



PROJECT NUMBER: UOE-23086  
PROJECT NAME: SBDO Fire Station #305  
PROJECT LOCATION: Hesperia, CA COUNTY: San Bernardino  
CUSTOMER: FCP, Inc. Ventura, CA



#### PROJECT LOADS

DESIGN CODE: CBC 2022 BUILDING END USE: 305  
ROOF LIVE LOAD: 20 PSF MBMA OCC. CLASS: I - Standard Buildings  
GROUND SNOW LOAD: 30 PSF SNOW EXP. FACTOR, Ce: 1.0  
WIND: 130 WIND IMPORTANCE FACTOR, Iw: 1.0  
EXPOSURE: B WITH HURRICANE COASTLINE CYES: NO  
UL 50: YES NO RAIN INTENSITY (p/h): N/A

SEISMIC INFORMATION: S&T 716, S10.508  
Design S&T 561  
Seismic Imp. Factor: 1.0 Seismic Design Category: A  
Analysis Procedure: Equivalent Lateral Force Method  
Basic SFS:

NOTES:  
1) ALL STRUCTURAL AND NON-STRUCTURAL MEMBERS ARE ASSUMED TO BE  
DESIGNED FOR THE MOST SEVERE OF THE FOLLOWING: 1) WIND, 2) SNOW, 3) SEISMIC, 4) OTHER  
AS NOTED OTHERWISE. 5) THE DESIGN OF STRUCTURAL MEMBERS SUPPORTING DEAD LOADS IS CONTROLLED  
BY THE LIVE LOAD EFFECTS. 6) ROOF LIVE LOAD OR ROOF SNOW LOAD IS  
DETERMINED BY THE FOLLOWING CODES:

LOAD	VALUE
ROOF DEAD (PSF)	2.0
ROOF LIVE (PSF)	20
ROOF SNOW (PSF)	30
WIND (PSF)	130
SEISMIC (PSF)	AS NOTED

#### GENERAL NOTES

1. MATERIALS: ALL MATERIALS SHALL BE AS SPECIFIED IN THE MATERIALS SECTION OF THE SPECIFICATIONS. ALL MATERIALS SHALL BE OF THE BEST QUALITY AVAILABLE AND SHALL BE SUBJECT TO INSPECTION AND TESTING BY THE ENGINEER. ALL MATERIALS SHALL BE OF THE BEST QUALITY AVAILABLE AND SHALL BE SUBJECT TO INSPECTION AND TESTING BY THE ENGINEER.

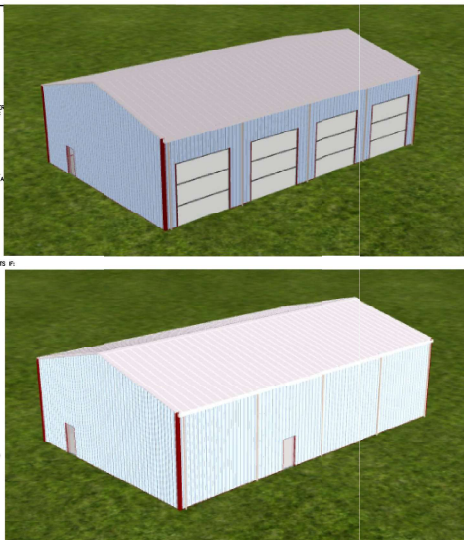
2. STRUCTURAL FRAME: THE STRUCTURAL FRAME SHALL BE DESIGNED TO RESIST THE EFFECTS OF DEAD, LIVE, WIND, AND SEISMIC LOADS. THE FRAME SHALL BE DESIGNED TO RESIST THE EFFECTS OF DEAD, LIVE, WIND, AND SEISMIC LOADS. THE FRAME SHALL BE DESIGNED TO RESIST THE EFFECTS OF DEAD, LIVE, WIND, AND SEISMIC LOADS.

3. BUILDING ERECTION NOTES: THE GENERAL CONTRACTOR AND/OR ERECTOR IS RESPONSIBLE TO SAFELY AND PROPERLY ERECT THE METAL BUILDING SYSTEM IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE GENERAL CONTRACTOR AND/OR ERECTOR IS RESPONSIBLE TO SAFELY AND PROPERLY ERECT THE METAL BUILDING SYSTEM IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4. ANCHOR BOLTS: ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5. GENERAL DETAIL NOTES: ALL DETAILS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL DETAILS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL DETAILS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

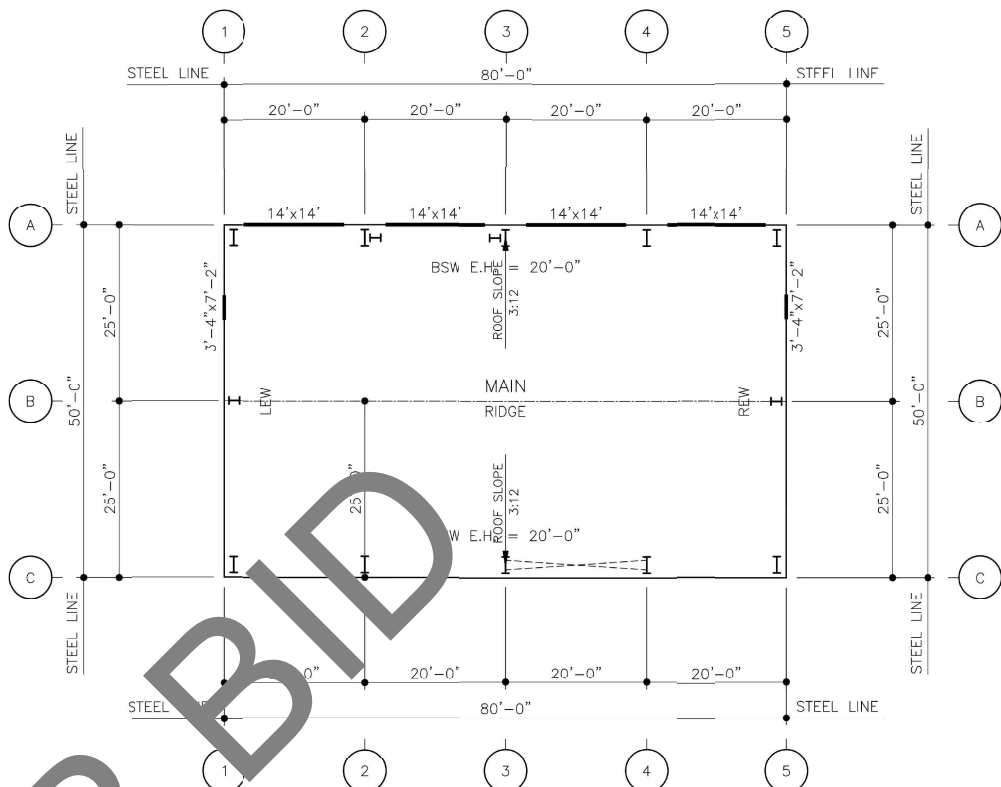
6. SUMMARY OF ABREVIATIONS: ALL ABBREVIATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL ABBREVIATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL ABBREVIATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.



DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY COVER SHEET DRAWING  
C1

PROJECT NAME: SBDO FIRE STATION #305  
PROJECT LOCATION: Hesperia, CA  
CUSTOMER: FCP, INC.  
VENTURA, CA

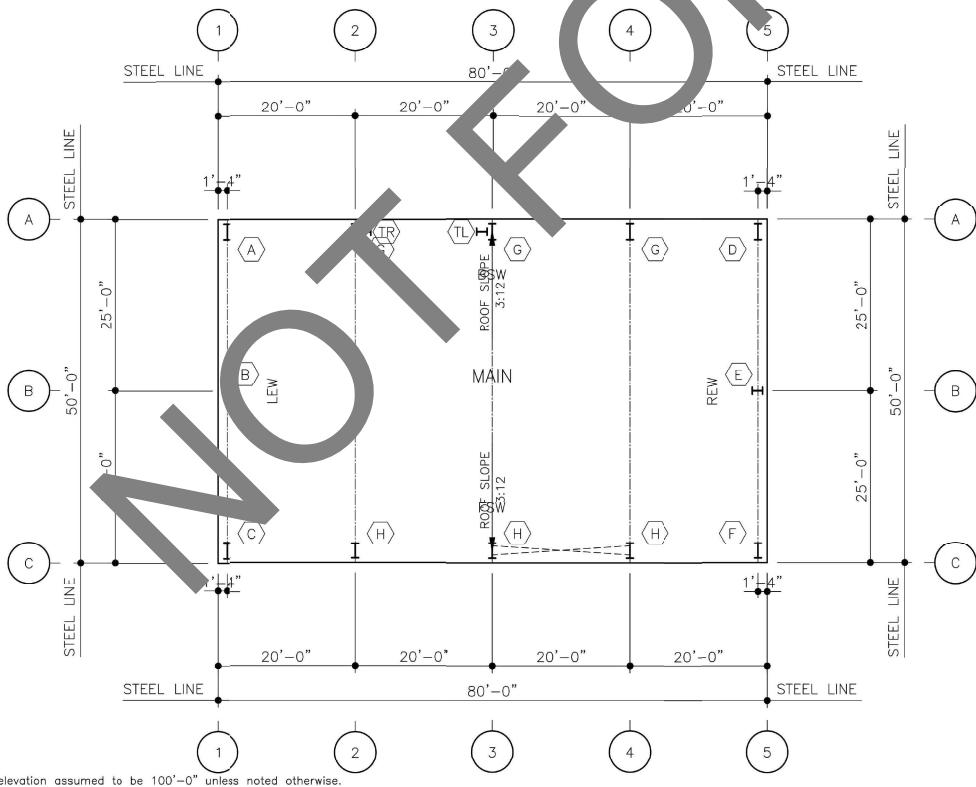
DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY COVER SHEET DRAWING  
C1



DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY FLOOR PLAN  
FP1

PROJECT NAME: SBDO FIRE STATION #305  
PROJECT LOCATION: Hesperia, CA  
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VENTURA, CA

DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY FLOOR PLAN  
FP1



DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY FLOOR PLAN  
FP1

PROJECT NAME: SBDO FIRE STATION #305  
PROJECT LOCATION: Hesperia, CA  
CUSTOMER: FCP, INC.  
VENTURA, CA

DO NOT USE FOR FINAL CONSTRUCTION  
PRELIMINARY FLOOR PLAN  
FP1

#### NOTES

THE DRAWINGS & NOTES SHOWN ON THIS SHEET IS FOR INFORMATION & BIDDING PURPOSE ONLY. FINAL DESIGN & ENGINEERING/SHOP DRAWING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, WET STAMPED BY A REGISTERED CALIFORNIA ENGINEER, GENERAL CONTRACTOR TO SUBMIT ENGINEERING/SHOP DRAWINGS AS A DEFERRED SUBMITTAL.



#### CONSULTANT

PROJECT ADMINISTERED BY:  
SAN BERNARDINO COUNTY  
PROJECT & FACILITIES  
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.  
SAN BERNARDINO, CA 92415

PROJECT NAME:  
FIRE STATION 305  
PREFABRICATED  
METAL STORAGE  
BUILDING

PROJECT # 10101200

8331 CALIENTE ROAD  
HESPERIA, CA 92344

#### ISSUE INFORMATION

DATE	INFORMATION
02-29-24	PFM 1st PC
04-24-24	BD SET

#### SHEET INFORMATION

STK: PROJECT NO.: 374-164-22  
SCALE: AS NOTED  
DATE: FEBRUARY 2024  
PLOT DATE:  
DRAWING NAME:

