

SYMBOLS AND ABBREVIATIONS LEGEND			
SYMBOLS			
	PENDENT ON LINE		SCREWED UNION
	PENDENT RECESSED ON DROP		GROOVED COUPLING
	UPRIGHT ON SPRIG		FLANGED CONNECTION
	UPRIGHT AND PENDENT DROP		ANGLE VALVE
	UPRIGHT SPRINKLER		GLOBE VALVE
	DRY PENDENT		BUTTERFLY VALVE
	CONCEALED SPRINKLER		O.S.&Y. VALVE
	HORIZONTAL SIDEWALL		WATER CHECK VALVE
	PENDENT SIDEWALL		ALARM VALVE
	UPRIGHT SIDEWALL		DRY / PREACTION VALVE
	PIPE ELEV. CHANGE		FIRE SPRINKLER RISER
	CAP		FLOW SWITCH
	SCREWED PLUG		ELECTRIC BELL
ABBREVIATIONS			
AFF	— ABOVE FIN. FLR.	EQB	— EARTHQUAKE BRACE
AV	— ANGLE VALVE	FDC	— FIRE DEPT. CONN.
AO	— ARM OVER	FHC	— FIRE HOSE CAB.
AS	— AUTO. SPRINKLER	PHR	— FIRE HOSE RACK
ASR	— AUTO. SPRK. RISER	FLG	— FLANGE
BOB	— BOT. OF BEAM	FOB	— FACE OF BLOCK
BOD	— BOT. OF DECK	FOC	— FACE OF CONC.
BOJ	— BOT. OF JOIST	FOS	— FACE OF STUD
CH VA	— CHECK VALVE	FW	— FACE OF WALL
CI	— CAST IRON	GC	— GRV. CPLG.
COE	— CHANGE OF ELEVATION	GLB	— GULLAW BEAM
COJ	— CUT ON JOB	GRC	— GRV. RED. CPLG.
COUP	— COUPLING	GRV	— GROOVE
CUT	— CUT TO FIT	GBE	— GRV. BOTH ENDS
DI	— DUCTILE IRON	ODE	— GRV. ONE END
DN	— DOWN	GOL	— GRV. OUTLET
DR	— DROP	GV	— GLOBE VALVE
(E)	— EXISTING	HGR	— HANGER
JST	— JOIST	LVL	— LEVEL
MJ	— MALEABLE IRON	MJ	— MECH. JOINT
NF	— NO FITTING	N&C	— NIPPLE & CAP
NIC	— NOT IN CONTRACT	NTS	— NOT TO SCALE
PE	— PLAIN END	PI	— POST INDICATOR
PIV	— POST INDICATOR VALVE	PLG	— PLUG
SLP	— SLOPE	SP	— STANDPIPE
STB	— STEEL BEAM	RED	— REDUCING
RN	— RISER NIPPLE		
SCR	— SCREW	TC	— THRD. CPLG.
TF	— THRD. FLG.	TBE	— THRD. BOTH ENDS
THRD	— THREAD	TOE	— THRD. ONE END
TOL	— THRD. OUTLET	TRC	— THRD. TED. CPLG.
TAG	— THRD. & GRV.	UNO	— UNLESS NOTED OTHERWISE
WF	— WLD. FLG.	WLD	— WELD
WMO	— WATER MOTOR CONG.		

WATER SUPPLY TEST DATA	
Hydrant Flow Detail 5/13/24	
#1 N ₂₄₄₅	
Residual ~ 52	
Flow ~ 40 psi	
GPM ~ 40 psi	
~ 1060	
#2 N ₂₄₄₁	
Static ~ 52 psi	
Flow ~ 41 psi	
Flow ~ 40 psi	
~ 1060	
#3 N ₂₄₇₉	
Static ~ 52.5 psi	
Flow ~ 40 psi	
Flow ~ 40 psi	
~ 1060	
#4 N ₂₄₉₉	
Static ~ 52 psi	
Residual ~ 52	
Flow ~ 40 psi	
GPM ~ 40 psi	
~ 1060	
CITY OF LODI STANDARD WATER SUPPLY INFORMATION	
45 PSI STATIC PRESSURE	
20 PSI RESIDUAL PRESSURE	
4000 GPM FLOW @ P.O.C. TO CITY WATER MAIN	

