

- C. Center plastic signs on doors, level.
- D. Anchor all components firmly into position for long life under hard use.
- E. Clean and polish.

3.03 SCHEDULES

- A. Exterior building signs:
 - 1. Handicap signs per CBC requirements and as shown on Drawings.
 - 2. Building letters: "Department of Veterans Services". Color to be Bronze anodized.
 - 3. Seal: Provide County of Riverside seal.
 - 4. Monument sign: 2" and 7" letters as detailed on both sides of the sign.
- B. Interior signs:
 - 1. Handicap restrooms 12" triangle for men and 12" circle for women per Title 24 - mounted on each restroom door.
 - 2. Office and restrooms ES Plastic: 4" x length required -- 7 doors. Text to be determined by Owner. Mount beside each door with the code required Braille designations on the sign. Copy to be in two lines as possible.

END OF SECTION

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SECTION 10800
TOILET AND BATH ACCESSORIES

PART 1 -- GENERAL

1.01 SCOPE OF WORK

All of the requirements of the Contract Documents apply to this Section.

1.02 SUBSTITUTIONS

Substitutions will be considered per Article 5 of the General Conditions.

1.03 SUBMITTALS

- A. Provide, within 35 days of Notice to Proceed, product data on accessories describing size, finish, details of function, attachment methods.
- B. Submit shop drawings, manufacturer's literature and brochures, and catalog cuts, showing complete details of all manufactured and fabricated items. Do not purchase items until the shop drawings have been approved. See Section "Samples and Shop Drawings" for number and manner of submittals.

1.04 KEYING

Supply two (2) keys for each accessory to Owner. Master Key all accessories.

1.05 REGULATORY REQUIREMENTS

Conform to Title 24 and City codes for installing work in conformance with ANSI A117.1.

1.06 SEQUENCING AND SCHEDULING

Coordinate the work of this Section with the placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

PART 2 -- PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

As indicated on the Drawings.

2.02 MATERIALS

- A. Stainless Steel Sheet: ASTM A167, Type 304.
- B. Tubing: ASTM A269, stainless steel.
- C. Fasteners, Screws, and Bolts: Hot dip galvanized as recommended by manufacturer.
- D. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 PRODUCTS

As indicated on the Drawings.

2.04 FACTORY FINISHING

Stainless Steel: No. 4 satin luster finish.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed.
- B. Verify that site conditions are ready to receive work and dimensions are as instructed by the manufacturer.
- C. Correct conditions detrimental to timely and proper completion of the Work.
- D. Do not proceed until unsatisfactory conditions are corrected.
- E. Beginning of installation means acceptance of conditions.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site at appropriate time for building-in.
- B. Provide complete information, diagrams, templates, and instructions for the installation of all items, in sufficient time so that all backing, blocking, framing and formwork can be properly installed, and so that the work of other trades will not be delayed.
- C. Verify exact location of accessories for installation.

3.03 INSTALLATION

- A. Install the work of this Section in strict accordance with the manufacturer's recommended installation procedures as approved by the Architect, anchoring all components firmly into position for long life under hard use.
 - 1. Furnish and install all anchorage devices required to install the item and its appurtenances complete. Provide anchorage in ample time when required to be built in by other trades.
 - 2. All wall-mounted items shall be securely fastened to solid backing or blocking.
- B. Install fixtures, accessories and items in accordance with manufacturer's instructions.
- C. Install plumb and level, securely and rigidly anchored to substrate.

***** END OF SECTION *****

SECTION 11027

KNOX BOXES

PART 1 -- GENERAL

1.01 DESCRIPTION

- A. Requirements of Division 1 apply to all Work of this Section
- B. This Section describes the requirements for furnishing and installing lock boxes. There are three lock boxes. Locate adjacent to Entry Doors, and within the fencing adjacent to vehicular Gates.

1.02 SUBMITTALS

- A. Per Article 5 of the General Conditions.
- B. Product Data: Manufacturer's descriptive and technical data and installation details.

1.03 SUBSTITUTIONS

Substitutions will be considered per Article 5 of the General Conditions.

1.04 QUALITY ASSURANCE

Coordinate ordering lock boxes with local Fire District.

PART 2 -- PRODUCTS

2.01 LOCK BOXES

- A. Manufacturer: Knox Company Model #4400 at Doors. Model #3502 at Gates. Or approved equal.
 - 1. Construction: Heavy-duty, high security
 - 2. Door: 5/8-inch solid steel with gasket
 - 3. Size: 9½-inches high x 9½-inches wide x 5-inches deep
 - 4. Mounting: Recessed
 - 5. Finish: Aluminum Finish
- B. Fastenings: Non-ferrous, type to suit installation conditions
- C. Vehicular Gate Key Control Switch: Knox #3502

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the area and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected
- B. Coordinate work with other trades as needed to assure that proper substrate are provided to receive work of this Section.
- C. Report all unacceptable surfaces to the Architect and do not tile such surfaces until they are leveled enough to meet above requirements.

3.02 INSTALLATION

- A. Install lock boxes at locations indicated in accordance with manufacturer's instructions.

- B. Securely fasten in place with sides plumb and level.
- C. Exposed surfaces shall be free from scratches, tool marks, and other damage and defects.

***** END OF SECTION *****

SECTION 12500
WINDOW TREATMENT

PART 1 – GENERAL

1.01 SCOPE

Furnish and install Manual Roller Shades (Premium Quality)

1.02 REFERENCES

A. FLAME-RESISTANT MATERIALS SHALL PASS OR EXCEED ONE OR MORE OF THE FOLLOWING TESTS:

- National Fire Protection Association (NFPA) 701 (small scale for horizontal applications)
- Department of Transportation Motor Vehicle Safety Standard 302 Flammability of Interior Materials
- California Administrative Code Title 19
- Federal Standard 191 Method 5903 (used by Port Authority of New York and New Jersey for drapery, curtain, and upholstery material)
- Boston Fire Department Teat BFD IX-1
- New York State Uniform Fire Prevention and Building Code

1.03 SUBMITTALS

- A. Product Data:** Manufacturer's descriptive literature shall be submitted indicating materials, finishes, construction and installation instructions and verifying that product meets requirements specified. Manufacturer's recommendations for maintenance and cleaning shall be included.
- B. Drawings and Diagrams:** Wiring diagrams of any motorized components or units, working and assembly drawings shall be supplied as requested.
- C. Samples:** Responsible contracting officer or agent shall supply one sample shade of each type specified in this contract for approval. Supplied units shall be furnished complete with all required components, mounting and associated hardware, instructions and warranty.

1.04 QUALITY ASSURANCE:

- A.** Manufacturer, subsidiary or licensed agent shall be approved to supply the products specified, and to honor any claims against product presented in accordance with warranty.
- B.** Installer or agent shall be qualified to install specified products by prior experience, demonstrated performance and acceptance of requirements of manufacturer, subsidiary, or licensed agent. Installer shall be responsible for an acceptable installation.
- C.** Provide Manual Roller Shades of only one manufacturer for entire project.

1.05 DELIVERY, STORAGE AND HANDLING:

- A.** Product shall be delivered to site in manufacturer's original packaging.
- B.** Product shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.

1.06 JOB CONDITIONS:

- A. Prior to shade installation, building shall be enclosed.
- B. Interior temperature shall be maintained between 60° F. and 90° F. during and after installation; relative humidity shall not exceed 80%. Wet work shall be complete and dry.

1.07 WARRANTY:

- A. Lifetime Limited Warranty. Fabrics warranted for 5 years. Specific product warranties available from manufacturer or its authorized agent.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Hunter Douglas Contract: 12250 Parkway Centre Dr., Poway, CA 92064. Phone: 800-727-8953. Fax: 800-205-9819/ Website: www.hunterdouglascontract.com, or approved equal.

Contact the following for project assistance and dealer referral @ 800-964-2580: David Cover ext. #827313

- B. Product substitutions must be approved by architect minimum of 30 days prior to close of bid.

2.02 MANUAL ROLLER SHADES

- A. PRODUCT: Hunter Douglas "Manual Roller Shades" or approved equal.

B. MATERIALS:

1. Fabrics: Inherently anti-static, flame retardant, fade and stain resistant, light filtering, room darkening, & blackout fabrics providing 0% - 15% openness factors. Fabric weights to range between 6.00 oz/sq.yd. – 20.70 oz/sq.yd. containing fiberglass, PVC, polyester, acrylic, vinyl laminates, cotton, & vinyl coatings. Finish selected by architect from manufacturer's available contract colors.
2. Control Systems: Adjustment-free continuous qualified #10 stainless steel ball chain ((90-lb. test)) and pulley clutch operating system allows precise control and ensures a uniform look. Clutch will develop no more than ½ pound drag for ease of lifting. Glass reinforced polyester thermopolymer (PBT) plastic components conform to military specification MIL M-24519 and designed for smooth, trouble-free operation.
3. Roller: Circular-shaped painted extruded aluminum tubes with thicker wall & ribs provide additional strength while locking into place the clutch & end plug. 3" outside diameter extruded tube to have a .090 wall thickness. 2" outside diameter extruded tube to have a .072" wall thickness (1 ½" & 1 1/8" tubes have .055" wall thickness) providing strength & durability.
4. End Plug: Heat stabilized fiber reinforced plastic outside sleeve and center shaft provide bearing surfaces on which the roller rides ensuring smooth, wear resistant operation.
5. Bottom Rod: Extruded aluminum weight in a Sealed Pocket Hem Bar (excluding thicker fabric) for tracking adjustments and provides uniform look.
6. Mounting Hardware: Manufacturer's standard .07" nickel-plated, C1008/1010 cold rolled steel universal brackets including end plug bracket with lock down retainer device.

7. Additional Available Options: Fascia, Top & Bottom Covers, Blockout Systems, Motorization, 3 Clutch Sizes, Fabric Wrapped Hembar, Dual Shades, Coupled Shades, Banded Shades, Extruded Pockets, Reverse Roll.

2.03 FABRICATION

Shade measurements shall be accurate to within $\pm 1/8"$ or as recommended in writing by manufacturer.

2.04 FABRICS

Fabric selection by Architect.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Subcontractor shall be responsible for inspection on site, approval of mounting surfaces, installation conditions and field measurement for this work.
- B. Other interacting trades shall receive drawings of shade systems, dimensions, assembly and installation methods from subcontractor upon request.

3.02 INSTALLATION:

- A. Installation shall comply with manufacturer's specifications, standards and procedures as detailed on contract drawings.
- B. Adequate clearance shall be provided to permit unencumbered operation of shade and hardware.
- C. Clean finish installation of dirt and finger marks. Leave work area clean and free of debris.

3.03 DEMONSTRATION:

Demonstrate operation method and instruct owner's personnel in the proper operation and maintenance of the blinds.

*****END OF SECTION*****

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SECTION 13850
SECURITY SYSTEM

PART 1 -- GENERAL

- 1.01 Furnish and install a complete intrusion detection monitoring and control system with the performance criteria detailed in this specification; one in each building. The systems shall be inclusive of all necessary functionality, monitoring and control capability as detailed herein and on accompanying shop drawings.
- 1.02 The systems shall be completely programmable from any keypad with programming access determined by level of Personal Identification Number (PIN) code. There shall be no need for a removable programming module or PROM burn to accomplish user programming changes.
- 1.03 The system shall be listed as a Power Limited Device and be listed under the following performance standards.
- UL 1610 Central Station Burglar Alarm Units.
 - UL 1635 Digital Burglar Alarm Communicator System Units.
 - UL 1023 Household Burglar Alarm System Units.
 - UL 365 Police Station Connected Burglar Alarm Units and Systems.
 - UL 609 Local Burglar Alarm Units and Systems.
 - UL 864 Control Units for Fire Protective Signaling Systems.
 - UL 985 Household Fire Warning System Units.
 - NFPA71 Central Station Signaling Systems.
 - NFPA72A Local Protective Signaling Systems.
 - NFPA72C Remote Station Protective Signaling Systems.
 - NFPA72D Proprietary Protective Signaling Systems.
 - NFPA74 Household Fire Warning Equipment.
 - CSFM California State Fire Marshal Specifications.
- Each system shall be supplied with complete details on all installation criteria necessary to meet all of the above listings.
- 1.04 The system supplier shall be a company specializing in the manufacture and supply of security, fire and access control systems with at least (5) years of experience and shall have local employees available for support during installation and for final hook-up and acceptance testing. The local manufacturers office shall produce system specific layout and wiring shop drawings for use by the installing contractor.
- 1.05 **WARRANTY**
- The contractor shall warrant the complete system wiring and equipment to be free from inherent mechanical and electrical defects for a period of one year from the completed and certified test.
- The equipment manufacturer shall make available to the owner a maintenance contract proposal to provide a minimum of two inspections and tests per year.
- 1.06 **SUBSTITUTIONS**
- Substitutions will be considered per Article 5 of the General Conditions.

PART 2 -- PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Input/Output Capacity

The system shall be capable of monitoring a minimum of 48 individual loops or zones and controlling a minimum of (8) output relays.

B. User/Authorization Level Capacity

The system shall be capable of operation by 100 unique PIN codes with each code being assigned one of 9 User Authorization Levels.

C. Area System

The user of the system shall be capable of selectively arming and disarming any one or more of 8 areas within the system based on the user P.I.N. code used. Each of the 48 loops or zones shall be assignable to any one of the 8 available areas.

D. Keypads

The system shall support a minimum of 8 keypads with Alphanumeric Display. Each keypad shall be capable of arming and disarming any portion of the intrusion detection system based on P.I.N. authorization.

The keypads alphanumeric display shall provide complete prompt messages during all stages of operation and programming of the system and display all relevant operating and test data.

E. Loop Configuration

The system shall have a minimum of 16 Class B loops available in the Command Processor control cabinet and a minimum of 4 Class B loops available at each keypad or loop expander on the system. The system shall have the capacity for a minimum of 8 keypads or loop expanders total but at least one must be a keypad. All Class B loops shall be 2 wire, 22 AWG minimum, supervised by an End-of-Line (EOL) device and shall be able to detect open, normal or short conditions in excess of 200 milliseconds duration.

F. Keypad Communication

Communication between the Command Processor control panel and all keypads and loop expanders shall be multiplexed over a 4 conductor non-shielded cable. This cable shall also provide power to all keypads, loop expanders and other power consuming detection devices.

G. Output Relays

The Command Processor control cabinet shall have, as an integral part of the assembly, (8) output control SPDT form C relays rated 3 amps at 3 ϕ VDC or 120 VAC. Each of these relays shall be capable of activation as outlined in this specification.

H. Primary Power

The Command Processor primary power supply shall be a 16 VAC 40VA Wire-in transformer.

I. Secondary Power

The Command Processor secondary power supply shall be a 12VDC 6AH sealed lead-acid rechargeable battery. The battery shall be protected by an automatic circuit breaker. When initially connected to battery power alone, the Command Processor control panel shall be protected by a cutoff relay until manually started or primary power is applied, The secondary power shall be float charged at 13.8 VDC at a maximum of 1.2 amps.

J. Battery Supervision

The Command Processor control panel shall supervise the secondary power source by placing a load across the battery. Once every hour while the primary source is available. If the voltage falls below 11.9 VDC a low battery fault shall be detected. If the primary power source is not available, a low battery fault shall be detected any time the voltage falls below 11.9 VDC.

The secondary power supply shall be automatically disconnected from the system when the primary power supply is not available and the secondary power supply drops to 10.0 VDC.

K. Ground Supervision

The Command Processor control panel shall supervise the earth ground connection and annunciate an open circuit condition.

L. Bell Output use during system installation and testing which will silence the bell and when silenced place the bell circuit into a trouble condition. (Requires polarized bell module)

M. Auxiliary Output

The Command Processor control panel shall be capable of supplying a minimum of 1 amp continuous at 10.5 - 15VDC to power keypads, loop expanders, smoke detectors and other power consuming detection devices such as motion detectors. This output shall also be separately fused and the panel shall provide a separate terminal for smoke detectors and disconnect power for 3 seconds during smoke detector reset.

N. Keypad Trouble

If at any time a keypad does not detect polling, the alphanumeric display shall indicate "Service Required". If at any time a keypad detects polling but not its particular address, the alphanumeric display shall indicate "Non-Polled Address".

2.02 LIGHTNING SUPPRESSION

The Command Center control panel primary power source and incoming telephone lines shall be protected from lightning, power surges, voltage spikes and transient or RF interference with a combination of zener overvoltage transient suppressors, R/C filters, ferrite beads and spark gaps. (Requires Lightning Suppressor module.)

2.03 REMOTE COMMUNICATION CAPABILITY

A. Central Station Capability

The system shall be monitored at a Central Monitoring Station using (a Digital Alarm Communicating Transmitter) (dual Digital Alarm Communicating Transmitters) (Multiplex Communication) (Multiplex Communication with Digital Alarm Communicating Transmitter backup). The Digital Alarm Communicating Receiver at the Central Monitoring Station shall be capable of receiving all data as specified in this specification.

NOTE-CONSULT SALES ENGINEERING FOR MULTIPLEX TRANSMISSION.

B. Communicator Program

Single Line Digital Alarm Communicating Transmitter

The system shall be capable of dialing 2 telephone numbers, of 15 digits each using the switched telephone network such that if 2 unsuccessful attempts are made to the first number the system shall automatically switch to the second number and make 2 attempts. If these 2 attempts are unsuccessful the system shall switch between numbers after 2 attempts each, until a successful connection is made or a maximum of 10 try's are attempted. Once 10 unsuccessful attempts are made the system shall stop dialing. Should another event occur which requires a message to be transmitted the dialing process shall be repeated.

(Option B, Dual Line Digital Alarm Communicating Transmitter)

The system shall be capable of dialing 2 telephone numbers of 15 digits each using 2 separate switch telephone network lines such that if 2 unsuccessful attempts are made on the first line to the first number the system shall make 2 attempts on the first line to the second number. If these 2 attempts are unsuccessful the system shall repeat the sequence using the second line. If all 8 attempts are unsuccessful the system shall make 2 further attempts on the first line to the first number. After the tenth unsuccessful attempt dialing will stop. Should another event occur which requires a message to be transmitted the dialing process shall be repeated.

(Option C, Multiplex Communication)

The system shall be capable of being continuously polled by a compatible receiver system over a leased 3002 type telephone line and identifying itself with its unique account number when polled.

The Command Processor control panel shall be capable of supplying a minimum of 2 amps continuous at 10.5-15.0 VDC to power local sounding devices. This output shall be separately fused.

This output shall be supervised and the system shall detect and annunciate an open circuit, a shorted circuit or a ground on either side of the bell circuit. The system shall incorporate a silence switch for

(Option D, Multiplex Communication With Digital Alarm Communicating Transmitter Backup)

The system shall be capable of being continuously polled by a compatible multiplex receiver system over a leased 3002 type telephone line and identifying itself with its unique account number when polled. When the system has a message to Communicate and a polling request is not received for 150 seconds, or 75 seconds when the message is a fire type, the system shall switch to the Digital Alarm Communicating Transmitter backup and proceed as follows.

The Digital Alarm Communicating Transmitter backup shall be capable of dialing 2 telephone numbers using the switched telephone network such that if 2 unsuccessful attempts are made to the first number the system will automatically switch to the second number and make 2 attempts. If these 2 attempts are unsuccessful the system shall switch between numbers after 2 attempts each until a successful connection is made or 10 try's are attempted. Once 10 unsuccessful attempts are made the system shall not try again. After dialing is complete communication shall switch back to multiplex when a poll is received. Should another event occur which requires a message to be transmitted and polling has not been received, the dialing process shall be repeated.

C. (Option) Automatic Recall Time

(Single and Dual Line DACT and Multiplex with DACT Backup).

The system shall transmit an Automatic Recall Message using the Digital Alarm Communicating Transmitter to test communications, each 24 hours.

D. Communication Failure Output

(Option A, DACT Systems)

Should a Digital Alarm Communicating Transmitter fail to communicate with the Central Monitoring Station receiver on 3 successive attempts an output relay shall be activated on the Command Processor control panel. This relay output shall be reset when the system is disarmed.

(Option B, Multiplex Systems)

Should a polling signal not be received by the Command Center control panel for a period of 150 seconds an output relay shall be activated. This relay shall be reset when the system is disarmed.

E. (Option) Opening And Closing Reports

The system shall communicate to a compatible receiver each time an area is armed and disarmed and report the area number and name and the user number of the individual operating the system.

F. (Option) Reports To Operator

(Only Available When Opening & Closing Reports Are Chosen)

The system shall require that when opening and closing reports are communicated to a Central Monitoring Station the compatible receiver operator must acknowledge each communication and record same in log.

G. Close Waiting (Option)

When openings and closings are being monitored at a Central Monitoring Station, the system shall wait for an acknowledgment from the Central Monitoring Station before displaying the "System ON" message during arming of the security areas. During the waiting period the display shall read "One Moment" and the exit delay shall be extended during this period.

H. Closing Check (Option)

After temporary or permanent schedules have expired the system shall at one minute past each hour, check to see that all areas of the system are armed. If any area shall be found to be disarmed past the scheduled time, the system shall emit a steady beep and display "Closing Time" at the keypad displays designated to display System Troubles. If the system is not armed within 4 minutes, then a No Closing Report shall be transmitted to the Central Monitoring Station.

I. (Option) Abort Reports

The system shall communicate an alarm abort report to the Central Monitoring Station any time a burglar alarm has been transmitted and the system disarmed while the alarm bell is still sounding.

J. (Option) Loop Restoral Reports

The system shall communicate all loop restorals to the Central Monitoring Station. The report shall include the loop number, name and condition.

K. (Option) Bypass Reports

The system shall communicate all loop bypasses and resets to the Central Monitoring Station. The report shall include the loop number and name and the user number of the individual operating the system.

L. (Option) Schedule Change Reports

The system shall communicate all permanent and temporary schedule changes to the Central Monitoring Station. The report shall include the day, opening time, closing time and the user number making the change.

