Project No.:

Construction Documents for Housing Periodic Fire Damper Testing Volume 1 of 1

University of California
Merced Campus
Merced County
Merced, California

CONSTRUCTION DOCUMENTS
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Volume 1

Division 1 Specifications

ADVERTISEMENT FOR BIDS

Subject to conditions prescribed by the University of California, Merced, sealed bids for a lump sum Contract are invited for the following work:

HOUSING PERIODIC FIRE DAMPER TESTING
Project Number:
UNIVERSITY OF CALIFORNIA, MERCED

DESCRIPTION OF WORK:

The Housing Periodic Fire Damper Testing Project includes complete inspection and testing of all fire and smoke dampers in Housing buildings complexes, Valley Terraces Housing building complex, Sierra Terraces building complex, The Summits building complex: Tenaya & Cathedral and Half Dome. Valley Terraces includes Calaveras Hall, San Joaquin Hall, Merced Hall, Fresno Hall, Stanislaus Hall, Madera Hall, Kings Hall, Kern Hall, Tulare Hall and Terrace Center. This work may be performed in fully or partially occupied Housing building on an active University of California, Merced campus. The project will be awarded to the lowest bidder by each building complex.

Bidding Documents will be available on **May 13, 2021**, and will be issued only at:

University of California, Merced
https://rfp-rfq.ucmerced.edu/

Bids will be received electronically only at: https://ucmerced.app.box.com/f/9e563f2e8ef348eb9ca36789fd52fe30

Bid Deadline: Sealed bids must be received on or before **2:00PM, WEDNESDAY, JUNE 2, 2021.** Hard copy or email bids will not be accepted. Project will be awarded to the lowest bidder for each building complex not overall lowest bid.

BID OPENING
Bids will be opened via zoom at https://ucmerced.zoom.us/j/87321143588

or Dial by phone at (669 900) 6833

Meeting ID: 873 2114 3588

Bidder shall hand deliver their original bonds within 48 hours of bid opening to:
Attention: Fran Telechea
Downtown Campus Center
655 W. 18th Street, Merced, CA 95340

If the original bonds are not received within 48 hours, we will move to next lowest bidder.

MANDATORY PRE-BID JOB WALK:
A **MANDATORY** Pre-Bid Job Walk will be conducted on **MAY 20, 2021** beginning promptly at **10:00AM** in Summits Quad behind Tenaya & Cathedral. Bidders shall park in the Bellevue lot. Only bidders who participate in the Job Walk will be allowed to bid on the Project as prime contractors. Parking permits are required For parking permit details, see https://taps.ucmerced.edu/permits/visitorsvendors. Bidders will be required to wear masks and comply with a Health check-in at the front of campus. Anyone feeling ill or have a fever should not attend. Bidders must follow all posted building safety information for COVID-19. Bidder is responsible for bringing their own ladder and any equipment that may be needed during the job walk.

If you need accommodations related to disabilities, please call Fran Telechea at 209-201-8174 at least 3 working days prior to the job walk.

RFI Procedure:
Any questions related to the bid and/or bid documents must be submitted in writing and submitted to Sara Anastos at sanastos@ucmerced.edu. RFI questions must be submitted by **MAY, 25, 2021 at 4:00PM.**

LICENSE REQUIREMENTS: The successful Bidder will be required to have the following State of California Contractor's License current at the time of submission of the Bid:

B or C-20

Every effort will be made to ensure that all persons have equal access to contracts and other business opportunities with the University within the limits imposed by law or University policy. Each Bidder may be required to show evidence of its equal employment opportunity policy. The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding Documents and to pay prevailing wage at the location of the work.

The work described in the contract is a public work as that term is defined in section 1771 of the California Labor Code.

No contractor or subcontractor may be listed on a Bid for this project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded any portion of this project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 and 1771.1 .

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

The successful Bidder shall pay all persons providing construction services and/or any labor on site, including any University location, no less than the UC Fair Wage (defined as $13 per hour as of 10/1/15, $14 per hour as of 10/1/16, and $15 per hour as of 10/1/17) and shall comply with all applicable federal, state and local working condition requirements.

Estimated construction cost: $ 500,000

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

5/13/2021

PROJECT DIRECTORY

Project Name:	HOUSING PERIODIC FIRE DAMPER TESTING
Project No:	
Location:	University of California Merced Merced Campus- Valley Terraces Building Complex Sierra Terraces Building Complex The Summits Building Complex: Tenaya & Cathedral Half Dome
University:	The Regents of the University of California
University's Facility person acting on behalf of University:	Mike McLeod Vice Chancellor/Chief Operating Officer (209) 228-7659
University's Representative is:	Fran Telechea Planning, Design & Construction (209) 201-8174
All inquiries shall be in writing and shall be directed only to:	Fran Telechea ftelechea@ucmerced.edu
Design Professional Consultants:	NONE
Address for Stop Notices:	Arturo Martinez-Chavez Accounting University of California, Merced 5200 North Lake Road Merced CA 95343
Address for Demand for Arbitration:	Western Case Management Center 6795 N. Palm Avenue, 2nd Floor Fresno CA 93704
A copy of the Demand for Arbitration must be sent to:	University of California Office of the General Counsel 1111 Franklin Street, 8th Floor Oakland, CA 94607-5200

INSTRUCTIONS TO BIDDERS

1. Bidder, by making a Bid, represents that (1) Bidder has read, understood, and made the Bid in accordance with the provisions of the Bidding Documents; (2) Bidder has visited the Project site and is familiar with the conditions under which the Work is to be performed and the local conditions as related to the requirements of the Contract Documents; (3) the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; (4) at the time of submission of the Bid, Bidder and all Subcontractors, regardless of tier, have the appropriate current and active licenses issued by the State of California Contractor's State License Board for the Work to be performed and any licenses specifically required by the Bidding Documents; (5) Bidder has read and shall abide by the nondiscrimination requirements contained in the Bidding Documents; (6) Bidder has the expertise and financial capacity to perform and complete all obligations under the Bidding Documents; (7) the person executing the Bid Form is duly authorized and empowered to execute the Bid Form on behalf of Bidder; and (8) Bidder is aware of and, if awarded the Contract, will comply with Applicable Code Requirements in its performance of the Work.

2. Bidder shall, before submitting its Bid, carefully study and compare the components of the Bidding Documents and compare them with any other work being bid concurrently or presently under construction which relates to the Work for which the Bid is submitted; shall examine the Project site, the conditions under which the Work is to be performed, and the local conditions; and shall at once report to University's Representative errors, inconsistencies, or ambiguities discovered. If Bidder is awarded the Contract, Bidder waives any claim arising from any errors, inconsistencies or ambiguities, that Bidder, its subcontractors or suppliers, or any person or entity under Bidder on the Contract became aware of, or reasonably should have become aware of, prior to Bidder’s submission of its Bid.

3. Any clarifications, interpretations, corrections, and changes to the Bidding Documents will be made in writing by Addenda.

4. Bidder shall visit the Project site in a mandatory Job Walk prior to submitting a Bid.

5. Bids shall be submitted on the Bid Form included with the Bidding Documents. Bidder shall make no stipulations on the Bid Form nor qualify the Bid in any manner.

6. Each Bidder shall list in the Bid Form all first-tier Subcontractors that will perform work, labor or render services. The Bid Form contains spaces for the following information when listing Subcontractors: (1) portion of the Work; (2) name of Subcontractor; (3) city of Subcontractor's business location; (4) California contractor license number. An inadvertent error in listing the California contractor license number shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected contractor’s license number is submitted in writing by, and actually received from the Bidder within 24 hours after the bid opening and provided the corrected contractor’s license number corresponds to the submitted name and location for that subcontractor. The failure to list, on the Bid Form, any one of the items set forth above will result in the University treating the Bid as if no Subcontractor was listed for that portion of the Work and Bidder will thereby represent to University that Bidder agrees that it is fully qualified to perform that portion of the Work and shall perform that portion of the Work.

7. Subcontractors listed in the Bid Form shall only be substituted after the Bid Deadline with the written consent of University and in accordance with the State of California “Subletting and Subcontracting Fair Practices Act.”

8. Not Used.

9. University will have the right to reject all Bids, or any Bid not accompanied by the required Bid Security or any other item required by the Bidding Documents, or a Bid which is in any other way incomplete or irregular.

University will have the right, but is not required, to waive nonmaterial irregularities in a Bid. University will have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents.

10. University will select the apparent lowest responsive and responsible Bidder and notify such Bidder on University's form within 50 days (unless the number of days is modified in Supplementary Instructions to Bidders)

after the Bid Deadline or reject all Bids. Within 10 days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, Bidder shall submit to University all of the following items:

.1 Three originals of the Agreement signed by Bidder.

.2 Three originals of the Payment Bond (as required).

.3 Three originals of the Performance Bond (as required).

.4 Certificates of Insurance on form provided by University required under Article 8 of the General Conditions.

.5 Name of, qualifications of, and references for the Superintendent proposed for the Work.

.6 Names of all Subcontractors, with their addresses, telephone number, facsimile number, contact person, portion of the Work, California contractor license number, and designation of any Subcontractor as a Small Business Enterprise (SBE), Disadvantaged Business Enterprise (DBE), Women-owned Business Enterprise (WBE) and Disabled Veteran Business Enterprise (DVBE) on Report of Subcontractor Information in the form contained in the Exhibits.

11. Any Bidder, person, or entity may file a Bid protest. The protest shall specify the reasons and facts upon which the protest is based and shall be filed in writing with the University campus or facility not later than 5:00 pm on the 3rd business day after the date of announcement of Bid results. The campus or facility will review the protest and issue a decision resulting from such review. The decision is final and is not appealable within the University of California.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. Requests for clarification or interpretation of the Bidding Documents shall be addressed only in writing and received by to Sara Anastos at sanastos@ucmerced.edu. RFI questions must be submitted by **MAY, 25, 2021 at 4:00PM.**

2. A **MANDATORY** Pre-Bid Job Walk will be conducted on **MAY 20, 2021** beginning promptly at **10:00AM** in the Summits Quad behind Tenaya & Cathedral**.** Only bidders who participate in the Job Walk will be allowed to bid on the Project as prime contractors. Bidders shall park in the Bellevue lot. Parking permits are required For parking permit details, see https://taps.ucmerced.edu/permits/visitorsvendors.. Bidders will be required to wear masks and comply with a Health check-in at the front of campus. Anyone feeling ill or have a fever should not attend. Bidders must follow all posted building safety information for COVID-19. Bidder is responsible for bringing their own ladder and any equipment that may be needed during the job walk.

   If you need accommodations related to disabilities, please call Fran Telechea at 209-201-8174 at least 3 working days prior to the job walk.

3. **Bids will be received electronically only** at:
   https://ucmerced.app.box.com/f/9e563f2e8ef348eb9ca36789fd52fe30
   Bid Deadline: Sealed bids must be received on or before **2:00PM, WEDNESDAY, JUNE 2, 2021.** Hard copy or email bids will not be accepted. Project will be awarded to the lowest bidder for each building complex not overall lowest bid.

4. Bids will be opened via zoom https://ucmerced.zoom.us/j/87321143588 or Dial by phone at (669 900) 6833. Meeting ID: 873 2114 3588
   Bidder shall hand deliver their original bonds and wet signatures within 48 hours of bid opening to:

   Attention: Fran Telechea
   Downtown Campus Center
   655 W. 18th Street, Merced, CA 95340

   If the original bonds are not received within 48 hours, we will move to next lowest bidder.

5. The University has negotiated contracts with certain suppliers (listed in the "Information Available to Bidders") to supply materials to University construction projects. Bidders may be able to obtain favorable pricing from the listed suppliers for materials required for this Contract. Bidders are not obligated to obtain any required materials from the listed suppliers. Use of any of the listed suppliers is at the bidder's risk, and the University does not provide any warranties, express or implied, with respect to the listed suppliers, their products and/or services. In particular, University does not warrant that the listed suppliers, their products and/or services are suitable for this project.

7. If Contractor fails to meet Substantial Completion milestone as described in the Summary of Work, Contractor shall be assessed liquidated damaged in the amount of $1,500.00 per day for each calendar day following the Substantial Completion date where work remains incomplete (Saturdays, Sundays, and holidays included).

8. For each day the Work remains incomplete beyond the expiration of the Contract Time. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of $750.00. See Article 5 for detailed requirements.

9. Addenda will be issued only by University and only in writing. Addenda will be identified as such and will be posted to our website at https://rfp-rfq.ucmerced.edu/.

10. Contract Time: Substantial Completion July 30, 2021, Final Completion August 23, 2021.

11. Contractor shall have an active B license or C-20.

INFORMATION AVAILABLE TO BIDDERS

The following information is made available for the convenience of bidders and is not a part of the Contract. The information is provided subject to the provisions of Article 3 of the General Conditions.

1. State of California, Department of Industrial Relations, Prevailing Wage Determinations for Statewide, Northern California, and Merced County may be found at http://www.dir.ca.gov/DLSR/statistics_research.html

   A. No special determinations have been received from the Department of Industrial Relations for this project.
   B. 1st publication date of the Advertisement for Bids.

2. Project Schedule, site map and Fire Damper testing and inspection checklist have been included.

PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Periodic Testing of Fire Dampers**	**81 days?**	**Thu 5/13/21**	**Thu 9/2/21**
2		**Bidding**	**18 days**	**Thu 5/13/21**	**Mon 6/7/21**
3		Bid Documents Posted	1 day	Thu 5/13/21	Thu 5/13/21
4		Non-Mandatory Job Walk	1 day	Thu 5/20/21	Thu 5/20/21
5		Last Day for RFIs	1 day	Wed 5/26/21	Wed 5/26/21
6		Last Day for Addenda (if neede	1 day	Fri 5/28/21	Fri 5/28/21
7		Bid Opening	1 day	Wed 6/2/21	Wed 6/2/21
8		Award & Post	3 days	Thu 6/3/21	Mon 6/7/21
9		**Construction Phase**	**55 days**	**Tue 6/8/21**	**Mon 8/23/21**
10		Contract	10 days	Tue 6/8/21	Mon 6/21/21
11		NTP	1 day	Tue 6/22/21	Tue 6/22/21
12		Testing	44 days	Wed 6/23/21	Mon 8/23/21
13		Substantial Completion	1 day	Fri 7/30/21	Fri 7/30/21
14		Completion	1 day	Mon 8/23/21	Mon 8/23/21
15					
16					
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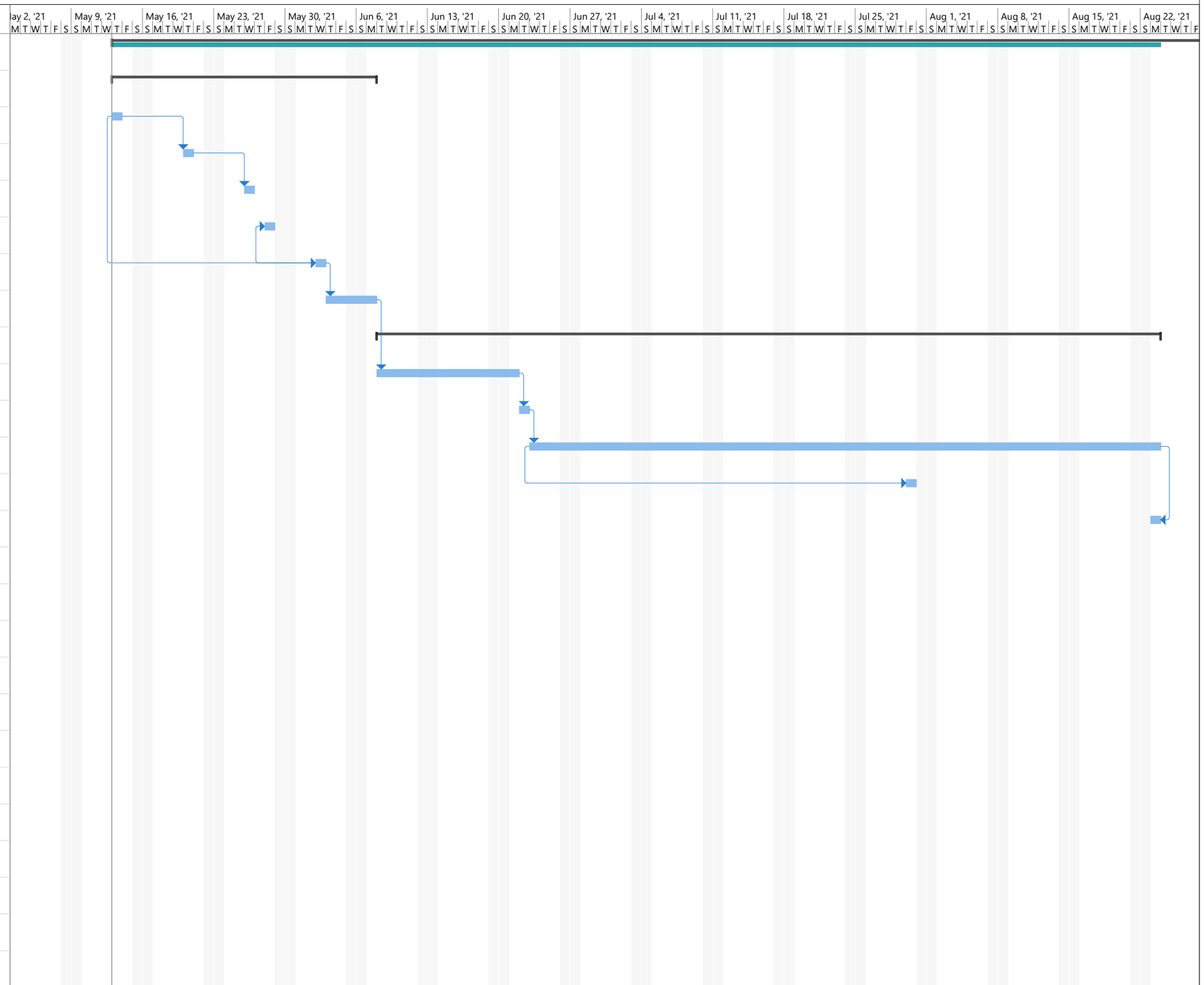


HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

SIERRA TERRACES

VALLEY TERRACES

CONTRACTOR STAGING AREA
Note: Loading and unloading permited. Parking is available if spaces are available. If area is occupied, then park in Bellevue Lot

HALF DOME

THE SUMMITS:
TENAYA & CATHEDRAL

BELLEVUE LOT

CONTRACTOR IS RESPONSIBLE FOR ALL PARKING PERMIT PAYMENTS IN THIS AREA

FIRE AND SMOKE DAMPERS

Form 17-C ☑

Inspection and Maintenance

Year _____ System _____
Location _____ Date _____ Inspector _____

1. Full unobstructed access to dampers is provided.
2. Smoke damper needs to be cycled through its closure and opening in accordance with *NFPA 72.*
3. Fusible link, if provided, is removed and damper closes completely and latches closed (where latch provided).
4. No interference with damper operation by rusted, bent, or misaligned parts, damaged blades, or defective hinges.
5. Damper frame not penetrated by foreign objects to prevent proper operation.
6. Fusible link is not damaged or painted. If damaged, it should be replaced.
7. All exposed moving parts to be dry lubricated per manufacturer's instructions.
8. Note deficiencies and how they were corrected. After any repairs, the damper should be retested for proper operation.

Y = Satisfactory **N** = Unsatisfactory (explain below) **N/A** = Not applicable

Fire Damper Number or Location	1	2	3	4	5	6	7	8

Note: Use reverse side for comments.

Note: Dampers must be tested and inspected 1 year after installation and then every 4 years, except in a hospital, where they can be inspected every 6 years.

BID FORM

FOR: Housing Periodic Fire Damper Testing

UNIVERSITY OF CALIFORNIA, MERCED

5200 North Lake Road

Merced, CA 95343

6/2/2021

BID TO: PLANNING, DESIGN AND CONSTRUCTION

https://ucmerced.app.box.com/f/9e563f2e8ef348eb9ca36789fd52fe30

Bids will **only be received electronically** by uploading to the box link provided above.

BID FROM: _____

(Name of Bidder)

_____

(Address)

_____ , _____ _____

(City) (State) (Zip Code)

_____

(Telephone Number)

_____

(Date Bid Submitted)

Note: All portions of this Bid Form must be completed and the Bid Form must be signed before the Bid is submitted. Failure to do so will result in the Bid being rejected as non-responsive. Hard copy or email bids will not be accepted. Project will be awarded to the lowest responsible bidder for each building not overall lowest bid.

1. 0 BIDDER'S REPRESENTATIONS

Bidder, represents that a) Bidder and all Subcontractors, regardless of tier, has the appropriate current and active Contractor's licenses required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment; e) Bidder and all Subcontractors, regardless of tier, are currently registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5 and 1771.1. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within 60 days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to complete the proposed Work, Substantial Completion July 20, 2021, Final Completion August 20, 2021 after the date of commencement specified in the Notice to Proceed.

2.0 ADDENDA

Bidder acknowledges that it is Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda from University's Facility at the appropriate address stated on Page 1 of this Bid Form. Bidder therefore agrees to be bound by all Addenda that have been issued for this Bid.

3.0 NOT USED

4.0 LUMP SUM BASE BID FOR VALLEY TERRACES BUILDING COMPLEX (INCLUDES CALAVERAS HALL, SAN JOAQUIN HALL, MERCED HALL, FRESNO HALL, STANISLAUS HALL, MADERA HALL, KINGS HALL, KERN HALL, TULARE HALL, AND TERRACE CENTER)

$ | | , | | | | , | | | . | |

(Place figures in appropriate boxes.)

Bidder shall check the box below if no bid submitted for the Valley Terraces Building Complex

☐ No Bid

LUMP SUM BASE BID FOR SIERRA TERRACES BUILDING COMPLEX (INCLUDES MARIPOSA AND TULOUMNE HALL)

$ | | , | | | | , | | | . | |

(Place figures in appropriate boxes.)

Bidder shall check the box below if no bid submitted for the Sierra Terraces Building Complex

☐ No Bid

LUMP SUM BASE BID FOR THE SUMMITS BUILDING COMPLEX: TENAYA & CATHEDRAL

$ ☐☐ , ☐☐☐ , ☐☐☐ . ☐☐

(Place figures in appropriate boxes.)

Bidder shall check the box below if no bid submitted for The Summits Building Complex

☐ No Bid

LUMP SUM BASE BID FOR HALF DOME

$ ☐☐ , ☐☐☐ , ☐☐☐ . ☐☐

(Place figures in appropriate boxes.)

Bidder shall check the box below if no bid submitted for Half Dome Building

☐ No Bid

Bidder includes in the Lump Sum Base Bid the following allowances: NONE

5.0 SELECTION OF APPARENT LOW BIDDER

Refer to the Instructions to Bidders for selection of apparent low bidder.

6.0 UNIT PRICES - NONE

7.0 DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS

Bidder shall determine and provide below the daily rate of compensation for any Compensable Delay caused by University at any time during the performance of the Work.

$ [ ][ ] , [ ][ ][ ] . [ ][ ] X 10 multiplier

(Place figures in appropriate boxes.)

The Minimum Compensable Daily Rate is $1 per day. Failure to fill in a dollar figure for the daily rate for Compensable Delay at or greater than the Minimum Compensable Daily Rate shall rend the bid non-responsive.

The daily rate shown above will be the total amount of Contractor entitlement for each day of Compensable Delay caused by University at any time during the performance of the Work and shall constitute payment in full for all delay costs, direct or indirect, of the Contractor and all subcontractors, suppliers, persons and entities under Contractor on the Project, including without limitation all subcontractors added by Contract Amendment. The number of days of Compensable Delay shown as a "multiplier" above is not intended as an estimate of the number of days of compensable delay anticipated by the University. The University will pay the daily rate of compensation only for the actual number of days of Compensable Delay, as defined in the General Conditions; the actual number of days of compensable delay may be greater or lesser than the "multiplier" shown above.

8.0 ALTERNATES - NONE

9.0 LIST OF SUBCONTRACTORS

Bidder will use Subcontractors for the Work:

Yes ____

If “yes”, provide in the spaces below (a) the name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the state of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid, (b) the portion of the work which will be done by each subcontractor. The prime contractor shall list only one subcontractor for each such portion as is defined by the prime contractor in its bid.

	Subcontractor			
Portion of the Work Activity (e.g. electrical, mechanical, concrete)	Name of Business	Location of Business (City)	License No.	DIR Registration No.

(Note: Add additional pages if required.)

11.0 BIDDER INFORMATION

TYPE OF ORGANIZATION:

_____
(Corporation, Partnership, Individual, Joint Venture, etc.)

IF A CORPORATION, THE CORPORATION IS ORGANIZED UNDER THE LAWS OF:

THE STATE OF _____.
(State)

NAME OF PRESIDENT OF THE CORPORATION:

_____
(Insert Name)

NAME OF SECRETARY OF THE CORPORATION:

_____
(Insert Name)

IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS:

_____
(Insert Names)
_____

CALIFORNIA CONTRACTORS LICENSE(S):

_____	_____	_____
(Classification)	(License Number)	(Expiration Date)

(For Joint Venture, list Joint Venture's license and licenses for all Joint Venture partners.)

12.0 REQUIRED COMPLETED ATTACHMENTS

The following documents are submitted with and made a condition of this Bid:

1. Bid Security in the form of _____
   (Bid Bond or Certified Check)
2. Qualification Questionnaire

13.0 DECLARATION

I, _____ , hereby declare that I am the
(Printed Name)

_____ of _____
(Title) (Name of Bidder)

submitting this Bid Form; that I am duly authorized to execute this Bid Form on behalf of Bidder; and that all information set forth in this Bid Form and all attachments hereto are, to the best of my knowledge, true, accurate, and complete as of its submission date.

I further declare that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was executed at: _____(Name of City if within a City, otherwise Name of County),

in the State of _____, on _____.
(State) (Date)

_____
(Signature)

QUALIFICATION QUESTIONNAIRE

For

HOUSING PERIODIC FIRE DAMPER TESTING

As used herein, the term “entity” means the prospective Bidder submitting this Qualification Questionnaire regardless of whether the entity is an individual company, joint venture, or partnership. Please note that the term “prospective Bidder” may sometimes be used interchangeably with the term “entity.”

SUBMITTED BY:

_____
(Entity Name. If a Joint Venture, state name of JV Entity)

_____
(Contact Name)

_____
(Address)

_____
(City, State, Zip Code)

_____ _____
(Telephone Number) (Facsimile Number)

_____
(E-mail)

Each prospective Bidder must answer all of the following questions and provide all requested information, where applicable. Any prospective Bidder failing to do so will be deemed to be non-responsive and not responsible with respect to this Qualification at the sole discretion of the University of California. Prospective Bidders that affirmatively respond (i.e. answer YES) to all questions, submit all required information and supporting data, and are determined to have accurately responded to the questions will be considered responsive. Only those Bidders that have been determined to be qualified will be considered responsive.

If the prospective Bidder is determined by the University not to be qualified, the prospective Bidder may request a review by the Facility. Any such request must be received by the Facility within 3 calendar days after receipt by the prospective Bidder of the determination. The decision resulting from such review is final and is not appealable within the University of California. Any person or entity not satisfied with the outcome of the qualification must file a writ challenging the outcome within 10 calendar days from the date of the University's written notice regarding qualification determination. Any assertion that the outcome of the qualification process was improper will not be a ground for a bid protest.

All information submitted for qualification evaluation in response and marked as “confidential” will be considered official information acquired in confidence, and the University of California will maintain its confidentiality unless (1) the University determines that it is required to release the information to a third party pursuant to the requirements of the California Public Records Act or (2) the University is required by court order to release the information to a third party pursuant to the requirements of the California Public Records Act. In the event that the University receives a request pursuant to the California Public Records Act and the University determines that it is required to disclose information marked “confidential” by the provisions of the California Public Records Act, the University will notify the prospective bidder of the pending disclosure at least 72 hours prior to such disclosure so that the prospective Bidder may seek a restraining order in advance of such disclosure. The University shall err on the side of transparency and will generally treat information provided by the prospective bidder that is not marked “confidential” as

subject to disclosure pursuant to the California Public Records Act. Likewise, any decision by the University that any document is subject to disclosure pursuant to the California Public Records Act shall not prevent the University from making a subsequent determination that any document is not subject to disclosure pursuant to the California Public Records Act.

All other information submitted for Qualification evaluation will be considered official information acquired in confidence, and the University will maintain its confidentiality to the extent permitted by law.

1. LICENSE(S) AND REGISTRATION

A. Does the entity hold the following California contractor's license(s), which is(are) current active, and in good standing with the California Contractor's State License Board?

License Classification: General Building Contractor or HVAC Contractor

License Code(s): B or C-20

YES ☐ NO ☐

(NOTE -The entity submitting this qualification questionnaire must be the holder of the requisite license. If the entity submitting is a Joint Venture, the joint venture must hold the license or have applied for the license(s).

B. If yes, provide the following information about the entity's contractor's license:

1. Name of license holder exactly as on file with the California Contractor's State License Board:

_____

2. License Classification(s): _____

3. License Code(s): _____

4. License Number(s): _____

5. Date(s) Issued: _____

6. Expiration Date(s): _____

C. Can you truthfully state that the entity's contractor's license has not been suspended or revoked by the California Contractor's State License Board within the last 5 years?

YES ☐ NO ☐

D. Are the Contractor and all Subcontractors, regardless of tier, currently registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5 and 1771.1, or will Contractor and all Subcontractors be registered at time of bid?

YES ☐ NO ☐

2. SURETY

Prospective Bidder shall obtain and submit the Surety Declaration in the form shown below, signed by an authorized representative of the surety proposed to be used for this project and notarized.

A. Is the surety to be used for this project authorized by the Insurance Commissioner to transact business in the State of California as an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120)?

YES ☐ NO ☐

B. Is the entity able to obtain bonding for $500,000?

YES ☐ NO ☐

C. Can the entity truthfully state that **no** surety has paid out any monies on claims on the performance bond issued by a surety for the benefit of the Owner arising out of the construction activities of the entity within the last 5 years?

YES ☐ NO ☐

D. Can the entity truthfully state that **no** surety has paid out any monies on claims on the payment bond issued by a surety for the benefit of the Owner arising out of the construction activities of the entity within the last 5 years?

YES ☐ NO ☐

D. Surety Declaration:

The undersigned declares under penalty of perjury that the bonding capacity indicated above is true and correct and that this declaration was executed in

_____ (County), _____, (State)

on _____ (Date).

_____
(Signature)

_____
(Name and Title - Printed or Typed)

_____
(Representing [Surety Name])

_____
(Entity Name)

_____
(Address)

_____
(City, State, Zip Code)

_____ _____
(Telephone Number) (Facsimile Number)

_____
(E-mail)

(ATTACH NOTARIZATION of SURETY REPRESENTATIVE'S SIGNATURE)

3. INSURER

Prospective Bidder shall obtain and submit the Insurance Declaration in the form shown below, signed by an authorized representative of its insurer and notarized. (If more than one insurer, submit a completed form for each insurer).

A. Is the entity able to obtain insurance in the following limits for this construction contract?

YES ☐ NO ☐

Commercial Form General Liability Insurance* - Limits of Liability	Minimum Requirement
Each Occurrence - Combined Single Limit for Bodily Injury and Property Damage	$1,000,000
Products - Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$1,000,000
General Aggregate	$2,000,000

Business Automobile Liability Insurance* - Limits of Liability	Minimum Requirement
Each Accident - Combined Single Limit for Bodily Injury and Property Damage	$1,000,000

Workers Compensation and Employer's Liability Insurance**	Minimum Requirement
Workers Compensation:	(as required by Federal and State of California law)
Employer's Liability:	
Each Employee	$1,000,000
Each Accident	$1,000,000
Each Policy	$1,000,000

*This insurance must be (i) issued by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's) or (ii) guaranteed, under terms consented to by the University (such consent to not be unreasonably withheld), by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's). Further, the deductible, or retained limit, for each coverage shall not be more than $100,000.

**This insurance must be issued by companies (i) that have a Best rating of B+ or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's); or (ii) that are acceptable to the University

Insurance Declaration:

PROVIDE THIS DECLARATION TO YOUR INSURANCE CARRIER FOR COMPLETION. DO NOT HAVE THE CARRIER SUBMIT THIS DECLARATION DIRECTLY TO THE UNIVERSITY.

The undersigned declares under penalty of perjury that below named insurer is currently willing to provide the insurance listed above and that this declaration was executed in

_____ (County), _____, (State)

on _____ (Date).

_____
(Signature)

_____
(Name and Title - Printed or Typed)

_____
(Representing [Insurer Name])

_____
(Entity Name)

_____
(Address)

_____
(City, State, Zip Code)

_____ _____
(Telephone Number) (Facsimile Number)

_____
(E-mail)

(ATTACH NOTARIZATION of INSURER REPRESENTATIVE'S SIGNATURE)

4. CONSTRUCTION EXPERIENCE (IN COMPARABLE PROJECTS)

Has the entity successfully ***completed*** at least 1 comparable projects within the last 5 years, all of which were completed in the United States of America?

YES ☐ NO ☐

A. Subject to the above qualifications, a "comparable project" is defined as having ALL of the following:

1. A contract cost at the bid date of at least $150,000 ; AND

2. Constructed by the entity submitting this Qualification Questionnaire. (Note: Projects completed by present employees of the Bidder for former employers are ***not acceptable***.)

B. An entity wishing to use a predecessor business to satisfy qualification requirements must demonstrate with written information submitted with this Qualification Questionnaire that it is substantially the same organization (in terms of who is managing Bidder) as the predecessor business. An entity may meet the requirement of the preceding sentence by demonstrating that the same person is the qualifying individual (under California Contractor's License Law) for:

1. Contractor's license of Bidder which shall be the same type as license required for the Contract; and

2. Contractor's license of predecessor business which shall also be the same type as the license required for the Contract.

COMPLETE AND SUBMIT THE FOLLOWING PROJECT DATA SHEET FOR EACH COMPARABLE PROJECT SUBMITTED AS EVIDENCE OF THE ENTITY'S EXPERIENCE. SUBMIT NOT MORE OR LESS THAN THE NUMBER PROJECT DATA SHEETS CORRESPONDING TO THE REQUIRED NUMBER OF COMPARABLE PROJECTS LISTED ABOVE.

PROJECT DATA SHEET

(A separate sheet must be prepared for each project submitted.)

1. Project Name: _____
2. Project Location (including full address, if any):

   _____

   City: _____ State: _____ Zip: _____
3. Project Description: _____
4. Construction Type: _____
5. Size (gross sq. ft.): _____
6. Business name of entity which constructed this project:

   _____
7. Did your entity act as a General Contractor during the entire project?

   YES ☐ NO ☐
8. Cost at Bid: $_____
9. Project Owner Name: _____
10. Project Owner Address: _____

    City: _____ State:_____ _____ Zip:_____ _____

    (Telephone Number) _____ (Facsimile Number) _____

    E-mail Address-optional: _____
11. Was the project characterized by the item(s) listed in Questions 4(A)

    YES ☐ NO ☐

(Attach additional pages with other pertinent project information as necessary.)

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, ,

as Principal, and _____, as Surety, are held and firmly bound unto THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, hereinafter called THE REGENTS, in the sum of 10% of the Lump Sum Base Bid amount for payment of which in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, Principal has submitted a Bid for the work described as follows:

_____

_____

NOW, THEREFORE, if Principal shall not withdraw said Bid within the time period specified after the Bid Deadline, as defined in the Bidding Documents, or within 60 days after the Bid Deadline if no time period be specified, and, if selected as the apparent lowest responsible Bidder, Principal shall, within the time period specified in the Bidding Documents, do the following:

(1) Enter into a written agreement, in the prescribed form, in accordance with the Bid.

(2) File two bonds with THE REGENTS, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by the Bidding Documents.

(3) Furnish certificates of insurance and all other items as required by the Bidding Documents.

In the event of the withdrawal of said Bid within the time period specified, or within 60 days if no time period be specified, or the disqualification of said Bid due to failure of Principal to enter into such agreement and furnish such bonds, certificates of insurance, and all other items as required by the Bidding Documents, if Principal shall pay to THE REGENTS an amount equal to the difference, not to exceed the amount hereof, between the amount specified in said Bid and such larger amount for which THE REGENTS procure the required work covered by said Bid, if the latter be in excess of the former, then this obligation shall be null and void, otherwise to remain in full force and effect.

In the event suit is brought upon this bond by THE REGENTS, Surety shall pay reasonable attorneys' fees and costs incurred by THE REGENTS in such suit.

IN WITNESS WHEREOF, we have hereunto set our hands this _____ day of _____, 20_____.

Principal: _____
(Name of Firm)

By: _____
(Signature)

_____
(Printed Name)

Title: _____

Surety: _____
(Name of Firm)

By: _____
(Signature)

_____
(Printed Name)

Title: _____

Address for Notices:

_____

_____

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

AGREEMENT

THIS AGREEMENT IS

made as of the _____ day of {_____}, 20{___},

between University:	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
whose address is:	5200 NORTH LAKE ROAD, MERCED, CA 95343
and Contractor:	{CONTRACTOR'S NAME}
whose address is:	{ADDRESS}
for the Project:	HOUSING PERIODIC FIRE DAMPER TESTING
University's Representative is:	FRAN TELECHEA
whose address is:	5200 NORTH LAKE ROAD, MERCED CA 95343

University and Contractor hereby agree as follows:

ARTICLE 1 - THE WORK. Contractor shall provide all services, materials, tools, equipment, and labor required to perform and complete all work described in the Contract Documents (the "Work").

ARTICLE 2 - CONTRACT DOCUMENTS. Contract Documents" means Request for Bid, Bid Form, this Agreement, General Conditions, Supplementary Conditions, Exhibits, Specifications, List of Drawings, Drawings, Addenda numbers _____, Notice to Proceed, Change Orders, and Notice of Completion.

ARTICLE 3 - THE CONTRACT SUM. Subject to the provisions of the Contract Documents, University will pay to Contractor, for the performance of the Work, {$CONTRACT SUM} (the "Contract Sum").

ARTICLE 4 - CONTRACT TIME. Contractor shall commence the Work on the date specified in the Notice to Proceed and fully complete the Work within {CONTRACT TIME} calendar days (the "Contract Time"). If Contractor is delayed in the completion of the Work by conditions beyond its control, a Change Order may be issued to make any necessary adjustment of the Contract Time. If the delay is an unreasonable delay caused by University, the Contract Sum may also be adjusted by Change Order.

ARTICLE 5 - LIQUIDATED DAMAGES. If Contractor fails to complete the Work within the Contract Time, Contractor shall pay to University, as liquidated damages and not as a penalty, the sum of $1,500 for each day after the expiration of the Contract Time that the Work remains incomplete. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of $750 per day. University and Contractor agree that if the Work is not completed within the Contract Time, University's damages would be extremely difficult or impracticable to determine and that the aforesaid amount is a reasonable estimate of and a reasonable sum for such damages. University may deduct any liquidated damages due from Contractor from any amounts otherwise due to Contractor under the Contract Documents. This provision shall not limit any right or remedy of University in the event of any other default of Contractor other than failing to complete the Work within the Contract Time. This provision shall not be applicable nor act as a limitation upon University if Contractor abandons the Work. In such event, Contractor shall be liable to University for all losses and damages incurred by University.

THIS AGREEMENT is entered into by University and Contractor as of the date set forth above.

CONTRACTOR:	UNIVERSITY:
_____ (Name of Firm)	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
a _____ (Type of Organization)	UNIVERSITY OF CALIFORNIA, MERCED
By: _____ (Signature)	By: _____ (Signature)
_____ (Printed Name)	MICHAEL J. MCLEOD (Printed Name)
_____ (Title)	CHIEF OPERATING OFFICER/VICE CHANCELLOR (Title)

California Contractor's License(s):

_____
(Name of Licensee)

_____
(Classification and License Number)

_____
(Expiration Date)

_____
(Employer Identification Number)

Attach notary acknowledgment for all signatures of Contractor. If signed by other than the sole proprietor, a general partner or corporate officer, attach original notarized Power of Attorney or Corporate Resolution.

GENERAL CONDITIONS

ARTICLE 1 - SUBCONTRACTORS. Contractor shall provide to University, prior to commencement of the Work, a list of all Subcontractors to be used to perform the Work. No substitution of Subcontractors shall be made without University's written consent.

ARTICLE 2 - CHANGES IN THE WORK. University may order changes in the Work. Contractor shall not make any change in the Work or be entitled to any adjustment of the Contract Sum or Contract Time, except as provided in a written Field Order or Change Order signed by University. A Field Order may be issued by University without Contractor's signature to order Contractor to perform Work whether or not it represents a change in the Work. If there is a change in the Work, a Change Order is used to modify the Contract including but not limited to an adjustment of the Contract Sum and/or Contract Time. Any adjustment to the Contract Sum and/or Contract Time shall be in accordance with the provisions of the Contract.

ARTICLE 3 - PAYMENT. University agrees to pay monthly to Contractor an amount equal to the sum of the following:

.1 Cost of the Work in permanent place as of the date of the Contractor's Application for Payment.
.2 Plus cost of materials not yet incorporated in the Work, subject to limitations below.
.3 Less amounts previously paid.

University reserves the right to withhold payments for Defective Work, stop notices, third party claims, failure to pay Subcontractors or suppliers, damages, disputed amounts and amounts owing by Contractor to University, or as otherwise provided by the Contract Documents.

Subject to the foregoing, University will make payment within 20 days after receipt of the approved Application for Payment with supporting data required by University.

ARTICLE 4 - RESOLUTION OF CLAIMS. Unresolved claims between University and Contractor, for which prompt written notice has been given followed by adequate supporting data within a reasonable time, shall be settled by an informal conference to meet and confer for settlement of the issues in dispute, followed by mediation as allowed by law, or, if agreed to by both parties, by arbitration conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. Unless otherwise directed by University, Contractor shall proceed with the Work regardless of any dispute or claim.

ARTICLE 5 - PROTECTION OF PERSONS AND PROPERTY. Contractor shall take necessary precautions for the safety and protection of persons and property in the areas of the Work.

ARTICLE 6 - USE OF SITE AND CLEAN UP. Contractor shall confine its operations to areas permitted by the Contract Documents and keep the Project site clean and free from unreasonable accumulation of excess dirt, materials, or waste caused by Contractor.

ARTICLE 7 - INDEMNIFICATION BY CONTRACTOR. Contractor shall indemnify, defend, and hold University harmless from and against all losses resulting from liability for damages due to bodily injury, personal injury, and property damage caused by a negligent act, omission, or willful misconduct of Contractor or any of its Subcontractors, agents, or employees.

ARTICLE 8 - INSURANCE. Contractor shall furnish and maintain insurance in the coverages and amounts specified in the Supplementary Conditions. Contractor shall require all Subcontractors to maintain Worker's Compensation and Employer's Liability insurance. Certificates for all required insurance shall be completed and submitted to University prior to University signing the Agreement.

ARTICLE 9 - BENEFICIAL OCCUPANCY AND SUBSTANTIAL COMPLETION.
University reserves the right, at its option and convenience, to occupy or otherwise make use of all or any part of the Work ("Beneficial Occupancy") prior to completion of the Work and upon 10 days' written notice to Contractor. In such event, Contractor shall continue to maintain all insurance required under this Contract. At the request of the Contractor, the University's Representative will review the progress of the Work and determine the date when the Work is complete and in accordance with the Contract Documents

except only for completion of minor items which do not impair University's ability to occupy and fully utilize the Work for its intended purpose (“Substantial Completion”).

ARTICLE 10 - CORRECTION OF DEFECTIVE WORK AND GUARANTEE TO REPAIR PERIOD. "Defective Work" means any Work or portion thereof which is defective or otherwise does not conform with the requirements of the Contract Documents. "Guarantee to Repair Period" means a period of 1 year after the date of Substantial Completion of the Work or any longer period specified in the Contract Documents. Contractor shall, within 10 days after receipt of notice from University, (1) correct any Defective Work to University's satisfaction and (2) replace any other property which is damaged by the correction of Defective Work.

ARTICLE 11 - TERMINATION. University reserves the right to terminate this Contract for violation of any provisions herein or for performance of Work which remains uncorrected or unacceptable to University. University may also elect to terminate this contract for convenience upon written notice to Contractor. If the contract is terminated for convenience the Contractor waives all claims for loss of anticipated profits and damages and agrees that its sole and exclusive remedy is payment of the amount of the Contract Sum allocable to the portion of the Work properly performed as of the date of termination, less sums previously paid, plus any proven losses with respect to materials and equipment directly resulting from such termination, plus reasonable demobilization costs, plus reasonable costs of preparing a statement of costs, expenses, and losses in connection with such termination.

ARTICLE 12 - CONSTRUCTION BY UNIVERSITY OR SEPARATE CONTRACTORS. University may perform work on the Project site with University's own forces or with separate contractors.

ARTICLE 13 - STATUTORY REQUIREMENTS AND POLICIES. Contractor shall perform the Work in accordance with laws, statutes, the most recent building codes, ordinances, rules, regulations, lawful orders, and policies of all public authorities having jurisdiction over Contractor, University, or the Project, including, without limitation, the following:

1. Nondiscrimination. Contractor agrees as follows during the performance of the Work: Contractor shall provide equal treatment to, and shall not willfully discriminate against or allow harassment of any employee or applicant for employment on the basis of: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008 and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). Contractor will also take affirmative action to ensure that any such employee or applicant for employment is not discriminated against on any of the bases identified above. Such equal treatment shall apply, but not be limited to the following: employment; upgrade; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor also agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that qualified applicants will receive consideration for employment without regard to: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008 and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). For purposes of this provision: (1) "Pregnancy" includes pregnancy, childbirth, and medical conditions related to pregnancy and childbirth; and (2) "Service in the uniformed services" includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services.

2. Prevailing Wages. Contractor shall comply and shall ensure that all Subcontractors comply with prevailing wage law pursuant to the State of California Labor Code, including but not limited to Section 1720 et seq. of the State of California Labor Code. Compliance with these sections is required by this Contract. The Work under this Contract is subject to compliance monitoring and enforcement by the State of California Department of Industrial Relations.

   The State of California Department of Industrial Relations has ascertained the general prevailing per diem wage rates in the locality in which the Work is to be performed for each craft, classification, or type of worker required to perform the Work. A copy of the general prevailing per diem wage rates will be on file at University's principal facility office and will be made available to any interested party upon request. Contractor shall post a copy of the general prevailing per diem wage rates as well as job site notices as prescribed by regulation at the job site. By this reference, such schedule is made part of the Contract Documents. Contractor shall pay not less than the prevailing wage rates, as specified in the schedule and any amendments thereto, to all workers employed by Contractor in the execution of the Work. Contractor shall cause all subcontracts to include the provision that all Subcontractors shall pay not less than the prevailing rates to all workers employed by such Subcontractors in the execution of the Work. Contractor shall forfeit to University, as a penalty, not more than $200 for each calendar day or portion thereof for each worker that is paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any portion of the Work done by Contractor or any Subcontractor. The amount of this penalty shall be determined pursuant to applicable law. Such forfeiture amounts may be deducted from the Contract Sum or sought directly from the surety under its Performance Bond if there are insufficient funds remaining in the Contract Sum. Contractor shall also pay to any worker who was paid less than the prevailing wage rate for the work or craft for which the worker was employed for any portion of the Work, for each day, or portion thereof, for which the worker was paid less than the specified prevailing per diem wage rate, an amount equal to the difference between the specified prevailing per diem wage rate and the amount which was paid to the worker. Review of any civil wage and penalty assessment shall be made pursuant to section 1742 of the California Labor Code.

3. Payroll Records. Contractor shall, and cause all Subcontractors to, keep accurate payroll records and comply with all requirements of State of California Labor Code Section 1776.

4. Apprentices. Contractor shall, and cause all Subcontractors to, comply with all requirements of State of California Labor Code Sections 1777.5, 1777.6, and 1777.7 and State of California Code of Regulations, Title 8, Section 200, and the applicable sections that follow, regarding apprentices. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and written apprentice agreements under which the apprentice is training and in accordance with prevailing wage law pursuant to the Labor Code, including but not limited to Section 1777.5. The Contractor bears responsibility for compliance with this section for all apprenticeable occupations.

5. Work Day. Contractor shall not permit any worker to labor more than 8 hours during any 1 day or more than 40 hours during any 1 calendar week, except as permitted by law and in accordance with conditions provided by law. Contractor shall forfeit to University, as a penalty, $25.00 for each worker employed in the execution of the Work by Contractor or any Subcontractor, for each day during which each worker is required or permitted to work more than 8 hours in any 1 day and 40 hours in any 1 calendar week in violation of the provisions of any law of the State of California. Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the actual hours worked each day and each calendar week by each worker employed on the Project, which record shall be kept open at all reasonable hours to the inspection of University, its officers and agents, and to the inspection of the appropriate enforcement agency of the State of California.

6. Patient Health Information. Contractor acknowledges that its employees, agents, subcontractors, consultants and others acting on its behalf may come into contact with Patient Health Information ("PHI") while performing work at the Project Site. This contact is most likely rare and brief (e.g. walking through a clinic where patient files may be visible, overhearing conversations between physicians while working or touring a hospital, noticing a relative or acquaintance receiving treatment in a University facility, etc.). Contractor shall immediately notify University Representative of any such contact. Any and all forms of PHI should not be examined closer, copied, photographed, recorded in

any manner, distributed or shared. Contractor will adopt procedures to ensure that its employees, agents and subcontractors refrain from such activity. If Contractor, its employees, agents or subcontractors do further examine, copy, photograph, record in any manner, distribute or share this information, Contractor will report such actions immediately to the University Representative. Contractor will immediately take all steps necessary to stop any such actions and will ensure that no further violations of this contractual responsibility will occur. Contractor will report to University Representative within five (5) days after Contractor gives University Representative notice of the event/action of the steps taken to prevent future occurrences.

7. UC Fair Wage. Contractor shall pay all persons providing construction services and/or any labor on site, including any University location, no less than the UC Fair Wage (defined as $13 per hour as of 10/1/15, $14 per hour as of 10/1/16, and $15 per hour as of 10/1/17) and shall comply with all applicable federal, state and local working condition requirements.

ARTICLE 14 - RIGHT TO AUDIT. University and entities designated by University shall have the right to inspect, copy, and audit all books and records of Contractor relating to the Work. Contractor shall preserve all such books and records for a period of at least 3 years after the date of final payment to Contractor.

END OF GENERAL CONDITIONS

SUPPLEMENTARY CONDITIONS

1. MODIFICATION OF GENERAL CONDITIONS ARTICLE 3 – PAYMENT

Article 3 of the General Conditions is modified as follows:

University agrees to pay monthly to Contractor an amount equal to 95% of the sum of the following:

.1 Cost of the Work in permanent place as of the date of the Contractor's Application For Payment.
.2 Plus cost of materials not yet incorporated in the Work, subject to limitations below.
.3 Less amounts previously paid.

University reserves the right to withhold payments for Defective Work, stop notices, third party claims, failure to pay Subcontractors or suppliers, damages, disputed amounts and amounts owing by Contractor to University, or as otherwise provided by the Contract Documents.

Subject to the foregoing, University will make payment within 20 days after receipt of an approved Application for Payment with supporting data required by University.

2. MODIFICATION OF GENERAL CONDITIONS ARTICLE 8 – INSURANCE

Article 8 of the General Conditions is modified as follows:

Contractor shall furnish and maintain insurance in the amounts below.

The insurance required by paragraph 1 and 2 shall be (i) issued by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's) or (ii) guaranteed, under terms consented to by the University (such consent to not be unreasonably withheld), by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's). Such insurance shall be written for not less than the following:		Minimum Requirement
1.	Commercial General Liability Insurance-Limits of Liability	
	Each Occurrence-Combined Single Limit for Bodily Injury and Property	$1,000,000
	Products-Completed Operations Aggregate	$2,000,000
	Personal and Advertising Injury	$1,000,000
	General Aggregate	$2,000,000
	Commercial General Liability Insurance is subject to terms no less broad than the Insurance Services Office's (ISO) form CG 0001 (2004 or later edition), or a substitute form providing coverage at least as broad as the ISO form specified, covering all Work done by or on behalf of Contractor and providing insurance for bodily injury, wrongful death, personal injury, property damage, and contractual liability.	

2.	Business Automobile Liability Insurance-Limits of Liability Each Accident-Combined Single Limit for Bodily Injury and Property Damage	$1,000,000
	Business Automobile Liability Insurance is subject to terms no less broad than the Insurance Services Office's (ISO) form CA 0001 (1990 or later edition), or a substitute form providing coverage at least as broad as the ISO form specified, covering owned, hired, leased, and non-owned automobiles used by or on behalf of Insured, and providing liability insurance for bodily injury and property damage arising from the use or operation of such auto(s) with a minimum combined single limit of not less than $1,000,000 per accident.	

The insurance required by paragraphs 1 and 2 shall provide as follows: The Regents of the University of California, The University of California, University, and each of their Representatives, consultants, officers, agents, employees, and each of their Representative's consultants, regardless of whether or not identified in the Contract Documents or to the Contractor in writing, will be included as additional insureds on the Contractor's General Liability insurance for and relating to the Work to be performed by the Contractor and Subcontractors pursuant to additional insured endorsement at least as broad as the CG 20 10 07 04 in combination with the CG 20 37 07 04 (or earlier versions of CG 20 10 and CG 20 37 or Form B - CG 20 10 11 85 by itself), as published by Insurance Services Offices (ISO) and shall be included with Certificates of Insurance). This requirement shall not apply to Worker's Compensation and Employer's Liability insurance.

Worker's Compensation and Employer's Liability Insurance shall be issued by companies (i) that have a Best rating of B+ or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's); or (ii) that are acceptable to the University. Such insurance shall be written for not less than the following:

3.	WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY –	Minimum Requirement
	Worker's Compensation:	(as required by Federal and State of California law)
	Employer's Liability:	
	Each Employee	$1,000,000
	Each Accident	$1,000,000
	Policy Limit	$1,000,000

3. PAYMENT BOND AND PERFORMANCE BOND

For Contracts of $25,000 or more, Contractor shall furnish a Payment Bond in the amount of the Contract Sum.

For Contracts of $50,000 or more, Contractor shall also furnish a Performance Bond in the amount of the Contract Sum.

Each bond shall be effective as of the date of the Agreement, in the form of attached Exhibits, furnished by the University, and issued by a surety approved by University. Surety Companies used by Contractor shall be, on the date the Contract is signed by University, an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120).

5. MISCELLANEOUS PROVISIONS

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same Agreement. The counterparts of this Agreement may be executed via a digital signature process and shall have the same force and effect as the use of a manual signature. The University reserves the right to reject any digital signature unless it is unique to the person using it, capable of verification, created by public key cryptography or signature dynamics, and meets all requirements of California Government Code § 16.5 and California Code of Regulations 22000 through 22005.

END OF SUPPLEMENTARY CONDITIONS

EXHIBITS TABLE OF CONTENTS

EXHIBIT 1 – CERTIFICATE OF INSURANCE

DATE ISSUED:

BROKER/AGENT	COMPANIES AFFORDING COVERAGE
	COMPANY **A**
	COMPANY **B**
NAMED INSURED	COMPANY **C**
	COMPANY **D**

COVERAGES

This is to certify that policies of insurance listed below have been issued to the insured named above for the policy period indicated. This certificate or verification of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate or verification of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE (M/D/Y)	POLICY EXP. DATE (M/D/Y)		LIMITS	DEDUCTIBLE
	GENERAL LIABILITY ☐ COMMERCIAL FORM ☐ CLAIMS MADE ☐ OCCURRENCE ☐ SEVERABILITY OF INTEREST CLAUSE ☐ CROSS LIABILITY CLAUSE				GENERAL AGGREGATE	$	
					PRODUCTS/COMPLETED OPERATIONS AGGREGATE	$	
					PERSONAL & ADVERTISING INJURY	$	
					EACH OCCURRENCE	$	**$**
					FIRE DAMAGE (ANY ONE FIRE)	$	
					MEDICAL EXPENSE (ANY ONE PERSON)	$	
	AUTOMOBILE LIABILITY ☐ ANY AUTO (CODE 1) ☐ ALL OWNED AUTOS (CODE 2) ☐ SCHEDULED AUTOS (CODE 7) ☐ HIRED AUTOS (CODE 8) ☐ NON-OWNED AUTOS (CODE 9) ☐ OTHER				CSL	$	
					BODILY INJURY (PER PERSON)	$	
					BODILY INJURY (PER ACCIDENT)	$	
					PROPERTY DAMAGE	$	**$**
	EXCESS LIABILITY ☐ UMBRELLA FORM ☐ OTHER ☐ CLAIMS MADE OCCURRENCE				EACH OCCURRENCE **$**	AGGREGATE **$**	
	PROFESSIONAL LIABILITY* ☐ CLAIMS MADE ☐ OCCURRENCE				EACH OCCURRENCE **$**	AGGREGATE **$**	
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY*				**AS REQUIRED BY FEDERAL AND CALIFORNIA LAW**		

SPECIAL PROVISIONS:

*Special Provision #1 and #2 below do not apply to this coverage.

1. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ITS OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, REPRESENTATIVES, AND REPRESENTATIVE'S CONSULTANTS ARE INCLUDED AS ADDITIONAL INSURERS BUT ONLY IN CONNECTION WITH **907016 Lantern Café Upgrade**
2. THIS INSURANCE SHALL BE PRIMARY INSURANCE AS RESPECTS THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ITS OFFICERS, AGENTS, AND EMPLOYEES. ANY INSURANCE OR SELF-INSURANCE MAINTAINED BY THE REGENTS OF THE UNIVERSITY OF CALIFORNIA SHALL BE EXCESS OF AND NONCONTRIBUTORY WITH THIS INSURANCE.
3. THE PROVISIONS UNDER PARAGRAPHS (1&2) OF THIS SECTION, "SPECIAL PROVISIONS", SHALL APPLY TO CLAIMS, COSTS, INJURIES OR DAMAGES BUT ONLY IN PROPORTION TO AND TO THE EXTENT SUCH CLAIMS, COSTS, INJURIES, OR DAMAGES ARE CAUSED BY OR RESULT FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE NAMED INSURED.
4. SHOULD ANY OF THE INSURANCE PROGRAMS DESCRIBED HEREIN BE MATERIALLY MODIFIED OR CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL THIRTY (30) DAYS (TEN [10] DAYS FOR NON-PAYMENT OF PREMIUM) WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED BELOW.

CERTIFICATE HOLDER: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA.
FORWARD TO:
Design & Construction
UNIVERSITY OF CALIFORNIA, MERCED
5200 N. Lake Rd
Merced, CA 95343

THE UNDERSIGNED CERTIFIES THAT HE/SHE IS AUTHORIZED TO SIGN THIS CERTIFICATE AND THAT THE SPECIAL PROVISIONS DESCRIBED HEREIN HAVE BEEN MADE A PART OF THE POLICY(IES) SHOWN ABOVE.

AUTHORIZED REPRESENTATIVE

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to

_____ as Principal a contract dated the ___ day of _____,___,
(the "Contract") for the work described as follows:

HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

AND WHEREAS, Principal is required to furnish a bond in connection with the Contract to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

NOW, THEREFORE, we, the undersigned Principal and

_____
as Surety, are held and firmly bound unto The Regents in the sum of

_____ dollars ($_____), for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, or its subcontractors shall fail to pay any of the persons named in State of California Civil Code Section9100, or amounts due under the State of California Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the State of California Unemployment Insurance Code with respect to such work and labor, that Surety will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall become and be null and void.

This bond shall inure to the benefit of any of the persons named in State of California Civil Code Section 9100 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Surety, for value received, hereby expressly agrees that no extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder, shall in any way affect the obligation of this bond; and it does hereby waive notice of any such extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder.

Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with the Contract; and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the other.

In the event suit is brought upon this bond, the parties not prevailing in such suit shall pay reasonable attorneys' fees and costs incurred by the prevailing parties in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this ___ day of _____,___.

Principal: _____ (Name of Firm)

By: _____ (Signature)

_____
(Printed Name)

Title: _____
Surety: _____
(Name of Firm)

By: _____ (Signature)

_____
(Printed Name)

Title: _____

Address for Notices:

_____

_____

_____

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

Bond No.:_____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to _____ as Principal a contract dated the _____ day of _____, 20 (the "Contract"), which Contract is by this reference made a part hereof, for the work described as follows:

HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

AND WHEREAS, Principal is required to furnish a bond in connection with the Contract, guaranteeing the faithful performance thereof;

NOW, THEREFORE, we, the undersigned Principal and _____ _____ as Surety are held and firmly bound unto The Regents in the sum of $_____, to be paid to The Regents or its successors and assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, shall promptly and faithfully perform the covenants, conditions, and agreements of the Contract during the original term and any extensions thereof as may be granted by The Regents, with or without notice to Surety, and during the period of any guarantees or warranties required under the Contract, and shall also promptly and faithfully perform all the covenants, conditions, and agreements of any alteration of the Contract made as therein provided, notice of which alterations to Surety being hereby waived, on Principal's part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify, defend, protect, and hold harmless The Regents as stipulated in the Contract, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and effect.

No extension of time, change, alteration, modification, or addition to the Contract, or of the work required thereunder, shall release or exonerate Surety on this bond or in any way affect the obligation of this bond; and Surety does hereby waive notice of any such extension of time, change, alteration, modification, or addition.

Whenever Principal shall be and declared by The Regents to be in default under the Contract, Surety shall promptly remedy the default, or shall promptly:

1. Undertake through its agents or independent contractors, reasonably acceptable to The Regents, to complete the Contract in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages, or, at Surety's election, or, if required by The Regents.

2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and, upon determination by The Regents of the lowest responsible bidder, arrange for a contract between such bidder and The Regents and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Sum, and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages; but, in any event, Surety's total obligations hereunder shall not exceed the amount set forth in the third paragraph hereof. The term "balance of the Contract Sum," as used in this paragraph, shall mean the total amount payable by The Regents to the Principal under the Contract and any amendments thereto, less the amount paid by The Regents to Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than The Regents or its successors or assigns.

Surety may join in any arbitration proceedings brought under the Contract and shall be bound by any arbitration award.

In the event suit is brought upon this bond by The Regents, Surety shall pay reasonable attorney's fees and costs incurred by The Regents in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this _____ day of _____ _____, 20 .

Principal:	_____	Surety:	_____
	(Name of Firm)		(Name of Firm)
By:	_____	By:	_____
Title:	_____	Title:	_____
			_____

Address for Notices:

_____

_____

_____

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

APPLICATION FOR PAYMENT

Number: _____ Period to: _____

TO UNIVERSITY: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, MERCED, UNIVERSITY OF CALIFORNIA, 5200 N. LAKE ROAD, MERCED, CA 95344 AND UNIVERSITY'S REPRESENTATIVE:

FROM CONTRACTOR: _____
ADDRESS: _____
PROJECT NAME: HOUSING PERIODIC FIRE DAMPER TESTING
PROJECT NUMBER: _____
FACILITY: University of California, Merced
CONTRACT DATE: _____
APPLICATION DATE: _____

CHANGE ORDER SUMMARY: Additions Deductions

Change Orders approved in previous months: Total: _____

Change Orders approved this month:

Number:	Date Approved:	
_____	_____	
_____	_____	
_____	_____	
	Total:	_____

NET CHANGE BY CHANGE ORDERS: _____

Application is made for payment under the Contract as shown below and in Schedule 1 attached hereto:

1. ORIGINAL CONTRACT SUM	$_____	
2. NET CHANGE BY CHANGE ORDERS		$_____
3. CONTRACT SUM TO DATE (Line 1 ± Line 2)		$_____
4. TOTAL AMOUNT COMPLETED TO DATE (Column E on Schedule 1)	$_____	
5. RETENTION: 5% of Completed Work (Column H on Schedule 1)*	$_____	
a. Current Value of Securities Deposited in Escrow	$_____	
b. Current Value of Retention Deposited in Escrow	$_____	
c. Retention Held by University	$_____	
Current Retention Value (a + b + c)	$_____	
6. TOTAL EARNED LESS RETENTION (Line 4 less Line 5)		$_____
7. TOTAL AMOUNT PREVIOUSLY PAID	$_____	
8. CURRENT PAYMENT DUE (Line 6 less Line 7)		$_____
9. BALANCE TO FINISH, PLUS RETENTION (Line 3 less Line 6)	$_____	

*Pursuant to Article 9.2.2 of the General Conditions.

The undersigned Contractor hereby represents and warrants to University that all Work, for which Certificates For Payment have previously been issued and payment received from University, is free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, any Subcontractor, and any other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment related to the Work.

The following Schedules are attached and incorporated herein, and made a part of this Application For Payment:

Schedule 1 Cost Breakdown Schedule
Schedule 2 Certification of Current Market Value of Securities in Escrow in Lieu of Retention
Schedule 3 List of Subcontractors
Schedule 4 Declaration of Releases of Claims

_____
(Contractor)

By: _____
(Name)

_____
(Title)

DECLARATION

I, _____, hereby declare that I am the

_____ of Contractor submitting this Application For Payment; that I am duly authorized to execute and deliver this Application For Payment on behalf of Contractor; and that all information set forth in this Application For Payment and all Schedules attached hereto are true, accurate, and complete as of its date.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was subscribed at

_____, _____, State of _____

on _____, 20___.

_____
(Signature)

_____
(Print Name)

HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project No.:

PROJECT NAME: HOUSING PERIODIC FIRE DAMPER TESTING

PROJECT NUMBER: _____

FACILITY: University of California, Merced

CONTRACT DATE: _____

APPLICATION NUMBER: _____

APPLICATION DATE: _____

PERIOD TO: _____

CONTRACTOR: _____

SCHEDULE 1

TO

APPLICATION FOR PAYMENT

COST BREAKDOWN

A ITEM NO.	B DESCRIPTION OF WORK ACTIVITY OR OTHER ITEM	C SCHEDULED VALUE	D % COMPLETE TO DATE	E TOTAL AMOUNT COMPLETED TO DATE (C x D)	F TOTAL AMOUNT COMPLETED ON PRIOR APPLICATION FOR PAYMENT	G AMOUNT OF THIS APPLICATION (E - F)	H RETENTION (5% x E)
001	Bonds/Insurance						
002	Mobilization						
003	Submittals						
004	Shop Drawings						
005							
006	As-built Update						
007	Closeout Documents						
008	Punchlist						
009	Warranty						
010	Commissioning/ Start Up						

PROJECT NAME: HOUSING PERIODIC FIRE DAMPER TESTING

CONTRACTOR: _____

PROJECT NUMBER: _____

APPLICATION NUMBER: _____

SCHEDULE 2
TO
APPLICATION FOR PAYMENT

CERTIFICATION OF CURRENT MARKET VALUE
OF SECURITIES IN ESCROW IN LIEU OF RETENTION

As of _____, 20___ (not earlier than 5 days prior to the date of the Application For Payment of which this certification is a part), the aggregate market value of securities on deposit in Escrow

Account No. _____ with _____
(Escrow Agent)

is _____ Dollars ($_____).

_____	_____
(Escrow Agent)	(Contractor)
By: _____	_____
(Name)	(Name)
_____	_____
(Title)	(Title)
Date: _____	Date: _____

NOTE: Notary acknowledgment for Contractor and Escrow Agent must be attached.

PROJECT NAME: HOUSING PERIODIC FIRE DAMPER TESTING

CONTRACTOR: _____

PROJECT NUMBER: _____

APPLICATION NUMBER: _____

SCHEDULE 3
TO
APPLICATION FOR PAYMENT

LIST OF SUBCONTRACTORS

Subcontractors listed below are all Subcontractors furnishing labor, services, or materials for the period referred to in the Application For Payment referenced above, of which this Schedule 3 is a part:

Name of Subcontractor	Subcontracted Work Activity	Date Work Activity Completed

_____
(Contractor)

By: _____

(Name)

_____
(Title)

Date:_____

PROJECT NAME:HOUSING PERIODIC FIRE DAMPER TESTING

CONTRACTOR: _____

PROJECT NUMBER: _____

APPLICATION NUMBER: _____

SCHEDULE 4
TO
APPLICATION FOR PAYMENT

DECLARATION OF RELEASE OF CLAIMS

Contractor hereby certifies that attached hereto are releases and waivers of claims and stop notices from all Subcontractors furnishing labor, services, or materials covered by the Certificate For Payment dated _____, 20___, except those listed below:

_____
(Contractor)

By: _____
(Name)

_____
(Title)

Date: _____

HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project No.:

SELECTION OF RETENTION OPTIONS

I (we): _____
(Contractor)

SELECTION OPTION 1 Check here for Option 1 _____

University will withhold retention

OR SELECTION OPTION 2 Check here for Option 2 _____

herewith elect to substitute securities in the form of:

_____
(Type of security)

in lieu of retention being withheld by University for the above-referenced project.

OR SELECT OPTION 3 Check here for Option 3 _____

herewith elect to have retention on the above-referenced project paid directly into the Escrow Account.

_____
(Type of Security to be purchased)

An Escrow Account will be opened with**:

_____
(Name of state or federally chartered bank in California)

whose address is:

_____
(Street)

_____
(City, County)

_____
(State, Zip Code)

On Behalf of Contractor*	On Behalf of University Acknowledged and Approved
_____	_____
(Signature)	(Signature)
_____	Michael McLeod
(Printed Name)	(Printed Name)
_____	Vice Chancellor/ Chief Operating Officer
(Title)	(Title)

***Signature shall be by the authorized party who signs the Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention ("Escrow Agreement").**

****** Note: Contractor and its surety bear the risk of failure of the bank selected.**

Note: If a completed and signed Escrow Agreement is not submitted with this form, University will not allow deposit of securities in lieu of retention.

RETURN THIS AGREEMENT SIGNED BY CONTRACTOR AND ESCROW AGENT TO: PLANNING DESIGN AND CONSTRUCTION MANAGEMENT, UNIVERSITY OF CALIFORNIA, MERCED, 5200 N. LAKE RD, MERCED CA 95343.

Escrow Account No.: _____

ESCROW AGREEMENT FOR
DEPOSIT OF SECURITIES IN LIEU OF RETENTION
AND
DEPOSIT OF RETENTION

This Escrow Agreement is made as of _____, _____, and entered into by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, whose address is University of California, Office of the President, 1111 Franklin Street, 6th Floor, Oakland, CA 94607-5200, hereinafter called "University," and

_____,

whose address is _____,

hereinafter called "Contractor," and _____,

a state or federally chartered bank in the state of California, whose address is:

_____,

hereinafter called "Escrow Agent."

For consideration hereinafter set forth, University, Contractor, and Escrow Agent agree as follows:

(1) Contractor has the option to deposit securities with Escrow Agent as a substitute for retention required to be withheld by University pursuant to the Contract Documents, hereinafter referred to as "Contract," entered into between University and Contractor for the Project titled **Housing Periodic Fire Damper Testing** in the amount of $_____, dated _____. Alternatively, on written request of Contractor, University shall deposit retention directly with Escrow Agent. When Contractor deposits the securities as a substitute for retention, Escrow Agent shall notify University within 5 days after the deposit. At all times, Contractor shall have on deposit securities the market value of which is at least equal to the cash amount then required to be withheld as retention under the terms of the Contract. Securities shall be held in the name of The Regents of the University of California, Merced Campus (Facility); and Contractor shall be designated as the beneficial owner.

(2) Escrow Agent shall review the market value of securities deposited in escrow under this Escrow Agreement as often as conditions of the securities market warrant, but in no case less than once per month. Escrow Agent shall promptly notify University and Contractor of the market value of the deposited securities if such market value is less than the total amount of retention required to be withheld under the terms of the Contract. Contractor shall promptly deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention. Escrow Agent shall, within 5 days after University's request, provide a statement to University of the current market value of all securities deposited under this Escrow Agreement as of a date not earlier than 5 days prior to such request. The provisions of this Paragraph 2 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(3) Contractor shall not use any or all of the securities deposited in lieu of retention under this Escrow Agreement for any other obligations, including deposits in lieu of retention for other contracts. Contractor represents, covenants and warrants that all deposited securities shall be lien free when tendered to the Escrow Agents and shall remain lien free during their retention by the Escrow Agent.

(4) University shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provision, provided that Escrow Agent holds

securities in the form and amount specified herein.

(5) Prior to Contractor's submission of each Application For Payment, Escrow Agent shall issue a current statement of (a) the value of the securities currently being deposited in lieu of retention and (b) the current value of all securities being held in escrow pursuant to this Escrow Agreement. Such statement shall be no more than 5 days old at the time of submission, shall be notarized or have a guarantee of signature, and shall be submitted to Contractor with a copy to University under separate cover. Contractor shall attach such original statement to each Application For Payment. The provisions of this Paragraph 5 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(6) If, at the request of Contractor, University deposits retention directly with Escrow Agent, Escrow Agent shall hold such retention for the benefit of Contractor until such time as the escrow created under the Contract is terminated. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when University deposits retention directly with Escrow Agent.

(7) University will allow Contractor to deposit the following securities in lieu of retention and direct the investment of the retention deposits into any of the following which at the time of payment are legal investments under the laws of the State of California:

a. Direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States of America or any Federal Reserve Bank), or obligations the timely payment of the principal of and interest on which are fully guaranteed by the United States of America, or tax-exempt obligations which are rated in the highest rating category of a nationally recognized bond rating agency.

b. Obligations, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following: Banks for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Bank System, Export-Import Bank of the United States, Federal Financing Bank, Federal Land Banks, Federal Farm Credits, Government National Mortgage Association, Farmer's Home Administration, Federal Home Loan Mortgage Corporation, or Federal Housing Administration.

c. Bonds of the State of California or those for which the faith and credit of the State of California are pledged for the payment of principal and interest.

d. Interest-bearing bankers acceptances and demand or time deposits (including certificates of deposit) in banks, provided such deposits are either (1) secured at all times, in the manner and to the extent provided by law, by collateral security described in clauses a or b of this Paragraph 7 continuously having a market value at least equal to the amount so invested so long as such underlying obligations or securities are in the possession of the Securities Investors Protection Corporation, (2) in banks having a combined capital and surplus of at least One Hundred Million Dollars, or (3) fully insured by the Federal Deposit Insurance Corporation.

e. Taxable government money market portfolios restricted to obligations with maturities of one (1) year or less, issued or guaranteed as to payment of principal and interest by the full faith and credit of the United States of America.

f. Commercial paper rated in the highest rating category of a nationally recognized rating agency, and issued by corporations organized and operating within the United States of America and having total assets in excess of Five Hundred Million Dollars.

(8) Contractor shall be responsible for paying all fees, costs, and expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by

Contractor and Escrow Agent. All fees, costs, and expenses of this Escrow Agreement and any transactions carried out hereunder shall be billed by Escrow Agent to Contractor. In the event that any fees, costs, or expenses shall remain unpaid in excess of 30 days from the date due, Escrow Agent may withhold such unpaid amount from any income distributable to Contractor, but shall not withhold such unpaid amount from any income distributable to University.

(9) Interest earned on the securities or the money market accounts held in escrow and all interest earned on the interest shall be for the sole account of Contractor and shall be held in escrow. Interest may be withdrawn by Contractor from time to time, without notice to University, only to the extent that the total amount held in escrow meets or exceeds the required amount of retention.

(10) Except as provided in Paragraph 9, Contractor shall have the right to withdraw all or any part of the escrow account only by written notice to Escrow Agent accompanied by written authorization from University to Escrow Agent stating that University consents to the withdrawal of the amount sought to be withdrawn by Contractor. University shall not be obligated to consent to any withdrawal to the extent of stop notice claims which cannot be satisfied from other funds then due and payable to Contractor.

(11) University shall have the right to draw upon the securities, any interest earned on the securities, and any interest earned on the interest in the event of default by Contractor. Upon 7 days written notice to Escrow Agent from University, with a copy to Contractor, Escrow Agent shall immediately convert the securities, any interest earned on the securities, and all interest earned on the interest to cash and shall distribute the cash as instructed by University. Escrow Agent shall have no duty to determine whether a default has occurred and may rely solely upon the written notice of such default from University.

(12) Upon receipt of written notification from University certifying that final payment is due under the Contract, Escrow Agent shall release to Contractor the amount, if any, by which the value of all securities and interest on deposit less escrow fees and charges of the escrow account exceeds 125% of all stop notice claims on file. Escrow Agent shall pay the remaining amount to University or as directed by University. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payment of fees and charges.

(13) Escrow Agent shall rely upon the written notifications from University and Contractor pursuant to this Escrow Agreement; and University and Contractor shall hold Escrow Agent harmless from Escrow Agent's release, conversion, and disbursement of the securities and interest as set forth herein.

(14) Escrow Agent shall have the right to terminate this Escrow Agreement upon 30 days notice to all parties hereunder. Upon receipt of such notice, University and Contractor shall appoint a successor Escrow Agent in writing and deliver written notice of such appointment to Escrow Agent. Thereupon, Escrow Agent shall deliver all assets in its custody to such successor Escrow Agent and all responsibility of Escrow Agent under this Escrow Agreement shall terminate; provided, however, if Contractor and University fail to appoint a successor Escrow Agent on or before the end of the 30 day notice period, then Escrow Agent is authorized and instructed to return all assets, documents, and other items in its custody to University and this Escrow Agreement shall be terminated without further instruction.

(15) The duties and responsibilities of Escrow Agent shall be limited to those expressly set forth in this Escrow Agreement; provided, however, that, with Escrow Agent's written consent, the duties and responsibilities in this Escrow Agreement may be amended at any time or times by an instrument in writing signed by all parties.

(16) Whenever Contractor tenders securities to be deposited in lieu of retention, an authorized representative of the Contractor shall declare under penalty of perjury that the securities are lien free and shall remain lien free during their retention by the Escrow Agent. The declaration shall be in the following form:

"The undersigned, on behalf of _____(Name of Contractor) whose address is _____ (Street Address, City, State, Zip Code) represents, covenants and warrants that the securities tendered herewith are lien free and shall remain lien free during their retention by the Escrow Agent.
I, _____ (Name), hereby declare that I am the _____ (Title) of _____ _____ (Name of Contractor), that I am duly authorized to make this representation, and that I declare under perjury under the laws of the State of California that the foregoing is true and correct."

_____ _____
(Signature) (Date)

(17) The names of the persons authorized to give written notice or to receive written notice on behalf of University and on behalf of Contractor in connection with this Escrow Agreement, and exemplars of their respective signatures, are as set forth below. Such names may be changed by written notice to the other parties.

On behalf of University:	On behalf of Contractor:
1.	1.
_____ (Name)	_____ (Name)
_____ (Signature)	_____ (Signature)
_____ (Telephone Number)	_____ (Telephone Number)
2.	2.
_____ (Name)	_____ (Name)
_____ (Signature)	_____ (Signature)
_____ (Telephone Number)	_____ (Telephone Number)

Contractor, Escrow Agent, and University hereby agree to the covenants contained herein.

IN WITNESS WHEREOF, Contractor, Escrow Agent, and University have executed this Escrow Agreement, the day and year first written above.

University:

By

(Signature)

(Printed Name)

(Title)

(Telephone Number)

By

(Signature)

(Printed Name)

(Title)

(Telephone Number)

Contractor:

By

(Signature)

(Printed Name)

(Title)

(Telephone Number)

By

(Signature)

(Printed Name)

(Title)

(Telephone Number)

Escrow Agent:

By:

(Signature)

(Printed Name)

(Title)

(Telephone Number)

COST PROPOSAL

Date: _____ Change Request No.: _____

Project Name: HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project No:

Facility: UNIVERSITY OF CALIFORNIA MERCED
MERCED CALIFORNIA

Contract Date:

SCOPE OF CHANGE:
INSTRUCTIONS:
Complete this form by providing (a) all information required above, (b) the amount and justification based upon the Contract Schedule for any proposed adjustment of Contract Time, (c) the proposed adjustment of Contract Sum, (d) the attached "Cost Proposal Summary," and (e) the attached form titled, "Supporting Documentation for the Cost Proposal Summary."

1. Attach the form titled "Supporting Documentation for the Cost Proposal Summary" for Contractor and each Subcontractor involved in the Extra Work. Each such form shall be completed and signed by Contractor or Subcontractor actually performing the Work activity identified on the form. Attach supporting data to each such form to substantiate the individually listed costs. The costs provided on these forms shall be used to substantiate Additional Costs shown on the Cost Proposal Summary.

2. The Contractor Fee shall be computed on the Cost of Extra Work of Contractor and each Subcontractor involved in the Extra Work; and shall constitute full compensation for all costs and expenses related to the subject change and not listed in the "Supporting Documentation for the Cost Proposal Summary," including overhead and profit.

3. Refer to Article 7.3 of the General Conditions for the method of computing the Contractor Fee.

Adjustment of the Contract Time (Include justification based upon the Contract Schedule):

Refer to Article 8 of the General Conditions. _____ (Days)

Adjustment of the Contract Sum (Total Additional Cost from Cost Proposal Summary): $ _____

Refer to Article 7 of the General Conditions.

Submitted:	Received:
(Contractor)	(University's Representative)
By:	By:
Title:	Title:
Date:	Date:

COST PROPOSAL SUMMARY

Project Name: _____ Change Request No.: _____

Project No.: _____ Contractor Name: _____

Facility: University of California, Merced

		(1) Contractor	(2) 1st Tier Subs	(3) 2nd & Lower Tier Subs	(4) Total
ACTUAL COSTS	1. Straight Time Wages/Salaries - Labor				
	2. Fringe Benefits and Payroll Taxes - Labor				
	3. Overtime Wages/Salaries - Labor				
	4. Fringe Benefits and Payroll Taxes - Overtime				
	5. Materials and Consumable Items				
	6. Sales Taxes (On line 5)				
	7. Rental Charges				
	8. Royalties				
	9. Permits				
	10. Actual Costs (Sum of lines 1-9)				
	11. Insurance & Bonds (up to 2% of line 10)				
CONTRACTOR FEE	12. Sub-Sub (15% of line 10; col. 3)				
	13. Subcontractor (5% of line 10; col. 3)				
	14. Subcontractor (15% of line 10; col. 2)				
	15. Contractor (5% of line 10; col. 2 & 3)				
	16. Contractor (15% of line 10; col. 1)				
	17. Contractor Fee (Sum of lines 12-16)				
	18. Sum of lines 10, 11, & 17				

Actual Costs are taken from line 12 of the attached forms titled, “Supporting Documentation For the Cost Proposal Summary” for Contractor and each Subcontractor involved in the Extra Work.

SUPPORTING DOCUMENTATION FOR THE COST PROPOSAL SUMMARY

Contractor/Subcontractor Name: _____
Work Activity _____
Facility University of California, Merced

Change Order Request No.: _____
Project No.: 900320

COST ITEM		COST (1)
ACTUAL COSTS	1. Straight Time Wages/Salaries -- Labor	
	2. Fringe Benefits and Payroll Taxes -- Labor: _____ % of line 1	
	3. Overtime Wages/Salaries - Labor (Attach University Representative's written authorization)	
	4. Fringe Benefits and Payroll Taxes -- Overtime: _____ % of line 3	
	5. Materials and Consumable items	
	6. Sales Taxes: _____ % of line 5	
	7. Rental Charges (attach U.S. Army Corps of Engineers' Schedule)	
	8. Royalties	
	9. Permits	
	10. Total Direct Expense -- sum of lines 1-9	
	11. Insurance and Bonds: _____ % of line 10 (up to 2% of line 10)	
TOTAL	12. Sum of lines 10 and 11	

(Company Name)	(Company Name)
(Signature) (2)	(Signature) (3)
(Title)	(Title)
(Date)	(Date)

NOTES:
(1) Round-off all Costs to the nearest dollar.
(2) This form shall be prepared and signed by Contractor or Subcontractor actually performing the Work activity indicated above.
(3) If this form is signed by a Subcontractor, it shall be reviewed and signed by Contractor certifying

the accuracy of the information.

FIELD ORDER No.: 001

Project Name: Housing Periodic Fire Damper Testing
Project Number:
To CM/Contractor:
Address:

DESCRIPTION OF CHANGE:
Date:
PCO #:

Please provide a Cost Proposal within 7 days of receipt of this Field Order.

In accordance with the General Conditions, Article 7, Paragraph 7.3.6; As a condition to General Contractor's right to an adjustment of the Contract Sum, pursuant to Article 7.3.5.3; General Contractor must keep detailed and accurate records itemizing each element of cost and shall provide substantiating records and documentation, including time cards and invoices. Such records and documentation shall be submitted to and approved University's Representative on a daily basis.

The PTC must follow all procedures set forth and submit per Article 4 of the General Conditions.

Estimated Adjustment of Contract Sum:	$0	Estimated Adjustment of Contract Time:

By:

(Signature)

(Title)

Date:

Fran Telechea
(University Representative)

(Signature)

Executive Director of Design & Construction Services
(Title)

Date:

NOTE: This Field Order will be superseded by a Change Order that will include the scope of the change in the Work and any actual adjustments of the Contract Sum and the Contract Time. Field Order shall only be used for Work currently under contract; and shall not be used to modify Option Sum or Option Time.

CHANGE ORDER

University of California Facility: Merced Campus

Change Order No. _____ Reference Field Order No. _____

PROJECT NAME:	HOUSING PERIODIC FIRE DAMPER TESTING		
PROJECT LOCATION:	UNIVERSITY OF CALIFORNIA MERCED, MERCED CALIFORNIA		
PROJECT NO:		CONTRACT DATE:	
TO CONTRACTOR:			
ADDRESS:			

DESCRIPTION OF CHANGE:

ADJUSTMENT OF CONTRACT SUM:		**ADJUSTMENT OF CONTRACT TIME:**		
Original Contract Sum:	$	Original Contract Time:		(Days)
Prior Adjustments:	$	Prior Adjustments:		(Days)
Contract Sum Prior to this Change:	$	Contract Time Prior to this Change:		(Days)
Adjustment for this Change:	$	Adjustment for this Change:		(Days)
Revised Contract Sum:	$	Revised Contract Time:		(Days)

Contractor waives any claim for further adjustments of the Contract Sum and the Contract Time related to the above described change in the Work.

RECOMMENDED:

By: _____
(Signature of University's Representative)

_____
(Printed Name)

Date: _____

ACCEPTED:

By: _____
(Contractor Signature)

_____
(Printed Contractor Name)

Date: _____

REVIEWED AND RECOMMENDED:

By: _____
(Signature of University's Designated Administrator)

_____
(Printed Name)

Date: _____

FUNDS SUFFICIENT:

By: _____
(Signature from University's Accounting Office)

_____
(Printed Name)

Date: _____

APPROVED:

UNIVERSITY: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

_____
(Printed or Typed Name)

By: _____
(Signature)

_____
(Title)

Date:: _____

CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

Exhibit 10

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information:

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: $ _____

Check Payable to: _____

Exceptions

This document does not affect any of the following:

(1) Retentions.

(2) Extras for which the claimant has not received payment.

(3) The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment:

Date(s) of waiver and release:_____

Amount(s) of unpaid progress payment(s): $_____

(4) Contract rights, including

(A) a right based on rescission, abandonment, or breach of contract, and

(B) the right to recover compensation for work not compensated by the payment.

Signature:

Claimant's Signature: _____

Claimant's Title: _____

Date of Signature: _____

CONDITIONAL WAIVER AND RELEASE
UPON FINAL PAYMENT

(CA Civil Code § 8136)

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information:

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: $ _____

Check Payable to: _____

Exceptions:

This document does not affect any of the following:

Disputed claims for extras in the amount of $ _____.

Signature:

Claimant's Signature: _____

Claimant's Title: _____

Date of Signature: _____

UNCONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT

(CA Civil Code § 8134)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information:

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

Through Date: _____

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below.

The claimant has received the following progress payment:

$ _____

Exceptions:

This document does not affect any of the following:

(1) Retentions.

(2) Extras for which the claimant has not received payment.

(3) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Signature:

Claimant's Signature: _____

Claimant's Title: _____

Date of Signature: _____

UNCONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT

(CA Civil Code § 8138)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information:

Name of Claimant: _____

Name of Customer: _____

Job Location: _____

Owner: _____

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been paid in full.

Exceptions:

This document does not affect any of the following:

Disputed claims for extras in the amount of $ _____.

Signature:

Claimant's Signature: _____

Claimant's Title: _____

Date of Signature: _____

Project No.:

EXHIBIT

REPORT OF SUBCONTRACTOR INFORMATION

Sheet No. _____ of _____

Provide the following information for each contracting party including the Contractor and each Subcontractor regardless of tier.* Attach additional sheets if necessary.

1	2A	2B	3	4	5	6	7		8				
Full Name of Business	Portion of the Work	Dollar Amt	Street Address City, State & ZIP	Tel No / FAX No	Contact Name	Type of Owner-ship	License Info**		Business categories* (Check all categories that apply)				
							License Classification**	License No.**	SBE*	DBE*	WBE*	DVBE*	N/A
(GC)													
(Sub 1)													
(Sub 2)													
(Sub 3)													

Column 6 – Type of Ownership	Column 8 - Business Categories
SP = Sole Proprietorship P = Partnership C = Corporation JV = Joint Venture O = Other	SBE = Small Business Enterprise DBE = Disadvantaged Business Enterprise WBE = Woman Business Enterprise DVBE = Disabled Veteran Business Enterprise

* Regardless of tier, a completed Self-Certification must be submitted for the General Contractor and each Subcontractor shown on this Exhibit.
** List only those License Classification and Numbers relevant to this project.

HOUSING PERIODIC FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project No.:

EXHIBIT 13B
EXHIBIT

FINAL DISTRIBUTION OF CONTRACT DOLLARS

Sheet No. 1 of 1

Provide the following information for each contracting party including the Contractor and each Subcontractor regardless of tier.* Attach additional sheets if necessary.

1	2	3	4	5					6	
Full Name of Business	Street Address, City, State and ZIP	Tel No / FAX No	Contact Name	Business categories					Contract Dollars	
				SBE*	DBE*	WBE*	DVBE*	N/A	Amount ($)	Percent (%)
(GC)				0	0	0	0	0		0%
(Sub 1)				0	0	0	0	0		0%
(Sub 2)				0	0	0	0	0		0%
(Sub 3)				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%

Total Contract Amount = { $1,000.00 }

Column 6 - Business Categories	SUBTOTALS
SBE = Small Business Enterprise	$0
DBE = Disadvantaged Business Enterprise	$0
WBE = Woman Business Enterprise	$0
DVBE = Disabled Veteran Business Enterprise	$0

*Regardless of tier, a completed Self-Certification must have been submitted for the General Contractor and each Subcontractor shown on this Exhibit.

**Refer to the Report of Subcontractor Information for license and other information.

EXHIBIT 14

SELF-CERTIFICATION

For the Contractor and each Subcontractor indicated on the Report of Subcontractor Information, the following must be completed.

Indicate all Business category(ies) that apply by initialing next to the applicable category(ies):

_____ (Initial, if applicable) **Small Business Enterprise (SBE)** - an independently owned and operated concern certified, or certifiable, as small business by the Federal Small Business Administration (SBA). (Size standards by Standard Industrial Classification codes required by the Federal Acquisition Regulations, Section 19.102, may be found at www.sba.gov/size. The University may rely on written representation by the vendors regarding their status.) Annual average receipts, computed from the gross receipts for the last 3 fiscal years, do not exceed the amount listed in the MAXIMUM RECEIPTS TABLE below. The average annual receipt is computed by taking the sum of the gross receipts of the prior 3 fiscal years and dividing by 3.

MAXIMUM RECEIPTS TABLE	
Construction Services (by Contractor's License Classification): Class "A" - General Engineering Class "B" - General Building Class "C" - Specialty	AVERAGE ANNUAL RECEIPTS (Preceding 3 Years) $31,000,000 $31,000,000 $13,000,000
Architectural & Engineering Services	$4,500,000 (except landscape architectural services)
Landscape Architectural Services	$6,500,000
Other services	For appropriate amount, see www.sba.gov/size

_____ (IInitial, if applicable) **Disadvantaged Business Enterprise (DBE)** - a business concern which is at least 51% owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as members of a group without regard to their individual qualities. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free private enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged. Business owners who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans) are to be considered socially and economically disadvantaged.

_____ (Initial, if applicable) **Women-Owned Business Enterprise (WBE**) - a business that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

_____ (Initial, if applicable) **Disabled Veteran Business Enterprise (DVBE)** - a business that is at least 51% owned by one or more disabled veterans or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. A Disabled Veteran is a veteran of the military, naval, or air service of the United States with a service connected disability who is a resident of the State of California. To qualify as a veteran with a service connected disability, the person must be currently declared by the United States Veterans Administration to be 10% or more disabled as a result of service in the armed forces.

_____ (Initial, if applicable) **None of the above categories apply.**

I hereby certify under penalty of perjury under the laws of the State of California that I have read this certification and know the contents thereof, and that the business category indicated above reflects the true and correct status of the business in accordance with Federal Small Business Administration criteria and Federal Acquisition Regulations, FAR 19 pertaining to small, disadvantaged, women-owned, and disabled veteran business enterprises. I understand that falsely certifying the status of this business, obstructing, impeding or otherwise inhibiting any University of California official who is attempting to verify the information on this form may result in suspension from participation in University of California business contracts for a period up to five (5) years and the imposition of any civil penalties allowed by law.

INFORMATION FURNISHED BY: _____
(Print or Type Name of Owner and/or Principal)

_____
(Name of Business or Firm)

a _____
(Insert type of business e.g. corporation, sole proprietorship, partnership, etc.)

By: _____ _____
(Print Name) (Title)

_____ _____
(Signature) (Date)

PRIVACY NOTICE

The State of California Information Practices Act of 1977 (effective July 1, 1978) requires the University of California to provide the following information to individuals who are asked to supply personal information about themselves. Information furnished on the Self-Certification form may, in some cases, identify personal information of an individual.

- The University of California, Merced, is requesting the information contained in this form and the accompanying Report of Subcontractor Information.
- The Small Business Outreach Program Manager at the University of California, Merced, is responsible for maintaining the requested information. The contact information for the Small Business Outreach Program Manager may be found at: http://www.ucop.edu/purchserv/documents/sbdmgr.pdf
- The maintenance of information is authorized in part by Public Contract Code section 10500.5.
- Furnishing the information requested on this form is mandatory. If SBE, DBE, WBE and/or DVBE status is applicable, furnishing such information is mandatory.
- Failure to provide the information may be a violation of bidding procedures and/or breach of the contract and the University may pursue any and all remedies permitted by the provisions of the Contract Documents.
- The information on this form is collected for monitoring and reporting purposes in accordance with state law and University policy.
- The individual may access information contained in this form and related forms by contacting the Small Business Outreach Program Manager(s).

EXHIBIT 15
CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: _ HOUSING PERIODIC FIRE DAMPER CLEANING
Contractor: _____
Project Number: _____
Date of Issuance: _____

The Work has been reviewed and the date of Substantial Completion is hereby established as of the date of issuance above.

A Certificate of Occupancy has been issued by the University's Building Official _____ on _____, _____.

A list of items to be completed or corrected is included herein. The failure to include any items on such list does not alter the responsibility of Contractor to complete all of the Work in accordance with the Contract Documents.

In accordance with the Contract Documents, Contractor is notified as follows:

1. Without limitation of Contractor's obligation to fully complete the Work within the Contract Time, Contractor shall complete or correct the Work on the list of items attached hereto within _____ days from the date of Substantial Completion.
2. Contractor shall be responsible for all Contract requirements except items or responsibilities of University set forth in Paragraph 2 above.
3. List of items to be completed or corrected: See Attached List

UNIVERSITY'S REPRESENTATIVE:

_____
(Name of Firm)

_____
(Signature)

_____
(Typed or Printed Name)

_____
(Title)

_____
(Date)

UNIVERSITY: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

_____
(Signature)

_____
(Typed or Printed Name)

_____
(Title)

_____
(Date)

cc: Office of Risk Management

EXHIBIT 16
GUARANTEE/WARRANTY FORM

Date: _____

Project Name: HOUSING FIRE DAMPER TESTING
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project Location: **Merced County, Merced, California**

Project Number: _____

GUARANTEE FOR: _____
(Specification SECTION and Contract No.)

(the "Contract"), between the Regents of the University of California ("University") and

_____
(Name of Contractor)

("Contractor") and _____
(Name of Subcontractor)

Hereby guarantee to University that the portion of the work described as follows:

_____

_____

Which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specifications SECTION _____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from University that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize University to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to University promptly upon demand all costs and expenses incurred by University in connection therewith.

SUBCONTRACTOR
Signed; _____
Title: _____
Typed Name: _____
Name of Firm: _____
Contractor License Classification, Code, and Number: _____
Address: _____

CONTRACTOR _____
Signed: _____
Title: _____
Typed Name: _____
Name of Firm _____

HOUSING PERIODIC FIRE DAMPER TESTING

Project No.:

University of California,
Merced

Request for Information

RFI Number: _____

Date Created: ___ ___/ ___ ___ /___ ___

Answer Required by: ___ ___/ ___ ___/ ___ ___

Priority: ☐ Urgent ☐ High ☐ Normal ☐ Low

Submitted By

Company: _____ Subject: _____

Contact: _____ Discipline: _____

Telephone: _____ Category: _____

Email: _____ Reason: _____

Question

Suggestion

Answer

Received By: _____ Date: ___ ___/ ___ ___/ ___ ___

EXHIBIT 18
UTILITY SERVICE INTERRUPTION/SHUT DOWN REQUEST

A minimum of 14 working days advance notice is required prior to each utility service/interruption/shutdown request

Request No.:_____

METHOD OF PROCEDURE

Company:_____

Description:

Start Date of Work:_____ Time:_____

Completion Date of Work:_____ Time:_____

Location of Work:_____

Scope/Work:

Task #	Description of Work	Comments	Performed By	
			UCM	GC

Additional Comments/Request:

Letter of Instruction

Detailed, Grouped by Each Number

HOUSING PERIODIC FIRE DAMPER TESTING
5200 N Lake Rd
Merced CA 95343

Project #
Tel: 209 228-4479 Fax: 209 228-4468

University of California, Merced

Number: 001 **Date: 5/9/2020**

To:

From: University of California, Merced
Fran Telechea
5200 North Lake Road
Merced, CA 95343

Subject	Type	Reason
Student Services Building		

Location	Reference	Not To Exceed Cost
		0

Description

The following information is hereby issued as a clarification or interpretation of the Contract Documents. This is a clarification or interpretation only and not intended to change the scope of the Work, the Contract Sum, or the Contract Time.

Signature **Signed Date**

EXHIBIT 27

GENERAL CONTRACTOR CLAIM CERTIFICATION

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The Claim to which this certification is attached is made in good faith.

2. Amounts claimed for costs, expenses and damages incurred by General Contractor are accurate and complete. Supporting data for amounts incurred by General Contractor is accurate and complete. Any such supporting data, including any such new amounts, submitted after the execution of this certification, will be accurate and complete.

3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted by General Contractor on behalf of any and all subcontractors or suppliers, of all tiers, or any person or entity under General Contractor, are accurate and complete. General Contractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.

4. The amount requested accurately reflects the adjustment of the Contract Sum for which the General Contractor believes the University is liable.

5. Attached hereto is a certification that has been executed by each Subcontractor claiming not less than 5% of the total monetary amount sought by the claim to which this certification is attached.

6. I am duly authorized to certify the Claim on behalf of the General Contractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at: _____(Name of City if within a City, otherwise Name of County), in the State of _____(State), on _____(Date).

_____
(Signature)

_____
(Print Name)

_____
(Name of General Contractor)

EXHIBIT 28

SUBCONTRACTOR CLAIM CERTIFICATION

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The portion of the Claim made on behalf of the Subcontractor to which this certification is attached is made in good faith.

2. Amounts claimed for costs, expenses and damages incurred by the Subcontractor are accurate and complete. Supporting data for amounts incurred by the Subcontractor is accurate and complete. Any such supporting data, including any such new amounts, submitted to Contractor after the execution of this certification, will be accurate and complete.

3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted to Contractor by the Subcontractor on behalf of any and all subcontractors or suppliers to Subcontractor, of all tiers, or any person or entity under Subcontractor, are accurate and complete. Subcontractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.

4. The amount requested accurately reflects the amount for which the Subcontractor believes the University is liable to Contractor.

5. I am duly authorized to certify the Claim on behalf of the Subcontractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at: _____(Name of City if within a City, otherwise Name of County), in the State of _____(State), on _____(Date).

_____
(Signature)

_____
(Print Name)

_____
(Name of Subcontractor)

CONTRACTOR / SUBCONTRACTOR DAILY REPORT

Contractor /Subcontractor: _____

Daily Details

Date: ___ ___ / ___ ___/ ___ ___ ___ ___

Temperature: A.M. _____ °F P.M. _____ °F

Weather: _____

Manpower *(List Quantity)*

Project Managers:	_____	Other:	_____	_____
Superintendents:	_____	Other:	_____	_____
Non-Working Foremen:	_____	Other:	_____	_____
Working Foremen:	_____	Other:	_____	_____
Journeymen:	_____	Other:	_____	_____
Apprentices:	_____	Other:	_____	_____
Laborers:	_____	Other:	_____	_____

Subcontractors on Site: _____

_____

_____

Work Performed in Each Area: _____

_____

_____

_____

_____

Equipment Rented/Used:

Shortages/Discrepancies of Delivered Materials:

Delays/Problems:

Unsafe or Hazardous Conditions:

Questions:

Last Safety Meeting

Date: ___ ___/ ___ ___/ ___ ___ ___ ___

Topic:

Number of Additional Sheets Attached:

Signed:

_____

Printed Name: _____

Title: _____

Initial Inspection No.: _____ (CM)

Requests for Inspections and/or Tests

HOUSING PERIODIC FIRE DAMPER TESTING | Project No.: | University of California – Merced

Tel: | Fax:

Date of Request: _____ | Person Accompanying Inspector: _____

Date of Inspection: _____ | Cell Phone: _____

Installing Company: _____ | Requested Time: _____ | Reference # _____

Description | **System / Discipline**

_____ | _____

Location – Items to Be Inspected

_____

_____

_____

_____

Quality Control

Verified by: _____ on _____ (date).

IOR's Observations

Items Passed

_____

_____

_____

_____

_____

Items Failed

_____

_____

_____

_____

Signature | Signed Date

Interim Policy -- Universal Requirements for Physical Mitigation and Reduction of the Transmission of COVID-19

Responsible Officials:	Vice Chancellor, Physical Operations, Planning and Design Vice Chancellor, Student Affairs Executive Vice Chancellor and Provost
Responsible Offices:	Department of Public Safety and Police
Issuance Date:	June 4, 2020
Effective Date:	Immediately effective
Summary:	This interim policy sets forth universal requirements applicable to all campus affiliates and non-affiliates for physical mitigation and reduction of the transmission of COVID-19 at UC Merced facilities, including, but not limited to the main and downtown campuses, Promenade, Fresno Center, Castle, and all field stations, reserves and other remote research locations.
Scope:	This interim policy applies to all staff, faculty, students, volunteers and non-affiliates entering or physically present on University property and facilities controlled by the Merced campus. Non-affiliates include, but are not limited to vendors, service providers, suppliers, and visitors and guests.

Contact:	Chou Her, Executive Director Public Safety and Police
Email:	cher@ucmerced.edu
Phone:	(209) 228-7941

I. REFERENCES AND RESOURCES

Federal Laws and Regulations

- FEMA-4482-DR-CA
- CDC: Interim Guidance for Administrators of US Institutions of Higher Education
- CDC: Guidance for Institution of Higher Education with Students Participating in International Travel or Study Abroad Programs
- CDC: Social Distancing Guideline

State Laws and Regulations

- Executive Order N-25-20

- Executive Order N-33-20
- Merced County Stay-at-Home Order

UC Policies

- Regents Principles for Responsible Operation of University Locations in Light of the SARS-CoV-2 Pandemic
- Regents Standing Order 100.6: Duties of the Chancellors
- UC Policy: Management of Health, Safety and the Environment
- Executive Order: Paid Administrative Leave related to COVID-19

Guidelines/Resources

- UC Merced Emergency Preparedness: COVID-19 Resources

II. POLICY/PROCEDURE SUMMARY & SCOPE

This interim policy is effective immediately and will remain in effect until revoked by the Chancellor based on guidelines and recommendations regarding the incidence and spread of the COVID-19 virus. It sets forth basic physical requirements, including use of face coverings and physical distancing, applicable to all individuals entering or present on University property controlled by the Merced campus, including all campus and remote facilities, to mitigate and reduce the transmission of COVID-19 ("Universal Requirements"). Facility-specific guidance will be provided for each category of University facilities before a facility is returned to increased in-person use. Compliance with this guidance is mandatory under this policy. To the extent there is a conflict between these Universal Requirements and facility-specific guidance, the facility specific-guidance applies when entering and present in the facility.

All campus constituents, including, but not limited to, staff, faculty, students and volunteers, and non-affiliates, including, but not limited to, vendors, service providers, suppliers and visitors and guests, must adhere to these requirements at all times. Failure to comply with this interim policy may result in discipline. Violators will be required to comply or leave University property and facilities immediately.

III. DEFINITIONS (if applicable)

Campus affiliates: Includes all individuals affiliated with the University of California as staff, faculty, students, and volunteers.

Non-affiliates: Includes all individuals seeking entry to or present on University property and facilities, including, but not limited to, members of the public, visitors, service providers, suppliers, visitors and guests.

University property and facilities: Includes all property and facilities owned, leased or operated by the University of California, Merced campus, including, but not limited to the main and downtown campuses, Promenade, Castle, the Fresno Center, and all field stations, reserves and other remote research locations, operated by the Merced campus.

IV. POLICY TEXT

All campus constituents and non-affiliates must comply with the following physical mitigation measures when present on University property controlled by the Merced campus, including all campus and remote facilities. Entry and presence in Merced campus facilities without complying with the requirements of this policy are unauthorized and violators will be asked to comply or leave immediately.

- All individuals must wear face coverings, except when located alone in a private office, when eating and physically distanced by at least 6 feet, in the individual's own campus residence, or when outside and located more than six feet away from any other individual.
- All individuals must engage in physical distancing at all times and remain six feet or more away from other individuals, except those individuals with whom they share their primary residence.
- Individuals should not congregate on University property or in University facilities, including indoor and outdoor common areas and private rooms and offices, except when attending University sponsored and controlled events, such as classes and lectures, and must maintain physical distancing of six feet or more at all times. This includes when seated or standing in classrooms, dining facilities, in private spaces such as offices and conference rooms, and in all other common areas such as kitchens, breakrooms, restrooms, patios, courtyards and other outside common areas. Individuals are allowed to stand in organized lines while waiting for service at University facilities; however, individuals must remain six feet or more from any other individual and may not remain in a service area after they have received service.
- All individuals must participate in the campus personal health screening and/or self-screening process, and any facility access screening, including any symptomatic and asymptomatic testing, in order to enter UC Merced facilities and physical spaces.
- Individuals may not enter University facilities if they have tested positive for COVID-19 or feel unwell physically, and should immediately contact their supervisor to approve remote work or to approve the use of available leave.
- All individuals must follow all facility-specific guidance provided by the University when entering or present in University facilities, in addition to these Universal Requirements. The facility-specific guidance controls if there is a conflict with these Universal Requirements.
- All individuals must follow all guidance provided by the University regarding cleaning and disinfection of their personal workspace and/or dorm room.
- All individuals must follow all University directions regarding the availability of space on campus and may not use space that has been designated as closed by the University.
- Individuals may not remove/rearrange furniture/equipment in any University space unless it has been approved by Physical Operations, Planning, and Development (POPD) or the unit responsible for management of the space. Doing so may impact the capacity and physical distancing achieved in the space.

V. PROCEDURES

Compliance with this interim policy will be implemented and monitored by the units responsible for each of the University facilities and/or activities. All individuals must follow directives to comply with this policy by University staff charged with implementing and monitoring compliance. Individuals that violate this policy may receive a discretionary warning, but are nonetheless subject to discipline under the policies applicable to unrepresented staff, collective bargaining agreements, the Academic Personnel Manual (APM) and the student conduct policies contained in Policies Applying to Campus Activities, Organizations and Students (PACAOS). For purposes of these policies, violations of the requirements of this policy are deemed to be a threat to public health and to members of the campus community.

Individuals that witness violations of this policy may make a report to their supervisor or by email to UC Merced's COVID Response Center at COVIDResponseCtr@ucmerced.edu. All reports will be referred to the unit responsible for the University facility or activity for follow up. The responsible units may also refer the matter to Human Resources, Academic Personnel Office or Office of Student Rights and Responsibilities to determine if discipline is merited.

VI. POLICY REVISION HISTORY

Date	Action/Summary of Changes
June 4, 2020	Interim policy issued
August 25, 2020	Technical update: replaced contact information for reporting violations of this policy

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK REQUIRED BY CONTRACT DOCUMENTS

A. Scope of Work: The Housing Periodic Fire Damper Testing Project includes complete inspection and testing of all fire and smoke dampers in Housing buildings complexes, Valley Terraces Housing buildings, Sierra Terraces, The Summits: Tenaya & Cathedral and Half Dome. Valley Terraces includes Calaveras Hall, San Joaquin Hall, Merced Hall, Fresno Hall, Stanislaus Hall, Madera Hall, Kings Hall, Kern Hall, Tulare Hall and Terrace Center. This work may be performed in fully or partially occupied Housing building on an active University of California, Merced campus.

B. Base work includes:

1. Performing complete inspection and testing of all fire and fire/smoke dampers as required by National Fire Protection Association (NFPA) 80.

2. The work to be done includes all labor, tools and equipment necessary to completely perform inspection and testing of fire dampers as required to meet NFPA 80.

3. Fusible link shall be removed for testing to ensure full closure and lock-in-place, if so equipment at all applicable fire and fire/smoke damper locations. Fusible link shall be re-installed after each test.

4. The operational test of the damper shall verify:

a. that there is no damage interference due to rusted, bent, misaligned, or damaged frame or blades, or defective hinges or other moving parts.

b. that the damper frame has not been penetrated by any foreign objects that would affect the damper operation.

c. that the damper is not blocked from closure in anyway

d. that the damper is correctly installed.

5. Contractor shall document the following information:

a. location of the fire damper or combination fire/smoke damper including Building Name

b. date of the inspection.

c. name of the inspector & company name

d. all deficiencies discovered

6. location of the fire damper or combination fire/smoke damper,

7. Contractor is responsible for protecting all spaces including protection over contents to prevent debris from entering area. Contractor is responsible for cleaning all debris.

8. Written report back to the University on the condition of the HVAC system, noting any leaks, separated connections or pre-damages, etc.

C. Contractor is responsible for:

1. Lifting, staging, storage, and transportation, of own personnel, materials and equipment

2. Contractor may use the public restrooms located in building or area provided they are clean and respectful of the space. Should maintenance or cleanliness deficiencies be reported the Contractor will be responsible for providing on-site Portable Toilets and Sanitary Wash Stations.

3. No eating inside of buildings – eat only in designated lunch areas. Provide cleanup of all food waste and trash immediately after eating.

4. No AM/FM radios, CD players, iPods, MP3 players, iPhones, head phones or ear buds of any type, etc., on site.

5. Contractor shall control the conduct of its employees and those of its subcontractors and suppliers so as to prevent interaction initiated by said employees with University of California Merced students, staff, or other individuals (except those associated with the Project), on or adjacent to the Project site. Without limitation, unwanted interaction by those employees including whistling at, motioning toward, or initiating conversations with passerby. In the event that any employee initiates such unwanted interaction, or utilizes profanity, Contractor shall, either upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the University.

6. Contractors must pay for own parking

7. Contractors are responsible for disposal and recycling of materials.

8. Task lighting for own work

9. Safety requirements for own work. OSHA approved personal protective safety equipment such as hard hats, work shoes, gloves, goggles, masks, vests, harnesses, etc. shall be worn by all

10. Work areas to be left broom clean on a daily basis and shall be kept clear of obstruction created by the storage or stockpiling of materials and free from the accumulation of debris generated by Contractor's work. Cleanup of general construction debris to University's general trash dumpster on a daily basis. This

will be strictly enforced and any Contractor not providing labor will be charged for cleanup by the University on a monthly basis.

11. All access into occupied bedrooms or apartments must be coordinated with the University at least 72 hours in advance.

12. Contractor is responsible for reinstalling anything removed or uninstalled during the project.

13. Contractor is responsible for returning all settings back to the previously identified setting prior to the project. Contractor is responsible for identifying all of the settings prior to modifying them.

D. Project will be awarded to the lowest bidder for each building complex not overall lowest bid.

1.2 PROJECT PHASING

A. Work Phases: Contractor shall complete all work in a single phase. Substantial Construction Completion shall be no later than July 30, 2021, with Final Completion August 23, 2021.

B. University may opt for shift work to maintain schedule.

1.3 SCHEDULING

A. Contractor is to develop Contract Schedules as described in Section 01 31 45. Contractor will be required to perform its work in accordance with a Detailed Project Schedule approved by the University's Representative to be developed, updated, and maintained by the General Contractor after award of the Contact. General Contractor will be required to provide specified scheduling information necessary for the development, updating, and maintenance of the Detailed Project Schedule such that the schedule meets all occupancy and completion milestones. Substantial Construction Completion shall be no later than July 30, 2021, with Final Completion August 23, 2021.

B. Contractor shall provide detailed schedule to allow University to coordinate with the Contractor and any areas that may have student/staff occupants.

1.4 FINAL COMPLETION

A. Final Completion shall be applicable to the entire work as required by Article 4 of the Contract Agreement.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 11 00

SECTION 01 25 00
PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS REGARDING SPECIFICATION OF PRODUCTS, MATERIAL OR EQUIPMENT BY BRAND OR TRADE NAME.

A. Products, material or equipment specified by both brand or trade name and model number are approved for use, provided the Contractor complies with all Contract requirements. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment can be used without modification, to meet the requirements of the plans and specifications; Contractor shall, at its sole cost, modify such products, material, or equipment so that they comply with all requirements of the plans and specifications.

B. The first-named product, material or equipment specified by brand or trade name and model number is the basis for the Project design and the use of any item other than the first-named one may require modifications of that design. If Contractor uses any product, material or equipment other than the first-named one, Contractor shall, at its sole cost:

1. Make all revisions and modifications to the design and construction of the Work necessitated by the use the product, material or equipment.
2. Be responsible for all costs of any changes resulting from the use of the product, material or equipment including without limitation, costs or changes which affect other parts of the Work, the work of Separate Contractors, or any other property or operations of the University.

C. When a product, material or equipment specified by brand or trade name is followed by the words “or equal,” a substitution may be permitted if the substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and if the substitution complies with all other requirements of the plans and specifications.

D. A product, material or equipment specified by brand or trade name followed by the words “or equal, no known equal,” signifies that University does not have sufficient knowledge to specify a product, material or equipment, other than the one specified by brand or trade name, that is suitable for use on the Project. The use of the words "no known equal" is not intended to discourage substitution requests in accordance with the requirements specified herein.

E. When catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with a product, material or equipment required by the specifications, substitutions will not be allowed and the named product, material or equipment must be used.

F. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment is available; Contractor should confirm, prior to submitting its Bid, the availability of any product, material or equipment specified by brand or trade name and model number.

G. **COMPLETE AND ACCEPTABLE SUBSTITUTION** SUBMITTALS SHALL BE DELIVERED TO THE UNIVERSITY'S REPRESENTATIVE NO LATER THAN 35 DAYS FROM THE NOTICE TO PROCEED. SUBMITTALS MAY BE REQUIRED SOONER THAN 35 DAYS IF THE NOTICE TO PROCEED WAS DELAYED BY THE CONTRACTOR OR IF REQUIRED BY EARLY ACTIVITIES INDICATED ON THE PRELIMINARY MASTER PROJECT SCHEDULE.

1.2 SPECIAL REQUIREMENTS FOR PRODUCTS, MATERIAL OR EQUIPMENT, OTHER THAN THE FIRST-NAMED PRODUCT, MATERIAL OR EQUIPMENT, SPECIFIED BY BOTH BRAND OR TRADE NAME AND MODEL NUMBER.

A. In addition to complying with all other submittal requirements of the Contract, submit within 5 days after the date of commencement specified in the Notice to Proceed, for review and approval by the University's Representative, Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriate licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the product, material or equipment. If no revisions or modifications are necessary, submit within 5 days after the date of commencement specified in the Notice to Proceed, a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. Contractor shall utilize the first-named product, material or equipment if Contractor fails to make the appropriate required submittal pursuant to this paragraph within the 5-day period.

B. A product, material or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number may be used if no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. If such revisions or modifications are necessary, the product, material or equipment may be used only if the revisions or modifications are approved in writing by the University's Representative. Contractor has the burden of demonstrating, through the procedures specified herein, that any such revisions or modifications will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project. The University's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility or appearance of the Project or any portion of the Project.

1.3 SPECIAL REQUIREMENTS FOR SUBSTITUTIONS.

A. In addition to complying with all other submittal requirements of the Contract, submit written data demonstrating that the proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and otherwise complies with all requirements of the plans and specifications, including:

1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution.
2. Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.

3. List of Subcontractors, if any, that may be affected by the substitution.
4. Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriately licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the substitution. If no revisions or modifications are necessary, submit a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment.

B. At the request of and within the timeframes specified by the University's Representative:

1. Submit samples as deemed necessary by the University's Representative to evaluate the proposed substitution.
2. Submit proposed substitution to tests deemed necessary by the University's Representative to evaluate the proposed substitution. Such tests shall be made by an independent Testing Laboratory and at the sole expense of Contractor, after review and approval of the test procedures by University's Representative. If re-testing is deemed necessary by the University's Representative to evaluate the proposed substitution, such re-testing shall be made by an independent Testing Laboratory at the sole expense of the General Contractor.
3. Provide any additional information deemed necessary by the University's Representative to evaluate the proposed substitution.

C. If University's Representative, in reviewing a proposed substitution, requires revisions or corrections to be made to previously accepted shop drawings and supplemental supporting data to be resubmitted, Contractor shall do so within the time period specified by the University's Representative. A proposed substitution may be rejected if Contractor fails to submit such revisions, corrections, or supplemental supporting data within the specified time period.

D. Except for products, material or equipment designated in the Bidding Documents for evaluation of substitutions prior to award, requests for substitution, including the data required by Paragraph 1.3.A, must be submitted to the University's Representative not later than 35 days after the date of commencement specified in the Notice to Proceed. No requests for substitutions of products, material or equipment subject to the 35-day deadline shall be considered unless the request and supporting data is submitted on or before the deadline, except those deemed, in University's Representative's sole opinion, to be necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.

E. If a product, material or equipment is designated in the Bidding Documents for evaluation of substitutions prior to award, then a request for substitution of the product, material or equipment, including the data required by Paragraph 1.3.A, must be submitted by the deadline specified in the Bidding Documents. Because of time constraints, only one submittal will be allowed for each such substitution request. Requests for substitutions of products, material or equipment designated for evaluation prior to award may not be made after the deadline specified in the Bidding Documents, and such requests be shall not be considered unless the request and supporting data is submitted on or before the deadline specified in the Bidding Documents. Notwithstanding the forgoing, the University may

consider, after award of the Contract, requests for substitution of a product, material or equipment designated for evaluation prior to award where, in University's Representative's sole opinion, a substitution is necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.

F. In reviewing the supporting data submitted for substitutions, University's Representative will use, for purposes of comparison, all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Specifications. If more than 2 submissions of supporting data are required, the cost of reviewing the additional supporting data shall be at Contractor's expense.

G. Contractor has the burden of demonstrating, through the procedures specified herein, that its proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and complies with all other requirements of the plans and specifications. If revisions or modifications to the design or construction of the work are necessitated by the use of the substitution, Contractor also has the burden of demonstrating, through the procedures specified herein, that the use of the substitution will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project.

H. The University’s Representative may refuse to approve any requested substitution where, in the reasonable opinion of the University’s Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the proposed substitution is equal to, or superior to, the first-named product, material or equipment, in quality, utility and appearance and that the proposed substitution complies with all other requirements of the plans and specifications.

I. University's Representative may reject any substitution not proposed in the manner and within the time limits prescribed herein.

J. Substitutions are not allowed unless approved in writing by the University’s Representative. Any such approval shall not relieve Contractor from the requirements of the Contract Documents.

K. The 35-day and 5-day submittal periods do not excuse Contractor from completing the Work within the Contract Time or excuse Contractor from paying liquidated damages if Final Completion is delayed.

L. If revisions or modifications to the design or construction of the Work are necessitated by the use of a substitution, the substitution may be used only if the revisions and modifications are approved in writing by the University’s Representative. The University’s Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University’s Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility and appearance of the Project or any portion of the Project.

M. If a substitution request is finally rejected by the University Representative, Contractor shall furnish and install:

1. the first-named product, material, or equipment; or
2. a product, material, or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number, provided Contractor complies with the submittal requirements (including deadlines) of subsection 1.2 above.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 25 00

SECTION 01 26 13
REQUESTS FOR INFORMATION

PART 1 - GENERAL

1.1 SUMMARY

A. This section contains the procedures to be followed by the Contractor for submitting requests for clarification or additional information.

1.2 PROCEDURES

A. Notification by the Contractor:

1. Submit all requests for clarification and/or additional information in writing to the University's Representative using the Request for Information (RFI) form (Exhibit 17). RFIs shall be submitted electronically as directed by the University. Contractor shall submit their RFI form for University approval prior to utilization. If Contractor does not have a form, Exhibit 17 shall be used.
2. RFI's not completely and correctly filled out by the Contractor will not be answered. Impacts to the Project arising from the Contractor's failure to properly submit RFI's are the Contractor's sole responsibility.
3. Number RFI's sequentially. Submit a new RFI for each new question. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI shall be '001.' The second RFI shall be '002.' The first resubmittal of RFI 002 shall be '002-001.'

B. Limit each RFI to one subject and one subject only. RFI's addressing more than one subject will not be answered.

C. Submit RFI's if one of the following conditions occur:

1. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
2. Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.
3. Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.

D. Non Compliant RFI's

1. RFI's will not be recognized or accepted if, in the opinion of the University's Representative, one of the following conditions exist:
   a. The Contractor submits the RFI as a request for substitution.
   b. The Contractor submits the RFI as a submittal.
   c. The Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.
   d. The Contractor submits the RFI in manner that suggest that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.

e. The Contractor submits an RFI in an untimely manner without proper coordination and scheduling of Work or related trades.

2. If over 10% of the RFI's received from the Contractor are found to fall into these categories, the Contractor will be back charged the cost to the University of the additional effort required to respond to these inappropriate questions. Such back charges may include expenses incurred by the University's Design Professional as determined by the University's Representative. Said back charges will be deducted from the Contract Sum.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 Requests for Information

A. Contractor shall ask for any clarification or request for information immediately upon discovery. Contractor shall submit RFI's in a reasonable time frame so as not to affect the project schedule while allowing the full response time described below. RFI's shall include:

1. Specification Section or Drawing Number and Detail impacted.
2. Address impacts to schedule and cost.
3. Suggest possible solutions to fit field conditions, if appropriate.

B. Response Time:

1. The University's Representative, whose decision will be final and conclusive, shall resolve such questions and issue instructions to the Contractor within a reasonable time frame. In most cases, RFI's will receive a response within 14 days. In some cases, this time frame may need to be lengthened for complex issues, or shortened for emergency situations, as mutually agreed in writing between the University's Representative and the Contractor.
2. Should the Contractor proceed with the Work affected before receipt of a response from the University's Representative, any portion of the Work which is not done in accordance with the University's Representative's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and the General Contractor shall be responsible for all resultant losses.

C. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, the Contractor shall follow procedures set forth in the General Conditions.

END OF SECTION 01 26 13

SECTION 01 31 00
PROJECT COORDINATION
As applies

PART 1 - GENERAL

1.1 COORDINATION REQUIREMENTS

A. Contractor shall coordinate the Work and shall not delegate responsibility for coordination to any Subcontractor.

1. Contractor shall anticipate the interrelationship of all Subcontractors and their relationship with the Work.
2. Contractor shall resolve differences or disputes between Subcontractors concerning coordination, interference, or extent of the Work between Sections.
3. Contractor shall coordinate the Work of Subcontractors so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.
4. Contractor shall not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
5. Contractor shall not cover any piping, wiring, ducts, or other installations until they have been inspected and approved and required certificates of inspection issued.
6. Contractor shall remove and replace all Work that does not comply with the Contract Documents. Repair or replace any other Work or property damaged by these operations with no adjustment of Contract Sum.
7. Contractor shall coordinate all portions of the Work requiring careful coordination in order to fit in space available. Before commencing such portions of the Work, prepare supplementary drawings for review by the University's Representative.
8. Contractor shall ensure that anchorage, blocking, joining, and other detailing are provided as required.

B. Electrical and Mechanical Coordination

1. Routing and Coordination of underground Site Utilities
   a. Contractor shall schedule and coordinate the Work of all site water, sanitary sewer, storm drain, electrical, telecommunications, hydronic, and other utilities Subcontractors having installation responsibilities within the limits of work, with respect to the sequence of Work and the allocation of space among the trades. The planned sequence of Work in such areas and any proposed departure from it affecting or potentially affecting coordination of the overall installation shall be brought promptly, in writing, to the attention of the University's Representative.

   b. As soon as practical and in no case starting later than 15 days after the Notice to Proceed, the Contractor and above named Subcontractors, shall participate in a meeting for the preparation of a coordinated 3-D Building Information Model (BIM) of the demonstrating how these all site water, sanitary sewer, storm drain, electrical, telecommunications, hydronic, and other utilities will fit within the limits of work. These utilities will be fully coordinated one with the other as well

as with architectural and structural components of the building. This effort shall be in accordance with the Coordination Process Article of the Instructions to Bidders.

2. Routing and Coordination of overhead Mechanical, Fire Sprinkler, Plumbing and/or Electrical Installations

a. Contractor shall schedule and coordinate the Work of all Mechanical, Fire Sprinkler, Plumbing, Electrical, Technology, Structural Steel, Metal Framing and Acoustical Ceiling Subcontractors having installation responsibilities within the ceiling space, with respect to the sequence of Work and the allocation of space among the trades. The planned sequence of Work in such areas and any proposed departure from it affecting or potentially affecting coordination of the overall installation shall be brought promptly, in writing, to the attention of the University's Representative.

b. As soon as practical and in no case starting later than 15 days after the Notice to Proceed, the Contractor and above named Subcontractors, with assistance from the Drywall Subcontractor, shall participate in a meeting for the preparation of a coordinated 3-D Building Information Model (BIM) of the overhead mechanical, electrical, technology, fire protection and plumbing utilities demonstrating how these utilities will fit within the designated ceiling and vertical shaft spaces. These utilities will be fully coordinated one with the other as well as with architectural and structural components of the building. The Metal Framing and Drywall Subcontractor will provide input as to location of king studs and other wall and ceiling components which potentially impact placement of utilities. This effort shall be in accordance with the Coordination Process Article of the Instructions to Bidders. The Structural Steel Subcontractor shall provide a 3-D model of their work based on their approved shop drawings.

1) BIM layout models of all equipment, ductwork and piping shall be prepared at not less than a 3/8 scale and in the most current version of 3D CAD or BIM software format compatible with NavisWorks software. A listing of compatible formats can be found at http://www.navisworks.com/en/support/formats. The Contractor shall establish standards governing model programs, coordinate system, communication and transfer protocols.

2) The resulting 3D models shall accurately show sequencing, routing, sizes and elevations of all ductwork, piping, equipment, registers, grilles, diffusers and similar features, as well as locations of all valves, dampers, services thermostats and all other items requiring access and maintenance. These models shall also accurately show structural and architectural components, including but not limited to beams, columns, walls, ceilings, doors and their types. Additionally, the Contractor shall model any other major architectural and structural features as shown on their respective drawings or models. The design team's architectural and structural models will be available as supplementary information for coordination. The Contractor shall within 15 days after the Notice To Proceed commence and manage the initial

coordination with mechanical, plumbing, fire protection, security, telephone/data, audio/visual, casework, and electrical Subcontractors who shall then begin participating in regular BIM coordination meetings. The Subcontractors shall create their own models in adherence with the standards established in the initial BIM coordination meeting(s), including modeling accurate 3D routings, valves, access panels, switch panels, clearances, etc., as required. The updated models from all Subcontractors shall be uploaded via means established in the initial BIM coordination meeting on a weekly basis at minimum. The planned sequence of Work in such areas and any proposed departure from it affecting or potentially affecting coordination of the overall installation shall be brought promptly, in writing, to the attention of the University's Representative.

3) BIM Coordination Meetings: The Contractor shall then prepare a preliminary composite of all models, incorporating all the information and BIM models provided by the Subcontractors. The composite model will then be reviewed during a series of BIM coordination meetings as directed by the Contractor in coordination with the University's Representative, at which time all trades shall be represented by at least one project manager and one modeler in order to review and resolve any real or apparent inferences or conflicts. The Contractor shall also have an active teleconference at all BIM coordination meetings for inclusion of the design team and University staff. In preparing the composite model, minor changes in duct, pipe or conduit routings that do not affect the intended function may be made as required to avoid conflicts. Items may not be resized, exposed, concealed or relocated without the University's Representative's written approvals. No changes shall be made in any wall or chase locations, soffit or ceiling heights, door swings or locations, window or other openings, or other features affecting the function or esthetic effect of the building. If conflicts or interferences cannot be satisfactorily resolved, the University's Representative shall be notified and their decision obtained. The composite BIM model need not be submitted as a whole, but they shall be submitted, in all cases, in ample time to avoid construction delay. The coordination model may lack complete data in certain instances pending receipt of shop drawings or fabrication models, but sufficient space shall be allotted for those items affected. When the final information is received, such data shall be promptly inserted in the composite model. All changes in the scope of work due to revisions formally issued and approved shall be shown on the composite model. All work on the coordination composite drawings shall be performed by competent modelers and shall be clear and fully usable. The University's Representative shall determine the acceptability of the BIM models.

4) Composite BIM Model: After all conflicts, interferences and associated issues are resolved, the Contractor shall then develop a

final composite model showing the agreed upon routing, layout and placement of all ductwork, conveyers, piping, conduit, valves, panels, lighting fixtures and all other major mechanical and electrical installations. In preparing the final composite model, any supplementary drawings shall be created as well to accurately communicate the as-built condition. Particular attention shall be given to the locations, size and clearances of all equipment items, shafts, soffits, ceilings, wall spaces and similar features. These final composite models and drawings shall then be signed off by each of the Subcontractors, indicating their awareness and agreement with the indicated routings, layouts and their interrelationship with the other work and systems of all other Subcontractors. After sign-off, no unauthorized deviations will be permitted and if made without written agreement of the University's Representative, this unauthorized work will be removed and corrected by the Contractor at no additional cost to the University. Furthermore, no extra compensation will be paid or additional time allowed relating to any system or component installed without proper coordination between all the trades involved. If any improperly coordinated work or work installed that is not in accordance with the approved coordinated composite model requires additional work by other trades, the costs of all such additional work shall be borne by the Contractor.

5) Final Composite BIM Model and Drawings: After the final composite BIM model and associated drawings have been agreed upon and signed by the Contractor and all Subcontractors, the Contractor shall reproduce copies and distribute the BIM model/drawings for reference purposes to each of the participating Subcontractors and the University's Representative. Other Subcontractors responsible for supplementary composite drawings as previously indicated herein shall provide their information for the Contractor's distribution. The University's Representative, Contractor and each Subcontractor shall retain the record copies of final composite BIM models and drawings as working references. All shop drawings and fabrication models, prior to their submittal to the University and their design consultants, shall be compared with the record composite model/drawings and developed accordingly by the responsible Subcontractor. The Contractor with the participation of Subcontractors shall be responsible for the up-to-date maintenance of their record copies of the composite model and to keep one copy available at the site. Any such revision to the composite model(s), which may become necessary during the progression of work shall be communicated to the Contractor and shall be accurately recorded during construction and in a record model and associated drawings at the completion of work by the Contractor. The University, the Contractor and each Subcontractor shall utilize the composite BIM model and any subsequent revisions in the development of their as-built model and drawings. The Final Composite BIM Model and Drawings

are to be submitted as part of the Closeout Record Documents.

c. Should unavoidable conflicts be encountered during the preparation or review of the Shop Drawings, or during construction, they shall be promptly brought to the attention of the University's Representative, in writing, for resolution.

d. Where the Drawings are diagrammatic, showing only the general arrangement of the systems, Contractor shall have responsibility for the fitting of materials and equipment to other parts of the equipment and structure, and to make adjustments as necessary or required to resolve space problems, preserve service room, and avoid architectural and structural elements and the Work of other trades. Contractor may be required to identify certain areas to relocate installations within the spaces depicted on the Drawings, e.g., ductwork may be shifted within the space shown to accommodate other systems. Such functional relocations shall not be deemed a change to the requirements of the Contract. In the event a major re-routing of a system appears necessary, Contractor shall prepare and submit for approval, Shop Drawings of the proposed rearrangement.

e. Because of the diagrammatic nature and small scale of the Drawings, all necessary offsets, adjustments, and transitions required for the complete installation are not shown. Contractor shall carefully investigate the structural and finish conditions affecting all the Work and shall arrange such Work accordingly, furnishing such fittings, equipment, valves, accessories, etc., as may be required to meet such conditions, at no additional cost to the University.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 00

SECTION 01 31 19
PROJECT MEETINGS
As applies

PART 1 - GENERAL

1.1 CONTRACTOR PRECONSTRUCTION CONFERENCE(S)

A. Prior to commencement of Work, a preconstruction conference will be conducted by the University's Representative to discuss procedures that are to be followed during performance of the Work.

B. Location: As designated by University's Representative. For those meetings determined to be at the Contractor Job Office, Contractor shall provide video conferencing for those attendees that are offsite.

1. Video Conferencing is defined as the ability to have direct video communication and present documents that will be reviewed during a meeting to offsite attendees. Contractor shall submit to the University what service they intend on utilizing to provide video conferencing no later than three days (3) after Notice to Proceed. Additionally, any requested training on utilization of the video conferencing service shall be provided by Contractor.

C. Attending shall be:

1. University's Representative.
2. Contractor's Project Manager
3. Contractor's Project Superintendent.
4. Subcontractors, as appropriate or as requested by the University's Representative.
5. Others as appropriate or as requested by the University's Representative.

1.2 BILLING MEETINGS

A. Monthly billing meeting shall be conducted by University's Representative each month on or prior to the 20th of the month prior to submittal of the Application For Payment (Exhibit 4).

B. Location: As designated by University's Representative.

C. Attending shall be:

1. University's Representative.
2. Others as appropriate or as requested by the University's Representative.

3. Contractor's Project Manager or Contractor's Project Superintendent

1.3 OAC (OWNER, ARCHITECT, CONSTRUCTION MANAGER) PROGRESS MEETINGS

A. Weekly progress meetings will be held to discuss project management, project administration and field coordination including but not limited to schedule, procurement, submittals, RFIs, Field Directives, Inspection Status, Bulletins and Potential Change Orders. The University's Representative shall conduct these meetings.

B. Location: The Contractor shall facilitate video conference calls and host the meeting in their construction site office.

C. Attending shall be:

1. University's Representative.
2. University's Consultants (optional)
3. Contractor's Project Manager, Project Engineer and Project Superintendent and others as requested by University's representative.
4. University's Design Professional and Design Professional's Consultants as appropriate.
5. Others as appropriate or as requested by the University's Representative.

1.4 PREPATORY MEETINGS AND PRE-INSTALLATION CONFERENCES

A. The University's Representative will conduct a pre-installation conference at the site before each construction activity or when required in technical Specification Section.

B. Attendance will be required of parties directly affecting, or affected by, or involved in the installation and its coordination or integration with other materials and installations that have preceded or will follow the particular item of work or activity under consideration. Parties attending the conference shall be qualified and authorized to act on behalf of entity each represents.

C. Conference Schedule: Schedule conference to assure a sufficient amount of time prior to the scheduled work or activity under consideration so that any concerns, problems or disagreements can be resolved without delaying the Project. Notify the University's Representative 7 days in advance of meeting date.

D. The University's Representative shall coordinate with the Contractor to make physical arrangements for conferences, prepare agenda, preside at conferences, record minutes, and distribute copies within two days after conference to the University's Representative, the Project Inspector, conference participants and those affected by the decisions made at the conference. The Contractor will record in the minute's significant discussions and agreements and disagreements.

E. Do not proceed with the work or activity if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and reconvene the conference at the earliest feasible date.

1.5 GUARANTEES, BONDS, WARRANTIES AND SERVICE/OPERATION AND MAINTENANCE CONTRACTS/DATA REVIEW MEETING

A. Eleven months following the date of Substantial Completion, a meeting shall be conducted by the University's Representative for the purpose of reviewing the guarantees, bonds, and service and maintenance contracts for materials and equipment.

B. Consultant shall provide a Field Observation Report noting comments and observations within 14 days of this walk. The Contractor shall take action as appropriate to implement repair or replacement of defective items, and to extend service and maintenance contracts as required based in the field observation report

C. Attending shall be:

1. University's Representative.
2. University's Consultants, as appropriate.
3. University's Design Professional and Design Professional's Consultants as appropriate.
4. Contractor superintendent(s) whom will be managing the project from on site.
5. Subcontractors, as appropriate or as requested by the University's Representative.
6. Others as appropriate or as requested by the University's Representative.

1.6 LEAN SCHEDULING AND PULL-PLANNING MEETINGS

A. The University Representative will be utilizing the "Last Planner System" to develop and implement a phased schedule that supplements and supports the Master Schedule included within the bid documents.

1. This will require time commitment from officers and supervisors of Contractor and all Subcontractors.
2. Contractor will be required to provide their input and commitment to the final schedule.
3. There will be a workshop held prior to the start of construction where the process will be explained in detail and the Master Project Schedule reviewed. Periodically "pull planning" sessions will be held to refine and expand on the detail in the Master Project Schedule. These sessions will require the contractor's superintendents and foreman to brainstorm and create detailed activities and resource requirements that support the Master Schedule.

B. Attending shall be:

1. University's Representative.
2. University's Consultants (optional).
3. University's Design Professional and Design Professional's Consultants as appropriate (optional)
4. Contractor superintendent(s) whom will be managing the project from on site.
5. Subcontractors, as appropriate or as requested by the University's Representative.
6. Others as appropriate or as requested by the University's Representative.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 19

SECTION 01 31 42
CONTRACTOR SCHEDULES

PART 1 - GENERAL

1. CONTRACTOR SCHEDULE

The Contractor is to utilize the "Last Planner System" to develop and implement a phased schedule that supplements and supports the Preliminary Master Project Schedule as defined in this section. This will require time commitment from officers and supervisors of the Contractor and all Subcontractors. The Contractor and all Subcontractors will be required to provide their input and commitment to the final schedule.

A. Pull Planning Sessions

1. There will be a workshop held prior to the start of construction where the process will be explained in detail and the Contractor's Preliminary Master Project Schedule reviewed.
2. Periodically "pull planning" sessions will be held to refine and expand on the detail in the Preliminary Master Project Schedule.
3. These sessions will require the Contractor and Subcontractor's superintendents and foreman to brainstorm and create detailed activities and resource requirements that support the Preliminary Master Project Schedule.
4. After the Contractor and all Subcontractors agree to each other's input, all parties will commit to this updated schedule.

B. Submit

1. Six week look-ahead schedules will be reviewed and updated each week and will be the basis of a Weekly Work Plan (WWP).
2. The Contractor will be required to submit their WWP on a weekly basis prior to that week for review during the OAC meeting.

C. Form

1. The WWP will consist of a production plan in which quantity goals as well as weekly manpower requirements established consistent with meeting the overall project schedule.
2. Prepare the WWP in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time and in accordance with the Preliminary Master Project Schedule.

D. Activities

1. The WWP will consist of a production plan in which quantity goals as well as weekly manpower requirements established consistent with meeting the overall project schedule.
2. Identify all holidays, including University holidays, and non-working days on the WWP.

3. During the Pull Planning Sessions the Contractor and each Subcontractor will identify all Work activities in correct sequence for the completion of the Work. Work activities will include the following:
   a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's prior approval.
   b. System test dates.
   c. Scheduled overtime Work if required by Contract Documents.
   d. Dates designated for working spaces, storage areas, access, and other facilities to be provided by University.
   e. Dates orders and decisions from University on designated items are due.
   f. Dates for delivery of University-furnished equipment.
   g. Dates for University-furnished utilities.
   h. Connection and relocation of existing utilities.
   i. Connection to or penetrating existing structures.
   j. Scheduled inspections as required by Codes, or as otherwise specified.

4. During the Pull Planning Sessions the Contractor and each Subcontractor will identify all Work activities that constitute the critical path.
   a. Critical Work activities are defined as Work activities which, if delayed or extended, will delay the scheduled completion of one or more of the milestones specified in this Section or the scheduled completion of the Work, or both. All other Work activities are defined as non-critical Work activities and are considered to have float.

1.2 PRELIMINARY MASTER PROJECT SCHEDULE

A. The Preliminary Master Project Schedule shall be utilized for monitoring progress of the Work and represent a practical plan to complete the Work within the Contract Time.

B. The Preliminary Master Project Schedule will identify the following milestone events:

1. Refer to the Preliminary Master Project Schedule shown in the Bidding Documents for milestone activities listed in Section 01 31 45 Contract Schedules.

C. The Preliminary Master Project Schedule will identify all holidays and non- working days.

D. Updating.

1. The Preliminary Master Project Schedule and WWP will be monitored and updated each week during the construction phase by the whole project team.
2. Monitoring and evaluation will cover not only future activities; but completed activities will be evaluated from a "lesson learned" perspective in order to improve on future planning activities.
3. Project team members will be held accountable for meeting these goals.
4. No Applications For Payment will be processed nor shall any progress payments become due until updated information is accepted by University's Representative.

1.3 TIME CONTROL

A. Set up control procedures so that approved schedules are adhered to. Contractor's responsibility is to properly notify University's Representative of anticipated and actual time delays (refer to General Conditions).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 42

SECTION 01 31 45
CONTRACT SCHEDULES
As applies

PART 1 - GENERAL

1.1 PRELIMINARY CONTRACT SCHEDULE

A. Within the time stated in the Notice of Selection as Apparent Lowest Responsible Bidder, Contractor shall submit a preliminary work plan or schedule of proposed operations to the University's Representative for approval. This schedule shall acknowledge the full contract duration as well as significant known contract constraints. In preparation of the plan or schedule, the Contractor shall make due allowance for and include the following:

1. Preparation of equipment and material submittals for review.
2. Procurement schedule.
3. Construction and installation schedule.
4. Owner Furnished Owner Installed Furniture/FF&E
5. Owner Furnished Contractor Installed Equipment
6. Major milestones.
7. Commissioning
8. Training

B. Form

1. Prepare the Preliminary Contract Schedule in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time.

1.2 PROJECT OR CONTRACT SCHEDULE

1. Within 15 working days of receipt of the Notice to Proceed, the Contractor shall submit a detailed project schedule. This Detailed Project Schedule shall incorporate the first 90 calendar days of contract Work as shown in the accepted Preliminary Contract Schedule.
2. Form:
   a. The Detailed Contract Schedule shall be CPM (Critical Path Method), using PDM (Precedence Diagram Method) method of scheduling, with time scaled diagrams (plots) and tabular charts.
   b. The Detailed Contract CPM Schedule when approved by the University, shall serve as the contract schedule for the project.
   c. The Detailed Contract CPM Schedule duration shall conform to the full contract duration; and may include one or more float activities, to show full accounting of the Contract Time.
   d. Prepare the Detailed Contract Schedule in sufficient detail to demonstrate serious planning for the Work and to represent a practical plan to complete the Work within the Contract Time.

e. Identify all holidays, UC Merced finals weeks and non-working days.

f. Critical Work activities are defined as Work activities that, if delayed or extended, will delay the scheduled completion of 1 or more of the milestones specified in this Section or the scheduled completion of the Work, or both. All other Work activities are defined as non-critical Work activities and are considered to have float.

g. Float is defined as the time that a non-critical Work activity can be delayed or extended without delaying the scheduled completion of milestones specified in this Section or the scheduled completion of the Work, or both. Neither the General Contractor nor the University shall have an exclusive right to the use of float. The party using float shall document the effect on the updated Contract Schedule.

B. Content:

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work. Work activities shall include the following:

a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's Representative's prior approval.

1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the University.

2) A minimum of 18 days shall be allotted for University's Representative to review each submittal.

2. Date mobilization complete.

3. System test dates.

4. Scheduled overtime Work if required by Contract Documents.

5. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the University.

6. Dates Contractor requests orders and decisions from the University on designated items.

7. Dates Contractor requests University-furnished equipment/FF&E

8. Dates Contractor requests University-furnished utilities.

9. Dates Contractor requests road closures.

10. Mock-up construction and reviews

11. Connection and relocation of existing utilities including utility shutdowns.

12. Connecting to or penetrating existing structures.

13. Scheduled inspections as required by Codes, or as otherwise specified.

14. Milestone activities showing the point of substantial completion and final completion for each stage of the work, if designated in the Contract Documents, shall be included in The Preliminary Contract Schedule, Contract Schedule, and updates.

C. Presentation

1. Network Logic Diagrams

a. The Contract Schedule shall include all construction and demolition activities, procurement of equipment components and major off-site fabricated items, through the entire construction phase, including pre-commissioning and job close out. Completion or "Punch List" work shall be included in the Contract Time.

b. The Contract Schedule shall include a complete sequence of construction, in adequate detail for the planning and coordination of the Work. Unless approved by the University's Representative, there shall be no activities shown with durations in excess of **7** working days.

c. The Contract Schedule shall be depicted in the form of precedence diagramming method (PDM) and shall be segregated or divided into bands of activities to reflect the General Contractor's scheduling areas and/or phasing of all construction and procurement activities.

d. The PDM Diagram may be divided into a number of separate pages with suitable notation relating to the interface points from one page to the other. Individual pages shall not exceed 30 by 42 inches.

e. Each activity shall be drawn so that the early start and early finish dates (or actual dates) are clearly indicated. The schedule plot also shall show the dates in tabular form.

f. Each activity shall reflect at least the following information:

1) Description of the work.

2) Activity duration (in work days).

3) Activity number.

4) Activity relationship and float.

g. All activities shall be shown, distinguishing critical

h. Critical path activities, non-critical activities and milestone activities.

i. For large schedules, a summary page shall be provided indicating the major milestones. The summary page shall include a legend that clearly identifies all symbols used within the CPM PDM Diagram. The summary page shall include an index listing all sheets within each sub-network.

j. Graphic schedules shall be accompanied by electronic data files of the network, showing all activities, durations, dependencies and constraints. The files shall be provided on electronic download in format to be determined.

2. Tabular Computer Reports

a. Accompanying the Construction Schedule, the Contractor shall submit various computer generated tabular reports as further described within this Section.

b. As requested by the University's Representative, the Contractor will be required to submit additional Schedule and Cost Reports.

D. Computer System and Computer Generated Tabular Reports:

1. The computer system selected shall be based on PRIMAVERA/PRIMAVISION®, or equal.

2. The computer software employed by the University’s Representative will be capable of:

a. Numeric or Alpha/Numeric activity numbering.

b. Activity codings (to facilitate selecting groups or groupings of activities), with at least a 6-position alpha/numeric code.

c. Activity description field of at least 48 characters.

d. Reporting capabilities that allow sorting of a group or groupings of activities to generate various computer tabular reports and, establishing various planning schedules, as well as bar graphs.

e. Identifying any user assigned constraint; e.g., start not earlier than on the printout, adjacent to the activity.

f. Activity coding to allow graphic presentation in Gantt or PERT chart format.

3. Computer generated tabular reports:

a. Construction Schedule tabular reports shall include the activity number, activity description, duration, remaining duration, percent complete, early start date, early finish date, late start date, late finish date, total float, precedence relationships, lead/lag values and shall correlate work days to schedule dates. If the activity is completed or in progress, it shall have actual start or actual finish dates in lieu of the planned dates. The following sorts are required:

1) A Schedule of all activities, sorted by activity number, with the CPM Logic.

