall provide all the rigging, scaffolding, tools, tackle, hoist, personnel safety equipment, labor, etc., necessary to complete the installation of fixtures and materials in accordance with the intent of this specification.
- E. The Plumbing Contractor must coordinate all areas of the work required with the Owner's Representative as they relate to material, storage, trash removal, hours of work, job site office, telephone, sanitary facilities, electrical power, drinking water, hoisting, temporary barriers, safety measures, etc., including cost of such items.
- F. The Plumbing Contractor is responsible to coordinate demolition and reconstruction (cutting and patching) of walls, floors, and ceilings required for the performance of the work of this Section of the Contract. Other appropriate Contractor is responsible for the actual demolition and reconstruction of walls, floors and ceilings. The Plumbing Contractor is responsible for demolition and reconstruction of existing hardscape as required for performance of work under this Section of the Contract.
- G. The Plumbing Contractor shall have a competent Job Superintendent and/or Foreman on site or available at all times by phone ("pager") during project progress with authority to act on the Contractor's behalf and to supervise the installation of the work under this section. Superintendent shall also be responsible in conferring with other trades as to the proper execution and conduct of the work under this section so that work may be carried on as rapidly as possible and still maintain coordination with the other trades in progress at the same time.
- H. All workmanship shall be first class in every respect and shall be performed only by skilled mechanics recognized as such in each of their respective trades.

1.06 DRAWINGS AND SPECIFICATIONS

- A. Drawing and specifications are intended to complement each other and are required to be taken together to provide all associated items of work, materials and equipment necessary for a complete installation.
- B. A set of plumbing drawings will accompany these specifications showing the arrangements and sizes of piping systems and principal connections to the plumbing fixtures. Drawings and specifications are intended to complement each other to the extent that all associated items of work and materials necessary to the completion of the installation of the systems shall be provided whether or not mentioned in the specifications or shown on the drawings.
- C. Discrepancies between Architectural and Plumbing drawings: the drawings showing the greater number of fixtures shall govern. Where fixtures are indicated on the Architectural plan, but not

similarly shown on the Plumbing drawings and where such items are covered by specifications, all such items together with the necessary appurtenances and services shall be provided. Discrepancies as described above are inadvertent and it shall be the Plumbing Contractor's responsibility to comply with the intent of this paragraph and the Contract.

- D. Plumbing work, as laid out, is to some extent, diagrammatic and locations thereon are drawn to scale where possible. It is not the intention of the drawings to show all the offsets, fittings, and accessories. Locations indicated shall be adhered to as closely as possible; reasonable deviations therefrom shall be made at no additional expense.

1.07 AS-BUILT DRAWINGS

- A. As-built drawings shall be provided by modular building manufacturer.

1.08 GUARANTEE

- A. All work shall be guaranteed for a minimum period of one year from either the official date of completion or from the official date of acceptance by the Owner whichever is the later date.
- B. Certain items shall be guaranteed for a longer period, as stated in the specification for those items.
- C. Should any trouble develop during this time due to defective material, faulty workmanship, or non-compliance with plans, specifications, codes, or written directions of the Owner, Architect, or Inspector the Plumbing Contractor shall furnish all necessary labor and materials to correct the trouble without additional charges.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All materials shall be new, of commercial quality, and shall be standard current products of manufacturers regularly engaged in the production of plumbing products. Unless indicated otherwise, all fixtures, and equipment shall conform to the same requirements as “materials”. Use the same brand of manufacture for each class of fixtures, equipment, or material.

2.02 PIPING SYSTEMS MATERIALS

- A. Piping Systems shall be provided by Modular Building Manufacturer

2.03 PLUMBING FIXTURES

- A. Fixtures shall be as scheduled on the drawings.
- B. Provide all necessary angle stops, risers, escutcheons, 17-gauge CP traps, sealant, etc. as required for fixtures.
- C. Accessibility Requirements:
 - 1. Accessible plumbing fixtures shall comply with all of the requirements of CBC Division 6

2. Heights and location of all accessible fixtures shall be mounted according to CBC Section 11B-602 through 11B-612.
3. Fixture controls shall comply with CBC Section 11B-601.3 for drinking fountains, 11B-604.6 for water closets, 11B-604.9.5 for children's water closets, 11B-605.4 for urinals, 11B-606.4 for lavatories and sinks, 11B-607.5 for bathtubs, 11B-608.5 for showers, and 11B-611.3 for washing machines and clothes dryers.
4. Accessible sinks shall not exceed 6-1/2" in depth, Sinks shall be mounted with the front of the higher rim and counter surface 34" maximum above the finish floor or ground.
5. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks. CBC Section 11B-606.

PART 3 – EXECUTION

3.02 INSTALLATION OF PIPING, FIXTURES AND EQUIPMENT

- A. Install classroom sinks in plastic laminate tops.

3.03 PLUMBING FIXTURES AND MISCELLANEOUS EQUIPMENT

- A. All fixtures shall be anchored and set level with relation to walls and floor lines in a neat and workmanlike manner using equal spacing and neat grouping.
- B. Fill all joints between plumbing fixtures and walls or floors or cabinets with Dow-Corning 780 Sealant or Sonolastic Sealant, color to match fixtures. Sealant shall be applied as recommended by the manufacturer, workmanship subject to approval of Architect or his representative.
- C. All fixtures shall be covered and protected until completion of the work. Fixtures shall be cleaned and all fittings shall be polished. Metal parts shall be polished chrome plated brass unless otherwise indicated. All exposed piping and fittings shall be polished chrome plated.

3.04 STERILIZATION

- A. The Plumbing Contractor shall provide feed and flush nipples near point of connection of new piping to building hot and cold water system to facilitate systems flushing and chlorinating.
- B. Provide the services of a commercial disinfecting/chlorinating company to perform standard commercial water systems sterilization, Atlantis Chlor, Walsh Enterprises or equivalent.
- C. Flush out all new water piping to thoroughly remove all dirt and debris.
- D. Chlorinate all new water piping up to points of connection to existing building systems.
- E. Flush solution with clear water and until residual chlorine levels are equal to level of incoming City water supply.

- F. Obtain test samples of flushed out systems and test to verify that total plate count of bacteria/c.c. of sample is less than 100 or equal to the supply and for negative coliform organisms per ANSI/AWWA C651-92. Testing shall be performed by a State of California approved water testing laboratory.
- G. Repeat the above procedure until results in paragraph F above are obtained.
- H. Provide certificates of final satisfactory test results as part of close out requirements.

END OF SECTION 22 00 00

SECTION 23 00 00 – HEATING, VENTING AND AIR CONDITIONING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section and shall govern the work the same as though written herein in full. It is the intent to provide a complete tested, balanced and operating heating, ventilating and air conditioning system.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, fixtures and services together with the demolition, installation, testing and adjusting necessary to the acceptable completion of all the heating, ventilating and air-conditioning (HVAC) work shown on the drawings or as herein specified.
- C. Description of the Systems: The following list is intended to generally describe the various HVAC systems components to be installed, but shall not be considered as a limit of the work to be performed under this section of the specifications.
 - 1. Rooftop Package Heat Pumps
 - 2. Rooftop ERV units
 - 3. Automatic Temperature Control including low voltage wiring
 - 4. Ductwork systems and accessories
 - 5. Toilet Exhaust Systems
 - 6. General Exhaust Systems
 - 7. Air distribution equipment
 - 8. Insulation and duct liner
 - 9. Testing, Adjusting and Balancing
- D. Related Work not in this Section:
 - 1. The following work will not be furnished under this section of the specifications but will be included in other specification sections:
 - a. All line voltage wiring (regardless of voltage) and all miscellaneous wiring devices and all connections thereto and all line and low voltage conduit. All electrical disconnects and starters not integral to equipment scheduled and / or specified. All timeclocks and miscellaneous “on-off” control devices.
 - b. Openings in wall and roofs
 - c. Roofing, including flashing
 - d. Condensate drains
 - e. Direct digital control system (DDC) in Section 23 09 13
 - f. Finish painting
- E. Work Under Seperate Contracts
 - 1. Automatic fire protection will be designed and installed under separate contract with the Owner.

1.02 SUBMITTALS

- A. The HVAC Contractor shall provide submittal data for all equipment and material being furnished by him to the Architect for approval. Submit the following according to the Conditions of the Contract and Division 1 Specifications Section: 01 33 00.
 - 1. Product Data for:

- a. Ductwork, ductwork accessories and supports.
 - b. Dampers, all types including combination fire/smoke dampers
 - c. Fire-safing material
 - d. Supply, return and exhaust grilles and diffusers
 - e. Pipe and Duct insulation and acoustical duct liner
 - f. Insulated flexible duct
 - g. Filters
 - h. Gauges and thermometers
 - i. Duct sealant and coatings
 - j. Heating hot water boilers and pumps
 - k. Energy recovery ventilators (ERV's)
 - l. Exhaust fans, all types
 - m. Fan-coil and makeup fan-coil units
 - n. Variable frequency drives (VFD's)
2. Wiring diagrams for:
- a. all equipment requiring power
- B. Each submittal brochure shall contain all of the items listed above and shall be bound with covers, indexed with tabs and have a table of contents. Submittals shall indicate make, specific model and size, accessories, dimensional drawings, wiring diagrams and other pertinent information. Submit all items at one time. Partial submittals are not acceptable. Substitutions of materials and fixtures form that specified herein, noted on the drawings or as outlined in the General or Supplementary Conditions shall be clearly identified as deviations. Deviation data to clearly demonstrate equivalency and comparisons between specified and proposed items shall be provided by the HVAC Contractor unless prior arrangements are made to compensate the Engineer for researching this data. This data shall specifically include tabulated comparisons between scheduled and proposed equipment in the following areas:
1. Weight (including curbs and other accessories).
 2. Dimensions
 3. Electrical requirements (voltage, phase, full load amps).
 4. Sound levels
 5. Performance (efficiencies, heating, cooling, air flow, static pressure, pressure drops, etc.)
- C. "Equivalent" submittals lacking above information will be returned "not reviewed". Approval of substitutions shall in no way relieve the HVAC Contractor from the responsibility of complying with the design intent of the plans and specifications and for installation in the space available.
- D. Shop Drawings for coordination, fabrication, and installation:
1. Dimension drawings for concrete pad equipment foundations including bolt sizes and locations (1/4" scale minimum).
 2. Details of suspension, supports and seismic restraint and anchors for above ceiling hung equipment.
 3. Chilled and hot water piping drawings (1/4" scale).
 4. Ductwork fabrication and installation drawings for all congested areas including laboratory classrooms with fume hood exhaust and make-up air and laboratory classrooms with formaldehyde venting and makeup air.
 5. The contract HVAC drawings shall not be used and substituted for ductwork and piping shop drawings.
 6. Coordinate location of piping and ductwork systems with electrical, plumbing and fire protection systems in the preparation of shop drawings. Provide number of copies of prints of piping and ductwork as required by the Owner's representative for use in coordination with the other trades.

E. The following submittals for closing out the job shall be a prerequisite to the issuance of Final Certificate of Payment:

1. Test and Balance Reports
2. Reproducible "As-built" (record) drawings
3. Approved inspection reports
4. Guarantee

1.03 QUALITY ASSURANCE

A. Work of the Contract Documents shall satisfy the requirements of:

1. Air Diffusion Council (ADC).
2. ASME, ASTM and ANSI standards for base materials.
3. California Fire Marshal requirements for fire and smoke dampers.
4. ASHRAE standards for heat transfer coils and air filters.
5. National Fire Protection Association standards (N.F.P.A.).
6. SMACNA Seismic Restraint Manual Guideline for Mechanical Systems.
7. 2013 California Building Code (C.B.C.).
8. 2013 California Mechanical Code (C.M.C.) (Title 24, Part 4)
9. 2013 California Fire Code (C.F.C.).

B. Where these drawings and specifications call for or describe materials or construction of a better quality or larger sizes than required by all laws, codes, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work, the drawings and specification shall take precedence.

1.04 PRODUCT AND EQUIPMENT DELIVERY, STORAGE AND HANDLING

A. Exercise care in transporting and handling to avoid damage to and contamination of materials and equipment.

B. Materials and equipment kept at the job site shall be stored in enclosures or under protective covering to prevent physical and weather damage or the introduction of foreign material. Material and equipment shall be stored above grade in manufacturer's original, unopened protective packaging and kept as clean and dry as possible.

C. Damage to materials and/or equipment due to negligence in handling, storage or delivery shall be cause to reject and replace all such damaged material and/or equipment at the Contractor's own expense with no additional cost to the Project.

1.05 PROJECT CONDITIONS, SUPERVISION AND WORKMANSHIP

A. The HVAC Contractor shall examine the complete project drawings and make a preliminary examination of the site. The HVAC Contractor shall also examine in advance methods for installation, means to be provided for getting ductwork and equipment into place and any other requirements of the work. This shall include verification that all systems and all equipment will fit spaces allotted. Work shall be installed so that indicated ceiling heights are maintained, with no portion of the work requiring excessive furring.

B. The HVAC Contractor must consider and include any additional cost involved in verifying and coordinating the work with existing conditions and points of connection. If situations arise where the work cannot be installed as intended, the Owner's representative must be informed to assist in resolving the problem.

- C. Maintain ample headroom in passageways and rooms, and clearance around all equipment, ductwork, conduits and pipelines shall be maintained for unrestricted passage and for easy servicing. Install the work to maintain indicated ceiling heights.
- D. The HVAC Contractor shall provide all the rigging, scaffolding, tools, tackle, hoists, personnel safety equipment, labor, etc., necessary to complete the installation of equipment and materials in accordance with the intent of this specification.
- E. The HVAC Contractor must coordinate all areas of the work required with the Owner's Representative as they relate to material, storage, trash removal, hours of work, job site office, telephone, sanitary facilities, electrical power, drinking water, hoisting, temporary barriers, safety measures, etc., including cost of such items.
- F. The HVAC Contractor is responsible to coordinate demolition and reconstruction (cutting and patching) of walls, floors, and ceilings required for the performance of the work of this Section of the Contract. The appropriate Contractor shall perform the actual work of demolition and reconstruction of walls, floors and ceilings.
- G. The HVAC Contractor shall have a competent Job Superintendent and/or Foreman on-site or available at all times by phone ("pager") during project progress with authority to act on the Contractor's behalf and to supervise the installation of the work under this section. Superintendent shall also be responsible in conferring with other trades as to the proper execution and conduct of the work under this section so that work may be carried on as rapidly as possible and still maintain coordination with the other trades in progress at the same time.
- H. All workmanship shall be first class in every respect and shall be performed only by skilled mechanics recognized as such in each of their respective trades.

1.06 DESCRIPTION OF THE SYSTEMS

- A. The following list is intended to generally describe the various HVAC systems components to be installed, but shall not be considered as a limit of the work to be performed under this section of the specifications:
 - 1. Heating Hot Water Boilers
 - 2. Heating Hot Water Pumps
 - 3. 4-Pipe Fan-Coil and Units
 - 4. Energy Recovery Ventilators
 - 5. Direct Digital Control (DDC) System
 - 6. Ductwork systems and accessories
 - 7. Toilet exhaust systems
 - 8. General exhaust systems
 - 9. Laboratory Fume Hood exhaust and make-up air systems including connections to fume hoods including exhaust and make-up air control valves.
 - 10. Laboratory Exhaust (formaldehyde venting) Exhaust Fans
 - 11. Air distribution equipment
 - 12. Duct and Pipe Insulation and duct liner
 - 13. Testing, Adjusting and Balancing.

