GENERAL NOTES

1. THIS PROJECT IS NEW CONSTRUCTION. THE PLANS AND SPECIFICATIONS INDICATE THE GENERAL EXTENT OF THE WORK BASED ON OWNER PROVIDED RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL VISIT SITE, VERIFY EXISTING CONDITIONS, AND REPORT ANY DISCREPANCIES NOTED TO THE ARCHITECT PRIOR TO SUBMITTING A BID. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND RECONNECTION OF MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS NECESSARY TO ACCOMPLISH THE WORK WHETHER OR NOT SPECIFIED AND/OR INDICATED.
2. MECHANICAL CONTRACTOR SHALL NOTIFY GENERAL CONTRACTOR TO REPAIR WALL, FLOOR, AND CEILING SURFACES AS REQUIRED DUE TO WORK.
3. CUTTING OR CORING OF STRUCTURAL MEMBERS OR FOOTINGS IS PROHIBITED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER AND THE ARCHITECT.
4. CONTRACTOR SHALL VERIFY THAT THE ELECTRICAL CONNECTIONS TO THE UNITS, INCLUDING CIRCUIT PROTECTION, CONFORM TO UNIT LABELS AND MANUFACTURER'S DIRECTIONS. WHERE WIRE SIZES SHOWN ON DRAWING EXCEED MANUFACTURER'S RECOMMENDATIONS, THE DRAWINGS SHALL GOVERN. ALL WIRING SHALL BE PER THE NATIONAL ELECTRICAL CODE. AS AMENDED AND ENFORCED BY JURISDICTIONAL AUTHORITY.
5. PROVIDE SHOP DRAWINGS OF ALL MECHANICAL LAYOUTS SHOWING EQUIPMENT, DUCTWORK, REGISTERS, PIPING, FILTER RACKS, CONTROL DAMPERS, LIGHTS, ACCESS PANELS AND ACCESS SPACES, ETC. OBTAIN AND COORDINATE WITH APPROVED FIRE SPRINKLER PLUMBING, ELECTRICAL, CASE WORK AND OTHER TRADES SHOP DRAWINGS PRIOR TO MECHANICAL DRAWING SUBMITTAL.
6. COORDINATE EXACT GRILLE, DIFFUSER AND ACCESS DOOR LAYOUT WITH LIGHTS AND SPRINKLERS.
7. PROVIDE STEEL DUCTS ABOVE RATED CEILINGS AND MINIMUM 18" BEYOND RATED WALLS.
8. SUPPORT DUCTS TIGHT BELOW STRUCTURE WHEREVER POSSIBLE.
9. PROVIDE ACOUSTICAL LINING IN ALL DUCTS WITHIN 15 FEET OF UNITS. PROVIDE FLEXIBLE CONNECTION ON INLET AND OUTLET DUCT CONNECTIONS TO EQUIPMENT.
10. FLASHING AND WEATHERPROOFING AT EXTERIOR PENETRATIONS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS.
11. COORDINATE WITH OWNER ON SPACE REQUIRED AND TIME SCHEDULE FOR DELIVERY OF ALL ITEMS WHICH ARE TO BE GIVEN TO THE OWNER FOR HIS DISPOSITION.
12. FOR ROOF PENETRATIONS WITHOUT CURBS, PROVIDE WEATHERPROOF FLASHING PER SMACNA ARCHITECTURAL SHEET METAL MANUAL AND DRAWING NOTES.
13. ALL TRANSITIONS IN DUCTWORK SHALL BE MADE AT 15 DEGREES MAXIMUM EACH FACE UNLESS OTHERWISE NOTED OR SPECIFICALLY APPROVED.
14. ALL DUCTWORK IS CONCEALED UNLESS OTHERWISE NOTED.
15. LABEL ALL PIECES OF EQUIPMENT WITH MARK MATCHING SCHEDULE OR EQUIPMENT LIST WITH ENGRAVED PLASTIC LABELS WITH MINIMUM 1/4" HIGH LETTERS. LABELS EXPOSED TO WEATHER SHALL BE ENGRAVED BRASS.
16. PRIME AND PAINT ALL EXPOSED DUCTWORK PER ARCHITECTURAL SPECIFICATIONS. PAINT SHALL NOT EXCEED THE FOLLOWING VOLATILE ORGANIC COMPOUND CONTENT LIMITS: FLATS < 50 GRAMS PER LITER, NON-FLATS < 100 GRAMS PER LITER.
17. ALL DUCTS, REGISTERS, EQUIPMENT, ETC. SHOWN IS NEW UNLESS OTHERWISE NOTED.
18. THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM(S) FOR THE BUILDING(S) WERE DESIGNED IN COMPLIANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA CODES, STANDARDS AND REGULATIONS INCLUDING BUT NOT LIMITED TO CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA ENERGY CODE (CEC - TITLE 24, PART 6), AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE) AND SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).

    THE INDOOR AND OUTDOOR DESIGN CONDITIONS ARE THOSE ESTABLISHED FOR HOLLISTER BY THE CALIFORNIA ENERGY CODE AS FOLLOWS:
    1. OUTDOOR CONDITIONS
        SUMMER: 89°F DB/68°F WB
        WINTER: 21°F DB
    2. INDOOR CONDITIONS
        SUMMER: 74°F DB ±2°F
        WINTER: 70°F DB ±2°F

    IF THE OUTDOOR TEMPERATURES ARE HIGHER OR LOWER THAN DESIGN TEMPERATURES ESTABLISHED BY THE CALIFORNIA ENERGY CODE, THERE IS THE POTENTIAL THAT THE INSTALLED HVAC SYSTEM WILL NOT BE ABLE TO MAINTAIN THE DESIRED INDOOR TEMPERATURE. THE INCREASE OR DECREASE OF INDOOR TEMPERATURE COULD BE AS HIGH AS THE DIFFERENCE BETWEEN THE ACTUAL OUTDOOR TEMPERATURE AND THE DESIGN CONDITION.
19. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE ADDRESSABLE TYPE AND COMPATIBLE WITH FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED BY FIRE ALARM CONTRACTOR. ENTIRE SYSTEM SHALL COMPLY WITH THE CALIFORNIA MECHANICAL CODE, THE CALIFORNIA FIRE CODE, AND THE NATIONAL FIRE PROTECTION ASSOCIATION.
20. ADHESIVES, SEALANTS AND CAULKS USED INDOORS SHALL NOT EXCEED THE FOLLOWING VOLATILE ORGANIC COMPOUND LIMITS PER TITLE 24, PART 11, SECTION 5.504.
    - METAL TO METAL < 30 GRAMS PER LITER
    - FIBERGLASS < 80 GRAMS PER LITER
    - CONTACT ADHESIVE < 80 GRAMS PER LITER
    - MASTICS < 100 GRAMS PER LITER
    - ZINC-RICH PRIMERS < 340 GRAMS PER LITER
    - FIRE RESISTANT COATINGS < 350 GRAMS PER LITER
21. HVAC EQUIPMENT SHALL NOT CONTAIN CFC'S OR HALONS PER TITLE 24, PART 11, SECTION 5.508.
22. AT THE TIME OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENTS OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC OR SHEET METAL TO PROTECT THE AIR DISTRIBUTION SYSTEM FROM CONTAMINATION WITH DUST AND DEBRIS.
23. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE ADDRESSABLE TYPE AND COMPATIBLE WITH FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE PROVIDED BY, WIRED TO FIRE ALARM, AND FOR POWER BY ELECTRICAL CONTRACTOR. DETECTORS INSTALLED BY AND CONNECTED TO UNIT BY MECHANICAL CONTRACTOR. ENTIRE SYSTEM SHALL COMPLY WITH THE UNIFORM MECHANICAL CODE, THE UNIFORM FIRE CODE, AND THE NATIONAL FIRE PROTECTION ASSOCIATION.

DSA GENERAL NOTES

1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO CONSTRUCT A NEW SCHOOL CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
2. THE SEISMIC SUPPORT AND ANCHORAGE OF THE EQUIPMENT DESCRIBED ON THESE DRAWINGS HAVE BEEN ENGINEERED BY THE ENGINEER OF RECORD FOR CONFORMANCE WITH APPROPRIATE BUILDING CODES. THE ENGINEER OF RECORD WAS NOT RESPONSIBLE FOR THE EQUIPMENT DESIGN.
3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE CRITERIA FROM CHAPTER 16A CALIFORNIA BUILDING CODE (CBC) 2019.
4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.
5. SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72.

COMPONENT ANCHORAGE NOTES

ALL MECHANICAL AND PLUMBING COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (EG HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICAL, GAS, OR WATER.
3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCE NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK AND PIPING. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING AND DUCTWORK DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP):

MP☐ MD☒ PP☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL OPM#: 0043-13, "MASON WEST, INC. SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS", OPM-0052-13 "B-LINE/TOLCO SEISMIC RESTRAINT SYSTEMS GUIDELINES".

HVAC DUCT LEGEND

	SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
1			LONG SWEEP 90° ELBOW - RECTANGULAR, ROUND OR OVAL
2			SHORT SWEEP 90° ELBOW - RECTANGULAR, ROUND OR OVAL
3			45° ELBOW - RECTANGULAR, ROUND OR OVAL
4			30° ELBOW - RECTANGULAR, ROUND OR OVAL
5			90° ELBOW - RECTANGULAR DUCT (NO DUCT TURN)
6			90° ELBOW - RECTANGULAR DUCT WITH TURNING VANES
7			45° LATERAL - ROUND TO ROUND OR OVAL TO OVAL
8			90° TAKEOFF WITH 45° TAPER - RECTANGULAR TO RECTANGULAR (FOR BRANCH TAKEOFF LONGER THAN 50'-0", USE 15)
9			90° TAKEOFF WITH 45° ELONGATED TEE - ROUND TO ROUND
10			90° CONICAL TEE - ROUND TO ROUND OR OVAL TO OVAL
11			SPIN-IN WITH BALANCE DAMPER - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL
12			90° TEE - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL
13			EXTRACTOR AND BRANCH DUCT - RECTANGULAR TO RECTANGULAR (FOR BRANCH TAKEOFFS LONGER THAN 10'-0", USE 8)
14			Y BRANCH - ROUND OR OVAL DUCT
15			90° RADIUS SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT
16			90° RECTANGULAR SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT
17			TRANSITION - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL

	SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
18			SECTION AT SUPPLY AIR OR MAKE-UP AIR DUCT UP
19			SECTION AT RETURN AIR OR COMBUSTION AIR DUCT UP
20			SECTION AT EXHAUST AIR OR RELIEF AIR DUCT UP
21			SUPPLY AIR DUCT DOWN RETURN AIR DUCT DOWN EXHAUST AIR DUCT DOWN
22			ROUND DUCT UP - SUPPLY, RETURN OR EXHAUST
23			ROUND DUCT DOWN - SUPPLY, RETURN OR EXHAUST
24			CEILING DIFFUSER - ONE, TWO, THREE AND FOUR WAY THROW
25			CEILING - RETURN AND EXHAUST REGISTERS
26			SIDEWALL - SUPPLY DIFFUSER, RETURN AND EXHAUST REGISTERS
27			RETURN AND EXHAUST REGISTER CONNECTION - ELBOW DOWN OR ROUND TAP OUT OF RECTANGULAR DUCT, TAP SAME SIZE AS NECK
28			SUPPLY DIFFUSER AND RETURN REGISTER CONNECTION - TAP DOWN SAME SIZE AS NECK
29	UP / DN	UP / DN	DUCT RISE IN THE DIRECTION OF AIR FLOW DUCT DROP IN THE DIRECTION OF AIR FLOW
30			MANUAL BALANCE DAMPER WITH DUCT ACCESS DOOR
31	M	M	MOTORIZED BALANCE DAMPER WITH DUCT ACCESS DOOR
32	F/D F/SD	F/D F/SD	FIRE DAMPER WITH DUCT ACCESS DOOR FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR
33			ACOUSTICALLY LINED DUCT
34	12x12 CD (300)		REGISTER NECK SIZE AND MARK DESIGN CFM PANEL AT T-BAR CEILING

LIST OF GOVERNING CODES:

2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.
2019 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, C.C.R.
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

ALL SECTION NUMBERS BELOW REFER TO GROUP 1, CHAPTER 4, PART 1, TITLE 24, C.C.R.
1. ADDENDA, CONSTRUCTION CHANGES PER SECTION 4-338.
2. INSPECTOR APPROVED BY DSA. INSPECTOR AND CONTINUOUS INSPECTION OF WORK PER SECTION 4-333(b) AND 4-342.
3. TESTS AND TESTING LABORATORY PER SECTION 4-335.
4. SPECIAL INSPECTION PER SECTION 4-333(c).
5. CONTRACTOR SHALL SUBMIT VERIFIED REPORTS PER SECTION 4-336 AND 4-343(c).
6. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, C.C.R. - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER PER SECTION 4-333(a) AND 4-341.
7. GOVERNING CODES: TITLE 24.
8. A COPY OF PARTS 1, 2, 3, 4, AND 5 OF TITLE 24 SHALL BE KEPT AVAILABLE IN THE FIELD DURING CONSTRUCTION.
9. DSA SHALL BE NOTIFIED OF START OF CONSTRUCTION PER SECTION 4-331.
10. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT PER SECTION 4-334.

HVAC LEGEND

SYMBOL	ABBRV.	IDENTIFICATION	ABBRV.	IDENTIFICATION
		AIR DUCT	GPM	GALLONS PER MINUTE
		FLEXIBLE AIR DUCT	GALV	GALVANIZED
	BD	BALANCING DAMPER	GA	GAUGE
		AIR FROM DEVICE	HP	HORSEPOWER
		AIR TO DEVICE	HR	HOUR
		SECTION THROUGH SUPPLY	HTG	HEATING
		SECTION THROUGH RETURN	HZ	HERTZ
		SECTION THROUGH EXHAUST	ID	INSIDE DIAMETER
		THERMOSTAT	IN	INCH
		TEMPERATURE SENSOR	INT	INTERIOR
		CARBON DIOXIDE SENSOR	KW	KILOWATTS
		RATED FIRE BARRIER SEE ARCHITECTS DRAWINGS	LAT	LEAVING AIR TEMPERATURE
		CENTERLINE	LBS	POUNDS
	POC	POINT OF CONNECTION	LG	LONG
	&	AND	LRA	LOCKED ROTOR AMPS
	@	AT	LWB	LEAVING WET BULB
	°F	DEGREES FAHRENHEIT	MAX	MAXIMUM
	AC	AIR CONDITIONER	MBH	1000 BTU PER HOUR
	AC/H	AIR CHANGES PER HOUR	MCA	MINIMUM CIRCUIT AMPS
	AFF	ABOVE FINISH FLOOR	MECH	MECHANICAL
	AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MFR	MANUFACTURER
	AL	ACOUSTICALLY LINED	MIN	MINIMUM
	AMB	AMBIENT	MOCP	MAXIMUM OVERCURRENT PROTECTION
	AMP	AMPERE	(N)	NEW
	APPROX	APPROXIMATE	NC	NORMALLY CLOSED
	ARCH	ARCHITECT/ARCHITECTURAL	NIC	NOT IN CONTRACT
	BHP	BRAKE HORSEPOWER	NO	NORMALLY OPEN
	BLDG	BUILDING	NTS	NOT TO SCALE
	BTUH	BRITISH THERMAL UNITS PER HOUR	OA	OUTSIDE AIR
	CFM	CUBIC FEET PER MINUTE	OBD	OPPOSED BLADE DAMPER
	CLG	CEILING	OC	ON CENTER
	CO2	CARBON DIOXIDE	PD	PRESSURE DROP
	CONC	CONCRETE	PH	PHASE
	CONN	CONNECTION	P/N	PART NUMBER
	CONT	CONTINUED, CONTINUATION	PRESS	PRESSURE
	COOL	COOLING	PSI	POUNDS PER SQUARE INCH
	COORD	COORDINATE	QTY	QUANTITY
	COP	COEFFICIENT OF PERFORMANCE	RA	RETURN AIR
	CONST	CONSTRUCTION	REQD	REQUIRED
	DB	DRY BULB	REQS	REQUIREMENTS
	D/L	DOOR LOUVER	RLA	RATED/RUNNING LOAD AMPS
	DN	DOWN	RM	ROOM
	DWGS	DRAWINGS	RPM	REVOLUTIONS PER MINUTE
	(E)	EXISTING	SA	SUPPLY AIR
	EA	EXHAUST AIR	SC	SENSIBLE COOLING
	EAT	ENTERING AIR TEMPERATURE	SEER	SEASONAL ENERGY EFFICIENCY RATIO
	EER	ENERGY EFFICIENCY RATIO	SP	STATIC PRESSURE
	EF	EXHAUST FAN	SPEC	SPECIFICATION
	ELEC	ELECTRICAL	SQ	SQUARE
	ELEV	ELEVATION	STD	STANDARD
	EMBT	EMBEDMENT	STRUCT	STRUCTURAL
	ENT	ENTERING	TC	TOTAL COOLING
	EQUIP	EQUIPMENT	TEMP	TEMPERATURE
	ESP	EXTERNAL STATIC PRESSURE	TSP	TOTAL STATIC PRESSURE
	EWB	ENTERING WET BULB	TV	TURNING VANES
	EXT	EXTERIOR	TYP	TYPICAL
	FFE	FINISHED FLOOR ELEVATION	UL	UNDERWRITER'S LABORATORIES
	FLA	FULL LOAD AMPS	UON	UNLESS OTHERWISE NOTED
	FLEX	FLEXIBLE	V	VOLT
	FLR	FLOOR	W/	WITH
	FPM	FEET PER MINUTE	WB	WET BULB
	FT	FEET	WC	WATER COLUMN
	FT HD	FEET HEAD	WT	WEIGHT

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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
LEGEND AND NOTES MECHANICAL

SHEET NUMBER
M0.1

DSA SUBMITTAL
2/4/22

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AIR DISTRIBUTION

MARK	TYPE	MAKE & MODEL	REMARKS
CD-1	CEILING DIFFUSER	TITUS MCD	(1) (8)
CD-2	CEILING DIFFUSER	TITUS MCD	(2) (9)
HSS-1	HIGH SIDEWALL SUPPLY	TITUS S300FS	(6)
HSS-2	HIGH SIDEWALL SUPPLY	TITUS 300RS	(1) (10)
LSD-1	LINEAR SLOT DIFFUSER	TITUS ML-39	(4)
RG-1	RETURN GRILLE	TITUS 8R	(1) (8)
RG-2	RETURN GRILLE	TITUS 8R	(2) (7)
HSR-1	HIGH SIDEWALL RETURN	TITUS S8F	(6)
HSR-2	HIGH SIDEWALL RETURN	TITUS 350RL	(1) (10)
LSR-1	LINEAR SLOT RETURN	TITUS MLR-39	(5)
EG-1	EXHAUST GRILLE	TITUS 8R	(1) (8)
HSE-1	HIGH SIDEWALL EXHAUST	TITUS S8F	(6)
HSE-2	HIGH SIDEWALL EXHAUST	TITUS 350RL	(1) (11)
HSE-3	HIGH SIDEWALL EXHAUST	TITUS 350RL	(1) (10)
TG-1	TRANSFER GRILLE	TITUS 8R	(1) (8)
TG-2	TRANSFER GRILLE	TITUS MCD	(1) (8)
TG-3	TRANSFER GRILLE	TITUS 350RL	(1) (10)
TG-4	TRANSFER GRILLE	TITUS S8F	(6)
TG-5	TRANSFER GRILLE	TITUS 8R	(2) (9)
TG-6	TRANSFER GRILLE	TITUS MCD	(2) (9)
TG-7	TRANSFER GRILLE	TITUS 350RL	(1) (10)
DL-1	DOOR LOUVER	TITUS T-700L	(3)

(1) WITH BORDER TYPE 1 SURFACE MOUNT.
(2) WITH BORDER TYPE 3 LAY-IN.
(3) WITH BORDER TYPE 1 SURFACE MOUNT AND AUXILIARY FRAME.
(4) WITH TWO (2) 1" SLOTS AND BORDER TYPE 22.
(5) WITH FOUR (4) 1" SLOTS AND BORDER TYPE 22.
(6) FOR MOUNTING, SEE 3/M6.1.
(7) FOR MOUNTING, SEE 6/M6.1.
(8) FOR MOUNTING, SEE 14/M6.1.
(9) FOR MOUNTING, SEE 15/M6.1.
(10) FOR MOUNTING, SEE 16/M6.1.
(11) FOR MOUNTING, SEE 13/M6.1.

SOUND ATTENUATORS

MARK	UNIT SERVED	SUPPLY RETURN EXHAUST	UNIT DIMENSIONS W" x H" x L"	CFM	VELOCITY	PD	DYNAMIC INSERTION LOSS OCTAVE BAND & HERTZ 1 / 63	2 / 125	3 / 250	4 / 500	5 / 1000	6 / 2000	7 / 4000	8 / 8000	MAKE & MODEL	REMARKS
SA-1	HP-1	SUPPLY	22" x 18" x 60"	1605	583 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-2	HP-1	RETURN	16" x 24" x 60"	1605	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-3	HP-2	SUPPLY	22" x 18" x 60"	1605	583 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-4	HP-2	RETURN	16" x 24" x 60"	1605	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-5	HP-3	SUPPLY	22" x 18" x 60"	1605	583 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-6	HP-3	RETURN	16" x 24" x 60"	1605	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-7	HP-4	SUPPLY	22" x 18" x 60"	1605	583 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-8	HP-4	RETURN	16" x 24" x 60"	1605	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-9	HP-7	SUPPLY	24" x 24" x 60"	4000	1000 FPM	0.09"	5	11	19	31	34	26	18	17	RUSKIN MLF-60	(1)
SA-10	HP-7	RETURN	24" x 24" x 60"	4000	1000 FPM	0.09"	5	11	19	31	34	26	18	17	RUSKIN MLF-60	(1)
SA-11	HP-10	SUPPLY	24" x 20" x 60"	1990	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-12	HP-10	RETURN	16" x 30" x 60"	1990	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-13	HP-11	SUPPLY	24" x 20" x 60"	1990	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-14	HP-11	RETURN	16" x 30" x 60"	1990	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-15	HP-12	SUPPLY	32" x 18" x 60"	2400	600 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-16	HP-12	RETURN	16" x 30" x 60"	2000	606 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-17	HP-14	SUPPLY	24" x 20" x 60"	1590	611 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-18	HP-14	RETURN	16" x 24" x 60"	1990	603 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-19	HP-15	SUPPLY	36" x 22" x 60"	3400	618 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-20	HP-15	RETURN	20" x 38" x 60"	3400	653 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-21	EF-5	EXHAUST	18" x 18" x 60"	1410	622 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-22	EF-6	EXHAUST	18" x 18" x 60"	1410	622 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)
SA-23	EF-7	EXHAUST	18" x 18" x 60"	1410	622 FPM	0.09"	5	14	21	31	32	28	25	21	RUSKIN ELBSP5	(1) (2)

(1) DYNAMIC INSERTION LOSS AT 1000 FPM FORWARD FLOW FACE VELOCITY.
(2) CONFIGURATION: 2'-6" UP, 2'-6" DOWN.

HEAT PUMPS

MARK	COOL MBH TC	COOL MBH SC	HEAT MBH TH	CFM TOTAL	CFM ESP	CFM OA	FAN RPM	MOTOR BHP	MOTOR V/PH	UNIT FLA	UNIT MCA	UNIT MOCP	WT LBS	EER SEER	MAKE & MODEL	REMARKS
HP-1	48.23	36.94	45.6	1605	0.5"	375	1901	0.74	460/3	12	13	20	1050	16.2	CARRIER 50GCQM05A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-2	48.23	36.94	45.6	1605	0.5"	415	1901	0.74	460/3	12	13	20	1050	16.2	CARRIER 50GCQM05A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-3	48.23	36.94	45.6	1605	0.5"	375	1901	0.74	460/3	12	13	20	1050	16.2	CARRIER 50GCQM05A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-4	48.23	36.94	45.6	1605	0.5"	415	1901	0.74	460/3	12	13	20	1050	16.2	CARRIER 50GCQM05A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-5	48.23	36.94	45.6	1600	0.5"	490	1901	0.74	460/3	12	13	20	1050	16.2	CARRIER 50GCQM05A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-6	123.51	93.78	116.1	4000	0.5"	455 1245	722	1.95	460/3	48	49	50	2325	12.3	CARRIER 50HCQD12A2M6-2A4G0	(1) (9) (10) (11) (12) (13) (14) (15)
HP-7	123.51	93.78	116.1	4000	0.5"	655 900	722	1.95	460/3	48	49	50	2325	12.3	CARRIER 50HCQD12A2M6-2A4G0	(1) (9) (10) (11) (12) (13) (14) (15)
HP-8	35.89	27.31	34.3	1200	0.5"	230	1946	0.54	460/3	9	10	15	950	16.2	CARRIER 50GCQM04A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-9	35.89	27.31	34.3	1200	0.5"	100	1946	0.54	460/3	9	10	15	950	16.2	CARRIER 50GCQM04A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-10	49.81	42.26	47.20	1990	0.5"	700	2079	0.96	460/3	12	13	20	1050	16.2	CARRIER 50GCQM06A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-11	49.81	42.26	47.20	1990	0.5"	570	2079	0.96	460/3	12	13	20	1050	16.2	CARRIER 50GCQM06A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-12	73.01	56.37	68.9	2400	0.5"	575	804	1.61	460/3	26	27	30	1400	12.0	CARRIER 50GHQD07A2M6-2A4G0	(1) (3) (6) (7) (8) (9) (10) (14) (15)
HP-13	92.10	69.40	85.4	3000	0.5"	700	801	1.30	460/3	39	40	40	1650	12.2	CARRIER 50HCQD08A2M6-2A4G0	(1) (5) (6) (7) (9) (10) (14) (15)
HP-14	49.81	42.26	47.20	1980	0.5"	570	2079	0.96	460/3	12	13	20	1050	16.2	CARRIER 50GCQM06A2M6-2U4A0	(1) (2) (3) (4) (10) (14)
HP-15	101.20	77.70	97.10	3400	0.5"	545	845	1.65	460/3	42	43	45	1750	12.9	CARRIER 50HCQD09A2M6-2A4G0	(1) (5) (6) (7) (9) (10) (14) (15)

(1) WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
(2) WITH MEDIUM STATIC DRIVE, LOUVERED HAIL GUARDS, TRU OPEN CONTROLLER, HINGED PANELS, UNPOWERED CONVENIENCE OUTLET, AND CRHEATER333A00 ELECTRIC HEATER.
(3) WITH MICROMETL CRBV-SRT12GA-11 CURB.
(4) WITH CARRIER TEMPERATURE ULTRA LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF.
(5) WITH MEDIUM STATIC DRIVE, LOUVERED HAIL GUARDS, TRU OPEN CONTROLLER, HINGED PANELS, 2-SPEED VFD CONTROLLER, CRHEATER116B00 ELECTRIC HEATER, AND CRSINGLE047A00 SINGLE POINT KIT.
(6) WITH MICROMETL CRBV-SRT34GA-11 CURB.
(7) WITH MICROMETL ECD-SRT34CA-D0DB-4 ECONOMIZER.
(8) WITH MEDIUM STATIC DRIVE, LOUVERED HAIL GUARDS, TRU OPEN CONTROLLER, HINGED PANELS, 2-SPEED VFD CONTROLLER, CRHEATER265A00 ELECTRIC HEATER, AND CRSINGLE042A0 SINGLE POINT KIT.
(9) WITH DUCT MOUNTED SMOKE DETECTOR IN MAIN SUPPLY DUCT PER CMC 608. DETECTORS PROVIDED BY, WIRED TO FIRE ALARM, AND FOR POWER BY ELECTRICAL CONTRACTOR. DETECTORS INSTALLED BY AND CONNECTED TO UNIT CONTROLLER BY MECHANICAL CONTRACTOR.
(10) WITH BACNET COMMUNICATION CARD.
(11) WITH MEDIUM STATIC DRIVE, LOUVERED HAIL GUARDS, TRU OPEN CONTROLLER, HINGED PANELS, 2-SPEED VFD CONTROLLER, CRHEATER292A00 ELECTRIC HEATER, AND CRSINGLE047A00 SINGLE POINT KIT.
(12) WITH MICROMETL CRBV-SRT05GA-11 CURB.
(13) WITH MICROMETL ECD-SRT05CA-D0DB-4 ECONOMIZER.
(14) FOR MOUNTING, SEE 4/M6.1.
(15) WITH CARRIER STAGED AIR VOLUME SYSTEM.

ROOF HOODS

MARK	CFM	THROAT AREA SF	THROAT VELOCITY	THROAT SIZE	HOOD SIZE	CURB CAP SIZE	WT LBS	MAKE & MODEL	REMARKS
RH-1	-	0.82	- FPM	12"Ø	29"Ø	22" x 22"	35	GREENHECK GRSR-12	(1) (2)
RH-2	-	0.82	- FPM	12"Ø	29"Ø	22" x 22"	35	GREENHECK GRSR-12	(1) (2)

(1) WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
(2) WITH CURB SEAL AND GREENHECK GPI-22-G14

SPLIT SYSTEM AIR CONDITIONERS

MARK	COOL MBH	HEAT MBH	CFM	ESP	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL MOCP	WT LBS	EER SEER	LINE SIZE GAS	LINE SIZE LIQ	MAKE & MODEL	REMARKS
CU-1	18	-	-	-	208/1	16	25	100	21.5	1/2"	1/4"	CARRIER 38MARBQ18AA3	(3)
FC-1			380	-	(1)	(1)	(1)	30	-	1/2"	1/4"	CARRIER 40MAHBQ18XA3	(2) (4)
CU-2	18	-	-	-	208/1	16	25	100	21.5	1/2"	1/4"	CARRIER 38MARBQ18AA3	(3)
FC-2			380	-	(1)	(1)	(1)	30	-	1/2"	1/4"	CARRIER 40MAHBQ18XA3	(2) (4)

(1) POWER FOR INDOOR UNIT PROVIDED BY OUTDOOR UNIT.
(2) WITH CARRIER KSACN0801AAA WIRED REMOTE CONTROLLER.
(3) FOR MOUNTING, SEE 11/M6.1.
(4) FOR MOUNTING, SEE 12/M6.1.

FANS

MARK	CFM	ESP	SONES OR TIP SPEED	MOTOR HP	MOTOR V/PH	FAN RPM	WT LBS	MAKE & MODEL	REMARKS
EF-1	400	0.25"	4.8	1/10	115/1	1186	55	GREENHECK G-090-VG	(1) (2) (6)
EF-2	170	0.125"	1.1	30 WATTS	115/1	1186	19	GREENHECK SP-A190	(1) (3) (7)
EF-3	1300	0.25"	11.0	1/4	115/1	1670	70	GREENHECK G-100-VG	(1) (4) (6)
EF-4	400	0.25"	4.8	1/10	115/1	1186	55	GREENHECK G-090-VG	(1) (2) (6)
EF-5	1410	0.25"	5.2	3/4	115/1	528	130	GREENHECK G-180-VG	(1) (5) (6)
EF-6	1410	0.25"	5.2	3/4	115/1	528	130	GREENHECK G-180-VG	(1) (5) (6)
EF-7	1410	0.25"	5.2	3/4	115/1	528	130	GREENHECK G-180-VG	(1) (5) (6)

(1) WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
(2) WITH NEMA-3R DISCONNECT SWITCH, CURB SEAL, GRAVITY OPERATED BACKDRAFT DAMPER, AND GREENHECK ATI-17-10-G18 ROOF CURB.
(3) WITH UNIT MOUNTED SOLID STATE SPEED CONTROL AND HANGING ISOLATION KIT.
(4) WITH NEMA-3R DISCONNECT SWITCH, CURB SEAL, GRAVITY OPERATED BACKDRAFT DAMPER, AND GREENHECK ATI-19-12-G18 ROOF CURB.
(5) WITH NEMA-3R DISCONNECT SWITCH, CURB SEAL, GRAVITY OPERATED BACKDRAFT DAMPER, AND GREENHECK ATI-30-18-G18 CURB.
(6) FOR MOUNTING, SEE 8/M6.1.
(7) FOR MOUNTING, SEE 10/M6.1.

FUME HOOD EXHAUST FANS

MARK	CFM	ESP	INLET dBA	MOTOR HP	MOTOR V/PH	FAN RPM	WT LBS	MAKE & MODEL	REMARKS
FHEF-1	600	0.25"	67	1/2	460/3	2394	320	GREENHECK VEKTOR-H-10	(1) (2) (3)
FHEF-2	600	0.25"	67	1/2	460/3	2394	320	GREENHECK VEKTOR-H-10	(1) (2) (3)
FHEF-3	800	0.25"	67	1	460/3	2510	320	GREENHECK VEKTOR-H-10	(1) (2) (3)
FHEF-4	800	0.25"	67	1	460/3	2510	320	GREENHECK VEKTOR-H-10	(1) (2) (3)

(1) WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
(2) FOR MOUNTING, SEE 9/M6.1.
(3) WITH NEMA-3R DISCONNECT SWITCH, GREENHECK EMV-11 DAMPER, SURE-AIR FLOW STATION (NO ELECTRONICS), AND GREENHECK GPFHL 14" TALL ROOF CURB.

CEILING FANS

MARK	DIAMETER	V/PH	MAX RPM	WT LBS	MAKE & MODEL	REMARKS
CF-1	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)
CF-2	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)
CF-3	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)
CF-4	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)
CF-5	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)
CF-6	60"	110/1	170	35	BIG ASS FANS I6	(1) (2)

(1) FINISH: PER ARCHITECT.
(2) WITH FIXED WALL MOUNT REMOTE.