2) A Schedule of all activities, sorted by early start date without the CPM Logic.

3) A Schedule of all activities, sorted by total float without the CPM Logic.

4) When requested, a Schedule of all activities showing successors, predecessors and constraints.

b. Computer generated bar graphs of all activities. The following sorts are required:

1) Sorted by early start only.

2) Sorted by trade and/or responsibility, by early start.

c. Computer generated milestone schedule.

E. Submission

1. Upon receipt, the University's Representative shall review the, Detailed Contract Schedule; the University's Representative and the Contractor shall meet to jointly review the Schedule.

2. If the Schedule is found to be acceptable, the schedule will then be approved by the University's Representative as the Baseline Construction Schedule (Contract Schedule).

3. If the Contractor or the University's Representative determines the Contract Schedule to be in need of revision, within 10 working days thereafter, the Contractor shall revise and resubmit the Schedule to the University's Representative for approval, and, upon acceptance thereof, the Schedule shall be approved as the Baseline Construction Schedule (Contract Schedule).

F. Distribution:

1. University's Representative, via electronic download

2. Contractor's Superintendent.

G. Updating:

1. Contractor shall update the Contract Schedule reflecting progress as of the end of the month and shall submit to the University's Representative for approval by no later than the tenth day of the following month. The updates shall be made as follows:
   a. The schedule update shall consist of updated CPM Schedule reports similar to the Baseline Construction Schedule. The CPM Schedule reports shall report progress based upon percent complete of actual time and remaining duration. If the General Contractor is behind schedule, or requests an extension to the Contract time, the Contract Schedule must be updated and submitted for review in support of the request. Contract Schedules must be updated any time that delays or a change in scheduled work occurs.
   b. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
   c. The updated Contract Schedule shall reflect the true effect of all processed change orders for the progress month. Subject to the provisions stated in the General Conditions, the General Contractor will be granted an extension to the contract time for the cumulative effect any approved change orders have had on the critical path; refer to General Conditions for the prerequisites for entitlement to a time extension.
   d. The updated Contract Schedule shall include all delays for the progress month. Subject to the provisions stated in the General Conditions, the Contractor will be granted an extension to the contract time for the cumulative effect any excusable delay(s) had on the critical path. No time extension will be granted for a claimed delay, unless the General Contractor can demonstrate to the satisfaction of the University's Representative the claimed delay affected the controlling operation or operations of the project. To receive an extension to the contract time, the following conditions must be met:
      1) Written notice has been provided, within 7 days of the delay.
      2) The written notice meets the notice requirements as outlined in the General Conditions.
      3) The Contractor has met the conditions of the General Conditions, all of which are prerequisites for entitlement of an extension of the contract time. The Contractor may submit, with the written notification or with the updated Construction Schedule, a CPM sub-net sketch that delineates the activities that were affected by the delay and the effect the delay had on the critical path. No time extension will be granted if the Contractor has not met the requirements of the General Conditions, or if the Contractor has not satisfactorily demonstrated that the claimed delay affected the critical path. Accordingly, all delays not incorporated into the updated Construction Schedule shall be deemed denied by the University.
2. At the updating, in addition to the above, the Contractor shall provide short interval schedule reports, which include:
   a. A bar graph spanning 1 month prior to the datum line to 2 months beyond the datum line.
   b. A " Four-Week Look Ahead" or predicated status report, covering the work within the next 4 week period, with activities sorted by early start.
3. The Contractor shall provide an Accompanying Narrative Report as needed to explain changes to the schedule, changes to the critical path and shall include a list of critical

activities that require action from the University's Representative. The Accompanying Narrative Report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an account audit of days lost/gained.

4. Other conditions under which additional schedule updating will be required are as follows:
   a. When delay in completion of any work items or sequence of work items result in an indicated extension of the project completion.
   b. When delays in submittals or deliveries or work stoppages known to the General Contractor are encountered that make re-planning or rescheduling of the work necessary.
   c. When the schedule does not represent the actual prosecution and progress of the work.
5. Subject to all other requirements of the Contract Documents, nothing in these requirements shall be deemed to be a usurpation of the Contractor's authority and responsibility to plan and schedule the Work.
6. Distribute copies as required for initial distribution and monthly distribution.

1.3 RECOVERY PLAN

If Contractor is behind schedule by more than five (5) calendar days for any stage of work, based on the updated Contract Schedule after incorporating all approved time extensions, Contractor shall submit to The University's Representative within five (5) working days of notification of such delay, a "Recovery Plan." The Recovery Plan shall be based on proposed revisions to Contract Schedule for the next sixty (60) calendar day period and shall show how Contractor intends to bring the work back on schedule. The Recovery Plan shall also include a written description of the measures that Contractor intends to take without additional cost to The University to regain schedule compliance. The Recovery Plan activities shall be identified according to their relationship to activities on the accepted schedule.

A. Should Contractor fail to submit and execute such Recovery Plan, The University shall have the option to require Contractor to employ any or all measures that The University deems fit to regain schedule compliance without additional cost to The University.

B. The Recovery Plan submitted by Contractor, upon acceptance by The University's Representative, shall be incorporated into the Contract Schedule during the next update.

C. Contractor will be required to submit a Recovery Plan for each update that indicates that the work progress is more than five (5) calendar days behind schedule.

D. Should Contractor dispute the determination of The University's Representative regarding the status on Contract delay, such dispute shall not relieve the Contractor of the responsibility to comply with the requirements of this Section and other related Sections until the dispute is resolved per Article 4 of the General Conditions.

1.4 TIME CONTROL

A. Set up control procedures so that approved schedules are adhered to. Contractor's responsibility is to properly notify University's Representative of anticipated and actual time delays (refer to General Conditions).

B. Time extension requests shall be submitted in accordance with the provisions of General Conditions.

C. The General Contractor's time extension request shall be reviewed and evaluated by the University's Representative. A request for the extension shall be deemed denied if not responded to by University's Representative within 21 days.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 45

SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
As applies

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Shop Drawings, Product Data, and Samples shall be submitted to the University's Representative only in connection with proposed substitutions or when specifically required by the Specifications. Contractor will, however, be required to certify in writing that materials to be provided will be as specified by individual Specification Sections. The University's Representative will not review any other such submittals. Product Data and Samples for proposed substitutions shall be submitted to University's Representative in accordance with Section 01 25 00 Product Options and Substitutions. Contractor shall be responsible for obtaining copies of Shop Drawings, Product Data, and Samples as it may require for its own use.

1.2 RELATED REQUIREMENTS

A. Definitions

1. The terms “Shop Drawings” and “Product Data” as used herein also include, but are not limited to fabrication, erection, layout and setting drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams as well as all other drawings and descriptive data pertaining to materials, equipment, piping, duct, conduit systems, and methods of construction as required to show that the materials, equipment, or systems and the positions thereof conform to the Contract Documents.
2. As used herein, the term “manufactured” applies to standard units usually mass-produced. The term “fabricated” means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall establish the actual detail of all manufactured or fabricated items, indicate proper relationship to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relationship to physical spaces in the structure.

B. Manufacturer’s Instructions

1. Where any item of Work is required by the Contract Documents to be furnished, installed, or performed in accordance with a specified product manufacturer's instructions, General Contractor shall procure and distribute the necessary copies of such instructions to the University's Representative and the General Contractor shall furnish, install, or perform the Work in strict accordance therewith.

C. Submittal Schedule

1. The minimum time required by University's Representative and University's Design Professional to review and process Shop Drawings, Product Data and Samples shall be 18 days after receipt.
2. The Contractor shall submit a schedule for submission of Shop Drawings, Product Data, and Samples (the "Submittal Schedule"). The schedule shall

include the Contractor's time to process the submittal(s), and the time required for review by the University's Representative and University's Design Professional. The schedule shall be agreed upon by the University's Representative, the University's Design Professional, and the Contractor in order that submittals will be available when needed by the construction process and so that each party can plan its workload in an orderly manner. Required submittal schedule and register shall be initially submitted no later than 2 months after the Notice to Proceed.

3. Contractor shall prepare the Submittal Schedule and coordinate it with the Contract Schedule. No submittals will be processed prior to University's Representative and University's Design Professional receiving and approving the Submittal Schedule, unless an exception is made by the University's Representative.

4. In preparing the Submittal Schedule, the Contractor must first determine from the Contract Schedule the date the particular item is needed for the Work. Working backwards, the Contractor will add the required number of days for shipment, time for fabrication, and similar items to determine the date of the first submittal. Contractor shall be responsible for the impact to the schedule resulting from submittals that do not conform to contract requirements. Contractor shall make reasonable allowances in the Submittal Schedule for the re-submittal of items that do not conform to contract requirements.

5. The Submittal Schedule shall be adjusted to meet the needs of the construction process and the Contract Schedule. Submit 1 electronic copy of the Submittal Schedule after it is completed and each time it is updated by the Contractor.

1.3 SHOP DRAWINGS

A. Present information required on Shop Drawings in a clear and thorough manner. Identify details by reference to drawing and detail, schedule and/or room numbers shown and specified.

B. The Contractor shall prepare Shop Drawings that comply with the Requirements of Section 01 78 39 Project As-Built Documents.

1.4 PRODUCT DATA

A. Preparation

1. Clearly mark each copy to identify pertinent products or models.
2. Show performance characteristics and capacities.
3. Show dimensions and clearances required.
4. Show wiring or piping diagrams and controls.

B. Manufacturer’s standard schematic drawings and diagrams

1. Modify the standard schematic drawings and other diagrams to delete information that is not applicable to the Work.
2. Supplement standard information to provide information specifically applicable to the Work.
3. Clearly indicate manufacturer’s model or part number intended for Project.

C. Material Safety Data Sheets

1. Material Safety Data Sheets (MSDS) shall be submitted for all hazardous substances so defined by the State of California. MSDS shall also be provided for all substances furnished under this contract that are not available to the general public from retail outlets; e.g., paints, coatings, lacquers, varnishes, sealers, removers, thinners, solvents, adhesives, cleaners, acids, putty, fillers, disinfectants, fungicides, pesticides, gases, oils, lubricants, treatments, liquid-applied flooring, etc.

2. Contractor shall provide electronic or physical copies upon request at the job site.

1.5 SAMPLES

A. Samples shall be of sufficient size and quality to clearly illustrate the following:

1. Functional characteristics of the products with integrally related parts and attachment devices.
2. Full ranges of color, texture and pattern or as specified by the University's Representative.
3. Or as specified.

B. Field Samples and mock-ups

1. Erect at the Project site, at a location as directed by the University's Representative;
2. Size: As specified;
3. Fabricate each Sample and mock-up to be complete and fully finished;
4. Remove mock-ups at conclusion of the Work;
5. Or as specified.

1.6 LEED™ SUBMITTAL INFORMATION

A. All information noted in Section 01 81 13 LEED® Requirements shall be noted on Exhibit 49, LEED NC v4.1 Product Data Submittal Data Form of every submittal including , but not limited to:

1. Distance in miles from final assembly location to project site;
2. All recycled content information;
3. All FSC certified wood information;
4. All electric, natural gas and water efficiency information;
5. VOC and other LEED® related issues.

B. Any submittals not containing this information on the cover will be rejected.

1.7 CONTRACTOR'S REVIEW OF SUBMITTALS

A. Review, edit as appropriate, and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittals shall clearly show that they have been reviewed by the Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections. Contractor's stamp and signature shall indicate that the submittal has been reviewed by the Contractor for conformance with the Contract requirements. Submittals that do not comply with this paragraph shall not be reviewed.

B. Determine and verify

1. Field measurements.
2. Field construction criteria.
3. Catalog numbers and similar data.
4. Conformance with Contract Documents.

C. Coordinate each submittal with requirements of the Work and of the Contract Documents.

D. Notify the University's Representative and University's Design Professional in writing, at time of submission, of any changes in the submittals from requirements of the Contract Documents.

E. Do not proceed with fabrication or Work that requires submittal review approval.

1.8 SUBMITTAL REQUIREMENTS

A. The Contractor shall:

1. Submit items in a group or in a sequence which provide the University's Representative with sufficient information to review items of Work which require coordination with each other. Submissions that do not provide sufficient information to review items of Work requiring coordination with each other shall be returned to the Contractor for re-submittal.
2. Submit submittals promptly in timely manner to avoid delay in the Work or in the Work of any Separate Contractor.
3. Submit a completed Exhibit 23 Material Submittal Approval Form with every submittal.
4. Submit new samples as required for initial submittal.

B. Number of Submittals Required

1. Shop Drawings: Submit electronic file of shop drawings to the University’s Representative . The University’s Representative shall return an electronic copy with review comments to the Contractor. Verify Quantity Required.
2. Project Data and Non-Reproducible Submittals: Submit 1 electronic copy to the University’s Representative. The University’s Design Professional shall return 1 electronic copy with review comments to the Contractor.
3. Samples and Non-Reproducible Submittals: Submit number as specified in individual Specification Section(s) to University’s Representative.
4. University may require submittals to be submitted electronically in the format of AUTOCAD® (latest version available at date of Bid). Files must be ORIGINAL.DWG format. Electronic media must be submitted by electronic download. One set of original plots must be provided with the electronic media.
   a. Drawings are to use a specified title block, orientation and north arrow provided by the University.
   b. All actual Drawings are to be done on Model space and plot set up/title block are on Paper space.
   c. Shop Drawing size should be 30”x42” unless is requested differently by the University’s Representative.
   d. All Cross references within the same AUTOCAD® Drawing must be bound.

C. Submittals shall contain:

1. A unique number. Follow Submittal Number with incremental alphabetical suffix as necessary for each resubmission. For example, the first submittal will be '001'. The second submittal will be '002'. The first revision number shall be '00' to indicate the original submittal.

   Example: 001-Spec Number-00 would be the first submission for this specification. The revised submission for the same submittal would be Example: 001-Spec Number-01.
2. Actual date of submission, date of submission as shown on Submittal Schedule, date response due, and dates of any previous submissions.
3. Project name and number.
4. Contract identification.
5. The names of:
   a. Contractor.
   b. Subcontractor.
   c. Supplier.
   d. Manufacturer.
   e. Bid Package Number if applicable.
6. Identification of the product with the Specification Section number.
7. Field dimensions clearly identified as such.
8. Relation to adjacent or critical features of the Work or materials including interaction with work of other trades.
9. Reference standards such as American Society for Testing and Materials (ASTM) or Federal Specification (FS) numbers.
10. Identification of changes from requirements of the Contract Documents.
11. Identification of revisions on re-submittals. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the University's Representative.
12. An 8 by 3 inch blank space for review stamps.
13. Contractor's stamp, initialed or signed, certifying to the review of the submittal; verification of materials field measurements and conditions; and compliance of the information within the submittal with requirements of the Work and of the Contract Documents.
14. Contractor shall submit submittal(s) with transmittal provided by the University's Representative.

D. Resubmission Requirements

1. Shop Drawings and Product Data
   a. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the University's Representative.
   b. University's Representative and the University's Design Professional will review a total of 2 submittals for the same item at no cost to the Contractor. The cost for the review of more than 2 submittals of the same item shall be deducted from the Contract Sum.
2. Samples: Submit samples as required for review/approval.

E. Distribution

1. Reproduce and distribute copies of Shop Drawings and Product Data that carry the University's Representative's review stamp, to the following locations:
   a. Contractor’s Project site file.
   b. Record documents file maintained by the Contractor.
   c. Separate General Contractors.
   d. Subcontractors.
   e. Supplier, manufacturer or fabricator.
2. Distribute Samples that carry the University’s Representative’s review stamp as directed.
3. Provide electronic copies of Shop Drawings and Product Data that have the final approved review stamp to the University’s Representative for file.

F. University’s Representative and the University’s Design Professional will review Contractor’s submittals, such as Shop Drawings, Product Data and Samples, for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 33 23

SECTION 01 35 00
SPECIAL REQUIREMENTS

PART 1 - GENERAL

1.1 DEFINITION OF PROJECT SITE

A. Contractor's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.

B. The Project site is located at University of California, Merced Campus, 5200 N. Lake Rd. Merced CA 95343.

1.2 WORK HOURS

A. No Work shall be done outside of standard Monday through Friday 7:00 A.M. to 5:00 P.M. working hours, on holidays or weekends unless prior written approval has been obtained from the University's Representative 3 days prior to the event.

1.3 SITE INGRESS AND EGRESS

A. Contractor shall use the Project Access Road off of Lake Road at Bellevue Road as shown on the Site Plan.

1.4 SITE RESTRICTIONS

A. OUT OF BOUNDS AREAS**:** Areas outside the project limits as identified on the Topographic Survey in the Contract Documents.

1. Little Lake
   a. The Contractor shall not permit any personnel or construction vehicle to approach within 100 feet of Little Lake except with the prior written approval of the University's Representative.
   b. The Contractor shall ensure that no personnel shall use the Lake to fish, swim or for other non-construction activities.
   c. The Contractor shall ensure that no run-off shall enter the Lake except as indicated on the Drawings.
   d. The Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Lake.

2. Merced Irrigation District
   a. The Contractor shall not permit any personnel or construction vehicle to approach within 50 feet of the Fairfield Canal and the penstock between Le Grand and Fairfield Canals except with the prior written approval of the University's Representative.
   b. The Contractor shall ensure that no personnel shall use the Fairfield Canal or the penstock between Le Grand and Fairfield Canals to fish, swim or for other non-construction activities.

c. The Contractor shall ensure that no run-off shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals except as indicated in the Contract documents.

d. The Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals.

1.5 ROADS

A. Existing roads and existing or planned construction roads shall be used for construction access within the limits defined herein.

B. Contractor shall take all necessary precaution to ensure the safety of University Students, Staff, Faculty and Visitors at all times.

C. Contractor must obtain prior written approval from the University's Representative to block streets or parking areas at any time.

D. The Contractor shall clear all roads (including Lake Road), parking areas and sidewalks affected by the Contractor's operations. This will include the immediate removal of dust, dirt, or any other debris or detritus so that roads and sidewalks are maintained in a safe and usable condition.

1.6 PARKING

A. All parking locations and arrangements must be coordinated and approved by University of California, Merced's Transportation and Parking Services (TAPS) prior to the start of work.

B. A parking permit and fee to utilize the University of California, Merced (UCM) parking facilities will be required for all areas. Parking Permits can be purchased on monthly basis at $38 per month per vehicle. Contact Transportation and Parking Services (TAPS) at (209) 228-8277 or visit the Facilities modular behind Central Plant for information on obtaining permits. A valid permit must be displayed at all times by all vehicles while parking on campus, whether in fenced construction areas or not. Fees are subject to change without notice. Contractor is responsible for covering all parking fees.

C. The Contractor shall not permit any personnel to park within the construction site or construction yard. Parking will be limited to a maximum of one company insured vehicle on site or within the construction yard.

D. On-street parking is not permitted in areas not designated for parking or construction.

F. Vehicles found to be on university property without a valid permit, will be cited. Fines range from $60.00 for no permit to $445.00 for parking in a handicapped stall without a valid blue tag.

1.7 TRAFFIC CONTROL

A. The Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities under construction shall be maintained at all times. The Contractor shall

provide a schedule of any activity that will impact traffic, or any planned closing of the streets, for approval by the University's Representative and shall give a minimum of 14 working days notice before closing any street or access.

B. Contractor shall furnish at Contractor's expense all barricades, lights, and other devices and means necessary to control traffic and shall maintain these devices at all times to protect the public and/or Work.

C. It is the responsibility of the Contractor performing Work on or adjacent to a highway to install and maintain such devices as are necessary to provide safe passage for the traveling public through the Work, as well as for the safeguard of workers. At a minimum of 14 days before Work begins, traffic control plans for handling traffic through a construction or maintenance Project shall be submitted to and approved by the University's Representative and public agency or authority having jurisdiction over the highway, in accordance with Chapter 5 of the CalTrans Traffic Manual.

D. The Contractor shall comply with the provisions of 01 35 40 Environmental Mitigation.

E. The Contractor shall ensure that all of the General Contractor’s activities that affect traffic control, road use, materials delivery, equipment delivery, rights of way and preservation of 3rd party access rights are coordinated with those of all Separate Contractors.

1.8 SURROUNDING SITE CONDITION SURVEY

A. Prior to commencing the Work, Contractor, and University's Representative shall tour the Project site together to examine and record damage to existing adjacent buildings, campus streets and city streets, bicycle paths, sidewalks, and all other improvements. This record shall serve as a basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the adjacent buildings and improvements not noted in the original survey, but subsequently discovered, shall be reported to the University's Representative.

1.9 INTERRUPTION OF BUILDING SERVICES

A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases this will require Work activities before 8:00 A.M. and after 5:00 P.M. and weekend Work, at no additional cost to the University. At least 14 working days advance notice shall be given to the University's Representative before interruptions to utility service (refer to Exhibit 18 Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.

B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The Contractor shall program Work so that service will be restored in the minimum possible time, and shall cooperate with the University in reducing shutdowns of utility systems.

C. The University reserves the right to deny shutdown requests based on scheduled work load, research projects, and usage of surrounding buildings or other activities planned on campus.

1.10 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities that are known to the University.

B. Contractor shall locate all known existing installations before proceeding with construction operations that may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired at no additional cost to the University.

C. Existing underground structures and utilities shall be kept in service unless prior approval to interrupt or shutdown service is obtained from University's Representative. If damaged, they shall be repaired by the Contractor with no adjustment of Contract Sum or Contract Time.

D. The Contractor shall coordinate all Work with the operations of separate Contractors as needed. This shall include, but not be limited to, the responsibility of the Contractor to coordinate with University's Representative.

E. If any other structures or utilities are encountered, the Contractor shall request University's Representative to provide direction on how to proceed with the Work.

F. If any structure or utility is damaged by the Contractor, the Contractor shall take appropriate action to ensure the safety of persons and property.

G. No Work is to be performed on energized electrical equipment. The University reserves the right to specify specific conditions for all Work involving energized high-voltage electrical equipment.

H. General Contractor shall uncover, prior to any earthwork for new construction, all existing piping where crossings, interferences or connections are shown on the Drawings, from 1 foot below proposed construction limit to the existing ground surface. Any variation in the actual elevations and the indicated elevations shall be brought to the University's Representative's attention. If the Contractor does not expose all existing utilities, General Contractor shall not be entitled to additional compensation for Work necessary to avoid interferences.

I. If interferences occur at locations other than the general locations shown on the Drawings, and such utilities are damaged before their locations have been established, or create an interference, the Contractor shall notify the University's Representative and a method for repairing the damage or correcting the interference shall be supplied by the University's Representative. Payment for additional Work due to interferences not shown on the Drawings shall be in accordance with the General Conditions.

J. Care shall be exercised to prevent damage to adjacent facilities including walks, streets, curbs, and gutters; where equipment will pass over these obstructions suitable planking shall be placed. Damaged facilities, due to the Contractor operations, shall be removed and replaced at the Contractor's expense.

1.11 PROTECTION OF PERSONNEL

A. Contractor shall take proper precautions to ensure the safety of all persons at all times during the construction period.

B. Contractor shall comply with University's COVID-19 policy per Exhibit 33.

1. CM/Contractor shall report any cases to University's Representative immediately

1.12 PROJECT SITE SECURITY

A. The Contractor shall install and maintain 8' high chain link site security fencing and gates as shown on the Site Logistics Plan. Fencing at the building perimeter shall include black shade screen to shield construction activities from view. Contractor shall maintain and/or replace as necessary black shade screen throughout duration of the project. Contractor shall be responsible for keeping areas involved in this Work locked and secure at all times when Work is not in progress.

B. All persons working on the Project site shall receive a site safety briefing and Natural Resource Awareness Training from the University prior to being allowed to start work.

1.13 CONSTRUCTION STAGING & MULTIPLE CONSTRUCTION CONTRACTS

A. The following describes the scheduling of the Work and the coordination required for the Work done by Separate Contractors:

1. The University reserves the right to let other construction contracts.

2. The following projects may be in progress at times during this project:

3. Disagreements between the Contractor and other Separate Contractors about concurrent use of Work areas or access to the Project site which are not resolved by the participants shall be referred to the University's Representative and the Contractor agrees to abide by the University's Representative's determination as to concurrent use or priority of access and to perform its Work in compliance with the University's Representative's resolution at no additional cost to the University.

B. All material and equipment for construction operations shall be brought in and the Work so conducted as to avoid any interference with existing University facilities or their normal operations, and with concurrent construction Work by other Separate Contractors.

1.14 FINAL EXAM SCHEDULE

A. Contractor shall be advised that academic finals week takes place on the UC Merced campus during May, August and December of each year. During these periods of time, students are involved in intensive testing relative to their academic course work. During these periods of time, noise level generated as a result of construction activity must be kept to a minimum. Contractors will be expected to Work with the University's requirements to achieve a level of noise that is acceptable to the University. Actual schedule for finals

weeks during each year will be coordinated with Contractor following the issuance of the Notice to Proceed.

1.15 WORK SITE DECORUM

A. Extreme care to limit noise and odors shall be taken at all times. Loud or unnecessary conversation shall be avoided. The playing of radios tapes, or compact discs shall be strictly prohibited.

B. Contractor shall control the conduct of its employees and those of its subcontractors and suppliers so as to prevent interaction initiated by said employees with University of California Merced students, staff, or other individuals (except those associated with the Project), on or adjacent to the Project site. Without limitation, unwanted interaction by these employees includes whistling at, motioning toward, or initiating conversations with passersby. In the event that any employee initiates such unwanted interaction, or utilizes profanity, Contractor shall, either upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the University.

C. Smoking, the use of tobacco products and the use of unregulated nicotine products (e.g. e-cigarettes) is prohibited on University property.

D. Firearms are prohibited on University property.

E. Alcoholic beverages are prohibited on University property unless the prior written approval of the University’s Representative is obtained.

F. Pets are prohibited on the Project site.

1.16 PUBLICITY

A. Contractor shall not release any information, story, photograph, plan or drawing relating to the Project to anyone, including press or other public communications medium, except as submitted and approved for release by the University’s Representative.

1.17 PROJECT SIGN

A. No signs or advertisements will be permitted on the Project site, except with express permission of University's Representative.

1.18 JOB OFFICE

A. Space on the Project Site is limited. Trailer space must be requested and approved by the University’s Representative. Storage and office trailers are to be located in the temporary laydown area as shown on the Site Logistics. Space will be allocated by the University’s Representative. Contractor shall provide and maintain all temporary facilities as required for completion of the Project. Verify location of temporary laydown area on drawings.

1.19 SALVAGE

A. All material and equipment removed as part of this Project is the property of the Contractor and shall be removed from the Campus and legally disposed of, unless otherwise stated in the Contractor's "Scope of Work".

1.20 CLEANUP

A. During the progress of the Work, the Contractor shall keep the Project site in a neat and clean condition that is free of debris to the satisfaction of the University's Representative. All materials and debris accumulated in conjunction with completing this Work shall be disposed of in the jobsite trash dumpsters provided by the Contractor and disposed of off campus. Contractor shall not use University refuse containers.

1.21 UNIVERSITY FURNISHED CONSTRUCTION DOCUMENTS

A. University will furnish to the Contractor 1 set of Drawings and Specifications and 1 electronic set of the Drawings and Specifications upon an award of the Contract at no cost. If more than 1 set is required or if the Contractor wants the Drawings in another size other than the size issued with the Bidding Documents, the Contractor will pay the actual cost of reproduction for printing.

1.22 JOB CONDITIONS

A. Protection: Where roof edge does not terminate in a parapet wall and/or where Work is in progress overhead and materials or objects could potentially fall, the Contractor is required to construct temporary covered pedestrian walkways over each building entrance. Walkway covers shall extend out 12 feet in length for the first floor and an additional 4 feet for each additional floor of the building. Walkway covers shall extend from face of building. Contractor shall be required to place and maintain yellow safety construction flagging or ropes with signage to prevent pedestrians from coming within 25 feet of Work in progress overhead and to route pedestrians in and out of building entrances.

B. Safety Precautions: Perform Work in such a manner as to prevent damage to existing facilities to remain or to be salvaged. Hazardous Work shall not be left standing or hanging, but shall be knocked or pulled down to avoid damage or injury to employees or the public.

C. Crane Operation, Staging and Storage

1. Operator Training and Crane Certification: Prior to starting crane operations, General Contractor shall provide copies of operator's training and crane certification to the University's Representative.

2. Crane Staging Area: Contractor shall be required to coordinate with the University's Representative a minimum of 5 working days in advance of loading and removal of materials from the roof. Contractor is responsible for providing necessary staging area for crane.

3. Storage: Contractor shall not be allowed on-site crane storage unless with the prior written approval of the University's Representative.

1.23 NOT USED

1.24 PROJECT SITE SUPERINTENDENT

A. Contractor shall employ a competent Project Site Superintendent/Foreman satisfactory to the University's Representative. The Project Site Superintendent/Foreman shall be in attendance at the Project site at all times during the performance of the Work. Project Site Superintendent/Foreman shall represent the Contractor and communications given to and received from the Project Site Supervisor shall be binding on Contractor.

B. The Contractor shall submit to the University's Representative the qualifications of the Project Site Superintendent/Foreman prior to commencement of the Work. The University's Representative shall approve the Project Site Superintendent/Foreman based on his/her experience with projects similar to type, scope, size, and complexity.

C. The Project Site Superintendent/Foreman approved for the Project by the University's Representative, must be able to proficiently read, write and verbally communicate in English. The Project Site Superintendent/Foreman may not perform the Work of any trade, pick-up materials, or perform any Work not directly related to the supervision and coordination of the Work at the Project site while Work is in progress.

D. Failure to maintain a Project Site Superintendent/Foreman on the Project site at all times Work is in progress shall be considered a material breach of this Contract, entitling University to terminate the Contract or alternatively, issue a stop Work order until the Project Site Superintendent/Foreman is on the Project site. If, by virtue of issuance of said stop Work order, General Contractor fails to complete the Contract on time, General Contractor will be assessed Liquidated Damages in accordance with the Agreement.

E. If the Project Site Superintendent/Foreman fails to perform to the satisfaction of the University's Representative, the University's Representative may, upon 15 days written notice, require the General Contractor to remove the Project Site Superintendent/Foreman from the Project and replace the Project Site Superintendent/Foreman with a replacement acceptable to the University's Representative.

F. If the Contractor elects a replacement of the Project Site Superintendent/Foreman, such replacement shall be discussed with the University's Representative prior to actual replacement. The same criteria employed by the University's Representative to approve the initial Project Site Superintendent/Foreman shall also apply to the University's Representative's approval of any subsequent Project Site Superintendent/Foreman.

1.25 OTHER CONTRACTOR SITE PERSONNEL

A. In addition to the Project Site Superintendent/Foreman, the Contractor shall provide site personnel of quality and quantity sufficient to carry out all of the on-site Contractor responsibilities described in the Contract Documents. See Instructions to Bidders for other site personnel requirements that may also be required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 00

SECTION 01 35 40 - ENVIRONMENTAL MITIGATION
As applies

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Related Sections

1. 01 81 13 LEED® Requirements
2. 01 74 19 Site Waste Management Program
3. 01 35 43 Hazardous Materials Procedures

B. Requirements

1. The Environmental Mitigation requirements for this Project are recorded in this Specification Section. The mitigation measures may include, but are not limited to, procedures and standards to control:
   a. Dust Palliation
      (1) All construction, demolition, excavation, extraction or other earthmoving activities shall comply with the San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII - Fugitive PM10 Prohibitions.
      (2) All disturbed areas, including storage piles, shall be sprinkled with water or other dust control agents/chemical stabilizers acceptable to SJVAPCD, or shall be covered with vegetative ground cover, so as to effectively prevent dust emissions. Additional watering or acceptable dust control agents/chemicals shall be applied during dry weather or windy days until dust emissions are not visible.
      (3) Trucks hauling dirt and debris shall be effectively wetted and/or maintain not less than six inches freeboard and/or cover the top of the load to reduce wind blown dust or spills.
      (4) Dirt or debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to the Project site shall be cleaned daily of construction related dirt or mud. The use of dry rotary brushes and blower devices is prohibited except where preceded by sufficient wetting to limit visible dust emissions and the prior written approval of the University's Representative.
      (5) On-site stockpiles of excavated material shall be covered or watered.
      (6) Traffic speeds on unpaved roads shall be limited to 15 mph.
      (7) If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more calendar days, the area must comply with conditions for a stabilized surface area as defined in Rule 8011 of SJVAPCD and General Contractor shall comply with the record keeping requirements specified in Rule 8011 of SJVAPCD.

b. Other Air Pollutants
   (1) When feasible, construction equipment should use alternative fuel sources such as propane, natural gas or electricity.
   (2) Minimize idling time of machinery to a maximum of 10 minutes when construction equipment is not in use.
   (3) Construction equipment rated greater than 100 horsepower shall have, to the extent feasible, diesel exhaust controlled by use of catalyst-based diesel particulate filters.
   (4) Use low-emission on-site station equipment.

c. Noise
   (1) Construction equipment shall be properly outfitted and maintained with adequate mufflers and other appropriate noise reduction devices to minimize construction-generated noise.
   (2) Stationary noise sources such as generators or pumps shall be located away from noise sensitive land-uses and occupied buildings.
   (3) Prior to construction activities, Contractor shall coordinate with the County Parks and Recreation Division to reduce the likelihood that planned events at the Lake Yosemite Park are adversely affected by project construction.
   (4) Comply with all applicable sound ordinances as required.
   (5) Should the Contractor need to generate construction noise adjacent to occupied buildings, the Contractor shall inform the University's Representative in writing 14 calendar days prior to generating the noise.
   (6) The Contractor shall comply with the provisions of Section 01 35 00 Special Requirements with regard to Work Hours.

d. Odors
   (1) Work that causes excessive odors shall be performed only after coordination with the University's Representative. Filtering of air intakes to air handling units may be needed to prevent odors and vapors from entering buildings.
   (2) Contractor shall provide 14 working days advance written notice to the University's Representative in order for advance notices to be forwarded to building occupants. Work stoppage may occur if advance notification has not been coordinated or if odors and vapors from the work are found to generate complaints from building occupants.

e. Light
   (1) The Contractor shall minimize up-light and light spill by focusing light sources and using shielding.
   (2) No light sources shall be directed across the site boundaries.

1.2 ARCHAEOLOGICAL RESOURCES

A. GENERAL

1. If during the course of construction, evidence of deposits of historical or archaeological interest is found, the Contractor shall cease the Work affecting the

find and immediately notify the University's Representative and shall not disturb deposits until written notice from University's Representative is given to proceed.

2. Contractor will be compensated for lost time or changes in construction to avoid the find based upon normal change order procedures if Critical Path is affected.

B. Procedures

1. If a potentially significant archaeological find is identified during construction, the University may incorporate into the proposed project design measures that will minimize or eliminate direct impacts to the deposit. These may include avoidance of the site by inclusion in landscaping or open space, placement of fill over the site, and/or project redesign. If this is not feasible, or if such measures will not ensure the avoidance of impacts, the University will ensure that an archaeological testing program is carried out to assess the significance of the find.
2. If a find is determined to be significant, and if it cannot be preserved intact through project design measures, then the University will retain an archaeologist to design and carry out a treatment plan to document the data and/or preserve such scientific samples of the data for which the site is significant as may be appropriate, given the significance of the find.
3. Any significant finds that are recovered shall be retained by University and will be donated to an appropriate cultural or historical center. Unauthorized collection of artifacts is prohibited. If human remains are encountered, Work will be halted and the Merced County Coroner will be contacted immediately by the University's Representative. If human remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission. The Commission will then notify the person it believes to be the most likely descendant. That descendant will work with the University to develop a program for reinternment of the remains and any associated artifacts.
4. When Native American archaeological, ethnographic, or spiritual resources are found, identification and handling of those resources will be conducted jointly by a University appointed Archaeologist and Native American representatives who are approved by the local Native American community as scholars of their cultural traditions. The Archaeologist shall either be certified by the Society of Professional Archaeologist, or meet the Federal Standards appearing in 36 CFR 61. If no approved Native American representative is available, persons who represent tribal government and/or organizations in the surrounding region shall be consulted. If historic archaeological resources are found, identification and handling of those resources will be conducted by historical archaeologists or architectural historians retained by the University.

1.3 PALEONTOLOGICAL RESOURCES

A. General

1. If during the course of construction, evidence of deposits of paleontological interest is found, the Contractor shall cease the Work affecting the find and

immediately notify the University's Representative. Do not disturb deposits until written notice from University's Representative is given to proceed.

2. Contractor will be compensated for lost time or changes in construction to avoid the find based upon normal change order procedures if Critical Path is affected.

B. Procedures

1. Prior to project construction, construction personnel shall be informed by the Contractor of the potential for encountering significant paleontological resources.
2. If a potentially significant paleontological find is discovered, the Contractor shall cease all operations in the area of the find until a University appointed paleontologist has been afforded the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find.
3. Collection of fossil resources by other than the University's consulting paleontologist is prohibited.
4. A University appointed, qualified paleontologist may be intermittently present to inspect exposures of the Merhten Formation, North Merced Gravels, and Riverbank Formation during construction operations to ensure that paleontological resources are not destroyed by project construction.

1.4 NOXIOUS OR TOXIC MATERIALS

A. The Contractor shall ensure that:

1. No noxious or toxic materials shall be used in or around occupied buildings without prior approval of the University's Representative.
2. Chemical wastes shall be stored in covered metal containers and shall be removed from the premises daily.
3. There shall be no accumulations of wastes that create hazardous conditions.
4. Adequate ventilation is provided during use of volatile or noxious substances. Such materials shall only be used after 48 hours previous notification to the University's Representative and preferably on weekends or "down" periods.
5. Chemicals, such as mineral spirits, oil, or paint thinner, are not dumped into storm or sanitary drains or on University property or on any adjoining property.
6. Vehicle maintenance or servicing shall not spill oil or fuel onto the ground and if a spill occurs, it shall be cleaned up immediately and the soil disposed of according to local, State, and/or Federal requirements.
7. Chemical storage, including fuel and oil, shall be double contained.
8. The Contractor's Project Site Superintendent shall be trained in the prevention and correction of spills.
9. Contractor shall have immediate access to spill control equipment, such as absorbent, shovels, and containers.

1.5 REMOVAL AND DISPOSAL OF EXCESS SOIL

A. All materials and debris accumulated in conjunction with completing this Work shall be disposed of legally by the Contractor off the University's property. Contractor shall not

use University refuse containers. Clear soil spoils shall be transported and deposited at a designated on-campus site.

B. Contractor is to coordinate with University Representative to identify the on-campus location of a temporary staging area for storage of excavated soil. The intent of this area is to serve as a nearby storage area for excavated soil intended by the Contractor to be used for backfill or fill later in the project. This area is to be restored to original condition after its use is no longer required.

1.6 REMOVAL AND DISPOSAL OF WASTE MATERIALS

A. All waste materials resulting from the process of clearing and construction shall be legally disposed of by the Contractor as follows:

1. All refuse and debris, concrete and other inert materials, combustible and incombustible substances, resulting from the processes of construction, shall be removed from the University's property. The Contractor shall not use any refuse container belonging to the University. The Contractor shall provide debris boxes for the use of the Contractor and all of their Subcontractors and dispose all debris off-site excepting chemical and hazardous waste which shall be disposed of by the Subcontractor generating the waste. Contractor shall be responsible for depositing their waste into the debris boxes provided by the Contractor on a daily basis.
2. Chemical Waste: All chemical waste, including solvents, oils or any other material that may be harmful to plant life, shall be disposed of in accordance with local, State and/or Federal regulations. Chemical waste shall not be stored on the University's property. At completion of Work, any contaminated soil shall be removed from the University's property and replaced with good soil by the Contractor at no additional cost to the University.

B. The Contractor shall not burn or bury rubbish or waste materials on the University's property.

C. During construction, the Contractor shall maintain buildings, premises and property free from accumulations of waste materials and rubbish. The Contractor shall legally dispose of such waste, rubbish and debris at reasonable intervals off the University's property.

1.7 CONTROL OF NONNATIVE & INVASIVE PLANT SPECIES

A. Contractor shall ensure that seeds from invasive plant species are not transported into the Campus site by earth moving equipment. At a minimum, the Contractor shall ensure that:

1. All earth moving equipment shall be washed down (wheels, under-carriage, bucket/bed, etc.) prior to being transported to the Project site. All earth moving equipment shall be clean and free of seeds or other plant material before being brought on site.
2. The Contractor shall notify the University’s Representative of the source location of all off-site fill material a minimum of 10 calendar days prior to importing

material to the Project site and appropriate steps shall be taken to minimize the potential for invasive species to colonize areas disturbed during construction due to use of such fill.

3. Any organic material used during project construction for erosion control, or any material used for hydroseeding or revegetating disturbed areas is certified free of invasive species.

1.8 PROTECTION OF SENSITIVE AREAS OUTSIDE PROJECT SITE BOUNDARY

A. Contractor shall install and maintain all temporary construction fencing around the Project site in accordance with Section 01 56 00 Temporary Barriers and Enclosures and in accordance with fencing layout shown on the Site Logistics Plan. Fencing shown to be installed at the building site, as opposed to the laydown area, will include black shade meshing to obstruct views into the construction site.

B. Contractor shall operate strictly within the confines of the fence and in the staging area described in the Site Logistics Plan (see Information Available to Bidders) .

C. In no instances shall construction related vehicles or Contractor's personnel travel beyond the Project site boundary except on roads.

D. In no instance shall the Contractor allow any material, whether solid or liquid, to migrate from the Project site across, under or over the temporary construction fencing except when said material is being removed from the Project site in accordance with the Contract Documents.

1.9 NATURAL RESOURCE AWARENESS TRAINING FOR CONSTRUCTION PERSONNEL

A. Training Program

1. Prior to working on the Project site, all construction personnel shall attend a training program provided by the University Representative on Monday and Wednesday mornings at 7:30am or when agreeable with University's Representative. The training will include at minimum, a description of the species at risk and their habitat, the importance of the species and their habitat, the general measures being implemented to conserve the sensitive areas/species, and the boundaries within which the project may be accomplished.
2. The training shall be conducted in English and shall consist of a presentation and the distribution of appropriate literature. The Contractor shall ensure that all Subcontractor and Contractor supplier personnel attend a training session before they start working at the Project site.
3. The Contractor shall ensure that the following site regulations, which will be identified in the Training program, are adhered to:
   a. All food related items shall be properly disposed of, and signs indicating that the feeding of wildlife is prohibited shall be placed at the Project site.
   b. Vehicle traffic shall occur primarily between dawn and dusk, and shall be limited to 20 mph to reduce the potential for wildlife road mortality.

c. Any trench or pit shall be constructed in such a way as to provide ramps of either fill or planks to prevent kit fox and other species from becoming entrapped.

d. Pipes, culverts, etc. greater than four inches in diameter shall be stored in such a way as to prohibit foxes or other species from using these areas as temporary refuge. In addition, these structures shall be thoroughly inspected each morning for kit fox or other species.

e. No firearms shall be allowed on University Property.

f. No pets shall be permitted on University Property.

g. The use of pesticides on the Project site by the General Contractor, including but not limited to rodenticides, insecticides and herbicides, is prohibited unless prior written approval of the University's Representative is obtained.

h. Construction vehicles shall be limited to a maximum speed of 10 mph in the vicinity of breeding ponds of California tiger salamander during the salamander movement period. The location of the breeding ponds and dates of the movement period shall be identified by the University's Representative.

i. If construction activities occur within 0.6 miles of salamander breeding ponds, the Contractor shall erect drift fences or other effective salamander barriers around the site before 1st February in the winter prior to the start of construction. The fences shall be positioned so as to allow salamander's access to the breeding ponds but to exclude them from the Project site. Prior to fence erection, layout of the fences shall be submitted to the University's Representative for review and approval.

j. The University's Representative shall identify any areas containing burrowing owls. The Contractor shall establish "Sensitive Areas" around the occupied owl holes identified by the University's Representative. The Sensitive Areas shall not be disturbed by the Contractor. The Sensitive Areas shall extend to a distance of 160 feet from each occupied burrow during the non-breeding season of 1st September through 31 January. The sensitive Areas shall extend to a distance of 250 feet from each occupied burrow during the breeding season of 1st February through 31st August. The Contractor shall erect a temporary fence during the breeding season around occupied burrows. If in the opinion of the University's Representative, the Sensitive Area method is impractical, the owls may be passively relocated. To relocate the owls, the Contractor shall fit one-way doors across the entrances to those burrows identified by the University's Representative. The doors shall be positioned so that the owls can exit but not enter their burrows. The doors shall remain in place for 72 hours. Before and during the relocation process, the Contractor shall establish a 250 feet Sensitive Area around the burrows identified for relocation. No relocation activity shall be carried out during the breeding season.

k. The University's Representative shall identify the location of active raptor nests adjacent to the Project site. Should an active Swanson's Hawk nest be located within 1000 feet of the Project site, or an active nest of another raptor species be identified within 250 feet of active construction, the University's Representative will, in consultation with

the California Department of Fish & Game, determine the actions necessary to protect the nest site. Such actions may include avoiding construction within a distance from the nest determined by the University's Representative for a period determined by the University's Representative

1.10 AUTHORITY OF THE UNIVERSITY'S REPRESENTATIVE TO SUSPEND WORK

A. The University's Representative has the authority to suspend construction work when such work causes or threatens to cause harm to sensitive habitat or species.

B. Contractor will be fully responsible for any and all damages and sanctions placed against the Project for any violations of these requirements.

1.11 SURFACE WATER CONTROL

A. All portions of the Work shall be kept free of standing water at all times during construction of the Work herein specified. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water away from the Project site and the resultant water shall be carried to the nearest water course approved by the University's Representative and disposed of without erosion to the surrounding area. Care shall be taken to prevent silting of the water courses. Silt that is deposited, as a result of the Work in this Project, shall be removed and disposed of by the Contractor, at the Contractor's expense and to the satisfaction of the University's Representative. The General Contractor shall follow CALTRANS "Handbook of Practices, Storm Water Pollution Practice."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 40

SECTION 01 35 43
HAZARDOUS MATERIALS PROCEDURES
As applies

PART 1 - GENERAL

1.1 CONTRACTOR'S RESPONSIBILITY

A. Except as otherwise specified, in the event Contractor encounters on the Project site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), lead, or other hazardous substances that have not been rendered harmless, Contractor shall immediately stop work in the area affected and report the condition to the University's Representative in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of University and Contractor if in fact the material is asbestos, PCB, lead, or other hazardous substances and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos, PCB, lead, or other hazardous substances, or when such materials have been rendered harmless.

B. Disclose any hazardous substance or condition exposed during the Work to the University's Representative for decision or remedy.

C. In no event, shall the Contractor install materials that contain asbestos, PCB, lead or other known hazardous materials without specific prior written approval by the University's Representative.

D. Disposal of lighting ballasts containing PCB's shall be accomplished by the University. The Contractor shall coordinate with the University's Representative regarding a date, location and time for delivery to a location on Campus to be designated.

E. Regulated Carcinogens by California Code of Regulations (CCR) Title 8, Section 5200 et seq.

1. Products containing chemicals regulated as carcinogens by California Occupational Safety and Health Act (COSHA) are not allowed for use on University projects. The COSHA regulated carcinogens are:
   a. 2-Acetylaminofluorene, 5209
   b. 4-Aminodiphenyl
   c. Benzidine (and its salts)
   d. 3,3'-Dichlorobenzidine (and its salts)
   e. 4-Dimenthylaminoazobenzene
   f. alpha-Naphthylamine
   g. beta- Naphthylamine
   h. 4-Nitrobiphenyl
   i. N-Nitrosodimethylamine
   j. beta-Propiolactone
   k. bis-Chloromethyl ether
   l. Methyl chloromethyl ether
   m. Ethyleneimine
   n. Methylene Chloride, 5202
   o. Methylenedianiline (MDA), 1535, 5200
   p. Cadmium, 1532, 5207

q. Asbestos, 1529, 5208, 5208.1, 8358
r. Vinyl Chloride, 5210
s. Coke Oven Emissions, 5211
t. 1,2-Dibromo-3-Chloropropane (DBCP), 5212
u. Acrylonitrile, 5213
v. Inorganic Arsenic, 5214
w. 4,4'-Methylenebis(2-Chloroaniline) (MBOCA), 5215
x. Formaldehyde, 5217
y. Benzene, 5218
z. Ethylene Dibromide (EDB), 5219
aa. Ethylene Oxide (EtO), 5220
bb. 1,3 Butadiene, 5201

2. Case-by-case exceptions may be considered for products containing the following COSHA recognized carcinogens:
   a. Methylene Chloride, 5202
   b. Cadmium, 1532, 5207
   c. Inorganic Arsenic, 5214
   d. Formaldehyde, 5217
   e. Benzene, 5218
3. Case-by-case exceptions may only be made when suitable alternative products are not available. Such exceptions are subject to approval by the University's Representative.
4. Exceptions require that the Contractor shall have an established carcinogen program as required by COSHA and shall submit to University's Representative, a copy of the COSHA Confirmation of Report for COSHA carcinogens.
5. When exceptions are granted the Contractor is responsible for providing to the University's Representative a copy of the semi-annual Confirmation of Report received from COSHA or, in lieu of that, a copy of the Contractor's semi-annual report as submitted to COSHA at periods not to exceed 6 months, or at project closeout, whichever occurs first.

1.2 ASBESTOS IN BUILDINGS NOTIFICATION

A. California Health and Safety Code, Section 25915, Chapter 10.4, Division 20 requires UC Merced employees and contractors working for the campus to be notified of the presence of asbestos in buildings constructed prior to 1979. For information about asbestos in specific buildings, contact the University's Representative.

B. It is important to note that the presence of asbestos does not mean you have been exposed to asbestos. Exposure strictly refers to the inhalation or ingestion of friable asbestos particles. Asbestos becomes friable through drilling, sanding or similar destructive processes usually associated with remodeling or demolition work. Intact, bonded, sealed and undisturbed asbestos does not pose a hazard.

C. Contractors who disturb or potentially disturb friable or non-friable asbestos must comply with all Federal State and Local rules and regulations regarding hazardous materials.

1.3 LEAD BASED PAINT IN BUILDINGS

A. The California Department of Health Services requires the certification of employees and supervisors performing lead related construction activities in residential and public buildings, as defined in Title 17, California Code of Regulations, Division 1, Chapter 8. Lead related construction work is defined in Title 17 as any construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup, that, by using or disturbing lead containing material or soil, may result in significant exposure of adults or children to lead.

B. It is important to note that the presence of lead does not mean you have been exposed to lead. Exposure strictly refers to the inhalation or ingestion of lead dust. Lead becomes dust through drilling, sanding or similar destructive processes usually associated with remodeling or demolition work. Intact, bonded, sealed and undisturbed lead does not pose a hazard.

C. For information about lead in specific buildings, contact the University Representative

D. Contractors who disturb or potentially disturb lead must comply with all Federal State and Local rules and regulations regarding hazardous materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 43

SECTION 01 41 00
REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 CODES, AGENCIES, AND REFERENCES

A. The Work shall be performed in accordance with Applicable Code Requirements and applicable requirements of all other regulatory agencies, including, but not limited to, the following:

1. Americans with Disabilities Act - Title II.
2. California Environmental Quality Act.
3. California Health and Safety Code.
4. National Fire Protection Association (NFPA).
5. Federal Occupational Safety and Health Administration.
6. Federal Clean Water Act, including but not limited to the Storm Water Pollution Prevention requirements.
7. Federal Endangered Species Act.
8. Federal Clean Air Act.
9. Porter-Cologne Water Quality Act, State of California
10. Endangered Species Act, State of California
11. California Fish & Game Code, Section 1600, et. seq.
12. Resource Conservation and Recovery Act (RCRA) and the California Hazardous Waste Control Law.
13. Comprehensive Environmental Response and Cleanup Liability Act (CERCLA)
14. California Building Code (CBC)

1.2 STANDARDS AND CODES

A. Applicable laws, codes, rules, regulations, ordinances and standards

1. Code of Federal Regulations
   a. Title 33, Navigation and Navigable Waters
   b. Title 40, Protection of Environment
   c. Title 50, Wildlife and Fisheries
2. California Code of Regulations (CCR)
   a. Title 8, Industrial Relations/Elevators
   b. Title 14, Natural Resources
   c. Title 17, Public Health
   d. Title 19, Public Safety

e. Title 20, Public Utilities and Energy
f. Title 21, Public Works
g. Title 22, Environmental Health
h. Title 23, Waters
i. Title 24, California Building Standards Code
    1) Part 2, California Building Code
    2) Part 3, California Electric Code
    3) Part 4, California Mechanical Code
    4) Part 5, California Plumbing Code
    5) Part 6, California Energy Code
    6) Part 7, California Elevator Safety Construction Code
    7) Part 9, California Fire Code
    8) Part 11 California Green Building Standards Code
    9) Part 12, California State Reference Standards
j. Title 27 Environmental Protection

3. San Joaquin Valley Air Pollution Control District Regulation #8

1.3 REFERENCES

A. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order (Exhibit 9) or Field Order (Exhibit 8), as applicable.

1.4 CONFLICTS

A. Unless otherwise directed by the University's Representative, if a conflict exists between referenced regulatory requirements and the Contract Documents, the Contractor shall refer the matter to the University’s Representative for further instruction.

B. Nothing stated in this Section of the Specifications or other Sections of the Specifications, the other Contract Documents or the Bidding Documents or shown on the Drawings shall be construed as allowing Work that is not in strict compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.

1.5 TRENCHING AND SHORING

A. All Work shall be in full accordance, but not necessarily limited to the following codes and regulations: Titles as listed in Section 1.2 Standards and Codes above, State of California, California Code of Regulations (CCR), Division of Occupational Safety and Health Administration (DOSHA).

1. Pursuant to Labor Code 6707, the General Contractor shall include in the bid all costs incident to the provisions of adequate sheeting, shoring, bracing or equivalent method for

the protection of life or limb that shall conform to applicable Federal and State safety orders.

2. Before beginning any excavation 5 feet or more in depth, the Contractor shall submit to the University's Representative a detailed Drawing showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. The proposed design shall comply with the standards established by the State of California Construction Safety Orders, Title 8 and Title 24 of the California Code of Regulations (CCR). If the design varies from such shoring system standards, the Drawing shall be prepared by a registered civil or structural engineer whose name and registration number shall be indicated on the Drawing. If a dispute arises as to whether the plan must be prepared by a registered civil or structural engineer, the University's Representative's determination of the matter shall be final and conclusive on the Contractor. The cost of required engineering services shall be borne by the Contractor and shall be deemed to have been included in the Contract Sum for the Work as stated in the Agreement.

3. Neither the review nor approval of any Drawing showing the design of shoring, bracing, sloping, or other provisions for worker protection, shall relieve the Contractor from the obligation to comply with construction State of California Construction Safety Order and Title 24 of the California Code of Regulations (CCR) for the design and construction of such protective Work, and the Contractor shall indemnify the University and the University's Representative from any and all claims, liability, costs, actions and causes of action arising out of or related to the failure of such protective systems. The Contractor shall defend the University, its officers, employees, Design Professional and agents and the University's Representative in any litigation or proceeding brought with respect to the failure of such protective systems.

4. All Work including any temporary construction shall be in full compliance with the latest orders of the Division of Industrial Safety of the State of California and all codes and regulations as called for hereinafter in these specifications.

1.6 REGULATORY NOTIFICATIONS

A. Submit all required notifications to Federal, State of California, State in which disposal facility is located if not in California, regional, and local agencies with regulatory responsibilities associated with the Work activities that are included in the Contract. All notifications shall be served in writing, in the form required by the agency requiring notification, and in a timely manner so as not to negatively impact the Project schedule. Serve notifications at least 10 working days in advance (or earlier if required by agency) of activity requiring notice. The Contractor shall serve all required notifications in writing to all governmental and quasi-government agencies having notification requirements pertaining to any portion of the Work included in the Project.

B. Contractor shall comply with the State General Construction Activity Storm water Permit National Pollutant Discharge Eliminate System (NPDES) for the campus and comply with the University’s Storm Water Pollution Prevention Plan.

1.7 NOTIFICATIONS, CERTIFICATES AND UNIFORM HAZARADOUS WASTE MANIFEST

A. Permits

1. Contractor will not be required to obtain a County of Merced building permit.

B. Fire Department

1. Contractor shall be responsible for issuing in writing to the University's Representative the following notifications prior to starting site Work:
   a. Hazardous Condition Notification - Hot Work: must be coordinated before starting any hot work (welding, burning, or cutting, etc.) involving use of gas or electric welding equipment. Contractor shall report to the University's Representative, at the beginning and 30 minutes prior to the end of each shift that such "hot" work takes place
   b. Hazardous Conditions Notification-General: for the storage or use of any flammable liquid in excess of 10 gallons or in any confined area where vapors can be ignited. The General Contractor shall report to the University's Representative at the beginning and 30 minutes prior to the end of each shift that such work takes place
   c. Hazardous Condition Notification-Special Conditions: Coordinate in advance with the University's Representative before restricting access to or blocking of any building exit or Work that will require the shutdown of building fire protection or alarm systems. The General Contractor shall report to the University's Representative at the beginning and 30 minutes prior to the end of each shift that such work takes place
   d. At the end of the Work, the Contractor must submit Automatic Sprinkler Systems-Material and Test Certificate for Aboveground Piping and Automatic Sprinkler Systems- Material and Test Certificate for Underground Piping for approval by the University (Exhibits 20 and 21)**.** The Automatic Sprinkler underground and aboveground will not be accepted until these certificates have been completed and submitted.

C. Prior to commencing clearing, excavation and trenching, Contractor shall locate all known existing installations before proceeding with construction operations that may cause damage to such installation. Existing installations shall be kept in service where possible and damage to them shall be repaired at no additional cost to the University.

D. Uniform Hazardous Waste Manifest: Contractor shall be responsible for coordination with the University's Representative for obtaining a Uniform Hazardous Waste Manifest prior to removal of asbestos containing materials, polychlorinated biphenyl (PCB), or other hazardous materials from the Project site. Manifest will be provided by the University's Representative. Only the University's Representative will be allowed to sign individual manifests on behalf of the Contractor / University.

1.8 CIVIL OR CRIMINAL PENALTIES OR FINES

A. Contractor shall be liable for the payment of any and all civil or criminal penalties or fines imposed by the U.S. Fish & Wildlife Service (USFWS), U.S. Army Corps of Engineers

(USACE), California Department of Fish & Game (CDFG), Central Valley Regional Water Quality Control Board (CVRWQCB) or any other applicable regulatory agency for Contractor's violations of the federal Endangered Species Act (ESA), Clean Water Act (CWA), California Endangered Species Act (CESA), Porter-Cologne Water Quality Control Act (Porter-Cologne); any regulation promulgated to implement said statutes; the UC Merced Biological Opinion; or any applicable authorization issued by the USFWS, USACE, CDFG, CVRWQCB, or other applicable federal, state or local regulatory agency.

B. In the event Contractor is found liable for civil actions under the abovementioned statues, regulations, permits or authorizations, Contractor shall be responsible for the payment of any civil penalties imposed by any applicable regulatory agency. Penalties may vary according to the applicable statute, including but not limited to, penalties of up to $50,000 per day of violation of the CWA, $25,000 for each ESA violation, and $15,000 per day of violation of Porter-Cologne.

C. In the event Contractor is convicted of criminal actions under the abovementioned statutes, regulations, permits or authorizations, Contractor shall be responsible for satisfying applicable terms of imprisonment and the payment of any criminal fines imposed by the regulatory agency. Fines may vary according to the applicable statue, including but not limited to, fines of $250,000 per day of violation of the CWA, $50,000 for each ESA violation, and $15,000 per day of violation of Porter-Cologne.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 41 00

SECTION 01 42 13
ABBREVIATIONS, SYMBOLS & DEFINITIONS

PART 1 - GENERAL

1.1 ABBREVIATIONS

A. The following abbreviations of organizations may be used in the Contract Documents:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers' Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ABAG	Association of Bay Area Governments
ABPA	Acoustical and Board Products Association
ABPTA	American Bearing Power Transmission Association
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADA	Americans with Disabilities Act of 1990
ADAAG	American with Disabilities Act Accessibility Guidelines
ADC	Air Diffusion Council
AFBMA	Anti-Friction Bearing Manufacturers Association
AFI	Air Filter Institute
AGA	American Gas Association
AF&PA	American Forest and Paper Association
AGC	Associated General Contractors of America
AHA	American Hardboard Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute
AOAC	Association of Official Analytical Chemists
APA	American Plywood Association
API	American Petroleum Institute
AQMD	Air Quality Management District
ARI	Air-Conditioning and Refrigeration Institute
ASA	American Standards Association
ASAHC	American Society of Architectural Hardware Consultants
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers

ASME	American Society of Mechanical Engineers Association
ASTM	American Society for Testing and Materials
AWCI	Association of Wall and Ceiling Industries
AWG	American Wire Gauge
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers Bureau
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers' Association
BICSI	Building Industry Consulting Service International
BOCA	Building Officials and Code Administrators
CAC	California Administrative Code
CARB	California Air Resources Board
CBC	California Building Code
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CDA	Copper Development Association, Inc.
CDFG	California Department Fish and Game
CE	Corps of Engineers (U.S. Dept. of the Army)
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response and Cleanup Liability Act
CESO	California Elevator Safety Order
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturer's Institute
CLPA	California Lathing and Plastering Association
CMC	California Mechanical Code
CMM	State of California, Business, Transportation and Housing Agency, Department of Transportation “Materials Manual”
COSHA	California Occupational Safety and Health Act
CPC	California Plumbing Code
CPSC	Consumer Product Safety Commission
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards of NBS (U.S. Dept. of Commerce)
CSS	State of California, Business, Transportation and Housing Agency, Department of Transportation “Standard Specifications”
CTI	Cooling Tower Institute
CVRWQCB	Central Valley Regional Water Quality Control Board
DHI	Door & Hardware Institute
DHS	California Department of Health Services
DSA	Division of State Architect
DSA/AC	Division of State Architect, Access Compliance Section
EIA	Electronic Industrial Alliance
EPA	Environmental Protection Agency

ESO	Electrical Safety Orders of Division of Industrial Safety, Title 8, CAC
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
FFDA	Federal Food and Drug Administration
FGMA	Flat Glass Marketing Association
FIA	Factory Insurance Association
FM	Factory Mutual System, Factory Mutual Engineering Corporation
FS	Federal Specifications
FSC	Forest Stewardship Council
GA	Gypsum Association
GFI	Ground Fault Interrupter
HCP	Habitat Conservation Plan
HEPA	High Efficiency Particulate Air
HI	Hydronics Institute
HMI	Hoists Manufacturers Institute
HMMA	Hollow Metal Manufacturers Association
HPMA	Hardwood Plywood Manufacturers Association
IAPMO	International Association of Plumbing and Mechanical Officials
IAQ	Indoor Air Quality
IBEW	International Brotherhood of Electrical Workers
IBR	Institute of Boiler and Radiator Manufacturers
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineering Association
IEC	International Electrotechnical Commission
IEQ	Indoor Environmental Quality
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
IPCEA	Insulated Power Cable Engineers' Association
ISA	Instrument Society of America
ISO	International Standards Organization
ITU	International Telecommunications Union
LEED®	Leadership in Energy & Environmental Design
LIA	Lead Industries Association
MBMA	Metal Building Manufacturer's Association
MIA	Marble Institute of America
MID	Merced Irrigation District
MIL	U.S. Government, Military Specification
MLSFA	Metal Lath/Steel Framing Association
MM	State of California, Business, Transportation and Housing Agency, Department of Transportation “Materials Manual”
MSS	Manufacturers Standardization Society of Valves and Fittings Industry
NAAB	National Association of Air Balance
NAAMM	The National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBFU	National Board of Fire Underwriters
NBGQA	National Building Granite Quarries Association, Inc.
NBHA	National Builders' Hardware Association

NBS	National Bureau of Standards
NCCP	National Communities Conservation Plan
NCMA	National Concrete Masonry Association
NCPWB	National Certified Pipe Welding Bureau
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Protection Act
NETA	National Electrical Testing Association
NFPA	National Fire Protection Association
NHLA	National Hardwood Lumber Association
NIOSH	National Institute of Occupational Safety and Health
NPA	National Particleboard Association
NPDES	National Pollutant Discharge Eliminate System
NRC	Noise Reduction Coefficient
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association, Inc.
NWWDA	National Wood Window and Door Association
OSHA	Office of Safety and Health Act
OSHPD	Office of Statewide Health Planning and Development
PCA	Portland Cement Association
PCB	Polychlorinated Biphenyl
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PI	Perlite Institute
PS	Product Standard of United States Department of Commerce
RCRA	Resource Conservation & Recovery Act
RCSC	Research Council on Structural Connection
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RUS	U.S. Department of Agriculture, Rural Utilities Service
SJVAPCD	San Joaquin Valley Air Pollution Control District
SAE	Society of Automotive Engineers
SBC	State Building Code
SBS	State Building Standards Electrical Code, Title 24, Part 3
SCS	Scientific Certification Systems
SDI	Steel Door Institute
SFM	State of California, Office of State Fire Marshal
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association, Inc.
SPIB	Southern Pine Inspection Bureau (Grading Rules)
SPR	Simplified Practice Recommendation
SSPC	Society for Protective Coatings
STC	Sound Transmission Coefficient
SWI	Sealant and Waterproofers Institute

SWPPP	Storm Water Pollution Prevention Plan
TCA	Tile Council of America, Inc.
TIA	Telecommunications Industry Association
UBC	Uniform Building Code
UCM	University of California Merced
UCMFM	University of California Merced Facilities Management
UFAS	Uniform Federal Accessibility Standards
UHMW	Ultra-High Molecular Weight
UL	Underwriters' Laboratories, Inc.
USA	Underground Service Alert
USDA	United States Department of Agriculture
USFWS	United States Fish & Wildlife Service
USGBC	United States Green Building Council
USS	United States Standards
USSG	United States Steel Gauge
WAPA	Western Area Power Authority
WCLIB	West Coast Lumber Inspection Bureau
WH	Warnock Hersey
WIC	Woodwork Institute of California
WLPDIA	Western Lath/Plaster/Drywall Industries Association
WRSI	Western Concrete Reinforcing Steel Institute
WWPA	Western Wood Products Association
WWPOA	Western Wood Preserving Operators Association
WWTP	Waste Water Treatment Plant

B. Additional abbreviations, used on the Drawings, are listed thereon.

1.2 SYMBOLS

A. Symbols, used only on the Drawings, are shown thereon.

1.3 DEFINITIONS

A. The following terms, when used on the Drawings or in the Specifications, shall have the following meanings:

1. AS DIRECTED - “As directed by the University's Representative.”
2. AS REQUIRED - “As required by Applicable Code Requirements; by good building practice; by the condition prevailing; by the Contract.”
3. AS SELECTED - “As selected by the University's Representative.”
4. BY OTHERS - Work on this Project that is outside the scope of Work to be performed by the Contractor under this Contract, but that will be performed by the University, Separate Contractors, or other means.
5. EQUAL - Of same quality, appearance, and utility to that specified, as determined by the University's Representative. The Contractor bears the burden of proof of quality.
6. FABRICATED - Items specifically assembled or made out of selected materials to meet individual design requirements.

7. FURNISH - “Supply only, not install (unless required to be provided or installed elsewhere in the Contract Documents).”
8. INSTALL - “Install or apply only, not furnish.”
9. MANUFACTURED – Applies to standard units usually mass-produced.
10. OFF SITE - Outside the Work area as shown on the Drawings or the property lines.
11. PROJECT SITE - Geographical location of the Project.
12. PROVIDE - “Furnish and install.”
13. SHOWN - “As indicated on the Drawings.”
14. SPECIFIED - “As written in the Contract Documents.”
15. SUBMIT - “Submit to University's Representative.”
16. OFCI - UNIVERSITY-FURNISHED, CONTRACTOR INSTALLED - “To be furnished by University and installed by Contractor as part of the Work. Scope of work includes receipt, off-loading, inspection, on-site storage of material and protection after installation until acceptance.”

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 42 13

SECTION 01 45 00
QUALITY CONTROL

PART 1 - GENERAL

1.1 DEFINITIONS

A. The term "University's Testing Laboratory" means a testing laboratory retained and paid for by University for the purpose of reviewing material and product reports and performing other services as determined by the University.

B. The term “Contractor's Testing Laboratory” means a testing laboratory retained and paid for by Contractor to perform the testing services required by the Contract Documents. Contractor's Testing Laboratory shall be an organization other than University's Testing Laboratory and shall be acceptable to the University's Representative. It may be a commercial testing organization, the testing laboratory of a trade association, the certified laboratory of a supplier or manufacturer, Contractor's own forces, or other organization. Contractor's Testing Laboratory shall have performed testing of the type specified for at least 5 years.

C. The term “Geotechnical Engineer” means an engineer retained and paid for by the University for the purpose of performing geotechnical inspection, testing, and observation functions specified by the University.

1.2 CONTRACTOR’S RESPONSIBILITIES REGARDING UNIVERSITY’S TESTING LABORATORY

A. Secure and deliver to University's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.

B. Submit a copy of the preliminary design mixes proposed to be used for concrete and other materials that require review by University's Testing Laboratory to the University Representative. University Representative will submit the copy to the University’s Testing Laboratory for review.

C. Submit copies of product test reports as specified.

D. Furnish incidental labor and facilities:

1. To provide University's Testing Laboratory access to the Work to be tested.
2. To obtain and handle samples at the Project site or at the source of the product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

E. Provide a minimum of forty-eight hours notice to University's Representative to allow for University's Testing Laboratory assignment of personnel and scheduling of tests.

F. When material or work to be tested or inspected is not available for testing or inspection, even though notice has been given under Subsection 1.2.E above, Contractor shall

reimburse University for University's Testing Laboratory personnel and travel expenses incurred.

1.3 TESTS AND INSPECTIONS

A. Tests, inspections, and acceptance of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, Contractor shall make arrangements for such tests, inspections, and acceptances with Contractor's Testing Laboratory. Contractor shall give the University's Representative a minimum of twenty-four hours written notice of when and where tests and inspections are to be made.

B. If such procedures for testing, inspection, or acceptance reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the University's Representative's services and expenses.

C. If the University's Representative is to observe tests, inspections, or make acceptances required by the Contract Documents, University's Representative will do so promptly and, where practicable, at the normal place of testing.

D. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

E. Certain portions of the Work will be tested and/or inspected at various stages. Nothing in any prior acceptance or satisfactory test result shall govern, if at any subsequent time the Work, or portion thereof, is found not to conform to the requirements of the Contract Documents.

1.4 ADDITIONAL TESTING AND INSPECTION

A. If initial tests or inspections made by University's Testing Laboratory or Geotechnical Engineer reveal that any portion of the Work does not comply with the Contract Documents, or if the University's Representative determines that any portion of the Work requires additional testing or inspection, additional tests and inspections shall be made as directed.

1. If such additional tests or inspections establish that such portion of the Work complies with the Contract Documents, all costs of such additional tests or inspections shall be paid by the University.
2. If such additional tests or inspections establish that such portion of the Work fails to comply with the Contract Documents, all costs of such additional tests and inspections, and all other costs resulting from such failure, including compensation for the University's Representative and the University's consultants, shall be deducted from the Contract Sum.

1.5 TEST REPORTS

A. University's Testing Laboratory and General Contractor's Testing Laboratory shall submit 1 copy of all reports to University's Representative, indicating observations and results of tests and indicating compliance or non-compliance with the Contract Documents.

B. The University's Representative shall distribute to the Contractor one copy of the reports from the University's Testing Laboratory.

C. The number of copies for the Contractor and supplier being tested will be determined upon commencement of the Contract.

1.6 CLOSING IN UNINSPECTED WORK

A. Do not allow or cause Work to be covered or enclosed before it has been inspected and approved by the University's Representative. Should any Work be enclosed or covered before it has been approved, it shall be uncovered, inspected, approved or repaired, and covered. Make all repairs necessary to restore Work of others to the condition in which it was found at time of cutting, at no additional cost to the University.

1.7 GEOTECHNICAL ENGINEER

A. All excavation, filling, and compaction shall be subject to inspection, observation, and testing by Geotechnical Engineer. The University will retain and pay expenses of the Geotechnical Engineer to perform the inspection, testing, and observation functions described in this Section, except that the costs of any additional testing or inspection made necessary by inadequate compaction, replacement of unacceptable material or other Work not complying with the Contract Documents shall be borne by the Contractor and may be deducted from the Contract Sum. The Geotechnical Engineer shall communicate with the University's Representative who will relay any appropriate instructions to the Contractor.

B. Source Quality Control: Geotechnical Engineer will sample and test fill material from the source designated by the Contractor. Contractor shall pay for the Geotechnical Engineer's transportation expenses, if the source is more than 50 miles from the Project site.

1.8 JOB CONDITIONS

A. Contractor shall visit the Project site to determine the existing conditions, nature of materials to be encountered and other facts concerning or affecting the Work to be performed under this Contract.

B. The records of investigation of soil or subsurface conditions and logs of test borings that are made available by the University are not part of the Contract and are solely for the convenience of the Bidder or Contractor. It is expressly understood and agreed that the University assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigation thus made, the records thereof, or of the interpretations set forth therein, and there is no warranty or guaranty, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas or any part thereof, or that unanticipated for developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

C. The availability or use of the records of investigations of soil or subsurface conditions and/or logs of test borings shall not be construed as a waiver of the Contractor's duty to examine the Project site of the Work contemplated. Contractor is cautioned to make such independent investigations and examinations as necessary to satisfy the Contractor of subsurface conditions to be encountered in the performance of the Work.

D. The records of investigations will not relieve Contractor from the risk of unanticipated soil or subsurface conditions or from properly fulfilling the terms of the Contract at the Contract Sum.

E. Contractor shall promptly, and before such condition is disturbed, notify the University's Representative in writing if soil or subsurface conditions are encountered which require, in the opinion of the University's Representative, design details which differ from those design details shown in the Contract Documents and the University's Representative finds that such revised, design details will cause an increase or decrease in the cost of, or the time required for performance of the Contract, the University's Representative will, after approval by the University, modify the Contract terms in writing to provide for the change in design details and to provide for an adjustment in cost and/or time of performance as permitted in the General Conditions.

1.9 RESPONSIBILITY FOR ACCURACY OF SITE DATA

A. Upon application to the University to do so, the Contractor will be permitted to enter the Project site to put down test holes or trenches to determine the conditions for construction prior to bidding, and subject to compliance with the requirements of Division 1. Such test holes or trenches shall be located at least 10 feet clear of any existing foundations, and/or any existing trees, utilities, or other improvements. Test holes shall be backfilled with granular backfill as specified. The test holes shall be kept full of water during backfilling; the backfill shall be hand shoveled into the hole so that it is completely dispersed and "puddled" as placed. Drill cuttings shall be neatly piled over the hole after backfilling. Material to be excavated is assumed to be earth or other materials that can be removed by power earth moving equipment, including rippers.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 45 00

SECTION 01 51 00
TEMPORARY UTILITIES
As applies

PART 1 - GENERAL

1.1 REQUIREMENTS

A. Contractor shall provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.

B. Contractor shall pay for connections/disconnections of all temporary utilities; e.g., gas, water, power, and telephone.

C. Contractor shall pay for connections for water and electricity to Project site sources.

D. University does not guarantee amounts of water and electricity available from existing University's sources, nor will the University be responsible for interruptions in service.

E. Contractor shall maintain and operate systems to provide continuous service.

F. Contractor shall modify and extend systems as required.

G. Materials may be new or used, but shall be adequate for the required purposes. Their use and methods of installation shall not create unsafe conditions or violate requirements of Applicable Codes Requirements.

1.2 REMOVAL AND RECONDITIONING

A. Contractor shall remove all temporary services installed as a requirement of these Contract Documents. Restore utilities to their original condition at the completion of Work.

B. Contractor shall legally and properly dispose of all debris resulting from removal and reconditioning operations.

C. Contractor shall direct Concrete, Drywall and Painting Subcontractors to patch and repair building elements as required by temporary utility removals.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

A. Contractor shall install and use temporary utilities in accordance with latest version of the following:

1. California Electrical Code.
2. Federal, State, and local codes and regulations.
3. Utility company requirements.

1.4 TEMPORARY ELECTRICITY

A. University will not provide electricity free of charge. Contractor shall make connections to temporary power in coordination with University Representative, and shall meter their

temporary electricity use.

B. Refer to Instructions to Bidders for temporary electrical scope of work and Contractor's responsibility.

1.5 TEMPORARY FIRE PROTECTION

A. Contractors shall conform to the rules, regulations, and instructions of the University and the Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative. The Contractor shall:

1. Ensure that no burning shall be done on Project site.
2. Provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the course of the Work.
3. Use fire protection equipment only for extinguishing fires.
4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings, and throughout the Project site.

B. In the area under construction demolition, the Contractor will provide at least 1 multi-purpose dry chemical fire extinguisher for each 3,000-square feet of building floor area. Locate fire extinguishers so that a person never has to walk more than 75 feet to obtain one. Fire extinguisher minimum size must be 4A:20BC (10 pound ABC). Use fire protection equipment only for fighting fires. Any additional fire extinguishers required for the scope of work are to be provided by the General Contractor.

C. Contractor shall assigned a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, be a liaison with the University's Representative, Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative, and direct the prompt removal of combustible and waste materials from the Project site. Prior to start of Work, the Contractor shall organize a mandatory safety meeting. The attendees at this meeting shall at a minimum include the University's Representative, a representative of the Merced County Fire Department, the Contractor's Project Site Superintendent and the Contractor's Fire Liaison.

D. Contractors shall instruct all subcontractors in the site fire prevention measures, the location of fire extinguishers and the procedures for dealing with fire on site.

E. Call 9-1-1 and pull fire alarm box when applicable, for any emergency. Report the exact location (building name and street intersection) and nature of the emergency. The Contractor is responsible for and will be billed for fire response charges (actual cost of personnel and equipment) for any false alarm and needless call.

F. Refer to Section 01 41 00 Regulatory Requirements for permits required.

G. Vehicles or storage of materials on Project site must not obstruct, block or damage or render useless any fire hydrants, fire department connection, fire alarm box or fire access roadway. Any necessary road closures or disruption to utilities shall be requested through the University's Representative as stated in Section 01 35 00 Special Requirements.

H. Do not tamper with or work on any fire alarm or fire protection system without first gaining authorization from the University's Representative. System shutdown requests shall require a minimum of 48 hours advance notice. Contact University's Representative for any such requests.

1.6 TEMPORARY HEAT, VENTILATION AND AIR CONDITIONING

A. Contractor shall provide temporary heat and ventilation as required by the Instructions to Bidders and as required to maintain adequate environmental conditions to meet specified minimum conditions for installation of materials; and to protect equipment, materials, and finishes from damage due to temperature or humidity for all work. The use of temporary heating appliances will require a Hazardous Condition Permit as specified in Section 01 41 00 Regulatory Requirements.

B. Contractor shall provide adequate forced ventilation of enclosed areas to cure installed materials, to prevent excessive humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases for their own work.

1.7 TEMPORARY SANITARY FACILITIES

A. Portable Chemical Toilets and maintenance will be provided by the Contractor.

B. Permanent toilet facilities within an existing building shall not be used without written authorization of the University.

1.8 TEMPORARY TELEPHONE SERVICE

A. The Contractor shall provide a mobile radio system on-site at all times for effective University's Representative communications with the Contractor's field personnel. A radio will be provided to the University's Representative.

1.9 TEMPORARY WATER

A. Contractor shall meter temporary water.

B. Water may be taken from University's systems in such quantities and at such times as they are available. If this is done, the Contractor using the water source shall provide all equipment, including metering, connections, and other materials necessary for extending the utility lines to where they will be used. Coordinate the installation with University's Representative. The Contractor shall pay for connections and removal of connections to the local water and power mains.

C. If water is obtained from a campus fire hydrant, the hydrant valve shall not be used as a control valve. Use hydrant wrench; do not use pipe wrench. The Contractor using water source shall provide all valving necessary to control the flow of water.

D. The Contractor shall:

1. Use a reduced pressure backflow preventer shall be used at any connection to University's system, including fire hydrants.

2. Install according to California Administrative Code, Title 17, Section 7603(c), and test immediately after installation by a certified tester in accordance with Title 17, CAC, Section 7605(d).
3. Install piping with taps located so that water is available throughout the Project site by the use of hoses. Protect piping and fittings against freezing.
4. Provide water for human consumption in accordance with the regulatory requirements for potable water.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 51 00

SECTION 01 56 00
TEMPORARY BARRIERS AND ENCLOSURES
As applies

PART 1 - GENERAL

1.1 TEMPORARY FACILITIES

A. Contractor shall provide and maintain the following temporary facilities as required for prosecution of the Contract:

1. All scaffolding, staging, runways, and similar equipment necessary to complete own work is to be provided by the responsible Contractor installing the said work.
2. Temporary rigging, rubbish chutes, ladders between floors and similar equipment shall be provided by the Contractor requiring said work
3. Barricades, lights and similar safety precautions shall be provided by the Contractor requiring said work.
4. OSHA compliant guardrails at floor openings and building perimeter shall be provided as well as toe guards upon placement of concrete slabs, and the Contractor shall maintain the guardrails until they are no longer required at which time they will be removed from the project site.
6. The Contractor shall erect and maintain a temporary OHSA compliant guardrail system around the storm drain and sanitary sewer excavations and shall remove it when directed by the University's Representative.
7. All materials and equipment required to safely accomplish Work under this Section shall be in conformance with requirements of California Occupational Safety and Health act (COSHA), Chapter 5 of CalTrans Traffic Manual and other State and Federal Codes and regulations where applicable.

B. Codes: All temporary Work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.

C. Removal: Upon completion of the Work, and before the final payment, the responsible Contractor shall remove all temporary Work and facilities to put the Project site in the condition required by the Contract Documents with no additional cost to the University.

D. Contractor is responsible for any damages caused by Contractor's Operations.

1.2 TEMPORARY PROJECT CONSTRUCTION FENCE

A. The Contractor shall not place any signs, advertisements, notices, or graphic materials on construction fencing that have not been approved in advance by University's Representative.

B. Fencing with screening option shall be provided and maintained by Contractor. Contractor has the option of fabric screening or slats and shall submit for approval prior to installation. Contractor is responsible for any damage caused by Contractor's Operations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 56 00

Drawing List

GARDEN SUITES AND LAKEVIEW DINING MECHANICAL RECORD DRAWINGS (VALLEY TERRACES BUILDING COMPLEX)

M1.01	SITE PLAN
M1.02	MECHANICAL ROOMS PARTIAL PLANS
M1.03	MECHANICAL ROOMS U/G PIPING
M2.01	HOUSING TYPE 1 1ST FLOOR PLAN
M2.02	HOUSING TYPE 2 1ST FLOOR PLAN
M2.03	HOUSING TYPE 1 2ND FLOOR PLAN
M2.04	HOUSING TYPE 2 2ND FLOOR PLAN
M2.05	COMMONS FLOOR PLAN
M3.01	MECHANICAL ROOMS PARTIAL PLANS
M3.02	MECHANICAL ROOMS PARTIAL PLANS
M3.03	MECHANICAL COMMONS BLDG SECTIONS
M5.01	DETAILS
M5.02	DETAILS
M5.03	FLOW DIAGRAM
M5.04	FLOW DIAGRAM

SIERRA TERRACES BUILDING COMPLEX MECHANICAL RECORD DRAWINGS

M0.1	DRAWING, SCHEDULE, EQUIPMENT SCHEDULES, MECHANICAL LEGENDS AND DETAILS
M0.2	BUILDING 1 AND 2 HVAC EQUIPMENT AND VAV BOX SCHEDULE
M2.1A	BUILDING 1 HVAC PARTIAL FIRST FLOOR PLAN
M2.1B	BUILDING 1 HVAC PARTIAL FIRST FLOOR PLAN
M2.2A	BUILDING 1 HVAC PARTIAL SECOND FLOOR PLAN
M2.2B	BUILDING 1 HVAC PARTIAL SECOND FLOOR PLAN
M2.3A	BUILDING 1 HVAC PARTIAL ATTIC PLAN
M2.3B	BUILDING 1 HVAC PARTIAL ATTICK PLAN
M2.4	BUILDING 1 – ALTERNATE 1 HVAC FIRST AND SECOND FLOOR PLAN
M2.5	BUILDING 1 – ALTERNATE 2 HVAC FIRST AND SECOND FLOOR PLAN
M2.6	BUILDING 1 – ALTERNATE 1 & 2 HVAC ATTIC PLAN
M2.7A	BUILDING 2 HVAC PARTIAL FIRST FLOOR PLAN
M2.7B	BUILDING 2 HVAC PARTIAL FIRST FLOOR PLAN
M2.8A	BUILDING 2 HVAC PARTIAL SECOND FLOOR PLAN
M2.8B	BUILDING 2 HVAC PARTIAL SECOND FLOOR PLAN
M2.9A	BUILDING 2 HVAC PARTIAL ATTIC PLAN
M2.9B	BUILDING 2 HVAC PARTIAL ATTIC PLAN
M2.10	BUILDING 2 – ALTERNATE 3 HVAC FIRST AND SECOND FLOOR PLAN
M2.11	BUILDING 2 – ALTERNATE 4 HVAC FIRST AND SECOND FLOOR PLAN
M2.12	BUILDING 2 – ALTERNATE 3 & 4 HVAC ATTIC PLAN
M3.1	BUILDING 1 & 2 TYPICAL FIRST FLOOR DORM ROOM AND OTHER SECTIONS

M3.2	BUILDING 1 & 2 ATTIC SECTION
M4.1	BUILDING 1 MECHANICAL ROOM PLAN AND SECTIONS
M4.2	BUILDING 2 ENLARGED CHILLED WATER PIPING PLAN
M7.1	CONTROL DIAGRAMS
M7.2	CONTROL DIAGRAMS

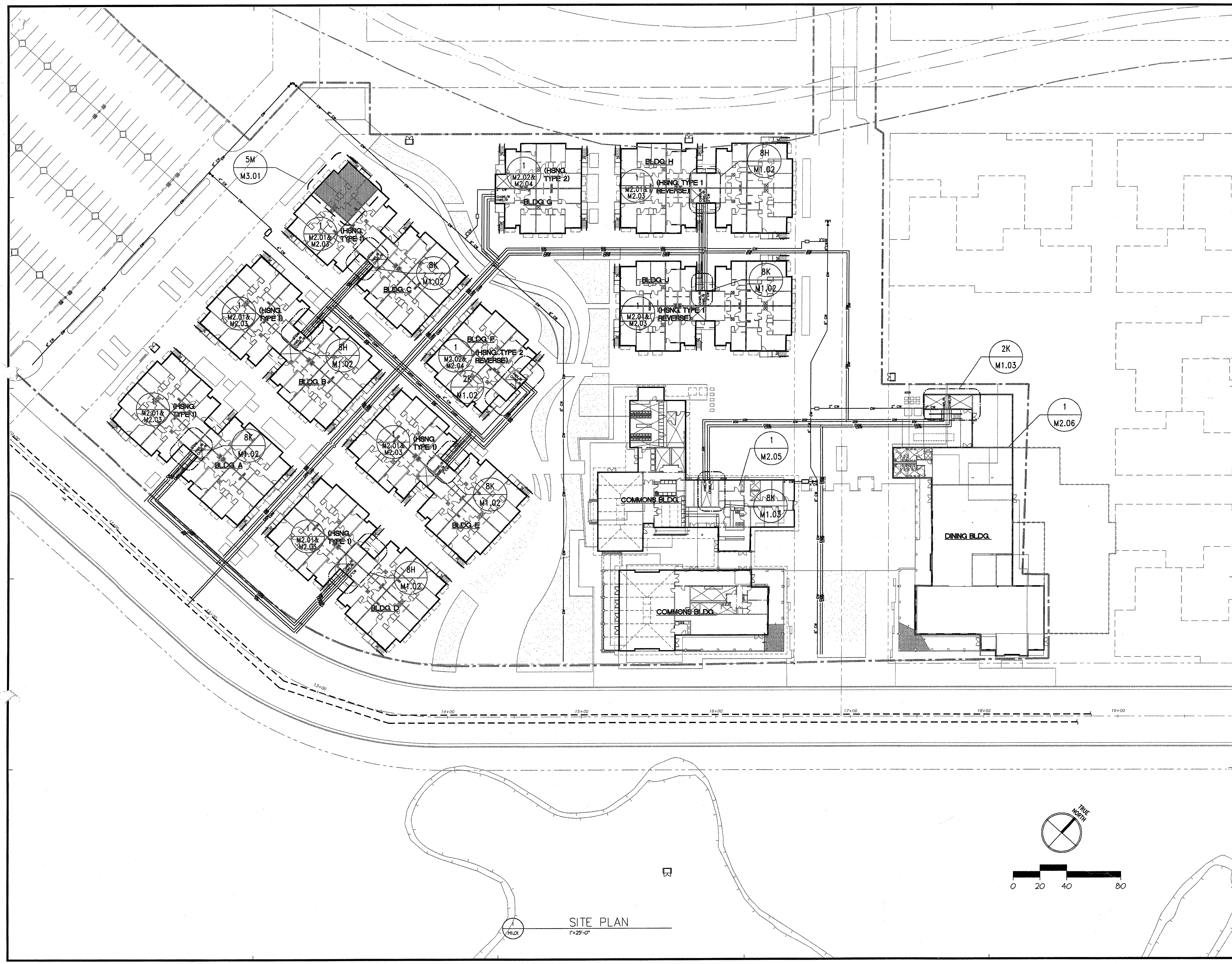
STUDENT HOUSE PHASE 3 – THE SUMMITS MECHANICAL RECORD DRAWINGS (THE SUMMITS BUILDING COMPLEX: TENAYA & CATHEDRAL)

M0.2	MECHANICAL EQUIPMENT AND SCHEDULES
M2.1W	MECHANICAL FIRST FLOOR BUILDING PLAN WEST
M2.1E	MECHANICAL FIRST FLOOR BUILDING PLAN – EAST
M2.2W	MECHANICAL SECOND FLOOR BUILDING PLAN – WEST
M2.2E	MECHANICAL SECOND FLOOR BUILDING PLAN – EAST
M2.3W	MECHANICAL THIRD FLOOR BUILDIGN PLAN – WEST
M2.3E	MECHANICAL THIRD FLOOR BUILDING PLAN – EAST
M2.4W	MECHANICAL FOURTH FLOOR BUILDING PLAN – WEST
M2.4E	MECHANICAL FOURTH FLOOR BUILDING PLAN – EAST
M2.5W	MECHANICAL ROOF PLAN – WEST
M2.5E	MECHANICAL ROOF PLAN – EAST
M3.1	MECHANICAL DETAILS
M3.2	MECHANICAL DETAILS
M3.3	MECHANICAL DETAILS
M4.1	ENLARGED MECHANICAL ROOM LAYOUT
M5.1	HEATING WATER SYSTEM PIPING DIAGRAM
M5.2	CHILLED WATER SYSTEM PIPING DIAGRAM
M6.1	FAN COIL UNIT CONTROLS
M6.2	CHILLED WATER AND HEATING HOT WATER SYSTEMS CONTROL DIAGRAMS
M7.1	MECHANICAL VENTILATION AIR FLOOR DIAGRAMS
M7.2	HEATING HOT WATER AND CHILLED WATER SYSTEMS DIAGRAM EAST BUILDING
M7.4	HEATING HOT WATER AND CHILLED WATER SYSTEMS DIAGRAM WEST BUILDING

HOUSING 4 THE SUMMITS MECHANICAL RECORD DRAWINGS (HALF DOME)

M0.1	HVAC LEGENDS
M0.2	HVAC SCHEDULES
M0.3	HVAC SCHEDULES
M0.4	HVAC SCHEDULES
M0.5	HVAC SCHEDULES
M1.0	HVAC BUILDING ISOMETRIC
M2.01A	LEVEL 01 PARTIAL PLAN – EAST WING, NORTH
M2.01B	LEVEL 01 PARTIAL PLAN – EAST WING, SOUTH
M2.01C	LEVEL 01 PARTIAL PLAN – MIDDLEWING

M2.01D	LEVEL 01 PARTIAL PLAN – WEST WING, EAST
M2.01E	LEVEL 01 PARTIAL PLAN – WEST WING, WEST
M2.02A	LEVEL 02 PARTIAL PLAN – EAST WING, NORTH
M2.02B	LEVEL 02 PARTIAL PLAN – EAST WING, SOUTH
M2.02C	LEVEL 02 PARTIAL PLAN – MIDDLEWING
M2.02D	LEVEL 02 PARTIAL PLAN – WEST WING, EAST
M2.02E	LEVEL 02 PARTIAL PLAN – WEST WING, WEST
M2.03A	LEVEL 03 PARTIAL PLAN – EAST WING, NORTH
M2.03B	LEVEL 03 PARTIAL PLAN – EAST WING, SOUTH
M2.03C	LEVEL 03 PARTIAL PLAN – MIDDLEWING
M2.03D	LEVEL 03 PARTIAL PLAN – WEST WING, EAST
M2.03E	LEVEL 03 PARTIAL PLAN – WEST WING, WEST
M2.04A	LEVEL 04 PARTIAL PLAN – EAST WING, NORTH
M2.04B	LEVEL 04 PARTIAL PLAN – EAST WING, SOUTH
M2.04C	LEVEL 04 PARTIAL PLAN – MIDDLEWING
M2.04D	LEVEL 04 PARTIAL PLAN – WEST WING, EAST
M2.04E	LEVEL 04 PARTIAL PLAN – WEST WING, WEST
M2.05A	LEVEL 05 PARTIAL PLAN – EAST WING, NORTH
M2.05B	LEVEL 05 PARTIAL PLAN – EAST WING, SOUTH
M2.05C	LEVEL 05 PARTIAL PLAN – MIDDLEWING
M2.05D	LEVEL 05 PARTIAL PLAN – WEST WING, EAST
M2.05E	LEVEL 05 PARTIAL PLAN – WEST WING, WEST
M2.06A	LEVEL 06 PARTIAL PLAN – EAST WING, NORTH
M2.06B	LEVEL 06 PARTIAL PLAN – EAST WING, SOUTH
M2.06C	LEVEL 06 PARTIAL PLAN – MIDDLEWING
M2.06D	LEVEL 06 PARTIAL PLAN – WEST WING, EAST
M2.06E	LEVEL 06 PARTIAL PLAN – WEST WING, WEST
M3.01	HVAC SECTION
M3.01A	AHU SHAFT SECTIONS
M3.02	HVAC SECTIONS
M3.03	HVAC BUILDING SECTIONS
M3.04	HVAC BUILDING SECTIONS
M4.01	HVAC EQUIPMENT BASIS-OF-DESIGN LAYOUTS
M4.02	HVAC EQUIPMENT BASIS-OF-DESIGN LAYOUTS
M5.01	CHW SYSTEM SCHEMATIC
M5.02	HW SYSTEM SCHEMATIC
M6.01	HVAC DETAILS
M7.01	CONTROL SCHEMATICS
M7.02	CONTROL SCHEMATICS
M7.03	CONTROL SCHEMATICS



UCMerced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature

LICENSED ARCHITECT RUSSEL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEPHEN A. BECKER M016029 Exp. 12-31-03 MECHANICAL STATE OF CALIFORNIA

Architect Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC 25 FLS___ SS___
DATE___

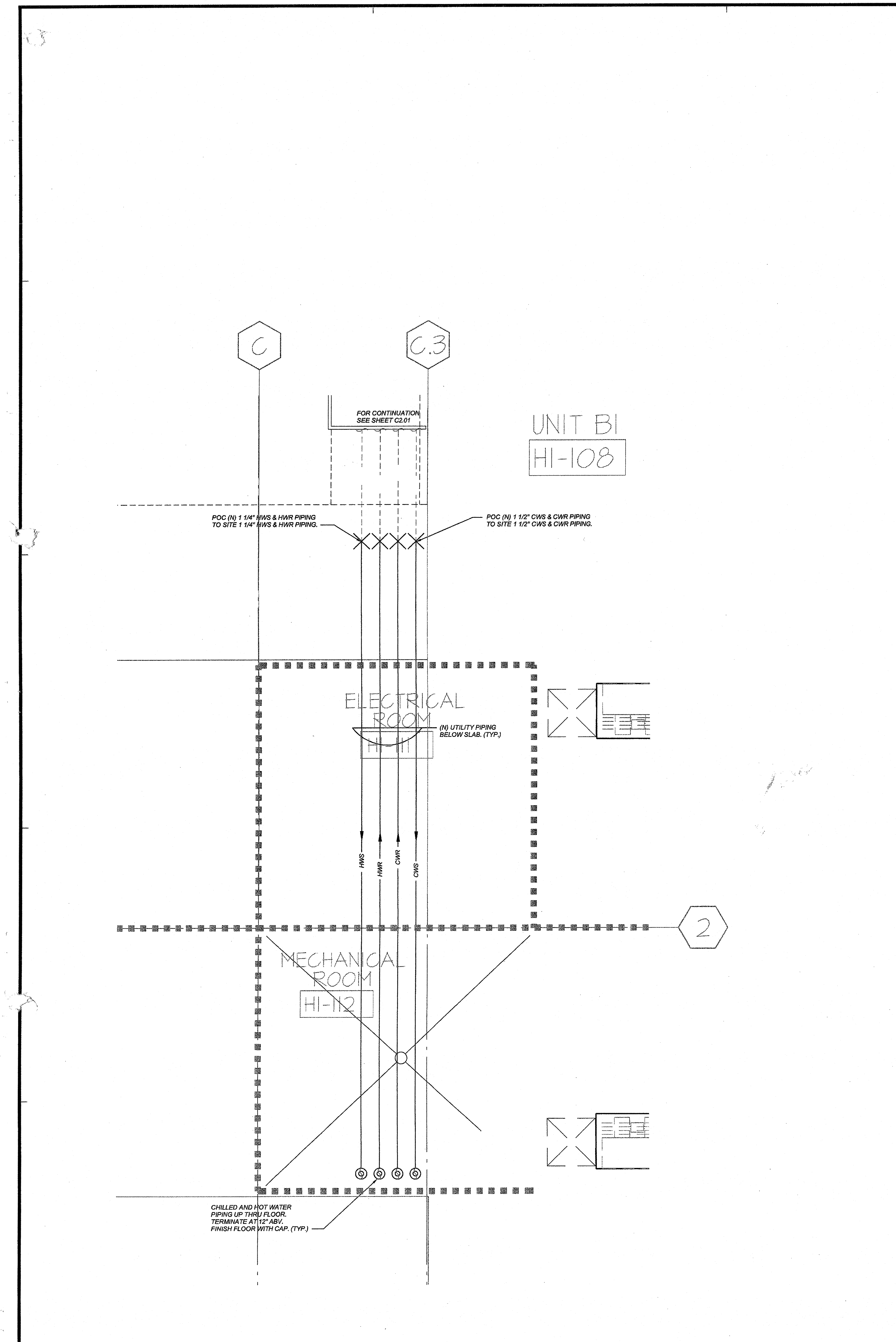
UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1'=25'-0"

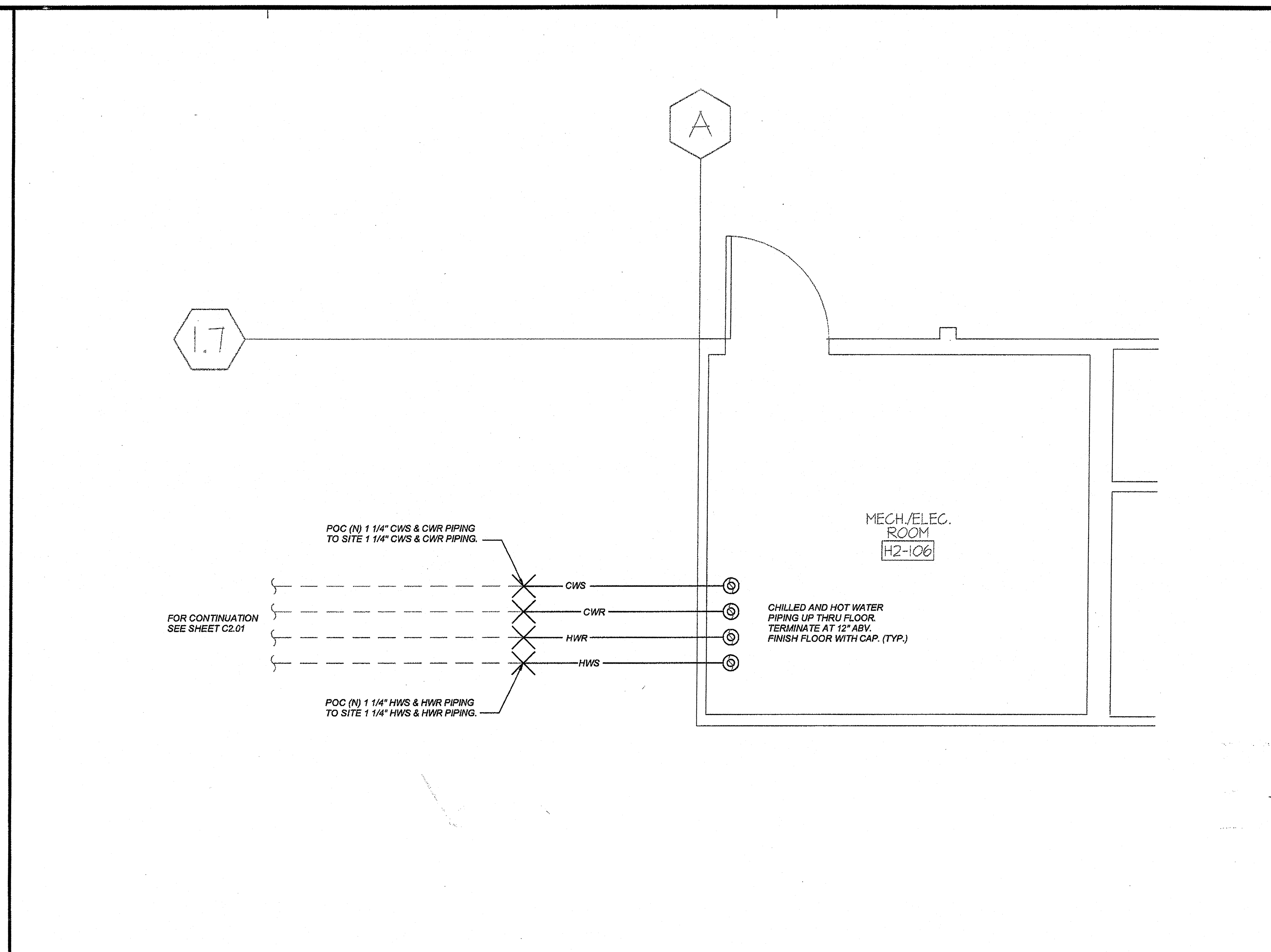
Key Plan:

Drawing Title
SITE PLAN

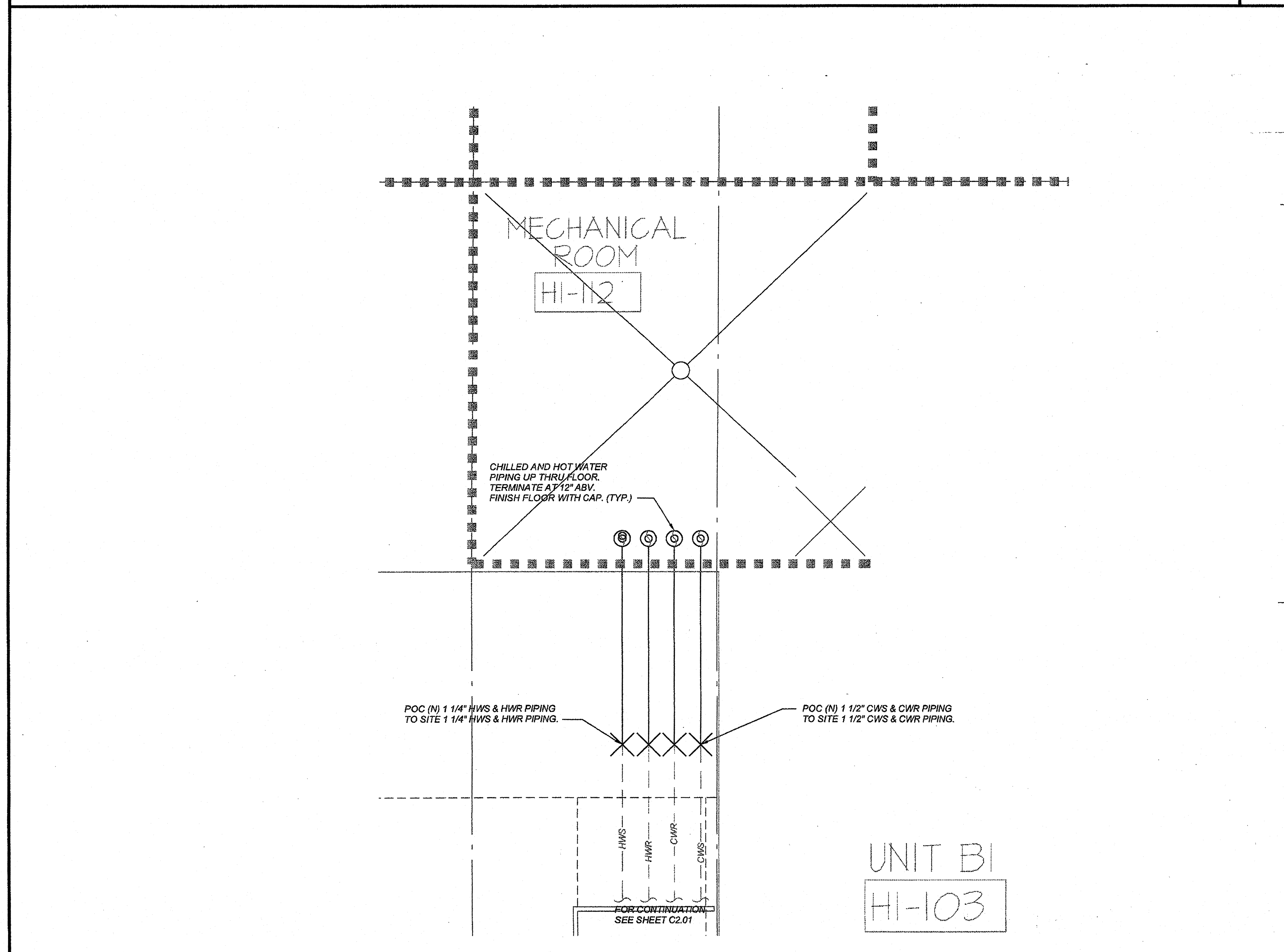
Drawing Number:
M1.01



MECHANICAL ROOM - HOUSING TYPE 1B — SCALE: 1/2"=1'-0" — 2H



MECHANICAL ROOM - HOUSING TYPE 2 — SCALE: 1/2"=1'-0" — 2K



MECHANICAL ROOM - HOUSING TYPE 1A — SCALE: 1/2"=1'-0" — 2K

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

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Agency Approvals:
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DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC 03 FLS SS
DATE

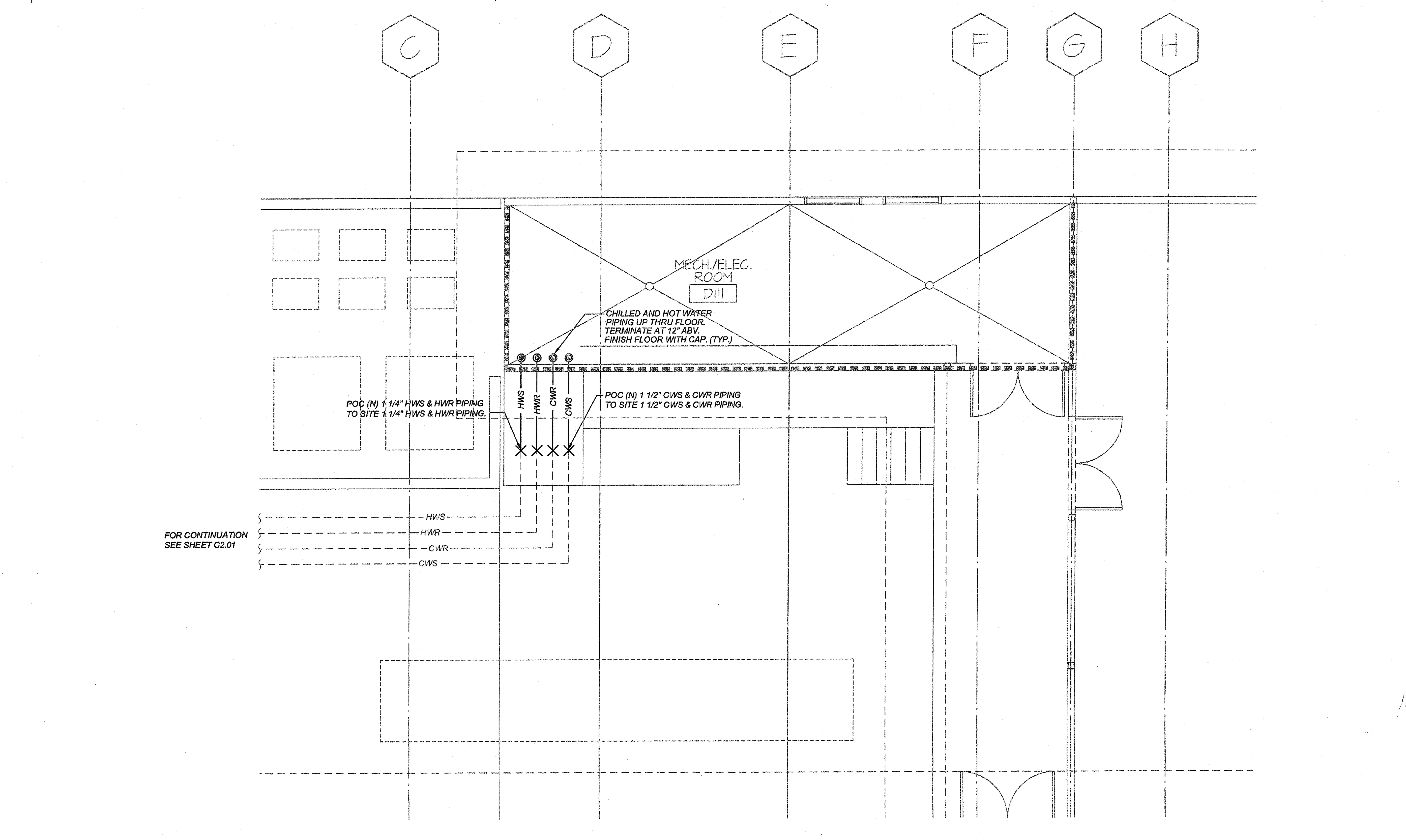
UNIVERSITY OF CALIFORNIA MERCED FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:

Drawing Title
MECHANICAL ROOMS PARTIAL PLANS

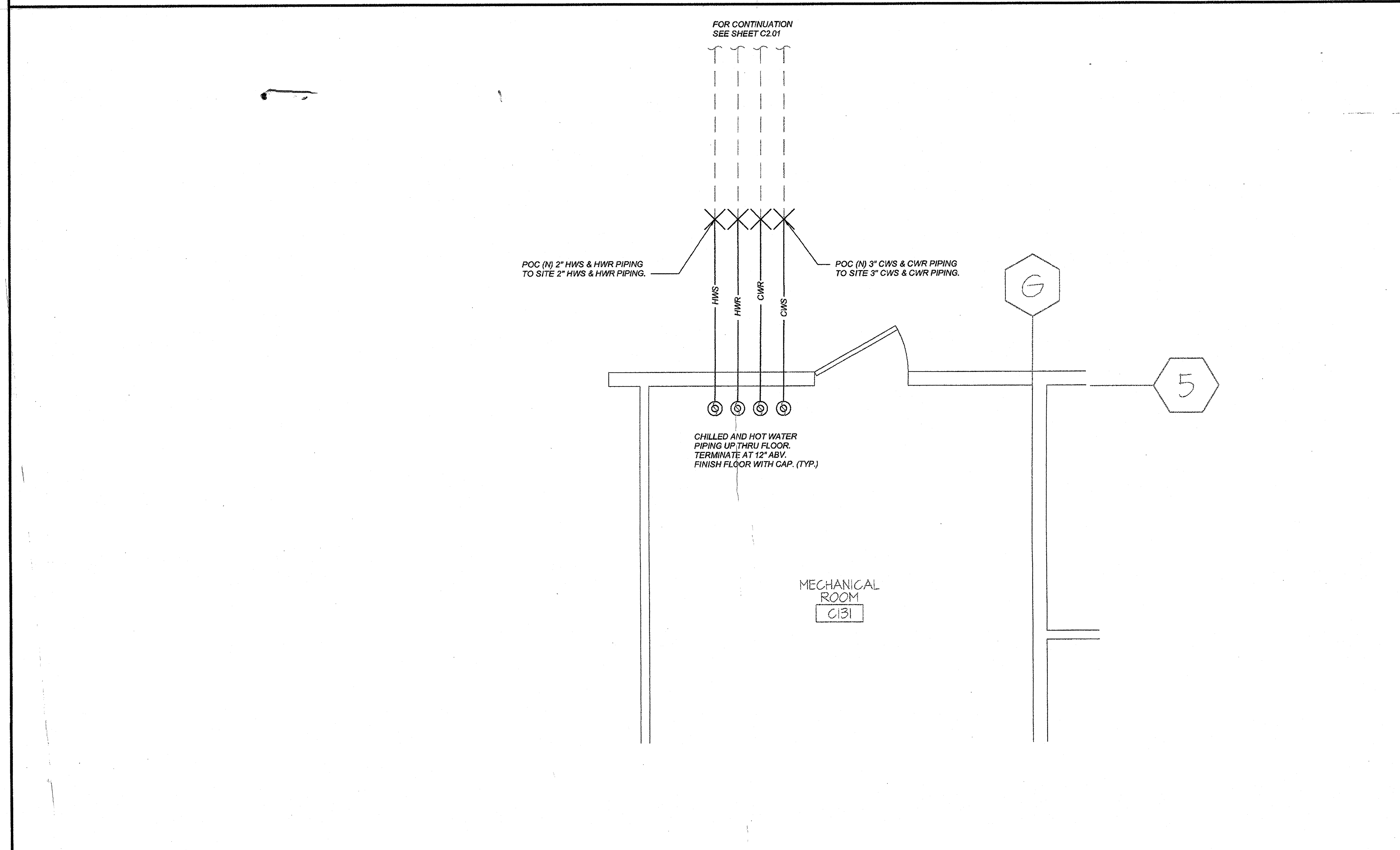
Drawing Number:
M1.02



MECHANICAL ROOM - DINING

SCALE: 1/4"=1'-0"

2K



MECHANICAL ROOM - COMMONS BLDG

SCALE: 1/2"=1'-0"

8K

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
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ARCHITECT:
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LICENSED ARCHITECT RUSSELL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEPHEN A. BECKER M016029 Exp. 12-31-03 MECHANICAL STATE OF CALIFORNIA

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UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL

CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED

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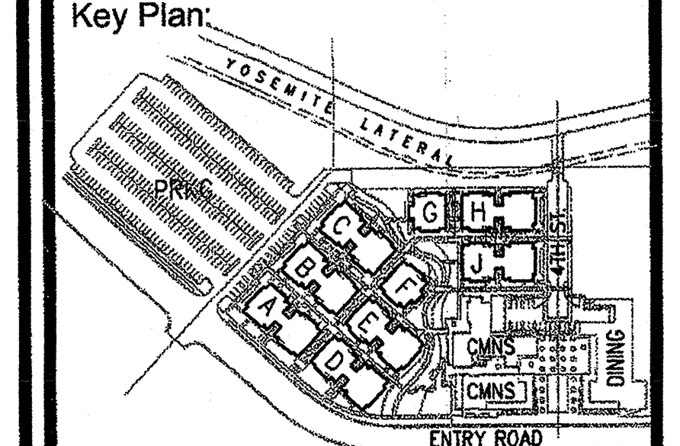
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

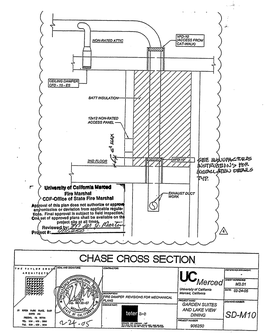
Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

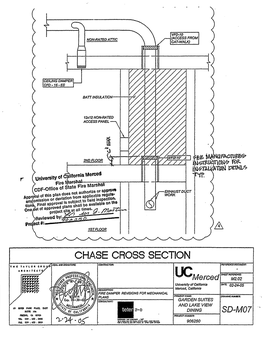
Key Plan:

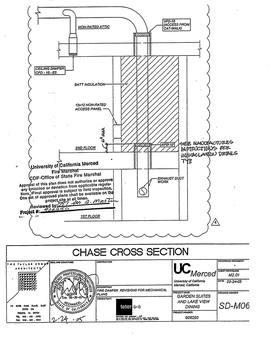


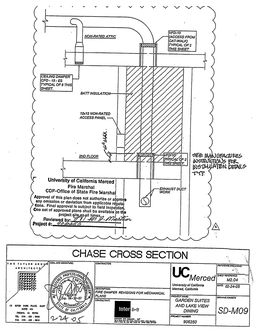
Drawing Title
MECHANICAL ROOMS U/G PIPING

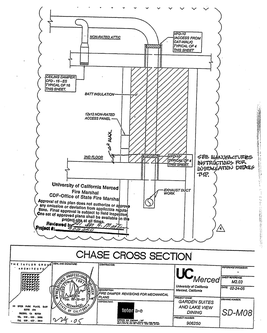
Drawing Number:
M1.03

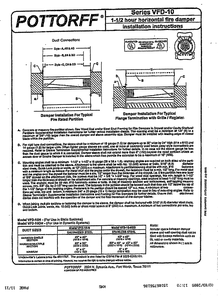


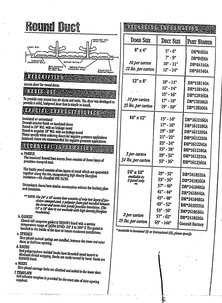


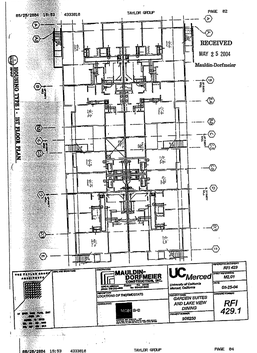


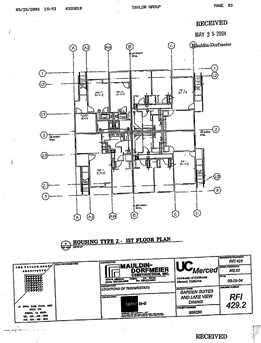


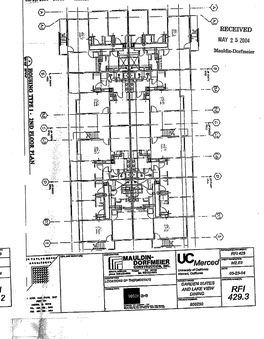












THE TAYLOR GROUP ARCHITECTS OF CALIFORNIA

10 RIVER PARK PLACE
SUITE 104
FRESNO, CA 93720
TEL 559.433.3000
FAX 559.433.3010

Bulletin

Project: UC Merced - Garden Suites and Lakeview Dining - Project #906251
Bulletin Number: 027
Date: February 24, 2005
To SFM: Juan Martin, Fire Marshall - UCSF/UCM

This is a clarification and/or modification to the project contract documents and is in no way an authorization or order for any change(s) or additional work that would revise the contract price. It is understood that the Contractor will incorporate the data described by this memo unless the Architect is notified in writing to the contrary in accordance with Article of the General Conditions.

Subject:
Housing Buildings – Fire Dampers

Description:
Revised Fire Dampers in shaft between floors from model # "FD-140-OP" to "VFD-10". The revised Chase Cross Sections are shown in attached drawings, Sheets SD – M06 through SD – M10, dated 2/24/05.

Proposal will be assumed to include -0- calendar days for construction time extension unless specifically identified by the Contractor.

Distribution:
John Sykes - Project Manager

Referenced Drawings: Sheet M2.01, M2.02, M2.03, M2.04 & M3.01.

Attachments: SD – M06, SD – M07, SD – M08, SD – M09 & SD – M10.

Specification Sections: N/A

LICENSED ARCHITECT No. C15281 Ren. 1-31-07 STATE OF CALIFORNIA

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: J. Martin
Project #: 906250

CHASE CROSS SECTION — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — UC Merced, University of California Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M3.01 — 02-24-05 — SD-M10 — 2-24-05

University of California Merced — Fire Marshal — CDF-Office of State Fire Marshal — Reviewed by: J. Martin — Project #: 906250

CHASE CROSS SECTION — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.02 — 02-24-05 — SD-M07 — 2-24-05

CHASE CROSS SECTION — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.01 — 02-24-05 — SD-M06

CHASE CROSS SECTION — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.04 — 02-24-05 — SD-M09 — 2-24-05

CHASE CROSS SECTION — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.03 — 02-24-05 — SD-M08 — 2-24-05

FEB-03-2005 THU 11:27 AM AIR TECH SALES FAX NO. 9187827550 P. 07/07

POTTORFF® Series VFD-10 1-1/2 hour horizontal fire damper installation instructions

Damper Installation For Typical Fire Rated Partition — Damper Installation For Typical Flange Termination with Grille / Register

POTTORFF 2824 N. Sylvania Ave., Fort Worth, Texas 76111

Round Duct

Access door for round ducts.

Page 1 of 2

Ramon Torres

From: Ramon Torres [ramontorres@ttgarchitects.com]
Sent: Monday, February 07, 2005 1:31 PM
To: 'Mike Anderson'
Subject: RE: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0002 - Housing-Thermostat Control Wire Routing

```
Response:

Per on-site meeting with Jim Kirby on 1/31/05, the control wiring may be located
within the soffit area. Install per N.E.C. requirements.

Ramon Torres,
Project Architect/ Mgr.
The Taylor Group Architects
978 W. Alluvial Ave., Ste 107
Fresno, Ca. 93711
Phone: 559.437.5000
Fax: 559.437.5005
Email: ramontorres@ttgarchitects.com

-----Original Message-----
From: Mike Anderson [mailto:manderson@mdc-inc.com]
Sent: Friday, January 28, 2005 7:05 AM
To: 'ramontorres@ttgarchitects.com'
Subject: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information:
TGA-0002 - Housing-Thermostat Control Wire Routing

****** Request For Information: TGA-0002 - Housing-Thermostat Control Wire Routing
******
```

Jim K 02/07/05

Page 2 of 2

```
Question:
We propose running the Plenum Rated Thermostat control wiring from the walls
(concealed) and into the Housing soffits next to the ductwork. This will eliminate
penetrating the Floor-Ceiling Assembly. Please review with mechanical engineer/
SFM and advise if this is acceptable.

Answer:

- - RFI:
Construction

Name:
Mauldin-Dorfmeier Construction, Inc.

Author Contact ID:
MIKAND

Author RFI Number:

Name - Answer Company:
The Taylor Group Architects

Answer Contact ID:
RAMTOR

Discipline:
Mechanical
```

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 429

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing T Stats
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/5/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/12/2004

RECEIVED MAY 2 5 2004 Mauldin-Dorfmeier

REQUEST:

The response to RFI 405 identified thermostat layout. Attached is our understanding of the thermostat layout. Please concur and provide thermostat layout using Taylor Group title block for UC submission.

Responce:
See attached email dated 5/25/04 from Steven Jones/Teter a+e & 8½x11 RFI-429.1, 429.2, 429.3 & 429.4.
Ramon Torres/TTG
5/25/04

Disregard handwritten layout given on site. — CC: MDC(All) DKMS Helix Cosco Mountain Finishers IOR

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 5/25/04 — # of pages 5 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 02

RECEIVED MAY 2 5 2004 Mauldin-Dorfmeier

HOUSING TYPE 1 - 1ST FLOOR PLAN

MAULDIN-DORFMEIER CONSTRUCTION, INC. — LOCATIONS OF THERMOSTATS — UC Merced — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.01 — 05-25-04 — RFI 429.1

04/08/2004 08:04 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 352

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Framing at Building J
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/7/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/14/2004

RECEIVED APR 0 7 2004 Mauldin-Dorfmeier

REQUEST:

Is it acceptable to remove the framing above the door header to the bottom of the floor joist to allow for wall diffuser above the door (rough opening size is 6 1/2" high x 30 1/2" long). Please advise.

Sheet M2.01

Responce:
Refer to dtl. 14/S5.05
Ramon Torres/TTG
4/8/04

CC: MDC (All) Kinetics Mountain Finishers. Helix Cosco.

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 4/8/04 — # of pages 1 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 03

RECEIVED MAY 2 5 2004 Mauldin-Dorfmeier

HOUSING TYPE 2 - 1ST FLOOR PLAN

MAULDIN-DORFMEIER CONSTRUCTION, INC. — LOCATIONS OF THERMOSTATS — UC Merced — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.02 — 05-25-04 — RFI 429.2

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 04

RECEIVED MAY 2 5 2004 Mauldin-Dorfmeier

HOUSING TYPE 1 - 2ND FLOOR PLAN

MAULDIN-DORFMEIER CONSTRUCTION, INC. — LOCATIONS OF THERMOSTATS — UC Merced — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.03 — 05-25-04 — RFI 429.3

04/16/2004 09:27 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 362

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Duct Sizing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/12/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/19/2004

RECEIVED APR 1 6 2004 Mauldin-Dorfmeier

REQUEST:

Specs and drawings indicate increasing the duct size to allow for acoustic lining.

The ceiling height is 7'-0" AFF, top ceiling construction is 7'-5" +/-, the duct work will be at 7'-5 1/2" to 8'-2 1/2", the bottom of the TJIs are at 8'-0", also cutting wall top plates are a concern. Please advise.

Reference M2.01
Spec Section 15650-24 3.5D

Responce:
See attached email dated 4/16/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
4/16/04

MDC (All) All subs.

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 4/16/04 — # of pages 2 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

04/16/2004 09:27 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Friday, April 16, 2004 9:49 AM
To: Ramon Torres
Subject: RE: AC #362

RECEIVED APR 1 6 2004 Mauldin-Dorfmeier

Ramon,
We have reviewed that attached RFI #362 and have the following response:

This issue was discussed in the field on April 13th. The 30"x7" acoustic lined supply air mains in the housing first floor shall be constructed with a 7" outside dimension to fit the space available.

Thank you,

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, April 12, 2004 3:47 PM
To: Steven Jones
Subject: FW: AC #362

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com

4/16/2004

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 611

Phone: 559-252-4600
Fax: 559-252-5058

Damper/Detectors in Housing
UC Merced Housing
Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 8/18/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 8/25/2004

Damper/Detectors – 611

Fire Marshal has indicated on the Fire Alarm Shop Drawing review, "One of the red mark comments pertains to duct detecors for fire smoke dampers. The comment give direction to delete the duct detectors because the fire somke dampers are not required. There has been no bulletin submitted to delete dampers that I recall. Detectors cannot be deleted and leave the dampers in place. The project designers need to coordinate and submit for approval any deletion of fire dampers. A bulletin to address the deletion shall include the justification for deleting and relevant code sections."

Please provide the bulletin for Fire Marshal Approval as soon as possible.

Responce:
See attached "MDC #001" dated 8/30/04
Please forward to Lorin mailbox @ Job-site for her review & approval.
Ramon Torres/TTG
8/31/04

MDC(All) - office.

TEL 559.433.3000
FAX 559.433.3010

Project: UC Merced - Garden Suites and Lakeview Dining - Project #906251
MOC Number: 001
Date: 30-Aug-04
To Contractor: Mauldin - Dorfmeir Construction, Inc.

This is a clarification and/or modification to the project contract documents and is in no way an authorization or order for any change(s) or additional work that would revise the contract price. It is understood that the contractor will incorporate the data described by this memo unless the Architect is notified in writing to the contrary in accordance with Article of the General Conditions.

Subject:
Clarification of Fire/Smoke Dampers in the Housing Units.

Description:
The Fire/ Smoke Dampers shown on Sheets M2.01, M2.02, M2.03 and M2.04 that are located in the Bathroom exhaust ducts may be deleted.
Per C.B.C. 711.3, our duct chases do not require to be enclosed because they are not a part considered a "Shaft Enclosure". Where ducts penetrate Floor/ Ceiling and Roof/ Ceiling assemblies, provide required Firestopping.

Proposal will be assumed to include -0- calendar days for construction time extension unless specifically identified by the Contractor.

Distribution:
Rodger Ward - Project Supt.

Attachments: N/A
Referenced Specification Sections:
Referenced Drawings: M2.01, M2.02, M2.03 and M2.04

RECEIVED MAY 2 5 2004 Mauldin-Dorfmeier

HOUSING TYPE 2 - 2ND FLOOR PLAN

MAULDIN-DORFMEIER CONSTRUCTION, INC. — LOCATIONS OF THERMOSTATS — UC Merced — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.04 — 05-25-04 — RFI 429.4

RECEIVED MAR 2 5 2005 BERNARDS BROS. INC.

Submittal Transmittal
Detailed, Grouped by Each Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced — Tel: 209-724-4321 Fax: 209-724-4468

Date: 3/21/2005 — Reference Number: 1052

Submittal Transmittal
Detailed, Grouped by Each Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced — Tel: 209-724-4321 Fax: 209-724-4468

Date: 3/3/2005 — Reference Number: 1002

Transmitted To: Ramon Torres — Transmitted By: Tony Valdez

RECEIVED MAR 7 2005 The Taylor Group

Submittal Transmittal
Detailed, Grouped by Each Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced — Tel: 209-724-4321 Fax: 209-724-4468

Date: 3/4/2005 — Reference Number: 1011

Transmitted To: Ramon Torres — Transmitted By: Tony Valdez

Submittal Transmittal

Garden Suites and Lakeview Dining

Date: 3/2/2005 — Reference Number: 0988

Transmitted To: Ramon Torres — The Taylor Group Architects

04/20/2004 13:10 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION FIELD No. 377

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing Ductwork
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/16/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/23/2004

RECEIVED APR 2 0 2004 Mauldin-Dorfmeier

REQUEST:

The duct sizing issue was reviewed with Steven Jones (Teter) on 4/13/04. Teter directed Kinetics to build duct per plans without enlarging ductwork to accommodate acoustical lining. Example would be a 30x6 lined duct awill be 30" x 6" outside dimension, inside dimension will be 28"x4". Please confirm.
The main duct elevation will have to be at 7'-3" bottom to avoid wall plates from being cut and modified. Please confirm.

Sheet M2.01

Responce:
See attached email dated 4/20/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
4/20/04

CC: MDC (All) All subs attach ~~RFI~~ 362

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 4/20/04 — # of pages 2 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

04/20/2004 13:10 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Tuesday, April 20, 2004 12:07 PM
To: Ramon Torres
Subject: RE: AC #377

RECEIVED APR 2 0 2004 Mauldin-Dorfmeier

Ramon,
We have reviewed the attached RFI #377 and have the following response:

Please refer to response to RFI #362.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, April 19, 2004 10:04 AM
To: Steven Jones
Subject: FW: AC #377
Importance: High

Please review and respond to me i will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com
Website: http://www.ttgarchitects.com

4/20/2004

METALAIRE L/S-SD

Kinetics Mechanical Service, Inc. REQUEST FOR INFORMATION

Bernards Bros

Housing Fire Dampers

Housing Shaft Fire Dampers

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 562

N. Millbrook
Box 15100
CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

Housing-SFDs/Exhaust Duct
UC Merced Housing
Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 7/7/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 7/14/2004

to Sheet M2.01-M2.04

meeting the design team reviewed the smoke fire damper and exhaust duct design with the fire marshal. forward revised design.

Responce:
Housing Units - Clarification @ draftstops in attics:
Because the draftstops are not rated construction the ductwork that penetrates the draftstops is not required to have ~~[illegible]~~ smoke or fire dampers. The dampers shown on sht M2.03 & M2.04 are not required. All ducts from individual units are to be routed individually within each unit up through furred vertical chases to the attic. Where ductwork penetrates the floor/ceiling & roof/ceiling assemblies provide fire stopping.
Ramon Torres/TTG

MDC(All) All Subs

05/17/2004 14:13 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 446

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: HVAC< Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/10/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/17/2004

REQUEST:

1. Can we use bare Alumaflex duct for the last 7 foot connection to the exhaust grills and satisfy the requirements of Section 15650.3.3.A.4?

2. Please confirm there is no requirement for volume dampers in the supply air duct for the housing units. We intend to use OBD's on registers only.

3. Exhaust duct will have volume dampers and will require access doors. Please confirm these can be placed in the ceilings.

Responce:
See attached email dated 5/17/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
5/17/04

MDC(All) Helix Cosco Kinetics Finishers Mountain

M2.01 2.02 2.03 2.04

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 5/17/04 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Rodger Ward

05/17/2004 14:13 4333010

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004
To: Ramon Torres
Subject: RE: AC #446
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI #446 and have the following response:

1. Flexible ductwork is not allowed for moisture bearing exhaust ductwork per specification 15650.3.3.B.4. Ductwork is to be constructed of aluminum sheet and sloped to allow drainage. Flexible ductwork could retain moisture and allow mold growth.

2. Volume control dampers are not required in the supply air ducts for the housing units. Registers are to be provided with OBD's.

3. Coordinate any necessary ceiling access with architectural. Attic access is already provided and may be sufficient for exhaust duct damper access.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres
Sent: Tuesday, May 11, 2004 10:06 AM
To: Steven Jones
Subject: FW: AC #446
Importance: High

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000

5/17/2004

04/22/2004 06:52 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION FIELD No. 381

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing-Duct Routing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/16/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/23/2004

REQUEST:

Type 1 Housing restrooms branch duct will have to be modified due to wall framing clearances. This issue was reviewed between Steven Jones (Teter) and Steve La Russa (Kinetics) and attached is the proposed duct routing. Please confirm this is acceptable.

sheet M2.01

Responce:
See attached email dated 4/21/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
4/21/04

MDC(All) All subs

Post-it® Fax Note 7671 — To Tony Valdez — Co./Dept. MDC — Fax # 209 383 4205 — Date 4/21/04 — # of pages 2 — From Ramon Torres — Co. TTG

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

04/22/2004 06:52 4333010 TAYLOR GROUP PAGE 02

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Wednesday, April 21, 2004 4:49 PM
To: Ramon Torres (E-mail)
Subject: RFI #381

Ramon,
We have reviewed the copy of RFI #381 faxed to us on 4-19-04 regarding the restroom supply duct routing in the type I housing units and have the following response:

The proposed revisions to the supply duct routing are acceptable.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/2004

Access Doors

Sandwich Access Doors

DUCTMATE

DETAIL & SUBMITTAL SHEET

TYPICAL DOUBLE PANEL ACCESS DOOR

SECTION DETAIL

CONSTRUCTION FEATURES:

(Attn: Steve)

POTTORFF® Series VFD-10 1-1/2 hour horizontal fire damper installation instructions

POTTORFF® In Drywall Partitions

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 493

Phone: 559-487-1086
Fax: 559-487-1091

-Registers
UC Merced Housing
Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/24/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/31/2004

RECEIVED JUN 0 3 2004 Mauldin-Dorfmeier

shows exhaust registers as type C for Unit H1 110. Type C registers are supply registers. should be changed to reflect Type G registers.

4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

Steven Jones [stevenj@teterae.com]
Wednesday, June 02, 2004 5:14 PM
Ramon Torres
RE: AC #493
Follow up
Flagged

RECEIVED JUN 0 3 2004 Mauldin-Dorfmeier

reviewed the attached RFI #493 and have the following response:

in the H1 110 housing units should be type 'G' registers to match the exhaust registers in all the

Steven A. Jones, P.E.

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 484

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing-Flex for sidewall registers
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/21/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/28/2004

REQUEST:

In RFI 381 we proposed a solution to modify the duct routing due the minimal wall framing clearances. In order to make the proposed layout work around shower plumbing we would need to make several offsets to the duct. This will have a significant cost impact. To get around the shower plumbing Steven Jones (Teter) on 5/12/04 concured the use of wire flex to side wall registers in lieu of rectangular duct would be an acceptable solution. This solution will also eliminate the cost associated with RFI 381. Please confirm the use of wire flex per the attached sketch is acceptable.

05/25/2004 15:36 4333010 TAYLOR GROUP PAGE 02

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Tuesday, May 25, 2004 3:54 PM
To: Ramon Torres (E-mail)
Subject: Re: RFI #484
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed RFI #484 faxed to us by Mauldin Dorfmeier and have the following response:

Flexible ducting maybe used only for the final connection to the sidewall grille as indicated on the proposed sketch. Flexible duct dimensions shall be increased to compensate for the increased pressure drop associated with the flexible duct.

Steven A. Jones, P.E.

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 446

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: HVAC< Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/10/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/17/2004

REQUEST:

1. Can we use bare Alumaflex duct for the last 7 foot connection to the exhaust grills and satisfy the requirements of Section 15650.3.3.A.4?

2. Please confirm there is no requirement for volume dampers in the supply air duct for the housing units. We intend to use OBD's on registers only.

3. Exhaust duct will have volume dampers and will require access doors. Please confirm these can be placed in the ceilings.

Responce:
See attached email dated 5/17/04 from Steven Jones/Teter a+e
Ramon Torres/TTG

Ramon,
We have reviewed the attached RFI #446 and have the following response:

1. Flexible ductwork is not allowed for moisture bearing exhaust ductwork per specification 15650.3.3.B.4. Ductwork is to be constructed of aluminum sheet and sloped to allow drainage. Flexible ductwork could retain moisture and allow mold growth.

2. Volume control dampers are not required in the supply air ducts for the housing units. Registers are to be provided with OBD's.

3. Coordinate any necessary ceiling access with architectural. Attic access is already provided and may be sufficient for exhaust duct damper access.

04/29/2004 13:54 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc. REQUEST FOR INFORMATION No. 403

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing-Thermostat Location
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/23/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/30/2004

RECEIVED APR 2 9 2004 Mauldin-Dorfmeier

REQUEST:

Sheet M2.01 through M2.04 do not identify thermostat locations for all housing units. Suggested location would be hallways or living rooms for Type A, C and Resident Coordinator unit(s), bedroom for Type A units. Please provide drawing showing location of thermostats.

Responce:
See attached email dated 4/29/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
4/29/04

CC: MDC(All) -Kinetics -Turnupspeed electric -Helix -Cosco -Finishers -Mountain

8"

M2.01 M2.02 M2.03 M2.04

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed:
Tony Valdez

04/29/2004 13:54 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Thursday, April 29, 2004 12:49 PM
To: Ramon Torres
Subject: RE: AC #403
Follow Up Flag: Follow up
Flag Status: Flagged

RECEIVED APR 2 9 2004 Mauldin-Dorfmeier

Ramon,
We have reviewed the attached RFI #403 and have the following response:

Thermostats for the housing unit fan coils Type A and Type C shall be located in the hallway adjacent to the fan coil closet. Thermostats for the Type B units shall be located in the living space on the wall adjacent to the hallway. For the residential coordinator apartment, place thermostat in the hallway.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, April 26, 2004 8:42 AM
To: Steven Jones
Subject: FW: AC #403

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104

THE TAYLOR GROUP ARCHITECTS OF CALIFORNIA

10 RIVER PARK PLACE
SUITE 104
FRESNO, CA 93720
TEL 559.433.3000
FAX 559.433.3010

Bulletin

Project: UC Merced - Garden Suites and Lakeview Dining - Project #906251
Bulletin Number: 027
Date: February 24, 2005
To SFM: Juan Martin, Fire Marshall - UCSF/UCM

This is a clarification and/or modification to the project contract documents and is in no way an authorization or order for any change(s) or additional work that would revise the contract price. It is understood that the Contractor will incorporate the data described by this memo unless the Architect is notified in writing to the contrary in accordance with Article of the General Conditions.

Subject:
Housing Buildings – Fire Dampers

Description:
Revised Fire Dampers in shaft between floors from model # "FD-140-OP" to "VFD-10". The revised Chase Cross Sections are shown in attached drawings, Sheets SD – M06 through SD – M10, dated 2/24/05.

Proposal will be assumed to include -0- calendar days for construction time extension unless specifically identified by the Contractor.

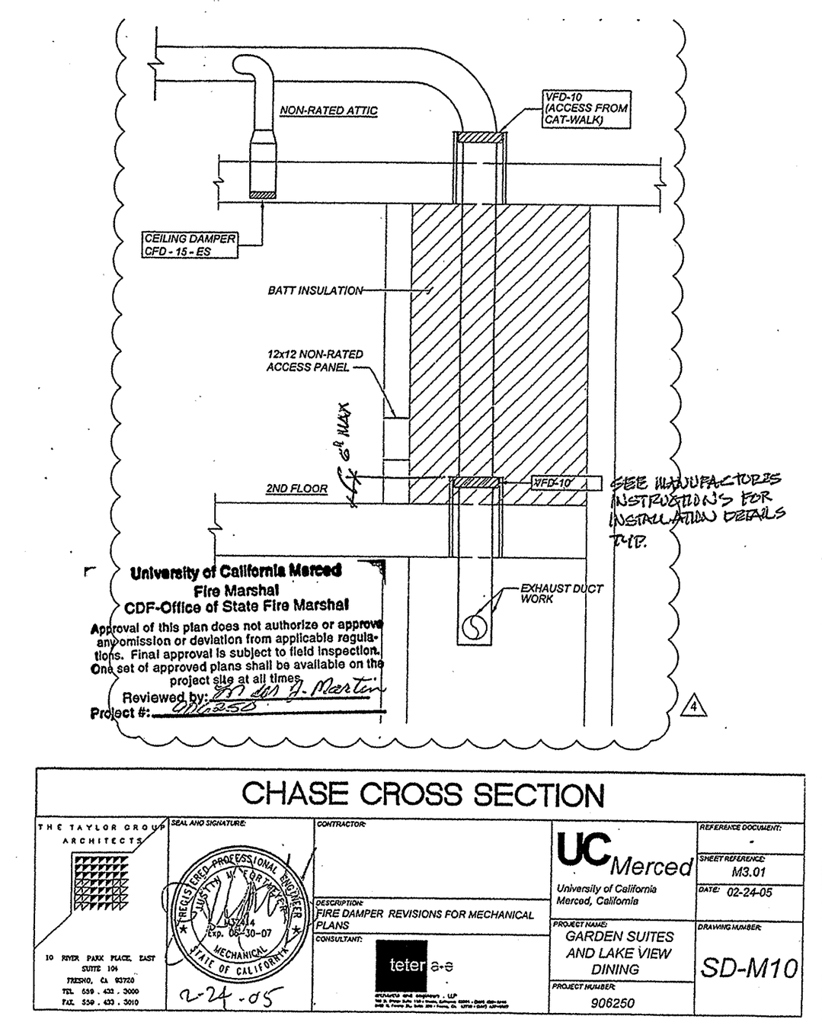
Distribution:
John Sykes - Project Manager

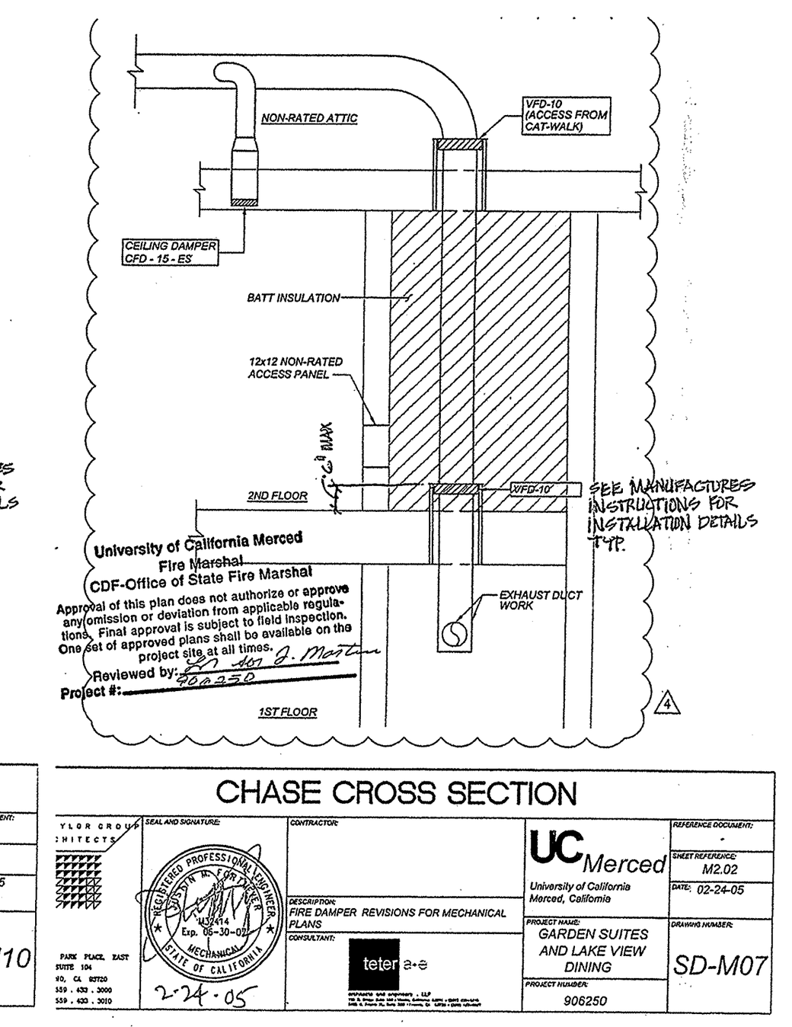
Referenced Drawings: Sheet M2.01, M2.02, M2.03, M2.04 & M3.01.

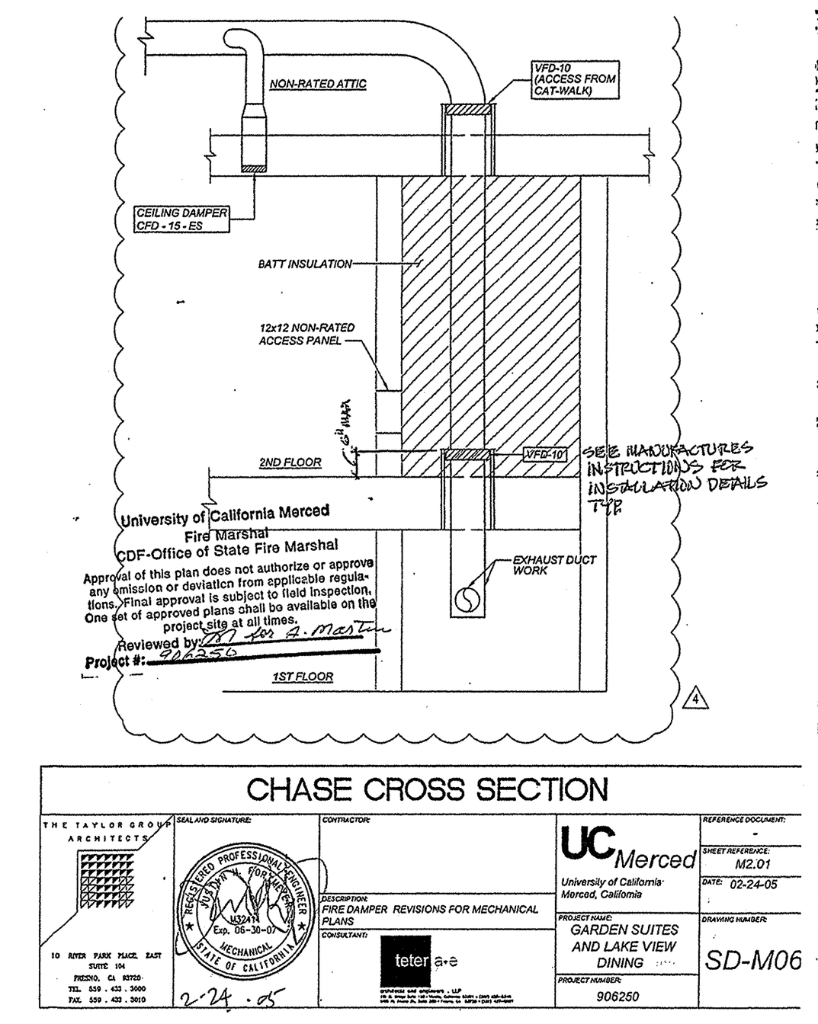
Attachments: SD – M06, SD – M07, SD – M08, SD – M09 & SD – M10.