#### SEAL



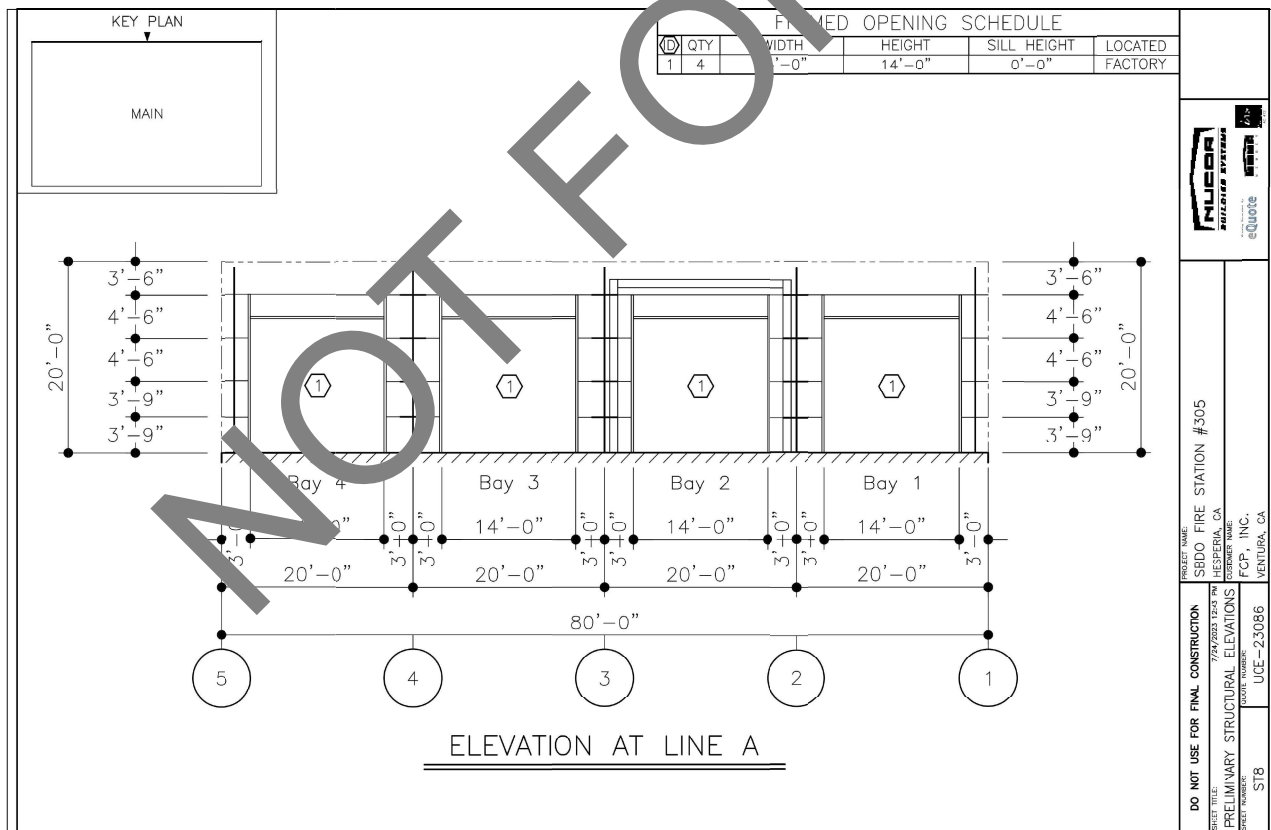
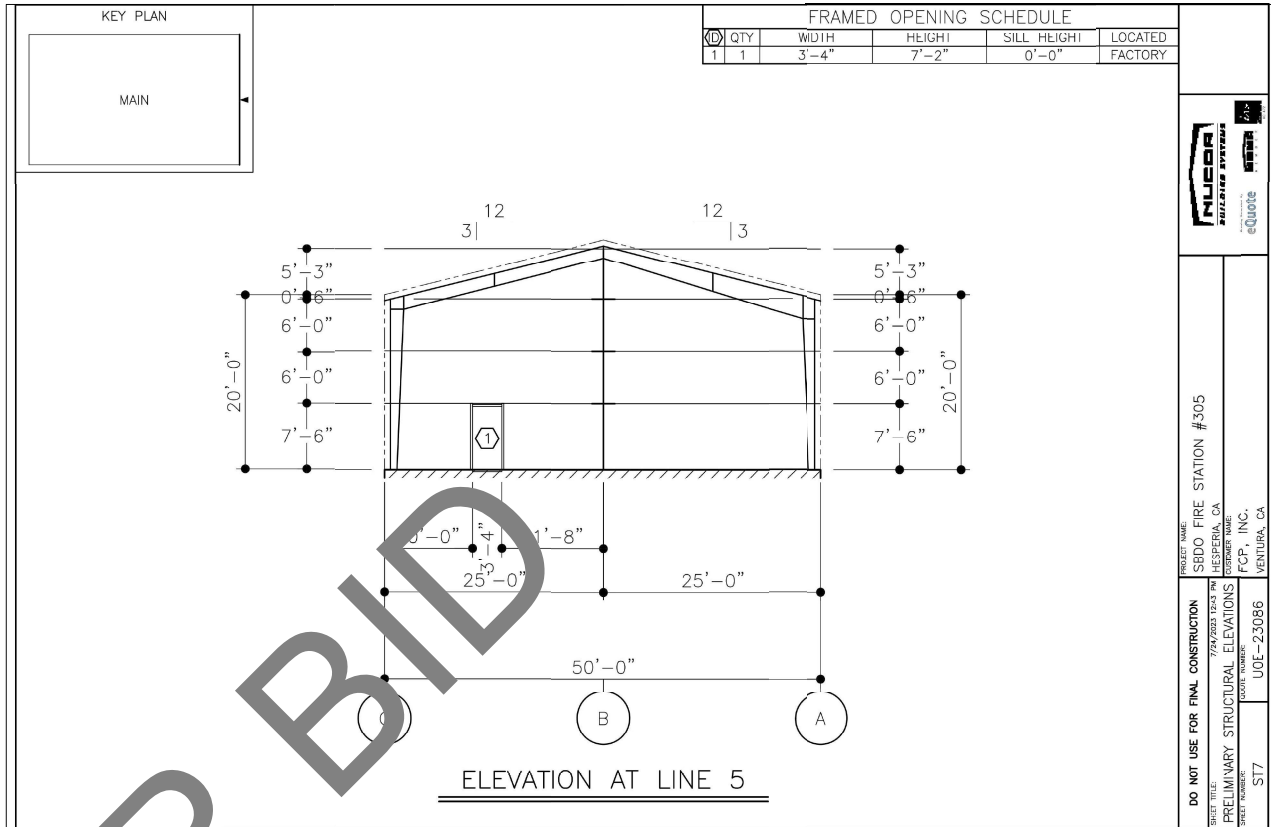
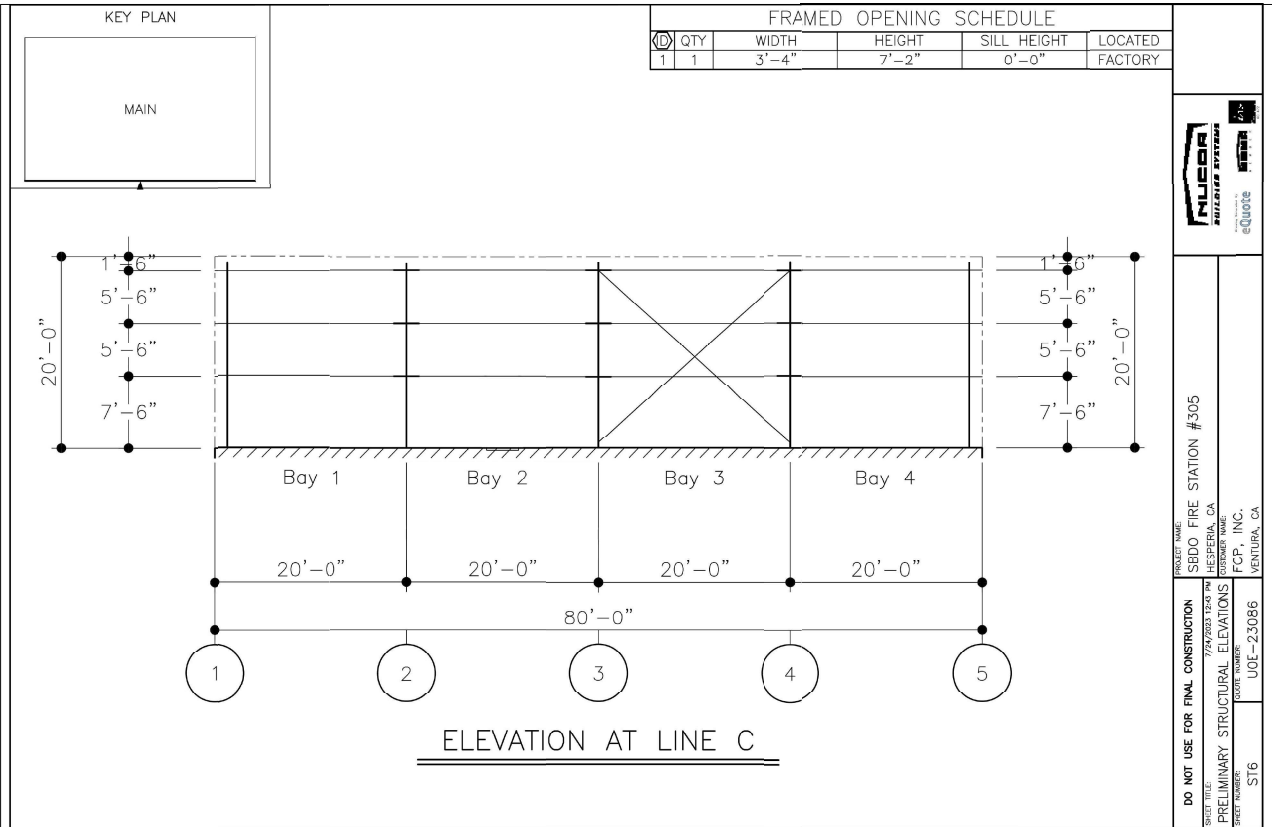
#### SHEET TITLE