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NEW COLLEGE CAMPUS

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

DSA SUBMITTAL 2/4/22

REGISTERED PROFESSIONAL ENGINEER
WILLIAM M. ESTES
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EXP. SEPT 30, 2023
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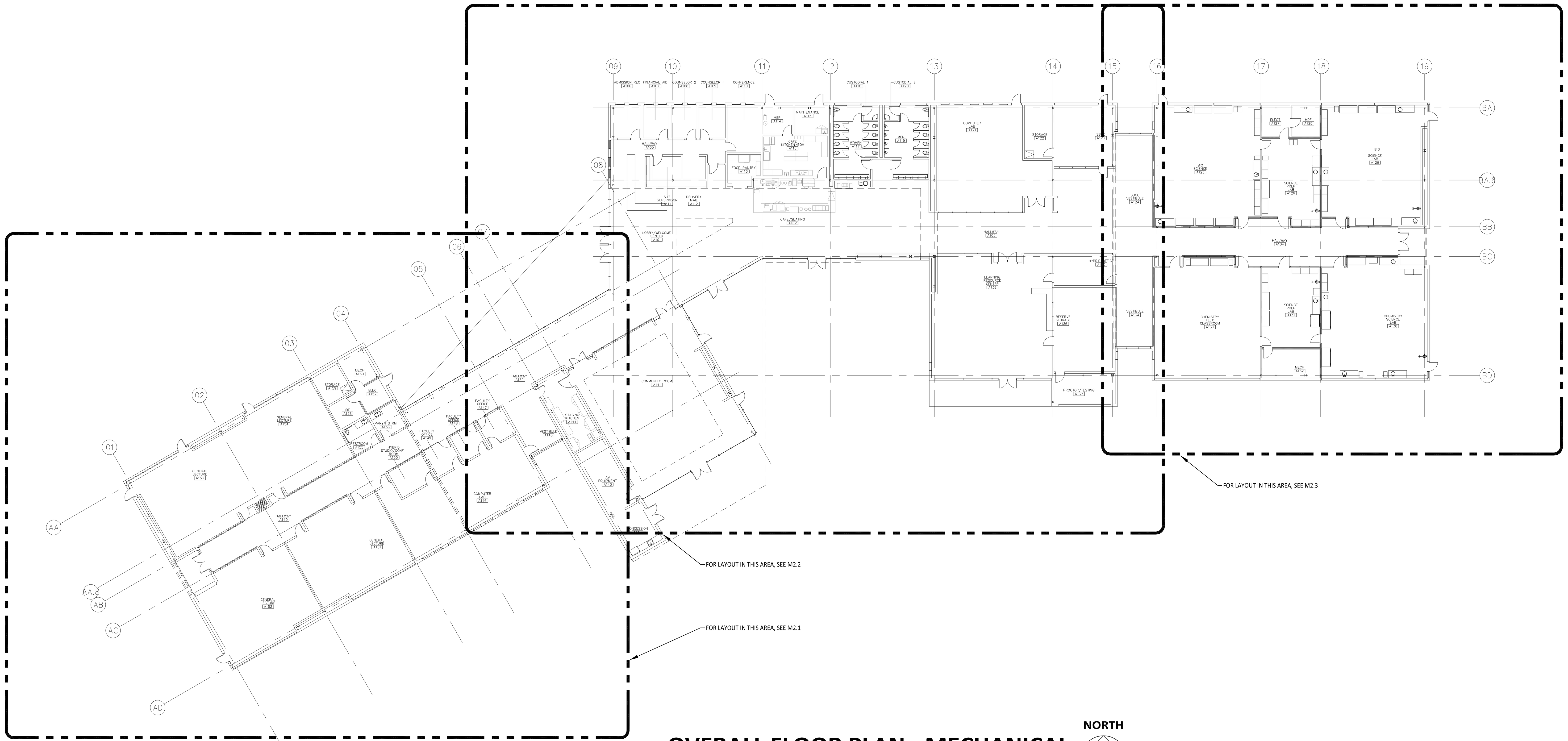
SHEET TITLE
SCHEDULES MECHANICAL

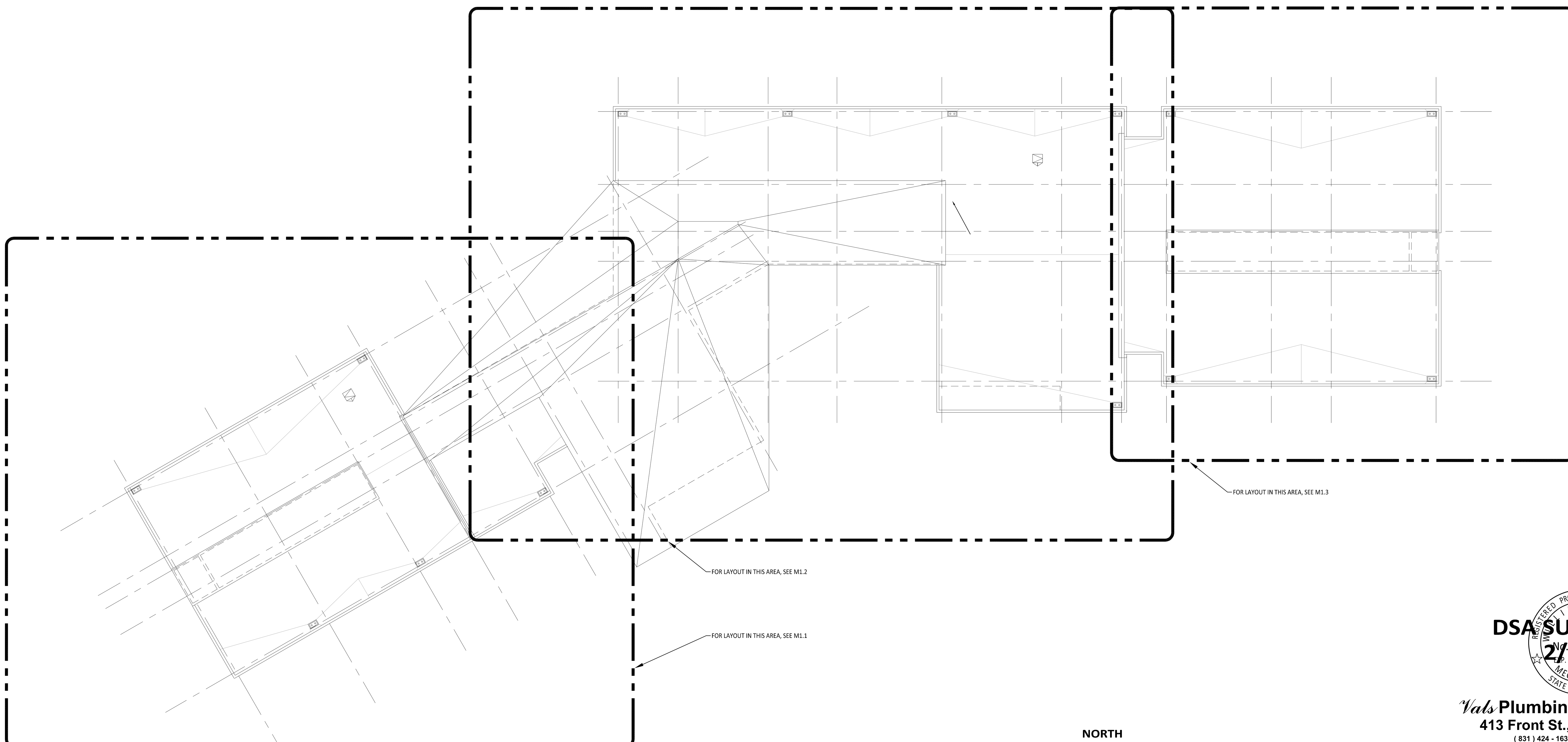
SHEET NUMBER
M0.2



OVERALL FLOOR PLAN - MECHANICAL

SCALE: 1" = 20'-0"

NORTH



OVERALL ROOF PLAN - MECHANICAL

SCALE: 1" = 20'-0"

NORTH

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2/4/22

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DSA SUBMITTAL

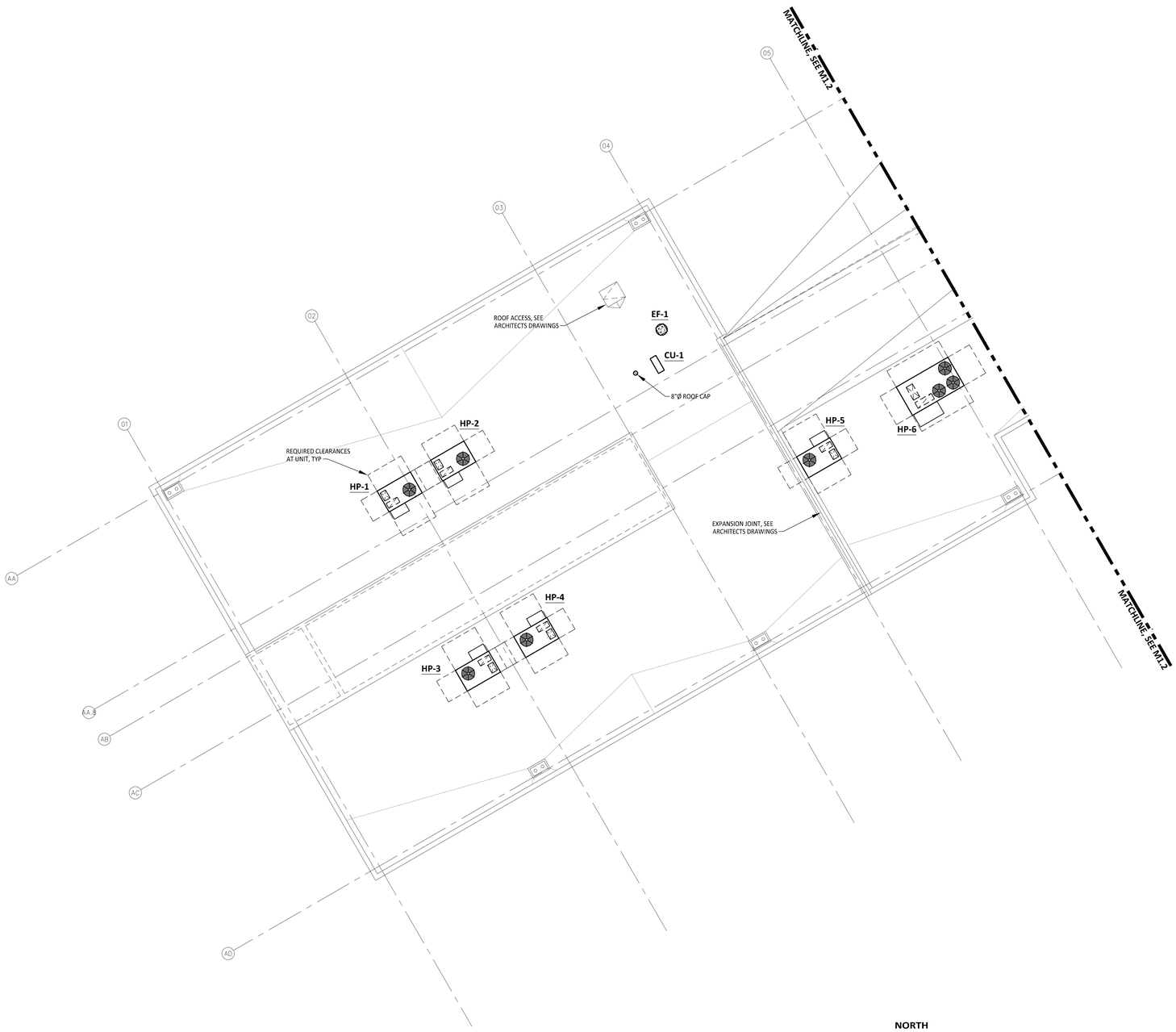
FEBRUARY 4, 2022

SHEET TITLE

OVERALL PLANS
MECHANICAL

SHEET NUMBER

M1.0



SECTOR A ROOF PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

NORTH

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FEBRUARY 4, 2022

SHEET TITLE

SECTOR A ROOF PLAN MECHANICAL

SHEET NUMBER

M1.1

DSA SUBMITTAL
2/4/22

REGISTERED PROFESSIONAL ENGINEER
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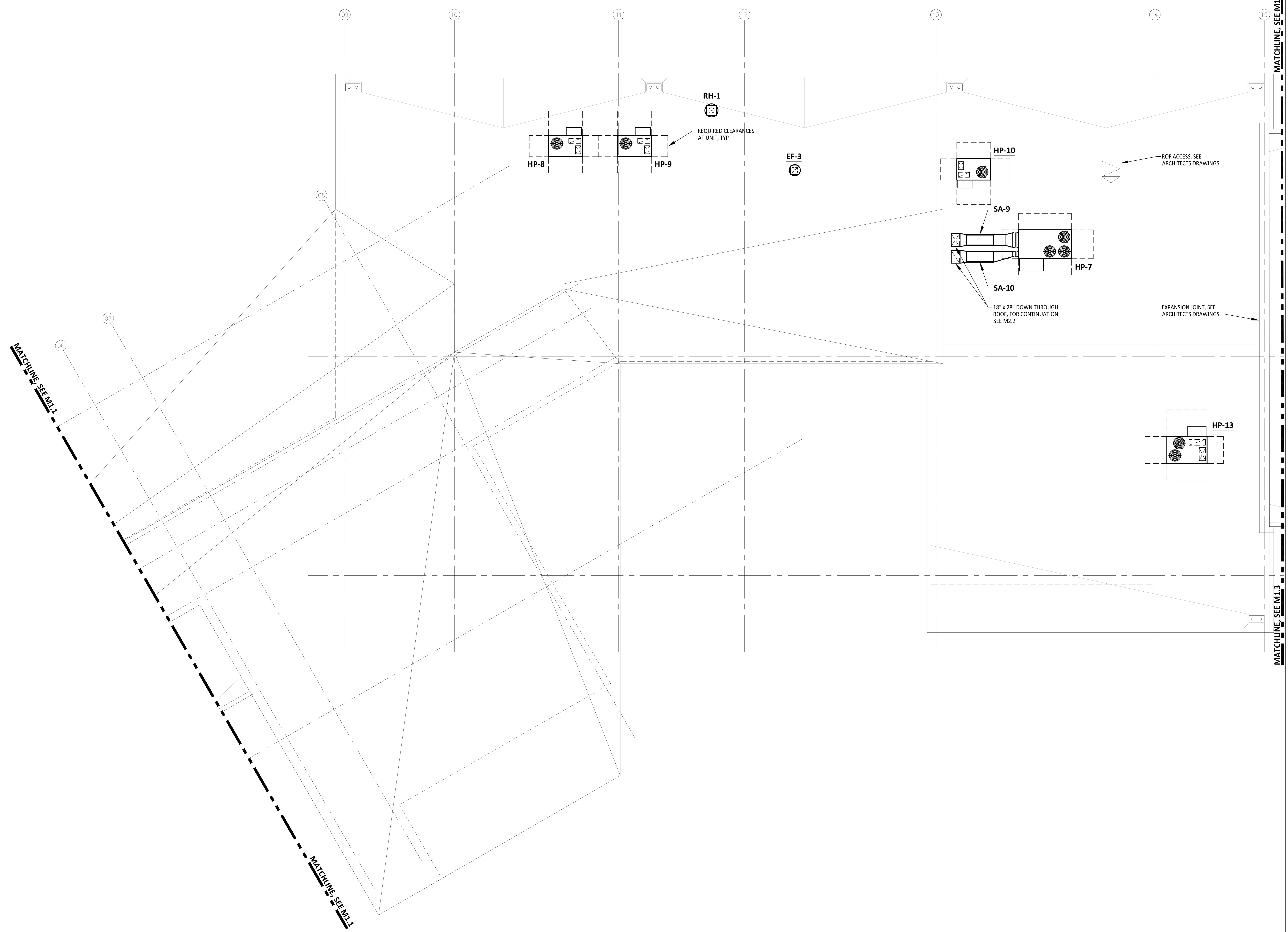

SECTOR B ROOF PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

NORTH

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ARCH PROJECT NO:	1897.00
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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

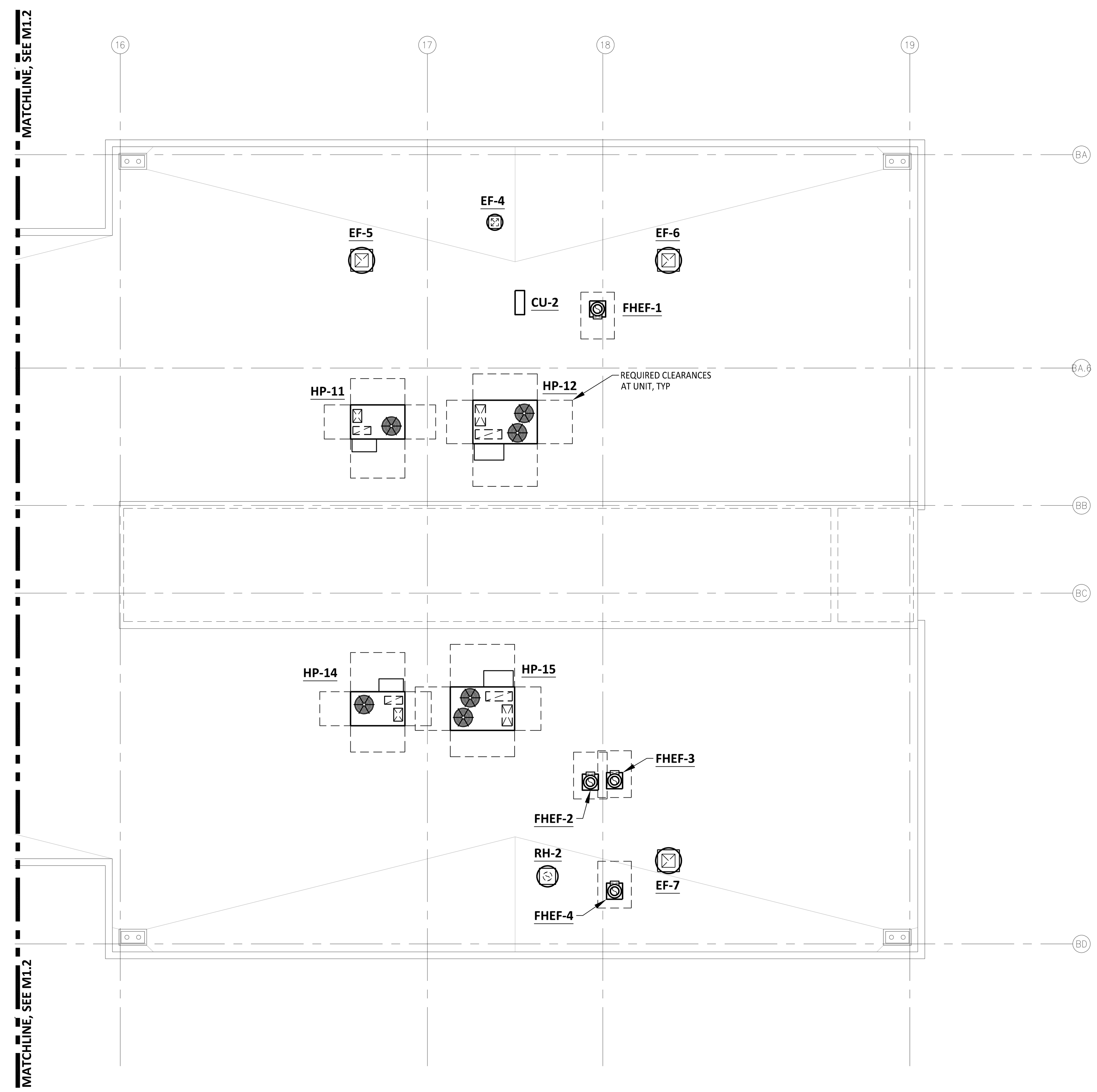
FEBRUARY 4, 2022

SHEET TITLE

SECTOR B
ROOF PLAN
MECHANICAL

SHEET NUMBER

M1.2



SECTOR C ROOF PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

NORTH

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DSA SUBMITTAL

FEBRUARY 4, 2022

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2/4/22

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SHEET TITLE

SECTOR C
ROOF PLAN
MECHANICAL

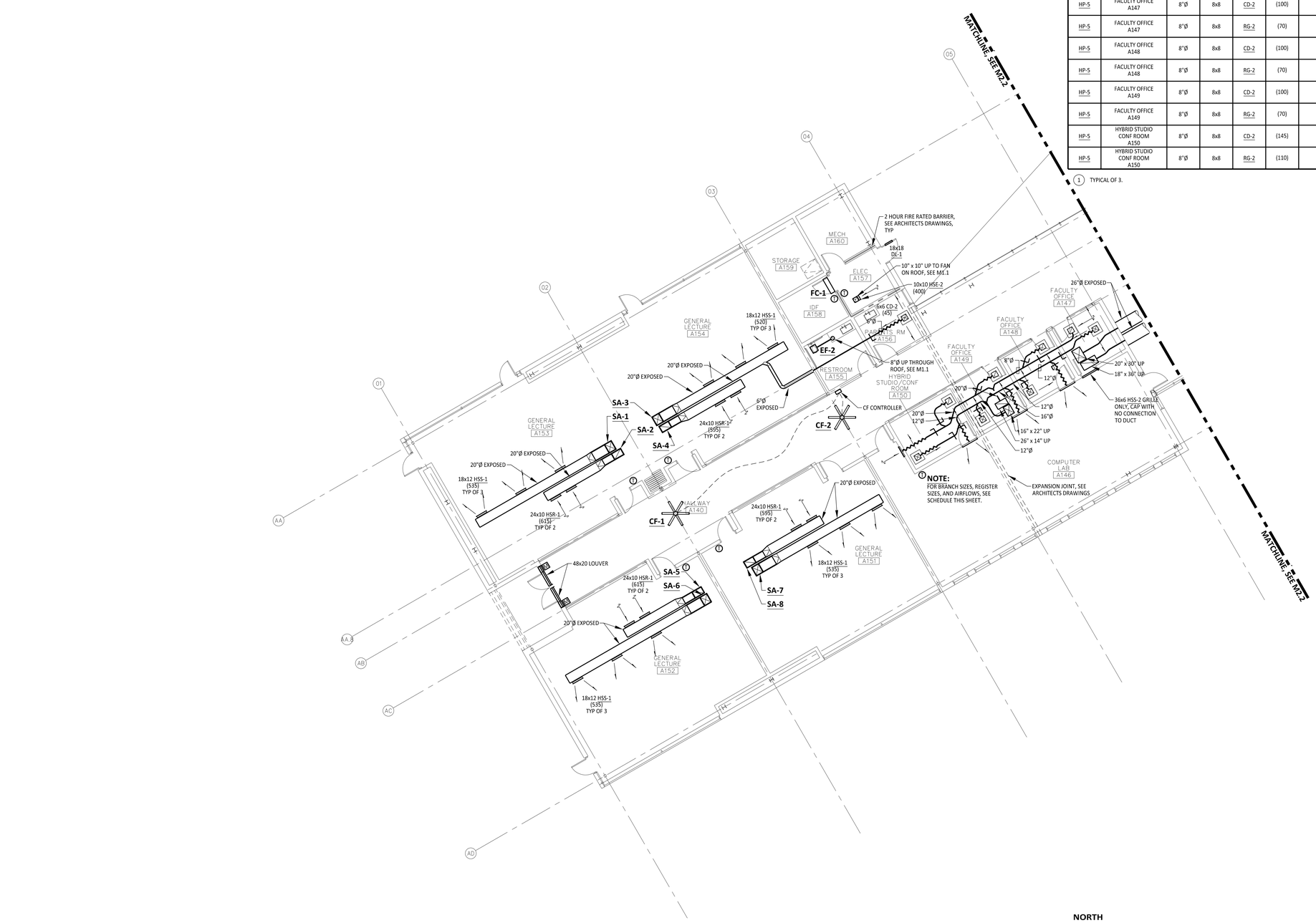
SHEET NUMBER

M1.3

AIR DISTRIBUTION

UNIT	ROOM NAME ROOM NUMBER	BRANCH SIZE	REGISTER SIZE	MARK	DESIGN CFM	REMARKS
HP-5	COMPUTER LAB A146	12"Ø	36x6	HSS-2	(385)	(1)
HP-5	COMPUTER LAB A146	20"Ø	24x14	HSR-2	(790)	
HP-5	FACULTY OFFICE A147	8"Ø	8x8	CD-2	(100)	
HP-5	FACULTY OFFICE A147	8"Ø	8x8	RG-2	(70)	
HP-5	FACULTY OFFICE A148	8"Ø	8x8	CD-2	(100)	
HP-5	FACULTY OFFICE A148	8"Ø	8x8	RG-2	(70)	
HP-5	FACULTY OFFICE A149	8"Ø	8x8	CD-2	(100)	
HP-5	FACULTY OFFICE A149	8"Ø	8x8	RG-2	(70)	
HP-5	HYBRID STUDIO CONF ROOM A150	8"Ø	8x8	CD-2	(145)	
HP-5	HYBRID STUDIO CONF ROOM A150	8"Ø	8x8	RG-2	(110)	

(1) TYPICAL OF 3.



SECTOR A FLOOR PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

NORTH

DSA SUBMITTAL
FEBRUARY 4, 2022

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AE Project #: 20210022
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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

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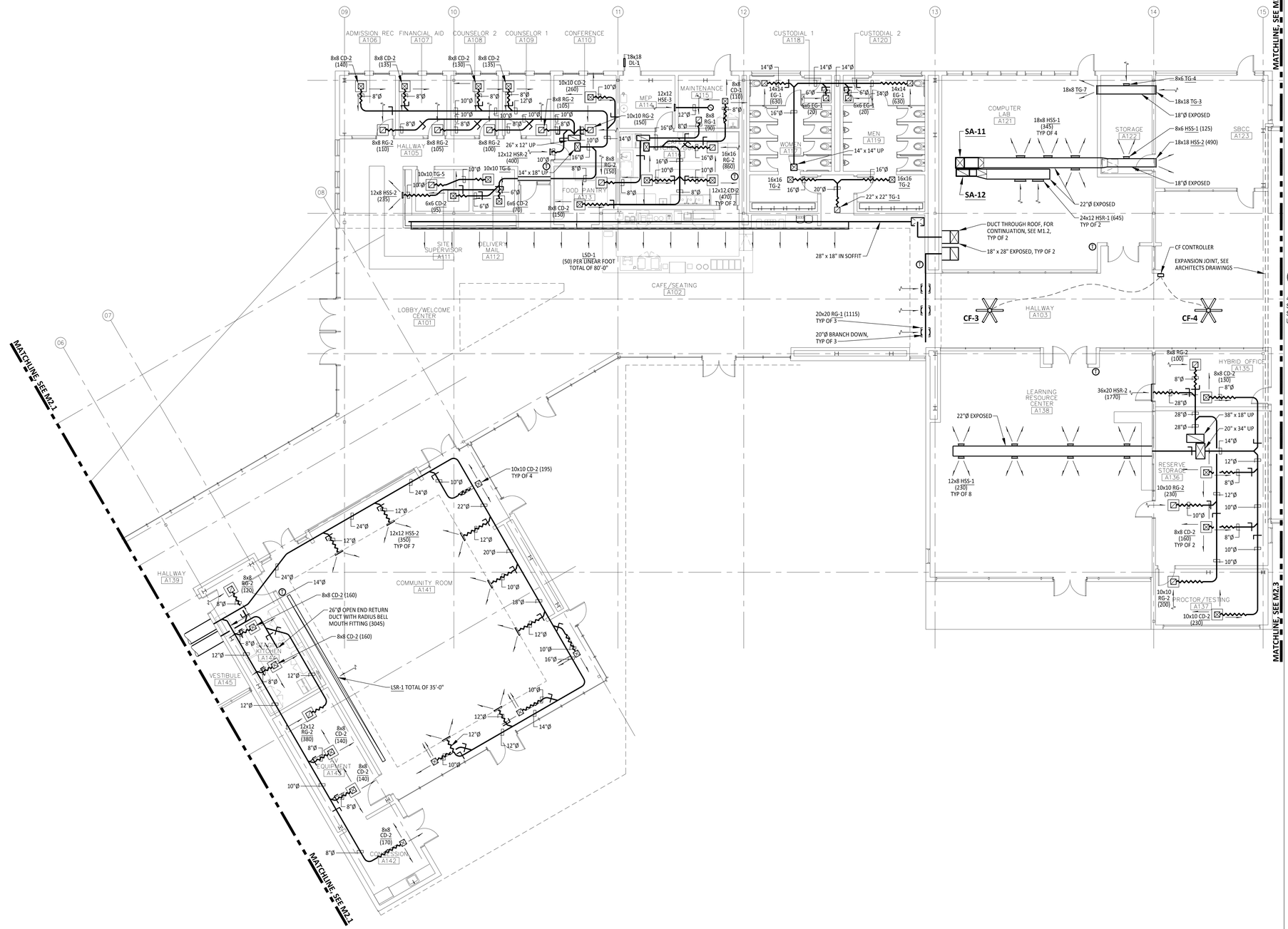
FEBRUARY 4, 2022

SHEET TITLE

SECTOR A FLOOR PLAN MECHANICAL

SHEET NUMBER

M2.1



SECTOR B FLOOR PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

NORTH

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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

SECTOR B FLOOR PLAN MECHANICAL

SHEET NUMBER

M2.2

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2-4-22

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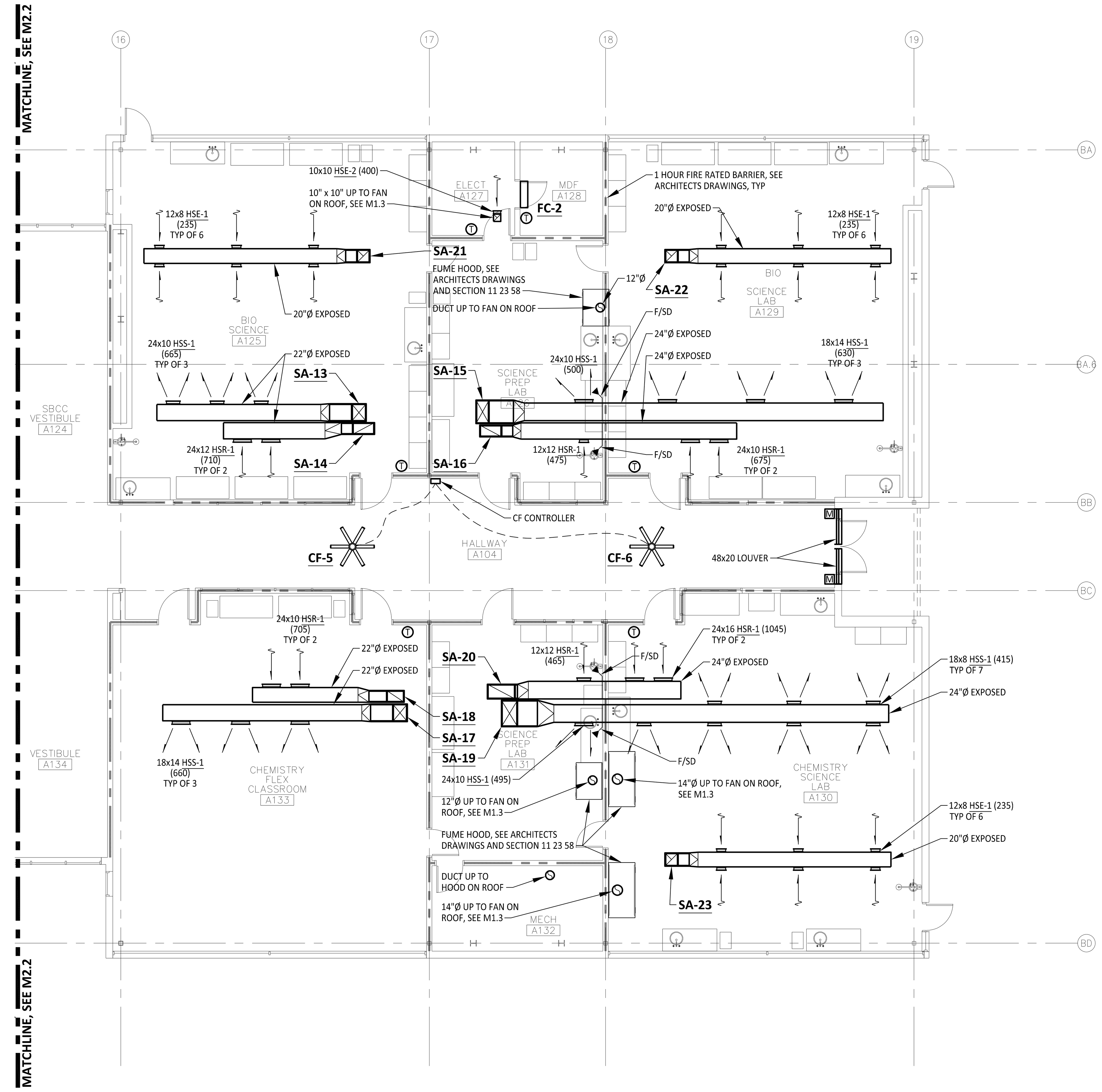

SECTOR C FLOOR PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

DSA SUBMITTAL
2/4/22

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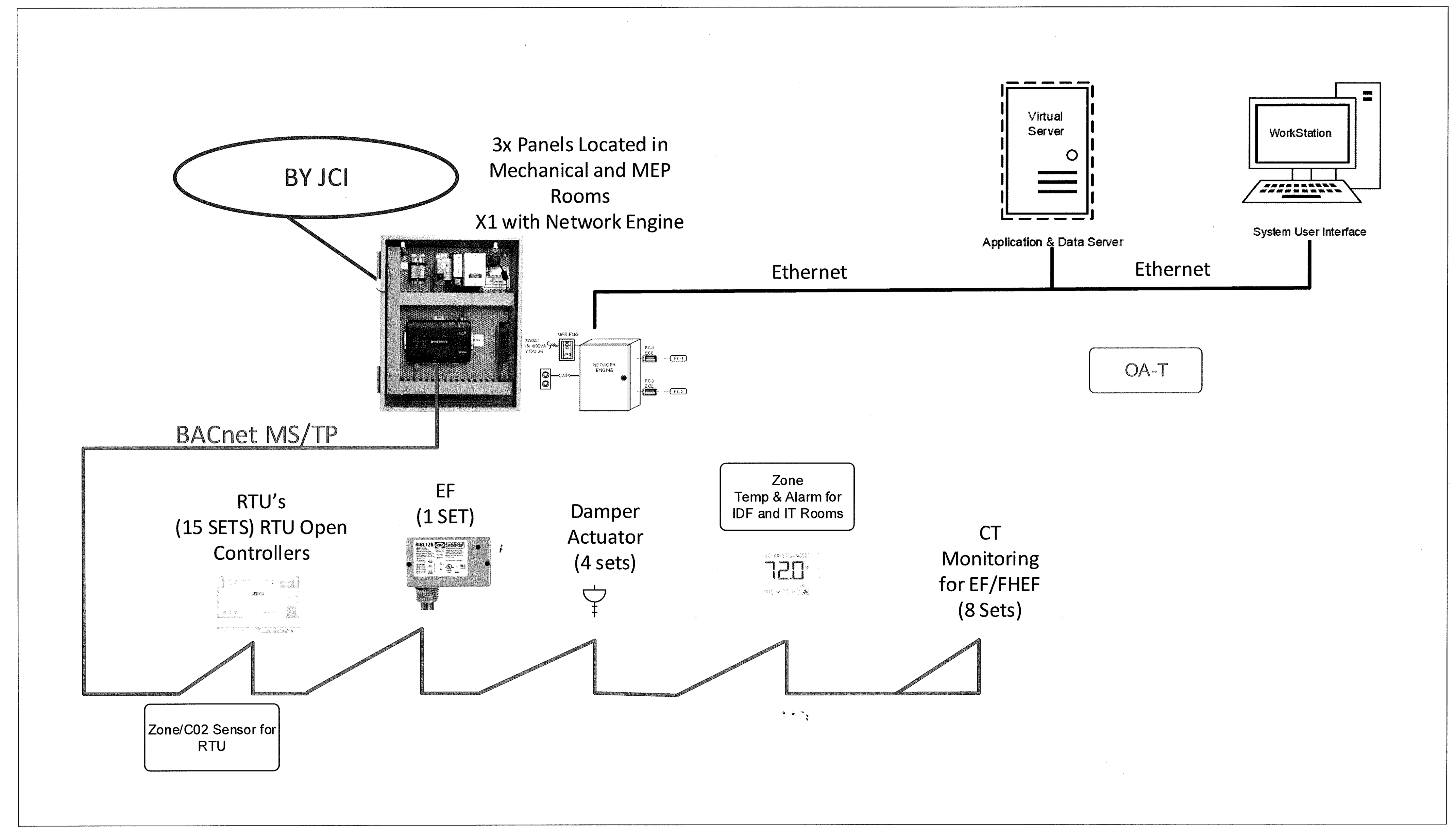
ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTOR C FLOOR PLAN MECHANICAL

SHEET NUMBER
M2.3



1 M5.1 **SYSTEM ARCHITECTURE**

SCALE: NONE

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

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FEBRUARY 4, 2022

SHEET TITLE

CONTROLS MECHANICAL

SHEET NUMBER

M5.1

DSA SUBMITTAL 2/4/22

REGISTERED PROFESSIONAL ENGINEER WILLIAM M. ESTES No. M24908 EXP. SEPT 30, 2023 MECHANICAL STATE OF CALIFORNIA

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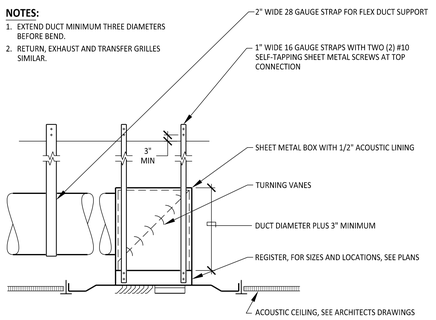
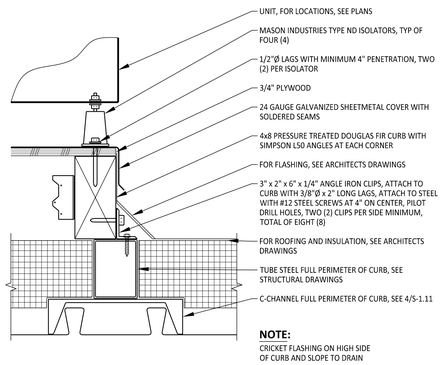
Monterey, California 93940-5788

NOTES:
1. EXTEND DUCT MINIMUM THREE DIAMETERS BEFORE BEND.
2. RETURN, EXHAUST AND TRANSFER GRILLES SIMILAR.