M. (Option) Code Change Reports

The system shall communicate all code additions and deletions to the Central Monitoring Station. The report shall include the user number added or deleted and the user number making the change.

N. (Option) Door Access Reports

The system shall allow the selection of a door access report from any combination of the 8 keypads in the system. A door access report shall be communicated to the Central Monitoring Station when a door is accessed from a selected keypad. The report will include the user number and the address of the keypad used to access its associated door.

Doors not selected to be reported shall remain accessible through the associated keypad by authorized users. (Must use key-pads with door strike relays.)

O. Power Failure Delay (Option)

The system shall transmit a Power Failure message to the Central Monitoring Station should primary power fail for (0 to 9) hours.

2.04 SYSTEM CAPABILITY

A. Arm Display (Option)

The system shall display the identity of all armed security areas on keypad alphanumeric displays.

B. Opening Code (Option A)

The system shall require a valid user code to disarm security areas.

Opening Code (Option B)

The system shall require a valid user code to disarm security areas outside of temporary or permanent scheduled periods. No user code shall be required to disarm security areas during scheduled period.

C. Closing Code (Option A)

The system shall require a valid user code to arm security areas.

Closing Code (Option B)

The system shall not require a user code to arm security areas.

D. Any Bypass (Option A)

The system shall permit any security loops to be bypassed without a valid user code during the arming sequence.

Any Bypass (Option B)

The system shall require a valid user code to bypass any security loops during arming.

E. Entry Delay

The system shall permit an entry delay time of (0 to 250) seconds on any loops assigned as exit type loops. When an armed exit type loop is activated, a pre-warn tone shall sound and the entry keypad shall display "Enter Code". If a valid user code is not entered prior to the expiration of the entry delay, an alarm will be transmitted.

F. Exit Delay

The system shall permit an exit delay time of (0 to 250) seconds on any loops assigned as exit type loops. This exit delay shall be displayed and counted down on the exit keypads alphanumeric display. If any loop is in an alarm condition at the expiration of the exit delay, the entry delay sequence will commence immediately.

G. Loop Retard Delay (Option)

The system shall allow a loop retard delay of (0 to 250) seconds to be applied to any loop designated as Fire, Supervisory, Auxiliary 1 or Auxiliary 2. This retard delay shall only function in the short condition.

H. Swinger Bypass (Option)

The system shall be able to automatically bypass any loop which trips more than (0 to 7) times within one hour commencing with the first trip. The system shall also transmit a report of automatic bypass to the Central Monitoring Station if Bypass Reports are included as monitored events.

I. Reset Swinger Bypass (Option)

The system shall also be able to automatically reset the swinger bypass when Swinger Bypass has been in effect for an hour without a further trip on the bypassed loop. The system shall also transmit a report of automatic swinger bypass reset to the Central Monitoring Station if bypass reports are included as monitored events.

2.05 OUTPUT CONTROL CAPABILITY

A. Bell Cutoff (Option)

The system shall automatically reset the Bell Output (0 to 99) minutes after the Bell Output has been activated.

B. Bell Test (Option)

The system shall be able to automatically activate the bell output for one second each time the security system is armed.

C. Bell Action

The system shall be able to activate the bell output in the following manner for the loop type specified.

Fire Type	(None) (Pulsed) (Steady)
Burglary Type	(None) (Pulsed) (Steady)
Supervisory Type	(None) (Pulsed) (Steady)
Panic Type	(None) (Pulsed) (Steady)
Emergency Type	(None) (Pulsed) (Steady)
Auxiliary 1 Type	(None) (Pulsed) (Steady)
Auxiliary 2 Type	(None) (Pulsed) (Steady)

D. Cutoff Output (Option)

The system shall allow a single designated output relay to be automatically reset after a period of (0 to 99) minutes. The system will allow this relay to be manually silenced from the keypad.

E. Area Outputs (Option)

The system shall activate an output relay per security area when any security area is placed in the armed condition. (Requires 16 output relay model control panel)

F. Fire Alarm Output (Option)

The system shall activate a specified output relay whenever a fire type loop is placed in the alarm condition. This relay shall be reset when the Fire Reset function is performed and no fire type loops remain in the alarm condition.

G. Fire Trouble Output (Option)

The system shall activate a specified output relay whenever a fire type loop is placed in the trouble condition or when a supervisory type loop is placed in the alarm or trouble condition. The relay shall be turned off when all fire and supervisory type loops are restored.

2.06 USER CAPABILITY

- A. (Option) Arm/Disarm
The system shall allow authorized users to arm and disarm the burglary system and display such on the alphanumeric display.
- B. (Option) Alarm Silence
The system shall allow authorized users to silence the bell output and display such on the alphanumeric display.
- C. (Option) Fire Reset
The system shall allow authorized users to reset the smoke detectors and display such on the alphanumeric display.
- D. (Option) Door Access
The system shall allow authorized users to activate a door strike associated with each keypad and display such on the alphanumeric display. (Requires keypad with door strike relay.)
- E. (Option) Armed Areas
The system shall allow authorized users to display a list of armed areas by number and name On the alphanumeric display.
- F. (Option) Outputs On/Off
The system shall allow authorized users to individually turn output relays on and off and display the status of each output relay on the alphanumeric keypad.
- G. (Option) Loop Status
The system shall allow authorized users to display the armed, bypassed or alarmed loops on the alphanumeric keypad and check the status of individual loops.
- H. (Option) Bypass Loops
The system shall allow authorized users to individually bypass any of the burglary loops on the system and display same on the alphanumeric keypad. These users shall also be able to reset any bypassed loops and the system shall display same on the alphanumeric display. Any bypassed loop shall automatically be reset each time the system is disarmed.
- I. (Option) System Test
The system shall allow authorized users to test the bell circuit, battery and communications to the central monitoring station and display the results on the alphanumeric display.
- J. (Option) User Codes
The system shall allow authorized users to add and delete user codes in the system memory.
- K. (Option) Schedules
The system shall allow authorized users to enter, change or delete daily on and off schedules for the output relays, and temporary and permanent opening and closing schedules.
- L. (Option) Time
The system shall allow authorized users to display and reset the day of the week and the time of the day in the system memory.

2.07 DISPLAY CAPABILITY

A. (Option) Loop Monitor

The system shall be able to monitor selected burglary loops during disarmed periods and display the loop names when tripped.

B. (Option) System Monitor Trouble

The system shall annunciate and display trouble conditions from the following functions on any or all of the alphanumeric keypads in the system. The functions to be displayed shall be bell circuit, AC power, battery power, bell power fuse, panel tamper, auxiliary power fuse, and ground circuit.

C. (Option) Fire Loops

The system shall annunciate and display fire loop alarms and troubles on any or all of the alphanumeric keypads in the system.

D. (Option) Burglary Loops

The system shall annunciate and display burglary loop alarms and troubles on any or all of the alphanumeric keypads in the system.

E. (Option) Supervisory Loops

The system shall display supervisory loop alarms and troubles on any or all of the alphanumeric keypads in the system.

F. (Option) Panic Loops

The system shall display panic loop alarms and troubles on any or all of the alphanumeric keypads in the system.

G. (Option) Emergency Loops

The system shall display emergency loop alarms and troubles on any or all of the alphanumeric keypads in the system.

H. (Option) Auxiliary 1 Loops

The system shall display auxiliary 1 alarms and troubles on any or all of the alphanumeric keypads in the system.

I. (Option) Auxiliary 2 Loops

The system shall display auxiliary 2 alarms and troubles on any or all of the alphanumeric keypads in the system.

2.08 AREA IDENTIFICATION CAPABILITY

(Area Arming systems Only)

Area Name

Each of the 8 areas within the system shall be identified by a name consisting of up to ten alphanumeric characters. This name shall be used to identify an area when displayed on the alphanumeric keypad.

2.09 LOOP OR ZONE CAPABILITY

A. Loop Name

Each of the loops within the system shall be identified by a name consisting of up to ten alphanumeric characters. This name shall be used to identify a loop when displayed on the alphanumeric keypad.

B. Loop Type

The system shall be able to identify each loop as one of ten different loop types. Each loop type shall have up to eight specifiable characteristics with a default configuration based on loop type.

The system shall allow each individual loop to be configured independently for each of the characteristics related to its selected loop type.

The system shall allow each individual loop to activate one selectable output relay per loop status change and the loop changes that can activate a separate relay each are disarmed opened, disarmed shorted, armed open and armed shorted if available in the selected loop type for that loop. Further, the selected relay shall be either latched activated, pulsed on and off, momentarily activated or follow the status of the loop.

C. Loop Message

The system shall allow the selection of either an alarm, trouble or no message to be displayed on the alphanumeric keypad (and transmitted to the Central Monitoring Station) when a loop condition changes. The selection shall be made separately for disarmed open circuit, disarmed short circuit, armed open circuit and armed short circuit when available for the selected loop type. Each loop shall have a default selection based on the loop type selected.

D. Pre-warn Addresses

The system shall allow the selection of any or all keypads to sound a pre-warning when entry is made through an exit type loop. The system shall at this time also display "Enter Code" on the alphanumeric display on selected keypads.

E. (Option) Retard

The system shall allow any individual fire, supervisory or auxiliary loop to apply a retard period prior to activating an alarm message and if a retard is chosen the system shall allow the annunciation and display of retard activation on any or all alphanumeric keypad displays during the retard period.

2.010 SYSTEM OPERATION

A. User Codes

The system shall allow an authorized user to add a minimum of 100 individual PIN codes to the system and each PIN code shall be assigned to one of 9 authorization levels.

Each PIN code shall be from two to five digits in length (and allow the assigned user to activate and deactivate a predefined combination of the burglary areas within the system)

B. Output Schedules

The system shall allow an authorized user to establish and change a single on-off permanent schedule for each of the output relays for each or the seven days of the week.

C. Burglary System Schedules

The system shall allow an authorized user to establish a permanent opening and closing schedule for each day for the burglar alarm system such that certain users shall not be able to deactivate the alarm system outside of the established schedule. The system shall also allow an authorized user to establish a temporary opening and closing schedule for each day for the burglar alarm system to operate as a permanent schedule except that this schedule shall be automatically canceled after a single use.

(The system shall also use the established schedules as a reference for the Closing Check function when openings and closings are reported to a central monitoring station.)

2.011 MATERIAL

A Command Processor Control Panel

The Command Processor control panel shall be Simplex Product #
(3002-9001 with 2 output relays.)
(3002-9002 with 8 output relays.)
(3002-9003 with 16 output relays.)

B Security command Keypads

The Security Command keypads shall be Simplex Product #
(3002-9801 Surface Mount)
(3002-9802 Surface Mount with door strike relay)
(3002-9803 Flush Mount)
(3002-9804 Flush Mount with door strike relay)

C (Option) Lightning Suppressor

The Lightning Suppressor shall be Simplex Product #
3009-9817

D (Option) Communication Modules

The Communication Modules shall be Simplex Product #
3002-9813 Single Line DACT
3002-9814 Backup DACT

E (Option) Polarized Bell Module

The Polarized Bell Module shall be Simplex Part #3002-9820.

F (Option) Primary Power Supply

1. The Primary Power Supply shall be Simplex Product # 3009-9816
(Required to support 3 or 4 batteries)
2. The Primary Power Supply shall be Simplex Product # 3009-9815
(Required where Class II transformers are not acceptable)

G Secondary Power Supply

The Secondary Power Supply shall be Simplex Product #3002-9824 (First battery on system) and (1,2 or 3) Simplex Product # 3002-9821 (2nd, 3rd, & 4th batteries on system).

H Detection Devices

The various detection devices connected into the protection loops shall be standard Simplex products to ensure compatibility of performance and power consumption with the specified system.

I Output Devices

The various control devices connected to the system output relays shall be standard Simplex products to ensure compatibility of performance and power consumption with the specified system.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed.
- B. Correct conditions detrimental to timely and proper completion of the Work.
- C. Do not proceed until unsatisfactory conditions are corrected.
- D. Beginning of installation means acceptance of conditions.

3.02 CODES

The contractor shall provide and install the system in accordance with the plans and specifications, all national and local codes, and the manufacturers installation instructions.

3.03 OTHER WORK

Installation of equipment and devices that pertain to other work in the contract shall be closely coordinated with the appropriate subcontractor.

3.04 SUPERVISION

The manufacturer shall provide all on-site supervision of the installation, perform a complete functional test of the system and submit a written report to the contractor attesting to the proper operation of the complete system.

3.05 TESTING

The complete system shall be fully tested by the contractor in the presence of the owner's representative, the architect, the consulting engineer, the authority having jurisdiction and the manufacturer. Upon completion of a successful test, the contractor shall so certify in writing to the Owner, architect, manufacturer and general contractor.

3.06 TRAINING

The equipment manufacturer shall provide, as part of this contract, a minimum of (2) hours system programming and operation training to the building owner and consulting engineer.

*****END OF SECTION*****

SECTION 15400

PLUMBING

PART 1 -- GENERAL

1.01 SCOPE

Work of this section includes everything necessary and incidental to completing plumbing work, except as herein specifically excluded.

1.02 GENERAL REQUIREMENTS

- A. All core drilling, cutting, and patching for the installation of work under this section shall be performed under this section of the specifications. No holes will be allowed in any structural members without the written approval of the Architect.
- B. Guarantee: Furnish a written guarantee form as stipulated in section "General Conditions," for a period of one (1) year from date of acceptance of work by the owner.

1. Materials:

- a. All material and equipment shall be new and in perfect condition when installed, of the best grade and of the same manufacturer throughout for each class or group of equipment. Materials not identified by name or manufacturer shall be comparable to that specified and as approved by the Architect. Maintain adequate job protection for all materials, equipment and work of other trades. Store all pipe at least four inches (4") above grade to avoid contact with water and dirt.
- b. Unless otherwise directed by the Mechanical Engineer in writing, or specified or indicated, all materials, fixtures and equipment shall be installed in accordance with manufacturer's recommendations and instructions.
- c. Plumbing equipment shall bear the manufacturer's label nameplate showing all performance characteristics. All valves, pipe fittings, etc., shall bear the manufacturer's trademark or identifying markings.
- d. All materials of similar function or service shall be of one manufacturer.

2. Approval of Materials:

- a. Within thirty (30) days after award of the contract, submit to the Architect, ten (10) copies of a complete list of material and equipment Proposed for the job including rating and capacity data, sizes, grade, electrical data, part or catalog number, manufacturer's name, pictures, catalog cuts, etc.
- b. Submit with the above list, ten (10) copies of complete shop drawings for all fabricated equipment and ten (10) copies of complete wiring diagrams with descriptions and details.
- c. For additional submittal requirements refer to Part 3 Execution: 3.05, C. Execution paragraph 3. No exceptions will be allowed for this requirement.
- d. Safety Compliance: All materials, equipment and installation shall comply with the requirements of "Occupational Safety and Health Act" (OSHA) Standards.

C. Verification of Dimensions:

1. All indicated dimensions are approximate and are given for estimating purposes only. Before proceeding with the work, this contractor shall carefully check and verify all dimensions, sizes, required clearances and shall assume full responsibility for the fitting of all equipment and materials herein required to other parts of the work and to the work of other trades.
 2. The drawings are essentially diagrammatic to the extent that all offsets, bends, special fittings and locations are not exactly located.
 3. This contractor shall comply with all contract documents in laying out his work and equipment. He shall coordinate the work of this section with the work of other trades and all job conditions.
 4. The installation of valves, thermometers, gauges, cleanouts, water hammer arrestor access doors or other indicating equipment or specialties requiring reading, adjustment, inspection, repairs, removal or replacement shall be conveniently and accessibly located with reference to the finished building.
 5. Where wall and ceiling access doors are required for access to plumbing equipment, doors shall be furnished and installed under other sections. Coordinate this requirement with appropriate section of specifications.
- D. Rough-In: Rough-in and final connections shall be provided for equipment furnished under other sections and by the owner in accordance with rough-in drawings furnished by others. Future equipment, as noted on the drawings, shall be provided with all required rough-in utilities.
- E. Before submitting his bid for the work under this division the contractor shall carefully study all drawings and shall make a careful examination of the premises. He shall determine in advance, the methods of installing and connecting the equipment, the means to be provided for getting the equipment into place and shall make himself thoroughly familiar with all the requirements of the contract. After award of the contract, no subsequent allowances will be made to the contractor due to the failure to comply with the above requirements or any other conditions affecting the installation and completion of the work.
- F. Any minor changes in work, which have not been installed, shall be made by this contractor without additional compensation except changes that increase or decrease the size of the materials specified or indicated on the drawings. This contractor shall submit an estimate of the cost, or credit for, such changes he does not consider of a minor nature and shall proceed only upon the written authorization of the Engineer.

1.03 SUBSTITUTIONS

Substitutions will be considered per Article 5 of the General Conditions.

1.04 SUBMITTALS AND TESTS

Requirements and Submittals

1. Conformation to requirements of Uniform Plumbing Code 1994 Edition, local and/or State codes and/or Ordinances, including the Uniform City and County Building Codes, State County and City Health Department Ordinances, State of California Industrial Accident Commission Safety Orders.
2. Apply and pay for all permits, fees, inspections, examinations and tests required by any legally constituted authorities.
3. Submission of six (6) brochures containing certified manufacturer's drawings and cuts of all equipment and specialties within thirty (30) days after Contract is signed. Partial or incomplete submittals will be rejected and will be returned to Contractor for re-submittal.

- a. Submittals shall be in a neat ring binder form and shall contain a complete list, in index form, of the manufacturer's names, cuts of equipment, performance data, catalog numbers and trade names; as required; to properly identify the materials and equipment to be furnished under these specifications.
- b. Data submitted for each item shall be properly identified by reference to item number of paragraphs in the specifications and mechanical drawings' equipment schedule designation.
- c. Any deviation from item as specified shall be clearly indicated on the submittal and noted as such.
- d. These specifications and accompanying drawings specify and illustrate equipment and materials deemed most suitable for the service anticipated. This is not to preclude other products equally as good and efficient. The contractor shall prepare his bid on the basis of the particular equipment and materials specified for the purpose of determining the low bid.
- e. The awarding of the contract shall constitute a contractual obligation to furnish the specified equipment and materials.
- f. After the execution of the contract, should the contractor desire to substitute equipment other than that specified in the contract documents, such substitution will be considered for one reason only:
- g. The equipment proposed for substitution is superior in construction and efficiency to that specified herein.
- h. In the event the contractor obtains the Engineer's approval of equipment other than that herein described; he shall, at his own expense, make any changes in the structures, buildings, or piping necessary to accommodate the equipment and shall furnish record drawings to the Engineer.
- i. It will be assumed that the cost to the contractor of the equipment proposed to be substituted is less than that of the equipment specified in the contract documents; and, if the substitution is approved, the contract price shall be reduced by an amount equal to the savings.

PART 2 -- PRODUCTS

2.01 PIPING INSTALLATION

- A Arranged as shown on the drawings and as required for a complete system.
- B Run straight and true to line and as direct as possible.
- C Risers shall be plumb. Form right angles on parallel lines with building wall.
- D Keep pipes close to walls and partitions, offset only where necessary to follow walls, or as directed.
- E Locate groups of pipes parallel to each other. Pipe spacing shall permit application of full insulation and access for servicing valves.
- F All piping shall be isolated from other piping, any part of the building, framing, conduit, etc., with one-inch (1") strips of hair, felt, or pipe isolators.
- G Risers shall not have couplings in runs from one floor outlet to next.

- H All piping shall be concealed in walls or above ceilings unless otherwise noted.
- I Street elbows, bushings, and long screw fittings will not be allowed for on-site buildings.
- J Cleanouts:
 1. Floor cleanouts, as specified (see plans for size), shall be no-hub and installed into pipe where shown on plans. Floor cleanouts shall be accessible in all cases and shall be brought to surface on "WYE" branches.
 2. Wall cleanouts, as specified (see plans for size), shall be taper thread plugs and installed into pipe where shown on plans. Wall cleanouts shall be accessible in all cases.
 3. All cleanouts shall be provided with removable floor or wall plate as hereinbefore specified.
 4. Cleanouts to grade shall be provided with either a traffic rated brass cap or concrete yard box.
- K. Install stops on all hot and cold-water fixture supplies, unless integral stops are specified. Supply trim shall have all metal-to-metal connections.
- L. Protect open pipe ends. Keep piping free from scale and dirt; protect open ends whenever work is suspended during construction to prevent foreign bodies entering and lodging there; use temporary plugs₁ or other approved material for protection.
- M. Bending or mitering of pipe to constitute fittings shall not be permitted.

2.02 DOMESTIC HOT AND COLD WATER PIPING SYSTEM

- A. Mains, risers, branches, connections of sizes and arrangement as indicated on drawings.
- B. Shut-off valves shall be provided in main branches, runs to risers and where indicated on drawings.
- C. Piping below grade shall be dipped and wrapped with "Hunt's Process" No. HP#6-F. All field joints and fittings shall be double wrapped with "Scotch Wrap" No. 50. In lieu of wrapping, "X-Tru-Coat" steel pipe shall be considered an approved equal.
- D. Joints under concrete slabs, if allowed by local codes, shall be brazed.

2.03 SOIL, WASTE, AND VENT PIPING SYSTEMS (CAST IRON PIPING)

- A. Mains, risers, branches and connections of sizes and arrangement as indicated on drawings.
- B. Cast iron soil pipe and fittings below grade shall be service weight single-hub type.
 1. Shall be no-hub service weight using the "Anaheim Foundry Company," HUSKY Series 4000, heavy duty, all stainless steel (#304) coupling:
 - a. One and one half (1 1/2"), two inch (2"), three inch (3"), four inch (4"), diameter coupling shall consist of a three inch (3") wide corrugated 304 stainless steel shield in conjunction with four (4) stainless steel clamps mounted in series, secured in place by means of a fixed and "floating" eyelet to allow clamp travel during tightening.
 - b. For five inch (5"), six inch (6"), eight inch (8"), and ten inch (10"), shall consist of a four-inch (4") wide corrugated 304 stainless steel shield in conjunction with six (6) stainless steel clamps mounted in series, secured in place by means of a fixed and "floating" eyelet to allow clamp travel during tightening.
 - c. All HUSKY Series 4000 couplings, or approved equal, shall be installed using a factory preset torque wrench, set to 80 inch-pounds.