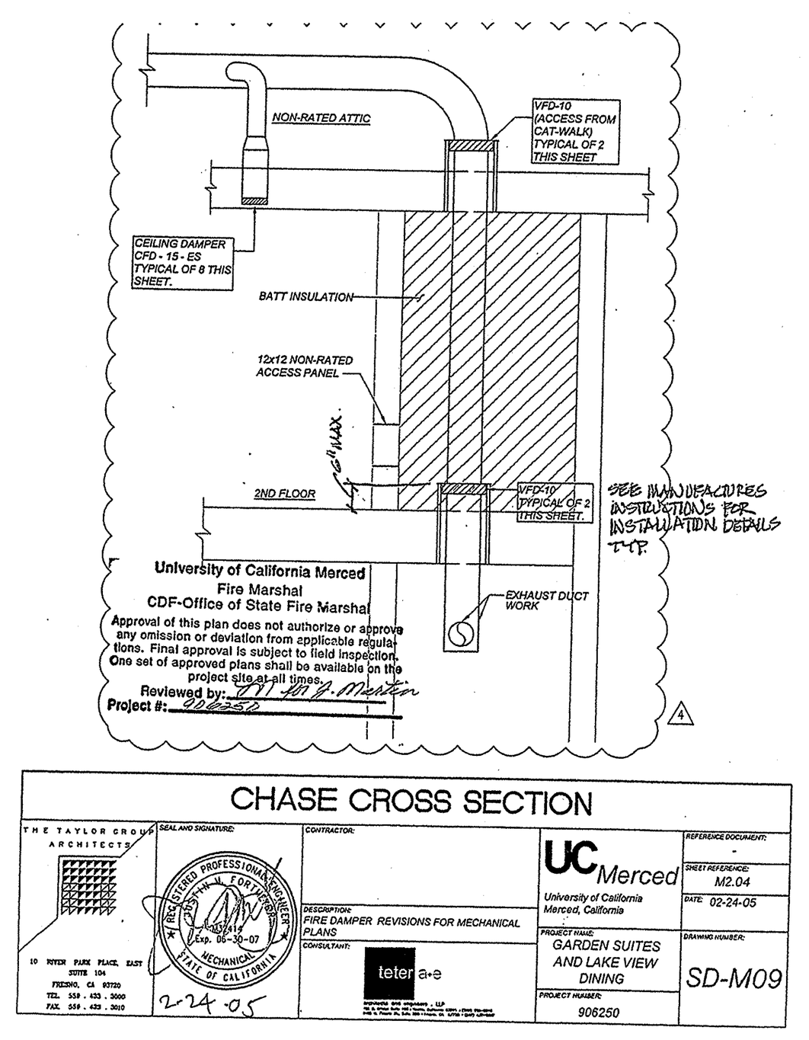
Specification Sections: N/A

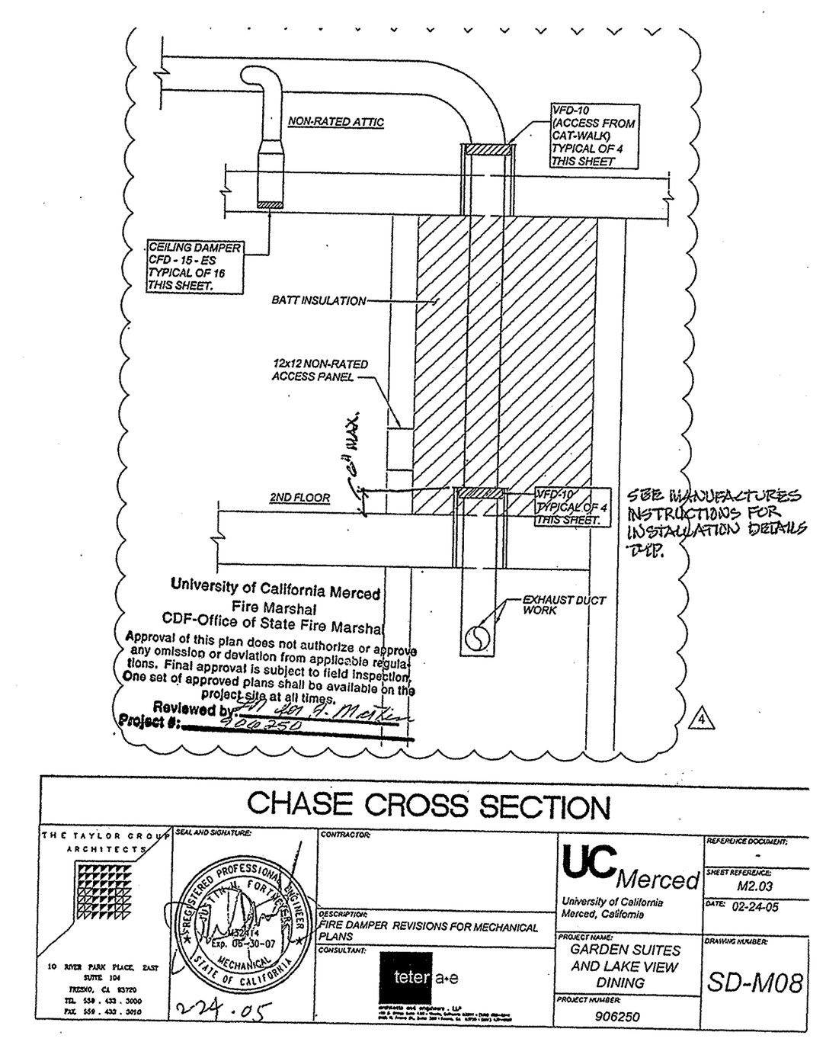
LICENSED ARCHITECT RUSSELL TAYLOR No. C 15201 Ren. 1-31-07 STATE OF CALIFORNIA

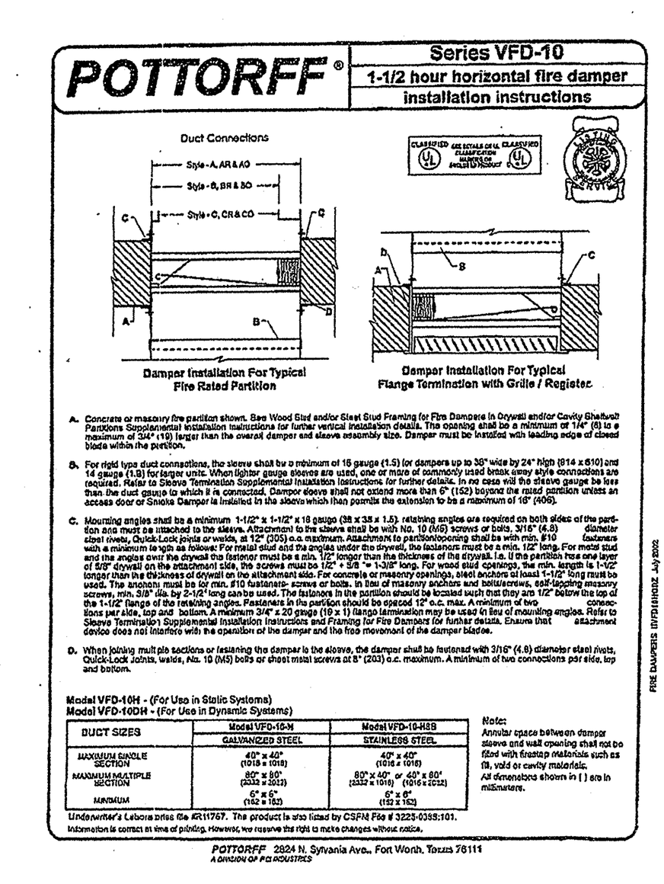












Mauldin-Dorfmeier Construction, Inc. — REQUEST FOR INFORMATION No. 403

Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing-Thermostat Location
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/23/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/30/2004

RECEIVED APR 29 2004 Mauldin-Dorfmeier

...through M2.04 do not identify thermostat locations for all housing units. Suggested location would ...r living rooms for Type A, C and Resident Coordinator unit(s), bedroom for Type A units. Please ...ing showing location of thermostats.

...ached email dated 4/29/04 from Steven Jones/Teter a&e
Ramon Torres/TTG

CC: MDC (All) – Kinetics – Turnupspeed electric – Helix – Cosco – Finishers – Mountain

M2.01, M2.02, M2.03, M2.04

Post-it Fax Note 7671 — To: Tony Valdez; Co./Dept.: MDC; Fax #: 209 383 4005; Date: 4/29/04; # of pages: 2; From: Ramon Torres; Co.: TTG

By: Mauldin-Dorfmeier Construction, Inc.
Date:

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Thursday, April 29, 2004 12:49 PM
To: Ramon Torres
Subject: RE: AC #403
Follow Up Flag: Follow up
Flag Status: Flagged

RECEIVED APR 29 2004 Mauldin-Dorfmeier

Ramon,
We have reviewed the attached RFI #403 and have the following response:

Thermostats for the housing unit fan coils Type A and Type C shall be located in the hallway adjacent to the fan coil closet. Thermostats for the Type B units shall be located in the living space on the wall adjacent to the hallway. For the residential coordinator apartment, place thermostat in the hallway.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, April 26, 2004 8:42 AM
To: Steven Jones
Subject: FW: AC #403

Please review and respond to me I will forward the responce.

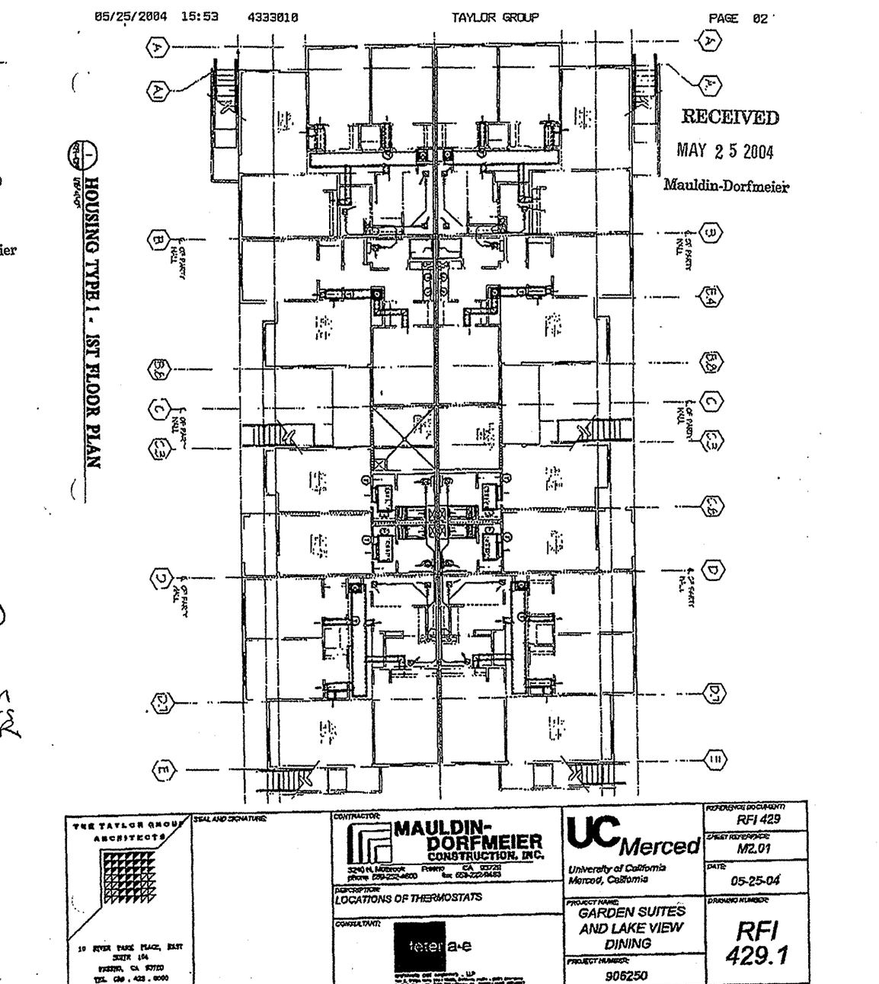
Ramon Torres
Project Architect/ Manager

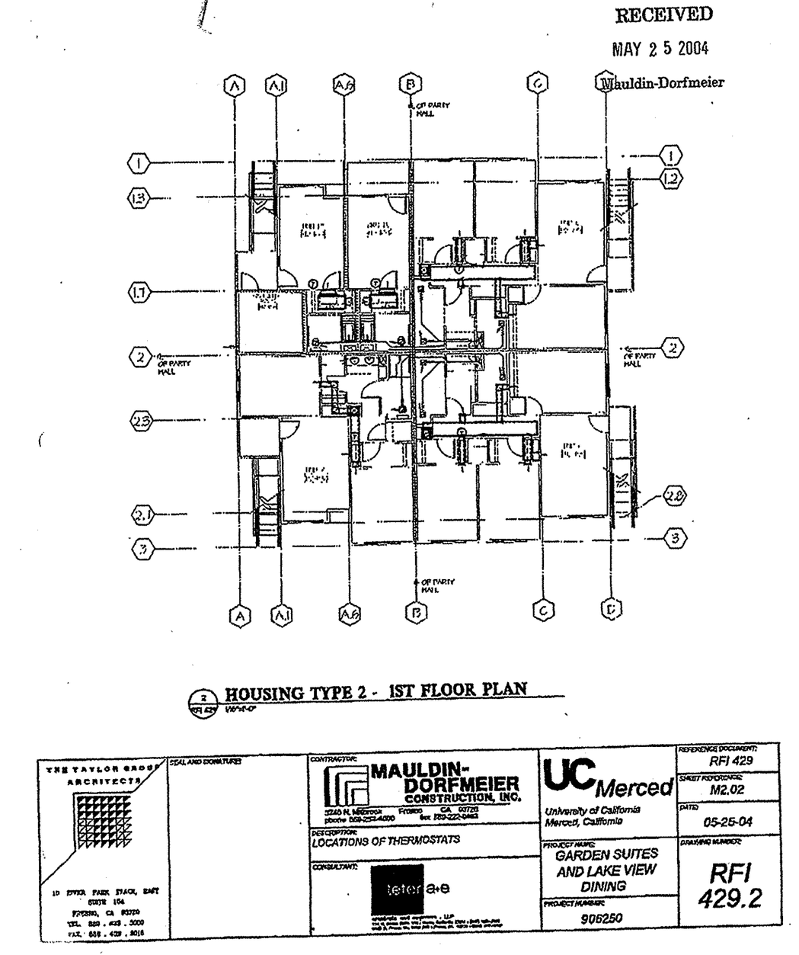
The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA. 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com
Website: http://www.ttgarchitects.com

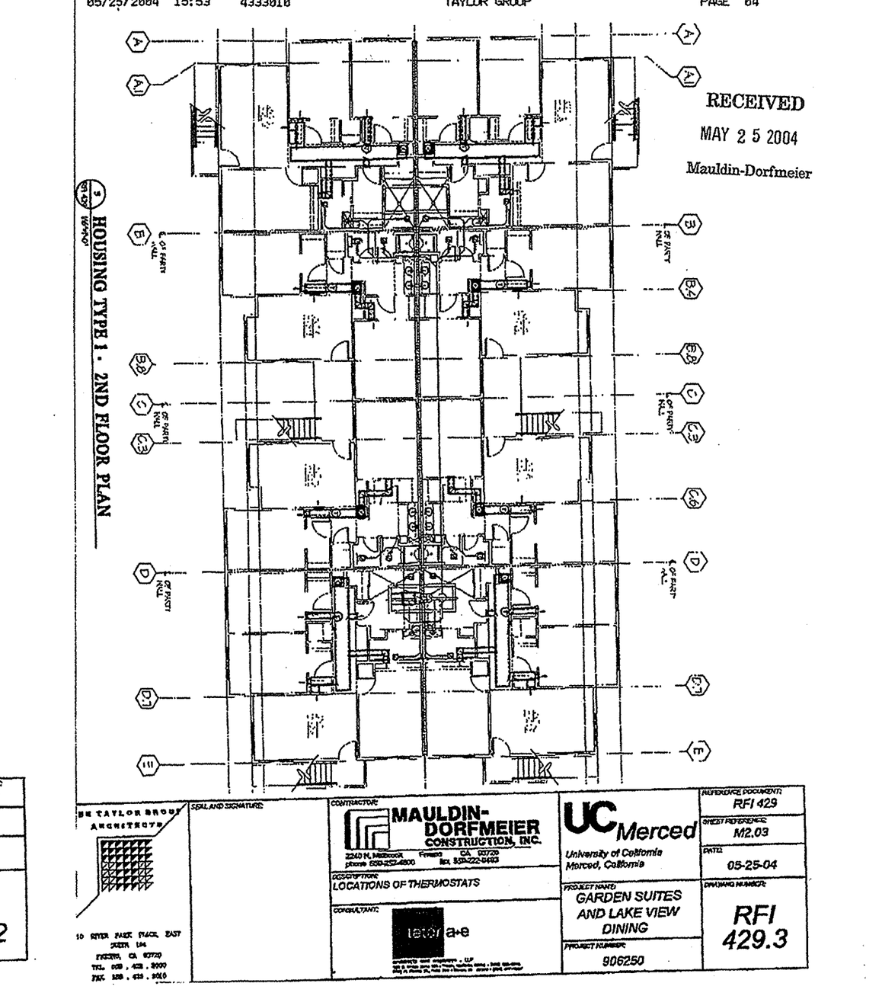
...r Construction, Inc. — REQUEST FOR INFORMATION No. 429

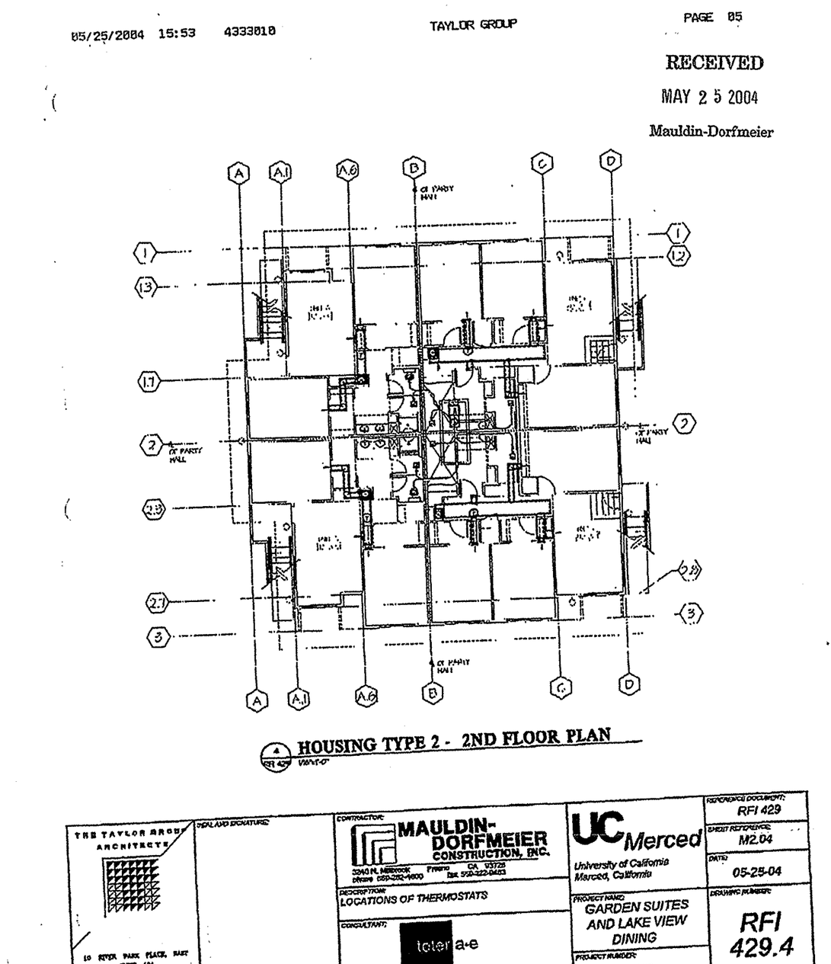
Phone: 559-487-1086
Fax: 559-487-1091

RECEIVED MAY 25 2004 Mauldin-Dorfmeier









Mauldin-Dorfmeier Construction, Inc. — ARCHITECT CLARIFICATION AC No. 688

AC. 688

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Housing-Duct thru Non Bearing wall
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
978 West Alluvial, Suite 107
Fresno, CA 93711
Phone: 559-437-5000 Fax: 559-437-5005

DATE: 11/23/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 11/30/2004

REQUEST:

Refer to Sheet M2.01 and M2.02

At all 1st floor C Units the lower plate from the double top plate has been notched to accomodate the installation of the duct work thru the non bearing walls. Please review with structural engineer and confirm notching of lower plate from the double top plates is acceptable.

ANSWER:

As per Section 2320, 11.2, California Buiding Code 2001 Edition, a single tip plate can be used at Interior non-bearing walls. However, if the plate is not continuous please insure there are at least two angle braces on ...ch side of each individual section of the top plate.
...amon Torres/TGA
11/23/04

Mauldin-Dorfmeier Construction, Inc. — REQUEST FOR INFORMATION No. 524

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Housing-Exhasut Fan Location
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 6/10/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 6/17/2004

REQUEST:

Refer to Sheet M2.02

The response to RFI 472 advises that the housing exhaust fans are to be relocated from the roof monitor to the attic. This is not achievable as the fans are physically wider than the roof joists and have already been installed in monitors per plan. For your use.

ANSWER:

See attached email dated 6/16/04 from Steven Jones/Teter AE.

Ramon Torres/TTG
6/16/04

Email from Steven Jones dated 6/16/04
We have reviewed the attached RFI 524 and have the following response:
Please indicate the elevation that the exhaust fans are to be mounted at. Please indicate proposed method for maintaining the exhaust fans.

Response from MDC
I am in receipt to your acceptance and questions to RFI 524. Elevation and method for maintaining exhaust fans is per the 100% CDs. Please refer to the plans.
Tony Valdez/6/21/04

Mauldin-Dorfmeier Construction, Inc. — REQUEST FOR INFORMATION No. 472

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

5/19 R.T. F.-31.

TITLE: Exhaust Fan Location, Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/19/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/26/2004

REQUEST:

Drawing M2.02 appears to show the exhaust fan location in the roof monitors. How is it accessable? How do we maintain the rated shaft if it is required"

Responce:
See attached email dated 6/3/04 from Steven Jones/Teter a&e
Ramon Torres/TTG

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Thursday, June 03, 2004 2:36 PM
To: Ramon Torres (E-mail)
Subject: Re: RFI #472

Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed RFI #472 faxed to us by Mauldin Dorfmeier and have the following response:
The roof monitor shall not be enclosed in a rated shaft, per response to RFI #433. Exhaust fan shall be located in the attic space. If exhaust fan is located in the monitor, it shall be mounted low enough to allow maintenance access from the attic space.

Steven A. Jones, P.E.

Mauldin-Dorfmeier Construction, Inc. — REQUEST FOR INFORMATION No. 446

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: HVAC< Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/10/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/17/2004

REQUEST:

1. Can we use bare Alumaflex duct for the last 7 foot connection to the exhaust grills and satisfy the requirements of Section 15650.3.3.A.4?

2. Please confirm there is no requirement for volume dampers in the supply air duct for the housing units. We intend to use OBD's on registers only.

3. Exhaust duct will have volume dampers and will require access doors. Please confirm these can be placed in the ceilings.

Responce:
See attached email dated 5/17/04 from Steven Jones/Teter a&e
Ramon Torres TTG
5/17/04

MDC (All) – Helix – Cosco – Kinetics – Finishers – Mountain

M2.01, 2.02, 2.03

Post-it Fax Note 7671 — To: Tony Valdez; Co./Dept.: MDC; Fax #: 209 383 4005; Date: 5/17/04; From: Ramon Torres; Co.: TTG

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: Rodger Ward
Date:

Page 1 of 1

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004 2:35 PM
To: Ramon Torres
Subject: RE: AC #446
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI $446 and have the following response:

1. Flexible ductwork is not allowed for moisture bearing exhaust ductwork per specification 15650.3.3.B.4. Ductwork is to be constructed of aluminum sheet and sloped to allow drainage. Flexible ductwork could retain moisture and allow mold growth.

2. Volume control dampers are not required in the supply air ducts for the housing units. Registers are to be provided with OBD's.

3. Coordinate any necessary ceiling access with architectural. Attic access is already provided and may be sufficient for exhaust duct damper access.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

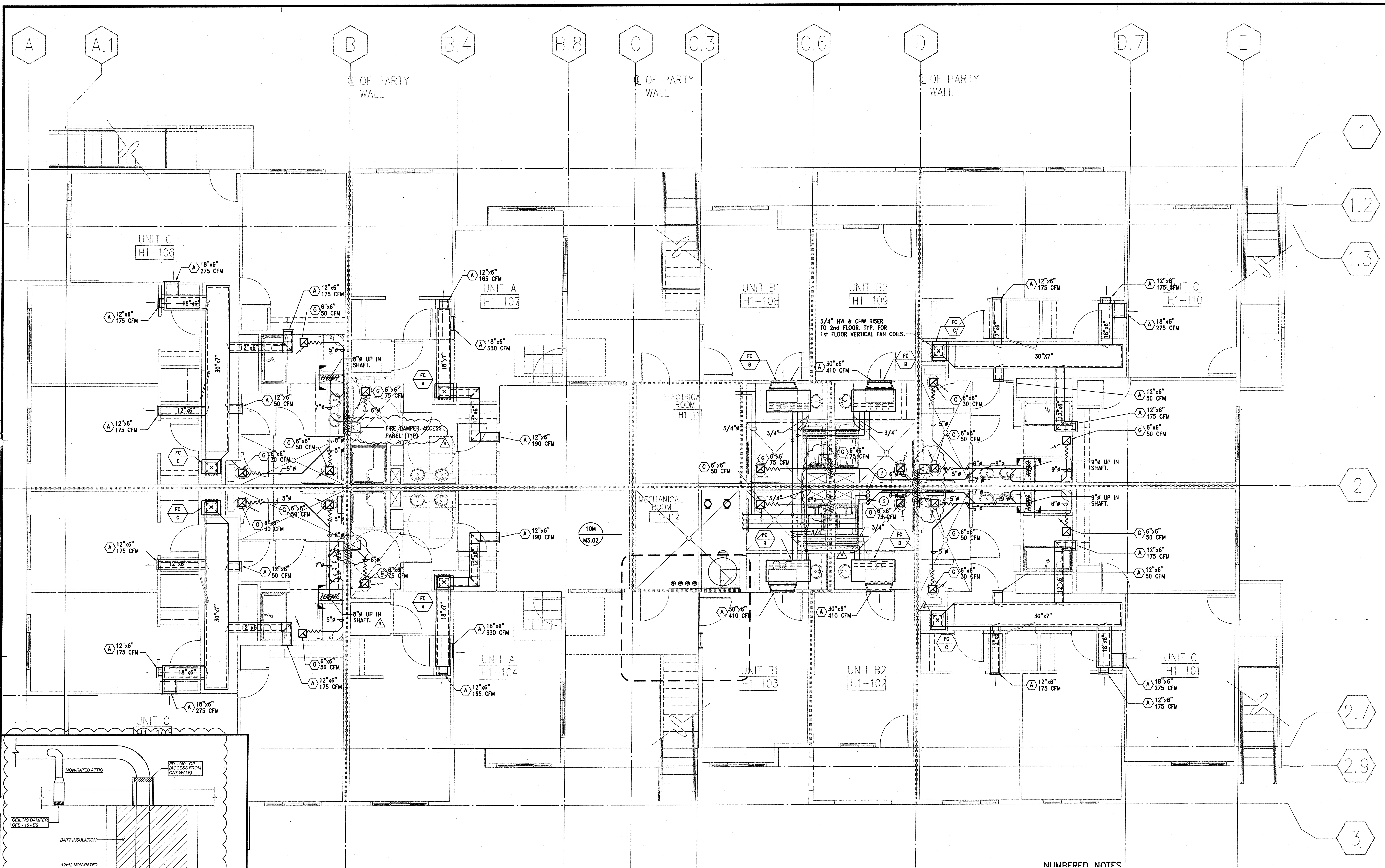
-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Tuesday, May 11, 2004 10:05 AM
To: Steven Jones
Subject: FW: AC #446
Importance: High

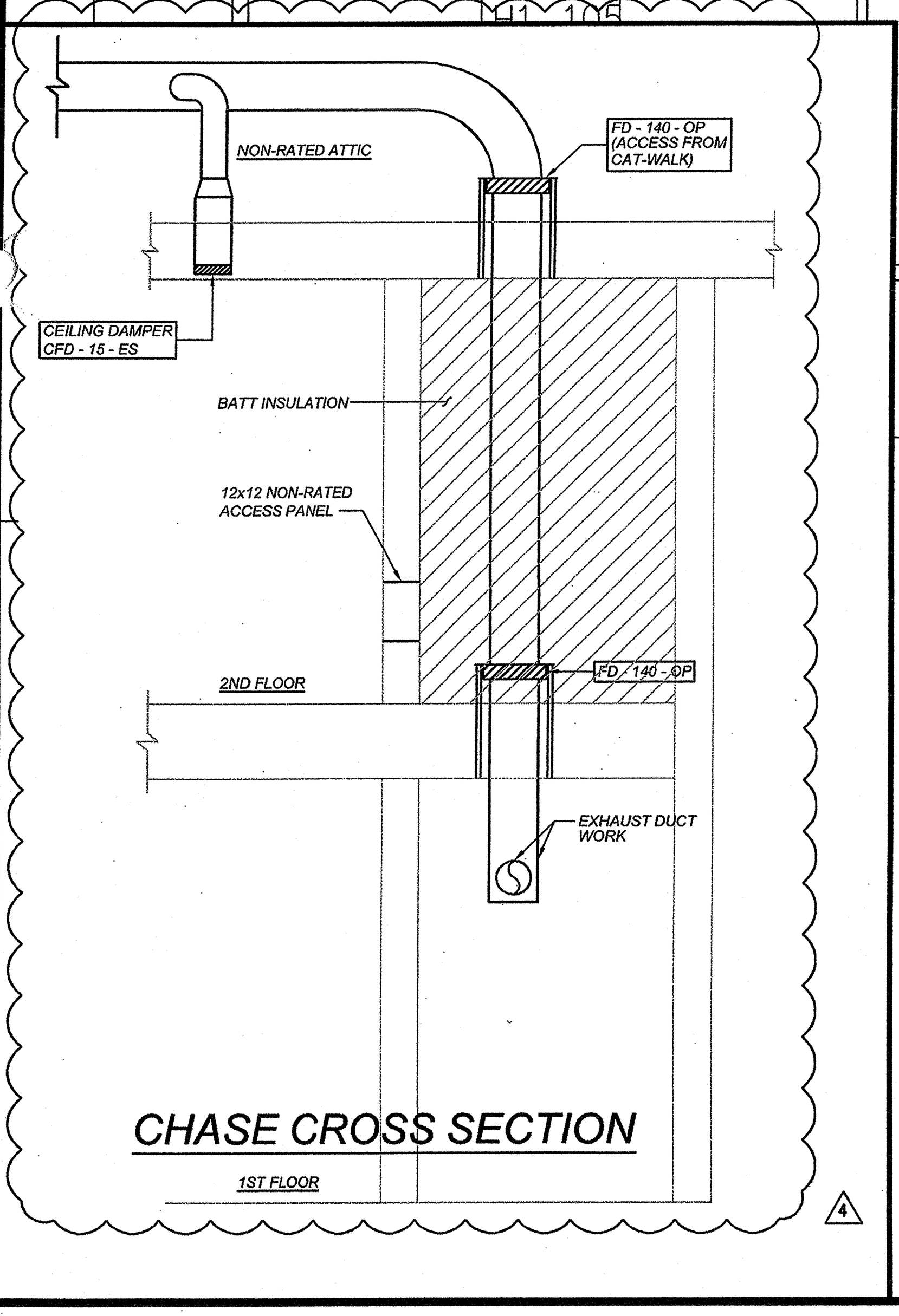
Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA. 93720
Phone: 559.433.3000

5/17/2004





CHASE CROSS SECTION

1ST FLOOR

1 M2.01 HOUSING TYPE 1 – 1ST FLOOR PLAN

1/4"=1'-0"

NUMBERED NOTES

KEYNOTES

1. 1 1/2" CWS & CWR RISER TO 2nd FLOOR.
2. 1 1/4" HWS & HWR RISER TO 2nd FLOOR.

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Project #:

SHEET LEGEND	
//////////	FIRE DAMPER - POTTORFF VFD-10 TYPICAL OF 6 THIS PLAN
△	NON-RATED ACCESS PANEL

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature

Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
50% C.D. Submittal	06.02.03
100 % C.D. Submittal	07.30.03
1 DSA/SS/FLS Resubmittal	10.06.03
2 DSA/Site Access Rev.	12.16.03
Site Impr. Submittal (Draft)	01.24.04
3 Site Impr. Submittal	07.26.04
4 Fire Damper Access Pnls	11.29.04

Agency Approvals:

FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. -
AC____ FLS____ SS____
DATE____

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:

Drawing Title
HOUSING TYPE 1
1st FLOOR PLAN

Drawing Number:
M2.01

04/23/2004 13:54 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.
3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

REQUEST FOR INFORMATION
No. 403

TITLE: Housing-Thermostat Location
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/23/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 4/30/2004

RECEIVED
APR 2 9 2004
Mauldin-Dorfmeier

REQUEST:

Sheet M2.01 through M2.04 do not identify thermostat locations for all housing units. Suggested location would be hallways or living rooms for Type A, C and Resident Coordinator unit(s), bedroom for Type A units. Please provide drawing showing location of thermostats.

Responce:
See attached email dated 4/29/04 from Steven Jones / Teter a+e
Ramon Torres / TTG
4/29/04

CC: MDC (All)
- Kinetics
Turnupspeed electric
- Helix
- Cosco
- Finishers
- Mountain

8"

M
M2.01
M2.02
M2.03
M 2.04

Post-it® Fax Note 7671	Date 4/29/04	# of pages ▸ 2
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Date:

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed:
Tony Valdez

04/29/2004 13:54 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Thursday, April 29, 2004 12:49 PM
To: Ramon Torres
Subject: RE: AC #403
Follow Up Flag: Follow up
Flag Status: Flagged

RECEIVED
APR 2 9 2004
Mauldin-Dorfmeier

Ramon,
We have reviewed the attached RFI #403 and have the following response:

Thermostats for the housing unit fan coils Type A and Type C shall be located in the hallway adjacent to the fan coil closet. Thermostats for the Type B units shall be located in the living space on the wall adjacent to the hallway. For the residential coordinator apartment, place thermostat in the hallway.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, April 26, 2004 8:42 AM
To: Steven Jones
Subject: FW: AC #403

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com
Website: http://www.ttgarchitects.com

05/17/2004 14:13 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.
3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

REQUEST FOR INFORMATION
No. 446

TITLE: HVAC< Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/10/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/17/2004

REQUEST:

1. Can we use bare Alumaflex duct for the last 7 foot connection to the exhaust grills and satisfy the requirements of Section 15650.3.3.A.4?

2. Please confirm there is no requirement for volume dampers in the supply air duct for the housing units. We intend to use OBD's on registers only.

3. Exhaust duct will have volume dampers and will require access doors. Please confirm these can be placed in the ceilings.

Responce:
See attached email dated 5/17/04 from Steven Jones / Teter a+e
Ramon Torres TTG
5/17/04

MDC (All)
Helix
Cosco
Kinetics
Finishers
Mountain

M2.01
2.02
2.03
2.04

Post-it® Fax Note 7671	Date 5/17/04	# of pages ▸
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Requested By: Mauldin-Dorfmeier Construction, Inc.
Date:
Signed:
Rodger Ward

Page 1 of 1

05/17/2004 14:13 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004 2:35 PM
To: Ramon Torres
Subject: RE: AC #446
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI $446 and have the following response:

1. Flexible ductwork is not allowed for moisture bearing exhaust ductwork per specification 15650.3.3.B.4. Ductwork is to be constructed of aluminum sheet and sloped to allow drainage. Flexible ductwork could retain moisture and allow mold growth.

2. Volume control dampers are not required in the supply air ducts for the housing units. Registers are to be provided with OBD's.

3. Coordinate any necessary ceiling access with architectural. Attic access is already provided and may be sufficient for exhaust duct damper access.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Tuesday, May 11, 2004 10:06 AM
To: Steven Jones
Subject: FW: AC #446
Importance: High

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000

5/17/2004

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.
3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

REQUEST FOR INFORMATION
No. 429

TITLE: Housing T Stats
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/5/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/12/2004

RECEIVED
MAY 2 5 2004
Mauldin-Dorfmeier

REQUEST:

The response to RFI 403 identified thermostat layout. Attached is our understanding of the thermostat layout. Please concur and provide thermostat layout using Taylor Group title block for UC submission..

Responce:
See attached email dated 5/25/04 from Steven Jones / Teter a+e
& 8½ x 11 RFI-429.1, 429.2, 429.3 & 429.4.
Ramon Torres / TTG
5/25/04

Disregard handwritten layout given on site.
CC: MDC (All)
KMS
Helix
Cosco
Mountain
Finishers
TDR

Post-it® Fax Note 7671	Date 5/25/04	# of pages ▸ 5
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Date:

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed:
Tony Valdez

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 02

RECEIVED
MAY 2 5 2004
Mauldin-Dorfmeier

HOUSING TYPE 1 - 1ST FLOOR PLAN

THE TAYLOR GROUP ARCHITECTS — MAULDIN-DORFMEIER CONSTRUCTION, INC. — UC Merced, University of California, Merced, California — LOCATIONS OF THERMOSTATS — teter a+e — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.01 — 05-25-04 — RFI 429.1

THE TAYLOR GROUP ARCHITECTS OF CALIFORNIA

10 RIVER PARK PLACE
SUITE 104
FRESNO, CA 93720
TEL 559.433.3000
FAX 559.433.3010

Bulletin

Project: UC Merced - Garden Suites and Lakeview Dining - Project #906251
Bulletin Number: 027
Date: February 24, 2005
To SFM: Juan Martin, Fire Marshall - UCSF/UCM

This is a clarification and/or modification to the project contract documents and is in no way an authorization or order for any change(s) or additional work that would revise the contract price. It is understood that the Contractor will incorporate the data described by this memo unless the Architect is notified in writing to the contrary in accordance with Article of the General Conditions.

Subject:
Housing Buildings – Fire Dampers

Description:
Revised Fire Dampers in shaft between floors from model # "FD-140-OP" to "VFD-10". The revised Chase Cross Sections are shown in attached drawings, Sheets SD – M06 through SD – M10, dated 2/24/05.

Proposal will be assumed to include -0- calendar days for construction time extension unless specifically identified by the Contractor.

Distribution:
John Sykes - Project Manager

Referenced Drawings: Sheet M2.01, M2.02, M2.03, M2.04 & M3.01.

Attachments: SD – M06, SD – M07, SD – M08, SD – M09 & SD – M10.

Specification Sections: N/A

No. C16281
Ren. 1-31-07

NON-RATED ATTIC
VFD-10 (ACCESS FROM CAT-WALK)
CEILING DAMPER CFD - 15 - ES
BATT INSULATION
12x12 NON-RATED ACCESS PANEL
6" MAX.
2ND FLOOR
VFD-10
SEE MANUFACTURES INSTRUCTIONS FOR INSTALLATION DETAILS TYP.
EXHAUST DUCT WORK

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: JM for J. Martin
Project #: 906250

CHASE CROSS SECTION

THE TAYLOR GROUP ARCHITECTS — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — teter a+e — UC Merced, University of California, Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M3.01 — 02-24-05 — SD-M10 — 2-24-05

02/28/2005 14:21 5594375085 THE TAYLOR GROUP PAGE 01

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 03

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MAY 2 5 2004
Mauldin-Dorfmeier

HOUSING TYPE 2 - 1ST FLOOR PLAN

THE TAYLOR GROUP ARCHITECTS — MAULDIN-DORFMEIER CONSTRUCTION, INC. — UC Merced, University of California, Merced, California — LOCATIONS OF THERMOSTATS — teter a+e — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.02 — 05-25-04 — RFI 429.2

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 04

RECEIVED
MAY 2 5 2004
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HOUSING TYPE 1 - 2ND FLOOR PLAN

THE TAYLOR GROUP ARCHITECTS — MAULDIN-DORFMEIER CONSTRUCTION, INC. — UC Merced, University of California, Merced, California — LOCATIONS OF THERMOSTATS — teter a+e — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.03 — 05-25-04 — RFI 429.3

NON-RATED ATTIC
VFD-10 (ACCESS FROM CAT-WALK) TYPICAL OF 2 THIS SHEET
CEILING DAMPER CFD - 15 - ES TYPICAL OF 8 THIS SHEET.
BATT INSULATION
12x12 NON-RATED ACCESS PANEL
6" MAX.
2ND FLOOR
VFD-10 TYPICAL OF 2 THIS SHEET.
SEE MANUFACTURES INSTRUCTIONS FOR INSTALLATION DETAILS TYP.
EXHAUST DUCT WORK

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: JM for J. Martin
Project #: 906250

CHASE CROSS SECTION

THE TAYLOR GROUP ARCHITECTS — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — teter a+e — UC Merced, University of California, Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.04 — 02-24-05 — SD-M09 — 2-24-05

NON-RATED ATTIC
VFD-10 (ACCESS FROM CAT-WALK) TYPICAL OF 4 THIS SHEET
CEILING DAMPER CFD - 15 - ES TYPICAL OF 16 THIS SHEET.
BATT INSULATION
12x12 NON-RATED ACCESS PANEL
6" MAX.
2ND FLOOR
VFD-10 TYPICAL OF 4 THIS SHEET.
SEE MANUFACTURES INSTRUCTIONS FOR INSTALLATION DETAILS TYP.
EXHAUST DUCT WORK

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: JM for J. Martin
Project #: 906250

CHASE CROSS SECTION

THE TAYLOR GROUP ARCHITECTS — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — teter a+e — UC Merced, University of California, Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.03 — 02-24-05 — SD-M08 — 2-24-05

05/25/2004 15:53 4333010 TAYLOR GROUP PAGE 05

RECEIVED
MAY 2 5 2004
Mauldin-Dorfmeier

HOUSING TYPE 2 - 2ND FLOOR PLAN

THE TAYLOR GROUP ARCHITECTS — MAULDIN-DORFMEIER CONSTRUCTION, INC. — UC Merced, University of California, Merced, California — LOCATIONS OF THERMOSTATS — teter a+e — GARDEN SUITES AND LAKE VIEW DINING — 906250 — RFI 429 — M2.04 — 05-25-04 — RFI 429.4

NON-RATED ATTIC
VFD-10 (ACCESS FROM CAT-WALK)
CEILING DAMPER CFD - 15 - ES
BATT INSULATION
12x12 NON-RATED ACCESS PANEL
6" MAX.
2ND FLOOR
VFD-10
SEE MANUFACTURES INSTRUCTIONS FOR INSTALLATION DETAILS TYP.
EXHAUST DUCT WORK
1ST FLOOR

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: JM for J. Martin
Project #: 906250

CHASE CROSS SECTION

THE TAYLOR GROUP ARCHITECTS — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — teter a+e — UC Merced, University of California, Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.02 — 02-24-05 — SD-M07 — 2-24-05

NON-RATED ATTIC
VFD-10 (ACCESS FROM CAT-WALK)
CEILING DAMPER CFD - 15 - ES
BATT INSULATION
12x12 NON-RATED ACCESS PANEL
6" MAX.
2ND FLOOR
VFD-10
SEE MANUFACTURES INSTRUCTIONS FOR INSTALLATION DETAILS TYP.
EXHAUST DUCT WORK
1ST FLOOR

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: JM for J. Martin
Project #: 906250

CHASE CROSS SECTION

THE TAYLOR GROUP ARCHITECTS — FIRE DAMPER REVISIONS FOR MECHANICAL PLANS — teter a+e — UC Merced, University of California, Merced, California — GARDEN SUITES AND LAKE VIEW DINING — 906250 — M2.01 — 02-24-05 — SD-M06 — 2-24-05

05/17/2004 15:47 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.
3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

REQUEST FOR INFORMATION
No. 439

TITLE: Housing-HVAC, Fan Coil Units
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/6/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/13/2004

REQUEST:

1. All housing vertical fan coils on the 2nd floor will be installed before gypcrete is poured. We propose mounting fan coils on Unistrut before gypcrete is poured, or as an alternate, can we use 2 layers of 5/8 type X sheet rock in leiu of the gypcrete under the fan coils? Please confirm one of the methods is acceptable.

2. Are seismic anchors for the fan coils required? If so, is a 16 ga. strap to the wall acceptable?

Reference M2.03 and M2.04

Responce:
1. No, the Gypcrete needs to be poured as it is part of the required floor/ceiling assembly.
2. see attached email dated 5/17/04 from Steven Jones / Teter a+e
Ramon Torres / TTG
5/17/04

CC: MDC (All)
Kinetics
Helix
Cosco
Mountain
Finishers

Post-it® Fax Note 7671	Date 5/17/04	# of pages ▸ 2
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Requested By: Mauldin-Dorfmeier Construction, Inc.
Date:
Signed:
Rodger Ward

Page 1 of 1

05/17/2004 15:47 4333010 TAYLOR GROUP PAGE 02

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004 3:46 PM
To: Ramon Torres
Subject: RE: AC #439
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI #439 and have the following response:

1. Floor construction to be determined by Architect.
2. Refer to SMACNA for all seismic restraint requirements per specification section 15020.1.20.A.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Tuesday, May 11, 2004 9:49 AM
To: Steven Jones
Subject: FW: AC #439
Importance: High

Steven in your responce the GYP CRETE needs to go thru it is part of the floor assembly.

Please review and respond to me I will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com
Website: http://www.ttgarchitects.com

5/17/2004

FEB-03-2005 THU 11:27 AM AIR TECH SALES FAX NO. 9187827550 P. 07/07

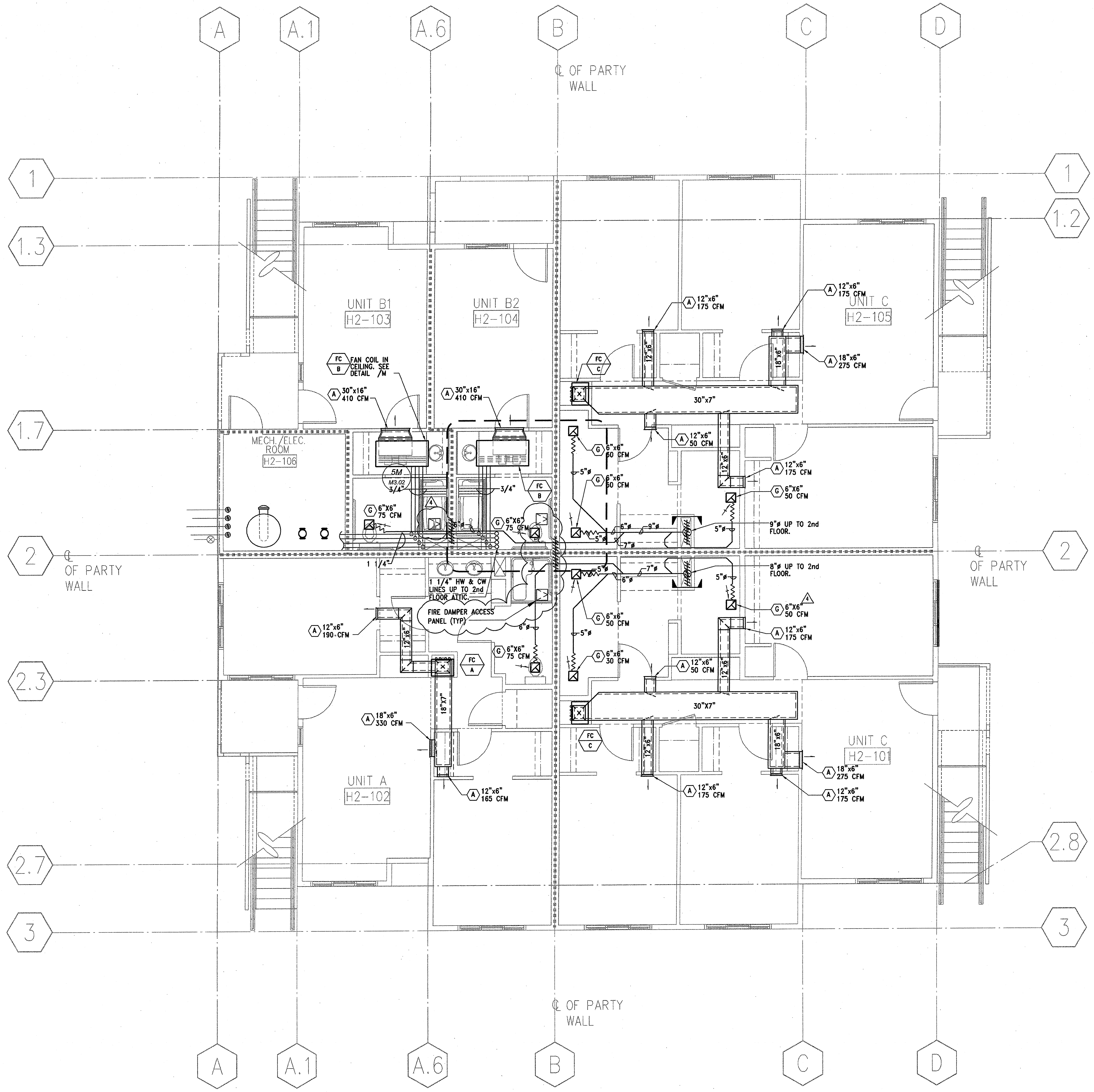
POTTORFF®

Series VFD-10
1-1/2 hour horizontal fire damper
installation instructions

POTTORFF 2824 N. Sylvania Ave., Fort Worth, Texas 76111

02/03/2005 13:20 9187827550 PAGE 11/11

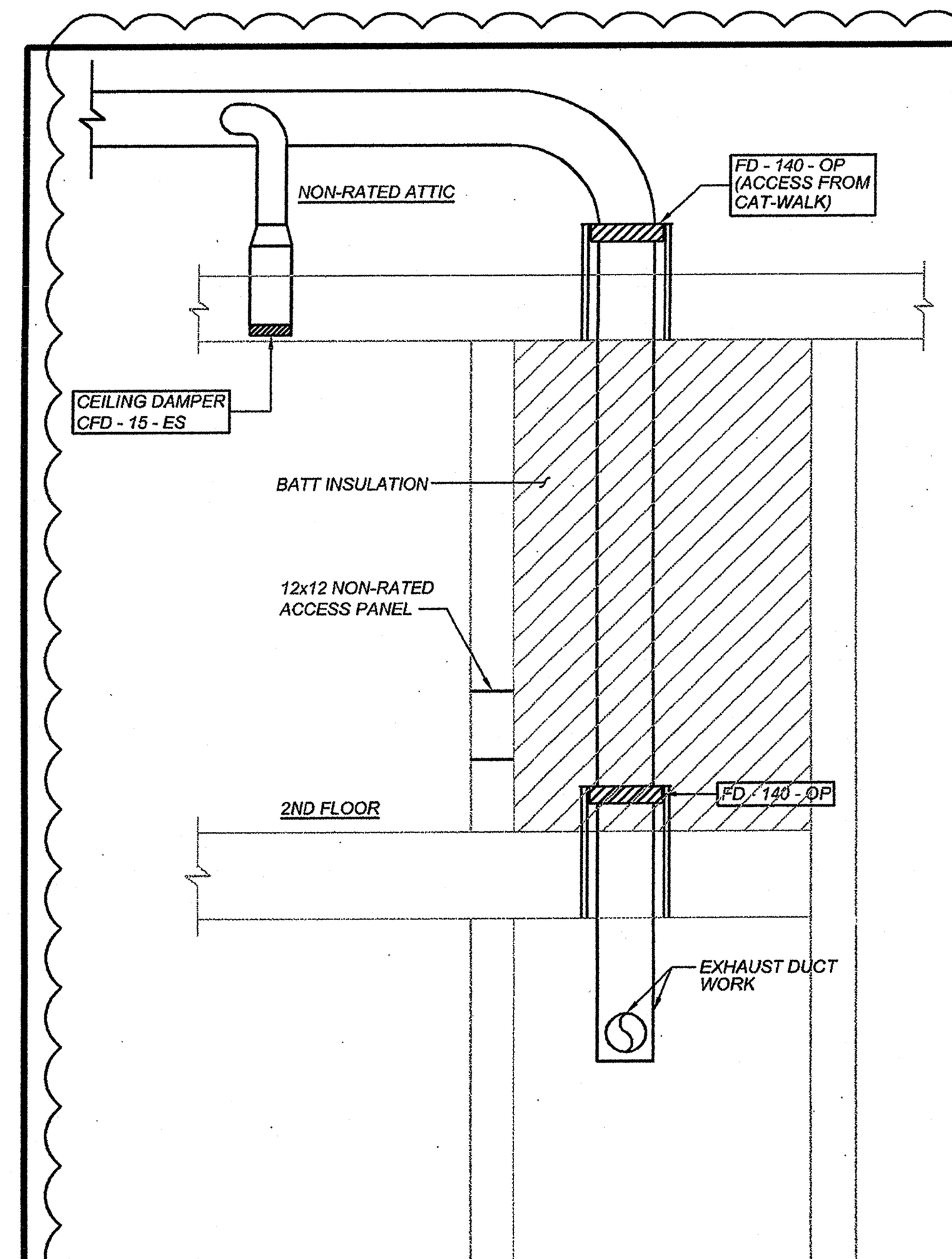
[illegible]



SHEET LEGEND	
(fire damper symbol)	FIRE DAMPER - POTTORFF VFD-10 TYPICAL OF 3 THIS PLAN
(access panel symbol)	NON-RATED ACCESS PANEL

1 / M2.02 HOUSING TYPE 2 – 1ST FLOOR PLAN
1/4"=1'-0"

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Project #:



CHASE CROSS SECTION
1ST FLOOR

UC Merced
University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
50% C.D. Submittal	06.02.03
100 % C.D. Submittal	07.30.03
1 DSA/SS/FLS Resubmittal	10.06.03
2 DSA/Site Access Rev.	12.16.03
Site Impr. Submittal (Draft)	01.24.04
3 Site Impr. Submittal	07.26.04
4 Fire Damper Access Pnls	11.29.04

Agency Approvals:
FILE NO.: –
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. –
AC____ FLS____ SS____
DATE____

UNIVERSITY OF CALIFORNIA MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:

Drawing Title
HOUSING TYPE 2 1st FLOOR PLAN

Drawing Number:
M2.02

THE TAYLOR GROUP ARCHITECTS OF CALIFORNIA

10 RIVER PARK PLACE
SUITE 104
FRESNO, CA 93720
TEL 559.433.3000
FAX 559.433.3010

Bulletin

Project: UC Merced - Garden Suites and Lakeview Dining - Project #906251
Bulletin Number: 027
Date: February 24, 2005
To SFM: Juan Martin, Fire Marshall - UCSF/UCM

This is a clarification and/or modification to the project contract documents and is in no way an authorization or order for any change(s) or additional work that would revise the contract price. It is understood that the Contractor will incorporate the data described by this memo unless the Architect is notified in writing to the contrary in accordance with Article of the General Conditions.

Subject:
Housing Buildings – Fire Dampers

Description:
Revised Fire Dampers in shaft between floors from model # "FD-140-OP" to "VFD-10". The revised Chase Cross Sections are shown in attached drawings, Sheets SD – M06 through SD – M10, dated 2/24/05.

Proposal will be assumed to include -0- calendar days for construction time extension unless specifically identified by the Contractor.

Distribution:
John Sykes - Project Manager

Referenced Drawings: Sheet M2.01, M2.02, M2.03, M2.04 & M3.01.

Attachments: SD – M06, SD – M07, SD – M08, SD – M09 & SD – M10.

Specification Sections: N/A

LICENSED ARCHITECT
No. C15281
Ren. 1-31-07
STATE OF CALIFORNIA

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 404

FIELD

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing-Roof Detail 12/S5.04
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/26/2004
JOB: 03017

STARTED:
COMPLETED:
REQUIRED: 5/3/2004

REQUEST:

1. Housing roof detail 12/S5.04 shows Truss Connector hardware (TC26) to connect the trusses to the double plate. TC hardware is indicated to be used for scissor trusses. There are 2 ply girder trusses that will impair the TC 26 to work properly and there are no scissor trusses. We propose to use a truss bearing enhancer (TBE) for these connections. Please advise if this is acceptable. If it is acceptable please advise if it is required on 1 or 2 sides.

2. TC's are detailed at jack trusses. [redacted]

ANSWER:

The TC 26 is also used as a tie to resist uplift forces at typical gable trusses, however if you desire, a TBE6 can be used on the side of the truss in lieu of TC26.

Klare Yavasile/Brooks Ransom
4/30/04

cc:
MDC (all)
Mtn. Connection

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: ____________
Tony Valdez
Date: ____________

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Page 1 of 1

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 446

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: HVAC< Housing
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/10/2004
JOB: 03017

STARTED:
COMPLETED:
REQUIRED: 5/17/2004

REQUEST:

1. Can we use bare Alumaflex duct for the last 7 foot connection to the exhaust grills and satisfy the requirements of Section 15650.3.3.A.4?

2. Please confirm there is no requirement for volume dampers in the supply air duct for the housing units. We intend to use OBD's on registers only.

3. Exhaust duct will have volume dampers and will require access doors. Please confirm these can be placed in the ceilings.

Responce:
See attached email dated 5/17/04 from Steven Jones / Teter a+e
Ramon Torres TTG
5/17/04

MDC(All)
Helix
Cosco
Kinetics
Finishers
Mountain

M2.01
2.02
2.03
2.04

Post-it® Fax Note 7671	Date 5/17/04 # of pages ▸
To Tony Valdez	From Ramon Torres
Co./Dept. MDC	Co. TTG
Phone #	Phone #
Fax # 209 383 4905	Fax #

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: ____________
Rodger Ward
Date: ____________

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Page 1 of 1

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004 2:35 PM
To: Ramon Torres
Subject: RE: AC #446
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI $446 and have the following response:

1. Flexible ductwork is not allowed for moisture bearing exhaust ductwork per specification 15650.3.3.B.4. Ductwork is to be constructed of aluminum sheet and sloped to allow drainage. Flexible ductwork could retain moisture and allow mold growth.

2. Volume control dampers are not required in the supply air ducts for the housing units. Registers are to be provided with OBD's.

3. Coordinate any necessary ceiling access with architectural. Attic access is already provided and may be sufficient for exhaust duct damper access.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Tuesday, May 11, 2004 10:06 AM
To: Steven Jones
Subject: FW: AC #446
Importance: High

Please review and respond to me I will forward the responce.

Ramon Torres

Project Architect/ Manager

The Taylor Group Architects

10 River Park Place East, Suite 104

Fresno, CA. 93720

Phone: 559.433.3000

5/17/2004

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 429

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Housing T Stats
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/5/2004
JOB: 03017

RECEIVED
MAY 2 5 2004
Mauldin-Dorfmeier

STARTED:
COMPLETED:
REQUIRED: 5/12/2004

REQUEST:

The response to RFI 403 identified thermostat layout. Attached is our understanding of the thermostat layout. Please concur and provide thermostat layout using Taylor Group title block for UC submission..

Responce:
See attached email dated 5/25/04 from Steven Jones / Teter a+e & 8½x11 RFI-429.1, 429.2, 429.3 & 429.4.
Ramon Torres / TTG
5/25/04

CC: MDC(All)
Disregard handwritten layout given on site for DKMS
Helix
Cosco
Mountain
Finishers
TOR

Post-it® Fax Note 7671	Date 5/25/04 # of pages ▸ 5
To Tony Valdez	From Ramon Torres
Co./Dept. MDC	Co. TTG
Phone #	Phone #
Fax # 209 383 4905	Fax #

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: ____________
Tony Valdez
Date: ____________

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Page 1 of 1

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MAY 2 5 2004
Mauldin-Dorfmeier

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MAY 2 5 2004
Mauldin-Dorfmeier

FEB-03-2005 THU 11:27 AM AIR TECH SALES FAX NO. 9187827550 P. 07/07

POTTORFF®

Series VFD-10
1-1/2 hour horizontal fire damper installation instructions

Damper Installation For Typical Fire Rated Partition

Damper Installation For Typical Flange Termination with Grille / Register

Model VFD-10H - (For Use in Static Systems)
Model VFD-10DH - (For Use in Dynamic Systems)

DUCT SIZES	Model VFD-10-H GALVANIZED STEEL	Model VFD-10-HSS STAINLESS STEEL
MAXIMUM SINGLE SECTION	40" x 40" (1016 x 1016)	40" x 40" (1016 x 1016)
MAXIMUM MULTIPLE SECTION	80" x 80" (2032 x 2032)	80" x 40" or 40" x 80" (2032 x 1016) (1016 x 2032)
MINIMUM	6" x 6" (152 x 152)	6" x 6" (152 x 152)

Note:
Annular space between damper sleeve and wall opening shall not be filled with firestop materials such as fill, void or cavity materials.
All dimensions shown in ( ) are in millimeters.

Underwriter's Laboratories file #R11767. The product is also listed by CSFM File # 3225-0355:101. Information is correct at time of printing. However, we reserve the right to make changes without notice.

POTTORFF 2824 N. Sylvania Ave., Fort Worth, Texas 76111
A DIVISION OF PCI INDUSTRIES

FIRE DAMPERS IVFD10H02Z July 2002

RECEIVED
MAY 2 5 2004
Mauldin-Dorfmeier

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 529

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Housing Fan Coil Installation
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 6/16/2004
JOB: 03017

RECEIVED
JUN 1 7 2004
Mauldin-Dorfmeier

STARTED:
COMPLETED:
REQUIRED: 6/23/2004

REQUEST:

Refer to AC 439, M2.03 and M2.041.

All housing vertical fan coils on the 2nd floor will be installed before gypcrete is poured. We propose mounting fan coils on Unistrut before gypcrete is poured, or as an alternate, can we use 2 layers of 5/8 type X sheet rock in leiu of the gypcrete under the fan coils? Please confirm one of the methods is acceptable.

ANSWER:

Unitstrut will be installed and allow gypcrete to flow in. This will still maintain STC rating.

OK
Ramon Torres/TTG
6/17/04

MDC(All)

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 439

FIELD

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Housing-HVAC, Fan Coil Units
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/6/2004
JOB: 03017

STARTED:
COMPLETED:
REQUIRED: 5/13/2004

REQUEST:

1. All housing vertical fan coils on the 2nd floor will be installed before gypcrete is poured. We propose mounting fan coils on Unistrut before gypcrete is poured, or as an alternate, can we use 2 layers of 5/8 type X sheet rock in leiu of the gypcrete under the fan coils? Please confirm one of the methods is acceptable.

2. Are seismic anchors for the fan coils required? If so, is a 16 ga. strap to the wall acceptable?

Reference M2.03 and M2.04

Responce:
1. No, the Gypcrete needs to be poured as it is part of the required floor/ceiling assembly.
2. see attached email dated 5/17/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
5/17/04

CC: MDC (All)
Kinetics
Helix
Cosco
Mountain
Finishers

Post-it® Fax Note 7671	Date 5/17/04 # of pages ▸ 2
To Tony Valdez	From Ramon Torres
Co./Dept. MDC	Co. TTG
Phone #	Phone #
Fax # 209 383 4905	Fax #

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: ____________
Rodger Ward
Date: ____________

Expedition®

Page 1 of 1

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 17, 2004 3:46 PM
To: Ramon Torres
Subject: RE: AC #439
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI #439 and have the following response:

1. Floor construction to be determined by Architect.
2. Refer to SMACNA for all seismic restraint requirements per specification section 15020.1.20.A.

Steven A. Jones, P.E.
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Tuesday, May 11, 2004 9:49 AM
To: Steven Jones
Subject: FW: AC #439
Importance: High

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Please review and respond to me i will forward the responce.

Ramon Torres

Project Architect/ Manager

The Taylor Group Architects

10 River Park Place East, Suite 104

Fresno, CA. 93720

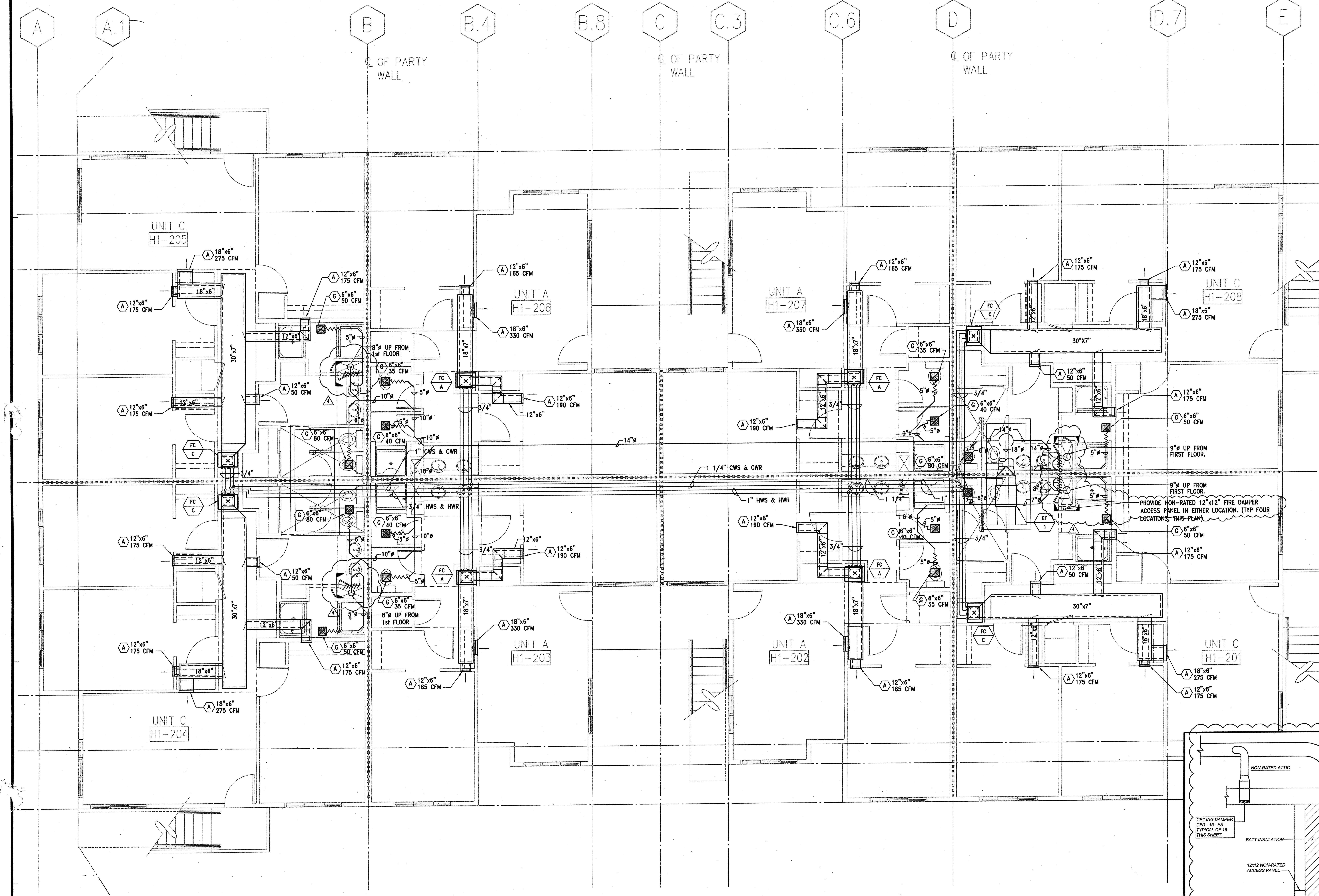
Phone: 559.433.3000

Fax: 559.433.3010

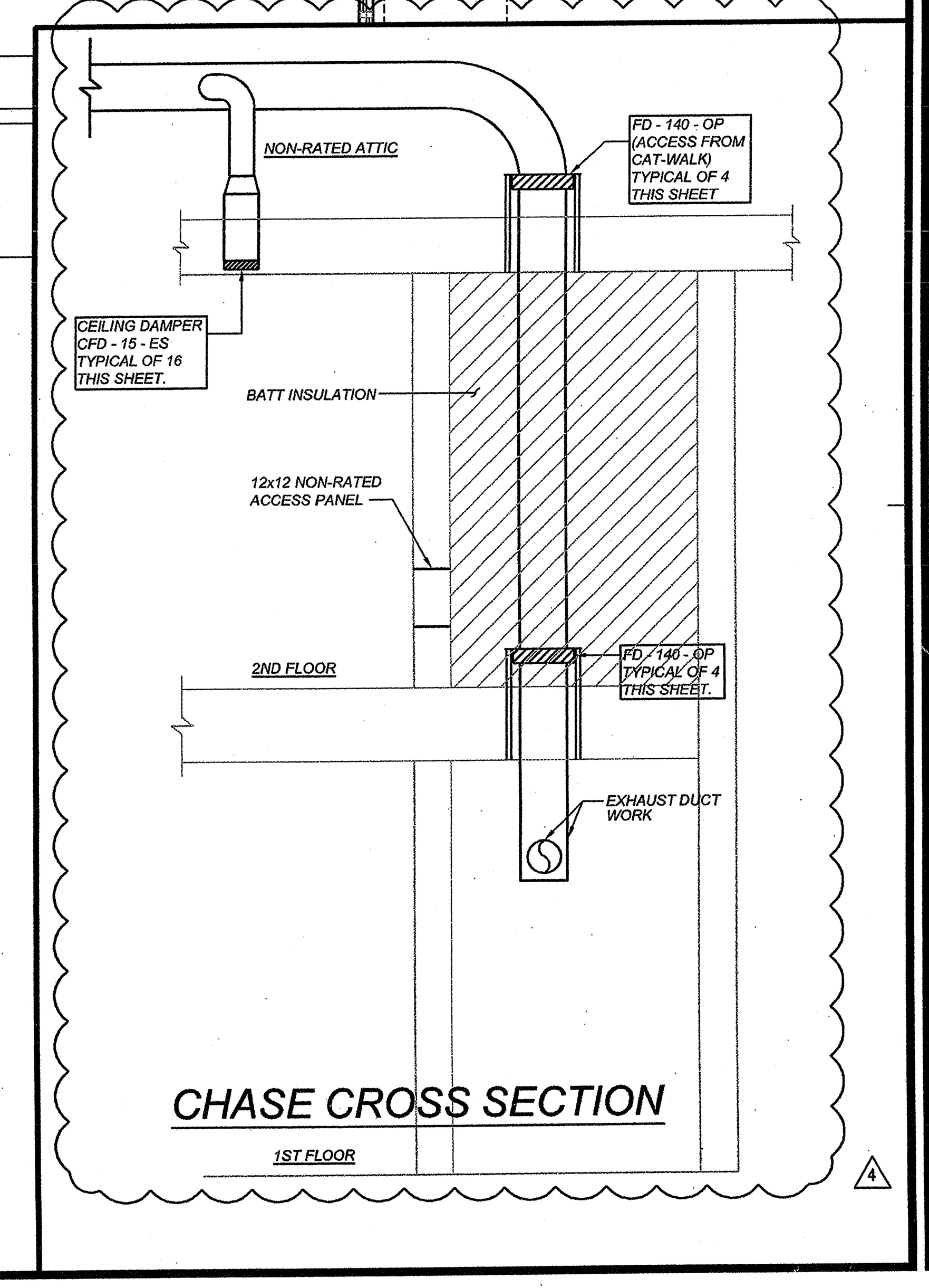
Email: ramontorres@ttgarchitects.com

Website: http://www.ttgarchitects.com

5/17/2004



University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Project #:



CHASE CROSS SECTION

SHEET LEGEND	
[symbol]	FIRE DAMPER
[symbol]	NON-RATED ACCESS PANEL

1 / M2.03 HOUSING TYPE 1 – 2ND FLOOR PLAN
1/4"=1'-0"

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-8463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
50% C.D. Submittal	06.02.03
100 % C.D. Submittal	07.30.03
1 DSA/SS/FLS Resubmittal	10.06.03
2 DSA/Site Access Rev.	12.16.03
Site Impr. Submittal (Draft)	01.24.04
3 Site Impr. Submittal	07.26.04
4 Fire Damper Access Pnls	11.29.04

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. -
AC____ FLS____ SS____
DATE____

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:

Drawing Title
HOUSING TYPE 1 2nd FLOOR PLAN

Drawing Number:
M2.03

04/16/2004 09:35 4333010 TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION No. 354

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Commons-Smoke Fire Dampers
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 4/7/2004
JOB: 03017
RECEIVED APR 1 6 2004 Mauldin-Dorfmeier
STARTED:
COMPLETED:
REQUIRED: 4/14/2004

REQUEST:

Please confirm there is no fire smoke damper requirements for the five side wall registers on grid line 10 in the south and north structure corridor below gridline 4 and between grid line D and D.7 where the supply and return air ducts are shown penetrating the rated wall.

Sheet M2.05

Responce:
See attached email dated 4/16/04 from Steven Jones / Teter a&e
Ramon Torres / TTG
4/16/04

MDC (All)
All subs

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION No. 635

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Commons-AHU1 & EF8
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 9/2/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 9/9/2004

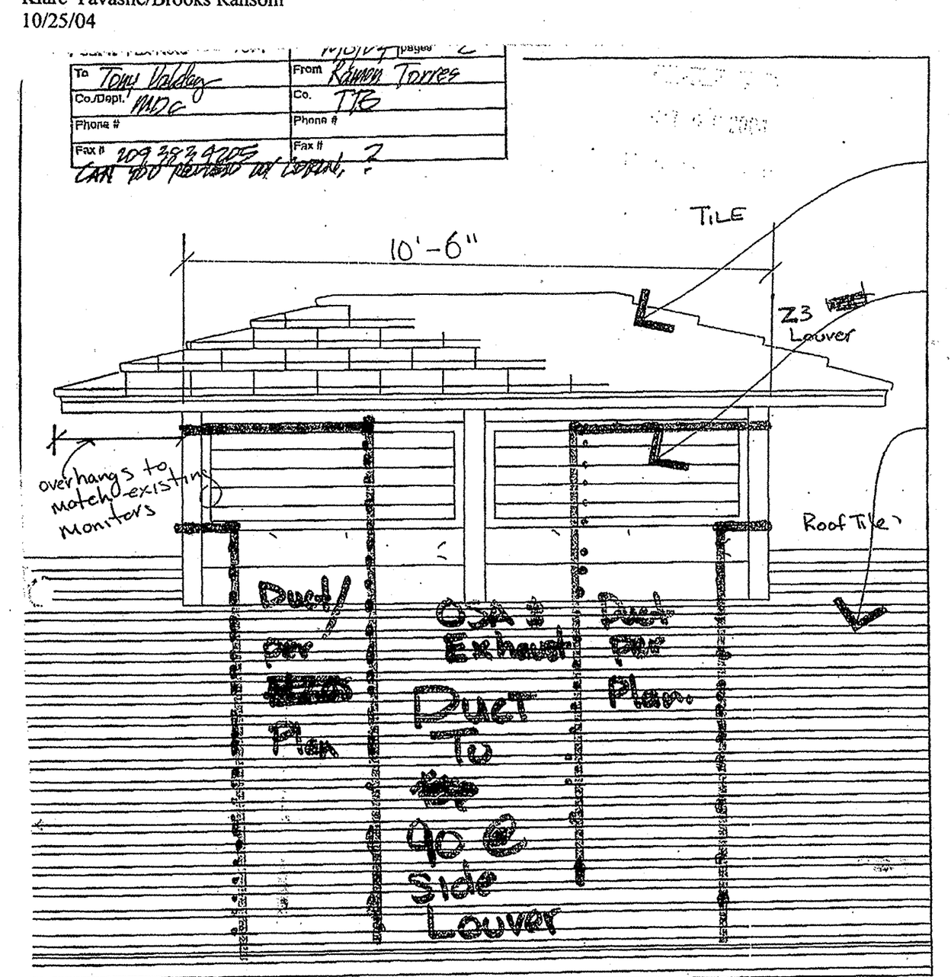
REQUEST:

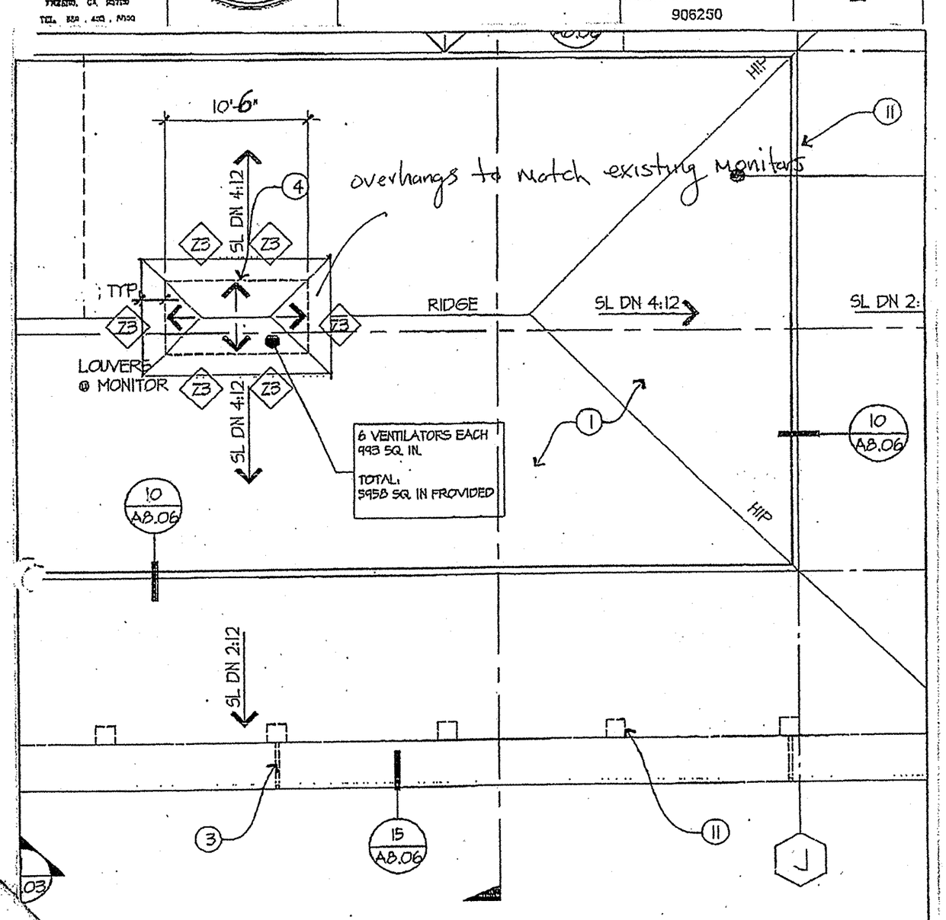
Refer to sheet M2.05 and California Mechanical Code Section 906.6.1

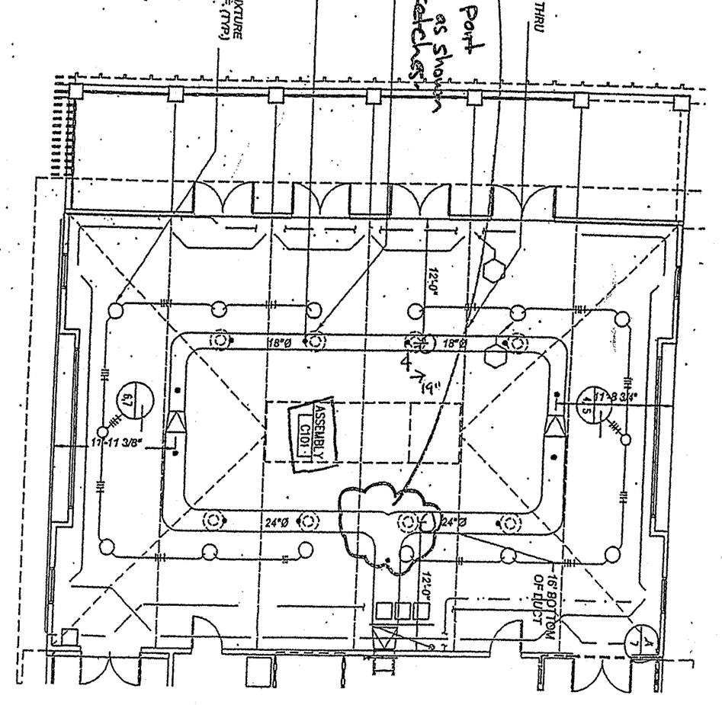
Commons AHU-1 takes in OSA at EF-8 discharges at Commons roof monitor. The inspector has pointed out that CMC 2001 under Section 906.6.1 - Prohibited Sources indicates that outside or return air for a heating system shall not be taken from closer than 10 feet from an appliance vent outlet or discharge outlet of an exhaust fan, unless the outlet is three feet above the outside air inlet. Please advise if relocation to 10 feet away or lowering OSA duct to 3 feet above the outside air inlet is required. If required, please provide method of relocation.

ANSWER:

Provide additional rod bracing in accordance with your request (detail 19/S5.03). Please insure there is rod bracing provided at each ofthe four sides of the monitor. Also, insure the roof framing supporting the monitor addition is as per the approved plans.
Klare Yavasile/Brooks Ransom
10/25/04







Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION No. 456

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Fan Coils 12 & 14, Installation
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 5/14/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 5/21/2004

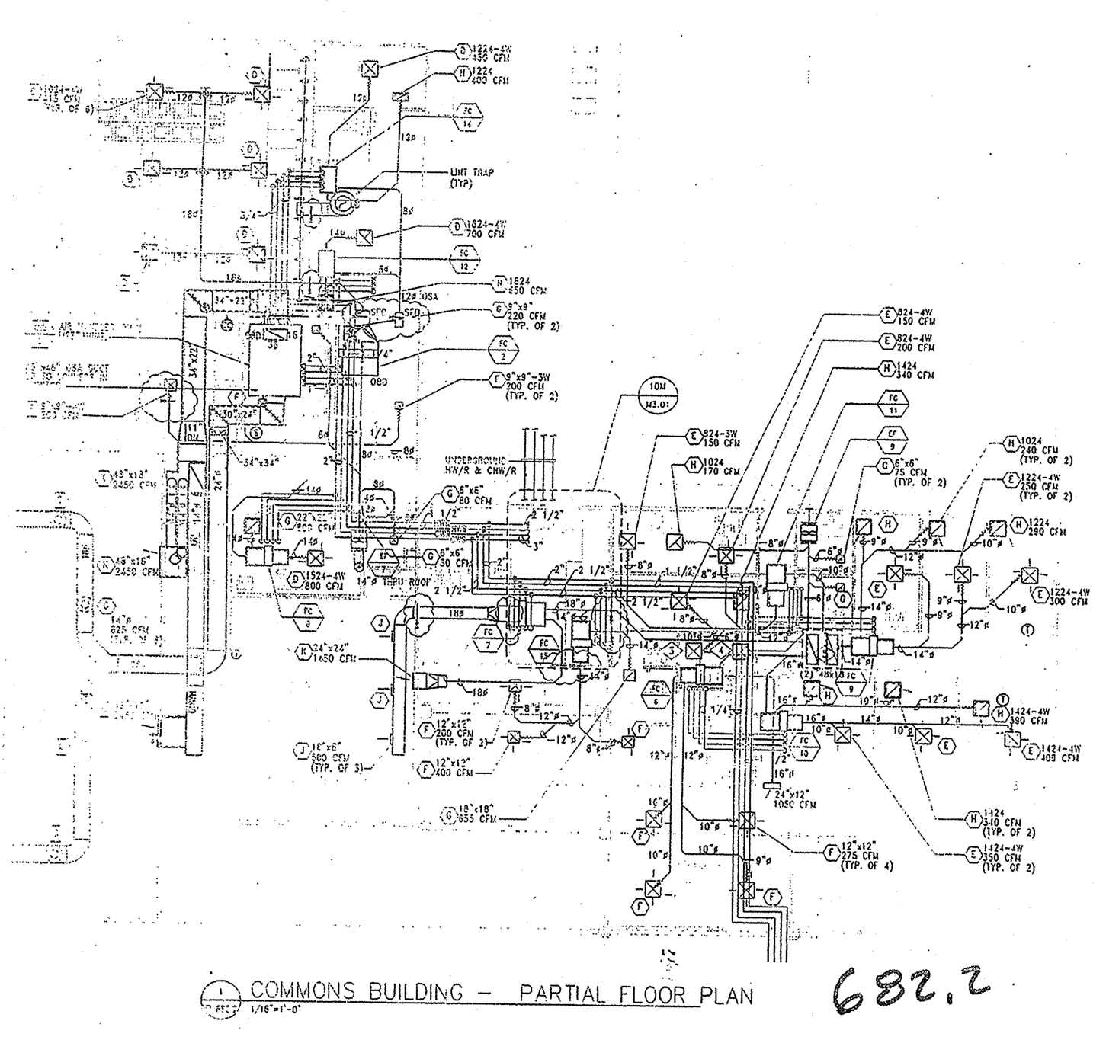
REQUEST:

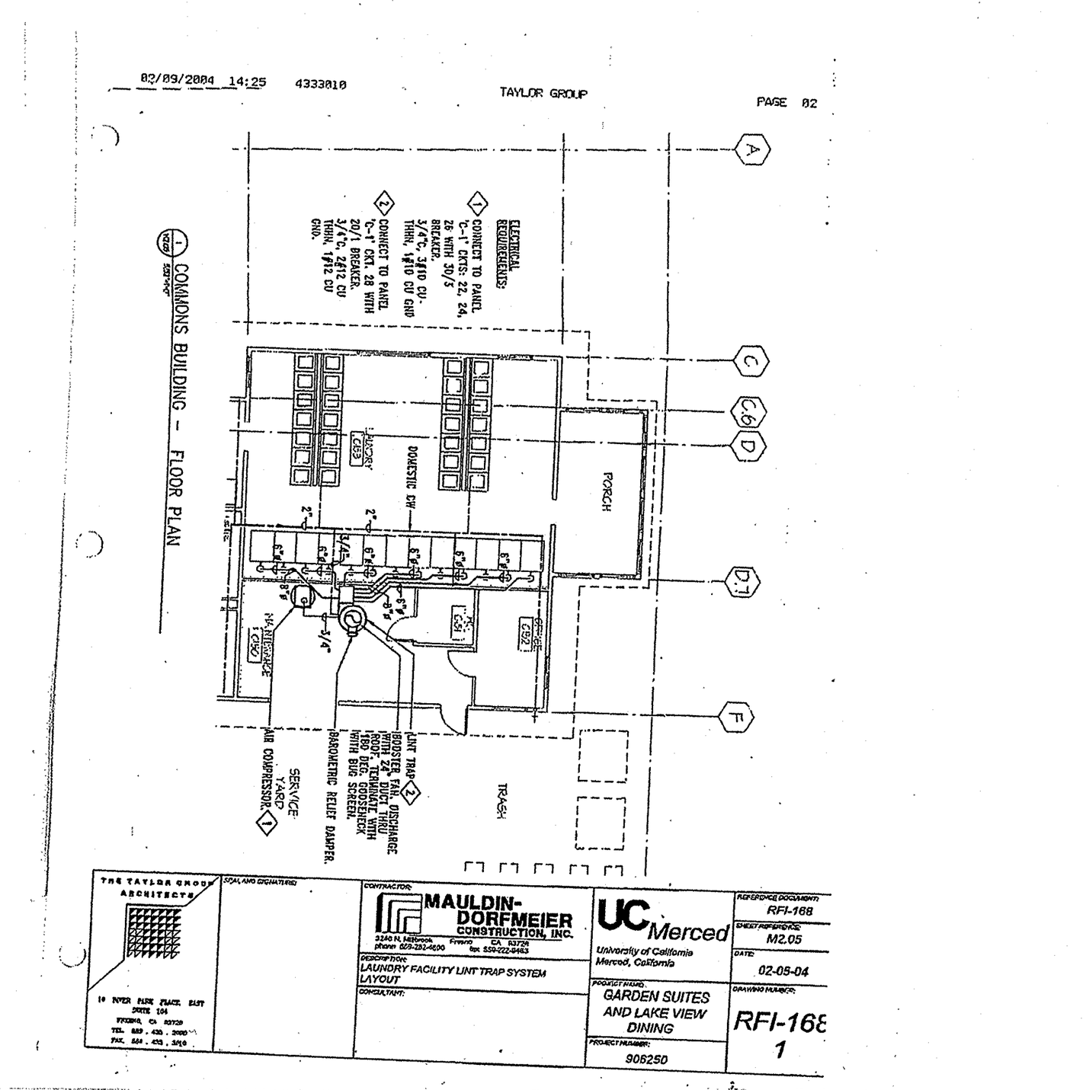
Please provide revised information on the installation of Fan Coils 12 and 14 in the Maintenence area of Commons, including new duct work.

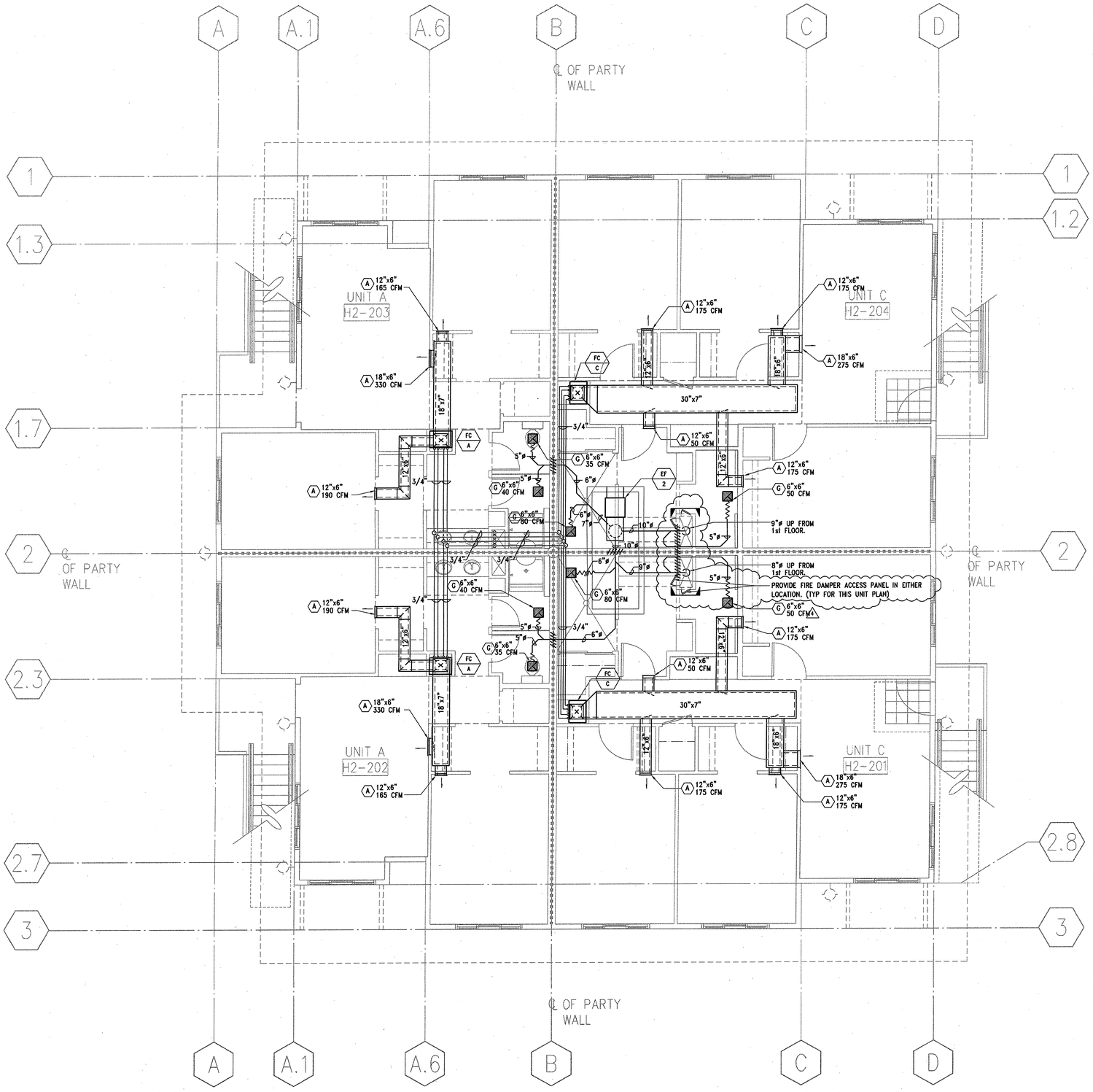
ANSWER:

Fan coils FC-12 and FC-14 shall be relocated to fit in the attic space within the trusses. See attached supplemental drawing. Add grille mark 'N' to Grille Schedule. Grille mark 'N' shall be same as grille mark 'G' but with built in filter frame. Titus Core 50FF.
Steven Jones/Teter a & e
05/18/04

cc:
MDC (all)
Kinetics, Helix, Cosco, Mtn. Connection, Finishers, IOR



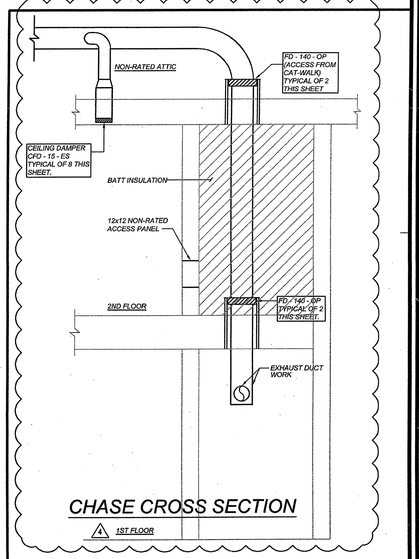




1 M2.04 HOUSING TYPE 2 – 2ND FLOOR PLAN
1/4"=1'-0"

SHEET LEGEND	
	FIRE DAMPER
	NON-RATED ACCESS PANEL

University of California Merced
Fire Marshal
CDF-Office of State Fire Marshal
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: [illegible]
Project #: 906250



CHASE CROSS SECTION
4 1ST FLOOR

UC Merced
University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
LICENSED ARCHITECT RUSSEL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER JOHN W. DORFMEIER MECHANICAL STATE OF CALIFORNIA
Architect Engineer

CONTRACTOR:
MAULDIN–DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

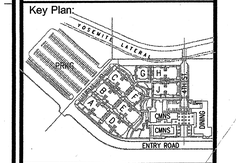
DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
50% C.D. Submittal	06.02.03
100 % C.D. Submittal	07.30.03
1 DSA/SS/FLS Resubmittal	10.06.03
2 DSA/Site Access Rev.	12.16.03
Site Impr. Submittal (Draft)	01.24.04
3 Site Impr. Submittal	07.26.04
4 Fire Damper Access Pnls	11.29.04

Agency Approvals:
FILE NO. – –
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. –
AC. FLS. SS.
DATE

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by:
Project #: 906250
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:


Drawing Title
HOUSING TYPE 2
2nd FLOOR PLAN

Drawing Number:
M2.04

Request for Information TGA-0261

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0261 — Importance: Construction — Date Created: 7/6/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	7/6/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Commons-Lint Trap Wiring Diagram and Dampers
Discipline: Mechanical
Category
Specification Section — Reference — Reference Drawings
Cost Impact: Not Sure — Amount — Sched Impact: Not Sure — Days — Dwg Impact: Not Sure
Cost Impact Comments — Sched Impact Comments — Dwg Impact Comments
Sketch Numbers
Author Company: Bernards Brothers — Authored By: Tony Valdez — Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
Bernards Brothers	Dan Huff	1	
The Hallmark Group	Fran Telechea	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 7/20/2005
Refer to M2.05 and Bulletin 18

1. Please review and providing wiring diagram showing how the compressor, lint trap, and fan are to be tied in.
2. Please review and provide locations for additional dampers that are required for the lint trap system.

Suggestion

Answer Company: The Taylor Group Architects — Answered By: Ramon Torres — Co-Respondent: Justin Fortmeyer
Answer — Date Answered: 7/11/2005

Prolog Manager — Printed on: 7/12/2005 — Hallmark_UnivCaMerced — Page 1

Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:57; Page 1

RECEIVED JUL 11 2005 BERNARDS

teter a+e — COPY

Facsimile Transmittal

Date: 7/8/05 — Facsimile Number: 209-383-4205
To: Ramon Torres — Number of Pages: 7 including cover
Company: The Taylor Group / Bernards Brothers
Project Number: 03-6117
Project Name: UC Merced – Laundry Lint Trap – Documentation of Discussions
From: Justin Fortmeyer
Urgent ☒ Call Upon Receipt ☐

Notice: If the reader is not the specified recipient of this confidential facsimile transmission, you are hereby notified that any distribution or copying of this communication is strictly prohibited. If you are not the specified recipient, please notify us immediately by telephone.

Ramon:

This fax is to document our discussions with Steve Larussa of KMS. Copies of the attached documentation were delivered to Steve at the job site on Thursday, July 7, 2005. Two topics have been discussed over the past week, assistance with the laundry lint trap installation and barometric relief damper sizes and locations. We have discussed this information in phone conversations and at a site visit on July 7 – below is our formal response:

1. Barometric Relief Dampers:

It is our understanding that it is not feasible to locate a barometric relief damper in the ductwork between the lint trap and the exhaust fan. We contacted the manufacturer's representative, and determined that it is acceptable to provide Barometric Relief Dampers at the end of each duct run behind the dryers and between the dryer duct header and the exhaust fan. We recommend three (3) dampers to relieve 5800 cubic feet per minute.

Attached is a cut sheet for the PRD and PRD-RD dampers (2 pages), which are of the same make that was included in the laundry lint trap submittal. We recommend providing one PRD-RD dampers at the end of each duct run behind the dryers (1 @ 8" diameter and 1 @ 10" diameter - 2 Total) and one PRD between the dryer duct header and the lint trap (26"x14"). If a 26"x14" PRD damper is not available, 'Greenheck' is an acceptable alternative.

architects and engineers . LLP
a: 8405 north fresno st : suite 300 : fresno california : 93720 t: 559 . 437 . 0887 f: 559 . 438 . 7554 www . teterae . com

---

Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:57; Page 2

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teter a+e

Facsimile Transmittal

Finally, since the relief dampers will be located between the dryers and the lint trap, the lint collection bag will need to be replaced with a lint collector equipped with a rigid frame. The manufacturer's representative stated that the current bag could be exchanged without additional cost. It is our understanding that the current bag has already been returned.

2. Lint Trap Electrical and Controls:

It is our understanding that the Lint Trap equipment that was submitted was to be a turnkey assembly with prepiped and prewired blowdown controls. According to our discussion with the manufacturer's rep., for this type of installation, a relay and blowdown timer would be included.

Attached is a copy of several cutsheets taken from the installation manual shipped with the equipment and the Laundry Lint Trap submittal (2 pages). This is not new information, but we are providing it along with an explanation to assist with the installation. The attached were delivered to Steve Larussa at the site yesterday.

Page 6: Wiring diagram for the automatic blowdown, indicating the blowdown timer, relay to the "Assist Blower" and the wiring to the air solenoid valve. This represents the wiring that is required to interlock the exhaust fan with the automatic blowdown sequence.

Page 7: Parts List for Lint Trap indicating relay switch and timer that are needed to automate the blowdown process.

As we discussed on Wednesday, a formal RFI will be issued to document these items. When received, we will respond with the information above. In the meantime, if there are questions remaining, please call us.

Sincerely,

Teter A+E, LLP

Justin M. Fortmeyer, P.E.

Enclosures

architects and engineers . LLP
a: 8405 north fresno st : suite 300 : fresno california : 93720 t: 559 . 437 . 0887 f: 559 . 438 . 7554 www . teterae . com

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Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:57; Page 3

teter a+e

Facsimile Transmittal

cc: Dan Huff, BB
Tony Valdez, BB

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architects and engineers . LLP
a: 8405 north fresno st : suite 300 : fresno california : 93720 t: 559 . 437 . 0887 f: 559 . 438 . 7554 www . teterae . com

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Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:58; Page 4
By-Pass Dampers — ~~Page 1 of 2~~ page 4

Static Pressure Control

The EBD style by-pass are self-contained units that give you the static control mounted to the damper. It is an "all-in-one" design that makes the installation process much easier than most electronic by-pass dampers. The static pressure can be adjusted in the field between 0.5" to 4" of pressure. This is done by the turn of a set-screw. Requires 24VAC to operate. Tubing and pitot tube are included.

Round Sizes	Rectangular Sizes
10"	12" X 8"
12"	12" X 10"
14"	12" X 12"
16"	20" X 8"
18"	20" X 10"
	20" X 12"

RECEIVED JUL 11 2005 BERNARDS

MODEL PS-4 pressure switch available separately for use with ND style dampers.

Model PRD Model PRD pressure regulating damper is a single blade, steel, barometric damper with a counter balanced weighted arm. The PRD provides an economical solution

Model PRD-RD Model PRD-RD pressure regulating damper is a single blade, round variation of a barometric relief damper. This is the simplest, most economical way of

http://www.ewccontrols.com/ultrazone/bypass.htm 7/8/2005

Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:58; Page 5
By-Pass Dampers — ~~Page 2 of 2~~ page 5

for bypassing excess air when zone dampers close. Damper adjustment is done by adjusting the supplied weights and by offsetting the arm.

bypassing excess static pressure in multi-zone applications. Resistance is controlled by offsetting the arm and adjusting the weights. The arm can be inserted into either side of the damper for added versatility.

Size	CFM
12" X 8"	1000
12" X 10"	1200
12" X 12"	1400
20" X 8"	1600
20" X10"	2000
20" X12"	3000

Size	CFM
8"	400
10"	750
12"	1200
14"	1800
16"	2400

Other sizes available upon request.

Return to Ultra-Zone

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Last modified: December 19, 2003

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http://www.ewccontrols.com/ultrazone/bypass.htm 7/8/2005

Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:58; Page 6/8

From: UC MERCED HOUSING 209 383 4205 09/30/2004 08:58 #018 P.009/022
SEP. 11. 2003 2:01PM NO. 331

page 6

RECEIVED JUL 11 2005 BERNARDS

Sent By: FRESNO PROF. PARTNERS; 5594387554; Jul-11-05 17:58; Page 7/8

Clean Cycle Systems
A DIVISION OF TQ INDUSTRIES

page 7

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PARTS LIST FOR DLF-500 Series Lint Filter

*** Insert Model Number

Part #	Description	Price
500-03	Complete Blowdown System for 500 Series	$430.00
500-04	Swivel Rotor Joint (Upper)	$135.00
500-04-L	Rotor Bushing Assy. (Lower)	30.00
***-07	Polyester Lint Screen	?
***-07-SS	Stainless Steel Lint Screen	?
***-07-C	Lower Polyester Cap for Stainless Steel Screen	?
500-09	Fire Control, Complete Kit	600.00
500-11	Water Solenoid Valve, 3/4"	145.00
500-12	Air Solenoid Valve, 3/4"	145.00
500-13	Lint Bag	65.00
500-15	Inspection Door	140.00
500-16	Blowdown Control Panel	225.00
500-16-1	Relay Switch	24.00
500-16-2	Timer, SSAC-RS4A12 (Multiple)	135.00
500-17	Fire Control Panel	210.00
500-17-1	Timer, SSAC-ORB12OA160 (Fire)	68.00
500-16-17	Combination Air/Fire Panel	435.00
500-18	Fenwal Sensor	225.00
500-19	Over Pressure Alarm, Complete Kit	260.00
500-20	Flex Lint Tube	225.00
500-25	Enclosure Box, Vicker	90.00
500-21	Bungee Cord (50 ft.)	16.00
500-21-1	Bungee Holder	9.00
500	Manual	45.00

500COPRT.DOC

RECEIVED MAY 5 2005 The Taylor Group

Request for Information

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0189 — Importance: Construction — Date Created: 5/4/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	5/4/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Commons-Laundry Room Make Up Air
Discipline: Mechanical
Category
Specification Section — Reference — Reference Drawings
Cost Impact: Not Sure — Amount — Sched Impact: Not Sure — Days — Dwg Impact: Not Sure
Cost Impact Comments — Sched Impact Comments — Dwg Impact Comments
Sketch Numbers
Author Company: Bernards Brothers — Authored By: Tony Valdez — Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 5/18/2005
Refer to Submittal 29-15000-0

The make up air for the laundry room design shows two 18" diameter ducts from the mechanical mezzanine to the ceiling in the service isle behind the dryers. The duct routing as shown is difficult given that the ceiling and work above the ceiling has been installed. To minimize the difficulty level we suggest installing flexible duct as shown on the attached sketch. Please note that the spec section 15650 3.3B2 indicates that the use of flexible duct is limited to the last 7 feet of each branch duct. Please review and confirm flexible duct as shown on the attached sketch is acceptable.

Suggestion

Answer Company: The Taylor Group Architects — Answered By: Ramon Torres — Co-Respondent
Answer — Date Answered: 5/13/05
See attached response from Steven Jones/Teter a+e dated 5/13/05.
Ramon Torres

Prolog Manager — Printed on: 5/4/2005 — Hallmark_UnivCaMerced — Page 1

Ramon Torres

From: Ramon Torres [ramontorres@ttgarchitects.com]
Sent: Tuesday, May 17, 2005 8:53 AM
To: ramontorres@ttgarchitects.com
Subject: FW: TGA - 189 Fortmeyer

-----Original Message-----
From: Steven Jones [mailto:stevenj@teterae.com]
Sent: Friday, May 13, 2005 10:55 AM
To: Ramon Torres
Subject: RE: TGA - 189 Fortmeyer

Ramon,

We have reviewed RFI #TGA-189 and have the following response:

Per my conference call with you, Steve Larussa, and Tony Valdez, the transfer ducting can be installed with a portion of rigid duct to limit the flexible ducting to no more than 7 feet and routed as shown on the sketch provided by KMS as part of this RFI.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a+e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email:stevenj@teterae.com

From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Thursday, May 05, 2005 9:09 AM
To: Steven Jones
Cc: Ramon Torres
Subject: TGA - 189 Fortmeyer
Importance: High

Please review and respond ASAP. Thanks.
Call KMS to resolve this issue.

Ramon Torres,
Project Architect/ Mgr.
The Taylor Group Architects
978 W. Alluvial Ave., Ste 107
Fresno, Ca. 93711
Phone: 559.437.5000
Fax: 559.437.5005

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Request for Information TGA-0214

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0214 — Importance: Construction — Date Created: 5/19/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	5/19/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Commons-Laundry Lint Trap Ductwork
Discipline: Mechanical
Category
Specification Section — Reference — Reference Drawings
Cost Impact: Not Sure — Amount — Sched Impact: Not Sure — Days — Dwg Impact: Not Sure
Cost Impact Comments — Sched Impact Comments — Dwg Impact Comments
Sketch Numbers
Author Company: Bernards Brothers — Authored By: Tony Valdez — Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 6/2/2005
Refer to spec section 15650, 3.3B.4

Spec Section 15650, 3.3B.4 indicates that ductwork bearing moisture such as exhaust ducts from ....clothes driers,... shall be constructed of aluminum sheets. Please review and confirm it is acceptable to use stainless steel ductwork in lieu of aluminum ductwork.

Suggestion

Answer Company: The Taylor Group Architects — Answered By: Ramon Torres — Co-Respondent
Answer — Date Answered: 5/23/05
Stainless stl. is acceptable per field mtg w/ Steven Jones & Steve Larussa on 5/19/05.
Ramon Torres/TTG

Prolog Manager — Printed on: 5/19/2005 — Hallmark_UnivCaMerced — Page 1

RECEIVED MAR 28 2005 The Taylor Group

Request for Information TGA-0104

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0104 — Importance: Construction — Date Created: 3/28/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/28/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Commons-Fire Damper at Corridor C108
Discipline: Mechanical
Category
Specification Section — Reference — Reference Drawings
Cost Impact: Not Sure — Amount — Sched Impact: Not Sure — Days — Dwg Impact: Not Sure
Cost Impact Comments — Sched Impact Comments — Dwg Impact Comments
Sketch Numbers
Author Company: Bernards Brothers — Authored By: Tony Valdez — Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 4/11/2005
Refer to Sheet M2.05

Please review and advise if a smoke fire damper is required at the transfer air duct in Commons Corridor C108.

Suggestion

Answer Company: The Taylor Group Architects — Answered By: Ramon Torres — Co-Respondent
Answer — Date Answered: 4/6/04
See attached responce from Justin Fortmeyer/Teter a+e dated 4/5/04
Ramon Torres/TTG

Prolog Manager — Printed on: 3/28/2005 — Hallmark_UnivCaMerced — Page 1

04/06/2005 08:26 5594375005 THE TAYLOR GROUP PAGE 03
Page 1 of 1

TTG Mail

From: Ramon Torres [ramontorres@ttgarchitects.com]
Sent: Wednesday, April 06, 2005 8:44 AM
To: Julio Marroquin
Subject: FW: TGA - 104

-----Original Message-----
From: Justin Fortmeyer [mailto:justinf@teterae.com]
Sent: Tuesday, April 05, 2005 5:33 PM
To: Ramon Torres
Cc: Steven Jones
Subject: RE: TGA - 104

Ramon:

We have reviewed RFI #104 and offer the following response:

Based on our discussion with The Taylor Group, corridor C108 is "tunnel construction." Therefore, [redacted] providing a ceiling fire/smoke damper in the transfer air duct serving the corridor.

Please let us know if you have further questions.

Regards,

Justin

From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, March 28, 2005 4:15 PM
To: Justin Fortmeyer
Cc: ramontorres@ttgarchitects.com
Subject: TGA - 104

Please review and respond ASAP. thanks

Ramon Torres,
Project Architect/ Mgr.
The Taylor Group Architects
978 W. Alluvial Ave., Ste 107
Fresno, Ca. 93711
Phone: 559.437.5000
Fax: 559.437.5005
Email: ramontorres@ttgarchitects.com

4/6/2005

RECEIVED APR 8 2005 The Taylor Group

Request for Information TGA-0132

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0132 — Importance: Construction — Date Created: 4/7/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	4/7/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Commons-Duct Routing at Commons Maintenance Room C150
Discipline: Mechanical
Category: Confirmation
Specification Section — Reference — Reference Drawings
Cost Impact: Not Sure — Amount — Sched Impact: Not Sure — Days — Dwg Impact: Not Sure
Cost Impact Comments — Sched Impact Comments — Dwg Impact Comments
Sketch Numbers
Author Company: Mauldin-Dorfmeier Construction, Inc. — Authored By: Mike Anderson — Author RFI Number

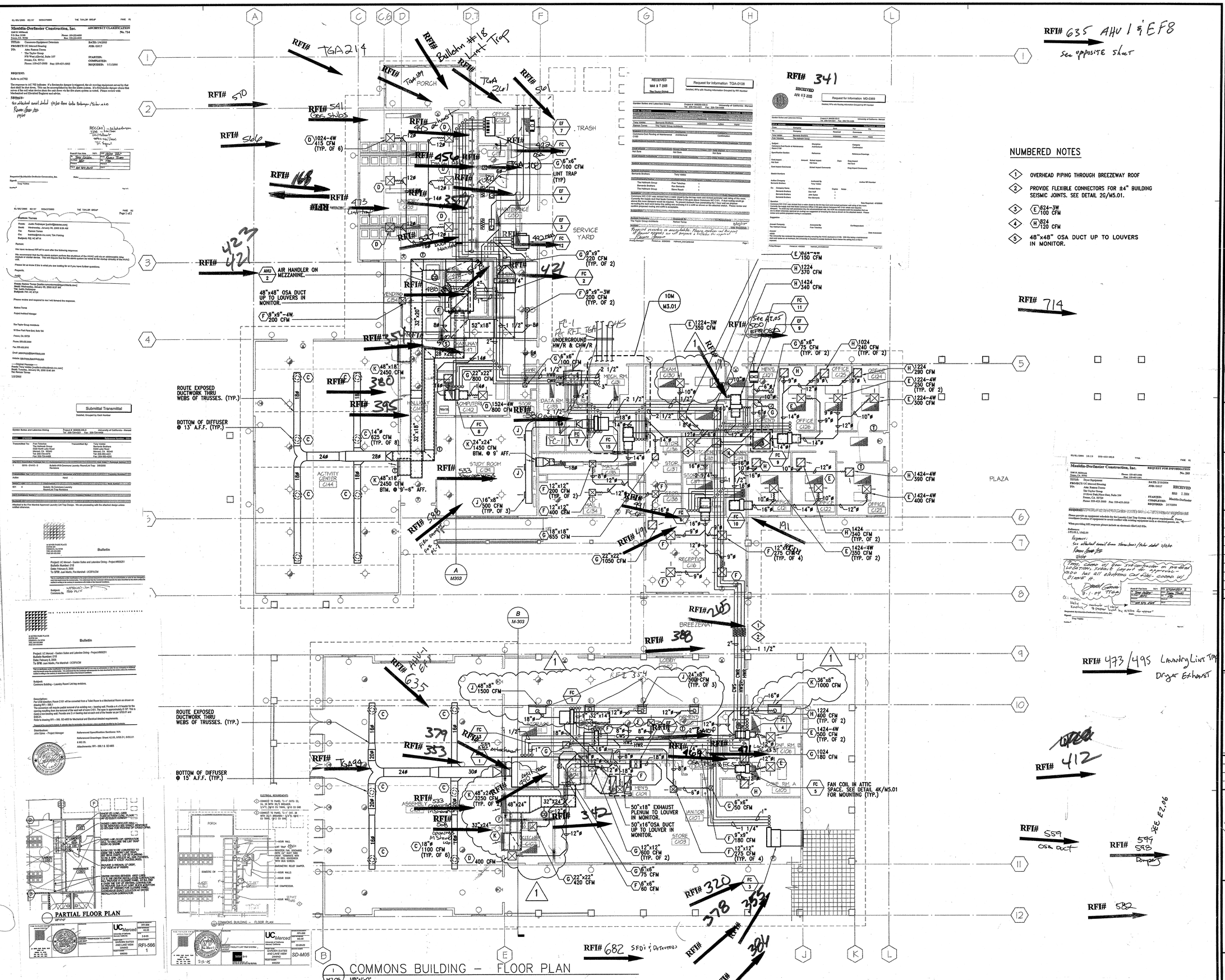
Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 4/21/2005
Attached is the duct routing for Commons Maintenance Room C150. This layout was reviewed with the University and indicated that it is acceptable as long as the soffit that is built will not be below the shown ceiling elevation. Please review and confirm design team takes no objection to suggested routing.

Suggestion

Answer Company: The Taylor Group Architects — Answered By: Ramon Torres — Co-Respondent
Answer — Date Answered: 4/11/05
No Objection taken
Ramon Torres

Prolog Manager — Printed on: 4/7/2005 — Hallmark_UnivCaMerced — Page 1



NUMBERED NOTES

1. OVERHEAD PIPING THROUGH BREEZEWAY ROOF
2. PROVIDE FLEXIBLE CONNECTORS FOR ±4" BUILDING SEISMIC JOINTS. SEE DETAIL 2G/M5.01.
3. E 624-3W 100 CFM
4. H 824 120 CFM
5. 48"x48" OSA DUCT UP TO LOUVERS IN MONITOR.

1 M2.05 COMMONS BUILDING - FLOOR PLAN 1/8"=1'-0"

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
RUSSEL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE
STEPHEN A. BECKER M016029 Exp. 12-31-03 MECHANICAL
Architect Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC 03 FLS ____ SS ____
DATE ____

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

Drawn By: JW
Revision Date: 5-27-03
Plot Date:
Scale: 1/8"=1'-0"

Key Plan:

Drawing Title
COMMONS FLOOR PLAN

Drawing Number:
M2.05

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 292

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

FIELD

TITLE: Dining-Housekeeping Pad
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 3/4/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 3/11/2004

REQUEST:

Please see sheet S2.05, M2.05, M2.06 and detail 2/M2.06. There are no dimensions for housekeeping pad on S2.05. We are ready to pour this areas and request permission to pour the sloped slab in this room and then pour the housekeeping pad at a later date, using an approved method. Is this acceptable. If yes, may we drill and epoxy slab dowels and then pour a housekeeping pad later?

ANSWER:

Go ahead and pour the slab. I have asked Carla to design the anchors for the two boilers assuming we have the slab poured and will be pouring a 3 inch housekeeping pad later. She has already designed the anchors for these tanks July 25, 2003, and sent the info to Steve Jones at Teter.

We will re-visit this design for the new condition. The anchors will have to be epoxied into the slab first and then we will pour the house keeping pad around the anchors. I'll send a detail with calc's when she is finished

Klare Yavasille/Brooks Ransom
3/4/04

Requested By: Mauldin-Dorfmeier Construction, Inc. Date: 3/4/2004
Signed:
Tony Valdez

03/08/2004 15:09 559-433-3010 TTGA PAGE 02

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

DINING HOUSEKEEPING PAD REVISION
SCALE: N.T.S.

THE TAYLOR GROUP ARCHITECTS · 10 RIVER PARK PLACE EAST SUITE 104 FRESNO, CA 93720
MAULDIN-DORFMEIER CONSTRUCTION, INC.
DESCRIPTION: UPDATE
CONSULTANT: BROOKS RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 N. PALM AVE., SUITE 100 FRESNO, CALIFORNIA 93711
UC Merced University of California Merced, California
PROJECT NAME: GARDEN SUITES AND LAKE VIEW DINING
PROJECT NUMBER: 906250
SHEET REFERENCE: 10/S403
DATE: 03-04-04
DRAWING NUMBER: BRA-26

03/08/2004 15:09 559-433-3010 TTGA PAGE 03

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

DINING HOUSEKEEPING PAD REVISION
SCALE: N.T.S.

MAULDIN-DORFMEIER CONSTRUCTION, INC.
DESCRIPTION: UPDATE
BROOKS RANSOM ASSOCIATES
UC Merced University of California Merced, California
PROJECT NAME: GARDEN SUITES AND LAKE VIEW DINING
PROJECT NUMBER: 906250
SHEET REFERENCE: 10/S403
DATE: 03-04-04
DRAWING NUMBER: BRA-27

03/08/2004 15:09 559-433-3010 TTGA PAGE 04

RECHECK WATER HEATER ANCHORAGE

CODE : 2001 CBC
ZONE : 3
ANCHORS : THR. ROD EPOXIED INTO 4" SLAB – THEN POUR 3" HOUSEKEEPING PAD.
CONCRETE : 3000 PSI

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

SEISMIC LOADS
$C_a = 0.36$
$I = 1.0$

NON BUILDING STRUCTURES
TANKS / PRESSURE VESSELS : $R = 2.2$

$V_{max} = \frac{2.5\, C_a I}{R} \times W$

$V_{max} = 0.41 \times W$

$V_{ASD} = 0.29 \times W$

BROOKS-RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 NORTH PALM, SUITE 100 FRESNO, CALIFORNIA 93711 (559) 449-8444 FAX (559) 449-8404
UC MERCED EQUIPT. ANCHORAGE
By: CMD Date: 3/4/04 Job no. 03114
Sheet 4

03/08/2004 15:09 559-433-3010 TTGA PAGE 05

ST-1 : STORAGE WATER HEATER

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

$V = 0.29 \times W_p$

$W_p = 900^{\#} + \left(175\ gal \times 0.13368\ \frac{ft^3}{gal} \times 62.4\ \frac{\#}{ft^3}\right) = 2360^{\#}$

$V_{eq} = 684^{\#}$

$M_{OT} = 0.684 \times 2/3 \left(\frac{77}{12}\right) = 2.93^{k\text{-}1}$

$M_R = 2.36^k \times \frac{17''}{12} \times 0.9 = 3.00^{k\text{-}1}$

NO UPLIFT

SHEAR : $V = \frac{0.684}{3} = 0.228^k$

FOR 3/8"Φ ATR –

$V_{allow\ min} = 550^{\#} > 228^{\#}$ – OK

USE (3) 3/8"Φ ATR w/ 3" EMBED. IN 5" SLAB W/ SIMPSON SET EPOXY

SPECIAL INSPECTION IS REQ'D PER ICBO ER-5279

BROOKS-RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 NORTH PALM, SUITE 100 FRESNO, CALIFORNIA 93711 (559) 449-8444 FAX (559) 449-8404
By: Date: Job no. 03114
Sheet 5

03/08/2004 15:09 559-433-3010 TTGA PAGE 06

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

FOUNDATION – ST-1

$f'_c = 3000$ psi
$S_P = 3000$ PSF (D+L) ; 4500 PSF (TOTAL LOADS)

SOIL BEARING
$P = 2360^{\#}$
PAD SIZE ~ 4' × 4' = 16 ft²
SOIL BRG = $\frac{2360^{\#}}{16\,\square'}$ = 147 PSF < 3000 PSF – OK

OVERTURNING
DEPTH = 7"

$P_{CONC} = 150 \left[16\,\square' \times 7/12\right] = 1400^{\#}$

$M_O = 684 \times \left[\left(2/3 \times \frac{77}{12}\right) + 7/12\right] = 3.3^{k\text{-}1}$

$M_R = 0.9 \left[2360 + 1400\right] \times \frac{48}{12} \times \frac{1}{2} = 6.7^{k\text{-}1}$

$FS_{OT} = \frac{6.7}{3.3} = 2.03$ – OK

REINF:
$\rho = 0.002 \times A$
$= 0.002 \times 8'' \times 12''$
$= 0.20\ in^2/ft$

USE #4s @ 12" AVG. SPCG. (IN ADDITION TO TYP. STRUCT. SLAB REINF.)

BROOKS-RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 NORTH PALM, SUITE 100 FRESNO, CALIFORNIA 93711 (559) 449-8444 FAX (559) 449-8404
By: Date: Job no. 03114
Sheet 6

03/08/2004 15:09 559-433-3010 TTGA PAGE 07

ST-2 ; STORAGE WATER HEATER

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

$V = 0.29 \times W_p$

$W_p = 1200 + \left(300\ gal. \times 0.13368\ \frac{ft^3}{gal} \times 62.4\ \#/ft^3\right) = 3702^{\#}$

$V = 1074^{\#}$

$M_{OT} = 1{,}074^{\#} \times 2/3 \times 80/12 = 4.77^{k\text{-}1}$

$M_R = 0.9 \times \left[3702^{\#} \times \frac{20'}{12}\right] = 5.6^{k\text{-}1}$

NO UPLIFT

SHEAR =
$V = \frac{1074}{3} = 358^{\#} < 550^{\#}$ – OK

USE SAME ANCH. AS ST-1

BROOKS-RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 NORTH PALM, SUITE 100 FRESNO, CALIFORNIA 93711 (559) 449-8444 FAX (559) 449-8404
By: Date: Job no. 03114
Sheet 7

03/08/2004 15:09 559-433-3010 TTGA PAGE 08

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

FOUNDATION – ST-2

SOIL BRG
$\frac{3702}{16} = 231$ PSF – OK

OT
$P_{CONC} = 150 \times \left[16 \times 7/12\right] = 1400^{\#}$

$M_O = 1074 \times \left[2/3 \times 80/12 + 7''/12\right] = 5.4^{k\text{-}1}$

$M_R = 0.9 \left[3702 + 1400\right] \times \frac{4'}{2} = 9.2^{k\text{-}1}$

$FS_{OT} = \frac{9.2}{5.4} = 1.7$ – OK

USE 4'×4' × 8" TOTAL DEPTH w/ #4s @ ~12" o.c.

BROOKS-RANSOM ASSOCIATES STRUCTURAL ENGINEERS CIVIL ENGINEERS 7415 NORTH PALM, SUITE 100 FRESNO, CALIFORNIA 93711 (559) 449-8444 FAX (559) 449-8404
By: Date: Job no.
Sheet 8

03/08/2004 15:09 559-433-3010 TTGA PAGE 09
From: MDC-UC MERCED HOUSING 209 383 4205 03/03/2004 15:46 #401 P.001/003

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

Attention Klare
From Tony – UC Merced
559-449-8404

RV and Associates, Inc.
3200 Bayshore Road
Benicia, CA 94510
Phone: 707.745.3655
Fax: 707.745.2050

RECEIVED MAR – 3 2004 BROOKS RANSOM ASSOCIATES

PVI QUICKDRAW HEAT EXCHANGER AND STORAGE TANK COMBINATION

Would it be possible to pour the sloped slab (without housekeeping pad) in the Dining Mechanical Room. The attached tanks will be sitting on the pad.
~~– Then set Mechanical equipment w/ leveling nuts.~~
~~– Then dry pack / grout beneath equipment @ later date.~~

Propose to pour a 3" high housekeeping pad, doweled into slab (either before the pour or epoxy) at a later date.

Please advise

Sheet 9 Of:

03/08/2004 15:09 559-433-3010 TTGA PAGE 10
From: MDC-UC MERCED HOUSING 209 383 4205 03/03/2004 15:46 #401 P.002/003

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

JOB NAME: UC Merced Garden Suites

PVI POLYSHIELD® SUPERTANK® WATER-TO-WATER UNINSULATED STORAGE WATER HEATER DOUBLE-WALL U-TUBE

SB4614 6/17/2003
CUSTOMER APPROVAL
PVI INDUSTRIES, LLC P.O. BOX 7124 FORT WORTH, TEXAS 76111 TOLL FREE 1-800-433-5654
Sheet 10 Of:

03/08/2004 15:09 559-433-3010 TTGA PAGE 11
From: MDC-UC MERCED HOUSING 209 383 4205 03/03/2004 15:47 #401 P.003/003

RECEIVED MAR 0 8 2004 Mauldin-Dorfmeier

JOB NAME: UC Merced Garden Suites

PVI POLYSHIELD® SUPERTANK® WATER-TO-WATER UNINSULATED STORAGE WATER HEATER DOUBLE-WALL U-TUBE

SB4615 6/17/2003
CUSTOMER APPROVAL
PVI INDUSTRIES, LLC P.O. BOX 7124 FORT WORTH, TEXAS 76111 TOLL FREE 1-800-433-5654
Sheet 11 Of:

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 555

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

FIELD

TITLE: 48 X 24 Ducts, Dining
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 7/2/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 7/9/2004

REQUEST:

There are two 48 X 24 ducts on line 10. One of these pass through the shear wall the other is hung from the roof assembly. Please determine if this presents a problem structurally and if so, please provide a solution.

ANSWER:

The ducts can be installed as shown on the approved drawings. Please provide strapping as per detail 11/S5.02. The shear walls are adequete with the penetration of the ducts as noted on the RFI.
Klare Yavasile/Brooks Ransom
7/09/04

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 560

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

FIELD

TITLE: Dining-Equipment Service Access
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 7/7/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 7/14/2004

REQUEST:

Refer to Sheet M2.06

1. The equipment in the Dining Upper Mechanical Well will not have the manufacturers recommended access of 36" on each side to service the units. The width of the MUA is 50 inches wide. The well is 108 inches wide. If you take 50 inches away from 108 inches you are left with 58 inches. You divide the 58 inches by 2 then you are left with +/-29 inches on both sides of the MUA which will not meet manufacturers recommendations of 36". Please review and verify if code allows clearance of +/-29". If clearance does not meet clearance please provide direction.

2. In Dining Upper Mechanical Well the MUA is located above the floor drain. Please review, coordinate drawings with structural drawings and provide revised layout for floor drains.

01/06/2005 22:37 5594375005 THE TAYLOR GROUP PAGE 01

Mauldin-Dorfmeier Construction, Inc.

ARCHITECT CLARIFICATION
No. 718

3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

TITLE: Dining-Exposed Duct
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
978 West Alluvial, Suite 107
Fresno, CA 93711
Phone: 559-437-5000 Fax: 559-437-5005

DATE: 1/6/2005
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 1/13/2005

RECEIVED JAN 0 7 2004 Mauldin-Dorfmeier

REQUEST:

Refer to sheet M2.06

The response to AC 701 from the Design Team indicated that the exposed duct at Dining is part of this project. Please review and advise if the registers are 15' or 13' AFF with a type C Grill.

RESPONCE:
See attached email dated 1/7/05 from Justin Fortmeyer / Teter a+e

MDC (All)
All Subs
SFM
IOR } Mailbox
UC/Hallmark.

Post-it® Fax Note 7671	Date 1/7/05	# of pages ▸ 2
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Requested By: Mauldin-Dorfmeier Construction, Inc. Date:
Signed:
Tony Valdez

08/05/2004 15:41 4333010 TAYLOR GROUP PAGE 02

Ramon Torres Page 1 of 2

From: Steven Jones [stevenj@teterae.com]
Sent: Thursday, August 05, 2004 3:17 PM
To: Ramon Torres
Subject: RE: AC #560
Follow Up Flag: Follow up
Flag Status: Flagged

Ramon,
We have reviewed the attached RFI #560 and have the following response:

1. The unit must be located to allow maintenance access. Any electrical panels must have minimum 30" clearance.
2. According to the dimensions shown in the equipment substitution submittal, we do not see any conflicts with the roof drains. The roof drains are located 12 feet apart and the submittal indicates the unit length to be approximately 6 feet. We have made several requests to the contractor for clarification regarding this conflict and have not received a response.

Since this RFI is 3 weeks past due, we recommend closing this RFI until the contractor issues a clarification regarding the roof drain conflict.

Steven A. Jones, P.E.

01/06/2005 22:37 5594375005 THE TAYLOR GROUP PAGE 02

Ramon Torres Page 1 of 2

From: Justin Fortmeyer [justinf@teterae.com]
Sent: Friday, January 07, 2005 9:37 AM
To: Ramon Torres
Cc: tvaldez@mdc-inc.com
Subject: RE: AC #718
Follow Up Flag: Follow up
Flag Status: Flagged

RECEIVED JAN 0 7 2004 Mauldin-Dorfmeier

Ramon/Tony:

We have reviewed RFI AC#718 and offer the following response:

We recommend that the diffusers be mounted at the same height AFF as the bottom of the bottom truss chord. Also, 'Type C' is the correct grille type.

Please let us know if you have further questions.

Regards,

Justin

From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Friday, January 07, 2005 8:41 AM
To: Justin Fortmeyer
Subject: FW: AC #718

Please review and respond to me I will forward the responce.

Ramon Torres

Project Architect/ Manager

The Taylor Group Architects

10 River Park Place East, Suite 104

Fresno, CA 93720

Phone: 559.433.3000

Fax: 559.433.3010

Email: ramontorres@ttgarchitects.com

Website: http://www.ttgarchitects.com

-----Original Message-----
From: Tony Valdez [mailto:tvaldez@mdc-inc.com]
Sent: Thursday, January 06, 2005 5:19 PM

1/7/2005

Page

ony Valdez

om: "Justin Fortmeyer" <justinf@teterae.com>
: "Tony Valdez" <tvaldez@bernards.com>
c: "Ramon Torres" <ramontorres@ttgarchitects.com>
ent: Tuesday, February 01, 2005 5:11 PM
ubject: RE: AC #718

ny/Ramon:

r the Dining Exposed Duct Work, a 'Type C' 18" neck diffuser will work just fine.

t me know if you need anything further.

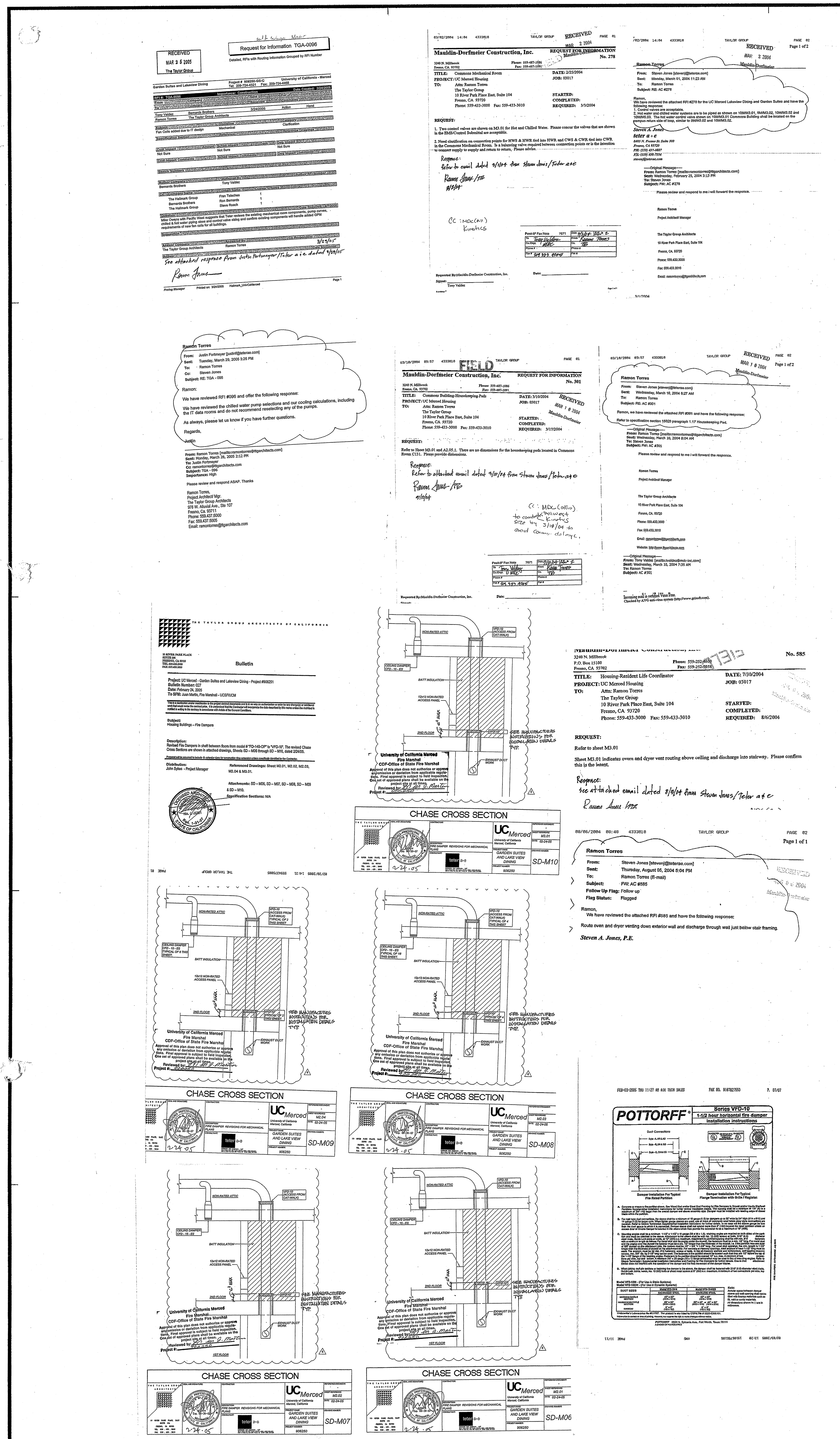
gards,

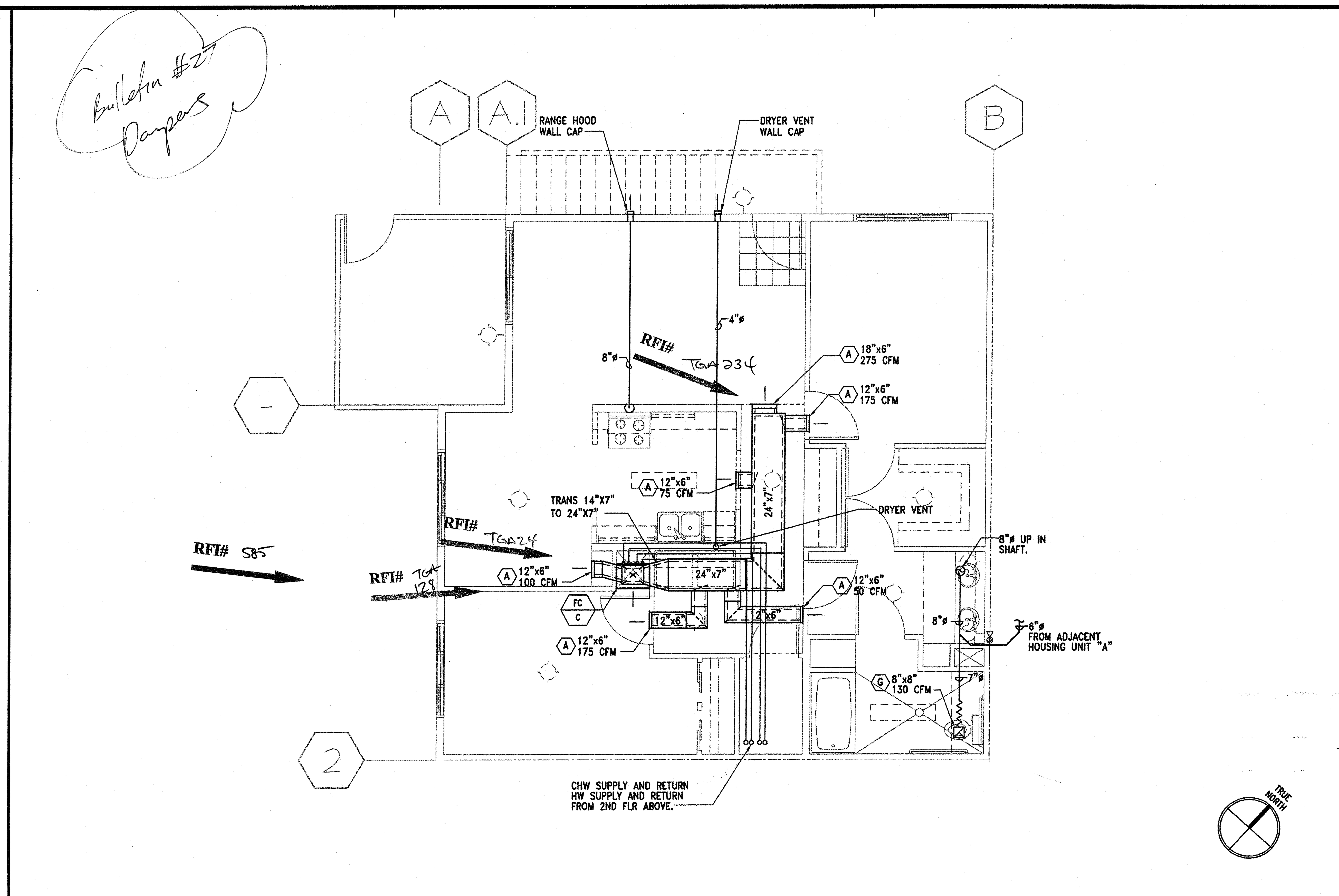
stin

om: Tony Valdez [mailto:tvaldez@bernards.com]
nt: Tuesday, February 01, 2005 12:21 PM
: Justin Fortmeyer
: Ramon Torres
bject: Re: AC #718

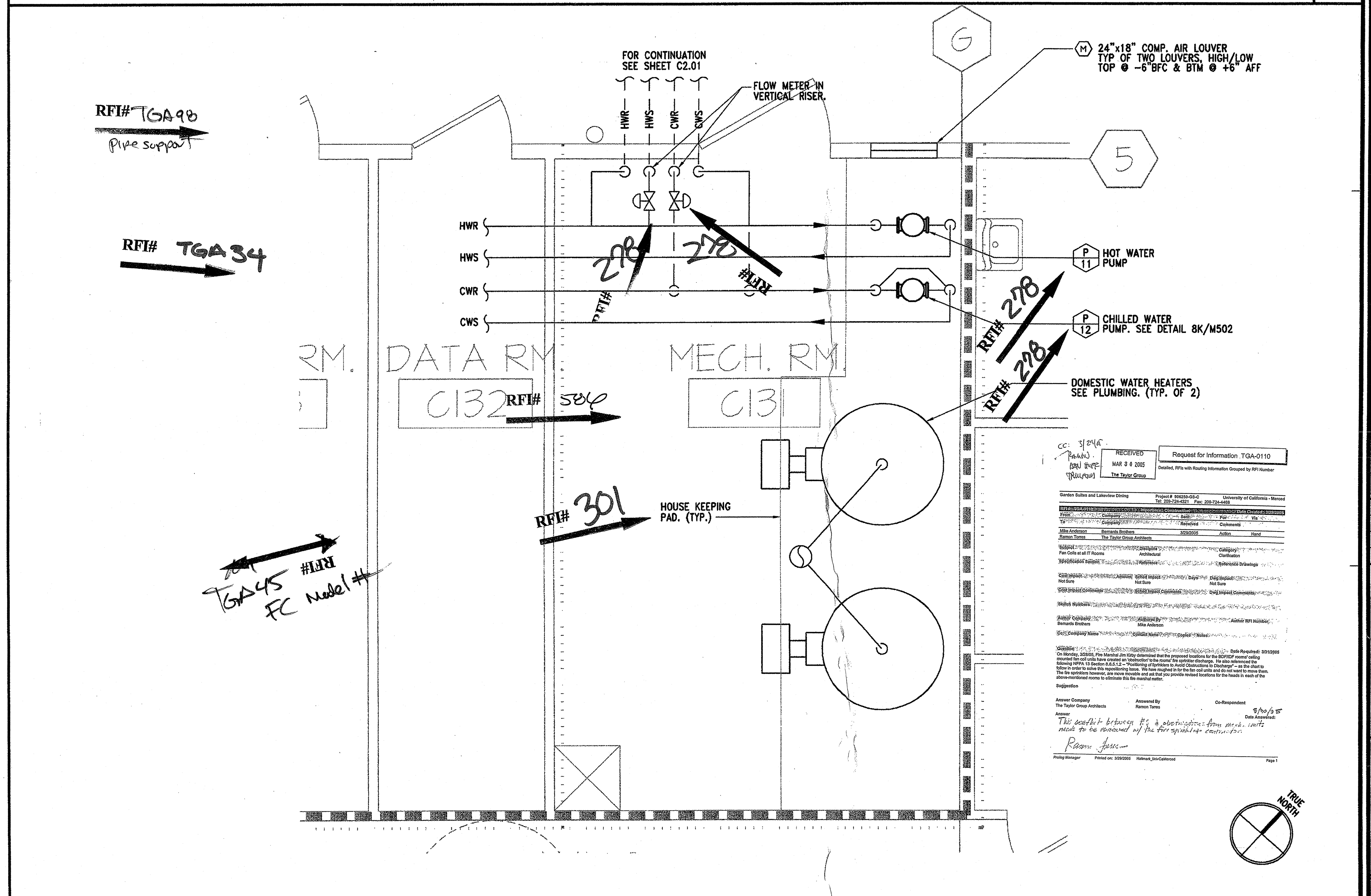
stin, would a 18" Type C diffuser be acceptable at the Dining Exposed Duct Work.

----- Original Message -----
From: Justin Fortmeyer
To: Ramon Torres





RESIDENT LIFE COORDINATOR UNIT / 2 BEDROOM FLOOR PLAN-1st FLOOR — SCALE: 1/4"=1'-0" — 5M



10H — MECHANICAL ROOM - COMMONS BLDG — SCALE: 1/2"=1'-0" — 10M

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559.433.3000

Seal and Signature

Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-6463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:

FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 01-105208
AC PS FLS SS
DATE

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL

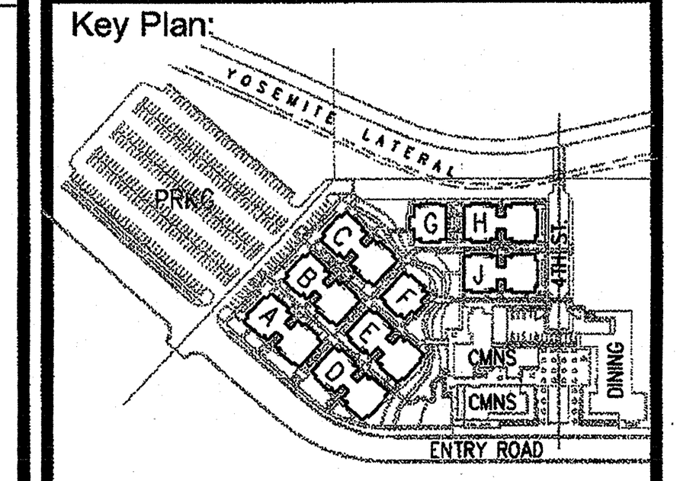
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: 10-13-03
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:



Drawing Title
MECHANICAL ROOMS PARTIAL PLANS

Drawing Number:
M3.01

RECEIVED
MAR 2 4 2005
The Taylor Group

Request for Information TGA-0087

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0087 — Importance: Construction — Date Created: 3/24/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/24/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Housing-Fan Coil Thermostat Locations — **Discipline:** Mechanical — **Category:** Confirmation
Specification Section — **Reference** — **Reference Drawings**
Cost Impact: Not Sure — **Amount** — **Sched Impact:** Not Sure — **Days** — **Dwg Impact:** Not Sure
Cost Impact Comments — **Sched Impact Comments** — **Dwg Impact Comments**
Sketch Numbers
Author Company: Bernards Brothers — **Authored By:** Tony Valdez — **Author RFI Number**

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 4/7/2005
1. Please provide a thermostat location for the fan coil units in Buildings A, B, C, D, E, F, G, H, J and Commons Building Electrical Rooms.

2. Please review and confirm it is acceptable to install 1/2" exposed EMT with a surface mount, 4 square box for the thermostat conduit.

Suggestion
Answer Company: The Taylor Group Architects — **Answered By:** Ramon Torres — **Co-Respondent**
Answer — Date Answered:
See attached email responce from Steven Jones & Tim Fickling / Teter a+e dated 3/25/05
Ramon Torres

Prolog Manager — Printed on: 3/24/2005 — Hallmark_UnivCaMerced — Page 1

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Friday, March 25, 2005 8:58 AM
To: Ramon Torres
Cc: Justin Fortmeyer; Tim Fickling
Subject: FW: TGA - 087
Attachments: TGA - 087 - Fickling.pdf

Ramon,

In response to question #1 of the attached RFI # TGA-087

Mount the thermostats for the IT Room fan coil units on any interior wall where there is clear space.

If you need any further clarification, please let us know.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a + e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email:stevenj@teterae.com

From: Tim Fickling
Sent: Thursday, March 24, 2005 8:56 PM
To: 'Ramon Torres'
Cc: 'Mike Anderson'; Steven Jones; Justin Fortmeyer
Subject: RE: TGA - 087

Steve Jones will address Question No. 1.

If these Electrical Rooms have already been "rocked", the surface mounted exposed EMT and box is acceptable. If the Electrical Rooms have not been "rocked", conduits and boxes shall be concealed in wall.