15 M6.1 DIFFUSER MOUNTING T-BAR CEILING

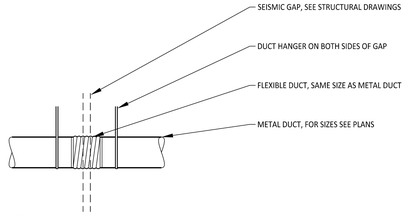
NO SCALE



NOTE:
CRICKET FLASHING ON HIGH SIDE OF CURB AND SLOPE TO DRAIN

11 M6.1 CONDENSING UNIT MOUNTING

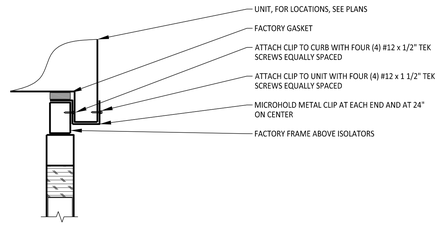
NO SCALE



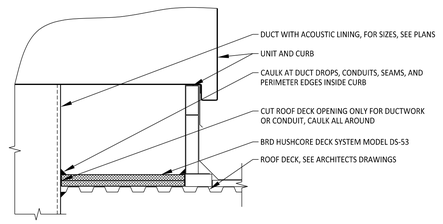
NOTE:
EXPANSION/CONTRACTION CAPABILITY SHALL BE PROVIDED IN DUCTS WHICH CROSS BUILDING EXPANSION (SEISMIC) GAPS. THE TOTAL RELATIVE MOVEMENT IN ANY HORIZONTAL DIRECTION ON EACH SIDE OF THE GAP CENTERLINE SHALL BE, AS A MINIMUM, EQUAL TO THE SIZE OF THE BUILDING EXPANSION GAP.
FOR EXAMPLE, AT A 4" BUILDING EXPANSION GAP, A DUCT SHALL BE PERMITTED TO MOVE A MINIMUM OF 4" ON EACH SIDE OF THE GAP CENTERLINE.

7 M6.1 DUCT CROSSING SEISMIC GAP

NO SCALE



UNIT CONNECTION TO CURB



NOTES:
1. PRODUCTS AND SYSTEMS SHALL BE BY BRD NOISE AND VIBRATION CONTROL.
2. DECKING SHALL BE MAINTAINED INSIDE THE RTU ROOF CURB TO A CLEARANCE OF 1/4" MAXIMUM AROUND ALL DUCT DROPS AND CONDUIT BUT NEVER CONTACT THE DUCT OR CONDUIT.
3. PANELS SHALL GET HUSH SEALANT MODEL HSAC-100 ACOUSTICAL GRADE CAULK AT ALL SEAMS AND PERIMETER EDGES INSIDE CURB.
4. A LETTER OF CERTIFICATION SHALL BE ISSUED BY THE ACOUSTICAL SYSTEM SUPPLIER STATING THE COMPLETE SYSTEM HAS BEEN PROPERLY INSTALLED PRIOR TO SETTING THE UNITS. PHOTO VERIFICATION IS ACCEPTABLE FOR REVIEW AND APPROVAL.

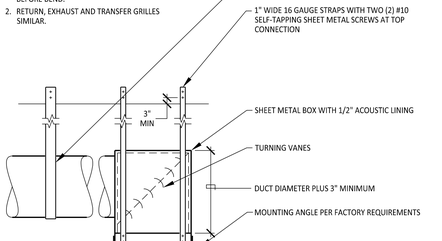
1 M6.1 ACOUSTIC TREATMENT WITHIN ROOF CURB

NO SCALE

NOTES:
1. EXTEND DUCT MINIMUM THREE DIAMETERS BEFORE BEND.
2. RETURN, EXHAUST AND TRANSFER GRILLES SIMILAR.

16 M6.1 SIDEWALL MOUNTING

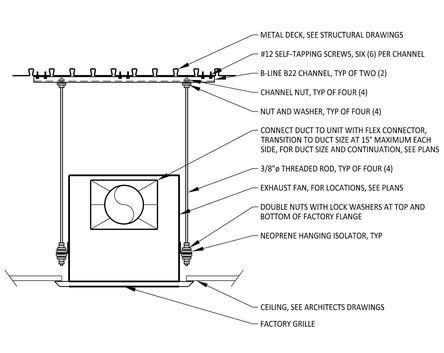
NO SCALE



NOTE:
MAINTAIN FACTORY REQUIRED CLEARANCES ALL AROUND UNIT

12 M6.1 FAN COIL MOUNTING

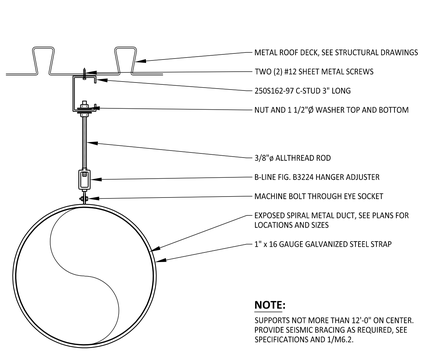
NO SCALE



NOTE:
CRICKET FLASHING ON HIGH SIDE OF CURB AND SLOPE TO DRAIN

8 M6.1 ROOF MOUNTED FAN

NO SCALE (HOODS AND CAPS SIMILAR)



CURB CONNECTION TO STRUCTURE

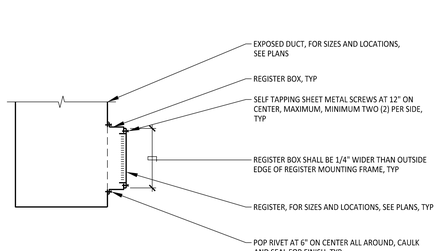
4 M6.1 HP UNIT MOUNTING

NO SCALE

NOTES
1. APPLIES TO UNITS WITHOUT SOUND ATTENUATOR ELBOWS.

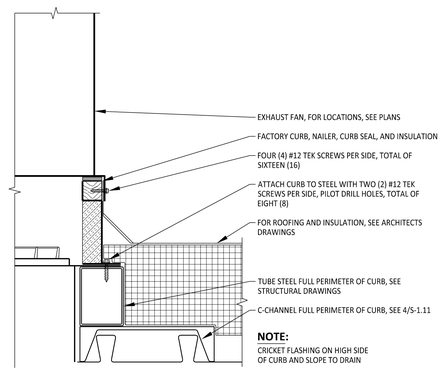
2 M6.1 DUCT TRANSITION AT UNITS

NO SCALE



13 M6.1 DUCT MOUNTED REGISTER

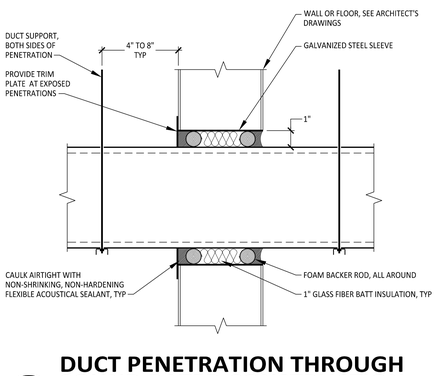
NO SCALE



NOTE:
CRICKET FLASHING ON HIGH SIDE OF CURB AND SLOPE TO DRAIN

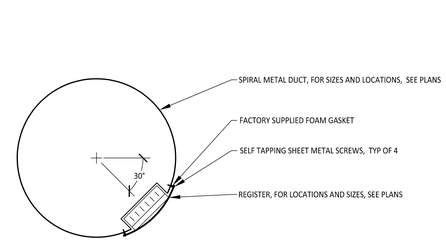
9 M6.1 ROOF MOUNTED FAN

NO SCALE (FUME HOOD EXHAUST FANS)



5 M6.1 DUCT PENETRATION THROUGH SOUND RATED CONSTRUCTION

NO SCALE



3 M6.1 DUCT MOUNTED REGISTER

NO SCALE

NOTES:
1. EXTEND DUCT MINIMUM THREE DIAMETERS BEFORE BEND.
2. RETURN, EXHAUST AND TRANSFER GRILLES SIMILAR.

14 M6.1 DIFFUSER MOUNTING HARD CEILING

NO SCALE

10 M6.1 CEILING MOUNTED FAN

NO SCALE

NOTE:
SUPPORTS NOT MORE THAN 12'-0" ON CENTER. PROVIDE SEISMIC BRACING AS REQUIRED, SEE SPECIFICATIONS AND 1/M6.2.

6 M6.1 EXPOSED DUCT SUPPORT

NO SCALE

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PTN: 43-C4	FILE NO: N/A

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FEBRUARY 4, 2022

SHEET TITLE
DETAILS MECHANICAL

SHEET NUMBER
M6.1

REGISTERED PROFESSIONAL ENGINEER
TAM M. PHAM
No. M27993
MECHANICAL
STATE OF CALIFORNIA

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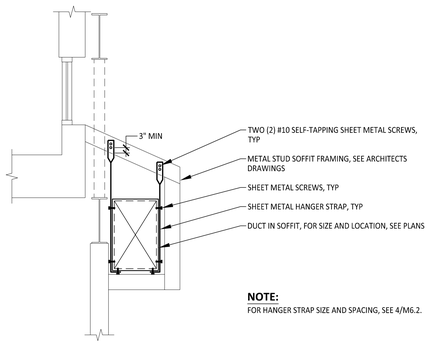

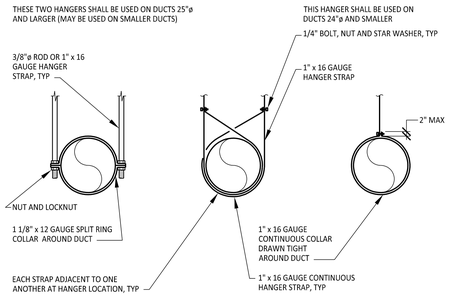

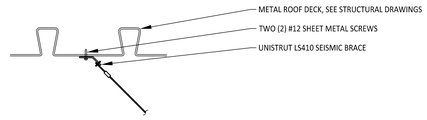

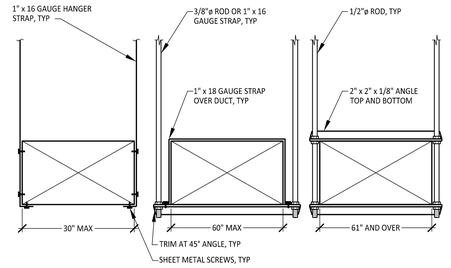

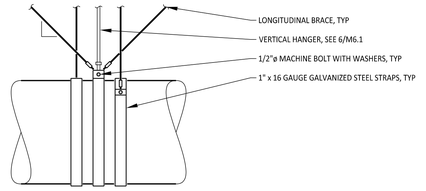

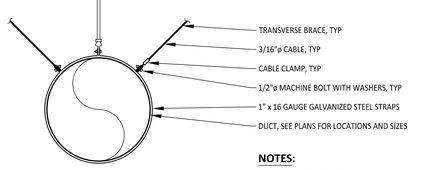

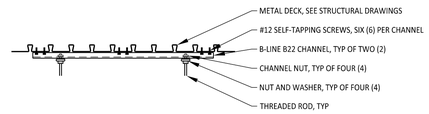

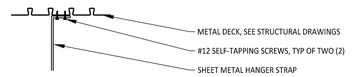

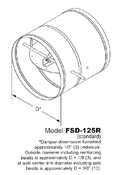

NOTE:
FOR HANGER STRAP SIZE AND SPACING, SEE 4/M6.2.

5 M6.2 DUCT IN SOFFIT SUPPORT

NO SCALE

POTTORFF® 1½ hour • **UL class 1** — combination fire smoke damper round blade

model **FSD-125R**

Application

The FSD-125R combination fire smoke damper employs a single round blade for point-of-origin control of fire and smoke in static and dynamic smoke management systems. This unique damper comes standard with mounting plates for interface to round or square openings in masonry, metal stud, or wood stud assemblies and is ideal for all round duct applications. The FSD-125R, standard construction, is qualified to 2000 fpm (10.2 m/s) and 4 in. wg. (1.0 kPa) at 250° F (121°C). Optional construction is qualified to 3000 fpm (15.3 m/s) and 4 in.wg. (1.0 kPa) at 350° F (177°C) and may be installed in vertical walls or partitions, or horizontally in floors or assemblies with fire resistance ratings up to 2 hours.

Standard Construction

Sleeve/Frame: Integral 16" x 20 gauge (406 x 1.0) galvanized steel with reinforcing beads.

Retaining Plates: Dual sided system suitable for round or square penetrations.

Blade: 14 gauge (2.0) equivalent galvanized steel — round.

Axles: ½" (13) diameter plated steel, D<8" (203), ¾" (19), D≥8" (203).

Linkage: In the air-stream.

Bearings: Bronze oilite, sleeve-type.

Seal: Silicone blade edge seal.

Actuator: 120 VAC, power-open, spring-close, external mount.

Fire Closure Device: HS-10 (electric actuators)
PFV (pneumatic actuators)

Fire Closure Temperature: 165°F (75°C).

Minimum Size: 6" Ø (152 Ø)

Maximum Size: 24" Ø (610 Ø)

Options

☐ Alternate actuator:
☐ 24 VAC ☐ 230 VAC ☐ Pneumatic

☐ DRS-30 — Two temperature fire closure device. (Includes actuator with auxiliary switches)

☐ Alternate sleeve/frame length:
☐ 20" (508) ☐ 24" (610)

☐ Single-sided mounting plate.

☐ Duct access door factory mounted to sleeve/frame.

☐ Alternate fire closure temperature:
☐ 212°F (100°C) ☐ 250°F (121°C)
☐ 350°F (177°C)

☐ Remote control stations:
☐ RCP-1 (single) ☐ RCP-1K (single, key controlled)
☐ RCP-1M (single, momentary switch)

☐ Type - 304 stainless steel construction.

Ratings

UL 555 Fire Resistance Rating: 1½ hour (vertical and horizontal)

UL 555S Leakage Class: 1 [8 cfm/sq.ft. @ 4 in.wg.]
[(0.04 m³/s/m² @ 1.0 kPa)]

Maximum Dynamic Closure Velocity: 3,000 fpm (15.3 m/s)

Maximum UL555S Rated Pressure: 4 in.wg. (1.0 kPa)

Maximum Temperature: 350°F (177°C)

Listings

UL 555 and 555S listing: R11767

CSFM listing: 3225-0368:112 and 3230-0368:113

New York City MEA listing: 295-98-E

Meets NFPA Standards: 90A, 92A, 92B and 101

Meets Building Code Standards: IBC, NBC, NFPA, SBC and UBC

Model **FSD-125R**
(standard)
*Damper dimensions furnished approximately 1/8" (3) undersize. Outside diameter including reinforcing beads is approximately D + 1/8 (3), and at axle center line diameter including axle heads is approximately D + 3/8" (10).

Fire Smoke Dampers **FSD125R** (1/2) August 2011

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.

POTTORFF® 5101 Blue Mound Road, Fort Worth, Texas 76106 www.pottorff.com

POTTORFF® 1½ hour — combination fire smoke dampers installation instructions

The following installation details apply to model **FSD-125R**

Figure 1a
Horizontal Concrete Partition

Figure 1b
Vertical Concrete Partition

Figure 2
Stud Partition

A. Concrete or masonry fire partition shown in figure 1a and 1b. Wood or steel stud fire partition shown in figure 2. See Wood Stud and/orSteel Stud Framing for Fire Dampers In Drywall and/or Cavity Shaftwall Partitions Supplemental Installation Instructions for further vertical installation details. The square or round opening shall be a minimum ¼" (6) larger than the damper sleeve/frame. Damper must be installed with the leading edge of the closed blade within the partition. Damper may be installed with the blade a maximum of 15 degrees from horizontal. For mounting angles that are up to and including 1-½" high, the opening shall be a maximum of ¾" (19) larger than the overall damper and sleeve assembly. When openings are larger than ¾" (19), but less than 6" (152) the mounting angles must be a minimum of 16 gauge (1.5) and must be tall enough to overlap the opening by a minimum of 1" (25).

B. The connecting duct shall not be continuous, and shall terminate at the sleeve/frame using one or more of commonly used break away style connections. Refer to Sleeve Termination Supplemental Installation Instructions for further details. Damper sleeve shall not extend more than 16" (406) beyond the rated partition on the actuator side. The opposite side extension shall be a maximum of 6" (152) unless an access door is installed in the sleeve which then permits the extension to be a maximum of 16" (406).

C1. Dual Side Mounting Plates - Holding Plate and Guide Plate
The holding plate (on operator side) must be flush with the partition. Seat the holding plate (see figures 4, 4A and 5) into the mounting groove on operator side of damper and place damper in the partition. Place the guide plate (see figure 4A) around opposite side of damper sleeve and slide forward until it touches the partition. Secure both plates with joiner clips (see figure 3) using four #10 (M5) sheet metal screws, bolts or ⅛" (3) welds or rivets per joiner clip minimum. A minimum of three 1" x 1" x 2" x 20 GA. (25 x 25 x 51 x 1) clip angles shall be arranged symmetrically around the damper and fastened to the damper sleeve flush with the guide plate. Fasteners shall be a minimum of #10 (M5) screws, bolts, ⅛" (3) rivets or welds. The guide plate shall be attached to the partition with a minimum of four fasteners, at the corners of square plates (for square openings) or equally spaced around the circumference of round plates (for round openings).

For horizontal installation of the damper in a concrete floor, the holding plate must be installed on the top side of the floor opening.

C2. As an alternative to C1, for dampers ≤ 8" (203) in diameter the guide and holding plates must be attached only to the sleeve, with clip angles spaced a maximum of 8" (203) O.C. For dampers > 8" (203) and ≤ 12" (305) in diameter, the clip angles must be spaced a maximum of 4" (102) O.C. The clip angles must be staggered on either side of the partition.

C3. As a further option for round openings either or both plates may be replaced by 1-½" x 1-½" x 20 GA. (38 x 38 x 1) minimum angle rings. The ring shall be fastened to the damper sleeve and not the partition at 8" (203) on center maximum with a minimum of 3 fasteners using #10 (M5) sheet metal screws, bolts, masonry anchors, ⅛" (3) diameter rivets of welds.

C4. Single Side Mounting Plate
Single side mounting plates can be used for vertical masonry or steel stud partitions. The mounting plate must be 20 GA. (1) minimum, the clamping brackets must be 2" x 1" x ½" x 14 GA. (51 x 25 x 13 x 2) minimum, and the clamping bolt shall be a ¼" - 20 x 3" (M6 x 76) bolt minimum. Each clamping bracket must be secured to the mounting plate with a minimum of two 3/16" (5) diameter rivets or welds. The mounting plate hinges on a 3/16" (5) minimum diameter rivet. The mounting plate can be installed on either side of the partition. The mounting plate must be positioned with the retaining bolt and nut facing **AWAY** from the wall. **The mounting plate may be placed into the mounting groove or placed around the damper sleeve/frame. See Sheet 2 for mounting plate hole diameters.** Tighten clamping bolt to ensure the mounting plate is secured to the damper. The mounting plate must be fastened to the partition at all four corners and for dampers D≥ 12" (25) the mounting plate must be fastened 1" (25) from the center of each side using a minimum of #10 (M5) screws, concrete anchors, ⅛" (3) rivets or welds. Fasteners must be a minimum of ¼" (6) from the edge of the plate and **must engage the steel stud by ½" (13) minimum.**

D. Fire/leakage rated damper and qualified operators are tested together by Underwriters Laboratories and are factory installed to qualify for standard damper/operator warranties. Damper operator/actuator must be tested prior to system start-up to ensure proper operation. Before applying power to the actuator, the power must be verified.

Model - FSD-125R
For Use in Dynamic or Static Systems.
1-1/2 Hour Rated.
Vertical or horizontal mounting.
Galvanized and Stainless Steel construction.

CLASSIFIED UL SEE DETAILS ON UL CLASSIFICATION MARKING ON ENCLOSED PRODUCT CLASSIFIED UL

Fire Smoke Dampers **IIFSD125R** (1/2) August 2019

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.

POTTORFF® 5101 Blue Mound Road, Fort Worth, Texas 76106 www.pottorff.com

6 M6.1 FIRE/SMOKE DAMPER

NO SCALE

THESE TWO HANGERS SHALL BE USED ON DUCTS 25"ø AND LARGER (MAY BE USED ON SMALLER DUCTS)

THIS HANGER SHALL BE USED ON DUCTS 24"ø AND SMALLER

ROUND DUCT HANGER

RECTANGULAR DUCT HANGER

NOTES:

1. REFER TO 4/M6.2 FOR HANGER SPACING.
2. ATTACHMENTS TO OVERHEAD STRUCTURE SHALL BE MADE IN ACCORDANCE WITH STRUCTURAL ENGINEERS REQUIREMENTS AND WEIGHT LIMITATIONS.
3. FOR TOP CONNECTIONS, SEE 2/M6.2.

3 M6.2 DUCT HANGERS

NO SCALE

MINIMUM HANGER SIZES FOR ROUND DUCT				
DUCT DIAMETER	MAX SPACING	WIRE DIAMETER	ROD DIAMETER	STRAP
10" AND LESS	12'-0"	ONE (1) 12 GAUGE	1/4"	1"x22 GAUGE
11"-18"	12'-0"	TWO (2) 12 GAUGE OR ONE (1) 8 GAUGE	1/4"	1"x22 GAUGE
19"-24"	12'-0"	TWO (2) 10 GAUGE	1/4"	1"x22 GAUGE
25"-36"	12'-0"	TWO (2) 8 GAUGE	3/8"	1"x20 GAUGE
37"-50"	12'-0"	-	TWO (2) 3/8"	TWO (2) 1"x20 GAUGE
51"-60"	12'-0"	-	TWO (2) 3/8"	TWO (2) 1"x18 GAUGE
61"-84"	12'-0"	-	TWO (2) 3/8"	TWO (2) 1"x16 GAUGE
85"-96"	12'-0"	-	TWO (2) 1/2"	TWO (2) 1 1/2"x16 GAUGE

MINIMUM HANGER SIZES FOR RECTANGULAR DUCT								
MAX HALF OF DUCT PERIMETER	PAIR AT 10'-0"		PAIR AT 8'-0"		PAIR AT 5'-0"		PAIR AT 4'-0"	
	STRAP	WIRE ROD	STRAP	WIRE ROD	STRAP	WIRE ROD	STRAP	WIRE ROD
P/2=30"	1"x22 GAUGE	10 GAUGE	1"x22 GAUGE	10 GAUGE	1"x22 GAUGE	12 GAUGE	1"x22 GAUGE	12 GAUGE
P/2=72"	1"x18 GAUGE	3/8"Ø	1"x20 GAUGE	1/4"Ø	1"x22 GAUGE	1/4"Ø	1"x22 GAUGE	1/4"Ø
P/2=96"	1"x16 GAUGE	3/8"Ø	1"x18 GAUGE	3/8"Ø	1"x20 GAUGE	3/8"Ø	1"x22 GAUGE	1/4"Ø
P/2=120"	1 1/2"x16 GAUGE	1/2"Ø	1"x16 GAUGE	3/8"Ø	1"x18 GAUGE	3/8"Ø	1"x20 GAUGE	1/4"Ø
P/2=168"	1 1/2"x16 GAUGE	1/2"Ø	1 1/2"x16 GAUGE	1/2"Ø	1"x16 GAUGE	3/8"Ø	1"x18 GAUGE	3/8"Ø
P/2=192"	NOT GIVEN	1/2"Ø	1 1/2"x16 GAUGE	1/2"Ø	1"x16 GAUGE	3/8"Ø	1"x16 GAUGE	3/8"Ø
P/2=193" AND UP	SPECIAL ANALYSIS REQUIRED							

4 M6.2 MINIMUM DUCT HANGER SIZE AND MAXIMUM SPACING

NO SCALE

TOP CONNECTION

NOTES:

1. BRACE ALL DUCTS WITH AN ENCLOSED AREA GREATER THAN 6 SQUARE FEET.

1 M6.2 EXPOSED DUCT BRACING

NO SCALE

2 M6.2 TOP CONNECTIONS

NO SCALE

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DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00
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FEBRUARY 4, 2022

SHEET TITLE

DETAILS
MECHANICAL

SHEET NUMBER

M6.2

DSA SUBMITTAL
2/4/22

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AE Project # : 20210022

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GENERAL NOTES:

1. THIS PROJECT IS NEW CONSTRUCTION. THE PLANS AND SPECIFICATIONS INDICATE THE GENERAL EXTENT OF THE WORK BASED ON OWNER PROVIDED RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL VISIT SITE, VERIFY EXISTING CONDITIONS, AND REPORT ANY DISCREPANCIES NOTED TO THE ARCHITECT PRIOR TO SUBMITTING A BID. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND RECONNECTION OF MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS NECESSARY TO ACCOMPLISH THE WORK WHETHER OR NOT SPECIFIED AND/OR INDICATED.
2. PLUMBING CONTRACTOR SHALL NOTIFY GENERAL CONTRACTOR TO REPAIR WALL, FLOOR, AND CEILING SURFACES AS REQUIRED DUE TO INSTALLATION WORK.
3. CUTTING OR CORING OF STRUCTURAL MEMBERS OR FOOTINGS IS PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE ARCHITECT.
4. CONTRACTOR SHALL VERIFY THAT THE ELECTRICAL CONNECTIONS TO THE UNITS, INCLUDING CIRCUIT PROTECTION, CONFORM TO UNIT LABELS AND MANUFACTURER'S DIRECTIONS. WHERE WIRE SIZES SHOWN ON DRAWING EXCEED MANUFACTURER'S RECOMMENDATIONS, THE DRAWINGS SHALL GOVERN. ALL WIRING SHALL BE PER THE NATIONAL ELECTRICAL CODE.
5. ALL CONTROL WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE PROVIDED AND INSTALLED BY THE PLUMBING CONTRACTOR.
6. FLASHING AND WEATHERPROOFING AT EXTERIOR PENETRATIONS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS.
7. COORDINATE WITH OWNER ON SPACE REQUIRED AND TIME SCHEDULE FOR DELIVERY OF ALL ITEMS WHICH ARE TO BE GIVEN TO THE OWNER FOR HIS DISPOSITION.
8. FOR ROOF PENETRATIONS WITHOUT CURBS, PROVIDE WEATHERPROOF FLASHING PER SMACNA ARCHITECTURAL SHEET METAL MANUAL AND DRAWING NOTES.
9. LABEL ALL PIECES OF EQUIPMENT WITH MARK MATCHING SCHEDULE OR EQUIPMENT LIST WITH ENGRAVED PLASTIC LABELS WITH MINIMUM 1/4" HIGH LETTERS. LABELS EXPOSED TO WEATHER SHALL BE ENGRAVED BRASS.
10. PRIME AND PAINT ALL EXPOSED PIPING PER ARCHITECTURAL SPECIFICATIONS. PAINT SHALL NOT EXCEED THE FOLLOWING VOLATILE ORGANIC COMPOUND CONTENT LIMITS: FLATS < 50 GRAMS PER LITER, NON-FLATS < 100 GRAMS PER LITER.
11. COORDINATE WITH ELECTRICAL ON REQUIRED POWER OUTLETS AND LIGHT SWITCHES NEAR PLUMBING EQUIPMENT.
12. ALL PIPING, VALVES, EQUIPMENT, ETC. SHOWN IS NEW UNLESS OTHERWISE NOTED.

DSA GENERAL NOTES

1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO CONSTRUCT A SCHOOL CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
2. THE SEISMIC SUPPORT AND ANCHORAGE OF THE EQUIPMENT DESCRIBED ON THESE DRAWINGS HAVE BEEN ENGINEERED BY THE ENGINEER OF RECORD FOR CONFORMANCE WITH APPROPRIATE BUILDING CODES. THE ENGINEER OF RECORD WAS NOT RESPONSIBLE FOR THE EQUIPMENT DESIGN.
3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE CRITERIA FROM CHAPTER 16A CALIFORNIA BUILDING CODE (CBC) 2019.
4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

COMPONENT ANCHORAGE NOTES

ALL MECHANICAL AND PLUMBING COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (EG HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICAL, GAS, OR WATER.
3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCE NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK AND PIPING. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING AND DUCTWORK DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP):

MP ☐ MD ☐ PP ☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP ☐ MD ☐ PP ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL OPM#: 0043-13, "MASON WEST, INC. SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS", OPM-0052-13 "B-LINE/TOLCO SEISMIC RESTRAINT SYSTEMS GUIDELINES".

LIST OF GOVERNING CODES:

2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.
2019 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, C.C.R.
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

ALL SECTION NUMBERS BELOW REFER TO GROUP 1, CHAPTER 4, PART 1, TITLE 24, C.C.R.
1. ADDENDA, CONSTRUCTION CHANGES PER SECTION 4-338.
2. INSPECTOR APPROVED BY DSA. INSPECTOR AND CONTINUOUS INSPECTION OF WORK PER SECTION 4-333(b) AND 4-342.
3. TESTS AND TESTING LABORATORY PER SECTION 4-335.
4. SPECIAL INSPECTION PER SECTION 4-333(c).
5. CONTRACTOR SHALL SUBMIT VERIFIED REPORTS PER SECTION 4-336 AND 4-343(c).
6. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, C.C.R. - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER PER SECTION 4-333(a) AND 4-341.
7. GOVERNING CODES: TITLE 24.
8. A COPY OF PARTS 1, 2, 3, 4, AND 5 OF TITLE 24 SHALL BE KEPT AVAILABLE IN THE FIELD DURING CONSTRUCTION.
9. DSA SHALL BE NOTIFIED OF START OF CONSTRUCTION PER SECTION 4-331.
10. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT PER SECTION 4-334.

PLUMBING GENERAL NOTES:

1. SEE ARCHITECTS PLANS AND DETAILS FOR PLUMBING FIXTURE MOUNTING LOCATIONS, HEIGHTS, CLEARANCES, ETC.
2. ACCESSIBLE FIXTURES SHALL HAVE LEVER OR PUSH TYPE OPERATORS THAT REQUIRE LESS THAN FIVE (5) POUNDS FORCE TO ACTIVATE.
3. OPERATING CONTROLS FOR ACCESSIBLE FIXTURES TO BE OPERABLE WITH ONE HAND, NO TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
4. FAUCETS WITH SELF-CLOSING VALVES SHALL REMAIN OPEN FOR NO LESS THAN 10 SECONDS AND NO MORE THAN 15 SECONDS.
5. INSULATE ALL PIPING UNDER ACCESSIBLE FIXTURES AND COVER ANY SHARP OR ABRASIVE SURFACES WITH PROTECTIVE PIPE COVERS.
6. ALL PLUMBING VENTS THROUGH ROOF SHALL OFFSET ABOVE CEILING AND NOT PENETRATE WALL TOP PLATE.
7. MAXIMUM DEPTH OF ACCESSIBLE SINKS SHALL BE 6 1/2".