- C. Above grade piping and vent line shall be service weight cast iron with no-hub joints.
- D. Vent piping may be schedule 40 galvanized steel in lieu of item 2.02, C.
- E. Cleanouts shall be provided as previously specified and in the following locations:
 - 1. Near bottom of each stack and riser.
 - 2. At every 135-degree change of direction for horizontal line.
 - 3. Every one hundred feet (100') horizontal run.
- F. Extend cleanouts to accessible surface. Do not place cleanouts in carpeted floors. In such locations, use wall-type cleanouts.
- G. Each fixture and appliance discharging water into sanitary sewer or building sewer lines shall have a seal trap in connection with a complete venting system so gasses pass freely to atmosphere with no pressure for siphon condition on water seal.
- H. Vent entire system to atmosphere. Discharge fourteen inches (14") above roof. Join lines together in fewest practical numbers before projecting above roof (see plans for locations). Offset vent lines so they will not pierce roof near an edge or valley.
- I. Use torque wrench to obtain proper tension in cinch bands when using hubless cast iron pipe. Butt ends of pipe against centering flange or coupling.
- J. Grade all soil and waste lines at one quarter inch (1/4") fall per foot, in direction of flow; unless otherwise noted on plans (see plans for other locations)

2.04 VALVES

- A. Provide shut-off valves where indicated and specified; and in the following locations:
 - 1. Risers and main branches at points of take-off from their supply or return mains.
 - 2. Individual equipment units at Inlet and outlet to permit unit removal for repairs without interfering with remainder of system.
- B. Locate valves for easy access and operation; where concealed, access doors shall be provided under other sections. Coordinate requirements with General Contractor.
- C. Do not locate valves with stems below horizontal.

2.05 CONCEAL PIPING

- A. Where indicated or specified, conceal piping in building construction. Install such piping in time so as not to delay work of other trades and to allow ample time for tests and approval; do not cover before test approval is obtained from the Engineer.
- B. Run up branches passing through floor or roof into partition; offset above floor close to equipment unit; expose only as much as necessary for final connection.
- C. Where furred spaces are indicated, keep pipes as close to structural members as possible so as to require minimum furring. In case of furred beams, obtain approval, from Architect, of resulting headroom clearance before installing pipes.
- D. Access panels: Install where shown and over all concealed valves, cleanouts, isolation unions and any concealed equipment which may require access for operation, maintenance and repair. Panel shall be sized for proper service and be not less than twelve inches by twelve inches (12" x 12"), furnished and installed by this contractor.

2.06 PIPES PIERCING WATERPROOFING

For pipes passing through waterproofed floor or roof, provide sleeves and flashing to maintaining watertight condition. Submit details for approval.

2.07 CHECK FOR INTERFERENCES WITH OTHER TRADES

- A. Before installing piping, check architectural, structural, plumbing, electrical and fire protection drawings. Make accurate layout of all piping, including installed elevations. Submit copies of final layout to other trades for coordination with their work so that grouped pipes, conduit, and ducts will not interfere with each other, or with full swing doors and will leave minimum headroom as indicated.
- B. Coordination of the mechanical piping is the responsibility of this section.
- C. Protect open pipe ends. Keep piping free from scale and dirt. Protect open ends whenever work is suspended during construction to prevent foreign bodies entering and lodging there; use temporary plugs, burlap, or other approved material for protection.

2.08 SUPPORTS, HANGERS, FLASHING, AND SEISMIC RESTRAINT

- A. Pipe Support:
 - 1. All piping shall be supported in such a manner that it is securely attached to the structure of the building. Attachment is to be capable of supporting the tributary weight of pipe and contents in any direction. Maximum spacing of support and braces shall be as detailed on drawings.
 - 2. Support horizontal overhead piping with clevis hangers. Upper end of hanger rod shall be supported from a code-approved attachment. See drawings for pipe support details. Submit shop drawings of all piping supports for approval.
 - 3. Piping shall be attached to top chord members only of prefabricated roof or floor trusses. Where plywood web trusses occur, pipe support may be secured to additional web stiffeners as shown on plans.
- B. Flashing: Pipes through roof shall be flashed with "Semco" No. 1110-7 steel reinforced boot type, six (6) pound seamless lead flashing with suitable counter flashing sleeve, or as approved by the Architect. Submit shop drawings for approval.
- C. Seismic Restraint: All piping and equipment shall be suitably restrained and anchored in both horizontal and vertical directions to withstand seismic forces as required by the State of California. See drawings for details.

2.09 PIPES OVER ELECTRICAL EQUIPMENT

- A. Where pipe joints or valves in cold and hot water lines occur within two feet (2'0") in horizontal direction from electrical panels, or equipment, provide a drip pan of size that will afford protection. Submit pan size and construction for approval.
- B. Pans shall be 18 GA. GI sheet, edges turned up two and one half inches (2 1/2") all sides, reinforced with galvanized angles or by rolling edge over one quarter of an inch (1/4") diameter galvanized wire.
- C. Provide drain with three quarters of an inch (3/4") galvanized flange and galvanized pipe drain to nearest floor sink.
- D. Support with galvanized bars or angles, brace to prevent sagging or swaying, as detailed for ductwork.

2.010 PIPE AND FITTING MATERIALS

- A. Service Defined: Classification and names of services as used in "Schedule of Pipe and Fitting Materials" herein, shall have the following meaning:
 - 1. Cold Water: Connections from cold water supply outlets provided by Plumbing Contractor to equipment and for makeup.
 - 2. Drains: Drains from expansion or storage tanks to floor drains, drains from air conditioning equipment condensate pans or piping drip pans.

B. Schedule: Unless otherwise specified, pipe and fitting materials shall conform to following schedule:

1. Interpretation of Schedule: Figure "40" and "80" following pipe material in this schedule designate pipe wall thickness, conforming to ASA B36.10, applicable to sizes one inch (1") to ten inches (10") inclusive. Figure "40" shall mean "standard," "80" shall mean "extra strong" or "extra heavy," in the accepted trade terminology for pipe wall thickness.
 - a. Fittings shall conform to pipe as to black, galvanized, or C-P finish.
 - b. Schedule of Pipe and Fitting Materials

Service	Pipe Material Weight	Type of Joints	Pressure Fittings Material	Shut-Off Rating PSI SwP	Valve
Cold Water ABV. Gnd.	Copper L Tube	Soldered	Cast Bronze/ Wrought Copper	125	Ball, Check Butterfly
Cold Water Below Gnd.	Copper K Tube	Soldered	Cast Bronze/ Wrought Copper	125	Ball Butterfly
Hot Water Abv. Gnd.	Copper L Tube	Soldered	Cast Bronze/ Wrought Copper	125	Ball Butterfly
Vent	Service Weight Cast Iron	No-hub Screwed	N/A	N/A	N/A
Waste & Soil	Service Weight Cast Iron	No-hub	N/A	N/A	N/A
Drains	Copper L Tube	Soldered	Bronze	125	
Medical Gas Oxygen	Copper K Tube	Soldered	Cast Bronze/ Wrought Copper	125	Ball
Condensate	Copper L Tube	Soldered	Bronze	125	Butterfly

2.011 ASTM DESIGNATIONS FOR PIPE AND FITTING MATERIALS

A Pipe, as specified in schedule, shall conform to requirements covered by following ASTM designations:

1. Steel 40 or 80: A-53, Grade B.
2. Copper Tube "B": B-75.
3. Copper Tube "K" and "L": B-88.

4. Cast Iron Waste: A74-80.
- B Fittings, as specified in schedule for various services, shall conform to requirements covered by the following ASTM designations:
1. Malleable Iron: A-197.
 2. Steel Welding Type: A-234.
 3. Bronze, Solder Joint: B-88.
 4. Wrought Copper, Solder Joint: ANSI B16.22, B16.18.
 5. ABS: D2661-85a & D3311-82

2.012 MANUFACTURERS OF PIPE AND FITTINGS

All pipe and fittings shall be "U.S." manufactured. Pipe manufacturer shall be submitted for approval. The following manufacturers shall be acceptable for materials listed under each group:

1. Steel Pipe
 - a. U.S. Steel Co.
 - b. Republic Steel
 - c. California Steel Industries
 - d. Pioneer Pipe of Utah
 - e. Kaiser Steel
 - f. Bethlehem Steel Co.
 - g. National Tube Co.
2. Copper Tubing and Fittings
 - a. Muller Brass
 - b. Chase
 - c. Revere
 - d. Cerro
3. Cast Iron Pipe
 - a. Alhambra
 - b. Anaheim Foundry
 - c. U.S. Pipe and Foundry
 - d. Universal Cast Iron Manufacturing

2.013 PIPE JOINTS

- A. Unless otherwise specified, join pipe as follows:
1. All steel pipe two inches (2") and smaller shall have screwed joints.
 2. All steel pipe two and one half inches (2 1/2") and larger shall have welded joints.
 3. All copper pipe shall have soldered joints made with 95-5 tin/antimony solder.
 4. Galvanized vent pipe shall be screwed "Durham" tarred drainage fittings.
 5. All joints in underground and under-floor distribution piping shall be welded, regardless of size.

- B. Welding Exceptions: In locations such as risers in shafts or mains in crowded corridors, where welding may be difficult; permission may be given by job inspector or Mechanical Engineer to use screwed joints up to four inch (4") size.
- C. Welding Process, Procedure:
1. Where welding is required by work of this section, such work shall only be performed by welders qualified and certified by a recognized, approved agency. Such certification shall bear a date not more than six (6) months prior to date of starting work under this section and shall be submitted and approved by the job inspector and Mechanical Engineer prior to starting work.
 2. Pipe welding shall comply with the latest revision of applicable code, ASA Code for Pressure Piping and State requirements. Before welding is performed, contractor shall submit to the Mechanical Engineer evidence of compliance of welding and operator's qualification according to provisions of governing codes. Standard Procedure Specifications and operators qualified by National Certified Pipe Welding Bureau shall be considered as conforming to requirements of these specifications.
 3. Use only welding type fittings and welding neck flanges. The following exceptions may be used, only as approved by the Mechanical Engineer:
 - a. Join "small" branches into mains with intersection weld, instead of using welding type tee. "Small" shall mean that the branch is one size less than half the size of the main which it intersects as: 1 1/4" branch into 3" main; 1 1/2" branch into 4" main; 2" branch into 6" main; 4" branch into 10" main.
 - b. Use only "Weldolet" or "Threadolet" type of welding fittings for intersection welding of branches to mains.
 4. Do not make direct welded connections to valves, expansion joints, strainers, apparatus, and other equipment, which are intended to be removable.
 5. Brass piping shall have screwed joints for sizes two inches (2"), flanged for two and one half inches (2 1/2") and larger.
- D. Brazing Option: Brazing of threadless brass pipe to bronze fittings with preinserted rings, will be acceptable in place of screwed joints.
1. For brazing joints on threadless brass pipe and copper "B" tube, copper tube type "K" and "L," use brazing alloy, 80% copper, 15% silver, 5% phosphorous, which will flow freely at 1300 °F; Handy and Harmon "Sil-Fos," or approved equal; use flux and brazing method recommended by manufacturer of brazing alloy.
 2. Copper tube type "K" and "L" shall have soldered or sweated joints with solder-joint type or copper fittings. Flared joints with flare type bronze fittings may be used where approved for specific service. Solder shall be 95-5 or equal.
 3. Do not make brazed or soldered connections to valves, expansion joints, strainers, apparatus, other units, which are intended to be removable.
- E. Screwed Joints:
1. For screwed joints use red or white lead and oil, or approved pipe-joint compound; apply only on male threads.
 2. Brass pipe shall have screwed joints, for sizes two inches (2") and under; flanged two and one half (2 1/2") and over.

3. Cut pipe, nipples evenly, cut threads clean, remove burrs, ream ends to full inside bore. Cut brass pipe with hacksaw rather than with pipe cutter.
 4. Do not use Stulson Wrench for making brass pipe joints tight; such pipe, bearing wrench marks, will not be acceptable and shall be replaced at Contractor's own expense.
- F. Joints of Dissimilar Metals: Provide with "EPCO" dielectric valves isolation couplings of same size as pipe.
- G. Pipe Preparation:
1. Pipe shall be carefully cleaned before installation. The ends of threaded pipe shall be reamed out full-size with a long taper reamer so as to be partially bell-mouthed and perfectly smooth.
 2. All threads on black steel pipe shall be cut with new clean dies, full thickness of the die and so that no more than two (2) threads are left exposed on the pipe when the joint is made up in the fitting or valve.
 3. Copper, brass pipe and chromed, polished or painted. Connections from fixtures shall show no tool marks. Install with approved wrenches.
 4. Thread lubricant shall be used for all threaded joint make-up and shall be applied to the make thread only. Lubrication shall include threaded cleanout plugs.

2.014 PIPE SLEEVES, ESCUTCHEONS, COVERS

- A. Furnish and set sleeves to accommodate pipes passing through foundations, walls, floors, partitions, and roof; provide escutcheons at exposed finished surfaces pierced by pipes.
- B. Any pipe passing through a wall of a vertical shaft or through a wall of an occupancy separating or floor shall pass through a 16 GA G.I. sleeve. After pipe has been installed through sleeve, remaining space shall be packed tightly with an inert packing and secured on each side of wall with a 16 GA escutcheon around pipe. Submit shop drawings for approval.

2.015 VALVE TYPES

- A. General: For valve location and installation, refer to "Valves" under "Piping Installation herein and the drawings.
- B. Valve Requirements: Unless otherwise indicated or specified for particular system or individual equipment, following requirements shall apply:
1. Valves, General: Designed for packing under pressure with valve open or closed.
 2. Valves used for throttling of controlling flow: Globe type as indicated. For shut off use butterfly or ball type as indicated.
 3. Ball valves on all cold water and hot water piping unless otherwise noted.
 4. Valves shall have rating of not less than 125-PSI SWP or as indicated in service schedule.
 5. Valve Material: Bronze for sizes two inches (2") and smaller.
 6. Valve ends: Screwed for all sizes two inches (2.) and smaller, except copper tube.
 7. Valve ends for copper tubes, Type K and L: Solder joint type.
 8. Flange valves shall have flange drilling to suit joining pipe flanges.

9. Gate valves shall have solid tapered wedge, except where otherwise specified.
 10. Globe type valves shall have renewable composition discs recommended by manufacturer for intended service, or renewable bevel seat and metal disc where so specified.
 11. Check valves shall be horizontal swing type with bronze seat and composition or bronze disc as approved; body of same material, pressure rating, screwed or flanged, finish as adjoining globe or gate valve. Check valves in pump discharge lines shall be of the spring-loaded non-slam type as manufactured by "Mission" Duo Check Series 150-S-M-F.
- C. Submit complete shop drawings and catalog cuts of all valve types to be used, for review and approval by Mechanical Engineer, prior to installation. No Exceptions.

2.016 VALVE CATALOG NUMBER DESIGNATIONS

- A. Valve design, material of components, workmanship, and other features: Equal to "Stockham Valve Company" catalog numbers (unless otherwise noted) for various types of valves listed.
- B. Gate Valves:
1. Screwed, bronze, union bonnet, rising stem, 150-PSI SWP; NO. B-120.
 2. Screwed, ibbm, non-rising stem, 125-PSI SWP; NO. G 608.
 3. Flanged, ibbm, non-rising stem, 125-PSI SWP; NO. G 461.
 4. Flanged, ibbm, OS & Y, 125-PSI SWP; NO. G-623.
- C. Ball Valves:
1. Screwed two inches (2") and smaller, cast bronze body, 40 PSI WOG, "Apollo 3" Series 82.
 2. Valves shall include reinforced Teflon packing ring, thrust seal, body seals and seats.
 3. Balls shall be chromium-plated bronze, with full size ports.
 4. Quarter turn on-off, adjustable packing gland and internally inserted stem.
 5. 2 1/2" and larger: "Powell" 150 PSI, flanged ball valve Fig. 4226T with 316 stainless steel (SS) body and 316 55 ball and stem with Teflon seat.
- D. Globe and Angle Valves:
1. Screwed, bronze, composition, 150-PSI SWP; B-22 globe, No. 17 angle.
 2. Screwed, bronze, bevel seat and metal disc, 200P51 SWP, B-37 globe, No. 701 angle.
- E. Check Valve, Horizontal Swing Type (not for pump discharge):
1. Screwed, bronze body, bronze disc, 125-PSI SWP; B-319.
 2. Flanged, cast iron, bronze disc, 125-PSI SWP; G-931.
- F. Cocks
1. One inch (1") and larger, 175 lb. brass, square head, "Powell" Fig. 2201 lubricated type.

2.017 MANUFACTURER OF VALVES

- A. Valves: "Stockham," "Crane," "Nibco" or "Potter-Roemer."
- B. All valves shall be the product of manufacturer.

- C. All valves shall bear name or trademark of manufacturer, working pressure, and direction of flow cast or stamped on valve body.

2.018 PIPE ISOLATION

- A. Hangers shall be separated from pipe by means of steel encased hair felt padded isolation.
- B. Isolator shall be as manufactured by "Lemco-Trisolators" or "Potter Roemer RP Isolators." Submit shop drawings for approval.

2.019 PIPING IDENTIFICATION

- A. Each individual pipeline concealed or exposed shall be labeled for quick and easy identification as to direction of flow and content of materials carried in the pipes by method of stenciling.
- B. Labels shall be installed at each valve, special fittings and at all branch take-offs and twenty feet (20'-0") apart on long runs.
- C. Samples of all stenciling for flow and content shall be submitted for approval prior to installation.

LETTERS

- 1. Domestic Hot Water Supply: DHW
 - 2. Domestic Cold Water Supply: DCW
 - 3. Soil: S
 - 4. Waste: W
 - 5. Gravity Condensate: GC
- D. Prior to stenciling, all fuel gas piping shall be provided with one coat of primer paint and one coat of yellow paint. Primer and paint types as selected by the Architect.

2.020 PLUMBING FIXTURES

- A. All plumbing fixtures indicated on drawings and/or specifications shall be furnished and installed in accordance with manufacturer's specifications by this contractor.
- B. Plumbing fixtures shall be as follows, with connection sizes as indicated in fixture schedule on the plumbing drawings:
 - 1. Water closet WC-1: American Standard "Cadet" 18" high 9468.018 (1.6) gallons per flush, floor mounted, siphon jet, white vitreous china, elongated bowl. 1 1/2" top spud with Sloan Royal 113 flush valve, 1.6 gallons per flush, Church plastic seat model 295C, elongated, open front, with external check hinge, scratch and stain resistant. C.E.C. listed.
 - 2. Water closet WC-2: American Standard "Madera" 2221.018 (1.6) gallons per flush, floor mounted, siphon jet, white vitreous china, elongated bowl. 1 1/2" top spud with Sloan Royal 113 flush valve, 1.6 gallons per flush, Church plastic seat model 295C, elongated, open front, with external check hinge, scratch and stain resistant. C.E.C. listed.
 - 3. Urinal U-1: American Standard "Allbrook" 6541.132 wall hung, white vitreous china. 1 1/4" top spud Sloan royal flush valve 186-1. 1 gallon per flush, J.R. Smith urinal support model 644. C.E.C. listed.
 - 4. Lavatory L-1: American Standard "Lucerne" 0355.027, white vitreous china, wall-hung lavatory with faucet holes on 4" centers. Front overflow, 1 1/2"x 1 1/4" cast brass P-trap with chrome finish. Symmons "Scot" S-60-G-H metering faucet with

- 4" center set. Rose spray outlet with 0.5 GPM flow rate. Grid strainer. Chicago 1028 angle stops w/ rigid riser. C.E.C. listed.
5. Sink S-1: Elkay Rigidbilt Stainless Steel Scullery Sink, RNSF8358LR 16 GA type 304 stainless steel, Square welded construction 18"x 24"x13 1/2" with faucet holes on 8" centers punched for 3 holes. 1 1/2" cast brass L.A. pattern P-trap with chrome finish. Elkay LK-35 chrome basket strainers. Elkay LK499 chrome plate mixing faucet with 10" high gooseneck spout with aerator, BH4 wrist blade handles. Chicago 1003 angle stops w/ rigid riser.
 6. Sink S-2: Elkay Stainless Steel Hand Sink, ELV2219 18 GA type 304 stainless steel, backsplash with faucet holes on 4" centers punched for 3 holes. 1 1/2" cast brass L.A. pattern P-trap with chrome finish. Elkay LK-8 chrome grid strainers. Elkay LK411 chrome plate mixing faucet with 11" high gooseneck spout with aerator, BH4 wrist blade handles. Chicago 1003 angle stops w/ rigid riser
 7. Drinking Fountain DF-1: Haws model 1010 wall mounted dual bubbler drinking fountain, front push bar operated, 18 GA. type 304 stainless steel with #4 satin finish. Polished chrome plated vandal-resistant bubblers and push bars, self-closing valves, automatic stream regulation. 1/2" IPS screwdriver stops, chrome plated waste strainers, 1 1/4" ips traps and vandal resistant bottom plates.
 8. Floor Drain FD-1: J.R. Smith #2005-A-P-PB, 5" square top, 2" outlet, trap primer connection, duco cast iron body with polished bronze grate.
 9. Floor Sink FS-I: J.R. Smith #3410-12, 8" square top -medium receptor, no hub, 2" pipe size connection, cast iron flanged receptor, acid resistant coated interior and acid resistant coated grate.
 10. Trap Primer TP-I: Precision Plumbing Products, Inc. model "Prime-rite" 1/2" inlet and 1/2" outlet with distribution unit may be located as indicated on drawings or as required by code. UPC listed.
 11. Water Hammer Arrestor WHA-I: Precision Plumbing Products, Inc. model "SC-Series" (size as required), installed on all quick closing valves and all valves which close with the flow of fluid, or on headers serving more than one fixture. Provide a 12"x 12" access panel.
 12. RD-1: J.R. Smith #1083-C Roof Drain. Duco cast iron body with no-hub fitting, combined flashing clamp, gravel stop and adjustable "Flow Rate Control" assembly and dome.
 13. OD-1: J.R. Smith #1080-C Overflow Drain. Duco cast iron body with no-hub fitting, combined flashing clamp, gravel stop and adjustable "Flow Rate Control" assembly and dome. 3 1/2" water dam.
- C. Interior exposed pipe, valves, and fixture trim shall be chrome plated.
 - D. The complete installation of each fixture shall include trap and accessories with accessible stop or control valve in each hot and cold-water branch supply line. Fixture floor connections shall be made with approved brand of cast Iron floor flange, soldered or caulked securely to waste pipe. Make joint between fixture and floor flange tight with approved fixture setting compound or gaskets.
 - E. Polish chrome finish at completion of project.
 - F. Install fixtures and fittings as per local codes and manufacturer's instructions.
 - G. Do not use flexible water piping.
 - H. Caulking: Fixtures shall be bedded and caulked along joint at walls, counter tops and other intersecting surfaces with "Polysenseal" distributed by "Gladding-McBean" or approved equal.