PREFABRICATED  
METAL BUILDING

#### SHEET NO.

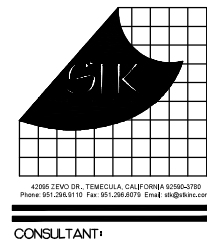
A4.0





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PROJECT ADMINISTERED BY:

SAN BERNARDINO COUNTY

PROJECT & FACILITIES

MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.

SAN BERNARDINO, CA 92445

PROJECT NAME:

FIRE STATION 305

PREFABRICATED

METAL STORAGE

BUILDING

PROJECT # 10J01200

8331 CALIENTE ROAD

HESPERIA, CA 92344

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STK: PROJECT NO.: 374-164-22

SCALE: AS NOTED

DATE: FEBRUARY 2024

PLOT DATE: -

DRAWING NAME: -



SHEET TITLE:

PREFABRICATED

METAL BUILDING

SHEET NO.:

A4.2



## PIPE SUPPORT SCHEDULE



## PLUMBING LEGEND AND SYMBOLS

## ANCHORAGE AND BRACING NOTES

## THE MATERIAL SCHEDULE

NOTE: ALL EXPOSED FUEL GAS PIPING SHALL BE PRIME AND PAINTED, COORDINATE COLOR WITH ARCHITECT

SYMBOL	ITEM	LOCATION	DEMAND (IN CFH)
RH-1	RADIANT GAS HEATER	NEW METAL BUILDING	125
RH-2	RADIANT GAS HEATER	NEW METAL BUILDING	125
RH-3	RADIANT GAS HEATER	NEW METAL BUILDING	125
-	(E) LOAD	-	2,379

TOTAL GAS LOAD	2,754 CFH
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LONGEST DEVELOPED PIPE LENGTH (MEDIUM PRESSURE @ 5 PSI) <350 FT.  
SIZING BASED ON 2022 CPC TABLE 1215.2(6)

LONGEST DEVELOPED PIPE LENGTH (LOW PRESSURE GAS) <100 FT.  
SIZING BASED ON 2022 CPC TABLE 1215.2(1)

CONSULTANT:

385 N. ARROWHEAD AVE.  
SAN BERNARDINO, CA 92415

PROJECT NAME:

FIRE STATION 305  
PREFABRICATED  
METAL STORAGE  
BUILDING

PROJECT # 10.10.1200

8331 CALIENTE ROAD  
HESPERIA, CA 92344

SHEET INFORMATION:

STK PROJECT NO.:	374-164-2
SCALE:	AS NOTE
DATE:	FEBRUARY 202
PLOT DATE:	
DRAWING NAME:	

SEAI :