PLUMBING LEGEND

SYMBOL	ABBRV.	IDENTIFICATION	ABBRV.	IDENTIFICATION
	CW	COLD WATER (DOMESTIC)	COORD	COORDINATE
	HW	HOT WATER	CONST	CONSTRUCTION
	HWR	HOT WATER RETURN	DF	DRINKING FOUNTAIN
	V	VENT	DN	DOWN
TW	TW	TEMPERED WATER	DWGS	DRAWINGS
TWR	TWR	TEMPERED WATER RETURN	(E)	EXISTING
TP	TP	TRAP PRIMER LINE	EC	ELECTRICAL CONTRACTOR
F	F	FIRE WATER	ELEC	ELECTRICAL
SPKR	SPKR	SPRINKLER	ELEV	ELEVATION
DSPKR	DSPKR	DRY SPRINKLER	EMBT	EMBEDMENT
SPKR(D)	SPKR(D)	DELUGE SPRINKLER	EQUIP	EQUIPMENT
WSP	WSP	WET STAND PIPE	EWT	ENTERING WATER TEMPERATURE
DSP	DSP	DRY STAND PIPE	EXT	EXTERIOR
G	G	GAS (7"WC)	FD	FLOOR DRAIN
MPG	MPG	MEDIUM PRESSURE GAS	FFE	FINISHED FLOOR ELEVATION
W	S OR W	SOIL OR WASTE ABOVE GRADE	FLA	FULL LOAD AMPS
W	S OR W	SOIL OR WASTE BELOW GRADE	FLEX	FLEXIBLE
GW	GW	GREASE WASTE (ABOVE GROUND)	FLR	FLOOR
GW	GW	GREASE WASTE (BELOW GROUND)	FS	FLOOR SINK
IW	IW	INDUSTRIAL WASTE (ABOVE GROUND)	FPM	FEET PER MINUTE
IW	IW	INDUSTRIAL WASTE (BELOW GROUND)	FT	FEET
RWL	RWL	RAIN WATER LEADER	FT HD	FEET HEAD
RD	RD	ROOF DRAIN	GPM	GALLONS PER MINUTE
ID	ID	INDIRECT DRAIN	GALV	GALVANIZED
CD	CD	CONDENSATE DRAIN	GA	GAUGE
		CAP	GC	GENERAL CONTRACTOR
	CONT	CONTINUATION	HP	HORSEPOWER
OR		GATE VALVE	HR	HOUR
			HZ	HERTZ
	SOV	SHUT-OFF VALVE	ID	INSIDE DIAMETER
	GV	GLOBE VALVE	IE	INVERT ELEVATION
		BUTTERFLY VALVE	IN	INCH
		BALL VALVE	INV	INVERT
	BV	BALANCING VALVE	KW	KILOWATTS
	CS	CIRCUIT SETTER	LBS	POUNDS
		SOLENOID VALVE	LG	LONG
			LRA	LOCKED ROTOR AMPS
		PRESSURE REDUCING VALVE	LVG	LEAVING
			LWT	LEAVING WATER TEMPERATURE
	T&PRV	TEMP. & PRESS. RELIEF VALVE	MAX	MAXIMUM
			MBH	1000 BTU PER HOUR
OR		ANGLE VALVE	MC	MECHANICAL CONTRACTOR
			MCA	MINIMUM CIRCUIT AMPS
	CKV	CHECK VALVE	MECH	MECHANICAL
			MFR	MANUFACTURER
		STRAINER	MIN	MINIMUM
OR	GC	GAS COCK	MOCP	MAXIMUM OVERCURRENT PROTECTION
			(N)	NEW
	PRV	PRESSURE REGULATING VALVE	NC	NORMALLY CLOSED
			NIC	NOT IN CONTRACT
	GPR	GAS PRESSURE REGULATOR	NO	NORMALLY OPEN
		UNION	NTS	NOT TO SCALE
	FC	FLEXIBLE CONNECTION	OC	ON CENTER
		PRESSURE/TEMPERATURE PLUG	OD	OUTSIDE DIAMETER
	WHA	WATER HAMMER ARRESTOR	PC	PLUMBING CONTRACTOR
	HB	HOSE BIBB	PD	PRESSURE DROP
	GCO/FCO	GRADE CLEANOUT/FLOOR CLEANOUT	PH	PHASE
	WCO	WALL CLEANOUT	P/N	PART NUMBER
		CIRCULATION PUMP (DOMESTIC)	PRESS	PRESSURE
		THERMOMETER	PRV	PRESSURE REDUCING VALVE
			PSI	POUNDS PER SQUARE INCH
		RATED FIRE BARRIER SEE ARCHITECTS DRAWINGS	P/T	PRESSURE/TEMPERATURE
P		PRESSURE GAUGE	QTY	QUANTITY
T		TEMPERATURE GAUGE	REQD	REQUIRED
	POC	POINT OF CONNECTION	REQS	REQUIREMENTS
℄		CENTERLINE	RLA	RATED/RUNNING LOAD AMPS
AD	AD	ACCESS DOOR	RM	ROOM
Ø	DIA	DIAMETER	RPM	REVOLUTIONS PER MINUTE
	&	AND	RV	RELIEF VALVE
	@	AT	SM	SHEETMETAL
	°F	DEGREES FAHRENHEIT	SOV	SHUT-OFF VALVE
	AC	AIR CONDITIONER	SPEC	SPECIFICATION
	AFF	ABOVE FINISH FLOOR	SQ	SQUARE
	AGGR	AGGREGATE	STD	STANDARD
	AMP	AMPERE	STRUCT	STRUCTURAL
	APPROX	APPROXIMATE	STSL	STAINLESS STEEL
	ARCH	ARCHITECT/ARCHITECTURAL	TDH	TOTAL DYNAMIC HEAD
	BHP	BRAKE HORSEPOWER	TEMP	TEMPERATURE
	BJ	BETWEEN JOISTS	TYP	TYPICAL
	BLDG	BUILDING	UL	UNDERWRITER'S LABORATORIES
	BT	BATHTUB	UON	UNLESS OTHERWISE NOTED
	BTU	BRITISH THERMAL UNIT	V	VOLT
	CFH	CUBIC FEET PER HOUR	VTR	VENT THROUGH ROOF
	CI	CAST IRON	W/	WITH
	CIRC	CIRCULATING	WC	WATER COLUMN
	CLG	CEILING	WH	WATER HEATER
	CONC	CONCRETE	WM	WASHING MACHINE
	CONN	CONNECTION	WT	WEIGHT

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DSA SUBMITTAL 2/4/22

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No. M24908
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FEBRUARY 4, 2022

SHEET TITLE

LEGEND AND NOTES PLUMBING

SHEET NUMBER

P0.1

KITCHEN FIXTURE CONNECTIONS ROUGH-IN

MARK	DESCRIPTION	WASTE ID	WASTE W	WASTE V	WATER CW	WATER HW	GAS G	GAS MBH	REMARKS
2	RO WATER FILTER SYSTEM & 20 GAL TANK	1/2"			1/2"				(1) (2)
3	ICE STORAGE BIN	3/4"							(1) (2)
4	ICE MACHINE - S/C				1/2"				(1)
5	S/S FLOOR TROUGH		4"						(1)
8	S/S MOP SINK CABINET W/FAUCET		2"		1/2"	1/2"			(1)
11	S/S HAND SINK		1 1/2"		1/2"	1/2"			(1)
13	S/S 3-TUB SINK	1 1/2"							(1) (2)
14	FAUCET				1/2"	1/2"			(1)
18	S/S PREP TABLE W/SINK	2"							(1) (2)
C6	FAUCET				1/2"	1/2"			(1)
C10	ICE STORAGE BIN	1"							(1) (2)
C11	COFFEE MACHINE				1/2"				(1)
C13	HOT WATER DISPENSER				1/2"				(1)
C16	S/S WORK COUNTER W/SINKS	2"							(1) (2)
C17	BLENDER CONTAINER RINSER	1/2"			1/2"				(1) (2)
C18	FAUCET				1/2"	1/2"			(1)
C23	DIPPERWELL W/FAUCET	1 1/2"			1/2"				(1) (2)
C24	ESPRESSO MACHINE	1 1/2"			1/2"				(1) (2)
S4	ICE MACHINE & BIN	1/2"							(1) (2)
S5	FLOOR TROUGH		4"						(1)
S6	WATER FILTER FOR ICE MACHINE				3/4"				(1)

(1) SEE KITCHEN EQUIPMENT DRAWINGS FOR MANUFACTURER AND MODEL.

(2) RUN INDIRECT DRAIN TO FLOOR SINK, SPILL TO FLOOR SINK WITH ELBOW DOWN AND AIR GAP.

FOOD SERVICE EQUIPMENT NOTES

1. ALL EQUIPMENT LOCATIONS AND RELATED ROUGH-IN REQUIREMENTS SHOWN ON PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY WITH OWNER AND FOOD SERVICE CONSULTANT ALL REQUIREMENTS, INCLUDING FLOOR SINK LOCATIONS ETC. PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL ROUGH-IN AND FURNISH FINAL CONNECTIONS TO ALL EQUIPMENT SHOWN WITH SHUT-OFF VALVES AND UNIONS.
3. ALL FLOOR SINKS SHOWN SHALL BE FURNISHED AND INSTALLED WITH RIM FLUSH WITH FINISHED FLOOR, UNLESS NOTED OTHERWISE.
4. ALL EQUIPMENT REQUIRING CONDENSATE CONNECTIONS SHALL BE FURNISHED WITH P-TRAPS PER MANUFACTURER'S REQUIREMENTS AT THE POINT OF CONNECTION TO THE COIL DRAIN PANS.
5. ALL PIPING SHOWN SHALL BE RUN CONCEALED IN WALLS, ABOVE CEILING, OR UNDER SLAB, UNLESS NOTED OTHERWISE.
6. PLUMBING CONTRACTOR SHALL BE PROVIDE AND INSTALL INDIRECT DRAINS TO FLOOR SINKS FOR ALL FOOD SERVICE EQUIPMENT REQUIRING DRAIN CONNECTIONS WITH INDIRECT DRAINS TO FLOOR SINKS.
7. ITEM NUMBERS CORRESPOND TO FOOD SERVICE CONSULTANTS EQUIPMENT NUMBERS.
8. ALL FOOD SERVICE EQUIPMENT, UNLESS OTHERWISE NOTED, PROVIDED AND INSTALLED BY FOOD SERVICE CONTRACTOR. PLUMBING CONTRACTOR TO ROUGH-IN AND CONNECT.
9. FOR ADDITIONAL NOTES IN FOOD SERVICE AREA, SEE ARCHITECTURAL DRAWINGS.

PLUMBING FIXTURE CONNECTIONS

MARK	DESCRIPTION	MIN BRANCH SIZE W	MIN BRANCH SIZE V	MIN BRANCH SIZE CW	MIN BRANCH SIZE HW	TRAP	REMARKS
WC-1	WATER CLOSET	3"	2"	1"	-	INTEGRAL	
WC-2	WATER CLOSET	3"	2"	1"	-	INTEGRAL	
WC-3	WATER CLOSET	3"	2"	1"	-	INTEGRAL	
L-1	LAVATORY CUSTOM BUILT	1-1/2"	1-1/2"	1/2"	1/2"	1-1/2"	
L-2	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	1-1/2"	
U-1	URINAL	2"	1-1/2"	3/4"	-	INTEGRAL	
U-2	URINAL	2"	1-1/2"	3/4"	-	INTEGRAL	
S-1	SINK	2"	1-1/2"	1/2"	1/2"	1-1/4" x 1-1/2"	
DF-1	DRINKING FOUNTAIN	2"	1-1/2"	1/2"	-	2" x 1-1/2"	
MS-1	MOP SINK	2"	1-1/2"	1/2"	1/2"	2"	
FD-1	FLOOR DRAIN	2"	1-1/2"	1/2" TP	-	2"	(1)
FS-1	FLOOR SINK	3"	2"	-	-	3" TRAP	(3)
RD-1	COMBINATION ROOF DRAIN/OVERFLOW DRAIN	-	-	-	-	-	(4) (5)
HB-1	HOSE BIBB	-	-	3/4"	-	-	(2)
CW-1	CAN WASH	4"	2"	1/2"	1/2"	4"	(6)

(1) ZURN Z415B BODY ASSEMBLY WITH TYPE "B" STRAINER. 5"ø STRAINER, 2" PIPE SIZE.

(2) ACORN MODEL 8121-LF

(3) ZURN MODEL Z-1901. 12x12 A.R.E. SANI-FLOR RECEPTOR, 8" SUMP DEPTH.

(4) WATTS DUAL OUTLET ROOF DRAIN / OVERFLOW MODEL RD-700, 3" PIPE SIZE

(5) WATTS DOWNSPOUT NOZZLE, MODEL RD-940, 3" PIPE SIZE

(6) ZURN MODEL Z1982-NH-WB-11, 4" PIPE SIZE. 12" x 12" STAINLESS STEEL SANI-FLOOR CAN WASH DRAIN, 8" SUMP DEPTH. PROVIDE ZURN MODEL ZS1464 WATER SUPPLY CONTROL BOX ASSEMBLY

PLUMBING FIXTURE SPECIFICATION

FIXTURES SHALL BE COMPLETE WITH ALL FITTINGS, SUPPORTS, FASTENING DEVICES, FAUCETS, VALVES, 17 GAUGE TRAPS, STOPS, CAULKING AND APPURTENANCES REQUIRED. FIXTURE COLOR SHALL BE WHITE, UNLESS OTHERWISE NOTED.

1. WATER CLOSET WC-1: KOHLER "KINGSTON", MODEL K-4325. ELONGATED BOWL, 1-1/2" SPUD. 1.28 GPF, 17" RIM HEIGHT - TOP SPUD. MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   FLUSH VALVE: KOHLER "TRIPOINT", MODEL K-10956-SV TRIPOINT DC 1.28 GPF WC FLUSH VALVE.
   SEAT: CENTOCO OPEN FRONT TOILET SEAT, 1500STSCC.
   CARRIER: JAY R. SMITH, FIGURE 0210Y.
2. WATER CLOSET WC-2: KOHLER "KINGSTON", MODEL K-4325. ELONGATED BOWL, 1-1/2" SPUD. 1.28 GPF, 15" RIM HEIGHT - TOP SPUD.
   FLUSH VALVE: KOHLER "TRIPOINT", MODEL K-10956-SV TRIPOINT DC 1.28 GPF WC FLUSH VALVE.
   SEAT: CENTOCO OPEN FRONT TOILET SEAT, 1500STSCC.
   CARRIER: JAY R. SMITH, FIGURE 0209Y FOR URINAL/WATER CLOSET BACK TO BACK, FIGURE 0210Y FOR SINGLE INSTALLATION.
3. WATER CLOSET WC-3: KOHLER "HIGHCLIFF ULTRA", MODEL K-96057. ELONGATED BOWL, 1-1/2" SPUD. 1.28 GPF, 15" RIM HEIGHT - TOP SPUD.
   FLUSH VALVE: KOHLER "TRIPOINT", MODEL K-10956-SV TRIPOINT DC 1.28 GPF WC FLUSH VALVE.
   SEAT: CENTOCO OPEN FRONT TOILET SEAT, 1500STSCC.
4. LAVATORY L-1: SLOAN GRADIENT ELGR SERIES, MODEL ELGR-83000, 3 STATION. MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   FAUCET: SLOAN COMBINATION ESD-501. INCLUDES EFX-250-ISM FAUCET AND ESD-500 SOAP DISPENSER MODEL. 0.5 GPM.
   DRAIN: KOHLER MODEL K-7129-A GRID DRAIN.
   P-TRAP: McGUIRE MODEL 8902CB
   SUPPLY & STOPS: McGUIRE MODEL LFH2165LKN3
   DRAIN COVER: McGUIRE "PROWRAP", MODEL PW2000WC
5. LAVATORY L-2: KOHLER "KINGSTON" MODEL K-2005 SINGLE FAUCET HOLE, WALL MOUNTED LAVATORY.
   MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   FAUCET: SLOAN MODEL EAF-700 OPTIMA SENSOR FAUCET. 0.5 GPM. HARDWIRED-POWERED DECK-MOUNTED GOOSENECK BODY.
   DRAIN: KOHLER MODEL K-7129-A GRID DRAIN.
   P-TRAP: MCGUIRE MODEL 8902CB
   SUPPLY & STOPS: MCGUIRE MODEL LFH2165LKN3
   DRAIN COVER: MCGUIRE "PROWRAP", MODEL PW2000WC
6. URINAL U-1: KOHLER "DEXTER" MODEL K-5452-ET, 3/4" TOP SPUD. 0.125 GPF. MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   FLUSH VALVE: KOHLER "TRIPOINT" MODEL K-10949-SV, TOUCHLESS DC 0.125 GPF FLUSH VALVE.
   CARRIER: JAY R. SMITH URINAL CARRIER WITH BEARING PLATE MODEL 0637.
7. URINAL U-2: KOHLER "DEXTER" MODEL K-5452-ET, 3/4" TOP SPUD. 0.125 GPF.
   FLUSH VALVE: KOHLER "TRIPOINT" MODEL K-10949-SV, TOUCHLESS DC 0.125 GPF FLUSH VALVE.
   CARRIER: JAY R. SMITH URINAL CARRIER WITH BEARING PLATE MODEL 0637.
8. SINK S-1: ELKAY "CELEBRITY" MODEL GECR2521. COUNTER MOUNTED SINK, 25"x21-1/4"x5-3/8 DEEP, SINGLE HOLE. 20 GAUGE, 304 STAINLESS STEEL. MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   DRAIN: ELKAY DELUXE 3-1/4", TYPE 304 STAINLESS STEEL BODY, MODEL NUMBER LK99.
   FAUCET: KOHLER "CORALAIS" SINK FAUCET, MODEL K-15175-F, SINGLE HOLE.
9. DRINKING FOUNTAIN DF-1: ELKAY MODEL LZSTLDDWSVRSK, EZH2O BOTTLE FILLING STATION AND BI-LEVEL ADA COOLER, FILTERED NON-REFRIGERATED, STAINLESS STEEL. MUST MEET CALIFORNIA REQUIREMENTS FOR ADA.
   WALL CARRIER: ELKAY MODEL MLP200.
10. MOP SINK MS-1: KOHLER "WHITBY" MODEL K-6710 FLOOR MOUNTED SERVICE SINK, PROVIDE MODEL K-8940 SINK RIM GUARD.
    FAUCET: KOHLER "KINLOCK" MODEL K-8907 SERVICE SINK FAUCET. 8" CENTERS WITH VACUUM BREAKER.
    DRAIN: KOHLER

VACUUM PUMP SCHEDULE

MARK	DESCRIPTION	# OF PUMPS	SCFM EACH	VACUUM IN. HG	PUMP MOTOR HP	PUMP MOTOR V/PH	RECEIVER TANK (GAL)	WEIGHT PUMP	WEIGHT TANK	MAKE & MODEL	REMARKS
VP-1	CHEMISTRY LABORATORY VACUUM PUMP	1	5	21	0.6	208/3	30	21	90	BECKER VT 4.10	(1) (2)

(1) INCLUDE ALL CONTROLS NECESSARY FOR AUTOMATIC ALTERNATION

(2) INCLUDE 30 GALLON RECEIVER TANK

LABORATORY EQUIPMENT PLUMBING CONNECTIONS

MARK	DESCRIPTION	ID	W	V	AW	CW	HW	VAC	RO	DI	CA	CA PSI	REMARKS
		ROUGH-IN SIZE (INCHES)											
LS-1	LABORATORY SINK	-	-	1-1/4	1-1/2	-	-	-	-	-	-	-	(1) (5)
WA	GLASS WASHER	3/4"	-	-	-	-	3/4"	-	-	-	-	-	(5) (3)
WP	WATER PURIFICATION SYSTEM	-	-	-	-	1/2"	-	-	-	-	-	-	(5)
EW-1	DECK MOUNTED EMERGENCY EYEWASH	-	-	-	-	1/2"	1/2"	-	-	-	-	-	(2) (5)
EWS-1	EMERGENCY EYEWASH/SHOWER	-	2	1-1/2	-	1"	1"	-	-	-	-	-	(2) (5)
FC-1	FAUCET. HOT AND COLD,	-	-	-	-	1/2"	1/2"	-	-	-	-	-	(5)
FC-2	VACUUM BALL VALVE	-	-	-	-	-	-	1/2"	-	-	-	-	(5)

(1) PROVIDE 1-1/2" ACID WASTE TYPE P-TRAP.

(2) PROVIDE POINT OF USE TEMPERING VALVE TO SUPPLY FIXTURE WITH TEPID WATER, GUARDIAN MODEL G3800LF. SEE DIV 07 SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

(3) DI WATER FED FROM Milli-Q SYSTEM

(4) PROVIDE METAL ROUGH-IN BOX WITH 1/2" CW WITH QUARTER TURN ANGLE STOP AND BLANK-OFF WALL PLATE FOR FUTURE WATER CONNECTION TO AUTOCLAVE.

(5) SEE LABORATORY DRAWINGS FOR FIXTURE MODELS AND SPECIFICATIONS.

WATER HEATERS

MARK	LOCATION	GAL CAP	MBH IN	ELECT KW	ELECT V/PH	RECOVERY @ 80° F RISE	FULL WT	MAKE & MODEL	REMARKS
WH-1	MECH A160	50	-	6	208/1	30 GPH	572 LBS.	RHEEM ELD52-TB	(1)
WH-2	MECH A132	50	-	6	208/1	30 GPH	572 LBS.	RHEEM ELD52-TB	(1)
WH-3	MEP A114	80	-	6	208/1	30 GPH	886 LBS.	RHEEM ELD80-TB	(2)
WH-4	MEP A114	80	-	12	208/1	61 GPH	886 LBS.	RHEEM ELD80-TB	(1)
EWH-1	TRASH ENCLOSURE	12	-	4	480/1	18 GPH	140 LBS.	BRADFORD WHITE LEH2W3-1	

(1) SIMULTANEOUS ELEMENTS

(2) NON-SIMULTANEOUS ELEMENTS

PUMPS

MARK	GPM	TDH FT	BHP	MOTOR RPM	MOTOR HP	MOTOR V/PH	WT LBS	MAKE & MODEL	REMARKS
CP-1	1.5	20	-	HIGH SPEED	0.16	120/1	8	ARMSTRONG ASTRO 250SSU-TA	(1)
CP-2	1.5	20	-	HIGH SPEED	0.16	120/1	8	ARMSTRONG ASTRO 250SSU-TA	(1)
CP-3	1.5	20	-	HIGH SPEED	0.16	120/1	8	ARMSTRONG ASTRO 250SSU-TA	(1)
CP-4	1.5	20	-	HIGH SPEED	0.16	120/1	8	ARMSTRONG ASTRO 250SSU-TA	(1)
CP-5	1.5	20	-	HIGH SPEED	0.16	120/1	8	ARMSTRONG ASTRO 250SSU-TA	(1)

(1) PUMP WITH 24 HR TIMER, AQUASTAT AND LINE CORD

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ARCH PROJECT NO: 1897.00
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PTN: 43-C4 FILE NO: N/A

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SCHEDULES PLUMBING

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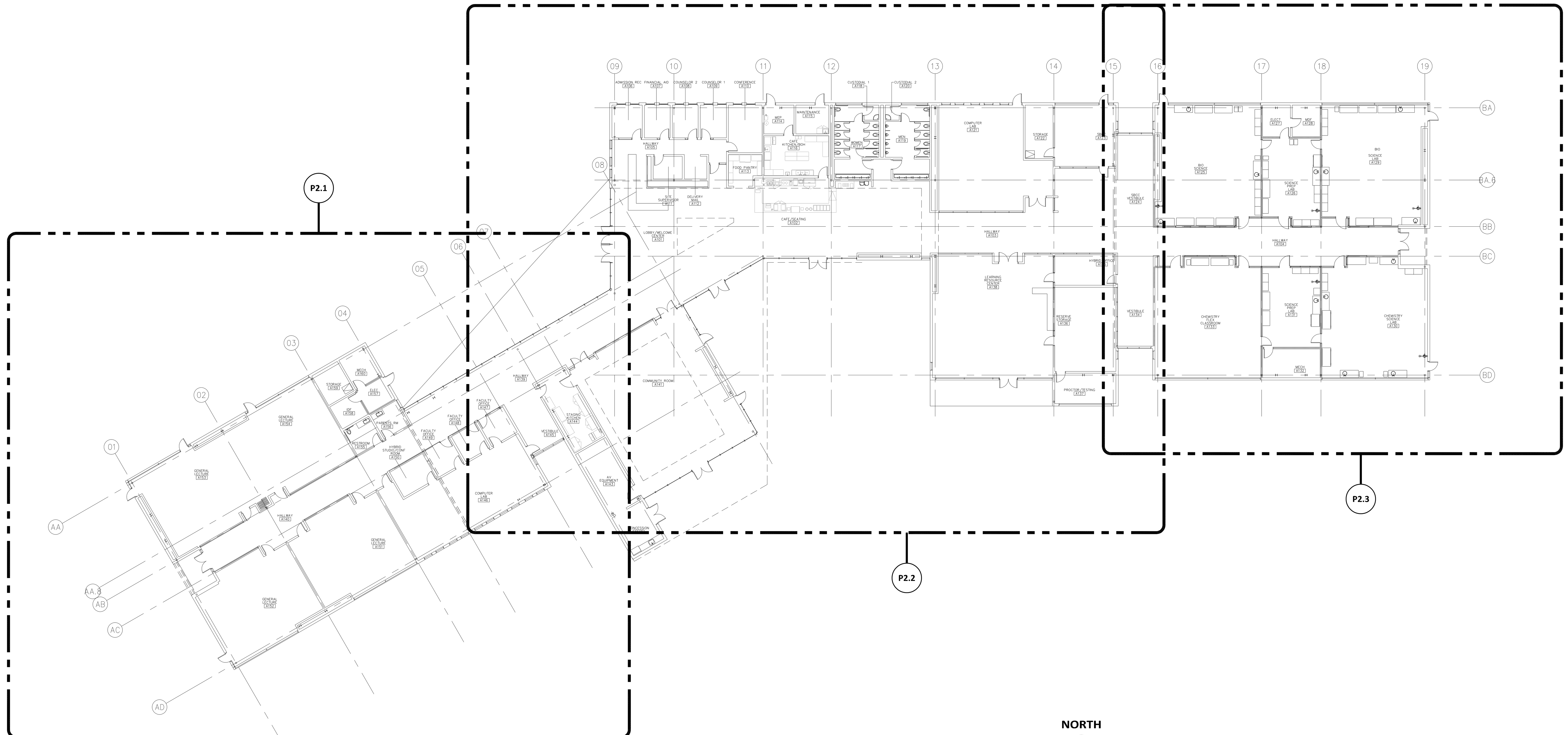
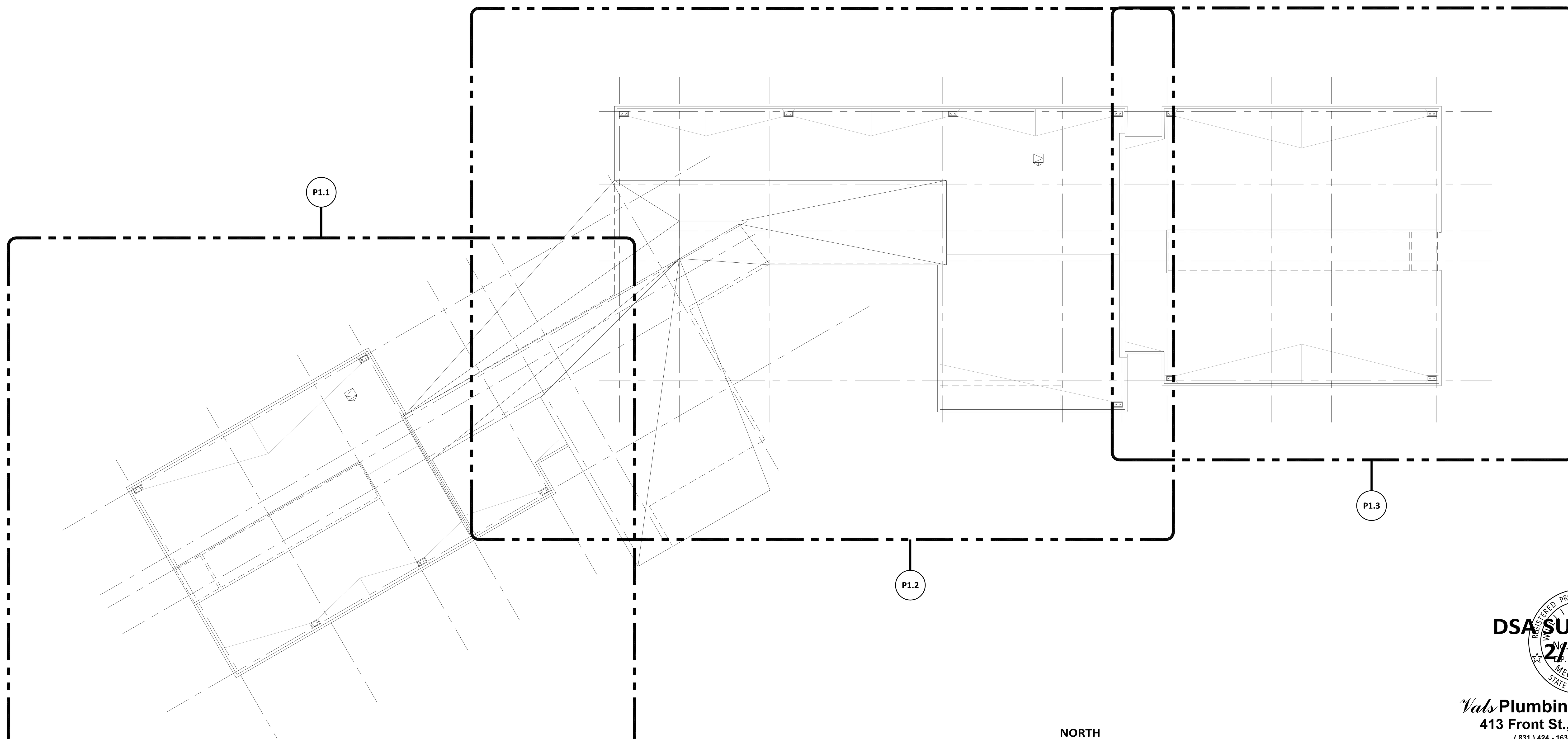
P0.2



OVERALL FLOOR PLAN - PLUMBING

SCALE: 1" = 20'-0"

NORTH



OVERALL ROOF PLAN - PLUMBING

SCALE: 1" = 20'-0"

NORTH

DSA SUBMITTAL
2/4/22

REGISTERED PROFESSIONAL ENGINEER
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FEBRUARY 4, 2022

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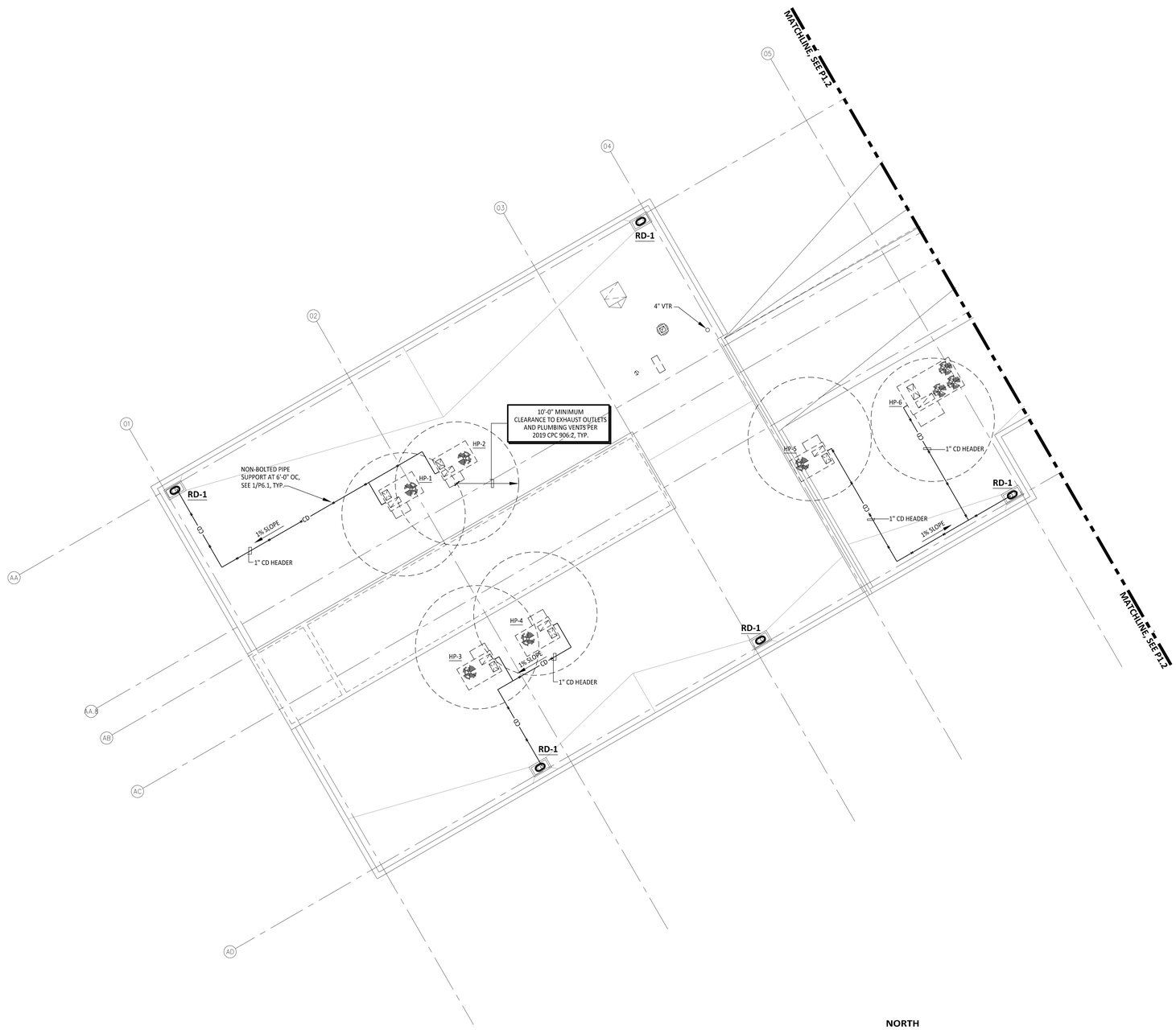
OVERALL PLANS
PLUMBING