Timothy D Fickling
Professional Engineer

8405 N Fresno, Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554

3/28/2005

RECEIVED
MAR 2 4 2005
The Taylor Group

Request for Information TGA-0088

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0088 — Importance: Construction — Date Created: 3/24/2005

See attached email response from Steven Jones / Teter a+e

Prolog Manager — Printed on: 3/24/2005 — Hallmark_UnivCaMerced — Page 1

Page 1 of 1

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Friday, March 25, 2005 8:49 AM
To: Ramon Torres
Cc: Justin Fortmeyer
Subject: UC Merced Garden Suites (05-6647.05) TGA - 088
Attachments: TGA - 088 - Fortmeyer.pdf

Ramon,

We have reviewed the attached RFI #TGA-088 regarding chilled water pipe routing and have the following response:

Due to space constraints above the ceiling, chilled water piping may be routed below the ceiling for the IT/Data room fan coils.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a + e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email:stevenj@teterae.com

RECEIVED
MAR 2 4 2005
The Taylor Group

Request for Information TGA-0086

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0086 — Importance: Construction — Date Created: 3/24/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/24/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Housing-Fan Coil Seismic Bracing — **Discipline:** Structural — **Category:** Clarification
Specification Section — **Reference** — **Reference Drawings**
Cost Impact: Not Sure — **Amount** — **Sched Impact:** Not Sure — **Days** — **Dwg Impact:** Not Sure
Cost Impact Comments — **Sched Impact Comments** — **Dwg Impact Comments**
Sketch Numbers
Author Company: Bernards Brothers — **Authored By:** Tony Valdez — **Author RFI Number**

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 3/25/2005
The hangers for the fan coil units located in Buildings A, B, C, D, E, F, G, H, and J electrical rooms will measure no more than ten (10) inches from the top of the fan coil unit to the point were the all thread is attached to the 3x3x1/4" angle. Because the hanger length is only 10 inches, would it be acceptable to eliminate the seismic bracing on the unit in these buildings.

Suggestion
Answer Company: The Taylor Group Architects — **Answered By:** Ramon Torres — **Co-Respondent** — 3/24/05
Answer — Date Answered:
See attached email response from Klare Yavasile-B/R dated 3/24/05
Ramon Torres

Prolog Manager — Printed on: 3/24/2005 — Hallmark_UnivCaMerced — Page 1

MAR. 25. 2005 8:51AM BROOKS RANSOM ASSOC. NO. 083 P. 2

BROOKS RANSOM ASSOCIATES

STRUCTURAL ENGINEERS
CIVIL ENGINEERS
7415 N. PALM - SUITE 100 • FRESNO, CALIFORNIA 93711
TELEPHONE (559) 449-8444 • FAX (559) 449-8404

UC Merced
5320 N. Lake Road
Merced, CA 95340
Garden Suites & Lakeview Dining

TGA-0086

DATE: March 25, 2005

TO: Ramon Torres
AT: Taylor Group

FROM: Klare W. Yavasile, S.E.

To my knowledge the fan coil units have to be braced even if the length of the hanger rods is less than 12 inches.

The 12 inch maximum length exception only applies to piping and ducts, and there are 5 other issues that have to be addressed to qualify for the exception. Please refer to the attached copy of Table 16-O and please pay particular attention to footnote 11.

The above responses/clarifications are responding to requests from the contractor, with regard to the structural design intent only. No other approvals are intended, nor should they be inferred. It is the contractor's and/or architect's responsibility to coordinate any and all changes with the other trades, consultants, and reviewing agencies.

MAR. 25. 2005 8:51AM BROOKS RANSOM ASSOC. NO. 083 P. 3

2001 CALIFORNIA BUILDING CODE — TABLE 16-O

Request for Information TGA-0034

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0034 — Importance: Construction — Date Created: 3/2/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/2/2005	Action	Hand
Ramon Torres	The Taylor Group Architects	3/8/2005		

Subject: Housing/Commons-Revisions to Sheet M2.01, M2.02 and M2.05 — **Discipline:** Structural — **Category:** Confirmation
Specification Section — **Reference** — **Reference Drawings**
Cost Impact: Not Sure — **Amount** — **Sched Impact:** Not Sure — **Days** — **Dwg Impact:** Not Sure
Cost Impact Comments — **Sched Impact Comments** — **Dwg Impact Comments**
Sketch Numbers
Author Company: Bernards Brothers — **Authored By:** Tony Valdez — **Author RFI Number**

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 3/16/2005
Refer to Sheets M0.03, M2.01, M2.02 and M2.05 dated 2/24/05. Please note the Fan Coil Units are installed below finish ceiling.

1. Sheet M2.01, M2.02 show FC2-Magic Air Horizontal Surface Mounted Units installed in the Housing Mechanical and Mechanical/Electrical Rooms. We suggest supporting the units from the bottom flange of the TJI's using Tolco Beam Clamps as submitted in submittal 17-15000-0. The approximate weight of the unit is 160 pounds. Please review with structural engineer and confirm proposed attachment is acceptable.

2. Sheet M2.05 show FC2-Magic Air Horizontal Surface Mounted Unit installed in the Commons Mechanical Room. We intend supporting the unit from the bottom chord of the trusses using detail 4K/M5.01. Please review with Structural Engineer and confirm proposed attachment is acceptable. If not acceptable please provide supporting detail.

Suggestion
Answer Company: The Taylor Group Architects — **Answered By:** Ramon Torres — **Co-Respondent:** Klare Yavasile

Prolog Manager — Printed on: 3/8/2005 — Hallmark_UnivCaMerced — Page 1

MAR. 3.2005 2:45PM BROOKS RANSOM NO.816 P.2/3

BROOKS RANSOM ASSOCIATES

STRUCTURAL ENGINEERS
CIVIL ENGINEERS
7415 N. PALM - SUITE 100 • FRESNO, CALIFORNIA 93711
TELEPHONE (559) 449-8444 • FAX (559) 449-8404

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MAR 0 3 2005

UC Merced
5320 N. Lake Road
Merced, CA 95340
Garden Suites & Lakeview Dining

TGA-0034

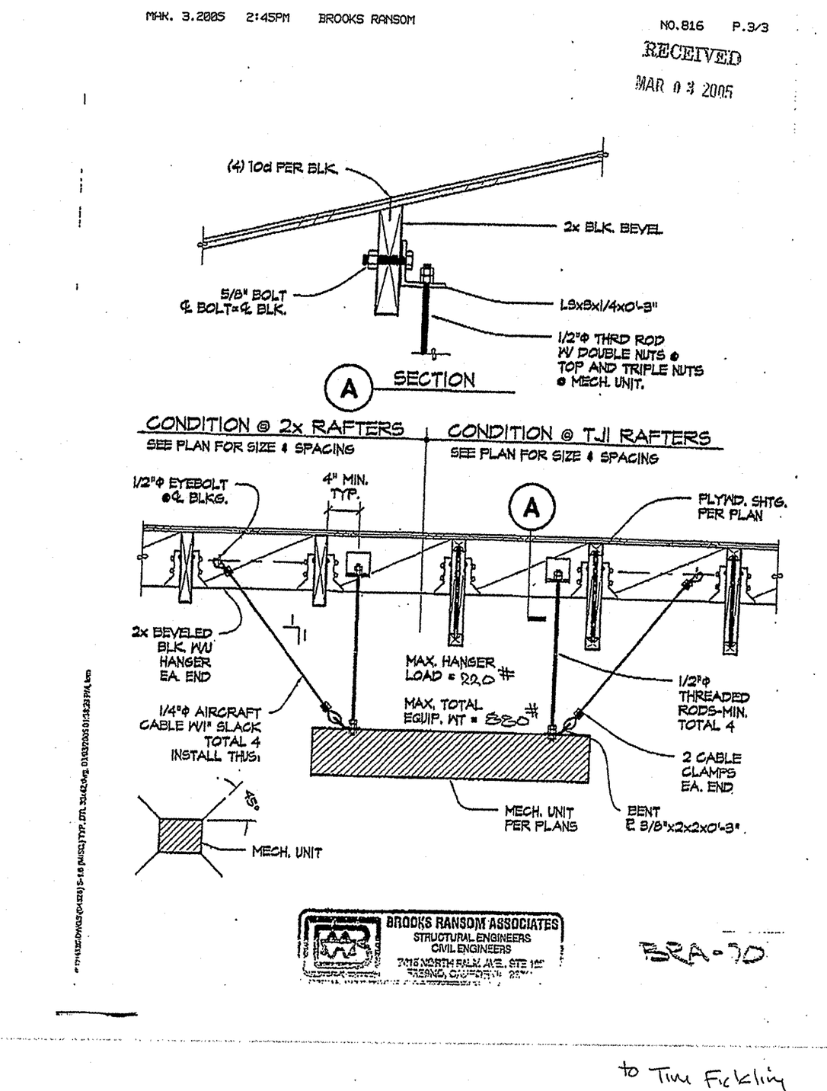
DATE: March 3, 2005

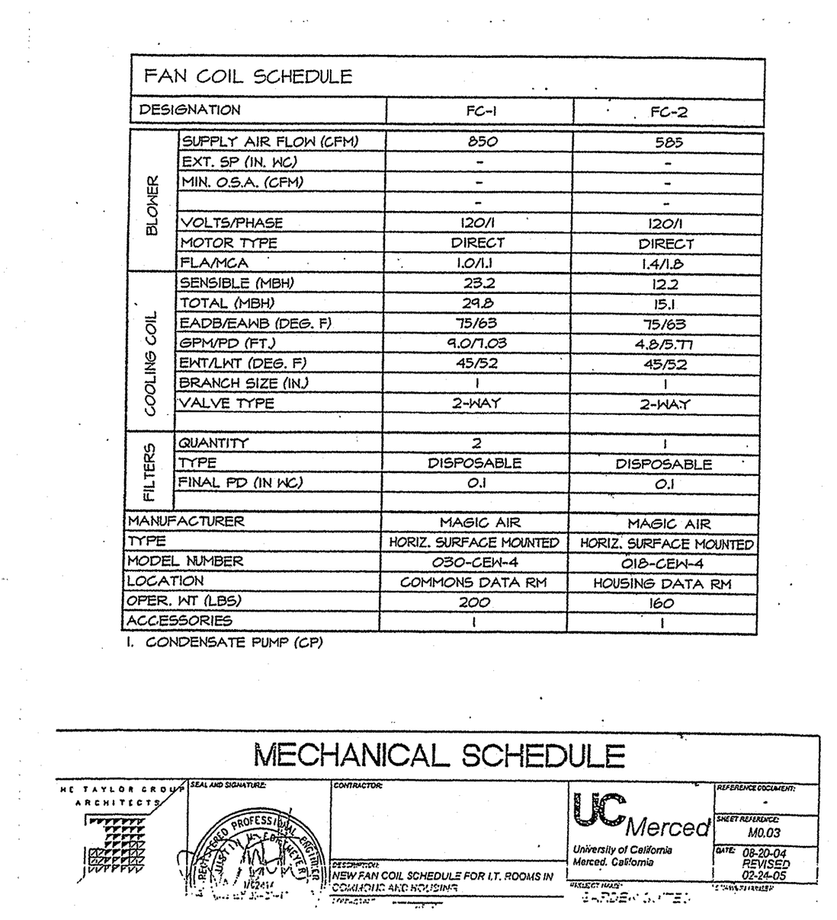
TO: Ramon Torres
AT: Taylor Group

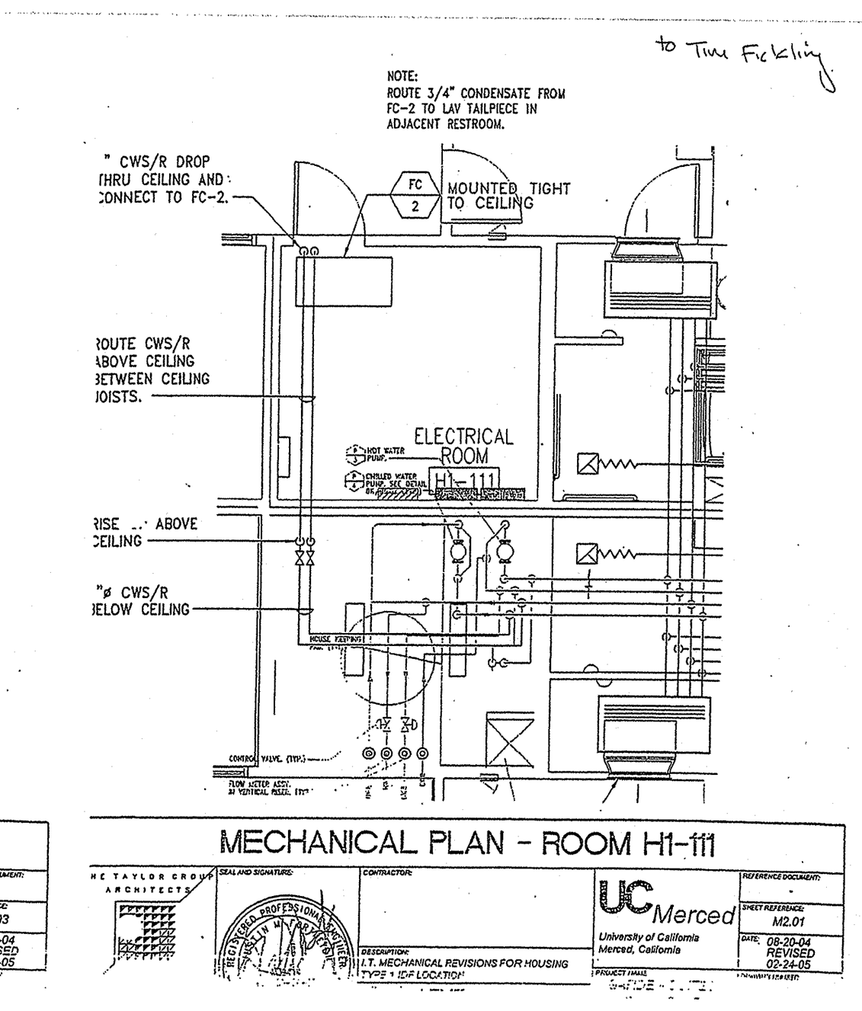
FROM: Klare W. Yavasile, S.E.

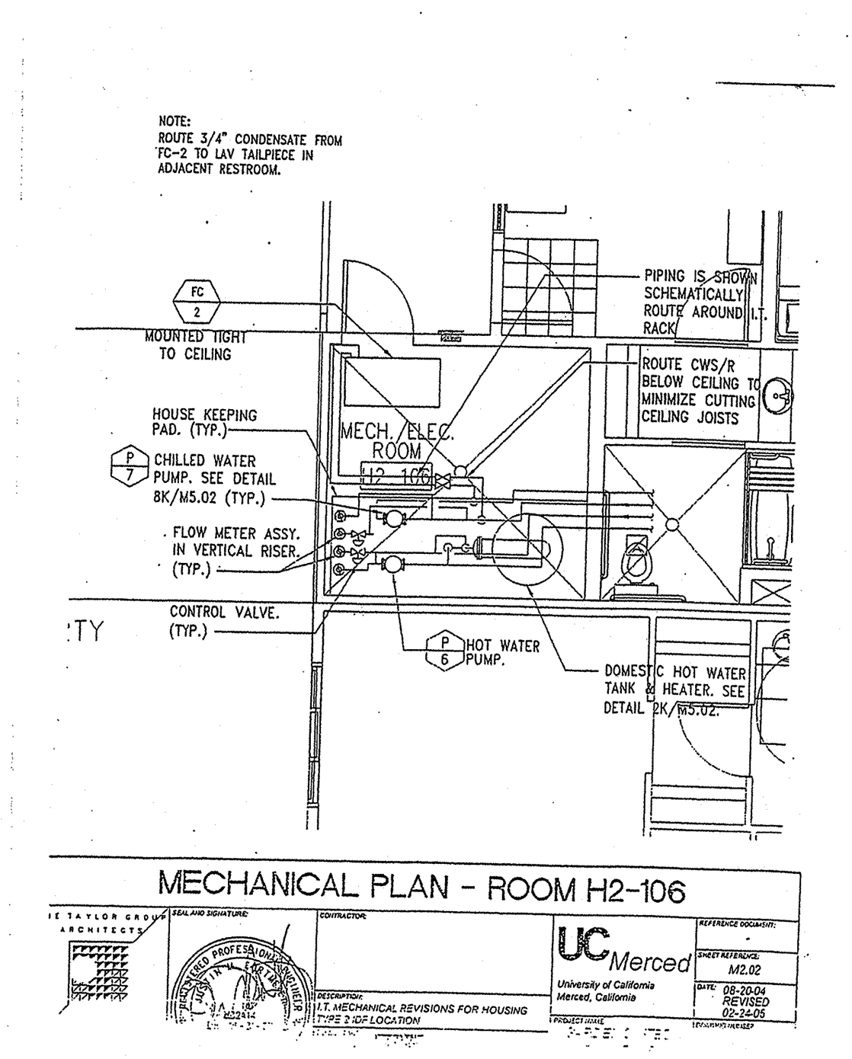
I can't approve hanging a mechanical unit off of the bottom chord of the trusses using a truss clamp. We have provided several methods of hanging off of the TJI's on Sheet S5.05. Another method of hanging mechanical units is to use the attached detail BRA-70.

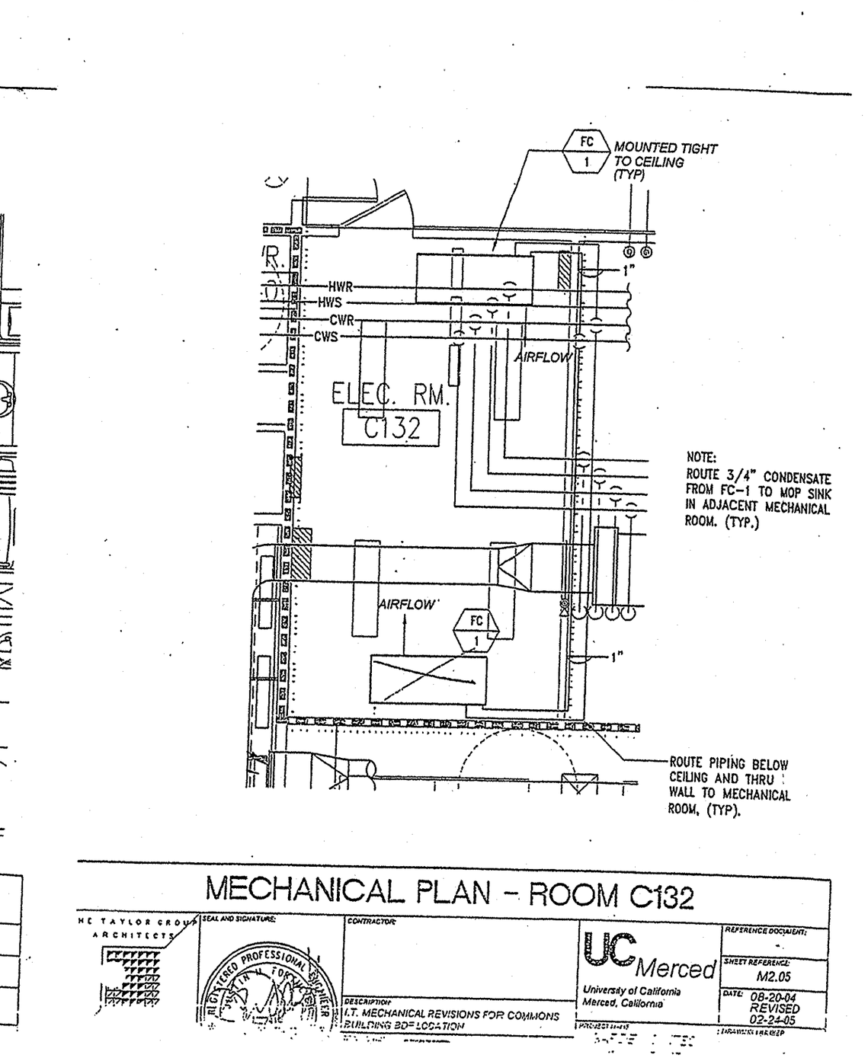
The above responses/clarifications are responding to requests from the contractor, with regard to the structural design intent only. No other approvals are intended, nor should they be inferred. It is the contractor's and/or architect's responsibility to coordinate any and all changes with the other trades, consultants, and reviewing agencies.











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MAY 2 2005
The Taylor Group

Request for Information TGA-0178

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0178 — Importance: Construction — Date Created: 4/28/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	4/28/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Houisng-Fan Coil at Building J — **Discipline:** Mechanical — **Category**
Specification Section — **Reference** — **Reference Drawings**
Cost Impact: Not Sure — **Amount** — **Sched Impact:** Not Sure — **Days** — **Dwg Impact:** Not Sure
Cost Impact Comments — **Sched Impact Comments** — **Dwg Impact Comments**
Sketch Numbers
Author Company: Bernards Brothers — **Authored By:** Tony Valdez — **Author RFI Number**

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 5/12/2005
Refer to Bulletin 23

Bulletin 23 specified the fan coil unit to be used at the Housing Buildings. The fan coil unit for Building J was damaged by the freight company during transit. A replacement 1 1/2 ton fan coil unit will take 4-6 weeks to delivery. Magic Aire has a 2 ton fan coil unit with a reheat coil that is immediately available. Please review and confirm it is acceptable to install this 2 ton unit which is Magic Aire Model 24-CEW-4 in Building J in lieu of the specified 1 1/2 ton.

Suggestion
Answer Company: The Taylor Group Architects — **Answered By:** Ramon Torres — **Co-Respondent** — 5/2/05
Answer — Date Answered:
See attached response from Steven Jones / Teter a+e dated 5/2/05
Ramon Torres

Prolog Manager — Printed on: 4/29/2005 — Hallmark_UnivCaMerced — Page 1

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 02, 2005 2:00 PM
To: Tony Valdez
Cc: Ramon Torres; Justin Fortmeyer
Subject: RE: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0178 - Houisng-Fan Coil at Building J

Ramon,
We have reviewed the attached RFI # TGA-0178 "Housing-Fan Coil at Building J" emailed to us by Tony Valdez on Friday 4/29/05, and have the following response:

In an effort to keep construction progressing, we take no exception to the proposed substitution. The proposed 2-ton fan coil will not adversely affect the design of the IT data room air conditioning. Please verify the owners acceptance of the increased unit size. The proposed unit is also 9 inches longer. Please verify that this increase in unit length will not create any further coordination issues.

If you need any further clarification, please let us know.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a + e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email:stevenj@teterae.com

From: Tony Valdez [mailto:tvaldez@bernards.com]
Sent: Friday, April 29, 2005 4:18 PM
To: Steven Jones
Cc: Ramon Torres
Subject: Fw: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0178 - Houisng-Fan Coil at Building J

Subject: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0178 - Houisng-Fan Coil at Building J

****** Request For Information: TGA-0178 - Houisng-Fan Coil at Building J ******
RFI ID:
5160

Number:
TGA-0178

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APR 2 8 2005
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Request for Information TGA-0179

Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining — Project # 906250-GS-C — University of California - Merced
Tel: 209-724-4321 Fax: 209-724-4468

RFI #: TGA-0179 — Importance: Construction — Date Created: 4/28/2005

Date Required: 5/12/2005
... Design.

5/2/05 — Date Answered:

Prolog Manager — Page 1

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, May 02, 2005 3:54 PM
To: Tony Valdez; Ramon Torres
Cc: Justin Fortmeyer
Subject: RE: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0179 - Fan Coil Units for IT Rooms

Ramon,
We have reviewed the attached RFI #TGA-0179 – Fan Coil Units for IT Rooms, emailed to us by Tony Valdez on 04-29-05 and have the following response:

At the time the fan coil equipment was submitted for our review, the manufacturer indicated that a secondary drain was not available. Per my phone discussion with Tony on 05-02-05, the fan coil units have been provided with integral overflow drain connections contrary to the submittal. The contractor has requested to plug this connection in lieu of running a secondary drain line from the fan coil. In our response to RFI #TGA-041 sent on 03-22-05 we recommended the secondary drain be provided if the owner expressed any concern with limiting the possibility of water damage in the IT room due to clogged condensate lines. Our 03-22-05 response to RFI #TGA-041 was as follows:

"The secondary condensate lines, or overflow connections, are not required by code since these units all hang below the ceiling. Furthermore, the units that have been submitted do not have an available secondary condensate connection. However, if there is concern about additional protection of the IT equipment from the potential of a leaking condensate pan, we suggest the contractor install a secondary drain pan under the unit. The secondary condensate can be routed out through the exterior wall and terminated with a 90 degree elbow down."

In the best interest of the owner, we recommend installing the secondary drain as previously indicated. However, as previously indicated, this drain is not required by code.

Ramon, please forward this issue to the owner for their review and approval before the drain is omitted.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a + e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email:stevenj@teterae.com

From: Tony Valdez [mailto:tvaldez@bernards.com]
Sent: Friday, April 29, 2005 4:18 PM
To: Steven Jones
Cc: Ramon Torres
Subject: Fw: [PM_MAIL]: [Garden Suites and Lakeview Dining] Request For Information: TGA-0179 - Fan Coil Units for IT Rooms

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Request for Information TGA-0179

Detailed, RFIs with Routing Information Grouped by RFI Number

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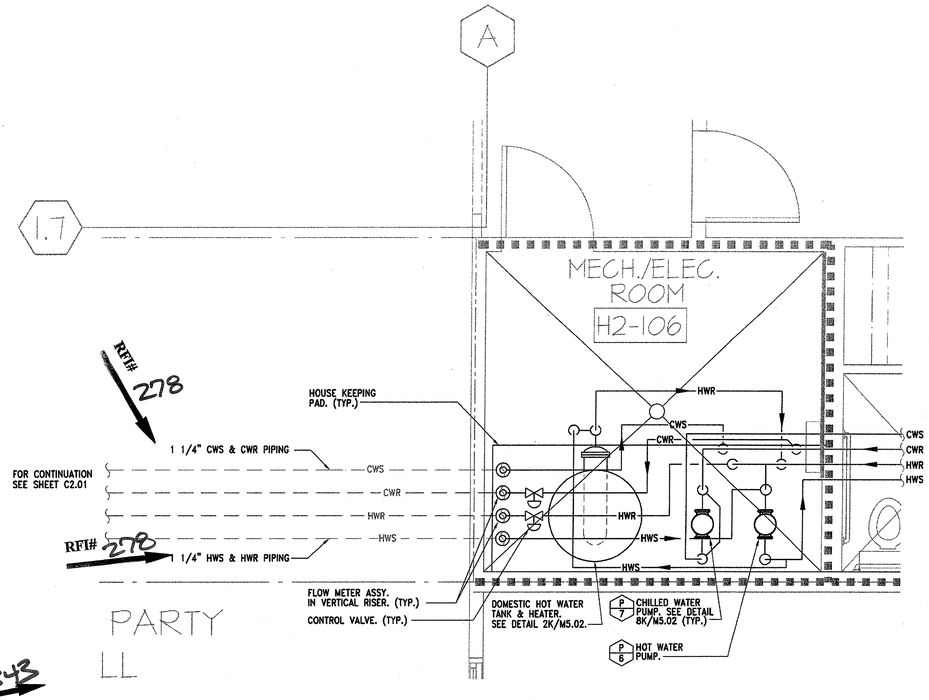
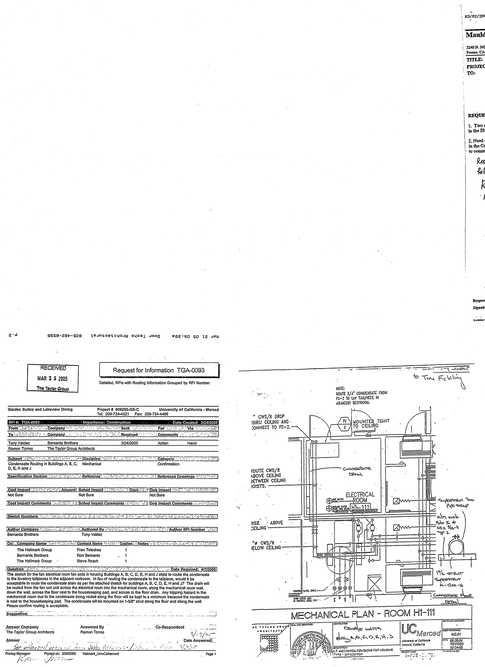
MAY 2 2005
The Taylor Group

Request for Information TGA-0178

Detailed, RFIs with Routing Information Grouped by RFI Number





03/02/2004 14:04 4333010 TAYLOR GROUP PAGE 01

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MAR 2 2004
Mauldin-Dorfmeier

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION
No. 278

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Commons Mechanical Room
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 2/25/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 3/3/2004

REQUEST:

1. Two control valves are shown on M3.01 for Hot and Chilled Water. Please concur the valves that are shown in the EMS/Control Submittal are acceptable.

2. Need clarification on connection points for HWS & HWR tied into HWR and CWS & CWR tied into CWR in the Commons Mechanical Room. Is a balancing valve required between connection points or is the intention to connect supply to supply and return to return. Please advise.

Responce:
Refer to email dated 3/1/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
3/2/04

CC: MDC(All)
Kinetics

Post-it® Fax Note 7671
To Tony Valdez
Co./Dept. MDC
Phone #
Fax # 209 383 4205
Date 3/2/04
# of pages ▸ 2
From Ramon Torres
Co. TG
Phone #
Fax #

Requested By: Mauldin-Dorfmeier Construction, Inc.
Date:
Signed:
Tony Valdez

02/2004 14:04 4333010 TAYLOR GROUP PAGE 02

RECEIVED
MAR 2 2004
Mauldin-Dorfmeier

Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, March 01, 2004 11:23 AM
To: Ramon Torres
Subject: RE: AC #278

Ramon,
We have reviewed the attached RFI #278 for the UC Merced Lakeview Dining and Garden Suites and have the following response:
1. Control valves are acceptable.
2. Hot water and chilled water systems are to be piped as shown on 10M/M3.01, 5M/M3.02, 10M/M3.02 and 10M/M5.03. The hot water control valve shown on 10M/M3.01 Commons Building shall be located on the campus return side of loop, similar to 5M/M3.02 and 10M/M3.02.

Steven A. Jones
teter a + e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Wednesday, February 25, 2004 3:13 PM
To: Steven Jones
Subject: FW: AC #278

Please review and respond to me i will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA. 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com

3/1/2004

RECEIVED
MAR 2 5 2005
The Taylor Group

Request for Information TGA-0093
Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining
Project # 906250-GS-C
Tel: 209-724-4321 Fax: 209-724-4468
University of California - Merced

RFI #: TGA-0093 Importance: Construction Date Created: 3/24/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/24/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Condensate Routing in Buildings A, B, C, D, E, H and J
Discipline: Mechanical
Category: Confirmation

Specification Section / Reference / Reference Drawings

Cost Impact: Not Sure
Sched Impact: Not Sure
Dwg Impact: Not Sure

Cost Impact Comments / Sched Impact Comments / Dwg Impact Comments

Sketch Numbers

Author Company: Bernards Brothers
Authored By: Tony Valdez
Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 4/7/2005
The sketch for the fan electrical room fan coils in housing Buildings A, B, C, D, E, H and J state to route the condensate to the lavatory tailpieces in the adjacent restroom. In lieu of routing the condensate to the tailpiece, would it be acceptable to route the condensate drain as per the attached sketch for buildings A, B, C, D, E, H and J? The drain will be routed from the fan coil unit across the electrical room into the mechanical room, along the mechanical room wall, down the wall, across the floor next to the housekeeping pad, and across to the floor drain. Any tripping hazard in the mechanical room due to the condensate being routed along the floor will be kept to a minimum because the condensate is next to the housekeeping pad. The condensate will be mounted on 1-5/8" strut along the floor and along the wall. Please confirm routing is acceptable.

Suggestion

Answer Company: The Taylor Group Architects
Answered By: Ramon Torres
Co-Respondent
Date Answered:
Answer: See attached response from Justin Fortmeyer/[illegible]
Ramon Torres

Prolog Manager Printed on: 3/24/2005 Hallmark_UnivCaMerced Page 1

Ramon Torres

From: Ramon Torres [ramontorres@ttgarchitects.com]
Sent: Tuesday, March 29, 2005 1:31 PM
To: ramontorres@ttgarchitects.com
Subject: FW: TGA - 093

-----Original Message-----
From: Justin Fortmeyer [mailto:justinf@teterae.com]
Sent: Monday, March 28, 2005 2:07 PM
To: Ramon Torres
Cc: Steven Jones
Subject: RE: TGA - 093

Ramon:

We have review the attached RFI, #93 and have the following response:

We take no exception to the routing proposed by the contractor. Maintain required slope of drain line and air gap at floor drain.

Please let us know if you need anything further.

Regards,

Justin

From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Monday, March 28, 2005 1:27 PM
To: Justin Fortmeyer
Cc: ramontorres@ttgarchitects.com
Subject: TGA - 093
Importance: High

Please review and respond ASAP. thanks

Ramon Torres,
Project Architect/ Mgr.
The Taylor Group Architects
978 W. Alluvial Ave., Ste 107
Fresno, Ca. 93711
Phone: 559.437.5000
Fax: 559.437.5005
Email: ramontorres@ttgarchitects.com

3/29/2005

CHAMPION INDUSTRIAL CONTRACTORS, INC.

RFI-5

March 24, 2005
Respond by: March 25, 2005

Howard S. Wright Construction Co.
3960 Industrial Blvd., Suite 600
Sacramento, CA 95691
Attn. Dan Huff

Subject: UC Merced Garden Suites and Lakeview Dining
Re: Condensate Routing in Buildings A, B, C, D, E, H, and J

Dan:

The sketch for the fan coil units in buildings A, B, C, D, E, H, and J state to route the condensate to the lavatory tailpieces in the adjacent restroom. In lieu of routing the condensate to the tailpiece, would it be acceptable to route the condensate drain as per the attached sketch for buildings A, B, C, D, E, H, and J? The drain will be routed from the fan coil unit across the electrical room into the mechanical room, along the mechanical room wall, down the wall, across the floor next to the housekeeping pad, and across to the floor drain. Any tripping hazard in the mechanical room due to the condensate being routed along the floor will be kept to a minimum because the condensate is next to the housekeeping pad. The condensate will be mounted on 1-5/8" strut along the floor and along the wall.

Sincerely,

Fred Duckart
Project Manager

— SCALE: 1/2"=1'-0" **10M**

MECHANICAL ROOM - HOUSING TYPE 2 SCALE: 1/2"=1'-0" **5M**

SECTION AT HOUSING UNIT SCALE: 1/2"=1'-0" **10H**

RECEIVED
MAR 1 0 2005
The Taylor Group

Request for Information TGA-0044
Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining
Project # 906250-GS-C
Tel: 209-724-4321 Fax: 209-724-4468
University of California - Merced

RFI #: TGA-0044 Importance: Construction Date Created: 3/10/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	3/10/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Housing-Housekeeping Pads at Building G and J
Discipline: Architectural
Category: Clarification

Specification Section / Reference / Reference Drawings

Cost Impact: Not Sure
Sched Impact: Not Sure
Dwg Impact: Not Sure

Cost Impact Comments / Sched Impact Comments / Dwg Impact Comments

Sketch Numbers

Author Company: Bernards Brothers
Authored By: Tony Valdez
Author RFI Number

Cc: Company Name / Contact Name / Copies / Notes

Question — Date Required: 3/24/200
Please refer to sheet 5M and 10M/M2.03

The Housekeeping Pads in the Mechanical Rooms for Building J and G were not installed. The equipment in these rooms have skirts that keep it off the floor (Hot Water Storage Tank and Expansion Tank). Since the equipment is on skirts, please review and confirm the housekeeping in these two buildings can be deleted.

Suggestion

Answer Company: The Taylor Group Architects
Answered By: Ramon Torres, Aaron MacDonald
Co-Respondent: Steven Jones
Answer: See attached email from Steven Jones
Date Answered: 3/15/05

Prolog Manager Printed on: 3/10/2005 Hallmark_UnivCaMerced

Page 1 of 2

Ramon Torres

From: Ramon Torres [ramontorres@ttgarchitects.com]
Sent: Tuesday, March 15, 2005 10:14 AM
To: ramontorres@ttgarchitects.com
Subject: FW: TGA - 044
Attachments: TGA - 044 Fortmeyer.pdf

-----Original Message-----
From: Steven Jones [mailto:stevenj@teterae.com]
Sent: Friday, March 11, 2005 1:19 PM
To: ramontorres@ttgarchitects.com
Cc: Justin Fortmeyer
Subject: FW: TGA - 044

Ramon,

We have reviewed the attached RFI # TGA-044 regarding housekeeping pads in the housing mechanical rooms and have the following recommendation:

Install concrete housekeeping pads as indicated on the plans and specifications.

If you have any concerns or questions, please do not hesitate to call.

Thank You,

Steven A. Jones, P.E.
Mechanical Engineer

teter a + e, LLP
Architects & Engineers
8405 N. Fresno St. Suite 300
Fresno, CA 93720

Ph: 559.437.0887
Fx: 559.438.7554
email: stevenj@teterae.com

From: Justin Fortmeyer
Sent: Thursday, March 10, 2005 3:25 PM
To: Steven Jones
Subject: FW: TGA - 044

Steve:

Please respond to this. Thanks!

Justin

From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Thursday, March 10, 2005 1:41 PM

Request for Information TGA-0098 rev
Detailed, RFIs with Routing Information Grouped by RFI Number

Garden Suites and Lakeview Dining
Project # 906250-GS-C
Tel: 209-724-4321 Fax: 209-724-4468
University of California - Merced

RFI #: TGA-0098 Importance: Construction Date Created: 4/4/2005

From / To	Company	Sent / Received	For / Comments	Via
Tony Valdez	Bernards Brothers	4/4/2005	Action	Hand
Ramon Torres	The Taylor Group Architects			

Subject: Pipe Supports
Discipline: Mechanical
Category: Confirmation

Specification Section / Reference / Reference Drawings

Cost Impact: Not Sure
Sched Impact: Not Sure
Dwg Impact: Not Sure

Cost Impact Comments / Sched Impact Comments / Dwg Impact Comments

Sketch Numbers

Author Company: Bernards Brothers
Authored By: Tony Valdez
Author RFI Number

Cc: Company Name	Contact Name	Copies	Notes
The Hallmark Group	Fran Telechea	1	
Bernards Brothers	Ron Bernards	1	
The Hallmark Group	Steve Roach	1	

Question — Date Required: 4/6/2005
Attached is a sketch of a pipe support that we would like to use to support the chilled water and condensate piping when they are mounted against a wall. It will be used in conjunction with the fan coil units. The attached detail includes weight of pipe filled with water, strut size, etc. Please review and confirm proposed detail is acceptable.

Suggestion

Answer Company: The Taylor Group Architects
Answered By: Ramon Torres
Co-Respondent
Date Answered: 4/5/05
Answer: See attached response from Klare Yavasile - letter dated 4/5/05
Ramon Torres/TTG

Prolog Manager Printed on: 4/4/2005 Hallmark_UnivCaMerced Page 1

BROOKS RANSOM ASSOC. NO. 294 P. 2

BROOKS RANSOM ASSOCIATES
STRUCTURAL ENGINEERS
CIVIL ENGINEERS
7415 N. PALM - SUITE 100 • FRESNO, CALIFORNIA 93711
TELEPHONE (559) 449-8444 • FAX (559) 449-8404

UC Merced
5320 N. Lake Road
Merced, CA 95340
Garden Suites & Lakeview Dining

TGA-0098A

DATE: April 5, 2005

TO: Ramon Torres
AT: Taylor Group

FROM: Klare W. Yavasile, S.E.

The proposed method of providing the pipe support for two 1" diameter copper water pipes as shown on the submitted detail dated April 1, 2005, is acceptable to our office.

The above responses/clarifications are responding to requests from the contractor, with regard to the structural design intent only. No other approvals are intended, nor should they be inferred. It is the contractor's and/or architect's responsibility to coordinate any and all changes with the other trades, consultants, and reviewing agencies.

MECHANICAL ROOM - HOUSING TYPE 1 SCALE: 1/2"=1'-0" **10M**

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
Russel F. Taylor, No. C15291, 1-31-2005
Stephen A. Becker, M016029, Exp. 12-31-03
Architect Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	*04.23.03*
Bld'g Foundations Submittal	*05.27.03*
50% C.D. SUBMITTAL	*06.02.03*
100% C.D. SUBMITTAL	*07.30.03*
DSA/SS/FLS RESUBMITTAL	*10.06.03*

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC DS FLS ____ SS ____
DATE ____

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL

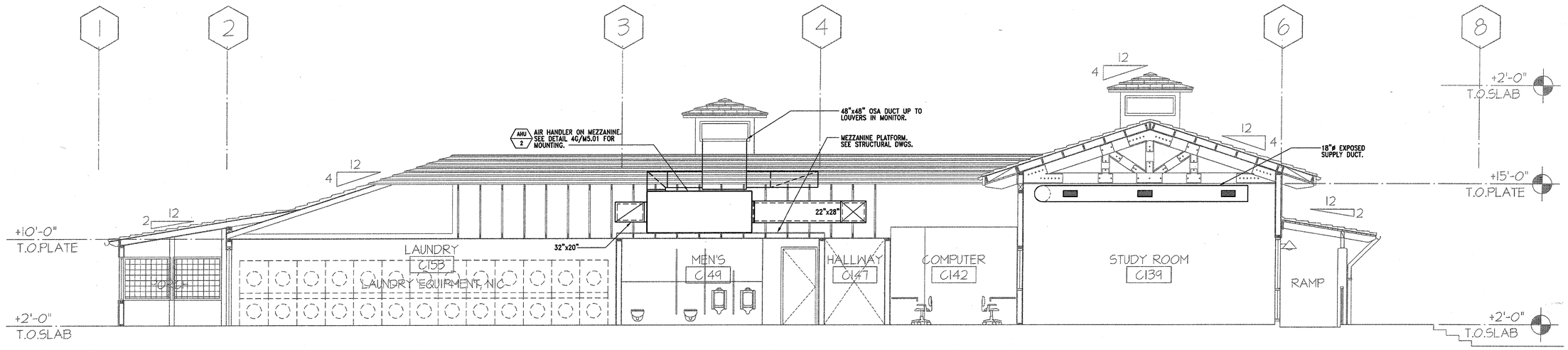
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

Drawn By: JW
Revision Date: 5-27-03
Plot Date:
Scale: 1/4"=1'-0"

Key Plan:

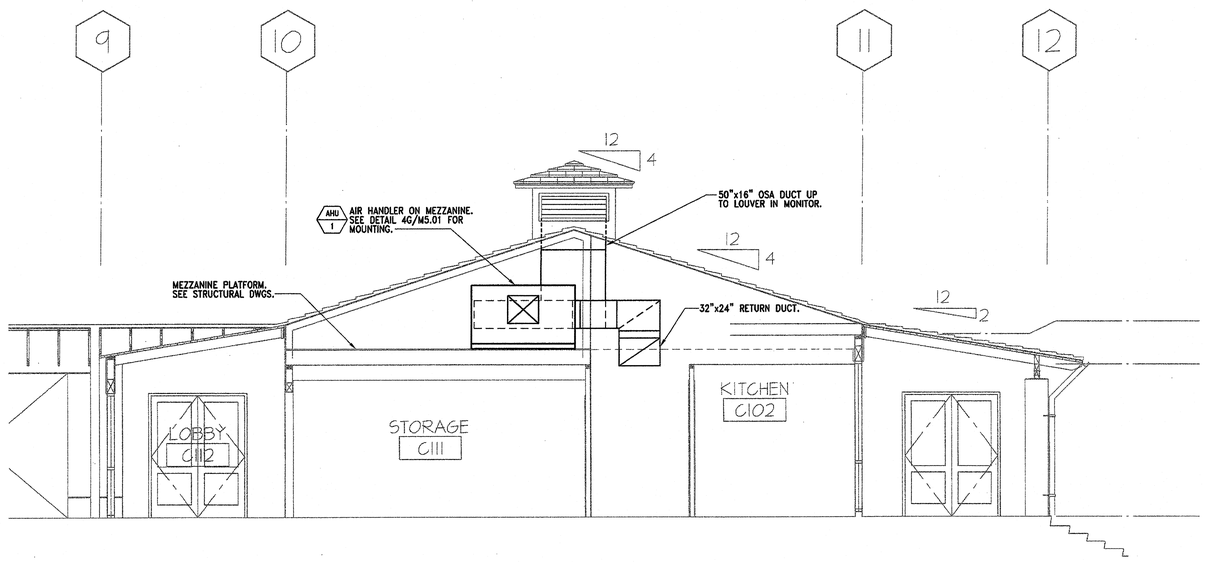
Drawing Title
MECHANICAL ROOMS PARTIAL PLANS

Drawing Number:
M3.02



COMMONS BLDG - SECTION

SCALE: 1/4"=1'-0" 5M



COMMONS BLDG - SECTION

SCALE: 1/4"=1'-0" 10M

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS

10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature

Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

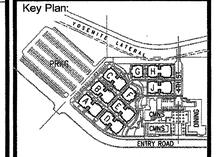
Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 01-105208
AC. 05 FLS. SS.
DATE

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
906250
Project #:
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	1/4"=1'-0"

Key Plan:



Drawing Title
MECHANICAL COMMONS BLDG SECTIONS

Drawing Number:
M3.03

Mauldin-Dorfmeier Construction, Inc.
3240 N. Millbrook
P.O. Box 15100
Fresno, CA 93702
Phone: 559-252-4600
Fax: 559-252-5058

REQUEST FOR INFORMATION
No. 629

FIELD

LE: Dining-Curb for AH3
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 9/1/2004
JOB: 03017

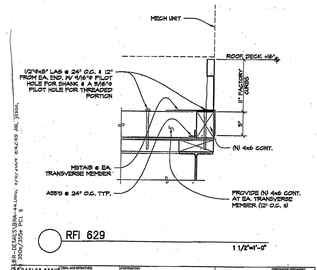
STARTED:
COMPLETED:
REQUIRED: 9/8/2004

REQUEST:

Attached is the detail depicting how we propose to frame the curb at AH3 at Dining Mechanical Well. Please review and advise if this detail is acceptable.

ANSWER:

Please provide 4x6's with 1/2" diameter lags as shown on the attached detail BRA-44.
Klare Yavasile/Brooks Ransom
9/08/04



RFI 629
1 1/2"=1'-0"

O:\2003\03114\dwg\BRA\BR-DETAILS\BRA-44.DWG, 9/8/2004 8:42:49 AM, jason,
COH Altio 350e/355e PCL 6
bra serve

TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000
FAX. 559 . 433 . 3010

SEAL AND SIGNATURE:
KLARE W. YAVASILE
No. S2486
Exp. 12-31-05

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-8463

DESCRIPTION:
UPDATE

CONSULTANT:
BROOKS RANSOM ASSOCIATES
STRUCTURAL ENGINEERS
CIVIL ENGINEERS
7415 N. PALM AVE., SUITE 100
FRESNO, CALIFORNIA 93711

UC Merced
University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

REFERENCE DOCUMENT:

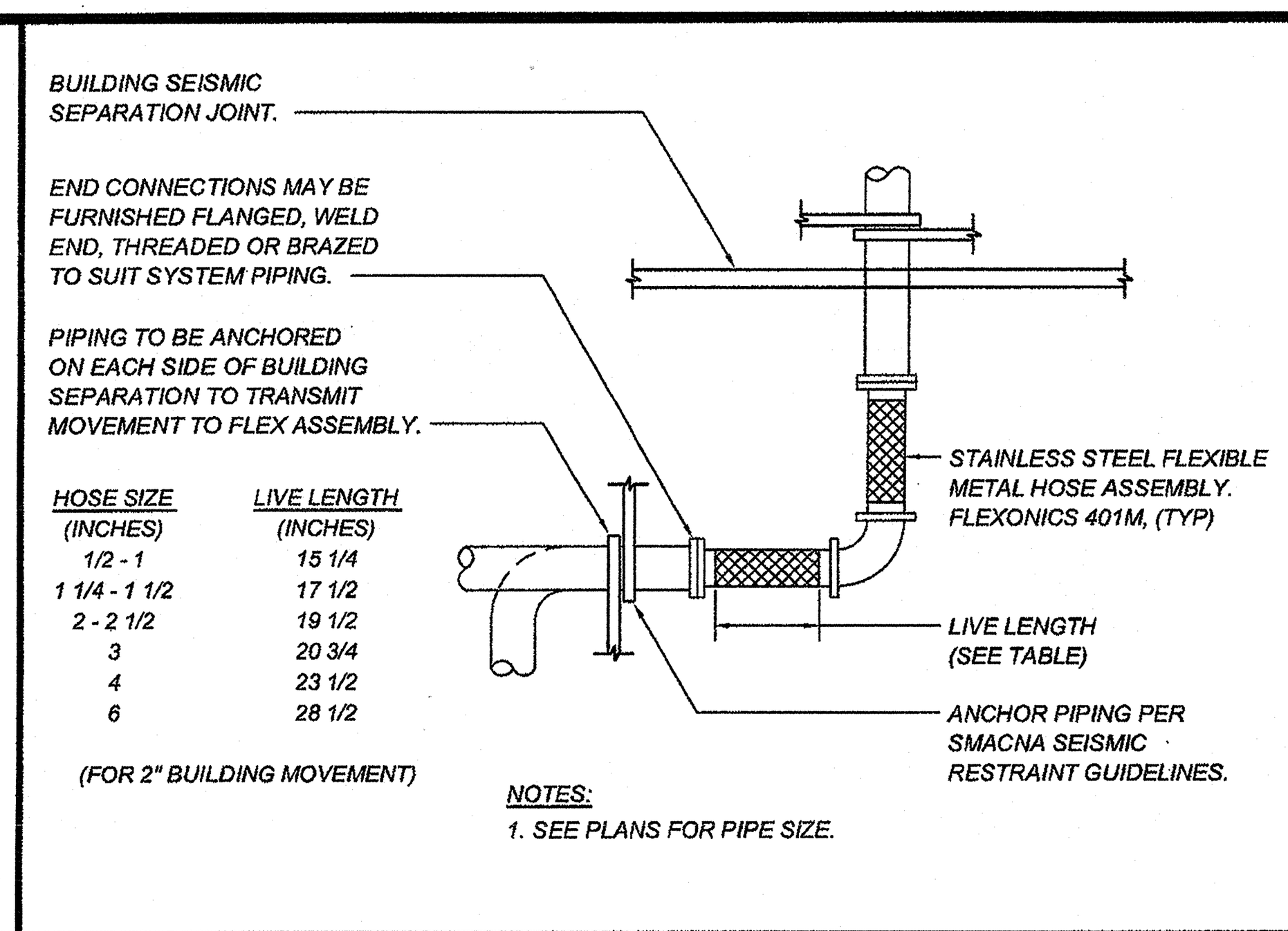
SHEET REFERENCE:

DATE:
09-07-04

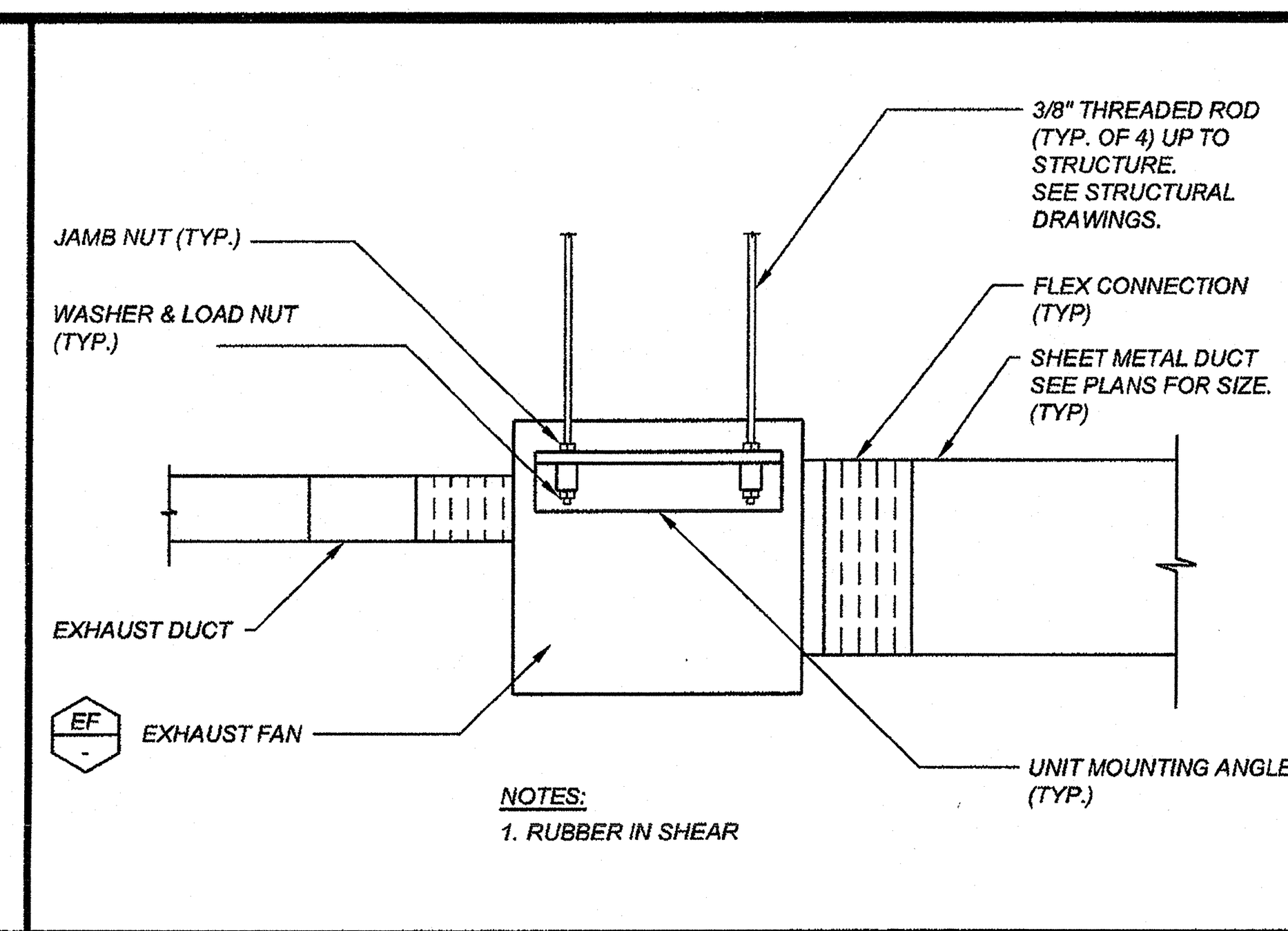
DRAWING NUMBER:
BRA-44

	2B	2E	SEISMIC LOOP 2G	EXHAUST FAN IN LINE CABINET 2K	SUPPLY AIR PLENUM AND BRANCH DUCTS 2M

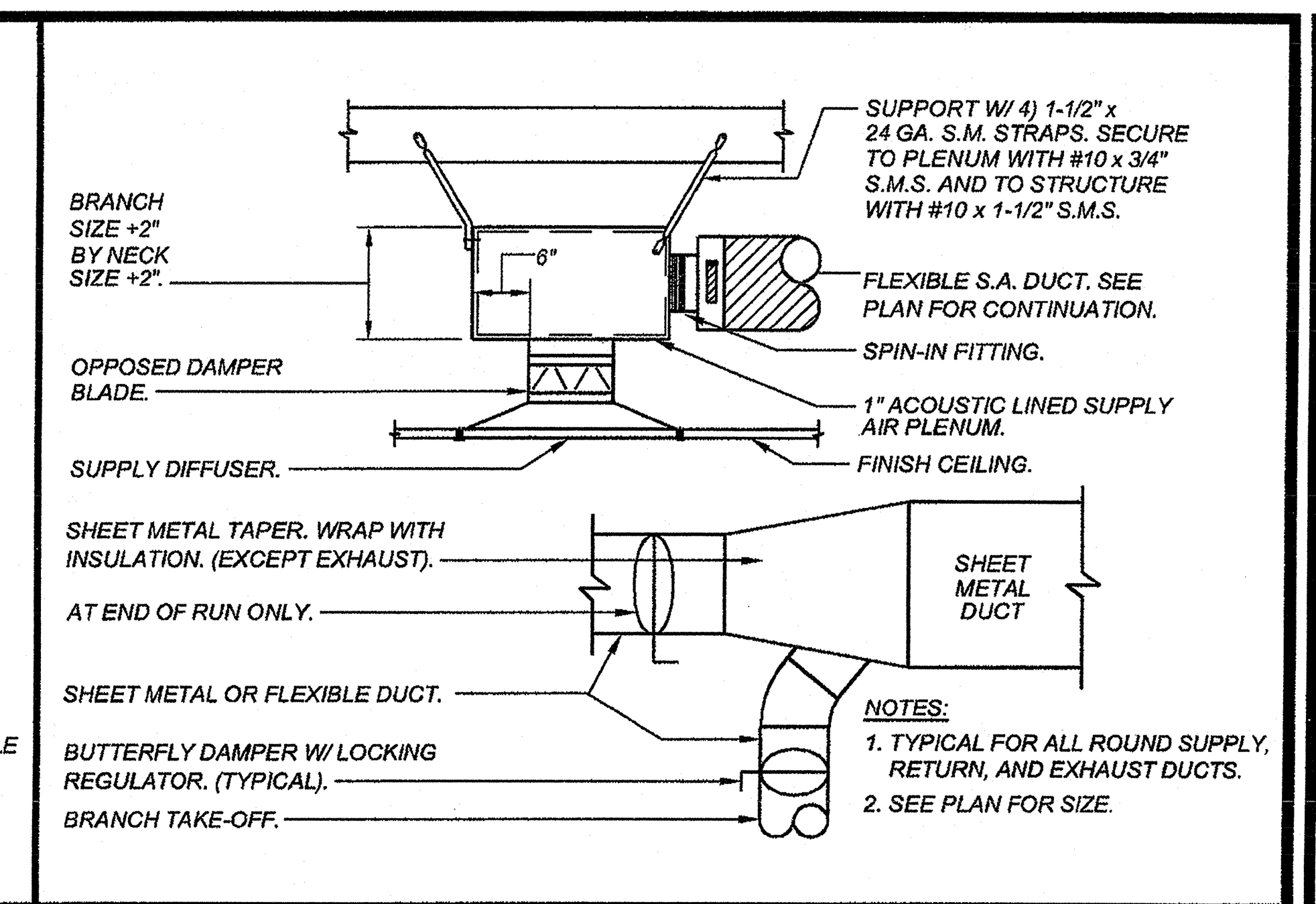
SEISMIC LOOP — 2G



EXHAUST FAN IN LINE CABINET — 2K

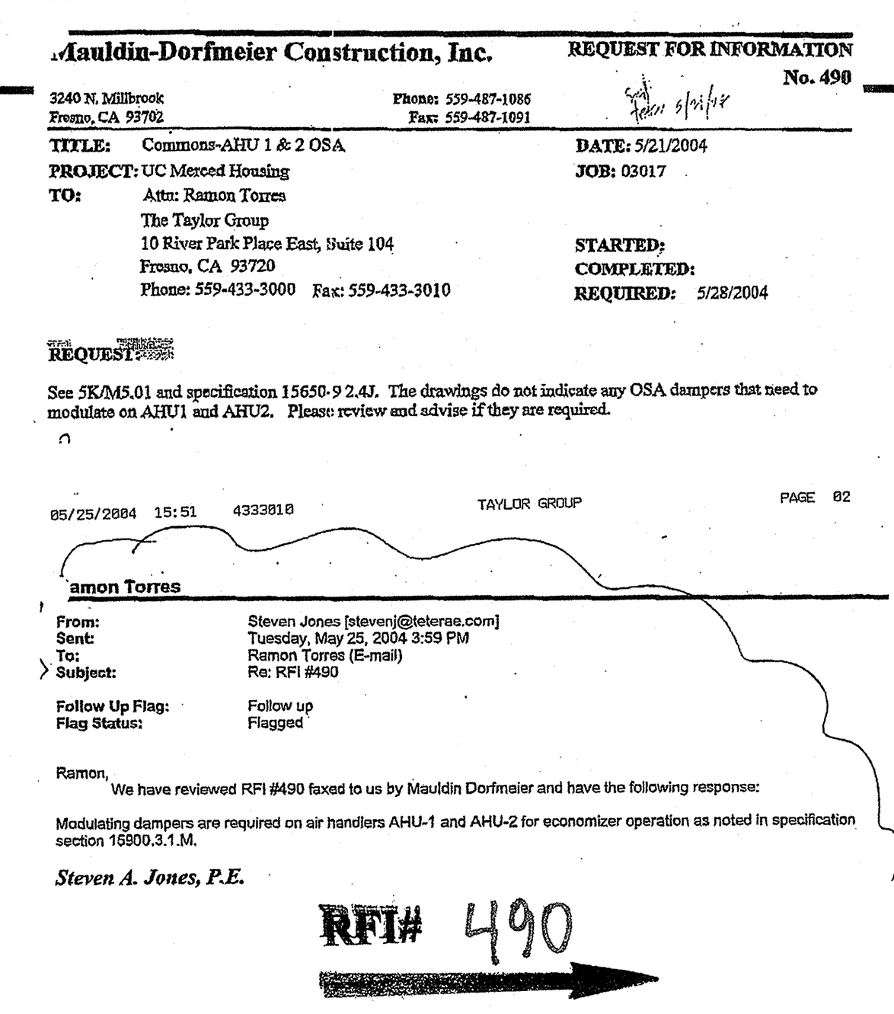


SUPPLY AIR PLENUM AND BRANCH DUCTS — 2M



	4B	4E	AIR HANDLER MOUNTING NTS 4G	FAN COIL (SUSPENDED) 4K	SPIN-IN TAKE OFF 4M

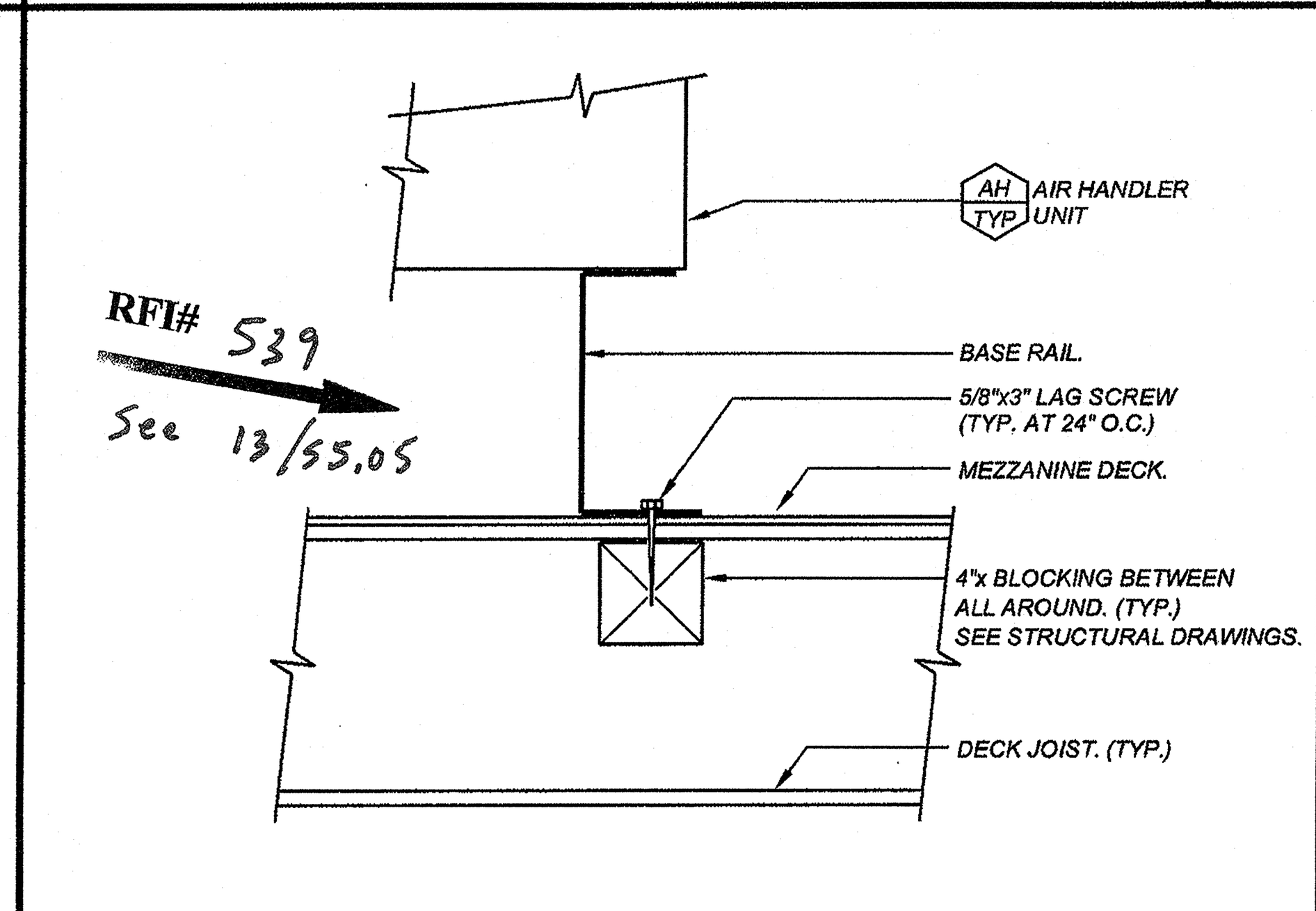
4E



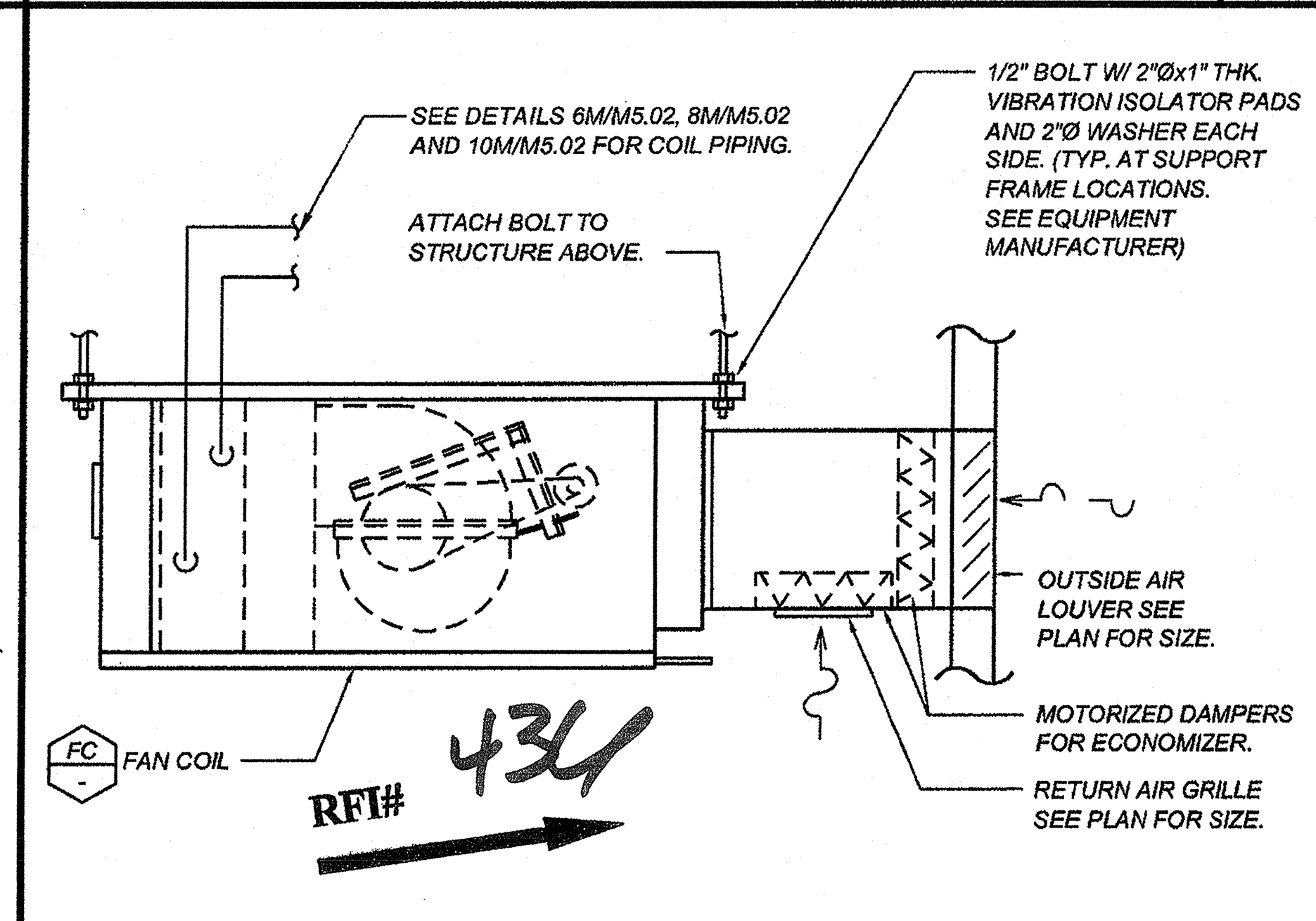
Commons - AHU 1 & 2 OSA

5K

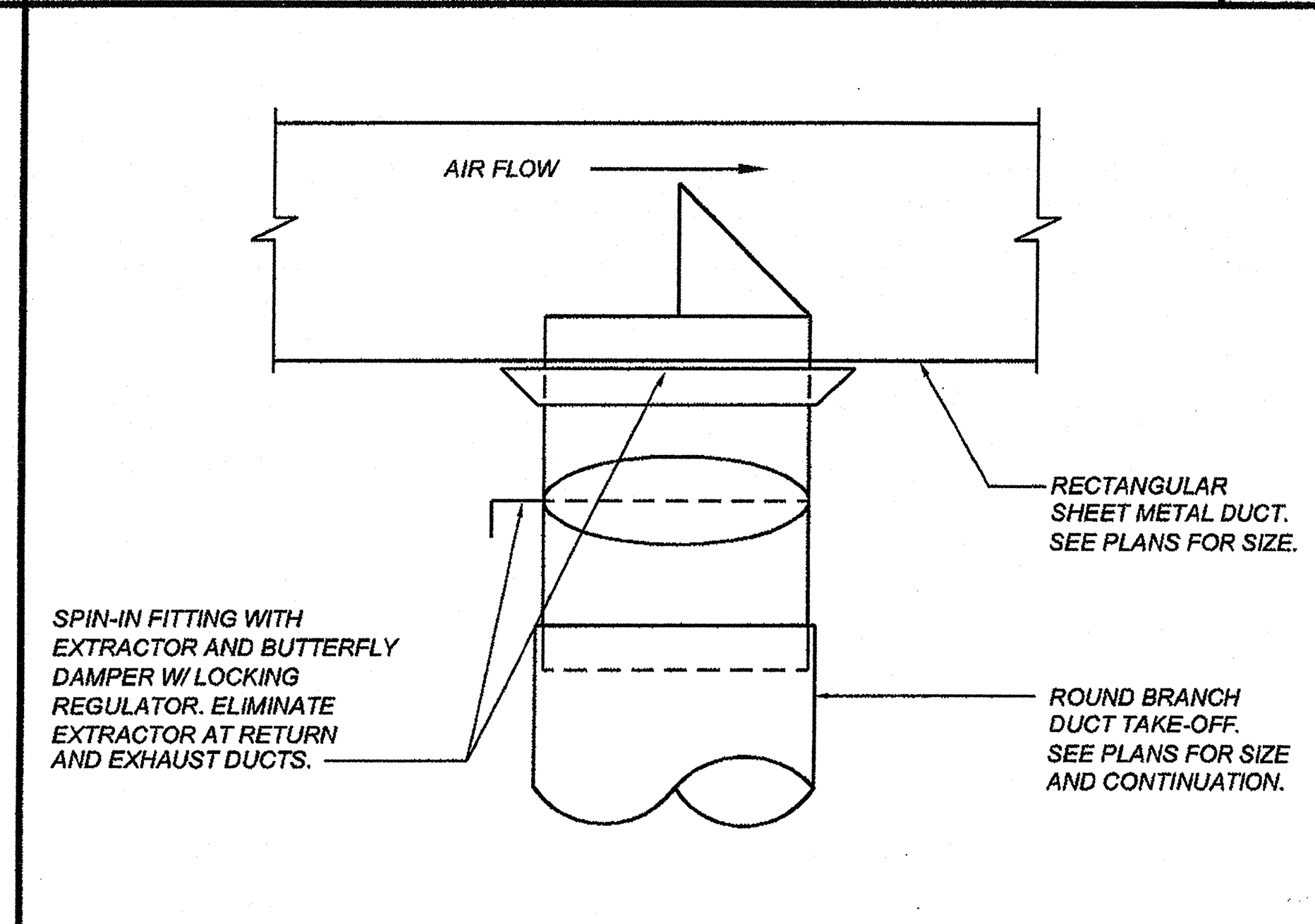
AIR HANDLER MOUNTING — 4G



FAN COIL (SUSPENDED) — 4K

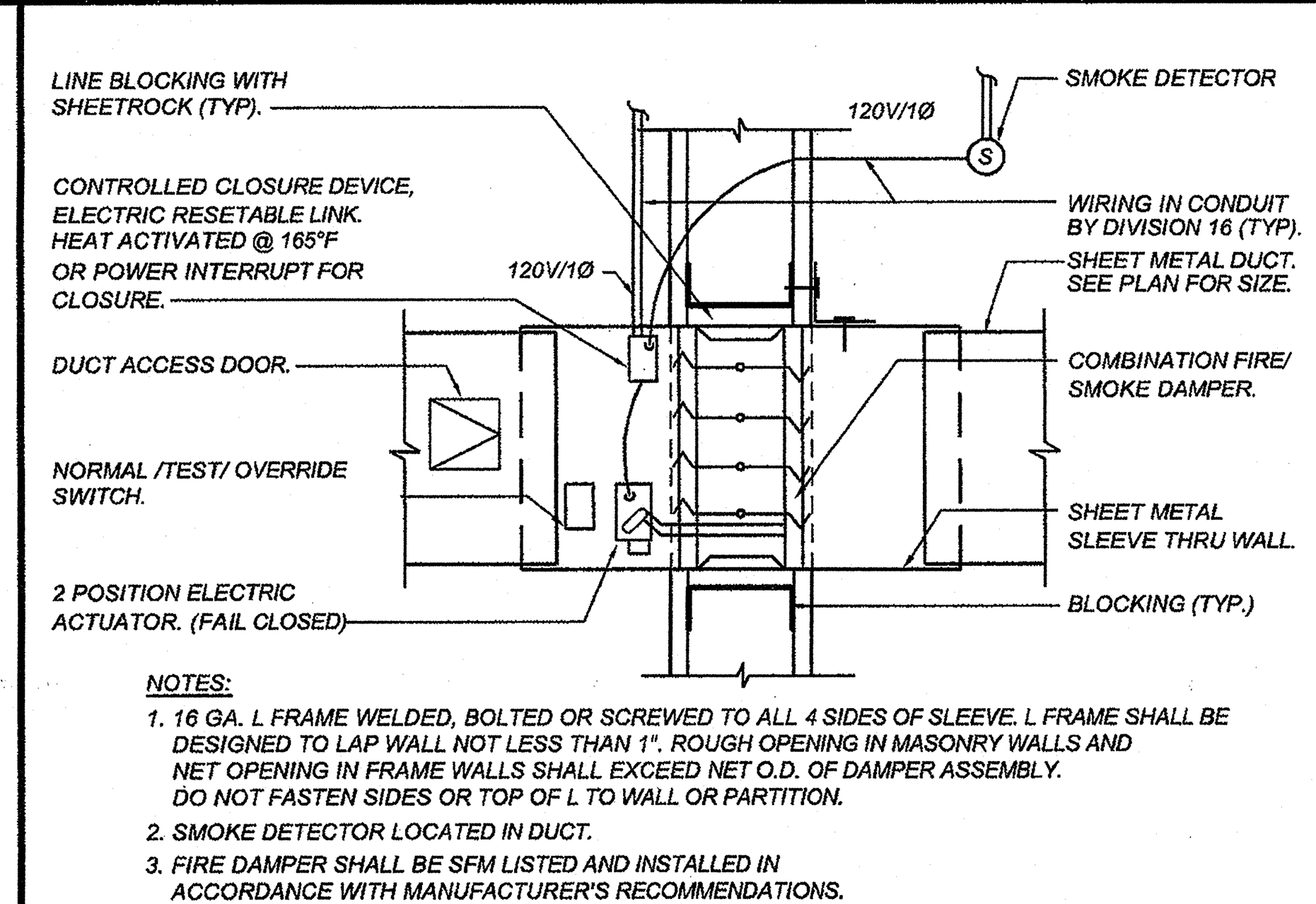


SPIN-IN TAKE OFF — 4M

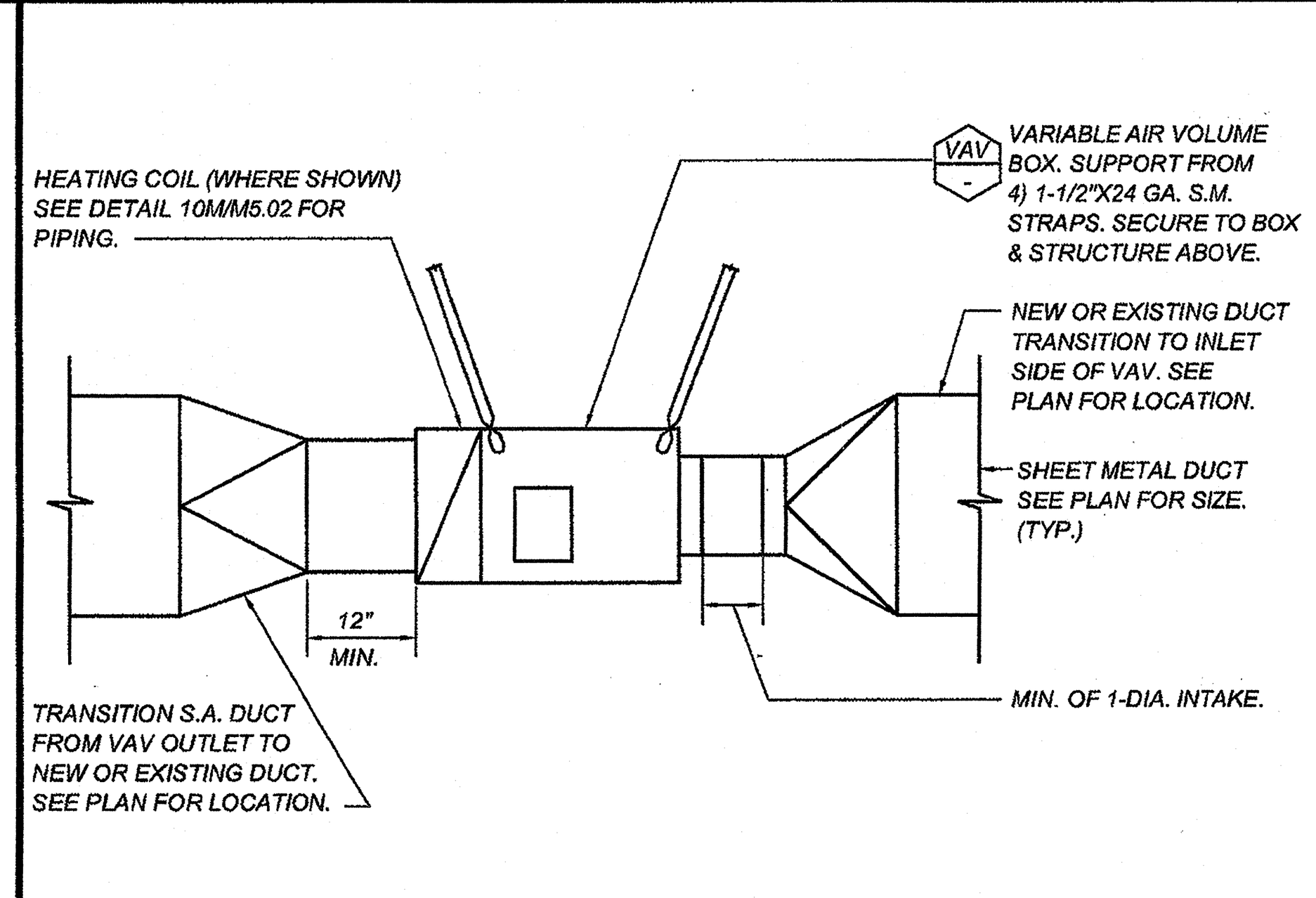


	6B	6E	FIRE/SMOKE DAMPER THROUGH WALL 6G	VAV BOX MOUNTING 6K	EQUIPMENT CURB - METAL 6M

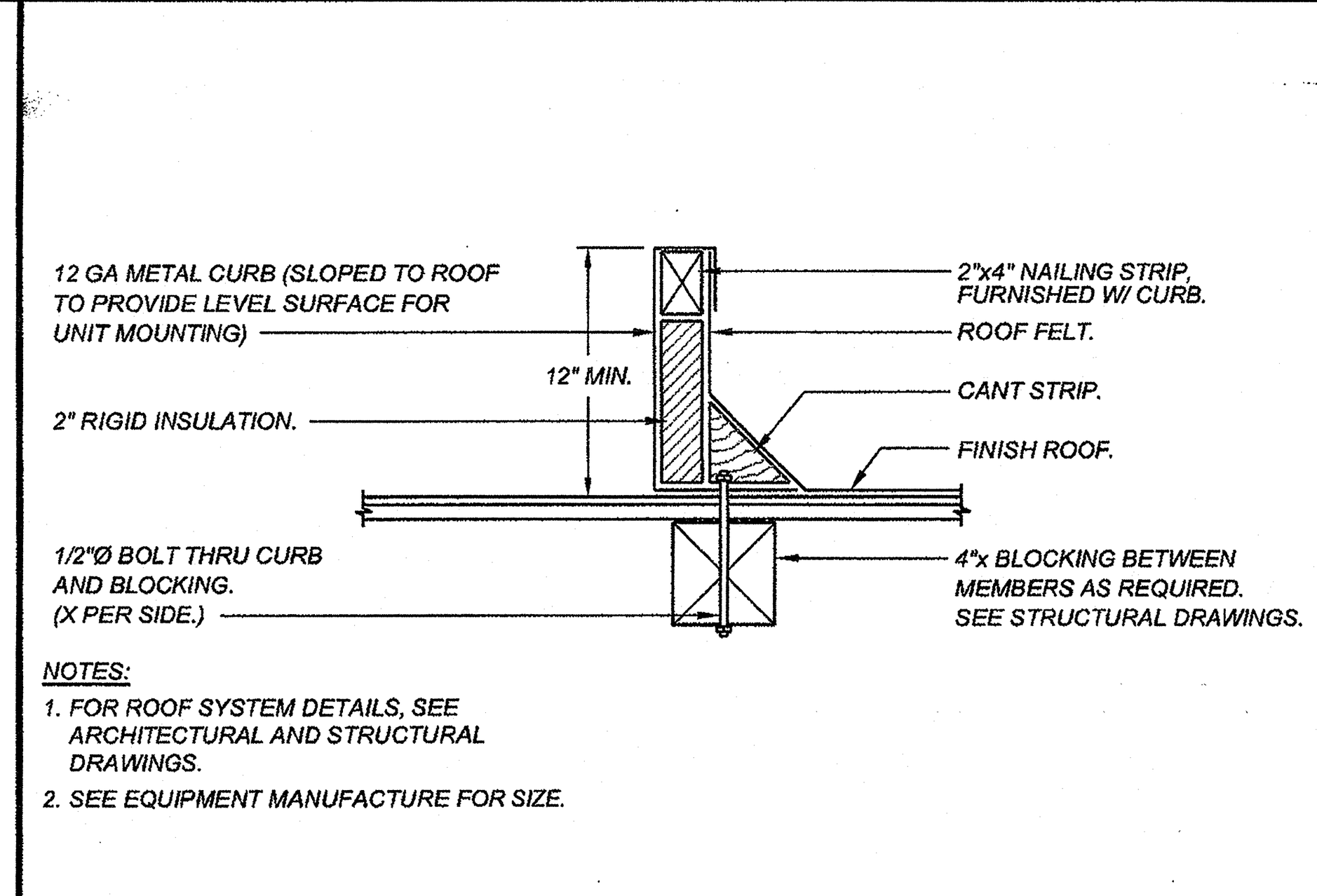
FIRE/SMOKE DAMPER THROUGH WALL — 6G



VAV BOX MOUNTING — 6K

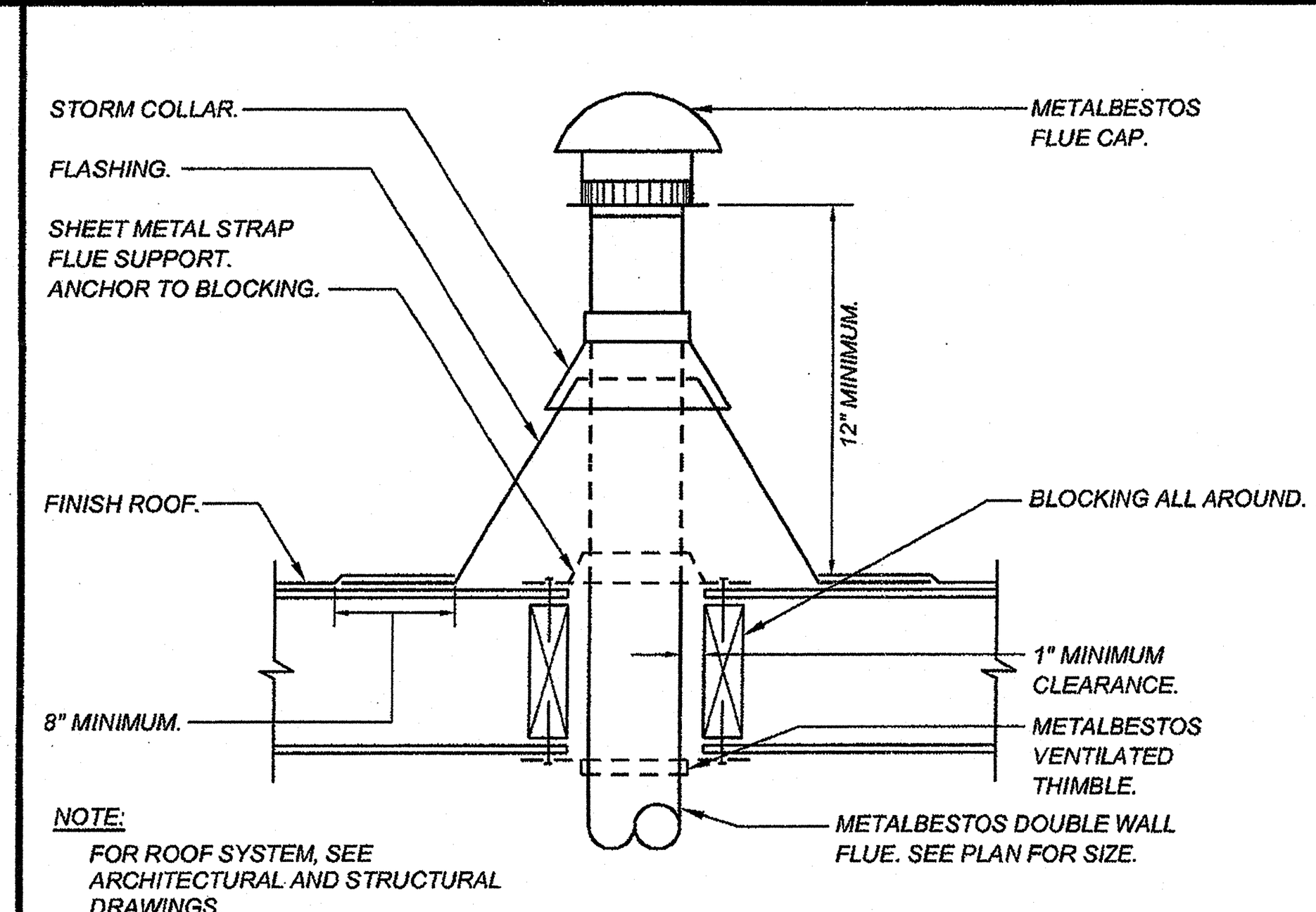


EQUIPMENT CURB - METAL — 6M

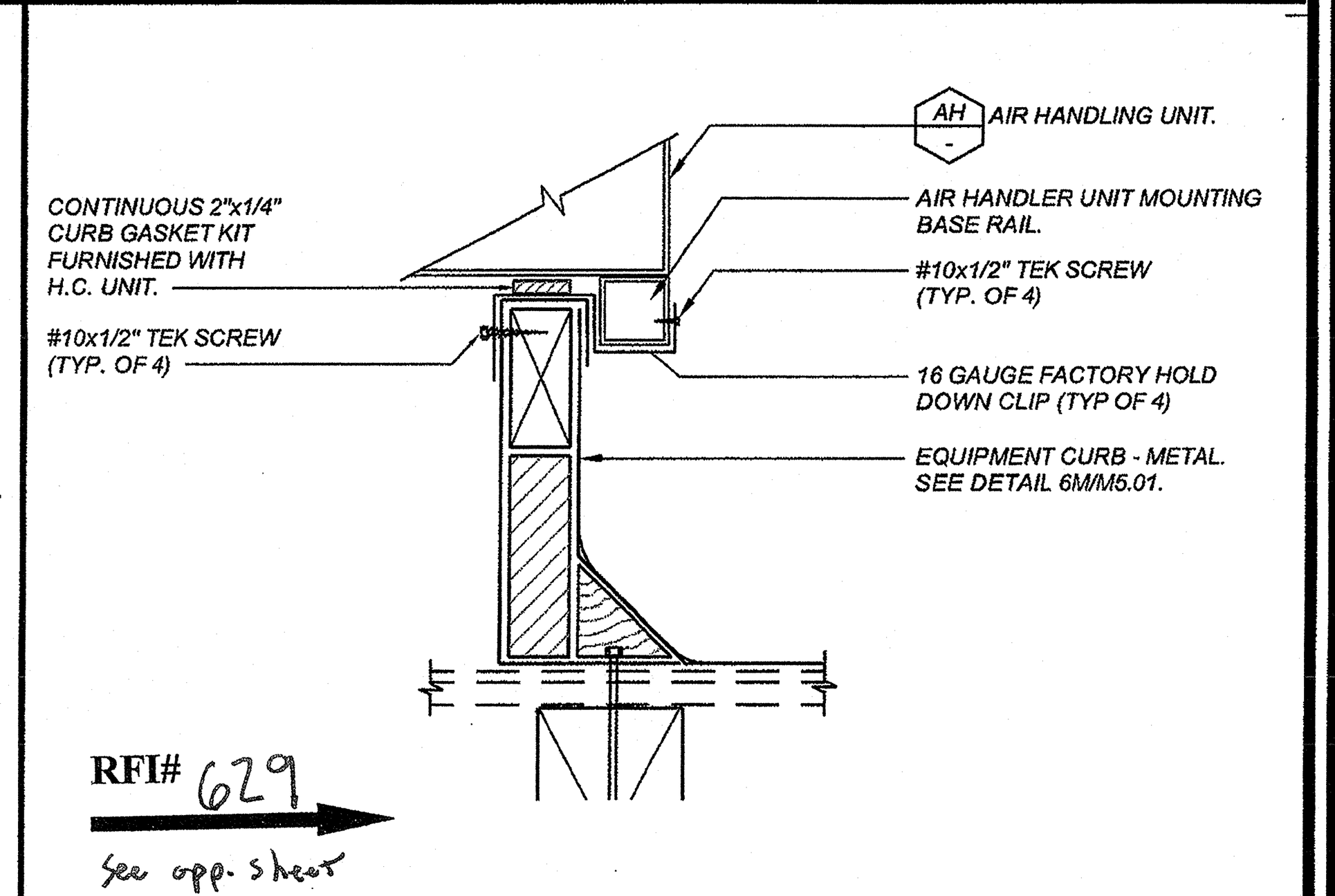


	8B	8E	8G	FLUE THROUGH ROOF - FLAT 8K	MECHANICAL UNIT ON METAL CURB 8M

FLUE THROUGH ROOF - FLAT — 8K

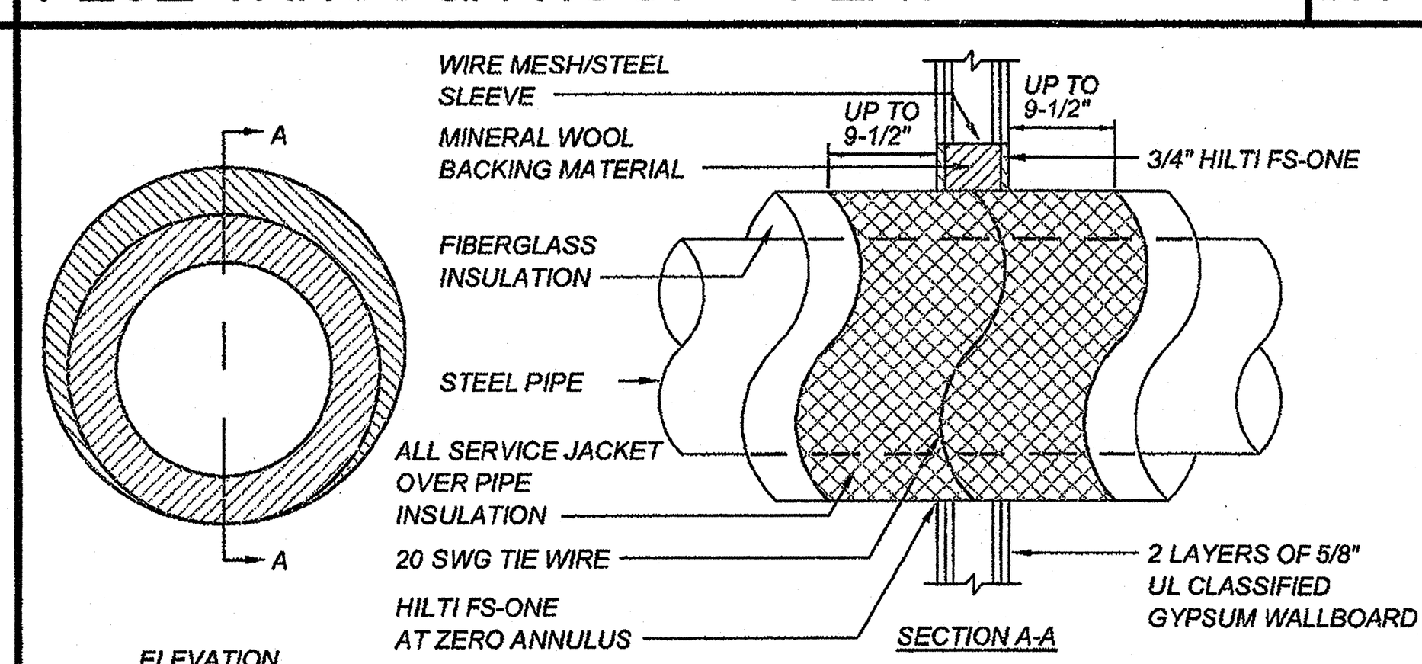


MECHANICAL UNIT ON METAL CURB — 8M



	10B	10E	10G	PIPE - WOOD WALL W/ FIRESTOP (INS.) 10K	EXHAUST FAN ON METAL CURB 10M

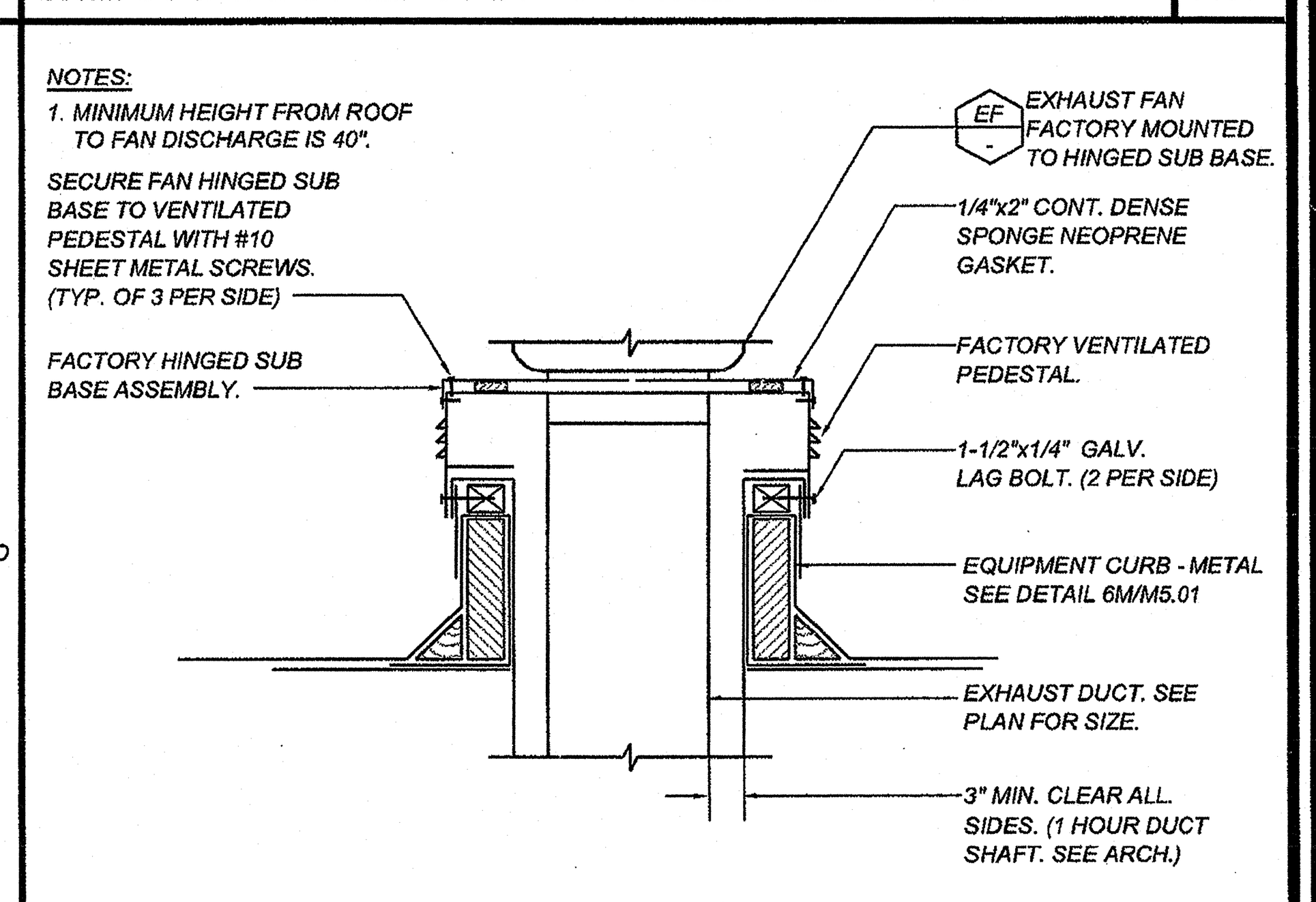
PIPE - WOOD WALL W/ FIRESTOP (INS.) — 10K



PENETRATION FIRESTOP FOR AN INSULATED PIPE THROUGH A GYPSUM WALLBOARD ASSEMBLY

NOTES:
1. HILTI FS-ONE FIRE SEALANT MEETS U.L. SYSTEM NO. W-L-5029 (2001 EDITION).
2. ALL PENETRATIONS THRU RATED WALLS & FLOORS SHALL BE SEALED WITH A FIRE BARRIER (HILTI FS-ONE) WHICH MEETS ASTM E-814 REQUIREMENTS.
3. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION.
4. SEE PLAN FOR PIPE SIZE.

EXHAUST FAN ON METAL CURB — 10M



UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature

LICENSED ARCHITECT — RUSSELL F. TAYLOR — NO. C15291 — 1-31-2005 RENEWAL DATE — STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER — STEPHEN A. JONES — Exp. 12-31-03 — MECHANICAL — STATE OF CALIFORNIA

Architect | Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-8463

CONSULTANT:

DRAWING STAGE:

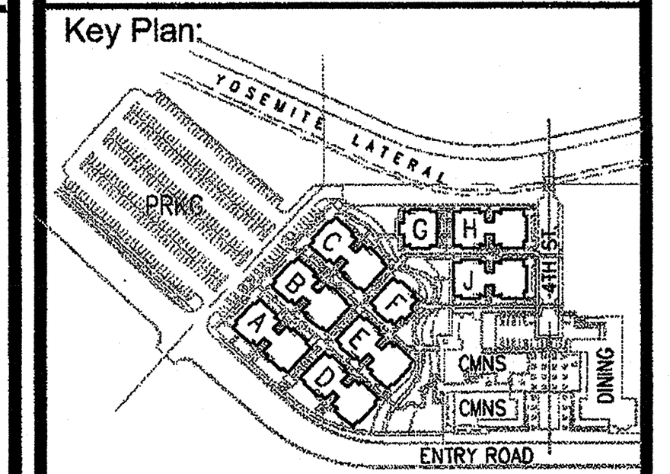
Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC ___ FLS ___ SS ___
DATE ___

UNIVERSITY OF CALIFORNIA MERCED
FIRE MARSHAL
COF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	NONE

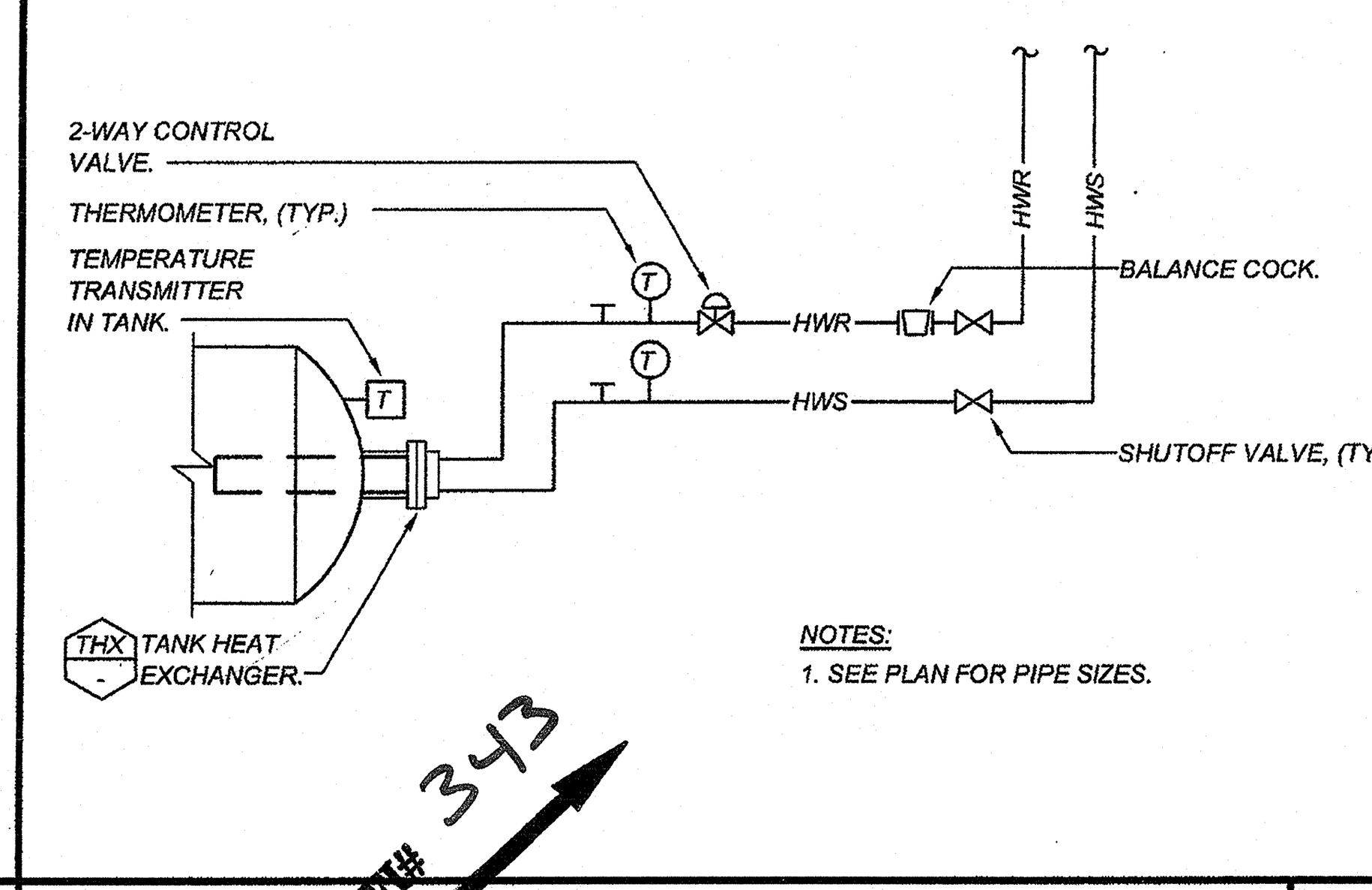
Key Plan:



Drawing Title
DETAILS

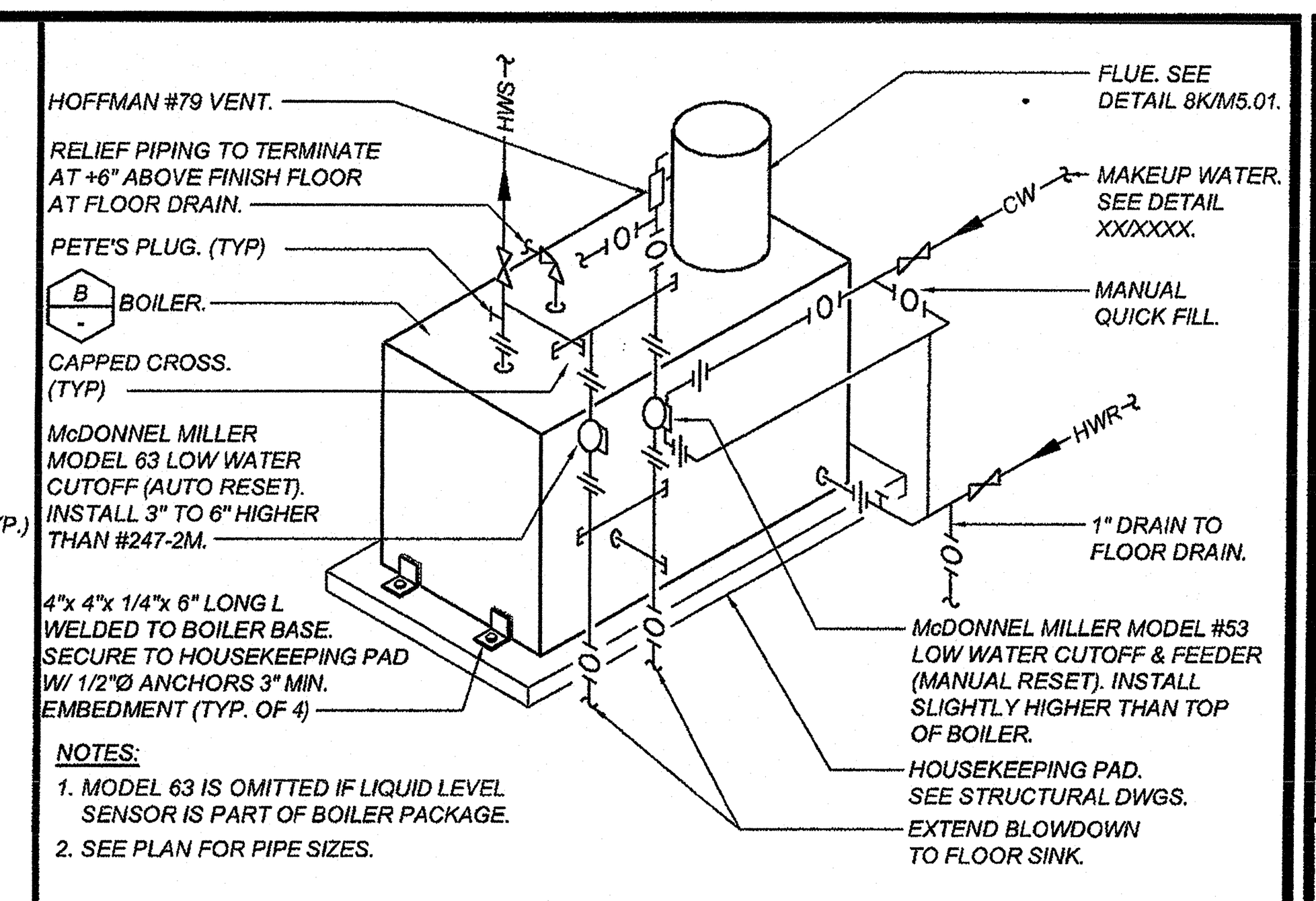
Drawing Number:
M5.01

2B	2E	2G
4B	4E	4G
6B	6E	6G
8B	8E	8G
10B	10E	10G

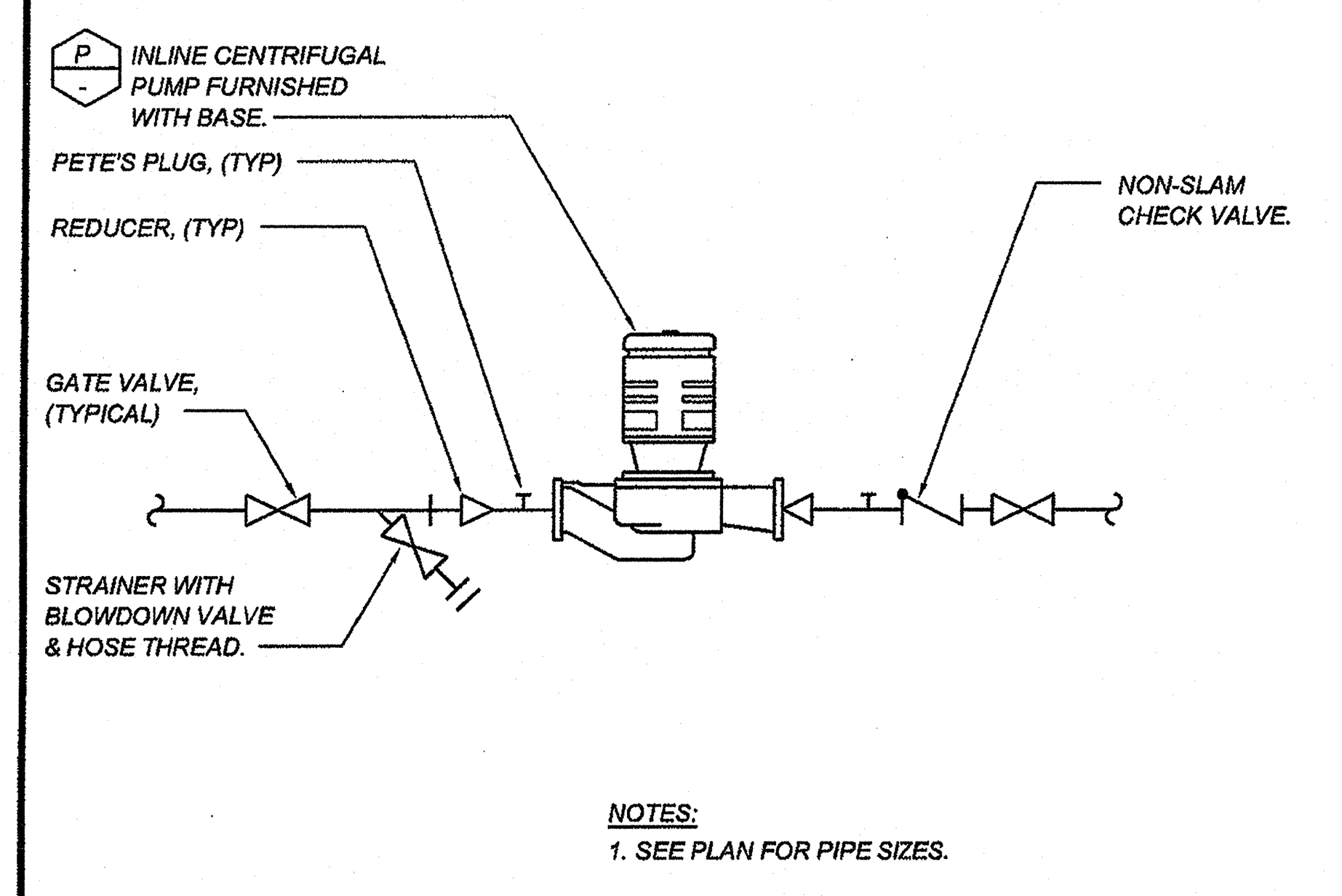


343

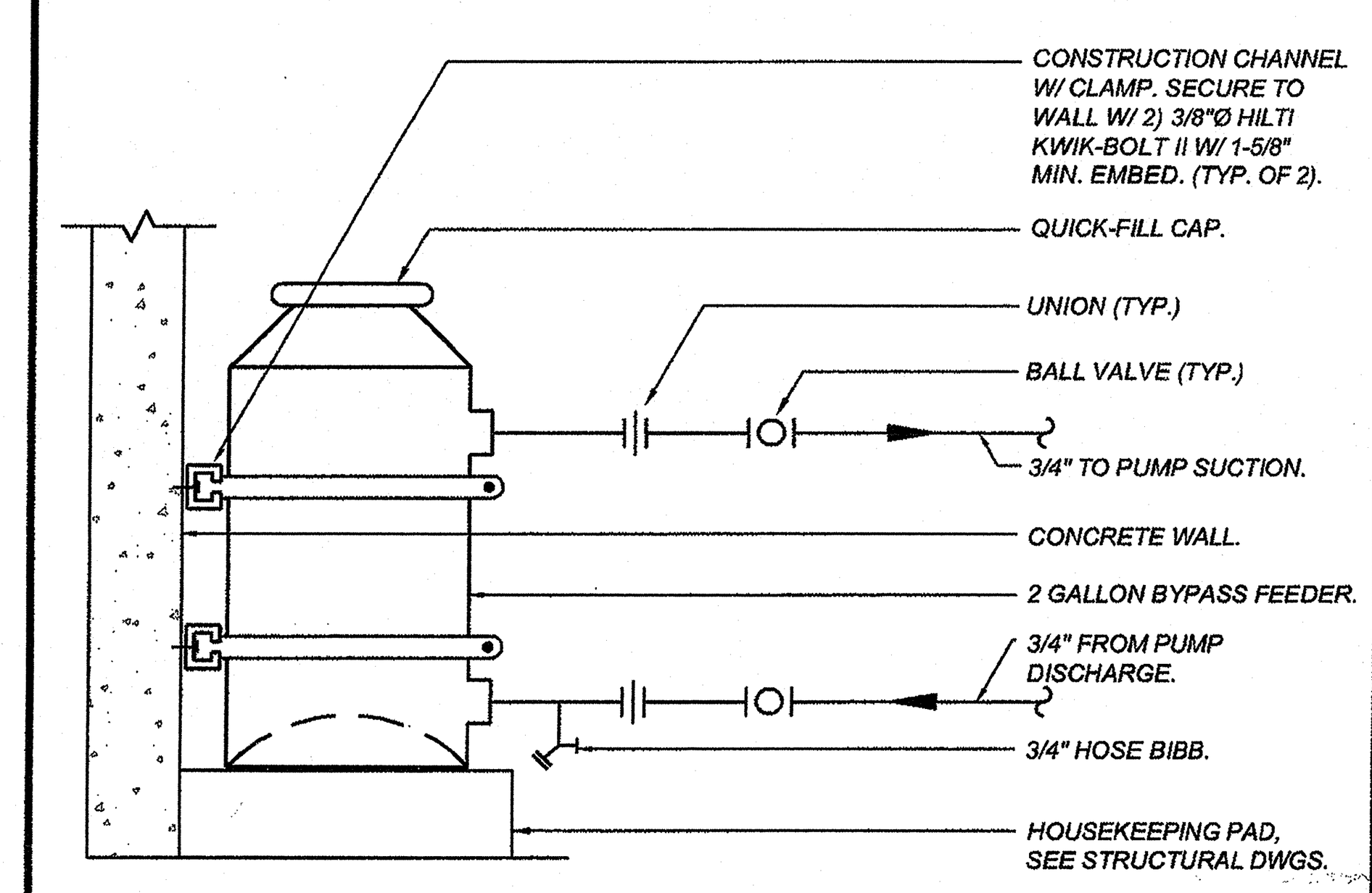
HEAT EXCHANGER - DOMESTIC NTS 2K



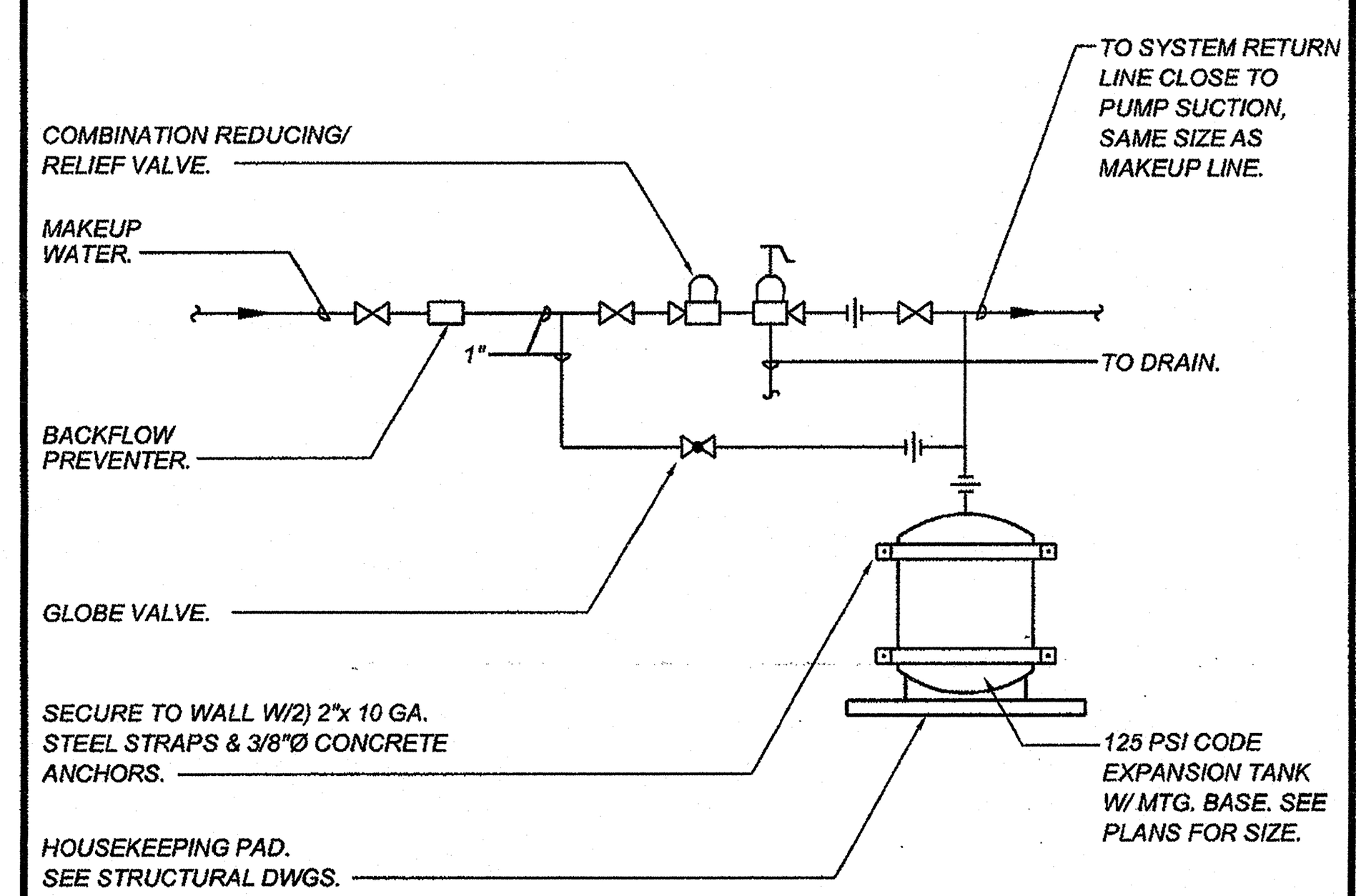
BOILER - HOT WATER 2M



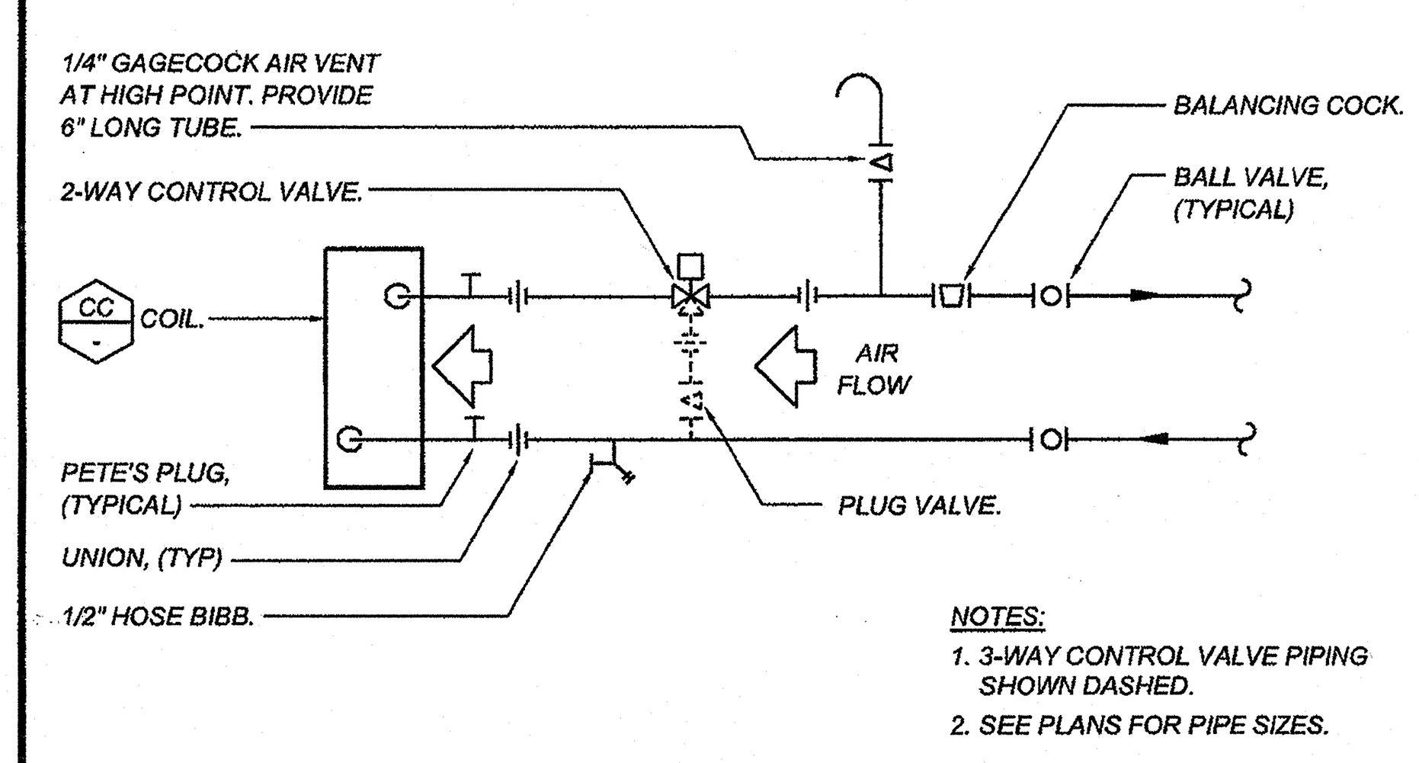
PUMP - IN-LINE 4K



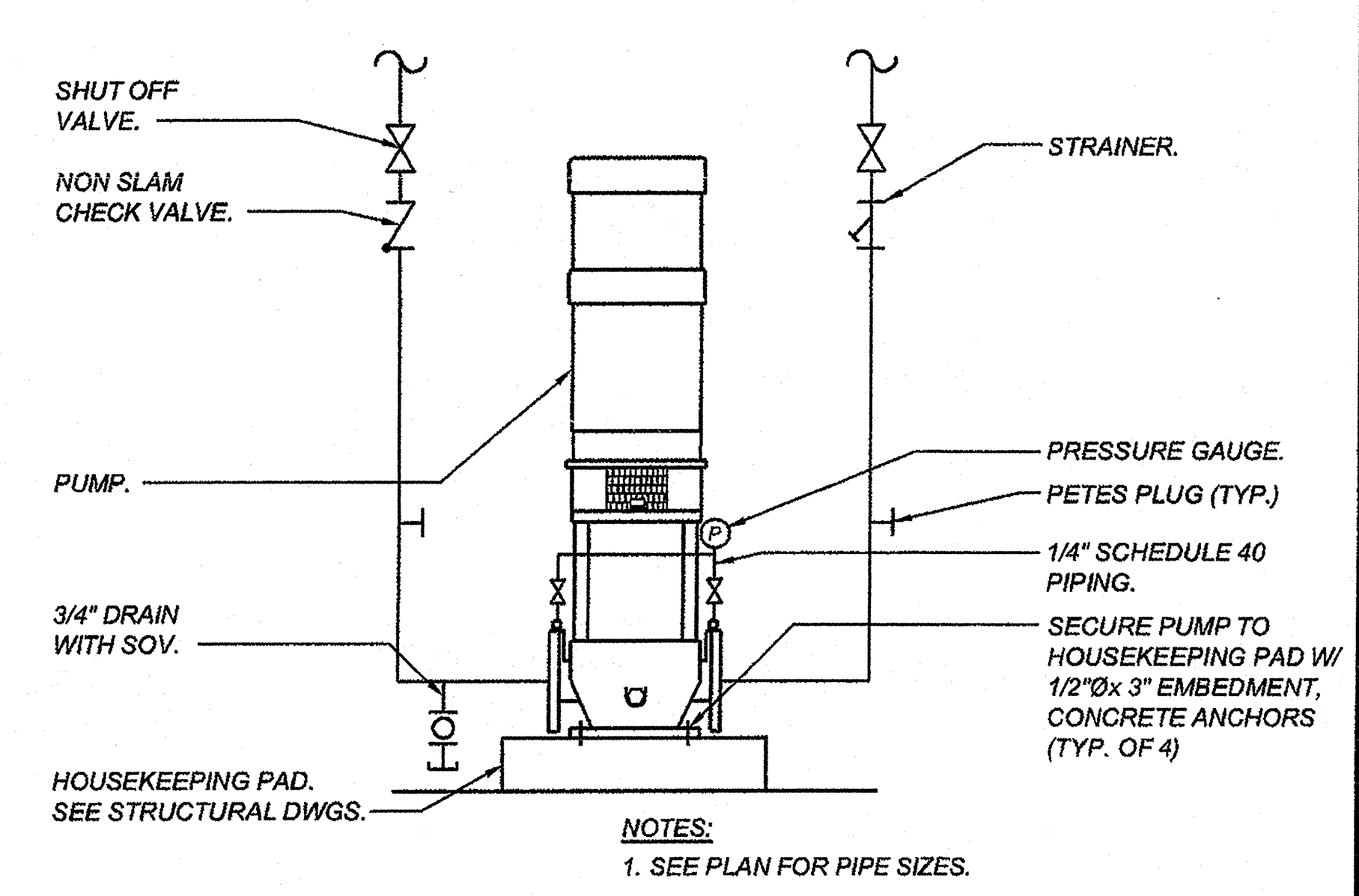
BYPASS FEEDER - FLAT BOTTOM 4M



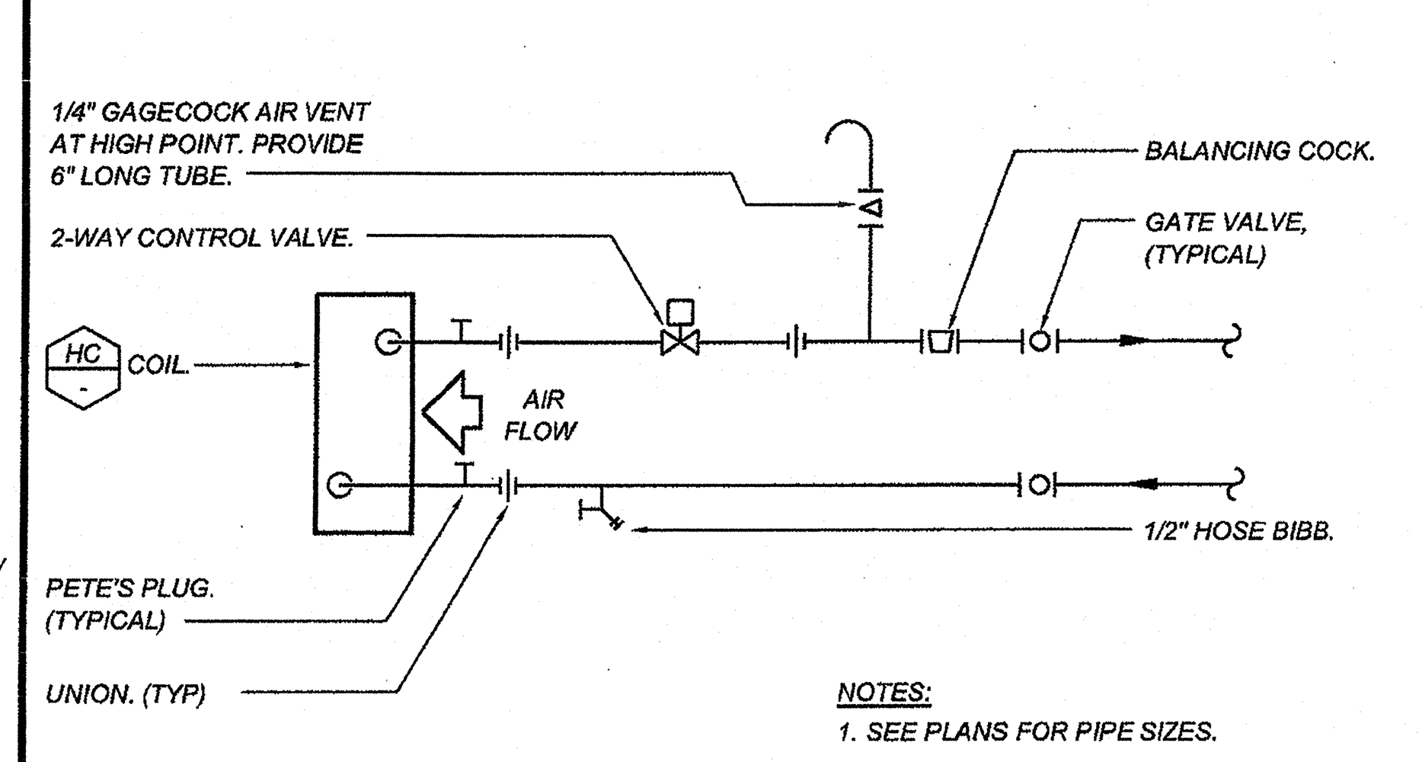
MAKEUP WATER-EXPANSION TANK 6K



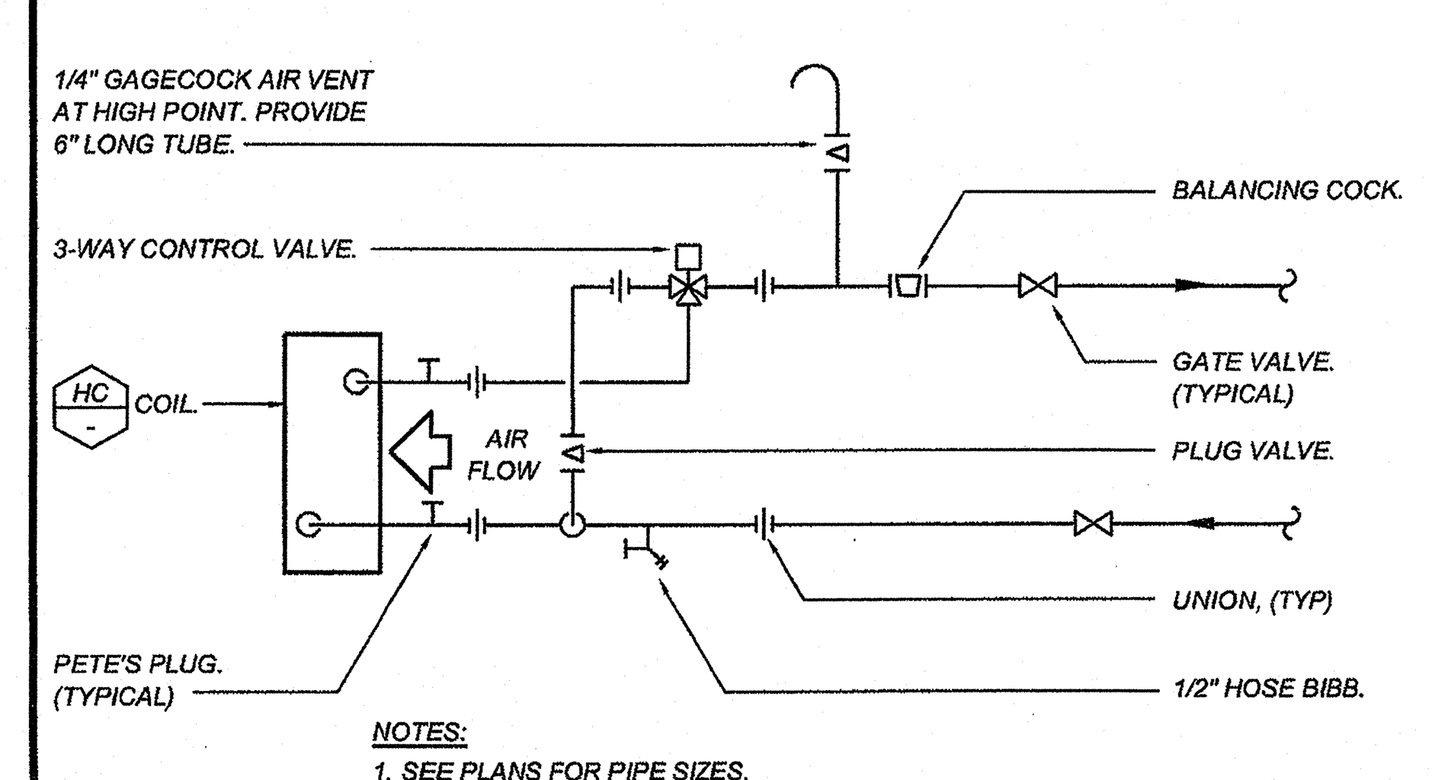
COIL - TWO WAY/THREE WAY COOLING 6M



PUMP - VERTICAL MULTISTAGE 8K



COIL - TWO WAY HEATING 8M



COIL - THREE WAY HEATING 10K 10M

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
Architect — Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-8483

CONSULTANT:

DRAWING STAGE:

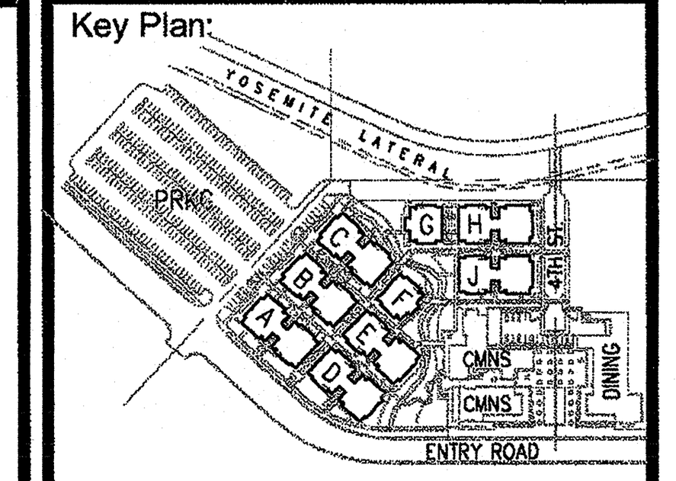
Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC FLS SS
DATE

UNIVERSITY OF CALIFORNIA MERCED FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	NONE

Key Plan:



Drawing Title
DETAILS

Drawing Number:
M5.02

03/02/2004 14:04 4333010 TAYLOR GROUP RECEIVED MAR 2 2004 PAGE 01

Mauldin-Dorfmeier Construction, Inc.

REQUEST FOR INFORMATION No. 278

3240 N. Millbrook
Fresno, CA 93702
Phone: 559-487-1086
Fax: 559-487-1091

TITLE: Commons Mechanical Room
PROJECT: UC Merced Housing
TO: Attn: Ramon Torres
The Taylor Group
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559-433-3000 Fax: 559-433-3010

DATE: 2/25/2004
JOB: 03017
STARTED:
COMPLETED:
REQUIRED: 3/3/2004

REQUEST:

1. Two control valves are shown on M3.01 for Hot and Chilled Water. Please concur the valves that are shown in the EMS/Control Submittal are acceptable.

2. Need clarification on connection points for HWS & HWR tied into HWR and CWS & CWR tied into CWR in the Commons Mechanical Room. Is a balancing valve required between connection points or is the intention to connect supply to supply and return to return. Please advise.

Responce:
Refer to email dated 3/1/04 from Steven Jones/Teter a+e
Ramon Torres/TTG
3/2/04

CC: MDC(All)
Kinetics

Post-it® Fax Note 7671	Date 3/2/04	# of pages ▸ 2
To Tony Valdez	From Ramon Torres	
Co./Dept. MDC	Co. TTG	
Phone #	Phone #	
Fax # 209 383 4205	Fax #	

Requested By: Mauldin-Dorfmeier Construction, Inc.
Signed: ____________ Tony Valdez
Date: ____________
Page 1 of 1

03/02/2004 14:04 4333010 TAYLOR GROUP PAGE 02
RECEIVED MAR 2 2004 Mauldin-Dorfmeier
Page 1 of 2

Ramon Torres

From: Steven Jones [stevenj@teterae.com]
Sent: Monday, March 01, 2004 11:23 AM
To: Ramon Torres
Subject: RE: AC #278

Ramon,
We have reviewed the attached RFI #278 for the UC Merced Lakeview Dining and Garden Suites and have the following response:
1. Control valves are acceptable.
2. Hot water and chilled water systems are to be piped as shown on 10M/M3.01, 5M/M3.02, 10M/M3.02 and 10M/M5.03. The hot water control valve shown on 10M/M3.01 Commons Building shall be located on the campus return side of loop, similar to 5M/M3.02 and 10M/M3.02.

Steven A. Jones
teter a+e
8405 N. Fresno St. Suite 300
Fresno, CA 93720
PH: (559) 437-0887
FX: (559) 438-7554
stevenj@teterae.com

-----Original Message-----
From: Ramon Torres [mailto:ramontorres@ttgarchitects.com]
Sent: Wednesday, February 25, 2004 3:13 PM
To: Steven Jones
Subject: FW: AC #278

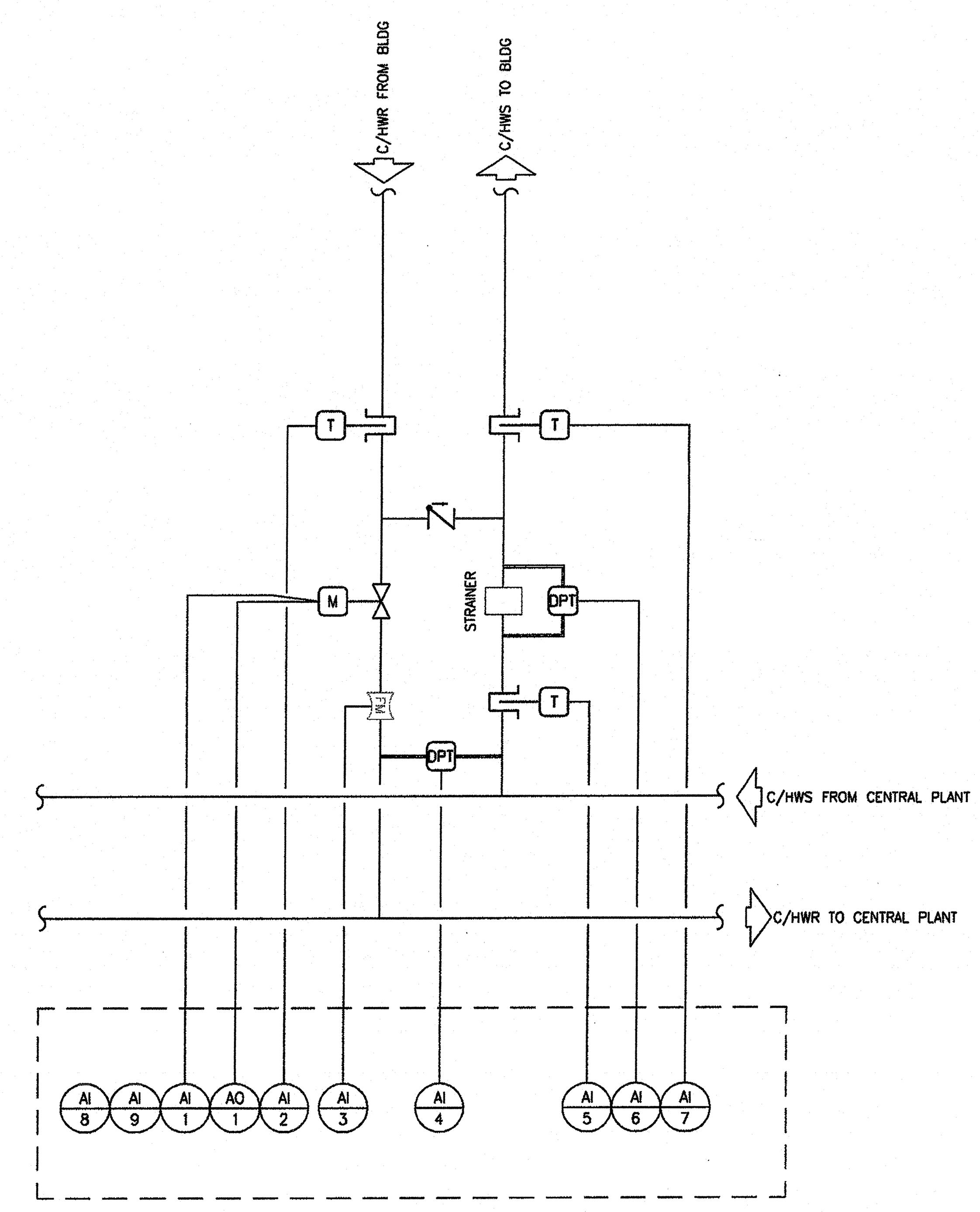
Please review and respond to me i will forward the responce.