CODE ANALYSIS
BUILDING AREA PROTECTED BY SPRINKLER SYSTEM: 42,697 SF OCCUPANCY TYPE: B TYPE V&B CONSTRUCTION W/ PARTIAL AUTOMATIC FIRE SPRINKLER SYSTEM
APPLICABLE CODES
2022 CALIFORNIA ADMINISTRATION CODE , TITLE 24 CCR 2022 CALIFORNIA BUILDING CODE (PART 2, VOLUME 1 AND 2, TITLE 24) (2018 INTERNATIONAL BUILDING CODE WITH 2021 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24 CCR) (2020 NATIONAL ELECTRICAL CODE WITH 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24 CCR) (2021 IAPMO UNIFORM MECHANICAL CODE WITH 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA PLUMBING CODE (PART 5, TITLE 24 CCR) (2021 IAPMO UNIFORM PLUMBING CODE WITH 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA FIRE CODE (PART 9, TITLE 24 CCR) (2021 INTERNATIONAL FIRE CODE WITH 2022 CALIFORNIA AMENDMENTS) 2022 NFPA 13 — STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (WITH 2019 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24 CCR) 2019 NFPA 24 — PRIVATE FIRE MAINS (WITH 2022 CALIFORNIA AMENDMENTS) 2013 NFPA 25 — STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS WITH CALIFORNIA AMENDMENTS (BASED ON NFPA 25, 2011 EDITION)

FIRE SPRINKLER SCOPE OF WORK
1. REMOVED EXISTING WET PIPE FIRE SPRINKLER SYSTEM PIPING, SPRINKLERS, PIPE HANGERS, AND SWAY BRACING LOCATED WITHIN THE EXISTING SERVER ROOM. 2. INSTALL NEW BRANCH LINE PIPING AS SHOWN ON THESE PLANS TO SUPPLY THE REMAINING EXISTING BRANCH LINE LOCATED TO THE EAST OF THE SERVER ROOM.

COORDINATION AND SHOP DRAWING NOTES
1. CLEARANCES IN ALL ATTIC AREAS ARE EXTREMELY LIMITED. MULTIPLE SYSTEMS ARE LOCATED IN THE ATTIC SPACES. WORK CLOSELY TOGETHER WITH ALL TRADES TO ENSURE THAT PROPER ROUTING OF THE ALL FIRE PROTECTION SYSTEMS IS ACHIEVED, AND TO ENSURE THAT NO CONFLICTS OCCUR. 2. CONDITIONS HAVE BEEN SHOWN AS ACCURATELY AS POSSIBLE. ALL CONDITIONS ARE TO BE FIELD VERIFIED. CONTRACTOR IS TO INCLUDE IN HIS BID, ADJUSTMENTS TO THE WORK AS REQUIRED TO ACCOMMODATE THE ACTUAL FIELD CONDITIONS. 3. COORDINATED SHOP DRAWINGS ARE REQUIRED. CONTRACTORS ARE TO PROVIDE COORDINATED SHOP DRAWINGS THAT INCLUDE ALL SYSTEMS TO BE INSTALLED.

GENERAL INFORMATION PLACARD
SPRINKLER SYSTEM — GENERAL INFORMATION FOR 1305 EAST VINE STREET, LODI CA
HIGH-PILED STORAGE: ☐ YES ☒ NO RACK STORAGE: ☐ YES ☒ NO COMMODITY CLASS: <u>N/A</u> MAX. STORAGE HT: <u>N/A</u> FT AISLE WIDTH (MIN.): <u>N/A</u> FT ENCAPSULATION: ☐ YES ☒ NO SOLID SHELVING: ☐ YES ☒ NO FLAMMABLE/COMBUSTIBLE LIQUIDS: ☐ YES ☒ NO OTHER STORAGE: ☐ YES ☒ NO HAZARDOUS MATERIALS: ☐ YES ☒ NO IDLE PALLETS: ☐ YES ☒ NO ANTIFREEZE SYSTEMS: ☐ YES ☒ NO LOCATION: _____ DRY OR AUX. SYSTEMS: ☐ YES ☒ NO LOCATION: _____ NAME OF CONTRACTOR OR DESIGNER: <u>CAPITAL ENGINEERING CONSULTANTS</u> ADDRESS: <u>11020 SUN CENTER DRIVE, SUITE 100, RANCHO CORDOVA, CA</u> PHONE: <u>916-851-3500</u>
DATE: <u>07/09/24</u> FLOW TEST DATA: STATIC: <u>45</u> PSI RESIDUAL: <u>20</u> PSI FLOW: <u>4000</u> GPM PITOT: <u>N/A</u> PSI DATE: <u>N/A</u> LOCATION: <u>CITY OF LODI</u> LOCATION OF AUX/LOW POINT DRAINS: <u>0 FIRE SPRINKLER RISER</u> ORIGINAL MAIN DRAIN TEST RESULTS: STATIC: <u>T.B.D.</u> PSI RESIDUAL: <u>T.B.D.</u> PSI