SHEET NUMBER

P1.0



SECTOR A ROOF PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

NORTH

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SECTOR A ROOF PLAN PLUMBING

SHEET NUMBER

P1.1

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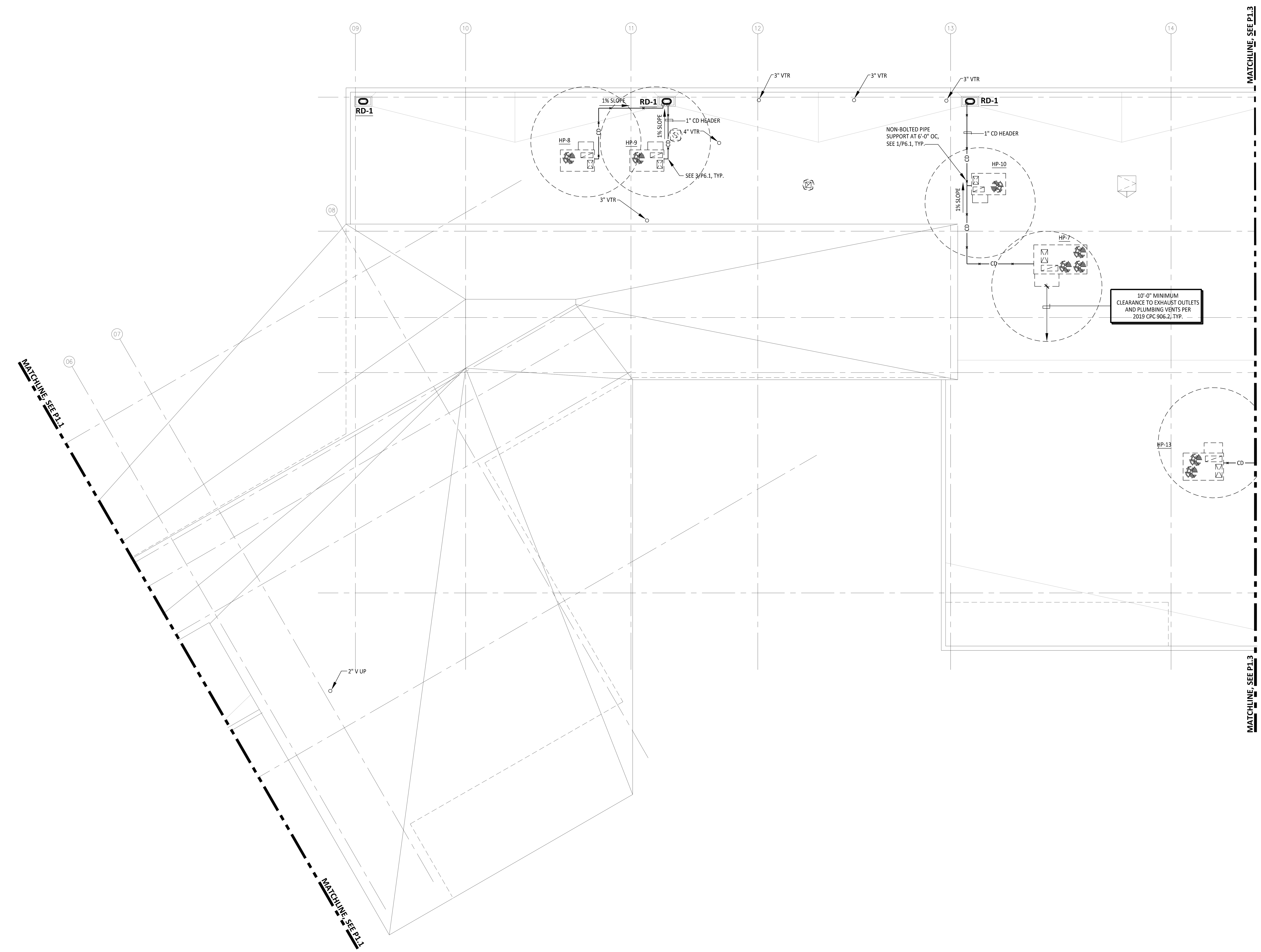

SECTOR B ROOF PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

NORTH

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2/4/22

REGISTERED PROFESSIONAL ENGINEER
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SECTOR B ROOF PLAN PLUMBING

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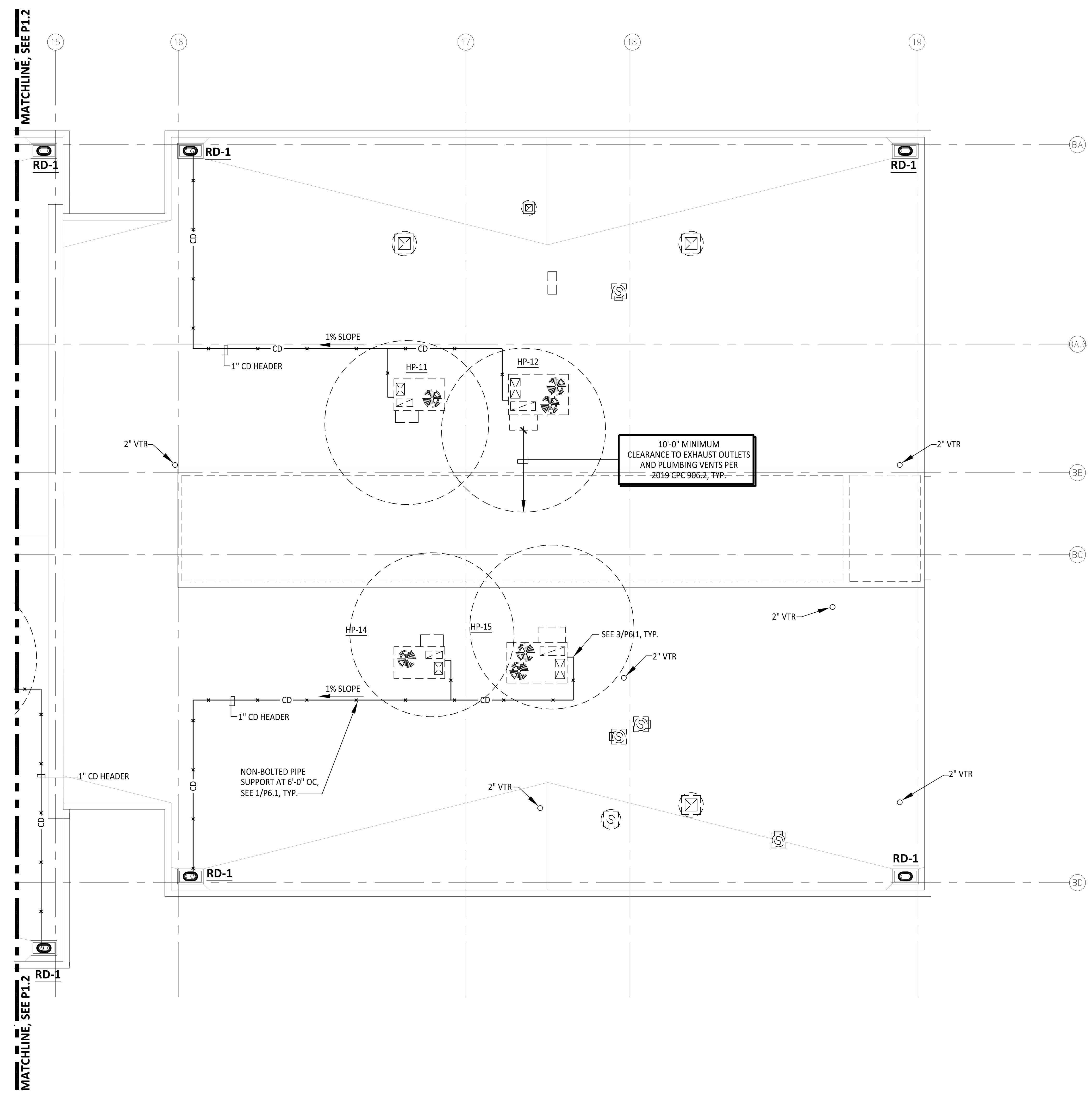
P1.2



SECTOR C ROOF PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

NORTH

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
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SHEET TITLE

SECTOR C ROOF PLAN PLUMBING

SHEET NUMBER

P1.3

DSA SUBMITTAL 2/4/22

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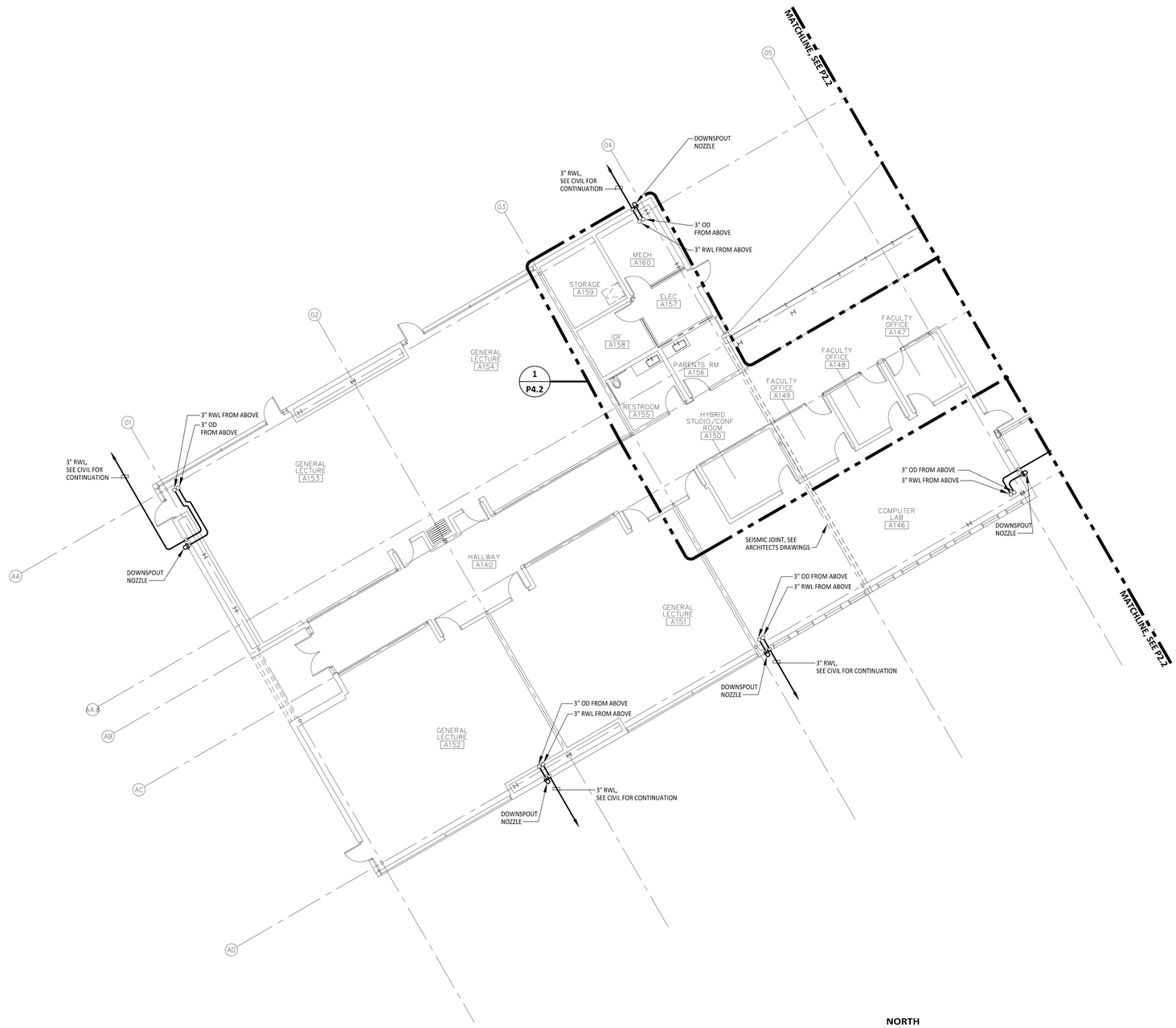

SECTOR A FLOOR PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

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DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

SECTOR A FLOOR PLAN PLUMBING

SHEET NUMBER

P2.1

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2/4/22

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CONSULTING ENGINEERS
AE Project # : 20210022
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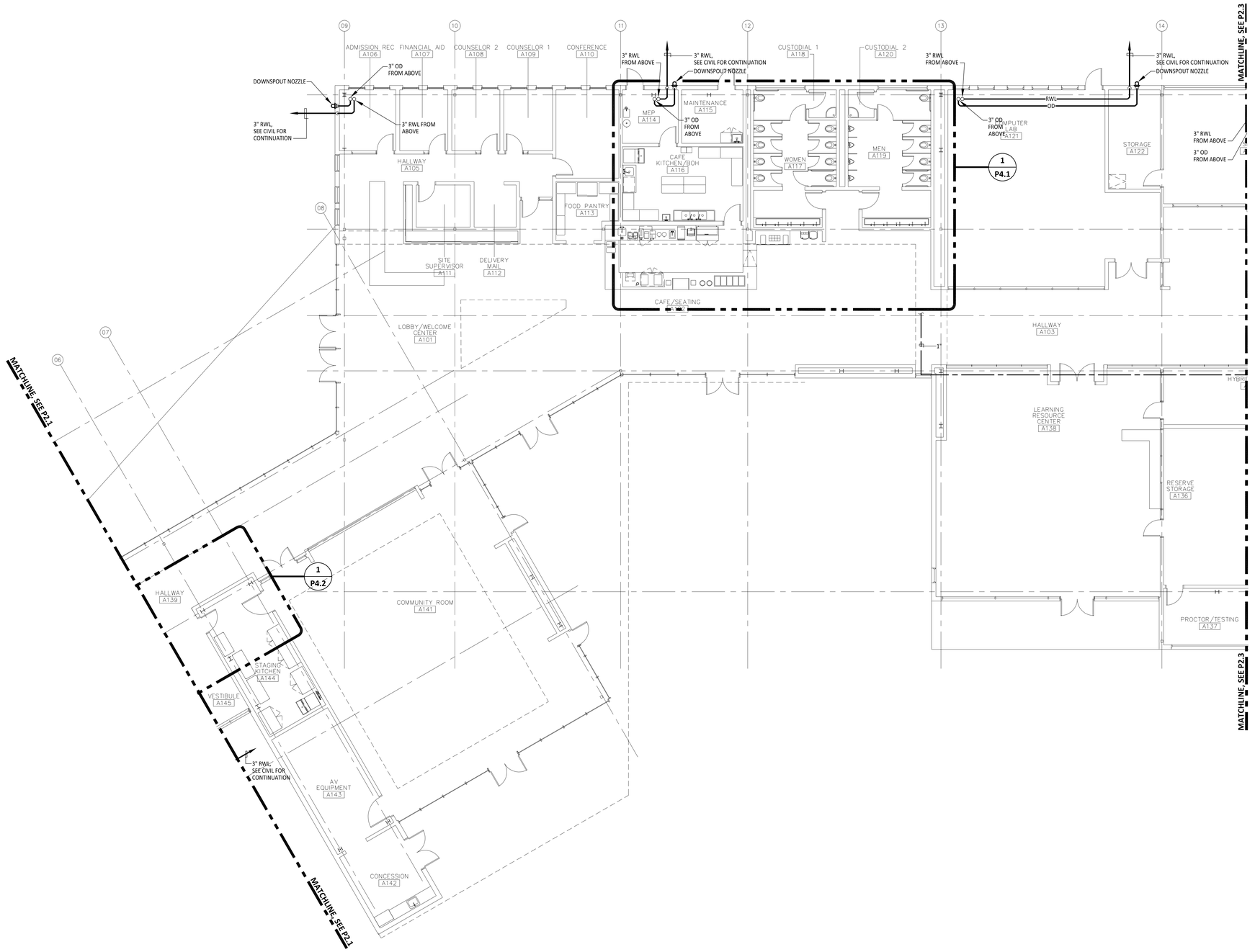
Monterey, California 93940-5788



SECTOR B FLOOR PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

NORTH

QUATTROCCHI KWOK ARCHITECTS
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(707) 576-0829

Gensler
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Tel 415.433.3700
Fax 415.836.4595

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

SECTOR B FLOOR PLAN PLUMBING

SHEET NUMBER

P2.2

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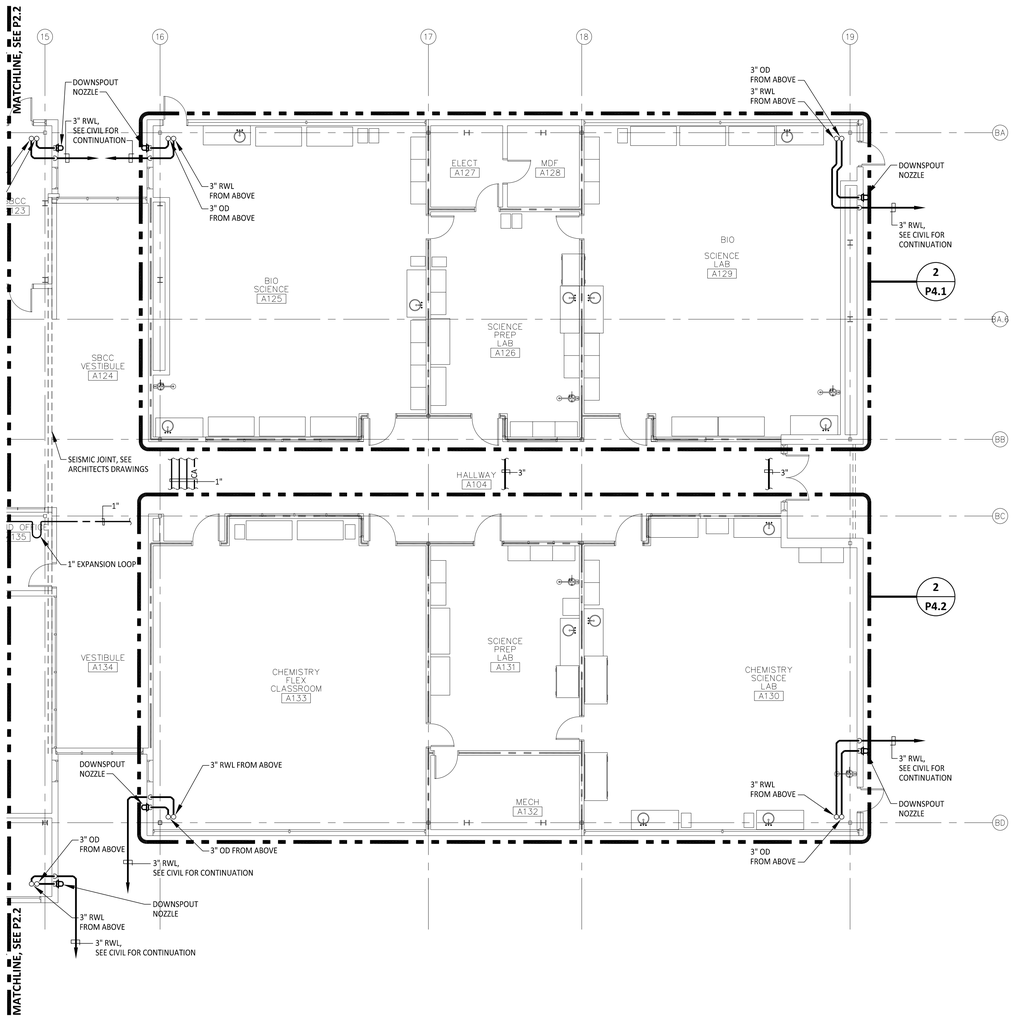

SECTOR C FLOOR PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

NORTH

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ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

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FEBRUARY 4, 2022

SHEET TITLE

SECTOR C FLOOR PLAN PLUMBING

SHEET NUMBER

P2.3

REGISTERED PROFESSIONAL ENGINEER
TAM M. PHAM
No. M 27993
MECHANICAL
STATE OF CALIFORNIA

DSA SUBMITTAL
2/4/22

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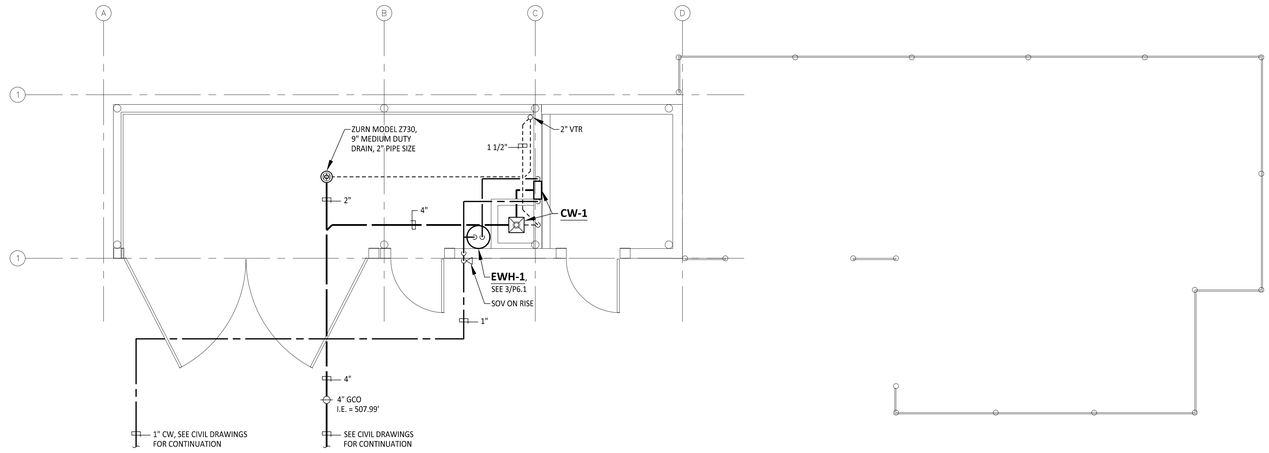

TRASH ENCLOSURE PLAN - PLUMBING

SCALE: 1/4" = 1'-0"

NORTH

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2/4/22

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

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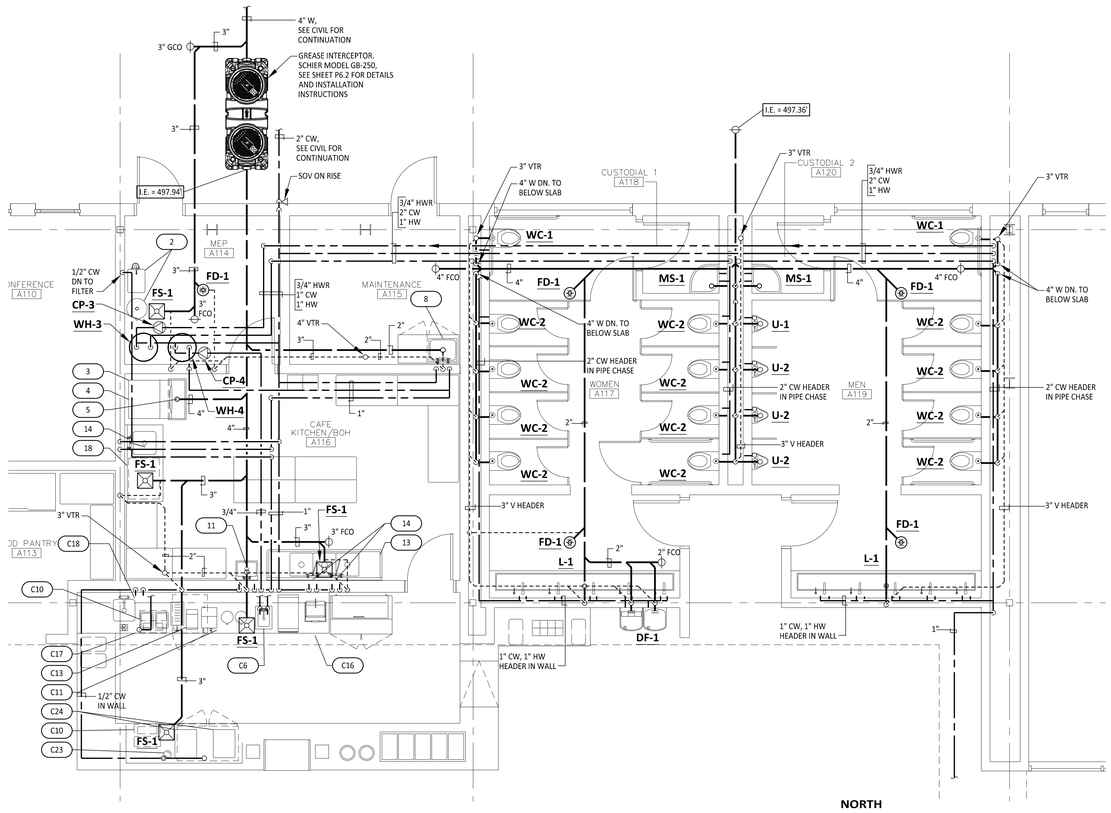
FEBRUARY 4, 2022

SHEET TITLE

TRASH
ENCLOSURE PLAN
PLUMBING

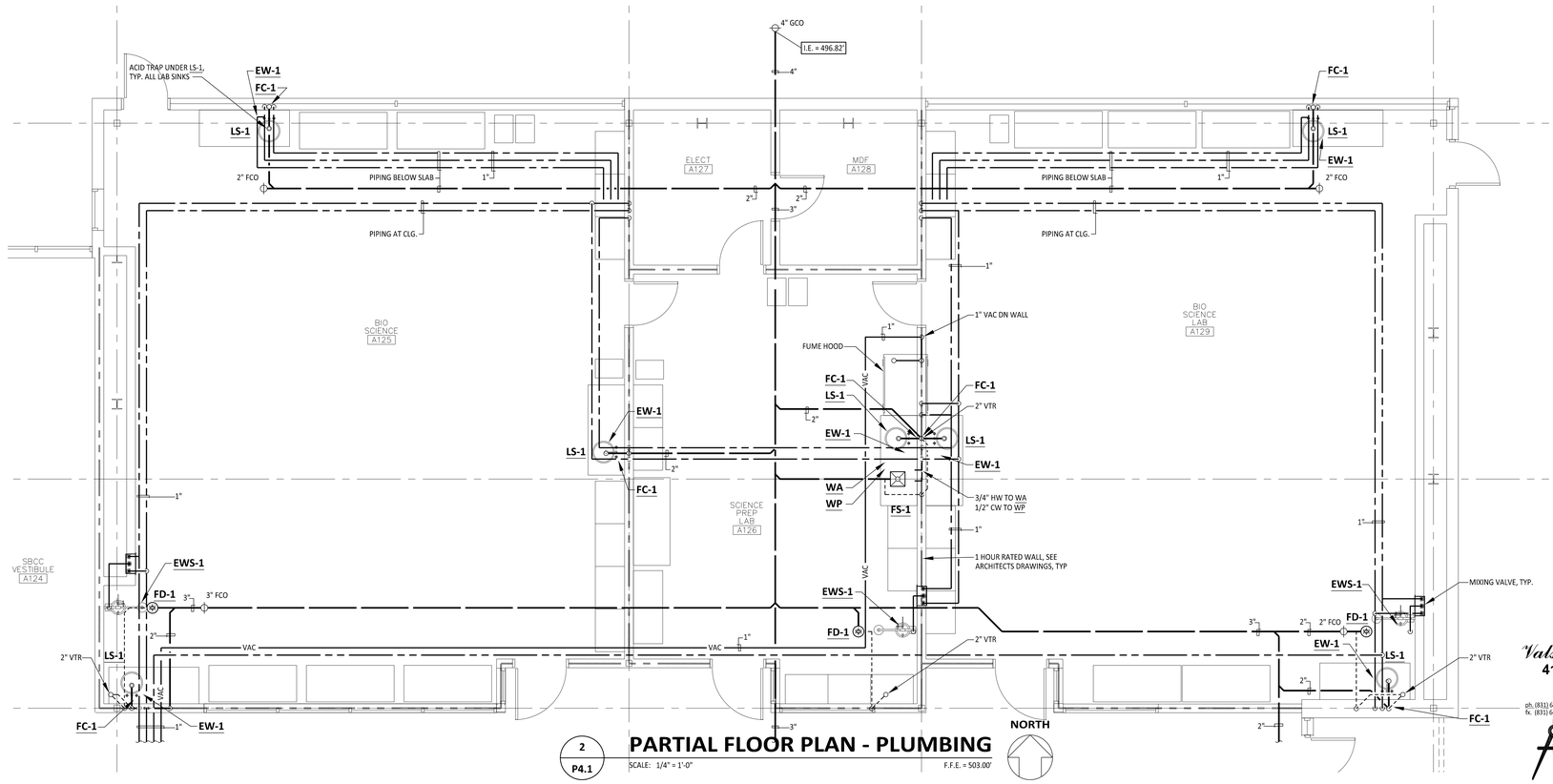
SHEET NUMBER

P2.4



1 P4.1 **PARTIAL FLOOR PLAN - PLUMBING**

SCALE: 1/4" = 1'-0" F.F.E. = 503.00'



2 P4.1 **PARTIAL FLOOR PLAN - PLUMBING**

SCALE: 1/4" = 1'-0" F.F.E. = 503.00'

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

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SHEET TITLE

PARTIAL FLOOR PLANS PLUMBING

SHEET NUMBER

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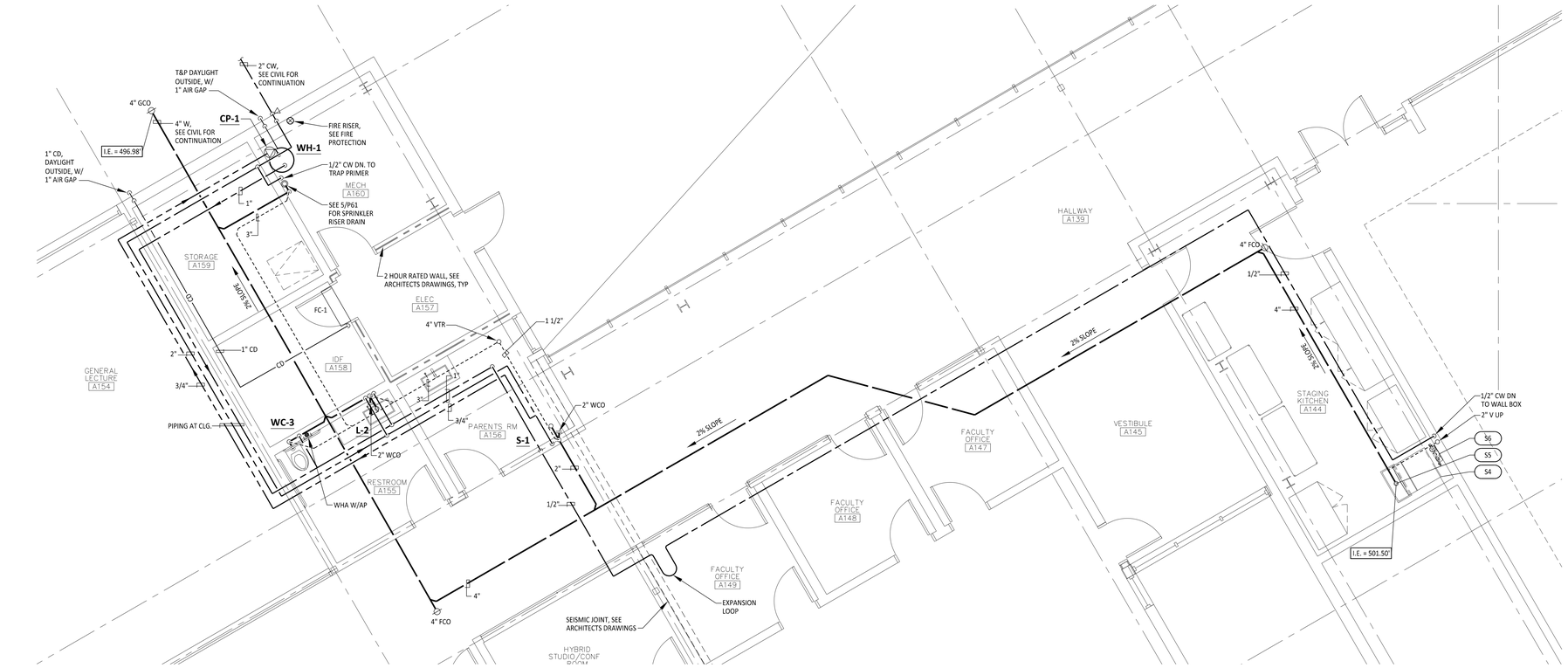
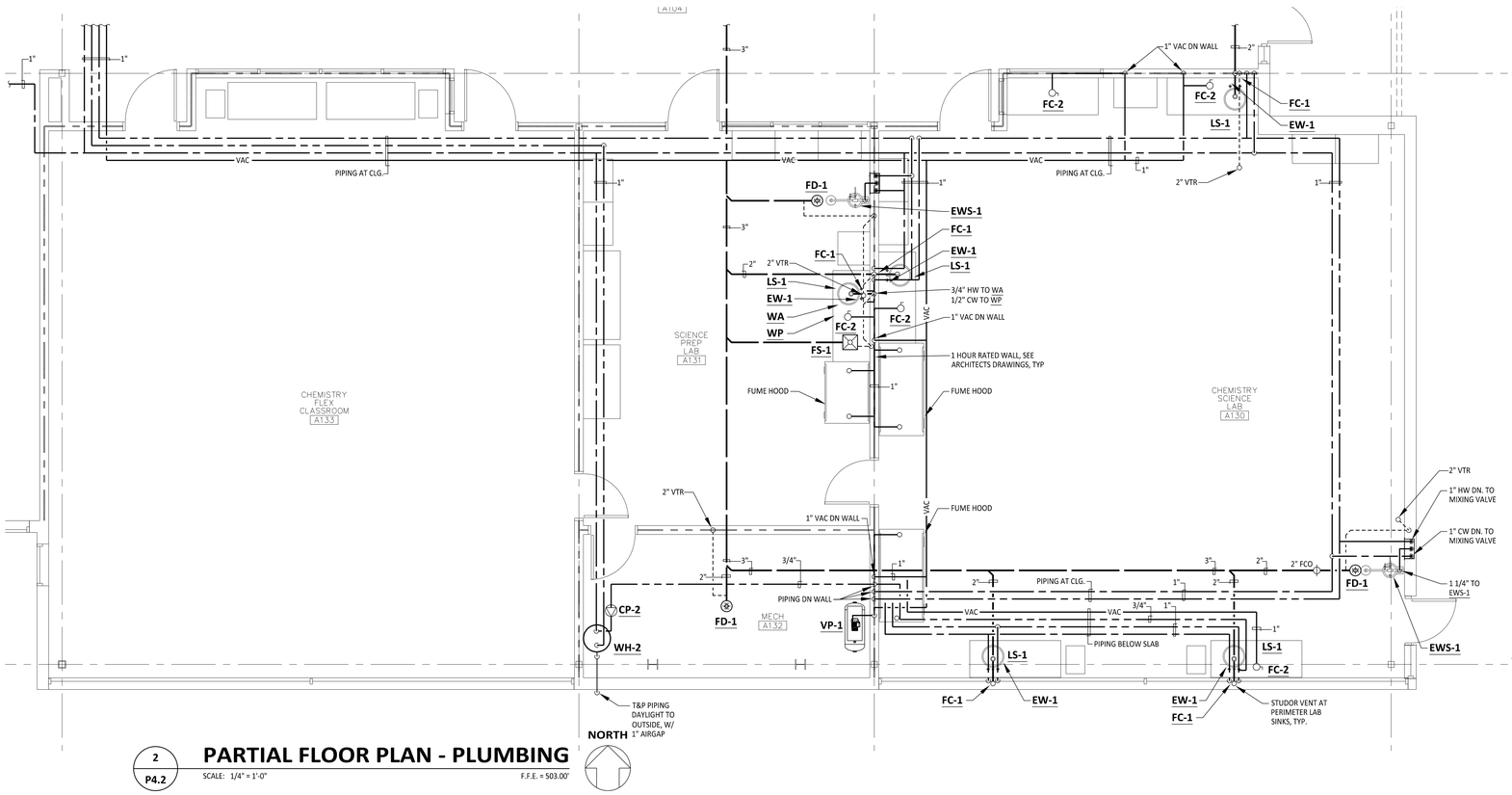