- I. Backing for all fixtures indicated on wall shall be one quarter inch by six inches (1/4" x 6" steel) plate; recessed flush with stud face and extending to next stud beyond fixture on each side. Secure plate top and bottom at each stud and weld three-eighths inch (3/8") steel stud bolts to each stud. See fixture schedule for type of support required. For wood stud installation, secure backing plate to each stud with three-eighths inch by two-inch (3/8" x 2") long lag bolts. Minimum two (2) per stud.

2.021 WATER HAMMER ARRESTORS

- A. Piston operated, type K copper barrel, with brass threaded adaptor:
 1. The piston shall provide a permanent mechanical barrier between fluid and pre-load air change.
 2. The piston shall be equipped with two (2) O-rings, "Parker Specifications" N741-75, temperature rated 40 °F to 450 °F. Seal lubricant shall be "Dow Corning" Silicone Compound #111 FDA listed as safe for use in potable water systems.
- B. Shall be designed to operate under domestic and commercial line pressures. Shall be equal to the pipe diameter at the point of installation.
- C. The installation shall be made in the vertical or horizontal positions from the source of lock. Shall be installed in the following locations:
 1. All quick closing valves.
 2. All valves that close with the flow of fluid.
- D. Normal arrestor operating pressure shall be 35 to 250 Psig, with a maximum surge or spike pressure not to exceed 1500 Psig.
- E. Arrestor shall be fully guaranteed in writing by manufacturer for the entire life of the system.
- F. Shall be as manufactured by "Precision Plumbing Products, Inc.," SC Series. Submit shop drawings for approval by the Mechanical Engineer.

2.022 CLEANOUTS

- A. Floor: "J.R.Smith" #4023 or #4043 or "Zurn" #1400-2 or #1440-3, with polished nickel bronze non-skid adjustable round or square top. Use carpet clamping type top with carpet marker in carpeted areas.
- B. Dry Wall: "J.R.Smith" #4670 or approved equal by "Zurn" or "Josam;" prime coated steel, face or wall type.
- C. All other walls: "J.R.Smith" #4470 or approved equal by "Zurn" 1470 series with chrome plated cover and screws. Provide "J.R. Smith" #4715 or approved equal where wall thickness is inadequate to conceal cleanout.
- D. Submit shop drawings and/or catalog cuts for each type for Mechanical Engineer's approval, prior to installation.

2.023 PIPE INSULATION

General

1. Furnish and install thermal insulation on clean dry surfaces; after testing, inspection, and approval in strict accordance with these specifications, contract documents and manufacturer's recommendations.
2. All insulation and accessory material shall meet the requirements of flame spread not to exceed 25 and smoke developed not to exceed 50, as tested by "Procedure ANSI/ASTM-E-84, NFPA 225 or UL 723.

3. Insulation shall be as manufacture by "Manville" or as approved by the Mechanical Engineer, prior to installation.
4. Installation: By skilled appliers directly in the employ of firms with a minimum of five (5) years successful installation experience, specializing in this type of work.
5. Pipe Hangers shall be installed outside the insulation. This contractor shall insert a section of cellular glass insulation at the support of a length not less than twice pipe diameter.

2.024 EQUIPMENT IDENTIFICATION

Valves

- 2.01 Numbered brass disc attached to each valve for identification.
- 2.02 Valve tag shall be stamped to identify type of service and sequence number (i.e.: HW-I). Submit sample valve tag for approval prior to installation.
- 2.03 Valve directory to be provided with operations and maintenance submittals.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed.
- B. Correct conditions detrimental to timely and proper completion of the Work.
- C. Do not proceed until unsatisfactory conditions are corrected.
- D. Beginning of installation means acceptance of conditions.

3.02 OPERATING AND MAINTENANCE DATA

Data: Submit to the Architect for approval, prior to acceptance of the installation, complete and at one time. Partial or separate data will not be accepted. Data shall consist of the following-

1. Manufacturer's Literature: Six (6) copies of manufacturer's instructions for operation and maintenance of all equipment, valves, and controls; including replacement parts lists.
2. Written Instruction: Typewritten instruction for operation and maintenance of the system composed of Operation Instructions and Maintenance Instruction. Six (6) copies submitted to the Architect for approval.
3. Operating instructions shall contain a brief description of the system. Adjustments requiring the technical knowledge of the service agency personnel shall not be included in the operating instructions.
4. Maintenance instructions shall list each item (i.e. plumbing fixtures and equipment) requiring inspection, lubrication, or service and describe the performance of such maintenance.
5. Verbal Instructions: Operating personnel shall be instructed in the operation of the systems in accordance with typewritten instructions. No other verbal instructions shall be given.
6. Binders: Four (4) complete sets of the above data in loose-leaf, ring type binders with permanent covers, with identification on inside cover.

3.03 SPECIAL REQUIREMENTS

- A. The manufacturer and/or supplier of all equipment shall certify in writing to the owner that this equipment complies with these specifications.

- B. All new equipment shall be anchored as required and/or as detailed on drawings.
- C. Written Certifications, in a form approved by the Mechanical Engineer, shall be provided by the equipment manufacturer or his authorized representative:
 - 1. That the equipment and its installation was inspected on the job by the manufacturer and that the equipment is in first-class condition throughout, was installed in accordance with manufacturer's requirements and recommendations, and that the installation is approved by the manufacturer.
 - 2. That the equipment is operating in a safe and satisfactory manner and is delivering capacities and performance hereinbefore specified and/or indicated on the drawings.
 - 3. The following shall be certified as described above: All plumbing fixtures and domestic hot water heaters.
- D. Damage by Leaks: The contractor shall be responsible for all damage to equipment and premises caused by leaks or breaks in piping or equipment for a period of one (1) year after date of final acceptance.
- E. Unless otherwise directed, and/or specified, and/or indicated, all materials and equipment shall be installed in accordance with the manufacturer's recommendations and instructions.
- F. Plumbing equipment shall bear the manufacturer's label or nameplate showing performance characteristics. Identifying size or model number shall be given only when not practicable or customary to show otherwise. All valves, pipe, fixtures and fittings shall bear the manufacturer's trademark or identifying markings.
- G. All materials of similar class or service shall be of one manufacturer.
- H. Plumbing piping layouts as shown on the drawings are subject to modifications, by contractor, without extra cost as required to clear other items of construction. This contractor shall coordinate the work of this section with that of other sections as to avoid interferences by other crafts involved.
- I. Contractor shall visit site prior to bidding and fully acquaint himself with all conditions affecting installation of the proposed system. Failure to do so shall not relieve contractor of responsibility of providing complete, operational, and acceptable system.

3.04 COMPLETION

- A. When the installation is complete and adjustments specified herein are made, the system shall be operated for a period of one week, during which time it shall be demonstrated to the Mechanical Engineer as being completed and operating in conformance with these specifications.
- B. Record as-built drawings showing locations and size of all plumbing piping, fixtures, and equipment as installed shall be kept up-to-date and available for inspection at all times during construction. These shall be signed by the General Contractor and Plumbing Contractor to certify their accuracy and shall be submitted to the owner prior to final acceptance of the work.

*** END OF SECTION ***

SECTION 15600
HEATING, VENTILATING AND AIR CONDITIONING

PART 1 -- GENERAL

1.01 SCOPE

Work of this section includes everything necessary and incidental to completing heating, ventilating, and air conditioning work; except as herein specifically excluded.

1.02 GENERAL REQUIREMENTS

- A. All core drilling, cutting, and patching for the installation of work under this section shall be performed under this section of the specifications. No holes will be allowed in any structural members without the written approval of the Architect.
- B. Guarantee: Furnish a written guarantee form as stipulated in section "General Conditions," for a period of one (1) year from date of acceptance of work by the owner.
- C. Materials:
1. All materials and equipment shall be new and in perfect condition when installed, of the best grade and of the same manufacturer throughout for each class or group of equipment. Materials not identified by name or manufacturer shall be comparable to that specified and as approved by the Architect. Maintain adequate job protection for all materials, equipment and work of other trades. Store all pipe at least four inches (4") above grade to avoid contact with water and dirt.
 2. Unless otherwise directed by the Mechanical Engineer in writing, or specified or indicated, all materials, and equipment shall be installed in accordance with manufacturer's recommendations and instructions.
 3. Mechanical equipment shall bear the manufacturer's label nameplate showing all performance characteristics. All valves, pipe fittings, etc., shall bear the manufacturer's trademark or identifying markings.
 4. All materials of similar function or service shall be of one manufacturer.
- D. Approval of Materials:
1. Within thirty (30) days after award of the contract, submit to the Architect, six (6) copies of a complete list of material and equipment proposed for the job including rating and capacity data, sizes, grade, electrical data, part or catalog number, manufacturer's name, pictures, catalog cuts, etc.
 2. Submit with the above list, six (6) copies of complete shop drawings for all fabricated equipment and six (6) copies of complete control diagrams with descriptions and details.
 3. Safety Compliance: All materials, equipment and installation shall comply with the requirements of "Occupational Safety and Health Act" (OSHA) Standards.
- E. Verification of Dimensions:
1. All indicated dimensions are approximate and are given for estimating purposes only. Before proceeding with the work, this contractor shall carefully check and verify all dimensions, sizes, required clearances and shall assume full responsibility for the fitting of all equipment and materials herein required to other parts of the work and to the work of other trades.

2. The drawings are essentially diagrammatic to the extent that all offsets, bends, special fittings and locations are not exactly located.
- F. This contractor shall comply with all contract documents in laying out his work and equipment. He shall coordinate the work of this section with the work of other trades and all job conditions.
1. The installation of valves, thermometers, gauges, dampers, duct access doors or other indicating equipment or specialties requiring reading, adjustment, inspection, repairs, removal or replacement shall be conveniently and accessibly located with reference to the finished building.
 2. Where wall and ceiling access doors are required for access to mechanical equipment, doors shall be furnished and installed under other sections. Coordinate this requirement with appropriate section of specifications.
- G. Rough-in: Rough-in and final connections shall be provided for equipment furnished under other sections and by the owner in accordance with rough-in drawings furnished by others. Future equipment, as noted on the drawings, shall be provided with all required rough-in utilities.
- H. Machinery Guards: All moving parts of machinery, such as shaft couplings, belt drives, etc., shall be adequately covered with removable metal guards to protect personnel from possible injury. Guards shall be furnished by the equipment manufacturer and shall comply with applicable requirements of applicable state agencies and OSHA.

1.03 SUBSTITUTIONS

Substitutions will be considered per Article 5 of the General Conditions.

1.04 SUBMITTALS AND TESTS

A. Requirements and Submittals:

1. Conformation to requirements of Uniform Mechanical Code-1995 Edition, local and/or State codes and/or Ordinances, including the Uniform City and County Building Codes, State County and City Health Department Ordinances, State of California Industrial Accident Commission Safety Orders.
2. Apply and pay for all permits, fees, inspections, examinations and tests required by any legally constituted authorities.
3. Submission of six (6) brochures containing certified manufacturer's drawings and cuts of all equipment and specialties within thirty (30) days after Contract is signed. Partial or incomplete submittals will be rejected and will be returned to Contractor for re-submittal.
 - a. Submittals shall be in a neat ring binder form and shall contain a complete list, in index form, of the manufacturer's names, cuts of equipment, performance data, catalog numbers and trade names; as required; to properly identify the materials and equipment to be furnished under these specifications.
 - b. Data submitted for each item shall be properly identified by reference to item number of paragraphs in the specifications and mechanical drawings' equipment schedule designation.
 - c. Any deviation from item as specified shall be clearly indicated on the submittal and noted as such.
 - d. These specifications and accompanying drawings specify and illustrate equipment and materials deemed most suitable for the service anticipated. This is not to preclude other products equally as good and efficient. The contractor shall prepare his bid on the basis of the

particular equipment and materials specified for the purpose of determining the low bid. The awarding of the contract shall constitute a contractual obligation to furnish the specified equipment and materials.

- e. After the execution of the contract, should the contractor desire to substitute equipment other than that specified in the contract documents, such substitution will be considered for one reason only: The equipment proposed for substitution is superior in construction and efficiency to that specified herein.
- f. In the event the contractor obtains the Engineer's approval of equipment other than that herein described; he shall, at his own expense, make any changes in the structures, buildings, or piping necessary to accommodate the equipment and shall furnish record drawings to the Engineer.
- g. It will be assumed that the cost to the contractor of the equipment proposed to be substituted is less than that of the equipment specified in the contract documents; and, if the substitution is approved, the contract price shall be reduced by an amount equal to the savings.

B. AIR SYSTEMS TEST AND BALANCE

- 1. Work under this section shall include complete and total balancing of all equipment air systems.
- 2. This contractor shall procure the services of an independent Air Balance and Testing Agency, approved by the Engineer, which specializes in the balancing and testing of heating, ventilating, and air conditioning systems. All work of this agency shall be done under the supervision of a qualified Heating and Ventilating Engineer employed by them. All instruments used by this agency shall be accurately calibrated and maintained in good working order. Should the Contractor refuse or neglect to make tests necessary to satisfy Architects that requirements of Specifications and Drawing are met, such tests may be made by an independent testing company with the Contractor charged for all expenses.
- 3. Air balance and testing shall not begin until system has been completed and is in full working order. The contractor shall put all heating, ventilating, and air conditioning systems and equipment into full operation and shall continue the operation of same during each working day of testing and balancing.
- 4. Testing and Balancing: The air balance agency shall perform the following tests and balance systems in accordance with the following requirements:
 - a. Test and adjust belt drive blower RPM's to design requirements.
 - b. Test and record each motor full load ampere reading.
 - c. Make pilot traverse of main supply, return and exhaust ducts and obtain design CFM at fans.
 - d. Test and record system static pressures, suction and discharge.
 - e. Adjust main exhaust and return air ducts to proper design CFM.
 - f. Adjust all zones to proper design CFM, supply and return.
 - g. Test and adjust each diffuser, grille and register to within +/-5% of design requirements.
- 5. After balancing, the contractor shall demonstrate to the Mechanical Engineer, that the system is in balance and shall spot-check diffusers and registers at random to ascertain proper air delivery.

6. In preparing balance reports, contractor shall record information as required on ABC test sheets, No's 82020, 82030, 82033, 82035, 82040, 82100, 82101 and others as required.
7. In cooperation with the controls manufacturer's representative, set adjustments of automatically operated dampers to operate as specified, indicated, and/or noted.
8. All diffusers, grilles, and registers shall be adjusted to minimize drafts in all areas. As a part of the work of this contract, the air conditioning contractor shall make any changes in the pulleys, belts and dampers required for correct balance as recommended by the air balance agency.

PART 2 -- PRODUCTS

2.01 SHEET METAL

- A. Layout: Drawings are in part diagrammatic and are intended to convey the scope of work and indicate the general arrangement of equipment, ducts and piping. Mechanical trades shall follow these drawings in laying out their work, consult general construction drawings to familiarize themselves with all conditions affecting their work and shall verify spaces in which their work will be installed. Where job conditions require changes in indicated locations and arrangement, make such changes at no additional cost to owner.
- B. Description: Includes sheet metal plenums, ductwork, manually operated dampers and equipment connections.
- C. Material: All sheet metal shall be fabricated of galvanized steel.
- D. Low Pressure Duct Construction: Gauges, transverse joints, spacing of joints and intermediate bracing shall be as tabulated below, in which transverse joints are shown SS for S-stop, DS for drive slip, PS for pocket slip, and BS for bar slip. PS and BS lapped and riveted at corners. Intermediate bracing where shown may be omitted if duct sections of four feet (4'0") or less are used. Maximum spacing of bracing--four feet (4'0")

1. Schedule:

Shape	Size (in.)	Gauge	Transverse Joint	Bracing
Rect.	Up to 12	26	DS, SS	None
Rect.	13 to 18	24	DS, SS	None
Rect.	19 to 30	24	DS, SS	None
Rect.	31 to 42	22	1" PS, or BS	1 x 1 x 1-1/8
Rect.	43 to 54	22	1 1/2" standing seam	1.5 x 1.5
Round	Up to 9	24	2" slip	None
Round	9 to 14	24	4" slip	None
Round	14 to 23	22	4" slip	None

2. Alternate Transverse Joint: For rectangular duct sizes nineteen inches (19") and above, in lieu of the joint construction specified in Schedule 1 above, an alternate joint construction in "Ductmate" shall be acceptable. Submit shop drawings for approval.
3. Stiffening: Panels twenty inches (20") and larger shall be cross-broken unless standing seams are used and are spaced closer than thirty-six inches (36").

4. Changes in Direction and Size: Elbows with throat radius 75% of the dimension of the adjacent duct as otherwise detailed. Ducturns used where indicated. In ducts twenty inches (20") wide or less, use Barber-Coleman ducturns or as approved. Transitions with lengths not shorter than those shown; minimum length of three feet (3'0") where not indicated. Round elbows shall be of 4-piece construction. Same gauge as adjacent duct. Round "Wye" fittings to have 45-degree side take-off tapped into reducing transition. Seal all joints as specified below.
5. Joints: Airtight for the purpose intended. Seal all joints with high pressure, flexible duct sealant with pressure tests to 10" of water column. Sealant shall be as manufactured by "Glenkote" or approved equal. Alternately, ductwork may be sealed with 6 oz canvas strips and Arabol. Pittsburgh lock or double seams excepted. Arabol shall be used full strength with no dilution. Duct tape shall not be used.
6. Supports: Ducts secured against displacement and vibration. Anchor to structural parts of building at intervals not greater than ten feet (10'0") and suspend with hanger straps. All supports shall be per SMACNA Standards. Submit shop drawings for approval.
7. Manual Dampers: Install where shown: manually operated, opposed blade dampers with interlocking edges, fabricated of 18-gauge steel and equipped with locking quadrants and end bearings. Duro Dyne SRH-228 damper regulators shall be installed on dampers in lined duct; SRST-I on wrapped duct, with proper offset for duct insulation. Each damper regulator rod, Duro Dyne model "SB." Submit shop drawings for approval.
8. All round "Wye" fittings shall include a manual volume damper with locking quadrant. Dampers shall be "Duro Dyne" JDS series or equal. Submit shop drawings for approval.
9. Turning vanes shall be double wall type. No exceptions.
10. Turning vanes in ducts twenty inches (20") wide and larger shall be double wall with perforate inner face and packed with fiberglass. Use "Sonoturn" or equal. Submit shop drawings for approval.
11. Register Boxes: Sheer metal register boxes shall be provided for all ceiling diffusers and registers with round duct connections. Register boxes shall be lined with one inch (1") duct liner and be complete with round starter collar, size as indicated on drawings. Submit shop drawing for approval.
12. Flexible ductwork shall be "GlassFlex" AVC-180 or equal, UL-181 Class I air duct, material tested and labeled with a flame and smoke rating of 25/50 or lower. The duct shall have R-4.5 fiberglass insulation and a 0.17 perm vapor barrier. Maximum length shall not exceed five feet (5'0"). Submit shop drawings for approval.
13. The contractor shall verify all clearances on job prior to fabricating ductwork. Provide transitions and offsets as required to install the work and coordinate all clearances with other trades.
14. Provide "Duro Dyne" model TH-1 instrument port in each supply and return trunk for each specified system. Submit shop drawings for approval.

2.02 DUCT INSULATION

- A. Line all ductwork where specified below with one inch (1") 1.5 PCF density moisture-resistant, fire-resistant, glass, sound absorbing duct liner. Liner shall be cemented to duct with "3M" #EC-104 adhesive. Where widths of ducts or casings exceed twenty inches (20"), both mechanical fasteners eighteen inches (18") on centers and adhesive

shall be used. Exposed edges securely cemented to prevent fraying. Dimensions of ducts are net inside liners. Manufacturer shall be "Manville" Linacoustic R or approved equal. Flame spread not over 25. Smoke developed not over 50. Liner shall meet all of the requirements of NFPA 90A & 90B. Submit shop drawings for approval on method of fastening and material.