FIRE SPRINKLER PROJECT NOTES
1. MODIFICATIONS TO THE EXISTING AUTOMATIC WET PIPE SPRINKLER SYSTEMS SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 EDITION OF NFPA PAMPHLET #13. 2. PLANS ARE NOT FOR CONSTRUCTION UNTIL APPROVED BY THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL NOT ORDER ANY MATERIALS OR INSTALL ANY EQUIPMENT, PIPING, ETC. UNTIL PLANS ARE APPROVED BY THE AUTHORITY HAVING JURISDICTION. 3. A MINIMUM OF 48 HOURS NOTICE SHALL BE REQUIRED FOR ANY INSPECTION AND/OR TESTING. 4. INSTALLATION OF THE SPRINKLER SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS (INCLUDING WATER SUPPLY INFORMATION) HAVE BEEN APPROVED BY THE LOCAL JURISDICTION HAVING AUTHORITY. A STAMPED SET OF APPROVED DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF ANY COMPONENTS, MUST BE REVIEWED AND APPROVED BY THE LOCAL JURISDICTION HAVING AUTHORITY PRIOR TO INSTALLATION. FAILURE TO COMPLY MAY RESULT IN A STOP WORK ORDER. 5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED SPRINKLER STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD. 6. THE EXISTING FIRE SPRINKLER SYSTEMS ARE HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY AT A DESIGN DENSITY OF 1.0 GPM SF OVER 1500 SF. 7. THREADED PIPING TO BE SCH-40, BLACK STEEL WITH CAST OR DUCTILE IRON FITTINGS. GROOVED END PIPING TO BE SCH-10, BLACK STEEL WITH GROOVED FITTINGS AND WELDED OUTLETS. 8. METHODS AND PROCEDURES FOR SHOP WELDING OF OUTLETS SHALL COMPLY WITH AWS B2.1. 9. THE INSTALLING FIRE SPRINKLER CONTRACTOR SHALL VERIFY / COORDINATE, AT NO ADDITIONAL COST TO THE OWNER, THE LOCATION OF SPRINKLERS, PIPING, AND DEVICES WITH THE WORK OF OTHER TRADES AND BUILDING STRUCTURE PRIOR TO FABRICATION AND INSTALLATION OF THE FIRE SPRINKLER SYSTEM. 10. THE INSTALLING FIRE SPRINKLER CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW AND APPROVAL, COORDINATED SHOP DRAWINGS AND SUPPORTIVE CALCULATIONS FOR ANY/ALL CHANGES TO THE FIRE SPRINKLER SYSTEM LAYOUT SHOWN ON THESE DRAWINGS, AT NO ADDITIONAL COST TO THE OWNER.