1.07 DRAWINGS AND SPECIFICATIONS

- A. Drawing and specifications are intended to complement each other and are required to be taken together to provide all associated items of work, materials and equipment necessary for a complete installation.

- B. A set of HVAC drawings will accompany these specifications showing the arrangements and sizes of ductwork and piping systems. Drawings and specifications are intended to complement each other to the extent that all associated items of work and materials necessary to the completion of the installation of the systems shall be provided whether or not mentioned in the specifications or shown on the drawings.
- C. Discrepancies between Architectural and HVAC drawings: In the case of discrepancies between the Architectural drawings and the HVAC drawings, the drawing showing the greater number of items or pieces of equipment shall govern unless otherwise directed by the Architect. Discrepancies encountered among drawings are to be brought to the attention of the Architect for clarification. In the case of diffusers, thermostats or other mechanical items indicated on architectural drawings but not on HVAC drawings, specifications for such items shall be deemed to be respectively similar to other such items which are covered by specifications and all necessary services and appurtenances shall be provided. Discrepancies as described above are inadvertent and it shall be the Contractor's responsibility to check the intent of this paragraph.
- D. HVAC work, as laid out, is to some extent, diagrammatic and locations thereon are drawn to scale where possible. It is not the intention of the drawings to show all the offsets, fittings, and accessories. Locations indicated shall be adhered to as closely as possible; reasonable deviations therefrom shall be made at no additional expense.

1.08 PERMITS AND FEES

- A. Contractor shall arrange for inspections required by authority having jurisdiction. Deliver any certificates of such inspections to the Owner.
- B. Owner shall apply and pay for all permits required by any public authority having jurisdiction. Owner shall pay for all inspections required.

1.09 RECORD DRAWINGS

- A. Submit reproducible record ("As-Built") drawings as required by the General Conditions showing final locations of all equipment, piping and ductwork.

1.10 GUARANTEE AND OPERATION

- A. The HVAC Contractor shall furnish to the Owner a guarantee in writing. All work shall be guaranteed for a minimum period of one year from either the official date of completion or from the official date of acceptance by the Owner whichever is the later date.
- B. It is to be understood that any equipment and systems requested in writing to be put into service by the Owner to serve their needs while the project is still under construction and used for that purpose only, shall be considered as accepted on the date said equipment is put into operation. The warranty for any such particular piece of equipment shall then be in effect as of the day of acceptance. Date of acceptance for all other materials and equipment not so used shall become effective on the date of acceptance for the entire project by the Owner.
- C. Guarantee shall warrant all materials and equipment to be free from defects whether they be of faulty manufacture or defective workmanship, and the HVAC Contractor shall agree to replace any such material or equipment at his expense that may prove defective from either cause within the warranty period.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All materials and equipment shall be new, full weight, of best quality suitable for desert environment, with the same brand of manufacture used for each class of material or equipment. All similar materials and equipment such as heat pumps, fans and air distribution devices shall be of the same type and manufacture unless specified otherwise. All equipment and devices shall be designed for resistance to earthquake disturbances. All equipment shall have motors, controls, accessories and fans properly fastened to the equipment to prevent “break-away” during an earthquake. All rotating equipment shall operate in factory standard dynamic balance. Failure to comply with these conditions shall be cause for rejection of any such material or equipment installed; the HVAC Contractor shall be so advised and shall be subject to removing all rejected material or equipment and replacing same with approved material or equipment at his expense.

2.02 MOTORS AND CONTROLLERS

- A. Furnish with each piece of equipment all motors and solid state controls.
- B. Motors shall conform to latest NEMA motor standard requirements and shall be manufactured by Gould, GE, Louis Allis or Marathon of a type suitable for service intended. Motors shall be rated to operate at an ambient temperature of 40° C. Oiling devices shall be located where readily accessible. In general, motors of ½ HP capacity or larger shall be three phase, and smaller motors shall be single phase. Motors for belt-driven equipment shall be provided with adjustable slide rails. Nameplate horsepower of motor submitted shall be equal to or greater than scheduled horsepower and shall be greater than required brake horsepower to handle load. All motors shall be premium high efficiency models where available.
- C. Starters for equipment other than packaged air-cooled chillers shall be provided by Division 26 Electrical.
- D. Variable Frequency Drives (VFD’s) shall be provided with the equipment being controlled as a part of that equipment package. VFD’s shall be provided with a BacNet interface to ensure compatibility with the project direct digital control (DDC) system.
- E. Electrical devices that fall within scope of UL testing capabilities shall be so tested and marked.

2.03 SHEET METAL DUCTWORK

- A. All ductwork shall be constructed of new galvanized prime grade steel sheets in accordance with Duct Construction Standards published by Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA). Fume hood and formaldehyde exhaust ductwork shall be 4 mil inside/1 mil outside PVS coated 20 gage spiral galvanized steel.
- B. Unless otherwise noted on Drawings, pressure-velocity classification of supply and return ductwork from HVAC units and fans shall be in accordance with Table 1-1 of SMACNA Manual.
- C. Installed ductwork shall meet “Functional Standards for Rectangular Low Pressure Ducts” cited in SMACNA Manual with respect to sheet deflection and vibration, reinforcing, seam and joint integrity, beam strength of duct section and duct leakage.
- D. Ductwork gauge and reinforcing shall comply with Tables 1-3 through 1-5 of SMACNA Manual to specified or noted static pressure rating.
- E. Duct sizes 19 inches to 48 inches wide and larger which have more than 10 square feet of unbraced panel shall be beaded or cross-braken unless ducts have nonconductive covering or acoustical liner. See Figure 1-8 of SMACNA Manual.

- F. For duct longitudinal seams use button punch snap lock for up to 20 gauge metal. Use Pittsburgh lock for up to 18 gauge metal and for fittings.
- G. Duct connectors shall be as follows or connectors of equal performance.
 - Width 0 to 60 inches: S-Slip.
 - Depth 0 to 18 inches: Drive slip.
 - Depth 19 to 30 inches: Reinforced drive slip.

Corner closures shall be as shown on Figures 1-13 through 1-18 of SMACNA Manual or as recommended by duct connection system manufacturer.
- H. Provide turning vanes in each square elbow. Construct turning vanes as shown in Figures 2-3 and 2-4 of SMACNA Manual. Use single thickness turning vanes with 3/4 inch flat trailing edge for velocities below 2000 FPM. For higher velocities use double thickness turning vanes.
- I. Duct transition and offsets shall be as shown in Figure 2-9 of SMACNA Manual.
- J. Main or parallel duct splits shall be as shown in Figure 2-7 of SMACNA Manual. Splitter blade shall be 16 gauge minimum and leading edge shall be hemmed.
- K. Round laterals and branches shall be made up with 45° taps and saddles to round or rectangular main or branch ducts as shown in SMACNA figure 3-4.
- L. Each individual air supply or return device, whether sidewall or ceiling diffuser, shall be fitted with a device to permit adjustment of air amount supplied to unit independently of any other outlet. These devices may take the form of outlet boots with opposed blade dampers, or of branch duct with dampers, as installation conditions dictate, but in any case, each shall be fitted with a means of manual adjustment of air amount delivered to outlet.
- M. Unless otherwise noted on drawings, duct sizes shown on drawings are for net free area.

2.04 DUCT AND PIPING INSULATION

- A. General: All instructions and associated materials such as coverings, vapor barriers, mastics and adhesives shall bear the Underwriters' Laboratories listing. U.L. rating not to exceed: flame spread 25, smoke developed 50. Insulation shall meet the requirements of NFPA Pamphlet No. 90-A and 2016 California Mechanical Code. The insulation Contractor shall provide a certificate that the system is installed and all materials comply with the Underwriters' Laboratories requirements. All insulation shall be delivered to the job site in unopened packages from the manufacturer. Approved manufacturers: Certainteed, Owens-Corning, Manville, Knauf.
- B. Duct wrap: 1 1/2 inch thick Fiber Glass, faced with Type IV (scrim-reinforced foil-craft laminate vapor barrier), 2 inch overlap tab along edge, 1-lb. density.
- C. Insulate all heating hot water and chilled water piping with 1-1/2" thickness (runouts may be 1/2" thickness) fiberglass pipe insulation with FSK jacket, Knauf 1000 Degree or approved equivalent. Provide molded fitting covers at all elbows and B-Line #B3154 metal shields at all pipe hangers. Cover all insulated piping exposed to the weather with aluminum jacketing.

2.05 DUCT LINER

- A. General: All liners and associated materials such as coverings, vapor barriers, mastics and adhesives shall bear the Underwriter's Laboratories listing. U.L. rating not to exceed: flame spread 25, smoke developed 50. Insulation shall meet the requirements of NFPA Pamphlet No. 90-A and California Mechanical Code. The insulation Contractor shall provide a certificate that the system is installed and

all materials comply with the Underwriter's Laboratories requirements. Any liner delivered to the job site shall be in unopened packages from the manufacturer. Approved Manufacturers: Certainteed, Owens-Corning, Manville, Knauf.

- B. Provide duct liner in plenums and ductwork where indicated on plans in accordance with SMACNA "Duct Liner Application Standard," 2nd edition.
- C. Unless otherwise noted on drawings, use flexible duct liner with 1-1/2 pound density, 1 inch thickness.
- D. Duct liner shall be adhered to sheet metal and with edges coated with one of the adhesives conforming to Standard for Adhesives for Duct Liner, ASC-A-7001C-1972, OF Adhesive Sealant Council, Inc. Duct liner shall be further secured with fasteners conforming to Mechanical Fastener Standard, MF-111975, on page 22 of Duct Liner Application Standard.

2.06 FLEXIBLE CONNECTIONS

- A. Furnish flexible connections fabricated of Durolon fabric with Hypalon coating, Metal Fab or Super Metal Fab, which shall meet requirements of UL test procedure UL-214. Fabric shall be coated on exterior side, with inorganic elastomeric compound and shall be able to withstand exposure to 250° to -50° F and shall be ozone resistant and airtight. Connectors shall be pre-assembled utilizing 24 gauge metal edges and shall have 3 inches or 6 inches as required exposed fabric and shall be as manufactured by Duro-Dyne Corporation.

2.07 ACCESS DOORS

- A. Provide access doors in ductwork to provide access to automatic dampers, fire and smoke dampers. Where ducts are insulated access doors shall be double skin doors with 1 inch insulation in door. Where size of duct permits, doors shall be 18 inches x 16 inches. Doors 24 inches x 16 inches and larger shall be provided with Ventlok No. 100 or 140. Provide identification for fire and/or smoke damper access openings. Stencil the words FIRE (or SMOKE) DAMPER on access doors in sheet metal ducts.

2.08 INSULATED FLEXIBLE DUCT

- A. The flexible duct for connection between ducting and air diffusers and grilles shall be a factory fabricated assembly consisting of an inner sleeve, insulation and an outer moisture barrier. The inner sleeve shall be constructed of an elastomeric compound helix. No installed flexible duct lengths shall exceed 8'-0". U.L. rating not to exceed: flame spread 25, smoke developed 50
- B. A minimum 1 inch thick fiberglass insulating blanket shall encase the inner sleeve and be sheathed with an outer moisture barrier of a reinforced metalized Mylar/neoprene laminated or equal.
- C. Acoustical performance of the flexible duct shall be in accordance with Air Diffusion Council Flexible Air Duct Test FD72R1: Paragraph 3.2.1, Sound Attenuation. The test data shall be made by accredited independent testing laboratory in accordance with the above testing procedure.
- D. Materials shall be Automation industries, Inc. Thermaflex G-KM Class I flexible air duct or equal, rated for 6" positive to .5" negative pressures.
- E. Aluminum flexible ductwork is not an approved material for this project.

2.09 FIRE/SMOKE DAMPERS

- A. Furnish and install all fire, smoke and combination fire/smoke dampers as required by the 2016 California Building and Mechanical Codes. Dampers shall be U.L. labeled and shall comply with the

requirements of N.F.P.A.-90A, and shall be approved by the State of California Fire Marshal. Dampers shall be Ruskin, Greenheck or approved equivalent, as follows:

1. Fire – Style B (rectangular), 95% or greater free area, rated for surface penetrated.
2. Fire – Style C (round), 100% free area, rated for surface penetrated.
3. Smoke – SD35 or SDRS25, 120 volt operator.
4. Combination Fire/Smoke – FSD35, 120 volt operator.

B. Provide smoke detectors for smoke damper operation, located as required per 2016 CMC.

2.10 MANUAL BALANCING DAMPERS

- A. Provide Ruskin MD-35 or equivalent opposed blade manual balancing damper fabricated from galvanized steel.
- B. Provide minimum 22 gauge butterfly type damper with locking damper/quadrant and regulator set for round duct.

2.11 GRILLES, REGISTERS AND DIFFUSERS

- A. Grilles, registers and diffusers units shall be all metal and constructed to have a neat, well-made appearance. Grille framework shall be rigidly constructed; flange corners shall be mitered and supported. Face bars shall be of heavy gauge metal to adequately resist bending or twisting and fit tightly and closely within framework. Units shall have a neck to slip inside ductwork for an airtight noiseless connection.
- B. Check drawings to supply proper outlets and adapting framework for type of construction at each outlet. Adapter shall be same finish as unit and be of configuration manufacturer recommends for construction involved.
- C. Manufacturer furnishing grilles, registers and diffusers shall verify sizes against CFM requirements for each outlet to get intended throw without objectionable noise.
- D. Provide grilles, registers and diffusers as scheduled on the drawings, Krueger, Metalaire, Titus, J & J, Price or Tuttle and Bailey.

2.12 DISPOSABLE AIR FILTERS

- A. Air filters shall be Farr 30/30, ECO-AIR #E35, or approved equivalent, pleated type.
- B. Provide two sets of filters for equipment requiring filters. Filters in heat pumps shall be 2 inches thick, disposable type.
- C. Filters shall have a rated average dust spot efficiency of 25-30% when tested in accordance with ASHRAE 52.1 test method.
- D. Filters shall be capable of operating with face velocities up to 500 FPM without impairing efficiency and shall have an initial resistance not to exceed 0.17 inch W.G. and shall be listed Underwriters Laboratories 900 Class 2 and with State of California Fire Marshal.

2.13 DUCT SEALANT/PROTECTIVE COATINGS

- A. Sealant for interior longitudinal and transverse duct seams shall be United McGill “UNI-GRIP” vinyl acrylic type, or equivalent by Foster.

- B. For ducts exposed to the weather use United McGill “UNI-WEATHER” all weather duct sealer, or equivalent by Foster
- C. For ducts exposed to the weather coat ducts with appropriate primer for finish painting by Painting Contractor.