1 P4.2 **PARTIAL FLOOR PLAN - PLUMBING**

SCALE: 1/4" = 1'-0" F.F.E. = 503.00'



2 P4.2 **PARTIAL FLOOR PLAN - PLUMBING**

SCALE: 1/4" = 1'-0" F.F.E. = 503.00'

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SHEET TITLE

PARTIAL FLOOR PLANS PLUMBING

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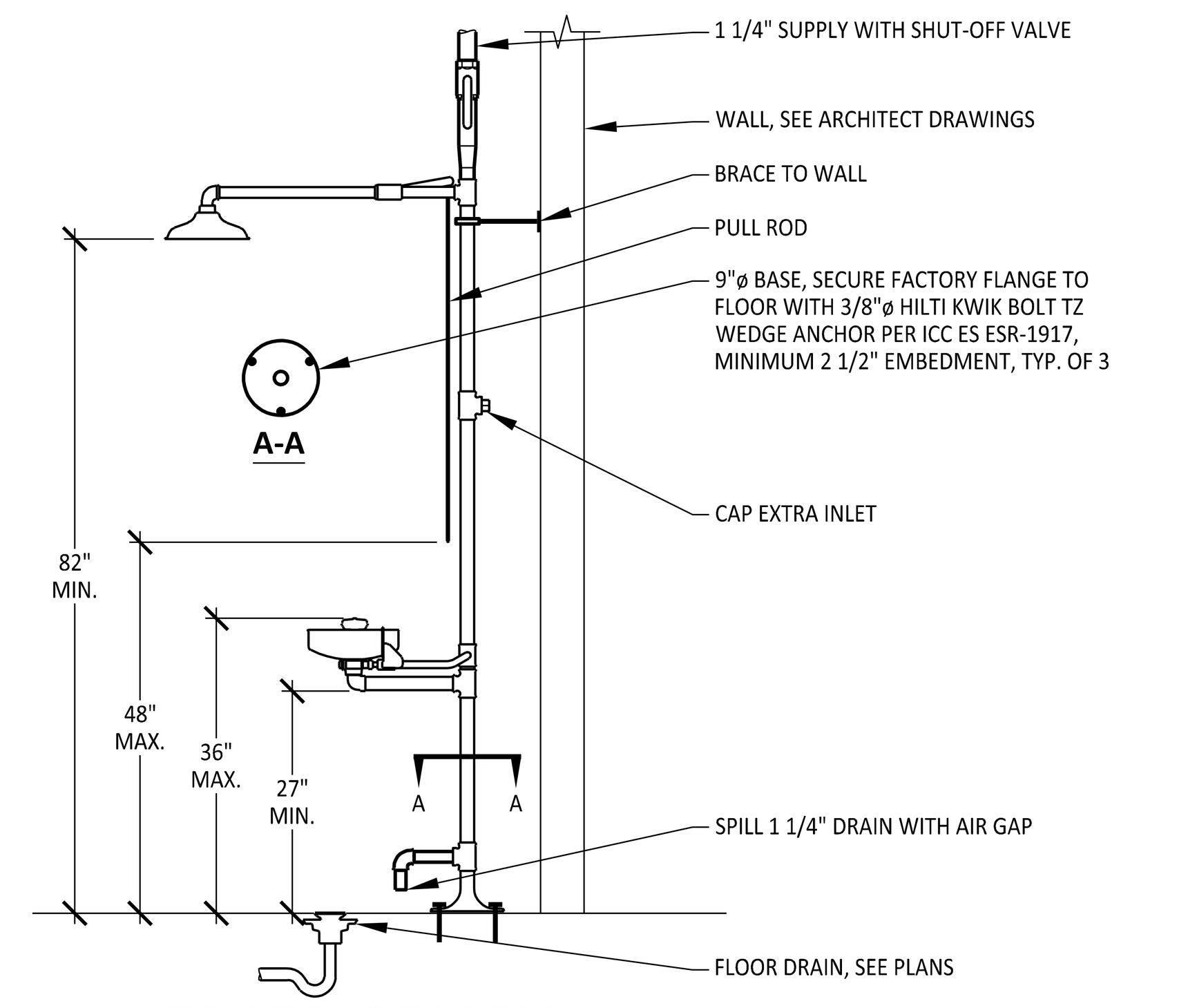
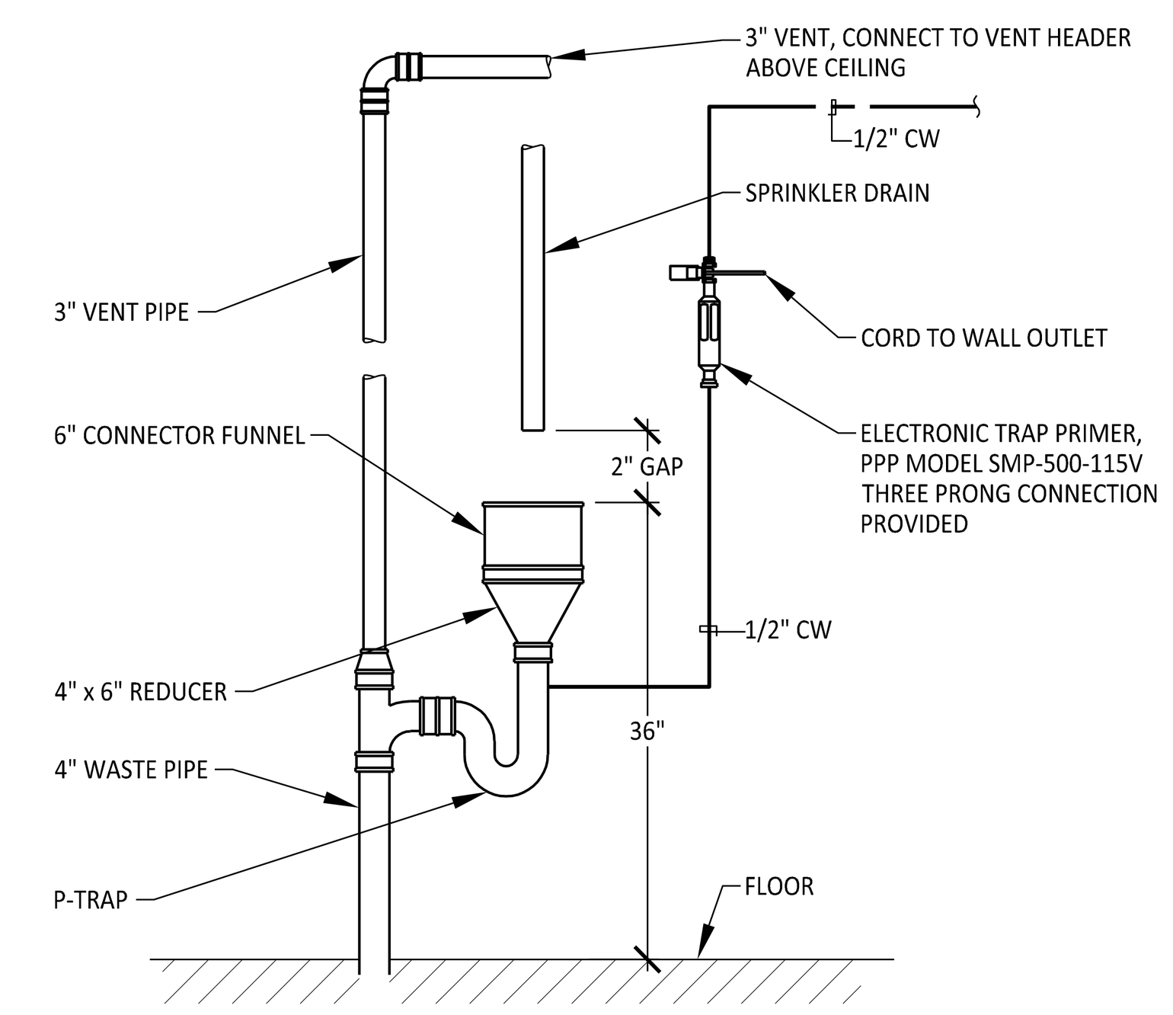
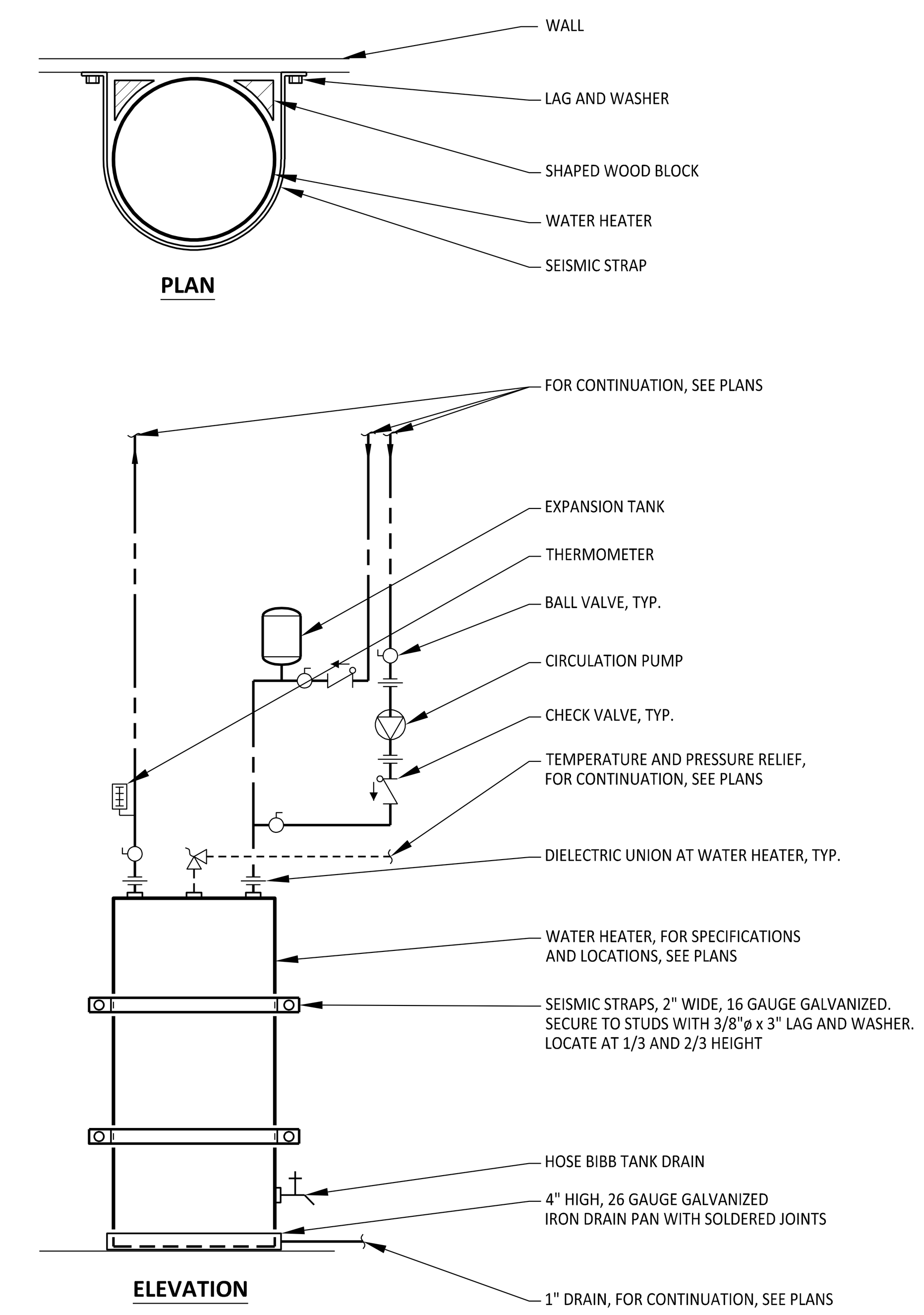


4
P6.1
EMERGENCY SHOWER AND EYEWASH
NO SCALE



5
P61
SPRINKLER RISER DRAIN
NO SCALE



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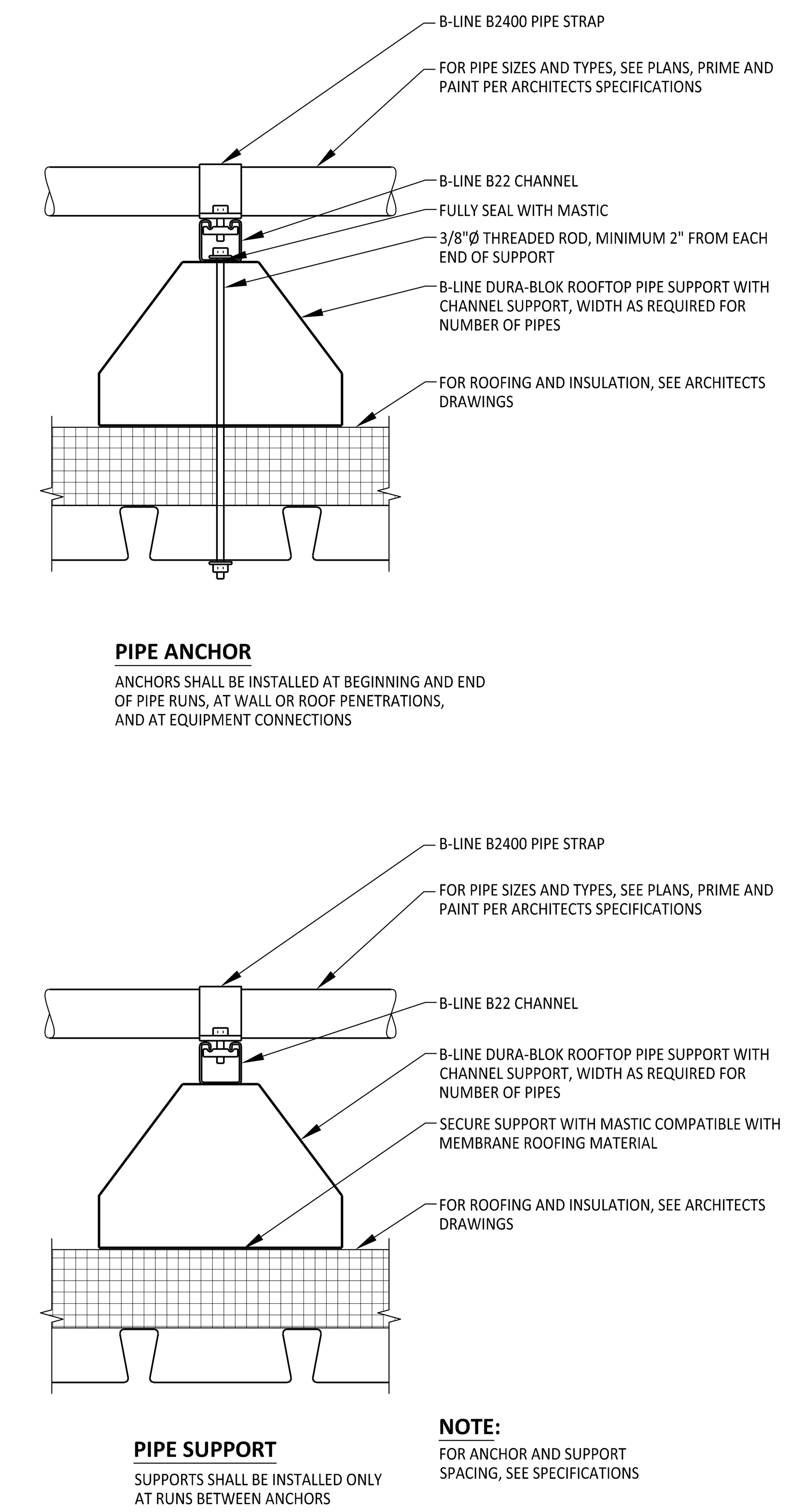
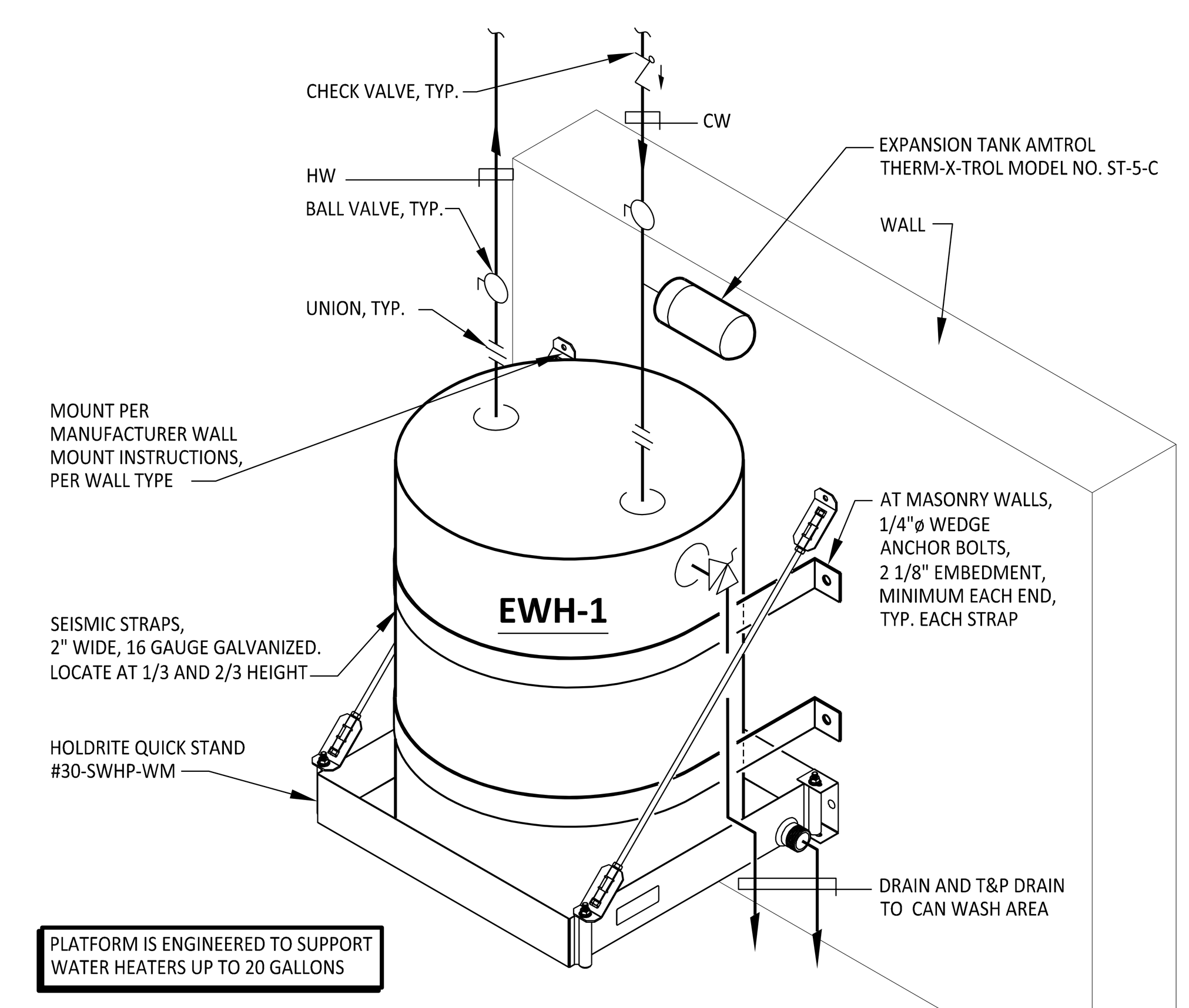
P6.1
ELECTRIC WATER HEATER
NO SCALE



1
P61
PIPE ANCHORS AND SUPPORTS ON ROOF
NO SCALE



3
P6.1
WATER HEATER WALL SUPPORT
NO SCALE

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2/4/22

REGISTERED PROFESSIONAL ENGINEER · WILLIAM M. ... · MECHANICAL · STATE OF CALIFORNIA

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PTN: 43-C4	FILE NO: N/A

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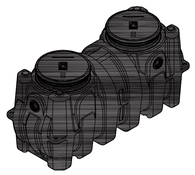
FEBRUARY 4, 2022

SHEET TITLE
DETAILS PLUMBING

SHEET NUMBER
P6.1

INSTALLATION GUIDE

GB-250 100/200 GPM Great Basin™ Indoor/Outdoor Grease Interceptor



Contents

Part #: 4055-001-02
Find these instructions online at: schierproducts.com/gb-250

SCHIER

913-951-3300 | schierproducts.com

SPECIAL PRECAUTIONS

For Schier Bruce Interceptor Installations – Failure to follow this guidance voids your warranty

⚠ WARNING!! DO NOT AIR TEST UNIT OR RISER SYSTEM
Doing so may result in property damage, personal injury or death.

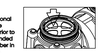
⚠ CAUTION Do not install this unit in any manner except as described in these instructions.

Installation Instructions

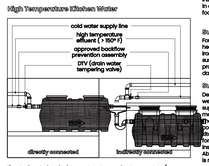
Installation instructions and additional components are included with the Interceptor. Read all instructions prior to installation. This Interceptor is intended to be installed by a licensed plumber in conformance with all local codes.

Install Interceptor as close as possible to fixtures being served

Provide at least 18" clearance above unit for routine maintenance.



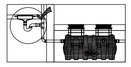
High Temperature Kitchen Water



If water is entering the Interceptor at excessive temperature (over 150° F), a drain water tempering valve (DTV) and approved backflow prevention assembly must be installed. Most state and local plumbing codes prohibit water above 150° F being discharged into the sanitary sewer. Water above 150° F will weaken or deform PVC Schedule 40 pipe, poly drainage fixtures like Interceptors and erode the coating of cast iron (leading to eventual failure).

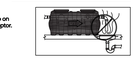
ODOR ALERT!

Interceptor is not a sewer gas trap. All upstream fixtures must be trapped



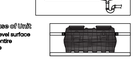
ODOR ALERT!

Do not install air gap on outlet side of Interceptor.



Fully Support Base of Unit

Install unit on solid, level surface in contact with the entire footprint of unit base

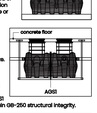


Support Inlet and Outlet Piping

For above grade installations ensure heavy inlet and outlet piping (such as cast iron or long runs) is properly supported or suspended during the entire installation process to prevent connection failure or damage to bulkhead fittings.

Suspended Installations

Design trapeze to support the wet weight of the unit. Do not partially support unit or suspend unit using metal U-channel to create a trapeze. The wet weight of the Interceptor combined with high temperature kitchen water creates the potential for tank deformation in suspended installations. In these situations Above Grade Support Kit model AGSI is required to be installed to maintain GB-250 structural integrity.



DO NOT USE CAST IRON COVERS IN ABOVE GRADE OR INDOOR INSTALLATIONS
Use composite cover C24G for above grade installations

SPECIAL PRECAUTIONS

For Schier Bruce Interceptor Installations – Failure to follow this guidance voids your warranty

Secure Cover Adapters

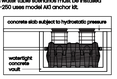
Cover adapters must be secured to base units in above grade installations with increased head pressure conditions. Use cover adapter tie-down kit model ATDK.

High Water Table Installations

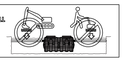
Interceptors and risers are not designed to withstand water table height in excess of the top of the unit when buried (see figure). If it is possible for this to occur, install the Interceptor and risers in a water-tight concrete vault or tank with cover. Where possible fill (void) vaults and tanks with sand. Backfill should be poured in stages to avoid crushing the Interceptor). At risk areas include but are not limited to tidal surge areas, floodplains and areas that receive storm water. Great Basin™ models that are direct buried in high water table scenarios must be installed with an anchor kit. Model GB-250 uses model AKI anchor kit.

Hydrostatic/ Pressure Slabs

When installed under a hydrostatic slab (slab designed to withstand upward lift, usually caused by hydrostatic pressure) interceptor must be enclosed in a watertight concrete vault.

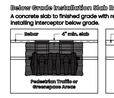


DO NOT COMPACT BACKFILL MECHANICALLY
Compact by hand only

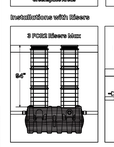


Below Grade Installation Slab Requirements

A concrete slab to finished grade with rebar is required when installing interceptor below grade.



Installations with Risers

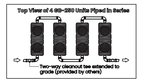


Corrugated Riser Pipe Requirements

Riser adapter model CA2 must be used when installing interceptors using 24" diameter corrugated pipe as a riser. This will adequately embed the cover adaptor in the concrete slab, preventing cover/cover adaptors failure under traffic rated loads.

Series Installations

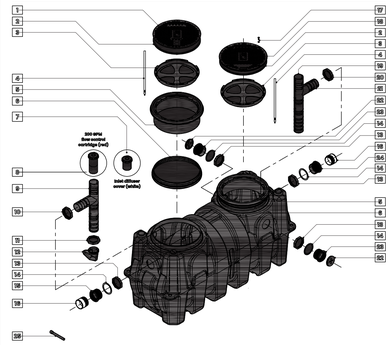
For lower flow rates and higher grease storage requirements. Piping between units and two-way cleanout tees by others.
NOTE: When the flow control is required, it should only be installed on the first unit in the series.



Rated Grease Capacities for Units Piped in Series

No. of Units In Series	Removal Efficiency 100 GPM	Removal Efficiency 100GPM
	95.7%	93.3%
2	3,790 lbs.	2,392 lbs.
3	5,685 lbs.	3,588 lbs.
4	7,580 lbs.	4,784 lbs.

GETTING TO KNOW THE GB-250

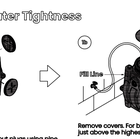


1. Pickable cast iron cover (standard)
2. Cover gasket
3. Safety Stor® access restrictor (x2)
4. Safety Stor® tether (x2)
5. Cover adaptor (x2)
6. Cover adaptor gasket assembly (x2) with upper and lower stainless steel band clamps
7. Inlet diffuser cover (white)
8. Flow control cartridge (for 70 GPM below kitchen, 200 GPM only), see page 7 for more information.
9. Inlet diffuser
10. Inlet diffuser retaining nut
11. Inlet diffuser foot retaining nut
12. Inlet diffuser (foot)
13. Bulkhead connection retaining nut
14. Bulkhead connection gasket
15. Inlet bulkhead connection 4" FPT
16. 4" plain end fitting (x2)
17. Composite cover bolts and washers (x6)
18. Bolted composite cover (optional)
19. Air relief/visual access
20. Outlet diffuser retaining nut
21. Outlet diffuser
22. 4" cleanout plug (x2)
23. Outlet bulkhead connection (optional) 4" FPT (x2)
24. Outlet bulkhead connection (standard) 4" FPT
25. 7/16" nut driver bit

1 Test Tank for Water Tightness

1a

1b

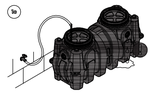


Cap all connection points with 4" cleanout plugs using pipe thread sealant or tape approved for use with plastics.

Remove covers. For base unit testing fill with water to just above the highest connection.

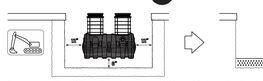
Inspect unit, connections and gaskets for leaks. Check water level at specific time intervals per local code.

1a



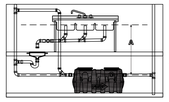
Have a Leak?
Call customer care at 913-951-3300
Hours 8am-5pm CST, M-F

2 Excavate Burial Pit ONLY



Excavate hole at least 12" larger than interceptor on all sides and 6" deeper than tank bottom. Lay a level bed of well-packed, crushed aggregate (approximately 3/4" size rock or sand, with no fines) in the base of hole.

4 Install Inlet Diffuser Components



This unit is supplied with additional components for use in high flow/ increased head pressure conditions.

- If dimension "A" is 13 feet or less, no additional components are needed, go to Step 5, Connect Piping
- If dimension "A" is more than 13 feet, or a high flow/increased head pressure condition exists, follow Steps below.

4a Choose appropriate inlet diffuser component based on flow rate and diffuser size

100 GPM
Install inlet diffuser cover (white)

OR

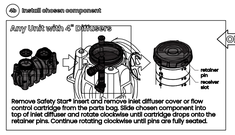
200 GPM
Install flow control cartridge (red) or plate

At 100 GPM this unit is certified to ASME A112.14.3 (Type D) and CSA B483 and does not require flow control. This inlet diffuser cover is provided to prevent the unit from swamping.

At 200 GPM this unit is certified to ASME A112.14.3 (Type C) and CSA B483 and requires internal flow control. External flow control with vent not required.

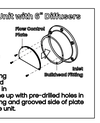
4b Install chosen component

Any Unit with 4" Diffusers



OR

200 GPM Unit with 6" Diffusers

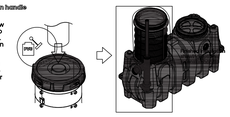


Remove Safety Stor® insert and remove inlet diffuser cover or flow control cartridge from the parts bag. Slide chosen component into top of inlet diffuser and rotate clockwise until cartridge drops onto the retainer pins. Continue rotating clockwise until pins are fully seated.

Before connecting piping and burial, fasten flow control plate to inlet bulkhead fitting using supplied screws. Holes in plate must line up with pre-drilled holes in bulkhead fitting and grooved side of plate must face the unit.

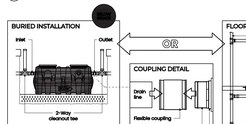
4c OPTIONAL: Install extension handle

For easy inlet diffuser cover or flow control cartridge removal in deep buried installations, 1-1/2" PVC SCH. 40 pipe may used as an extension handle. Before risers have been installed, cut pipe to length and attach to top of cover using PVC primer/cement. Extension handle length should be about 12" shorter than total riser height.



5 Connect Piping

5a Install plain end fittings



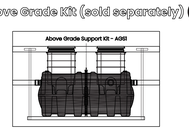
Screw plain end fittings (included) into bulkhead fittings using pipe thread sealant or tape approved for use with plastics. 6" connection types come pre-installed from the factory.

5b Connect Interceptor to drain lines

Place unit into final position and set level. Mechanically couple inlet and outlet drainage lines to unit. Do not exhaust units. Ensure all upstream fixtures are trapped. Vent per local code. Installation of 2-way cleanout tees to grade (by others) is recommended for buried installations.

6 Install AGSI Above Grade Kit (sold separately) ONLY

The wet weight of the Interceptor combined with high temperature kitchen water creates the potential for tank deformation in suspended installations. In these situations Above Grade Support Kit model AGSI is required to be installed to maintain GB-250 structural integrity.



7 Wet or Air Test Piping Per Local Code

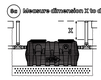
⚠ WARNING!! DO NOT AIR TEST UNIT OR RISER SYSTEM
Doing so may result in property damage, personal injury or death.

Have a Leak? Call customer care at 913-951-3300
Hours 8am-5pm CST, M-F

8 Bring Covers Flush-to-Grade ONLY

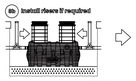
The GB-250 is ready for burial depth of 44" from finished grade to bottom of tank (or 13-1/2" to centerline of inlet). Deeper burials will require extending the cover adapters and possibly adding risers.

8a Measure dimension X to determine riser height needed.



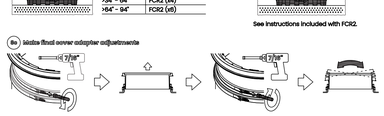
Riser Height Needed	Risers Required
17" – 4"	None (use adapter)
>4" – 13"	FCR2 (x1)
>13" – 9.4"	FCR2 (x1)
>13" – 9.4"	FCR2 (x1)

8b Install risers if required



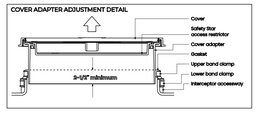
See instructions included with FCR2.

8c Make final cover adapter adjustments

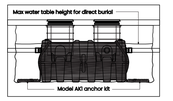


Loosen the cover adapter upper band clamp using 7/16" nut driver bit. Adjust cover adapter heights as needed. Maintain a minimum 3-1/8" insertion depth. Tighten upper band clamp to 5 – 8 ft. lbs. of torque using 7/16" nut driver bit. If required, cover adapters may now be tilted up to 10° in any direction using gasket flexibility.

COVER ADAPTER ADJUSTMENT DETAIL



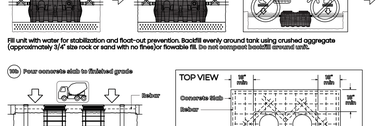
9 Install Anti-Flotation Anchor Kit ONLY



If the installation location is in a high water table or at risk area (including but not limited to tidal surge areas, floodplains and areas that receive storm water) the GB-250 must be installed with Schier model AKI anchor kit.

10 Backfill and Finished Grade ONLY

10a Backfill



Fill unit with water for stabilization and float-out prevention. Backfill evenly around tank using crushed aggregate (approximately 3/4" size rock or sand with no fines/or flowable fill. Do not compact backfill around unit.

10b Pour concrete slab to finished grade

Vehicular Traffic Areas:
Minimum 6" thick concrete slab with rebar required. Thickness of concrete around covers to be determined by specifying engineer. If traffic loading is required the concrete slab dimensions shown are for HS20 (32,000 lb. gross) vehicles only. Concrete to be 28 day compressive strength to 4,000 PSI. Use No. 4 rebar (1/2") grade 60 steel per ASTM A615 connected with tie wire. Rebar to be 2-1/2" from edge of concrete and spaced in a 12" grid with 4' spacing around access openings.

Pedestrian Traffic or Greasecaprox Areas:
Minimum 4" thick concrete slab with rebar required.

3 Set Up Outlet Diffuser and Install Cleanout Plugs

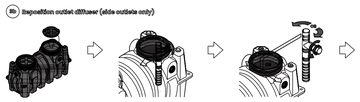
3a Choose outlet location.

Side Outlet:
Go to Step 3b.

OR

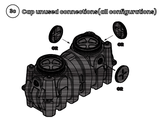
Straight Through:
Go to Step 3c.

3b Deposition outlet diffuser (side outlets only)



Remove Safety Stor® insert, leave tethered to unit. Unscrew diffuser retaining nut and remove outlet diffuser. Rotate diffuser toward chosen outlet, insert and hand tighten retaining nut.

3c Cap unused connections(all configurations)



Screw in provided 4" cleanout plugs using pipe thread sealant or tape approved for use with plastics. Do not cap the inlet or outlet connections attached to the diffusers.