## PLUMBING LEGEND NOTES & SCHEDULES

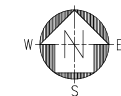
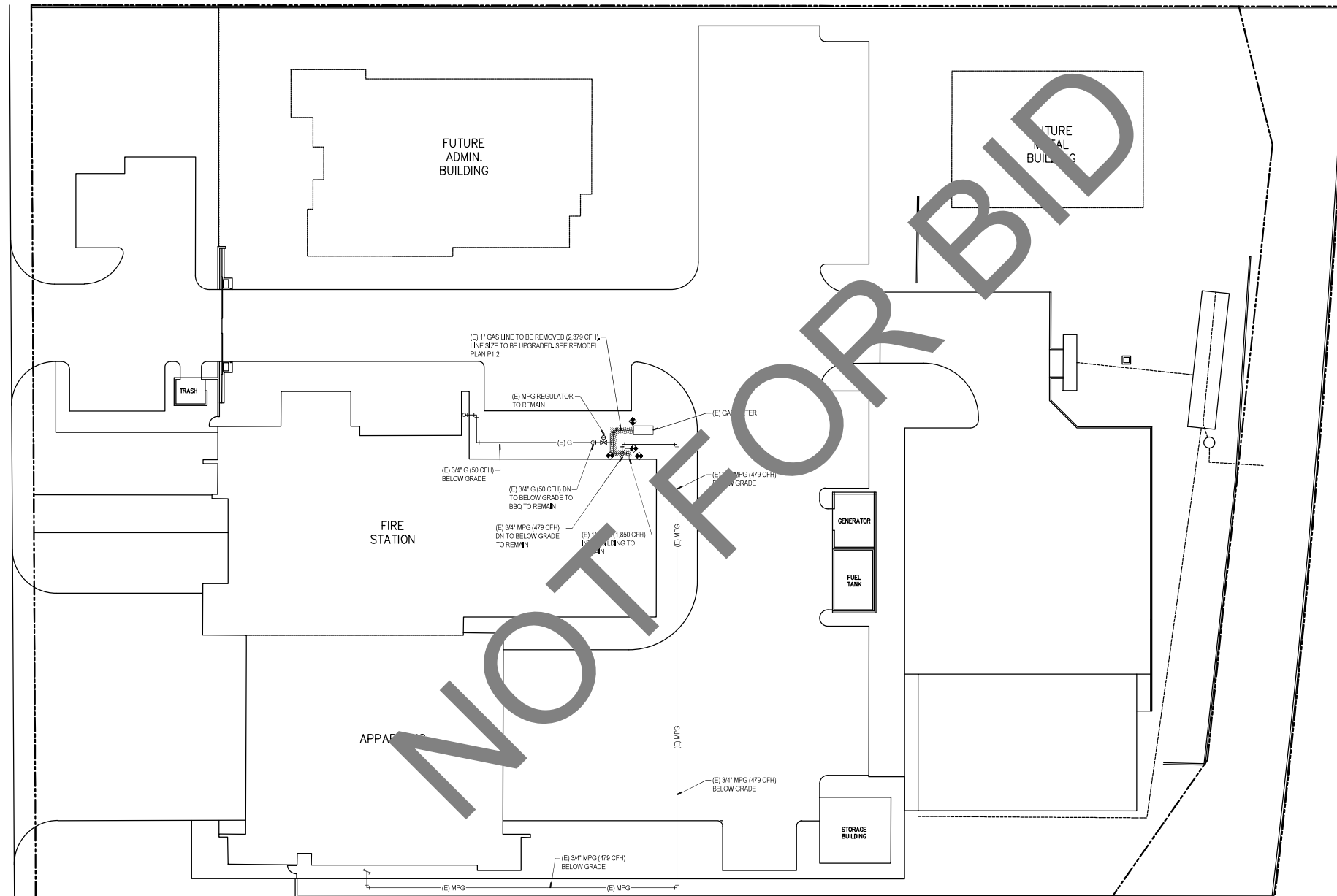
SHEET NO.:

# P0.1



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CALIENTE ROAD

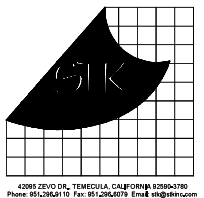


PLUMBING DEMOLITION SITE PLAN

SCALE: 1" = 20'-0" 1

GENERAL NOTES

1. FOR LINE TYPES, SYMBOLS & ABBREVIATIONS SEE LEGEND ON P0.1.



CONSULTANT:



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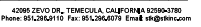
ISSUE INFORMATION:	
DATE:	INFORMATION:
02-29-24	PFM 1st PC
04-24-24	BID SET

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SHEET TITLE:  
PLUMBING  
DEMOLITION SITE  
PLAN

SHEET NO.:  
P1.1



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Email: [caddis@designwesteng.com](mailto:caddis@designwesteng.com)

**DESIGN WEST ENGINEERING**  
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

385 N. ARROWHEAD AVE.  
SAN BERNARDINO, CA 92415

PROJECT # 10.10.1200

8331 CALIENTE ROAD  
HESPERIA, CA 92344

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SHEET INFORMATION:

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SEAL:

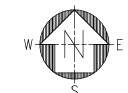


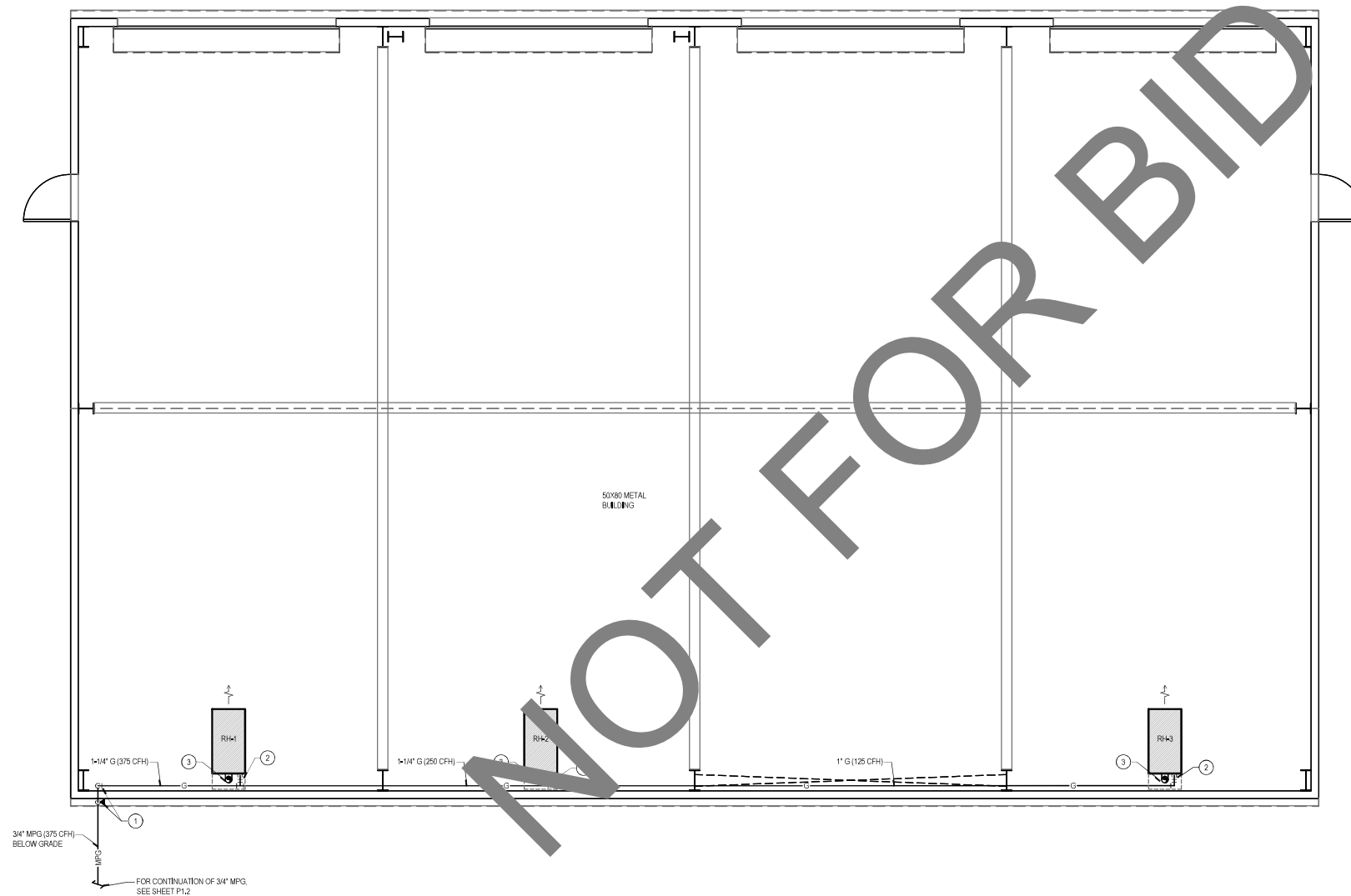
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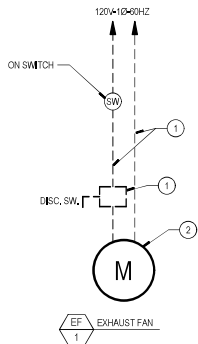
# PLUMBING REMODEL SITE PLAN