2.14 EQUIPMENT

- A. All equipment shall be of manufacturers and capacities as scheduled herein or on the drawings or approved equivalent by:
 - 1. Roof top package units: Carrier as scheduled (No known equivalent).
 - 2. Exhaust Fans: Greenheck as scheduled or equivalents by Cook.
 - 3. Energy Recovery Ventilators: MicroMetl as scheduled.
 - 4. Make-Up Air Units: Champion, or equivalent.
 - 5. Air Distribution: Titus as scheduled or equivalent by Price, Metalaire.
 - 6. Fire and Fire/Smoke Dampers and Access Panels: Ruskin as specified herein or equivalent by Greenheck, Potorff or ABL.

PART 3 – EXECUTION

3.01 VERIFICATION

- A. Before fabrication and installation of work, carefully verify all dimensions, sizes and actual building conditions. Coordinate work with other affected trades to avoid possible conflicts and resolve same where such exist. Install work to conform to structure, avoid obstructions, preserve headroom and keep openings and passageways clear.
- B. Work shall be installed so that ceiling heights indicated are maintained with no portion of work requiring furring. Changes necessary, resulting from lack of such verifications and coordinations, shall not be a cause for additional expense.
- C. Air distribution devices, access panels and controls shall be located within rooms as indicated on the architectural and HVAC drawings. In the event these drawings do not indicate exact locations, such locations shall be obtained from the Architect. In the event they are installed without instruction and if directed to be relocated as a result, they shall be moved and reinstalled without additional cost. Submit all pertinent information as to size, location and approximate number of additional access panels required. It shall further be the responsibility under this section to confer with all the trades on the project, and, wherever possible, dampers or other equipment shall be so grouped so that the least number of panels will be required.
- D. Diffusers, grilles, registers, controls, thermostats, etc., shall be located within rooms as indicated on Architectural and HVAC drawings. In the event these drawings do not indicate exact locations, such locations shall be obtained from the Architect. In the event they are installed without instruction and if directed to be relocated, they shall be moved and reinstalled without additional expense.

3.02 GENERAL INSTALLATION

- A. Because of small scale of the drawings, it is not intended that all of the offsets and accessories required be shown. All equipment apparatus, ductwork, piping and associated accessories shall be installed as closely as possible to indicated locations on drawings; but reasonable necessary deviations therefrom shall be made at no additional expense.

- B. There shall be NO cutting of structural members without prior written approval from Architect or his representative.
- C. Equipment shall be installed in locations shown in accordance with the equipment manufacturer's written installation instructions. Maintain all necessary clearances for air flow, access, repair and to electric control panels, etc.

3.03 HANGERS, MOUNTS AND SUPPORTS

- A. Equipment, piping, ductwork and accessories shall be individually mounted and/or hung from the structure. Approved hangers, and curbs shall be provided.
- B. Ductwork support upper attachments shall comply with Figures 4-1 and 4-2 of SMACNA Manual.
- C. Ductwork support lower attachments shall comply with Figure 4-4 of SMACNA Manual..
- D. Hanger sizes shall be per Tables 4-1 and 4-2 of SMACNA Manual.

3.04 CLEANING AND PROTECTION

- A. Interior of ductwork and equipment shall be cleaned and all scale, sand and dirt removed before closing and shall remain closed until final connections or extensions thereto are made.
- B. Equipment shall be provided with adequate protection when installed where damage may result by further construction, the weather, painting or plastering. If damage is incurred during construction, all damaged equipment shall be repainted, repaired or replaced to match new construction with no additional cost to Owner.
- C. Protective guards: All exposed parts such as shafts, couplings, drives and associated items shall be covered with guards to comply with the California State Safety Orders of Division of Industrial Accidents. Where guards are covering belt drives, provision shall be made for checking the RPM of the rotating parts.

3.05 DUCTWORK SYSTEMS

- A. Install all supply ductwork, return ductwork and exhaust ductwork in accordance with SMACNA recommendations and California Mechanical Code.
- B. Provide flexible ductwork only where indicated.
- C. Run ductwork in straight lines parallel with, or at right angles to, the lines of the building unless otherwise shown on the drawings.
- D. Run ductwork so as to not to interfere with doors, or other openings, or to prevent access to equipment.
- E. Conceal all ductwork except in equipment room(s) or where noted otherwise on drawings.
- F. Seal all duct seams and joints so the leakage rate is less than 5% of the system operating air flow.
- G. Provide final duct connections to all equipment requiring same and furnish all material required for final connection.
- H. Install ductwork and accessories to provide a system free from buckling, warping, leaking, vibration, rattles and objectionable noise.

- I. Fabricate and install exposed ductwork on the roof so as to shed rainwater off the top surface with no ponding at any point.
- J. During and after complete installation of ductwork, entire system shall be cleaned of rubbish, plaster, dirt and other debris before any grilles, outlets or registers are installed.
- K. Use radius elbows wherever possible. Where indicated or where space or condition does not permit use of radius elbows, use square elbows with turning vanes as specified herein.
- L. Flange duct openings where grilles and registers are attached. Paint the inside of all supply, return and exhaust ducts one coat of flat black paint, wherever the duct or duct liner is visible through openings. Exposed interior ducts through walls, ceilings, roofs, etc., shall have a metal collar to conceal opening between duct and finished surface.
- M. In reducing from one duct size to another, provide an angle of not more than 15 degrees from line parallel to air flow, for low pressure ductwork.
- N. Inlet and discharge connections to all air handling equipment shall have flexible connections.
- O. Multi-blade dampers, splitter dampers, extractors, turning vanes and other devices shall be provided where shown on drawings and where required to balance the air systems.
- P. Where ducts are insulated on inside (liner), dimensions shall be increased as required for thickness of liner beyond dimensions shown. Sizes indicated are net clear dimensions.

3.06 INSULATION INSTALLATION

- A. Duct Liner: Liner shall be adhered to all interior sides of duct with 100% coverage of Underwriter's Laboratories listed self-extinguishing adhesive such as Benjamin Fosters' 85-20 "Spark Free" or Minnesota Mining 38. Mechanical fasteners, similar to Graham Welded Pins, Tuff-Weld nylon hangers or Stic-Klips, shall be used on maximum 12-inch centers at top sections (when width exceeds 12 inches) and on sides (when height exceeds 24- inches); coating shall be exposed to the air stream. All exposed edges and the leading edge of all cross joints of the liner shall be coated with the same adhesive used to secure the duct liner to the metal surface.
- B. Duct Insulation: Insulation shall be installed per insulation written installation instructions. Duct liner shall be adhered to sheet metal and with edges coated with one of the adhesives conforming to Standard for Adhesives for Duct Liner, ASC-A-7001C-1972, OF Adhesive Sealant Council, Inc. Duct liner shall be further secured with fasteners conforming to Mechanical Fastener Standard, MF-111975, on page 22 of Duct Liner Application Standard.
- C. Insulate exposed and concealed kiln exhaust duct with insulation as noted above.

3.07 TAGGING AND IDENTIFICATION

- A. Equipment: Install laminated plastic equipment I.D. tags for all equipment provided. Tags shall be permanently secured to equipment using pop rivets. Engrave identity number of each item of equipment. Coordinate I.D. number designated for each piece of equipment with the room identification provided by the owner.
- B. HVAC Equipment: The following items of new equipment are scheduled on the drawings:
 - 1. Hot water pumps (HWP's)
 - 2. Air-Cooled Chillers (CH's)
 - 3. Hot Water Boilers (B's)
 - 4. Fume Hood Exhaust Fans (FHE's)

5. Laboratory (formaldehyde venting) Exhaust Fans (LEF's)
 6. Exhaust fans (EF's)
 7. Fan-Coil Units (FC's)
 8. Energy Recovery Ventilators (ERV's)
 9. Make-Up Air Fan-Coil Units (MUA's)
- C. HVAC Piping and Ductwork: Seton, or equivalent, pressure sensitive labels and directional arrows applied per ANSI A13.1-1981. Apply labels at all valve and damper locations in addition to ANSI requirements. Valves: Seton, or equivalent, 1" diameter brass valve tags with jack chain. Dampers: 1" bakelite nameplates affixed to adjacent ductwork. Provide valve and damper charts in Owner's Operation and Maintenance Manuals.

3.08 TESTS AND BALANCING

- A. All equipment and apparatus necessary for the tests shall be furnished by the Contractor. All defects disclosed by the tests shall be rectified without additional expense.
- B. Heating, Ventilating and Air Conditioning Systems: Provide the services of an approved independent air balancing testing agency to balance, adjust and test all air moving equipment and air distribution and exhausting systems, heating hot and chilled water systems, on both cooling and heating cycles as herein specified. All work shall be done under the direct supervision of a qualified and experienced Heating, Ventilating and Air Conditioning Technician. All instruments used shall be accurately calibrated and maintained in good working order. Agency or Contractor shall be a member of A.A.B.C. or T.A.B.B.
- C. Air balancing and testing shall not begin until system has been completed and is in full working order. All heating, ventilating and air conditioning systems and equipment shall be in full operation and shall continue the operation of same during each working day of testing and balancing. All electrical lighting systems shall be in operation during the testing when room temperatures are recorded.
- D. Air Systems: Upon the completion of the heating, ventilating and air conditioning system, the agency shall perform the following tests and balance each system in accordance with the following requirements:
1. Test and record system supply and return static pressures, at each fan-coil and makeup air fan-coil unit, exhaust fan and energy recovery ventilator.
 2. Test and adjust system for design return air, design outside air, and design relief air CFM.
 3. Check and record running load amps for all equipment and RPM for all fans.
 4. Obtain the assistance of the controls contractor in the balancing of laboratory fume hood exhaust, formaldehyde exhaust and makeup air systems and for laboratory classroom roomside pressures.
 5. Test and adjust each diffuser, grille, register and air terminal unit to within 5% of design requirements.
 6. All diffusers, grilles and registers shall be adjusted to minimize drafts in all occupied areas.
 7. Make all changes in the pulleys, belts and dampers or the addition of dampers required for correct balance.
- E. Upon completing of balancing and testing insert all information on a sheet listing all items required by specifications and be included in complete test and balance report. Six copies of the testing and balancing report shall be submitted to the Architect for evaluation and approval within 15 days after completion of tests and prior to final acceptance of the project.
- F. The testing agency shall provide a 13 month warranty, effective from date of final contract acceptance of project, during which the testing agency will provide field services to reset areas, change CFM requirements, or adjust conditions not foreseen during design.

3.09 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Provide three sets of written operating, maintenance and lubrication instructions for all installed systems and equipment.
- B. Provide the services of a competent representative to instruct the Owner's representative in the operation of all systems.

END OF SECTION 23 00 00

SECTION 26 05 00 – COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

- A. Scope of Work: The work under this division includes furnishing all labor, material, and equipment necessary for the installation and placing into operation of the electrical systems as indicated on the drawings. The work includes, but is not necessarily limited to, furnishing and installing the following:
1. Complete power and lighting, distribution board, generator and all accessories, transformers, panels, switches, feeders, branch circuits, lighting fixtures, lamps, controls and accessories.
 2. Motor and power wiring for all motor and/or equipment furnished under the contract. Except as otherwise specified to be furnished by or under other divisions of this specification, all wiring devices, conduit, feeders, and final connections to all equipment shall be furnished under this section.
 3. Install electrical control wiring for all equipment, except as described in 1.24, "Mechanical/Electrical Coordination Requirements".
 4. All equipment and materials specified in this division.
 5. Empty conduit systems as indicated on the drawings.
 6. All other items and/or work indicated on the drawings.
 7. Extension of the existing power and communications systems.
- B. This division of the specification outlines the provisions of the contract work to be performed under this division. This section applies to and forms a part of each section of specifications in Division 26 and all work performed under the electrical and communications contracts. In addition, work in this division is governed by the provisions of the bidding requirements, contract forms, general conditions, supplementary conditions, and all sections under general requirements.
- C. These specifications contain statements which may be more definitive or more restrictive than those contained in the General Conditions. Where these statements occur, they shall take precedence over the General Conditions.
- D. Where the word 'provide' or 'provision' is used, it shall be definitely interpreted as 'furnishing and installing complete in operating condition'. Where the words 'as indicated' or 'as shown' are used, it shall mean as shown on contract drawings.
- E. Where items are specified in the singular, this division shall provide the quantity as shown on drawings plus any spares or extras mentioned on drawings or specifications. All specified and supplied equipment shall be new.

1.02 DEFINITIONS

- A. Concealed: Hidden from sight, as in trenches, chases, hollow construction, or above furred spaces, hung ceilings B acoustical or plastic type, or exposed to view only in tunnels, attics, shafts, crawl spaces, unfinished spaces, or other areas solely for maintenance and repair.
- B. Exposed, Non-concealed, Unfinished Space: A room or space that is ordinarily accessible only to building maintenance personnel, a room noted on the 'finish schedule' with exposed and unpainted construction for walls, floors, or ceilings or specifically mentioned as 'unfinished'.

C. Finish Space: Any space ordinarily visible, including exterior areas.

1.03 SUBMITTALS

A. Shop Drawings:

1. Submit shop drawings and all data in accordance with Section 01 33 00 for all equipment provided under this division.
2. Shop drawings submittals processed are not change orders: the purpose of shop drawings submittals by the Contractor is to demonstrate to the Architect that the Contractor understands the design concept. He demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing the fabrication and installation methods of material and equipment he intends to use. If deviations, discrepancies, or conflicts between submittals and specifications are discovered either prior to or after submittals are processed, the design drawings and specifications shall control and shall be followed.

B. Manufacturer's data and dimension sheets shall be submitted giving all pertinent physical and engineering data including weights, cross sections and maintenance instructions. Standard items of equipment such as receptacles, switches, plates, etc., which are cataloged items, shall be listed by manufacturer.

C. Index all submittals and reference to these specifications. All submittal items shall be assembled and submitted in a single complete binder. Partial submittals will not be reviewed.

D. Project Closeout: Prior to completion of project, compile a complete equipment maintenance manual for all equipment supplied under sections of this division, as described below.

1. Equipment Lists and Maintenance Manuals:

- a. Prior to completion of job, Contractor shall compile a complete equipment list and maintenance manuals. The equipment list shall include the following items for every piece of material equipment supplied under this section of the specifications:
 2. Name, model, and manufacturer
 3. Complete parts drawings and lists
 4. Local supply for parts and replacement and telephone number.
5. All tags, inspection slips, instruction packages, etc., removed from equipment as shipped from the factory, properly identified as to the piece of equipment it was taken from.
6. Maintenance manuals shall be furnished for each applicable section of the specifications and shall be suitably bound with hard covers and shall include all available manufacturers' operating and maintenance instructions, together with "as-built" drawings to properly operate and maintain the equipment. The equipment lists and maintenance manuals shall be submitted in duplicate to the Architect for approval not less than 10 days prior to the completion of the job. The maintenance manuals shall also include the name, address, and phone numbers of all subcontractors involved in any of the work specified herein. Four copies of the maintenance manuals bound in single volumes shall be provided.