1. All supply, return, and exhaust plenums.
 2. Line all ductwork from inlet of exhaust fans upstream for a developed length of twenty feet (20'0") from the fan.
 3. Line all register boxes with one-inch (1") duct liner.
 4. In additional locations where shown on drawings.
- B. Wrap all unlined ductwork in uninsulated or unconditioned areas with 1 ½", .75 pcf fire-resistant moisture resistant fiberglass insulation duct wrap. Insulation package shall have a flame spread rating of 25, and a smoke developed factor of 50 and shall meet all of the requirements of NFPA 90A & 90B. Duct wrap insulation shall consist of a blanket of glass fibers factory laminated to a reinforced foil vapor retarder facing with a 2" min. stapling and taping flange on one edge.
1. Duct wrap shall not exceed 25% compression during installation and shall carry an R-value of 4.2 installed.
 2. Duct wrap sections shall be tightly butted to adjacent sections with the 2" flap overlapping the adjacent section. All joints to be stapled and taped with pressure sensitive tape matching the insulation facing, FRK backing stock or glass fabric and mastic. Seal all tears, punctures and other penetrations of the duct wrap facing with tape or mastic to provide a vapor-tight system.
 3. Insulation shall be as manufactured by "Owens-Corning, or equal in "Manville" or "Armstrong".
 4. Duct wrap shall be secured with #16 soft galvanized wire, spaced at twelve-inch centers. . No raw edges exposed will be acceptable.

2.03 CEILING DIFFUSERS AND REGISTERS

A. Performance:

1. Devices shall provide the required air throw and spread with no apparent drafts or excessive air movement within the ventilated or air conditioned area.
2. All air distribution accessories required to effect these conditions shall be provided and installed by this contractor.
3. Diffusers, grilles and registers causing excessive air movement, drafts or objectionable noise shall be replaced at no cost to the owner.

B. Ceiling Diffusers:

1. Diffusers shall be modular, removable core type, with adjustable volume control dampers.
2. Furnish diffusers in a factory applied, baked enamel finish. Color as selected by the Architect.
3. Diffusers shall be as manufactured by "Metalaire" Series 9000 MOD-FLO modular adjustable air diffusers, aluminum construction, or equal in "Anemostat."
4. Verify frame types prior to ordering. Submit Shop Drawings, including color samples, for approval.

5. Provide in the neck at each diffuser at duct takeoff from main duct, an adjustable type air extractor and volume controller. Submit shop drawings for approval.
6. Where air distribution devices are installed in lay-in ceilings, twenty four by twenty four (24" x 24") filler panel shall be provided. For ceiling diffusers larger than 24" x 24" (i.e. 30" x 22"), provide properly sized filler panel.

C. Sidewall Diffusers:

1. Diffusers shall be extruded aluminum linear bar grilles with sizes as shown on plans.
2. Deflection bars shall be 15° in a permanently fixed position.
3. Borders shall be 1" wide.
4. Grille and register sections shall be furnished in one piece up to 6 feet in length.
5. Bar Grille borders shall be mechanically fastened to provide a neat hairline corners.
6. Furnish all grilles with opposed blade dampers.
7. Grilles shall have a natural anodized finish, and shall be as manufactured by Metal*Aire or approved equal in "Anemostat" or "Titus".

D. Return/Exhaust Registers:

1. Registers shall be aluminum construction with key operated, opposed blade, volume Dampers.
2. Furnish all registers with a factory applied, baked enamel finish. Color as selected by the Architect.
3. Registers shall be as manufactured by "MetalAire" Model RH, or equal in "Anemostat."
4. Verify frame types prior to ordering. Submit shop drawings, including color samples, for approval.
5. Where registers are installed in lay-in ceilings, twenty four by twenty four (24" x 24") filler panel shall be provided. For return/exhaust registers larger than 24" x 24" (i.e. 30" x 22"), provide properly sized filler panel.

2.04 PACKAGED ROOF MOUNTED AIR CONDITIONING UNIT (GAS HEAT)

A. General:

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a scroll or reciprocating compressor for cooling duty and gas combustion for heating duty. Unit shall discharge supply air downward as shown on contract drawings. Units shall be manufactured by Carrier or approved equal. Substitute manufacturers shall meet all ratings on drawings, including SEER, cooling BTUH, and heating AFUE. Any substitute product not meeting any of the stated performance and efficiency ratings on the drawings shall be rejected.

B. Design Standards:

1. Unit shall be rated in accordance with ARI Standards 270 and 360. Designed in accordance with UL Standard 1995.
2. Unit shall be designed to conform to ANSI/ASHRAE 15.
3. Unit shall be UL tested and certified in accordance with ANSI Z21.47 Standards and CSA or CGA certified as a total package.

4. Unit casing shall be capable of withstanding Federal Test Method Standard 141 (Method 6061) 500-hour salt spray test.
- C. Setup and Handling:
1. Unit shall be stored and handled per manufacturer's recommendations.
- D. Cabinet:
1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a pre-painted baked enamel finish.
 2. Indoor blower compartment interior cabinet surfaces shall be insulated with a minimum 1/2 in. thick, flexible glass fiber insulation, coated on the air side. Aluminum foil faced glass fiber insulation shall be used in the furnace compartment.
 3. Cabinet panels shall be easily removable for servicing.
 4. Filters will be accessible through a hinged access panel.
 5. Holes shall be provided in the base rails for rigging shackles to facilitate overhead rigging.
 6. Unit shall have a factory-installed internal condensate drain trap providing a minimum 3/4-in. connection. Drain shall allow for no standing water accumulation per AHSRAE 62. Substitute manufacturers shall provide proof of compliance with ASHRAE 62.
- E. Fans:
1. Indoor Blower (Evaporator Fan):
 - a. All fans shall be belt driven and include an adjustable- pitch motor pulley.
 2. Condenser Fans shall be of the direct driven propeller type with corrosion-resistant blades riveted to corrosion-resistant steel supports. They shall be dynamically balanced and discharge air upwards.
- F. Compressor:
1. Hermetic type shall be factory rubber shock mounted and internally spring mounted for vibration isolation.
 2. Factory-installed crankcase heater to prevent refrigerant dilution of oil.
- G. Coils:
1. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.
- H. Heating Section:
1. Induced draft combustion type with energy saving direct spark ignition system and redundant main gas valve.
 2. The heat exchanger shall be of the tubular section type constructed of minimum of 20-gauge steel coated with a nominal 1.2-mil aluminum-silicone alloy for corrosion resistance.
- I. Refrigerant Components:
1. Fixed expansion device with filter driers.
- J. Filter Section:
1. FARR 30% disposable 2 inch filter or equal installed separately in RA duct and economizer outside air intake.

K. Controls and Safeties:

1. Unit Controls: Unit shall be complete with self-contained low-voltage control circuit protected by a manually resettable circuit breaker on the 24V side.
 - a. Economizer Control
 - b. Capacity control
2. Safeties:
 - a. Unit shall incorporate a solid-state compressor protector which provides reset capability at the space thermostat, should any of the following safety devices trip and shut off compressor:
 1. Compressor over temperature, over current.
 2. Low-pressure switch.
 3. Freezestat, evaporator coil.
 4. High-pressure switch.
 - b. Heating section shall be provided with the following minimum protections:
 1. High temperature limit switch.
 2. Induced draft motor centrifugal switch.
 3. Flame rollout switch (manual reset).
 4. Flame proving controls.
 5. Redundant Gas valve.
3. Operating Characteristics:
 - a. Unit shall be capable of starting and running at 115 degrees F ambient outdoor temperature per maximum load criteria of ARI Standard 360.
 - b. Compressor with standard controls shall be capable of cooling operation down to 25 degrees F outdoor ambient temperature.
 - c. Unit provided with fan time delay to prevent cold air delivery before heat exchanger warms up.
4. Electrical Requirements:
 - a. All unit power wiring shall enter unit cabinet at a single location.

L. Special Features:

1. Roof Curb: Formed 18 gauge galvanized steel shipped completely assembled with wood nailer strip, welded corners, and integral 2-in. spring isolation. Minimum curb height shall be 14 inches, including the spring isolation.

M. Integrated Economizer:

1. Integrated, fully modulating type field-installed capable of simultaneous economizer and compressor operation, to provide cooling with outside air.
2. Economizer shall be installed within the unit cabinet and equipped with centrifugal fan powered exhaust fan.
3. Provide FARR 30% disposable filter for OSA filtration.
4. Provide solid-state dual enthalpy control.

2.05 EXHAUST FANS (CEILING MOUNTED)

- A. General
 - 1. Fan shall be direct driven, ceiling mounted, with centrifugal blower.
 - 2. See equipment schedule for capacities and duty of each exhaust fan to be provided and plans for layout details.
 - 3. Fans shall be U.L. Listed and all electrical components shall carry the listing and comply with the State of California Electrical Code.
 - 4. Fans shall be as manufactured by "Cook," or approved equal in "Greenheck" or "Penn."
- B. Quality Assurance
 - 1. Exhaust fans shall be design certified by AMCA.
 - 2. All fans shall be statically and dynamically balanced.
- C. Construction
 - 1. The drive frame, bearing, and motor plates shall be constructed of mild gauge steel.
- D. Motors
 - 1. Motors shall be heavy duty, 1750 RPM, open drip-proof, horsepower and voltage as indicated on equipment schedule.
 - 2. Motors shall be equipped with permanently lubricated, sealed ball bearings.

2.06 AUTOMATIC TEMPERATURE CONTROLS

- A. Description: A complete system of automatic controls installed to control the equipment, consisting of a system of electronic and/or electric controls to provide the heating, ventilating and air conditioning results specified, as intended, and as shown on the drawings. All controls provided shall be the responsibility of a single manufacturer. The contractor shall furnish and install such additional material, equipment and appurtenances as required to make satisfactory operating Systems.
- B. Work Included: The Mechanical Contractor shall be responsible for furnishing all the automatic temperature control devices as shown on the plans. He shall secure the services of the temperature control manufacturer to install all temperature control devices, except those specified as being furnished with other equipment. The temperature control manufacturer shall also-
 - 1. Submit shop drawings of proposed temperature control system showing electrical interlocks with all mechanical equipment, list of materials being furnished, and a detailed description of the control sequence. These shop drawings shall completely show, in detail, all wiring, both control and power, for all heating and air conditioning equipment and systems. Failure to provide complete submittal will result in rejection of the product.
 - 2. Instruct the electrician, sheet metal worker, and pipe fitter on the particular requirements of control devices for which each is responsible.
 - 3. Calibrate all devices and make all final settings and test out control system under actual operating conditions for satisfactory operation.
 - 4. Deliver and hang a copy of the control diagram, material list and control sequence, inclusive, on a permanent type of print, framed behind glass and mounted as directed by the Architect in the field. All control devices on the diagram shall be clearly labeled as to location and function.

5. Contact operating personnel, instruct them on the operation and maintenance of the control system and provide as hereinafter specified.
 6. All low voltage wiring shall be furnished and installed by the Mechanical Contractor. Conduit for low voltage wire shall be furnished and installed under the Electrical Section of the specifications.
- C. Work Not Included: All line voltage wiring, including conduit shall be under the Electrical Section of the specifications.

2.07 EQUIPMENT IDENTIFICATION

Equipment

1. Stenciled identification for each piece of equipment installed.
2. Equipment identification tags to match plan numbers.
3. Submit equipment stenciling for approval by Mechanical Engineer, prior to installation.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed.
- B. Correct conditions detrimental to timely and proper completion of the Work.
- C. Do not proceed until unsatisfactory conditions are corrected.
- D. Beginning of installation means acceptance of conditions.

3.02 EQUIPMENT

- A. Regulation, Operation and Instruction
 1. Lubricate all bearings in accordance with manufacturer's recommendations and instructions.
 2. Check operation of all pumps, fans, motors, etc.
 3. The services of a qualified technician shall be made available for a continuous period of not less than seventy two (72) hours during business hours, at a time convenient to the owner to place the entire system into operation, supervise its operation, make all tests and adjustments, correct any and all defects and deficiencies and thoroughly instruct the owner's operators in the proper operation and maintenance of the entire system. Furnish complete test reports including all motor currents, static pressures, temperatures, fan speeds, and CFM to the Architect for review by the Mechanical Engineer.
 4. Furnish any additional operation, labor, and material that may be required during guarantee period.
 5. The contractor shall, during the guarantee period, and as directed by the owner, make any additional tests, adjustments, etc., that may be required and correct any deficiencies arising from the operation of the system.

3.03 OPERATING AND MAINTENANCE DATA

Data: Submit to the Architect for approval, prior to acceptance of the installation, complete and at one time. Partial or separate data will not be accepted. Data shall consist of the following--

1. Manufacturer's Literature: Six (6) copies of manufacturer's instructions for operation and maintenance of all equipment, valves, and controls; including replacement parts lists.
2. Written Instruction: Typewritten instruction for operation and maintenance of the system composed of Operation Instructions and Maintenance Instruction. Six (6) copies submitted to the Architect for approval.
 - a. Operating instructions shall contain a brief description of the system. Adjustments requiring the technical knowledge of the service agency personnel shall not be included in the operating instructions.
 - b. Maintenance instructions shall list each item (i.e. controls and mechanical equipment) requiring inspection, lubrication, or service and describe the performance of such maintenance.
3. Verbal Instructions: Operating personnel shall be instructed in the operation of the systems in accordance with typewritten instructions. No other verbal instructions shall be given.
4. Binders: Four (4) complete sets of the above data in looseleaf, ring type binders with permanent covers, with identification on inside cover.

3.04 SPECIAL REQUIREMENTS

- A. The manufacturer and/or supplier of all equipment shall certify in writing to the owner that this equipment complies with these specifications.
- B. All new equipment shall be anchored as required and/or as detailed on drawings.
- C. Written Certifications, in a form approved by the Mechanical Engineer shall be provided by the equipment manufacturer or his authorized representative:
 1. That the equipment and its installation was inspected on the job by the manufacturer and that the equipment is in first-class condition throughout, was installed in accordance with manufacturer's requirements and recommendations, and that the installation is approved by the manufacturer.
 2. That the equipment is operating in a safe and satisfactory manner and is delivering capacities and performance hereinbefore specified and/or indicated on the drawings.
- D. The following shall be certified as described above: Air-conditioning systems, evaporative coolers, suspended gas heaters, and exhaust fans.
- E. Damage by Leaks: The contractor shall be responsible for all damage to equipment and premises caused by leaks or breaks in piping or equipment for a period of one (1) year after date of final acceptance.
- F. Unless otherwise directed, and/or specified, and/or indicated, all materials and equipment shall be installed in accordance with the manufacturer's recommendations and instructions.
- G. Mechanical equipment shall bear the manufacturer's label or nameplate showing performance characteristics. Identifying size or model number shall be given only when not practicable or customary to show otherwise. All valves, pipe, and fittings shall bear the manufacturer's trademark or identifying markings.
- H. All materials of similar class or service shall be of one manufacturer.
- I. Duct layout as shown on the drawings is subject to modifications, by contractor, without extra cost as required to clear other items of construction. This contractor shall coordinate the work of this section with that of other sections as to avoid interferences by other crafts involved.

- J. Contractor shall visit site prior to bidding and fully acquaint himself with all conditions affecting installation of the proposed system. Failure to do so shall not relieve contractor of responsibility of providing complete, operational, and acceptable system.

3.05 COMPLETION

- A. When the installation is complete and adjustments specified herein are made, the system shall be operated for a period of one week, during which time it shall be demonstrated to the Mechanical Engineer as being completed and operating in conformance with these specifications.
- B. Record as-built drawings showing locations and size of all pipe and ducts as installed shall be kept up-to-date and available for inspection at all times during construction. These shall be signed by the General Contractor and Heating, Ventilating, and Air Conditioning Contractor to certify their accuracy and shall be submitted to the owner prior to final acceptance of the work.

***** END OF SECTION *****

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SECTION 16000

ELECTRICAL

PART 1-- GENERAL

1.01 SCOPE

- A. Provide all labor, materials, and equipment required to complete the electrical work shown on the Drawings and specified herein.
- B. A brief outline of these requirements includes, but is not limited to the following:
 - 1. Underground conduits, pullboxes, pads, vaults, etc. for power
 - 2. Electrical distribution equipment including switchgear
 - 3. Complete interior and exterior lighting, power, telephone, and cable television systems including branch circuit distribution as indicated.

1.02 LISTINGS AND CODES.

- A. All electrical materials and equipment shall be new and shall be listed by Underwriters Laboratories (UL) and bear their label, or listed and certified by a nationally recognized testing authority where UL does not have a listing. In addition, the materials, equipment, and installation shall comply with the requirements, where applicable, of the latest edition of the following:
 - 1. National Electrical Manufacturers Association (NEMA)
 - 2. American Standard Association (ASA)
 - 3. National Fire Protection Agency (NFPA)
 - 4. American National Standard Institute (ANSI)
 - 5. California Code of Regulation, Title 24 (CCR)
 - 6. National electrical code (NEC)
 - 7. All local and state codes having jurisdiction
- B. In cases where the codes have different levels of requirements, the most stringent rule shall apply.

1.03 SHOP DRAWINGS.

- A. Contractor shall submit to the architect for approval six (6) sets of a complete list and catalog cuts of all materials he proposes to provide for the electrical systems covered by these drawings. Each electrical item shall be identified by the manufacturer and trade name of the item as well as the description given on the electrical engineers plans. Unless otherwise specifically authorized by the electrical engineer, make all submittals in groups containing all associated items. The electrical engineer may reject partial submittals as not complying with the provisions of this section. No materials shall be delivered to the job until the list has been approved by the engineer. Acceptance or rejection of substitute materials shall be at the discretion of the engineer.
- B. Make all submittals in accordance with the general contractor's schedule of shop drawings and far enough in advance of scheduled dates of installation to provide required time for reviews, securing necessary approvals, possible revision and resubmittal, including placing orders and securing delivery.

1.04 LOCATIONS AND ACCESSIBILITY.

Work specified and not clearly defined by the Drawings shall be brought to the attention of the

electrical engineer prior to installation so that it may be installed and arranged in a satisfactory manner.

1.05 TESTING AND ADJUSTMENT.

- A. Upon completion of electrical work, adjust and test circuits, lights and other electrical items to insure proper operation of all electrical equipment.
- B. Check service voltages under maximum obtainable loads. Equipment, fixtures, and parts found to be in need of correction during such testing shall be immediately repaired or replaced with new equipment and that part of the system shall be retested. Such replacement or repair shall be done at no additional cost to the owner.
- C. All failures shall be corrected in a manner satisfactory to the engineer. The contractor shall furnish all necessary costs of retesting equipment and correcting failures.
- D. All electrical tests shall be witnessed by an inspector that shall have experience in electrical work, equal to that of an electrician having at least five (5) years experience as an I.B.E.W. journeyman.

1.06 LAYOUT AND INSTALLATION.

Layout and installation of electrical work shall be coordinated with the overall construction schedule and work schedule of various trades, to prevent delay in the completion of the project. Complete Drawings for the entire project shall be available at the job site. It shall be obligatory to thoroughly check these documents before organizing the electrical work schedule or installing material and equipment.

- 1. The electrical Drawings are diagrammatic in nature and indicate the preferred locations of outlets and equipment, and are to be followed as closely as possible. It is not within the scope of the Drawings to show all bends, offsets, pullboxes, and obstructions and it shall be the responsibility of the contractor to include such in the bid. The Drawings are not intended to be scaled, and the contractor shall refer to the architectural and structural Drawings for dimensions and limitations of the building structure, and to the mechanical Drawings for the location of equipment requiring electrical service and connections.
- 2. In the event that changes in the indicated locations or arrangements are necessary due to field conditions, such changes shall be made by the contractor without extra costs, providing the change has been approved by the architect before the work has been commenced and no additional materials are required. Contractor shall advise the architect of any required additional costs and have approval of same before proceeding.

1.07 WARRANTY.

The manufacturer's standard warranty shall in no event be for a period of less than two (2) years from date of initial start-up of the system and shall include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables (filters, and other service items made unusable by the defect) used during the course of repair. Running hours shall not be a limiting factor for the system warranty by either the manufacturer or servicing distributor. Submittals received without written warranties as specified will be rejected in their entirety.

1.08 SUBSTITUTIONS

Substitutions will be considered per Article 5 of the General Conditions.

PART 2 -- PRODUCTS

2.01. DISTRIBUTION SERVICE EQUIPMENT AND PANELBOARDS.

- A. Panelboards shall as indicated on plans and shall conform to the requirements of the U.L.,

NEMA standard for panelboards. Fronts shall be finished to resist corrosion with not less than one priming coat and one finishing coat. Exposed parts of trim and doors shall be painted by others after installation. All branch circuit panelboard locks shall be "like keyed" with three keys furnished to owner. Adjacent poles of single pole devices shall be of a different phase with split phase bussing. Circuits shall be numbered from top to bottom with odd numbers on the left and even numbers on the right. The front shall include flush hinged door with lock, covering all breakers.

- B. Identification nameplates shall be provided of micarta 1/8" thick, of approved size, with bevelled edges and engraved white letters 1/4" high minimum on black background.

2.02. CONDUITS AND RACEWAYS.

- A. All conduits and raceways shall conform to U.L. standards as applicable.
- B. Electrical metallic tubing (EMT). No less than 1/2" trade size, 2" maximum trade size. E.M.T. may be used in dry locations only. Shall conform to U.L. standards as applicable.
- C. Rigid galvanized steel conduit (RGS). Shall be steel, galvanized or zinc coated full weight, no less than 1/2" trade size. Shall conform to U.L. standards as applicable.
- D. Liquid-tight flexible conduit. No less than 1/2" trade size, flexible, galvanized steel core completely encased in a polyvinyl chloride jacket. Shall conform to U.L. standards as applicable.
- E. Non-metallic polyvinyl chloride (PVC). No less than 3/4" trade size, schedule #40 unless noted otherwise. Sunlight resistant and rated for 90° c. Conductors. Shall conform to U.L. standards as applicable.
- F. Flexible metallic conduit. No less than 1/2" trade size, steel, formed from continuous strip and zinc coated. Shall conform to U.L. standards as applicable.