SHEET NO.:

## P1.2

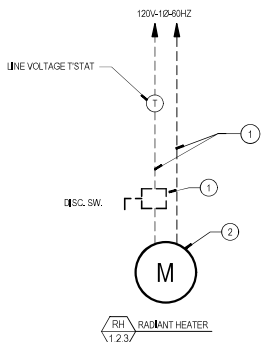






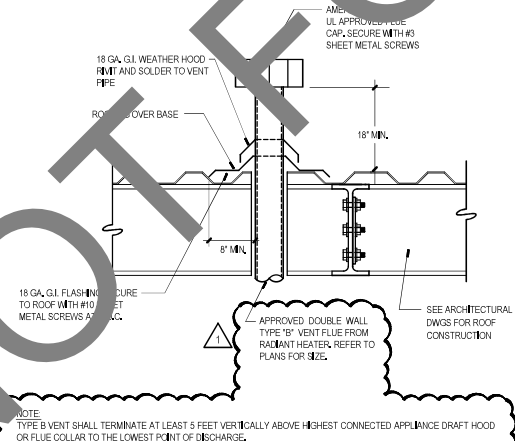
- ① ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.  
② ALL EQUIPMENT NOT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

EXHAUST FAN WIRING DIAGRAM 1



- ① ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.  
② ALL EQUIPMENT NOT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

RADIANT HEATER WIRING DIAGRAM 2



FLUE VENT 3

MECHANICAL GENERAL NOTES

- THE TOTAL INSTALLATION SHALL COMPLY WITH ANY REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING 2022 CBC (CALIFORNIA BUILDING CODE), 2022 CMICPC (CALIFORNIA MECHANICAL AND PLUMBING CODE), 2022 CAL GREEN REQUIREMENTS AND THE 2022 TITLE 24 ENERGY CODE.
- VISIT THE SITE PRIOR TO BID AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS UNDER WHICH HE WILL BE REQUIRED TO WORK.
- INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK OF OTHER TRADES. DUCT DIMENSIONS SHOWN ON PLANS ARE NET/INSIDE CLEAR.
- THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE NET/INSIDE DIMENSIONS. DO NOT FABRICATE DUCTWORK FROM THESE DRAWINGS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS WHICH REFLECT THE PROPOSED INSTALLATION. THE SHOP DRAWINGS MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY SHEET METAL FABRICATION. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCURATE AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMITTING THEM TO THE ENGINEER AND OWNER.
- IN THE PREPARATION OF THESE DOCUMENTS, CERTAIN ASSUMPTIONS ARE MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF EXISTING BUILDINGS AND/OR EQUIPMENT. THEREFORE, THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY CHANGES OR ADDITIONAL COSTS INCURRED DUE TO EXISTING CONDITIONS.
- COMPLY WITH CONTRACT DOCUMENTS IN LAYING OUT THEIR WORK AND EQUIPMENT. THEY SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND JOB CONDITIONS.
- WHERE NOT SPECIFICALLY INDICATED OTHERWISE, DUCTWORK AND EQUIPMENT SHALL BE SUPPORTED PER THE SMACNA GUIDELINES FOR SEISMIC RESTRAINT AND CURRENT APPLICABLE UNIFORM MECHANICAL CODE.
- TESTING, ADJUSTING, AND BALANCING (TAB) OF THE AIR CONDITIONING SYSTEMS AND RELATED AUXILIARY EQUIPMENT WILL BE PERFORMED BY A CERTIFIED, INDEPENDENT THIRD PARTY, AABC AGENCY PROCURED BY THE MECHANICAL CONTRACTOR. A COMPLETE AIR BALANCE REPORT TO BE SUBMITTED TO THE ADMINISTRATIVE AUTHORITY AND TO THE MECHANICAL ENGINEER AND APPROVED PRIOR TO FINAL PAYMENT.
- ANY SUBSTITUTION MADE THAT IS DIFFERENT FROM WHAT IS SPECIFIED ON THE DRAWINGS SHALL BE CLEARLY INDICATED ON THE SUBMITTAL AS TO THAT IS BEING SUBSTITUTED.
- WHERE MORE THAN ONE HEATING, COOLING, VENTILATING, OR REFRIGERATING SYSTEM IS INSTALLED ON THE ROOF OF A BUILDING OR WITHIN A BUILDING, IT SHALL BE PERMANENTLY IDENTIFIED AS TO THE AREA OR SPACE SERVED BY THE EQUIPMENT. (CNC-300)S PROVIDE PERMANENT LABELING AND IDENTIFICATION FOR EACH UNIT (SINGLE SYSTEM OR MULTIPLE) AND THERMOSTATS. IDENTIFICATION AND THE THERMOSTATS SHALL CORRELATE TO THE HVAC UNIT THAT IT SERVES.

HVAC LEGEND

SYMBOL	ABBREVIATIONS	DESCRIPTION
	DETAILING	DETAIL REFERENCE
	SHEET NO.	EQUIPMENT REFERENCE
	EQUIPMENT	THERMOSTAT
	LINE NO.	SWITCH
	LINE NO.	ABOVE FINISHED FLOOR
	LINE NO.	CUBIC FEET OF AIR PER MINUTE
	LINE NO.	CFM EXHAUST
	LINE NO.	NEW
	LINE NO.	INDICATES ROUND DUCT (INCHES)

ANCHORAGE AND BRACING NOTES

- PIPES, DUCTS AND CONDUITS SHALL BE SUPPORTED AND BRACED PER THE 2008 SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING SYSTEMS", THE "SUPERSTRUT SEISMIC RESTRAINT SYSTEM" FOR PIPES AND CONDUITS ONLY.