1.04 QUALITY ASSURANCE

- A. The following standard publications of the latest editions enforced and supplements thereto shall form a part of these specifications. All electrical work must, as a minimum, be in accordance with these standards.
1. National Fire Protection Association
 2. Underwriters' Laboratories, Inc. (UL)
 3. Certified Ballast Manufacturers' Association (CBM)
 4. National Electrical Manufacturers' Association (NEMA)
 5. Institute of Electrical & Electronics Engineers (IEEE)
 6. American Society for Testing & Materials (ASTM)
 7. National Board of Fire Underwriters (NBFU)
 8. National Board of Standards (NBS)
 9. American National Standards Institute (ANSI)
 10. Insulated Power Cable Engineers Association (IPECS)
 11. Electrical Testing Laboratories (ETL)
 12. National Electrical Safety Code (NESC)
 13. California Electrical Code Title 24, Part 3
 14. California Building Code
 15. Americans with Disability Act (ADA)
 16. California Fire Code
- B. Comply with all applicable laws, ordinances, rules, regulations, codes, or rulings of governmental units having jurisdiction as well as standards of NFPA, and serving utility requirements.
- C. Owner shall pay all permit fees and inspections required by any public authority having jurisdiction. Contractor shall coordinate work and arrange inspections with any public authority having jurisdiction.
- D. Installation procedures methods and conditions shall comply with the latest requirements of the Federal Occupational Safety and Health Act (OSHA).
- E. Cover no work until inspected, tested, and approved by the Architect. Where work is covered before inspection and test, uncover it and when inspected, tested, and approved, restore all work to original proper condition at no additional cost to Owner.

1.05 DRAWINGS AND SPECIFICATIONS

- A. Drawings and specifications are intended to complement each other. Where a conflict exists between the requirements of the drawings and/or the specifications, request clarification.
- B. The Architect shall interpret the drawings and the specifications, and his decision as to the true intent and meaning thereof and the quality, quantity, and sufficiency of the materials and workmanship furnished there under shall be accepted as final and conclusive.
- C. In case of conflicts not clarified prior to Bidding deadline, use the most costly alternative (better quality, greater quantity, or larger size) in preparing the Bid. A clarification will be issued to the successful Bidder as soon as feasible after the Award and if appropriate, a deductive change order will be issued.
- D. All provisions shall be deemed mandatory except as expressly indicated as optional by the word "may" or "option".

1.06 EXAMINATION OF PREMISES

- A. Examine the construction drawings and premises prior to bidding. No allowances will be made for not being knowledgeable of existing conditions.

1.07 WORK AND MATERIALS

- A. Unless otherwise specified, all materials must be new and of the best quality. Perform all labor in a thorough and workmanlike manner, to the satisfaction of the Architect.
- B. All materials provided under the contract must bear the UL label where normally available. Note that this requirement may be repeated under equipment specifications. In general, such devices as will void the label should be provided in separate enclosures and wired to the labeled unit in proper manner.

1.08 SUBSTITUTIONS

- A. Substitutions will be allowed only in strict conformance with the General Conditions of the Contract and Division.
 - 1. Whenever in specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer such specification shall be deemed to be used for the purpose of facilitating description of material, process, or article desired and shall be substantially equal or better in every respect to that so indicated or specified. If material, process, or article offered by Contractor is not, in opinion of architect, substantially equal or better in every respect to that specified, then Contractor shall furnish material, process or article specified. Burden of proof as to equality of any material, process, or article shall rest with Contractor. Contractor shall submit request together with substantiating data for substitution of an "or equal" item within thirty-five (35) days after award of contract. Provision authorizing submission of "or-equal" justification data shall not in any way authorize an extension of time for performance of this contract.

1.09 EQUIPMENT PURCHASES

- A. Arrange for purchase and delivery of all materials and equipment within 20 days after approval of submittals. All materials and equipment must be ordered in ample quantities for delivery at the proper time. If items are not on the project in time to expedite completion, the Owner may purchase said equipment and materials and deduct the cost from the contract sum.
- B. Provide all materials of similar class or service by one manufacturer.

1.10 COOPERATIVE WORK

- A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration.
- B. Cooperative work includes: General supervision and responsibility for proper location and size of work related to this division, but provided under the other sections of these specifications, and installation of sleeves, inserts, and anchor bolts for work under each section in this division.

1.11 VERIFICATION OF DIMENSIONS

- A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions, etc., and be responsible for properly fitting equipment and materials together and to the structure in properly fitting equipment and materials together and to the structure in spaces provided.
- B. Drawings are essentially diagrammatic, and many offsets, bends, pull boxes, special fittings, and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact location, routes, building obstructions, etc. and install apparatus and equipment in manner and locations to avoid obstructions, preserve headroom, keep openings and passageways clean, and maintain proper clearances.

1.12 CLEANUP

- A. In addition to cleanup specified under other sections, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any spattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.
- B. Use steel brushes on exposed metalwork to carefully remove rust, etc., leaving it smooth and clean.
- C. During the progress of the work, keep the premises clean and free of debris.

PART 2 – PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 CUTTING AND PATCHING

- A. Cut existing work and patch as necessary to properly install new work. As the work progresses, leave necessary openings, holes, chases, etc., in their correct location. If the required openings, holes, chases, etc., are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect.

3.02 CONCRETE

- A. Where used for structures to be provided under the contract such as bases, etc., concrete work, and associated reinforcing shall be as specified under architectural. See architectural drawings for details.
- B. See other sections for additional requirements for underground vaults, cable ducts, etc.

3.03 PAINTING

- A. Paint all unfinished metal with one coat of rust-inhibiting primer. (Galvanized and factory painted equipment shall be considered as having a sub-base finish.)
- B. Finished painting is specified Under "Finishes".

- C. Furnish all connections to electrical services furnished under other sections except as otherwise specifically designated. Provide all necessary connections, etc., required to properly connect all services and equipment.
- D. General: Painting requirements of this section are supplementary to other Painting Sections.
- E. Switchboards, panels, terminal cabinets, equipment enclosures, wireways, boxes, conduit, etc.: Standard gray or galvanized manufacturers' finish unless otherwise noted herein.
- F. Exceptions in public areas:
 - 1. Flush panels and cabinets: Fronts shall have factory applied primer and field applied oil base semi-gloss enamel finish coat (except metal plated parts) to match adjacent wall surfaces.
 - 2. Surface panels, cabinets and wireways: Same as "1. Flush Panels" above except also paint the enclosure (can) using the same paint as is on adjacent surface in lieu of semi-gloss paint. Apply etching compound (galvanized surfaces) and undercoater prior to finish coat.
 - 3. Surface and flush boxes: Paint to match adjacent surfaces as described in "2. Surface panels" above.
 - 4. Exposed conduit: Paint to match adjacent surfaces as described in "2. Surface panels" above.
 - 5. Ferrous metal miscellaneous parts (except stainless steel): Galvanized in accordance with ASTM A123 or A153.
 - 6. Lighting fixtures in public areas: Standard manufacturers' finish except as modified by the LIGHTING section, including Fixture Schedule. Exception: Paint the trims of recessed fixtures to match adjacent wall or ceiling surface if so directed by Owner's representative.
 - 7. Wiring devices, device plates and floor boxes in public areas: As specified in WIRING DEVICES and DEVICE PLATES Sections.

3.04 UTILITY SERVICES

- A. Upon notification of award of contract, notify the serving power, telephone utilities of the following:
 - 1. Name and address of Contractor.
 - 2. Estimated times of construction start, completion and required service connections.
 - 3. Project service voltage, phase load, and service size.

3.05 TEMPORARY LIGHTING AND POWER

- A. Contractor shall provide on-site generation, labor, materials and/or any required utility fees associated with the installation and maintenance of a temporary power source for Contractor's equipment or field offices during the period of construction.
- B. Building and site shall be sufficiently illuminated so that construction work can be safely performed. Lights shall be controlled by switches located with consideration for safety, security, and convenience.

3.06 RECORD DRAWINGS

- A. The Electrical Division shall maintain record drawings as specified in Section 01 78 39.
- B. Drawings shall show locations of all concealed and exposed conduit runs, giving the number and size of conduit wires. Underground ducts shall be shown with cross section elevations. Drawing changes shall not be identified only with referencing COR's and RFI's, the drawings shall reflect all the actual changes made.

- C. Two sets of reproducible as-built drawings shall be delivered to the Architect. See Section 01 78 39 for additional requirements.

3.07 EXCAVATION AND BACKFILL

- A. Perform all necessary excavation, shoring, and backfilling required for the proper laying of all conduits inside the building and premises, and outside as may be necessary. Remove all excess excavated materials from the site, or as otherwise directed by the Architect.
- B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms no wider than necessary to provide ample work room. Grade trench bottoms accurately. Machine grade only to the top line of the conduits, doing the remainder by hand. Do not cut any trench near or under footings without first consulting the Architect. All trenches shall be done in accordance with OSHA standards and regulations.
- C. Trenching and backfilling shall be done as per Section 31 23 33. No stones or coarse lumps shall be laid directly on conduit or conduits.
- D. Provide pumps and drainage of all open trenches for purposes of installing electrical duct and wiring.

3.08 ACCESSIBILITY

- A. Install all control devices or other specialties requiring reading, adjustment, inspection, repairs, removal, or replacement conveniently and accessibly throughout the finished building.
- B. All required access doors or panels in walls and ceilings are to be furnished and installed as part of the work under this section.
- C. Provide doors which pierce a fire separation with same fire ratings as the separations.
- D. Refer to 'Finish Schedule' for types of walls and ceilings in each area and the architectural drawings for rated wall construction.
- E. Coordinate work of the various sections to locate specialties requiring accessibility with others to avoid unnecessary duplication of access doors.

3.09 FLASHING

- A. Flash and counterflash all conduits penetrating roofing membrane.

3.10 IDENTIFICATION OF EQUIPMENT

- A. All electrical equipment shall be labeled, tagged, stamped, or otherwise identified in accordance with the following schedules:
- B. General:
 - 1. In general, the installed laminated nameplates as hereinafter called for shall also clearly indicate its use, areas served, circuit identification, voltage and any other useful data.
 - 2. All auxiliary systems, including communications, shall be labeled to indicate function.
 - 3. All labels, tags, and stamps shall use the owner room designation and room numbering system.

4. Provide nameplates for safety switches, switchboards, breakers mounted in switchboards, relay cabinets, signal terminal cabinets, individually mounted enclosed breakers, panelboards, starters, time clocks, remote control switches and similar items. Nameplates shall be laminated black-white-black backlit or phenolic plastic with ¼-inch high lettering engraved through the outer covering except where specifically described otherwise. Affix with self-tapping machine screws (no rivets or glue). The screws shall not project beyond the backside face of enclosure doors or panels.
- C. Conduits and outlet boxes for all special systems including emergency power, fire alarm, and communications systems shall be color coded for identification throughout. Conduits shall be spray painted with the system color code at 3-foot intervals. Outlet and junction boxes shall be spray painted with the system color code on the exterior of the box, except boxes which are flush mounted in walls, ceilings, or floors shall be painted on the inside of the box. System color codes shall be as follows:
- | | |
|------------------------------------|--------|
| 1. Emergency Power Systems | Orange |
| 2. Fire Alarm System | Red |
| 3. Nurse Call System | Blue |
| 4. Music/Paging System | Yellow |
| 5. Intercom System | Pink |
| 6. Telephone System | White |
| 7. Data System | Gray |
| 8. SMATV/Radio Program System | Brown |
| 9. Miscellaneous Signaling Systems | Violet |
- D. Lighting and Local Panelboards Transformers:
1. Panel identification shall be with white and black micarta nameplates. Emergency power distribution panels shall be identified with red and white micarta nameplates. Letters shall be no less than 3/8" high.
 2. Circuit directory shall be 2-column typewritten card set under glass or glass equivalent. Each circuit shall be identified by the room number and/or number of unit and other pertinent data as required.
 3. The circuit directory shall reference the building number and room number as designated by the school directory. Circuit directories which reference the building number and room number as designated on drawings are not acceptable.
- E. Distribution Switchboards and Feeders Sections, Motor Control Centers, Automatic Transfer Switches:
1. Identification shall be with 1" H 4" laminated white micarta nameplates with black lettering on each major component, each with name and/or number of unit and other pertinent data as required. Emergency power distribution panels shall be identified with red micarta nameplates and white lettering. Letters shall be no less than 3/8" high.
 2. Circuit breakers and switches shall be identified by number and name with 3/8" H 1-1/2" laminated micarta nameplates with 3/16" high letters mounted adjacent to or on circuit breaker or switch.
- F. Disconnect Switches, Motor Starters and Transformers:
1. Identification shall be with white micarta laminated labels and 3/8" high black lettering.
 2. Emergency equipment shall be identified with red labels and 3/8" high white lettering.

3.11 CONSTRUCTION FACILITIES

- A. Furnish and maintain from the beginning to the completion all lawful and necessary guards, railings, fences, canopies, lights, warning signs, etc. Take all necessary precautions required by City, State Laws, and OSHA to avoid injury or damage to any persons and property.
- B. Temporary power and lighting for construction purposes shall be provided under this section. Refer to 'temporary facilities' for description of work.

3.12 GUARANTEE

- A. Guarantee all material, equipment and workmanship for all sections under this division in writing to be free from defect of material and workmanship for one year from date of final acceptance, as outlined in the general conditions. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of equipment under all site conditions, conditions of load, installing any additional items of control and/or protective devices, as required.

3.13 PATENTS

- A. Refer to the General Conditions for Contractor's responsibilities regarding patents.

3.14 MECHANICAL / ELECTRICAL COORDINATION REQUIREMENTS

- A. All electrical work performed for this project shall conform to the National Electrical Code, to Local Building Codes and in conformance with Division 16 of these specifications whether provided under the Mechanical or the Electrical sections of the specifications. Where the mechanical Contractor is required to provide electrical work, he shall arrange for the work to be done by a licensed electrical contractor using qualified electricians. The Mechanical Contractor shall be solely and completely responsible for the correct functioning of all mechanical equipment regardless of who provided the electrical work.

- B. The Mechanical Contractor shall provide the following:

1. All motors required by mechanical equipment.
2. All starters for mechanical equipment which are integral to equipment scheduled and / or specified.
3. All wiring interior to packaged equipment furnished as an integral part of the equipment.
4. All control wiring for mechanical systems.
5. All control systems required by mechanical equipment.
6. Control wiring shall be defined as all wiring, either line voltage or low voltage, required for the control and interlocking of equipment, including but not limited to wiring to motor control stations, solenoid valves, pressure switches, limit switches, flow switches, thermostats, humidistats, safety devices and other components required for the proper operation of the equipment.
7. Motor starters supplied by Mechanical shall be fused combination type minimum size 1, and conform to appropriate NEMA standards for the service required. Provide NEMA type 3R/12 enclosures in wet locations. Provide all starters with appropriately sized overload protection and heater strips provided in each phase, hand/off auto switches, a minimum of 2 NO and NC auxiliary contacts as required, and an integral disconnecting means. For 1/2 horsepower motors and below, when control requirements do not dictate the use of a starter, a manual motor starter switch with overload protection in each phase may be provided. Acceptable manufacturers are Allen Bradley, General Electric, Square D, Furnas and Westinghouse.