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

GREASE INTERCEPTOR DETAILS PLUMBING

SHEET NUMBER

P6.2

DSA SUBMITTAL
2/4/22

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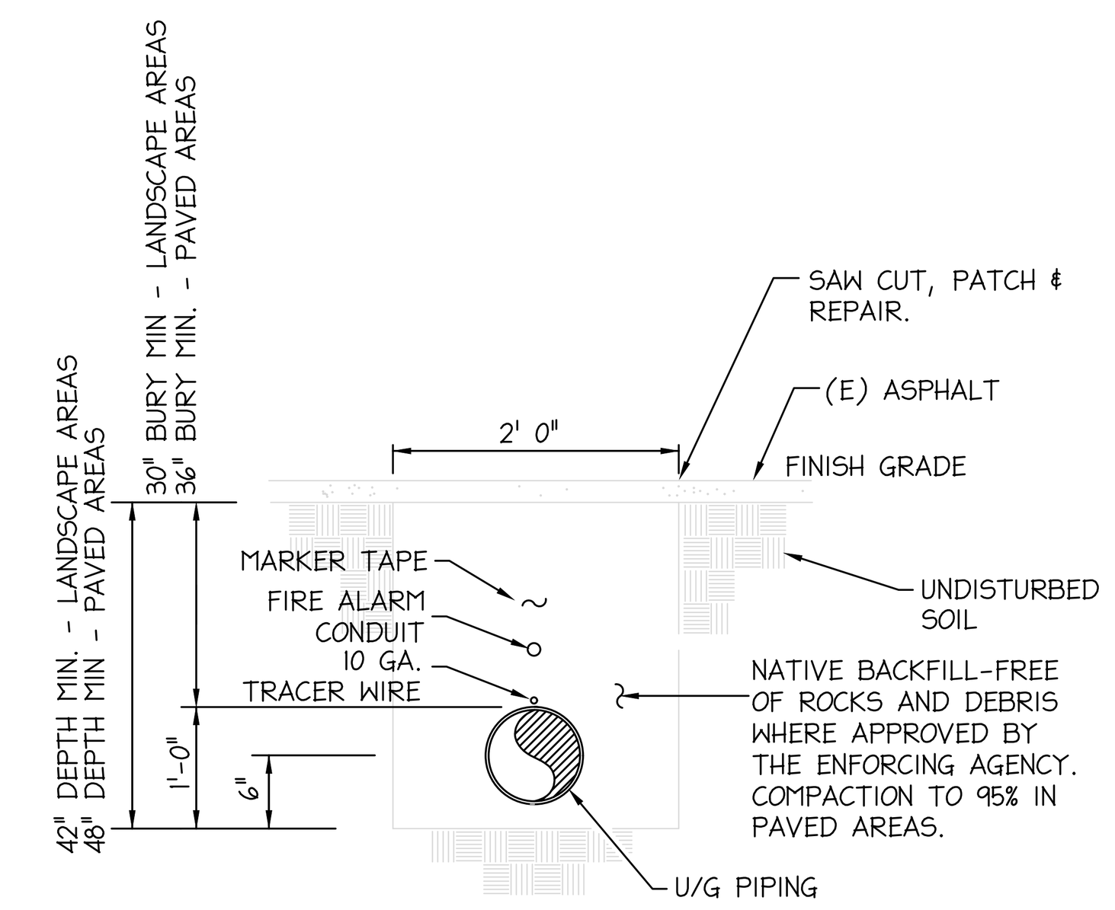
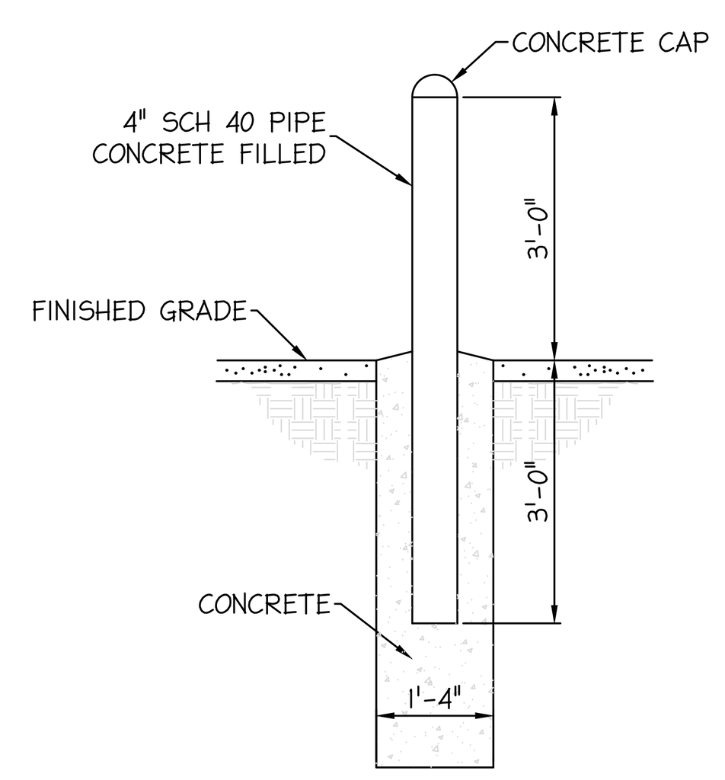


NOTES: BACKFILL SHALL BE WELL TAMPED IN LAYERS OR IN PUDDLES UNDER AND AROUND PIPES TO PREVENT SETTLEMENT OR LATERAL MOVEMENT. BACKFILL SHALL CONSIST OF CLEAN FILL SAND OR PEA GRAVEL TO A MINIMUM 6" BELOW AND TO A MINIMUM OF 12" ABOVE THE PIPE AND SHALL CONTAIN NO ASHES,CINDERS, REFUSE, ORGANIC MATTER, OR OTHER CORROSIVE MATERIALS. ROCKS SHALL NOT BE USED FOR BACKFILL. 10.9 NFPA 24 2016 2019 CFC

1 / FP0.01 — TRENCH DETAIL
SCALE: NONE



2 / FP0.01 — PIPE BOLLARD DETAIL
SCALE: NONE

THRUST BLOCK DESCRIPTION	THRUST BLOCK DESCRIPTION			
		HORIZONTAL BEND		
	PIPE SIZE	SURFACE AREA SQ. FT.	THICKNESS (INCHES)	THRUST FORCE
THICKNESS / SURFACE AREA	22-1/2° BENDS			
	4"	.8	12	1059
HORIZONTAL BEND	6"	1.6	12	2188
	8"	2.8	12	3765
	10"	4.2	12	5664
	12"	6	14	8009
	45° BENDS			
	4"	1.6	12	2077
	6"	3.2	12	4293
HORIZONTAL TEE	8"	5.5	14	7385
(2)#4 TIE DOWN / WEIGHTED BLOCK	10"	8.3	18	11110
	12"	11.8	18	15711
	90° BENDS and HYDRANT BURYS			
	4"	2.9	12	3839
	6"	5.9	12	7932
	8"	10.2	15	13646
	10"	15.4	18	20528
VERTICAL BEND	12"	21.8	18	29030
THICKNESS / SURFACE AREA	TEES and DEADENDS			
	4"	2	12	2714
	6"	4.2	12	5609
	8"	7.2	15	9649
	10"	10.9	18	14515
	12"	15.4	18	20527
HYDRANT BURY	USE 144 LBS PER CUBIC FT FOR GRAVITY BLOCKS			

NOTES:

1. ALL VALUES SHOWN ARE MINIMUM FOR A DESIGN PRESSURE OF 150 PSI AND A SOIL RESISTANCE OF 2000 LBS/SQ FT WITH THRUSTBLOCK MINIMUM OF 2 FT OF COVER AND VELOCITY OF 10 FPS.
2. ALL THRUST BLOCKS SHALL BE MADE OF CLASS "B" CONCRETE WITH A MINIMUM CRUSHING STRENGTH OF 2000 PSI @ 28 DAYS.
3. ALL BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL. THE BLOCKS SHALL BE PLACED SO THAT JOINTS AND FITTINGS WILL BE ACCESSIBLE FOR REPAIRS.
4. FOR VERTICAL BENDS, ALL METALLIC TIE-DOWNS SHALL BE INCASED WITH POLYETHLENE WRAP (8 MIL MIN) AS SPECIFIED IN AWWA C105.
5. ALL THRUST BLOCKS SHOULD HAVE A MINIMUM BLOCK WIDTH OF 1 TO 2 TIMES THE BLOCK HEIGHT. THE BLOCK HEIGHT SHOULD NOT BE LESS THAN THE OUTSIDE DIAMETER OF THE PIPE.

3 / FP0.01 — THRUST BLOCK SCHEDULE

DESIGN CRITERIA

AUTHORITY HAVING JURISDICTION: DSA

STANDARD: NFPA 13 (2016 EDITION WITH CFC AMMENDMENTS)

FIRE FLOW: 2019 CFC: APPENDIX BB TABLE BB105.1: NEW BUILDING WITH FIRE SPRINKLERS 1500 GPM PER SECTION BB105.

HYDRANT SPACING: 2019 CFC: APPENDIX CC TABLE CC105.1 1500 GPM = 500 FT AVERAGE SPACING REQUIRED. 300 FT AVERAGE SPACING PROVIDED.

SCOPE OF WORK: INSTALL ONSITE FIRE HYDRANTS, BACKFLOW PREVENTION, CONTROL VALVES AND SUPPLIES TO NEW BUILDING FIRE SPRINKLER SYSTEM RISER.

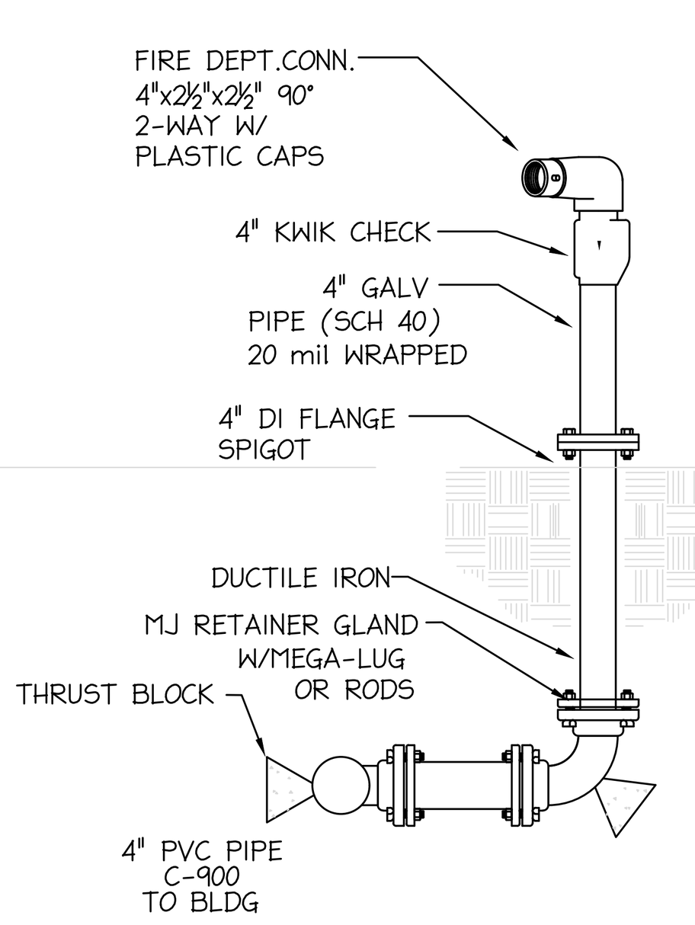
FACILITY USAGE: SCHOOL

UNDERGROUND INSTALLATION NOTES

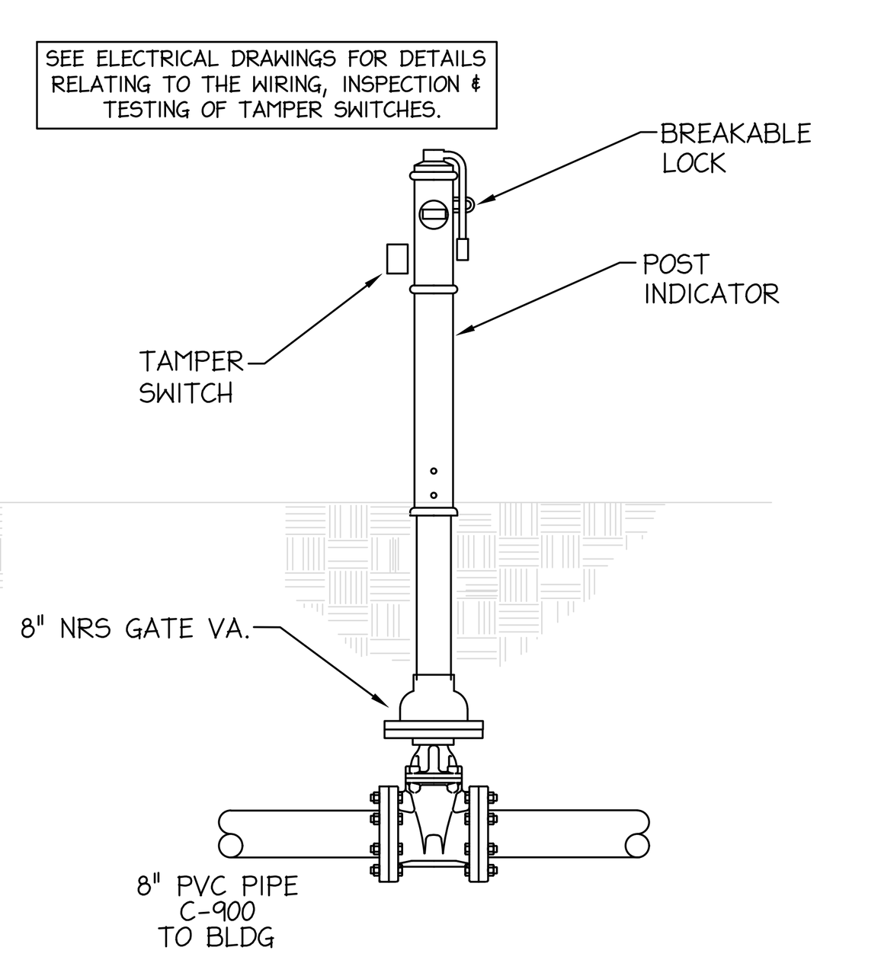
1) ALL MATERIALS AND METHODS SHALL CONFORM TO THE REQUIREMENTS OF NFPA 24 CHAPTER 10 (2016) AS AMENDED BY THE 2019 CFC & CSFM.
2) ALL INSTALLATION TO BE PER NFPA 24 10.9 (2016) AS AMENDED BY THE 2019 CFC & CSFM.
3) ALL MATERIALS TO BE NEW, UL LISTED AND/OR NFPA APPROVED.
4) THRUST BLOCKING SHALL BE PLACED AND FORMED PER NFPA 24 SECTION 10.6.1. OR A RESTRAINED JOINT SYSTEM UTILIZING MECHANICAL JOINTS WITH SET SCREW RETAINER GLANDS, PER SECTION 10.6.2.
5) U/G PIPING TO BE PVC, C-900, CLASS 235, DR18 OR DUCTILE IRON CLASS 52.
6) ALL UNDERGROUND PIPE IN VERTICAL POSITION TO BE DUCTILE IRON.
7) U/G FITTINGS TO BE DUCTILE IRON, CLASS 350 W/MECHANICAL JOINTS.
8) PIPING SHALL HAVE A MINIMUM BURY OF 36 INCHES BELOW GRADE.
9) U/G PIPE TO BE FLUSHED PER NFPA 24, SEC. 10.10.2.1.
10) U/G PIPING TO BE HYDROSTATICALLY TESTED AT 200 PSI FOR TWO HOURS PER NFPA 24, SEC. 10.10.2.2. PIPE TO BE CENTER LOADED FOR TESTING.
11) VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE PROCEEDING WITH INSTALLATION.
12) WATER FLOW INFORMATION: 74 STATIC, 50 RESIDUAL WITH 1,758 GPM FLOWING

GENERAL NOTES

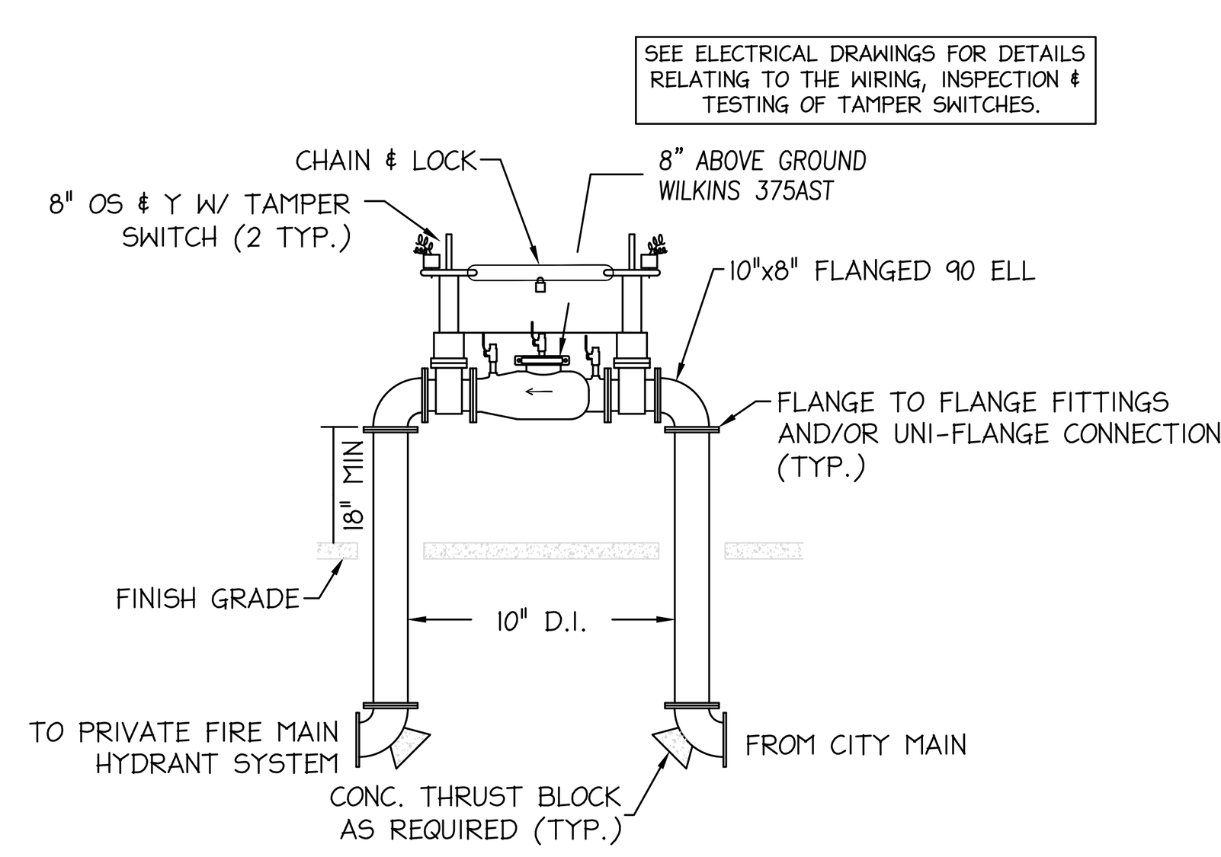
1) DETAILS AND DIMENSIONS OF CONSTRUCTION SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR. MINOR MODIFICATIONS TO THE DESIGN SHOWN WILL BE REQUIRED DUE TO FIELD CONDITIONS. ANY CHANGES MADE SHALL IN NO WAY EFFECT THE SPECIFIED PERFORMANCE OF THE FIRE SYSTEM. MAJOR DEVIATIONS FROM THE ORIGINAL DESIGN MUST BE APPROVED IN WRITING PRIOR TO CONSTRUCTION. UNAUTHORIZED CHANGES TO THESE DRAWINGS ARE NOT THE RESPONSIBILITY OF NEXUS ENGINEERING.
2) OWNERSHIP OF DOCUMENTS: THESE DOCUMENTS, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF NEXUS ENGINEERING AND ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF NEXUS ENGINEERING.
3) ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL, COUNTY, STATE, OR FEDERAL AGENCIES HAVING JURISDICTION. NEXUS ENGINEERING ASSUMES NO RESPONSIBILITY FOR SUPERVISION OF CONSTRUCTION OR PROPER EXECUTION OF THE WORK SHOWN ON THESE DRAWINGS. SAFETY METHODS AND TECHNIQUES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



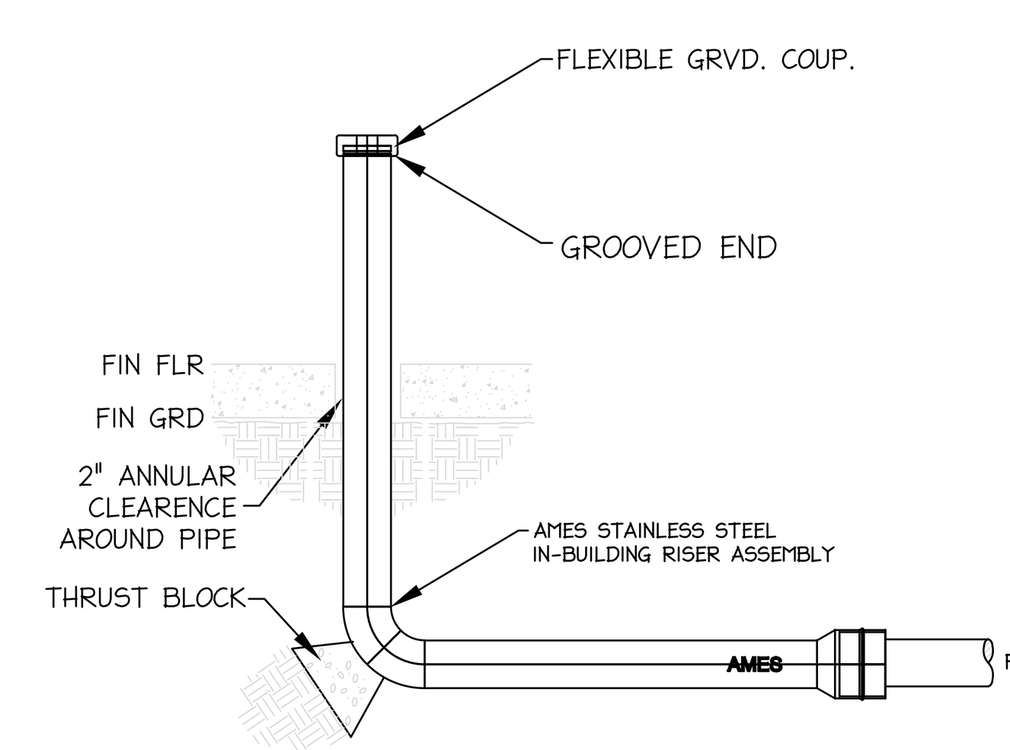
4 / FP0.01 — FDC DETAIL
SCALE: NONE



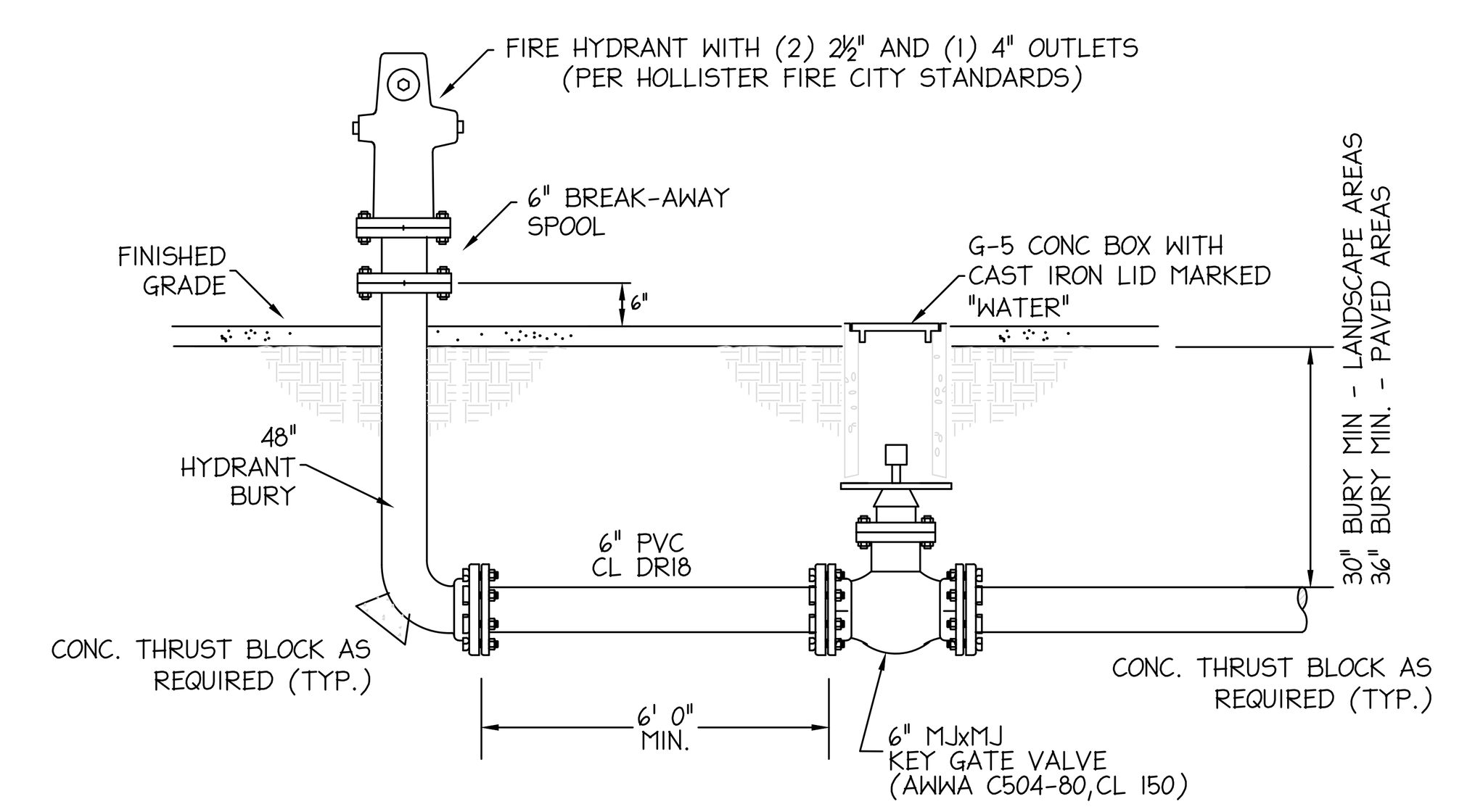
5 / FP0.01 — PIV DETAIL
SCALE: NONE



6 / FP0.01 — BACKFLOW PREVENTION ASSEMBLY DETAIL
SCALE: NONE



7 / FP0.01 — UNDERGROUND RISER SPIGOT DETAIL
SCALE: NONE



FIRE HYDRANT MANUFACTURER AND OUTLET QUANTITY TO BE CONFIRMED BY CONTRACTOR PER AHJ STNDS.

8 / FP0.01 — FIRE HYDRANT DETAIL
SCALE: NONE

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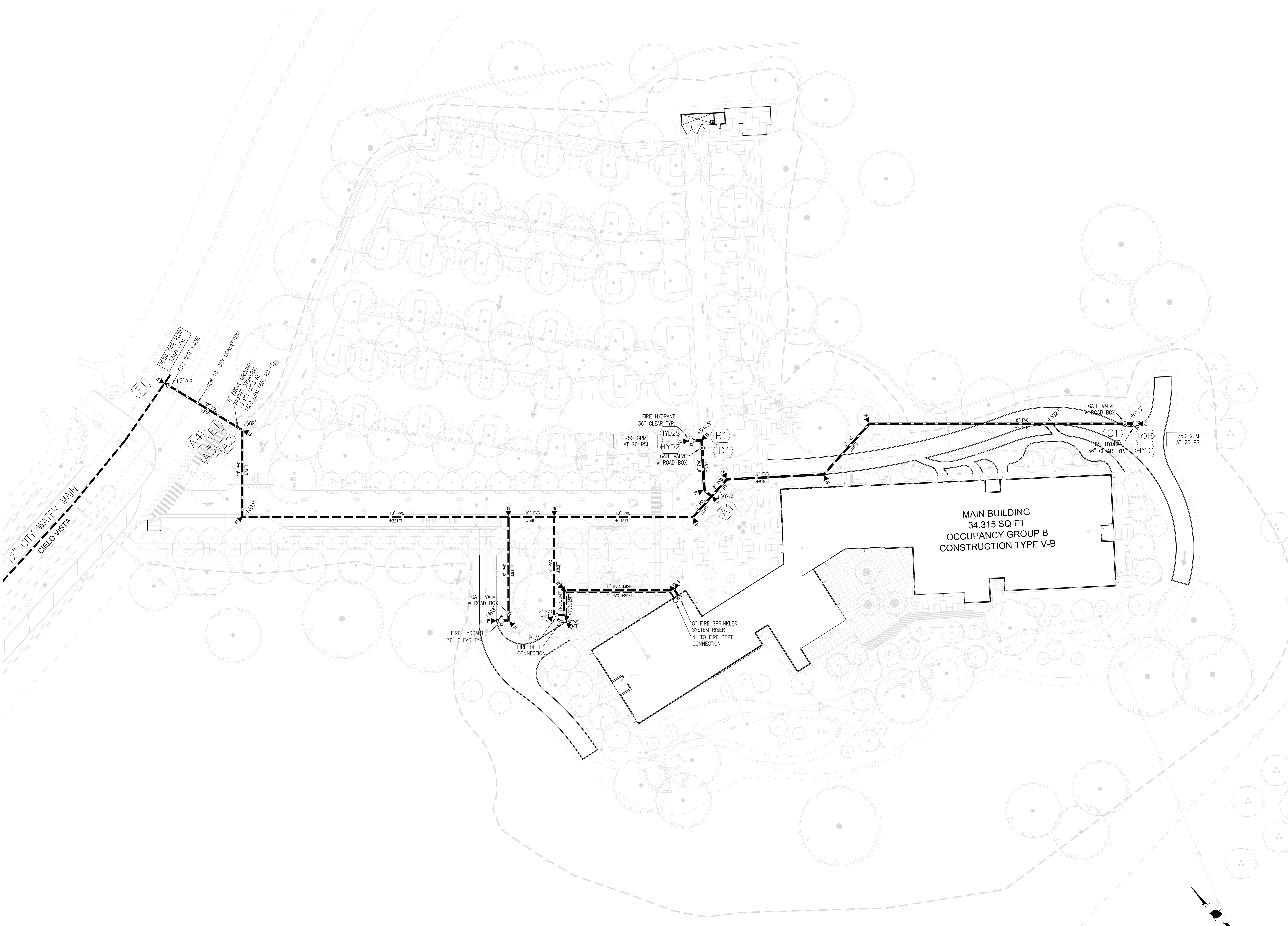
DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SITE FIRE PROTECTION NOTES & DETAILS

SHEET NUMBER
FP0.01



1
FP0.02

OVERALL FIRE PROTECTION UNDERGROUND & SITE PLAN

SCALE: 1"=30'-0"

0 15 30 60

1 INCH = 30 FEET

BIMcloud: archiserver - BIMcloud Basic for ARCHICAD 22/1897.00 GAVILAN COLLEGE;8/19/2021;8:42 PM

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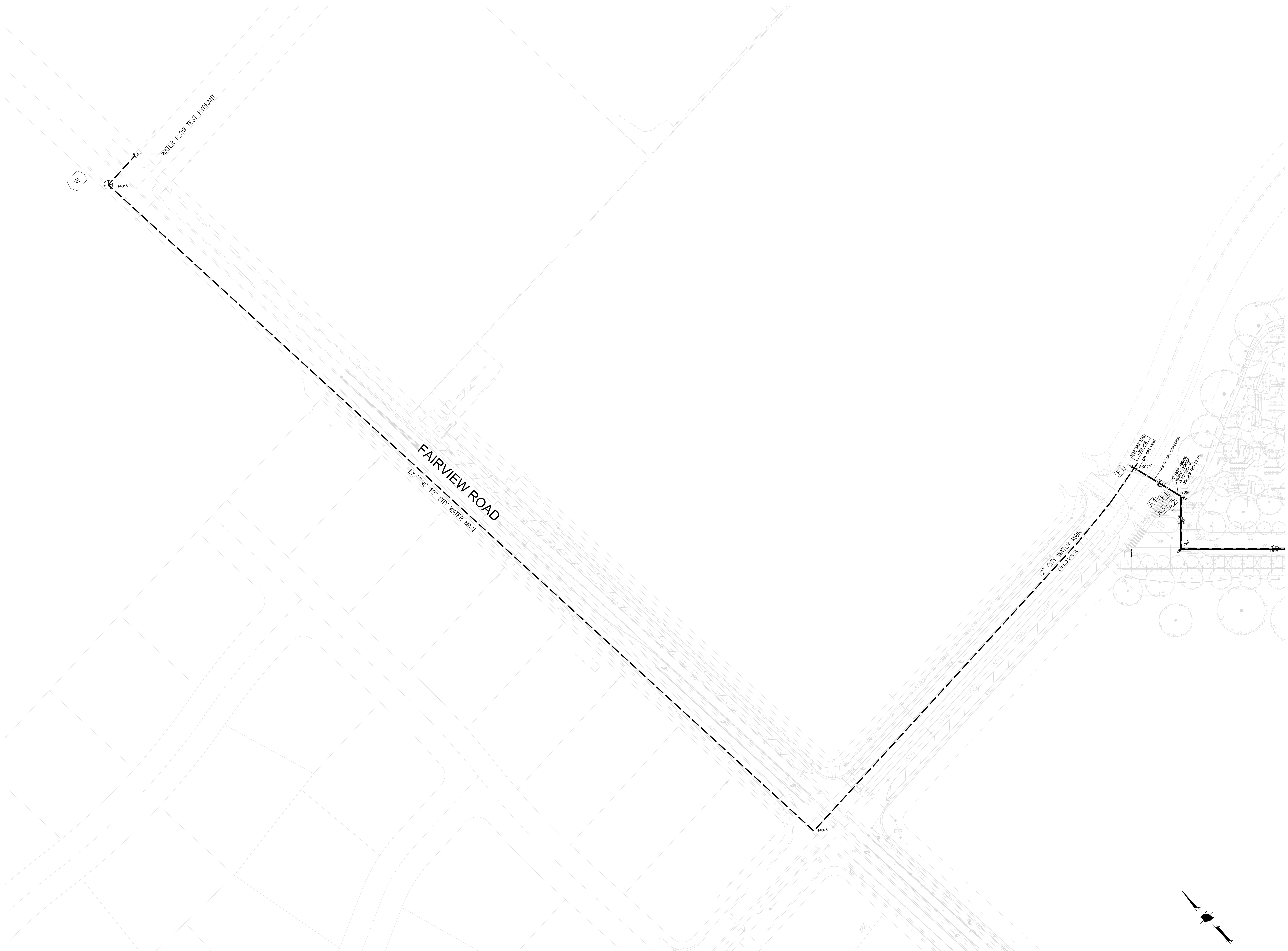
DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
OVERALL FIRE PROTECTION UNDERGROUND & SITE PLAN

SHEET NUMBER
FP0.02



1
FP0.03

OVERALL FIRE PROTECTION UNDERGROUND & SITE PLAN

SCALE: 1"=50'-0"

0 25 50 100

1 INCH = 50 FEET

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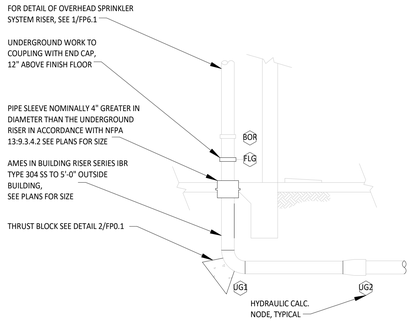
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
FIRE PROTECTION EXPANDED SITE PLAN

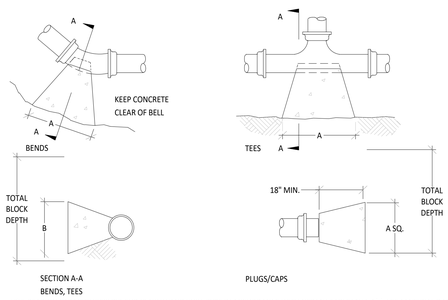
SHEET NUMBER
FP0.03



1 FP0.1

IN BUILDING RISER

NO SCALE



SOIL BEARING CAPACITY 2000 PSF FOR CLAYEY SAND SOILS TYPE IN ACCORDANCE WITH NFPA13:TABLEA10.6.1(c). SEE MATERIAL DATA SUBMITTAL GEOTECHNICAL REPORT FOR DESCRIPTION OF SOIL CONDITIONS.