Ramon Torres
Project Architect/ Manager

The Taylor Group Architects
10 River Park Place East, Suite 104
Fresno, CA 93720
Phone: 559.433.3000
Fax: 559.433.3010
Email: ramontorres@ttgarchitects.com

3/1/2004

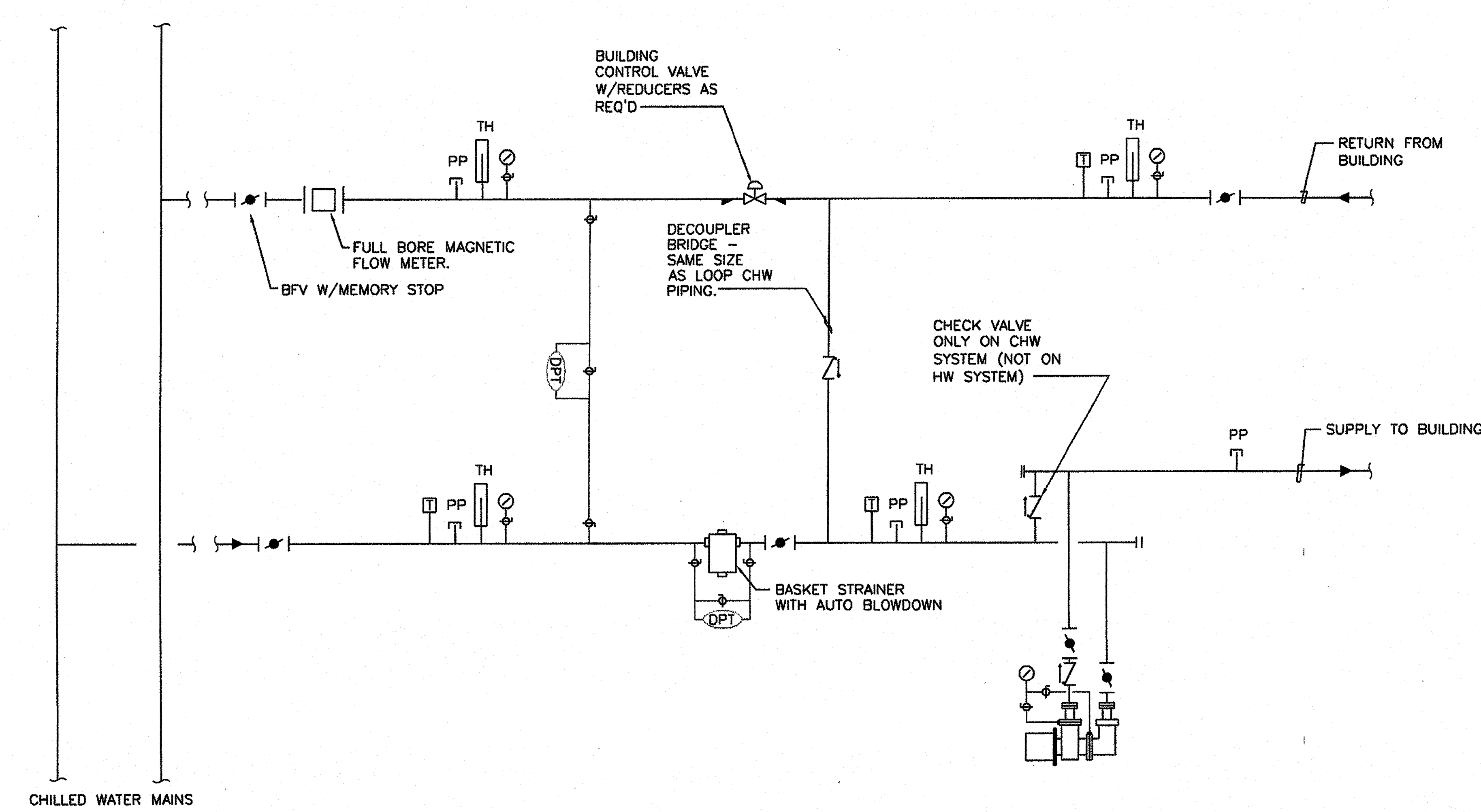
5H



BRIDGE SYSTEM CONTROL DIAGRAM

5M

10H



RFI# 278

BRIDGE SYSTEM PIPING DIAGRAM

10M

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS
10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature
LICENSED ARCHITECT RUSSELL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER STEPHEN A. JONES No. M27468 Exp. 12-31-03 MECHANICAL STATE OF CALIFORNIA
Architect Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

DRAWING STAGE:

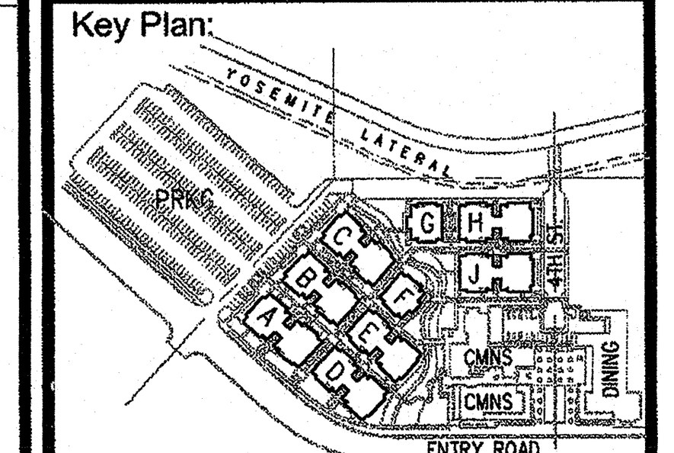
Description	Issue Date
100% D.D. Revisions	04.23.03
Bld'g Foundations Submittal	05.27.03
50% C.D. SUBMITTAL	06.02.03
100% C.D. SUBMITTAL	07.30.03
DSA/SS/FLS RESUBMITTAL	10.06.03

Agency Approvals:
FILE NO.: -
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 01-105208
AC #5 FLS ____ SS ____
DATE ____

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 10-13-03
Project #: 906250
Authorization #: M0005

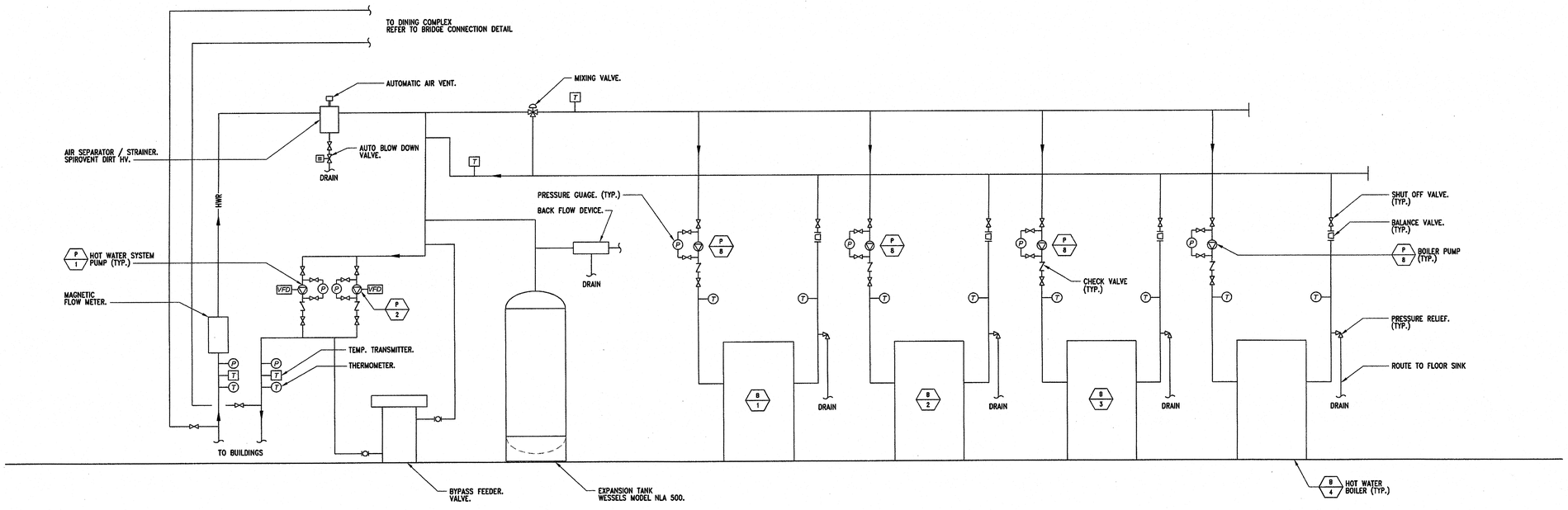
Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	NONE

Key Plan:



Drawing Title
FLOW DIAGRAM

Drawing Number:
M5.03



BOILER SYSTEM PIPING DIAGRAM

10M

UC Merced

University of California
Merced, California

PROJECT NAME:
GARDEN SUITES AND LAKE VIEW DINING

PROJECT NUMBER:
906250

ARCHITECT:
THE TAYLOR GROUP ARCHITECTS

10 RIVER PARK PLACE, EAST
SUITE 104
FRESNO, CA 93720
TEL. 559 . 433 . 3000

Seal and Signature

LICENSED ARCHITECT RUSSELL F. TAYLOR NO. C15291 1-31-2005 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEVEN A. GARCIA M016029 Exp. 12-31-03 MECHANICAL STATE OF CALIFORNIA

Architect Engineer

CONTRACTOR:
MAULDIN-DORFMEIER CONSTRUCTION, INC.
3240 N. Millbrook Fresno CA 93726
phone 559-252-4600 fax 559-222-9463

CONSULTANT:

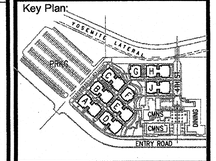
DRAWING STAGE:

Description	Issue Date
100% D.D. Revisions	*04.23.03*
Bld'g Foundations Submittal	*05.27.03*
50% C.D. SUBMITTAL	*06.02.03*
100% C.D. SUBMITTAL	*07.30.03*
DSA/SS/FLS RESUBMITTAL	*10.06.03*

Agency Approvals:
FILE NO. : --
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 04-105108
AC. P FLS. SS.
DATE

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: 906250
Project #: 10-15-03
Authorization #: M0005

Drawn By:	JW
Revision Date:	5-27-03
Plot Date:	
Scale:	NONE

Key Plan:


Drawing Title
FLOW DIAGRAM

Drawing Number:
M5.04

MECHANICAL PIPING SYMBOLS

SYMBOLS	DESCRIPTION
	GATE VALVE
	BUTTERFLY VALVE
	GLOBE VALVE
	CALIBRATED BALANCE VALVE
	CHECK VALVE
	BALL VALVE
	STOP COCK VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	3-WAY AUTOMATIC CONTROL VALVE
	2-WAY AUTOMATIC CONTROL VALVE
	SAFETY RELIEF VALVE
	TEE
	ELBOW
	TWIN SPHERE FLEX CONNECTION
	SUCTION DIFFUSER W/ STRAINER
POC	POINT OF CONNECTION
	TRIPLE DUTY VALVE
	FLOW CONTROL VALVE
	WYE STRAINER
	STRAINER W/BLOW OFF H.B.
	FUNNEL DRAIN (OPEN)
FM	FLOW METER
FS	FLOW SWITCH
ΔP	DIFFERENTIAL PRESSURE TRANSMITTER

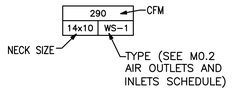
SYMBOLS	DESCRIPTION
P	PRESSURE GAUGE
ΔP	DIFFERENTIAL PRESSURE GAUGE
	THERMOMETER
	THERMO WELL
	THERMO WELL W/ TEMP SENSOR
	TEST FITTING (PETE'S PLUG)
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	VACUUM BREAKER
	FLEXIBLE CONNECTION (METALLIC)
	FLEXIBLE CONNECTION (NON-METALLIC)
	EXPANSION JOINT
	PIPE ANCHOR
	ALIGNMENT GUIDE
	FLANGED JOINT/BLIND FLANGE
	UNION
	RESTRICTION ORIFICE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	PIPE CAP
	PIPE BREAK
	PIPE UP
	PIPE DOWN
	TEE UP
	TEE DOWN
	FLOW DIRECTION ARROW

HVAC LEGEND

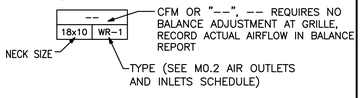
SYMBOLS	ABBR.	DESCRIPTION
T	T'STAT	ROOM THERMOSTAT
S	SENSOR	ROOM SENSOR
W	WS	WINDOW SWITCH
CO2	CO2	CO2 SENSOR
P	P	DUCT STATIC PRESSURE SENSOR
12ø		ROUND DUCT
20x12		RECTANGULAR DUCT
		FLEXIBLE DUCT
TOD=9'10"		TOP OF DUCT (PIPE) AT 9'10" AFF
T-EL+25'0"		TOP OF DUCT (PIPE) AT 25'0" ABOVE 0'0" DATUM ELEVATION
BOD=9'10"		BOTTOM OF DUCT (PIPE) AT 9'10" AFF
B-EL+25'0"		BOTTOM OF DUCT (PIPE) AT 25'0" ABOVE REF ELEVATION
		INTERNALLY INSULATED DUCT, DIMENSIONS SHOWN NET INSIDE UON
		DUCT TURNING VANES
		ROUND TO RECTANGULAR TRANSITION
		SUPPLY DUCT - DOWN
		SUPPLY DUCT - UP
		RETURN/EXH DUCT - DOWN
		RETURN/EXH DUCT - UP
UP	UP	GRADUAL RECTANGULAR DUCT UP/DOWN IN DIRECTION OF ARROW
UP		GRADUAL ROUND DUCT UP IN DIRECTION OF ARROW
DN		GRADUAL ROUND DUCT DOWN IN DIRECTION OF ARROW

SYMBOLS	ABBR.	DESCRIPTION
D.L. / U.C.	DL / UC	DOOR LOUVER / DOOR UNDERCUT
	SD	SLOT DIFFUSER
	CSPL / CSPS	CEILING SUPPLY DIFFUSER
	CRP / CRP	CEILING EXHAUST GRILLE / CEILING RETURN GRILLE
	WSG / WRG	WALL SUPPLY GRILLE / WALL RETURN GRILLE
	WRR / WRG / WER / WEG	WALL RETURN REGISTER / WALL RETURN GRILLE / WALL EXHAUST REGISTER / WALL EXHAUST GRILLE
	FSR / FSB	FLOOR SUPPLY REGISTER / FLOOR SUPPLY BAR GRILLE
	FRR / FRB	FLOOR RETURN REGISTER / FLOOR RETURN BAR GRILLE
	WSG/WRG	TRANSFER GRILLE
	FC	DUCT FLEXIBLE CONNECTION
	VD	MANUAL VOLUME DAMPER
	FD	FIRE DAMPER
	FSD	FIRE/SMOKE DAMPER
	BDD	BACK DRAFT DAMPER

DIFFUSER TAG



RETURN / EXHAUST GRILLE TAG



DRAWING SCHEDULE

SHEET	DESCRIPTION
M0.1	DRAWING SCHEDULE, EQUIPMENT SCHEDULES, MECHANICAL LEGENDS AND DETAILS
M0.2	BUILDING 1 AND 2 HVAC EQUIPMENT AND VAV BOX SCHEDULE
M2.1A	BUILDING 1 HVAC PARTIAL FIRST FLOOR PLAN
M2.1B	BUILDING 1 HVAC PARTIAL FIRST FLOOR PLAN
M2.2A	BUILDING 1 HVAC PARTIAL SECOND FLOOR PLAN
M2.2B	BUILDING 1 HVAC PARTIAL SECOND FLOOR PLAN
M2.3A	BUILDING 1 HVAC PARTIAL ATTIC PLAN
M2.3B	BUILDING 1 HVAC PARTIAL ATTIC PLAN
M2.4	BUILDING 1 – ALTERNATE 1 HVAC FIRST AND SECOND FLOOR PLAN
M2.5	BUILDING 1 – ALTERNATE 2 HVAC FIRST AND SECOND FLOOR PLAN
M2.6	BUILDING 1 – ALTERNATE 1 & 2 HVAC ATTIC PLAN
M2.7A	BUILDING 2 HVAC PARTIAL FIRST FLOOR PLAN
M2.7B	BUILDING 2 HVAC PARTIAL FIRST FLOOR PLAN
M2.8A	BUILDING 2 HVAC PARTIAL SECOND FLOOR PLAN
M2.8B	BUILDING 2 HVAC PARTIAL SECOND FLOOR PLAN
M2.9A	BUILDING 2 HVAC PARTIAL ATTIC PLAN
M2.9B	BUILDING 2 HVAC PARTIAL ATTIC PLAN
M2.10	BUILDING 2 – ALTERNATE 3 HVAC FIRST AND SECOND FLOOR PLAN
M2.11	BUILDING 2 – ALTERNATE 4 HVAC FIRST AND SECOND FLOOR PLAN
M2.12	BUILDING 2 – ALTERNATE 3 & 4 HVAC ATTIC PLAN
M3.1	BUILDING 1 & 2 TYPICAL FIRST FLOOR DOOR ROOM AND OTHER SECTIONS
M3.2	BUILDING 1 & 2 ATTIC SECTIONS
M4.1	BUILDING 1 – MECHANICAL ROOM PLAN AND SECTIONS
M4.2	BUILDING 2 – ENLARGED CHILLED WATER PIPING PLANS
M5.1	CHILLED WATER PIPING DIAGRAM
M7.1	CONTROL DIAGRAMS
M7.2	CONTROL DIAGRAMS

ABBREVIATIONS

ABBR.	DESCRIPTION
ø	PHASE, ROUND
(E)	EXISTING
(N)	NEW
(R)	RELOCATED
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
B+	BOTTOM ELEVATION
BF	BOTTOM FLAT
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
C.A.	COMBUSTION AIR
CAP.	CAPACITY
CFF	CAPACITY FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CL	CENTERLINE
CLG	CEILING
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DL	DRAIN LINE
DTF	DOWN THROUGH FLOOR
E.A.	EXHAUST AIR
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATING
EFF	EFFICIENCY
EWB	ENTERING WET BULB
FPF	FINS PER FOOT
FPI	FINS PER INCH
FT2	SQUARE FEET

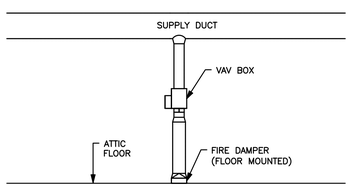
ABBR.	DESCRIPTION
H	HEIGHT
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIMENSION
IPLV	INTEGRATED PART LOAD VALUE
LDB	LEAVING DRY BULB
LWB	LEAVING WET BULB
MCA	MINIMUM CIRCUIT AMPS
MCOP	MAXIMUM OVERCURRENT PROTECTION
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
O.A.	OUTDOOR AIR
OD	OUTSIDE DIMENSION
P.O.C.	POINT OF CONNECTION
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
R.A.	RETURN AIR
S.A.	SUPPLY AIR
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SCT	SATURATED CONDENSING TEMPERATURE
SST	SATURATED SUCTION TEMPERATURE
T+	TOP ELEVATION
TF	TOP FLAT
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UTA	UP TO ATTIC
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH

COOLING COIL

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	CFM	ROWS	FPI	FACE AREA (SQ FEET)	AIR EDB (°F)	AIR EWB (°F)	AIR LDB (°F)	AIR LWB (°F)	AIR ΔP_W	WATER EWT (°F)	WATER LWT (°F)	WATER ΔP_W (FT)	WATER GPM	VALVE CV	SENS MBH	TOTAL MBH	WEIGHT (POUNDS)	REMARKS
CC 2.1	USA COIL & AIR CWCV-1200	F 2.1	900	4	12	3	76.8	61	55.3	55.0	0.23	41	54	5.2	4.3	--	21.3	28.1	70	PLUG SECONDARY DRAIN CONNECTION WITH PVC PLUG

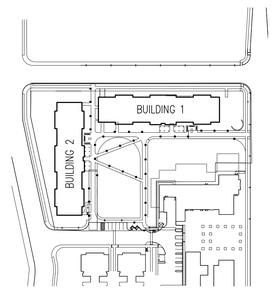
VARIABLE SPEED DRIVES

SYMBOL	EQUIPMENT SERVED	MANUFACTURER AND MODEL NO.	ELECTRICAL V/ø	ELECTRICAL HP	REMARKS
VFD CHP1.1	CHP 1.1	ABB ACH-550	208/3	3	NEMA 1 ENCLOSURE
VFD CHP1.2	CHP 1.2	ABB ACH-550	208/3	3	NEMA 1 ENCLOSURE
VFD AH1.1S	AH 1.1	ABB ACH-550	208/3	10	SUPPLY FAN, NEMA 1 ENCLOSURE
VFD AH1.1R	AH 1.1	ABB ACH-550	208/3	7.5	RETURN FAN, NEMA 1 ENCLOSURE
VFD AH1.2S	AH 1.2	ABB ACH-550	208/3	10	SUPPLY FAN, NEMA 1 ENCLOSURE
VFD AH1.2R	AH 1.2	ABB ACH-550	208/3	5	RETURN FAN, NEMA 1 ENCLOSURE
VFD AH2.1S	AH 2.1	ABB ACH-550	208/3	10	SUPPLY FAN, NEMA 1 ENCLOSURE
VFD AH2.1R	AH 2.1	ABB ACH-550	208/3	7.5	RETURN FAN, NEMA 1 ENCLOSURE
VFD AH2.2S	AH 2.2	ABB ACH-550	208/3	10	SUPPLY FAN, NEMA 1 ENCLOSURE
VFD AH2.2R	AH 2.2	ABB ACH-550	208/3	7.5	RETURN FAN, NEMA 1 ENCLOSURE



A / M0.1 VERTICALLY MOUNTED VAV BOX SECTION
1/4"=1'-0"

BUILDING 1 & 2 – SITE KEYPLAN



RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

Taylor Engineering
1093 Marina Village Parkway, Suite 201
Alameda, CA 94501
Phone: (510) 749-0135
Fax: (510) 749-0136

FISHER FRIEDMAN ASSOCIATES AIA
ARCHITECTURE PLANNING URBAN DESIGN
1485 PARK AVE., SUITE 103 EMERYVILLE, CA 94608

UC MERCED
SIERRA TERRACES
UCM #906260

DRAWING SCHEDULE, EQUIPMENT SCHEDULES, MECHANICAL LEGENDS AND DETAILS
SCALE: AS NOTED

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M0.1

AIR HANDLERS

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	SUPPLY FAN									SF ISOLATION		RETURN FAN								RF ISOLATION		COOLING COIL														HEATING SECTION				CONSTRUCTION FILTER			FINAL FILTER			MIN O.A. CFM	WEIGHT (POUNDS)	REMARKS
			TYPE	CFM	EXT SP (INCH WC)	TTL SP (INCH WC)	RPM	BHP	MHP	V/ø	TYPE	TYPE	DEFL (INCHES)	TYPE	CFM	EXT SP (INCH WC)	RPM	BHP	MHP	V/ø	MOTOR TYPE	TYPE	DEFL (INCHES)	EADB (°F)	EAWB (°F)	LADB (°F)	LAWB (°F)	ΔP_A (INCH WC)	GPM	CHWST (°F)	CHWRT (°F)	ΔP_W FEET	VALVE CV	ROWS	FPI	SIZE (INCHES)	SENS MBH	TOTAL MBH	EADB (°F)	ΔP_A (INCH WC)	MBH IN	MBH OUT	TYPE	DEPTH (INCHES)	MERV	TYPE	DEPTH (INCHES)	MERV			
AH 1.1	WESTERNAIR WAH-80	BLDG 1 NORTHEAST & CORRIDORS	18" BAF DW	9,125	1.25	4.45	2312	9.99	10.0	208/3	PREMIUM VFD	SPRING	2	18" BAF DW	7,100	1.24	1674	3.72	7.5	208/3	PREMIUM VFD	SPRING	2	80.7	63.8	53.4	53.3	0.65	18.5	41.0	68.1	9.1	--	6	12	45x58	246	246	24	0.65	300	249	PLEATED	2	6	CAR-TRIDGE	12	13	2,900	7,000	COOLING COIL INSULATED HEADER COVERS. PROVIDE FOUR UNIT SPLITS FOR FEILD DISASSEMBLY AND REMOVAL THROUGH SKYLIGHTS. SECONDARY CONDENSATE OVERFLOW CONNECTION AT COOLING COIL PAN. COOLING COIL TO SPAN FULL WIDTH OF UNIT TO SUPPORT FROM CORRIDOR WALLS BELOW UNIT.
AH 1.2	WESTERNAIR WAH-80	BLDG 1 SOUTHWEST	18" BAF DW	9,125	1.25	4.45	2312	9.99	10.0	208/3	PREMIUM VFD	SPRING	2	18" BAF DW	7,100	1.24	1674	3.72	5.0	208/3	PREMIUM VFD	SPRING	2	78.1	62.2	53.2	52.7	0.65	18.5	41.0	68.1	9.1	--	6	12	45x58	246	246	24	0.57	250	210	PLEATED	2	6	CAR-TRIDGE	12	13	2,050	7,000	
AH 2.1	WESTERNAIR WAH-80	BLDG 2 NORTHWEST & CORRIDORS	18" BAF DW	9,125	1.25	4.45	2312	9.99	10.0	208/3	PREMIUM VFD	SPRING	2	18" BAF DW	7,100	1.24	1674	3.72	7.5	208/3	PREMIUM VFD	SPRING	2	80.2	63.8	53.2	53.1	0.65	18.5	41.0	68.1	9.1	--	6	12	45x58	246	246	24	0.65	300	249	PLEATED	2	6	CAR-TRIDGE	12	13	2,900	7,000	
AH 2.2	WESTERNAIR WAH-80	BLDG 2 SOUTHEAST	18" BAF DW	9,125	1.25	4.45	2312	9.99	10.0	208/3	PREMIUM VFD	SPRING	2	18" BAF DW	7,100	1.24	1674	3.72	7.5	208/3	PREMIUM VFD	SPRING	2	78.1	62.4	54	53.2	0.65	18.5	41.0	68.1	9.1	--	6	12	45x58	246	246	24	0.80	250	210	PLEATED	2	6	CAR-TRIDGE	12	13	2,050	7,000	

CHILLED WATER FAN COILS

SYMBOL	SERVING	LOCATION	MANUFACTURER AND MODEL NO.	CFM	ESP ("WC)	FAN SPEED	SENS MBH	TOTAL MBH	EWT (°F)	LWT (°F)	GPM	VALVE CV	ROW	FPI	ΔP_W FEET	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	MOTOR DATA MHP	MOTOR DATA VOLTAGE/ø	WEIGHT (POUNDS)	REMARKS
FC 1.1 / FC 2.1	BLDG 1 & 2 IDF	IDF	MAGIC AIRE CEW 024	600	0.15	HI	14.5	19.0	41	56	1.9	--	4	–	8.6	73	66	52	51.5	3/4	120/1	155	2 WAY NORMALLY OPEN SPRING RETURN MODULATING ELECTRONIC CHILLED WATER CONTROL VALVE, DIRECT DRIVE FAN, FAN STARTER WITH 24-VAC COIL AND NO AUXILIARY CONTACTS, INTERNAL UNIT FILTER, MERV 6 FILTER, HANG WITH 2 INCH SPRING ISOLATION, SECONDARY CONDENSATE DRAIN CONNECTION PIPE AS INDICATED ON PLANS, BOTTOM SERVICE ACCESS
FC 1.2	BLDG 1 BDF	BDF	MAGIC AIRE CEW 024	600	0.15	HI	14.5	19.0	41	56	1.9	--	4	–	8.6	73	66	52	51.5	3/4	120/1	155	2 WAY NORMALLY OPEN SPRING RETURN MODULATING ELECTRONIC CHILLED WATER CONTROL VALVE, DIRECT DRIVE FAN, FAN STARTER WITH 24-VAC COIL AND NO AUXILIARY CONTACTS, INTERNAL UNIT FILTER, MERV 6 FILTER, HANG WITH 2 INCH SPRING ISOLATION, SECONDARY CONDENSATE DRAIN CONNECTION PIPE AS INDICATED ON PLANS, BOTTOM SERVICE ACCESS

BUILDING 1 VAV BOXES

TAG	MANUFACTURER AND MODEL	INLET SIZE	DESIGN CFM COOL	DESIGN CFM HEAT	REMARKS
V11-101	KRUEGER LMHS	6	410	90	ADD FOR ALTERNATE 2 ONLY
V12-102	KRUEGER LMHS	8	510	90	ADD FOR ALTERNATE 2 ONLY
V11-103	KRUEGER LMHS	6	410	90	ALTERNATE 2 COOL CFM = 390 ALTERNATE 2 HEAT CFM = 90
V12-104	KRUEGER LMHS	6	220	40	
V11-105	KRUEGER LMHS	6	420	90	
V12-106	KRUEGER LMHS	8	500	90	
V11-107	KRUEGER LMHS	6	420	90	
V12-108	KRUEGER LMHS	8	510	90	
V11-109	KRUEGER LMHS	6	420	90	
V12-110	KRUEGER LMHS	8	490	90	
V11-111	KRUEGER LMHS	6	390	90	
V12-112	KRUEGER LMHS	8	490	90	
V11-113	KRUEGER LMHS	6	420	90	
V11-115	KRUEGER LMHS	6	420	90	
V12-120	KRUEGER LMHS	12	1150	345	CO2 CONTROL, ELECTRIC REHEAT
V11-121	KRUEGER LMHS	10	850	435	CO2 CONTROL, ELECTRIC REHEAT
V12-122	KRUEGER LMHS	12	1150	360	CO2 CONTROL, ELECTRIC REHEAT
V11-131	KRUEGER LMHS	6	420	90	
V12-132	KRUEGER LMHS	8	490	90	
V11-133	KRUEGER LMHS	6	390	90	
V12-134	KRUEGER LMHS	8	490	90	
V11-135	KRUEGER LMHS	6	420	90	
V12-136	KRUEGER LMHS	8	500	90	
V11-137	KRUEGER LMHS	6	420	90	
V12-138	KRUEGER LMHS	8	510	90	
V11-139	KRUEGER LMHS	6	300	45	
V12-140	KRUEGER LMHS	8	490	90	
V11-141	KRUEGER LMHS	8	480	115	ADD FOR ALTERNATE 1 ONLY
V11-142	KRUEGER LMHS	8	560	135	ADD FOR ALTERNATE 1 ONLY
V11-201	KRUEGER LMHS	8	440	90	ADD FOR ALTERNATE 2 ONLY
V12-202	KRUEGER LMHS	8	490	90	ADD FOR ALTERNATE 2 ONLY
V11-203	KRUEGER LMHS	6	400	90	FOR BASE BID, UPSIZE TO 8ø
V12-204	KRUEGER LMHS	6	350	50	ALTERNATE 2 COOLING CFM = 310 ALTERNATE 2 HEAT CFM = 50
V11-205	KRUEGER LMHS	6	400	90	
V12-206	KRUEGER LMHS	8	450	90	
V11-207	KRUEGER LMHS	6	400	90	
V12-208	KRUEGER LMHS	8	450	90	
V11-209	KRUEGER LMHS	6	400	90	
V12-210	KRUEGER LMHS	8	440	90	
V11-211	KRUEGER LMHS	6	400	90	
V12-212	KRUEGER LMHS	8	440	90	
V11-213	KRUEGER LMHS	6	400	90	
V12-214	KRUEGER LMHS	8	470	90	
V11-215	KRUEGER LMHS	6	400	90	
V11-217	KRUEGER LMHS	6	400	90	
V12-220	KRUEGER LMHS	12	1050	495	CO2 CONTROL, ELECTRIC REHEAT
V11-231	KRUEGER LMHS	6	400	90	
V12-232	KRUEGER LMHS	8	440	90	
V11-233	KRUEGER LMHS	6	400	90	
V12-234	KRUEGER LMHS	8	440	90	
V11-235	KRUEGER LMHS	6	400	90	
V12-236	KRUEGER LMHS	8	450	90	
V11-237	KRUEGER LMHS	6	400	90	
V12-238	KRUEGER LMHS	8	450	90	
V11-239	KRUEGER LMHS	6	280	50	ALTERNATE 1 COOLING CFM = 240 ALTERNATE 2 HEAT CFM = 50
V12-240	KRUEGER LMHS	8	470	90	ALTERNATE 1 COOLING CFM = 440 ALTERNATE 2 HEAT CFM = 90
V11-241	KRUEGER LMHS	8	440	90	ADD FOR ALTERNATE 1 ONLY
V12-242	KRUEGER LMHS	8	470	90	ADD FOR ALTERNATE 1 ONLY
V11-2C1	KRUEGER LMHS	12	1075	395	
V11-2C2	KRUEGER LMHS	12	1090	450	
V11-2C3	KRUEGER LMHS	12	1030	395	

BUILDING 2 VAV BOXES

TAG	MANUFACTURER AND MODEL	INLET SIZE	DESIGN CFM COOL	DESIGN CFM HEAT	REMARKS
V21-101	KRUEGER LMHS	8	500	90	ADD FOR ALTERNATE 4 ONLY
V22-102	KRUEGER LMHS	8	500	90	ADD FOR ALTERNATE 4 ONLY
V21-103	KRUEGER LMHS	8	480	90	ALTERNATE 4 COOLING CFM = 440 ALTERNATE 2 HEAT CFM = 90
V22-104	KRUEGER LMHS	8	260	40	ALTERNATE 4 BOX SIZE = 6ø ALTERNATE 4 COOLING CFM = 210 ALTERNATE 2 HEAT CFM = 40
V22-106	KRUEGER LMHS	8	480	90	
V22-108	KRUEGER LMHS	8	480	90	
V21-109	KRUEGER LMHS	6	410	90	
V22-110	KRUEGER LMHS	8	470	90	
V21-111	KRUEGER LMHS	8	440	90	
V22-112	KRUEGER LMHS	8	470	90	
V21-113	KRUEGER LMHS	8	450	90	
V21-115	KRUEGER LMHS	8	450	90	
V22-120	KRUEGER LMHS	12	1100	345	CO2 CONTROL, ELECTRIC REHEAT
V21-121	KRUEGER LMHS	10	910	435	CO2 CONTROL, ELECTRIC REHEAT
V22-122	KRUEGER LMHS	12	1100	360	CO2 CONTROL, ELECTRIC REHEAT
V21-131	KRUEGER LMHS	6	410	90	
V22-132	KRUEGER LMHS	8	470	90	
V21-133	KRUEGER LMHS	8	440	90	
V22-134	KRUEGER LMHS	8	470	90	
V21-135	KRUEGER LMHS	8	450	90	
V22-136	KRUEGER LMHS	8	480	90	
V21-137	KRUEGER LMHS	8	450	90	
V22-138	KRUEGER LMHS	8	480	90	
V21-139	KRUEGER LMHS	6	270	45	
V22-140	KRUEGER LMHS	8	470	90	
V21-141	KRUEGER LMHS	8	490	115	ADD FOR ALTERNATE 3 ONLY
V22-142	KRUEGER LMHS	8	510	125	ADD FOR ALTERNATE 3 ONLY
V21-201	KRUEGER LMHS	8	500	90	ADD FOR ALTERNATE 4 ONLY
V22-202	KRUEGER LMHS	8	460	90	ADD FOR ALTERNATE 4 ONLY
V21-203	KRUEGER LMHS	8	440	90	
V22-204	KRUEGER LMHS	6	270	50	
V21-205	KRUEGER LMHS	8	450	90	
V22-206	KRUEGER LMHS	6	410	90	
V21-207	KRUEGER LMHS	8	440	90	
V22-208	KRUEGER LMHS	6	410	90	
V21-209	KRUEGER LMHS	8	440	90	
V22-210	KRUEGER LMHS	6	400	90	
V21-211	KRUEGER LMHS	8	440	90	
V22-212	KRUEGER LMHS	6	400	90	
V21-213	KRUEGER LMHS	8	450	90	
V22-214	KRUEGER LMHS	8	430	90	
V21-215	KRUEGER LMHS	8	440	90	
V21-217	KRUEGER LMHS	8	440	90	
V22-220	KRUEGER LMHS	12	970	495	CO2 CONTROL, ELECTRIC REHEAT
V21-231	KRUEGER LMHS	8	440	90	
V22-232	KRUEGER LMHS	6	400	90	
V21-233	KRUEGER LMHS	8	440	90	
V22-234	KRUEGER LMHS	6	400	90	
V21-235	KRUEGER LMHS	8	450	90	
V22-236	KRUEGER LMHS	6	410	90	
V21-237	KRUEGER LMHS	8	440	90	
V22-238	KRUEGER LMHS	6	410	90	
V21-239	KRUEGER LMHS	6	290	50	
V22-240	KRUEGER LMHS	6	400	90	
V21-241	KRUEGER LMHS	8	470	90	ADD FOR ALTERNATE 3 ONLY
V22-242	KRUEGER LMHS	8	430	90	ADD FOR ALTERNATE 3 ONLY
V21-2C2	KRUEGER LMHS	12	1060	450	
V21-2C1	KRUEGER LMHS	12	1160	395	
V21-2C3	KRUEGER LMHS	12	1195	395	

CHILLED WATER PUMPS

SYMBOL	MANUFACTURER AND MODEL NO.	DUTY	TYPE	GPM	PD (FEET)	RPM	BHP	MHP	V/ø	INLET PRESSURE (PSIG)	WEIGHT (POUNDS)	REMARKS
CHP 1.1 / CHP 1.2	BELL & GOSSETT 80 1.5x1.5x9.5	CHILLED WATER	INLINE	50	75	1750	1.88	3	208/3	35	200	PREMIUM EFFICIENCY ODP INVERTER DUTY MOTOR, GAUGE TAPS

FORCED AIR FURNACE

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	AFUE (%)	CFM	OSA CFM	EXT SP ("WC)	HEATING (MBH) INPUT	HEATING (MBH) OUTPUT	FANS SPEED	FANS FLA	FANS MHP	V/ø	MAX FUSE SIZE	WEIGHT (POUNDS)	REMARKS
F 2.1	CARRIER COMFORT 92 58MXB040F100-12	BLDG 2 RLC UNIT	95.5	900	150	0.6	40	38	MED-LOW	7.3	1/3	120/1	15	175	2 INCH CONCENTRIC TERMINATION KIT #KGAVT0501CVT, DOOR GASKET KIT #KGBAC0110DGK, 16 INCH MEDIA FILTER CABINET WITH 4 INCH DEEP MERV 13 FILTER, REMOVE AND DO NOT USE WASHABLE FILTER. MOUNT ON 3/4 INCH, 40 DUROMETER NEOPRENE PADS, MASON SUPER W OR EQUAL. FLEXIBLY CONNECT ALL DUCTS AND OTHER UTILITIES.

FIRE & SMOKE DAMPERS

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	ACTUATOR TYPE	V/ø	FIRE RATING	LEAKAGE RATING	REMARKS
FSD –	RUSKIN FSD36	SEE PLANS	ELECTRIC	120/1	1.5 HOUR	CLASS II MINIMUM	

FIRE DAMPERS

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	ACTUATOR TYPE	FIRE RATING	REMARKS
FD –	POTTORFF VFD10D	SEE PLANS	FUSED LINK	1.5 HOUR	16 INCH SLEEVE, MOUNT HORIZONTAL IN ATTIC FLOOR, BLADES OUT OF THE AIR STREAM

ELECTRIC DUCT HEATER

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	CFM	HEATING CAPACITY	EAT (°F)	LAT (°F)	V/ø	REMARKS
DH1 120 / DH2 120 / DH1 122 / DH2 122	INDEECO	V12 120 / V22 120 / V12 122 / V22 122	350	1.5 KW	55	70	208/1	SCR CONTROLLER
DH1 220 / DH2 220	INDEECO	V12 220 / V22 220	410	1.5 KW	55	70	208/1	SCR CONTROLLER
DH1 121 / DH2 121	INDEECO	V11 121 / V21 121	610	2 KW	55	70	208/1	SCR CONTROLLER

AIR OUTLETS AND INLETS

SYMBOL	LOCATION	MANUFACTURER AND MODEL NO.	DUTY	TYPE	FRAME	SIZE	FINISH	REMARKS
CDG-##	DRYWALL CEILINGS	KRUEGER 6604-F20	SUPPLY	PERFORATED SUPPLY	TYPE 1 SURFACE	AS INDICATED ON PLANS	WHITE	FLAT BLACK INTERIOR, ## REPRESENTS SIZE AS INDICATED ON DRAWINGS, NO OBD
CRG-##	DRYWALL CEILINGS	KRUEGER 6490-F20	DUCTED RETURN/ EXHAUST	PERFORATED RET/EXH	TYPE 1 SURFACE	AS INDICATED ON PLANS	WHITE	FLAT BLACK INTERIOR, ## REPRESENTS SIZE AS INDICATED ON DRAWINGS, NO OBD
WSG-##	SIDEWALL	KRUEGER 880V-F22	SUPPLY	WALL SUPPLY GRILLE	TYPE A	SEE PLANS	WHITE	PAINT GRILLE BOX FLAT BLACK INSIDE, ## REPRESENTS SIZE AS INDICATED ON DRAWINGS, NO OBD
WRG-##	SIDEWALL	KRUEGER S80H	RETURN/ EXHAUST	WALL RETURN/ EXHAUST GRILLE	TYPE A	SEE PLANS	WHITE	PAINT GRILLE BOX FLAT BLACK INSIDE, ## REPRESENTS SIZE AS INDICATED ON DRAWINGS, NO OBD

COMBINATION LIGHT/EXHAUST FAN

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	CFM	EXT SP (INCH WC)	CONNECTION DIAMETER (INCH)	SONES	REMARKS
F 1.2	SEE ELECTRICAL SHEET E0.02	BATHROOMS, SEE PLANS	90	0.3	4	1.0	INTEGRAL BACKDRAFT DAMPER, SPECIFIED, SUPPLIED, INSTALLED AND WIRED BY DIVISION 16, DUCTED BY DIVISION 15

EXHAUST FANS

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	TYPE	CFM	S.P.	RPM	SONES	ELECTRICAL BHP	ELECTRICAL AMPS	ELECTRICAL W	ELECTRICAL VOLTAGE	WEIGHT (LBS)	REMARKS
EF 1.1 / EF 1.2 / EF 1.3 / EF 2.1 / EF 2.2 / EF 2.3	PANASONIC FV-011VF2	CUSTODIAL ROOMS AND TOILET ROOMS	DIRECT DRIVE WITH GRILLE	90	0.4	1086	2.0	--	0.25	30	115/1ø	--	BACK DRAFT DAMPER
EF 1.4 / EF 2.4	FANTECH FX12XL	TRASH/ELECTRICAL ROOMS	INLINE DIRECT DRIVE	600	0.5	3280	21.0	--	3.6	411	115/1ø	--	SOLID STATE SPEED CONTROLLER MOUNTED AT FAN
EF 1.5 / EF 2.5	GREENHECK SP-A1410	TRASH/ELECTRICAL ROOMS	PREMIUM CEILING FAN WITH GRILLE	1050	0.25	1450	9.5	--	7.4	786	115/1ø	60	SOLID STATE SPEED CONTROLLER MOUNTED AT FAN, HANG WITH RUBBER RESILIENT ISOLATORS
EF 1.E / EF 2.E	GREENHECK SP-A1410	ELEVATOR MACHINE ROOMS	PREMIUM CEILING FAN WITH GRILLE	1050	0.25	1450	9.5	--	7.4	786	115/1ø	60	SOLID STATE SPEED CONTROLLER MOUNTED IN ELEVATOR MACHINE ROOM, HANG WITH RUBBER RESILIENT ISOLATORS

DRYER VENT BOOSTER

SYMBOL	MANUFACTURER AND MODEL NO.	SERVING	TYPE	CFM	S.P.	RPM	SONES	ELECTRICAL BHP	ELECTRICAL AMPS	ELECTRICAL HP	ELECTRICAL VOLTAGE	WEIGHT (LBS)	REMARKS
BF 1	FANTECH DBF 4XL	DRYER EXHAUST	DRYER BOOSTER FAN	--	--	2800	--	--	0.73	--	115/1ø	--	DRYER BOOSTER KIT. USE BF-1

VAV BOX TAG KEY

V12 / 101

- V12 — ASSOCIATED AIR HANDLER (AHX.X)
- 101 — EQUIPMENT TAG; V = VAV TERMINAL BOX
- SUITE/ROOM NUMBER

RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

Taylor Engineering
1000 Marina Village Parkway, Suite 201
Alameda, CA 94501
Phone: (510) 749-0135
Fax: (510) 749-0136

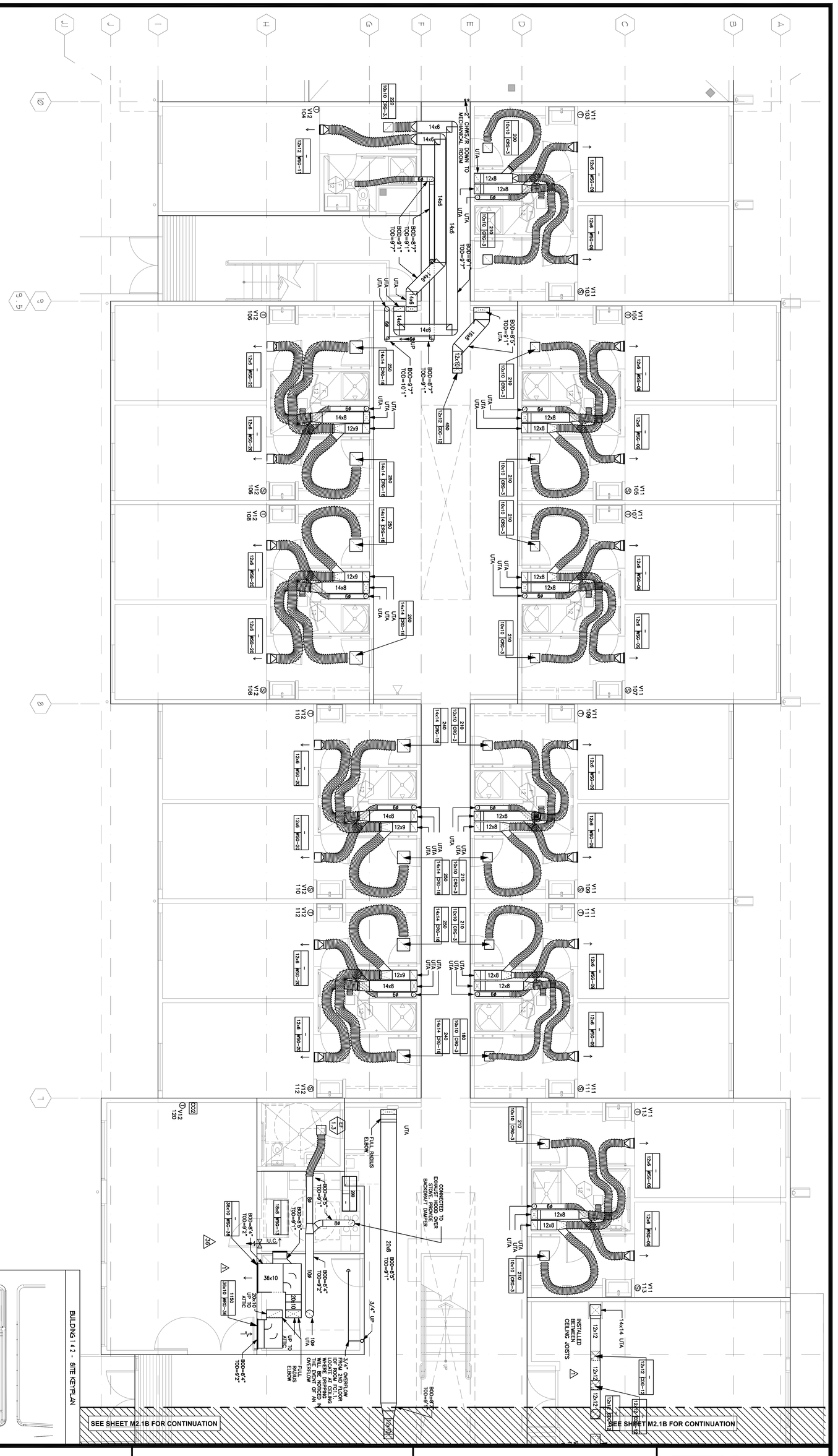
FISHER FRIEDMAN ASSOCIATES AIA
ARCHITECTURE PLANNING URBAN DESIGN
1485 PARK AVE, SUITE 103 EMERYVILLE, CA 94608

UC MERCED
SIERRA TERRACES
UCM #906260

BUILDING 1 AND 2
HVAC EQUIPMENT AND
VAV BOX SCHEDULE
NO SCALE

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M0.2



RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

JOB	0410
DATE	06/27/08
SHEET	M2.1A

BUILDING 1
HVAC PARTIAL FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

UC MERCED
SIERRA TERRACES UCM #906260

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1485 PARK AVE, SUITE 103 EMERYVILLE, CA 94608

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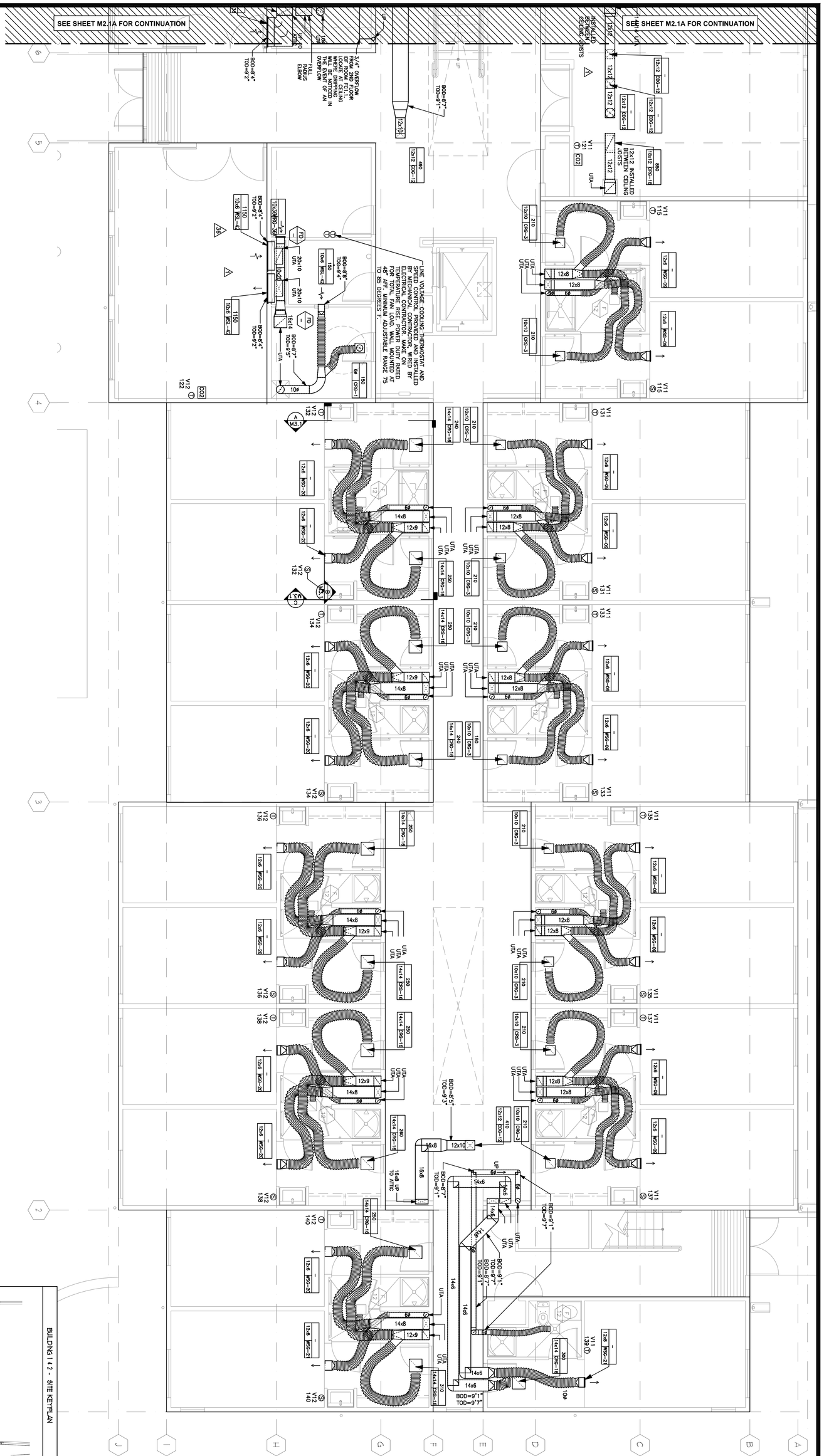

RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/08/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE #2		03/17/06
100% CONTRACT DOCUMENTS		
REVISION	NO.	DATE

JOB 0410

DATE 06/27/08

SHEET M2.1B

BUILDING 1
HVAC PARTIAL FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

UC MERCED
SIERRA TERRACES UCM #906260

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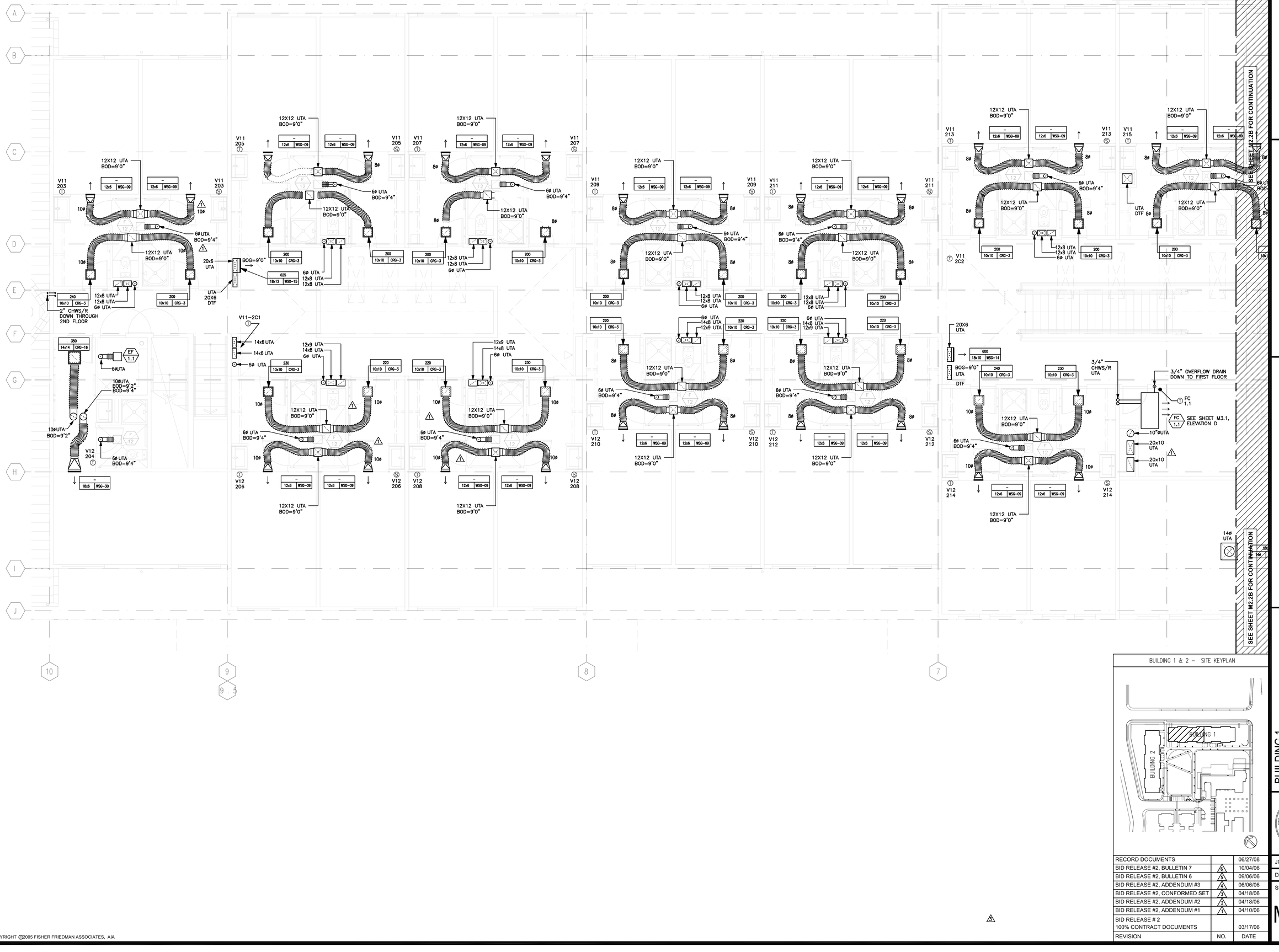

BUILDING 1 & 2 – SITE KEYPLAN

RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

Taylor Engineering
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FISHER FRIEDMAN ASSOCIATES AIA
ARCHITECTURE PLANNING URBAN DESIGN
1485 PARK AVE, SUITE 103 EMERYVILLE, CA 94608

UC MERCED
SIERRA TERRACES UCM #906260

BUILDING 1
HVAC PARTIAL SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB	0410
DATE	06/27/08

SHEET
M2.2A

RECORD DOCUMENTS 06/27/08
BID RELEASE #2, BULLETIN 7 10/04/06
BID RELEASE #2, BULLETIN 6 09/08/06
BID RELEASE #2, ADDENDUM #3 06/06/06
BID RELEASE #2, CONFORMED SET 04/18/06
BID RELEASE #2, ADDENDUM #2 04/18/06
BID RELEASE #2, ADDENDUM #1 04/10/06
BID RELEASE # 2 03/17/06
100% CONTRACT DOCUMENTS
REVISION NO. DATE

JOB 0410
DATE 06/27/08
SHEET M2.2B

BUILDING 1
HVAC PARTIAL SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

UC MERCED
SIERRA TERRACES UCM #906260

FISHER FRIEDMAN ASSOCIATES AIA
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Taylor Engineering LLC
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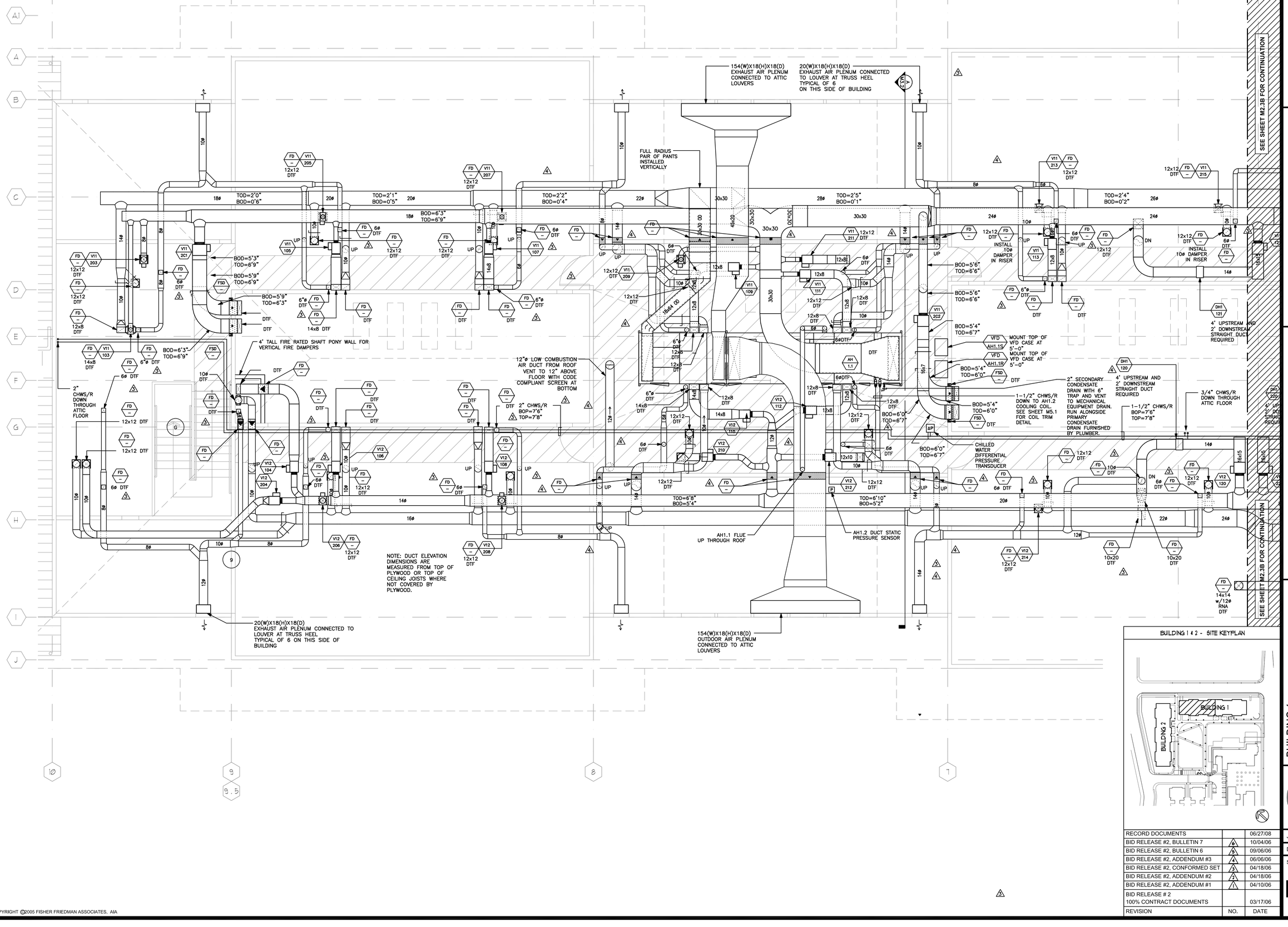

BUILDING 1 & 2 - SITE KEYPLAN

RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

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UC MERCED
SIERRA TERRACES

UCM #906260

BUILDING 1
HVAC PARTIAL ATTIC PLAN

SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.3A

154(W)X18(H)X18(D) OUTDOOR AIR PLENUM CONNECTED TO ATTIC Llouvers

AH1.1 DUCT STATIC PRESSURE SENSOR

INSTALL 10ø DAMPER IN RISER

2" SECONDARY CONDENSATE DRAIN WITH 6" TRAP AND VENT TO MECHANICAL EQUIPMENT DRAIN. RUN ALONGSIDE PRIMARY CONDENSATE DRAIN FURNISHED BY PLUMBER.

1-1/2" CHWS/R DOWN TO AH1.2 COOLING COIL. SEE SHEET M5.1 FOR COIL TRIM DETAIL

4' UPSTREAM AND 2' DOWNSTREAM STRAIGHT DUCT REQUIRED

4' UPSTREAM AND 2' DOWNSTREAM STRAIGHT DUCT REQUIRED

TOD=7'0" BOD=5'0"

AH1.2 FLUE UP THROUGH ROOF

12"ø LOW COMBUSTION AIR DUCT FROM ROOF VENT TO 12" ABOVE FLOOR WITH CODE COMPLIANT SCREEN AT BOTTOM

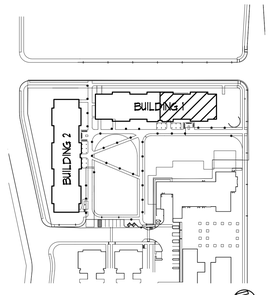
154(W)X18(H)X18(D) EXHAUST AIR PLENUM CONNECTED TO ATTIC LOUVERS

NOTE: DUCT ELEVATION DIMENSIONS ARE MEASURED FROM TOP OF PLYWOOD OR TOP OF CEILING JOISTS WHERE NOT COVERED BY PLYWOOD.

SEE SHEET M2.3A FOR CONTINUATION

SEE SHEET M2.3A FOR CONTINUATION

BUILDING 1 & 2 - SITE KEYPLAN



REVISION	NO.	DATE
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, BULLETIN 7	6	10/04/06
RECORD DOCUMENTS		06/27/08

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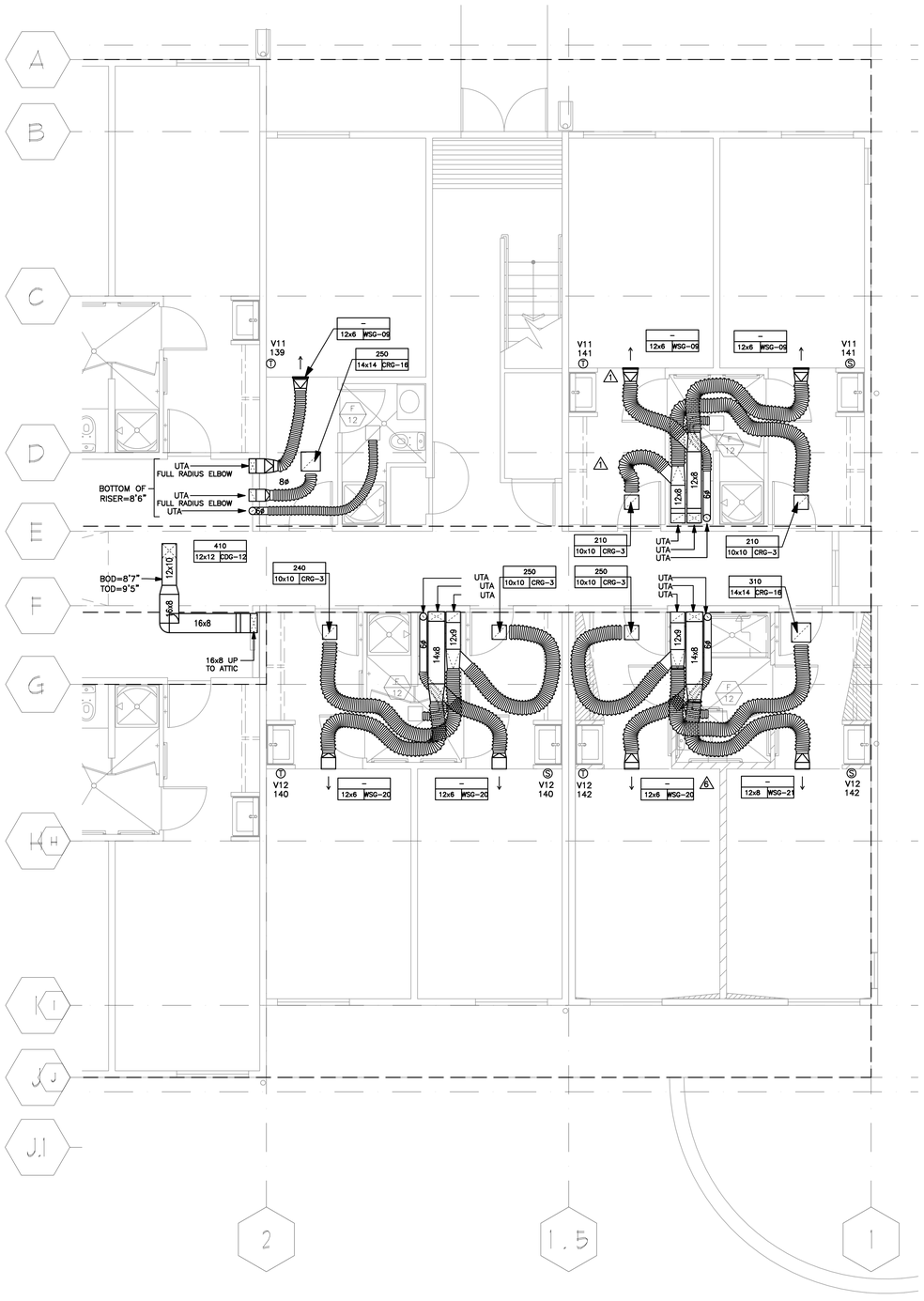
UC MERCED
SIERRA TERRACES UCM #906260

BUILDING 1
HVAC PARTIAL ATTIC PLAN

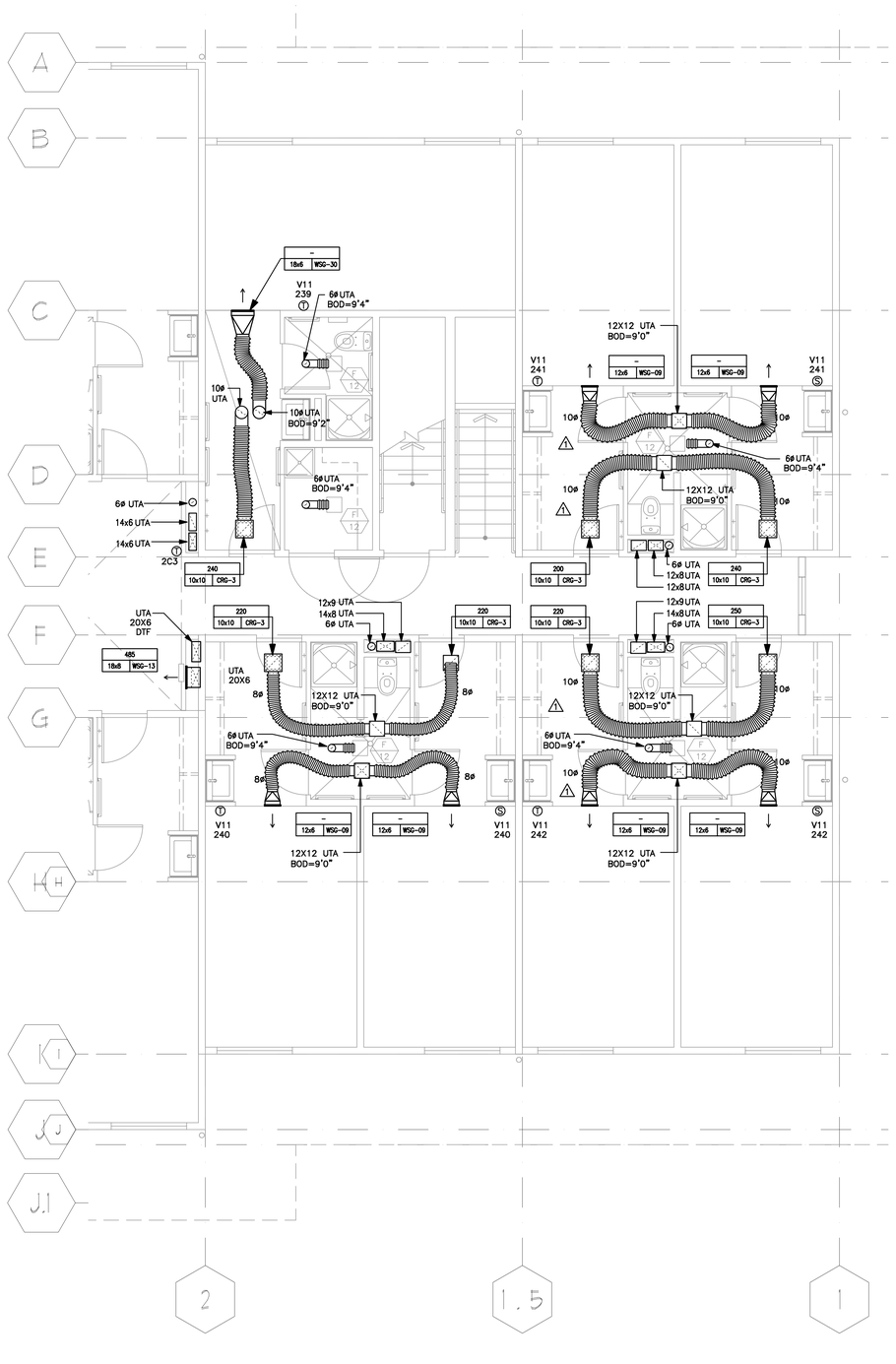
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER ALAN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.3B

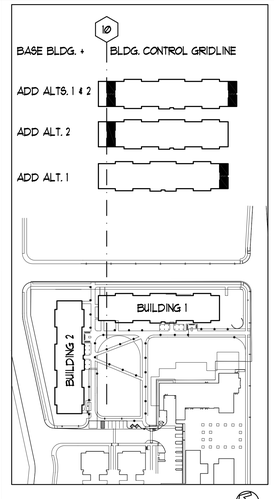


1 HVAC FIRST FLOOR PLAN – ALTERNATE 1
1/4" = 1'-0"



2 HVAC SECOND FLOOR PLAN – ALTERNATE 1
1/4" = 1'-0"

BUILDING 1 - ADD ALTERNATE KEY / SITE KEYPLAN



REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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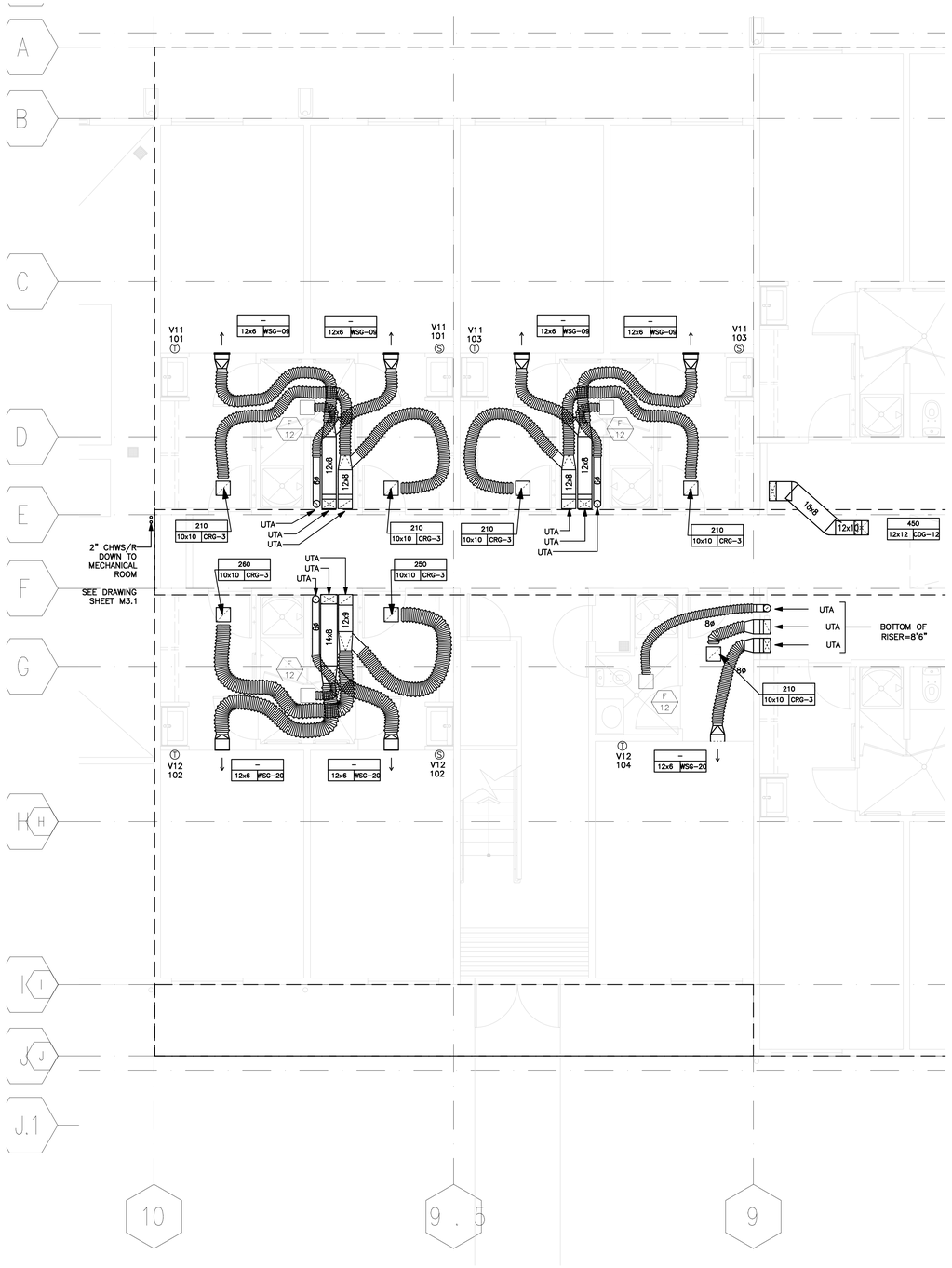
SIERRA TERRACES
UCM #906260

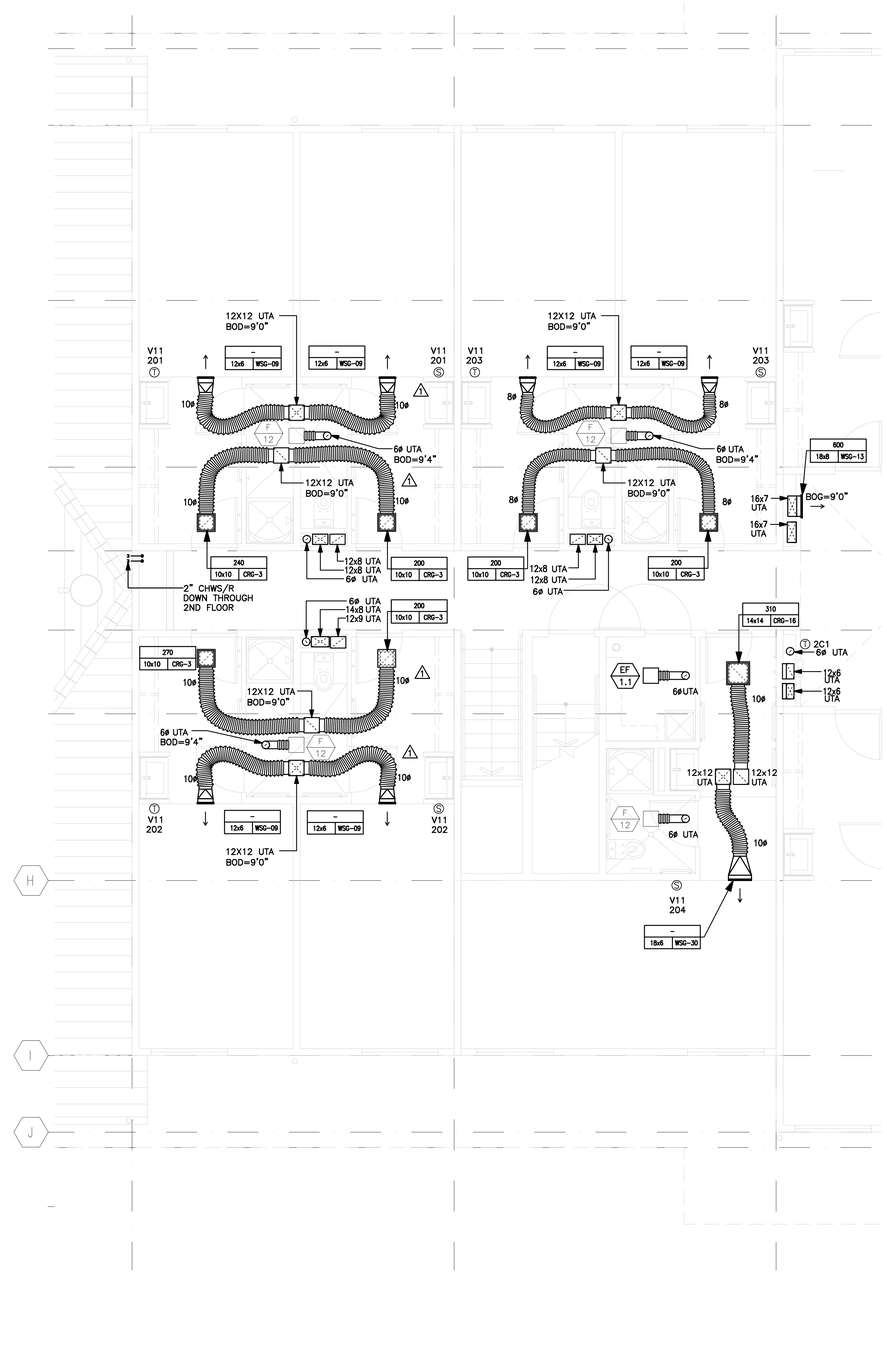
BUILDING 1 - ALTERNATE 1
HVAC FIRST AND SECOND FLOOR PLAN

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.4

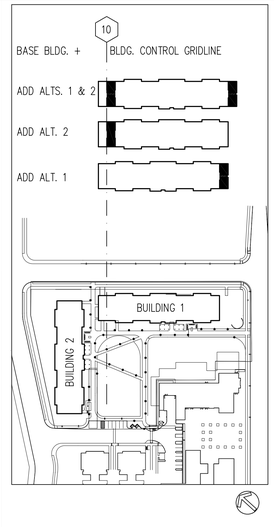


1 HVAC FIRST FLOOR PLAN – ALTERNATE 2
1/4" = 1'-0"



2 HVAC SECOND FLOOR PLAN – ALTERNATE 2
1/4" = 1'-0"

BUILDING 1 – ADD ALTERNATE KEY / SITE KEYPLAN



RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
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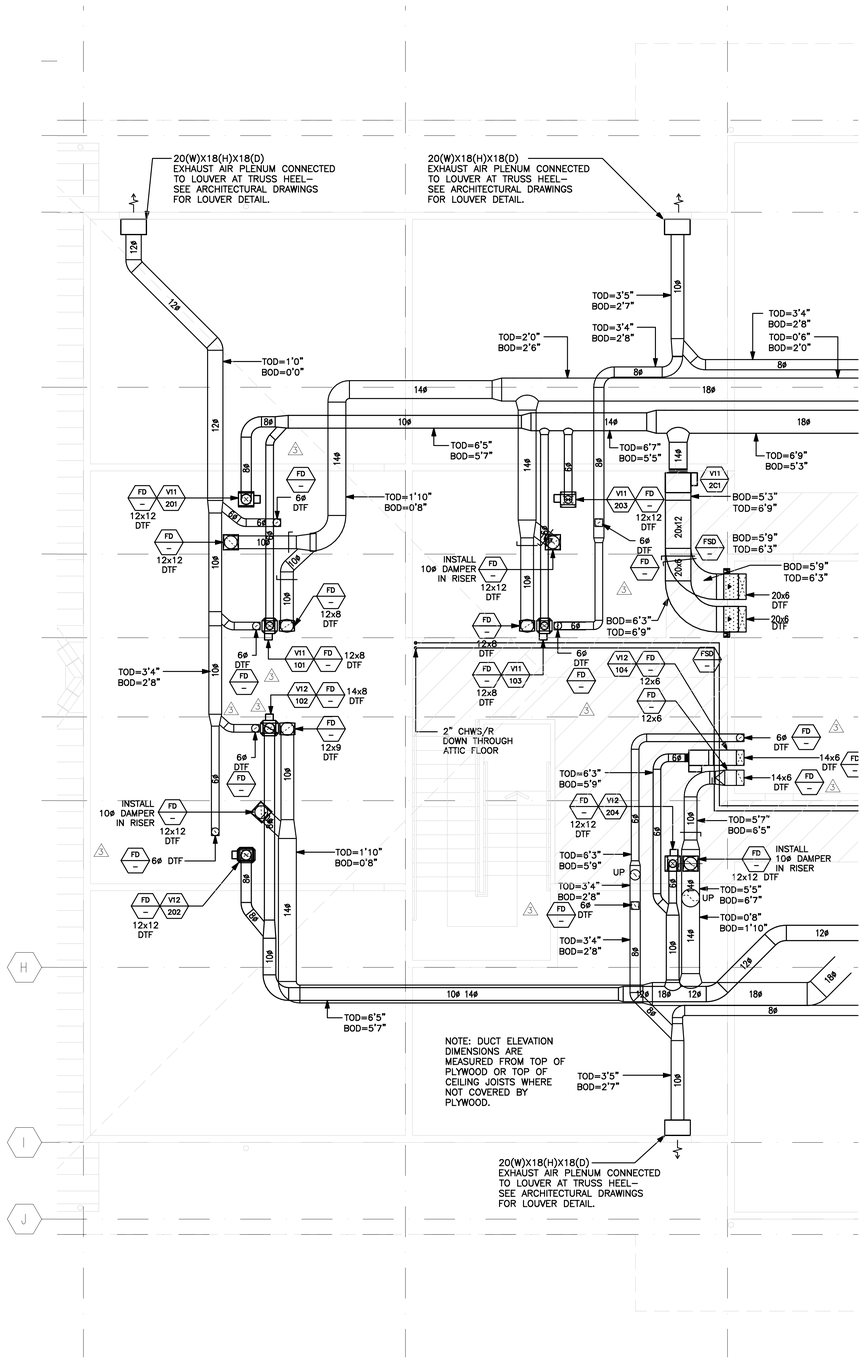
UCM #906260

BUILDING 1 - ALTERNATE 2
HVAC FIRST AND SECOND FLOOR PLAN

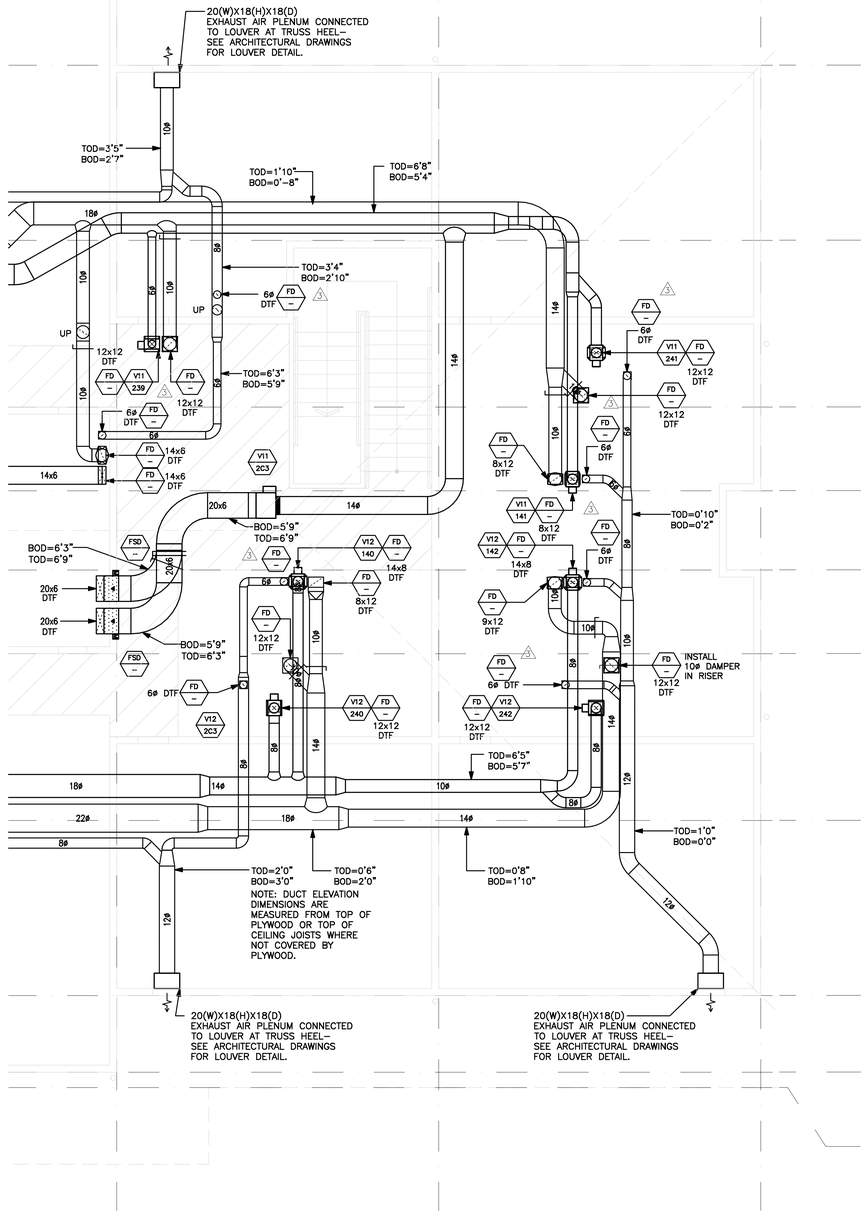
REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB	0410
DATE	06/27/08

SHEET
M2.5

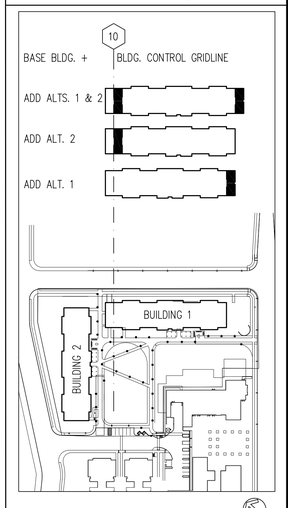


1 HVAC ATTIC PLAN – ALTERNATE 1
1/4" = 1'–0"



2 HVAC ATTIC PLAN – ALTERNATE 2
1/4" = 1'–0"

BUILDING 1 – ADD ALTERNATE KEY / SITE KEYPLAN



RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

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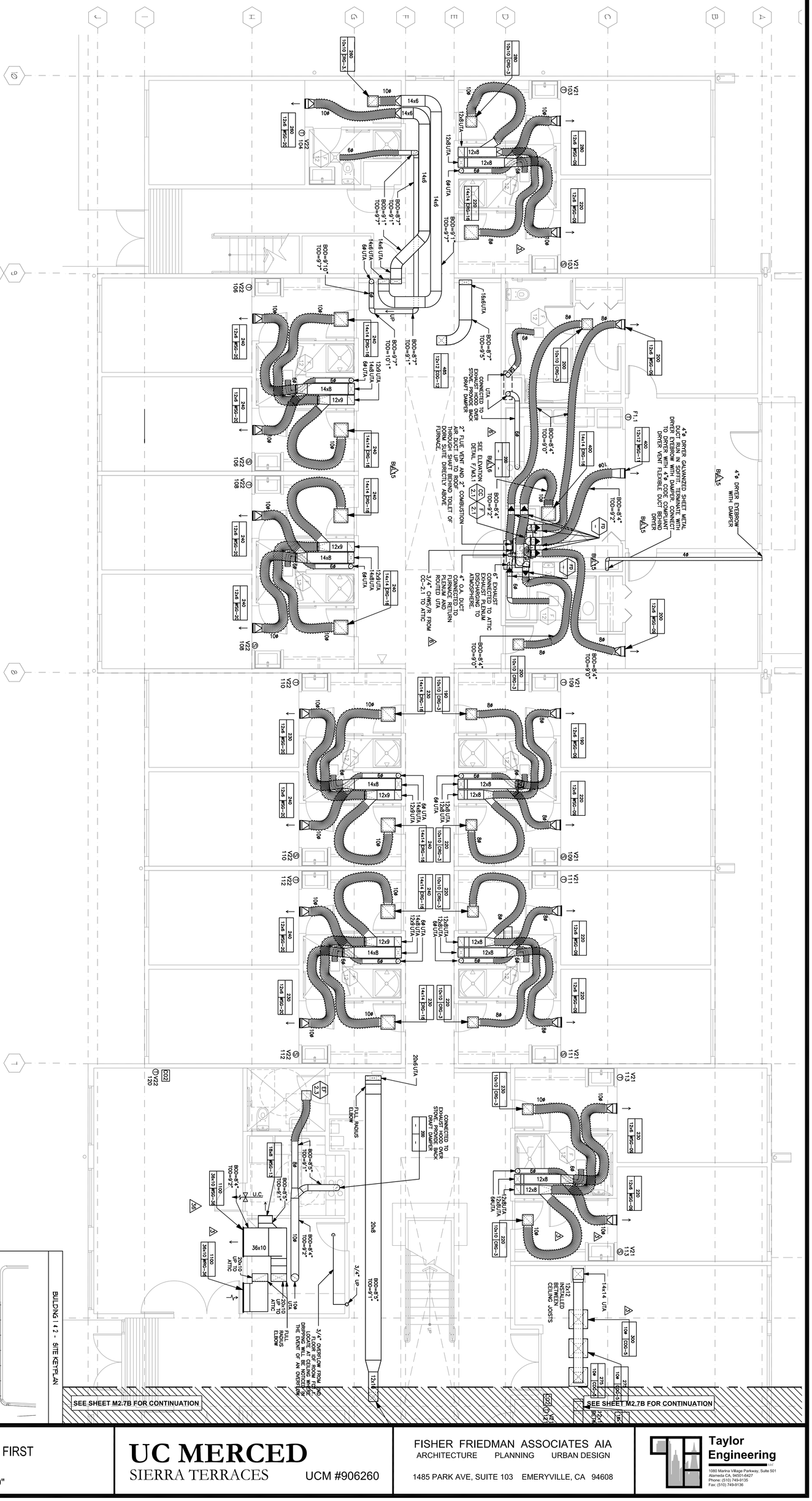
UC MERCED
SIERRA TERRACES
UCM #906260

BUILDING 1 - ALTERNATE 1 & 2
HVAC ATTIC PLAN

REGISTERED PROFESSIONAL ENGINEER GLENN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.6



REVISION	DATE
100% CONTRACT DOCUMENTS	03/17/06
BID RELEASE #2	
BID RELEASE #2, ADDENDUM #1	04/10/06
BID RELEASE #2, ADDENDUM #2	04/18/06
BID RELEASE #2, CONFORMED SET	04/18/06
BID RELEASE #2, ADDENDUM #3	05/05/06
BID RELEASE #2, BULLETIN 6	09/06/06
BID RELEASE #2, BULLETIN 7	10/04/06
RECORD DOCUMENTS	06/27/08

JOB	0410
DATE	06/27/08
SHEET	M2.7A

BUILDING 2
HVAC PARTIAL FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

UC MERCED
SIERRA TERRACES UCM #906260

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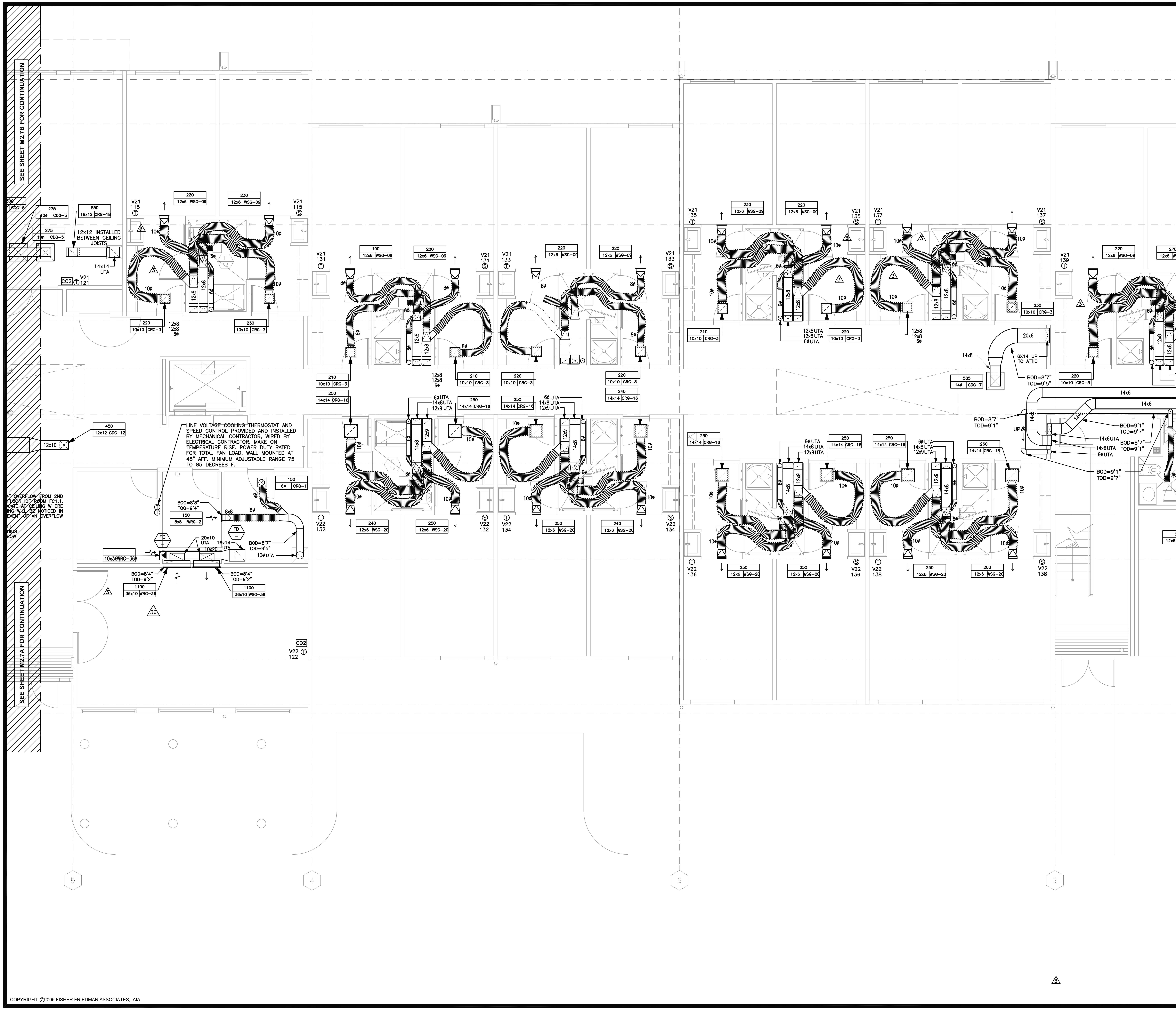

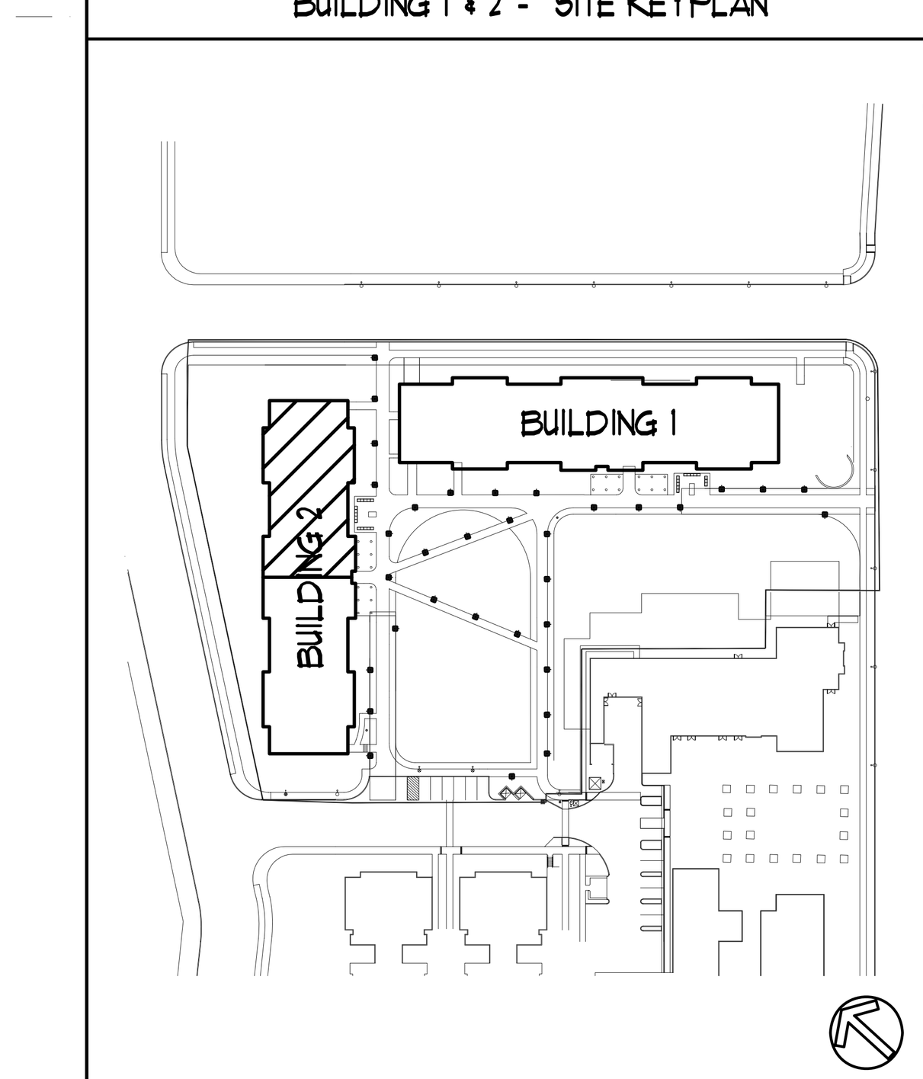

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UCM #906260

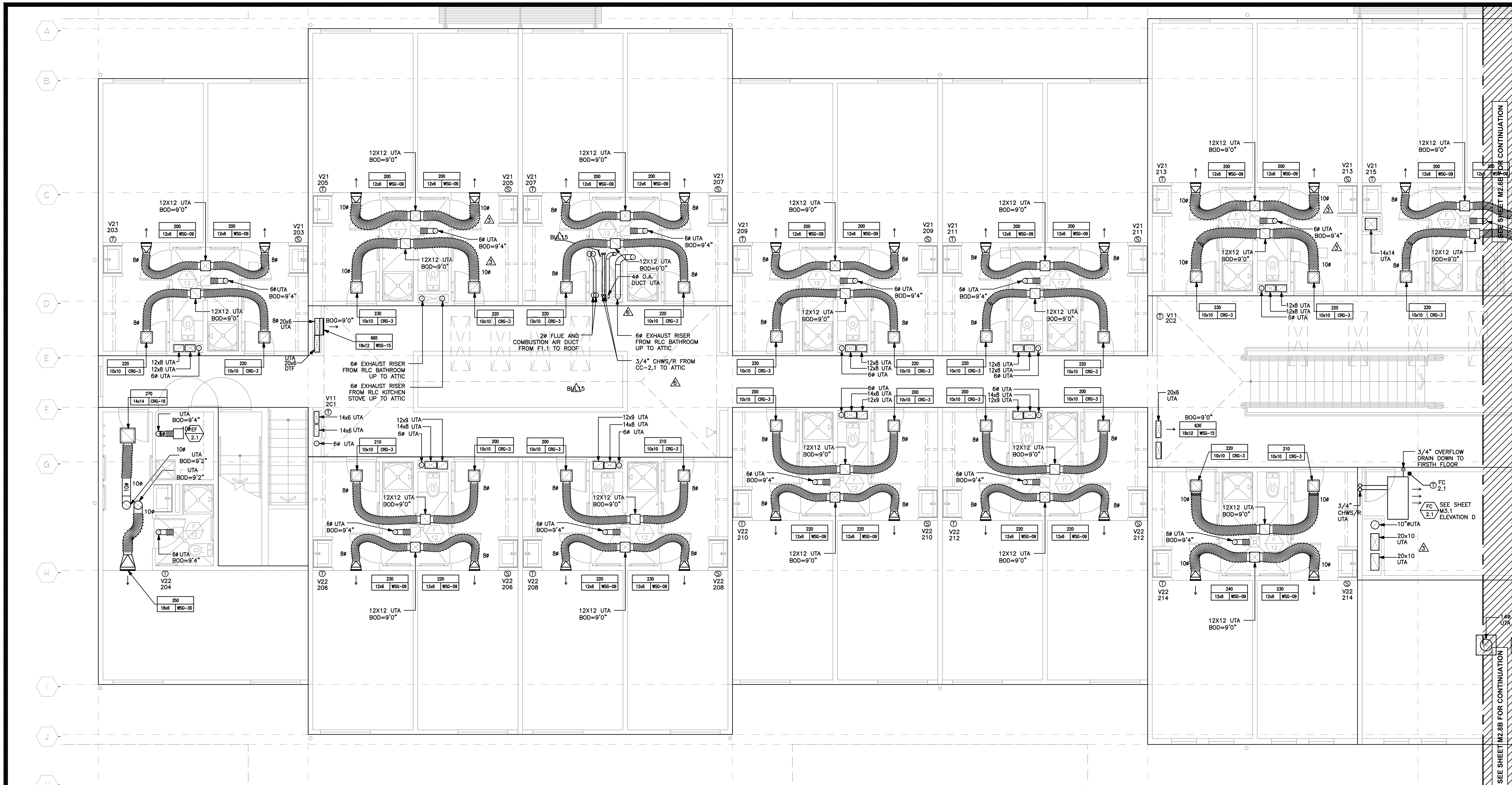
UC MERCED
SIERRA TERRACES

BUILDING 2
HVAC PARTIAL FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

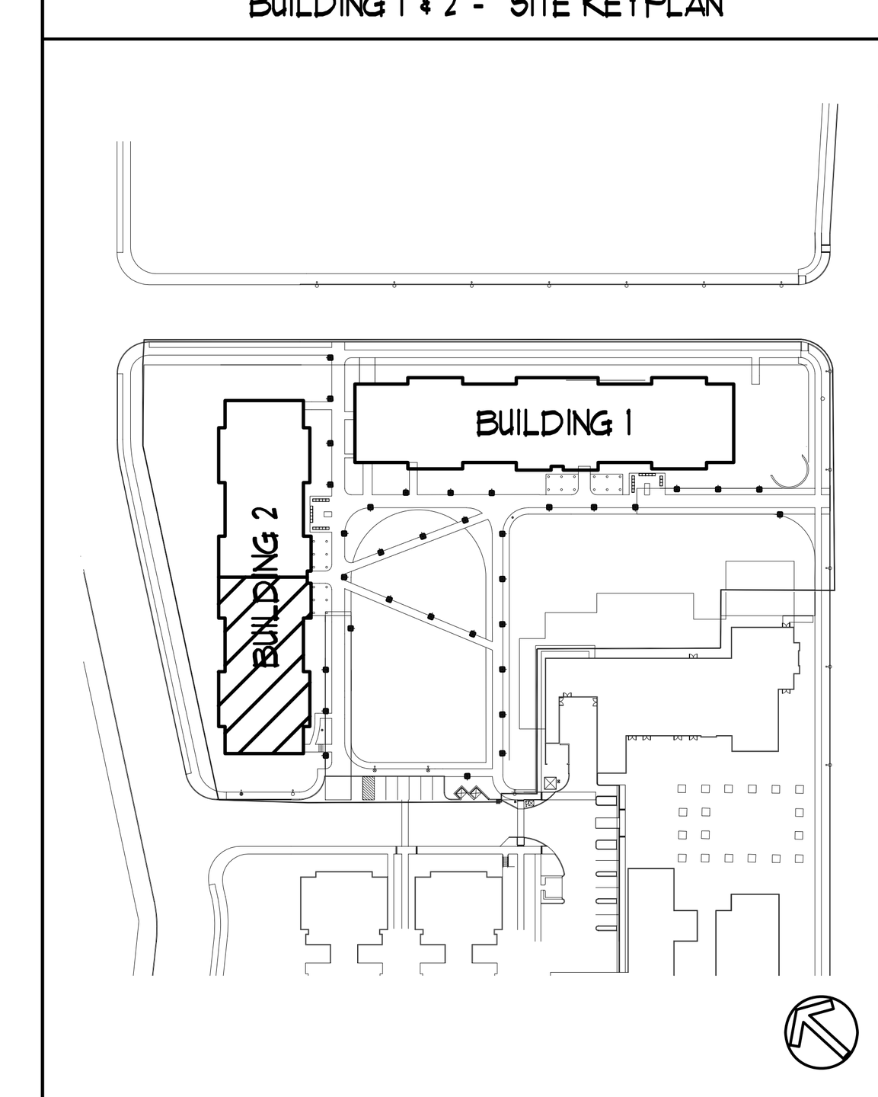
REGISTERED PROFESSIONAL ENGINEER GLOW FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06
REVISION	NO.	DATE

JOB	0410
DATE	06/27/08
SHEET	M2.7B



BUILDING 1 & 2 - SITE KEYPLAN



REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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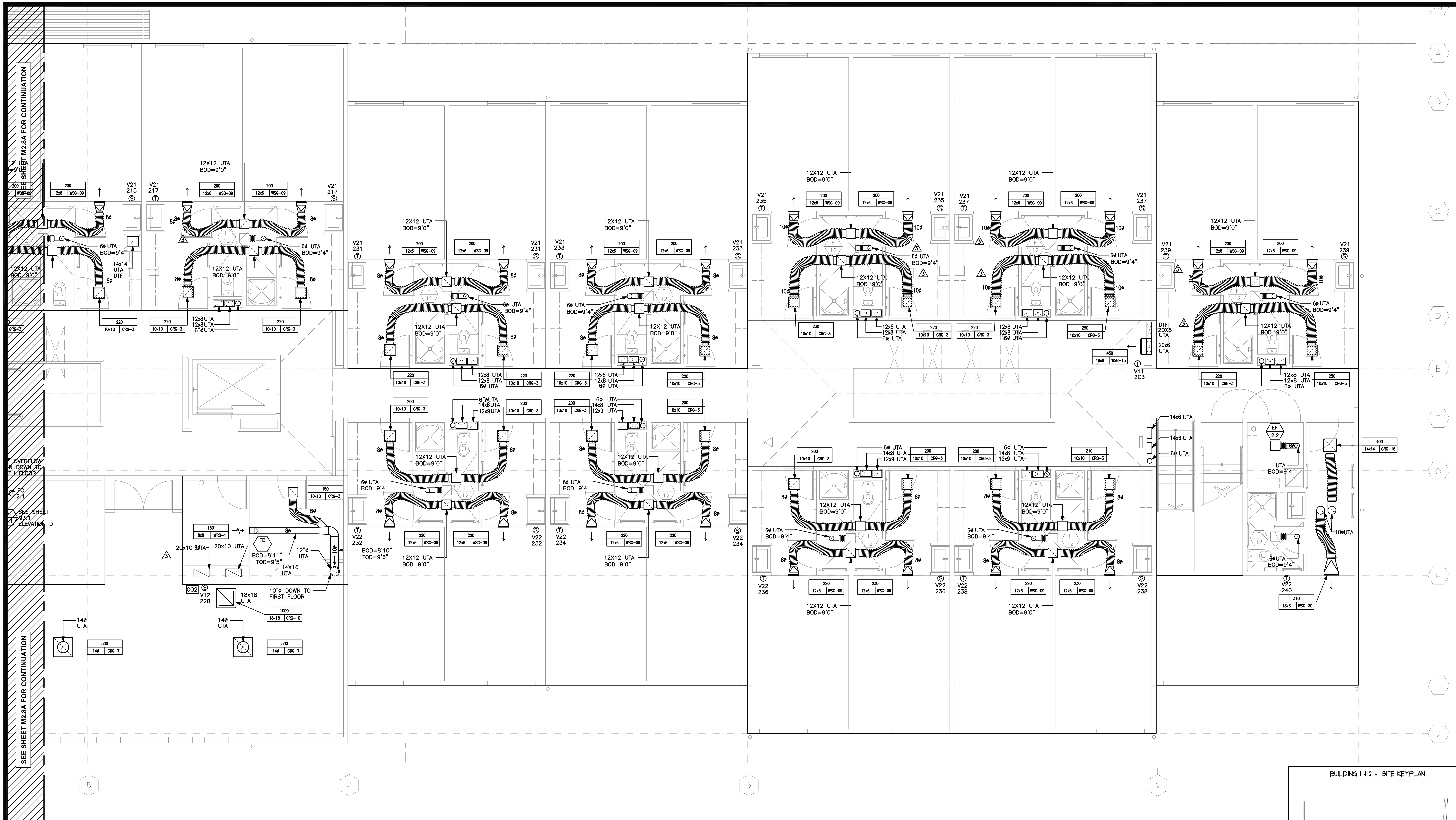
UC MERCED
SIERRA TERRACES

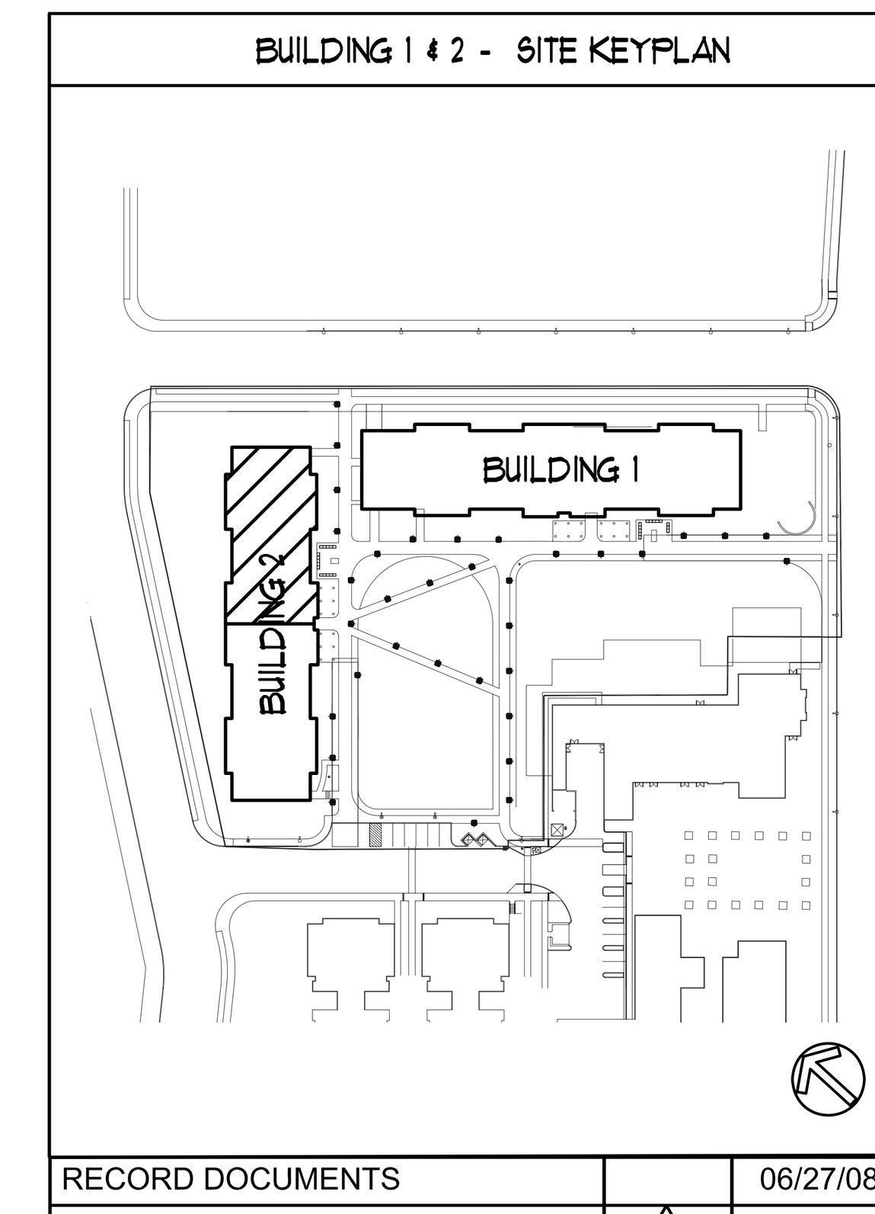
BUILDING 2
HVAC PARTIAL SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER — GLENN FRIEDMAN — No. M22870 — Exp. 09/30/06 — MECHANICAL — STATE OF CALIFORNIA

JOB	0410
DATE	06/27/08
SHEET	M2.8A



BUILDING 1 & 2 - SITE KEYPLAN



REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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SIERRA TERRACES

UCM #906260

BUILDING 2
HVAC PARTIAL SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER GLENN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.8B

4ø O.A. THROUGH 4ø HOLE THROUGH ROOF EVE WITH 50% FREE AREA RODENT SCREEN

154(W)X18(H)X18(D) EXHAUST AIR PLENUM CONNECTED TO ATTIC LOUVERS

20(W)X18(H)X18(D) EXHAUST AIR PLENUM CONNECTED TO LOUVER AT TRUSS HEEL TYPICAL OF 6 ON THIS SIDE OF BUILDING

SEE SHEET M2.9B FOR CONTINUATION

CONCENTRIC VENT UP THROUGH ROOF

FULL RADIUS PAIR OF PANTS INSTALLED VERTICALLY

6ø RLC STOVE EXHAUST DUCT DTF. FIRE DAMPER WITH HIGH TEMPERATURE FUSIBLE LINK

6ø EXHAUST DUCT DTF

3/4" CHWS/R FROM ATTIC DOWN TO CC-2.1

2ø FLUE AND COMBUSTION AIR DUCT FROM F1.1 CONNECT TO CONCENTRIC VENT AN UP THROUGH ROOF, HOLD DUCT TIGHT TO STRUCTURE WHERE POSSIBLE. SLOPE 1/4" PER FOOT TOWARDS FURNACE

4ø O.A. DUCT DTF

6ø EXHAUST DUCT DTF

12" LOW COMBUSTION AIR DUCT FROM ROOF VENT TO 12" ABOVE FLOOR WITH CODE COMPLIANT SCREEN AT BOTTOM

INSTALL 10ø DAMPER IN RISER

4" UPSTREAM AND 2" DOWNSTREAM STRAIGHT DUCT REQUIRED

MOUNT TOP OF VFD CASE AT 5'-0"

CHILLED WATER DIFFERENTIAL PRESSURE TRANSDUCER

3/4" CHWS/R DOWN THROUGH ATTIC FLOOR

2" SECONDARY CONDENSATE DRAIN WITH 6" TRAP AND VENT TO MECHANICAL EQUIPMENT DRAIN. RUN ALONGSIDE PRIMARY CONDENSATE DRAIN FURNISHED BY PLUMBER.

1-1/2" CHWS/R BOP=7'6" TOP=7'8"

1-1/2" CHWS/R DOWN TO AH1.2 COOLING COIL. SEE SHEET M5.1 FOR COIL TRIM DETAIL

NOTE: DUCT ELEVATION DIMENSIONS ARE MEASURED FROM TOP OF PLYWOOD OR TOP OF CEILING JOISTS WHERE NOT COVERED BY PLYWOOD

AH2.1 FLUE UP THROUGH ROOF

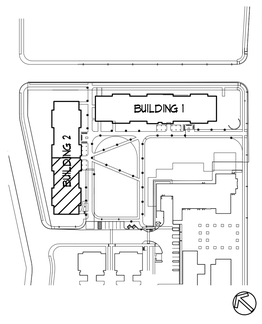
AH2.2 DUCT STATIC PRESSURE SENSOR

40(W)X18(H)X18(D) EXHAUST AIR PLENUM CONNECTED TO LOUVER AT TRUSS HEEL TYPICAL OF 6 ON THIS SIDE OF BUILDING

154(W)X18(H)X18(D) OUTDOOR AIR PLENUM CONNECTED TO ATTIC LOUVERS

SEE SHEET M2.9B FOR CONTINUATION

BUILDING 1 & 2 - SITE KEYPLAN



REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
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BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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UC MERCED
SIERRA TERRACES

UCM #906260

BUILDING 2
HVAC PARTIAL ATTIC PLAN

SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER GLENN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET M2.9A

SEE SHEET M2.9A FOR CONTINUATION

154(W)X18(H)X18(D) OUTDOOR AIR PLENUM CONNECTED TO ATTIC LOUVERS

AH2.1 DUCT STATIC PRESSURE SENSOR

TOD=2'4" BOD=0'2"

TOD=2'3" BOD=0'3"

INSTALL 10ø DAMPER IN RISER

4" UPSTREAM AND 2' DOWNSTREAM STRAIGHT DUCT REQUIRED

2" SECONDARY CONDENSATE DRAIN WITH 6" TRAP AND VENT TO MECHANICAL EQUIPMENT DRAIN. RUN ALONGSIDE PRIMARY CONDENSATE DRAIN FURNISHED BY PLUMBER.

MOUNT TOP OF VFD CASE AT 5'-0"

CHILLED WATER DIFFERENTIAL PRESSURE TRANSDUCER

3/4" CHWS/R DOWN THROUGH ATTIC FLOOR

1-1/2" CHWS/R DOWN TO AH1.2 COOLING COIL. SEE SHEET M5.1 FOR COIL TRIM DETAIL

12"ø LOW COMBUSTION AIR DUCT FROM ROOF VENT TO 12" ABOVE FLOOR WITH CODE COMPLIANT SCREEN AT BOTTOM

2" CHWS/R BOP=7'6" TOP=7'8"

2" CHWS/R DOWN THROUGH ATTIC FLOOR

TOD=7'0" BOD=5'0"

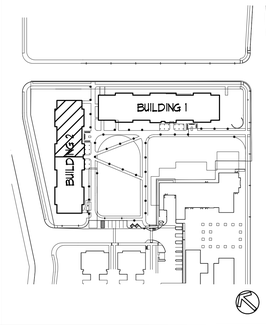
AH2.2 FLUE UP THROUGH ROOF

NOTE: DUCT ELEVATION DIMENSIONS ARE MEASURED FROM TOP OF PLYWOOD OR TOP OF CEILING JOISTS WHERE NOT COVERED BY PLYWOOD

154(W)X18(H)X18(D) EXHAUST AIR PLENUM CONNECTED TO ATTIC LOUVERS

SEE SHEET M2.9A FOR CONTINUATION

BUILDING 1 & 2 - SITE KEYPLAN



REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
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BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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UC MERCED
SIERRA TERRACES

UCM #906260

BUILDING 2
HVAC PARTIAL ATTIC PLAN

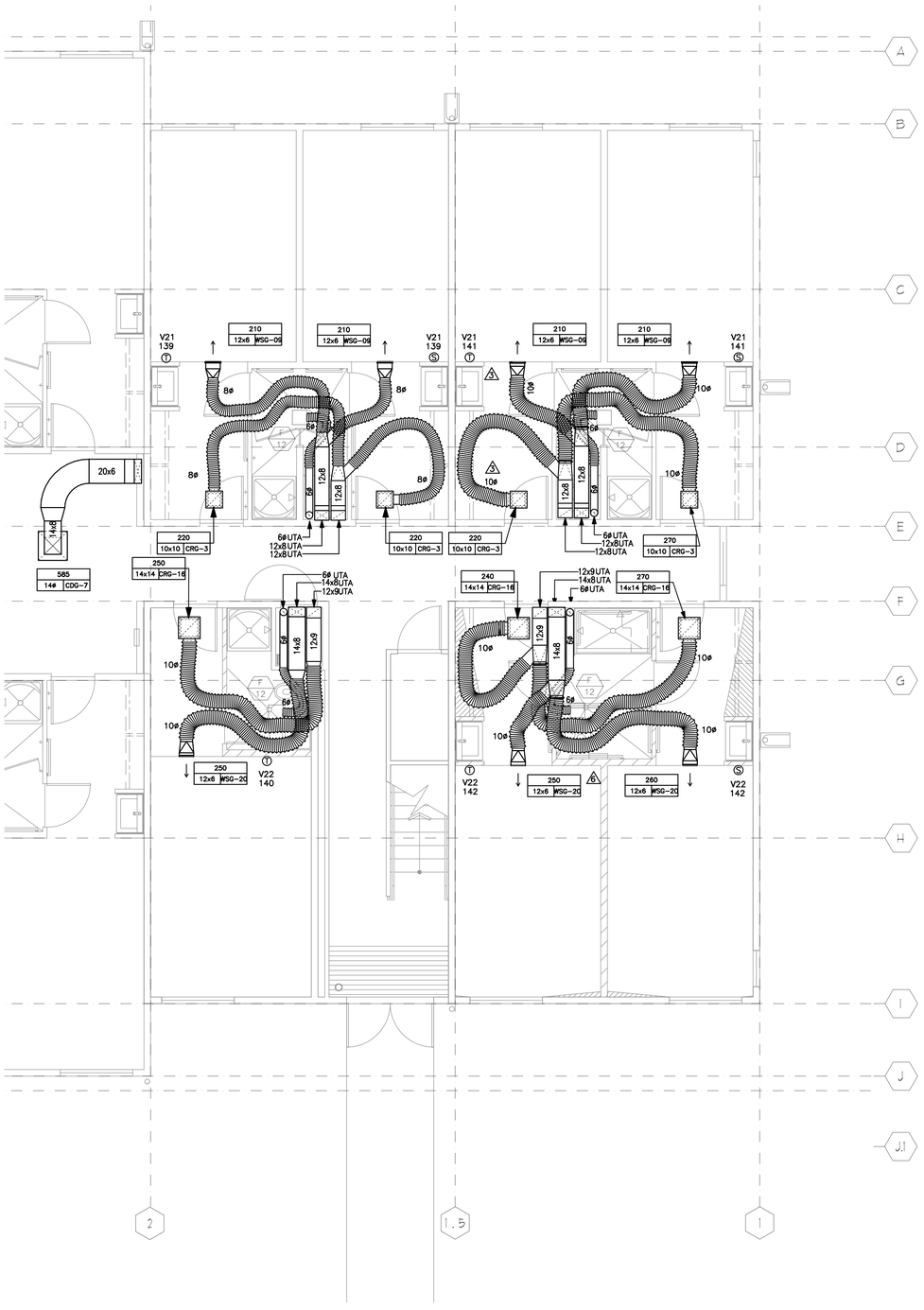
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER GLENN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

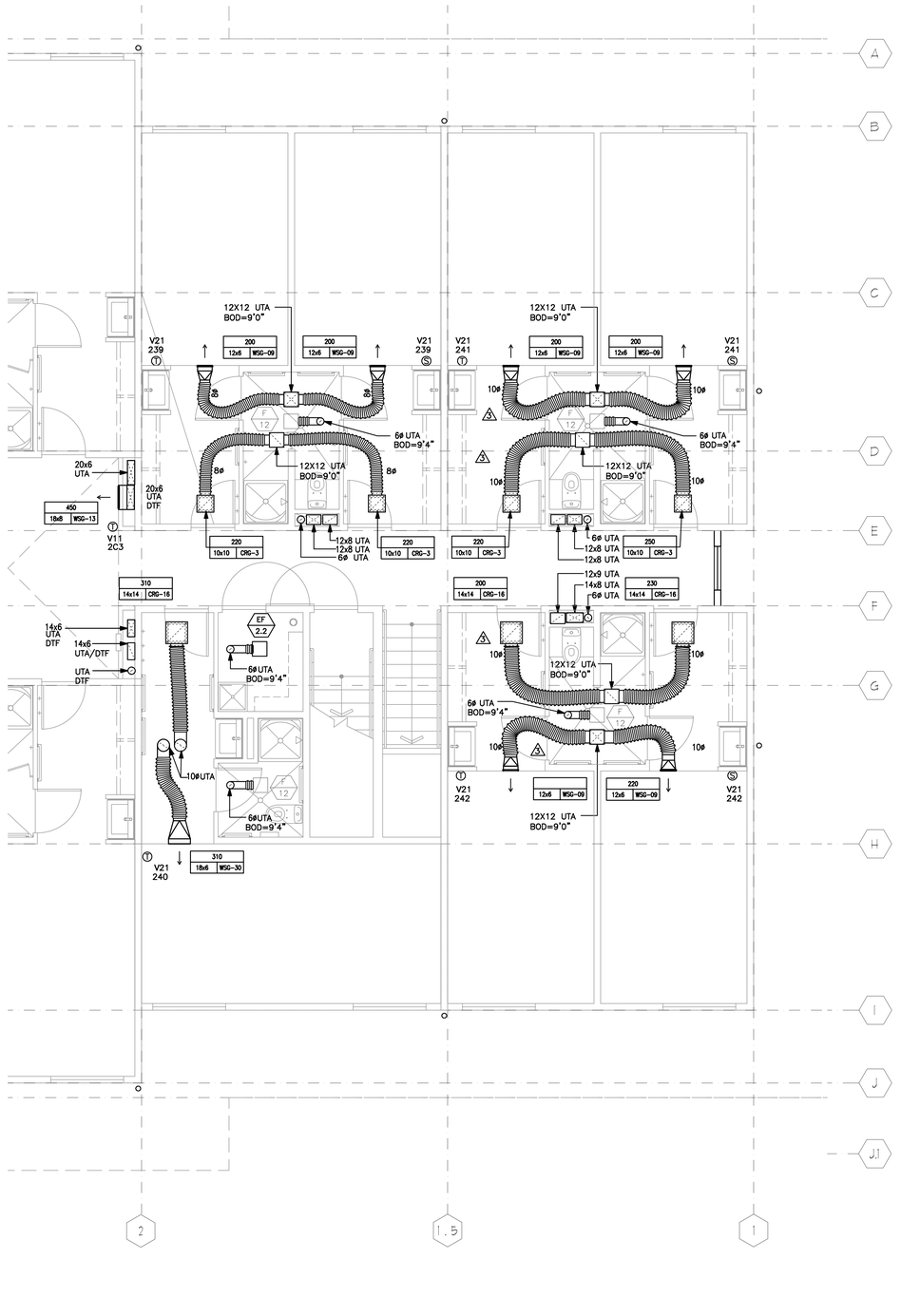
JOB	0410
DATE	06/27/08

SHEET

M2.9B

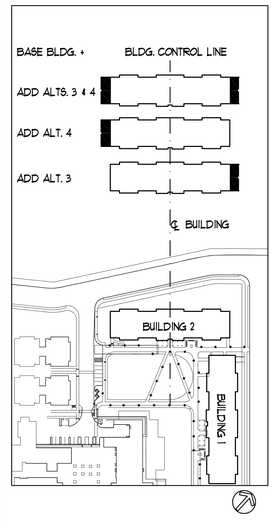


1 HVAC FIRST FLOOR PLAN – ALTERNATE 3
1/4" = 1'–0"



2 HVAC SECOND FLOOR PLAN – ALTERNATE 3
1/4" = 1'–0"

BUILDING 2 - ADD ALTERNATE KEY / SITE KEYPLAN



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BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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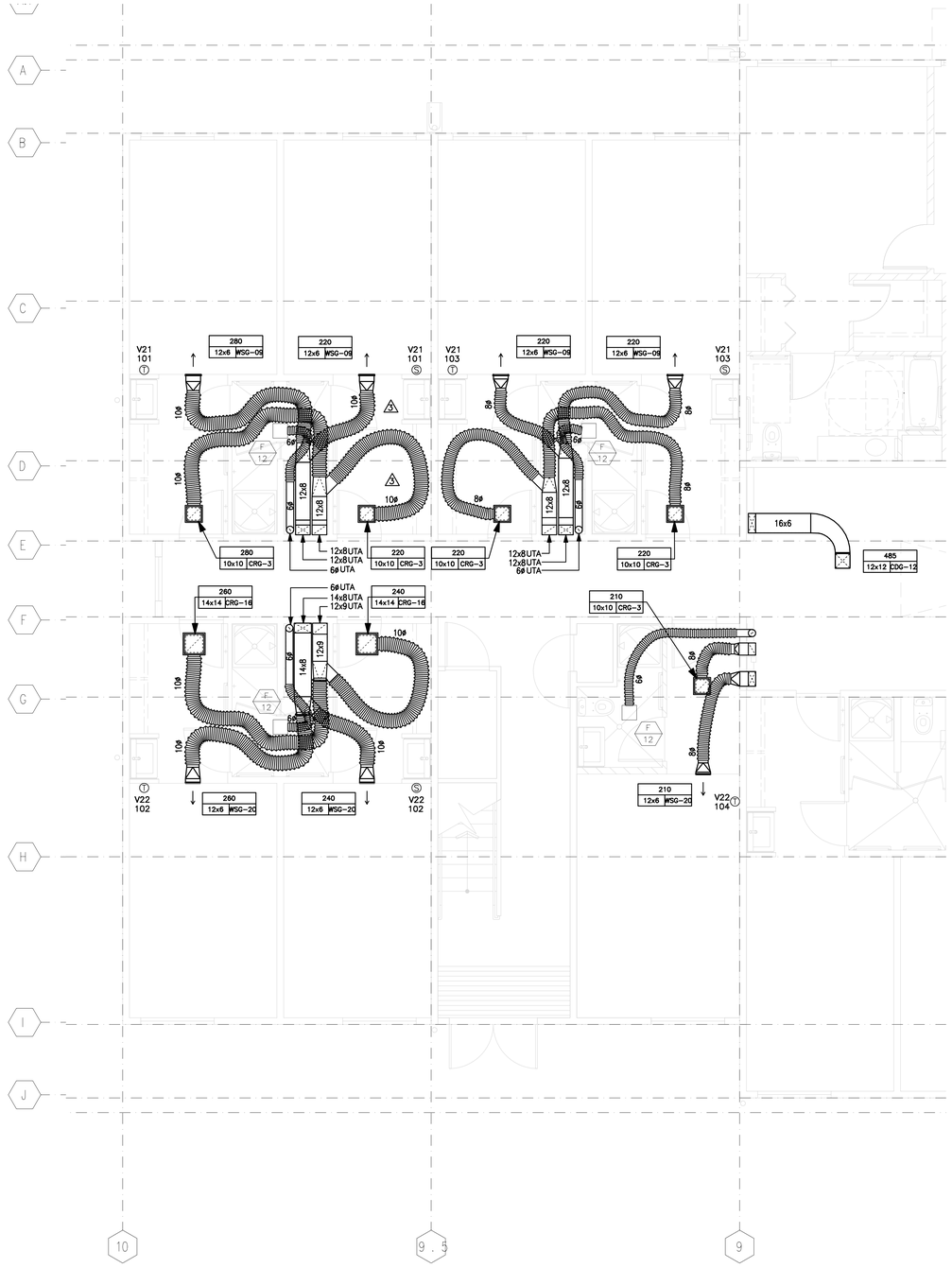
SIERRA TERRACES
UCM #906260

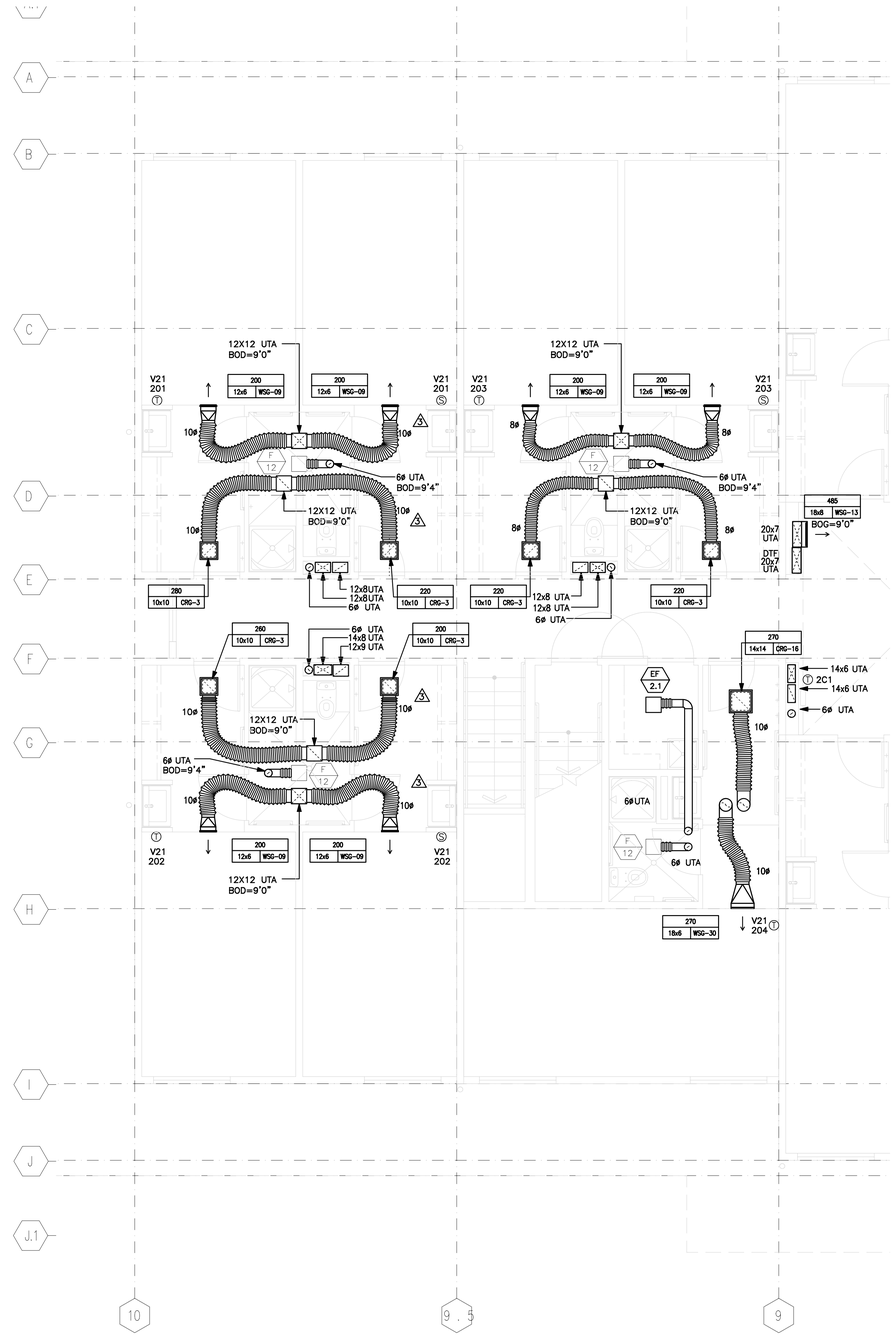
BUILDING 2 - ALTERNATE 3
HVAC FIRST AND SECOND FLOOR PLAN

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET
M2.10

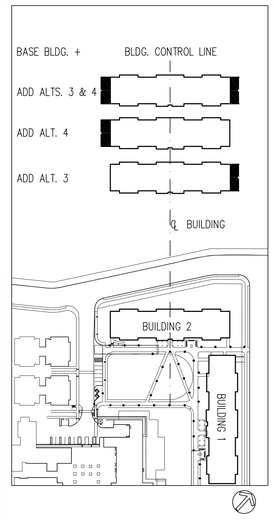


1 HVAC FIRST FLOOR PLAN – ALTERNATE 4
1/4" = 1'-0"



2 HVAC SECOND FLOOR PLAN – ALTERNATE 4
1/4" = 1'-0"

BUILDING 2 – ADD ALTERNATE KEY / SITE KEYPLAN



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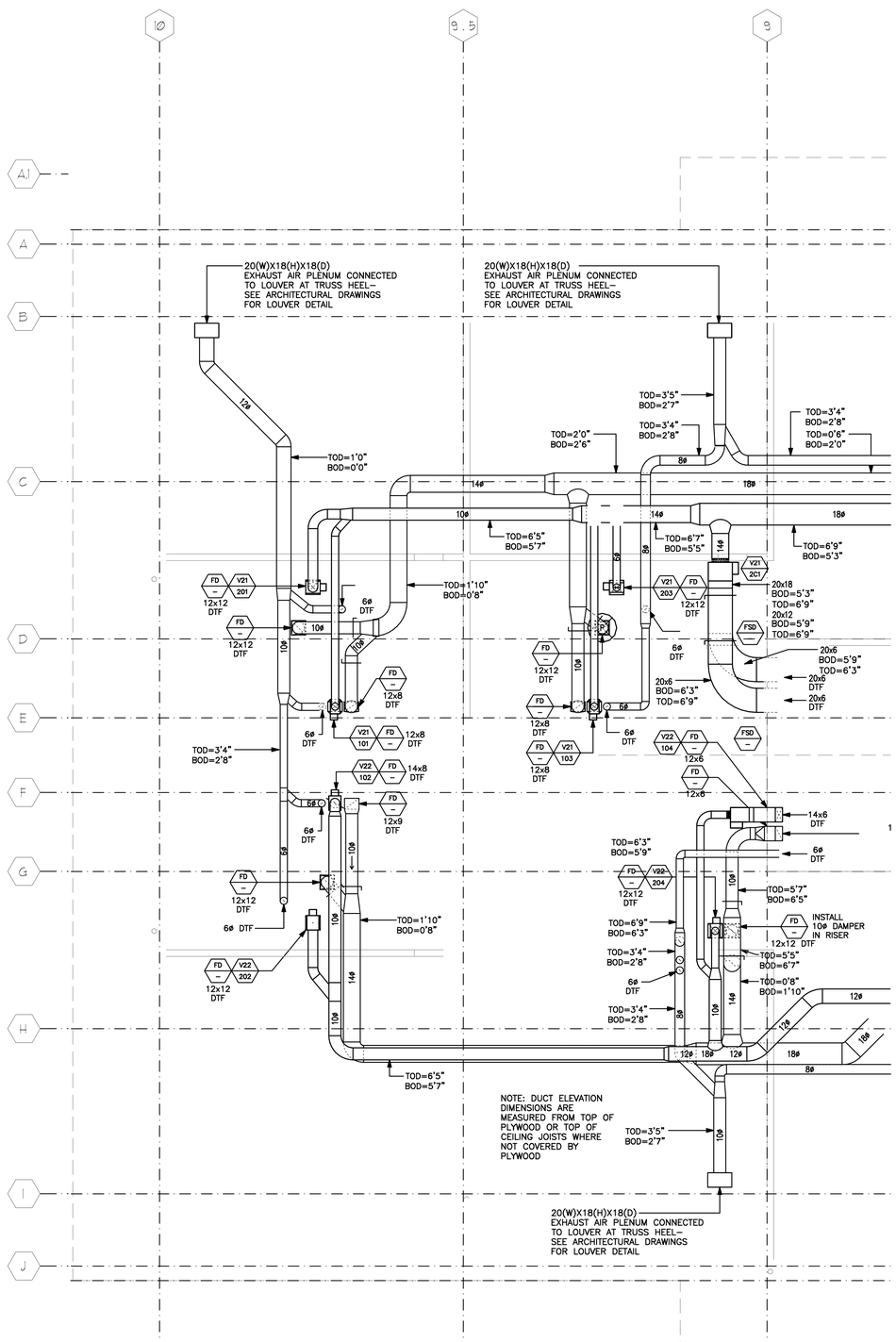
BUILDING 2 - ALTERNATE 4
HVAC FIRST AND SECOND FLOOR PLAN

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

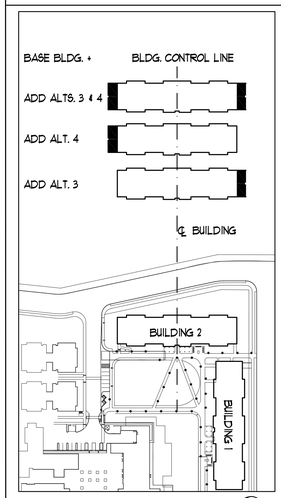
JOB	0410
DATE	06/27/08
SHEET	M2.11



1 HVAC ATTIC PLAN – ALTERNATE 3
1/4" = 1'-0"

2 HVAC ATTIC PLAN – ALTERNATE 4
1/4" = 1'-0"

BUILDING 2 - ADD ALTERNATE KEY / SITE KEYPLAN



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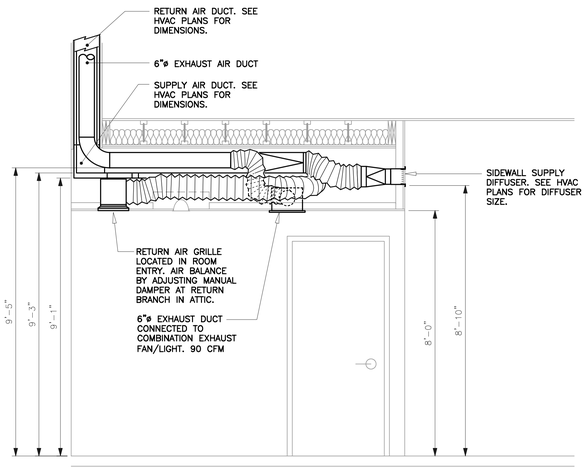
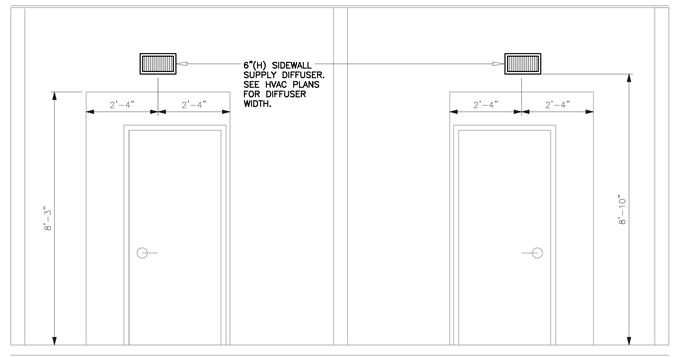
BUILDING 2 - ALTERNATE 3 & 4
HVAC ATTIC PLAN

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

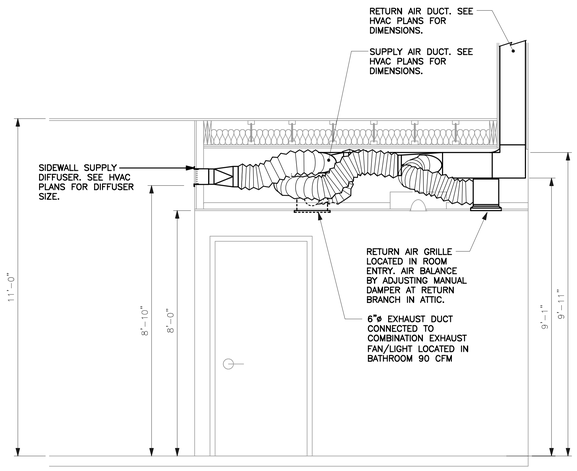
JOB 0410
DATE 06/27/08
SHEET
M2.12



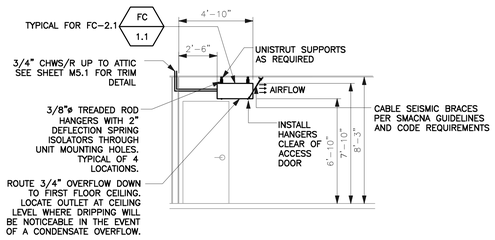
A M3.1 DORM ROOM SECTION (SHOWER SIDE)
1/4"=1'-0"



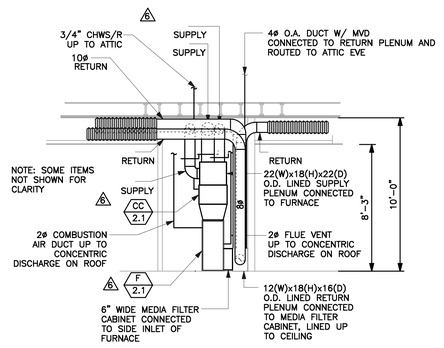
B M3.1 DORM ROOM SECTION (FACING CORRIDOR)
1/4"=1'-0"



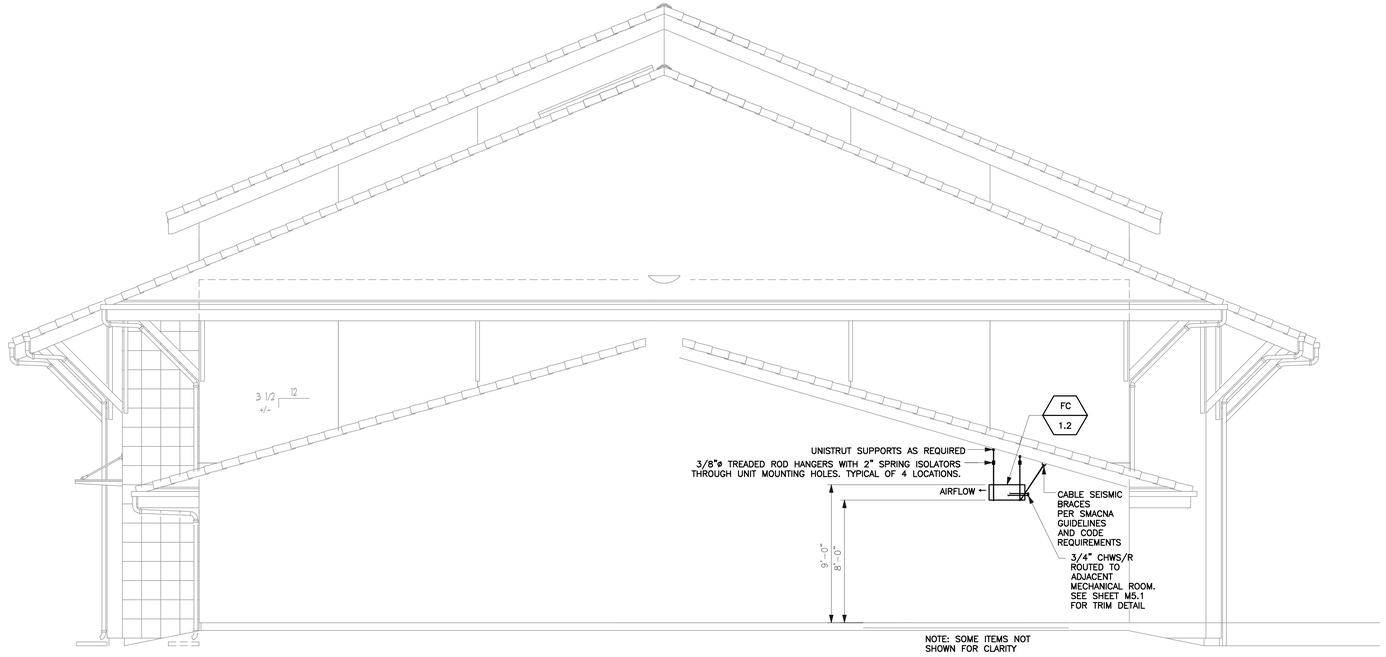
C M3.1 DORM ROOM SECTION (TOILET SIDE)
1/4"=1'-0"



D M3.1 IDF FAN COIL SECTION
1/8"=1'-0"



F M3.1 RLC FURNACE SYSTEM SECTION
1/4"=1'-0"



E M3.1 BDF FAN COIL SECTION
1/8"=1'-0"

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BUILDING 1 & 2
TYPICAL FIRST FLOOR DORM
ROOM AND OTHER SECTIONS
SCALE: AS NOTED

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
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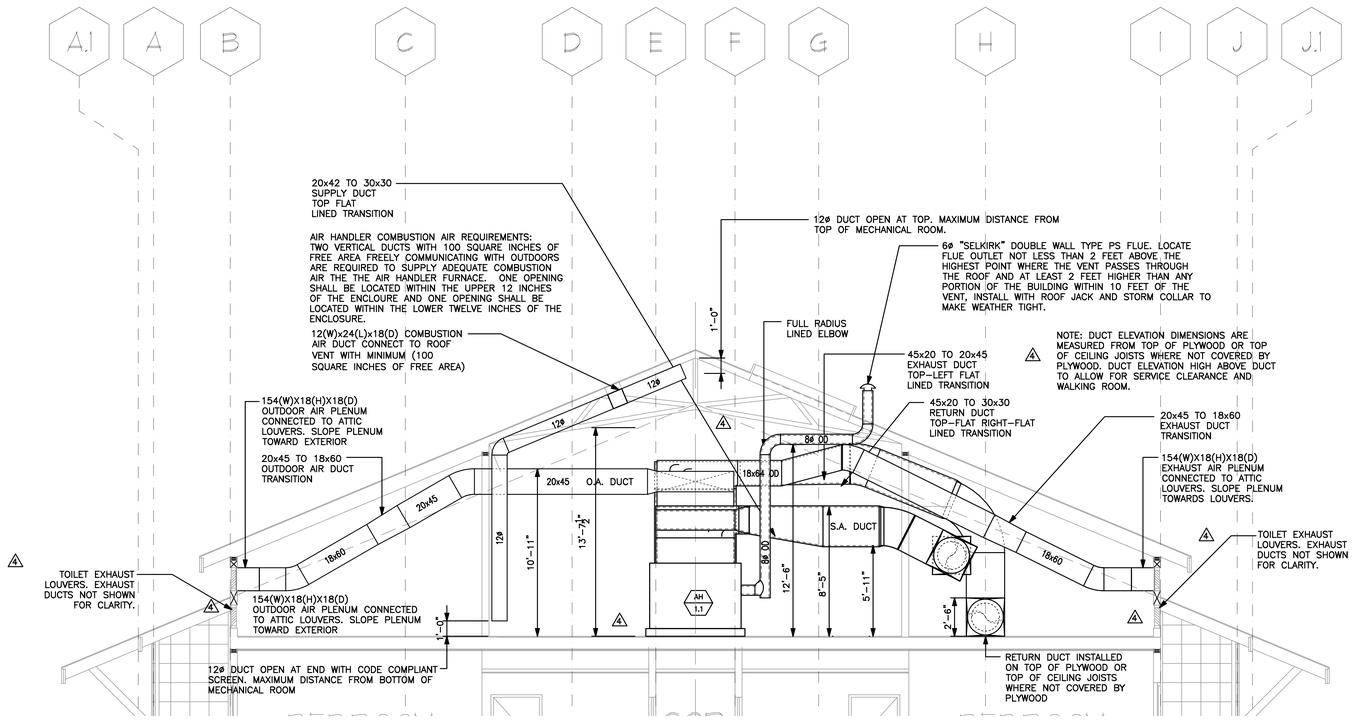
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