RADIANT HEATER SCHEDULE

TAG	MFR. & MODEL NO.	AREA SERVED	HEATING CAPACITY			FAN SYSTEM		GAS CONNECTION	FLUE DIAMETER	ELECTRICAL		WEIGHT	REMARKS
			TYPE	INPUT	OUTPUT	EFFICIENCY	CFM			VOLTS/PH/Hz	AMPS		
RH 1	DAYTON 55FGB	METAL STORAGE BUILDING	NATURAL GAS	125,000 BTUHR	103,750 BTUHR	83% THERMAL EFFICIENCY	1,476	BELT	1/4"	120V-1040Hz	6.9 MCA 15 MOCF	187 LBS	① ②
RH 2	DAYTON 55FGB	METAL STORAGE BUILDING	NATURAL GAS	125,000 BTUHR	103,750 BTUHR	83% THERMAL EFFICIENCY	1,476	BELT	1/4"	120V-1040Hz	6.9 MCA 15 MOCF	187 LBS	① ②
RH 3	DAYTON 55FGB	METAL STORAGE BUILDING	NATURAL GAS	125,000 BTUHR	103,750 BTUHR	83% THERMAL EFFICIENCY	1,476	BELT	1/4"	120V-1040Hz	6.9 MCA 15 MOCF	187 LBS	① ②

EQUIPMENT NOTES:

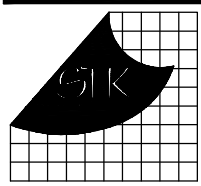
- ① BLOWER TYPE ② DAYTON LINE VOLT MECHANICAL TSTAT. HEAT ONLY, ON/OFF, 50° TO 90°F, EXPOSED DIAL, 120AC

EXHAUST FAN SCHEDULE

TAG	MFR. & MODEL NO.	FAN TYPE	AREA SERVED	FAN SYSTEM				ELECTRICAL		OPER. WGT (LBS)	SONES	REMARKS (SEE EQUIPMENT NOTES BELOW)
				EXHAUST CFM	ESP	RPM	MOTOR	VOLTS/PH/Hz	FLA			
EF 1	COOK AWB 30AB5	WALL EXHAUST FAN	METAL STORAGE BUILDING	4,000	0.2	845	1/2 HP	120V-1040Hz	5.8	173	23	① ② ③ ④

EQUIPMENT NOTES:

- ① COMPLETE WITH DISCONNECT SWITCH ② CONTROLLED BY A SWITCH ③ WIREGUARD - MOTOR SIDE ④ WIREGUARD - PROP. SIDE



4095 DEVIS DR., TEMECULA, CALIFORNIA 92590  
Phone: 951.264.1111 Fax: 951.264.0171 Email: sk@stkrucm.com

CONSULTANT:



4121 E. VANDERBILT WAY  
SAN BERNARDINO, CA 92408  
Phone: 909.895.2700  
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Email: codd@designwesteng.com

DESIGN WEST ENGINEERING  
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

PROJECT ADMINISTERED BY:  
SAN BERNARDINO COUNTY  
PROJECT & FACILITIES  
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.  
SAN BERNARDINO, CA 92415

PROJECT NAME:  
FIRE STATION 305  
PREFABRICATED  
METAL STORAGE  
BUILDING

PROJECT # 10.10.1200

8331 CALIENTE ROAD  
HESPERIA, CA 92344

ISSUE INFORMATION:

DATE:	INFORMATION:
02-29-24	△ PFM 1st PC
04-24-24	BD SET

SHEET INFORMATION:

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SEAL:



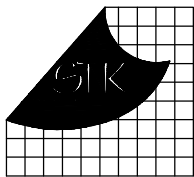
SHEET TITLE:

MECHANICAL  
LEGEND NOTES &  
SCHEDULES

SHEET NO.:

M0.1





4205 ZEVIO DR., TEMECULA, CALIFORNIA 92590  
Phone: 951-264-1111 Fax: 951-264-0078 Email: info@dweng.com

CONSULTANT:



4127 E. Vanderveit Way  
San Bernardino, CA 92408  
Phone: 909-395-3700  
Fax: 909-395-3710  
Email: cadd@dwengineering.com

DESIGN WEST ENGINEERING  
MECHANICAL/ELECTRICAL/ENERGY CONSULTANTS

PROJECT ADMINISTERED BY:  
SAN BERNARDINO COUNTY  
PROJECT & FACILITIES  
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.  
SAN BERNARDINO, CA 92415

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FIRE STATION 305  
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METAL STORAGE  
BUILDING

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02-29-24	△ PFM 1st PC
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DRAWING NAME: -

SEAL:



SHEET TITLE:

MECHANICAL  
TITLE 24  
REQUIREMENTS

SHEET NO.:

M0.2

22x30.2

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
<b>Mechanical Systems</b>		<b>Mechanical Systems</b>	
<b>CERTIFICATE OF COMPLIANCE</b>		<b>CERTIFICATE OF COMPLIANCE</b>	
Project Name: FS 305 - Metal Storage Building	Report Page: (Page 5 of 9)	Project Name: FS 305 - Metal Storage Building	Report Page: (Page 5 of 9)
Date Prepared: 1/29/2024		Date Prepared: 1/29/2024	

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)										
Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)										
01 Name or Item Tag	02 Equipment Category per Tables 110.2, 140.4(a)(2) and 170.2(c)(3a)	03 Equipment Type per Tables 110.2 and Title 20	04 Smallest Size Available <sup>1</sup> 140.4(a) and 170.2(c)(1)	05 Heating Output <sup>2,3</sup>		06 Cooling Output <sup>2,3</sup>		07 Load Calculations <sup>3,4</sup>		11 Total Sensible Cooling Load (kBtu/h)
				Per Design (kBtu/h)	Rated (kBtu/h)	Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)	
Radiant Heaters	PTAC/ PTHP	PTAC replacements	NA: Load Controls	311.25	103.75	0	0	0	282.36	179.18

<sup>1</sup>FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)(1). Healthcare facilities are excepted.

<sup>2</sup>It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.

<sup>3</sup>If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.

<sup>4</sup>Authority having jurisdiction may risk for load calculations used for compliance per 140.4(a) and 170.2(c).