- C. The Electrical Contractor shall provide the following for mechanical equipment:

1. All power wiring.
 2. Electrical disconnects as shown on the electrical drawings.
 3. All starters not integral to equipment scheduled and / or specified and all starters forming part of a motor control center.
- D. All power wiring and conduit to equipment furnished under Mechanical Division shall be provided under Electrical Division. Control wiring, whether line voltage or low voltage, shall be provided under the division which furnishes the equipment.
- E. Conduit for wiring for all HVAC and plumbing control shall be furnished and installed under Electrical Division.
- F. Power wiring shall be defined as all wiring between the panelboard switchboard overcurrent device, motor control center starter or switch, and the safety disconnect switch or control panel serving the equipment. Also, the power wiring between safety disconnect switch and the equipment line terminals.
- G. All motor starters which are not part of motor control centers and which are required for equipment furnished under this division shall be furnished and installed under the Electrical Division.
- H. Electrical Division shall make all final connections of power wiring to equipment furnished under this division.
- I. Wiring diagrams complete with all connection details shall be furnished under each respective section.

3.15 EQUIPMENT ROUGH-IN

- A. Rough-in all equipment, fixtures, etc. as designed on the drawings and as specified herein. The drawings indicate only the approximate location of rough-ins. The exact rough-in locations for manufactured equipment must be determined from large scale certified drawings. Mounting heights of all switches, receptacles, wall mounted fixtures and such equipment must be coordinated with the architectural designs. The Contractor shall obtain all rough-in information before progressing with any work for rough-in connections. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications to comply with rough-in drawings.

3.16 OWNER-FURNISHED AND OTHER EQUIPMENT

- A. Rough-in and make final connections to all Owner-furnished equipment shown on the drawings and specified, and all equipment furnished under other sections of the specifications.

3.17 EQUIPMENT FINAL CONNECTIONS

- A. Provide all final connections for the following:
1. All equipment furnished under this Division.
 2. Electrical equipment furnished under other sections of the specification.
 3. Owner-furnished equipment as specified under this Division.

3.18 INSERTS, ANCHORS, AND MOUNTING SLEEVES

- A. Inserts and anchors must be:

1. Furnished and installed for support of work under this Division.
 2. Adjustable concrete hanger inserts installed in new concrete work shall be as manufactured by Grinnell or approved equal.
 3. Installed in location as approved by the Architect. Expandable lead type anchors installed in existing concrete with minimum surface damage, as manufactured by Ackerman-Johnson, Pierce, Diamond, or Hilti.
 4. Toggle Bolts, or "Molly-Anchors" where installed in concrete block walls.
 5. Complete with 3/16" or heavier steel back-up plate where used to support heavy items. Thru-bolts for back-up plate shall be concealed from view, except as otherwise indicated. Refer to drawings for details of supports at post-tension concrete slab.
 6. Mounting of equipment that is of such size as to be free standing and that equipment which cannot conveniently be located on walls such as motor starters, etc., shall be rigidly supported on a framework of galvanized steel angle of Unistrut or B-line systems with all unfinished edges painted.
- B. Furnish and install all sleeves as required for the installation of all work under all sections of this division. Sleeves through floors, roof, and walls shall be as described in conduit section.

3.19 SEISMIC RESTRAINTS

- A. Provide the work in compliance with the most stringent seismic requirements for Zone 4, of applicable Codes including the Title 24 and California Code of Regulations (CCR) California Building Code, but with the requirements herein as minimum standards. Provide seismic restraints for materials and equipment of this Division, including (but not limited to) the items listed below. The attachments shall resist forces applied to the center of gravity of the components. Criteria shall be the operating weight of the item times .5g for horizontal forces and .33g for vertical forces. Design for the horizontal force to be applied in any direction. Wall mounted or suspended components shall, in addition, resist a downward force of 200 pounds minimum added to the operating weight.
- B. All switchgear and other free standing electrical equipment shall be anchored to withstand seismic forces in this area.
- C. Switchboards, transformers, and all free-standing panels or cabinets and similar equipment.
- D. Suspended lighting fixtures.
- E. Lighting fixtures integral with ceiling or directly mounted to ceiling.
- F. Suspended conduit hangers and trapezes.
- G. Suspended electrical conduit, 2-1/2" nominal size and larger, shall have individual hangers not longer than 12" from the top of the pipe to the bottom of the support for the hanger. If a longer hanger is used, Contractor shall apply seismic restraints. Supporting calculations and details shall be submitted for Title 24 compliance review.
- H. Four #9-12 gauge hanger wires shall be provided to each recessed troffer one located at each diagonal corner. In addition troffers shall be fastened with two self tapping screws at each end of fixture through housing to main runners of the T-bar grid. Installation of these screws shall in no way deform the fixture housing. Provide spacers between the fixture housing and the T-bar grid where required.

- I. Provide bracing and anchorage of conduit hangers and trapezes in accordance with SMACNA published "Guidelines for Seismic Restraints of Mechanical Systems".
- J. Pendant, suspended, or stem mounted lighting fixtures shall have approved earthquake resistant hangers if code required and have movable joints at ceiling and fixture when more than one stem is used per fixture. In addition, fixtures shall have steel stranded aircraft cable attached to the structure and to the fixture at each point of support, in addition to the fixture hanger. Cables shall be installed slack and shall be capable of supporting four times the vertical load. The fixture shall be capable of swinging 45° in any direction. Where a 45° swing would cause the fixture to strike a wall or other object, suitable cables or other means of bracing shall be added to prevent the fixture from swinging against the other object.
- K. Carefully review the space available to insure that the restraint systems proposed will not impair the required equipment clearance, working space or access.
- L. Submit details of the seismic anchorages and receive approval of the Owner's representative prior to installation. Details shown on the drawings are for reference only and may not be suitable for the actual equipment to be installed. Exception: Details for seismic anchorage may be omitted for equipment installed on a floor or roof and weighing less than 400 lbs. but the installation shall be subject to the approval of the Owner's representative.

3.20 RUSTPROOFING

- A. Rust proofing must be applied to all ferrous metals as follows:
 - 1. Hot-dipped galvanized shall be applied after forming of angle-iron, bolts, anchors, etc.
 - 2. Hot-dipped galvanized shall be applied after fabrication for junction boxes and pull boxes cast in concrete.

3.21 GENERAL WIRING

- A. Where located adjacent in walls, outlet boxes shall not be placed back to back, nor shall extension rings be used in place of double boxes, all to limit sound transmission between rooms. Provide short horizontal nipple between adjacent outlet boxes, which shall have depth sufficient to maintain wall coverage in rear by masonry wall.
- B. In those isolated instances in which construction conditions will not permit staggered outlet boxes, provide "Flamesafe" FSD 1077 fire stopping pads or approved equal, over the outlet box.
- C. Complete rough-in requirements of all equipment to be wired under the contract are not indicated. Coordinate with respective trades furnishing equipment or with the Architect as the case may be for complete and accurate requirements to result in a neat, workmanlike installation.
- D. Provide proper size and type of feeds from proper sources for all such items indicated, checking drawings of all trades to ensure inclusion of all items.

3.22 SEPARATE CONDUIT SYSTEMS

- A. Each electrical and signal system shall be contained in a separate conduit system as shown on the drawings and as specified herein. This includes each power system, each lighting system, each signal system of whatever nature, telephone, emergency system, sound system, control system, fire alarm system, etc.

- B. Further, each item of building equipment must have its own run of power wiring. Control wiring may be included in properly sized conduit for equipment feeders of #6 AWG and smaller, having separate conduit for larger sizes.

3.23 SPECIAL CONDUIT REQUIREMENTS

- A. The electrical Contractor shall furnish and install all conduits for the total and complete conduit for the following communication systems.
 - 1. Clock and Bell
- B. The fire alarm system shall be in conduit at all areas.
- C. Conduit for all low voltage systems, including fire alarm and clock and bell located above suspended ceiling shall be installed below gypsum board on bottom chord of truss, exposed.
- D. Provide a pull chord in all spare conduit and where conductors are installed by others.

END OF SECTION 26 05 00

SECTION 26 05 26 - GROUNDING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, Division One, and Section 26 05 00 Common Work Results for Electrical apply to this section.
- B. The scope of work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Grounding, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Furnish and install grounding and grounding conductors.

PART 2 – PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 GROUNDING

- A. All panelboard cabinets, equipment, enclosures, and complete conduit system shall be grounded securely in accordance with pertinent sections of Article 250 of CEC. Conductors shall be copper. All electrically operated equipment shall be bonded to the grounded conduit system. All non-current carrying conductive surfaces that are likely to become energized and subject to personal contact shall be grounded by one or more of the methods detailed in Article 250 CEC. All ground connections shall have clean contact surfaces. Install all grounding conductors in conduit and make connections readily accessible for inspection. Furnish and install grounding electrodes as described on the drawings.
- B. Grounding of metal raceways shall be assured by means of provisions of grounding bushings on feeder conduit terminations at the panelboard, and by means of insulated continuous stranded copper grounding wire extended from the grounds bus in the panelboard to the conduit grounding bushings.
- C. Except for connections which access for periodic testing is required, make grounding connections which are buried or otherwise inaccessible by exothermite type process.
- D. Equipment Grounding Conductors:
 - 1. Provide copper THWN insulated equipment grounding conductors in all raceways.
 - 2. The grounding conductors shall be provided whether scheduled or shown on the drawings or not, and, if necessary, the conduit size shall be increased to accommodate them. These grounding conductors shall be connected to the ground terminals on the device or enclosure at each end of the installation and shall be interconnected with the other ground terminals and conductors to form a continuous wired grounding system throughout the electrical wiring system.
- E. Ground Rods: 3/4" diameter × 8-foot copper clad steel. Drive full length into earth with the top 3-inch minimum below grade or underside of slab. Where ground rods cannot be driven vertically to the desired depth below grade, they shall be driven at an angle away from or parallel to the exterior

wall. When driven parallel to the wall, the angle shall not exceed 45°. The rod shall penetrate to a depth of permanent ground moisture. When ground rods cannot be driven because of bedrock at less than 4 feet below grade level, a counterpoise ground electrode shall be used in place of rods. The counterpoise system shall consist of not less than 50 feet of No. 2 AWG bare tinned copper wire, buried to a depth of at least 18" below grade, for each ground rod shown. The wires shall be run in a straight line. Each pad-mounted transformer and vacuum interrupting sectionalizing switch shall be grounded using the methods indicated herein.

- F. Connections: Connection to inaccessible ground rods below ground shall be made using exothermic welding devices. Above ground and accessible connections shall be made using exothermic devices. Multiple bolt silicon bronze connectors, Burndy or O.Z. Electric; or exothermic welded, Burndy, Erico Cadweld products, or equal.
- G. Test each grounding electrode for resistance at the connection point before connecting any wires. Resistance at the grounding electrode shall not exceed the following:
 - 1. Service Equipment, 25 ohms
 - 2. Interior Electrical Systems, 25 ohms
 - 3. Exterior Transformers, 10 ohms
 - 4. Junction Boxes and Manholes, 10 ohms
- H. If the above values are not achieved with the installed system, notify the Owner's representative.
- I. Each ground electrode shall be tested using a ground resistance meter, or other suitable instrument, in conformance with the manufacturer's directions. Submit a report listing as a minimum the date of testing, name of tester, instrument used, location and type of ground electrode, and resistance in ohms. Submit within five (5) days after testing is completed.

END OF SECTION 26 05 26

SECTION 26 50 00 – LIGHTING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with Lighting, as indicated on the drawings, specified herein, or reasonably required to complete the work.

1.02 SUBMITTALS

- A. Comply with requirements of Section 01 33 00 – SUBMITTALS.
- B. Material List including reflector type and each type of lamp and ballast.
- C. Catalog cuts for each fixture and pole including complete photometric data in IES format.
- D. Electronic ballast warranty.

1.03 GENERAL REQUIREMENTS

- A. Provide U.L. listed and labeled lighting fixtures complete with lamps at light outlets indicated on the drawings. Each fixture shall bear the U.L. label, and shall comply with Code Requirements. Exterior fixtures shall be U.L. approved for damp locations in soffits and for wet locations elsewhere and shall be so labeled.
- B. Design (including the frames) of recessed fixtures shall be compatible with the ceiling construction. Verify the type of ceiling and suspension method prior to ordering fixtures. Architect’s favorable review of the shop drawings for both the ceiling system and the lighting fixtures, with “No Exception Taken” or “Approved” on the Architect’s stamp, will not relieve the Contractor of the ceiling/lighting fixture compatibility requirement.
- C. Fixtures are listed and described in the Fixture Schedule and in the following paragraphs. Fixture catalog numbers are to be used as a guide only and shall be understood to be followed by the words “except as modified by the total fixture description both text and pictorial”. Provide accessories, features and adaptations necessary to meet the requirements of the description.
- D. If the fixture designation is omitted from a light outlet, assume a fixture of the type used in similar areas in preparing the bid. Confirm type with Architect prior to ordering.

1.04 ACCEPTABLE MANUFACTURERS

- A. Electromagnetic Advance, Valmont Electric
- B. Ballasts Jefferson, Universal, Sola or equal
- C. Electronic Ballasts Magnetek-Universal, Motorola, EBT or equal
- D. Lamps Sylvania, General Electric, N.A. Phillips, Osram or equal

1.05 LAMP REPLACEMENT

- A. Replace lamps which burn out after Owner's use or acceptance of the project (or of an area in the case of beneficial occupancy).
- B. Lamps (except incandescent) which burn out with 120 days.
- C. Incandescent lamps which burn out after usage which is less than 80% of rated life.

PART 2 - PRODUCTS

2.01 FINISH

- A. Treat surface mounted fixtures and exposed trim of recessed fixtures with a rust-inhabitant process. This process shall be Bonderlite or Oakite Crysoat or equal zinc phosphate bonding process. Refer to PAINT, FINISHES AND COLORS sections.

2.02 OPTICAL SYSTEMS

- A. Lighting fixtures for use with HPS lamps shall have the optical system specifically designed for a clear HPS lamp of the wattage indicated.

2.03 BALLAST WIRING

- A. Where multiple level switching of fluorescent fixtures is indicated on the drawings, wire ballasts for symmetrical grouping of lamps. For example in three lamp tandem fixtures, two inner and four outer lamps shall be switch controlled.

2.04 EXIT SIGN FIXTURES

- A. Emergency exit sign fixtures with illumination by LED's (Light Emitting Diodes), fully enclosed within aluminum housing and providing even illumination of letters through an optical diffuser to meet or exceed requirements of NFPA Life Safety Coded 101 and the OSHA code. The power supply shall be dual input 120/277V 60 Hz. All components shall be solid state, with surge protection and short circuit protection and each LED shall be individually driven such that failure of one will not affect another.

2.05 BALLASTS

- A. Emergency battery pack ballasts for fluorescent lighting fixtures shall consist of an automatic power failure device, test switch, pilot light, and fully automatic solid-state charge in a self-contained power pack furnished by the fixture manufacturer as an integral part of the fixture. Charger shall be either trickle, float, constant current or constant potential type, or a combination of these. Battery shall be no maintenance nickel cadmium type with capacity to supply power to one lamp for each fixture for 90 minutes minimum. Unit shall be capable of operating a dead fluorescent lamp.
- B. Fluorescent HID ballasts and emergency battery pack ballasts shall be guaranteed for 3 years.