JOB	0410
DATE	06/27/08
SHEET	M3.1



A M3.2 ATTIC SECTION

1/4"=1'-0" TYPICAL FOR ALL ATTIC AIR HANDLERS

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UCM #906260

BUILDING 1 & 2
ATTIC SECTION

SCALE: AS NOTED

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

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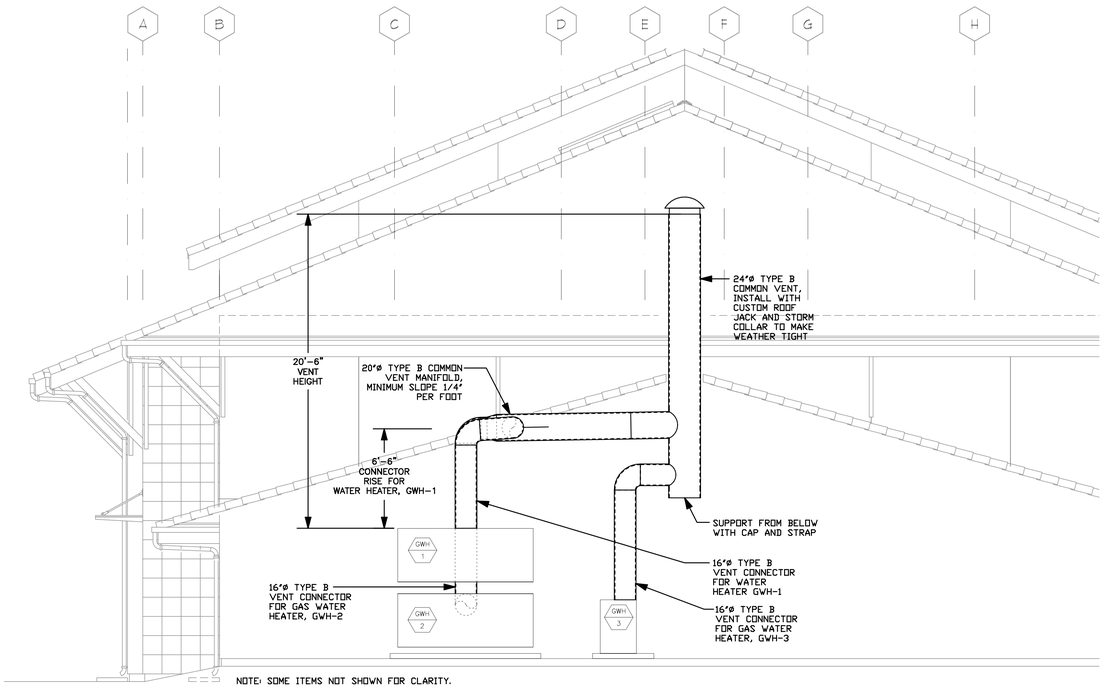
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

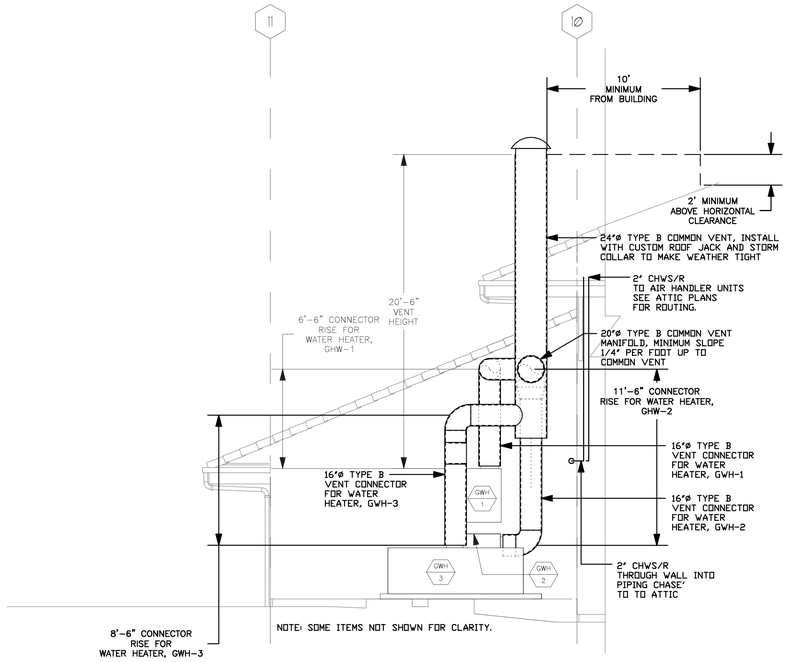
JOB 0410

DATE 06/27/08

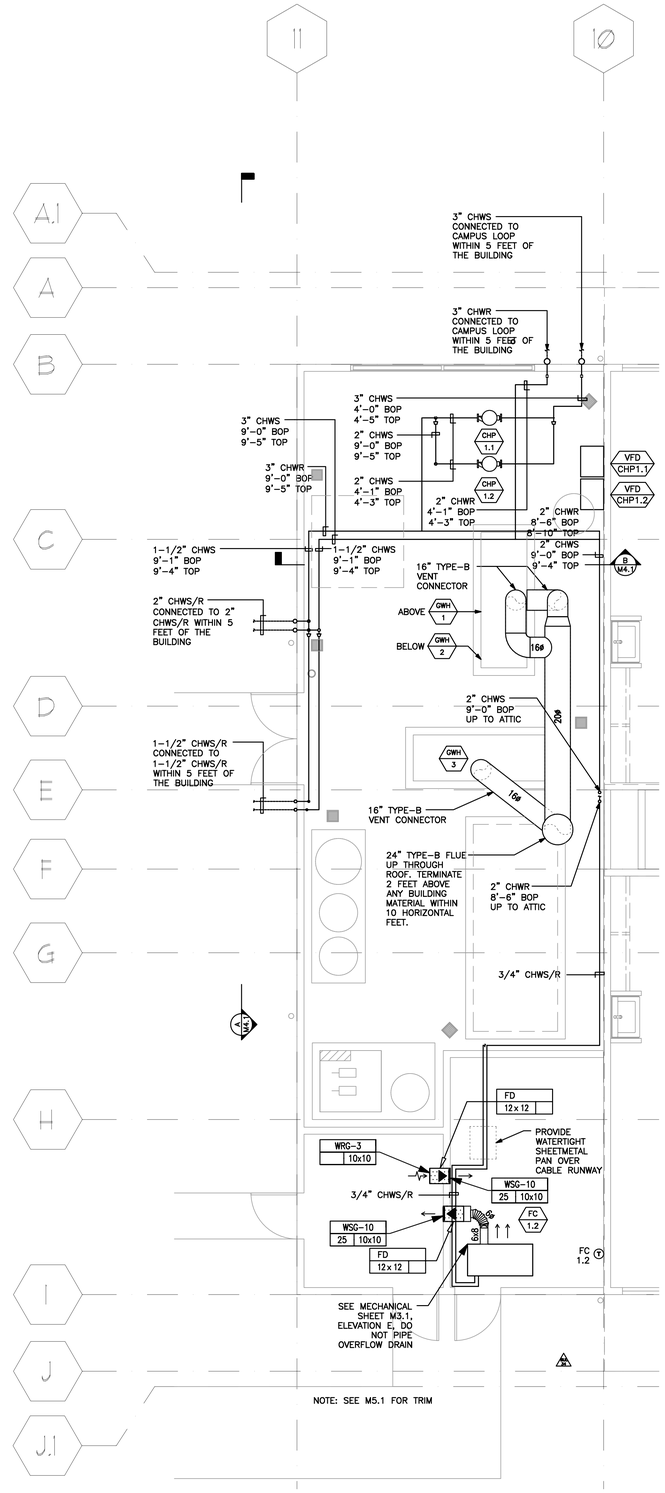
SHEET M3.2



A / M4.1 MECHANICAL ROOM SECTION
1/4" = 1'-0"

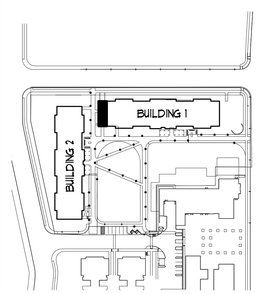


B / M4.1 MECHANICAL ROOM SECTION
1/4" = 1'-0"



1 / M4.1 MECHANICAL ROOM PLAN
1/4" = 1'-0"

BUILDING 1 & 2 - SITE KEYPLAN



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UC MERCED
SIERRA TERRACES

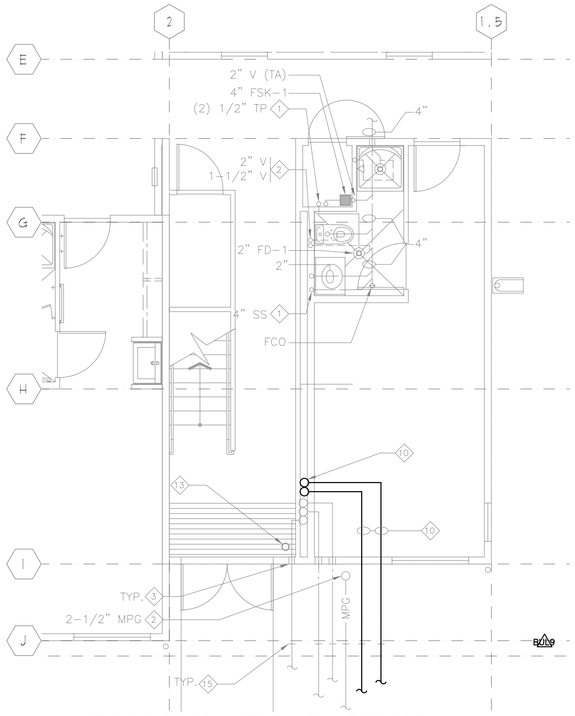
UCM #906260

BUILDING 1 MECHANICAL ROOM PLAN AND SECTIONS

SCALE: AS NOTED

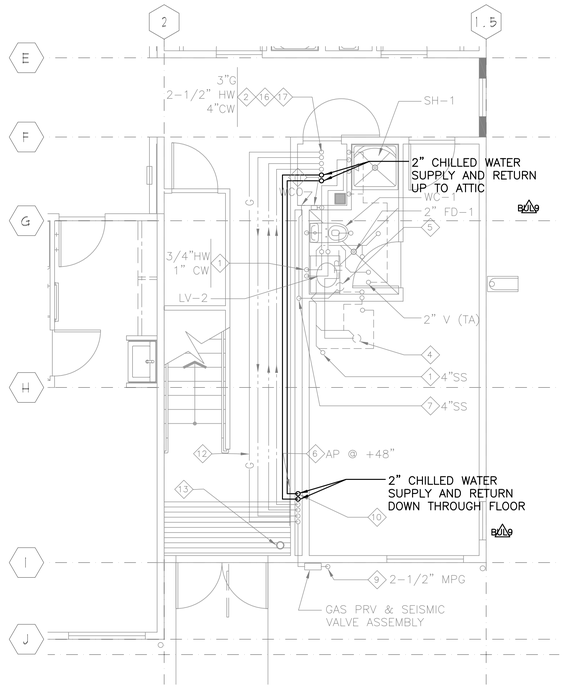
REGISTERED PROFESSIONAL ENGINEER GLENN FRIEDMAN No. M22870 Exp. 09/30/06 MECHANICAL STATE OF CALIFORNIA

JOB	0410
DATE	06/27/08
SHEET	M4.1



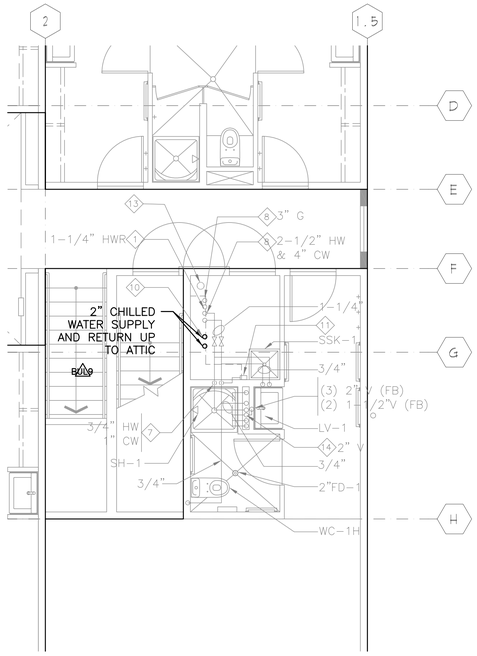
1 M4.2 — RA MODULE– BLDG.2 CHILLED WATER PIPING BELOW SLAB ON GRADE

1/4" = 1'-0"



2 M4.2 — RA MODULE– BLDG. 2 CHILLED WATER PIPING ABOVE SLAB

1/4" = 1'-0"

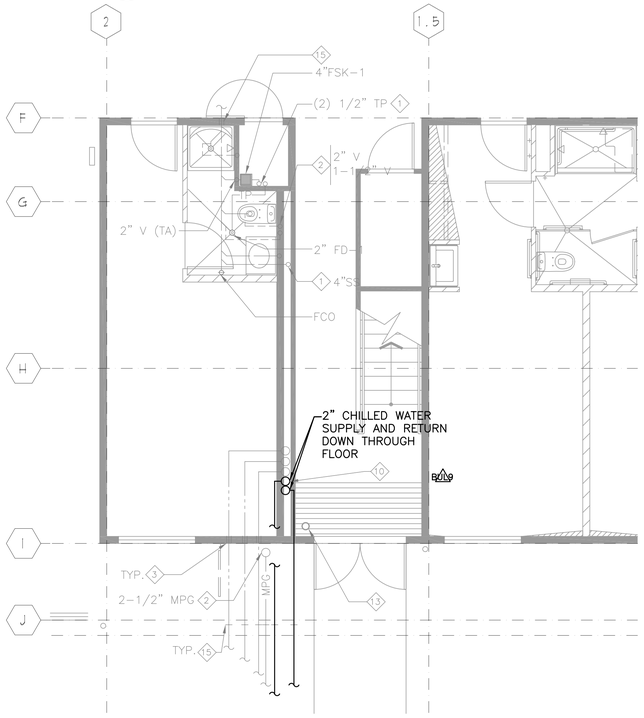


3 M4.2 — TRIPLE UNIT CHILLED WATER PIPING– BLDG. 2 – (2ND FLR. ONLY)

1/4" = 1'

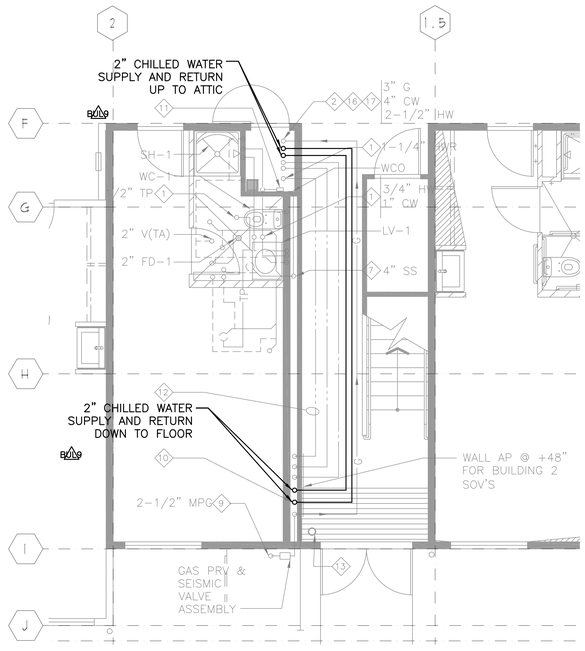
PLUMBING NOTES:

1. PIPING (FA)
2. PIPING (TA)
3. PIPE SLEEVE
4. FD ABOVE
5. SHOWER DRAIN ABOVE
6. WALL ACCESS PANEL FOR BUILDING 2 SOV'S.
7. PIPING (TB)
8. PIPING (FB) & (TA)
9. PIPING (FB)
10. MECHANICAL PIPING SEE MECHANICAL DRAWINGS
11. 1/2" CW TO TP ASSEMBLY
12. PIPING IN FIRST FLOOR CEILING SPACE.
13. FIRE SPRINKLER PIPING SEE FIRE SPRINKLER DRAWINGS
14. COMBINE VENTS IN WALL ABOVE FLOOR & RISE WITH (1) VENT, SIZE AS NOTED
15. CONNECT TO BID RELEASE NO. 1 STUBOUTS BELOW GRADE
16. PROVIDE DRAINAGE PROVISIONS AT BASE OF DOMESTIC WATER RISERS. DRAINAGE PROVISIONS SHALL INCLUDE BALL VALVE WITH HOSE ADAPTER. PROVISIONS SHALL BE FULLY ACCESSIBLE AT CEILING OF MECHANICAL ROOM.
17. PROVIDE DIRT LEG AT BASE OF GAS RISER



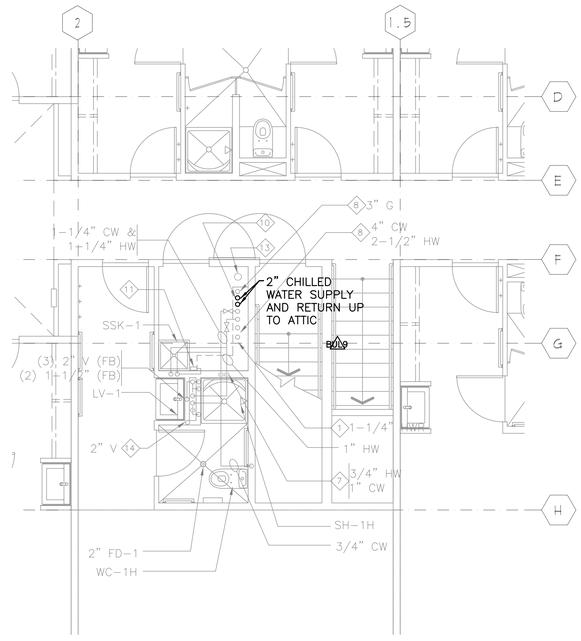
4 M4.2 — RA MODULE BID ALT. #3– BLDG.2 CHILLED WATER PIPING BELOW SLAB ON GRADE

1/4" = 1'-0"



5 M4.2 — RA MODULE BID ALT. #3– BLDG.2 CHILLED WATER PIPING ABOVE SLAB ON GRADE

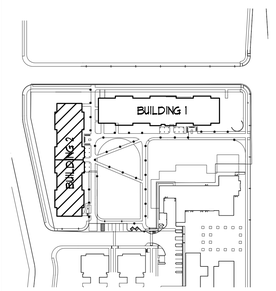
1/4" = 1'-0"



6 M4.2 — BID ALT. #3 TRIPLE UNIT CHILLED WATER 2ND FLOOR– BLDG. 2

1/4" = 1'

BUILDING 1 & 2 - SITE KEYPLAN



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BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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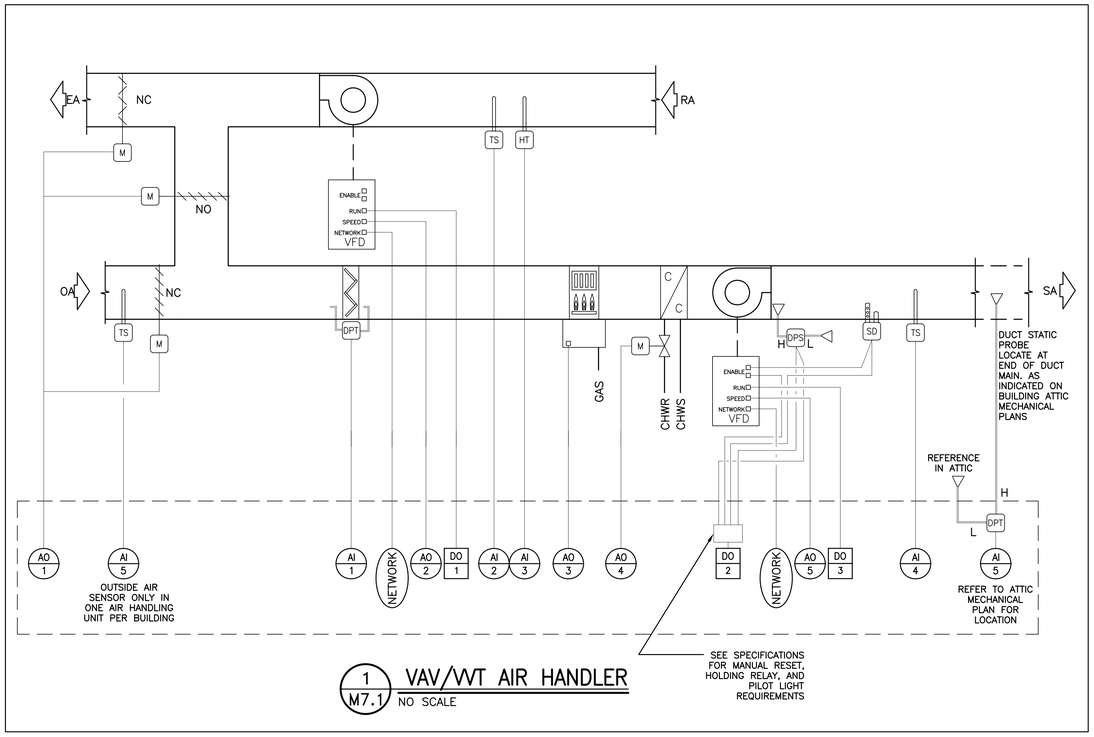
SIERRA TERRACES

UCM #906260

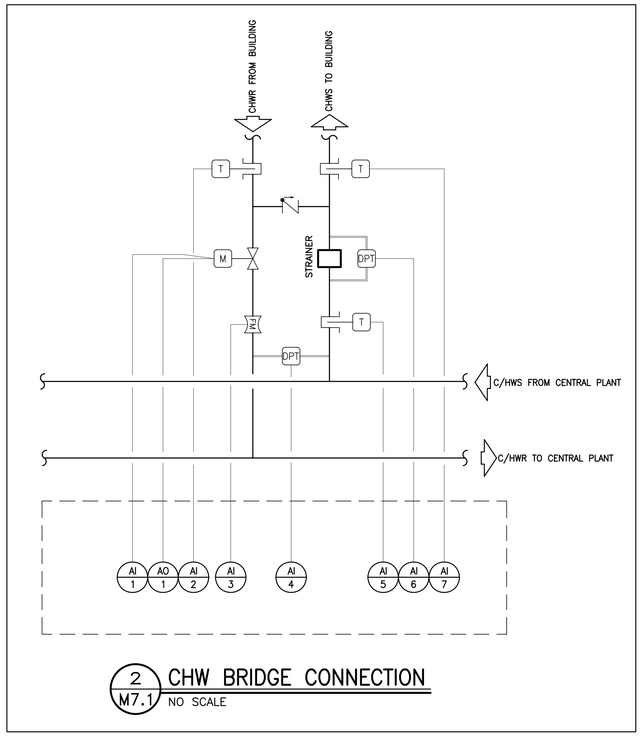
BUILDING 2
ENLARGED CHILLED WATER
PIPING PLANS

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

JOB 0410
DATE 06/27/08
SHEET
M4.2



1 M7.1 VAV/VVT AIR HANDLER
NO SCALE



2 M7.1 CHW BRIDGE CONNECTION
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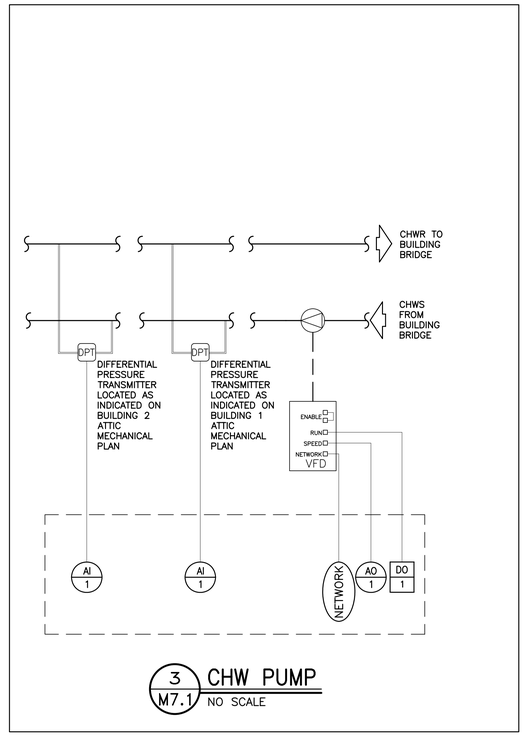

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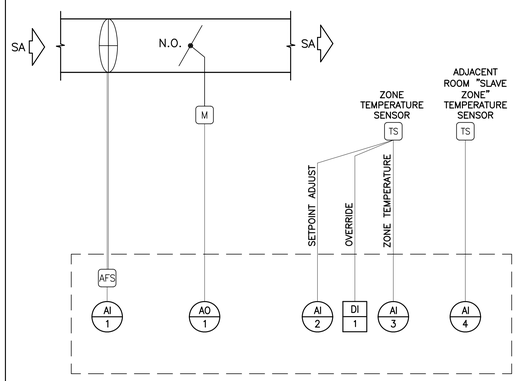

4 M7.1 SINGLE DUCT VAV BOX
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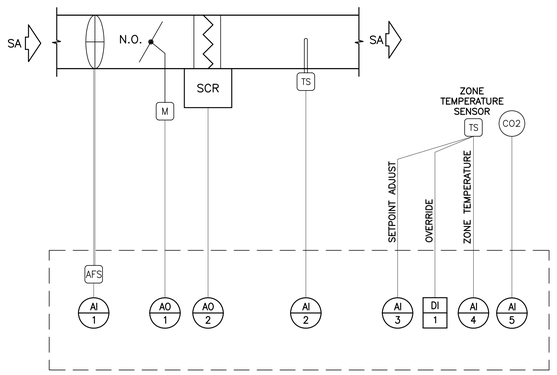
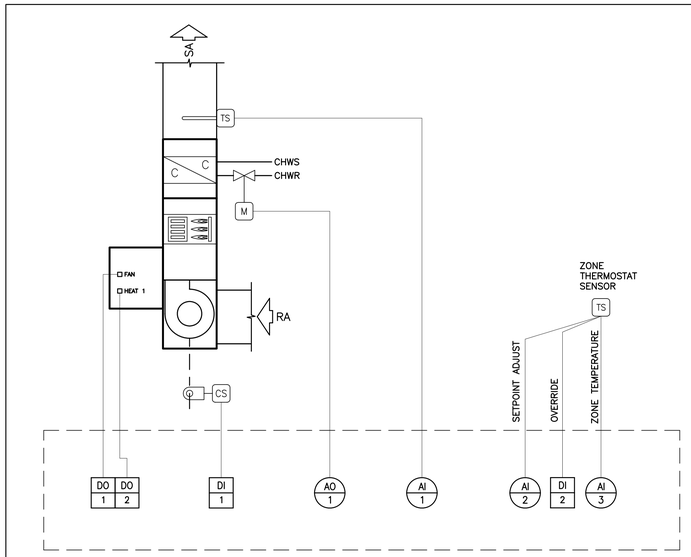


5 M7.1 VAV BOX W/REHEAT
NO SCALE



6 M7.1 FURNACE WITH CHILLED WATER COOLING COIL CONTROL
NO SCALE

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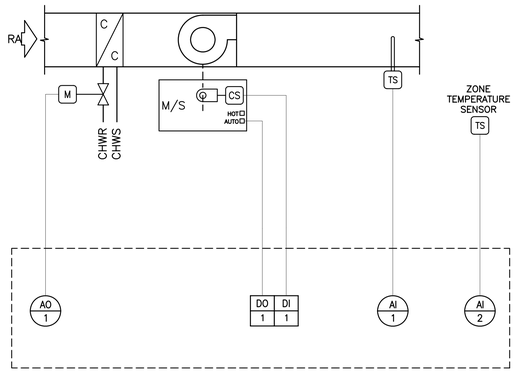
CONTROL DIAGRAMS

SCALE: NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
GLENN FRIEDMAN
No. M22870
Exp. 09/30/06
MECHANICAL
STATE OF CALIFORNIA

REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

JOB 0410
DATE 06/27/08
SHEET M7.1



1 M7.2 2-PIPE FAN-COIL
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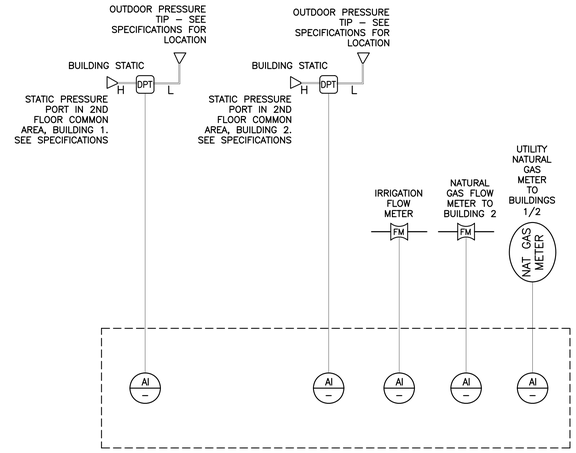

2 M7.2 MISC. POINTS
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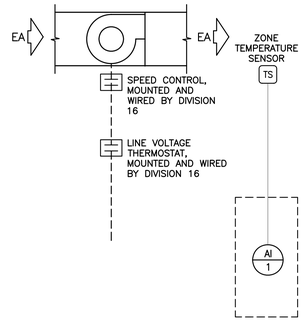

4 M7.2 ELEVATOR ROOM FAN POINTS
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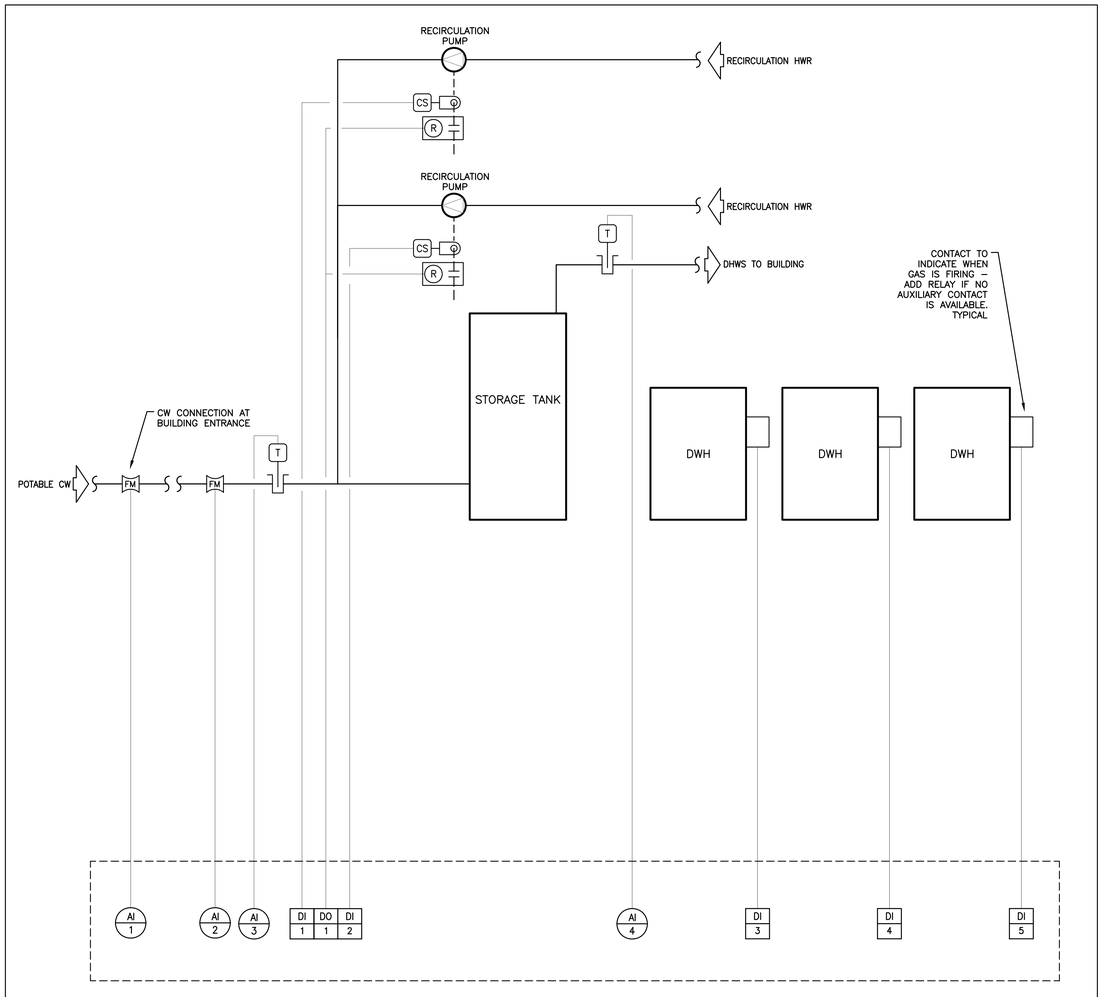
3⃝6



3 M7.2 DOMESTIC WATER SYSTEM
NO SCALE

3⃝5

REVISION	NO.	DATE
RECORD DOCUMENTS		06/27/08
BID RELEASE #2, BULLETIN 7	6	10/04/06
BID RELEASE #2, BULLETIN 6	5	09/06/06
BID RELEASE #2, ADDENDUM #3	4	06/06/06
BID RELEASE #2, CONFORMED SET	3	04/18/06
BID RELEASE #2, ADDENDUM #2	2	04/18/06
BID RELEASE #2, ADDENDUM #1	1	04/10/06
BID RELEASE # 2 100% CONTRACT DOCUMENTS		03/17/06

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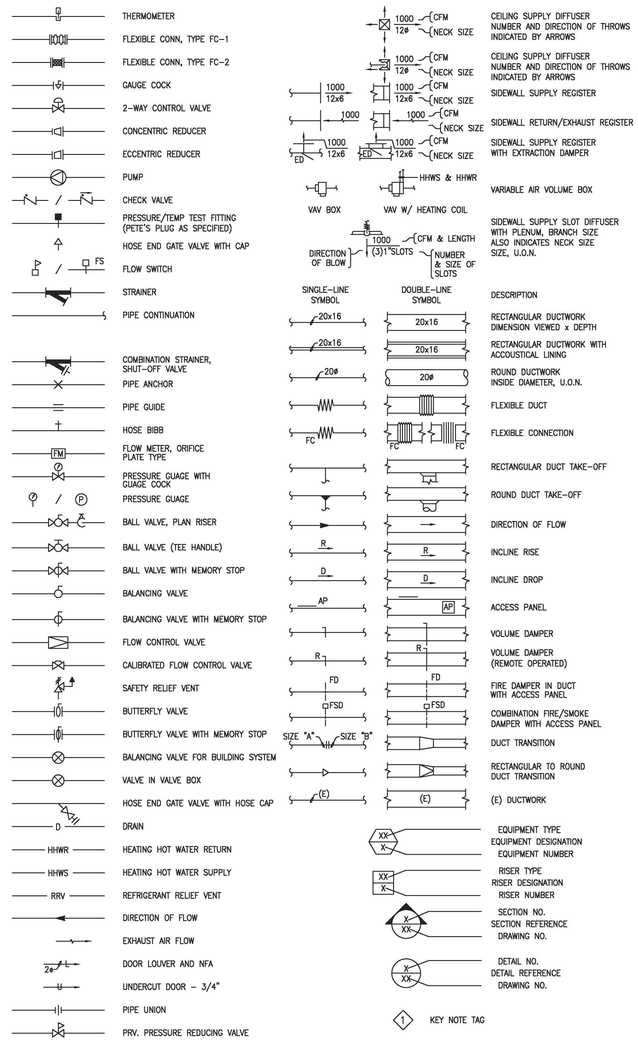
JOB 0410
DATE 06/27/08
SHEET M7.2

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AHS	AIR HANDLING SYSTEM
AL	ACOUSTIC LINING
AP	ACCESS PANEL
APD	AIR PRESSURE DROP (INWG)
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ATV	ACOUSTIC TURNING VANES
B	BOILER
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
C	CLOSED, AIR COMPRESSOR
CAP	CAPACITY
CC	COOLING COIL
CS	CURRENT SWITCH
CFF	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONN	CONNECTION
CONC	CONCRETE
CEG	CEILING EXHAUST GRILLE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CRG	CEILING RETURN GRILLE
CSD	CEILING SUPPLY DIFFUSER
DB	DECIBELS
DDCP	DIRECT DIGITAL CONTROL PANEL
DIAM	DIAMETER
DICA	DRILLED-IN CONCRETE ANCHOR
DIL	DYNAMIC INSERTION LOSS (DB)
DL	DOOR LOUVERS
DN	DOWN
DWG	DRAWING
#	DIAMETER, PHASE
(E)	EXISTING
EA	EACH
EAD	EXHAUST AIR DUCT
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF(%)	EFFICIENCY (PERCENT)
EL	ELEVATION
ELEC/ELECT	ELECTRICAL
ESP	EXTERNAL STATIC PRESSURE (INWG)
ET	EXPANSION TANK
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXHAUST	EXHAUST
EA	EXHAUST AIR
F	FILTER
(F)	FUTURE
°F	FAHRENHEIT IN DEGREES
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER, FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRE	FIRE RATED ENCLOSURE
FT	FEET
FTWG	FEET OF WATER, GAUGE PRESSURE
FT?	SQUARE FEET
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
GSM	GALVANIZED SHEET METAL
GV	GATE VALVE
GWH	GAS FIRED WATER HEATER
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
HC	HEATING COIL
HORIZ	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HTR	HEATER
HW	HOT WATER
ID	INSIDE DIAMETER
IFS	IN FURRED SPACE
IFW	IN FURRED WALL
IN	INCH
INWG	INCHS OF WATER, GAUGE
I.E./INV	INVERT ELEVATION
KW	KILOWATT
LBS	POUNDS
LDB	LEAVING DRY BULB
LF	LINEAR FEET
LG	LENGTH
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTUS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MECH/MECH'L	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MFS	MAXIMUM FUSE SIZE
MIN	MINIMUM
(N)	NEW
N/A	NOT APPLICAB E
NC	NORMALLY CLOSED, NOISE CRITERIA
NFA	NET FREE AREA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPER	OPERATING
OV	OUTLET VELOCITY
P	PUMP/PRESSURE GAUGE
PD	PRESS. DROP
PH	HEATING HOT WATER PUMP
PBLG	PLUMBING
POC	POINT OF CONNECTION
PRESS	PRESSURE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PX	CHEMICAL WATER TREATMENT PUMP
RA	RETURN AIR
RF	RETURN FAN
RPM	REVOLUTIONS PER MINUTE
REQ'D	REQUIRED
SA	SUPPLY AIR
SAD	SUPPLY AIR DAMPER
SC	SENSIBLE COOLING (MBH)
SF	SUPPLY FAN
SM	SHEET METAL
SP	STATIC PRESSURE
SQ	SQUARE
ST	SOUND TRAP
T	TEMPERATURE SENSOR
TC	TOTAL COOLING CAPACITY (MBH)
TCP	TEMPERATURE CONTROL PANEL
TEF	TOILET EXHAUST FAN
TEMP	TEMPERATURE
TH	TEMPERATURE GAUGE
TP	TOTAL PRESSURE
TYP	TYPICAL
UCD	UNDERCUT DOOR
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WMS	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP (FTWG)
WT	WEIGHT
WxH	WIDTH x HEIGHT
WxHxD	WIDTH x HEIGHT x DEPTH
WxL	WIDTH x LENGTH
WRR	WALL RETURN REGISTER
WSD	WALL SUPPLY DIFFUSER

LEGEND AND SYMBOLS



CONTROL NOTES

WHERE CONTROL DIAGRAMS ARE NOT SHOWN ON THE DRAWINGS, CONTROL CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO STARTING WORK. SHOP DRAWINGS SHALL INCLUDE MAKE, MODEL, AND ELECTRICAL CHARACTERISTICS OF ALL COMPONENTS, SIZE AND VOLTAGE OF ALL WIRING, AND RESPONSIBILITY FOR PROVIDING AND FOR INSTALLING ALL COMPONENTS INCLUDING WIRING.
2. CONTROLS SCHEMATICS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY OPERATING PRINCIPLES AND INTERRELATIONSHIPS ONLY. ACTUAL SIZING, LOCATION AND PLACEMENT OF COMPONENTS AND WIRING SHALL BE PER MANUFACTURER'S AND CODE REQUIREMENTS.
3. NOTHING IN THE SCHEMATICS AND SEQUENCES SHALL BE CONSTRUED AS CONTRARY TO STATE AND LOCAL CODES AND STANDARDS. WHERE THE DRAWINGS CONFLICT WITH THESE CODES AND STANDARD, THE CODES AND STANDARDS SHALL PREVAIL.
4. CONTROL CONTRACTOR SHALL COMMUNICATE WITH BUILDING'S OWNER FOR THE SCHEDULE OF ACTUAL BUILDING OPERATING HOURS PRIOR TO PROGRAMMING THE CONTROL SYSTEM.

SEISMIC BRACING CRITERIA

A. PROVIDE SEISMIC BRACING OF ALL MECHANICAL EQUIPMENT, PIPING AND DUCTWORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT UNIFORM BUILDING CODE FOR SEISMIC ZONE 4.

B. INSTALLATION OF METAL DUCTS OR FACTORY AIR DUCTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT UNIFORM MECHANICAL SECTION 604.2.

C. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION OF ALL MECHANICAL EQUIPMENT ANCHORAGE SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE OFFICE OF THE STATE ARCHITECT.

SHEET INDEX

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND STANDARDS, INCLUDING 2007 CALIFORNIA BUILDING CODE, 2007 CALIFORNIA MECHANICAL CODE, 2007 CALIFORNIA PLUMBING CODE, 2007 CALIFORNIA FIRE CODE, 2005 CALIFORNIA ENERGY CODE.
2. PRIOR TO BIDDING, OBTAIN A COPY OF THE SPECIFICATIONS AND PLANS, VISIT THE JOB SITE, TAKE NECESSARY MEASUREMENTS, AND GATHER ALL OTHER INFORMATION NEEDED FOR AN ACCURATE BID.
3. CONTRACT DRAWINGS ARE DIAGRAMMATIC. ACTUAL CONDITIONS MAY VARY AND MUST BE FIELD VERIFIED PRIOR TO FABRICATION AND CONSTRUCTION.
4. ALL ROOF WORK SHALL BE COORDINATED WITH THE ROOFING CONTRACTOR, AND SHALL COMPLY WITH HIS REQUIREMENTS TO PROTECT THE ROOFING WARRANTY.
5. COORDINATE INSTALLATION WITH THE WORK OF OTHER TRADES PRIOR TO STARTING. IN THE EVENT THAT CONFLICTS ARE FOUND WITH THE WORK OF OTHER TRADES, BRING ALL SUCH CONFLICTS TO THE DESIGNER'S ATTENTION FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.
7. GRILLES AND REGISTERS SHALL BE LOCATED SO AS TO BE CENTERED ON ADJACENT ARCHITECTURAL FEATURES, AND WITH THEIR EDGES ALIGNED WITH ONE ANOTHER WHERE APPLICABLE (ALIGN TOPS OF ADJACENT SUPPLY AND RETURN WALL REGISTERS AND GRILLES, FOR EXAMPLE). COORDINATE WITH GENERAL CONTRACTOR SO THAT FRAMING, BLOCKING, ETC. WILL ALLOW FOR INSTALLATION OF REGISTERS, GRILLES AND DUCTWORK.
8. CUTTING OR PENETRATION OF STRUCTURAL MEMBERS IS PROHIBITED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER AND THE ARCHITECT.
10. CONTROLS SCHEMATICS ARE INTENDED TO CONVEY OPERATING PRINCIPLES AND INTER-RELATIONSHIPS ONLY. ACTUAL SIZING, LOCATION AND PLACEMENT OF COMPONENTS AND WIRING SHALL BE PER MANUFACTURERS' AND CODE REQUIREMENT.
11. PRIOR TO START OF CONSTRUCTION WORK, CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS IN ADEQUATE DETAIL FOR REVIEW BY THE ARCHITECT AND SHALL RECEIVE APPROVAL OF THE DRAWINGS.
12. FURNISH AND INSTALL ALL MATERIALS, EQUIPMENT AND LABOR AS SHOWN AND AS NECESSARY FOR A COMPLETE AND WORKABLE SYSTEM.
13. INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT TO CLEAR STRUCTURAL AND ARCHITECTURAL MEMBER.
14. GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR FROM THE DATE OF FILING NOTICE OF COMPLETION
15. CONTRACTOR SHALL PAY AND OBTAIN FOR ALL REQUIRED UTILITY SERVICES, INSPECTIONS AND PERMITS.
16. INSTALL ALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.
17. PLATFORMS, CURBS, AND FLASHING FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS. COORDINATE EXACT SIZES OF REQUIRED OPENINGS AND SUPPORTS FOR FURNISHED EQUIPMENT.
18. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
20. ALL DUCTWORK SHALL BE INSULATED OR LINED PER SPECIFICATIONS OR AS NOTED IN THE DRAWINGS. DUCT SIZES ARE SHEET METAL SIZES. ALL DUCT JOINTS AND SEAMS SHALL BE SEALED PER SPECIFICATIONS.
21. MANUAL DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TO INDIVIDUAL DIFFUSERS, GRILLES AND REGISTERS.
22. ALL EQUIPMENT, DUCTS, PIPING AND OTHER DEVICES AND MATERIALS INSTALLED OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHERPROOFED.
23. COORDINATE LOCATIONS OF THERMOSTATS/SENSORS WITH ARCHITECTURAL DOCUMENTS.
24. COORDINATE ALL FLOOR, CEILING AND WALL OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
25. ALL DUCT ELBOWS BEFORE REHEAT COILS SHALL BE OF FULL RADIUS HARD CONNECTION ELBOWS.
26. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL CONTROL VALVES SHOWN IN FLOOR PLANS, FLOW DIAGRAMS AND CONTROL DIAGRAMS.
27. ALL PIPING AND DUCTWORK SHALL BE CONNECTED TO EQUIPMENT WITH FLEXIBLE CONNECTIONS.
28. SEE ARCHITECTURAL DWGS. FOR ALL LOUVER SIZES AND LOCATIONS.
29. PROVIDE A VALVED DRAIN AT LOW POINTS IN EACH PIPING SYSTEM.
30. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS INDICATED IN INCHES.
31. ALL PIPING IN MECHANICAL ROOMS TO BE HUNG WITH SPRING ISOLATORS WITH 1/2" STATIC DEFLECTION AT SPECIFIED SPACING FOR HORIZONTAL PIPING, VERTICAL DROPS AND ALL ELBOWS.
32. PROVIDE ELBOW SUPPORTS AT ALL PIPE CONNECTIONS TO EQUIPMENT.
33. PROVIDE AIR VENTS AT EACH HIGH POINT OF PIPING SYSTEM.
34. ARRANGE ALL PIPING WITHIN STRUCTURE NEATLY ALONG WALLS AND/OR IN NEAT HORIZONTAL GROUPS.
35. ALL THERMOSTATS/SENSORS SHALL BE MOUNTED AT 48" ABOVE FINISHED FLOOR TO MEET ADA REQUIREMENTS.
36. FOR EXACT CONCRETE PAD/CURB SIZES COORDINATE WITH APPROVED EQUIPMENT AND WITH STRUCTURAL DOCUMENTS.
38. PROVIDE ALL REQUIRED PIPE ANCHORS, PIPE GUIDES, AND PIPE EXPANSION JOINTS FOR HEATING, HOT WATER SYSTEMS. SUBMIT SHOP DRAWINGS INDICATING LOCATIONS AND DETAILS FOR REVIEW AND APPROVAL.
40. ALL DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY DIV. 26, INSTALLED BY DIV. 23. DETECTOR SAMPLING TUBES TO HAVE AN ACCESS DOOR MAKING SAMPLING TUBES READILY ACCESSIBLE.
41. COORDINATE WITH PLUMBING CONTRACTOR TO PROVIDE DRAIN PANS WITH DRAIN CONNECTIONS BELOW ALL PIPING LOCATED AT CEILING SPACES OF IN ELECTRICAL ROOMS, DATA ROOMS, (INCLUDING BDF,IDF AND MDF) AND ELEVATOR MACHINE ROOMS.
42. ALL PIPING SHOWN ON DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL NECESSARY PIPING OFFSETS, WHETHER OR NOT SHOWN ON DRAWINGS TO COORDINATE WORK WITH OTHER TRADES.
43. ALL PIPING IN CONCRETE FOUNDATIONS, AND WALLS, INCLUDING BLOCK WALLS SHALL BE FULLY INSULATED TO ISOLATE PIPING. FROM CONCRETE.
44. ALL PIPING AND DUCTWORK PENETRATIONS SHALL BE UL LISTED THROUGH PENETRATION FIRE STOP SYSTEM WHERE THEY PENETRATE A RATED WALL.
45. PROVIDE CEILING ACCESS PANELS IN ALL NON-ACCESSIBLE CEILINGS FOR VALVES, CLEANOUTS AND TRIM REQUIRING SERVICING.
46. INSTALL ACCESS PANELS IN ALL NON-ACCESIBLE CEILINGS AND WALLS FOR ACCESS TO VALVES, CLEANOUTS AND OTHER MAINTENANCE ITEMS. REFER TO ARCHITECTURAL PLANS FOR TYPE OF CEILINGS AND WALLS. INSTALL FIRE RATED ACCESS PANELS IN FIRE RATED CEILING AND WALLS. SEE ARCHITECTURAL SPECIFICATIONS FOR ACCESS PANELS. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS OF ACCESS PANELS.
47. WHERE MAIN PIPE SIZE IS NOT INDICATED BETWEEN BRANCH CONNECTIONS IN THE DRAWING, THE PIPE SIZE SHALL BE OF THE LARGER PRECEDING PIPE SIZE.
48. ALL VALVES AND ACCESSORIES SHALL BE FULL LINE SIZE. PROVIDE ALL NECESSARY UNIONS, REDUCERS AND STOPS AS REQUIRED WHEN CONNECTING TO EACH FIXTURE AND/OR EQUIPMENT.
49. FOR ANY CONFLICT IN THE DRAWINGS AND/OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL APPLY. ANY SUCH CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO THE CONSTRUCTION OF SUCH ITEMS.
50. PRE-INSULATED FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE OR APPROVED EQUAL MEETING UL 181 AND NFPA 90A-90B APPROVED. FLEXIBLE DUCTWORK SHALL USE A REINFORCED METALLIZED VAPOR BARRIER, BE ACOUSTICALLY RATED, USE A SELF-EXTINGUISHING CHLORINATED POLYETHYLENE (CPE) CORE PERMANENTLY BONDED TO A COATED SPRING STEEL WIRE HELIX THAT SUPPORTS AMPLE BLANKET OF FIBERGLASS INSULATION, PROVIDING A DOUBLE AIR SEAL.
52. ALL PRE-INSULATED FLEXIBLE DUCTWORK SHALL BE SUPPORTED AND JOINED TO SHEET METAL PER SMACNA DUCT CONSTRUCTION STANDARDS AN SHALL USE A 2" SHEET METAL SADDLE AT EACH SUPPORT HANGER.
53. FLEXIBLE DUCTWORK SHALL BE INSTALLED IN A PROFESSIONAL MANNER THAT SHALL ELIMINATE RESTRICTION TO AIR FLOW. ALL FLEXIBLE DUCTWORK SHALL BE CUT TO FIT THE LENGTH REQUIRED.
55. MATERIALS FOR METAL DUCTS SHALL COMPLY WITH CMC SECTION 602.5.
56. METAL DUCT SHALL BE SUPPORTED PER THE MINIMUM REQUIREMENTS OF CMC TABLE 6-5 AND ROUND DUCT LESS THAN 41" DIAMETER SHALL BE BRACED AND GUYED TO PREVENT LATERAL OR HORIZONTAL SWING. USE SMACNA SEISMIC RESTAINT GUILDENES FOR ALL DUCT SUPPORT REQUIREMENTS.
57. FACTORY MADE DUCTWORK SHALL BE SUPPORTED PER THE MINIMUM REQUIREMENTS OF CMC TABLE 6-6 OR AS SPECIFIED BY THE MANUFACTURES INSTALLATION INSTRUCTIONS PER CMC 604.4.
58. DUCT LINER OR EXTERIOR INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT RATING OF NOT MORE THAN 50, PER CMC SECTION 602.2., CMC 605.
59. MECHANICAL EQUIPMENT AND DEVICES SHALL OPERATE WITHOUT OBJECTIONABLE NOISE AND VIBRATION BEING TRANSMITTED TO OCCUPIED PORTIONS OF THE BUILDING OR ANY PART OF THE BUILDING STRUCTURE BY APPARATUS, PIPING, DUCT WORK, CONDUITS, OR OTHER PARTS OF THE MECHANICAL WORK.

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Student Housing Phase 3 - 'The Summits'

Merced, CA

UCM Project Number 906262

Client:

UNIVERSITY OF CALIFORNIA UCMERCED

Revision Schedule

Rev. No.	Issue	Date
	BID RELEASE 1	09/17/08
	BID RELEASE 2	12/15/08
	BID RELEASE 3	02/16/09
	BID RELEASE 4	05/04/09
	BID RELEASE 5	07/28/09
	BID RELEASE 6	09/01/09
	RECORD DOCUMENTS	09/16/11

Stamp:

Job Number:	0813
Drawn by:	-
Checked by:	-
Date:	16 SEPT 2011
Scale:	AS INDICATED

Title

MECHANICAL NOTES AND SYMBOLS

Sheet

M0.1

RECORD DOCUMENTS

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FAN SCHEDULE

		FAN DATA				WHEEL		MOTOR						
UNIT TAG	SYSTEM/LOCATION	CFM	RPM	TOTAL SP	BHP	DIA	TYPE	HP (WATTS)	RPM	V/PH/HZ	WEIGHT LBS	MANUFACTURER & MODEL NO	CONTROL	REMARKS
EF-1E-1	FC-1E-1 ECONOMIZER EXHAUST/ OFFICES	1400	821	0.5	0.2	22	BI	0.25	860	115/60/1	160	GREENHECK SQ-160-C	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-2	FC-1E-2 ECONOMIZER EXHAUST/ EXERCISE ROOM	1000	1008	0.375	0.13	17	BI	0.25	1140	115/60/1	77	GREENHECK SQ-130-B	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-3	FC-1E-3 ECONOMIZER EXHAUST/ MUSIC ROOM	600	1101	0.375	0.07	13	BI	0.25	1725	115/60/1	56	GREENHECK SQ-100-A	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-4	FC-1E-4 ECONOMIZER EXHAUST/ TUTORIAL ROOM	600	1101	0.375	0.07	13	BI	0.25	1725	115/60/1	56	GREENHECK SQ-100-A	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-5	FC-1E-5 ECONOMIZER EXHAUST/ MEETING ROOM 1	1600	786	0.375	0.19	22	BI	0.25	860	115/60/1	160	GREENHECK SQ-160-C	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-6	FC-1E-6 ECONOMIZER EXHAUST/ STUDY ROOM 1	800	924	0.375	0.1	17	BI	0.25	1140	115/60/1	77	GREENHECK SQ-130-B	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-7	FC-1E-7 ECONOMIZER EXHAUST/ STUDY ROOM 2	800	924	0.375	0.1	17	BI	0.25	1140	115/60/1	77	GREENHECK SQ-130-B	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-8	FC-1E-8 ECONOMIZER EXHAUST/ MEETING ROOM 2	1600	786	0.375	0.19	22	BI	0.25	860	115/60/1	160	GREENHECK SQ-160-C	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-9	FC-1E-9 ECONOMIZER EXHAUST/ COMPUTER ROOM	600	1101	0.375	0.07	13	BI	0.25	1725	115/60/1	56	GREENHECK SQ-100-A	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-10	FC-1E-10 ECONOMIZER EXHAUST/ LAUNDRY ROOM	1400	746	0.375	0.16	22	BI	0.25	1725	115/60/1	160	GREENHECK SQ-160-C	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1E-11	RESTROOMS EXHAUST/ PUBLIC REST ROOMS	600	1101	0.375	0.07	13	BI	0.25	1725	115/60/1	56	GREENHECK SQ-100-A	INTERLOCK WITH FC-1E-11	1,2,3,4
EF-1E-12	COPY ROOM EXHAUST/ OFFICES	175	900	0.375		10	CABINET	(48)	900	115/1/60	23	GREENHECK CSP-A200	INTERLOCK WITH FC-1E-1	1,2,3
EF-1E-13	KITCHEN ROOM EXHAUST/ MEETING ROOM 2	150	900	0.375		10	CABINET	(48)	900	115/1/60	23	GREENHECK CSP-A200	INTERLOCK WITH FC-1E-8	1,2,3
EF-1E-14	TRASH ROOM EXHAUST/ TRASH ROOM	600	1100	0.375			CEILING	(350)	1100	115/60/1	34	GREENHECK SP-A700-QD	CONTINUOUS OPERATION	1
EF-1E-15	POSTER ROOM EXHAUST/ POSTER ROOM	70	950	0.5			CEILING	(80)	950	115/1/60	25	GREENHECK SP-B110-QD	INTERLOCK WITH FC-1E-10	1
EF-1E-16	CORRIDOR EXHAUST VENTILATION / FIRST FLOOR	450	1539	0.5	0.1	11	BI	0.1250	1725	115/60/1	41	GREENHECK SQ-95-D	CONTINUOUS OPERATION	1,2,3,4
EF-2E-7	RESIDENCE BATHROOM/ 2ND FLOOR	240	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-2E-8	RESIDENCE BATHROOM/ 2ND FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-2E-9	RESIDENCE BATHROOM/ 2ND FLOOR	215	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-2E-10	RESIDENCE BATHROOM/ 2ND FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-2E-11	RESIDENCE BATHROOM/ 2ND FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-2E-12	RESIDENCE BATHROOM/ 2ND FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-3E-7	RESIDENCE BATHROOM/ 3RD FLOOR	240	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-3E-8	RESIDENCE BATHROOM/ 3RD FLOOR	205	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-3E-9	RESIDENCE BATHROOM/ 3RD FLOOR	215	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-3E-10	RESIDENCE BATHROOM/ 3RD FLOOR	250	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-3E-11	RESIDENCE BATHROOM/ 3RD FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-3E-12	RESIDENCE BATHROOM/ 3RD FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-4E-7	RESIDENCE BATHROOM/ 4TH FLOOR	260	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4E-8	RESIDENCE BATHROOM/ 4TH FLOOR	205	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-4E-9	RESIDENCE BATHROOM/ 4TH FLOOR	280	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4E-10	RESIDENCE BATHROOM/ 4TH FLOOR	285	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK SP-A390	CONTINUOUS OPERATION	1,2,3
EF-4E-11	RESIDENCE BATHROOM/ 4TH FLOOR	330	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4E-12	RESIDENCE BATHROOM/ 4TH FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-5E-1	EAST BLDG CORRIDOR EXHAUST/ROOF	850	1725	0.75	0.3	14	BI	0.33	1725	115/1/60	43	GREENHECK G-121-A	CONTINUOUS OPERATION	1,2,3,4,5
EF-5E-2	EAST BLDG CORRIDOR EXHAUST/ROOF	850	1725	0.75	0.3	14	BI	0.33	1725	115/1/60	43	GREENHECK G-121-A	CONTINUOUS OPERATION	1,2,3,4,5
EF--5E-3	EAST BLDG TRASH ROOMS EXHAUST/ROOF	700	1236	0.75	0.13	12	BI	0.25	1725	115/1/60	150	GREENHECK SWB-212-4	CONTINUOUS OPERATION	1,2,3
EF-1W-1	FC-1W-1 ECONOMIZER EXHAUST/ DELI	1340	735	0.375	0.16	22	BI	0.38	860	115/1/60	160	GREENHECK SQ-160-C	FAN ECM MOTOR SPEED TRACKING FAN COIL ECONOMIZER DAMPER POSITION	1,2,3,4
EF-1W-5	LAUNDRY ROOM EXHAUST/ LAUNDRY	350	1298	0.375	0.06	11	BI	0.13	1550	115/1/60	41	GREENHECK SQ-95-D	CONTINUOUS OPERATION	1,2,3,4
EF-1W-8	TRASH ROOM EXHAUST/ FIRST FLOOR	740	1095	0.375		10	CABINET	(455)	1725	115/1/60	39	GREENHECK CSP-A1050	CONTINUOUS OPERATION	1,2,3
EF-1W-9	RESIDENCE BATHROOM/ FIRST FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-1W-10	DELI KITCHEN EXHAUST/ DELI	260	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	INTERLOCK WITH FC-1W-1	1,2,3
EF-1W-11	RESIDENCE BATHROOM/ FIRST FLOOR	220	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-1W-12	RESIDENCE BATHROOM/ FIRST FLOOR	310	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-1W-13	CUSTODIAL ROOM EXHAUST/ FIRST FLOOR	170	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-2W-7	RESIDENCE BATHROOM/ 2ND FLOOR	240	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-2W-8	RESIDENCE BATHROOM/ 2ND FLOOR	190	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-2W-9	RESIDENCE BATHROOM/ 2ND FLOOR	245	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-2W-10	RESIDENCE BATHROOM/ 2ND FLOOR	240	1350	0.375		10	CABINET	(144)	1350	115/1/60	30	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-2W-11	RESIDENCE BATHROOM/ 2ND FLOOR	280	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-2W-12	RESIDENCE BATHROOM/ 2ND FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-3W- 7	RESIDENCE BATHROOM/ 3RD FLOOR	230	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-3W-8	RESIDENCE BATHROOM/ 3RD FLOOR	190	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-3W-9	RESIDENCE BATHROOM/ 3RD FLOOR	245	1050	0.375		10	CABINET	(80)	1350	115/1/60	25	GREENHECK CSP-A290	CONTINUOUS OPERATION	1,2,3
EF-3W-10	RESIDENCE BATHROOM/ 3RD FLOOR	440	1080	0.375		10	CABINET	(325)	1080	115/1/60	36	GREENHECK CSP-A710	CONTINUOUS OPERATION	1,2,3
EF-3W-11	RESIDENCE BATHROOM/ 3RD FLOOR	280	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-3W-12	RESIDENCE BATHROOM/ 3RD FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-4W-7	RESIDENCE BATHROOM/ 4TH FLOOR	260	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4W-8	RESIDENCE BATHROOM/ 4TH FLOOR	200	1000	0.375		10	CABINET	(83)	1000	115/1/60	30	GREENHECK CSP-A250	CONTINUOUS OPERATION	1,2,3
EF-4W-9	RESIDENCE BATHROOM/ 4TH FLOOR	260	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4W-10	RESIDENCE BATHROOM/ 4TH FLOOR	400	1070	0.375		10	CABINET	(217)	1070	115/1/60	36	GREENHECK CSP-A510	CONTINUOUS OPERATION	1,2,3
EF-4W-11	RESIDENCE BATHROOM/ 4TH FLOOR	330	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-4W-12	RESIDENCE BATHROOM/ 4TH FLOOR	280	1350	0.375		10	CABINET	(144)	1350	115/1/60	25	GREENHECK CSP-A390	CONTINUOUS OPERATION	1,2,3
EF-5W-1	WEST BLDG CORRIDOR EXHAUST/ROOF	850	1725	0.75	0.3	14	BI	0.33	1725	115/1/60	43	GREENHECK G-121-A	CONTINUOUS OPERATION	1,2,3,4,5
EF-5W-2	WEST BLDG CORRIDOR EXHAUST/ROOF	850	1725	0.75	0.3	14	BI	0.33	1725	115/1/60	43	GREENHECK G-121-A	CONTINUOUS OPERATION	1,2,3,4,5
EF-5W-3	WEST BLDG TRASH ROOMS EXHAUST/ROOF	700	1236	0.75	0.13	12	BI	0.25	1725	115/1/60	150	GREENHECK SWB-212-4	CONTINUOUS OPERATION	1,2,3

NOTES:
1. BACKDRAFT DAMPER.
2. VIBRATION ISOLATOR
3. BIRD SCREEN.
4. ECM MOTOR
5. ACOUSTICAL ROOF CURB

FAN COIL UNIT SCHEDULE

		FAN DATA				WHEEL		MOTOR			COOLING COIL PERFORMANCE									HEATING COIL PERFORMANCE										
											MIN CAPACITY (MBH)																			
UNIT TAG	SERVICE / LOCATION	CFM	RPM	TOTAL ESP (IN-WC)	BHP	DIA	TYPE	HP	RPM	V/PH/HZ	TOTAL	SENSIBLE	EWT (F)	LWT (F)	EAT DB (F)	EAT WB (F)	LAT (F)	WATER FLOW GPM	MAX PD FT	MIN CAPACITY (MBH)	EWT (F)	LWT (F)	EAT (F)	LAT (F)	WATER FLOW GPM	MAX PD FT	MINIMUM OUTSIDE AIR CFM	OPERATING WEIGHT (LBS)	MANUFACTURER/ MODEL NO.	REMARKS
FC-1E-1	OFFICES/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	35.5	32.9	41	66	76	64	57.0	3.1	12.2	29.4	180	140	71	92.3	1.6	3	300	340	WILLIAMS/ HH-016	1
FC-1E-2	EXERCISE/FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	28.1	24.8	41	66	76	64	53.0	2.5	4.6	31.2	180	140	71	107.1	1.7	1.3	410	240	WILLIAMS/ HH-012	1
FC-1E-3	MUSIC/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	12.1	11.5	41	66	76	64	58.3	1.1	2.5	14.6	180	140	71	99.2	0.8	0.4	230	240	WILLIAMS/ HH-08	1
FC-1E-4	TUTORIAL/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	19.8	17.6	41	66	76	64	48.8	1.7	2.5	17.4	180	140	71	104.6	1.0	0.4	230	240	WILLIAMS/ HH-08	1
FC-1E-5	MEETING 1/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	41.5	37.3	41	66	76	64	54.4	3.7	12.2	35.9	180	140	71	97.0	2.0	3	430	340	WILLIAMS/ HH-016	1
FC-1E-6	STUDY 1/FIRST FLR	800	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	21.6	20.4	41	66	76	64	52.4	1.9	2	12.2	180	140	71	88.7	0.7	0.6	115	230	WILLIAMS/ HH-08	1
FC-1E-7	STUDY 2/FIRST FLR	800	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	22.7	21.4	41	66	76	64	51.2	2.0	2	13.5	180	140	71	90.5	0.8	0.6	125	230	WILLIAMS/ HH-08	1
FC-1E-8	MEETING 2/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	37.9	34.4	41	66	76	64	56.1	3.3	12.2	37.4	180	140	71	98.1	2.2	3	445	340	WILLIAMS/ HH-016	1
FC-1E-9	COMPUTER/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.8	10.4	41	66	76	64	60.0	1.0	2.5	6.2	180	140	71	83.0	0.4	0.4	90	240	WILLIAMS/ HH-08	1
FC-1E-10	LAUNDRY/ FIRST FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	32.2	30.4	41	66	76	64	55.9	2.8	10.5	12.5	180	140	71	81.3	0.7	2.7	140	340	WILLIAMS/ HH-016	1
FC-1E-11	RESTROOMS/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	13.9	13.9	41	66	76	64	54.5	1.2	2.5	26.1	180	140	71	121.3	1.5	0.4	600	240	WILLIAMS/ HH-08	1
FC-1E-12	BDF/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	42.25	41.73	41	66	76	64	51.9	3.7	4.6	1.4	180	140	71	72.0	0.1	1.3		340	WILLIAMS/ HH-016	1
FC-1E-13	ELEVATOR MACHINE ROOM/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	25	24.6	41	66	76	64	53.2	2.2	4.6									240	WILLIAMS/ HH-012	1
FC-1E-14	MECHANICAL ROOM/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	50	49.4	41	66	76	64	47.4	4.4	12.2									340	WILLIAMS/ HH-016	1
FC-1E-15	ELECTRICAL ROOM/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	19.5	19.2	41	66	76	64	58.2	1.7	4.6									230	WILLIAMS/ HH-012	1
FC-2E-1	RESIDENCES/ SECOND FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	32.8	29.8	41	66	76	64	56.3	2.9	10.5	28.3	180	140	71	94.4	1.6	2.7	240	340	WILLIAMS/ HH-016	1
FC-2E-2	RESIDENCES/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	18.2	17.2	41	66	76	64	49.5	1.6	2.5	14.7	180	140	71	99.4	0.8	0.4	205	240	WILLIAMS/ HH-08	1
FC-2E-3	RESIDENCES/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	17	16.8	41	66	76	64	50.1	1.5	2.5	15.1	180	140	71	100.1	0.9	0.4	175	240	WILLIAMS/ HH-08	1
FC-2E-4	RESIDENCES/ SECOND FLR	800	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	23	20.9	41	66	76	64	51.8	2.0	2	17.9	180	140	71	96.9	1.0	0.6	200	230	WILLIAMS/ HH-08	1
FC-2E-5	RESIDENCES/ SECOND FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	25.6	22.9	41	66	76	64	54.8	2.3	4.6	21.8	180	140	71	96.2	1.3	1.3	200	240	WILLIAMS/ HH-012	1
FC-2E-6	RESIDENCES/ SECOND FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	23.8	22.7	41	66	76	64	55.0	2.1	4.6	23.5	180	140	71	98.2	1.4	1.3	200	240	WILLIAMS/ HH-012	1
FC-2E-7	IDF ROOM/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.3	7	41	66	76	64	65.2	0.6	2.5									240	WILLIAMS/ HH-08	1
FC-2E-8	ELECTRICAL ROOM/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.2	11	41	66	76	64	59.0	1.0	2.5									240	WILLIAMS/ HH-08	1
FC-3E-1	RESIDENCES/ THIRD FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	32.8	29.8	41	66	76	64	56.3	2.9	10.5	28.3	180	140	71	94.4	1.6	2.7	240	340	WILLIAMS/ HH-016	1
FC-3E-2	RESIDENCES/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	18.2	17.2	41	66	76	64	49.5	1.6	2.5	14.7	180	140	71	99.4	0.8	0.4	160	240	WILLIAMS/ HH-08	1
FC-3E-3	RESIDENCES/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	15.8	15.7	41	66	76	64	51.8	1.4	2.5	13.9	180	140	71	97.8	0.8	0.4	175	240	WILLIAMS/ HH-08	1
FC-3E-4	RESIDENCES/ THIRD FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	26.6	24	41	66	76	64	53.8	2.3	4.6	22.4	180	140	71	96.9	1.3	1.3	250	240	WILLIAMS/ HH-012	1
FC-3E-5	RESIDENCES/ THIRD FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	26.2	24.5	41	66	76	64	53.3	2.3	4.6	22.6	180	140	71	97.2	1.3	1.3	200	240	WILLIAMS/ HH-012	1
FC-3E-6	RESIDENCES/ THIRD FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	23.9	22.8	41	66	76	64	54.9	2.1	4.6	23.7	180	140	71	98.4	1.4	1.3	200	240	WILLIAMS/ HH-012	1
FC-3E-7	IDF ROOM/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.3	7	41	66	76	64	65.2	0.6	2.5									240	WILLIAMS/ HH-08	1
FC-3E-8	ELECTRICAL ROOM/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.2	11	41	66	76	64	59.0	1.0	2.5									240	WILLIAMS/ HH-08	1
FC-4E-1	RESIDENCES/ FOURTH FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	29.2	27.6	41	66	76	64	57.7	2.6	10.5	25.7	180	140	71	92.2	1.5	2.7	260	340	WILLIAMS/ HH-016	1
FC-4E-2	RESIDENCES/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	19.8	18.7	41	66	76	64	47.1	1.7	2.5	15.9	180	140	71	101.7	0.9	0.4	205	240	WILLIAMS/ HH-08	1
FC-4E-3	RESIDENCES/ FOURTH FLR	800	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	18.4	18.1	41	66	76	64	55.1	1.6	2	16.5	180	140	71	94.9	0.9	0.6	240	230	WILLIAMS/ HH-08	1
FC-4E-4	RESIDENCES/ FOURTH FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	28.1	26.9	41	66	76	64	51.1	2.5	4.6	24.2	180	140	71	99.0	1.4	1.3	285	240	WILLIAMS/ HH-012	1
FC-4E-5	RESIDENCES/ FOURTH FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	22	20.6	41	66	76	64	62.4	1.9	10.5	18.9	180	140	71	86.6	1.1	2.7	330	340	WILLIAMS/ HH-016	1
FC-4E-6	RESIDENCES/ FOURTH FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	26.4	26.2	41	66	76	64	51.7	2.3	4.6	25.5	180	140	71	100.5	1.5	1.3	200	240	WILLIAMS/ HH-012	1
FC-4E-7	IDF ROOM/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.5	7.2	41	66	76	64	64.9	0.7	2.5									240	WILLIAMS/ HH-08	1
FC-4E-8	ELECTRICAL ROOM/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.3	11	41	66	76	64	59.0	1.0	2.5									240	WILLIAMS/ HH-08	1
FC-1W-1	DELI/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	36.5	32.6	41	66	76	64	57.1	3.2	12.2	26	180	140	71	89.8	1.5	3	260	340	WILLIAMS/ HH-016	1
FC-1W-2	RESIDENCES/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	28	26.9	41	66	76	64	51.1	2.5	4.6	23.4	180	140	71	98.1	1.3	1.3	200	240	WILLIAMS/ HH-012	1
FC-1W-3	LOUNGE/ FIRST FLR	800	1308	0.5	0.1	9	FC	0.33	1750	120/1/60	23.4	20.5	41	66	76	64	52.3	2.1	2	26.3	180	140	71	109.0	1.5	0.6	200	230	WILLIAMS/ HH-08	1
FC-1W-4	RESIDENCES/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	24	21.6	41	66	76	64	56.0	2.1	4.6	21.5	180	140	71	95.9	1.2	1.3	220	240	WILLIAMS/ HH-012	1
FC-1W-5	LAUNDRY/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.5	10.2	41	66	76	64	60.3	1.0	2.5	10.9	180	140	71	92.0	0.6	0.4	160	240	WILLIAMS/ HH-08	1
FC-1W-6	RESIDENCES/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	25.8	24.1	41	66	76	64	53.7	2.3	4.6	9.8	180	140	71	82.3	0.6	1.3	310	240	WILLIAMS/ HH-012	1
FC-1W-7	RESIDENCES/ FIRST FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	10.8	10.2	41	66	76	64	60.3	1.0	2.5	8.7	180	140	71	87.8	0.5	0.4	140	240	WILLIAMS/ HH-08	1
FC-1W-8	MDF/ FIRST FLR	800	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	23.4	20.5	41	66	76	64	52.3	2.1	2								50	230	WILLIAMS/ HH-08	1
FC-1W-9	ELEVATOR MACHINE ROOM/ FIRST FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	25	24.6	41	66	76	64	53.2	2.2	4.6									240	WILLIAMS/ HH-012	1
FC-1W-10	ELECTRICAL ROOM/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1230	120/1/60	42.38	41.86	41	66	76	64	51.8	3.7	4.6									230	WILLIAMS/ HH-016	1
FC-1W-11	MECHANICAL ROOM/ FIRST FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	50	49.4	41	66	76	64	47.4	4.4	12.2									340	WILLIAMS/ HH-016	1
FC-2W-1	RESIDENCES/ SECOND FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	32.3	31.2	41	66	76	64	55.4	2.8	10.5	25.9	180	140	71	92.4	1.5	2.7	240	340	WILLIAMS/ HH-016	1
FC-2W-2	RESIDENCES/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	16.7	15.6	41	66	76	64	51.9	1.5	2.5	14.7	180	140	71	99.4	0.8	0.4	160	240	WILLIAMS/ HH-08	1
FC-2W-3	RESIDENCES/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	17.3	15.8	41	66	76	64	51.6	1.5	2.5	15.1	180	140	71	100.1	0.9	0.4	160	240	WILLIAMS/ HH-08	1
FC-2W-4	RESIDENCES/ SECOND FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	24.2	22	41	66	76	64	55.6	2.1	4.6	19.2	180	140	71	93.2	1.1	1.3	240	240	WILLIAMS/ HH-012	1
FC-2W-5	RESIDENCES/ SECOND FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	28.9	27.8	41	66	76	64	57.6	2.5	10.5	24.2	180	140	71	91.0	1.4	2.7	280	340	WILLIAMS/ HH-016	1
FC-2W-6	RESIDENCES/ SECOND FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	24.7	23.5	41	66	76	64	54.2	2.2	4.6	23.9	180	140	71	98.7	1.4	1.3	200	240	WILLIAMS/ HH-012	1
FC-2W-7	IDF ROOM/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.3	7	41	66	76	64	65.2	0.6	2.5									240	WILLIAMS/ HH-08	1
FC-2W-8	ELECTRICAL ROOM/ SECOND FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.3	11	41	66	76	64	59.0	1.0	2.5									240	WILLIAMS/ HH-08	1
FC-3W-1	RESIDENCES/ THIRD FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	32.3	31.2	41	66	76	64	55.4	2.8	10.5	25.9	180	140	71	92.4	1.5	2.7	230	340	WILLIAMS/ HH-016	1
FC-3W-2	RESIDENCES/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	16.4	15.8	41	66	76	64	51.6	1.4	2.5	14.8	180	140	71	99.5	0.9	0.4	160	240	WILLIAMS/ HH-08	1
FC-3W-3	RESIDENCES/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	17.6	16.1	41	66	76	64	51.2	1.5	2.5	15.1	180	140	71	100.1	0.9	0.4	205	240	WILLIAMS/ HH-08	1
FC-3W-4	RESIDENCES/ THIRD FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	38.2	33.5	41	66	76	64	56.6	3.4	12.2	36.8	180	140	71	97.6	2.1	3	440	340	WILLIAMS/ HH-016	1
FC-3W-5	RESIDENCES/ THIRD FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	28.8	27.6	41	66	76	64	57.7	2.5	10.5	24.1	180	140	71	90.9	1.4	2.7	200	340	WILLIAMS/ HH-016	1
FC-3W-6	RESIDENCES/ THIRD FLR	1000	1230	0.7	0.2	9	FC	0.5	1230	120/1/60	22.3	21.8	41	66	76	64	55.8	2.0	4.6	23.4	180	140	71	98.1	1.3	1.3	200	240	WILLIAMS/ HH-012	1
FC-3W-7	IDF ROOM/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.3	7	41	66	76	64	65.2	0.6	2.5									240	WILLIAMS/ HH-08	1
FC-3W-8	ELECTRICAL ROOM/ THIRD FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.3	11	41	66	76	64	59.0	1.0	2.5									240	WILLIAMS/ HH-08	1
FC-4W-1	RESIDENCES/ FOURTH FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	31.7	29.8	41	66	76	64	56.3	2.8	10.5	25.7	180	140	71	92.2	1.5	2.7	260	340	WILLIAMS/ HH-016	1
FC-4W-2	RESIDENCES/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	17.8	16.7	41	66	76	64	50.2	1.6	2.5	15.7	180	140	71	101.3	0.9	0.4	200	240	WILLIAMS/ HH-08	1
FC-4W-3	RESIDENCES/ FOURTH FLR	600	1351	0.5	0.1	9	FC	0.33	1750	120/1/60	19	18.2	41	66	76	64	47.9	1.7	2.5	16.5	180	140	71	102.8	0.9	0.4	220	240	WILLIAMS/ HH-08	1
FC-4W-4	RESIDENCES/ FOURTH FLR	1600	1500	0.7	0.3	9	FC	0.5	1500	120/1/60	34.9	32.8	41	66	76	64	57.0	3.1	12.2	29.1	180	140	71	92.1	1.7	3	400	340	WILLIAMS/ HH-016	1
FC-4W-5	RESIDENCES/ FOURTH FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	24.5	22.9	41	66	76	64	60.9	2.2	10.5	20.8	180	140	71	88.2	1.2	2.7	330	340	WILLIAMS/ HH-016	1
FC-4W-6	RESIDENCES/ FOURTH FLR	1400	1500	0.7	0.2	9	FC	0.5	1500	120/1/60	27.1	26.8	41	66	76	64	58.3	2.4	10.5	25.7	180	140	71	92.2	1.5	2.7	280	340	WILLIAMS/ HH-016	1
FC-4W-7	IDF ROOM/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	7.4	7.2	41	66	76	64	64.9	0.7	2.5									240	WILLIAMS/ HH-08	1
FC-4W-8	ELECTRICAL ROOM/ FOURTH FLR	600	1135	0.5	0.1	9	FC	0.33	1135	120/1/60	11.7	11.3	41	66	76	64	58.6	1.0	2.5									240	WILLIAMS/ HH-08	1

NOTES:

1. PROVIDE FAN COIL UNIT WITH MINIMUM OF MERV 8 AIR FILTERS, RETURN AIR PLENUM, ECM BLOWER MOTOR, CHARACTERIZED PORT PROPORTIONAL CONTROL VALVE, AND LAT SENSOR.

AIR HANDLING UNIT SCHEDULE

		FAN DATA				WHEEL		MOTOR			COOLING COIL PERFORMANCE									HEATING COIL PERFORMANCE								
											MIN CAPACITY (MBH)																	
UNIT TAG	SERVICE / LOCATION	CFM	RPM	TOTAL ESP (IN-WC)	BHP	DIA	TYPE	HP	RPM	V/PH/HZ	TOTAL	SENSIBLE	EWT (F)	LWT (F)	EAT DB (F)	EAT WB (F)	LAT (F)	WATER FLOW GPM	MAX PD FT	MIN CAPACITY (MBH)	EWT (F)	LWT (F)	EAT (F)	LAT (F)	WATER FLOW GPM	MAX PD FT	OPERATING WEIGHT (LBS)	MANUFACTURER/MODEL NO.
AHU-5E-1	COMMON CORRIDORS & LOBBY VENTILATION / EAST BLDG ROOF	1500	1361	1	0.732		FC	0.75	1750	480/3/60	49.9	47	41	66	100	69	70	4.0	0.3	101	180	140	21	70	5.1	2.5	1200	GREENHECK/ MSX-109-H12
AHU-5W-1	COMMON CORRIDORS & LOBBY VENTILATION / EAST BLDG ROOF	1500	1361	1	0.372		FC	0.75	1750	480/3/60	49.9	47	41	66	100	69	70	4.0	0.3	101	180	140	21	70	5.1	2.5	1200	GREENHECK/ MSX-109-H12

NOTES:

1. PROVIDE WITH MINIMUM OF MERV 8 AIR FILTERS AND WEATHER HOOD WITH ALUMINUM WIRE MESH SCREEN.
2. MOUNT UNIT ON ROOF USING A PREFABRICATED STEEL ROOF CURB WITH BUILT-IN SEISMIC VIBRATION ISOLATOR ASEMBLY CAPABLE OF A MINIMUM OF 2" DEFLECTION.

PUMP SCHEDULE

UNIT TAG	LOCATION/ SERVICE	MANUFACTURER & MODEL NO.	TYPE	GPM	HEAD FT	HP	ELECTRICAL V/PH/HZ	WEIGHT LBS	REMARKS
P-CHWS-E-1	EAST BLDG FIRST FLOOR/ CHWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	58	75	3	480/3/60	250	1
P-CHWS-E-2	EAST BLDG FIRST FLOOR/ CHWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	58	75	3	480/3/60	250	1,2
P-HWS-E-1	EAST BLDG FIRST FLOOR/ HWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	40	65	2	480/3/60	240	1
P-HWS-E-2	EAST BLDG FIRST FLOOR/ HWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	40	65	2	480/3/60	240	1,2
P-CHWS-W-1	WEST BLDG FIRST FLOOR/ CHWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	58	75	3	480/3/60	250	1
P-CHWS-W-2	WEST BLDG FIRST FLOOR/ CHWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	58	75	3	480/3/60	250	1,2
P-HWS-W-1	WEST BLDG FIRST FLOOR/ HWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	40	65	2	480/3/60	240	1
P-HWS-W-2	WEST BLDG FIRST FLOOR/ HWS SYSTEM	B&G SERIES 1531-1 1/4 BC	END SUCTION	40	65	2	480/3/60	240	1,2

NOTES:

1. PROVIDE PUMP MOTOR WITH VFD.
2. STAND-BY PUMP DUTY.

AIR OUTLET SCHEDULE

TAG	MANUFACTURER	MODEL NO.	THROW PATTERN	REMARKS
WSD-1	TITUS	300 RS	ADJUSTABLE	3/4" BLADE SPACING,BLADES PARALLEL TO SHORT DIMENSION
WRR-1	TITUS	350 RL	FIXED	3/4" BLADE SPACING, 35 DEG FIXED DEFLECTION, BLADES PARALLEL TO LONG DIMENSION, NO OPPOSED BLADE DAMPER REQUIRED
CSD-1	TITUS	PSS	ADJUSTABLE	PERFORATED FACE, 12" X 12" MODULE
CSD-2	TITUS	PSS	ADJUSTABLE	PERFORATED FACE, 24" x 24" MODULE
CSD-3	TITUS	TDCA-AA	4-WAY, ADJUSTABLE	LOUVERED FACE, 12" X12" MODULE
CSD-4	TITUS	TDCA-AA	4-WAY, ADJUSTABLE	LOUVERED FACE, 24" X 24" MODULE
CRG-1	TITUS	PAR	FIXED	PERFORATED FACE, 12" x 12" MODULE
CRG-2	TITUS	PAR	FIXED	PERFORATED FACE, 24" x 24" MODULE
CRG-3	TITUS	PAR	FIXED	EGGCRATE, ALUMINUM BORDER AND CORE
CEG-1	TITUS	PAR	FIXED	EGGCRATE, ALUMINUM BORDER AND CORE

HYDRONIC BOILER SCHEDULE

UNIT TAG	MANUFACTURER/ MODEL NO.	LOCATION	GAS INPUT MBH	OUTPUT CAPACITY MBH	ELECTRICAL DATA AMP	ELECTRICAL DATA V/PH/HZ	OPERATING WEIGHT LBS	REMARKS
B-1E-1	HAMILTON EVO / HW 399	FIRST FLOOR EAST BLDG	399.9	379.9	20	208/1/60	300	1
B-1E-2	HAMILTON EVO / HW 399	FIRST FLOOR EAST BLDG	399.9	379.9	20	208/1/60	300	1
B-1W-1	HAMILTON EVO / HW 399	FIRST FLOOR WEST BLDG	399.9	379.9	20	208/1/60	300	1
B-1W-1	HAMILTON EVO / HW 399	FIRST FLOOR WEST BLDG	399.9	379.9	20	208/1/60	300	1

NOTES:
1. PROVIDE A SEPARATE POWER CIRCUIT, 120V/1PH POWER SOURCE TO THE BUILT-IN SECOND LOW WATER CUT OFF SWITCH PER LATEST CALIFORNIA OSHA SAFETY REQUIREMENTS. CONNECT CIRCUIT PER MANUFACTURES RECOMMENDATION.

ROOF CAP SCHEDULE

TAG	MAKE	MODEL	THROAT/DUCT SIZE	MATERIAL	SERVICE	CFM	LOCATION LEVEL/COLUMN-GRID	REMARKS
IH-1	GREEN HECK	WIH	12x12/8x6	ALUMINUM	FC-4W-2 OSA INTAKE	200	HI ROOF-WEST/C.6&1.8	
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4W-1 OSA INTAKE	260	HI ROOF-WEST/C.6&1.2	
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4W-7 OUTLET	260	HI ROOF-WEST/C.3&1.2	1
RH-4	GREEN HECK	WRH	12x12/8x6	ALUMINUM	EF-4W-8 OUTLET	200	HI ROOF-WEST/C.3&1.8	1
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4W-9 OUTLET	260	HI ROOF-WEST/C.1&1.6	1
IH-2	GREEN HECK	WIH	16x16/14x8	ALUMINUM	TRASH OSA INTAKE	700	HI ROOF-WEST/B&1.4	
RH-5	GREEN HECK	WRH	14x14/10x8	ALUMINUM	EF-4W-10 OUTLET	400	HI ROOF-WEST/A.1&1.8	1
IH-1	GREEN HECK	WIH	12x12/10x8	ALUMINUM	FC-4W-5 OSA INTAKE	330	HI ROOF-WEST/A.3&3.3	
RH-4	GREEN HECK	WRH	12x12/10x8	ALUMINUM	EF-4W-11 OUTLET	330	HI ROOF-WEST/A.1&3.6	1
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4W-6 OSA INTAKE	280	HI ROOF-WEST/B.4&3.3	
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4W-12 OUTLET	280	HI ROOF-WEST/B.8&3.6	1
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4E-6 OSA INTAKE	200	HI ROOF-EAST/B.4&5.4	
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4E-12 OUTLET	200	HI ROOF-EAST/B.8&5.7	1
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4E-11 OUTLET	330	HI ROOF-EAST/A.1&5.7	1
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4E-4 OSA INTAKE	285	HI ROOF-EAST/A.4&7.3	
IH-2	GREEN HECK	WIH	16x16/14x8	ALUMINUM	TRASH OSA INTAKE	700	HI ROOF-EAST/B&7.6	
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4E-9 OUTLET	280	HI ROOF-EAST/C.1&7.4	1
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4E-8 OUTLET	205	HI ROOF-EAST/C.4&7.2	1
RH-4	GREEN HECK	WRH	12x12/8x8	ALUMINUM	EF-4E-7 OUTLET	260	HI ROOF-EAST/C.6&7.8	1
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4E-1 OSA INTAKE	260	HI ROOF-EAST/C.4&7.8	
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4E-2 OSA INTAKE	205	HI ROOF-EAST/C.6&7.2	
IH-1	GREEN HECK	WIH	12x12/8x8	ALUMINUM	FC-4E-5 OSA INTAKE	330	HI ROOF-EAST/A.3&5.3	
IH-1	GREEN HECK	WIH	12x12/10x10	ALUMINUM	FC-4E-23 OSA INTAKE	280	HI ROOF-EAST/B.8&7.2	
IH-3	GREEN HECK	WIH	36x18/22x10	ALUMINUM	FC-1W-1 OSA INTAKE	1600	LOW ROOF-B.4&4	
RH-4	GREEN HECK	WRH	12x1210x10	ALUMINUM	EF-1W-10 OUTLET	260	LOW ROOF-A.8&4	1
RH-6	GREEN HECK	WRH	32x18/24x10	ALUMINUM	EF-14W-1 OUTLET	1340	LOW ROOF-A.3&4.2	1

NOTES:
1. INCLUDES BACKDRAFT DAMPER AND BIRD SCREEN

COMMON DRYER VENT EXHAUST FAN SCHEDULE

		FAN DATA				WHEEL		MOTOR						
UNIT TAG	SYSTEM/LOCATION	CFM	RPM	TOTAL SP	BHP	DIA	TYPE	HP	RPM	V/PH/HZ	WEIGHT LBS	MANUFACTURER & MODEL NO	CONTROL	REMARKS
EF-1E-17	DRYER ROOM COMMON VENT EXHAUST / FIRST FLOOR	1840		1.2			B-WHEEL	2	1720	208/3/60	160	EXHAUSTO MDVS400	FAN MOTOR VARIABLE SPEED CONTROLLED THROUGH DIFFERENTIAL PRESSURE SWITCH IN COMMON EXHAUST VENT. THE CONTROL SYSTEM MODULATES THE FAN SPEED TO MAINTAIN PROPER AND CONSTANT PRESSURE IN THE EXHAUST SYSTEM.	1,2

NOTES:
1. COMPLETE SYSTEM COMPONENTS AND CONTROLS INCLUDING MEC-18 MODULATING FAN CONTROL.
2. VIBRATION ISOLATOR.
3. FACTORY PREPROGRAMMED VARIABLE FREQUENCY DRIVE.
4. XTP- SENSORAND OUTDOOR AVERAGE PRESSURE PROBE.

EXPANSION TANK SCHEDULE

TAG	MAKE	MODEL	SYSTEM	ACCEPTANCE VOLUME-GAL	TANK VOL-GAL	CONNECTION SIZE (IN)	OPER. WEIGHT GALS	FILL PRESSURE PSIG	MAXIMUM PRES. PSIG	REMARKS
ET-1	B & G	B-200	HEATING HOT WATER	10	25	1	630	25	54	

NOTES:

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Student Housing
Phase 3 - 'The Summits'
Merced, CA
UCM Project Number 906262

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Title
MECHANICAL EQUIPMENT SCHEDULES

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KEY NOTES

1. DRYER ROOM COMBUSTION AIR LOUVER.
2. PROVIDE CLEAN-OUT AT BOTTOM OF COMMON DRYER VENT VERTICAL RUN PRIOR TO WALL TERMINATION.
3. TYPICAL 4" DRYER VENT CONNECTION FROM EACH DRYER UNIT TO COMMON VENT. PROVIDE CONVERGING WYE TEE FITTING WITH MAXIMUM OF 30" BRANCH ENTRY PER CONNECTION (TYPICAL FOR 10 DRYERS).
4. 20x8 VENT BOX TERMINATE 18" ABOVE GROUND LEVEL. SEE DETAIL 7/M3.3.

SHEET NOTES

A. FOR HYDRONIC PIPING SIZES AND SIZES OF PIPING COIL CONNECTIONS TO FAN COIL UNITS, SEE DIAGRAMS ON SHEETS M7.2 AND 7.3.

B. FOR SUPPORTS OF ALL FAN COIL UNITS, EXHAUST FANS AND ALL OTHER CEILING MOUNTED EQUIPMENT SEE DETAILS ON SHEETS M3.1, M3.2 AND M3.3.

C. PROVIDE A MINIMUM OF TWO (2) BENDS ON ALL EXHAUST AIR MAKE-UP TRANSFER DUCTWORK BETWEEN RESIDENCES AND BATHROOMS.

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1 MECHANICAL FIRST FLOOR BUILDING PLAN - WEST

SCALE: 1/8" = 1'-0"

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Student Housing Phase 3 - 'The Summits'

Merced, CA

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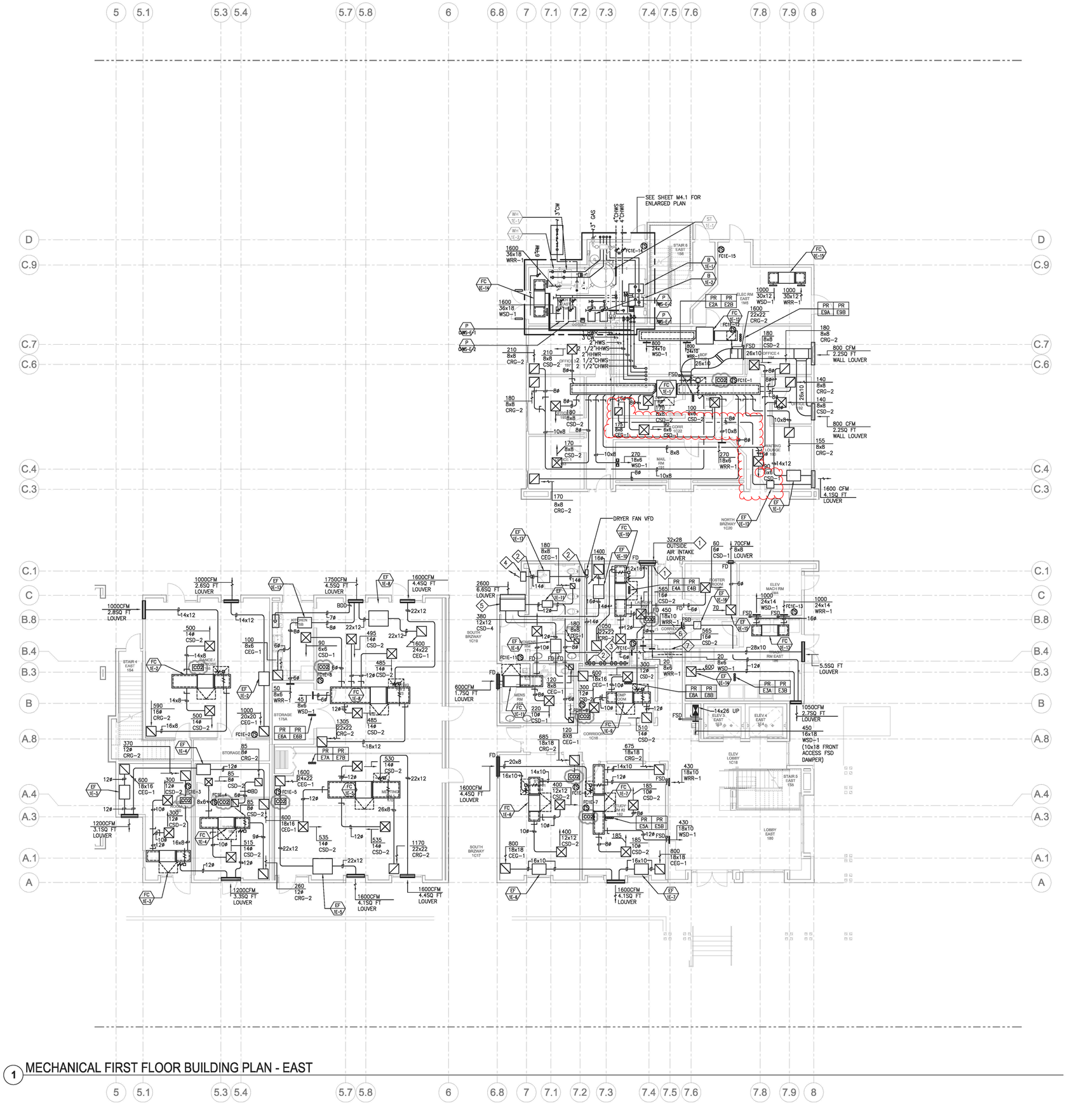

1 MECHANICAL FIRST FLOOR BUILDING PLAN - EAST

SCALE: 1/8" = 1'-0"

KEY NOTES

1. PROVIDE 6" DEEP GALVANIZED SHEET METAL PLENUM. LOCATE LOUVER AS HIGH AS POSSIBLE TO CEILING.
2. PROVIDE CLEAN-OUT AT BOTTOM OF COMMON DRYER VENT VERTICAL RUN PRIOR TO WALL TERMINATION.
3. TYPICAL 4" DRYER VENT CONNECTION FROM EACH DRYER UNIT TO COMMON VENT. PROVIDE CONVERGING WYE TEE FITTING WITH MAXIMUM OF 30° BRANCH ENTRY PER CONNECTION (TYPICAL FOR 8 DRYERS).
4. 26x12 VENT BOX TERMINATE 18" ABOVE GROUND LEVEL. SEE DETAIL 7/M3.3.
5. PROVIDE 30" DEEP SHEET METAL PLENUM BEHIND LOUVER FOR EXHAUST DUCT CONNECTIONS.
6. COMBUSTION AIR OPENING 36x16 WSD (TITUS 300RL WALL GRILLE) LOCATE TOP OF GRILLE WITH IN 12" BELOW BOTTOM OF CEILING.
7. 1HR RATED FIRE RATED ENCLOSURE.

SHEET NOTES

A. FOR HYDRONIC PIPING SIZES AND SIZES OF PIPING COIL CONNECTIONS TO FAN COIL UNITS, SEE DIAGRAMS ON SHEETS M7.2 AND 7.3.

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MECHANICAL FIRST FLOOR BUILDING PLAN - EAST

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KEY NOTES

1. FOR PIPE SIZES SEE DIAGRAM ON SHEET M7.3.
2. PIPE(S) THRU RATED WALL, PROVIDE FIRE RATED PIPE SLEEVES.
3. AHU SW-1 TEMPERATURE SENSOR.

SHEET NOTES

A. FOR HYDRONIC PIPING SIZES AND SIZES OF PIPING COIL CONNECTIONS TO FAN COIL UNITS, SEE DIAGRAMS ON SHEETS M7.2 AND 7.3.

B. FOR SUPPORTS OF ALL FAN COIL UNITS, EXHAUST FANS AND ALL OTHER CEILING MOUNTED EQUIPMENT SEE DETAILS ON SHEETS M3.1, M3.2 AND M3.3.

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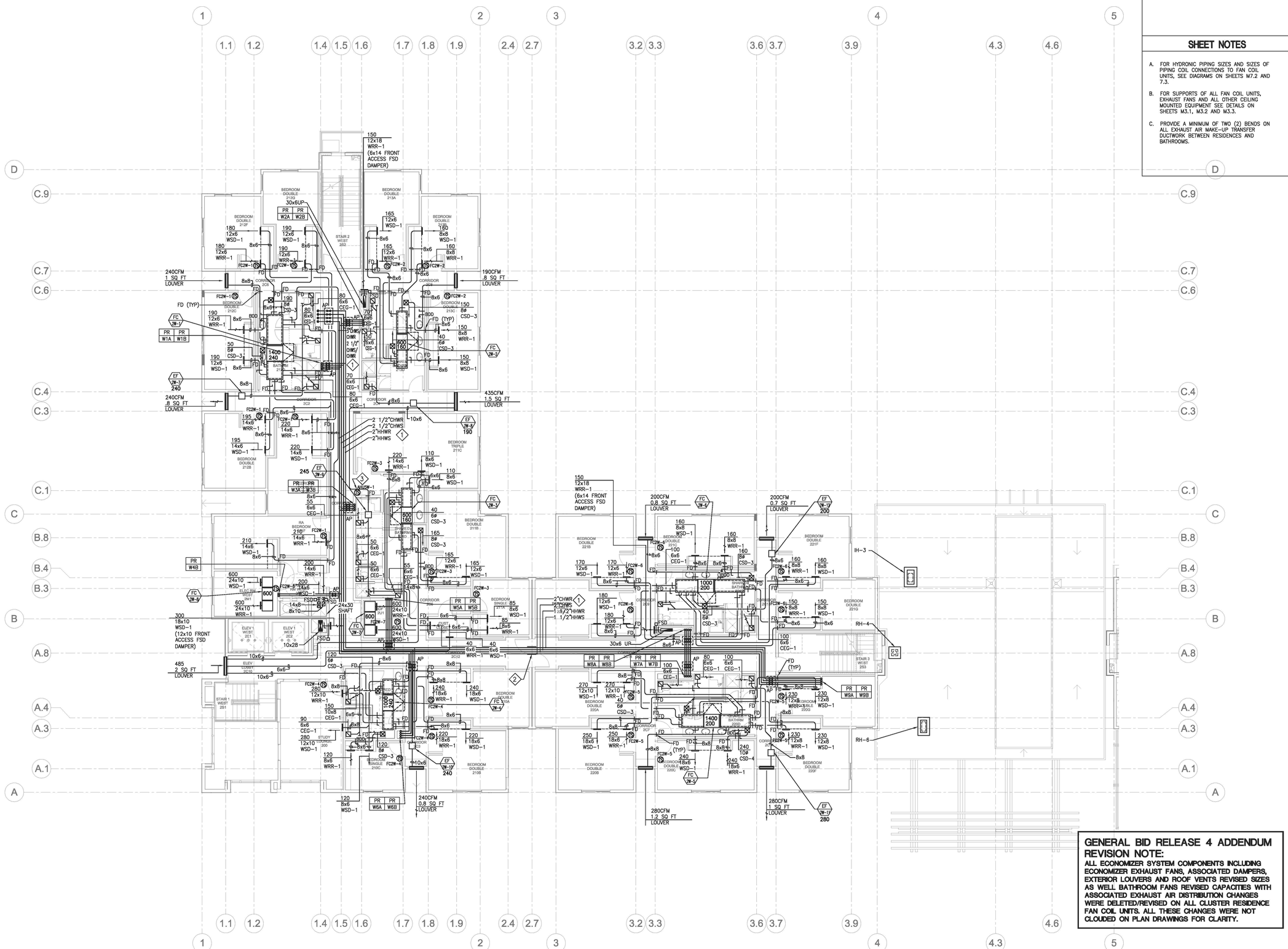

1 MECHANICAL SECOND FLOOR BUILDING PLAN - WEST

SCALE: 1/8" = 1'-0"

GENERAL BID RELEASE 4 ADDENDUM REVISION NOTE:
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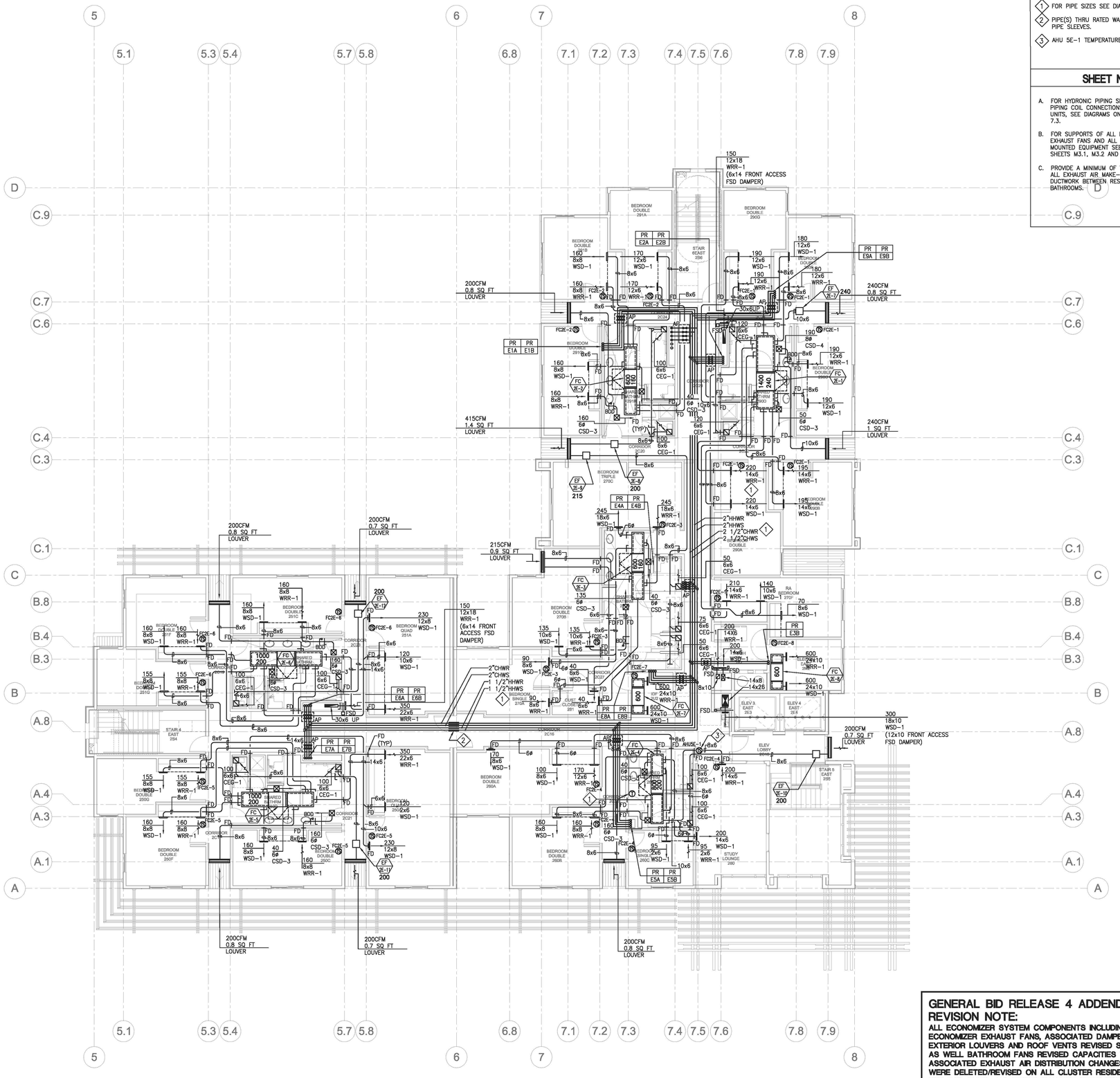

KEY NOTES

1. FOR PIPE SIZES SEE DIAGRAM ON SHEET M7.2
2. PIPE(S) THRU RATED WALL, PROVIDE FIRE RATED PIPE SLEEVES.
3. AHU 5E–1 TEMPERATURE SENSOR

SHEET NOTES

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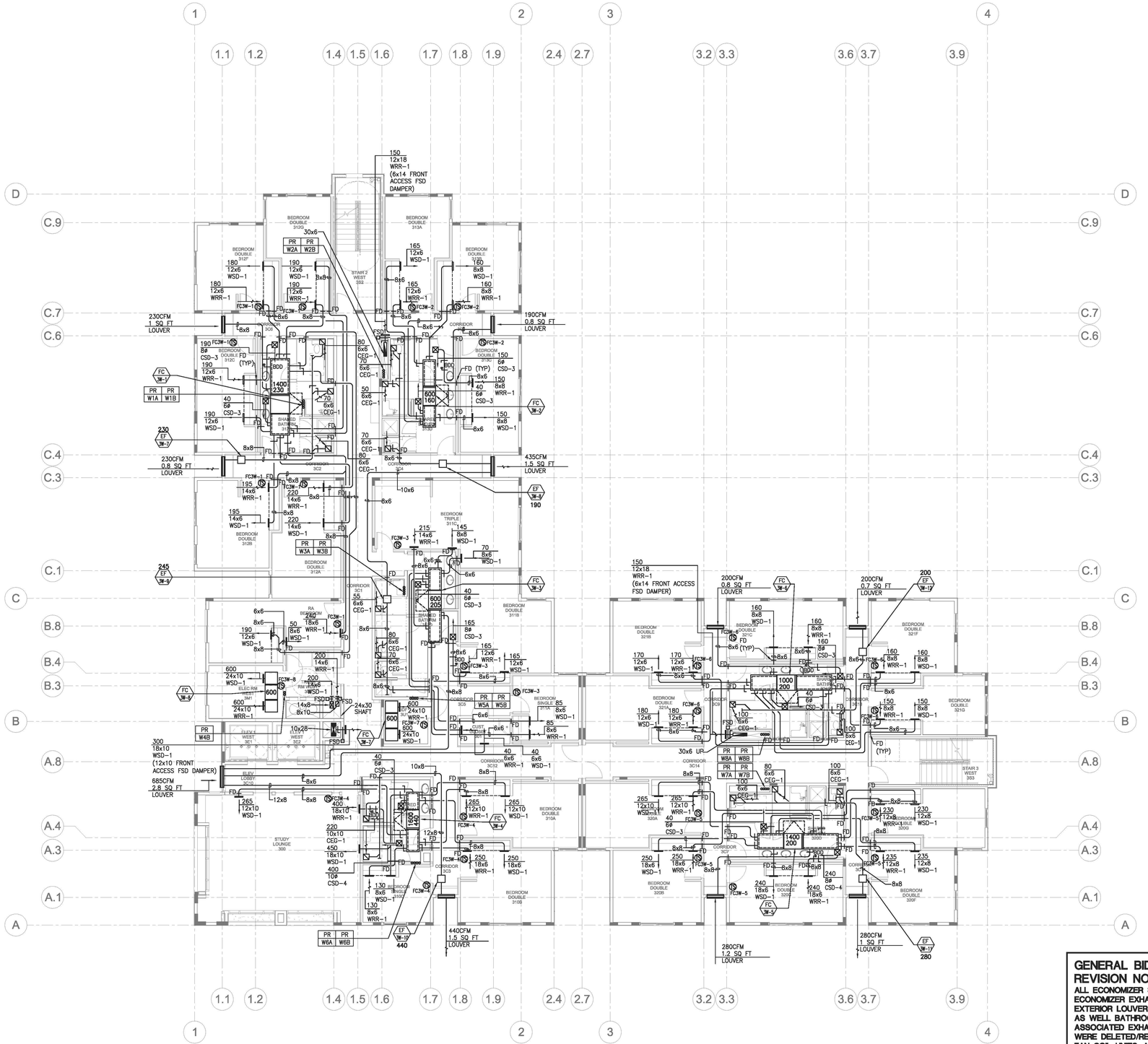

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1 MECHANICAL THIRD FLOOR BUILDING PLAN - WEST

0 4' 8' 16'
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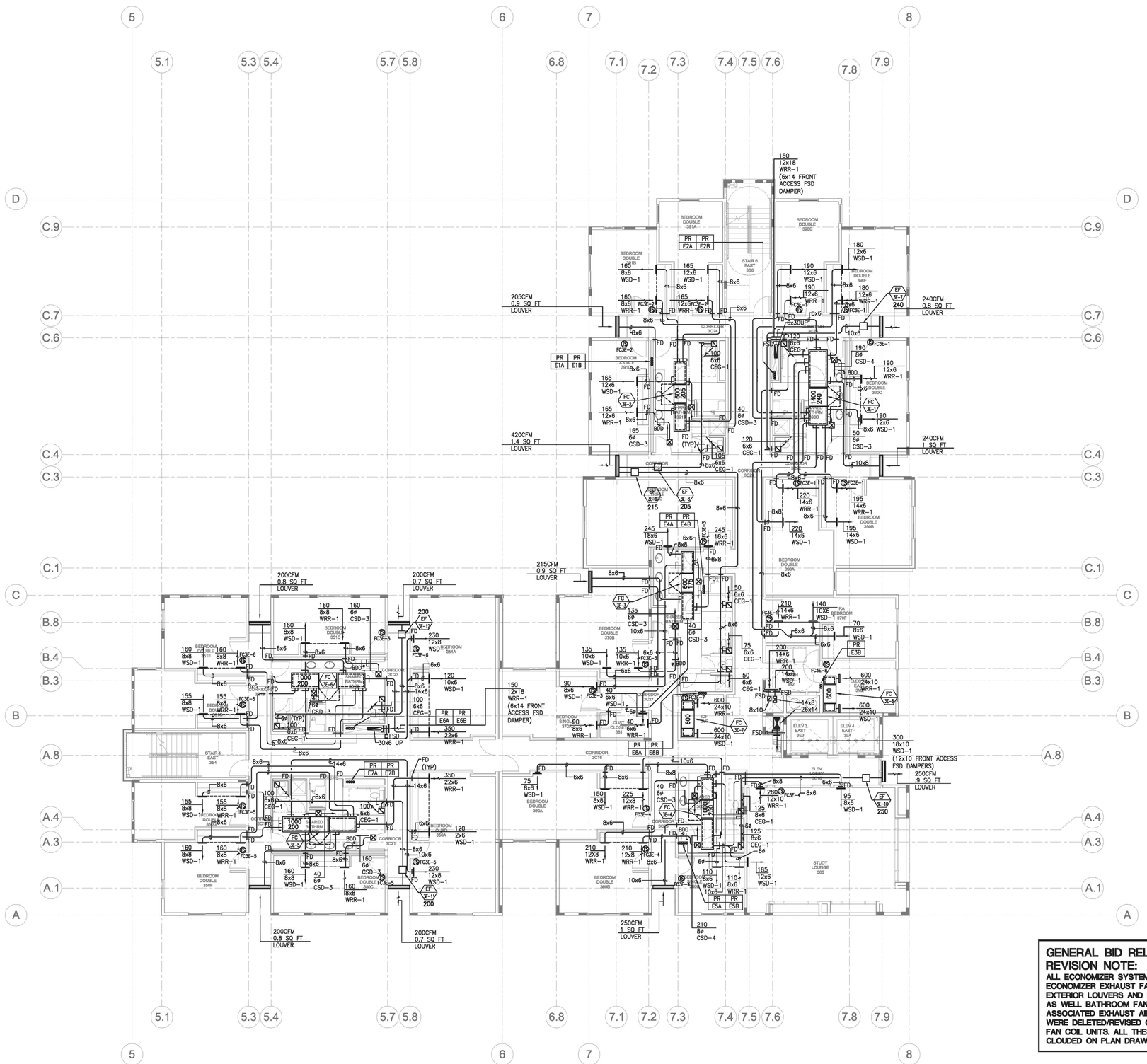

1 MECHANICAL THIRD FLOOR BUILDING PLAN - EAST

KEY NOTES

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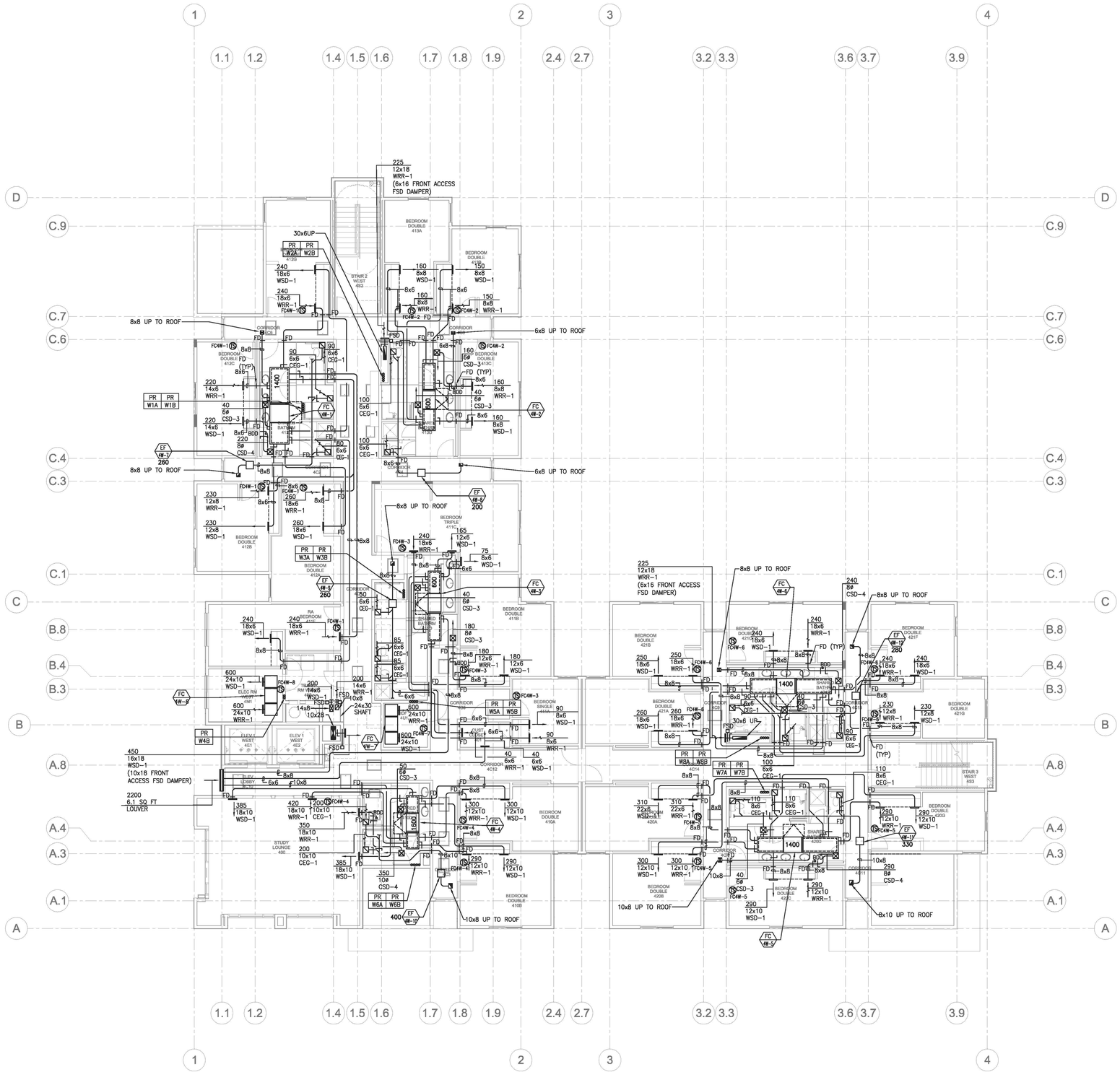

KEY NOTES

SHEET NOTES

A. FOR HYDRONIC PIPING SIZES AND SIZES OF PIPING COIL CONNECTIONS TO FAN COIL UNITS, SEE DIAGRAMS ON SHEETS M7.2 AND 7.3.

B. FOR SUPPORTS OF ALL FAN COIL UNITS, EXHAUST FANS AND ALL OTHER CEILING MOUNTED EQUIPMENT SEE DETAILS ON SHEETS M3.1, M3.2 AND M3.3.

C. PROVIDE A MINIMUM OF TWO (2) BENDS ON ALL EXHAUST AIR MAKE-UP TRANSFER DUCTWORK BETWEEN RESIDENCES AND BATHROOMS.

GENERAL BID RELEASE 4 ADDENDUM REVISION NOTE:
ALL ECONOMIZER SYSTEM COMPONENTS INCLUDING ECONOMIZER EXHAUST FANS, ASSOCIATED DAMPERS, EXTERIOR LOUVERS AND ROOF VENTS REVISED SIZES AS WELL BATHROOM FANS REVISED CAPACITIES WITH ASSOCIATED EXHAUST AIR DISTRIBUTION CHANGES WERE DELETED/REVISED ON ALL CLUSTER RESIDENCE FAN COIL UNITS. ALL THESE CHANGES WERE NOT CLOUDED ON PLAN DRAWINGS FOR CLARITY.

1 MECHANICAL FOURTH FLOOR BUILDING PLAN - WEST

SCALE: 1/8" = 1'-0"

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Student Housing Phase 3 - 'The Summits'

Merced, CA

UCM Project Number 906262

Client:
UNIVERSITY OF CALIFORNIA UCMERCED

Revision Schedule

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Title
MECHANICAL FOURTH FLOOR BUILDING PLAN - WEST

Sheet
M2.4W

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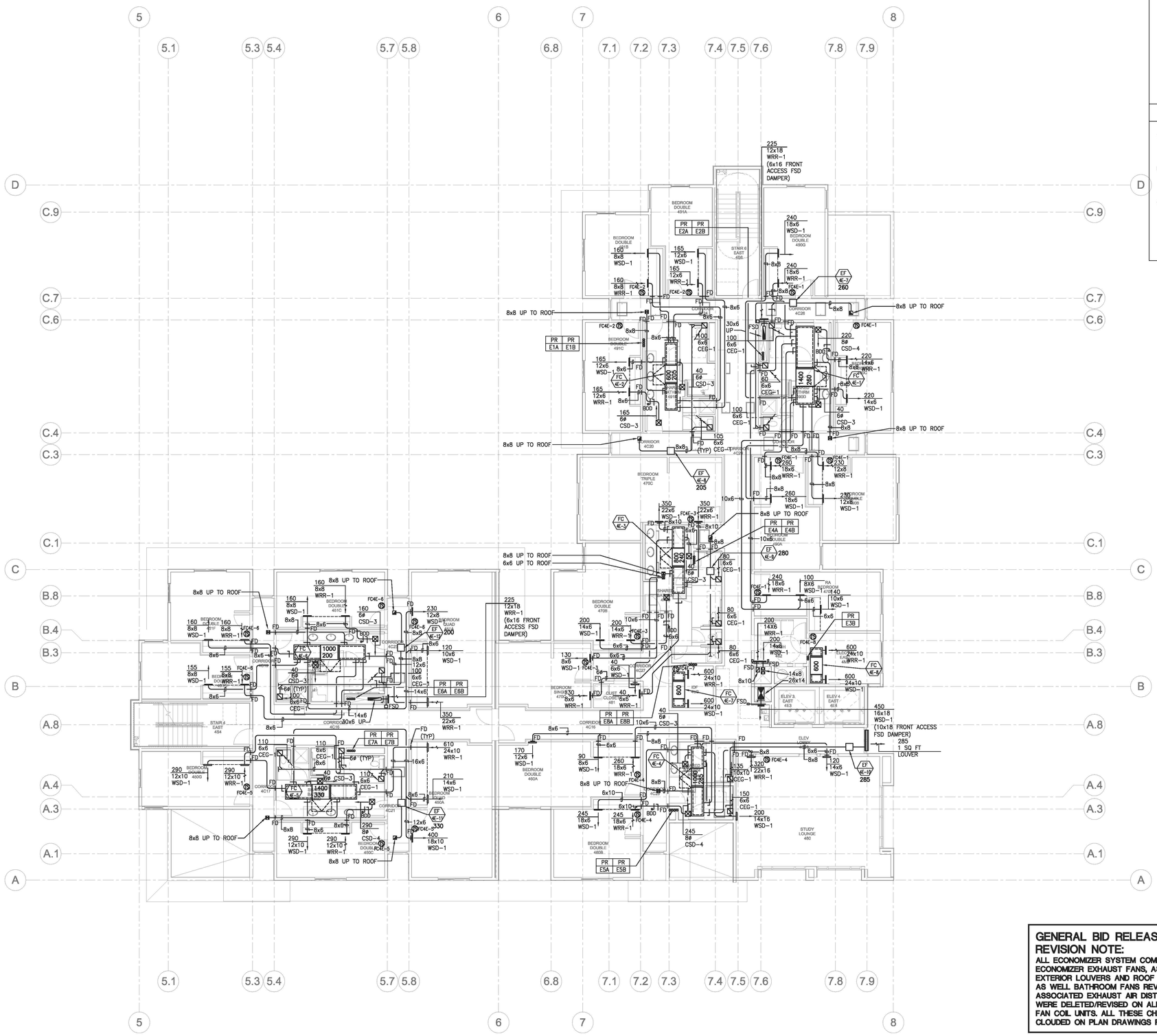

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1 MECHANICAL FOURTH FLOOR BUILDING PLAN - EAST

SCALE: 1/8" = 1'-0"

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MECHANICAL FOURTH FLOOR BUILDING PLAN - EAST

Sheet
M2.4E

RECORD DOCUMENTS

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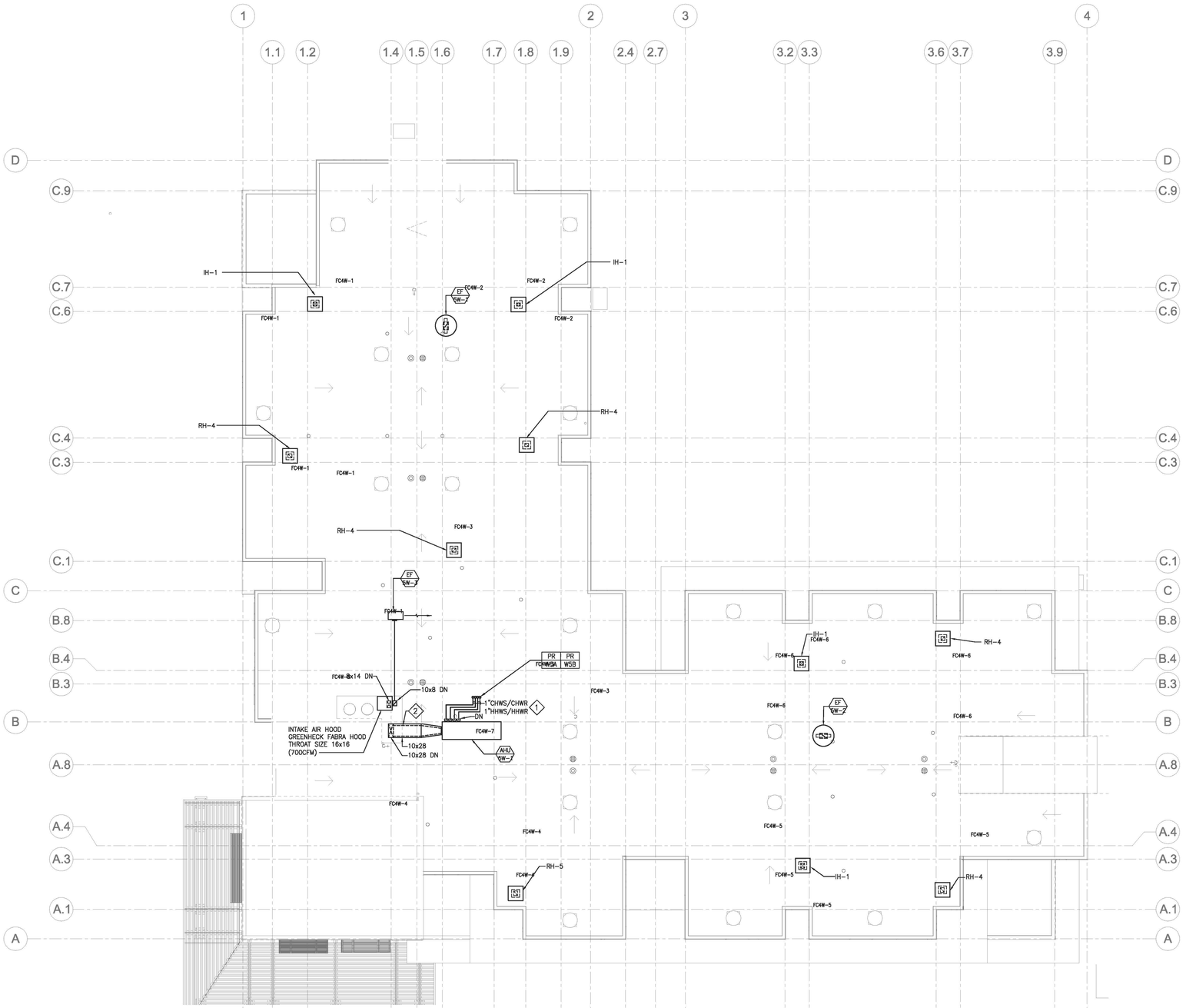
KEY NOTES

1. SEE DWG M7.2 FOR HYDRONIC PIPING DIAGRAM.
2. DUCT LINER, 2" THICK MINIMUM

SHEET NOTES

A. FOR EQUIPMENT ROOF MOUNTING SEE DETAILS ON SHEETS M3.1, M3.2 AND M3.3.



1 MECHANICAL ROOF PLAN - WEST

SCALE: 1/8" = 1'-0"

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M2.5W

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2. DUCT LINER, 2" THICK MINIMUM

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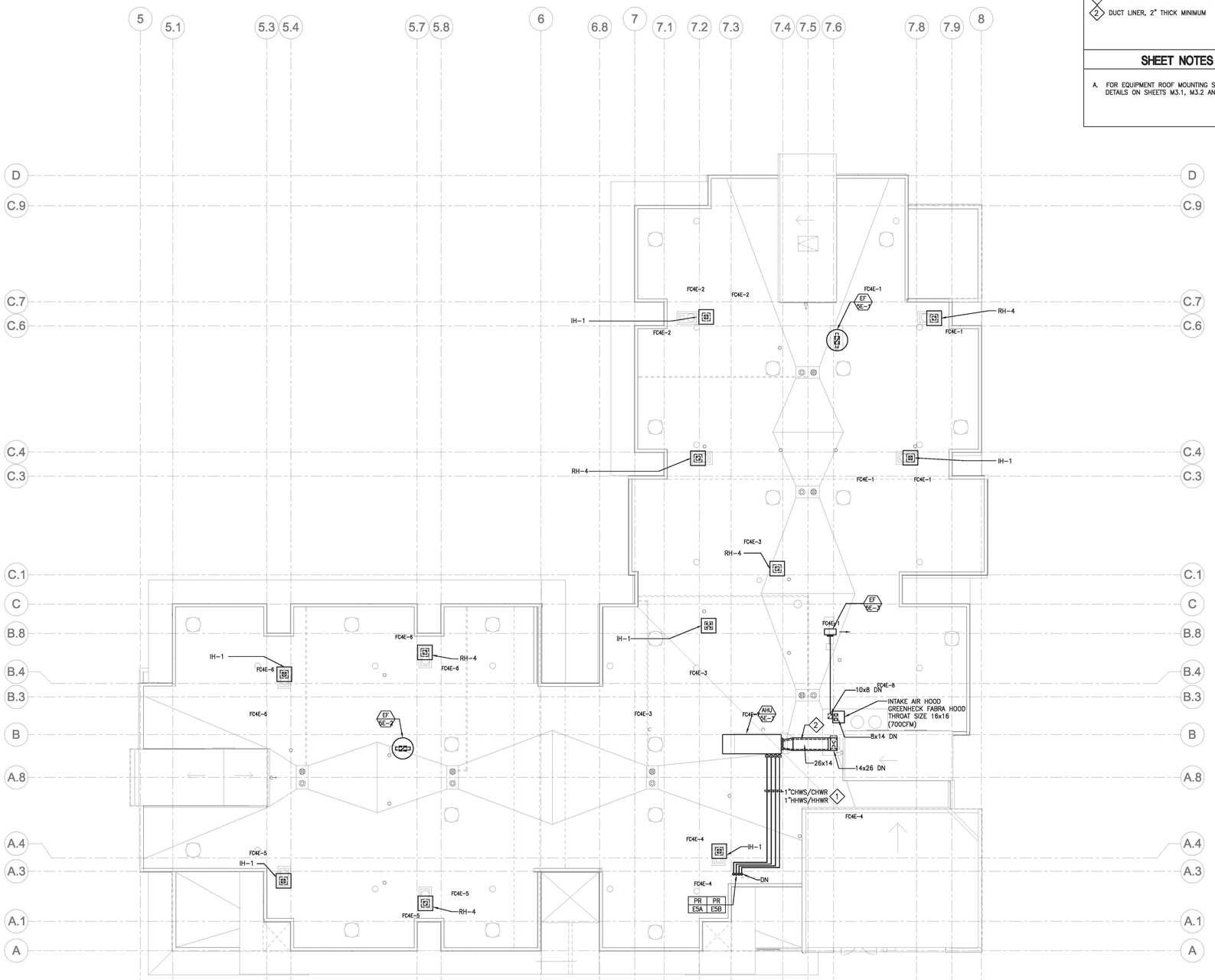

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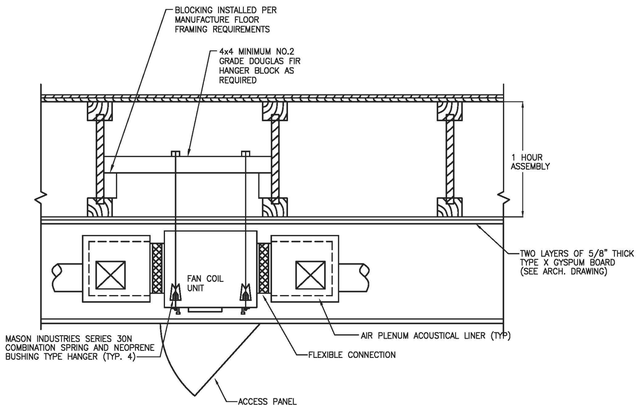

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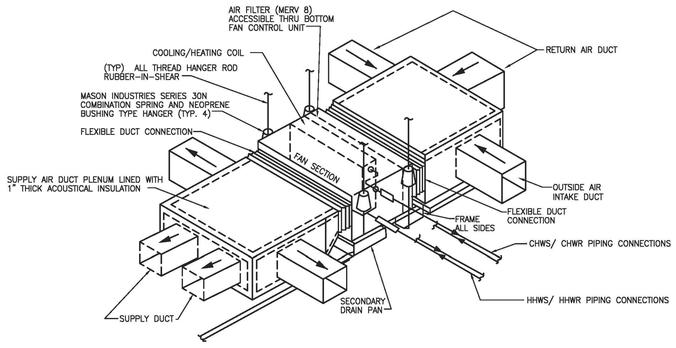
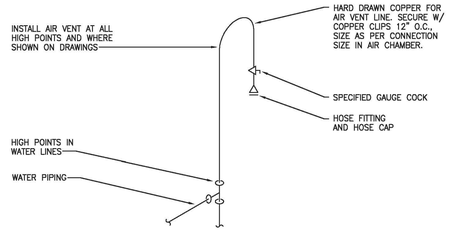


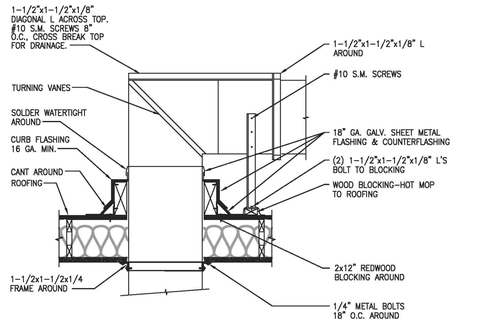
1 FAN COIL UNIT MOUNTING DETAIL

N.T.S.



5 MANUAL AIR VENT DETAIL

N.T.S.



4 DUCT THRU ROOF DETAIL

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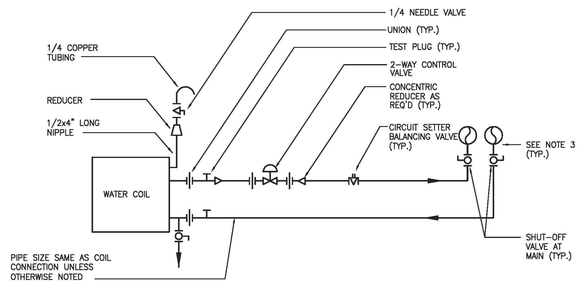
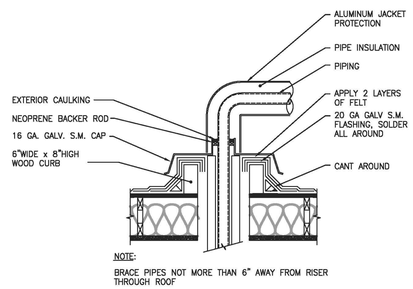


NOTES:

1. COIL VALVING AND TEST PLUGS SHALL BE IN AN ACCESSIBLE LOCATION.
2. ARRANGE PIPING AND LOCATE UNIONS TO FACILITATE COIL AND CONTROL VALVE REMOVAL.
3. COIL PIPING TO MAIN LOOP SHALL BE BOTTOM CONNECTION EXCEPT WHERE FIELD CONDITIONS DO NOT ALLOW.
4. BRANCH PIPE SIZES ARE SHOWN ON COIL AND TERMINAL SCHEDULES.
5. MANUAL AIR VENT SHALL BE REQUIRED WHERE COIL PIPING IS AT TOP CONNECTION TO MAIN LOOP.

6 HEATING/COOLING COIL PIPING WITH 2-WAY CONTROL VALVE

N.T.S.



7 PIPE THRU ROOF PENETRATION DETAIL

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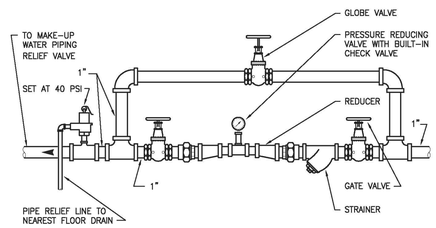

8 MAKE UP WATER STATION

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MECHANICAL DETAILS

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M3.1

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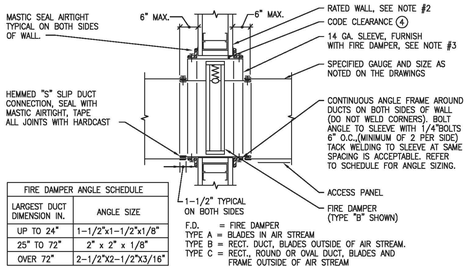

FIRE DAMPER ANGLE SCHEDULE	
LARGEST DUCT DIMENSION IN.	ANGLE SIZE
UP TO 24"	1-1/2"x1-1/2"x1/8"
25" TO 72"	2" x 2" x 1/8"
OVER 72"	2-1/2"X2-1/2"X3/16"

NOTES:
1. DETAIL SIMILAR FOR FIRE DAMPER ASSEMBLY IN WALL WITHOUT DUCT. (SEE TYPE "A") (FOR RETURN AIR OPENING, TYPICALLY)
2. FOR INSTALLATION IN METAL STUD WALL, FRAME FIRE DAMPER OPENING WITH DOUBLE METAL WALL CHANNEL COVERED WITH 5/8" GYPSUM BOARD ON ALL (4) SIDES.
3. IF FACTORY FURNISHED SLEEVE IS NOT SUFFICIENTLY LONG ENOUGH FOR INSTALLATION OF FRAMING ANGLES, PROVIDE AN ADDITIONAL 14 GA SLEEVE OF SUFFICIENT LENGTH.
4. CLEARANCE BETWEEN DAMPER SLEEVE AND WALL OPENING SHALL BE 1/8 INCH PER FOOT OF WIDTH (OR HEIGHT) UNLESS OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. CLEARANCE SHALL BE CALCULATED SEPARATELY FOR THE WIDTH AND THE HEIGHT. CLEARANCE TOLERANCE SHALL BE ZERO TO +1/8 INCH.

1 WALL FIRE DAMPER DETAIL

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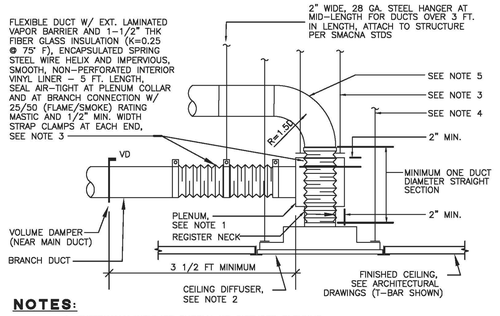

NOTES:
1. EXTERNALLY INSULATE SUPPLY AIR DIFFUSER PLENUMS.
2. TIE DIFFUSERS AND/OR GRILLES TO CEILING GRID WITH #20 GAUGE WIRE AT OPPOSITE SIDES. TERMINATE EACH WIRE AT EACH END WITH 3 TWISTS MINIMUM.
3. FOUR #12 GAUGE TAUT WIRES SUSPENDED FROM ABOVE PER SMACNA STANDARDS AND GUIDELINES FOR SEISMIC RESTRAINT.
4. PROVIDE SUPPORT WIRES ATTACH TO DIFFUSER/GRILLE PER NOTE 3 FOR OPTIONAL FLEXIBLE DUCT CONNECTION TO AIR OUTLETS.
5. OPTIONAL DUCT CONNECTION TO DIFFUSER/GRILLE WHERE SUFFICIENT CEILING SPACE IS AVAILABLE FOR INSTALLATION PER DETAIL. 90° ELBOW SHALL BE HARD DUCT.

3 CEILING SUPPLY DIFF. & GRILLE DETAIL

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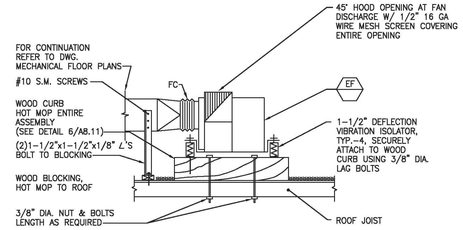


4 EXHAUST FAN MOUNTING

N.T.S.

FIRE/SMOKE DAMPER DETAIL 2 NOTES:
1. ACCESS DOOR (PER SMACNA STDS) SIZED TO PROVIDE SERVICE AND INSPECTION.
2. OPENING TO BE 1/8" WIDER FOR EACH FOOT OF SLEEVE WIDTH AND 1/8" HIGHER FOR EACH FOOT OF SLEEVE HEIGHT.
3. MANUAL RESET OPERATOR.
4. FIRE DAMPER FRAME ATTACHED TO SLEEVE BY DAMPER MANUFACTURER.
5. DUCT CONNECTION SHALL BE PER MANUFACTURER'S UL AND CSFM LISTED INSTALLATION INSTRUCTIONS.
6. ANGLES ALL AROUND SLEEVE ON BOTH SIDES OF PARTITION. WELDED OR BOLTED TO SLEEVE WITH 1" FILLETS 5" O.C. MAX. OR 1/4" DIA. BOLTS @ 5" O.C. MAX. ANGLES ARE NOT ATTACHED TO WALL (EXCEPT AT SILL WHICH IS OPTIONAL) TO PROVIDE FOR EXPANSION. IN NO CASE SHALL ANGLE OVERLAP WALL FRAME LESS THAN 1". SEE DAMPER MANUFACTURER'S INSTRUCTIONS FOR SIZE AND GAUGE OF ANGLE.
7. FUSIBLE LINK WITH LOCK
8. NEGATOR SPRING
9. FUSIBLE ROD

SPECIFICATIONS:

10. COMBINATION FIRE SMOKE DAMPER SHALL BE FRAMED WITH A MINIMUM OF 16 GAGE GALVANIZED STEEL FORMED INTO A STRUCTURAL HAT CHANNEL SHAPE WITH TABBED CORNERS FOR REINFORCEMENT. THE BLADES SHALL BE SINGLE SKIN 16 GAGE MINIMUM GALVANIZED WITH THREE LONGITUDINAL GROOVES FOR REINFORCEMENT. BEARINGS SHALL BE STAINLESS STEEL SLEEVE TURNING IN AN EXTRUDED HOLE IN THE FRAME. JAMB SEALS SHALL BE STAINLESS STEEL FLEXIBLE METAL COMPRESSION TYPE.
EACH COMBINATION FIRE/SMOKE DAMPER SHALL BE 1 1/2 HOUR RATED UNDER UL STANDARD 555, AND SHALL FURTHER BE CLASSIFIED BY UNDERWRITERS LABORATORIES AS A LEAKAGE RATED DAMPER FOR USE IN SMOKE CONTROL SYSTEMS UNDER THE LATEST VERSION OF UL555S, AND BEAR A UL LABEL ATTESTING TO SAME. DAMPER MANUFACTURER SHALL HAVE TESTED, AND QUALIFIED WITH UL, A COMPLETE RANGE OF DAMPER SIZES COVERING ALL DAMPERS REQUIRED BY THIS SPECIFICATION. TESTING AND UL QUALIFYING A SINGLE DAMPER SIZE IS NOT ACCEPTABLE. THE LEAKAGE RATING UNDER UL555S SHALL BE LEAKAGE CLASS III. SEALS SHALL BE NON-DEGRADABLE METAL TO METAL RATED TO 850 °F. AS PART OF THE UL QUALIFICATION, DAMPERS SHALL HAVE DEMONSTRATED A CAPACITY TO OPERATE (TO OPEN AND CLOSE) UNDER HVAC SYSTEM OPERATING CONDITIONS, WITH PRESSURES OF AT LEAST 4" W.G. IN THE CLOSED POSITION, AND 2000 FPM AIR VELOCITY IN THE OPEN POSITION.
MANUFACTURER SHALL PROVIDE FACTORY ASSEMBLED SLEEVE OF MINIMUM LENGTH FACTORY SUPPLIED CAULK SLEEVE SHALL BE 20 GAGE FOR DAMPERS AS SHOWN. THROUGH 84" WIDE AND 18 GAGE ABOVE 84" WIDE.
DAMPER SHALL BE RESETTABLE AND SUPPLIED WITH 165 DEG. F FUSIBLE LINK.

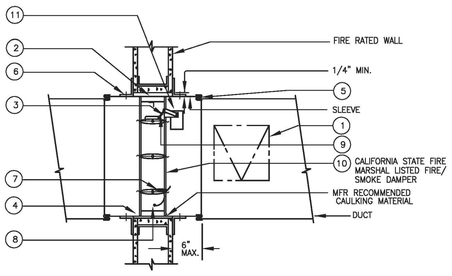
MANUFACTURER, MODEL NO. AND LISTING NO.

FIRE DAMPER SHALL BE RUSKIN FSD60 - CSFM LISTING #3225-245:102 SMOKE DAMPER CSFM LISTING #3230-245:110

CONTROL SEQUENCE:

DAMPER SHALL OPERATE IN A NORMALLY OPEN POSITION AND SHALL USE A SMOKE DETECTOR ACTUATED MOTOR. CLOSURE OF DAMPER BLADES SHALL BE UPON SMOKE DETECTION OR LOSS OF FUSIBLE LINK. DAMPER SHALL FAIL CLOSE WHEN POWER FAILS TO THE DAMPER. FIRE SMOKE DAMPER SHALL BE TIED TO THE BUILDING FIRE ALARM SYSTEM.

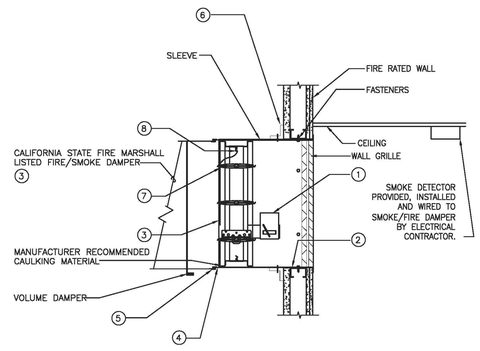
11. OPERATOR/ACTUATOR MOTOR LOCATED ON CORRIDOR SIDE OF DAMPER. UNIT MAY BE SUPPLIED WITHOUT MOTOR INSTALLED. SEE MANUFACTURER INSTRUCTIONS FOR FIELD MOUNTING OF MOTORS. REFER TO FIRE ALARM DRAWINGS FOR DAMPERS OPERATION SEQUENCE.



GENERAL NOTES:
1. DAMPER DETAIL FOR REFERENCE ONLY.
2. DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS.
3. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
4. PLACEMENT OF DAMPER SHALL BE IN THE SAME PLANE AS THE BARRIER BEING PENETRATED.
5. NON-BREAKAWAY DUCT/SLEEVE CONNECTIONS: DUCT SLEEVE CONNECTIONS SHALL BE MINIMUM OF 16 GAGE FOR DAMPERS UP TO 36"WIDE x 24"HIGH AND 14 GAGE FOR DAMPERS EXCEEDING 36"WIDE x 24"HIGH.
6. WHEN OPTIONAL SEALING OF THESE JOINTS IS REQUIRED, THE FOLLOWING SEALANTS MAY BE APPLIED IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S INSTRUCTIONS.
HARDCAST INC - IRON GRIP 601 PRECISION - PA2084T ECO-DUCT SEAL 44-52

2 COMBINATION FIRE/SMOKE DAMPER DETAIL

N.T.S.