2.03. FITTINGS. Fittings and outlets for conduit systems shall conform to the following:

- A. Fittings for electrical metallic tubing (EMT) for sizes 1/2" through 2" shall be wrench tightened compression type which shall provide pull-on force resistance and electrical continuity as required by U.L. No indenting fittings or adjustable set screw type fittings shall be used.
- B. Fittings for rigid galvanized steel conduit (RGS) shall be steel, threaded fittings only. Split and "set screw" type fittings are not acceptable.
- C. Fittings for liquid-tight flexible conduit shall be of the compression type with threaded ferrule, sealing ring and suitable for wet locations.
- D. Fittings for PVC shall be non-metallic, sunlight resistant, and of the same compound as the conduits which they are being utilized with.
- E. Fittings for flexible metallic conduit shall be of the "squeeze" type with either one (1) or two (2) screws, cast or malleable steel, cadmium or zinc coated.

2.04. CONDUCTORS.

- A. Conductor sizes are specified by American Wire Gauge (AWG). Conductors shall be copper. Wire sizes #10 and larger shall be stranded conductor. However, control and signal systems may be wired with #14 stranded. Insulation for wiring shall be 600 volt type "THWN", 75° c. Rated for dry or wet locations or type "THHN", 90° c. Rated for dry locations.
- B. Conductor sizes shall be as indicated; where sizes are not indicated they shall be as required by code. All wiring shall be color coded for phase identification as follows:

<u>120/208V. 3Phase, 4W.</u>	<u>277/480V. 3Phase, 4W.</u>
Phase A = Black	Phase A = Brown
Phase B = Red	Phase B = Orange

Phase C = Blue
Neutral = White
Ground = Green

Phase C = Yellow
Neutral = Grey
Ground = Green

- C. Make splices for conductors #8 and smaller with steel or copper spring insulated wire nuts. Splices for conductors #6 or larger shall be with split bolts or "Kearney's" which when used shall be thoroughly insulated.
- D. The green ground wire shown on conduit runs shall run continuous from panel to last outlet. This wire shall be pigtailed in each outlet for connection to box and device so that if the device is removed, the ground will not be interrupted.

2.05. OUTLET BOXES.

Pull boxes shall be sized for the number and size of conductors and conduits entering the box and equipped with plaster/extension rings where required. All boxes shall be labeled to indicate panel and circuit number of conductors contained within. In no case shall any box be less than 4" round or square. Unless specifically noted otherwise, outlet boxes for concealed work shall be galvanized or sherardized, one piece, pressed steel, with knockouts as required.

2.06. PULL BOXES.

Sizes as indicated on the Drawings and per utility company requirements, but in no case of less size or material thickness than required by the governing code in-ground. Pull boxes located in or around vehicular traffic areas shall be provided with traffic rated covers and shall be placed to avoid surface water flow areas. All covers shall be permanently identified as to the type of service contained therein (IE: power, communications, etc.) Above-ground boxes located in damp or wet areas shall be rated NEMA 3R.

2.07. DISCONNECTS.

- A. Manual motor starter switches shall be toggle type on/off, as required for control of single and three phase motors and resistance heater loads. Switches shall be side wired and be complete with oversize silver contacts. Shall be U.L. listed as applicable
- B. Safety switches shall be heavy-duty industrial type. Switches shall be fused or nonfused as indicated on the Drawings. Enclosures shall be rated either NEMA 1 or NEMA 3R as required by installation. Units shall be quick make, quick break with operating handle which can be padlocked in the "off" position. Finish shall be a standard light gray enamel. Switches shall have affixed to covers, a nameplate indicating what item is controlled by switch.
 - 1. Fuses shall be of correct rating for each installation, and shall be either current limiting or multi-element time delay as required by equipment manufacturers recommendation. Shall be U.L. listed.
- A. Sealing of devices in hazardous areas are to be treated per NEC Article 500

2.08. PULL WIRES.

Install an unspliced pull line in all empty conduits. Pull line shall be a 3/16" braided polypropylene line.

2.09. GROUND RODS.

Provide steel centered copper clad ground rods as required per NEC 250. Minimum length shall be 3/4" x 8', driven nearly full length into the earth with no more than 2" left above grade for proper connection to the grounding conductor(s). The resistance of a made electrode must comply with NEC 250-36.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed.
- B. Correct conditions detrimental to timely and proper completion of the Work.
- C. Do not proceed until unsatisfactory conditions are corrected.
- D. Beginning of installation means acceptance of conditions.

3.02 GENERAL.

Any cutting, patching or finish repair of the work or work of other trades necessary for the installation of the electrical work shall be provided under this section.

3.03 MISCELLANEOUS.

- A. Provide trenching, concrete encasement when required, backfilling and compaction for all underground conduits and/or structures. Compaction must meet General Contractor requirements.
- B. Provide footings for all post and/or pole-mounted lighting fixtures: concrete shall conform to the applicable sections of this specification and local codes having jurisdiction.
- C. Structural and miscellaneous steel used in connection with electrical work and located out-of-doors or in damp locations, shall be galvanized unless noted otherwise. Included are underground pullbox covers, unistrut bracing and similar electrical items.
- D. Flashings shall be provided at all points where conduit or other electrical components penetrate the roof. Flashings shall extend a minimum of 5" above the surrounding roof surface with weatherproof mastic applied, to prevent moisture or dust from entering the opening. Flashings shall be delivered to the roofing contractor for installation. The correct location of all such penetrations shall be verified by the contractor.
- E. Provide sleeves under walls, concrete footings and foundations. Sleeves shall have an inside diameter of not less than 1" larger than the outside diameter of conduit contained therein.

3.04 CONDUIT.

- A. Conduit for line voltage wiring shall be concealed within finished walls, ceilings and under/in floors. Exposed conduits above ceilings and surface mounted in mechanical and service areas shall be installed parallel or perpendicular to the building walls. Right angle turns shall consist of conduit bodies or symmetrical bends. All conduits shall be properly secured with components specifically manufactured for this use. All conduits shall be sized in accordance with fill capacities set forth in NEC Article 348.
- B. Electrical metallic tubing (EMT), Do not embed EMT in concrete or below grade. EMT may be used where concealed or where not subject to damage.
- C. Rigid galvanized steel conduit (RGS) shall be used in mechanical rooms, where conduit passes through concrete slabs on grade and where subject to physical damage.
- D. Flexible metallic conduit shall be used for final connections to all vibrating and mechanical equipment. A code gauge green insulated equipment grounding conductor shall be installed in such conduits. Flexible metallic conduit may be used in length's of less than 6' for connecting fixtures, provided that a code gauge insulated grounding conductor is provided. Liquid-tight flexible conduit shall be used for all damp or wet locations.
- E. Polyvinyl chloride conduit (PVC) shall only be used underground at depth per code, unless otherwise noted, below finished grade when not installed under a concrete slab or footing. Provide a code gauge green ground wire in all PVC runs. All underground conduit runs shall terminate with pre-manufactured bell ends at all manholes and pull boxes.
- F. Conduit ends shall be cut square and shall be carefully reamed out to full size with a tapered burring reamer and shouldered to the fittings.
- G. Bends in conduit shall be made so that the conduit will not be damaged, and that the internal

diameter of the conduit will not be effectively reduced. The radius of the curve of the inner edge shall not be less than shown in table 346-10 of the NEC.

- H. Conduit supports shall be provided for all above ground systems. Conduit shall be securely supported and fastened per the NEC and local jurisdiction
- I. Conduit shall not run closer than 6" to any hot water pipe, steam pipe, heater flue, or vent.
- J. Condulets shall be used where conduit runs must go around outside corners of walls, beams, equipment, etc. All conduit covers shall be accessible.
- K. All conduits entering or leaving the building shall be sealed per NEC requirements.
- L. All conduits entering the building from a hazardous area must be sealed per NEC Article 500.

3.05 CONDUCTORS AND TERMINATIONS.

- A. Wire and cable shall be continuous from outlet to outlet, with the splices only in junction boxes, gutters, equipment or other approved locations.
- B. Make splices, joints, taps and connections to equipment with approved solderless lugs sized for the wire or conductor involved.
- C. Identify power and lighting feeders with permanent tags at panels, pull boxes and points where conduit run is broken.
- D. Installation. Thoroughly clean conduit and wireways to insure all parts are perfectly dry before pulling wires. Use approved wire pulling compound for sizes #2 or larger, and on long runs.
- E. Wire or cable bends in junction and/or pullboxes shall be made with a long radius. Bends for cable shall have a radius of not less than 8 times the diameter of the cable. Per N.E.C. Section 300-34.
- F. Conductors #12 and smaller shall be provided with eye or forked type compression set connectors when conductors are terminated on a set screw type terminal.

3.06 DEVICE AND JUNCTION BOXES.

- A. Concealed outlet boxes shall be accurately placed, flush with the finished surface of wall or ceiling, unless otherwise indicated. They shall be plumb and rigidly fastened to the structure, independent of the conduit, by a bar hanger or strap approved for that particular use.
- B. Outlet boxes in furred ceiling shall be rigidly fastened to the supporting structure by an approved bar type hanger or blocking.
- C. Control apparatus, outlet boxes, junction and/or pullboxes, and other similar equipment shall be installed and maintained in accessible positions and locations.
- D. Wall outlets shall not be wired back-to-back, boxes on opposite sides of a common wall shall be separated by a stud. Provide a minimum of 24" of separation in acoustic and fire rated walls.
- E. Cast steel or aluminum outlet boxes shall be used for all surface mounting in damp or wet locations. Boxes shall be complete with threaded hubs and weatherproof covers.
- F. Provide multi-gang boxes where required, sectional or gangable boxes shall not be permitted.

3.07 GROUNDING.

All Grounding shall be in accordance with NEC Article 250

3.08 IDENTIFICATION.

- A. In addition to nameplates and governing codes for switchboards, panelboards, transformers, etc. The following shall be labeled to indicate function or use.
- B. Panelboards shall be provided with a typed circuit directory mounted in a holder on the inside

of the cabinet door. Nameplates shall be provided for all circuits in the service distribution and branch distribution boards, motor control centers, lighting control panels, separately mounted starting switches, disconnection switches. Motor control push-button stations, selector switches, transformers, terminal cabinets, telephone cabinets, etc. These nameplates shall have the same identification names as indicated on the plans.

3.09 CONNECTIONS TO EQUIPMENT.

The contractor shall connect all owner, mechanical and plumbing contractor supplied equipment requiring electrical connections throughout the building.

3.010 FINISH.

Panelboards shall be finished prime coat on exposed trim and door. Final finish will be determined by architect and provided by others.

3.011 PROTECTION AND RESPONSIBILITY.

The contractor shall protect all work, materials, and equipment from damage. Provide adequate and proper storage facilities during progress of work and be fully responsible for all injury or damage that may occur from any part of his work function.

3.012 CLEAN-UP.

Upon completion of work, and periodically as required for safety and sanitation, remove all trash and debris resulting from work under this section.

3.013 OPERATION AND MAINTENANCE INSTRUCTIONS.

Fully instruct and demonstrate to the owner's operating personnel the performance, operation and maintenance of equipment. The time allowed for said instruction shall be included as part of these contract documents.

3.014 FINAL REVIEW AND ACCEPTANCE.

Upon stated completion of contract, work shall be subject to review by representatives of owner, architect and engineer for adherence to contract Drawings and specifications. Any changes required to bring work into substantial conformance with Drawings and specifications shall be made by the contractor at no additional cost to the owner.

3.015 RECORD DRAWINGS.

Provide and maintain in good order a complete set of electrical contract prints. All changes shall be clearly recorded on this set of prints. At the end of the project, the contractor shall transfer all changes to one set of transparencies for submission to the architect. Accurate complete electrical contract prints shall be provided by the contractor to the architect when requested and at cost of printing. Upon completion of the work, deliver to the architect one complete set of final prints of the transparencies and the transparencies themselves, with complete installation and changes in the work indicated thereon. All sheets shall be dated and initialed by the contractor as being a correct and accurate record of the installation.

*****END OF SECTION*****

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OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

July 14, 2011

THE PRESS ENTERPRISE
ATTN: LEGALS
PO BOX 792
RIVERSIDE, CA 92501

FAX (951) 368-9018
E-MAIL: legals@pe.com

**RE: NOTICE INVITING BIDS: DEPARTMENT OF VETERANS' SERVICES OFFICE
PROJECT**

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **TWO (2) TIMES:**
Sundays: July 17 and 24, 2011.

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

Mcgil

Cecilia Gil, Board Assistant to
KECIA HARPER-IHEM, CLERK OF THE BOARD

Gil, Cecilia

From: PE Legals <legals@pe.com>
Sent: Thursday, July 14, 2011 10:27 AM
To: Gil, Cecilia
Subject: RE: FOR PUBLICATION: BIDS FOR DEPT. OF VETERANS' SERVICES OFFICE

Received for publication on July 17 and 24

Thank You!

enterpris@media

Publisher of the Press-Enterprise

Maria G. Tinajero · Legal Advertising Department

1-800-880-0345 · Fax: 951-368-9018 · email: legals@pe.com

Please Note: Deadline is 10:30 AM two (2) business days prior to the date you would like to publish.
Additional days required for larger ad sizes

From: Gil, Cecilia [<mailto:CCGIL@rcbos.org>]
Sent: Thursday, July 14, 2011 10:20 AM
To: PE Legals
Subject: FOR PUBLICATION: BIDS FOR DEPT. OF VETERANS' SERVICES OFFICE

Good Morning! Attached is a Notice Inviting Bids, for publication on 2 Sundays: July 17 and 24, 2011. Please confirm. THANK YOU!

Cecilia Gil

Board Assistant to the
Clerk of the Board of Supervisors
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.
PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**



OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

July 14, 2011

RIVERSIDE COUNTY RECORD
ATTN: LEGALS
PO BOX 3187
RIVERSIDE, CA 92519

FAX (951) 685-2961
E-MAIL: recordmde@aol.com

**RE: NOTICE INVITING BIDS: DEPARTMENT OF VETERANS' SERVICES OFFICE
PROJECT**

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **TWO (2) TIMES:**
Thursdays: July 21 and 28, 2011.

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

**NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN
FORMAT.**

Thank you in advance for your assistance and expertise.

Sincerely,

Mcgil

Cecilia Gil, Board Assistant to
KECIA HARPER-IHEM, CLERK OF THE BOARD

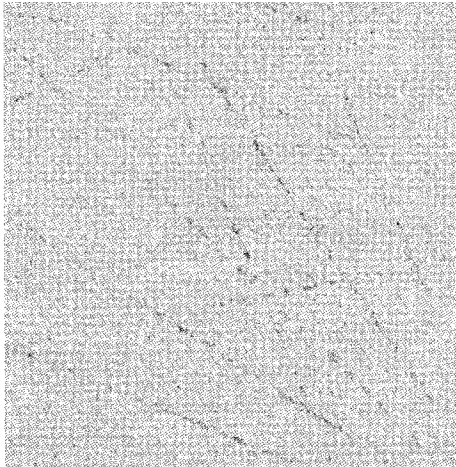
Gil, Cecilia

From: recordmde@aol.com
Sent: Thursday, July 14, 2011 11:43 AM
To: Gil, Cecilia
Subject: Re: FOR PUBLICATION: Bids for Dept. of Veterans' Services Office

Good Morning,
I have received the Notice Inviting Bids for publication.
Thanks, Mike

-----Original Message-----

From: Gil, Cecilia <CCGIL@rcbos.org>
To: recordmde <recordmde@aol.com>
Sent: Thu, Jul 14, 2011 6:22 am
Subject: FOR PUBLICATION: Bids for Dept. of Veterans' Services Office



Good Morning! Notice Inviting Bids for publication on 2 Thursdays: July 21 and 28, 2011. Please confirm. THANK YOU!

Cecilia Gil
Board Assistant to the
Clerk of the Board of Supervisors
951-955-8464

*THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.
PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.*

NOTICE INVITING BIDS

COUNTY OF RIVERSIDE, herein called Owner, invites sealed proposals for the construction of:

Department of Veterans' Office Project

This Project is to remodel an existing 4500 square foot County owned building to suit the needs of the Department of Veterans, including a new lobby, offices, restrooms, conference/training room and other improvements per plans and specifications. The Project is located at 4342 Orange Street, Riverside, CA 92501. Construction costs are estimated at \$200,000.00.

Proposals shall be delivered to the Clerk of the Board, on the 1st floor of the Riverside County Administration Center located at 4080 Lemon Street, Riverside, CA 92501, **no later than 2:30 pm on Monday, August 8, 2011** and will be promptly opened in public at said address.

Each Proposal shall be in accordance with the Plans, Specifications, and other Contract Documents prepared by Holt Architects. Plans and Specifications may be obtained from IB Reprographics, 3363 Durahart Street, Riverside, CA 92507, 951-682-1850, for a nonrefundable fee. An additional nonrefundable fee will be charged for each set of Plans and Specifications furnished that are requested to be mailed to Contractors.

Pursuant to the Labor Code, the Governing Board of the Owner has obtained from the Director of the Department of Industrial Relations, State of California, his determination of the general prevailing rates of per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, as set forth on the schedule, copies of which are on file at the Clerk of the Board of Supervisors, 4080 Lemon St., 1st floor, Riverside, CA 92501-3655, and which will be made available to any interested person upon request.

A Bid Bond, Performance Bond and Payment Bond shall be required for this Project.

The Contract General Conditions for this project will contain provisions allowing the successful contractor to substitute securities for monies withheld by the County to ensure performance (Public Contract Code 22300).

The Contractor will be required, per Public Contracts Code, Section 3300 and for this contract, to have a State of California contractor's license classification **B - General Building Contractor**.

A Mandatory pre-bid job walk will be held on Tuesday, July 26, 2011, starting no later than 9:00 AM., meeting at 4342 Orange Street, Riverside, CA 92501. No bids will be accepted from bidders who have not attended, or arrived late to the pre-bid job walk.

Request For Information deadline is August 2, 2011 at 10:00 AM.

For additional information, contact Bruce Norris at the County of Riverside, located at 3403 10th St., Riverside, CA 92501, whose telephone number is (951) 955-0353.

Dated: July 14, 2011

KECIA HARPER-IHEM
Clerk of the Board
By: Cecilia Gil, Board Assistant

THE PRESS-ENTERPRISE PLI.com

THE BUSINESS PRESS Socal

LA PRENSA WEEKLY

B-MEDIA waves LANDSOCAL HS

① BILLING PERIOD 07/24/11 - 07/25/11 | ② ADVERTISING/CLIENT NAME BOARD OF SUPERVISORS
 ③ BILLING DATE 07/25/11 | FOR BILLING INFORMATION CALL (951) 368-9713 | ④ PAGE NO 1
 ⑤ TOTAL AMOUNT DUE 362.50 | * UNAPPLIED AMOUNT | ⑥ TERMS OF PAYMENT Due Upon Receipt

⑨ REMITTANCE ADDRESS
 POST OFFICE BOX 12009
 RIVERSIDE, CA 92502-2209

⑧ BILLED ACCOUNT NAME AND ADDRESS
 BOARD OF SUPERVISORS
 COUNTY OF RIVERSIDE
 P.O. BOX 1147
 RIVERSIDE CA 92502

⑥ BILLED ACCOUNT NUMBER 045202 | REP NO LE04

Statement #: 56604795 Amount Paid \$ _____ Your Check # _____

PLEASE DETACH AND RETURN UPPER PORTION WITH YOUR REMITTANCE

⑩ DATE	⑪ REFERENCE	⑫ ⑬ ⑭ DESCRIPTION-OTHER COMMENTS/CHARGES	⑮ SAU SIZE ⑯ BILLED UNITS	⑰ RATE	⑱ GROSS AMOUNT	⑲ NET AMOUNT
07/17	4315187 CO	NIB - DEPT OF VETERANS SVC OFF Class : 10 Ctext Ad# 10729782 Placed By : Cecilia Gil	145 L	1.30		188.50
07/24	4315187 CO	NIB - DEPT OF VETERANS SVC OFF Class : 10 Ctext Ad# 10729782 Placed By : Cecilia Gil	145 L	1.20		174.00

EDA
 3.23 of 07/12/11
 RECEIVED RIVERSIDE COUNTY
 CLERK / BOARD OF SUPERVISORS
 2011 AUG - 2 PM 2 17

① *CURRENT NET AMOUNT DUE	② 30 DAYS	60 DAYS	OVER 90 DAYS	* UNAPPLIED AMOUNT	⑳ PLEASE PAY THIS AMOUNT
					362.50

enterprise media
 THE PRESS-ENTERPRISE PLI.com
 P.O. BOX 12009
 RIVERSIDE, CA 92502-2209
 FAX (951) 368-9026

ADVERTISING STATEMENT/INVOICE

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE



②③ STATEMENT NUMBER	① BILLING PERIOD	④ BILLED ACCOUNT NUMBER	⑦ ADVERTISER/CLIENT NUMBER	⑧ ADVERTISER/CLIENT NAME
56604795	07/24/11 - 07/25/11	045202		BOARD OF SUPERVISORS

THE PRESS-ENTERPRISE

3450 Fourteenth Street
Riverside CA 92501-3878
951-684-1200
951-368-9018 FAX

**PROOF OF PUBLICATION
(2010, 2015.5 C.C.P.)**

Press-Enterprise

PROOF OF PUBLICATION OF

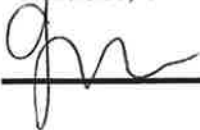
Ad Desc.: NIB - Dept of Veterans Svc Office

I am a citizen of the United States. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am an authorized representative of THE PRESS-ENTERPRISE, a newspaper of general circulation, printed and published daily in the County of Riverside, and which newspaper has been adjudicated a newspaper of general circulation by the Superior Court of the County of Riverside, State of California, under date of April 25, 1952, Case Number 54446, under date of March 29, 1957, Case Number 65673 and under date of August 25, 1995, Case Number 267864; that the notice, of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

07-17-11
07-24-11

I Certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: Jul. 24, 2011
At: Riverside, California



BOARD OF SUPERVISORS
P.O. BOX 1147
COUNTY OF RIVERSIDE
RIVERSIDE CA 92502

Ad #: 10729782

PO #:

Agency #: _____

Ad Copy:

NOTICE INVITING BIDS
COUNTY OF RIVERSIDE, herein called Owner, invites sealed proposals for the construction of:

Department of Veterans' Office Project

This Project is to remodel an existing 4500 square foot County owned building to suit the needs of the Department of Veterans, including a new lobby, offices, restrooms, conference/training room and other improvements per plans and specifications. The Project is located at 4342 Orange Street, Riverside, CA 92501. Construction costs are estimated at \$200,000.00.