2.06 LAMPS

- A. Provide lamps as listed below unless specifically indicated otherwise in the Lighting Fixture Schedule.

- 2.07 B. Incandescent General Service Lamps: Inside frosted, standard life, 130V.
FLUORESCENT LAMPS
 - A. Compact Fluorescent; 3500K degree color for interior locations.
 - B. 40 watt "Biax"; 3500K.
 - C. Rapid-start lamps; 3500K.
 - D. High Intensity Discharge (HID) Lamps:
 - 1. Metal halide light fixtures that utilize a horizontal lamp configuration shall be provided with a clear lamp rated for horizontal operation.
 - E. Each type of lamp by only one manufacturer color consistency.
- 2.08 LIGHT TRANSMITTING PLASTICS
 - A. All plastic shall be 100% virgin acrylic. Pattern #12 lenses shall be minimum .125-inch thick overall with .08-in. prism depth.
- 2.09 LIGHTING CONTROL SYSTEM – MOTION SENSING
 - A. Motion sensing lighting control system shall be installed where shown to switch lighting fixtures ON when a room or area is entered and OFF after a preset time delay after sensing no motion or occupancy.
 - B. System shall consist of motion sensor units, switchpacks, wiring, and miscellaneous electrical hardware. Ceiling mounted sensing and switchpack units shall be manufacturers by Novitas, Watt-Stopper or equal. Wall switch type unit shall be provided by Novitas or equal.
- 2.10 EMERGENCY INVERTER SYSTEMS
 - A. Furnish and install interruptible 3600 VA emergency AC inverter system manufactured by Chloride, Emerg-Lite, Exide, Lithonia, or equal capable of serving a 2400 VA 277 volt 60 Hz connected load for a period of 90 minutes to 87.5 percent of output voltage. System shall be listed to UL Standard 924.
 - B. The entire system, including inverter, battery charger, transfer equipment and battery, shall be designed for maximum reliability in emergency service and shall be designed with modular construction for easy field replacement. System transfer time to emergency mode shall be no more than 50 milliseconds. All solid-state components shall be conservatively rated. Electronics shall carry a one year warranty.
 - C. The system shall be designed to operate from 277 volt 1-phase 60 Hz input voltage and supply the normally ON loads at 277 volts single phase 60 Hz.
 - D. Supply normally ON loads at 277 volts single-phase 60 Hz and also supply normally OFF loads at 120 volts single-phase 60 Hz, at Building.
 - E. Inverter:
 - 1. The DC to AC inverter shall be of the solid state type with ferroresonant output transformer to provide 120/277 volt 1-phase 60 Hz sine wave output such that the output voltage is regulated to

within $\pm 5\%$ from 10% load to full load at unity power factor and the frequency is regulated within ± 1 Hz. Total harmonic distortion of the output shall be approximately 5% at full resistive load and nominal input.

2. System efficiency shall be at least 90% in the standby mode to minimize power consumption. Inverter efficiency shall be greater than 80% in emergency mode to insure maximum utilization of battery capacity and to minimize space.
3. To minimize power consumption, inverter shall not operate continuously; however, low level logic stage shall operate when AC supply is available to minimize interruption of power to load.
4. Self-protective features shall include short circuit protection, failsafe startup, automatic low battery shutdown, reverse input polarity protection and 5-minute operation at 130% of unit rating. The input power and control circuitry shall be separately fused.

F. Charger:

1. The battery charger shall be a solid state, constant voltage, current limited device incorporating internal red visual indicators to signal float and high charge mode. Charger shall be equipped with timed automatic equalize charge to periodically bring batteries up to full capacity. Charger shall be capable of recharging batteries in accordance with the requirements of UL 924.

G. Battery:

1. The Battery shall be sized to power the fully-loaded inverter for 90 minutes in accordance with UL requirement and shall be sealed, maintenance free lead calcium requiring no addition of water during service life. Expected service life shall be 10 years and warranty shall be a total of 10 years consisting of 1 years full replacement plus 9 years prorated replacement.

H. Controls:

1. Instrumentation and controls shall be suitable to determine that the system is operating in a satisfactory manner. As a minimum, these shall include utility power indicator, inverter bypassed indicator, DC battery voltmeter, AC output voltmeter, DC battery ammeter, system test switch, high-charge indicator.

I. Enclosure:

1. System electronics shall be enclosed in a free standing, 14-gauge, NEMA 1 sheet steel enclosure painted with key-lock hinged doors. Battery enclosures of similar construction shall be supplied as required. All electronics shall be mounted on easily removable modules with quick disconnect inter-wiring. All potentially hazardous components shall have safety covers and be properly marked with tags to indicate safe handling.

J. Accessories:

1. Inverter units shall be provided with output circuit breakers.
2. AC ammeter.

PART 3 – EXECUTION

3.01 FIXTURE MOUNTING

- A. Provide fixture supports. Design (including the frames) of recessed fixtures shall be compatible with the ceiling construction. Verify the type of ceiling and suspension method prior to ordering fixtures. Architect favorable review of the shop drawings for both the ceiling system and the lighting fixtures,

with “No Exception Taken” or “Approved” on the Owner’s representative’s stamp, will not relieve the Contractor of the ceiling/lighting fixture compatibility requirement.

- B. Mount pendant fixtures at the heights indicated on the drawings, unless otherwise directed by Architect.
- C. Verify the ceiling or wall construction, voltage, and the mounting requirements of each fixture and provide plaster frames, special flanges, concrete pour housings, boxes, brackets, adapters, hangers, stems, canopies, special ballasts or lenses, and other materials necessary to properly purchase and mount the fixture.
- D. Attach surface fixtures mounted on accessible panel type suspended ceilings to a main runner with a positive clamping device made of minimum 12 gauge steel. Rotational spring catches will not be permitted. Mount fixtures which are on combustible ceilings on spacers as required by Code unless Code approved for mounting directly on ceiling.
- E. See “Seismic Restraints” under Section 26 05 00 – Common Work Results for Electrical.

3.02 FIXTURE LOCATIONS

- A. Locate fixtures installed in Mechanical Equipment Rooms after ducts and piping are in place for maximum working space coverage. Connect with exposed conduit. Provide conduit with conduit fittings for boxes and offsets. Support fixtures from the structure independently of ducts or piping.

3.03 FIXTURE INSTALLATION

- A. Provide outlet boxes for recessed fixtures in a manner approved by the Code. In non-accessible ceilings provide access to junction boxes, ballast, transformers, and battery packs through fixture apertures: no access panels in ceiling. Provide appropriately temperature rated insulation for branch wires to recessed fixtures.
- B. Install lighting fixtures securely, level, plumb, aligned, and in straight rows. Lighting fixtures must be installed so they do not shift during relamping or adjustment.
- C. Recessed Fixtures:
 - 1. Supports: Provide seismic clips and bracing per Code. Refer to Section 26 05 00 Common Work Results for Electrical.
 - 2. Holes for Recessed Fixtures
 - 3. Minimum-width fixture trims are specified for this project. Cut holes to follow fixture housing exactly so no gaps will be visible after trims are installed.
 - 4. Round holes in acoustic tiles: Pre-cut in center of tiles, using adjustable-diameter cutter on slow-speed drill press.
 - 5. Install bottom of housing aligned with finished ceiling.
 - 6. Keep ceiling insulation at least 3” away from fixture.
 - 7. Install trims after painting of spaces. Install trims tightly, with no gaps, or light leaks. For exterior fixtures provide seals and gasketing to prevent insect entry into the fixtures. If soffits recessed fixtures are not available with a sealed housing, provide effective gasketing for the lens and for the lens trim/soffit surface interface.
- D. Ceiling-Mounted and Pendant Fixtures:
 - 1. Supports: Provide support for outlet boxes so fixtures can be installed securely, including seismic supports and restraints per Code.

2. Fixture weight less than 50 lb. at each suspension point: hang from strap or stud on outlet box.

END OF SECTION 26 50 00

SECTION 28 31 10 – FIRE ALARM

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, and equipment, and performing all operations in connection with the Fire Alarm System, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following:
 - 1. Furnish and install fire alarm devices to include all addressable signal initiating devices, audible and visual alarm devices, conduit, wire, fittings, and accessories required to provide a complete operating system.
 - 2. Connect the new Simplex Fire Alarm control panel with the existing fire alarm system in the administration office. Provide all necessary relays, control modules and programming.
 - 3. The specifications require the system to be Simplex. Any contractor requesting consideration for a substitute system shall provide the following documents to the Architect of Record ten (10) days prior to the bid:
 - a. Documentation showing the contractor is a factory direct office of the equipment being considered for substitution. No independent distributors will be allowed.
 - b. The contractor's UL Certificate qualifying the contractor for fire alarm installations.
 - c. Full set of submittals and drawings incorporating the substituted equipment. This shall include location layout, battery calculations of the main control panel and any transponders, and line loss of the signal circuit.

1.02 REFERENCES

- A. The latest editions of the publications listed below, form a part of this specification to the extent required by the references thereto:
 - 1. 2016 California Building Code (CBC), Part 2, Title 24, CCR (2015 International Building Code, Vol. 1&2, and 2016 California Amendments)
 - 2. 2016 California Electric Code (CEC), part 3, title 24, CCR(2014 National Electric Code 2016 California Amendments)
 - 3. 2016 California Mechanical Code (CMC), Part 4, Title 24, CCR, (2015 IAPMO Uniform Mechanical Code and 2016 California Amendments)
 - 4. NFPA #72 2016 Edition with California State Amendments
 - 5. 2016 California Fire Code (CFC), Part 9 Title 24, CCR, (2015 International Fire Code and 2016 California Amendments)
 - 6. Underwriters Laboratories, Inc (UL)

- 50 Cabinets and Boxes
- 268 Smoke Detectors, Combustion Products Types for Fire Protective Signaling Systems
- 38 Manually actuated Signaling boxes for use with Fire Protective Signaling Systems
- 521 Fire Detection Thermostats
- 464 Signal Appliances, Audible

- 7. California State Fire Marshal Listing (CSFM)
- B. Electrical Systems, as specified in Division 26.
- C. Communications Systems, as specified in Division 27.

1.03 SUBMITTALS

- A. In addition to the required submittals specified elsewhere, provide California State Fire marshal (CSFM) listings of all devices and equipment to be used.
- B. Provide complete shop drawings of the fire alarm system including the following items on the plans for approval by the School District prior to the start of construction.
 - 1. Complete battery load calculations, and line voltage drop calculations.
 - 2. Conduit size, number, and type of wires to each device, terminal cabinets and enclosures.
 - 3. Location, type and address of all system devices.
 - 4. Reconfiguration (signal and initiating).
 - 5. Complete riser diagrams and signal floor plan. Drawings shall contain State Fire Marshal approval.
 - 6. Backboard layouts (with detailed dimensions).

PART 2 - PRODUCTS

2.01 FIRE ALARM CONTROL PANEL (FACP)

- A. Fire Alarm Control Panel (FACP). The FACP shall be a Simplex 4100.
- B. The system shall be controlled and supervised by a microprocessor based monitoring fire alarm control panel. The systems shall be addressable, field configurable, programmable and editable. The system shall continuously scan devices for change of status. Each device shall have it's own unique address, but shall also be grouped by building as a separate zone for remote annunciation and alarm report purposes.
- C. The fire alarm control panel shall be housed in a lockable, code gauge steel cabinet with 80 character LCD display, master controller operator's panel, I indicating lamps, silence switch and reset switch mounted on cabinet front. The fire alarm control panel shall contain a voice tone generator and a sufficient number of amplifiers in order to provide evacuation tones and digital voice messages throughout the facility. Messages and tones are to be field programmable and initially set to temporal code when an alarm is initiated. An annunciator and message board shall be provided in the main lobby.
- D. The fire alarm control panel shall come with standardized software for on-site customization of the system. The unit shall be capable of providing a 600 event historical log with zone or point selectable alarm verification.
- E. The unit shall support 127 addressable points per module and one output point, SPST contact per zone. Provide the number of modules necessary to control and supervise fire alarm devices as shown on the Drawings, as well as to provide 25% spare capacity).
- F. The fire alarm control panel shall be capable of providing a Walk Test.

- G. The power feed for the FACP shall be 3-wire, 120volt, A.C. single phase (20A circuit) permanently labeled "FIRE ALARM CONTROL POWER", terminating at the master fire alarm control and supervisory panel in the general office and originating at the main electrical switchboard of the building that contains the FACP. The label shall be red with 1/4" high white lettering. The circuit breaker must be provided with a long-on device.
- H. In addition to the two A.C. circuits, the panel shall be equipped with a D.C. battery to activate an audible alarm and pilot light in case of a power failure on either A.C. circuit.
- I. Batteries must drive signaling devices per current requirements NFPA 72. Battery calculations are required as part of the submittal. Provide type and wiring configuration of batteries. Submittal shall specify point to point on OHM's Law.
- J. The master fire alarm panel shall be equipped with a manual pull lever type, supervised report station.

2.02 FIRE DETECTION DEVICES

- A. With the exception of the manually operated report station required at the master fire alarm panel and large assembly areas, the remainder of the school facility shall be equipped with approved, electronically supervised, automatic fire detection devices, such that every room, space, including concealed spaces, such as the attic spaces above ceilings, etc., is provided with approved coverage.
- B. Automatic fire detection devices shall be True Alarm addressable analog smoke and heat detectors. Where used, heat detectors shall be fixed temperature x rate of rise, fixed at 135°F and a 15°F/min rate of rise. In janitor rooms equipped with kilns, devices shall be fixed at 170°F. Use Simplex True Alarm Photo-Electrical Smoke Detectors. Model #4098-9714 with 4098-9792 Base.
- C. A 3/4" thick, fire resistive, plywood backboard shall be installed in the electric room for the fire alarm security, intercom and CCTV systems at each building. All fire alarm wiring shall terminate on U.L. approved strips on this backboard at a section clearly designated for fire alarm only. All wiring shall be labeled at termination strip. Wiring shall be configured such that all end of line resistors will be installed at terminal strip on signal backboards.

2.03 MANUAL FIRE ALARM STATIONS

- A. Manual Fire Alarm Stations shall be an addressable double action, breakglass type with a key operated test-reset lock in order that they may be tested, and so designed that after Actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected, as operated, at a minimum distance of one hundred feet, front or side. Manual Stations shall be constructed of die-formed satin-finished aluminum, with operating directions provided on the cover in depressed red letters. The word FIRE shall appear on each side of the stations in depressed letters, one-half inch in size or larger. Stations shall be suitable for semi-flush mounting on a standard single-gang box or switch plate and shall be provided with a terminal block for connection of Fire Alarm System Wiring. Pull Station shall be Simplex #4099-9021.

- 1. Manual Pull Stations shall comply with CBC Sections 11B-205 and 11B-403.

2.04 ALARM SPEAKER/STROBE DEVICES

- A. Furnish and install where indicated on the drawings, alarm speaker/strobe devices. The audible/visual devices shall be a combination addressable speaker/strobe. The speaker shall be 25 or 70 vrms. The visual shall be rated at 24 vdc.