GENERAL NOTES:
1. FRONT ACCESS DAMPER DETAIL FOR REFERENCE ONLY,
2. DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS.
3. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
4. PLACEMENT OF DAMPER SHALL BE IN THE SAME PLANE AS THE BARRIER BEING PENETRATED.
5. NON-BREAKAWAY DUCT/SLEEVE CONNECTIONS: DUCT SLEEVE CONNECTIONS SHALL BE MINIMUM OF 16 GAUGE FOR DAMPERS UP TO 36" WIDE X 24" HIGH AND 14 GAUGE FOR DAMPERS EXCEEDING 36" WIDE X 24" HIGH.
6. SEAL JOINTS IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S INSTRUCTIONS.
HARDCAST INC - IRON GRIP 601
PRECISION - PA2084T
ECO-DUCT SEAL 44-52

FIRE/SMOKE DAMPER DETAIL 5 NOTES:
1. OPERATOR/ACTUATOR MOTOR LOCATED ON CORRIDOR SIDE OF DAMPER. UNIT MAY BE SUPPLIED WITHOUT MOTOR INSTALLED. SEE MANUFACTURER INSTRUCTIONS FOR FIELD MOUNTING OF MOTORS.
2. OPENING TO BE 1/8" WIDER FOR EACH FOOT OF SLEEVE WIDTH AND 1/8" HIGHER FOR EACH FOOT OF SLEEVE HEIGHT.
3. SPECIFICATIONS: COMBINATION FIRE SMOKE DAMPER SHALL BE FRAMED WITH A MINIMUM OF 16 GAUGE GALVANIZED STEEL FORMED INTO A STRUCTURAL HAT CHANNEL SHAPE WITH TABBED CORNERS FOR REINFORCEMENT. THE BLADES SHALL BE SINGLE SKIN 16 GAUGE MINIMUM GALVANIZED WITH THREE LONGITUDINAL GROOVES FOR REINFORCEMENT. BEARINGS SHALL BE STAINLESS STEEL SLEEVE TURNING IN AN EXTRUDED HOLE IN THE FRAME. JAMB STAINLESS STEEL SHALL BE STAINLESS STEEL FLEXIBLE METAL COMPRESSION TYPE. EACH COMBINATION FIRE/SMOKE DAMPER SHALL BE 1 1/2 HOUR RATED UNDER UL STANDARD 555, AND SHALL FURTHER BE CLASSIFIED BY UNDERWRITERS LABORATORIES AS A LEAKAGE RATED DAMPER FOR USE IN SMOKE CONTROL SYSTEMS UNDER THE LATEST VERSION OF UL 555S, AND BEAR A UL LABEL ATTESTING TO SAME. DAMPER MANUFACTURER SHALL HAVE TESTED AND QUALIFIED WITH UL, A COMPLETE RANGE OF DAMPER SIZES COVERING ALL DAMPERS REQUIRED BY THIS SPECIFICATION. TESTING AND UL QUALIFYING A SINGE DAMPER SIZE IS NOT ACCEPTABLE. THE LEAKAGE RATING UNDER UL 555S SHALL BE LEAKAGE CLASS III. SEALS SHALL BE NON-DEGRADABLE METAL TO METAL RATED TO 850 DEGREE F, AS PART OF THE UL QUALIFICATION, DAMPERS SHALL HAVE DEMONSTRATED CAPACITY (TO OPERATE OPEN AND CLOSE) UNDER HVAC SYSTEM OPERATING CONDITIONS, WITH PRESSURES OF AT LEAST 4" W.G. IN THE CLOSED POSITION AND 2000 FPM AIR VELOCITY IN TIE OPEN POSITION. MANUFACTURER SHALL PROVIDE FACTORY ASSEMBLED SLEEVE OF MINIMUM LENGTH AS SHOWN. FACTORY SUPPLIED CAULK SLEEVE SHALL BE 20 GAUGE FOR DAMPERS THROUGH 84" WIDE AND 18 GAUGE ABOVE 84" WIDE.
DAMPER SHALL BE RESETTABLE AND SUPPLIED WITH 165 DEGREE F FUSIBLE LINK.

MANUFACTURER AND MODEL NUMBER:
FIRE DAMPER SHALL BE RUSKIN FSD60 FA - CSFM LISTING #3225-245:117, AND SMOKE DAMPER CSFM LISTING #3230-245:116

CONTROL SEQUENCE:
DAMPER SHALL OPERATE IN A NORMALLY OPEN POSITION AND SHALL USE A SMOKE DETECTOR ACTUATED MOTOR. CLOSURE OF DAMPER BLADES SHALL BE UPON SMOKE DETECTION OR LOSS OF FUSIBLE LINK. DAMPER SHALL FAIL CLOSE WHEN POWER FAILS TO THE DAMPER. FIRE SMOKE DAMPER SHALL BE TIED TO THE BUILDING FIRE ALARM SYSTEM.

4. FIRE DAMPER FRAME ATTACHED TO SLEEVE BY DAMPER MANUFACTURER.
5. DUCT CONNECTION SHALL BE PER MANUFACTURER'S UL AND CSFM LISTED INSTALLATION INSTRUCTIONS.
6. ANGLES ALL AROUND SLEEVE ON BOTH SIDES OF PARTITION, WELDED OR BOLTED TO SLEEVE WITH 1" FILLETS 5" O.C. MAX. OR ¼ " DIA. BOLTS @ 5" O.C. MAX. ANGLES ARE NOT ATTACHED TO WALL (EXCEPT AT SILL WHICH IS OPTIONAL) TO PROVIDE FOR EXPANSION. IN NO CASE SHALL ANGLE OVERLAP WALL FRAME LESS THAN 1". SEE DAMPER MANUFACTURER'S INSTRUCTIONS FOR SIZE AND GAUGE OF ANGLE.
7. FUSIBLE LINK WITH LOCK
8. NEGATOR SPRING

5 WALL MOUNTED COMBINATION FIRE/SMOKE DAMPER DETAIL

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Student Housing Phase 3 - 'The Summits'

Merced, CA

UCM Project Number 906262

Client:

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MECHANICAL DETAILS

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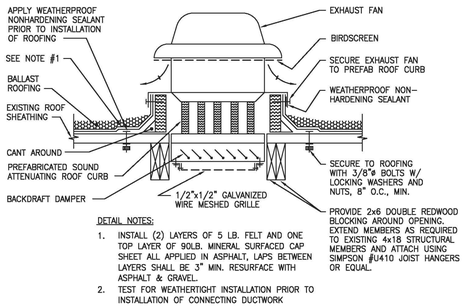

DETAIL NOTES:

1. INSTALL (2) LAYERS OF 5 LB. FELT AND ONE TOP LAYER OF 90LB. MINERAL SURFACED CAP SHEET ALL APPLIED IN ASPHALT, LAPS BETWEEN LAYERS SHALL BE 3" MIN. RESURFACE WITH ASPHALT & GRAVEL.
2. TEST FOR WEATHERTIGHT INSTALLATION PRIOR TO INSTALLATION OF CONNECTING DUCTWORK

1 ROOF TOP EXHAUST FAN MOUNTING

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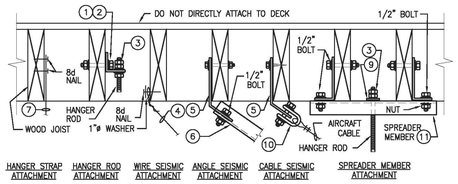
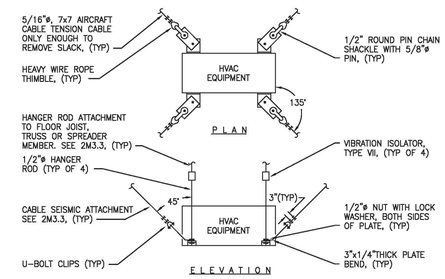


NOTES:

1. SIDE BEAM BRACKET WITH MACHINE BOLT, NUT AND WASHER EQUAL TO HANGER ROD SIZE, B-LINE #3062 OR EQUAL.
2. SIZE AS REQUIRED FOR HANGER ROD.
3. DOUBLE NUT ON HANGER ROD.
4. 12 GAUGE WIRE.
5. 2"x6"x1/4" BENT PLATE CLIP WITH 1/2"LAG SCREW AND 1/2"BOLT HOLE.
6. BRACING ANGLE.
7. HANGER STRAP.
8. 1/2" MACHINE BOLT, NUT AND WASHER TO SECURE ANGLE CLIP TO TRUSS CORD.
9. STEEL WASHER PLATE, B-LINE #B202 OR EQUAL.
10. 1/2" ROUND PIN CHAIN SHACKLE.
11. 12 GAUGE PREFORMED CHANNEL, B-LINE #B22 OR EQUAL

2 UPPER ATTACHMENTS TO WOOD STRUCTURE DETAIL

N.T.S.



3 SUSPENDED HVAC EQUIPMENT MOUNTING DETAIL

N.T.S.

4 ROOF VENT MOUNTING DETAIL

N.T.S.

5 PUMP MOUNTING DETAIL

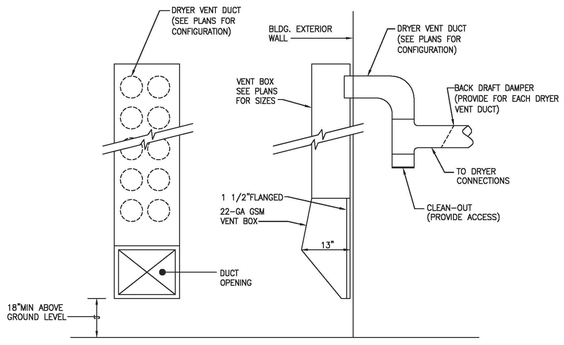
N.T.S.

NOTE:

MECHANICAL CONTRACTOR SHALL PROVIDE A HOUSEKEEPING PAD. PAD SHALL BE REINFORCED USING #4 REBAR LOCATED 14" ON CENTERS EACH WAY

6 CONCRETE HOUSEKEEPING PAD

N.T.S.



7 TYPICAL COMMON DRYER VENT TERMINATION DETAIL

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Student Housing Phase 3 - 'The Summits'

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MECHANICAL DETAILS

Sheet
M3.3

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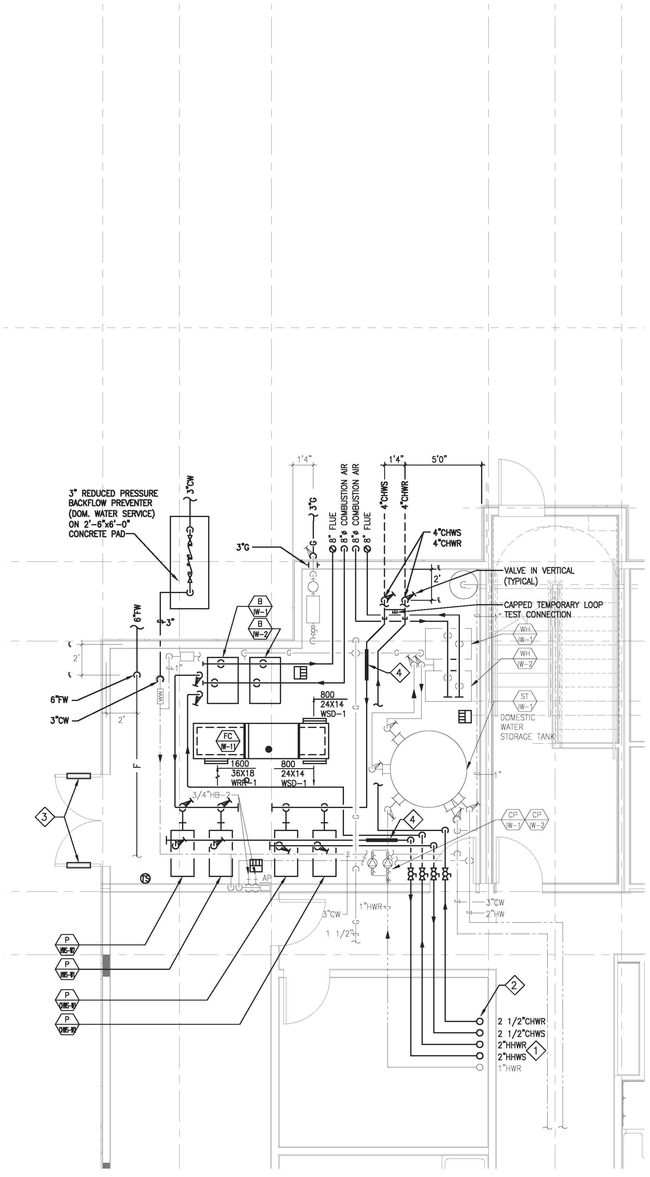
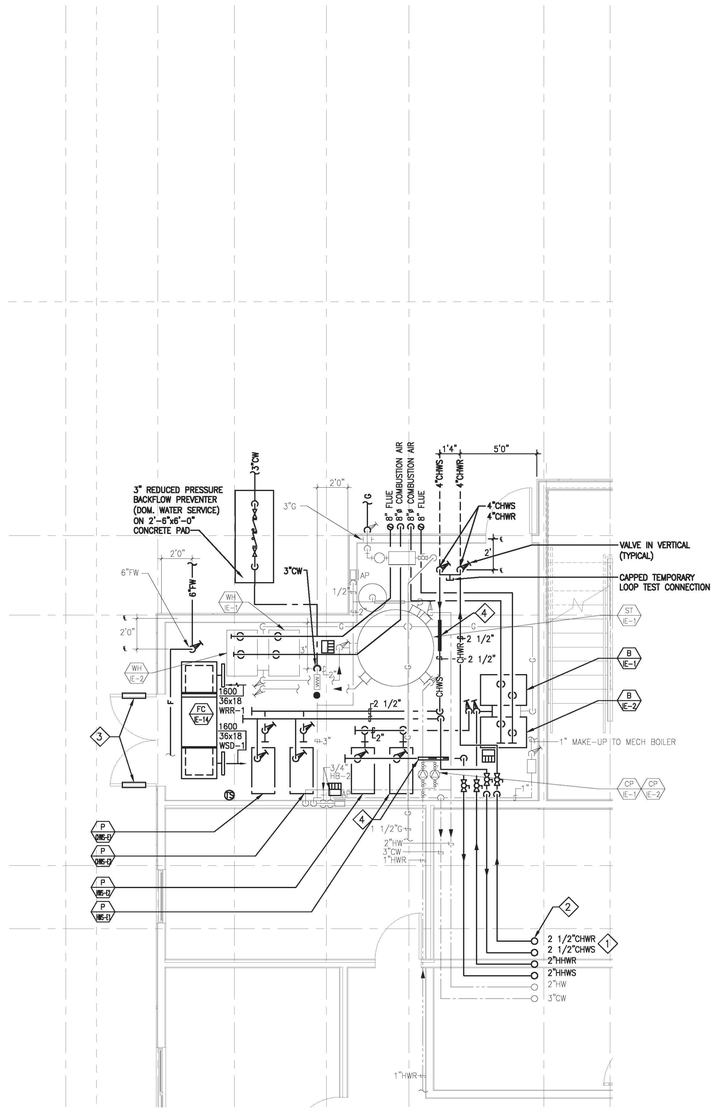
KEY NOTES

1. FOR PIPE SIZES SEE DIAGRAMS ON SHEETS M7.2 & M7.3.
2. PIPING UP TO SECOND FLOOR.
3. DOOR LOUVERS, 2 SQ FT TOTAL INSTALL LOUVER IN DOOR AT TOP AND BOTTOM OF DOOR.
4. VULCAN PULSED WATER TREATMENT SYSTEM, MODEL S25, 110 GPM CAPACITY, 24 VOLT, 2.25 WATT ELECTRICAL POWER REQUIREMENT. PROVIDE COMPLETE SYSTEM ASSEMBLY INCLUDING S25 ELECTRONIC UNIT CONTROLLER, 4 VULCAN FLAT IMPULSE CABLES, 4 ELECTRONIC SWITCHING ADAPTER AND ACCESSORY CABLE CLIPS AS REQUIRED. INSTALL ASSEMBLY PER MANUFACTURER'S RECOMMENDATION. MECHANICAL CONTRACTOR TO PROVIDE 12/24 VOLT STEP DOWN TRANSFORMER AS REQUIRED.



1 MECHANICAL ROOM - WEST BUILDING
1/4" = 1'-0"



2 MECHANICAL ROOM - EAST BUILDING
1/4" = 1'-0"

SCALE: 1/8" = 1'-0"

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ENLARGED MECHANICAL ROOM LAYOUT

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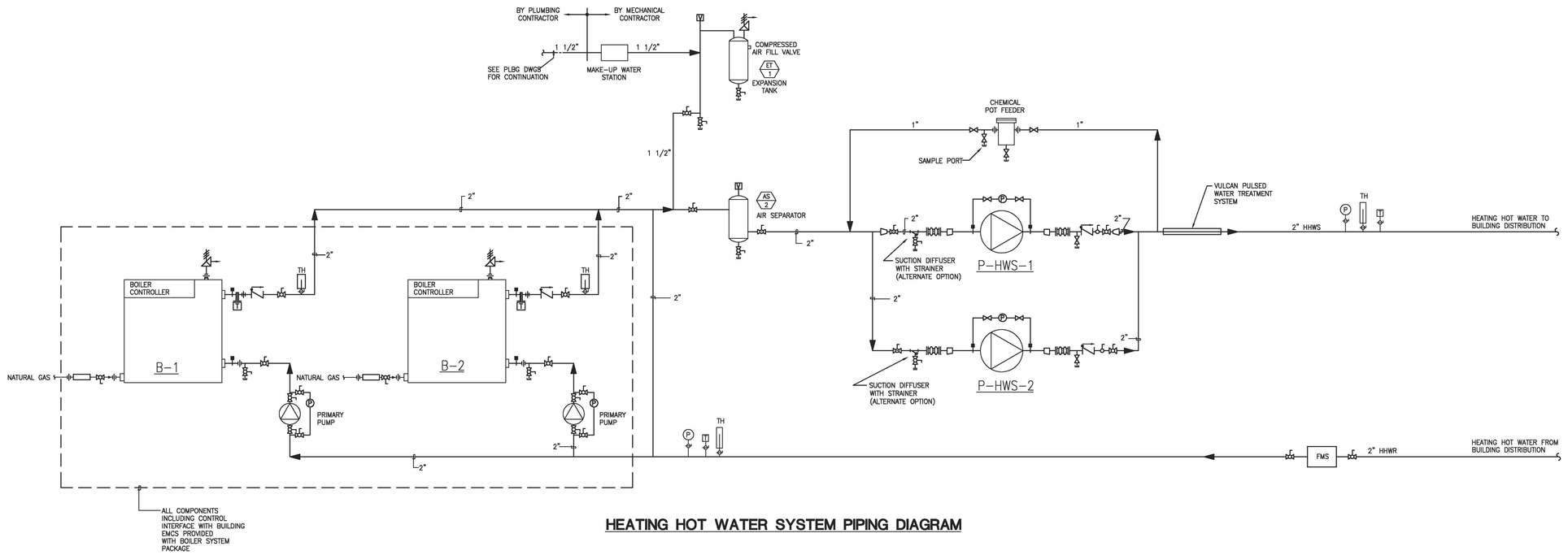

HEATING HOT WATER SYSTEM PIPING DIAGRAM

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HEATING WATER SYSTEM PIPING DIAGRAM

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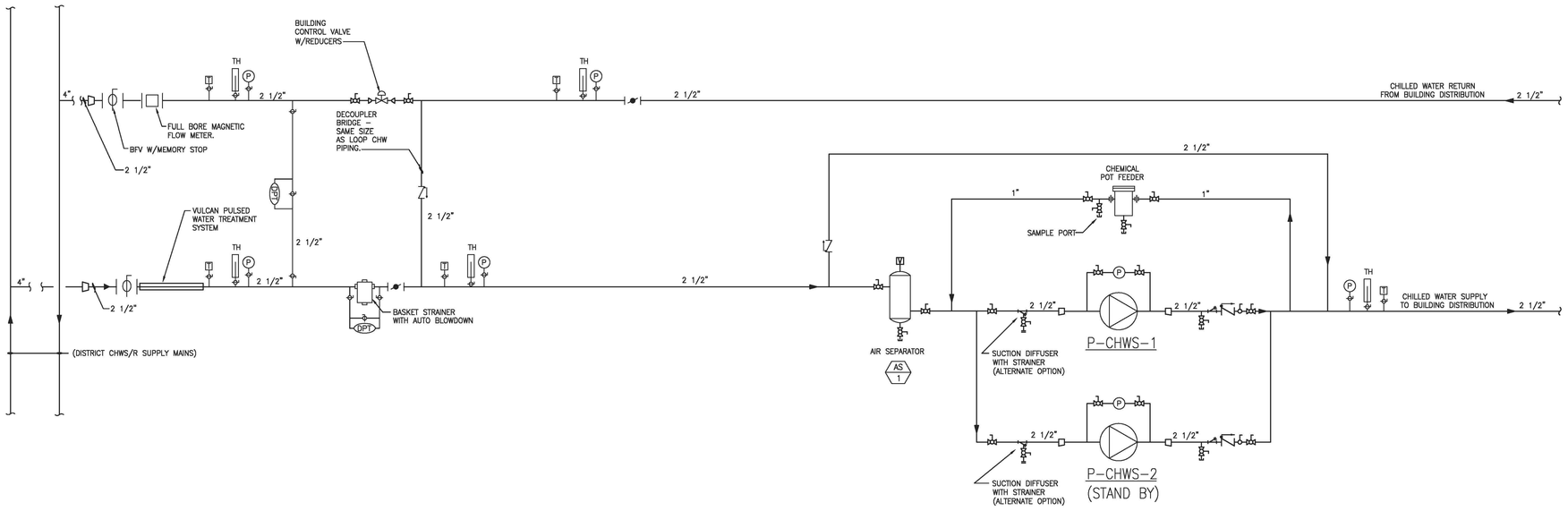

CHILLED WATER SYSTEM PIPING DIAGRAM

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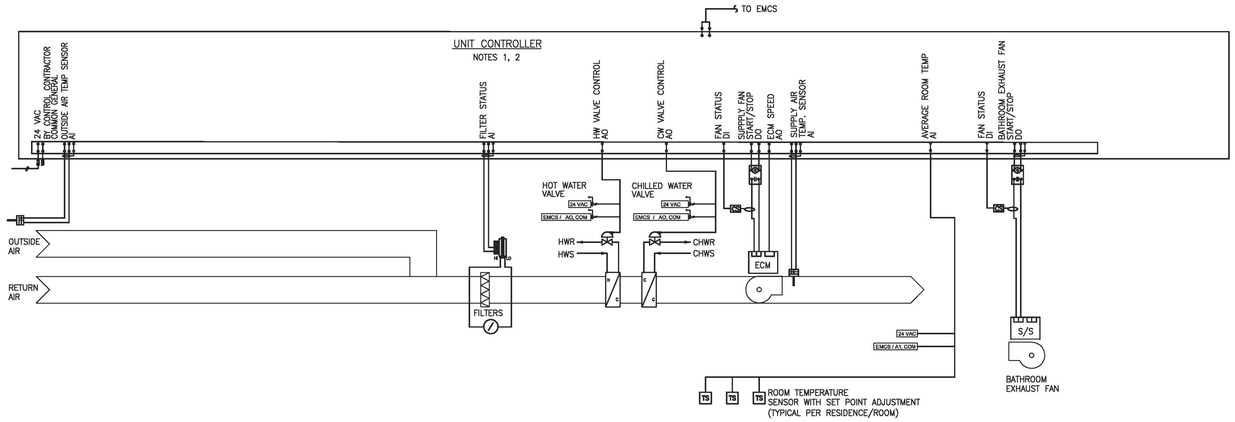
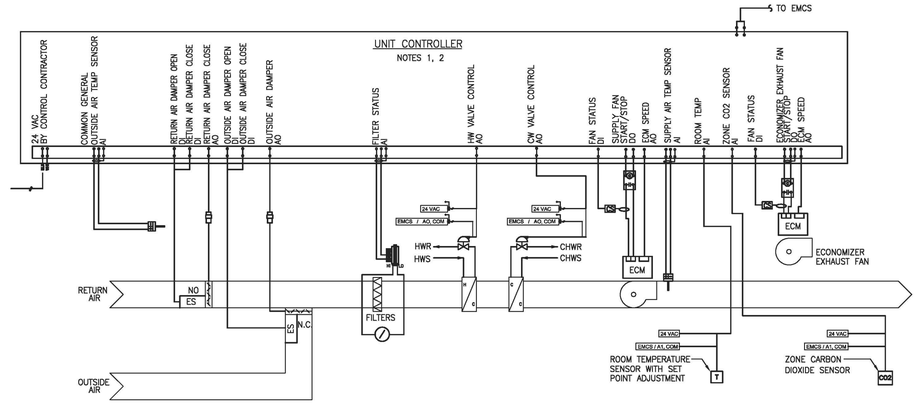


NOTES:

1. UNIT CONTROLLER PROVIDED BY CONTROL CONTRACTOR CONTROLLER SHALL BE CAPABLE OF COMMUNICATION TO BUILDING EMCS SYSTEM THRU DIRECT "BAC NET" COMMUNICATION CONNECTION.
2. ALL CONTROL POINTS INDICATED ON DIAGRAM SHALL BE PROVIDED THRU CONTROL CONTRACTOR SUPPLIED UNIT CONTROLLER.

FAN COIL CONTROL DIAGRAM
TYPICAL FOR CLUSTER RESIDENCE DORMS



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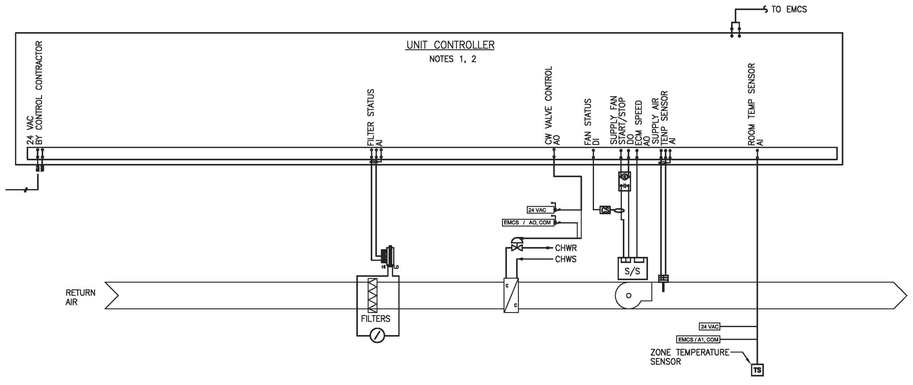
FAN COIL CONTROL DIAGRAM
TYPICAL FOR NON-RESIDENCE DORM SPACES



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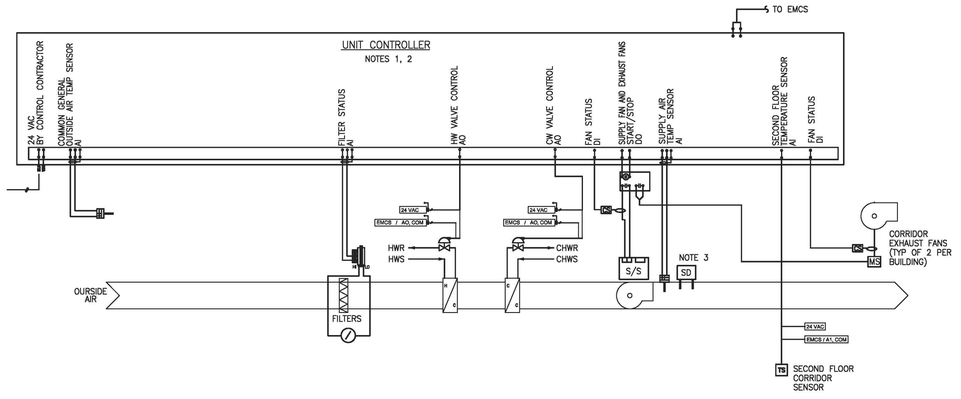
FAN COIL CONTROL DIAGRAM
TYPICAL FOR MECHANICAL, ELECTRICAL AND DATA ROOMS



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COMMON BUILDING CORRIDORS AIR HANDLING UNIT
VENTILATION SYSTEM CONTROL DIAGRAM

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FAN COIL UNIT CONTROLS

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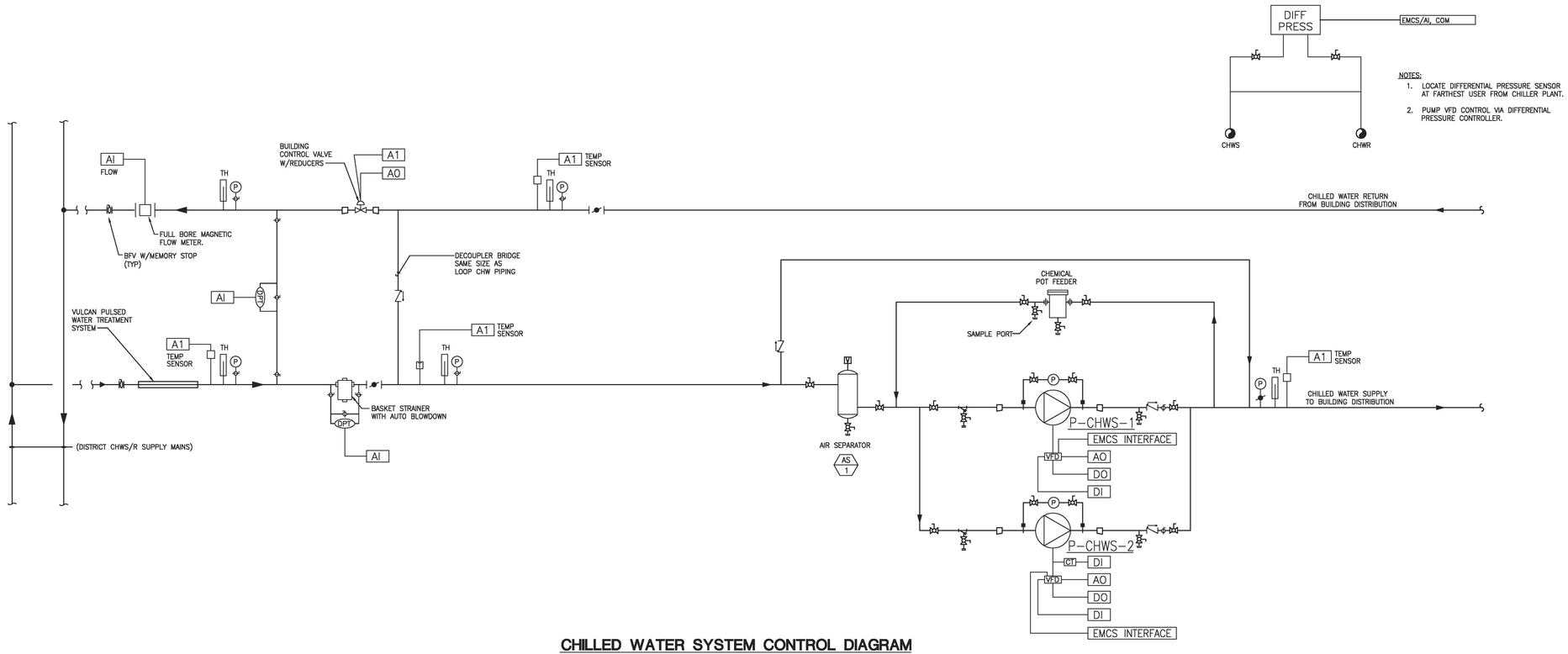
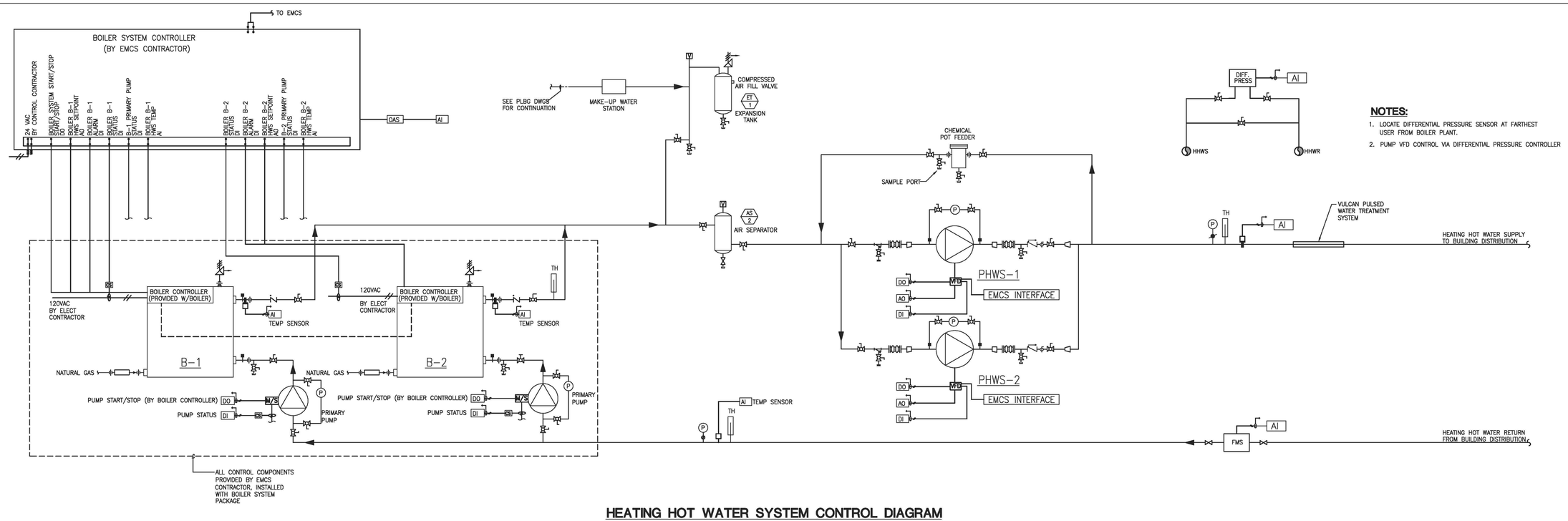


CHILLED WATER SYSTEM CONTROL DIAGRAM



HEATING HOT WATER SYSTEM CONTROL DIAGRAM

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Title
CHILLED WATER AND HEATING HOT WATER SYSTEMS CONTROL DIAGRAMS

Sheet
M6.2

RECORD DOCUMENTS

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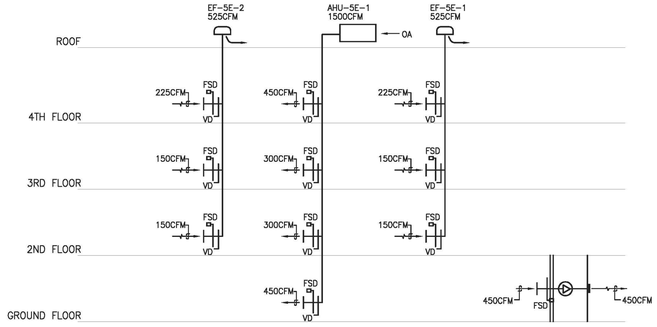
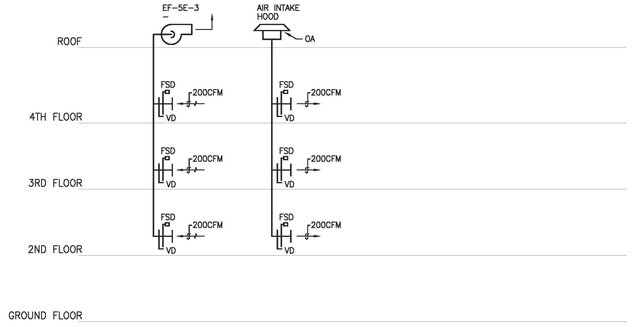
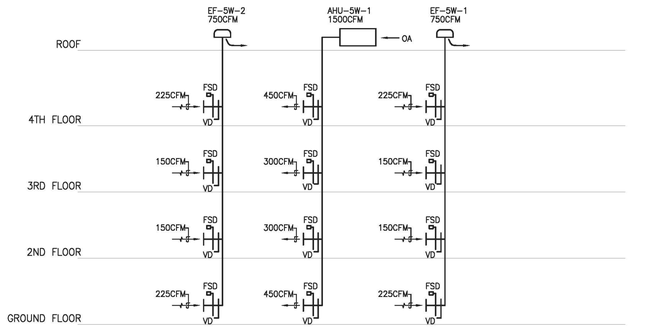


1 COMMON BUILDING CORRIDORS VENTILATION - AIR FLOW DIAGRAMS
EAST BLDG



2 TRASH ROOMS VENTILATION - AIR FLOW DIAGRAMS
EAST BLDG



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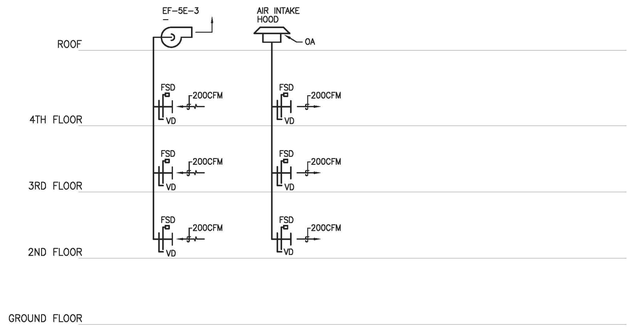

4 TRASH ROOMS VENTILATION - AIR FLOW DIAGRAMS
WEST BLDG

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Student Housing
Phase 3 - 'The Summits'

Merced, CA
UCM Project Number 906262

Client:
UNIVERSITY OF CALIFORNIA
UCMERCED

Revision Schedule

Rev. No.	Issue	Date
	BID RELEASE 1	09/17/08
	BID RELEASE 2	12/15/08
	BID RELEASE 3	02/16/09
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Title
MECHANICAL
VENTILATION AIR FLOW
DIAGRAMS

Sheet
M7.1

RECORD
DOCUMENTS

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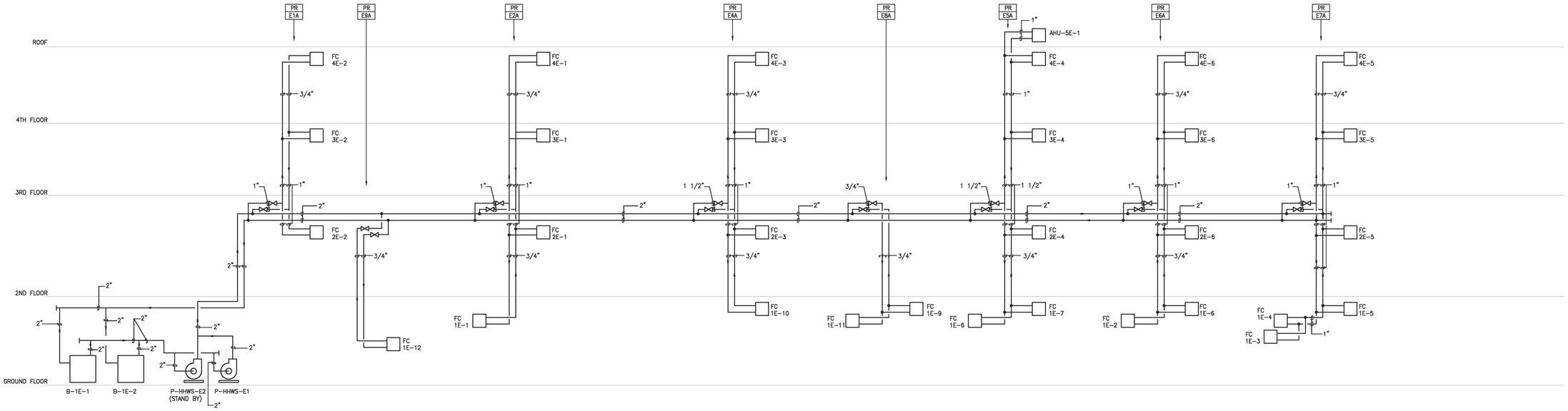
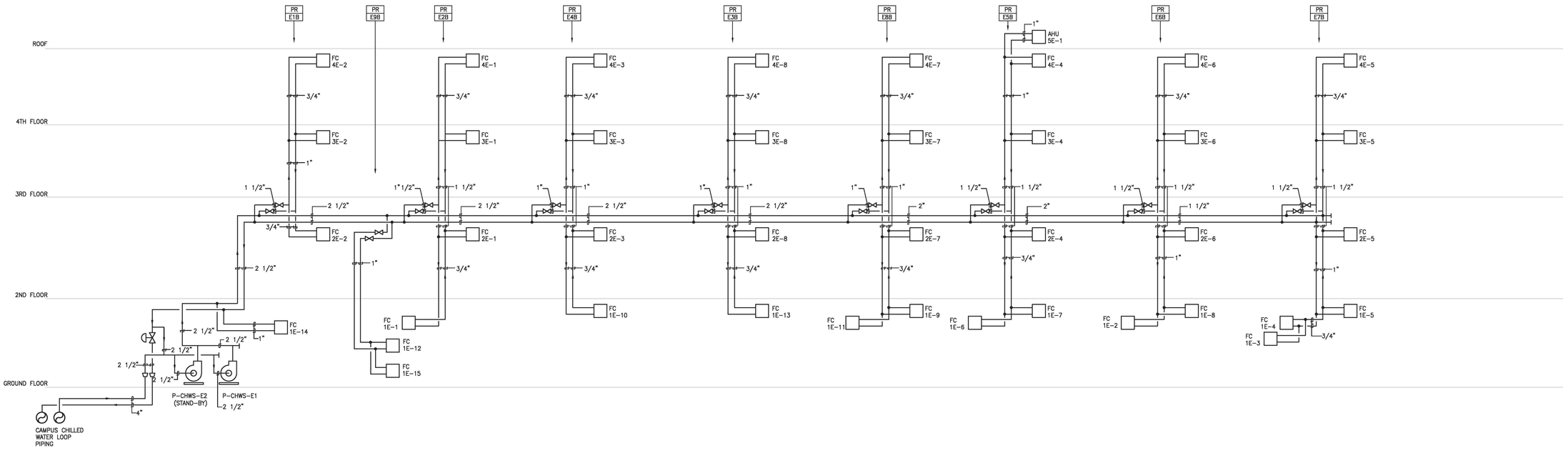


EAST BUILDING HEATING HOT WATER SYSTEM PIPING DIAGRAM



EAST BUILDING CHILLED WATER SYSTEM PIPING DIAGRAM

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Title
HEATING HOT WATER AND CHILLED WATER SYSTEMS DIAGRAM EAST BUILDING

Sheet
M7.2

RECORD DOCUMENTS

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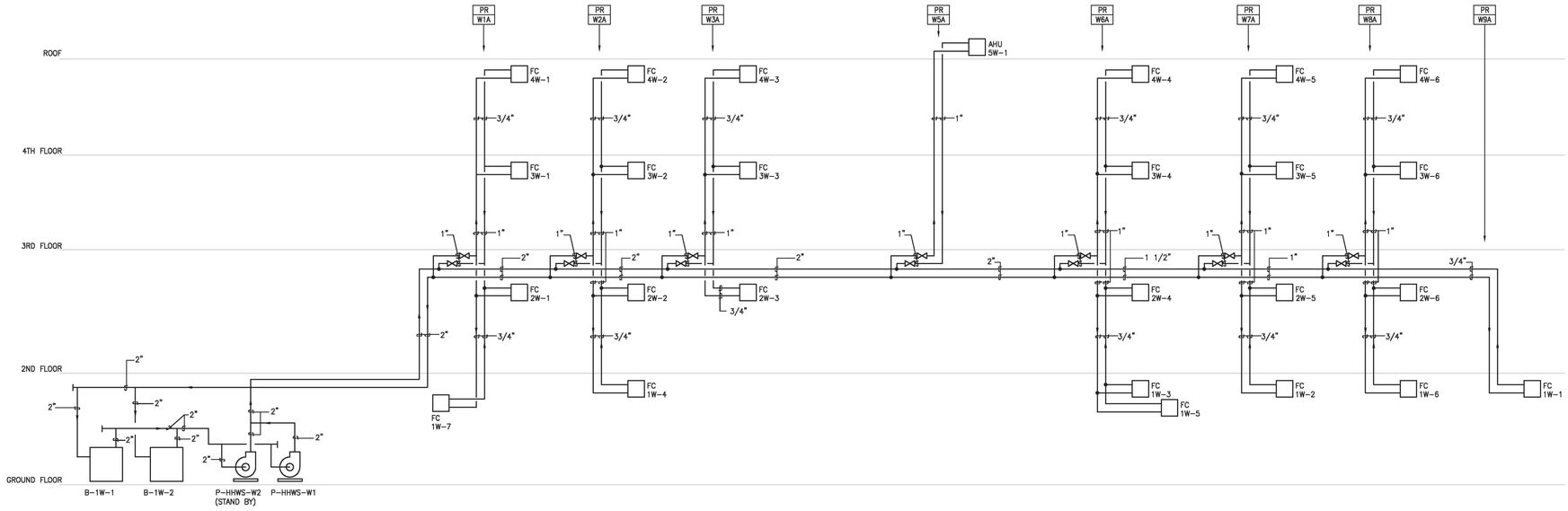

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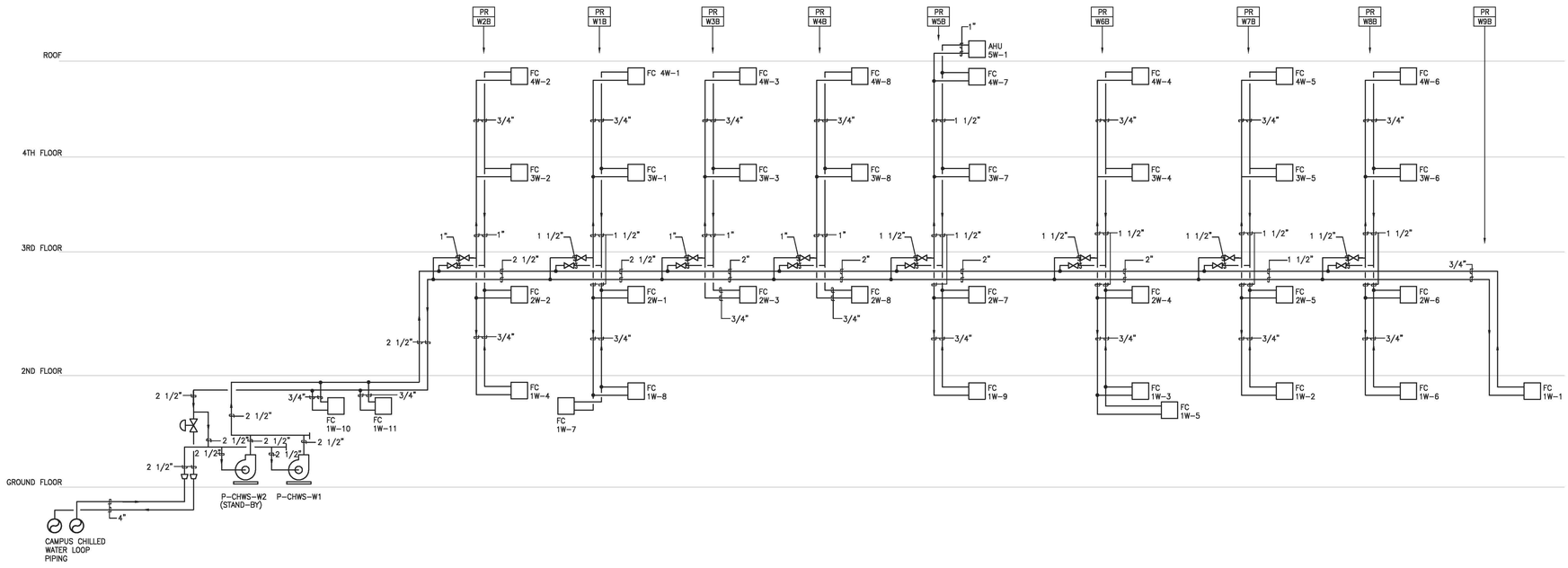

WEST BUILDING CHILLED WATER SYSTEM PIPING DIAGRAM

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Title

HEATING HOT WATER AND CHILLED WATER SYSTEMS DIAGRAM WEST BUILDING

Sheet

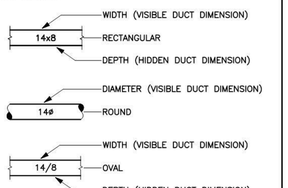
M7.3

RECORD DOCUMENTS

9/16/2011 11:02:40 AM

DUCT & DIFFUSERS

DUCT LABELING



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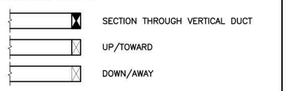

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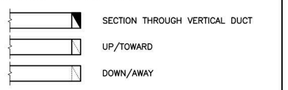
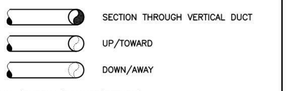
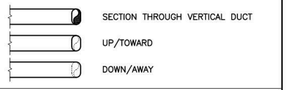
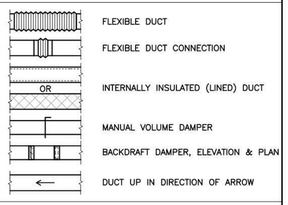


ROUND (SUPPLY/EXHAUST/RETURN)

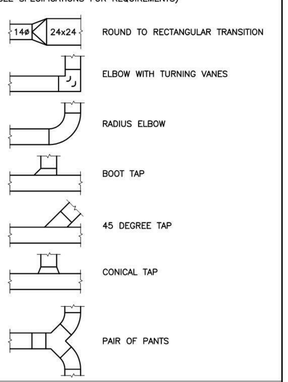


OVAL (SUPPLY/EXHAUST/RETURN)





REPRESENTATIVE DUCT FITTINGS
(SEE SPECIFICATIONS FOR REQUIREMENTS)



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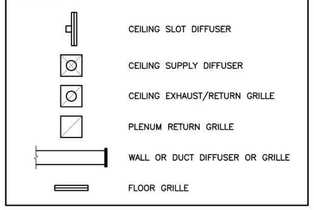

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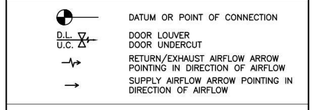

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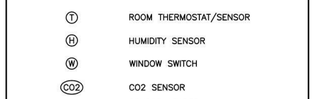

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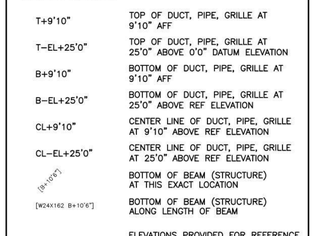
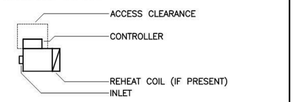


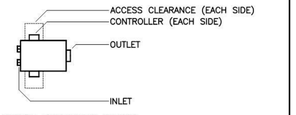
ELEVATIONS PROVIDED FOR REFERENCE ONLY – FINAL ELEVATIONS AND COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR

EQUIPMENT

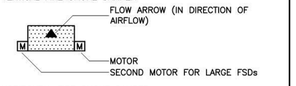
SINGLE DUCT VAV BOX



DUAL DUCT VAV BOX



VERTICAL FIRE SMOKE DAMPER

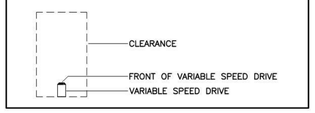


HORIZONTAL FIRE SMOKE DAMPER

CONTROL DAMPER

SUSPENDED NATURAL VENTILATION INDICATOR LIGHT

VARIABLE SPEED DRIVE



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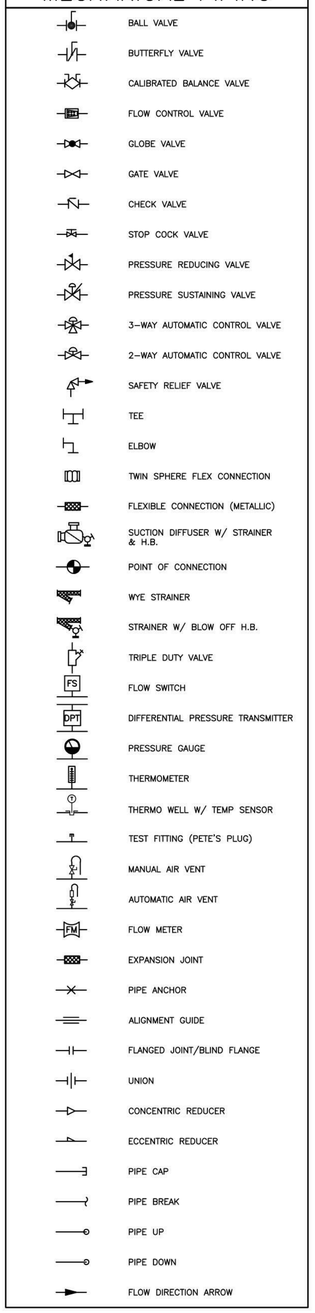
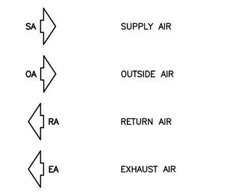


CONTROLS

GENERAL



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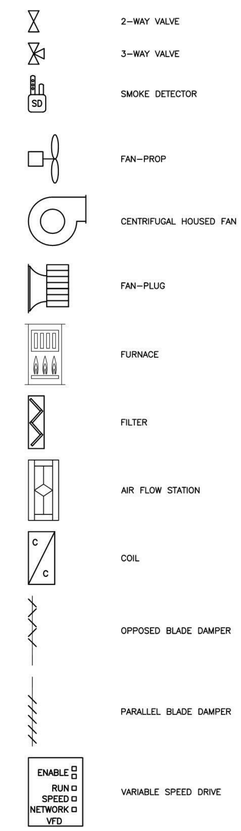

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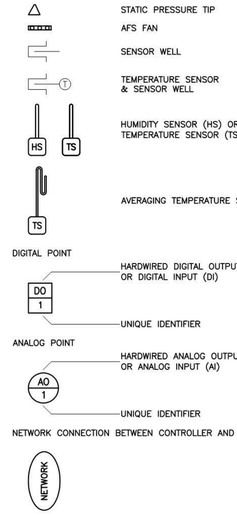
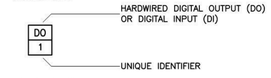
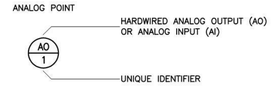


DIGITAL POINT



ANALOG POINT



NETWORK CONNECTION BETWEEN CONTROLLER AND DEVICE

ABBREVIATIONS

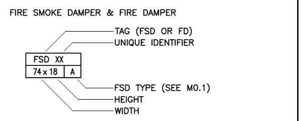
ABBR.	DESCRIPTION
ø	ROUND
ϕ	PHASE
(E)	EXISTING
(N)	NEW
(R)	RELOCATED
ABBR.	ABBREVIATION
ABS	ABSOLUTE
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP IN INCHES WATER COLUMN
B+	BOTTOM ELEVATION
BD	BELT DRIVE
BDD	BACK DRAFT DAMPER
BF	BOTTOM FLAT
BHP	BRAKE HORSEPOWER
C.A.	COMBUSTION AIR
C.A.P.	CEILING ACCESS PANEL
CAP	CAPACITY
CAP STAGE	CAPACITY STAGES
CARTR	CARTRIDGE
CCWR	CLOSED CONDENSER WATER RETURN
CCWS	CLOSED CONDENSER WATER SUPPLY
CENTR	CENTRIFUGAL
CFF	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CL	CENTERLINE
CLG	CEILING
COMP	COMPRESSOR
COP	COEFFICIENT OF PERFORMANCE
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DD	DIRECT DRIVE
DEFL	DEFLECTION
DELTA P	DIFFERENTIAL PRESSURE
DI	DIGITAL INPUT
DL	DRAIN LINE
DO	DIGITAL OUTPUT
E.A.	EXHAUST AIR
EDB	ENTERING DRY BULB TEMPERATURE
EER	ENERGY EFFICIENCY RATING
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
FD	FIRE DAMPER
FF	FOULING FACTOR
FPC	FAN POWERED PARALLEL VAV BOX – COOLING ONLY
FPF	FINS PER FOOT
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPP	FAN POWERED PARALLEL VAV BOX
FPR	FAN POWERED PARALLEL VAV BOX WITH REHEAT
FPS	FAN POWERED SERIES VAV BOX
FSC	FAN POWERED SERIES VAV BOX – COOLING ONLY
FSD	FIRE SMOKE DAMPER
FSR	FAN POWERED SERIES VAV BOX WITH REHEAT
FT	FEET
FT2	SQUARE FEET
GPM	GALLONS PER MINUTE
H	HEIGHT
H.B.	HOSE BIB
HEAD	PRESSURE RISE IN FEET OF WATER COLUMN

ABBREVIATIONS CONT

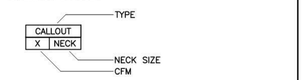
ABBR.	DESCRIPTION
HP	HORSEPOWER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
ID	INSIDE DIMENSION
IN	INCHES
IN WC	INCHES OF WATER COLUMN
IPLV	INTEGRATED PART LOAD VALUE
KBH	1,000 BTU/H
KW	KILOWATTS
LDB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MANUF	MANUFACTURER
MCA	MINIMUM CIRCUIT AMPS
MED	MEDIUM
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MIN	MINIMUM
MIN OA	MINIMUM OUTDOOR AIR CFM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MODULATING CAPACITY CONTROL
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NIC	NOT IN CONTRACT
NPLV	NON–STANDARD PART LOAD VALUE
O.F.	OVER FLOW
OA	OUTSIDE AIR
OADB	OUTDOOR AIR DRY BULB TEMPERATURE
OAWB	OUTDOOR AIR WET BULB TEMPERATURE
OCC	OCCUPIED
OD	OUTSIDE DIMENSION
OP WT	OPERATING WEIGHT
P.C.	PLUMBING CONTRACTOR
P.O.C.	POINT OF CONNECTION
PD	PRESSURE DROP
PRESS	PRESSURE
PROP	PROPELLER
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH, ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAUGE
QTY	QUANTITY
QTY@HxL	QUANTITY AT HEIGHT BY LENGTH
R.A.	RETURN AIR
REFR	REFRIGERANT
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
S.A.	SUPPLY AIR
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SCT	SATURATED CONDENSING TEMPERATURE
SENS	SENSIBLE
SST	SATURATED SUCTION TEMPERATURE
ST	STORAGE TANK
T+	TOP ELEVATION
TF	TOP FLAT
TSP	TOTAL STATIC PRESSURE
TURBS	TURBOLATORS
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VVC	VARIABLE VOLUME COOLING ONLY
VVR	VARIABLE VOLUME WITH REHEAT
W.A.P.	WALL ACCESS PANEL
W	WIDTH
W/	WITH
WPD	WATER PRESSURE DROP IN FEET WATER COLUMN

TAGS

FIRE SMOKE DAMPER & FIRE DAMPER



GRILLE OR DIFFUSER



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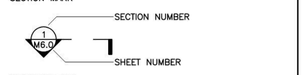
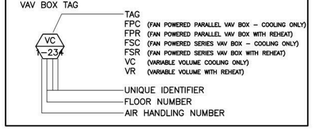


EQUIPMENT TAG

VAV BOX TAG



UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

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Seal and Signature

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations.
Final approval is subject to field inspection
One set of approved plans shall be available on the Project site at all times.
Reviewed by:
Date:
UCM Project #:

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL 01
AC_____FLS_____SS_____
DATE_____

Drawing Stage:
Record Drawings

Printing	Date
BID RELEASE 1	09.23.2011
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10014

Sheet Title
HVAC LEGENDS

Drawing Number:
M0.1

AIR HANDLERS & FAN COILS

SYMBOL	MANUFACTURER & MODEL NO	SERVING	SUPPLY FANS: TYPE	CFM	ESP / TSP	RPM	ISOLATION: TYPE	ISOLATION: DEFL	ELECTRICAL: BHP	ELECTRICAL: HP	ELECTRICAL: V/ϕ	RETURN/RELIEF FANS: TYPE	CFM	ESP / TSP	RPM	ISOLATION: TYPE	ISOLATION: DEFL	ELECTRICAL: BHP	ELECTRICAL: HP	ELECTRICAL: V/ϕ	COOLING COIL: EDB / EWB	LDB / LWB	APD	EWT	LWT	GPM	WPD	ROWS / FPI	CAP (KBH): TOTAL	CAP (KBH): SENS	HEATING COIL: EDB	LDB	APD	EWT	LWT	GPM	WPD	ROWS / FPI	CAP (KBH)	FILTER: PREFILTER TYPE	PREFILTER DEPTH	PREFILTER MERV	FINAL TYPE	FINAL DEPTH	FINAL MERV	MIN OA (CFM): OCC	MIN OA (CFM): ABS	OP WT (LBS)	REMARKS
AHU 1	TEMTROL	WEST WING NORTH FACADE AND CORRIDOR	BELT DRIVE HOUSED FAN	15,600	2.5 4.69	2026	SPNG	2"	15.8	20	460/3	FAN WALL	15,600	0.5 0.75	1042	–	–	0.42 (6)	5.0	460/3	80.4 62.2	52.9 51.3	0.54	42	70.4	34	5.06	8 10	486.8	445.7	54.3 –	90	0.04	155	125	29	0.77	2 6	435.2	PLEAT	2"	7	BAG (B 19)	12"	13	3,510	3,130	12,000	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 1/M4.01, 3-WAY VALVE ON THE HEATING COIL.
AHU 2	TEMTROL	WEST WING SOUTH FACADE	BELT DRIVE HOUSED FAN	17,800	2.5 4.64	1859	SPNG	2"	19.64	25	460/3	FAN WALL	17,800	0.5 0.75	1365	–	–	0.51 (6)	5.0	460/3	75.8 60.1	52.9 50.8	0.57	42	65.8	38	2.99	8 10	451.8	405.8	58.1 –	90	0.02	155	125	21	0.59	1 9	319.0	PLEAT	2"	7	BAG	12"	13	1950	1,950	12,000	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 2/M4.01
AHU 3	TEMTROL	MIDDLE WING NORTH FACADE AND CORRIDOR	DIRECT DRIVE PLENUM FAN	5,300	2.5 4.68	2209	SPNG	2"	6.74	7.5	460/3	FAN WALL	5,300	0.5 0.75	1041	–	–	0.42 (2)	3.0	460/3	81.4 63.1	52.9 51.4	0.52	42	71.4	12	7.71	8 10	174.9	153.5	53.1 –	90	0.04	155	125	11	0.63	2 6	162.8	PLEAT	2"	7	BAG	12"	13	970	970	7,800	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 3/M4.01,
AHU 4	TEMTROL	MIDDLE WING SOUTH FACADE AND LOUNGE	DIRECT DRIVE PLENUM FAN	13,400	2.5 4.75	1239	SPNG	2"	15.46	20	460/3	FAN WALL	13,400	0.75 0.75	1176	–	–	0.36 (6)	5.0	460/3	77 60.7	52.9 51.1	0.58	42	67	28	4.29	8 10	355.7	330.3	60.6 –	90	0.03	155	125	18	1.06	1 10	268.5	PLEAT	2"	7	BAG	12"	13	2,455	2,010	10,200	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 4/M4.01
AHU 5	TEMTROL	EAST WIND WEST FACADE AND STUDY	DIRECT DRIVE PLENUM FAN	10,100	2.5 4.69	1992	SPNG	2"	13.04	15	460/3	FAN WALL	10,100	0.75 0.75	1025	–	–	0.40 (4)	3.0	460/3	79.4 61.4	52.9 50.8	0.55	42	69.4	22	3.09	8 10	297.7	272.4	55.6 –	90	0.03	155	125	16	1.84	1 10	232.7	PLEAT	2"	7	BAG	12"	13	1,780	1,780	10,200	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 5/M4.01
AHU 6	TEMTROL	EAST WING EAST FACADE AND CORRIDOR	DIRECT DRIVE PLENUM FAN	10,400	2.5 4.75	2029	SPNG	2"	13.69	15	460/3	FAN WALL	10,400	0.75 0.75	1038	–	–	0.42 (4)	3.0	460/3	81.2 63.5	52.9 51.4	0.59	42	71.2	22	3.31	8 10	315.3	264.8	53.0 –	90	0.06	155	125	21	0.31	2 7	309.0	PLEAT	2"	7	BAG	12"	13	2,335	1,610	7,800	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 6/M4.01
AHU 7	TEMTROL	MIDDLE AND EAST WING GROUND FLOOR	DIRECT DRIVE PLENUM FAN	8,400	2.0 3.48	1805	SPNG	2"	7.7	15.0	460/3	–	–	– –	–	–	–	–	–	–	80.9 62.3	53.1 50.2	0.62	42	70.9	19	15.83	8 10	278.8	252.8	– –	–	–	–	–	–	–	– –	–	PLEAT	2"	7	BAG	12"	13	1,960	1,525	6,600	PREMIUM EFF. MOTOR, VSD, MOTORIZED RELIEF DAMPER, OA MEASUREMENT STATION, SEE 1/M4.02
FC 1 TO FC 4	ENVIRO-TEC HPE-06	IDF ROOMS (2U1, 2U2, 4U1, 4U2)	–	620	0.2 0.3	1050	–	–	176 WATTS	1/3	208/1	–	–	– –	–	–	–	–	–	–	76.1 59	54.3 50.1	0.25	42	62	1.4	2.96	6 10	13.9	13.7	– –	–	–	–	–	–	–	– –	–	–	–	–	–	–	–	–	129	ECM MOTOR, BOTTOM RETURN
FC 5	ENVIRO-TEC HPE-18	BDF RM 1U1	–	1950	0.1 0.3	1050 (2)	–	–	430 WATTS (2)	1/3 (2)	208/1	–	–	– –	–	–	–	–	–	–	75.4 58.6	54.3 50.0	0.25	42	62	4.0	1.36	6 10	41.7	41.3	– –	–	–	–	–	–	–	– –	–	–	–	PLEAT	1"	7 (A 27)	–	261	ECM MOTOR, BOTTOM RETURN
FC 6	ENVIRO-TEC HPE-12	RLC UNIT	–	665	0.5 1.0	1075 (2)	–	–	466 WATTS	1/6 (2)	208/1	–	–	– –	–	–	–	–	–	–	80.3 63.2	54.3 52.2	011	42	62	2.0	0.48	6 10	16.8	18.9	59.6 –	90	0.02	155	125	1.3	0.37	1 10	19.5	–	–	–	PLEAT	1"	13	325	125	221	ECM MOTOR, BOTTOM RETURN PLENUM

FANS & HOODS

SYMBOL	MANUFACTURER & MODEL NO	SERVING	TYPE	CFM	TSP	RPM	SONES	ELECTRICAL: BHP	ELECTRICAL: HP	ELECTRICAL: V/ϕ	OP WT (LBS)	REMARKS
TEF 1-2 TO TEF 1-4	COOK 100SQN12D	1ST FLOOR BATHROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	350	0.25	1021	3.7	99.9 WATTS	0.167	115/1	106	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER, FLEX DUCT CONNECTOR AT INLET AND OUTLET
TEF 1-5 TO TEF 1-6	PANASONIC FV-15VQL5	RLC BATHROOMS EXHAUST	CEILING LIGHT AND FAN COMBO	128	0.25	988	1.0	30.9 WATTS	–	115/1	14	CONTROLLED BY WALL SWITCH BY DIVISION 26
TEF 1-7	COOK 100SQN15D	PUBLIC RESTROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	375	0.25	1035	3.3	111 WATTS	0.167	115/1	104	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER, FLEX DUCT CONNECTOR AT INLET
TEF 2-1 TO TEF 2-8	COOK 100SQN12D	2ND FLOOR BATHROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	350	0.25	1021	3.7	99.9 WATTS	0.167	115/1	106	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER,FLEX DUCT CONNECTOR AT INLET AND OUTLET
TEF 3-1 TO TEF 3-8	COOK 100SQN12D	3RD FLOOR BATHROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	350	0.25	1021	3.7	99.9 WATTS	0.167	115/1	106	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER,FLEX DUCT CONNECTOR AT INLET AND OUTLET
TEF 4-1 TO TEF 4-8	COOK 100SQN12D	4TH FLOOR BATHROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	350	0.25	1021	3.7	99.9 WATTS	0.167	115/1	106	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER,FLEX DUCT CONNECTOR AT INLET AND OUTLET
TEF 5-1 TO TEF 5-8	COOK 100SQN12D	5TH FLOOR BATHROOMS EXHAUST	CENTRIFUGAL INLINE CABINET FAN	350	0.25	1021	3.7	99.9 WATTS	0.167	115/1	106	ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, BACKDRAFT DAMPER,FLEX DUCT CONNECTOR AT INLET AND OUTLET
TEF 6-1 (CL 1 BR-2)	COOK 120C15D	UNISEX BATHROOM AND CUST RM	DIRECT DRIVE DOWNBLAST	1140	0.5	1352	9.5	0.178 WATTS	0.25	115/1	68	ON EMERGENCY POWER, ECM MOTOR, SPEED CONTROLLER WITH EMCS CONNECTION, ROOF CURB
EF 1-1	FANTECH DBF4XL	RCL DRYER BOOSTER EXHAUST	DRYER BOOSTER FAN	–	–	2800	–	0.73	–	115/1	–	DRYER BOOSTER KIT
EF 1-2	COOK 10S15D	MAIN CUST. RM 1J1 EXHAUST	DIRECT DRIVE SIDEWALL PROP	200	0.125	1051	4.61	0.033	1/20	115/1	71	STANDARD GRAVITY WALL SHUTTER (GSS-14), WALL HOUSING, MOTOR SAFETY GUARD, BACKDRAFT DAMPER
EF 1-3	COOK GN-142	FAX COPY ROOM	CENTRIFUGAL CEILING CABINET FAN	50	0.3	769	0.98	39.5 WATTS	–	115/1	72	BACKDRAFT DAMPER
EF 1-4 TO EF 1-5	COOK 12S15D	TRASH ROOM 102, ROOM 175 EXHAUST	DIRECT DRIVE SIDEWALL PROP	500	0.2	1193	8.72	0.077	1/8	115/1	57	STANDARD GRAVITY WALL SHUTTER (GSS-14), WALL HOUSING, MOTOR SAFETY GUARD
EF 1-6	COOK 36A11DA	AHU-7 RELIEF	DIRECT DRIVE SIDEWALL PROP	8,400	0.65	1140	41	1.66	1.5	460/3	482	VSD, PREMIUM EFFICIENCY MOTOR, BACKDRAFT DAMPER, WALL HOUSING, MOTOR GUARD
EF 6-1	COOK 150C15D	STAIR 1 VENT FAN	DIRECT DRIVE DOWNBLAST	2200	0.2	1095	10.85	0.252	3/4	115/1	91	ECM MOTOR WITH LOCAL CONTROL, MOTORIZED DAMPER, ROOF CURB
EF 6-2 (CL 1 BR-2)	COOK 330ACEB	STAIR 2 VENT FAN	BELT DRIVE DOWNBLAST	6800	0.3	377	7.1	0.71	3/4	115/1	399	PREMIUM EFFICIENCY MOTOR, MOTORIZED DAMPER, ROOF CURB
EF 6-3	EXHAUSTO BESB500	LAUNDRY ROOM DRYER BOOSTER EXHAUST	BOX VENTILATOR	4840	0.75	1720	–	2.2	3	460/3	227	ROOF CURB, VARIABLE SPEED MOTOR, MDVS500 CONTROLL SYSTEM LOCATE INDOOR AT DRYER MAINTENANCE SPACE INCLUDING PRESSURE SENSOR, MEC18 CONTROLLER, AND ABBACS320 VFD DRIVE
EF 6-4	COOK 330-ACEB	STAIR 4 VENT FAN	BELT DRIVE DOWNBLAST	5400	0.2	303	4.5	0.371	1/2	115/1	458	PREMIUM EFFICIENCY MOTOR, MOTORIZED DAMPER, ROOF CURB
TF 1-1	COOK 100SQN12D	ELEC RM 1M1 TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	360	0.25	1031	3.76	101 WATTS	0.167	115/1	35	ECM MOTOR WITH LOACAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET
TF 1-2	COOK 135SQN10D	ELEC RM (1M2,1M3) TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	820	0.25	835	5.5	0.067	0.167	115/1	75	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET
TF 1-3 (CL 1 BR-2)	COOK 180SQN-HP	ELEV. MECH RM. TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	1500	0.2	692	5.9	0.114	1/4	115/1	220	ON EMERGENCY POWER, PREMIUM EFFICIENCY MOTOR, FLEX DUCT CONNECTOR AT INLET
TF 2-3 TO TF 2-4	COOK 70SQN10D	TRASH ROOM 202, 271 TRANSFER	CENTRIFUGAL INLINE CABINET FAN	100	0.15	1170	2.98	44.8 WATTS	0.05	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET FOR RM202, AT INLET FOR ROOM 271
TF 3-1 TO TF 3-2	COOK 90SQN10D	ELEC RM 3M1, 3M2 TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	100	0.2	795	1.7	47.8 WATTS	0.167	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET
TF 3-3 TO TF 3-4	COOK 70SQN10D	TRASH ROOM 302, 371 TRANSFER	CENTRIFUGAL INLINE CABINET FAN	100	0.15	1170	2.98	44.8 WATTS	0.05	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET FOR RM302, AT INLET FOR ROOM 371
TF 4-3 TO TF 4-4	COOK 70SQN10D	TRASH ROOM 402, 471 TRANSFER	CENTRIFUGAL INLINE CABINET FAN	100	0.15	1170	2.98	44.8 WATTS	0.05	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET FOR RM402, AT INLET FOR ROOM 471
TF 5-1	COOK 90SQN10D	ELEC RM 5M1 TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	100	0.2	795	1.7	47.8 WATTS	0.167	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET
TF 5-2	COOK 100SQN10D	ELEC RM 5M2 TRANSFER FAN	CENTRIFUGAL INLINE CABINET FAN	145	0.25	821	2.36	60.8 WATTS	0.167	115/1	25	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET
TF 5-3 TO TF 5-4	COOK 70SQN10D	TRASH ROOM 502, 571 TRANSFER	CENTRIFUGAL INLINE CABINET FAN	100	0.15	1170	2.98	44.8 WATTS	0.05	115/1	23	ECM MOTOR WITH LOCAL CONTROL, FLEX DUCT CONNECTOR AT OUTLET FOR RM502, AT INLET FOR ROOM 571

MISCELLANEOUS EQUIPMENT

SYMBOL	MANUFACTURER & MODEL NO	SERVING	DESCRIPTION	CAPACITY	DESIGN CONDITIONS	ELECTRICAL: PWR	ELECTRICAL: V/ϕ	OP WT (LBS)	REMARKS
ET H1	WESSELS NLA85	HOT WATER	EXPANSION TANK	23 GALLON, MAX. DESIGN PRESSURE 125 PSIG	–	–	–	210	–
AS 1	B&G	HOT WATER	AIR SEPARATOR	–	–	–	–	–	–

FIELD-MOUNTED VARIABLE SPEED DRIVES

EQUIPMENT SERVED	MANUFACTURER & MODEL NO	ELECTRICAL: HP	ELECTRICAL: V/ϕ	REMARKS
HWP 1, HWP 2	ABB ACH 550	3.0	460/3	CONCRETE PAD
CHP 1, CHP 2	ABB ACH 550	5.0	460/3	CONCRETE PAD
EF 1-5	ABB ACH 550	1.5	460/3	–
EF 6-3	ABB ACS320	3.0	460/3	LOCATE INDOOR AT DRYER MAINTENANCE SPACE

FIRE/SMOKE, SMOKE, & FIRE DAMPER TYPES

TAG	TYPE	END SWITCH	MANUF	MODEL	SERVING	MOTOR VOLTAGE	SPRING RETURN POSITION	FIRE RATING	LEAKAGE RATING	SMOKE DETECTOR	RELEASE TEMP	REMARKS
FSD	A	NO	RUSKIN	FSD-36	LOW VELOCITY	120	NORMALLY CLOSED	1.5 HR	CLASS II	BY DIV 26 -SEE ELECT DWGS	165°F	DAMPER JUSTIFIED TO BE 3" FROM END OPPOSITE ACTUATOR
FSD	AT	NO	RUSKIN	FSD-36-C3	CORRIDORS	120	NORMALLY CLOSED	1.0 HR	CLASS II	BY DIV 26 -SEE ELECT DWGS	165°F 250°F	INTERNAL MOUNT ACTUATOR ACCESSIBLE THROUGH BOTTOM OF GRILLE
FSD	B	NO	RUSKIN	FSD-60	MEDIUM VELOCITY	120	NORMALLY CLOSED	1.5 HR	CLASS II	BY DIV 26 -SEE ELECT DWGS	165°F 250°F	DAMPER JUSTIFIED TO BE 3" FROM END OPPOSITE ACTUATOR
FD	A	–	RUSKIN	DIBD STYLE A	LOW VELOCITY	–	–	1.5 HR	–	–	165°F	INTEGRAL SLEEVE
FD	B	–	RUSKIN	DIBD STYLE B	MEDIUM VELOCITY	–	–	1.5 HR	–	–	165°F	INTEGRAL SLEEVE, DIMENSIONS IN FSD SCHEDULE ARE DUCT INSIDE DIMENSIONS AND DON'T INCLUDE DAMPER
SD	A (CL 1 BR-2)	NO	RUSKIN	SD-36	LOW VELOCITY	120	NORMALLY OPEN	1.5 HR	CLASS II	BY DIV 26 -SEE ELECT DWGS	– –	INTEGRAL SLEEVE

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

TYPE MARK	DESCRIPTION	NOMINAL SIZE (IN)	INLET SIZE (IN)	MFG/MODEL
CEP-12	PERFORATED CEILING EXHAUST	12x12	6	PRICE APDDRE (B 1)
CEP-16	PERFORATED CEILING EXHAUST	16x16	8	PRICE PDDRE
CEP-20	PERFORATED CEILING EXHAUST	20x20	12x12	PRICE APDDRE (B 1)
CEP-24	PERFORATED CEILING EXHAUST	24x24	6	PRICE APDDRE (B 1)
CEP-24	PERFORATED CEILING EXHAUST	24x24	8	PRICE PDDRE
CEP-24	PERFORATED CEILING EXHAUST	24x24	10	PRICE PDDRE
CRP-12	PERFORATED CEILING RETURN	12x12	6	PRICE APDDRE (B 1)
CRP-16	PERFORATED CEILING RETURN	16x16	8	PRICE PDDRE
CRP-16	PERFORATED CEILING RETURN	16x16	10x10	PRICE PDDRE
CRP-20	PERFORATED CEILING RETURN	20x20	12x12	PRICE APDDRE (B 1)
CRP-24	PERFORATED CEILING RETURN	24x24	12x12	PRICE PDDRE
CRP-24	PERFORATED CEILING RETURN	24X24	18x18	PRICE PDDRE
CRP-24	PERFORATED CEILING RETURN	24X24	20x20	PRICE PDDRE
(B 1) CRP-24	PERFORATED CEILING RETURN	24X24		PRICE PFRFE
CRGR-20	LOUVER FACE RETURN GRILLE	20X20	18x18	PRICE 530
CSP-12	PERFORATED CEILING SUPPLY (B 1)	12x12	6	PRICE PDSPE (B 1)
CSP-24	PERFORATED CEILING SUPPLY	24x24	8	PRICE PDSPE
CSP-24	PERFORATED CEILING SUPPLY	24x24	10	PRICE PDSPE

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

TYPE MARK	DESCRIPTION	NOMINAL SIZE (IN)	INLET SIZE (IN)	MFG/MODEL
CSP-24	PERFORATED CEILING SUPPLY (B 1)	24x24	12	PRICE PDSPE (B 1)
CSP-24	PERFORATED CEILING SUPPLY	24x24	14	PRICE PDSPE
CSP-24	PERFORATED CEILING SUPPLY	24x24	16	PRICE PDSPE
(B 1) CSGR-16	LOUVER FACE SUPPLY GRILLE	24x24	14X14	PRICE 520
WRG	LOUVER FACE RETURN GRILLE	–	4X8	PRICE 530
WRG	LOUVER FACE RETURN GRILLE	–	12X48	PRICE 530
WRG	LOUVER FACE RETURN GRILLE	–	22X10	PRICE 530
WRG	LOUVER FACE RETURN GRILLE	–	24X24	PRICE 530
WSG	LOUVER FACE SUPPLY GRILLE	–	8X6	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	10X6	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	10X10	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	12X6	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	12X8	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	14X12	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	16X6	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	28X20	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	36X24	PRICE 520
WSG	LOUVER FACE SUPPLY GRILLE	–	38X6	PRICE 520

SEE SPECIFICATIONS FOR OPTIONS

SOUND TRAPS

SYMBOL	MANUFACTURER AND MODEL NO.	CFM	WxHxL (IN.)	PRESS. DROP: TRAP	PRESS. DROP: INST'D	INSERTION LOSS (dB): 63	125	250	500	1000	2000	4000	WEIGHT LBS	REMARKS
ST 1	PRICE RL72/7F	1,600	26x20x72	0.13	0.13	11	17	31	40	44	36	22	128	--
ST 2	PRICE RM120/9G	1,600	30x22x120	0.09	0.09	21	24	46	55	55	47	24	229	--

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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Seal and Signature

REGISTERED PROFESSIONAL ENGINEER ALLAN W. BALT No. M31302 Exp. 06/30/12 MECHANICAL STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations.
Final approval is subject to field inspection
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Reviewed by:
Date: _____
UCM Project #:

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EHDD Job Number
10014

Sheet Title
HVAC SCHEDULES

Drawing Number:
M0.2

VAV BOX SCHEDULE

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	HEATING COIL								REMARKS
			COOL	MIN	HEAT	AREA	OCC				ROW	CFM	EAT	LAT	GPM	EWT	LWT	MBH	CNTRL VLV TYPE
VR-7-140	KRUEGER LMHS	16 (CL 1 BR-2)	2245	230	1465	185	360	0.5	<22	Y	2	2245	57.0	81.0	4.0	155.0	125.0	58.3	2-WAY	
VR-7-150	KRUEGER LMHS	6	280	35	130	30	30	0.5	<22	–	2	130	55.0	89.3	0.3	155.0	125.2	4.8	2-WAY	
VR-7-155	KRUEGER LMHS	14	1450	175	435	135	105	0.5	<22	–	2	435	55.0	85.0	1.0	155.0	125.1	14.1	2-WAY	
VR-7-160	KRUEGER LMHS	14 (CL 1 BR-2)	1370	375	855	225	375	0.5	<22	–	2	855	55.0	89.9	2.2	155.0	125.1	32.2	2-WAY	
VR-7-170	KRUEGER LMHS	10	925	90	280	60	0	0.5	<22	–	2	280	55.0	85.0	0.6	155.0	125.1	9.1	2-WAY	
VR-7-172	KRUEGER LMHS	8	465	240	240	55	240	0.5	<22	–	2	240	55.0	83.3	0.5	155.0	125.0	7.3	2-WAY	
VR-7-185	KRUEGER LMHS	14	1620	285	485	285	690	0.5	<22	Y	2	1620	57.0	70.0	1.6	155.0	125.1	22.7	2-WAY	
VR-7-195	KRUEGER LMHS	8	585	115	440	115	45	0.5	<22	–	2 (CL 1 BR-2)	440	55.0	89.9	1.1	155.0	125.0	16.6	2-WAY	
VC-7-1U1	KRUEGER LMHS	16	1950	230	–	35	0	<0.5	<25	–	–	–	–	–	–	–	–	–	–	
VR-7-D	KRUEGER LMHS	8	570	60	440	55	30	0.5	<22	–	2 (CL 1 BR-2)	440	55.0	89.9	1.1	155.0	125.1	16.6	2-WAY	
VR-7-G	KRUEGER LMHS	(CL 10 2 BR-2) (CL 1 BR-2)	795	120	485	75	120	0.5	<22	–	2	485	55.0	89.8	1.3	155.0	125.2	18.2	2-WAY	

PUMPS

SYMBOL	MANUFACTURER & MODEL NO	SERVING	TYPE	GPM	HEAD	RPM	INLET PSIG	ELECTRICAL			OP WT (LBS)	REMARKS
								BHP	HP	V/ϕ		
HWP 1 / HWP 2	B&G 1531 1-1/4BC	HEATING WATER	CLOSE CPLD, END SUCT	66	76.5	1750	–	2.28	3	460/3	140	VSD, PREMIUM EFFICIENCITY MOTOR
CHP 1 / CHP 2	B&G 1531 1-1/2BC	CHILLED WATER	CLOSE CPLD, END SUCT	93 (B 1)	41	1750	(B 1) –	1.56	2	460/3	155	VSD, PREMIUM EFFICIENCY MOTOR

BOILERS

SYMBOL	MANUFACTURER & MODEL NO	CAP (KBH)		EWT	LWT	GPM	ELECTRICAL		OP WT (LBS)	REMARKS
		IN	OUT				HP	V/ϕ		
B 1 / B 2	AERCO BMK 1.5	1,500	1,290	125	155	66	13 AMP FLA	115/1	1757	–

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (1 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-1-113	KRUEGER LMHS	6	255	(CL 1 BR-2) 40	–	40	(CL 1 BR-2) 30	<0.5	<25	–	
VC-1-115	KRUEGER LMHS	6	185	35	–	35	30	<0.5	<25	–	
VC-1-121	KRUEGER LMHS	6	180	35	–	35	30	<0.5	<25	–	
VC-1-123	KRUEGER LMHS	6	255	40	–	40	30	<0.5	<25	–	
VC-1-125	KRUEGER LMHS	6	185	35	–	35	30	<0.5	<25	–	
VC-1-130	KRUEGER LMHS	6	135	35	–	25	15	<0.5	<25	–	
VC-1-131	KRUEGER LMHS	6	185	35	–	35	30	<0.5	<25	–	
VC-1-133	KRUEGER LMHS	6	250	40	–	40	30	<0.5	<25	–	
VC-1-135	KRUEGER LMHS	6	180	35	–	35	30	<0.5	<25	–	
VC-1-1C1	KRUEGER LMHS	8	600	150	–	150	75	<0.5	<25	–	
VC-1-201	KRUEGER LMHS	10	695	90	–	25	135	<0.5	<25	Y	
VC-1-203	KRUEGER LMHS	6	225	40	–	40	30	<0.5	<25	–	
VC-1-205	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-207	KRUEGER LMHS	6	115	35	–	25	15	<0.5	<25	–	
VC-1-211	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-213	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-215	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-221	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-223	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-225	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-230	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-1-231	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-233	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-235	KRUEGER LMHS	6	170	35	–	35	30	<0.5	<25	–	
VC-1-2C1	KRUEGER LMHS	8	465	185	–	185	90	<0.5	<25	–	
VC-1-301	KRUEGER LMHS	10	695	90	–	25	135	<0.5	<25	Y	
VC-1-303	KRUEGER LMHS	6	190	40	–	40	30	<0.5	<25	–	
VC-1-305	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-307	KRUEGER LMHS	6	115	35	–	25	15	<0.5	<25	–	
VC-1-311	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-313	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-315	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-321	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-323	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-325	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-330	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-1-331	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-333	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-335	KRUEGER LMHS	6	170	35	–	35	30	<0.5	<25	–	

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (2 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-1-3C1	KRUEGER LMHS	8	465 (CL 1 BR-2)	190	–	190	90 (CL 1 BR-2)	<0.5	<25	–	
VC-1-401	KRUEGER LMHS	10	695	90	–	25	135	<0.5	<25	Y	
VC-1-403	KRUEGER LMHS	6	190	40	–	40	30	<0.5	<25	–	
VC-1-405	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-407	KRUEGER LMHS	6	115	35	–	25	15	<0.5	<25	–	
VC-1-411	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-413	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-415	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-421	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-423	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-425	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-430	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-1-431	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-1-433	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-1-435	KRUEGER LMHS	6	170	35	–	35	30	<0.5	<25	–	
VC-1-4C1	KRUEGER LMHS	8	465	190	–	190	90	<0.5	<25	–	
VC-1-501	KRUEGER LMHS	10	705	90	–	25	135	<0.5	<25	Y	
VC-1-503	KRUEGER LMHS	6	245	40	–	40	30	<0.5	<25	–	
VC-1-505	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-507	KRUEGER LMHS	6	145	35	–	25	15	<0.5	<25	–	
VC-1-511	KRUEGER LMHS	6	210	35	–	35	30	<0.5	<25	–	
VC-1-513	KRUEGER LMHS	6	285	40	–	40	30	<0.5	<25	–	
VC-1-515	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-521	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-523	KRUEGER LMHS	6	285	40	–	40	30	<0.5	<25	–	
VC-1-525	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-530	KRUEGER LMHS	6	140	35	–	20	15	<0.5	<25	–	
VC-1-531	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-533	KRUEGER LMHS	6	285	40	–	40	30	<0.5	<25	–	
VC-1-535	KRUEGER LMHS	6	205	35	–	35	30	<0.5	<25	–	
VC-1-5C1	KRUEGER LMHS	10	700	190	–	190	90	<0.5	<25	–	
VC-2-112	KRUEGER LMHS	6	350	35	–	35	30	<0.5	<25	–	
VC-2-114	KRUEGER LMHS	8	455	60	–	40	30	<0.5	<25	–	
VC-2-116	KRUEGER LMHS	6	345	35	–	35	30	<0.5	<25	–	
VC-2-122	KRUEGER LMHS	6	350	35	–	35	30	<0.5	<25	–	
VC-2-124	KRUEGER LMHS	8	455	60	–	40	30	<0.5	<25	–	
VC-2-126	KRUEGER LMHS	6	350	35	–	35	30	<0.5	<25	–	
VC-2-132	KRUEGER LMHS	6	350	35	–	35	30	<0.5	<25	–	
VC-2-134	KRUEGER LMHS	8	460	60	–	40	30	<0.5	<25	–	

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HOUSING 4 THE SUMMITS

Project Number:
906270

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REGISTERED PROFESSIONAL ENGINEER ALLAN W. BALT No. M31302 Exp. 06/30/12 MECHANICAL STATE OF CALIFORNIA

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MERCED
FIRE MARSHAL
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations.
Final approval is subject to field inspection
One set of approved plans shall be available on the Project site at all times.

Reviewed by:
Date:
UCM Project #:

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT

APPL 01

AC_____FLS_____SS_____

DATE_____

Drawing Stage:
Record Drawings

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EHDD Job Number
10014

Sheet Title
HVAC SCHEDULES

Drawing Number:
M0.3

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (3 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-2-136	KRUEGER LMHS	6	415	35	–	35	30	<0.5	<25	–	
VC-2-204	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-2-206	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-212	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-214	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-2-216	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-222	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-224	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-226	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-232	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-234	KRUEGER LMHS	6	375	40	–	40	30	<0.5	<25	–	
VC-2-236	KRUEGER LMHS	6	410	35	–	35	30	<0.5	<25	–	
VC-2-304	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-306	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-312	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-314	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-316	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-322	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-324	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-326	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-332	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-334	KRUEGER LMHS	6	375	40	–	40	30	<0.5	<25	–	
VC-2-336	KRUEGER LMHS	6	410	35	–	35	30	<0.5	<25	–	
VC-2-404	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-406	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-412	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-414	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-416	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-422	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-424	KRUEGER LMHS	6	365	40	–	40	30	<0.5	<25	–	
VC-2-426	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-432	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-434	KRUEGER LMHS	6	375	40	–	40	30	<0.5	<25	–	
VC-2-436	KRUEGER LMHS	6	410	35	–	35	30	<0.5	<25	–	
VC-2-504	KRUEGER LMHS	6	385	40	–	40	30	<0.5	<25	–	
VC-2-506	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-2-512	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-2-514	KRUEGER LMHS	6	385	40	–	40	30	<0.5	<25	–	
VC-2-516	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-2-522	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-2-524	KRUEGER LMHS	6	385	40	–	40	30	<0.5	<25	–	
VC-2-526	KRUEGER LMHS	6	310	35	–	35	30	<0.5	<25	–	
VC-2-532	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-2-534	KRUEGER LMHS	6	385	40	–	40	30	<0.5	<25	–	
VC-2-536	KRUEGER LMHS	6	325	35	–	35	30	<0.5	<25	–	
VC-3-251	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-253	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-3-255	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-257	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-3-261	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-263	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-3-265	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-351	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-353	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (4 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-3-355	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-357	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-3-361	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-363	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-3-365	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-451	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-453	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-3-455	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-461	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-457	KRUEGER LMHS	6	115	35	–	20	15	<0.5	<25	–	
VC-3-463	KRUEGER LMHS	6	235	40	–	40	30	<0.5	<25	–	
VC-3-465	KRUEGER LMHS	6	165	35	–	35	30	<0.5	<25	–	
VC-3-551	KRUEGER LMHS	6	210	35	–	35	30	<0.5	<25	–	
VC-3-553	KRUEGER LMHS	6	285	40	–	40	30	<0.5	<25	–	
VC-3-555	KRUEGER LMHS	6	210	35	–	35	30	<0.5	<25	–	
VC-3-557	KRUEGER LMHS	6	145	35	–	20	15	<0.5	<25	–	
VC-3-561	KRUEGER LMHS	6	210	35	–	35	30	<0.5	<25	–	
VC-3-563	KRUEGER LMHS	6	285	40	–	40	30	<0.5	<25	–	
VC-3-565	KRUEGER LMHS	6	210	35	–	35	30	<0.5	<25	–	
VC-4-241	KRUEGER LMHS	10	1060	90	–	70	210	<0.5	<25	Y	
VC-4-245	KRUEGER LMHS	10	1115	180	–	180	90	<0.5	<25	–	
VC-4-252	KRUEGER LMHS	6	295	35	–	35	30	<0.5	<25	–	
VC-4-254	KRUEGER LMHS	6	380	40	–	40	30	<0.5	<25	–	
VC-4-256	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-260	KRUEGER LMHS	6	140	35	–	25	15	<0.5	<25	–	
VC-4-262	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-264	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-4-266	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-4-341	KRUEGER LMHS	10	1060	90	–	70	210	<0.5	<25	Y	
VC-4-345	KRUEGER LMHS	10	1110	180	–	180	90	<0.5	<25	–	
VC-4-352	KRUEGER LMHS	6	295	35	–	35	30	<0.5	<25	–	
VC-4-354	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-4-356	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-360	KRUEGER LMHS	6	140	35	–	25	15	<0.5	<25	–	
VC-4-362	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-364	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-4-366	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-4-441	KRUEGER LMHS	10	1060	90	–	70	210	<0.5	<25	Y	
VC-4-445	KRUEGER LMHS	10	1115	180	–	180	90	<0.5	<25	–	
VC-4-452	KRUEGER LMHS	6	295	35	–	35	30	<0.5	<25	–	
VC-4-454	KRUEGER LMHS	6	380	40	–	40	30	<0.5	<25	–	
VC-4-456	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-460	KRUEGER LMHS	6	140	35	–	25	15	<0.5	<25	–	
VC-4-462	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-464	KRUEGER LMHS	6	370	40	–	40	30	<0.5	<25	–	
VC-4-466	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-4-541	KRUEGER LMHS	10	1050	90	–	70	210	<0.5	<25	Y	
VC-4-545	KRUEGER LMHS	10	1290	180	–	180	90	<0.5	<25	–	
VC-4-552	KRUEGER LMHS	6	300	35	–	35	30	<0.5	<25	–	
VC-4-554	KRUEGER LMHS	6	400	40	–	40	30	<0.5	<25	–	
VC-4-556	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-4-560	KRUEGER LMHS	6	170	35	–	25	15	<0.5	<25	–	
VC-4-562	KRUEGER LMHS	6	305	35	–	35	30	<0.5	<25	–	
VC-4-564	KRUEGER LMHS	6	385	40	–	40	30	<0.5	<25	–	

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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REGISTERED PROFESSIONAL ENGINEER
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MERCED
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Reviewed by:
Date: _____
UCM Project #:

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT

APPL 01

AC_____FLS_____SS_____

DATE_____

Drawing Stage:
Record Drawings

Printing	Date
BID RELEASE 1	08.16.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

Revisions	Date
1 CLARIFICATION 1	11.17.2011
19 BULLETIN 19	07.12.2012

Drawn By: **AD / AZ**
Scale: **NO SCALE**
EHDD Job Number
10014

Sheet Title
HVAC SCHEDULES

Drawing Number:
M0.4

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (5 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-4-566	KRUEGER LMHS	6	310	35 CL 1 BR-2	–	35	30 CL 1 BR-2	<0.5	<25	–	
VC-5-281	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-283	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-285	KRUEGER LMHS	6	325	35	–	35	30	<0.5	<25	–	
VC-5-291	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-5-293	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-295	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-297	KRUEGER LMHS	6	390	35	–	35	30	<0.5	<25	–	
VC-5-2C3	KRUEGER LMHS	6	370	150	–	150	75	<0.5	<25	–	
VC-5-2T1	KRUEGER LMHS	6	110	35	–	35	30	<0.5	<25	–	
VC-5-381	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-383	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-385	KRUEGER LMHS	6	325	35	–	35	30	<0.5	<25	–	
VC-5-391	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-5-393	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-395	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-397	KRUEGER LMHS	6	390	35	–	35	30	<0.5	<25	–	
VC-5-3C3	KRUEGER LMHS	6	370	150	–	150	75	<0.5	<25	–	
VC-5-3T1	KRUEGER LMHS	6	110	35	–	35	30	<0.5	<25	–	
VC-5-481	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-483	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-485	KRUEGER LMHS	6	325	35	–	35	30	<0.5	<25	–	
VC-5-491	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-5-493	KRUEGER LMHS	6	240	35	–	35	30	<0.5	<25	–	
VC-5-495	KRUEGER LMHS	6	360	40	–	40	30	<0.5	<25	–	
VC-5-497	KRUEGER LMHS	6	390	35	–	35	30	<0.5	<25	–	
VC-5-4C3	KRUEGER LMHS	6	370	150	–	150	75	<0.5	<25	–	
VC-5-4T1	KRUEGER LMHS	6	110	35	–	35	30	<0.5	<25	–	
VC-5-581	KRUEGER LMHS	6	285	35	–	35	30	<0.5	<25	–	
VC-5-583	KRUEGER LMHS	6	410	40	–	40	30	<0.5	<25	–	
VC-5-585	KRUEGER LMHS	6	375	35	–	35	30	<0.5	<25	–	
VC-5-591	KRUEGER LMHS	6	275	40	–	40	30	<0.5	<25	–	
VC-5-593	KRUEGER LMHS	6	285	35	–	35	30	<0.5	<25	–	
VC-5-595	KRUEGER LMHS	6	410	40	–	40	30	<0.5	<25	–	
VC-5-597	KRUEGER LMHS	6	425	35	–	35	30	<0.5	<25	–	
VC-5-5C3	KRUEGER LMHS	8	600	150	–	150	75	<0.5	<25	–	
VC-5-5T1	KRUEGER LMHS	6	115	35	–	35	30	<0.5	<25	–	
VC-6-270	KRUEGER LMHS	10	710	90	–	55	270	<0.5	<25	Y	
VC-6-280	KRUEGER LMHS	6	170	35	–	25	15	<0.5	<25	–	
VC-6-282	KRUEGER LMHS	6	220	35	–	35	30	<0.5	<25	–	
VC-6-284	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-6-286	KRUEGER LMHS	6	215	35	–	35	30	<0.5	<25	–	
VC-6-287	KRUEGER LMHS	6	420	105	–	20	105	<0.5	<25	–	
VC-6-290	KRUEGER LMHS	6	165	35	–	20	15	<0.5	<25	–	
VC-6-292	KRUEGER LMHS	6	215	35	–	35	30	<0.5	<25	–	
VC-6-294	KRUEGER LMHS	6	230	40	–	40	30	<0.5	<25	–	
VC-6-296	KRUEGER LMHS	6	310	35	–	35	30	<0.5	<25	–	
VC-6-370	KRUEGER LMHS	10	705	90	–	55	270	<0.5	<25	Y	
VC-6-380	KRUEGER LMHS	6	170	35	–	25	15	<0.5	<25	–	
VC-6-382	KRUEGER LMHS	6	220	35	–	35	30	<0.5	<25	–	
VC-6-384	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-6-386	KRUEGER LMHS	6	215	35	–	35	30	<0.5	<25	–	
VC-6-387	KRUEGER LMHS	6	420	105	–	20	105	<0.5	<25	–	
VC-6-390	KRUEGER LMHS	6	165	35	–	20	15	<0.5	<25	–	

VAV CHANGE OVER COOLING ONLY BOX SCHEDULE (6 of 6)

MARK	MANUF & MODEL	INLET SIZE	DESIGN CFM			MIN OA CFM		TOTAL dP	NC	CO2 CONTROL	REMARKS
			COOL	MIN	HEAT	AREA	OCC				
VC-6-392	KRUEGER LMHS	6	215	35 CL 1 BR-2	–	35	30 CL 1 BR-2	<0.5	<25	–	
VC-6-394	KRUEGER LMHS	6	230	40	–	40	30	<0.5	<25	–	
VC-6-396	KRUEGER LMHS	6	310	35	–	35	30	<0.5	<25	–	
VC-6-470	KRUEGER LMHS	10	705	90	–	55	270	<0.5	<25	Y	
VC-6-480	KRUEGER LMHS	6	170	35	–	25	15	<0.5	<25	–	
VC-6-482	KRUEGER LMHS	6	220	35	–	35	30	<0.5	<25	–	
VC-6-484	KRUEGER LMHS	6	220	40	–	40	30	<0.5	<25	–	
VC-6-486	KRUEGER LMHS	6	215	35	–	35	30	<0.5	<25	–	
VC-6-487	KRUEGER LMHS	6	420	105	–	20	105	<0.5	<25	–	
VC-6-490	KRUEGER LMHS	6	165	35	–	20	15	<0.5	<25	–	
VC-6-492	KRUEGER LMHS	6	215	35	–	35	30	<0.5	<25	–	
VC-6-494	KRUEGER LMHS	6	230	40	–	40	30	<0.5	<25	–	
VC-6-496	KRUEGER LMHS	6	330	35	–	35	30	<0.5	<25	–	
VC-6-570	KRUEGER LMHS	10	715	90	–	55	270	<0.5	<25	Y	
VC-6-580	KRUEGER LMHS	6	170	35	–	25	15	<0.5	<25	–	
VC-6-582	KRUEGER LMHS	6	225	35	–	35	30	<0.5	<25	–	
VC-6-584	KRUEGER LMHS	6	230	40	–	40	30	<0.5	<25	–	
VC-6-586	KRUEGER LMHS	6	220	35	–	35	30	<0.5	<25	–	
VC-6-587	KRUEGER LMHS	6	450	105	–	20	105	<0.5	<25	–	
VC-6-590	KRUEGER LMHS	6	165	35	–	20	15	<0.5	<25	–	
VC-6-592	KRUEGER LMHS	6	220	35	–	35	30	<0.5	<25	–	
VC-6-594	KRUEGER LMHS	6	265	40	–	40	30	<0.5	<25	–	

UC Merced
University of California
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HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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Seal and Signature

REGISTERED PROFESSIONAL ENGINEER ALLAN W. DALY No. M31302 Exp. 06/30/12 MECHANICAL STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA
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DATE_____

Drawing Stage:
Record Drawings

Printing	Date
BID RELEASE 1	08.16.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

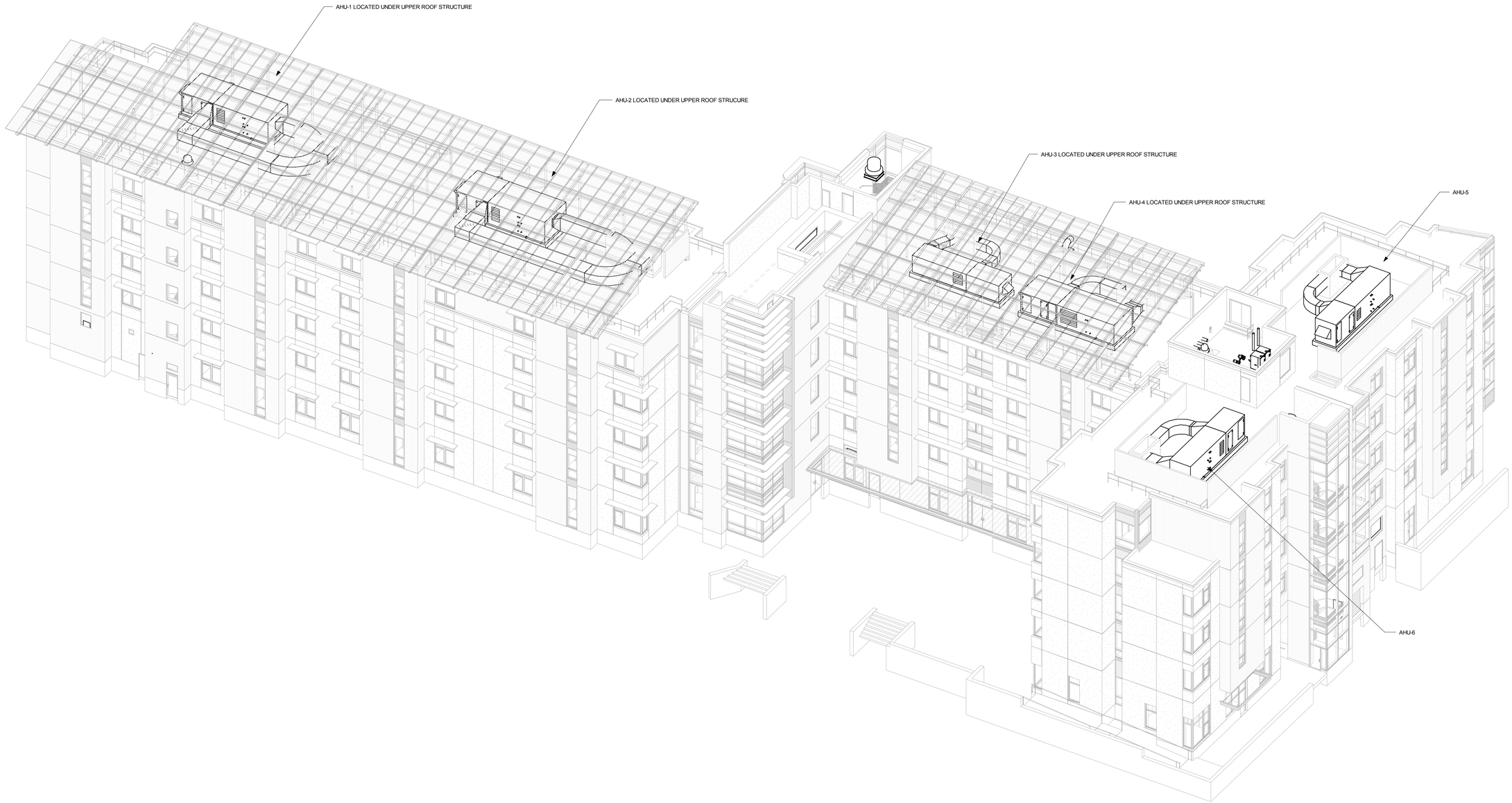
Revisions	Date
8 CLARIFICATION 1	11.17.2011
19 BULLETIN 19	07.12.2012

Drawn By: **AD / AZ**
Scale: **NO SCALE**

EHDD Job Number
10014

Sheet Title
HVAC SCHEDULES

Drawing Number:
M0.5



1 HVAC BUILDING ISO

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

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DATE_____

Drawing Stage:
Construction Drawings

Printing	Date
100% SCHEMATIC DESIGN	02.23.2011
100% DESIGN DEVELOPMENT	06.23.2011
BID RELEASE 1	09.23.2011
DSA SUBMITTAL	10.14.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	12.16.2012

Revisions	Date

Drawn By: AD \ AZ
Scale: AS NOTED

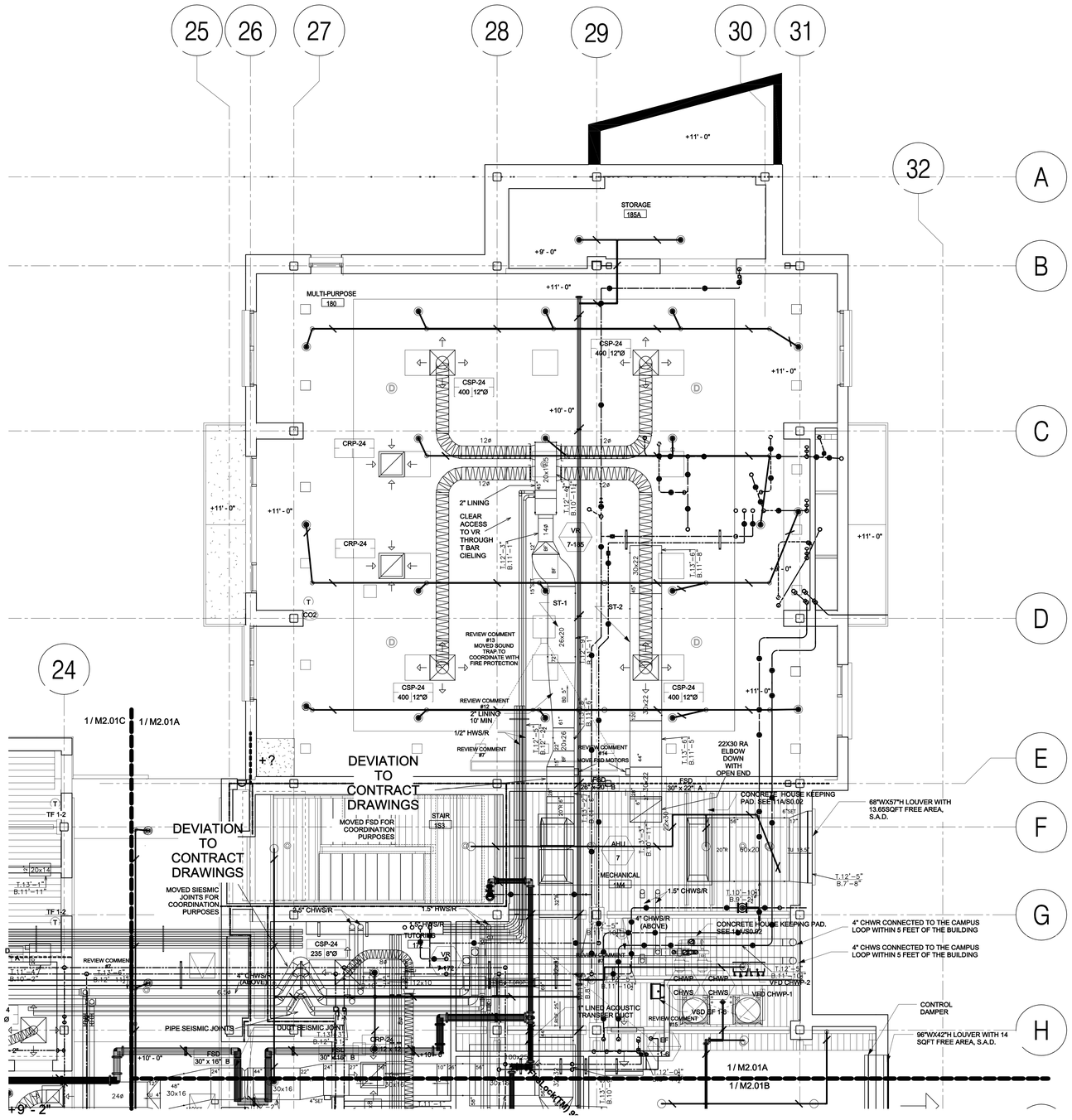
EHDD Job Number
10014

Sheet Title
HVAC BUILDING ISOMETRIC

Drawing Number:
M1.0

ENGINEERS REVIEW GENERAL CORRECTIONS

1. ALL VAV CONTROLS, PIPING VALVES AND EF MOTORS WILL BE LOCATED ON THE SIDE OF THE EQUIPTMENT CLOSEST TO THE ACCESS DOORS AND GRILLES WHERE SHOWN ON THE PLANS
2. ALL FSD MOTORS WILL BE INSTALLED EXTERNALLY OUTSIDE OF THE AIR STREAM
3. ALL FD'S WILL BE INSTALL AS SHOWN PER THE CONTRACT DRAWINGS (SEE TYPICAL ON ON THE INDIVIDUAL PAGES)
4. SHUT-OFF VALVES WILL BE INSTALLED AT ALL FUTURE PIPING CONNECTIONS



1 LEVEL 01 PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

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Merced, California

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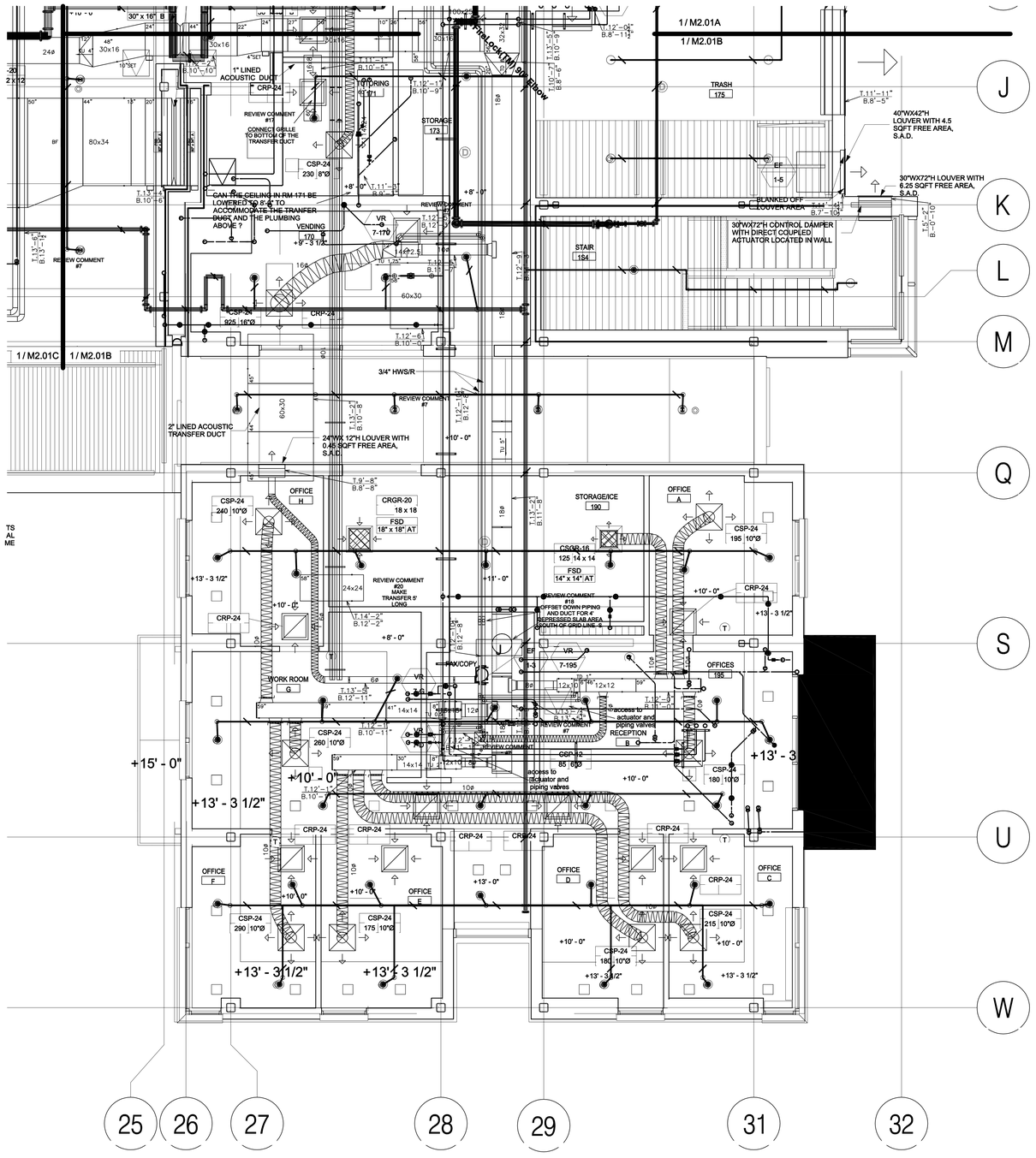
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 01 PARTIAL PLAN - EAST WING, NORTH

Drawing Number:
M2.01A



1 LEVEL 01 PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

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University of California
Merced, California

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Exp. 06/30/12
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BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

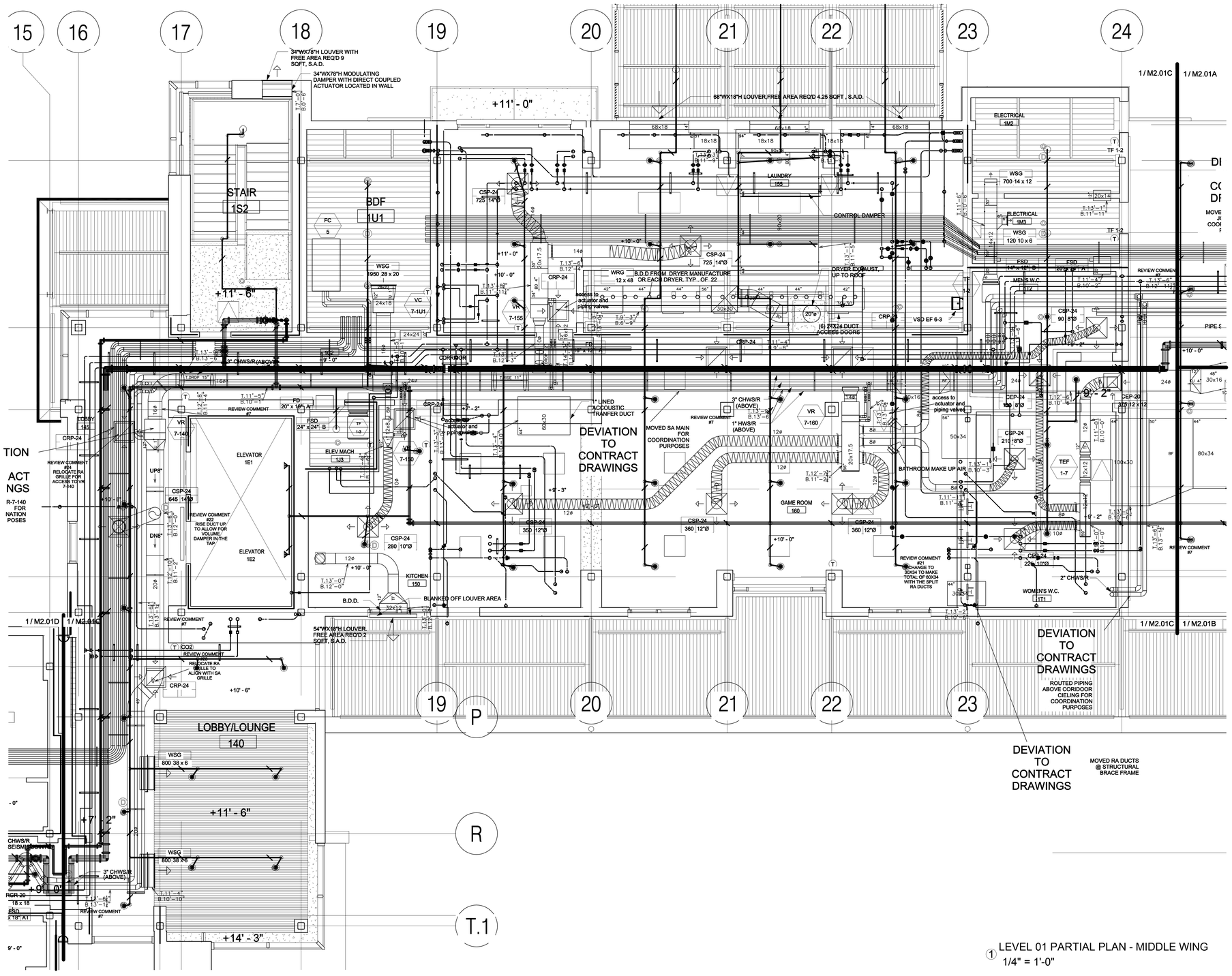
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 01 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.01B



① LEVEL 01 PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

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RECORD DRAWINGS	02.28.2014

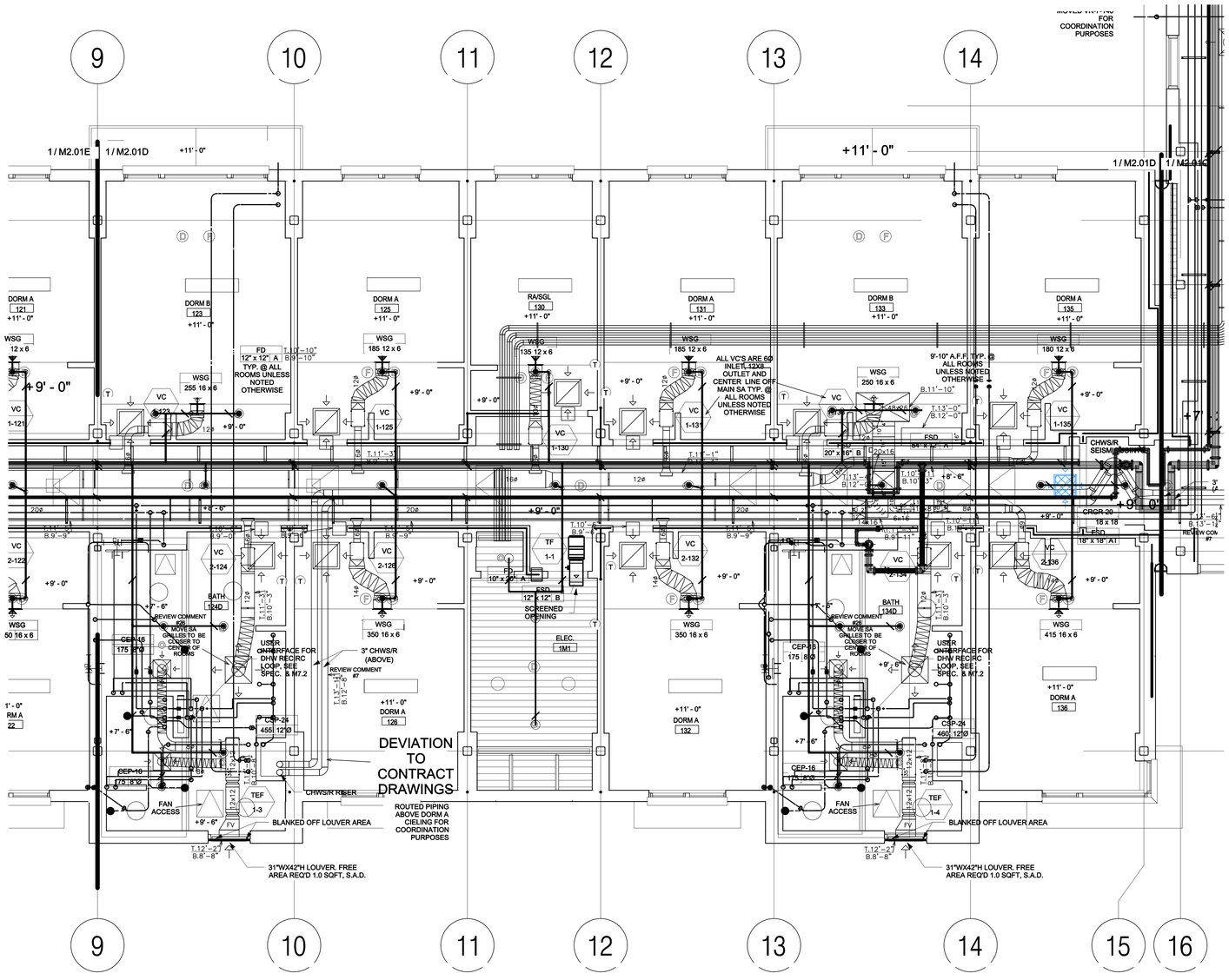
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 01 PARTIAL PLAN - MIDDLEWING

Drawing Number:
M2.01C



1 LEVEL 01 PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

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Merced, California

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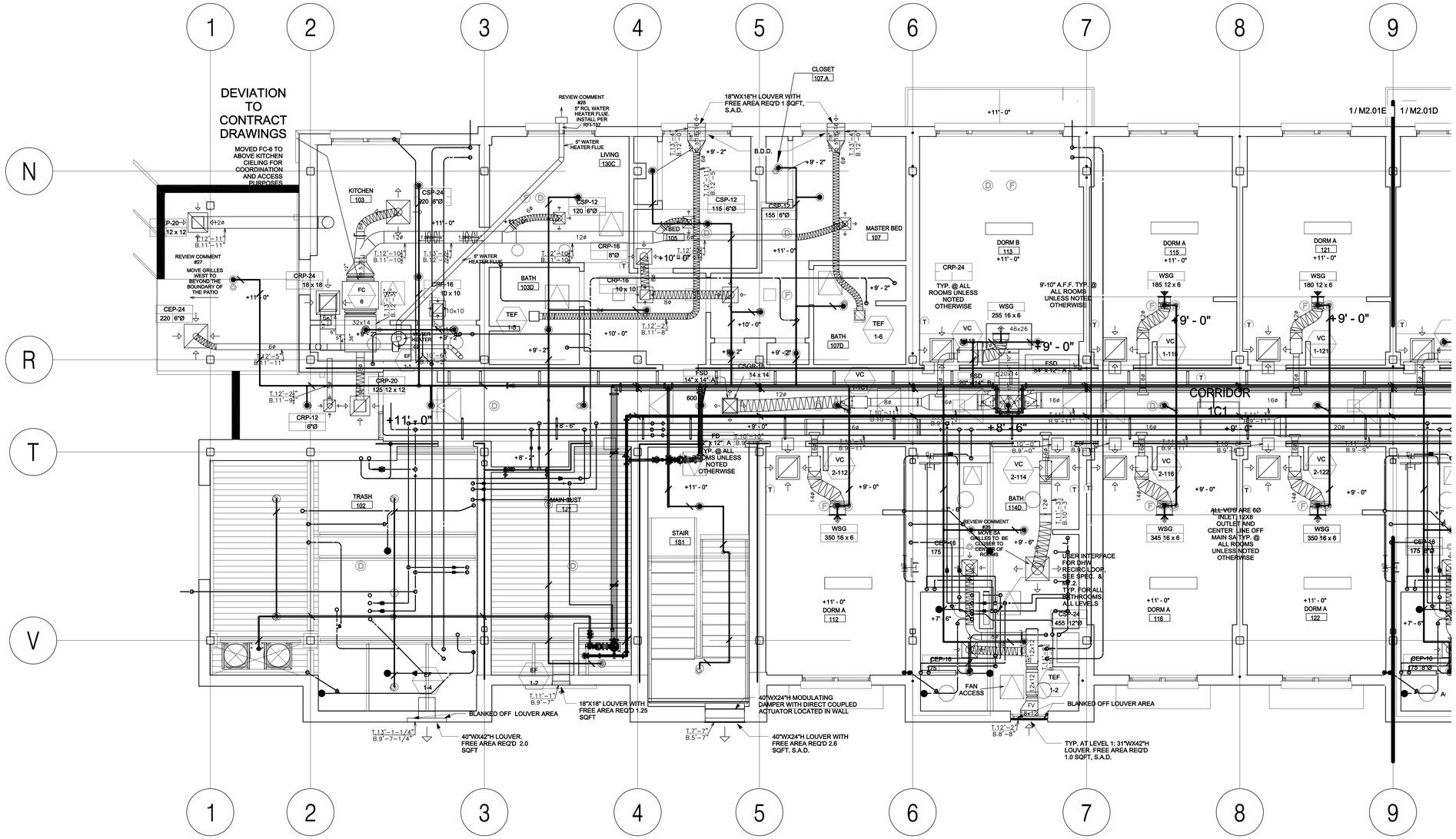
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 01 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.01D



1 LEVEL 01 PARTIAL PLAN -WEST WING,WEST
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
EHDD

Esherick Homsey Dodge & Davis
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Interior Design
Graphic Design

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Consultant

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Alameda CA, 94501-6427
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Fax: (510) 749-9136

Seal and Signature

REGISTERED PROFESSIONAL ENGINEER ALLAN W. DALY No. M31302 Exp. 06/30/12 MECHANICAL STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA
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FIRE MARSHAL
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Reviewed by:
Date: _____
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IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL 01
AC_____FLS_____SS_____
DATE_____

Drawing Stage:
Record Drawings

Printing	Date
BID RELEASE 1	08.16.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

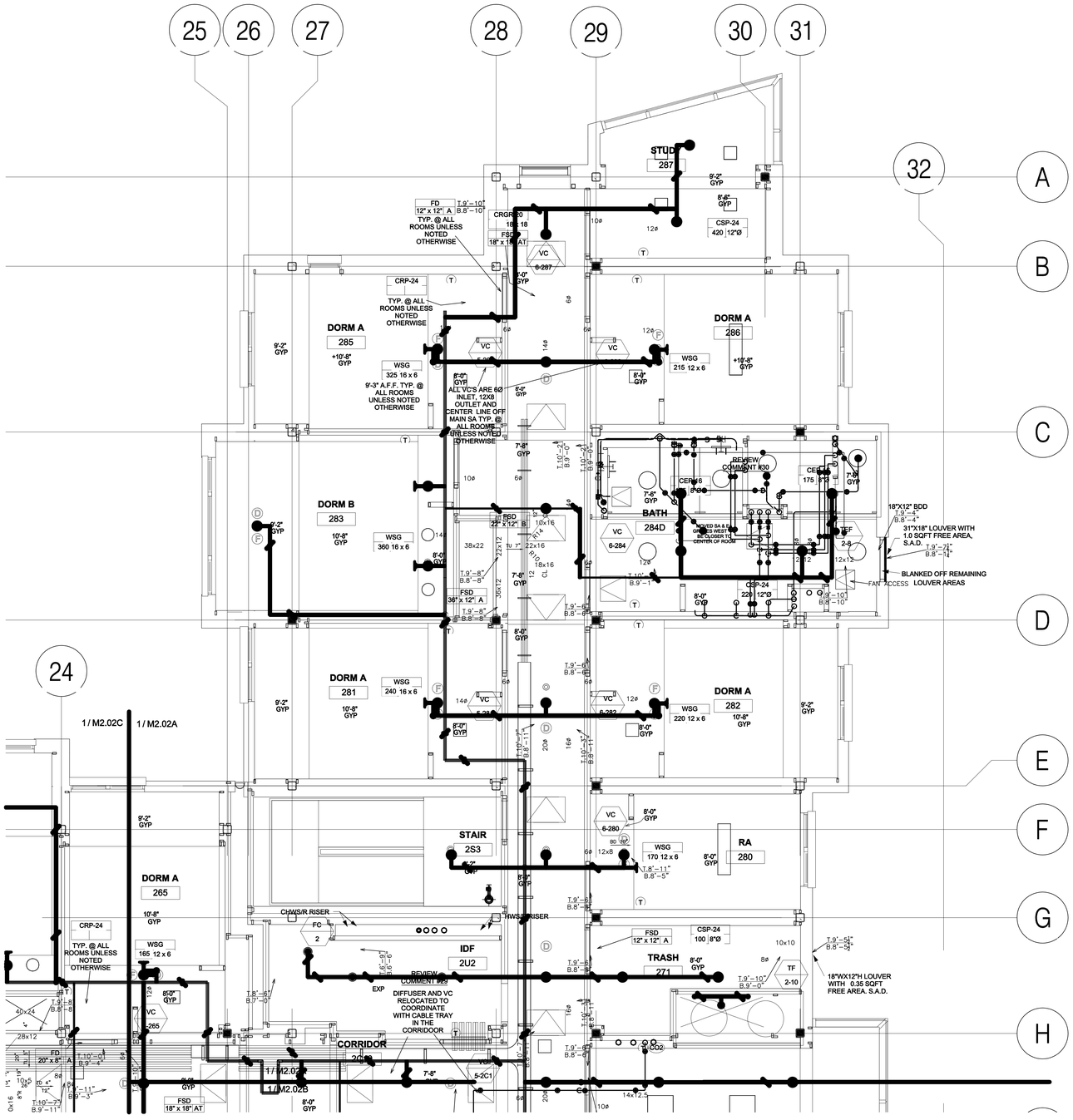
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 01 PARTIAL PLAN - WEST WING, WEST

Drawing Number:
M2.01E



1 LEVEL 02 PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
EHDD
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Homsey
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ALLAN W. BALT
No. M31302
Exp. 06/30/12
MECHANICAL
STATE OF CALIFORNIA

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RECORD DRAWINGS	02.28.2014

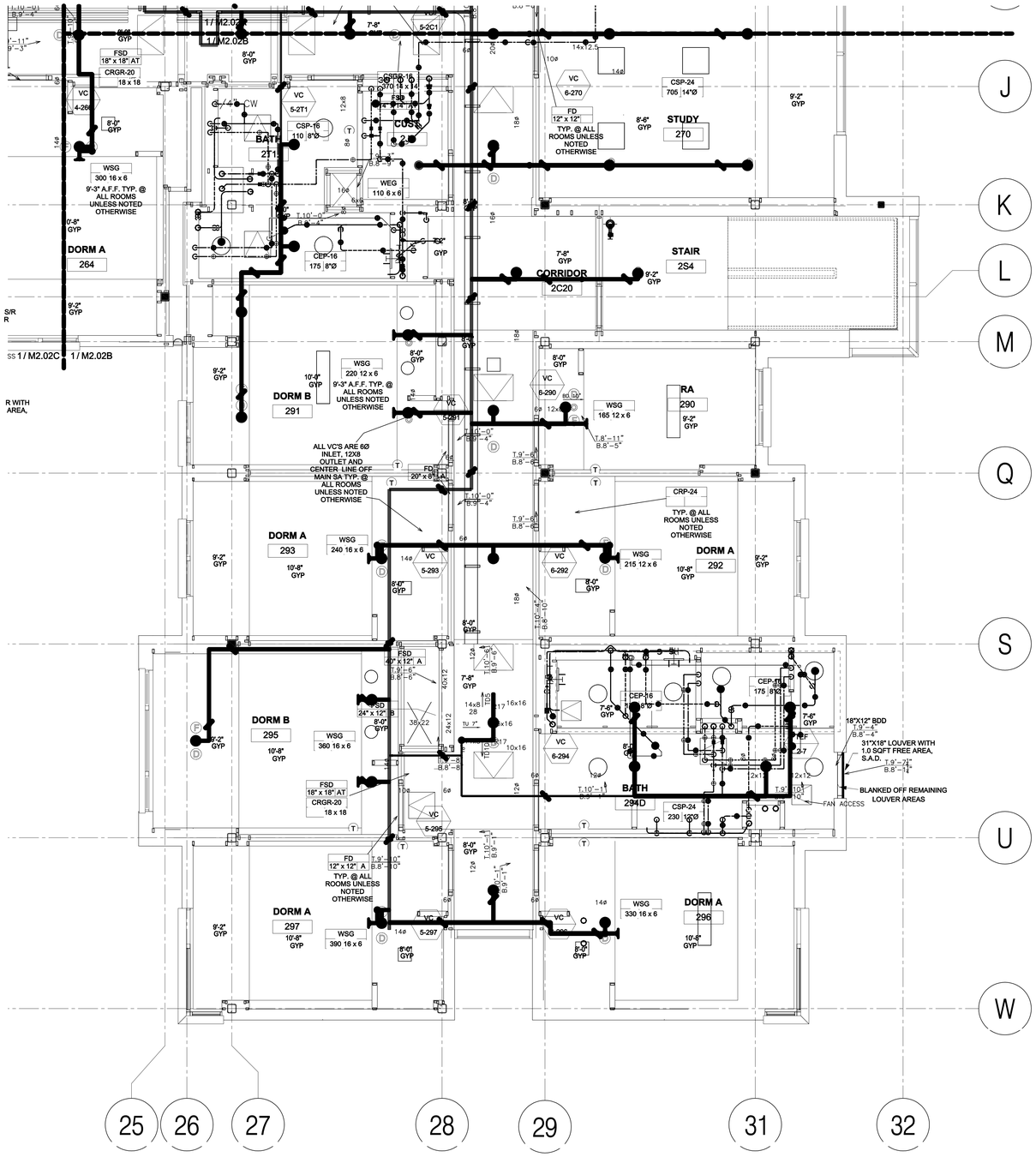
Revisions	Date

Drawn By: AD / AZ
Scale: 1/4"=1'-0"

EHDD Job Number
10014

Sheet Title
LEVEL 02 PARTIAL PLAN - EAST WING, NORTH

Drawing Number:
M2.02A



1 LEVEL 02 PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

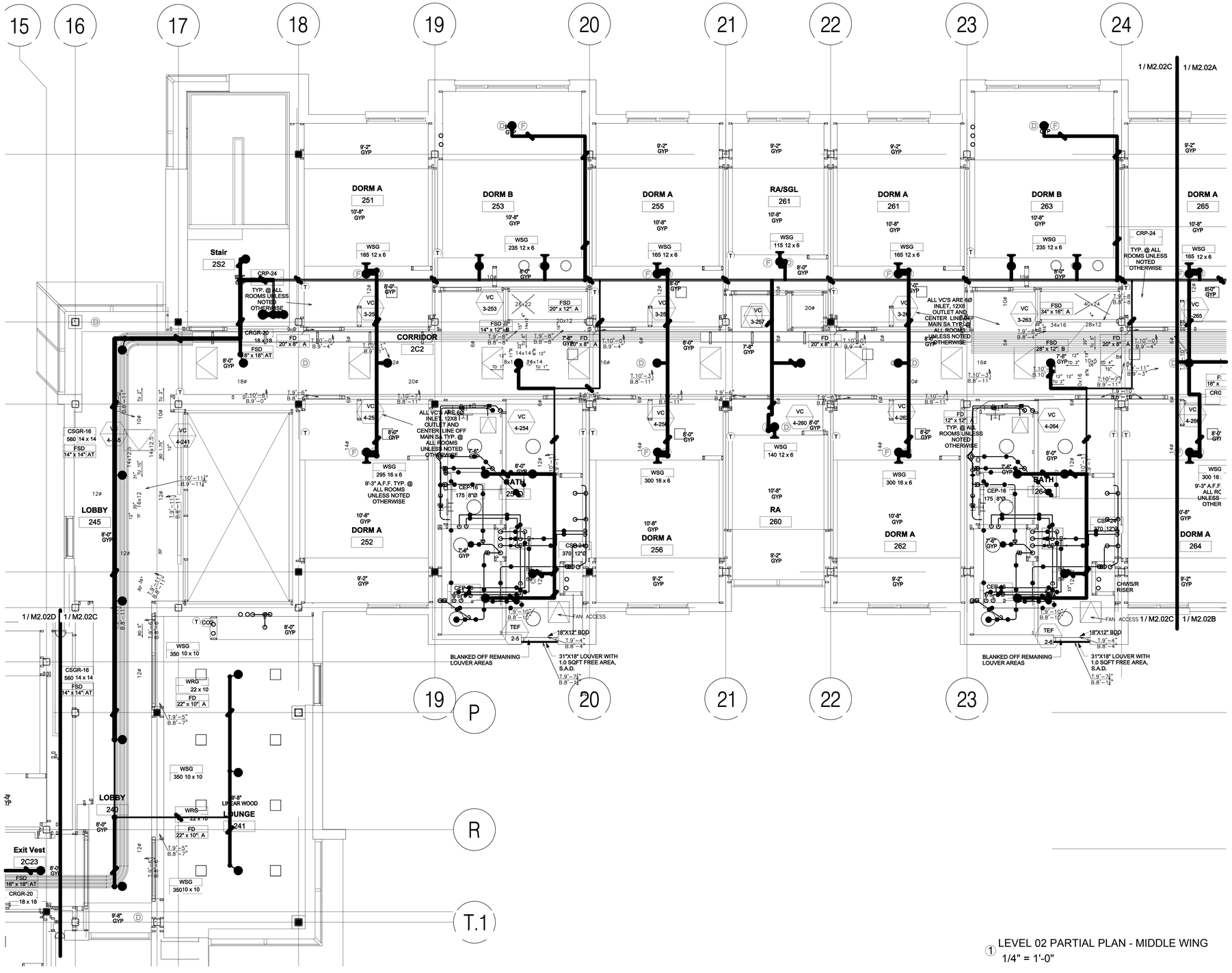
Revisions	Date

Drawn By: AD / AZ
Scale: 1/4"=1'-0"

EHDD Job Number
10014

Sheet Title
LEVEL 02 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.02B



1 LEVEL 02 PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:

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AC FLS SS
DATE

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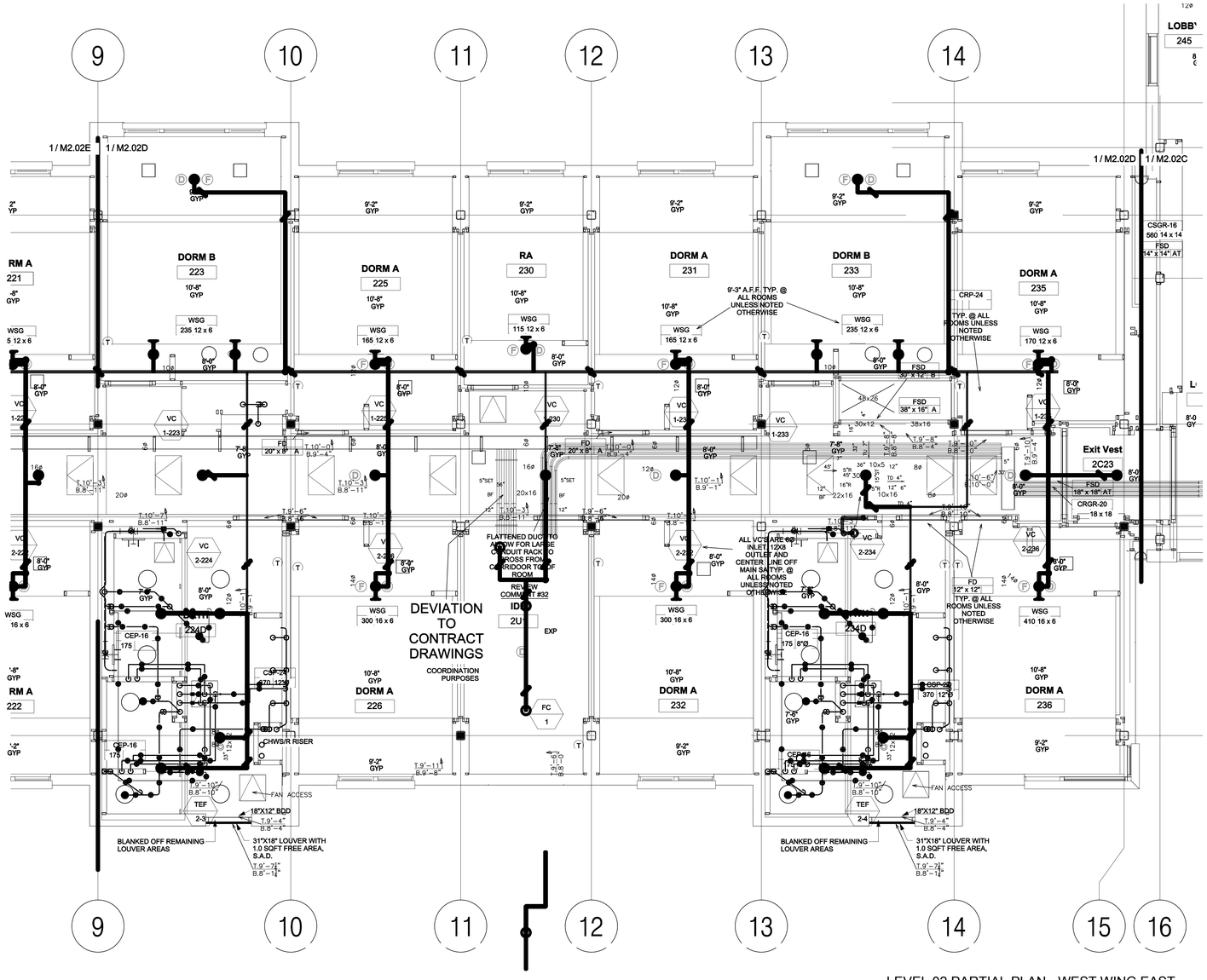
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**
EHDD Job Number
10014

Sheet Title
LEVEL 02 PARTIAL PLAN - MIDDLEWING

Drawing Number:
M2.02C



1 LEVEL 02 PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:

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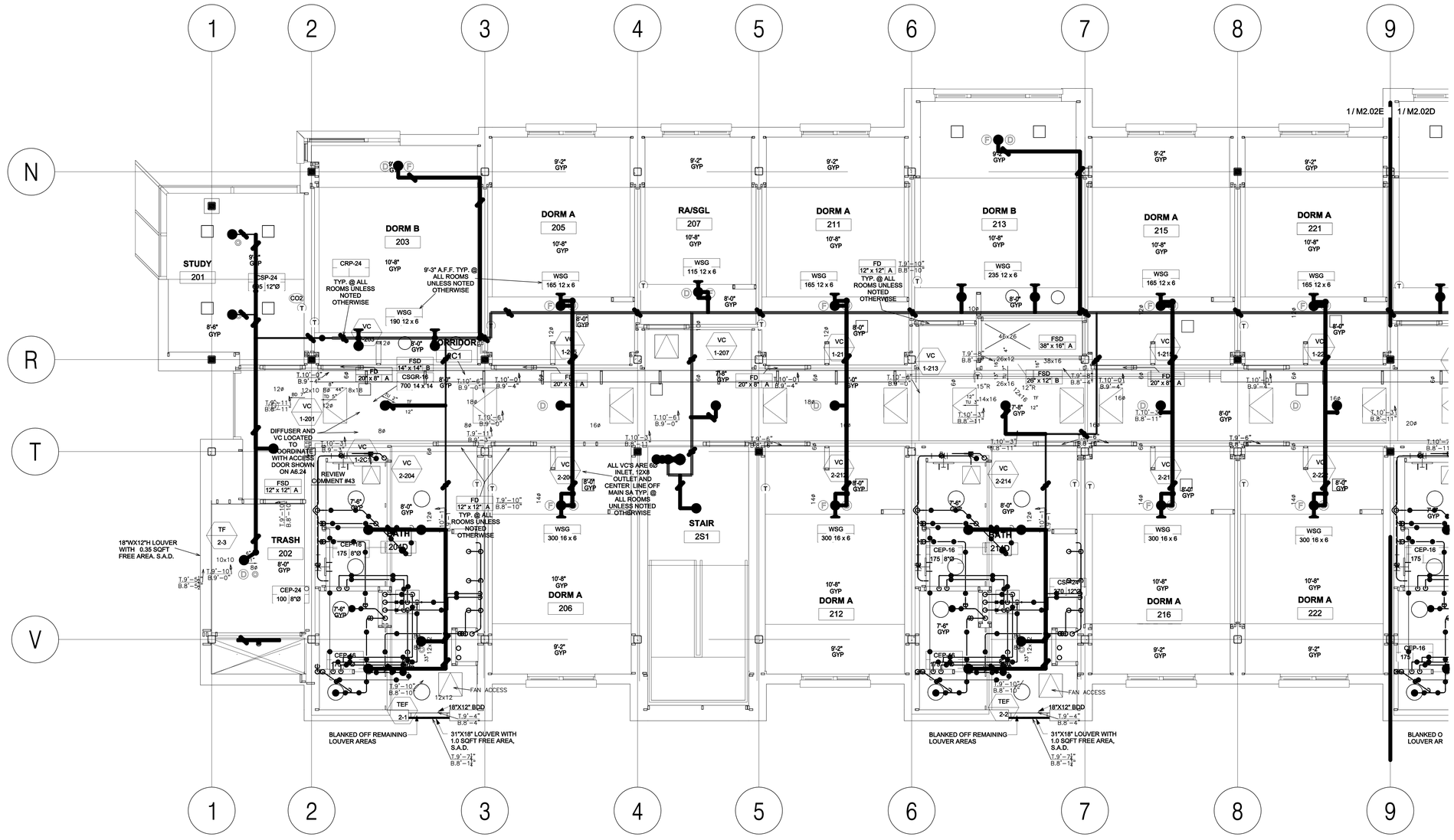
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 02 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.02D