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A Bid Bond, Performance Bond and Payment Bond shall be required for this Project.

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Request For Information deadline is August 2, 2011 at 10:00 A.M.

For additional information, contact Bruce Norris at the County of Riverside, lo-

cated at 3403 10th St., Riverside, CA 92501, whose telephone number is (951) 955-0353.

Dated: July 14, 2011
KECIA HARPER-IHEM
Clerk of the Board
By: Cecilia Gil, Board
Assistant 7/17, 24



The Riverside County Record Newspaper

Western Riverside County's Only Hometown Newspaper

Since 1955

Post Office Box 3187 • Riverside, California 92519

951-685-6191 • FAX 951-685-2961

e-mail: recorddhb@aol.com

INVOICE

July 20, 2011

Riverside County
Clerk of the Board
4080 Lemon Street, 1st Floor
P.O. Box 1147
Riverside, CA 92502- 1147

Legal Advertising

Notice Inviting Bids

Your: Department of Veterans Office Project
Our #0564

10.50 column inches x \$8.94 = \$97.45 x 2 = \$194.90

Publish two (2) week: July 21, 28, 2011

Amount Due: \$194.90

Thank You,

Cathy Sypin-Barnes

EDA
3.23 w/ 07/12/11

Affidavit of Publication

(2015.5 C.C.P.)

County of Riverside

State of California

Catherine Sy-pin-Barnes, being first duly sworn, deposes and says: That all times hereinafter, mentioned that she was a citizen of the United States over the age of eighteen years, and a resident of said County, and was and during all said times the principal clerk of the printer and publisher of The Riverside County Record-News, a newspaper of general circulation adjudicated by court decree, printed and published weekly in said County of Riverside, State of California, that said Riverside County Record-News is and was at all times herein mentioned, a newspaper of general circulation as that term is defined in section 4460 of the Political Code, and, as provided by that section, is published for the dissemination of local and telegraphic news and intelligence of a general character, having a bona fide subscriber list of paying subscribers, and is not devoted to nor published for the interest, entertainment or instruction of a particular class, profession, trade, calling, race or denominations; that at all said time said newspaper has been established, printed and published in said County and State at regular intervals more than one year preceding the date of publication of the notice herein mentioned; that said notice was set in type not smaller than nonpareil and preceded with words printed in black face type not smaller than nonpareil describing and expressing in general terms the purport and character of notice intended to be given; that the

RIVERSIDE COUNTY RECORD NEWSPAPER

of which the annexed is a printed copy, published and printed in said newspaper in at least 2 weekly issues, as follows:

July 21, 28, 2011

I certify (or declare) under penalty of perjury that the foregoing is true and correct.



Signature

Dated: July 28, 2011 at
Riverside, California

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COUNTY OF RIVERSIDE, herein called Owner, invites sealed proposals for the construction of:

Department of Veterans' Office Project

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A Bid Bond, Performance Bond and Payment Bond shall be required for this Project.

The Contract General Conditions for this project will contain provisions allowing the successful contractor to substitute securities for monies withheld by the County to ensure performance (Public Contract Code 22300).

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Dated: July 14, 2011

KECIA HARPER-IHEM

Clerk of the Board

By: Cecilia Gil, Board Assistant

0564

Published: July 21, 28, 2011



MEMORANDUM

RIVERSIDE COUNTY COUNSEL

CONFIDENTIAL
ATTORNEY-CLIENT PRIVILEGE

DATE: August 9, 2011
TO: Jane Jennings
Clerk of the Board
FROM: Marsha L. Victor
Principal Deputy
RE: Bids for Department of Veteran's Services

The four bids submitted for the above referenced project have been reviewed by this office. The bids are as shown in your summary of bids.

The bids appear to be in good form but with a minor irregularity. That irregularity will be addressed to the bidding department.

All documents submitted are returned herewith.


MLV

cc: Bruce Norris, EDA
Rebecca Tsagris, EDA

Bid Summary

TO: Pamela J. Walls
County Counsel

PROJECT: Veterans Services Office Project

FROM: Jane Jennings 955-8092
Board Assistant, COB

BID DATE: 8/08/11

BID TIME: 2:30 p.m.

Project Mgr: Bruce Norris - EDA
(951) 955-0353

ITEM/DATE: 3.23 of 07/12/11

(PLEASE REFER ALL QUESTIONS TO THE PROJECT MANAGER)

CONTRACTORS

BID AMOUNT

D. Webb, Inc.
9066 Fortuna Ave.
Yucca Valley, CA 92284
(760) 401-2034

Total Base Bid: \$ 213,446.00

Doug Nielsen Construction, Inc.
5998 Keswick Avenue
Riverside, CA 92506
N/A

Total Base Bid: \$ 318,544.00

Avi-Con, Inc. dba CA Construction
981 Iowa Ave. Suite A
Riverside, CA 92507
(951) 781-8055

Total Base Bid: \$ 337,000.00

J.M. Builders, Inc.
P.O. Box 1741
Redlands, CA 92373
(909) 793-4687

Total Base Bid: \$ 507,000.00

CONTRACTOR'S PROPOSAL

TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:

Date: 8/8/11

Bidder: D. Webb, Incorporated

The undersigned, having carefully examined the proposed site and the Plans and Specifications, the Notice Inviting Bids, the Instructions to Bidders, the Agreement Form, the Bond Forms, the General Conditions and the Supplementary General Conditions for the Construction of the Department of Veterans' Office Project, hereby proposes and agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the work in strict conformity with the Plans and Specifications, including all work specified in Addenda numbered and dated:

Addendum No. 1 Date undated - received 8/3/11

Addendum No. _____ Date _____

Addendum No. _____ Date _____

For the total Base Bid Two hundred-thirteen thousand dollars (\$ 213,446), including all applicable taxes, permits, and licenses. four hundred-forty-six

Alternate 1: N/A \$ _____ ADD

Alternate 2: N/A \$ _____ ADD/DEDUCT

For the **Grand Total of Base Bid and all Alternates** Two hundred-thirteen thousand dollars (\$ 213,446), including all applicable taxes, permits, and licenses. four hundred-forty-six

Bids must be submitted on all items. Failure to bid on all items may result in the bid being rejected as non-responsive. **The basis for award will be the qualified bidder with the lowest total of the Base Bid and all alternates.** Alternates may be awarded in any order after determination of the lowest responsible and responsive bidder.

AWARD OF CONTRACT

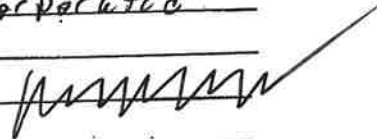
The undersigned fully understands that a Contract is formed upon the acceptance of this Proposal by the Owner and the undersigned further agrees that upon request he will promptly execute and deliver to Owner a written memorial of the Contract together with the required Payment and Performance Bonds and proof of insurance.

BID GUARANTEE

The enclosed certified or cashier's check or bidder's bond on approved form, made payable to the Owner in the amount of ten percent of the total bid submitted herewith, is hereby given as a guarantee that the bidder will execute and deliver the above mentioned written memorial and required bonds and insurance if awarded the contract, and in the event that the undersigned fails or refuses to execute and deliver said documents, such check or bond is to be charged with the costs of the damages experienced by the Owner as a result of such failure or refusal, including but not limited to publication costs, the difference in money between the amount of the bid of the said principal and the amount for which obligee may legally contract with another party to perform the said work if such amount be in excess of the former, building lease or rental costs, transportation costs and additional salary costs that result from the delay due to the principal's default on the awarded contract. In no event, however, shall the Surety's liability exceed the penal sum hereof.

Name of Bidder: D. Webb, Incorporated

Type of Organization: Corporation

Signed By: David Webb 

Title of Signer: President

Address of Bidder: 9066 Fortuna Ave.

Yucca Valley CA 92284

Affix Seal
If
Corporation

Telephone No.: 760 401-2034

Contractor's License No.: 794667

Classification: B Expiration Date: 11/30/12

LICENSURE STATEMENTS ARE MADE UNDER PENALTY OF PERJURY

If bidder is a corporation, and signer is not President or Secretary, attach a certified copy of By-Laws or resolution authorizing execution. If bidder is a corporation, affix corporate seal. If signer is an agent, attach Power of Attorney. If bidder is not an individual, list names of other persons authorized to bind the organization.

Bid Bond

KNOWN TO ALL MEN BY THESE PRESENTS, that we, the undersigned **D Webb Incorporated** as Principal; and **Indemnity Company of California** Surety, are hereby held and firmly bound unto the County of Riverside, hereinafter called the "Owner", in the sum of **10% of amount bid** Dollars (**\$10% of amount bid**) for the payment of such sum, well and truly to be made, do hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

WHEREAS, the said Principal is herewith submitting its Proposal for the construction of the **Department of Veterans' Office Project.**

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the aforesaid Principal shall be awarded the Contract upon said Proposal and shall, within the required number of days after the notice of such award, execute a written memorial of the awarded Contract and submit the required Labor and Material Payment and faithful Performance Bond and proof of insurance, then this obligation shall be null and void; and in the event that the Principal fails and/or refuses to execute and deliver said documents this Bond will be charged with the costs of the damages experienced by the Owner as a result of such refusal, including but not limited to, publication cost, the difference in money between the amount of the bid of the said Principal and the amount for which the obligee may legally contract with another party to perform the said work if such amount be in excess of the former; building lease or rental costs, transportation cost, and additional salary costs that result from the delay due to the Principal's default on the awarded Contract. In no event however, shall the Surety's liability exceed the penal sum hereof.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their separate seals this 3rd day of August, 2011, the name and corporate seal of each corporate party being hereto affixed and those present duly signed by its undersigned representative, pursuant to authority of its governing body.

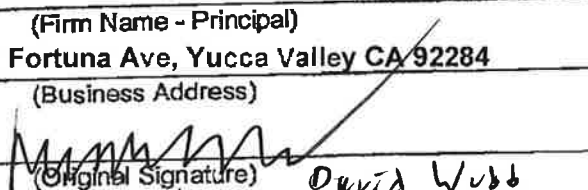
D Webb Incorporated

(Firm Name - Principal)

9066 Fortuna Ave, Yucca Valley CA 92284

(Business Address)

By



(Original Signature)

David Webb

President

(Title)

Indemnity Company of California

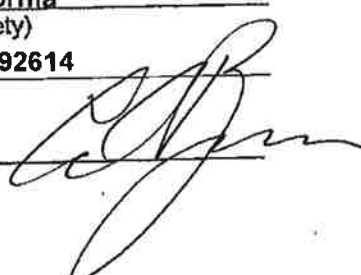
(Corporation Name - Surety)

17780 Fitch #200, Irvine CA 92614

(Business Address)

By **Ed Barr-Attorney in Fact**

(Original Signature)



Affix Seal
if
Corporation

Affix
Corporate
Seal

The rate of premium on this bond is \$2 per thousand. Total amount of premium charged, \$0.

(The above must be filled in by corporate surety.)

**POWER OF ATTORNEY FOR
DEVELOPERS SURETY AND INDEMNITY COMPANY
INDEMNITY COMPANY OF CALIFORNIA
PO Box 19725, IRVINE, CA 92623 (949) 263-3300**

KNOW ALL BY THESE PRESENTS that except as expressly limited, DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA, do each hereby make, constitute and appoint:

Ed Soo, Doug Lindley, jointly or severally

as their true and lawful Attorney(s)-in-Fact, to make, execute, deliver and acknowledge, for and on behalf of said corporations, as sureties, bonds, undertakings and contracts of suretyship giving and granting unto said Attorney(s)-in-Fact full power and authority to do and to perform every act necessary, requisite or proper to be done in connection therewith as each of said corporations could do, but reserving to each of said corporations full power of substitution and revocation, and all of the acts of said Attorney(s)-in-Fact, pursuant to these presents, are hereby ratified and confirmed.

This Power of Attorney is granted and is signed by facsimile under and by authority of the following resolutions adopted by the respective Boards of Directors of DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA, effective as of January 1st, 2008.

RESOLVED, that a combination of any two of the Chairman of the Board, the President, Executive Vice-President, Senior Vice-President or any Vice President of the corporations be, and that each of them hereby is, authorized to execute this Power of Attorney, qualifying the attorney(s) named in the Power of Attorney to execute, on behalf of the corporations, bonds, undertakings and contracts of suretyship; and that the Secretary or any Assistant Secretary of either of the corporations be, and each of them hereby is, authorized to attest the execution of any such Power of Attorney;

RESOLVED, FURTHER, that the signatures of such officers may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures shall be valid and binding upon the corporations when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached.

IN WITNESS WHEREOF, DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA have severally caused these presents to be signed by their respective officers and attested by their respective Secretary or Assistant Secretary this January 1st, 2008.

By: *Daniel Young*
Daniel Young, Vice-President

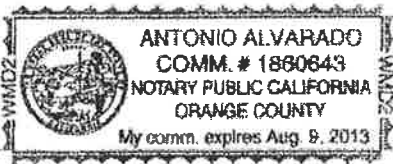
By: *Stephen T. Pate*
Stephen T. Pate, Senior Vice-President



State of California
County of Orange

On January 31, 2011 before me, Antonio Alvarado, Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Daniel Young and Stephen T. Pate
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal. *Antonio Alvarado*
Signature Antonio Alvarado, Notary Public

CERTIFICATE

The undersigned, as Secretary or Assistant Secretary of DEVELOPERS SURETY AND INDEMNITY COMPANY or INDEMNITY COMPANY OF CALIFORNIA, does hereby certify that the foregoing Power of Attorney remains in full force and has not been revoked and, furthermore, that the provisions of the resolutions of the respective Boards of Directors of said corporations set forth in the Power of Attorney are in force as of the date of this Certificate.

This Certificate is executed in the City of Irvine, California, this 3rd day of August 2011.

By: *Gregg Okun*
Gregg Okun, Assistant Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

State of California)
County of Placer)

On 8/3/11 before me, Jennifer Diane Moldrup, Notary Public,
personally appeared, Ed Barr

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

J. Moldrup
Notary Public Signature



(Notary Public Seal)

OPTIONAL INFORMATION

THIS OPTIONAL INFORMATION SECTION IS NOT REQUIRED BY LAW BUT MAY BE BENEFICIAL TO PERSONS RELYING ON THIS NOTARIZED DOCUMENT

Title or Type of Document _____

Date of Document _____ Number of Pages _____

Signer(s) Other Than Named Above _____

**CONTRACTOR'S CERTIFICATE
REGARDING WORKERS' COMPENSATION**

Labor Code Section 3700

Every employer, except the State and all political subdivisions or institutions thereof, 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, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees

I am aware of the provisions of Section 3700 of the Labor Code which requires 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 this Contract.


Principal

David Webb
Principal

President
Title

(In accordance with Article 5 [commencing at Section 1860], Chapter, Part 7, Division 2 of the Labor Code, the above Certificate must be signed and filed with the Owner prior to performing any work under this Contract.)

SEALED BID RECEIVED
CLERK OF THE BOARD OF SUPERVISORS

RECEIVED RIVERSIDE COUNTY
CLERK / BOARD OF SUPERVISORS

2011 AUG -8 PM 2:28

SEALED BID

Veterans' Office Project

08/08/11 2:30pm

D. Webb, Incorporated

CONTRACTOR'S PROPOSAL

TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:

Date: August 8, 2011

Bidder: Doug Nielsen Construction, Inc.

The undersigned, having carefully examined the proposed site and the Plans and Specifications, the Notice Inviting Bids, the Instructions to Bidders, the Agreement Form, the Bond Forms, the General Conditions and the Supplementary General Conditions for the Construction of the Department of Veterans' Office Project, hereby proposes and agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the work in strict conformity with the Plans and Specifications, including all work specified in Addenda numbered and dated:

Addendum No. 1 Date 8/1/11

Addendum No. _____ Date _____

Addendum No. _____ Date _____

For the total Base Bid three hundred eighteen thousand five hundred forty four dollars (\$ 318,544.⁰⁰), including all applicable taxes, permits, and licenses.

Alternate 1: Laminate flooring / carpet / base \$ 0 ADD

Alternate 2: _____ \$ _____ ADD/DEDUCT

For the **Grand Total of Base Bid and all Alternates** Three hundred eighteen thousand five hundred forty four dollars (\$ 318,544.⁰⁰), including all applicable taxes, permits, and licenses.

Bids must be submitted on all items. Failure to bid on all items may result in the bid being rejected as non-responsive. **The basis for award will be the qualified bidder with the lowest total of the Base Bid and all alternates.** Alternates may be awarded in any order after determination of the lowest responsible and responsive bidder.

Raymond A. Neal
President
8/8/11

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

FIRST NATIONAL INSURANCE COMPANY OF AMERICA
SEATTLE, WASHINGTON
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS: That First National Insurance Company of America (the "Company"), a Washington stock insurance company, pursuant to and by authority of the By-law and Authorization hereinafter set forth, does hereby name, constitute and appoint **JOHN A. RUIZ, TIMOTHY C. BAKER, MELODY L. SPAUR, KAREN A. EBY, ALL OF THE CITY OF TEMECULA, STATE OF CALIFORNIA**

, each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations in the penal sum not exceeding **FIFTY MILLION AND 00/100***** DOLLARS (\$ 50,000,000.00*****)** each, and the execution of such undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents, shall be as binding upon the Company as if they had been duly signed by the president and attested by the secretary of the Company in their own proper persons.

That this power is made and executed pursuant to and by authority of the following By-law and Authorization:

ARTICLE IV - Execution of Contracts: Section 12. Surety Bonds and Undertakings. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the president and attested by the secretary.

By the following instrument the chairman or the president has authorized the officer or other official named therein to appoint attorneys-in-fact:

Pursuant to Article IV, Section 12 of the By-laws, Garnet W. Elliott, Assistant Secretary of First National Insurance Company of America, is authorized to appoint such attorneys-in-fact as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

That the By-law and the Authorization set forth above are true copies thereof and are now in full force and effect.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of First National Insurance Company of America has been affixed thereto in Plymouth Meeting, Pennsylvania this 27th day of May, 2010.



FIRST NATIONAL INSURANCE COMPANY OF AMERICA

By Garnet W. Elliott
Garnet W. Elliott, Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 27th day of May, 2010, before me, a Notary Public, personally came Garnet W. Elliott, to me known, and acknowledged that he is an Assistant Secretary of First National Insurance Company of America; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of First National Insurance Company of America thereto with the authority and at the direction of said corporation.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires Mar. 28, 2013
Member, Pennsylvania Association of Notaries

By Teresa Pastella
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of First National Insurance Company of America, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article IV, Section 12 of the By-laws of First National Insurance Company of America.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the following vote of the board of directors of First National Insurance Company of America at a meeting duly called and held on the 18th day of September, 2009.

VOTED that the facsimile or mechanically reproduced signature of any assistant secretary of the company, wherever appearing upon a certified copy of any power of attorney issued by the company in connection with surety bonds, shall be valid and binding upon the company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, this 2nd day of August, 2011.



By David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

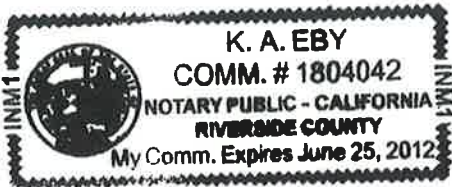
State of California }
County of Riverside } SS.

On 2 AUGUST 2011 Before Me

K. A. EBY, a Notary Public
Name of Notary Public

Personally Appeared

Melody L. Spaur
Name(s) of Signer(s)



Proved to me on the basis of satisfactory evidence

To be the person(s) whose name(s) (is) / are subscribed to the within instrument and acknowledged to me that ~~he / she~~ they executed the same in ~~his / he~~ / ~~their~~ authorized capacity(ies) and that by ~~his / her~~ / ~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[Signature]
Signature of Notary Public

1804042 6/25/12
License Number Expires

Notary Stamp

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title our Type of Document: _____

Document Date: _____ Number of Pages _____

Signer(s) Other Than Named Above: _____

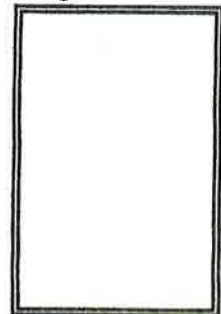
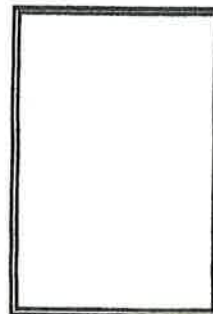
Capacity(ies) Claimed by Signer(s)

Signers Name: _____

- Individual:
- Corporate Officer - Title(s):
- Partner - Limited General
- Attorney-in-fact
- Trustee
- Guardian or Conservator
- Other: _____

Right Thumb Print
of Signer 1

Right Thumb Print
of Signer 2



Signer is Representing _____

SUBMITTED BY: Doug Nielsen Construction, Fire-
License # 821646

Proposal for the Construction of
Department of Veterans Project

Project Address:
4342 Orange Street, Riverside CA

SEALED BID RECEIVED
CLERK OF THE BOARD OF SUPERVISORS

RECEIVED RIVERSIDE COUNTY
CLERK / BOARD OF SUPERVISORS

2011 AUG -8 PM 22

CONTRACTOR'S PROPOSAL

TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:

Date: 8/8/11

Bidder: Avi-Con, Inc. dba CA Construction

The undersigned, having carefully examined the proposed site and the Plans and Specifications, the Notice Inviting Bids, the Instructions to Bidders, the Agreement Form, the Bond Forms, the General Conditions and the Supplementary General Conditions for the Construction of the Department of Veterans' Office Project, hereby proposes and agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the work in strict conformity with the Plans and Specifications, including all work specified in Addenda numbered and dated:

Addendum No. 1 Date 8/4/11

Addendum No. _____ Date _____

Addendum No. _____ Date _____

For the total Base Bid Three hundred thirty seven thousand dollars (\$ 337,000), including all applicable taxes, permits, and licenses.