- B. The audible shall be of rugged vandal-resistant construction. The visual section shall be a strobe using a Xenon flashtube in a clear housing with Solid State circuiting for maximum reliability and efficiency. The strobe unit shall have a meantime between failure (MTBF) of 1,000 hours or greater. The strobe section shall have a minimum intensity rating of 8,000 peak candela with a flash rate of 1 minimum – 2 maximum flash per second, Per NFPA 72, 18.5.3.1)
- C. The alarm speaker/strobe device shall be of the semi-flush type designed for mounting to a standard 4” square deep electrical outlet box. Each device shall be provided with a semi-flush accessory plate. Exterior speakers shall be weatherproof.
- D. Synchronization Requirements: The strobes shall flash at a synchronized rate and the speakers shall sound with synchronized output.

2.05 HEAT DETECTOR DEVICES

- A. Heat detectors shall be addressable, fixed temperature x rate of rise, fixed at 135°F and a 15°F/min rate of rise. In janitor rooms equipped with kilns, devices shall be fixed at 170°F. Heat Detector shall be True Alarm series. Simplex 4098 series.

2.06 SMOKE DETECTOR DEVICES

- A. Smoke detectors shall be True Alarm Analogue addressable, photo-electric. Simplex 4098-9714.
- B. Projected Beam Smoke Detectors shall be Fire Ray Reflective Beam Smoke Detectors. The system comprises of a single unit incorporating an infra-red Transmitter and Receiver. The signal is reflected by a prism and analyzed for smoke presence.

2.07 WIRING

- A. All wiring shall be in accordance with the California Electrical Code (CEC), State Codes, National Fire Protection Association Standard 72, 2016 Edition with state amendments.
- B. All underground conductors for communication circuits shall be West Penn Wire Aqua Seal Fire Alarm Cables. Part No AQZ93.
 - 2. Description: 18/2 Stranded bare copper conductors, overall shield with Aquaseal tape and overall jacket.
 - 3. NEC Rating: FPL – PLTC, NEC Article 760 and 725
 - 4. Approvals: UL Listed-Direct Burial
 - 5. Construction Parameters
 - a. Conductor: 18 AWG Bare Copper
 - b. Stranding: 7x26
 - c. Insulation Material: PVC with Nylon
 - d. Insulation Thickness: Nylon .005” Nominal
 - e. Number of Conductors: 2 (1 Pair)
 - f. Shield: 100% Aluminum Polyester Foil
 - g. Jacket Material: Sunlight / Moisture Resistant PVC
 - h. Jacket Thickness: 0.040” Nominal
 - i. Overall Cable Diameter: 0.310” Nominal
 - j. Approximate Cable Weight: 48 lbs / 1M Nom.
 - k. Flame Rating: UL 1685 Vertical Tray

- C. All underground conductors for power circuit shall be XHHW-2.
- D. No splices allowed in underground wiring.
- E. Interior, dry location wiring for low voltage initiating circuits shall be #18 AWG copper, twisted shielded pair minimum, signaling circuits shall be No. 14 AWG minimum, and wiring for 120 volt circuits shall be No. 12 AWG minimum unless detailed otherwise in drawings. All wiring shall be color coded, solid copper conductor. Use of power limited cable shall be restricted to controls listed for this purpose. Single conductors shall be type XHHW copper.
- F. Twenty (20) percent spare conductors shall be provided from the main Fire Alarm Control Panel to each Fire Alarm (signal) Terminal backboard. These spares shall be terminated and marked at the Fire Alarm Cabinet and each Terminal backboard.
- G. Wire markers shall be provided for each wire connected to equipment. The marker shall be of the taped bank type, of permanent material, and shall be suitable and permanently stamped with the proper identification. The markers shall be attached in a manner that will not permit accidental detachment. Changing of wire colors within circuits shall be unacceptable.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. The installation shall be accomplished by factory authorized technicians. The factory technician shall be state certified as an FLS technician.
- B. System shall be installed using material, supplies and methods of wiring previously covered under other sections.
- C. Contractor shall provide a complete schematic of terminal to terminal wiring within the FACP and show destination of all wires leaving the FACP. These are to be submitted at the time of final inspection.

3.02 TESTS

- A. Upon completion of installation, the system shall be subjected to operational tests, and when all necessary corrections have been accomplished, the Architect shall be advised and will schedule a final inspection test by a representative of the Owner.
- B. The Contractor shall furnish all instruments, labor, and materials required for the tests and a qualified technician to conduct the tests. Any deficiencies found shall be corrected by the Contractor and system retested as necessary prior to final acceptance. Tests shall be per NFPA 72 and as a minimum shall include the following:
 - 1. Operation of each signal initiating device. Special equipment required for testing ionization detectors and heat detectors shall be provided by the Contractor at the time of the test.
 - 2. Operation of all features of the system under normal operation.
 - 3. Operation of all supervisory features of the system.
 - 4. Operation of all features of the system on standby power with primary powers "OFF".

3.03 DOCUMENTATION

- A. Contractor shall provide the following to the Owner, the Architect, and the local fire official at the time of final inspection:
1. As-builts of fire alarm system.
 2. NFPA Certificate of Compliance stating that the system has been installed in accordance with approved plans and specifications and Codes.

END OF SECTION 28 31 10

SECTION 32 13 00 SITEWORK CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division 01 apply to this Section.
- B. Scope of work: The work under this section includes furnishing all labor, materials, and equipment, and performing all operations in connection with Sitework Concrete, as indicated on the Drawings, specified herein, or reasonably required to complete the work. The work includes, but is not limited to the following.
 - 1. Cast-In-Place concrete sidewalks.
- C. Related Sections:
 - 1. Section 31 23 00 Excavation and Fill
 - 2. Section 31 22 19 Finish Grading

1.02 REFERENCES

- A. ASTM A185 – Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
- B. ASTM A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- C. ASTM C33 – Concrete Aggregates.
- D. ASTM C94 – Ready-mixed Concrete.
- E. ASTM C150 – Portland Cement.
- F. ASTM C171 – Sheet Materials for Curing Concrete.
- G. ASTM C979 – Pigments for Integrally Colored Concrete.
- H. ASTM D1751 – Preformed Expansion Joint Fillers for Concrete, Paving and Structural Construction.
- I. ASTM C309 – Liquid Membrane-Forming Compounds for Curing Concrete.
- J. Chapter 19A, California Building Code.

1.03 ACCESSIBILITY REQUIREMENTS

- A. Concrete paving shall be stable, firm, and slip resistant and shall comply with CBC Section 11B-302 and 11B-403.

1.04 SUBMITTALS

- A. Submit under provisions of Section 01 33 00, Submittal Procedures.
- B. Layout Drawings: Provide layout drawing showing location of each type of pavement and construction, and dimensioned locations of expansion and control joints. Do not deviate from location of expansion joints and control joints shown on the drawings.
- C. Design Mixtures: Provide design mix for each concrete mixture. Design mix shall include data substantiating the reliability of the proposed mix. Submit alternate design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

1. Each design mixture shall be stamped and signed by a registered professional engineer licensed in the state of California.
2. Indicate amounts of mixing water to be withheld for later addition at project site.

D. Product Data

1. Expansion material
2. Curing materials

E. Site Samples

1. Prepare samples indicating slab construction and finish, at the site, cast in the directed locations and orientations. Prepare a minimum 8 foot square sample of each texture and finish required for the project. Include a transverse expansion joint, control joints and edging. Where paving adjoins other material such as pavers, include one edge of sample constructed of the other materials.
2. Approved samples may be part of permanent construction if the sample meets all project requirements and is approved.

1.05 QUALITY ASSURANCE

- A. Sitework Concrete work subject to the provisions of Section 01 45 24, Testing and Inspection Requirements, at the option of the Architect.
- B. Maintain one copy of all records on site.
- C. Acquire cement and aggregate from same source for all work.
- D. Conform to Section 1905A.13, California Building Code, when concreting during hot weather.
- E. Conform to Section 1905A.12, California Building Code, when concreting during cold weather. No pouring permitted below 40 degrees Fahrenheit.

1.06 PROJECT RECORD DOCUMENTS

- A. Accurately record actual locations of embedded sleeves, utilities and components which are concealed from view.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cement: ASTM C150 – Type V Portland Type, one manufacturing plant only.
- B. Aggregates: ASTM C33, single source for all materials.
- C. Water: Clean, fresh and potable

2.02 ACCESSORIES

- A. Expansion joints:

1. Expansion Joint Filler – ASTM D1751: Close cell bituminous saturated fiberboard, ½ inch thick; FIBER EXPANSION JOINT manufactured by The Burke Co., Montebello, CA, or approved equal.
2. Joint Devices: Integral extruded polystyrene plastic; ½ inch thick, with removable top strip exposing sealant trough; JOINT CAPS, manufactured by The Burke Company, or equal.
3. Sealant: Polyurethane two-component type, self leveling, for level surface application, UREXPAN NR-200, manufactured by the Pecora Corp., Harleysville PA, or equal. Color shall be selected by the Architect from manufacturer’s standard list of colors.
4. Sealant Primer: As recommended by Sealant Manufacturer.

2.03 CONCRETE MIX

- A. Mix and deliver concrete in accordance with Section 1905A, California Building Code.
 1. Deliver concrete in transit mixers only. Mix concrete for 10 minutes minimum at a peripheral drum speed of approximately 200 feet per minute. Mix at jobsite minimum 3 minutes. Discharge loads in less than 1-1/2 hours or under 300 revolutions of the drum, whichever comes first, after water is first added.
 2. Design Mix: Conform to 1905A.2 – 1905A.6, California Building Code.
 3. A registered civil engineer with experience in concrete mix design shall select the relative amounts of ingredients to be used as basic proportions of the concrete mixes proposed for use under this provision.
 4. Selection of Concrete Proportions: Concrete proportions shall be determined in accordance with the provisions of ACI 318, Section 5.2.
 5. Quantities of Materials: Provide Weighmaster’s Certificate for each load of concrete.
 6. Do not exceed 0.45 water-cement ratio, by weight.
 7. Concrete shall be mixed by transit mixers only.
- B. Required Strength: Minimum 4,500 psi for sitework concrete.

2.04 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615; 40 ksi yield grade; deformed billet steel bars, uncoated finish.
- B. Welded Steel Wire Fabric: Plain type, ASTM A185; in flat sheets; uncoated finish, 6 x 6 inch, No. 10 gage.
- C. Tie Wire: Annealed steel, minimum 16 gage size.
- D. Dowels: ASTM A615; 40 ksi yield grade, deformed steel, uncoated finish.
- E. Fiber Reinforced Concrete
 1. FIBERMESH 150: ASTM C 1116/C 1116M, Type III Fiber Reinforced Concrete. Manufactured by PROPOX CONCRETE SYSTEMS. 100% virgin homopolymer polypropylene multifilament fibers containing no reprocessed olefin materials. Provide 1.0 – 1.5 lbs. per cubic yard.
 2. FIBERMESH 650: ASTM C 1116/C 1116M, Type III Fiber Reinforced Concrete. Manufactured by PROPOX CONCRETE SYSTEMS. Alloy polymer macro-synthetic fiber featuring e3 patented technology manufactured to an optimum gradation and highly oriented to allow greater surface area contact within the concrete resulting in increased interfacial bonding and flexural toughness efficiency. Provide a minimum of 3.0 lbs. per cubic yard

2.05 CURING MATERIALS

- A. Polyethylene Film ASTM C171; 8 mil thick, clear, manufactured from virgin resin with no scrap or additives. POLYETHYLENE, No. 227, manufactured by The Burke Co., Montebello, CA, or equal.
- B. Water: Potable and not detrimental to concrete.
- C. Curing Compound: ASTM C309; wax resin base, WHITE PIGMENTED CURING COMPOUND, by The Burke Co., Montebello, CA, or equal.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify site concerns.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely and will not cause hardship in placing concrete.

3.02 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

3.03 PLACING CONCRETE (GENERAL)

- A. Convey and deposit concrete in accordance with Section 1905A, California Building Code. Remove loose dirt from excavations.
- B. Notify Job Inspector minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed joint fillers, joint devices and accessories are not disturbed during concrete placement.
- D. Ensure sub-base or base materials have been compacted or otherwise treated.
- E. Install joint fillers, primer and sealant in accordance with manufacturer's instructions.
- F. Place concrete continuously between predetermined expansion joints.
- G. Do not interrupt successive placement; do not permit cold joints to occur. Avoid segregation of materials. Perform tamping and vibrating so as to produce a dense, smooth application free of rock pockets and voids. Do not use vibrators to move concrete horizontally.

- H. Do not allow concrete to fall free from any height which will cause materials to segregate. Maximum height of free fall permitted in any case: 5 feet.
- I. Defective Installation: Repair and clean at Contractor's expense all concrete damaged or discolored during construction. Where concrete requires repair before acceptance, the repair shall be made by removing and replacing entire section between joints and not by refinishing the damaged portion.
- J. Proper curing of concrete surfaces is the responsibility of the Contractor. Concrete failing to meet specified strength shall be removed and replaced.

3.04 ON-SITE CONCRETE SIDEWALKS AND RAMPS

- A. Forms, Wood: Free from warp, with smooth and straight upper edges, surfaced one side, minimum thickness 1-1/2 inches adequate to resist springing or deflection from placing concrete.
- B. Forms, Metal: Gage sufficient to provide equivalent rigidity and strength.
- C. Reinforcement: Unless indicated otherwise on the drawings, provide welded steel wire fabric, 6 inches by 6 inches, No. 6 gage at mid-height of sidewalks and ramps. Interrupt reinforcement at expansion joints.
- D. Concrete Placement: Dampen subgrade to retain moisture in concrete mix. Tamp and spade to consolidate concrete for entire length of pour. Strike off upper surface to specified grades.
- E. Expansion Joint: Locate joint filler as shown on drawings or at maximum 60 feet centers and where slabs join vertical surfaces. Install vertically, full depth of concrete leaving plastic cap at 1/2 inch depth at top for sealant application.
 - 1. Provide 1/2 inch diameter greased steel dowels, 12 inches long at expansion joints with one end of dowel lubricated to allow for longitudinal movement. Spacing: 16 inches on center maximum, 6 inches from edges.
 - 2. Remove plastic caps. Prime both sides of joint and apply self-leveling sealant. Provide smooth concave surface.
- F. Control Joints – Saw Cut: After floating and finishing, saw cut concrete to a depth of: depth of concrete/4. Curved or non-aligned joints not acceptable. Sealant application not required. Space joints 12 ft maximum oc both ways or as patterned on the drawings.
- G. Finish:
 - 1. Screed concrete to required grade, float to a smooth, flat, uniform surface. Edge all headers to 1/4 inch radius. Edge expansion joints to 1/4 inch radius. Steel trowel to hard surface.
 - 2. Grades less than 6 percent: After final troweling, apply a medium hard broom finish transverse to centerline or direction of traffic.
 - 3. Grades 6 percent or more: Apply slip resistant heavy broom finish and remark as necessary after final finish to assure neat uniform edges, joints and score lines.
 - 4. Walkway grades in excess of five percent shall conform to Section 11B-403 and 11B-302.1, California Building Code.
- H. Curing: Cure surfaces utilizing one of the following methods:
 - 1. Spraying: Spray water over slab areas and maintain wet for 7 days.