1 LEVEL 02 PARTIAL PLAN -WEST WING,WEST
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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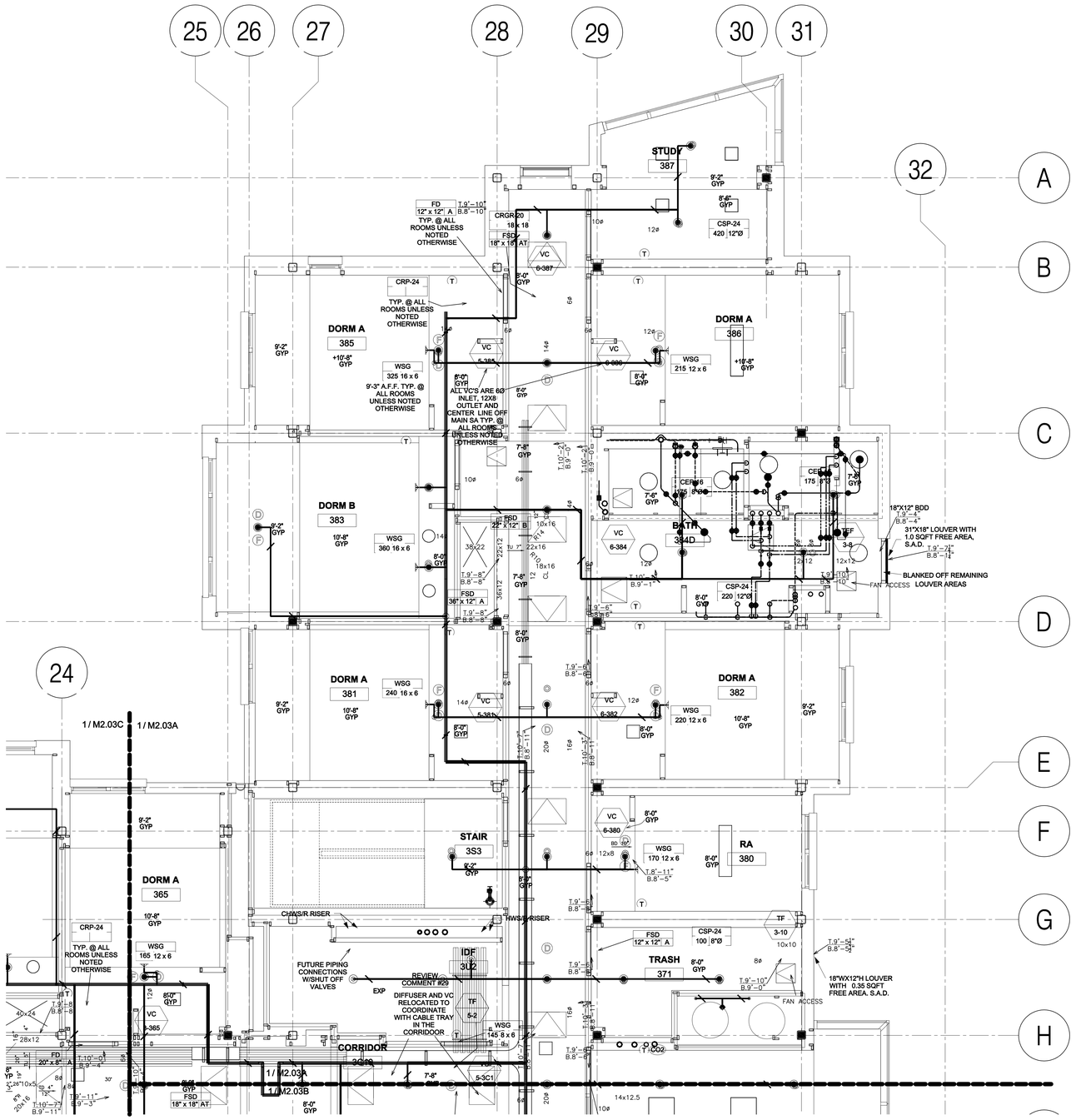
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**
EHDD Job Number
10014

Sheet Title
LEVEL 02 PARTIAL PLAN - WEST WING, WEST

Drawing Number:
M2.02E



① LEVEL 03 PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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RECORD DRAWINGS	02.28.2014

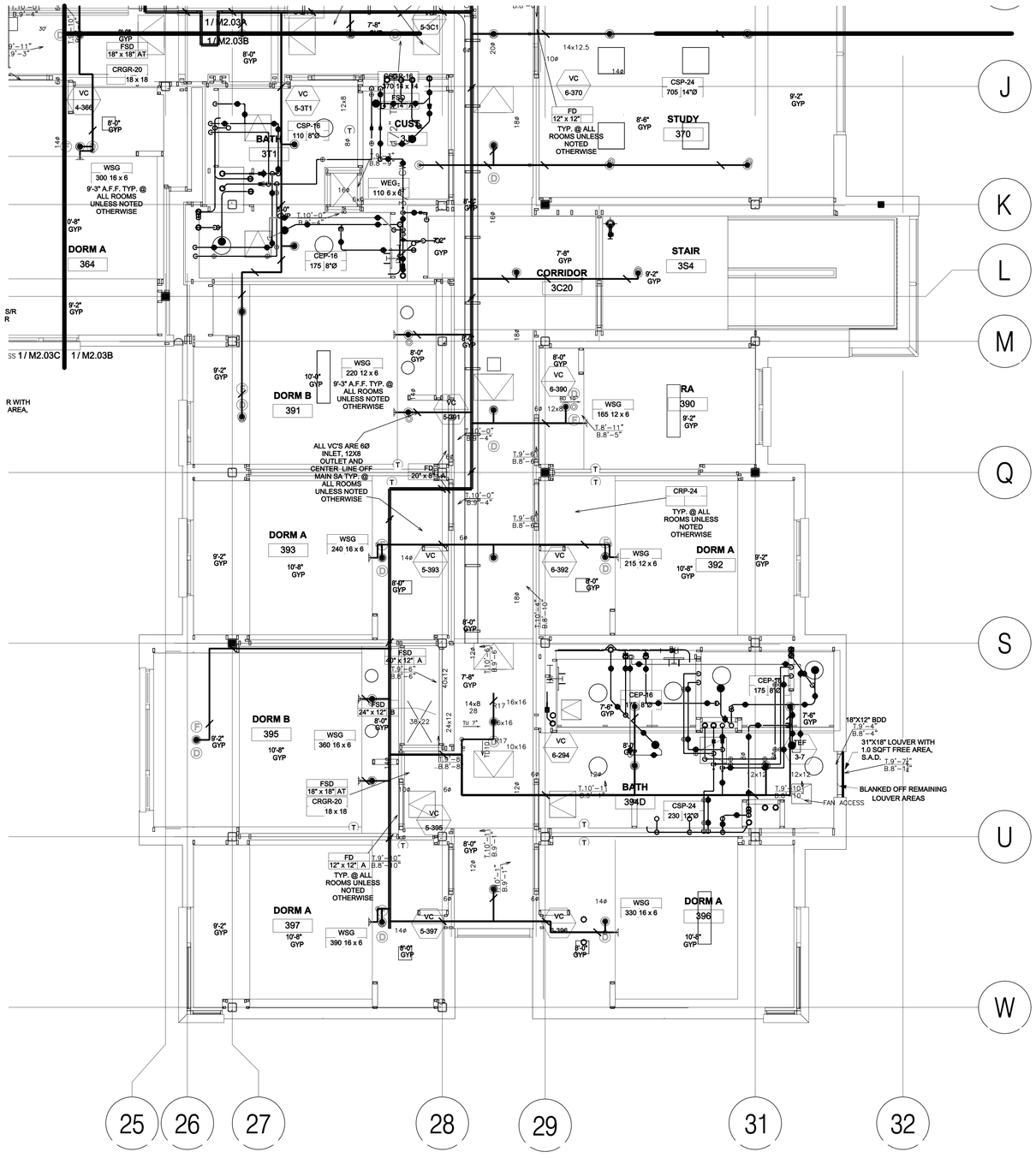
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
**LEVEL 03
PARTIAL PLAN -
EAST WING,
NORTH**

Drawing Number:
M2.03A



1 LEVEL 03 PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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REGISTERED PROFESSIONAL ENGINEER
ALLAN W. DALY
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Exp. 06/30/12
MECHANICAL
STATE OF CALIFORNIA

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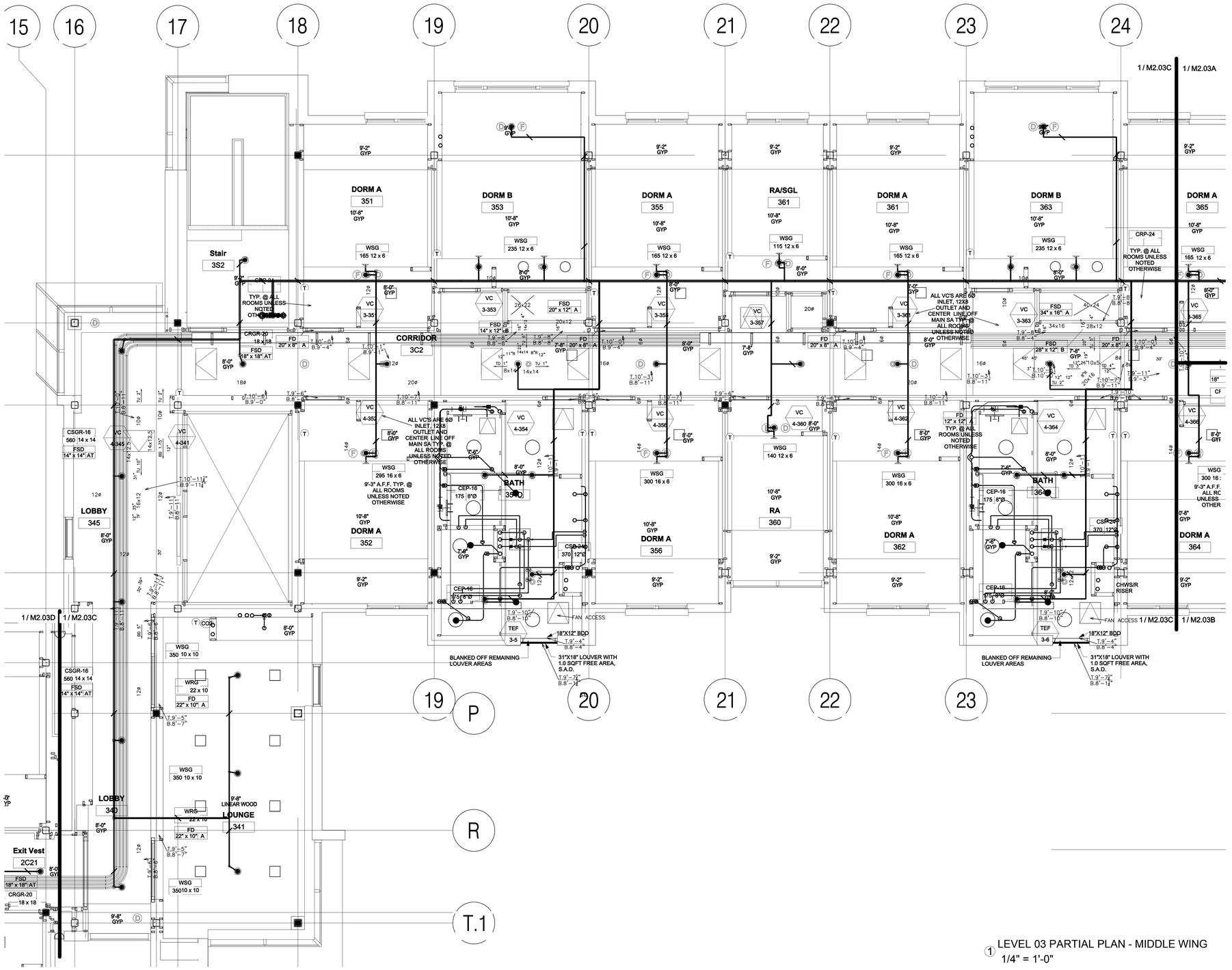
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 03 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.03B



1 LEVEL 03 PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

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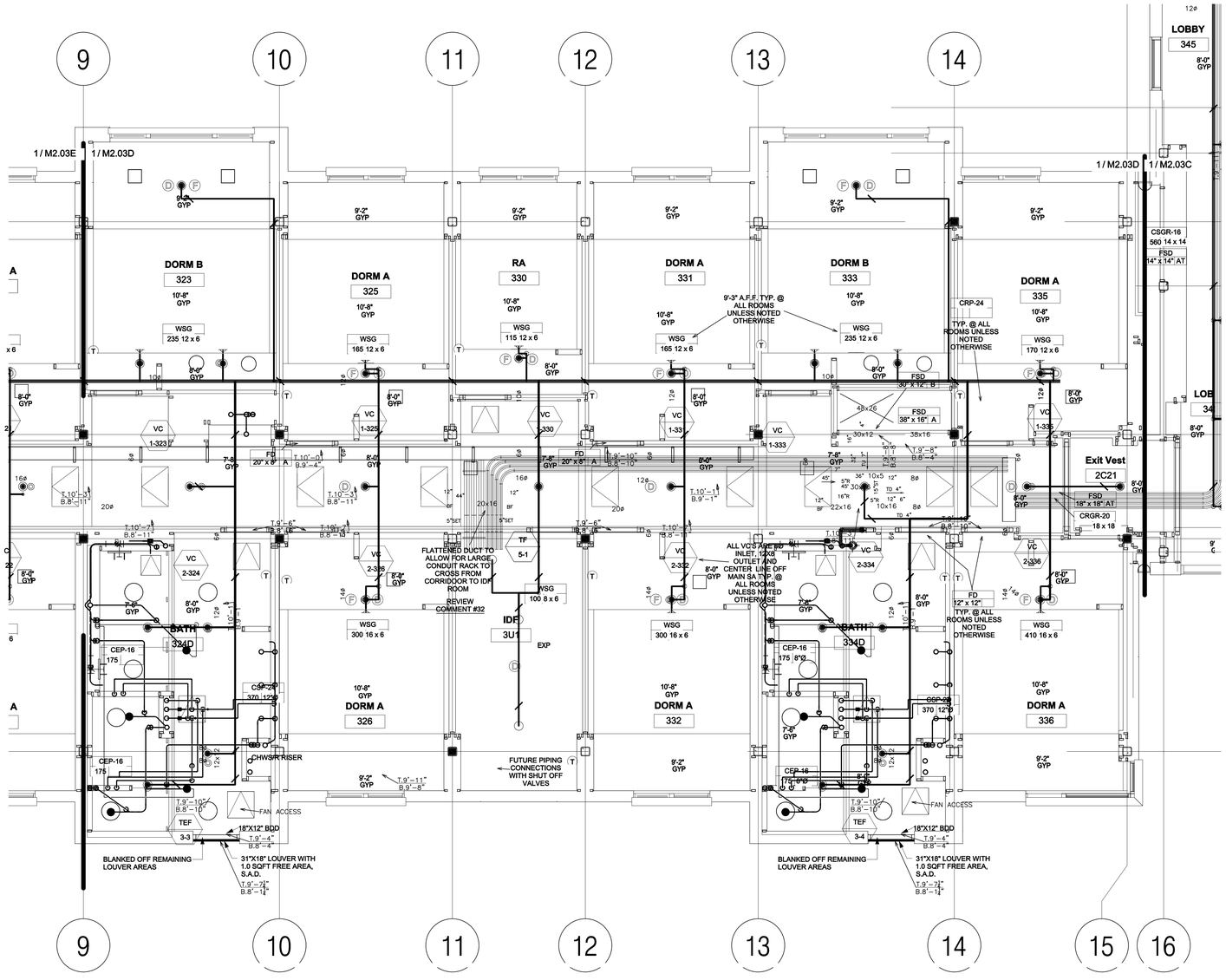
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 03 PARTIAL PLAN - MIDDLE WING

Drawing Number:
M2.03C



1 LEVEL 03 PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

UC Merced
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Merced, California

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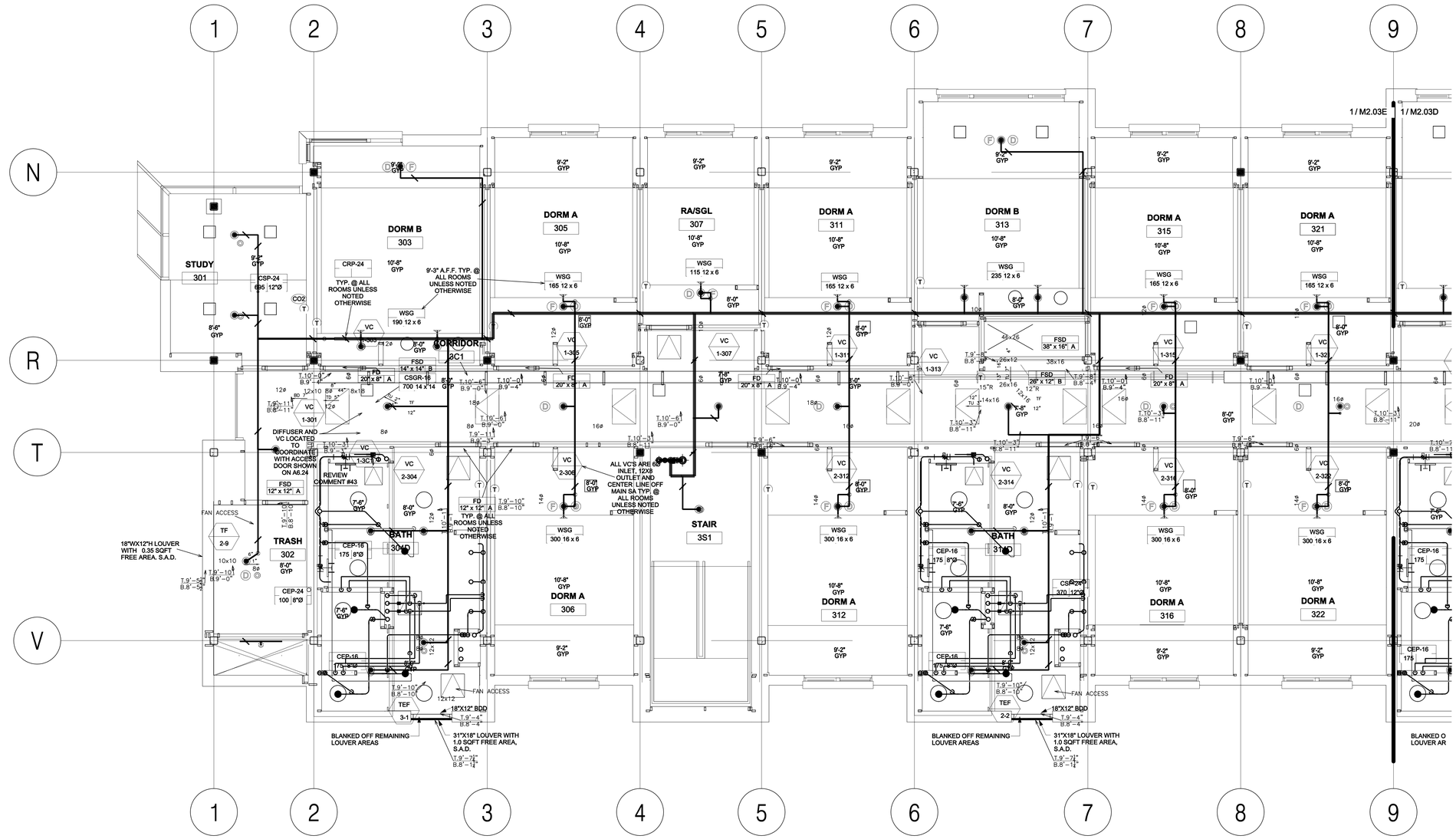
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 03 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.03D



1 LEVEL 03 PARTIAL PLAN -WEST WING,WEST
1/4" = 1'-0"

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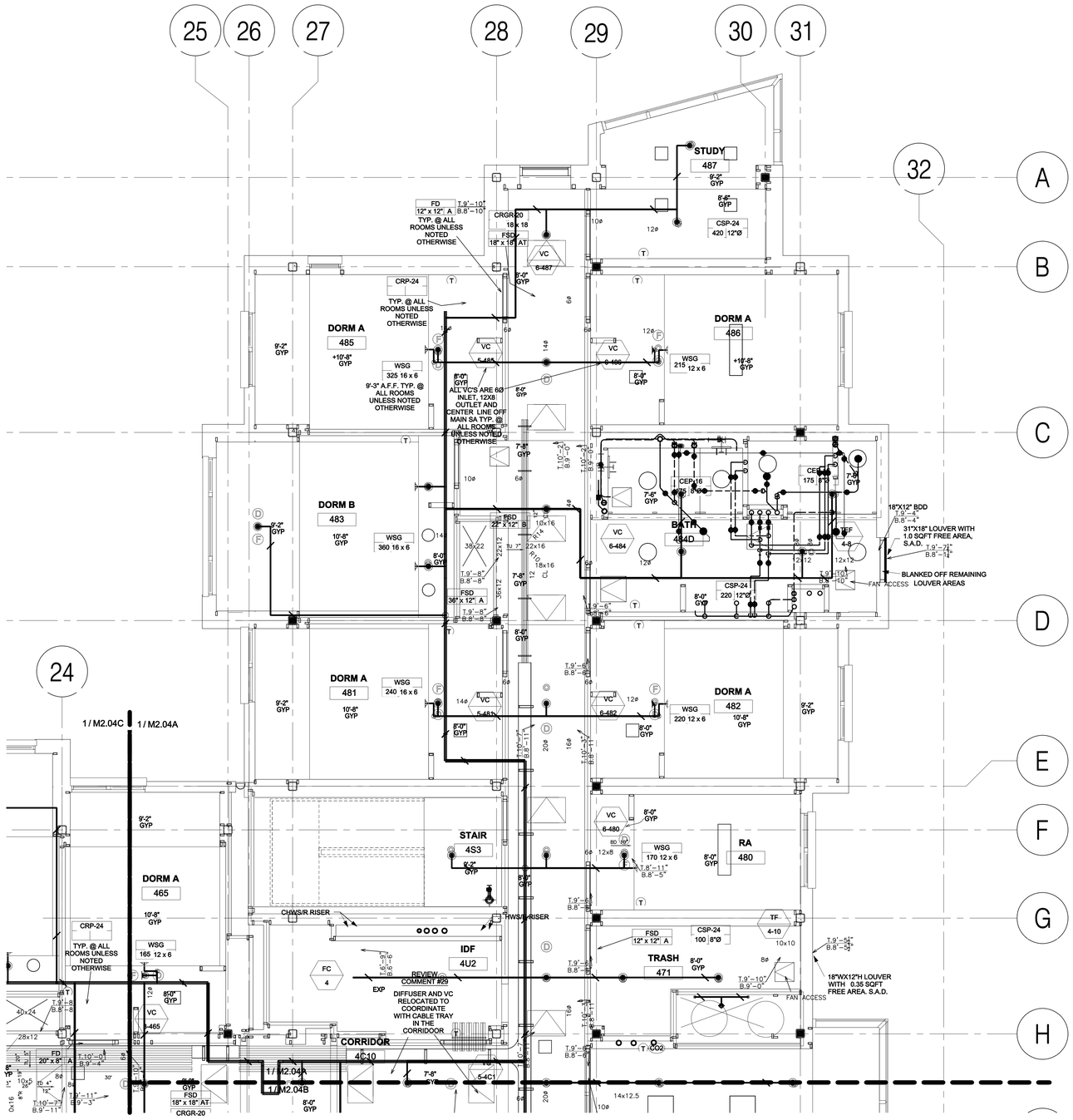
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 03 PARTIAL PLAN - WEST WING, WEST

Drawing Number:
M2.03E



1 LEVEL 04 PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

UC Merced
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Merced, California

HOUSING 4 THE SUMMITS

Project Number:
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Architect:
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RECORD DRAWINGS	02.28.2014

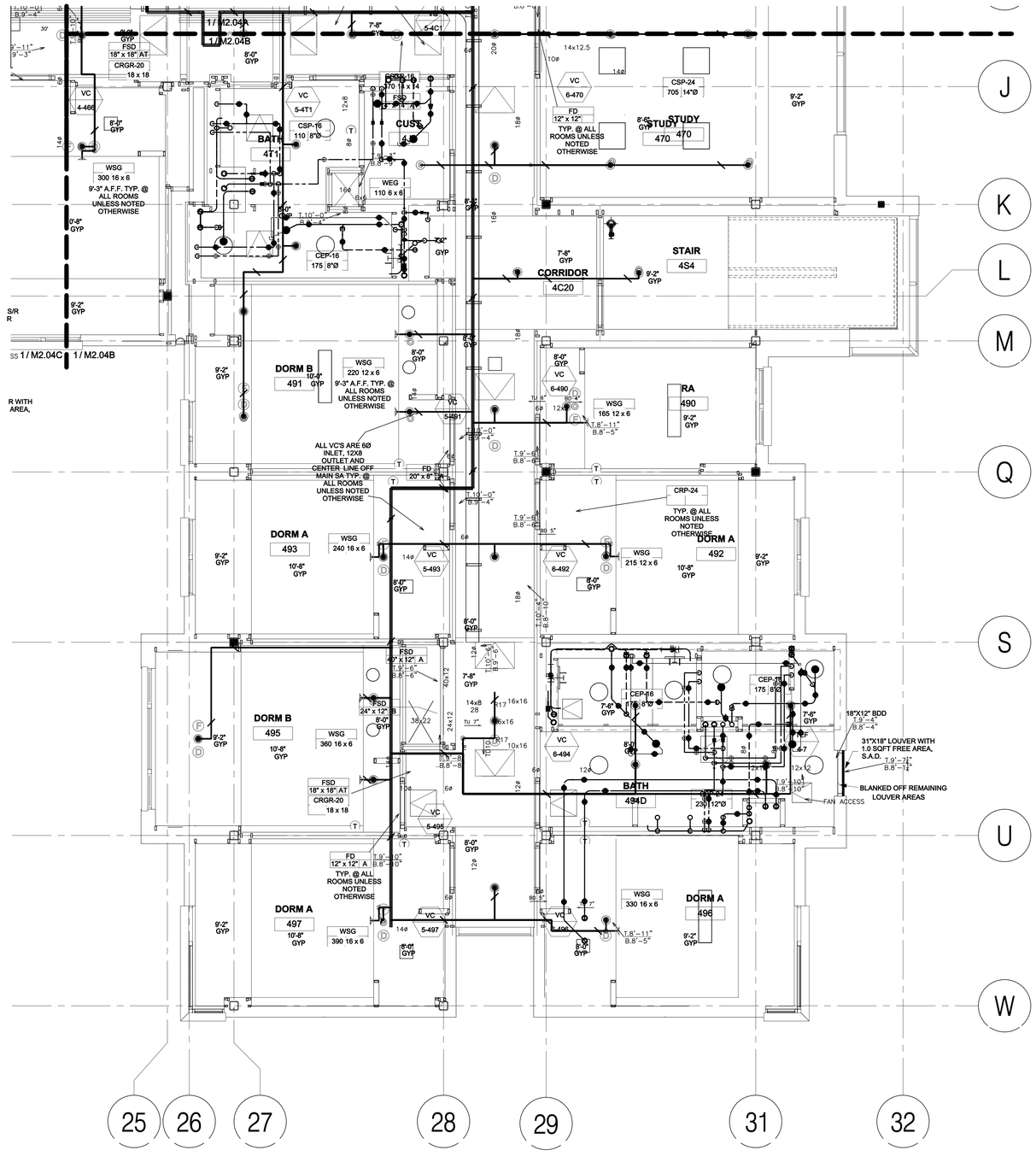
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 04 PARTIAL PLAN - EAST WING, NORTH

Drawing Number:
M2.04A



1 LEVEL 04 PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:

EHDD

Esherick Homsey Dodge & Davis
Architecture
Interior Design
Graphic Design

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Consultant

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Phone: (510) 749-9135
Fax: (510) 749-9136

Seal and Signature

REGISTERED PROFESSIONAL ENGINEER ALLAN W. DALY No. M31302 Exp. 06/30/12 MECHANICAL STATE OF CALIFORNIA

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APPL 01

AC_____FLS_____SS_____

DATE_____

Drawing Stage:
Record Drawings

Printing	Date
BID RELEASE 1	08.16.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

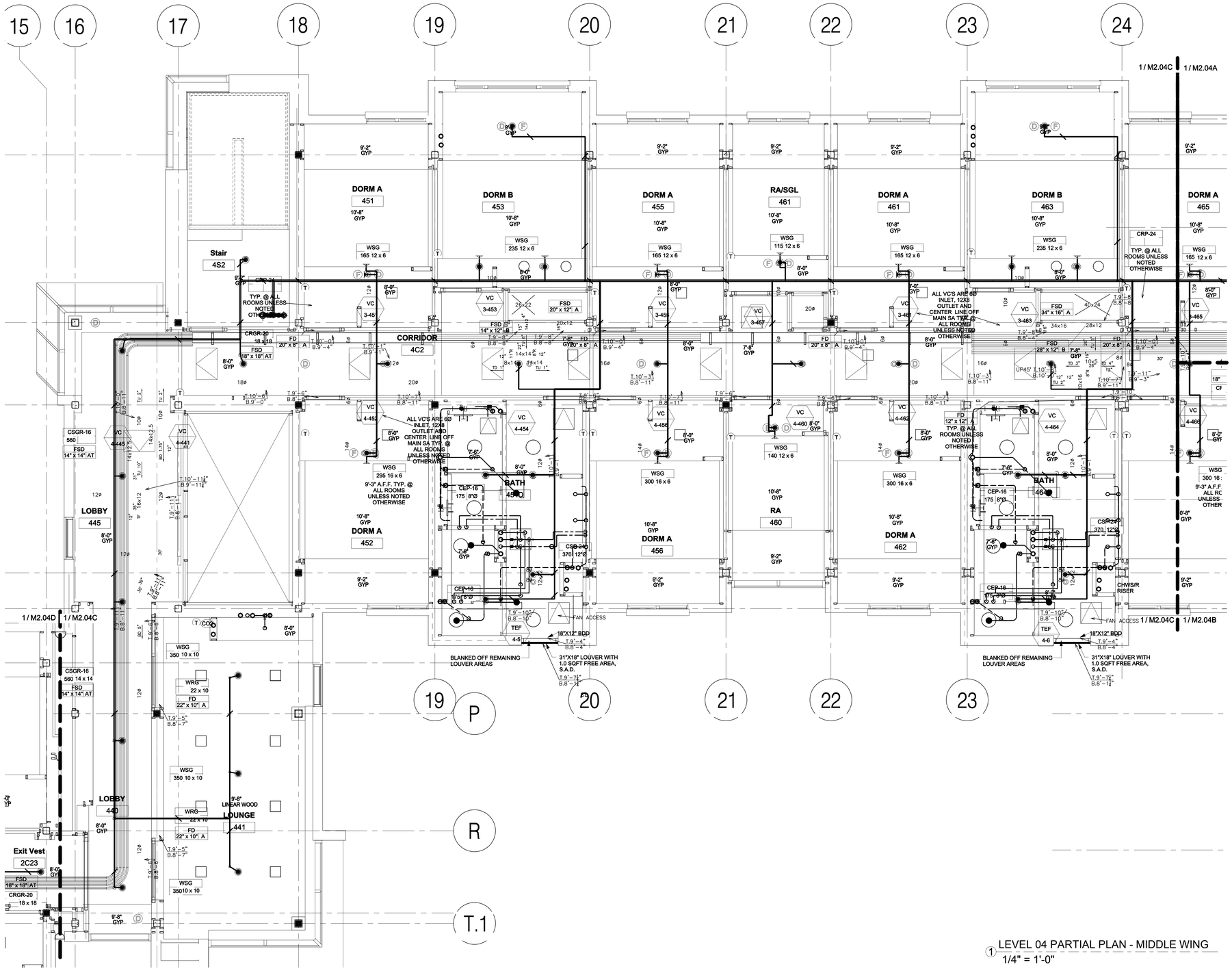
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 04 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.04B



1 LEVEL 04 PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

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University of California
Merced, California

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Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 04 PARTIAL PLAN - MIDDLE WING

Drawing Number:
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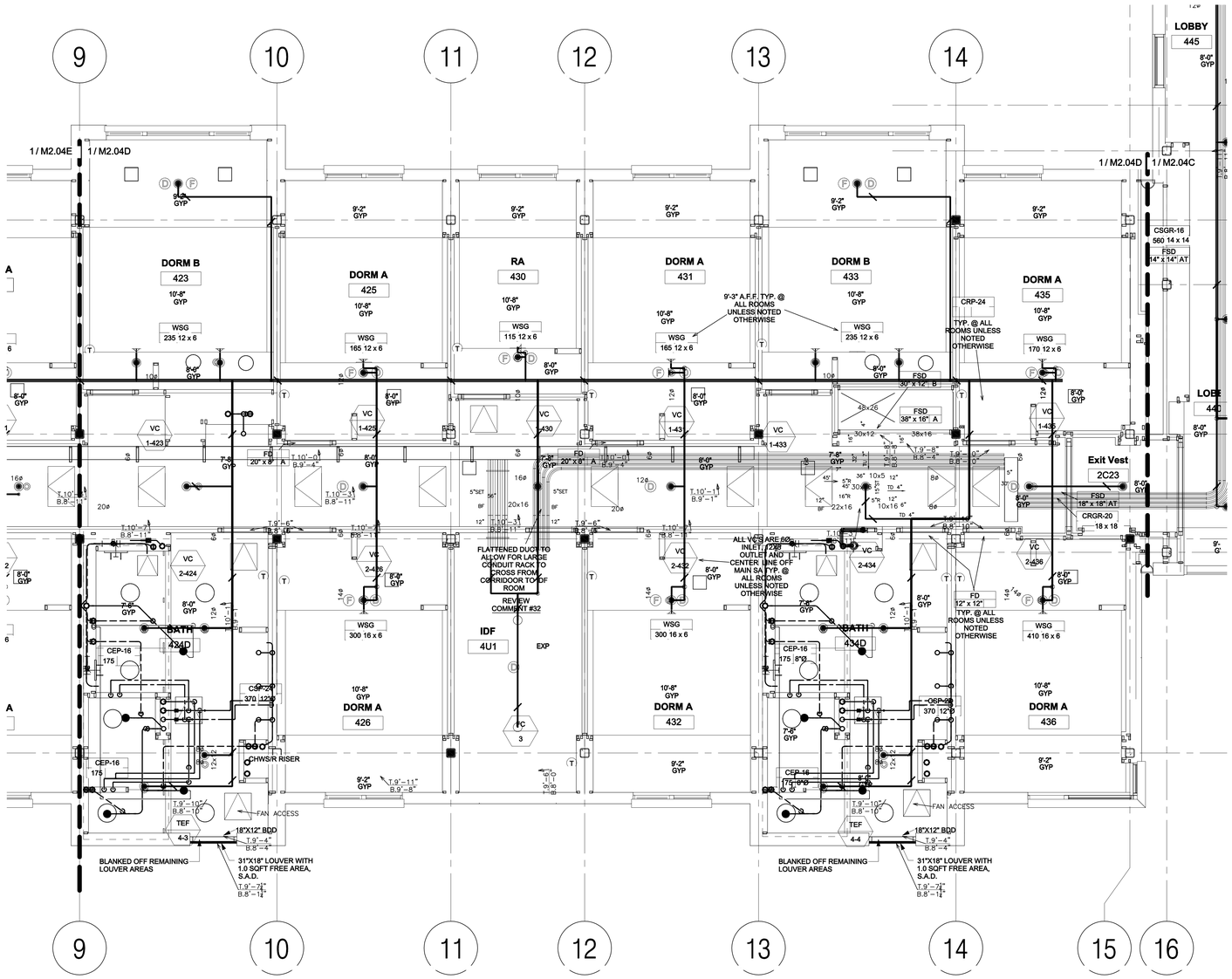

1 LEVEL 04 PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

UC Merced
University of California
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HOUSING 4 THE SUMMITS

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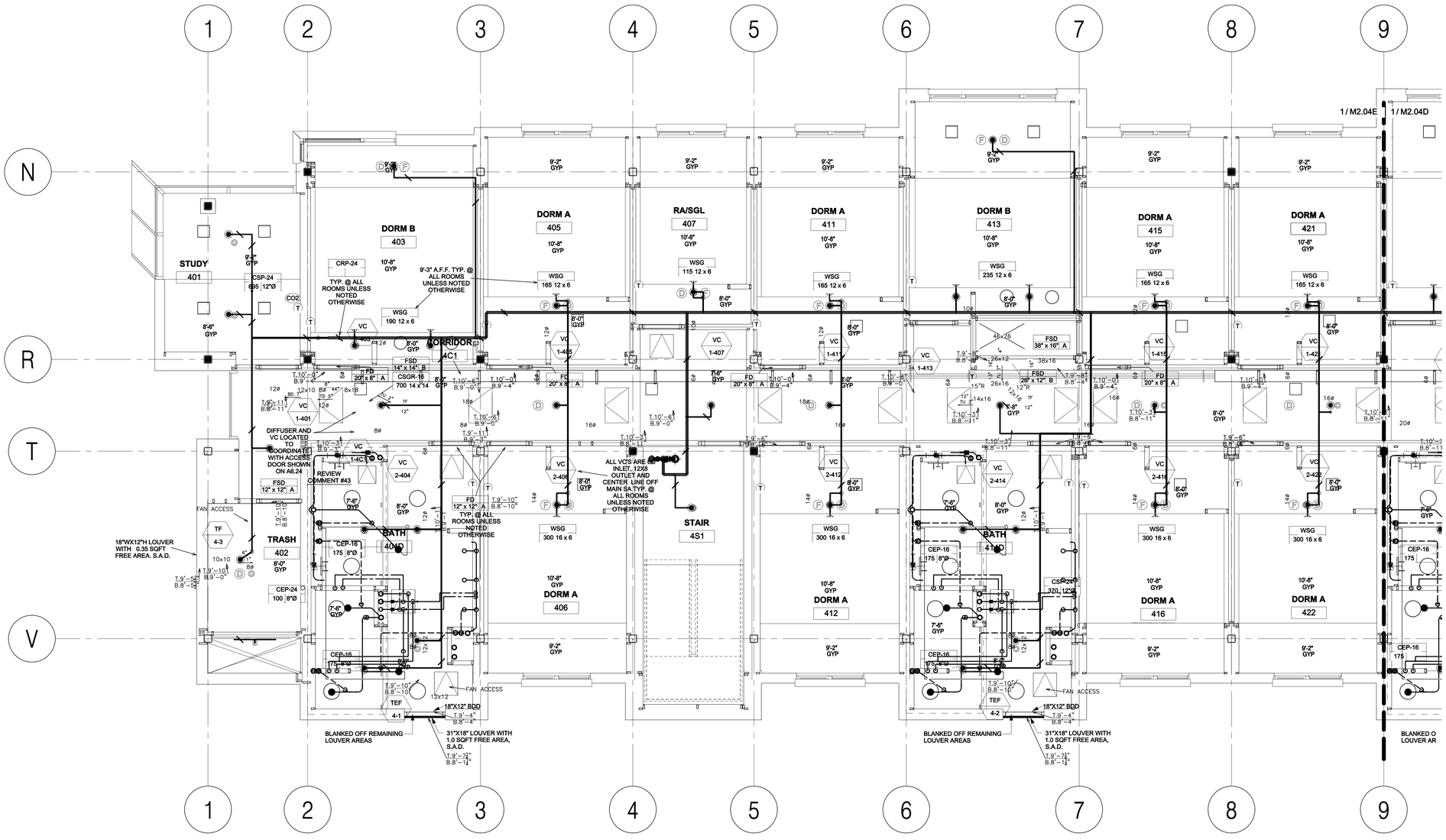
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 04 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.04D



1 LEVEL 04 PARTIAL PLAN -WEST WING,WEST
1/4" = 1'-0"

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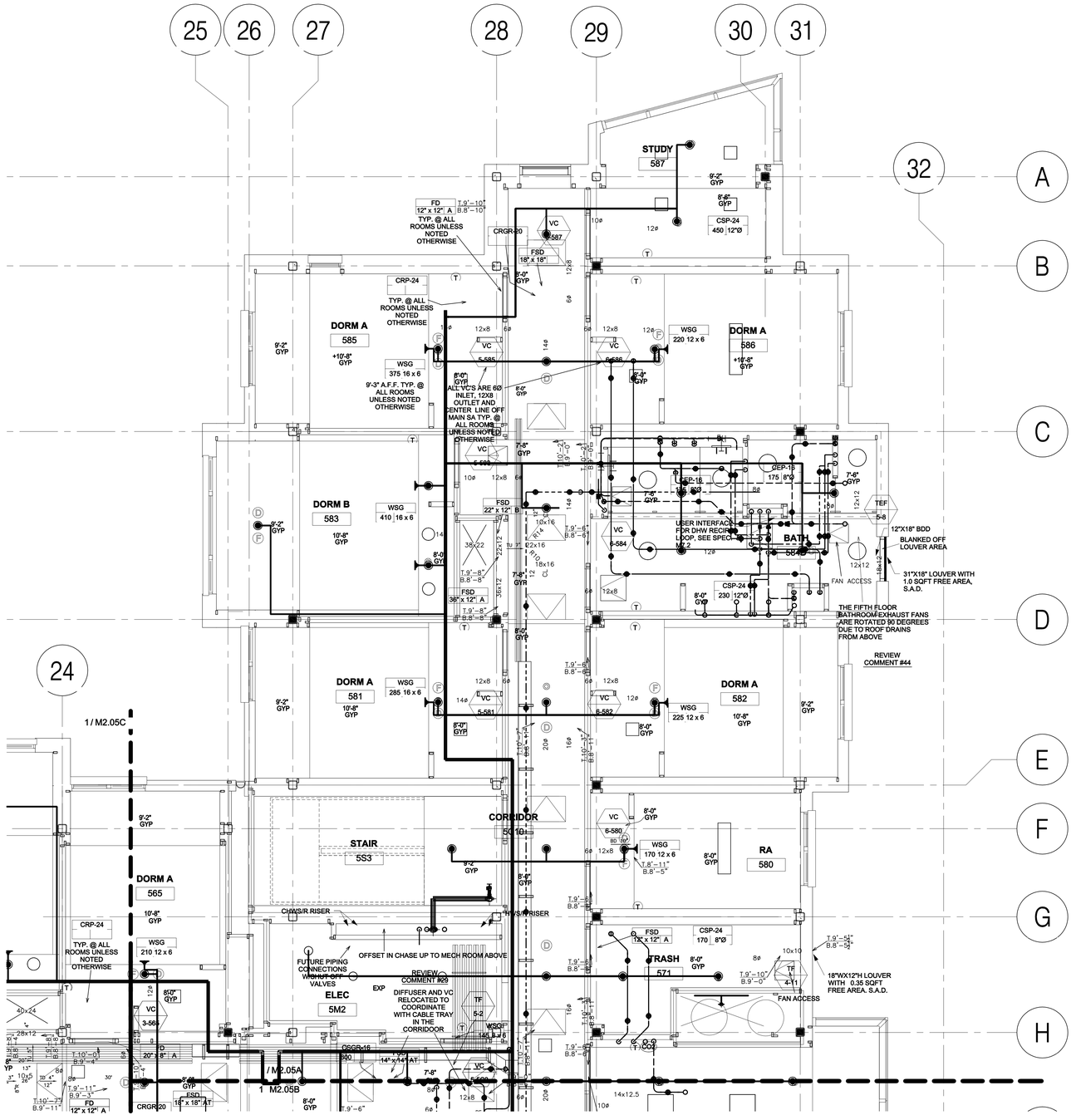
Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

EHDD Job Number
10014

Sheet Title
LEVEL 04 PARTIAL PLAN - WEST WING, WEST

Drawing Number:
M2.04E



1 LEVEL 05 PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

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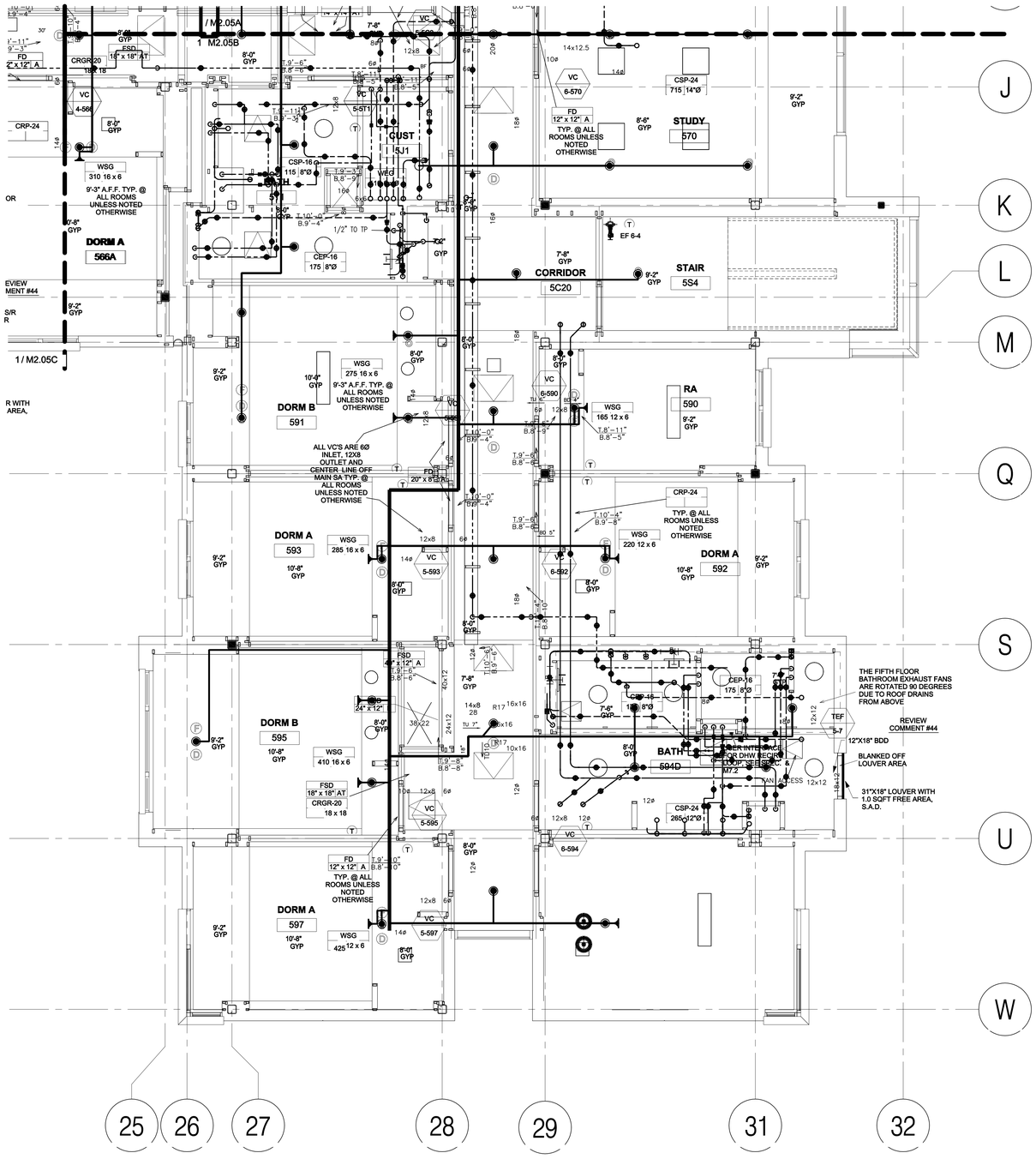
Drawn By: **AD / AZ**
Scale:

EHDD Job Number
10014

Sheet Title
LEVEL 05 PARTIAL PLAN - EAST WING, NORTH

Drawing Number:
M2.05A



1 LEVEL 05 PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

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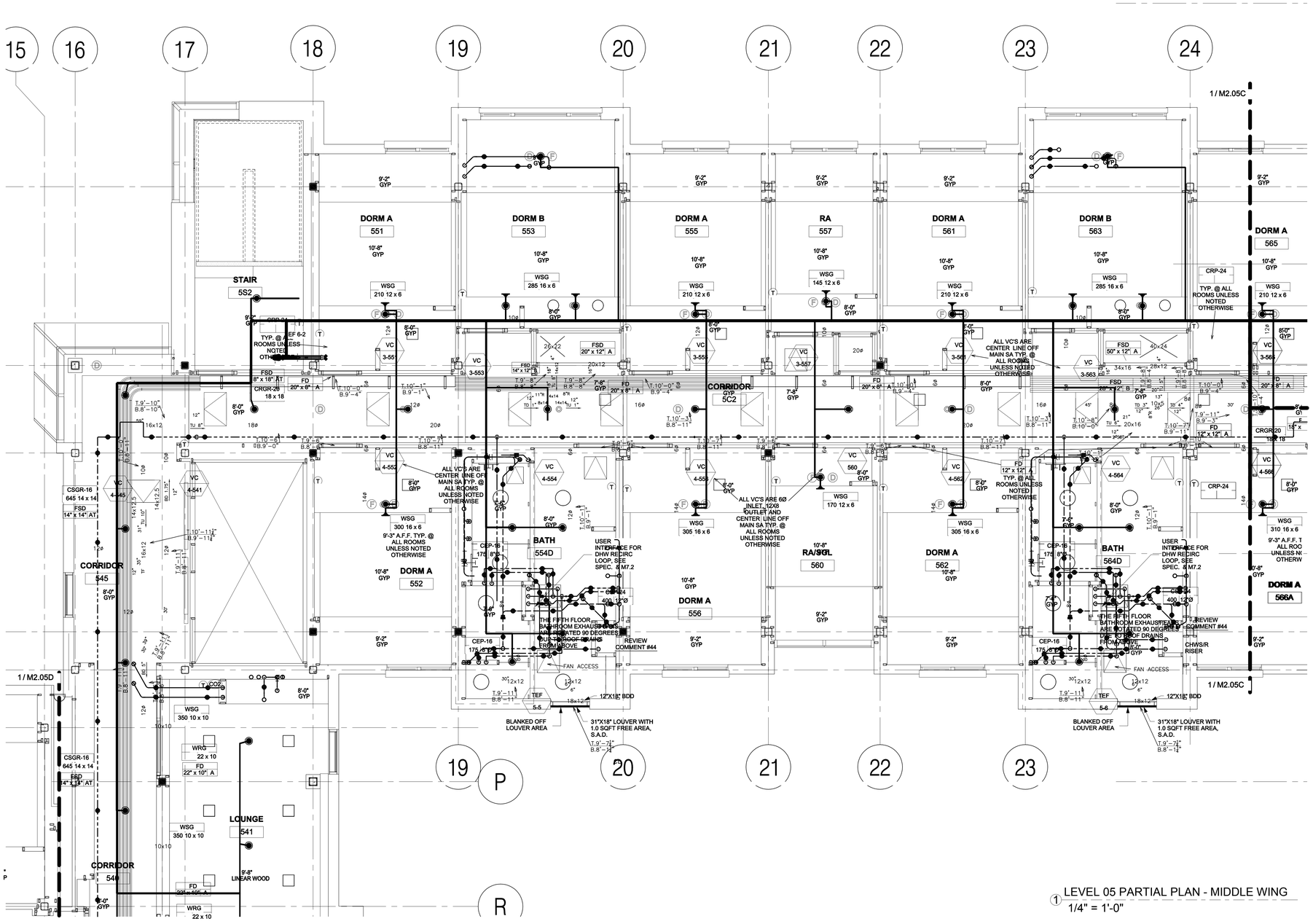
Drawn By: **AD / AZ**
Scale:
EHDD Job Number
10014

Sheet Title
LEVEL 05 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.05B



1 LEVEL 05 PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

UC Merced
University of California
Merced, California

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906270

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Drawn By: **AD / AZ**
Scale:
EHDD Job Number
10014

Sheet Title
LEVEL 05 PARTIAL PLAN - MIDDLE WING

Drawing Number:
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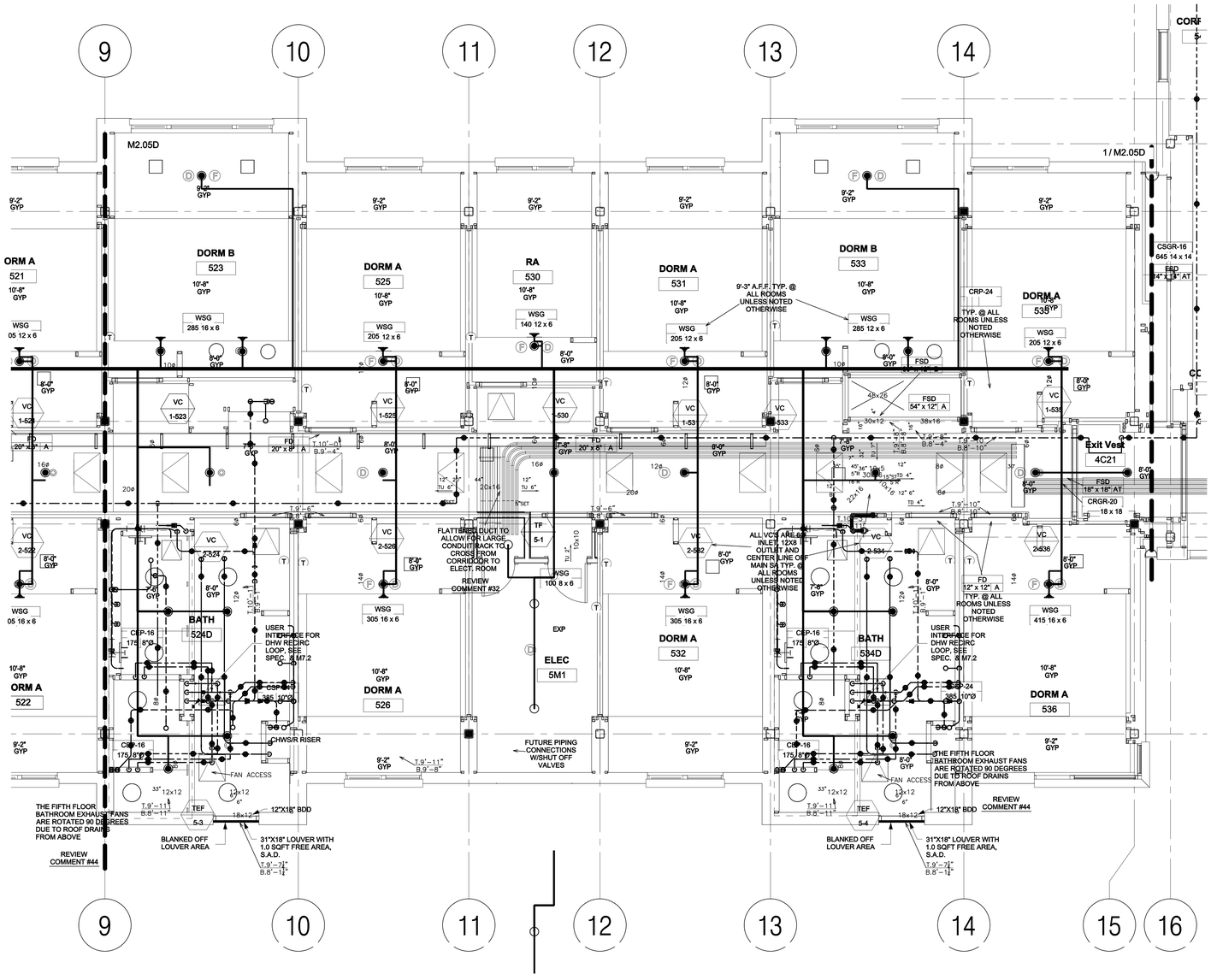

1 LEVEL 05 PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:

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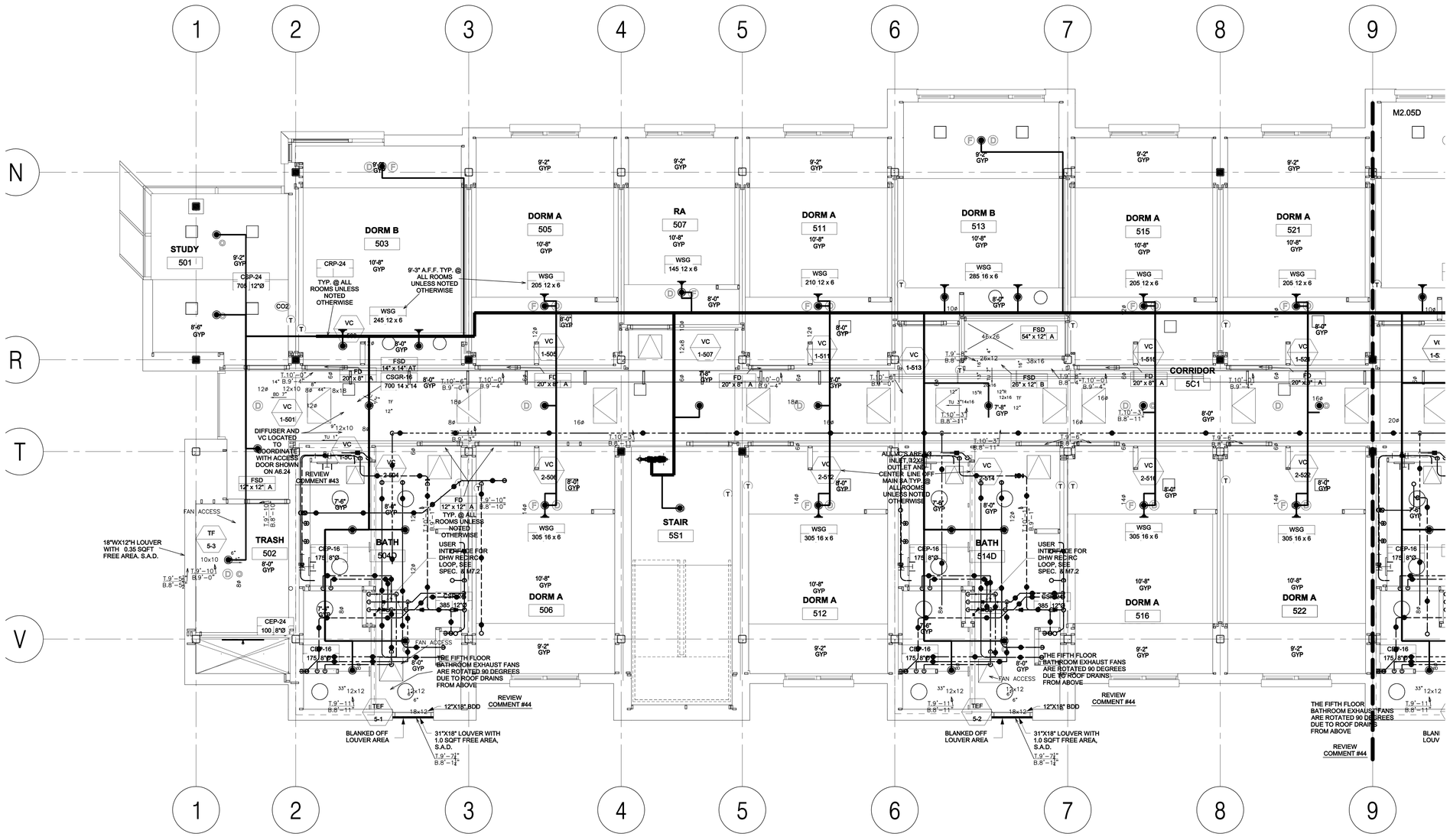
Revisions	Date

Drawn By: **AD / AZ**
Scale:

EHDD Job Number
10014

Sheet Title
LEVEL 05 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.05D



1 LEVEL 05 PARTIAL PLAN -WEST WING,WEST
1/4" = 1'-0"

UC Merced
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Merced, California

HOUSING 4 THE SUMMITS

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Scale:

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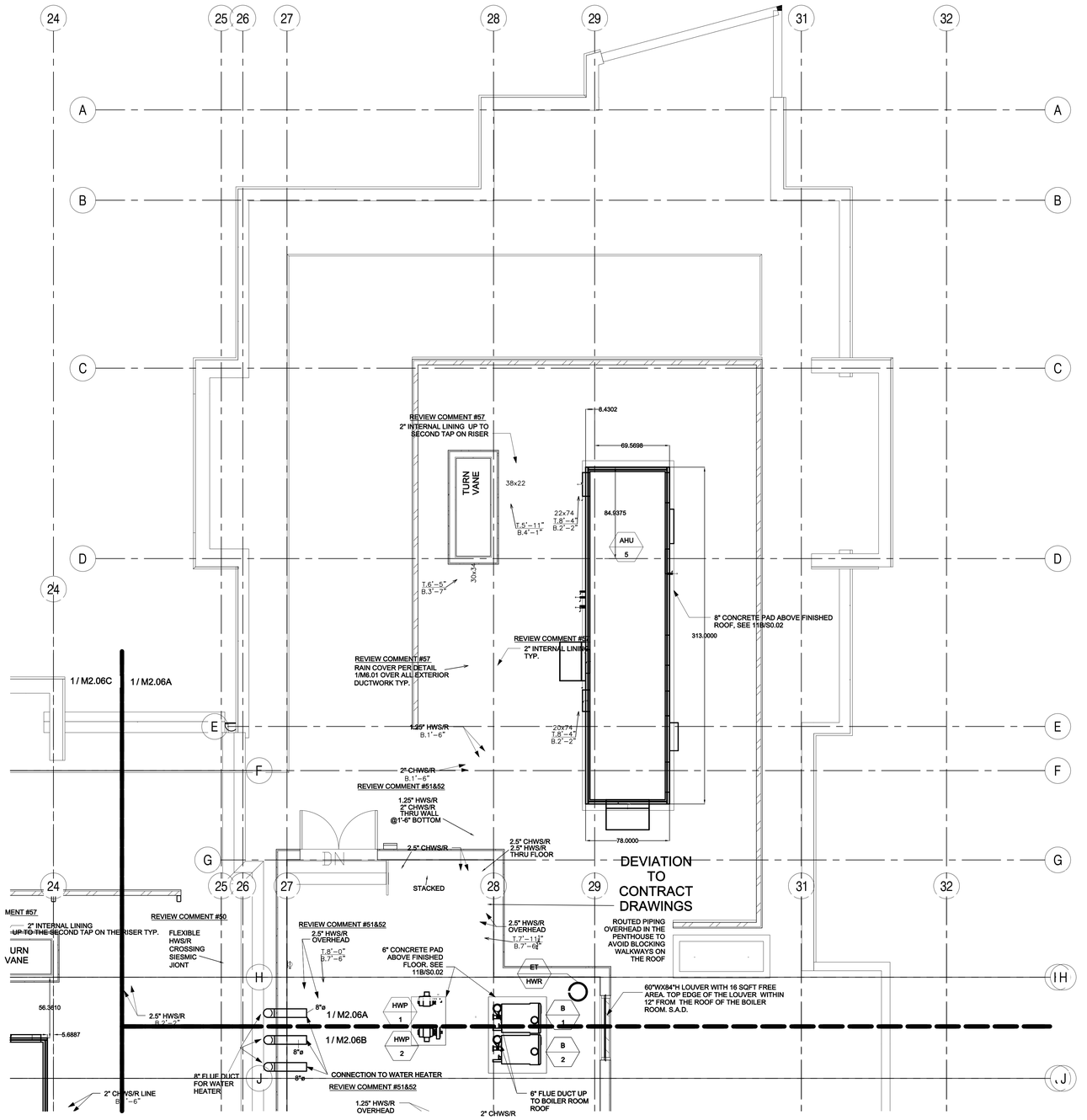
10014

Sheet Title
LEVEL 05 PARTIAL PLAN - WEST WING, WEST

Drawing Number:
M2.05E



1 ROOF PARTIAL PLAN - EAST WING, NORTH
1/4" = 1'-0"

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HOUSING 4 THE SUMMITS

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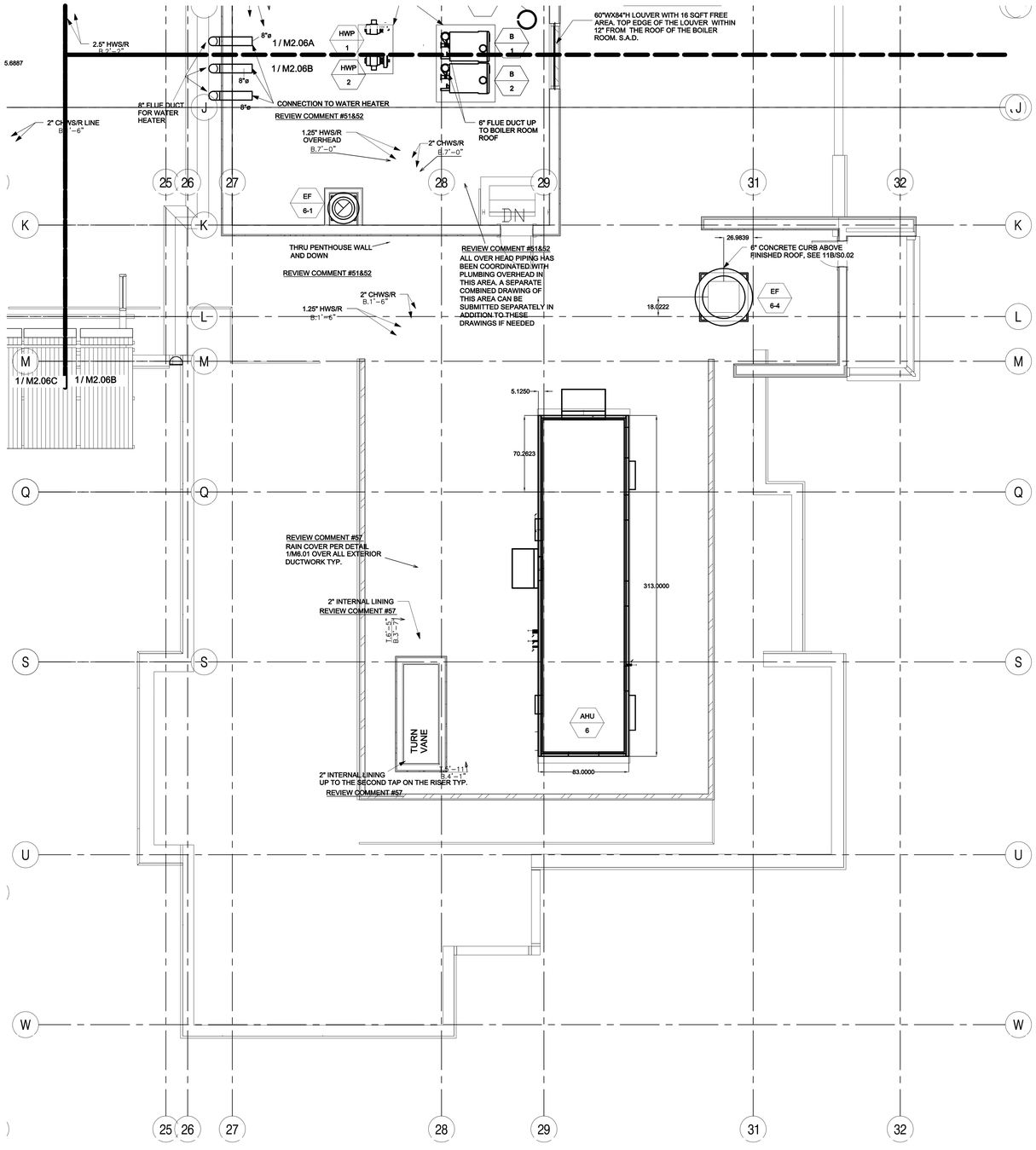
Drawn By: AD / AZ
Scale:
EHDD Job Number
10014

Sheet Title
LEVEL 06 PARTIAL PLAN - EAST WING, NORTH

Drawing Number:
M2.06A



1 ROOF PARTIAL PLAN - EAST WING,SOUTH
1/4" = 1'-0"

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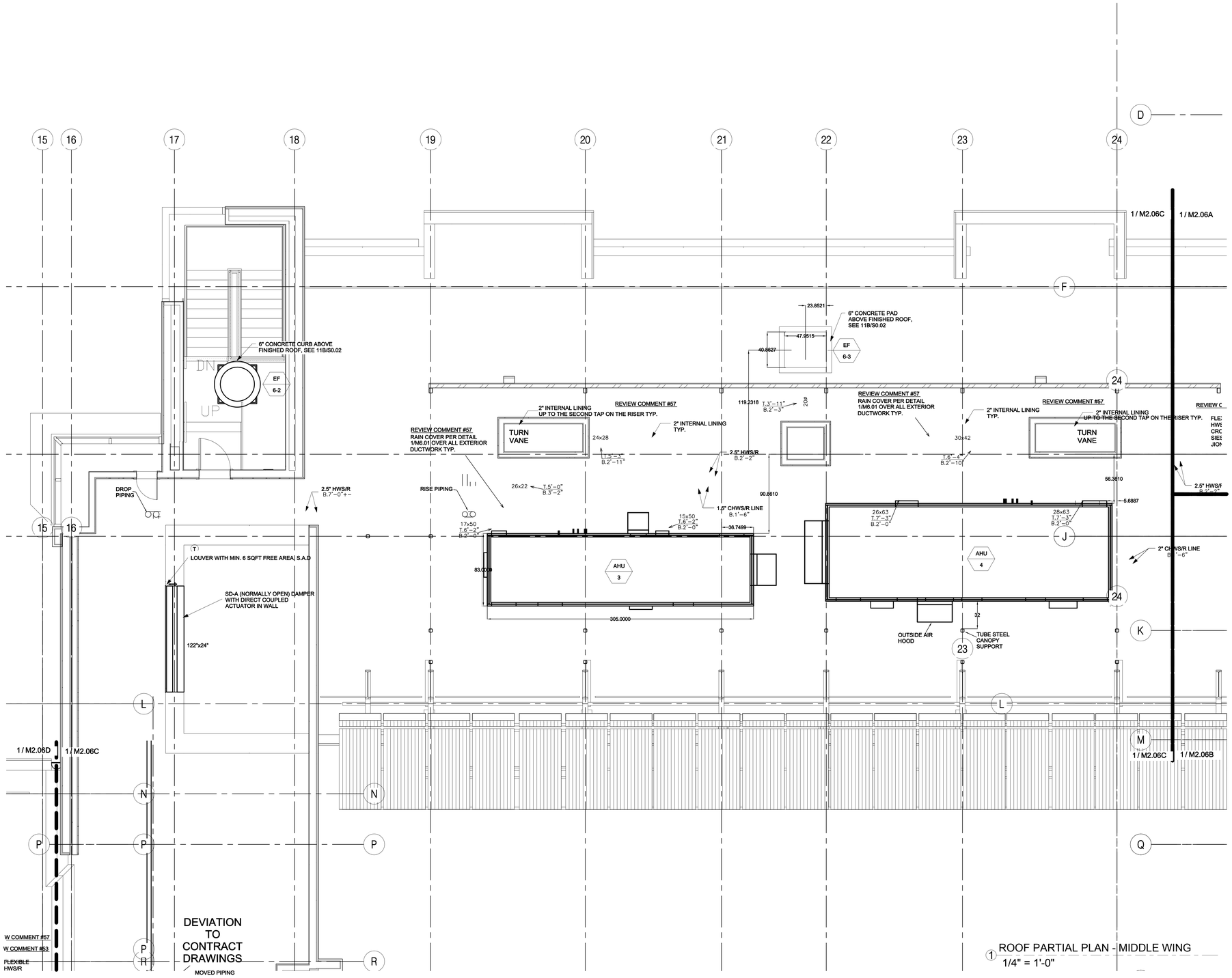
Scale:

EHDD Job Number
10014

Sheet Title
LEVEL 06 PARTIAL PLAN - EAST WING, SOUTH

Drawing Number:
M2.06B



1 ROOF PARTIAL PLAN - MIDDLE WING
1/4" = 1'-0"

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Scale:
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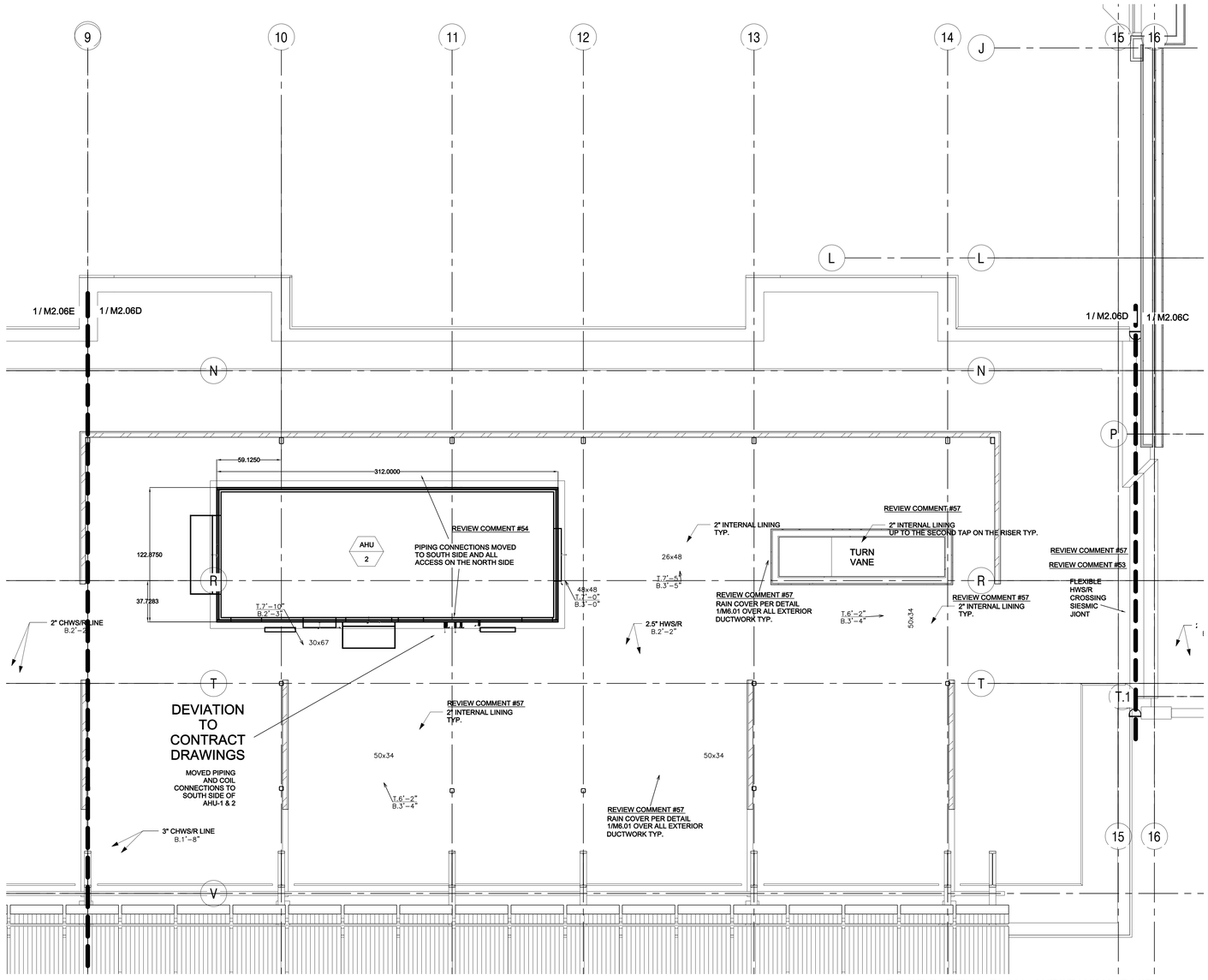
10014

Sheet Title
LEVEL 06 PARTIAL PLAN - MIDDLE WING

Drawing Number:
M2.06C



1 ROOF PARTIAL PLAN - WEST WING,EAST
1/4" = 1'-0"

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Consultant
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Phone: (510) 749-9135
Fax: (510) 749-9136

Seal and Signature

REGISTERED PROFESSIONAL ENGINEER
ALLAN W. DALY
No. M31302
Exp. 06/30/12
MECHANICAL
STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA
MERCED
FIRE MARSHAL
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Date:
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IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL 01
AC FLS SS
DATE

Drawing Stage:
Record Drawings

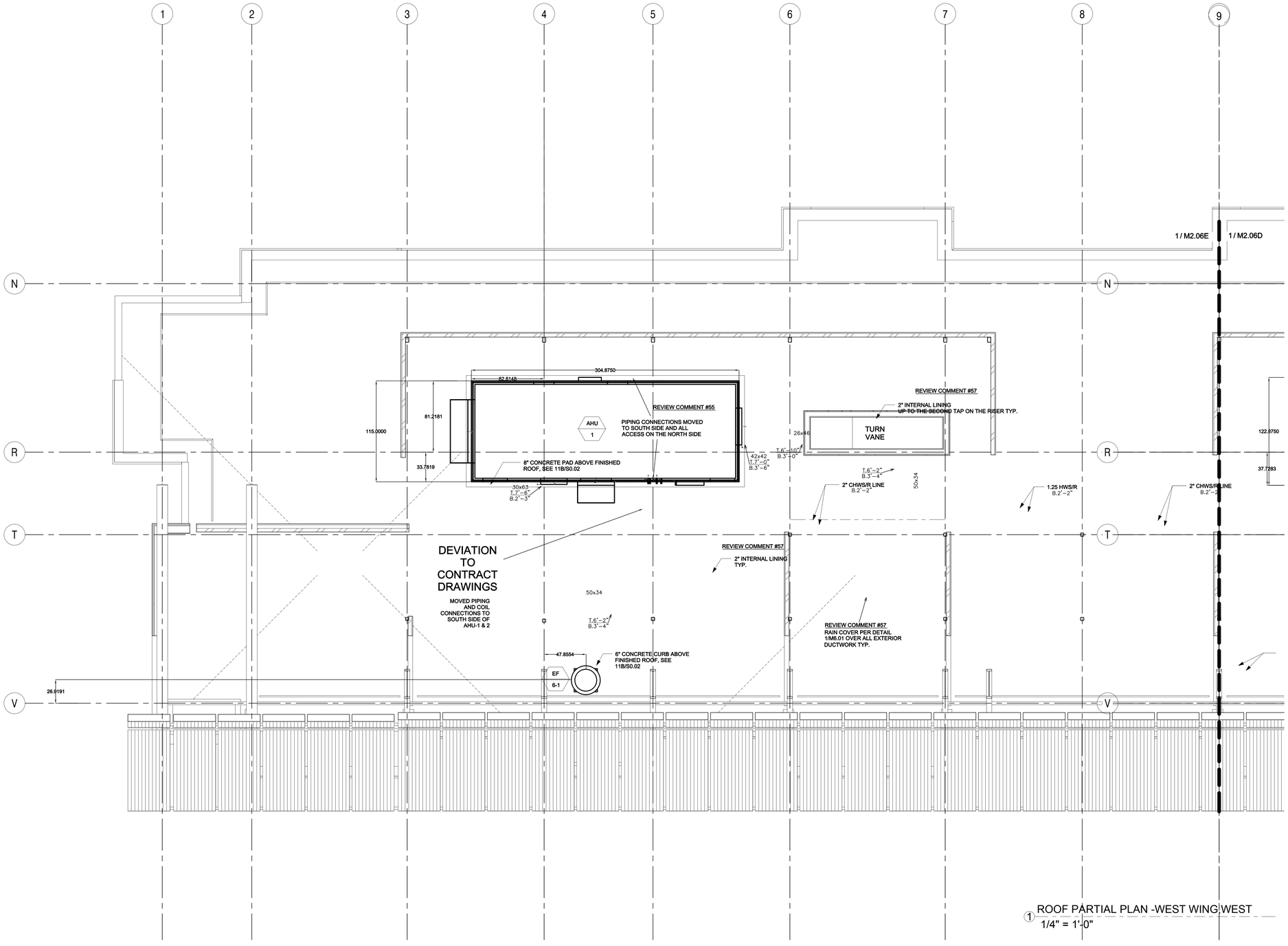
Printing	Date
BID RELEASE 1	08.16.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

Revisions	Date

Drawn By: **AD / AZ**
Scale:
EHDD Job Number
10014

Sheet Title
LEVEL 06 PARTIAL PLAN - WEST WING, EAST

Drawing Number:
M2.06D



1 ROOF PARTIAL PLAN -WEST WING WEST
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
EHDD
Esherick
Homsey
Dodge & Davis
Architecture
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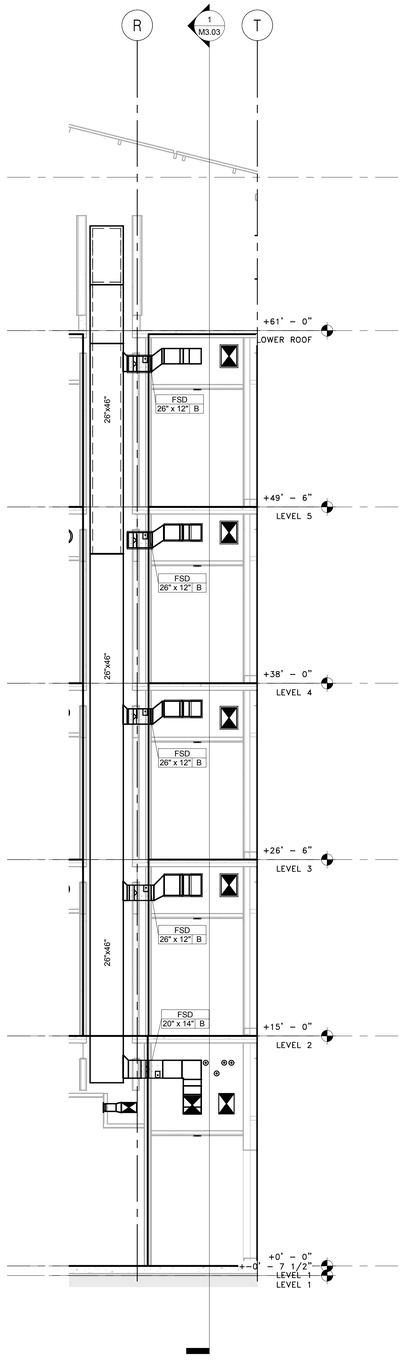
RECORD DRAWINGS	02.28.2014

Revisions	Date

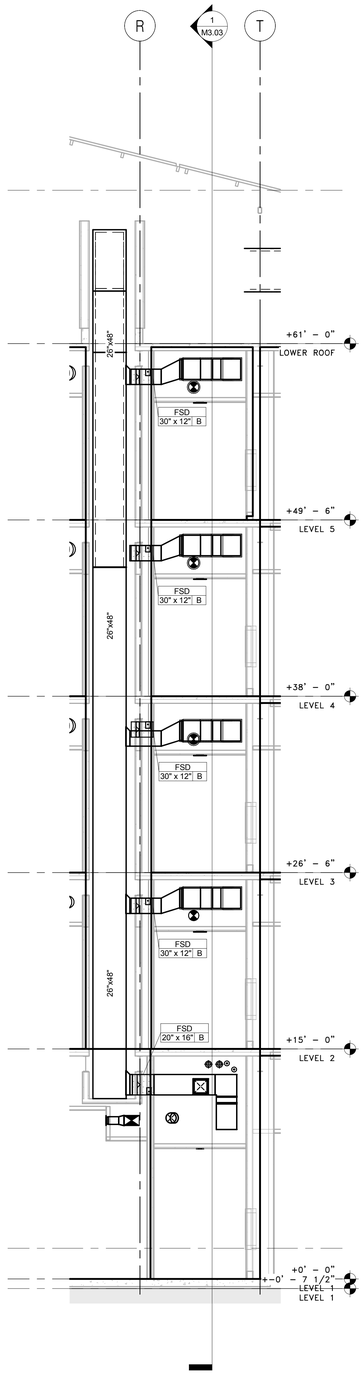
Drawn By: **AD / AZ**
Scale:
EHDD Job Number
10014

Sheet Title
LEVEL 06 PARTIAL PLAN - WEST WING, WEST

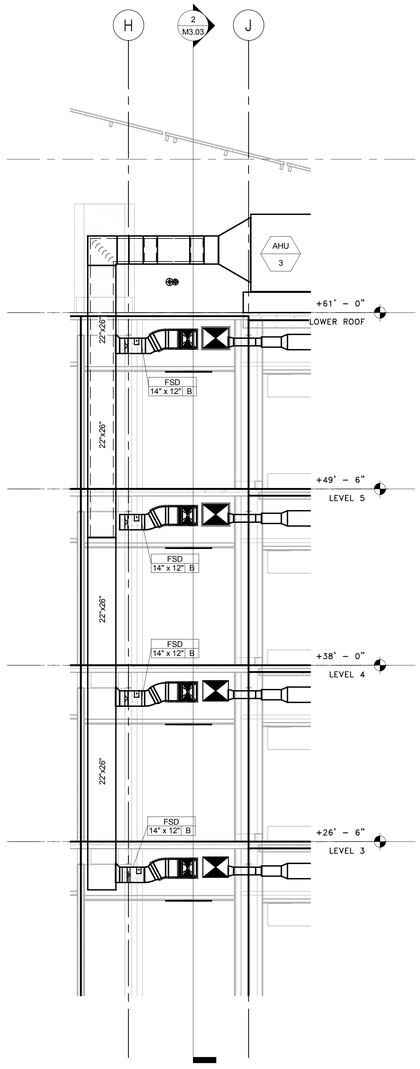
Drawing Number:
M2.06E



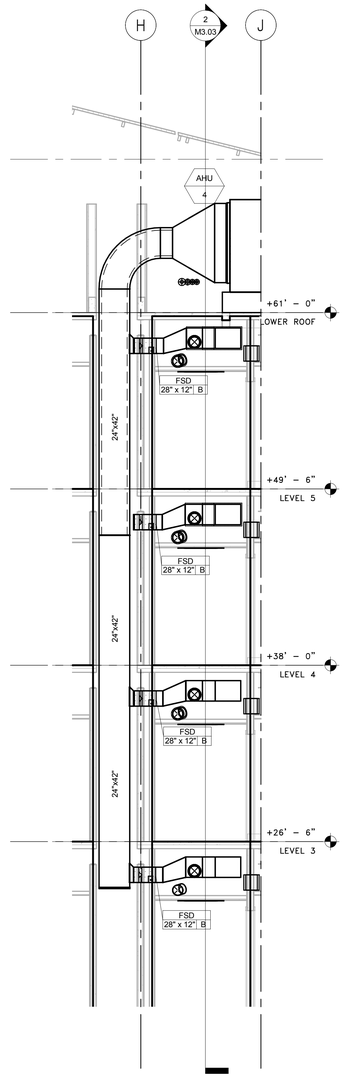
1 AHU-1 SHAFT SECTION
1/4" = 1'-0"



2 AHU-2 SHAFT SECTION
1/4" = 1'-0"



3 AHU-3 SHAFT SECTION
1/4" = 1'-0"



4 AHU-4 SHAFT SECTION
1/4" = 1'-0"

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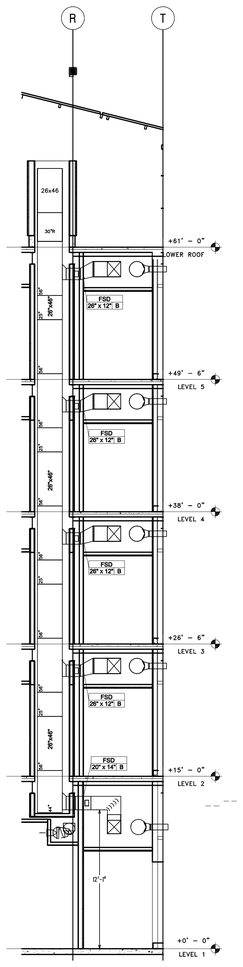
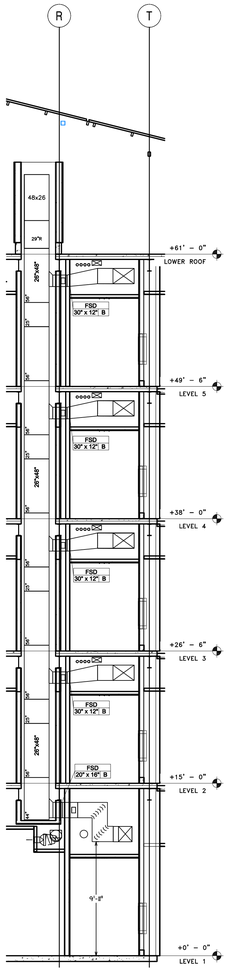
Drawn By: AD \ AZ
Scale: AS NOTED
EHDD Job Number
10014

Sheet Title
HVAC SECTIONS

Drawing Number:
M3.01



AHU-1 SHAFT SECTION



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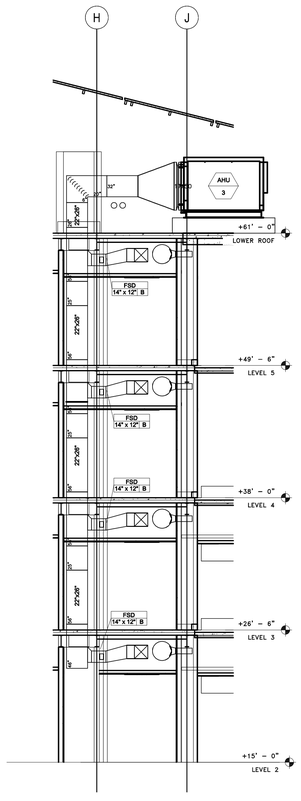
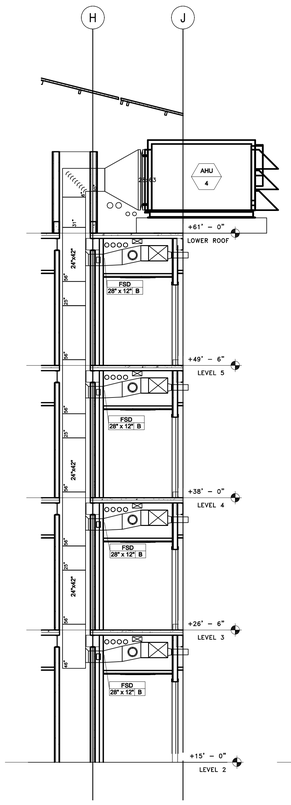


AHU-3 SHAFT SECTION



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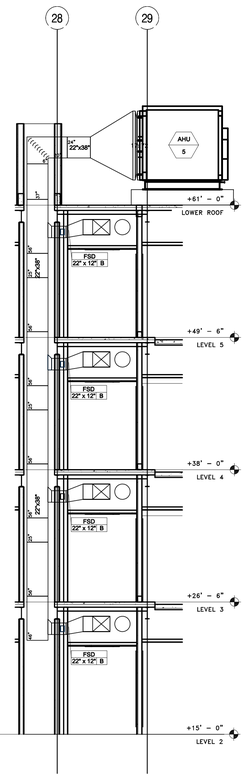
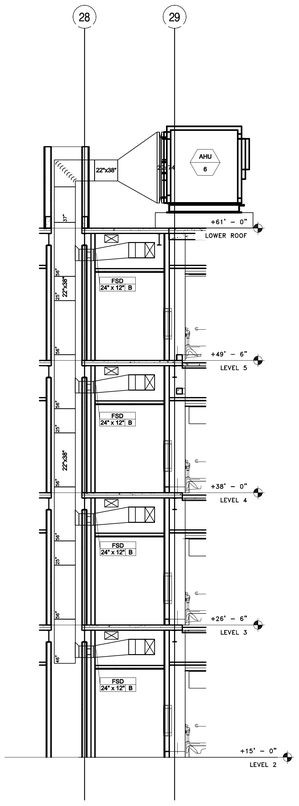


AHU-5 SHAFT SECTION



AHU-6 SHAFT SECTION

AHU SHAFT SECTIONS
3/16" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
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Architect:
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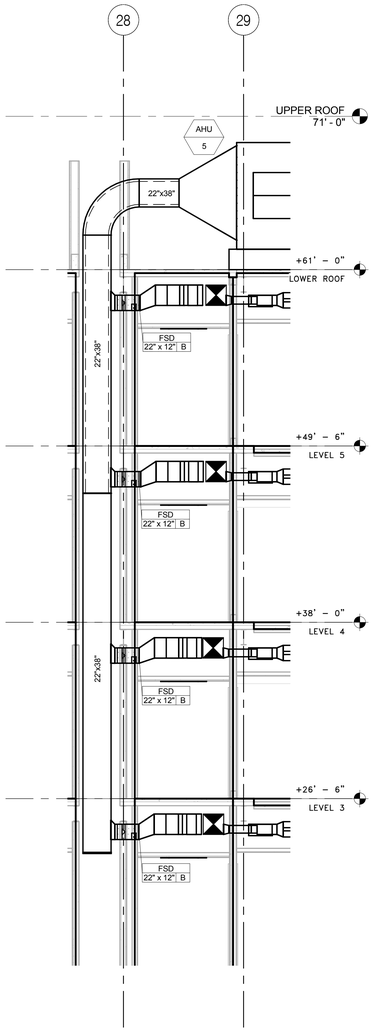
Revisions	Date

Drawn By: **AD / AZ**
Scale: **1/4"=1'-0"**

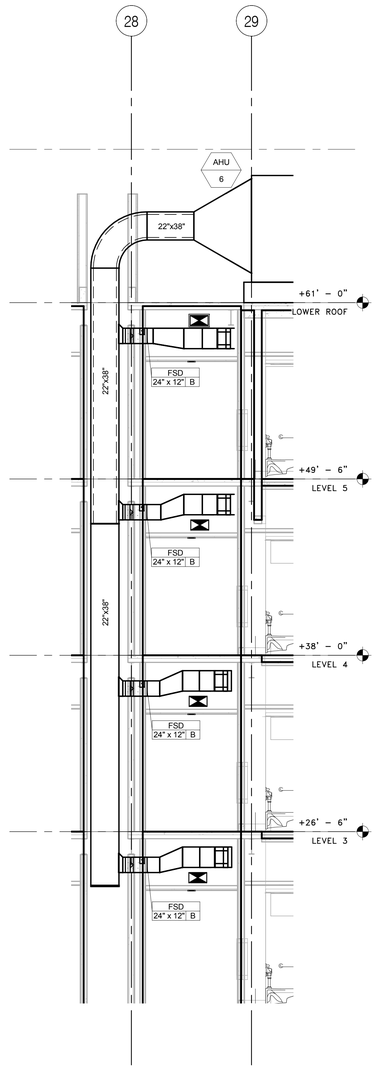
EHDD Job Number
10014

Sheet Title
AHU SHAFT SECTIONS

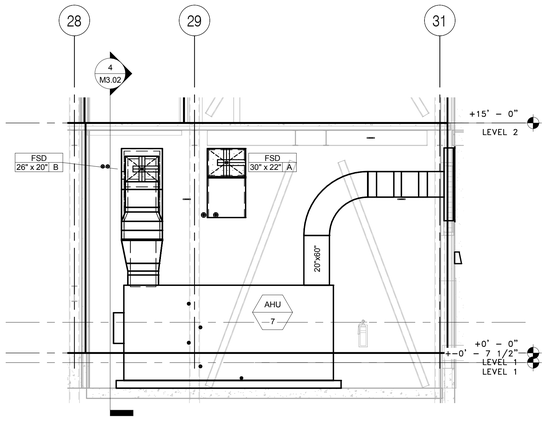
Drawing Number:
M3.01A



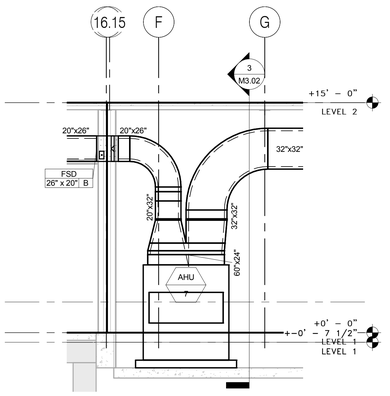
① AHU-5 SHAFT SECTION
1/4" = 1'-0"



② AHU-6 SHAFT SECTION
1/4" = 1'-0"



③ AHU-7 SOUTH ELEVATION
1/4" = 1'-0"



④ AHU-7 WEST SECTION
1/4" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

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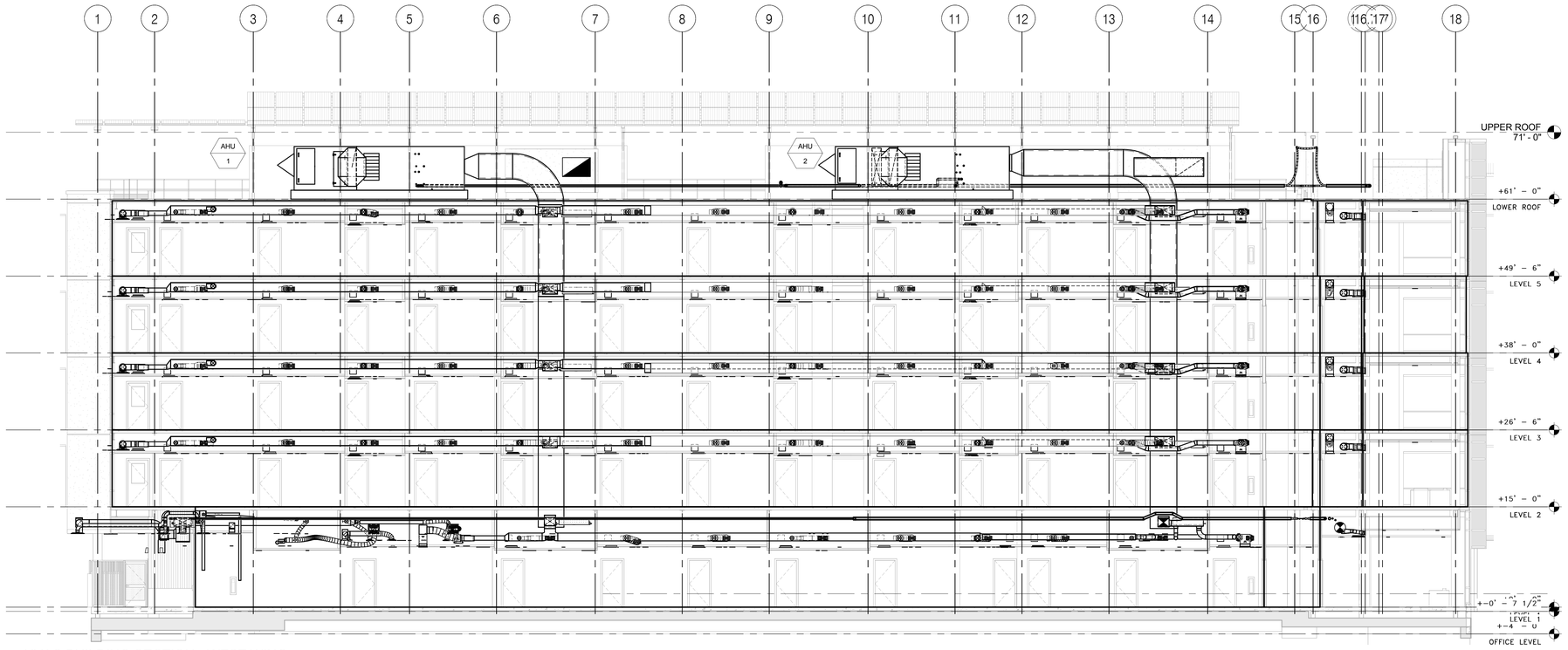
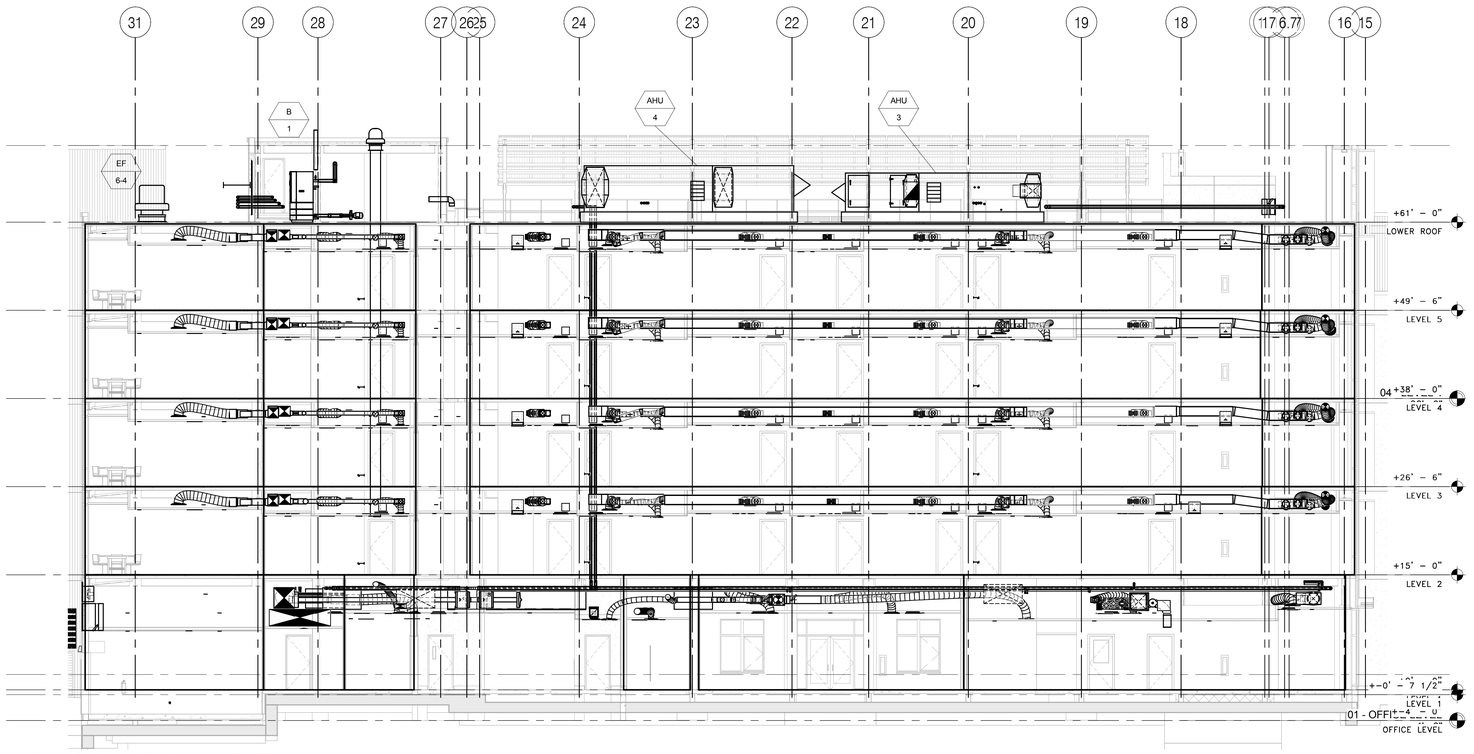
Drawn By: AD \ AZ
Scale: AS NOTED
EHDD Job Number
10014

Sheet Title
HVAC SECTIONS

Drawing Number:
M3.02



① HVAC BUILDING SECTION - WEST WING
1/8" = 1'-0"



② HVAC BUILDING SECTION - CENTRAL WING
1/8" = 1'-0"

UC Merced
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Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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Drawing Stage:
Construction Drawings

Printing	Date
100% SCHEMATIC DESIGN	02.23.2011
100% DESIGN DEVELOPMENT	06.23.2011
BID RELEASE 1	09.23.2011
DSA SUBMITTAL	10.14.2011
BID RELEASE 2	10.14.2011
DSA APPROVAL	12.07.2011
BID RELEASE 3	12.07.2011
CONFORMED SET	12.16.2012

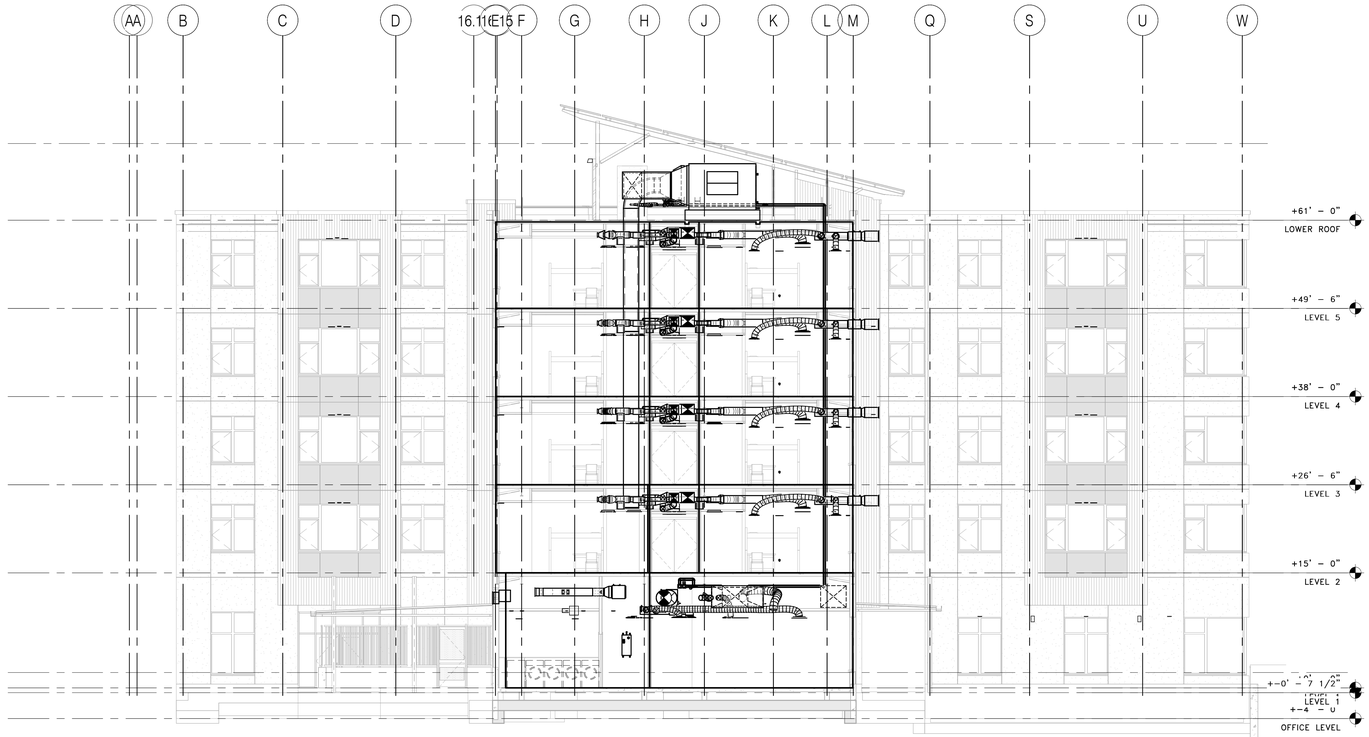
Revisions	Date

Drawn By: AD \ AZ
Scale: AS NOTED

EHDD Job Number
10014

Sheet Title
HVAC BUILDING SECTIONS

Drawing Number:
M3.03



1 HVAC BUILDING SECTION - EAST WING
1/8" = 1'-0"

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:

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Construction Drawings

Printing	Date
100% SCHEMATIC DESIGN	02.23.2011
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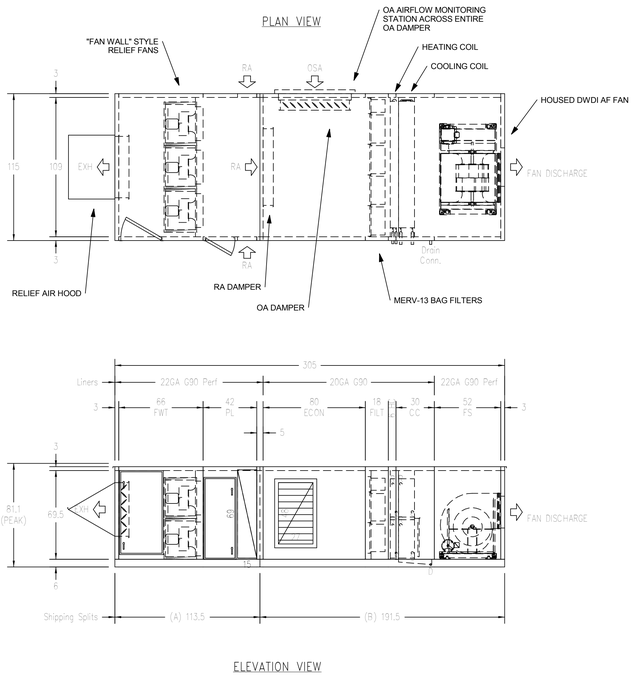
Drawn By: AD \ AZ
Scale: AS NOTED

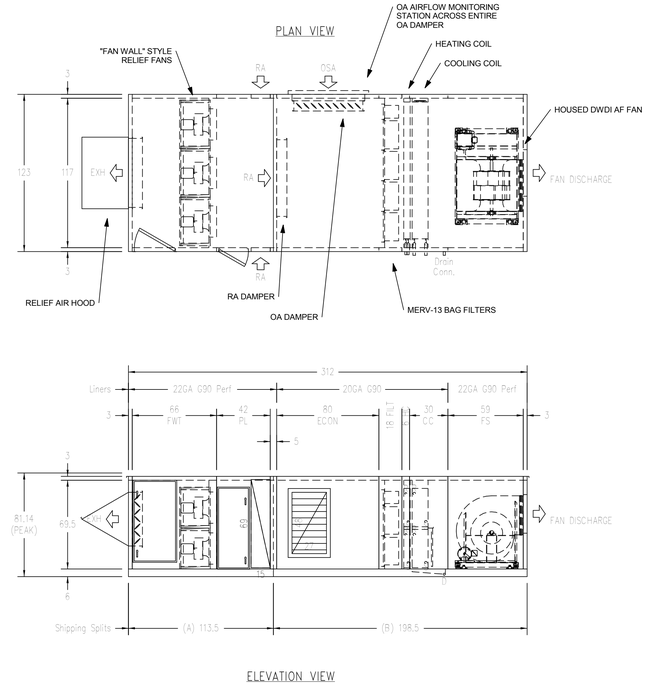
EHDD Job Number
10014

Sheet Title
HVAC BUILDING SECTIONS

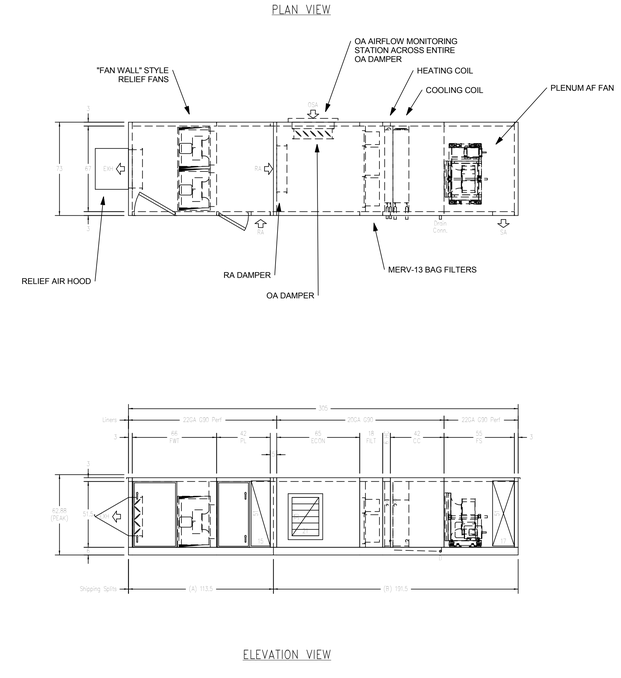
Drawing Number:
M3.04



① AH-1 BASIS-OF-DESIGN LAYOUT AND DETAILS
1/4" = 1'-0"



② AH-2 BASIS-OF-DESIGN LAYOUT AND DETAILS
1/4" = 1'-0"



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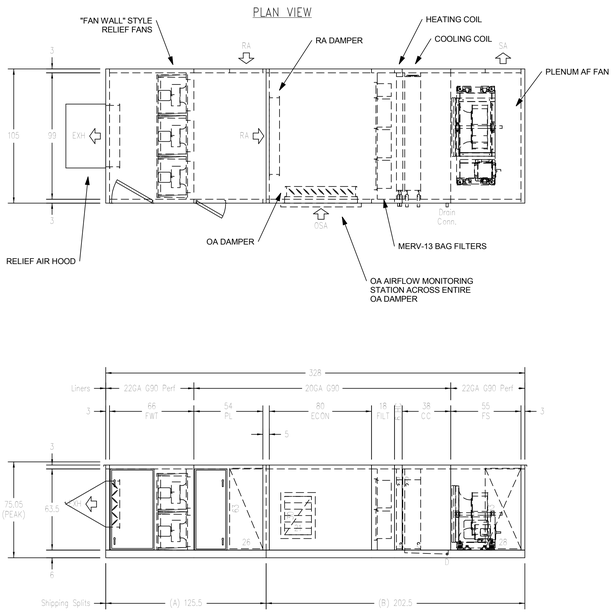

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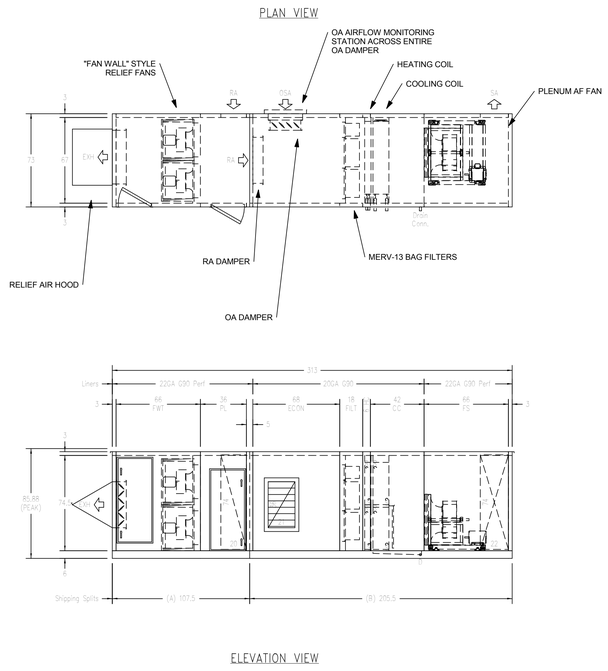
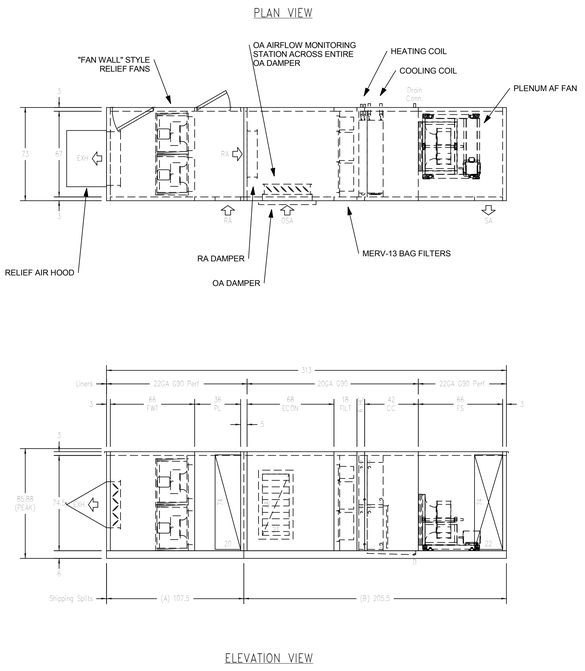
1/4" = 1'-0"



⑤ AH-5 BASIS-OF-DESIGN LAYOUT AND DETAILS
1/4" = 1'-0"



⑥ AH-6 BASIS-OF-DESIGN LAYOUT AND DETAILS
1/4" = 1'-0"

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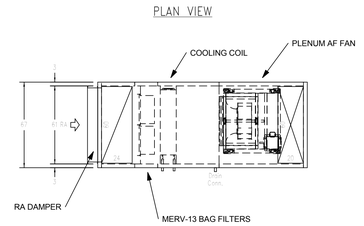
Drawn By: AD \ AZ
Scale: AS NOTED
EHDD Job Number
10014

Sheet Title
HVAC EQUIPMENT BASIS-OF-DESIGN LAYOUTS

Drawing Number:
M4.01



1 AH-7 BASIS-OF-DESIGN LAYOUT AND DETAILS
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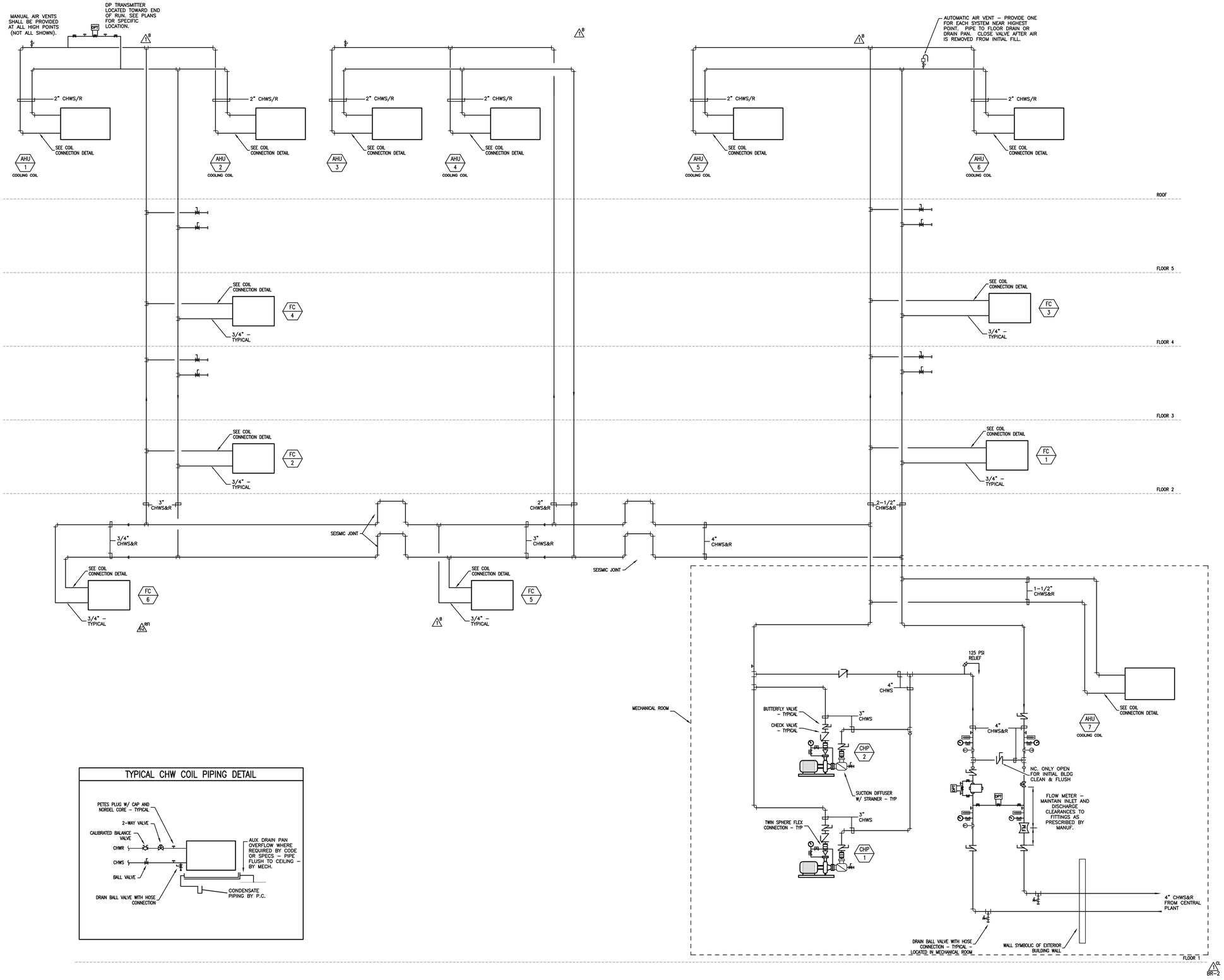
Scale: AS NOTED

EHDD Job Number
10014

Sheet Title
HVAC EQUIPMENT BASIS-OF-DESIGN LAYOUTS

Drawing Number:
M4.02



TYPICAL CHW COIL PIPING DETAIL

UC Merced
University of California
Merced, California

HOUSING 4 THE SUMMITS

Project Number:
906270

Architect:
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Esherick Homsey Dodge & Davis
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Graphic Design

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Seal and Signature

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BID RELEASE 1	08.16.2011
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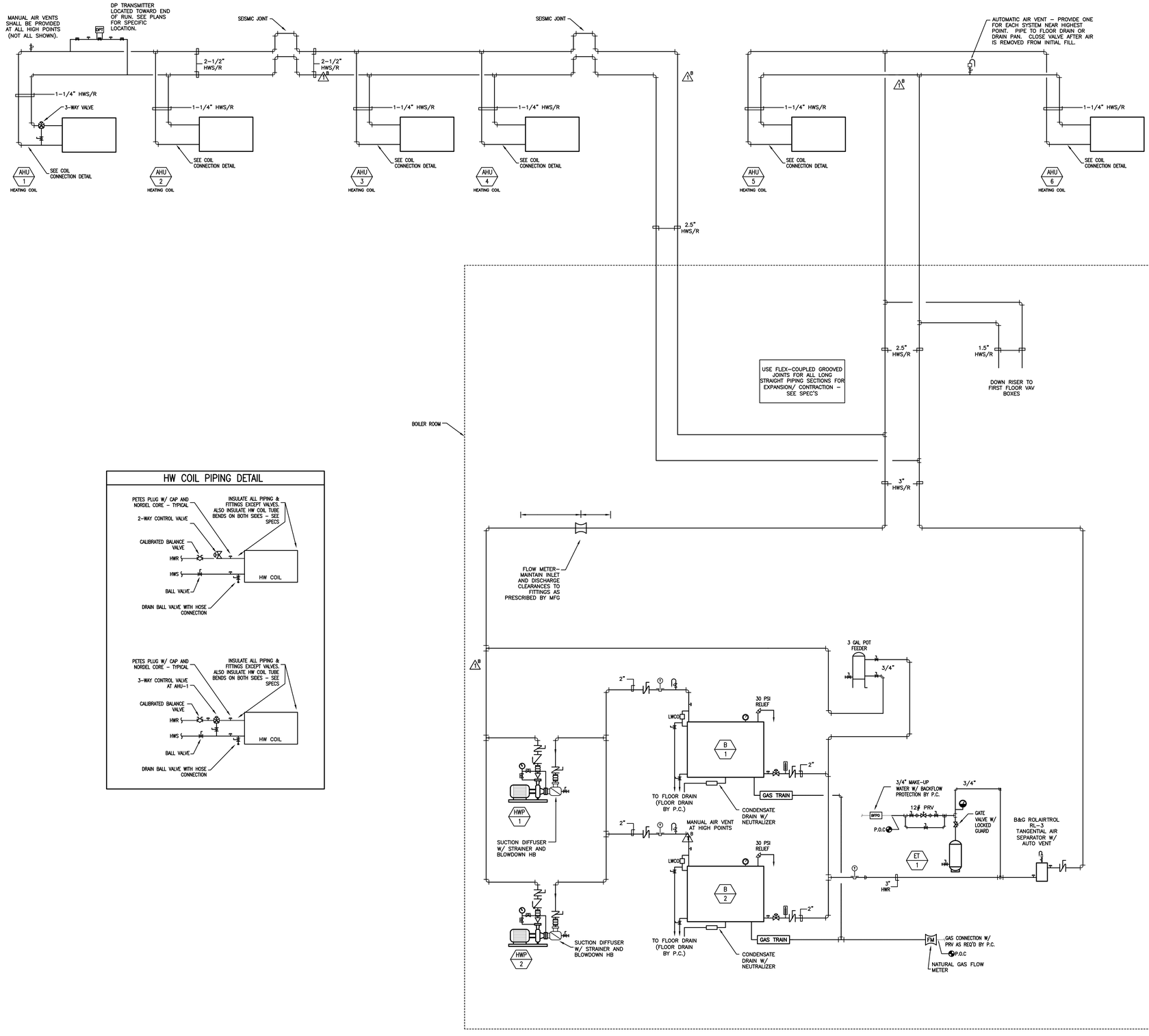
CONFORMED SET	02.16.2012
RECORD DRAWINGS	02.28.2014

Revisions	Date
8 BULLETIN 09	03.23.2012
8 RFI 062	03.26.2012

Drawn By: **AD / AZ**
Scale: **NO SCALE**
EHDD Job Number
10014

Sheet Title
CHW SYSTEM SCHEMATIC

Drawing Number: 8 9
M5.01



HW COIL PIPING DETAIL

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University of California
Merced, California

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Architect:
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Revisions	Date
1 BR-2 CLARIFICATION 1	11.17.2011
1 8 BULLETIN 01	02.07.2012
9 8 BULLETIN 09	03.23.2012

Drawn By: **AD / AZ**
Scale: **NO SCALE**
EHDD Job Number
10014

Sheet Title
HW SYSTEM SCHEMATIC

Drawing Number:
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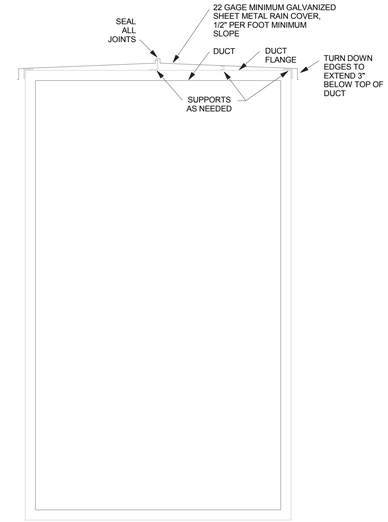
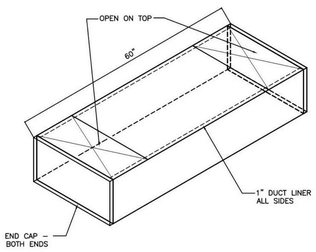
M5.02



1 ROOFTOP DUCTWORK RAIN COVER
1" = 1'-0"



2 LINED SOUND BOOT
1/2" = 1'-0"

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Revisions	Date

Drawn By: AD \ AZ
Scale: AS NOTED

EHDD Job Number

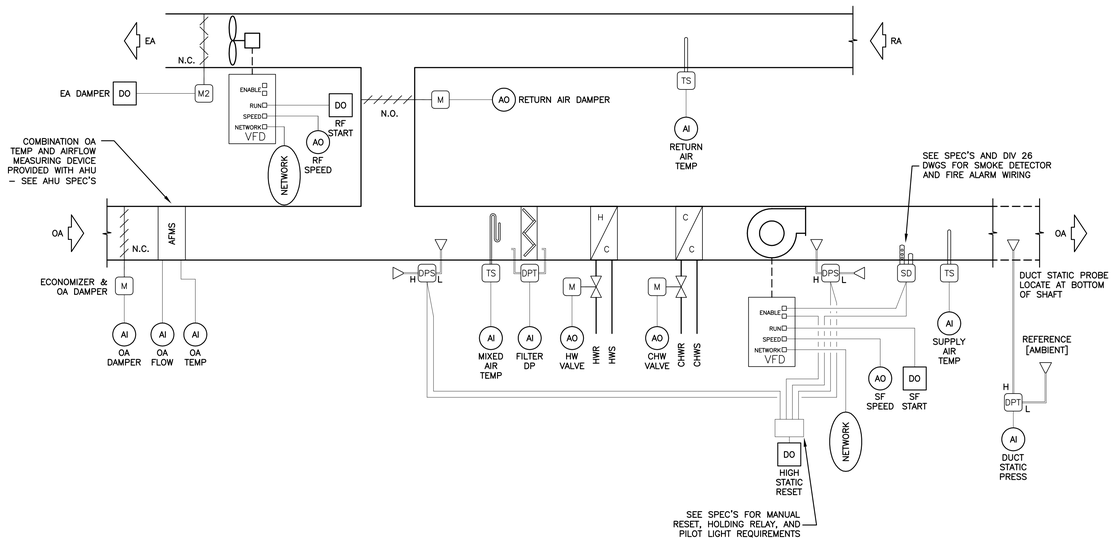
10014

Sheet Title

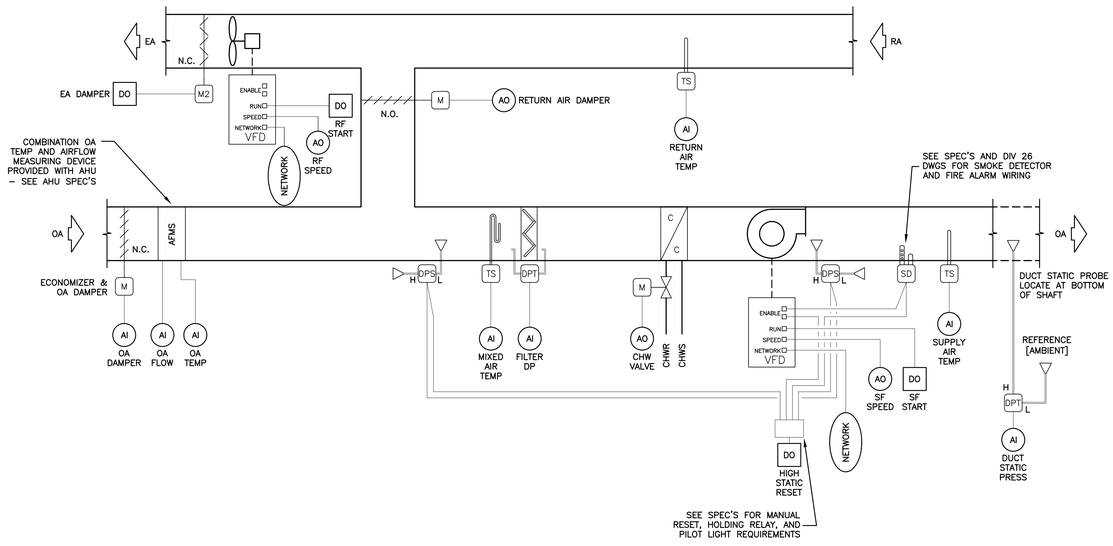
HVAC DETAILS

Drawing Number:

M6.01



1 M7.01 VAV AIR HANDLER CONTROL (AHU–1 THROUGH 6)
NO SCALE



2 M7.01 VAV AIR HANDLER CONTROL (AHU–7)
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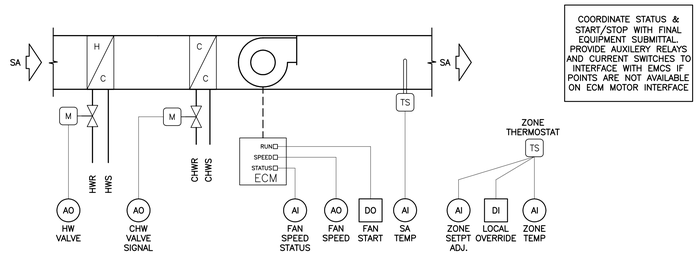
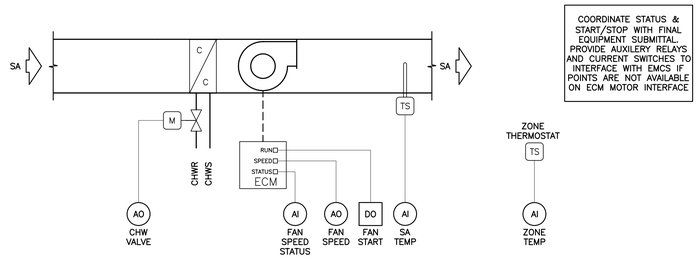


3 M7.01 VARIABLE SPEED 4–PIPE FAN COIL CONTROL
NO SCALE



4 M7.01 VARIABLE SPEED 2–PIPE FAN COIL CONTROL
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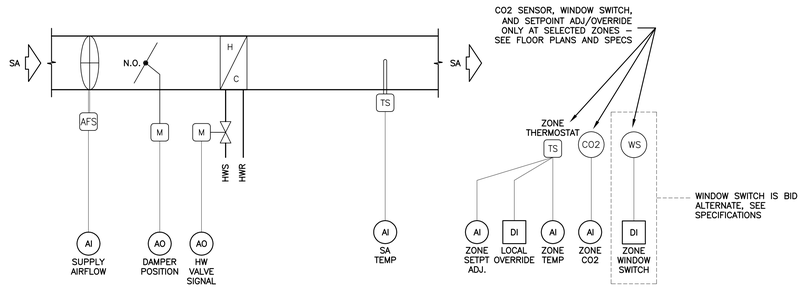

5 M7.01 VAV RH ZONE CONTROL
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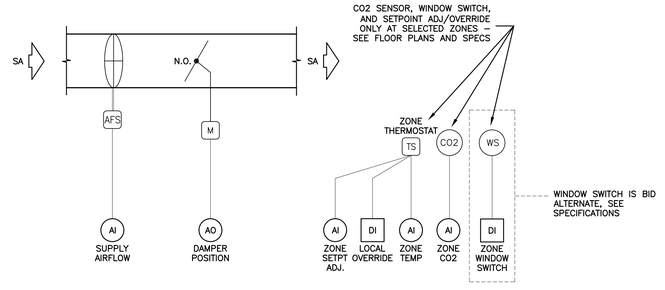

6 M7.01 VAV COOLING ONLY ZONE CONTROL
NO SCALE

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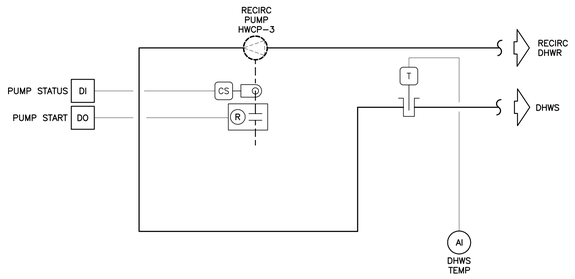
Sheet Title
CONTROL SCHEMATICS

Drawing Number:
M7.01



1 M7.02 RLC APPARTMENT DHW SYSTEM CONTROL
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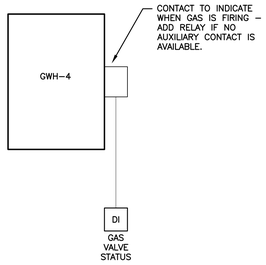

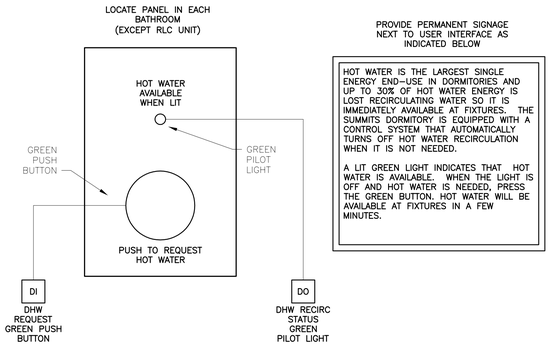

3 M7.02 DHW RECIRC LOOP USER INTERFACE
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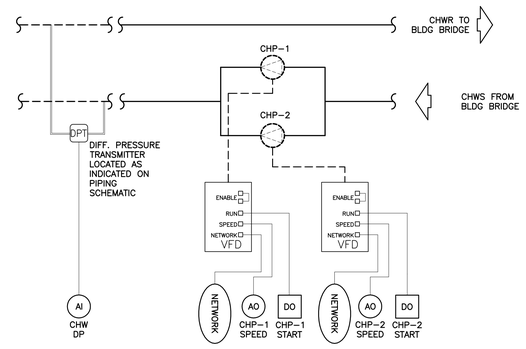

4 M7.02 CHW PUMP CONTROL DIAGRAM
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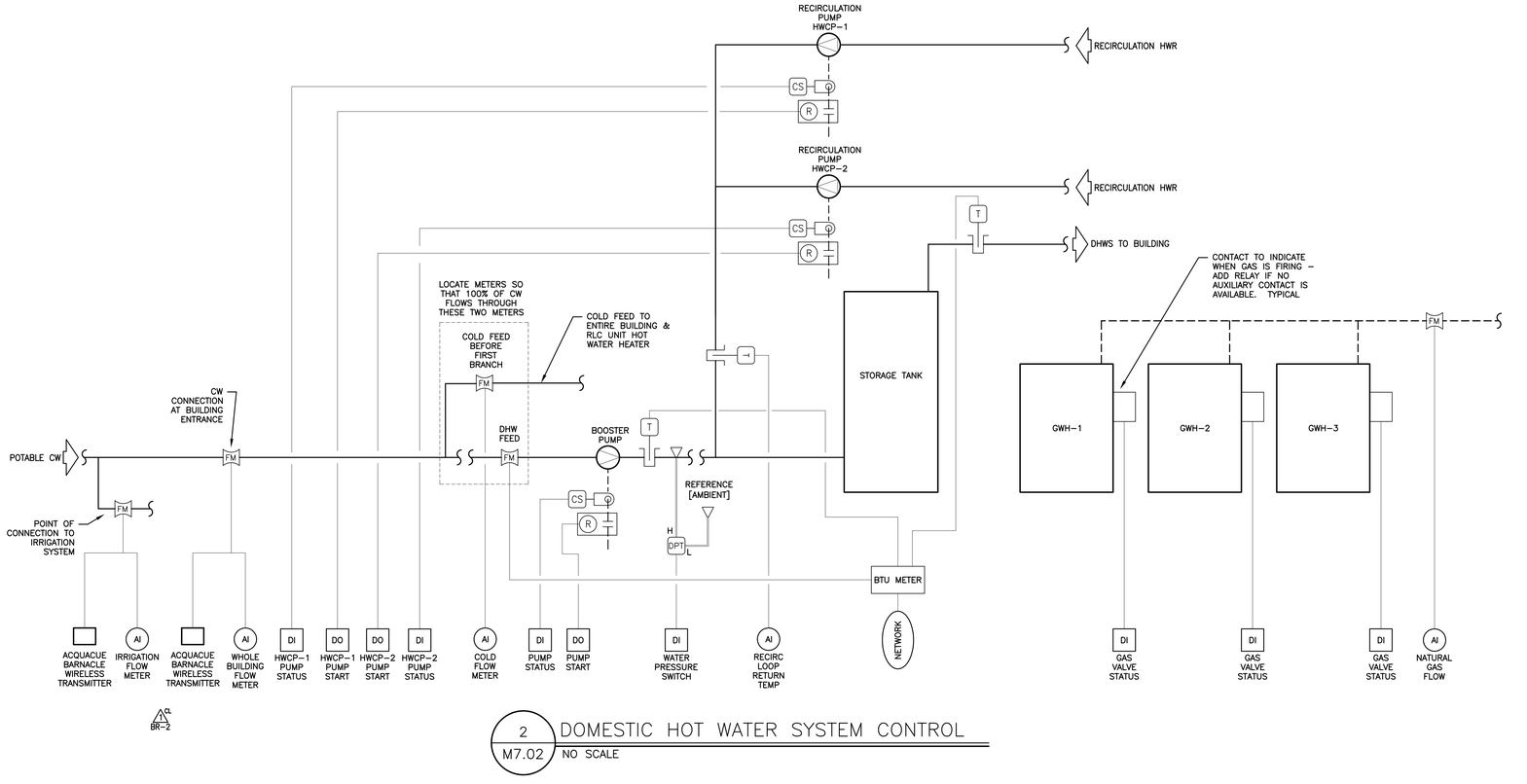
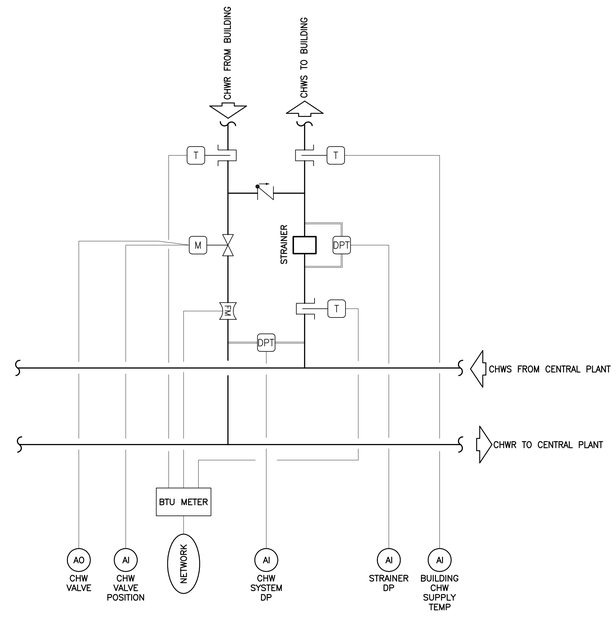


2 M7.02 DOMESTIC HOT WATER SYSTEM CONTROL
NO SCALE



5 M7.02 CHW BRIDGE CONNECTION
NO SCALE

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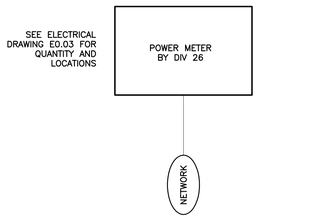

8 M7.03 POWER MONITORING
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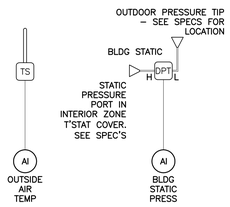

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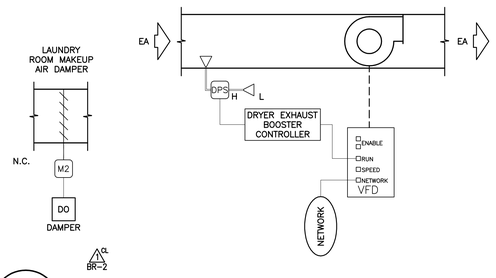

2 M7.03 DRYER BOOSTER SYSTEM CONTROL
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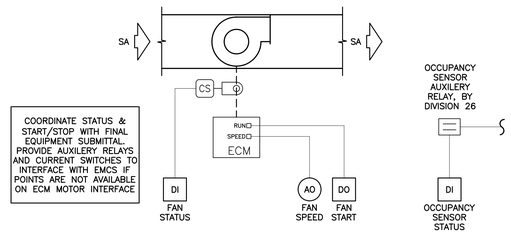

4 M7.03 BATHROOM EXHAUST FAN CONTROL
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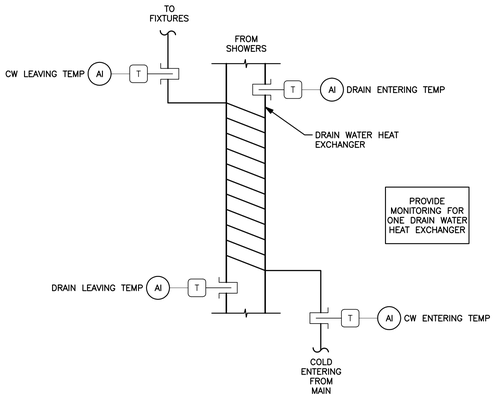
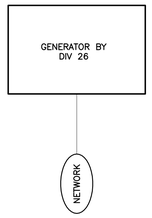


9 M7.03 DRAIN WATER HEAT EXCHANGER MONITORING
NO SCALE



10 M7.03 EMERGENCY GENERATOR INTERFACE
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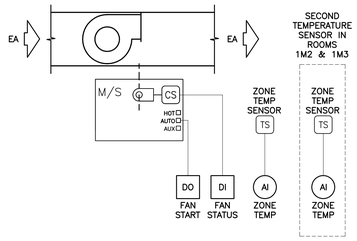

5 M7.03 ELECTRICAL & TRASH ROOM TRANSFER FAN CONTROL
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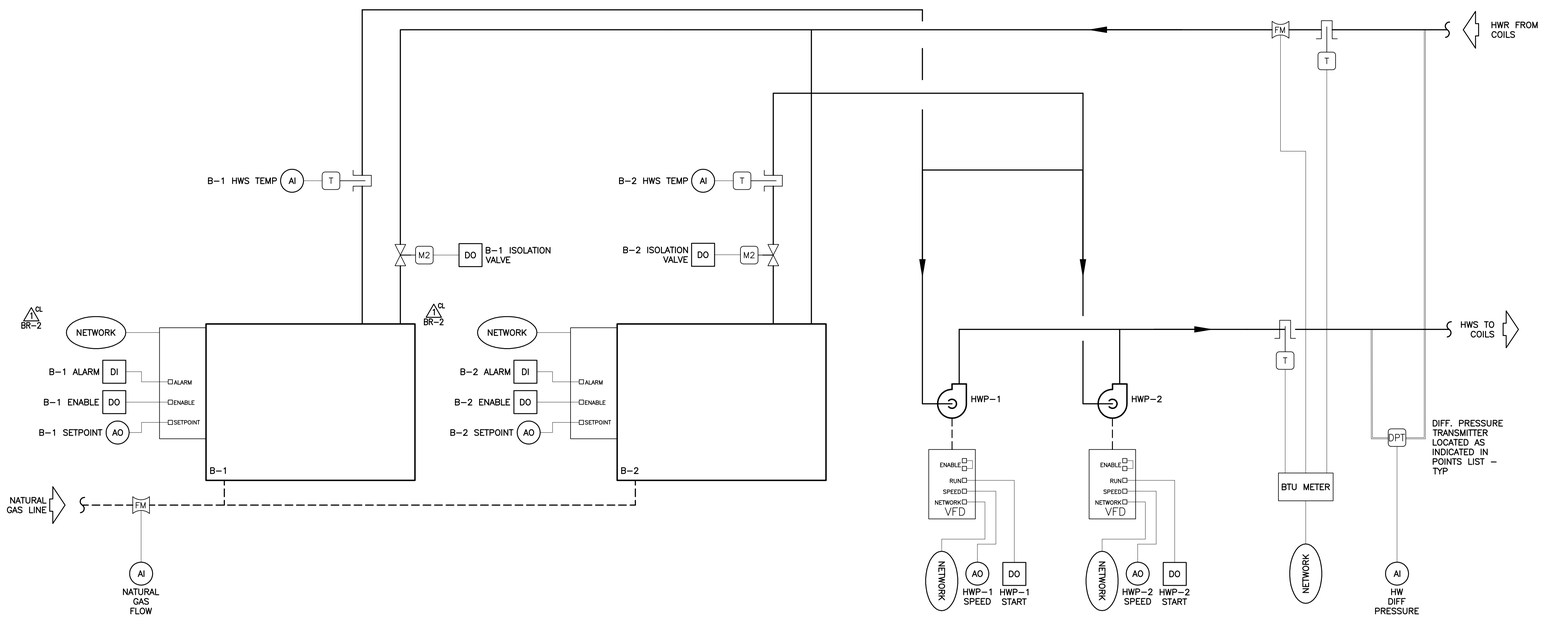

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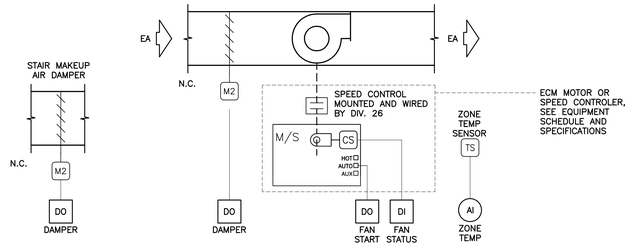

6 M7.03 STAIR EXHAUST SYSTEM CONTROL
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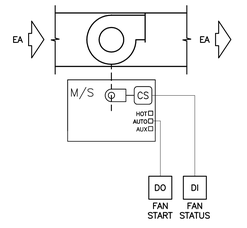

7 M7.03 TEF 6-1 CONTROL
NO SCALE

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