FIRE SPRINKLER GENERAL NOTES
1. NFPA 13 (2022) SEC. 6.10.2.1 UNDERGROUND MAINS AND LEAD-IN CONNECTIONS TO SYSTEM RISER SHALL BE COMPLETELY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD SPRINKLER PIPING SYSTEMS (WITNESSED BY THE INSPECTOR OF RECORD). 2. NFPA 13 (2022) SEC. 6.10.2.2 ALL INTERIOR PIPING AND APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS (WITNESSED BY THE INSPECTOR OF RECORD). LOCAL FIRE DEPARTMENT SHALL BE NOTIFIED OF DATE AND TESTING SO THAT THEY MAY OBSERVE TESTING. 3. NFPA 13 (2022) SEC. 16.2.7 PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH, AND NO FEWER THAN 6 SPARE SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATING IN EACH PROTECTED BUILDING FOR SYSTEMS LESS THAN 300 SPRINKLERS (12 SPARE SPRINKLER HEADS FOR SYSTEMS 300 TO 1000 SPRINKLERS). 4. NFPA 13 (2022) SEC. 18.6.3 THE END SPRINKLER ON A LINE SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT. 5. NFPA 13 (2022) SEC. 18.6.1 PROVIDE RESTRAINT OF BRANCH LINES BY USE OF ONE OF THE FOLLOWING: 1. A LISTED SWAY BRACE ASSEMBLY. 2. A WHIPAROUND U-HOOK SATISFYING THE REQUIREMENTS OF 9.3.5.3.11. 3. NUMBER 12, 440-LB. WIRE INSTALLED AT LEAST 45 DEGREES FROM THE VERTICAL PLANE AND ANCHORED ON BOTH SIDES OF THE PIPE. 6. NFPA 13 (2022) SEC. 7.7.1 & 7.7.2 SPRINKLER FLOW SWITCH SHALL BE TESTED BY IOR TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS ACTIVATED AN ALARM WILL SOUND NO LESS THAN 20 SECONDS AND NOT MORE THAN 90 SECONDS. 7. CBC SEC. 903.4.1 MAIN FIRE ALARM PANEL VALVE MONITORING AND WATER-FLOW ALARM AND TROUBLE SIGNALS SHALL BE DISTINCTLY DIFFERENT AND SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION MONITORING COMPANY. 8. NFPA 13 (2022) SEC. 16.11.7 FLOW SWITCH SHALL BE CONNECTED TO A 10 INCH 120 VAC OUTSIDE ALARM BELL AT THE RISER. APPROVED IDENTIFICATION SIGNS SHALL BE PROVIDED FOR OUTSIDE ALARM BELL "SPRINKLER FIRE ALARM — WHEN BELL RINGS CALL 911 / FIRE DEPARTMENT". 9. NFPA 13 (2022) SEC. 29.1 SPRINKLER CONTRACTOR (C16) SHALL COMPLETE AND SIGN CONTRACTOR'S MATERIAL TEST CERTIFICATE FOR THE OVERHEAD SPRINKLER SYSTEM USING FORM IN FIGURE 25.1. THIS FORM SHALL BE GIVEN TO THE INSPECTOR OF RECORD (IOR) WHO WILL TURN-IN FOR TOWN OF PARADISE RECORDS. 10. NFPA 13 (2022) SEC. 29.2.3.4.1 THE MAIN DRAIN VALVE SHALL BE OPEN AND REMAIN OPEN UNTIL THE SYSTEM PRESSURE STABILIZES. THE STATIC AND RESIDUAL PRESSURES SHALL BE RECORDED IN THE CONTRACTOR'S TEST CERTIFICATE (WITNESSED BY INSPECTOR OF RECORD-IOR). 11. TITLE 18 ARTICLE 908 (6-d) A LABEL OF THE SELF-ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR THE FIRE SPRINKLER SYSTEM WITH THE DATE OF SERVICE AND/OR DATE OF INSTALLATION WAS PERFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK. 12. ALL PENETRATIONS IN RATED WALL OR CEILING/FLOOR ASSEMBLIES WILL BE SEALED WITH AN APPROVED MATERIAL. 13. NFPA 13 (2022) SEC. 29.3 THE INSTALLING CONTRACTOR SHALL PROVIDE THE OWNER WITH A CALIFORNIA NFPA 25, CALIFORNIA EDITION — 2016. 14. ANY SUBSTITUTION OF "FLEXIBLE" TYPE PIPING IN LIEU OF "RIGID" PIPE OR ANY CHANGES TO SIZE, MANUFACTURER OR LENGTHS OF "FLEXIBLE" TYPE PIPING WILL REQUIRE RE-SUBMITTAL OF PIPING PLANS, PRODUCT DATA SHEETS AND HYDRAULIC CALCULATIONS TO THE TOWN OF PARADISE BUILDING RESILIENCY CENTER FOR REVIEW AND APPROVAL. 15. SPRINKLER PIPE FITTERS SHALL BE CERTIFIED BY CALIFRE OSM. SEE SFM 1B-17-002.

FIRE SPRINKLER SHEET INDEX	
FPO.01	FIRE SPRINKLER GENERAL NOTES, LEGEND
FP1.01	FIRE SPRINKLER FLOOR PLANS, DETAILS

AGENCY
APPROVAL:



HMC Architects

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ISSUE	
DESCRIPTION	DATE



RANCHO CORDOVA, CALIFORNIA
MM - RL/EP
PW - DESIGN TEAM
240411.00
PROJECT NO.



DATE SIGNED: 7/2/24

CONSULTANT
FACILITY:
LODI UNIFIED SCHOOL DISTRICT OFFICE
1305 EAST VINE STREET
LODI, CA 95240

PROJECT:
DISTRICT OFFICE SERVER ROOM MODIFICATIONS

SHEET NAME:
FIRE SPRINKLER GENERAL NOTES, LEGEND

CONSTRUCTION DOCUMENTS

DATE: 2025-01-14
CLIENT PROJ NO:
SHEET:

FPO.01