2. Spread polyethylene film over slab areas, lapping edges and sides, minimum 6 inches and sealing with pressure sensitive tape; cover with plywood or otherwise protect film from damage; maintain in place for 7 days.
3. Apply liquid curing compound at rate of 200 sf per gallon, using power sprayer equipped with agitator. Do not apply liquid curing compound to surfaces scheduled to receive paving units of any kind.

END OF SECTION 09 68 16

SECTION 33 11 16 - SITE WATER DISTRIBUTION PIPING

PART 1 – GENERAL

1.01 SUMMARY

- A. Provisions of General Conditions, Supplementary Conditions, and Division One apply to this section.
- B. Scope of Work: The work under this section includes furnishing all labor, materials, and equipment and performing all operations in connection with the Site Water Distribution Piping, as indicated on the drawings, specified herein, or reasonably required to complete the work. The work includes but is not limited to:
 - 1. Water piping.
 - 2. Valves and valve boxes.
 - 3. Lateral services extended to 5-feet from building.
 - 4. Connections of laterals to existing mains.
 - 5. Connection of building water system to laterals 5-feet from building.
 - 6. Testing and sterilization.
- C. Related Work Not in This Section:
 - 1. Section 31 23 33: Trenching and Backfilling.

1.02 SUBMITTALS

- A. Material List: Submit list of materials proposed for use accompanied by manufacturer's latest printed literature with technical data.
- B. Certificates: Manufacturer's certification that materials meet specified requirements.

1.03 QUALITY ASSURANCE

- A. Comply with the following codes and regulations:
 - 1. Plumbing code: Applicable portions of Uniform Plumbing Code pertaining to plumbing materials, construction, and installation of products.
 - 2. ANSI: Applicable American National Standards pertaining to products and installation of domestic water piping systems.
 - 3. American Water Works Association (AWWA) where noted.
 - 4. UL and FM: Provide valves used in fire protection piping, which are UL listed and FM approved.
 - 5. Greenbook Section 306.
 - 6. Local fire department regulations pertaining to fire protection systems.
- B. Manufacturers: Firms regularly engaged in manufacture of water piping systems products, of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- C. Inspection and Testing:
 - 1. Refer to Section 31 23 33, Trenching and Backfill for Compaction of Trenching.

1.04 RECORD DRAWINGS

- A. Provide complete record drawings showing dimensioned locations and depths of all piping, and exact locations of all accessories.

PART 2 - PRODUCTS

2.01 PIPE

- A. Poly Vinyl Chloride (PVC) Plastic Pipe: Manufactured of material conforming to ASTM D1784, class 12454B, designated as PVC 1120 in ASTM D1795.
 - 1. Pipe 4 inches through 12 inches diameter: Pipe, couplings, and fittings 4 inch through 12 inch diameter shall conform to requirements of AWWA C900, Class 150, CIOD pipe dimensions only, elastomeric gasket joint only, unless otherwise indicated or specified.

2.02 FITTINGS AND SPECIALS

- A. For Poly Vinyl Chloride (PVC) Pipe:
 - 1. For Pipe 4 inch through 12 inch diameter: Fittings and specials shall be cast iron, bell end in accordance with AWWA C110, 150 psi pressure rating unless otherwise indicated or specified, except that profile of bell may have special dimensions as required by pipe manufacturer, or may be fittings and specials of same material as pipe with elastomeric gaskets, all in conformance with requirements of AWWA C900. Cast-iron fittings and specials shall be cement-mortar lined (standard thickness) in accordance with ANSI A21.4. Fittings shall be for bell and spigot pipe or plain end pipe, or as applicable.

2.03 JOINTS

- A. PVC Pipe: Joints for pipe, fittings and couplings for pipe shall match the specified pipe. Joints connecting pipe of differing materials shall be made in accordance with manufacturer's recommendation.

2.04 VALVES

- A. Gate valves shall be designed for a working pressure of not less than 150 psi and conform to AWWA C509. Valve connections shall be as required for piping in which they are installed. Valves shall have a clear waterway equal to full nominal diameter of valve, and shall be opened by turning counterclockwise. Operating nut or wheel shall have an arrow cast in the metal, indicating direction of opening.
 - 1. Valves 3 inches and larger shall be iron body, bronze mounted, and shall conform to AWWA C500. Flanges shall not be buried. An approved pit shall be provided for all flanged connections.
 - 2. Cast iron wedge shall have sealing surfaces of the wedge permanently bonded with resilient material to meet ASTM tests for rubber to metal bond ASTM D429. All body bolts shall be type 316, stainless steel. Valves shall be Mueller "RS" or equal. All underground valves shall be NS and all above ground valves shall be OS&Y.

- B. Check valves: Swing type spring loaded, 200 psig working pressure, seat readily and tightly with the face of the closure elements made of a non-corrodible material such as bronze composition conforming to ASTM B62.
- C. Valve Boxes: Valve boxes shall be cast iron or concrete, except that concrete boxes may be installed only in locations not subjected to vehicular traffic. Cast-iron boxes shall be extension type with slide-type adjustment and with flared base. Minimum thickness of metal shall be 3/16 inch. Concrete boxes shall be standard product of a manufacturer of precast concrete equipment. Word "WATER" shall be cast in cover. Boxes shall be of such length as will be adapted, without full extension, to depth of cover required over pipe at valve location. The valve box and the installation of the gate valve shall conform to AWWA C509.

2.05 FIRE SPRINKLER APPURTENANCES

- A. Post indicators: U.L. approved type.
- B. Tracer Wire for Non-Metallic Piping: Tracer wire shall be bare copper or aluminum wire not less than 0.10 inch in diameter and shall be provided in sufficient length to be continuous over all runs of non-metallic piping.
- C. Pipe bedding and backfill shall conform to requirements of Subsections 306-1.2 and 306-1.3 of the Standard Specifications.
- D. Thrust blocks: Portland cement concrete conforming to requirements of Section 03 31 13.

PART 3 – EXECUTION

3.01 TRENCH EXCAVATION

- A. Perform all excavation for the construction of trenches and all additional excavation required for structures forming a part of the pipeline. Trench excavation shall conform to the requirements of Section 306-1 of Standard Specifications.
- B. Trenches shall be inspected by the Soils Engineer before proceeding with the work.

3.02 INSTALLATION OF PIPE

- A. Handling: Pipe and accessories shall be handled to insure delivery to trench in sound, undamaged condition. Particular care shall be taken not to injure pipe coating or lining. If coating or lining of any pipe or fitting is damaged, repair shall be made by Contractor at his expense in a satisfactory manner. No other pipe or material of any kind shall be placed inside a pipe or fitting after coating has been applied. Pipe shall be carried into position and not dragged. Use of pinch bars and tongs for aligning or turning pipe will be permitted only on bare ends of pipe, Interior of pipe and accessories shall be thoroughly cleaned of foreign matter before being lowered into trench and shall be kept clean during laying operations by plugging or other approved method. Before installation, pipe shall be examined for defects. Material found to be defective before or after laying shall be replaced with sound material without additional expense to the Owner. Rubber gaskets that are not to be installed immediately shall be stored in a cool and dark place. Poly vinyl chloride pipe and fittings shall be handled and stored in accordance with manufacturer's recommendations.
- B. Cutting of Pipe: Cutting of pipe shall be done in a neat and workmanlike manner without damage to pipe. Unless otherwise recommended by manufacturer, cutting shall be done with an approved-type

mechanical cutter. Wheel cutter shall be used when practicable. Copper tubing shall be cut square and all burrs shall be removed.

- C. Sewer and Irrigation Lines: Where location of water pipe is not clearly defined in dimensions on drawings, water pipe shall not be laid closer horizontally than 10'-0" clear from a sewer or irrigation line except where bottom of water pipe will be at least 12 inches above top of sewer or irrigation pipe, in which case water pipe shall not be laid closer horizontally than 6'-0" from sewer or irrigation. Where water lines cross under gravity flow sewer lines, sewer pipe for a distance of at least 10'-0" each side of crossing shall be fully encased on concrete or shall be made of pressure pipe with no joint located within 3'-0" horizontally of crossing.
- D. Joint Deflection:
 - 1. Flexible Plastic Pipe: Maximum offset in alignment between adjacent pipe joints shall be recommended by manufacturer, but in no case shall it exceed 5 degrees.
- E. Placing and Laying:
 - 1. Pipe and accessories shall be carefully lowered into trench by means of derrick, ropes, belt slings, or other authorized equipment. Under no circumstances shall any of water-line materials be dropped or dumped into trench, care shall be taken to avoid abrasion of pipe coating. Except where necessary in making connections with other lines, pipe shall be laid with bells facing in direction of laying. Full length of each section of pipe shall rest solidly upon pipe bed, with recesses excavated to accommodate bells, couplings, and joints. Pipe that has grade or joint disturbed after laying shall be taken up and relaid. Pipe shall not be laid in water or when trench conditions are unsuitable for work. Water shall be kept out of trench until jointing is completed. When work is not in progress, open ends of pipe, fittings, and valves shall be securely closed so that no trench water, earth, or other substance will enter pipes or fittings. Where any part of coating or lining is damaged, repair shall be made by Contractor at his expense in a satisfactory manner. Pipe ends left for future connections shall be valved, plugged, or capped, and anchored, as indicated.
 - 2. PVC shall be installed in accordance with AWWA M23.
- F. Jointing:
 - 1. PVC Pipe: Pipe 4 inch through 12 inch diameter shall have elastomeric gasket joints as specified in AWWA C900. Jointing procedure shall be as specified for pipe less than 4 inch diameter with configuration utilizing elastomeric ring gasket.
 - 2. Connections between different types of pipe and accessories shall be made with transition fittings approved by the Owner.
- G. Service Lines: Service lines shall include pipeline connecting building piping to water distribution lines at a point approximately 5'-0" outside building. All valves shall be provided with extension service boxes of lengths required. Service lines shall be constructed in accordance with following requirements:
 - 1. Service lines 2 inches in size shall have a gate valve.
 - 2. Service lines larger than 2 inches shall be connected to main by a rigid connection and shall have a gate valve.

3.03 THRUST BLOCKS

- A. Plugs, caps, tees and bends of deflecting 22-1/2 degrees or more, either vertically or horizontally, on water lines 6 inches in diameter or larger, and fire hydrants shall be provided with thrust blocking, or metal tie rods and clamps or lugs, as directed. Valves shall be securely anchored or shall be provided with thrust blocking to prevent movement. Thrust blocking shall be concrete of a mix not leaner than 1 cement: 2-1/2 sand: 5 gravel, and having a compressive strength of not less than 2,000 psi after 28 days. Blocking shall be placed between solid ground and hydrant or fitting to be anchored. Unless otherwise indicated or directed, base and thrust bearing sides of thrust blocks shall be poured directly against undisturbed earth. Sides of thrust blocks not subject to thrust may be poured against forms. Area of bearing shall be as indicated or as directed. Blocking shall be placed so that fitting joints will be accessible for repair. Steel rods and clamps shall be protected by galvanizing or by coating with bituminous paint.
- B. The area of the thrust blocks shall conform to the following table:

Size	Fitting	Area
10 inch	90 degree ell	13.68 square feet
	45 degree ell	7.41 square feet
	Valves, tees, dead ends	9.68 square feet
8 inch	90 degree ell	9.10 square feet
	45 degree ell	4.92 square feet
	Valves, tees, dead ends	6.43 square feet
6 inch	90 degree ell	5.29 square feet
	45 degree ell	2.86 square feet
	Valves, tees, dead ends	3.74 square feet

3.04 HYDROSTATIC TEST

- A. Where any section of a water line is provided with concrete thrust blocking for fitting or hydrants, hydrostatic tests shall not be made until at least five (5) days after installation of concrete thrust blocking unless otherwise approved. Method proposed for disposal of waste water from hydrostatic tests and disaffection shall be submitted to the Architect for approval prior to performing hydrostatic tests.
- B. Pressure Tests: After pipe is laid, joints completed, fire hydrants permanently installed, and trench partially backfilled leaving joints exposed for examination, newly laid piping or any valved section of piping shall, unless otherwise specified, be subjected for one hour to a hydrostatic pressure test of 200 psi. Each valve shall be opened and closed several times during test. Exposed pipe, joints, fittings, hydrants, and valves shall be carefully examined during partially open trench test. Joints showing visible leakage shall be replaced or remade as necessary. Cracked or defective pipe, joints, fittings, hydrants, and valves discovered in consequence of this pressure test shall be removed and replaced with sound material, and test shall be repeated until test results are satisfactory. Piping and specials requiring replacement disclosed by hydrostatic tests and all work connected therewith shall be at Contractor's expense.
- C. Leakage Test: Leakage test shall be conducted after pressure tests have been satisfactorily completed. Duration of each leakage test shall be at least two hours; and during test, water line shall be subjected to 200 psi pressure. Leakage is defined as quantity of water to be supplied into the newly laid pipe, or any valved or approved section thereof necessary to maintain specified leakage test pressure after pipe has been filled with water and the air expelled. No piping installation will be accepted until leakage is less than number of gallons per hour as determined by formula:

$L = 0.000135 \text{ IND (P raised to } \frac{1}{2} \text{ power)}$ for all pipe materials.

1. In which L equals allowable leakage in gallons per hour; N is number of joints in length of pipeline tested; D is nominal diameter of pipe in inches; and P is average test pressure during leakage test, in psi gauge.
 2. If any test of pipe discloses leakage greater than that specified in foregoing table, defective joints shall be located and repaired until leakage is within specified allowance.
- D. Time for Making Test: Except for joint material setting or where concrete reaction backing necessitates a five day delay, pipelines jointed with rubber gaskets, mechanical or push-on joints, or couplings may be subjected to hydrostatic pressure, inspected, and tested for leakage at any time after partial completion of backfill. Cement-mortar lined pipe may be filled with water as recommended by manufacturer before being subjected to pressure test and subsequent leakage test.
- E. Concurrent Hydrostatic Tests: Contractor may elect to conduct hydrostatic tests using either or both of the following procedures. Regardless of sequence of tests employed, results of pressure tests, leakage tests, and disinfection shall be satisfactory as specified. All replacement, repair, or retesting required shall be accomplished by Contractor.
1. Pressure test and leakage test may be conducted concurrently.
 2. Hydrostatic tests disinfection may be conducted concurrently, using water treated for disinfection to accomplish hydrostatic tests. If water is lost when treated for disinfection and air is admitted to the unit being tested, or if any repair procedure results in contamination of unit, disinfection shall be reaccomplished.

3.05 DISINFECTION

- A. Before acceptance of potable water operation, each unit of completed water line shall be disinfected as prescribed by AWWA C651 and Section 22 00 00, Paragraph 3.12 – Sterilization. Unit will not be accepted until satisfactory bacteriological results have been obtained. The system shall not be connected to CSA 64's facilities prior to disinfection and acceptance by the General Manager of CSA 64.

3.06 CLEANING

- A. At all times, maintain premises free from accumulation of debris, waste materials, unusable materials, together with excess equipment, tools and other implements of service resulting from work of this section.
- B. Debris, waste, or unused construction materials shall not be used for fill or backfill.

END OF SECTION 33 11 16

**EXHIBIT "VII"
PROJECT PLANS**