Alternate 1: flooring \$ Ø ADD

Alternate 2: _____ \$ _____ ADD/DEDUCT

For the **Grand Total of Base Bid and all Alternates** three hundred thirty seven thousand dollars (\$ 337,000), including all applicable taxes, permits, and licenses.

Bids must be submitted on all items. Failure to bid on all items may result in the bid being rejected as non-responsive. **The basis for award will be the qualified bidder with the lowest total of the Base Bid and all alternates.** Alternates may be awarded in any order after determination of the lowest responsible and responsive bidder.

AWARD OF CONTRACT

The undersigned fully understands that a Contract is formed upon the acceptance of this Proposal by the Owner and the undersigned further agrees that upon request he will promptly execute and deliver to Owner a written memorial of the Contract together with the required Payment and Performance Bonds and proof of insurance.

BID GUARANTEE

The enclosed certified or cashier's check or bidder's bond on approved form, made payable to the Owner in the amount of ten percent of the total bid submitted herewith, is hereby given as a guarantee that the bidder will execute and deliver the above mentioned written memorial and required bonds and insurance if awarded the contract, and in the event that the undersigned fails or refuses to execute and deliver said documents, such check or bond is to be charged with the costs of the damages experienced by the Owner as a result of such failure or refusal, including but not limited to publication costs, the difference in money between the amount of the bid of the said principal and the amount for which obligee may legally contract with another party to perform the said work if such amount be in excess of the former, building lease or rental costs, transportation costs and additional salary costs that result from the delay due to the principal's default on the awarded contract. In no event, however, shall the Surety's liability exceed the penal sum hereof.

Name of Bidder: Avi-Con, Inc. dba CA Construction

Type of Organization: Corporation

Signed By:  Jacob Avila

Title of Signer: Secretary

Affix Seal
If
Corporation

Address of Bidder: 981 Iowa Avenue Suite A

Riverside, CA 92507

Telephone No.: 951-781-8055

Contractor's License No.: 588602

Classification: A, B, D06 Expiration Date: 6/30/12

LICENSURE STATEMENTS ARE MADE UNDER PENALTY OF PERJURY

If bidder is a corporation, and signer is not President or Secretary, attach a certified copy of By-Laws or resolution authorizing execution. If bidder is a corporation, affix corporate seal. If signer is an agent, attach Power of Attorney. If bidder is not an individual, list names of other persons authorized to bind the organization.

Bid Bond

KNOWN TO ALL MEN BY THESE PRESENTS, that we, the undersigned AVI-CON, Inc. dba CA Construction, as Principal; and (1), as Surety, are hereby held and firmly bound unto the County of Riverside, hereinafter called the "Owner", in the sum of not to exceed ten percent (10%) of the total bid amount Dollars (\$ -----) for the payment of such sum, well and truly to be made, do hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. (1) First National Insurance Company of America

WHEREAS, the said Principal is herewith submitting its Proposal for the construction of the Department of Veterans' Office Project.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the aforesaid Principal shall be awarded the Contract upon said Proposal and shall, within the required number of days after the notice of such award, execute a written memorial of the awarded Contract and submit the required Labor and Material Payment and faithful Performance Bond and proof of insurance, then this obligation shall be null and void; and in the event that the Principal fails and/or refuses to execute and deliver said documents this Bond will be charged with the costs of the damages experienced by the Owner as a result of such refusal, including but not limited to, publication cost, the difference in money between the amount of the bid of the said Principal and the amount for which the obligee may legally contract with another party to perform the said work if such amount be in excess of the former; building lease or rental costs, transportation cost, and additional salary costs that result from the delay due to the Principal's default on the awarded Contract. In no event however, shall the Surety's liability exceed the penal sum hereof.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their separate seals this 5th day of August, 2011, the name and corporate seal of each corporate party being hereto affixed and those present duly signed by its undersigned representative, pursuant to authority of its governing body.

AVI-CON, Inc. dba CA Construction
(Firm Name - Principal)

981 Iowa Ave., Suite A, Riverside, CA 92507
(Business Address)

By _____
(Original Signature)

V.P. / CFO
(Title)

First National Insurance Company of America
(Corporation Name - Surety)

333 City Blvd. West, Suite 300, Orange, CA 92868
(Business Address)

By _____
(Original Signature)
Julia B. Gladding; Attorney-In-Fact

Affix Seal
If
Corporation

Affix
Corporate
Seal

The rate of premium on this bond is n/a per thousand. Total amount of premium charged, \$ n/a.

(The above must be filled in by corporate surety.)



POWER OF ATTORNEY

First National Insurance Company of America
1001 4th Avenue
Suite 1700
Seattle, WA 98154

KNOW ALL BY THESE PRESENTS:

No. 12417

That FIRST NATIONAL INSURANCE COMPANY OF AMERICA, a Washington corporation, does hereby appoint

KENNETH A. COATE; JULIA B. GLADDING; Riverside, California

its true and lawful attorney(s)-in-fact, with full authority to execute on behalf of the company fidelity and surety bonds or undertakings and other documents of a similar character issued by the company in the course of its business, and to bind FIRST NATIONAL INSURANCE COMPANY OF AMERICA thereby as fully as if such instruments had been duly executed by its regularly elected officers at its home office.

IN WITNESS WHEREOF, FIRST NATIONAL INSURANCE COMPANY OF AMERICA has executed and attested these presents

this 21st day of March 2009

Dexter R. Legg (signature)

Dexter R. Legg, Secretary

TAMIKOLAJEWSKI (signature)

Timothy A. Mikolajewski, Vice President

CERTIFICATE

Extract from the By-Laws of FIRST NATIONAL INSURANCE COMPANY OF AMERICA:

"Article V, Section 13. - FIDELITY AND SURETY BONDS ... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business... On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of FIRST NATIONAL INSURANCE COMPANY OF AMERICA adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

- (i) The provisions of Article V, Section 13 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,

the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, Dexter R. Legg, Secretary of FIRST NATIONAL INSURANCE COMPANY OF AMERICA, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of this corporation, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this AUG 05 2011 day of



Dexter R. Legg (signature)

Dexter R. Legg, Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

State of California }
County of Riverside }
On AUG 05 2011 before me, Stephanie D. Montague, Notary Public
Date Here Insert Name and Title of the Officer
personally appeared Julia B. Gladding
Name(s) of Signer(s)



who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

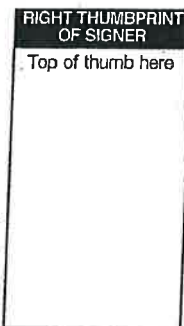
Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

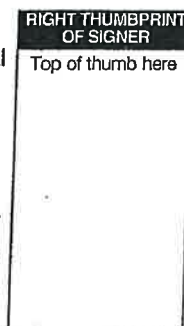
- Corporate Officer -- Title(s):
Individual
Partner -- Limited General
Attorney in Fact
Trustee
Guardian or Conservator
Other:



Signer Is Representing: _____

Signer's Name: _____

- Corporate Officer -- Title(s):
Individual
Partner -- Limited General
Attorney in Fact
Trustee
Guardian or Conservator
Other:



Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Riverside

On AUG 05 2011 before me, Stephanie D. Montague, Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Naomi Avila
Name(s) of Signer(s)



who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Bid Bond - County of Riverside

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: Naomi Avila

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

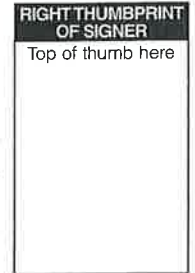
Signer Is Representing: _____



Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

Signer Is Representing: _____



AGREEMENT FORM

THIS AGREEMENT, entered into this _____ day of _____, 2011, by and between _____, hereinafter called the "Contractor", and the County of Riverside hereinafter called the "Owner".

WITNESSETH: That the parties hereto have mutually covenanted and agreed as follows:

CONTRACT: The Complete Contract includes all of the Contract Documents, to wit: The Notice Inviting Bids, the Instructions to Bidders, the Contractor's Proposal, Wage Schedule, Payment and Performance Bonds, the Plans and Specifications plus any Addenda thereto, the General Conditions, the Supplementary General Conditions, if applicable and this Agreement. All Contract Documents are intended to cooperate and be complimentary so that any work called for in one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all Contract Documents.

STATEMENT OF WORK: The Contractor hereby agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials for the Office of Veterans services Tenant Improvement Project. In strict accordance with the Plans and Specifications dated June 2011 prepared by Holt Architecture, Inc. & County of Riverside hereinafter called the "Architect", including Addenda thereto as listed in the Contractor's Proposal, all of which are made a part hereof.

TIME FOR COMPLETION: The work shall be commenced on a date to be specified in a written order of the Architect and shall be completed within Forty (40) calendar days from and after said date. It is expressly agreed that except for extensions of time duly granted in the manner and for the reasons specified in the General Conditions, time shall be of the essence.

COMPENSATION TO BE PAID TO CONTRACTOR: The Owner agrees to pay and the Contractor agrees to accept in full consideration for the performance of the Contract, subject to additions and deductions as provided in the General Conditions, the sum of _____ dollars (\$ _____) being the total of the base bid, alternates _____, _____, _____, plus the following addenda: _____, _____, _____. The sum is to be paid according to the schedule as provided in the General Conditions.

Pursuant to Labor Code, Section 1861, the Contractor gives the following certification: I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Worker's 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.

IN WITNESS WHEREOF, the parties hereto on the day and year first above written have executed this agreement in four (4) counterparts.

Type of Contractor's organization: _____

If other than individual or corporation, list names of all members who have authority to bind firm.

Firm Name: _____

Address: _____

Contractor's License No.: _____

IF OTHER THAN CORPORATION EXECUTE HERE

Signature: _____

Title: _____

IF CORPORATION, FILL OUT FOLLOWING AND EXECUTE

Name of President of Corporation: _____

Name of Secretary of Corporation: _____

Corporation is organized under the laws of State of _____

Signature: _____

Title: _____

Owner: COUNTY OF RIVERSIDE

Signature: _____

Title: Chairman - Board of Supervisors **BOB BUSTER**

Attest: Clerk - Board of Supervisors **KECIA HARPER-IHEM**

By: _____

Title: **DEPUTY**

Affix Seal
if
Corporation

PAYMENT BOND

(Public Work - Civil Code Section 3247 et seq.)

The makers of this Bond are _____ as
Principal and Original Contractor and _____, a corporation,
authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that
certain public works contract dated _____, 2011 between Principal and County of Riverside, a
public entity, as owner,

For _____ dollars (\$ _____)
the total amount payable. THE AMOUNT OF THIS BOND IS 100% OF SAID SUM. Said contract is for public
work of: **Office of Veterans services Tenant Improvement Project.**

The beneficiaries of this Bond are as is stated in 3248 of the Civil Code and the requirements and conditions
of this Bond are as is set forth in Sections 3248, 3249, 3250 and 3252 of said Code. Without notice, Surety
consents to extension of time for performance, change in requirements, amount of compensation, or
prepayment under said Contract.

Signed and Sealed this _____ Day of _____ 2011.

(Firm Name - Principal)

(Business Address)

By: _____
(Signature - Attach Notary's Acknowledgment)

(Title)

(Corporation Name - Surety)

(Business Address)

By: _____
(Signature - Attached Notary's Acknowledgment)

ATTORNEY-IN-FACT
(Title-Attach Power of Attorney)

Affix Seal
if
Corporation

Affix
Corporate
Seal

PERFORMANCE BOND

The makers of this Bond, _____, as Principal, and _____ as Surety, are held and firmly bound unto County of Riverside, hereinafter called the Owner, in the sum of _____ Dollars (\$ _____), for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such that whereas the Principal entered into a certain contract, hereto attached, with the Owner, dated _____, 2011 for the Office of Veterans services Tenant Improvement Project.

Now therefore, if the Principal shall well and truly perform and fulfill all the undertakings covenants, terms, conditions and agreements of said Contract during the original term of said Contract and any extension thereof that may be granted by the Owner, with or without notice to the Surety, and during the file of any guarantee required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may thereafter be made, then this obligation to be void, otherwise to remain in full force and virtue. Without notice, Surety consents to extension of time for performance, change in requirements, change in compensation or prepayment under said Contract.

Signed and Sealed this _____ Day of _____, 2011.

(Firm Name - Principal)

(Business Address)

By: _____
(Signature - Attach Notary's Acknowledgment)

(Title)

(Corporation Name - Surety)

(Business Address)

By: _____
(Signature - Attach Notary's Acknowledgment)

ATTORNEY-IN-FACT
(Title-Attach Power of Attorney)

Affix Seal
if
Corporation

Affix
Corporate
Seal

**CONTRACTOR'S CERTIFICATE
REGARDING WORKERS' COMPENSATION**


Labor Code Section 3700

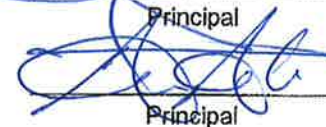
Every employer, except the State and all political subdivisions or institutions thereof, shall secure the payment of compensation in one or more of the following ways:

- (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, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees

I am aware of the provisions of Section 3700 of the Labor Code which requires 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 this Contract.



Principal


Principal
U.P.

Title

(In accordance with Article 5 [commencing at Section 1860], Chapter, Part 7, Division 2 of the Labor Code, the above Certificate must be signed and filed with the Owner prior to performing any work under this Contract.)

981 Iowa Ave. Ste A
Riverside, CA 92507

Department of Veterans
Office project

County of Riverside
Clerk of the Board
4090 Lemon Street
Riverside, CA 92507

SEALED BID RECEIVED
CLERK OF THE BOARD OF SUPERVISORS

RECEIVED RIVERSID
CLERK / BOARD OF SI
2011 AUG -8 PM

CONTRACTOR'S PROPOSAL

TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:

Date: 8/8/11

Bidder: J M Builders, Inc.

The undersigned, having carefully examined the proposed site and the Plans and Specifications, the Notice Inviting Bids, the Instructions to Bidders, the Agreement Form, the Bond Forms, the General Conditions and the Supplementary General Conditions for the Construction of the Department of Veterans' Office Project, hereby proposes and agrees to furnish all tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the work in strict conformity with the Plans and Specifications, including all work specified in Addenda numbered and dated:

Addendum No. 1 Date 8/3/11

Addendum No. _____ Date _____

Addendum No. _____ Date _____

For the total Base Bid five hundred seven thousand dollars (\$ ~~507,000~~), including all applicable taxes, permits, and licenses. \$ 507,000-

Alternate 1: 0 \$ 0 ADD

Alternate 2: 0 \$ 0 ADD/DEDUCT

For the Grand Total of Base Bid and all Alternates five hundred seven thousand dollars (\$ 507,000), including all applicable taxes, permits, and licenses.

Bids must be submitted on all items. Failure to bid on all items may result in the bid being rejected as non-responsive. The basis for award will be the qualified bidder with the lowest total of the Base Bid and all alternates. Alternates may be awarded in any order after determination of the lowest responsible and responsive bidder.

DESIGNATION OF SUBCONTRACTORS

In compliance with Section 4104 of the Public Contract Code the undersigned submits the following complete list of each Subcontractor who will perform work or labor or render service in or about the construction/Installation in an amount in excess of 1/2 of 1% of said total bid.

<u>PORTION OF THE WORK (Trade)</u>	<u>SUBCONTRACTOR</u>	<u>LOCATION</u>
Casework	Bertino	Colton
Insulation	Alert	La Puente
Glazing	Clements Bros	Redlands
XXXXXXXXXX		
Tile	Kentn Piece tile	Yucaipa
Acoustical	C-2	Rancho Cucamonga
Resilient/Carpet	Mikes Custom	Redlands
Paint	Triumph Paint	Riverside
Plumbing	ABB CO	Redlands
A/C Paving	IPS	Redlands
HVAC	Franklin Mech.	Calimesa
Elec.	RDM	Chino
Sign	Inland building	San Bernardino

AWARD OF CONTRACT

The undersigned fully understands that a Contract is formed upon the acceptance of this Proposal by the Owner and the undersigned further agrees that upon request he will promptly execute and deliver to Owner a written memorial of the Contract together with the required Payment and Performance Bonds and proof of insurance.

BID GUARANTEE

The enclosed certified or cashier's check or bidder's bond on approved form, made payable to the Owner in the amount of ten percent of the total bid submitted herewith, is hereby given as a guarantee that the bidder will execute and deliver the above mentioned written memorial and required bonds and insurance if awarded the contract, and in the event that the undersigned falls or refuses to execute and deliver said documents, such check or bond is to be charged with the costs of the damages experienced by the Owner as a result of such failure or refusal, including but not limited to publication costs, the difference in money between the amount of the bid of the said principal and the amount for which obligee may legally contract with another party to perform the said work if such amount be in excess of the former, building lease or rental costs, transportation costs and additional salary costs that result from the delay due to the principal's default on the awarded contract. In no event, however, shall the Surety's liability exceed the penal sum hereof.

Name of Bidder: JM Builders, Inc
Type of Organization: Corporation
Signed By: [Signature]
Title of Signer: President
Address of Bidder: 20547 Park Ave
Fedlands, CA 92373
Telephone No.: 909-793-4687
Contractor's License No.: 8435201
Classification: B Expiration Date: 9/2012

Affix Seal
If
Corporation

LICENSURE STATEMENTS ARE MADE UNDER PENALTY OF PERJURY

If bidder is a corporation, and signer is not President or Secretary, attach a certified copy of By-Laws or resolution authorizing execution. If bidder is a corporation, affix corporate seal. If signer is an agent, attach Power of Attorney. If bidder is not an individual, list names of other persons authorized to bind the organization.

Bid Bond

KNOWN TO ALL MEN BY THESE PRESENTS, that we, the undersigned J.M. BUILDERS, INC.
as Principal; and SURETEC INSURANCE COMPANY, as Surety, are
herely held and firmly bound unto the County of Riverside, hereinafter called the "Owner", in the sum of
TEN PERCENT OF AMOUNT BID Dollars (\$ 10%) for
the payment of such sum, well and truly to be made, do hereby jointly and severally bind ourselves, our heirs,
executors, administrators, successors and assigns.

WHEREAS, the said Principal is herewith submitting its Proposal for the construction of the
Department of Veterans' Office Project.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the aforesaid Principal shall be awarded
the Contract upon said Proposal and shall, within the required number of days after the notice of such award,
execute a written memorial of the awarded Contract and submit the required Labor and Material Payment and
faithful Performance Bond and proof of insurance, then this obligation shall be null and void; and in the event
that the Principal fails and/or refuses to execute and deliver said documents this Bond will be charged with the
costs of the damages experienced by the Owner as a result of such refusal, including but not limited to,
publication cost, the difference in money between the amount of the bid of the said Principal and the amount
for which the obligee may legally contract with another party to perform the said work if such amount be in
excess of the former; building lease or rental costs, transportation cost, and additional salary costs that result
from the delay due to the Principal's default on the awarded Contract. In no event however, shall the Surety's
liability exceed the penal sum hereof.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond
shall be in no way impaired or affected by any extension of the time within which the Owner may accept such
bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their separate
seals this 5TH day of AUGUST, 2011, the name and corporate seal of each corporate party
being hereo affixed and those present duly signed by its undersigned representative, pursuant to authority of
its governing body.

J.M. BUILDERS, INC.

(Firm Name - Principal)

PO Box 1741, Redlands, CA 92373

(Business Address)

By



(Original Signature)

(Title)

SURETEC INSURANCE COMPANY

(Corporation Name - Surety)

3033 5TH AVENUE, SUITE 300
SAN DIEGO, CA 92103

(Business Address)

By



(Original Signature) CHARLES L., FLAKE
ATTORNEY-IN-FACT

Affix Seal
If
Corporation

Affix
Corporate
Seal

The rate of premium on this bond is NIL per thousand. Total amount of premium charged,
\$ NIL.

(The above must be filled in by corporate surety.)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange

On 8-5-11 before me, Jan C. Moran, Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Charles L. Flake
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Place Notary Seal Above

Signature Jan C. Moran
Signature of Notary Public
Jan C. Moran

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Individual
- Corporate Officer -- Title(s): _____
- Partner -- Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer Is Representing: _____

Signer's Name: _____

- Individual
- Corporate Officer -- Title(s): _____
- Partner -- Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer Is Representing: _____

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Charles L. Flake, David L. Culbertson, Richard A. Coon

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Five Million and 00/100 Dollars (\$5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 10/31/2012 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

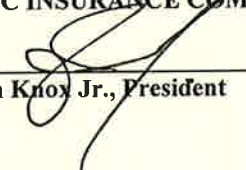
Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 3rd day of September, A.D. 2010.

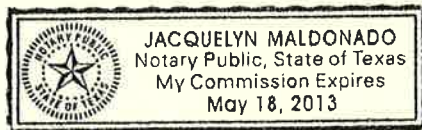
SURETEC INSURANCE COMPANY

By: 
John Knox Jr., President

State of Texas ss:
County of Harris



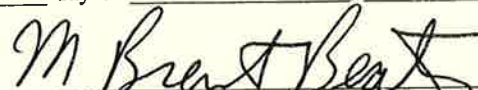
On this 3rd day of September, A.D. 2010 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.




Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2013

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 5TH day of AUGUST, 2011, A.D.


M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.



P.O. Box 1741
Redlands, CA 92373
LIC. #843561

To: County of Riverside
4080 Lemon St.
Riverside, CA 92501
1st Floor - Clerk of Board.

Bids: 8/8/11 @ 2:30

Project: Dept. of veterans office

RECEIVED RIVERSIDE COUNTY
CLERK / BOARD OF SUPERVISORS

2011 AUG -8 PM 2:24

SEALED BID RECEIVED
CLERK OF THE BOARD OF SUPERVISORS