Dry System Equipment Efficiency (Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP) only)						
01 Name or Item Tag	02 Heating Mode	03 Minimum COP Required per Table 110.2-E	04 Design COP	05 Rated Output Capacity (kBtu/h)	06 Cooling Mode	07 Design EER
Radiant Heaters	103750	3	0.8	0	11.9	0

#### G. PUMPS

This section does not apply to this project.

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<b>Mechanical Systems</b>		<b>Mechanical Systems</b>	
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#### J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1.130.2(c)(3B) 140.4(a) and 140.4(a) for all nonresidential and hotel/motel and at 120.1.130.2(c)(3B) 140.4(a) and 140.4(a) for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

01	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.							
02	<input checked="" type="checkbox"/>	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces							
03	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)(2).							
Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems									
04		05	06		07				
System Name	Radiant Heaters	System Design OA CFM Airflow <sup>1</sup>	0	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)(2) and 160.2(c)(2) <sup>1</sup>			
08	09	10	11	12	13	14	15	16	
Mechanical Ventilation Required per 120.1(c)(3) <sup>3</sup> & 160.2(c)(3)		Exh. Vent per 120.1(c)(4) & 160.2(c)(4)		DCV or Sensor Controls per 120.1(d)(3), 120.1(d)(5), and 120.1(e)(3) <sup>3</sup> 160.2(c)(5D) 160.2(c)(5E) 160.2(c)(5D)					
Space Name or Item Tag	Occupancy Type <sup>4</sup>	Conditioned Floor Area (ft <sup>2</sup> )	# of Shower heads/ toilets	# of people <sup>5</sup>	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV	NA: Not required per §120.1(d)(3)
Metal Storage Building	Occupiable storage rooms for liquids/ gels	4000		0	6000	0		DCV	NA: Not required per §120.1(d)(3)
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

<sup>1</sup> FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

<sup>2</sup> Air filtration requirements apply to the following three system types per 120.1(c)(1A): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

<sup>3</sup> Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

<sup>4</sup> See Standards Tables 120.1-A and 120.1-B.

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#### DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Steven Johnson	Documentation Author Signature: Steven Johnson
Company: Design West Engineering	Signature Date: 01/29/2024
Address: 412 East Vanderveit Way	CEA/HERS Certification Identification (if applicable): M33209
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

#### RESPONSIBLE PERSON'S DECLARATION STATEMENT

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1.3 and Part 1.4 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the building owner provides to the building owner at occupancy.

Responsible Designer Name: Steven Johnson	Responsible Designer Signature: Steven Johnson
Company: Design West Engineering	Date signed: 2024-01-29
Address: 412 E Vanderveit Way	License: M33209
City/State/Zip: San Bernardino CA 92408	Phone: 909-890-3700

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#### C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02		03		04		05		06		07		08		09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)(4)	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(g), 170.2(c)(4B)	AND	Distribution 120.3, 140.4(i), 160.2, 160.3	AND	Cooling Towers 110.2(e)(2)	Compliance Results	
(See Table F)		(See Table G)		(See Table H)	(See Table I)		(See Table J)	(See Table K)	(See Table L)		(See Table M)		(See Table N)		
Yes	AND	Yes	AND	Yes	AND	Yes	AND	Yes	AND	Yes	AND	Yes	AND	Yes	COMPLIES
Mandatory Measures Compliance (See Table Q for Details)															
														COMPLIES	

#### D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

#### E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

#### F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information					
01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
Radiant Heaters	3	Single zone	New/ Addition		<input type="checkbox"/>

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#### H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)(4D)

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)(4D)	Heat Recovery Efficiency (%)	Energy Recovery Bypass
Fan Energy Index (FEI)								
01 Name or Item Tag			02 FEI Exemption			03 FEI		
Radiant Heaters			None Applied			1		

#### I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 160.2 and prescriptive controls in 140.4(i) (1), 170.2(c)(4D) 170.2(c)(4L) or requirements in 141.0(b)(2) 180.2(b)(2) for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft <sup>2</sup> )	Thermostat 110.2(b) & 160.3(a)(2)(a) 160.3(a)(2)(a) 160.3(a)(2)(a) 160.3(a)(2)(a)	Shutoffs 120.2(g) & 160.3(a)(2)(b)	Isolation Zone Controls 110.12 120.2(b) & 160.3(a)(2)(b)	Demand Response 110.12 120.2(b) & 160.3(a)(2)(b)	Supply Air Temp. Reset 140.4(f) & 170.2(c)(4D)	Window Interlocks per 140.4(n) & 170.2(c)(4D)
Radiant Heaters	Single zone	<= 25,000	Setback	Timer	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

<sup>1</sup>FOOTNOTES: Gravity gas wall heaters, gravity room heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

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#### DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at [https://www.energy.ca.gov/title24/2019standards/2019\\_compliance\\_documents/Nonresidential\\_Documents/NRCA/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/)

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	Dayton 55FG85;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	Dayton 55FG85;
NRCA-MCH-11-A Automatic Demand Shed Controls	Dayton 55FG85;
NRCA-MCH-16-A Supply Air Temperature Reset Controls	Dayton 55FG85;
NRCA-MCH-18-A Energy Management Control Systems	Dayton 55FG85;

#### P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCC forms required for this project.

#### Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH	Yes
Mandatory Measures Note Block	Plan sheet or construction document location M-Sheets

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This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b)(2) or 141.0(b)(2) for alterations.		This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b)(2) or 141.0(b)(2) for alterations.	
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#### A. GENERAL INFORMATION

01 Project Location (city)	Hesperia	04 Total Conditioned Floor Area	4000
02 Climate Zone	14	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
• Warehouse			

#### B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)(2) and 180.2(b)(2) for alterations.

01		02		03	
Air System(s)		Wet System Components		Dry System Components	
<input checked="" type="checkbox"/> Heating Air System		<input type="checkbox"/> Water Economizer		<input type="checkbox"/> Air Economizer	
<input type="checkbox"/> Cooling Air System		<input type="checkbox"/> Pumps		<input type="checkbox"/> Electric Resistance Heat	
Mechanical Controls		<input type="checkbox"/> System Piping		<input checked="" type="checkbox"/> Fan Systems	
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)		<input type="checkbox"/> Cooling Towers		<input type="checkbox"/> Ductwork (existing to remain, altered or new)	
		<input type="checkbox"/> Chillers		<input checked="" type="checkbox"/> Ventilation	
		<input type="checkbox"/> Boilers		<input type="checkbox"/> Zonal Systems/ Terminal Boxes	