THRUST BLOCK CALCULATIONS PER NFPA 13: A.10.6.1(b)

4"-90 BEND AREA = (3.8 S.F.)(225PSI/100PSI)(1000PSF/2000PSF) = 4.3 S.F.
4"-45 BEND AREA = 4.3 S.F. x 0.541 = 2.3 S.F.
4"-22.5 BEND AREA = 4.3 S.F. x 0.276 =1.2 S.F.
4"-DEAD END AREA = (2.7 S.F.)(225PSI/100PSI)(1000PSF/2000PSF) = 3.0 S.F.

6"-90 BEND AREA = (7.9 S.F.)(225PSI/100PSI)(1000PSF/2000PSF) = 8.9 S.F.
6"-45 BEND AREA = 8.9 S.F. x 0.541 = 4.8 S.F.
6"-22.5 BEND AREA = 8.9 S.F. x 0.276 = 2.5 S.F.
6"-DEAD END AREA = (5.6 S.F.)(225PSI/100PSI)(1000PSF/2000PSF) = 6.3 S.F.

8"-90 BEND AREA=(13.6 S.F.)(225 PSI/100 PSI)(1000 PSF/2000 PSF)=15.3 SF
8"-45 BEND AREA= 15.3 S.F. x 0.541 = 8.3 S.F.
8"-22.5 BEND AREA = 15.3 S.F. x 0.276 = 4.2 S.F.
8"-DEAD END AREA = (9.6 S.F.)(225 PSI/100 PSI)(1000 PSF/2000 PSF)=10.8 SF.

PIPE SIZE	90° BENDS			45° BENDS			22.5° BENDS			TEES and PLUGS		
	SIZE SQ. FT.	"A"	"B"	SIZE SQ. FT.	"A"	"B"	SIZE SQ. FT.	"A"	"B"	SIZE SQ. FT.	"A"	"B"
4"	4.3	30"	21"	2.3	28"	12"	2	24"	12"	3.0	24"	18"
6"	8.9	53"	24"	4.8	39"	18"	2.5	30"	12"	6.3	43"	21"
8"	15.3	62"	36"	8.3	50"	24"	4.2	34"	18"	10.8	52"	30"

BASED ON A WATER PRESSURE OF 225 POUNDS PER SQUARE INCH AND A SOIL RESISTANCE OF 2000 POUNDS PER SQUARE FOOT, AND SAFETY FACTOR OF 1.5 IN ACCORDANCE WITH NFPA 13 (2016) TABLE A.10.6.1(b).

TOTAL BLOCK DEPTH SHALL BE AT LEAST TWICE THE BLOCK DEPTH "B" IN ACCORDANCE WITH NFPA 24.

JOINT RESTRAINT SHALL UTILIZE BOTH THRUST BLOCKS AND MEGALUG MECHANICAL JOINT RESTRAINT FITTINGS PER LOCAL FIRE MARSHAL

2 FP0.1

THRUST BLOCK

NO SCALE

OVERHEAD FIRE SPRINKLER SYSTEM GENERAL NOTES:

NFPA 13 (2016) SEC. 9.2.1.3.3.4 WHERE FLEXIBLE SPRINKLER HOSE FITTINGS ARE USED TO CONNECT SPRINKLERS TO BRANCH LINES IN SUSPENDED CEILINGS, A LABEL LIMITING RELOCATION OF THE SPRINKLER SHALL BE PROVIDED ON THE ANCHORING COMPONENT.

NFPA 13 (2016) SEC. 10.10.2.1 UNDERGROUND MAINS AND LEAD-IN CONNECTION MADE TO OVERHEAD SPRINKLER PIPING SYSTEMS SHALL BE COMPLETELY FLUSHED.

NFPA 13 (2016) SEC. 10.10.2.2 ALL INTERIOR PIPING AND APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATIC ALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS. LOCAL FIRE DEPARTMENT SHOULD BE NOTIFIED OF DATE AND TESTING SO THEY MAY OBSERVE TESTING.

NFPA 13 (2016) SEC. 6.2.9 PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH, AND NO FEWER THAT A TOTAL OF 6 SPARE HEADS MATCHING THE TYPES AND TEMPERATURE RATINGS IN EACH PROTECTED BUILDING FOR SYSTEMS LESS THAN 300 SPRINKLERS AND FEWER THAN 12 FOR SYSTEMS HAVING 300 TO 1000 SPRINKLERS.

NFPA 13 (2016) SEC. 9.3.6.1 PROVIDE RESTRAINT OF BRANCH LINES BY USING ONE OF THE FOLLOWING:
(1) LISTED SWAY BRACE ASSEMBLY
(2) WRAPAROUND U-HOOK SATISFYING THE REQUIREMENTS OF 9.3.5.5.11
(3) NO. 12, 440LB (200KG) WIRE INSTALLED AT LEAST 45 DEGREES FROM THE VERTICAL PLANE AND ANCHORED ON BOTH SIDES OF THE PIPE.
(4) CPVC HANGERS LISTED TO PROVIDE RESTRAINT
(5) HANGER NOT LESS THAN 45 DEGREES FROM VERTICAL INSTALLED WITHIN 6IN. OF THE VERTICAL HANGER ARRANGED FOR RESTRAINT AGAINST UPWARD MOVEMENT, PROVIDED IT IS UTILIZED SUCH THAT L/R DOES NOT EXCEED 400, WHERE THE ROD EXTENDS TO THE PIPE OR A SURGE CLIP HAS BEEN INSTALLED.

NFPA 72 (2016) SEC. 17.12.2 SPRINKLER FLOW SWITCH SHALL BE TESTED BY IOR TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS ACTIVATED AN ALARM WILL SOUND IN NOT MORE THAN 90 SECONDS.

NFPA 13 (2016) SEC. 6.8.3 FLOW SWITCH SHALL BE CONNECTED TO AN OUTSIDE ALARM BELL FOR EACH RISER. APPROVED IDENTIFICATION SIGN SHALL BE PROVIDED FOR OUTSIDE ALARM BELL "SPRINKLER FIRE ALARM - WHEN BELL RINGS CALL 911/FIRE DEPARTMENT".

THE PLANS SHALL INCLUDE THE INFORMATION ON THE HYDRAULIC DESIGN INFORMATION SIGN, IN COMPLIANCE WITH NFPA 13 SECTION 23.1.3 ITEM 31 AND CBC CHAPTER 35 AMENDMENTS TO NFPA 13 SECTION 25.5.1 AND 25.5.2

NFPA 13 (2016) SEC. 25.1 (3) SPRINKLER CONTRACTOR (C16) SHALL COMPLETE AND SIGN CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR THE OVERHEAD SPRINKLER SYSTEM USING FORM IN FIGURE 25.1. THIS COMPLETED FORM SHALL BE GIVEN TO THE APPROVING AUTHORITY, OWNER, AND CONTRACTOR.

NFPA 13 (2016) SEC. 25.2.3.4.1 THE MAIN DRAIN VALVE SHALL BE OPENED AND REMAIN OPENED UNTIL THE SYSTEM PRESSURE STABILIZES. THE STATIC AND RESIDUAL PRESSURES SHALL BE RECORDED ON THE CONTRACTOR'S TEST CERTIFICATE.

TITLE 19 ARTICLE (A) A LABEL OF 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 PREFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK.

THE SPRINKLER CONTRACTOR SHALL HAVE A REPRESENTATIVE PRESENT AT THE ROUGH-IN/HYDRO INSPECTION.

NFPA 13 (2016) SEC. 9.3.4.2 WHERE PIPE PASSES THROUGH HOLES IN PLATFORMS, FOUNDATIONS, WALLS, OR FLOORS, THE HOLES SHALL BE SIZED SUCH THAT THE DIAMETER OF THE HOLE IS NOMINALLY 2" LARGER THAN THE PIPE FOR PIPE 1" NOMINAL TO 3 1/2" NOMINAL AND 4" LARGER THAN PIPE FOR PIPE 4" NOMINAL AND LARGER.

SCOPE OF WORK

- ONE NEW NFPA 13 WET PIPE FIRE SPRIKLER SYSTEM FOR NEW BUILDING ON NEW COLLEGE CAMPUS WITH ALL REQUIRED HANGERS, BRACING,VALVES, ELECTRICAL DEVICES, ETC. FOR A COMPLETE SYSTEM.
- CONNECT TO NEW UNDERGROUND SUPPLY 5'-0 OUT FROM EXTERIOR WALL OF BUILDING
- CONNECT TO NEW FDC UNDERGROUND 5'-0 OUT FROM EXTERIOR WALL OF BUILDING
- REMOTE FDC IS UNDER CIVIL/FP UNDERGROUND SCOPE ON SHEETS FP0.01-FP0.03
- BACKFLOW IS UNDER CIVIL/FP UNDERGROUND SCOPE ON SHEETS FP0.01-FP0.03
- ALL UNDERGROUND FIRE SUPPLY PIPING EXCEPT THAT FROM THE BUILDING TO THE P.O.C 5'-0 FROM BUILDING IS UNDER CVIIL/FP UNDERGROUND SCOPE ON SHEETS FP0.01-FP0.03
- ELECTRICAL WIRING TO CONNECT DEVICES/SWITCHES BY ELECTRICAL/FIRE ALARM CONTRACTOR.

LIST OF GOVERNING CODES

2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.
2019 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, C.C.R.
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
2016 NFPA 13 AS AMENDED
2016 NFPA 24 AS AMENDED

ALL SECTION NUMBERS BELOW REFER TO GROUP 1, CHAPTER 4, PART 1, TITLE 24, C.C.R.
1. ADDENDA, CONSTRUCTION CHANGES PER SECTION 4-338.
2. INSPECTOR APPROVED BY DSA. INSPECTOR AND CONTINUIOUS INSPECTION OF WORK PER SECTION 4-333(b) AND 4-342.
3. TESTS AND TESTING LABORATORY PER SECTION 4-335.
4. SPECIAL INSPECTION PER SECTION 4-333(c).
5. CONTRACTOR SHALL SUBMIT VERIFIED REPORTS PER SECTION 4-336 AND 4-343(c).
6. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, C.C.R. - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER PER SECTION 4-333(a) AND 4-341.
7. GOVERNING CODES: TITLE 24.
8. A COPY OF PARTS 1, 2, 3, 4, AND 5 OF TITLE 24 SHALL BE KEPT AVAILABLE IN THE FIELD DURING CONSTRUCTION.
9. DSA SHALL BE NOTIFIED OF START OF CONSTRUCTION PER SECTION 4-331.
10. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT PER SECTION 4-334

DSA GENERAL NOTES

1. THE INTENT OF THE CONTRACT DOCUMENTS IS A NEW BUILDING ON A NEW COLLEGE CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.

2. ALL HANGERS AND SEISMIC SWAY BRACING SHALL BE DESIGNED AND INSTALLED PER NFPA 13 AND CHAPTER 16A CALIFORNIA BUILDING CODE.

3. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

FIRE DEPARTMENT CONNECTIONS:

NFPA 13 (2016) SEC. 8.17.2.5.1 CHECK-VALVE SHALL BE PROVIDED AT FIRE DEPARTMENT CONNECTION ASSEMBLY (FDC) TO PREVENT WATER (PRESSURE) AT INLET OF FDC VALVE.

TITLE 19 ARTICLE 906 (A) A LABEL OF THE SELF-ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR FIRE SPRINKLER SYSTEMS WITH THE DATE OF SERVICE AND/OR DATE INSTALLATION WAS PERFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK.

FIRE DEPARTMENT SIGNAGE:

CONTRACTOR SHALL PROVIDE SIGNS AT FIRE DEPARTMENT CONNECTIONS SERVING THIS SYSTEM. SIGNS SHALL INDICATE BUILDINGS SERVED BY FIRE DEPARTMENT CONNECTIONS.

CONTRACTOR SHALL PROVIDE SIGNS AT EXISTING BACKFLOW PREVENTER. SIGNS SHALL INDICATE BUILDINGS AND HYDRANTS SERVED BY BACKFLOW PREVENTER.

SEE SITE PLAN FOR BUILDING AND HYDRANT MARKS/IDENTIFICATIONS.

PRELIMINARY SPRINKLER DEMAND ESTIMATE:

HAZARD CLASS:ORDINARY HAZARD GROUP2
REQUIRED DENSITY: 0.20 GPM/SQ. FT
DESIGN AREA: 1500 SQ. FT
OVERAGE FACTOR: 1.2
SPRINKLER DEMAND: 0.20 x 1500 x 1.2 = 360 GPM
TOTAL COMBINED HOSE FLOW: 250 GPM

FIRE FLOW CALCULATIONS:

CODE REQUIRED SITE FLOW:

CONSTRUCTION TYPE:	V-B (WITH AUTOMATIC SPRINKLER SYSTEM)
FIRE FLOW CALCULATION AREA:	34,354 SF
2019 CFC FIRE FLOW(TABLE B8105.1):	5,000 GPM
2019 CFC MINIMUM FIRE FLOW:	1500 GPM

AVAILABLE WATER SUPPLY:

FIRE PROTECTION FLOW TEST NOVEMBER 15, 2021

TEST BY:	HOLISTER FIRE DEPARTMENT - CAPTAIN AGUILAR
STATIC PRESSURE:	75 PSI HYDRANT SEE FP1.0 FOR LOCATION
RESIDUAL PRESSURE:	40 PSI
OBSERVED FLOW:	1061 GPM (40 PSI PITOT ON 2 1/2" OUTLET)

FIRE PROTECTION FLOW TEST DECEMBER 21, 2021

TEST BY:	NEXUS ENGINEERING
STATIC PRESSURE:	74 PSI HYDRANT SEE FP1.0 FOR LOCATION
RESIDUAL PRESSURE:	50 PSI
OBSERVED FLOW:	1758 GPM (22 PSI PITOT ON 3.05" HOSE MONSTER C=1.35)
AVAILABLE FLOW:	2724 GPM AT 20 PSI RESIDUAL

SEISMIC BRACING:

SPECTRAL RESPONSE:
LATITUDE: 36.81
LONGITUDE: -121.36
S_s = 2.199
SEE DESIGN CRITERIA ON STRUCTURAL DRAWING S-0.2.

SEISMIC COEFFICIENT:
C_p = 1.03 (2016 NFPA 13-TABLE 9.3.5.9.3)

USE C_p =1.03

SEE DRAWING FP6.1 FOR SPECIFIC SEISMIC BRACING DETAILS AND FP6.3 FOR CALCULATIONS.

FIRE PROTECTION LEGEND

SYMBOL	ABBRV.	IDENTIFICATION	ABBRV.	IDENTIFICATION
F	F	FIRE WATER	FLR	FLOOR
SPKR	SPKR	SPRINKLER	FS	FLOOR SINK
DSPKR	DSPKR	DRY SPRINKLER	FPM	FEET PER MINUTE
SPKR(D)	SPKR(D)	DELUGE SPRINKLER	FT	FEET
WSP	WSP	WET STAND PIPE	FT HD	FEET HEAD
DSP	DSP	DRY STAND PIPE	GPM	GALLONS PER MINUTE
		PRESSURE/TEMPERATURE PLUG	GALV	GALVANIZED
	BV	BALL VALVE	GA	GAUGE
	CHVA	CHECK VALVE	GC	GENERAL CONTRACTOR
	OS&Y	OUTSIDE SCREW & YOKE GATE VALVE	HP	HORSEPOWER
	BV/SOV	BALANCING/SHUT-OFF VALVES	HR	HOUR
		GATE VALVE	HZ	HERTZ
	T&PRV	TEMP & PRESS RELIEF VALVE	ID	INSIDE DIAMETER
	GV	GLOBE VALVE	IE	INVERT ELEVATION
		SOLENOID VALVE	IN	INCH
			INT	INTERIOR
	DCBP	DOUBLE CHECK BACKFLOW PREVENTER	INV	INVERT
		UNION	KW	KILOWATTS
P		PRESSURE GAUGE	LBS	POUNDS
		CENTRIFUGAL WATER PUMP	LG	LONG
	FC	FLEXIBLE CONNECTION	LRA	LOCKED ROTOR AMPS
		HYDROSTATIC RELIEF VALVE	LVG	LEAVING
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER	MAX	MAXIMUM
			MC	MECHANICAL CONTRACTOR
	FH	FIRE HYDRANT	MCA	MINIMUM CIRCUIT AMPS
	FSR	FIRE SPRINKLER RISER	MECH	MECHANICAL
	PIV	POST INDICATING VALVE	MFR	MANUFACTURER
	EQB	FOUR WAY EQUIPMENT BRACING	MIN	MINIMUM
AD	AD	ACCESS DOOR	MOCP	MAXIMUM OVERCURRENT PROTECTION
ø	DIA	DIAMETER	(N)	NEW
	P.O.C.	POINT OF CONNECTION	NC	NORMALLY CLOSED
℄		CENTERLINE	NIC	NOT IN CONTRACT
		SEISMIC SEPARATION ASSEMBLY	NO	NORMALLY OPEN
	&	AND	NTS	NOT TO SCALE
	@	AT	OC	ON CENTER
	°F	DEGREES FAHRENHEIT	OD	OUTSIDE DIAMETER
	AD	AREA DRAIN	PC	PLUMBING CONTRACTOR
	AFF	ABOVE FINISH FLOOR	PD	PRESSURE DROP
	AGGR	AGGREGATE	PH	PHASE
	AMP	AMPERE	P/N	PART NUMBER
	APPROX	APPROXIMATE	PRESS	PRESSURE
	ARCH	ARCHITECT/ARCHITECTURAL	PRV	PRESSURE REDUCING VALVE
	BHP	BRAKE HORSEPOWER	PSI	POUNDS PER SQUARE INCH
	BJ	BETWEEN JOISTS	P/T	PRESSURE/TEMPERATURE
	BLDG	BUILDING	QTY	QUANTITY
	BTU	BRITISH THERMAL UNIT	REQD	REQUIRED
	CFH	CUBIC FEET PER HOUR	REQS	REQUIREMENTS
	CI	CAST IRON	RLA	RATED/RUNNING LOAD AMPS
	CIRC	CIRCULATING	RM	ROOM
	CLG	CEILING	RPM	REVOLUTIONS PER MINUTE
	CONC	CONCRETE	RV	RELIEF VALVE
	CONN	CONNECTION	SM	SHEETMETAL
	CONT	CONTINUED	SOV	SHUT-OFF VALVE
	COORD	COORDINATE	SPEC	SPECIFICATION
	CONST	CONSTRUCTION	SQ	SQUARE
	DN	DOWN	STD	STANDARD
	DWGS	DRAWINGS	STRUCT	STRUCTURAL
	(E)	EXISTING	STSL	STAINLESS STEEL
	EC	ELECTRICAL CONTRACTOR	TDH	TOTAL DYNAMIC HEAD
	ELEC	ELECTRICAL	TEMP	TEMPERATURE
	ELEV	ELEVATION	TYP	TYPICAL
	EMBT	EMBEDMENT	UL	UNDERWRITER'S LABORATORIES
	EQUIP	EQUIPMENT	UON	UNLESS OTHERWISE NOTED
	EXT	EXTERIOR	V	VOLT
	FD	FLOOR DRAIN	W/	WITH
	FFE	FINISHED FLOOR ELEVATION	WC	WATER COLUMN
	FLA	FULL LOAD AMPS	WT	WEIGHT
	FLEX	FLEXIBLE		

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER No. P1885 EXP. JUN 30, 2023 FIRE PROTECTION STATE OF CALIFORNIA

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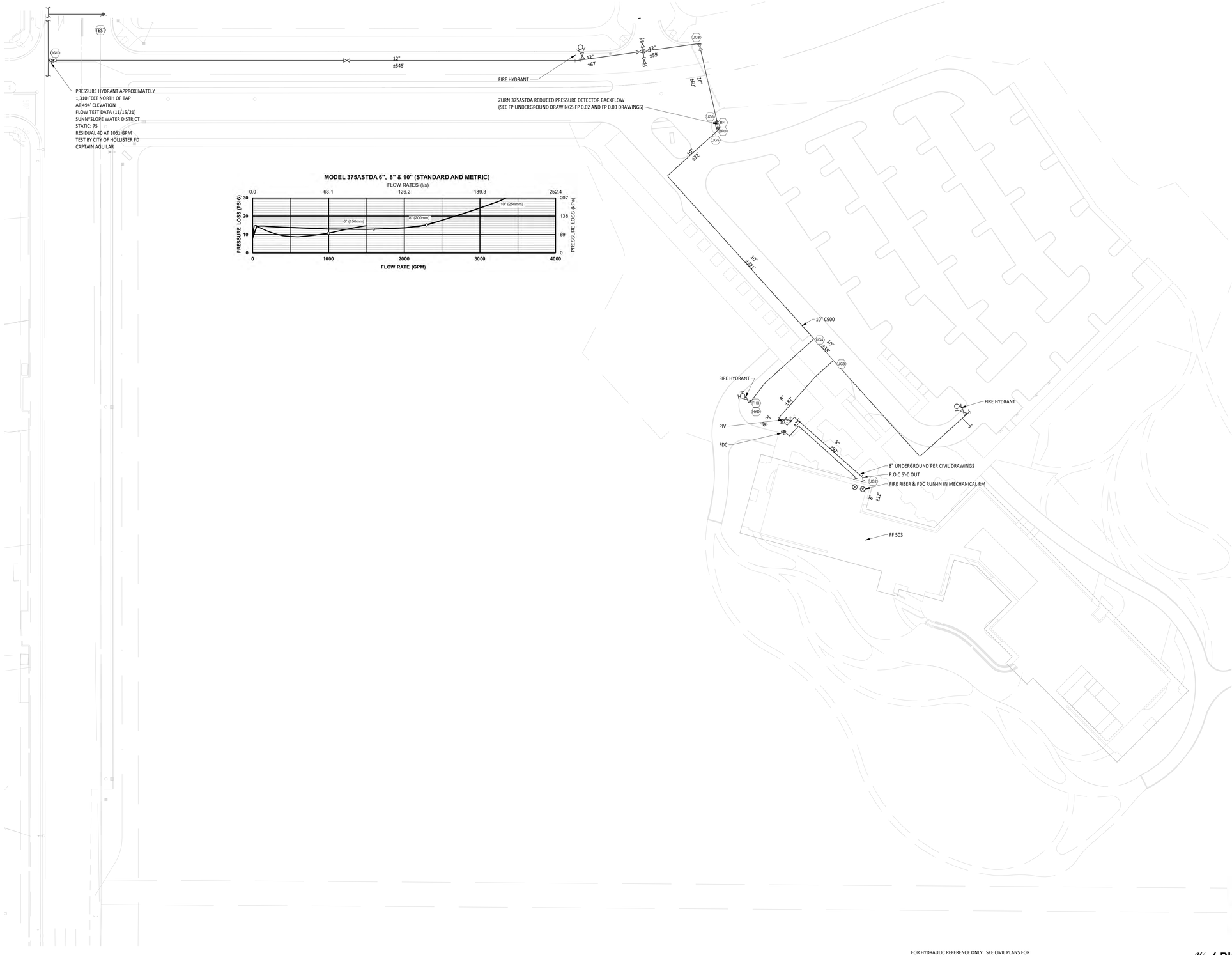
DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00
DRAWN BY: CAD
DRAWING SCALE: AS NOTED
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
LEGEND AND NOTES FIRE PROTECTION

SHEET NUMBER
FP0.1



FOR HYDRAULIC REFERENCE ONLY. SEE CIVIL PLANS FOR UNDERGROUND LAYOUT AND LOCATIONS OF ALL HYDRANTS.

1 FP1.0 SITE PLAN - FIRE PROTECTION
1" = 40'-0"

NORTH

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

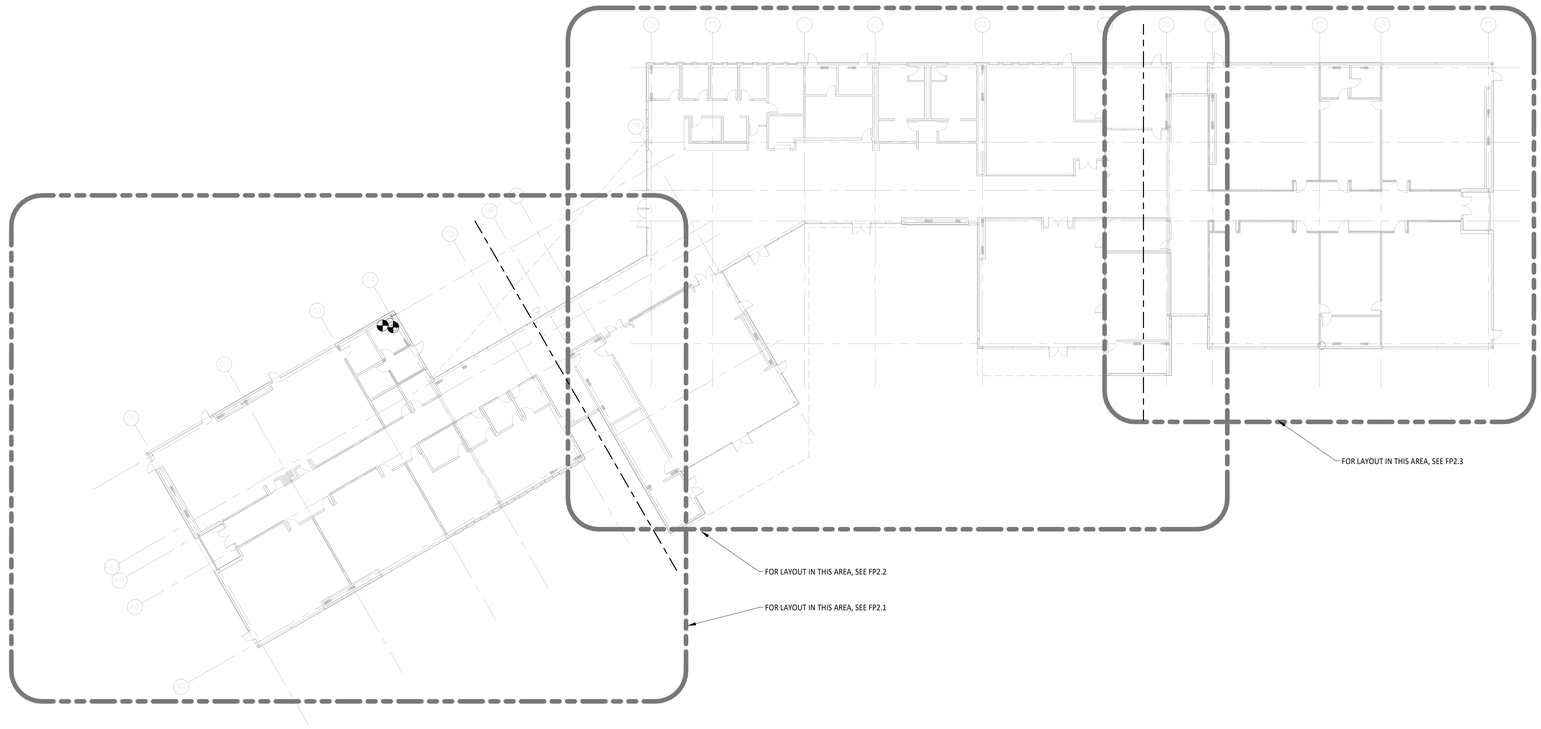
SHEET TITLE
SITE PLAN FIRE PROTECTION

SHEET NUMBER
FP1.0

Sprinkler Legend-Overall

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
	41	VIKING CORP	VK331	PENDENT	Frame Style	1/2"	4.2	175 °F	VK - White Polyester
	82	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
	180	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass
	54	VIKING CORP	VK350	UPRIGHT	Frame Style	1"	8	200 °F	VK - Brass

Total This Project:: 357



1 FP2.0 OVERALL FLOOR PLAN - FIRE PROTECTION
1" = 20'-0"

NORTH

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

OVERALL PLAN FIRE PROTECTION

SHEET NUMBER

FP2.0

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER No. P1885 EXP. 9-30-2023 FIRE PROTECTION STATE OF CALIFORNIA

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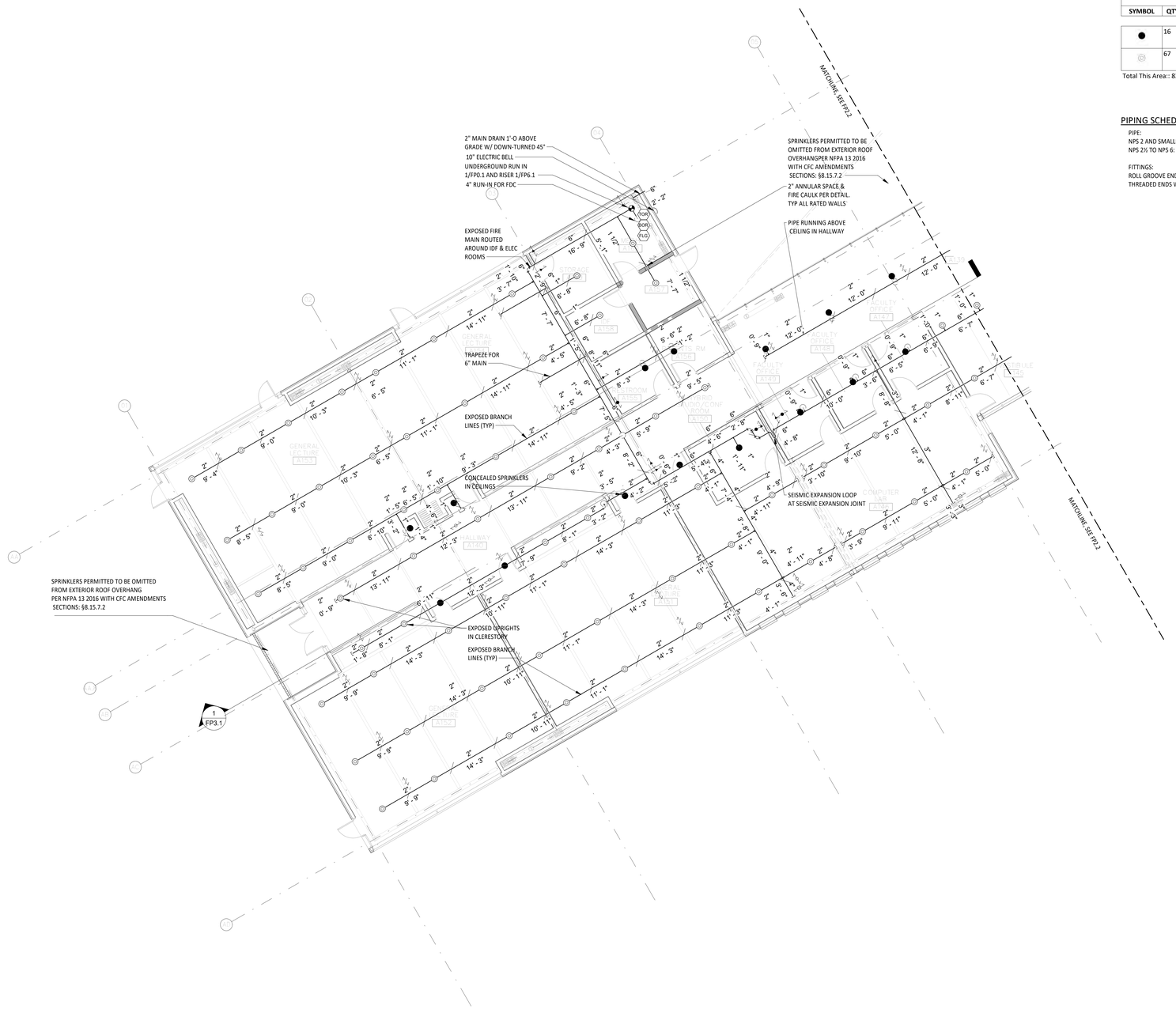

0' 2' 4' 8' 16' 24'

1/8"= 1'-0"

1 FP2.1 SECTOR A PARTIAL PIPING PLAN - FIRE PROTECTION

1/8" = 1'-0"

NORTH

Sprinkler Legend-Area A

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
●	16	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
◎	67	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass

Total This Area:: 83

PIPING SCHEDULE

PIPE:
NPS 2 AND SMALLER: SCHEDULE 40
NPS 2½ TO NPS 6: SCHEDULE 10

FITTINGS:
ROLL GROOVE ENDS WITH GROOVED FITTINGS & COUPLINGS: 1¼ NPS AND LARGER SCHEDULE 40 OR SCHEDULE 10 PIPE
THREADED ENDS WITH THREADED FITTINGS: SCHEDULE 40 PIPE

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PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTOR A PARTIAL PIPING PLAN - FIRE PROTECTION

SHEET NUMBER
FP2.1

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER NO. 21885 EXP. 12-31-2023 FIRE PROTECTION STATE OF CALIFORNIA

Vals **Plumbing & Heating, Inc**
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CONSULTING ENGINEERS
AE Project # : 20210022
22 Lower Ragsdale Dr., Suite A
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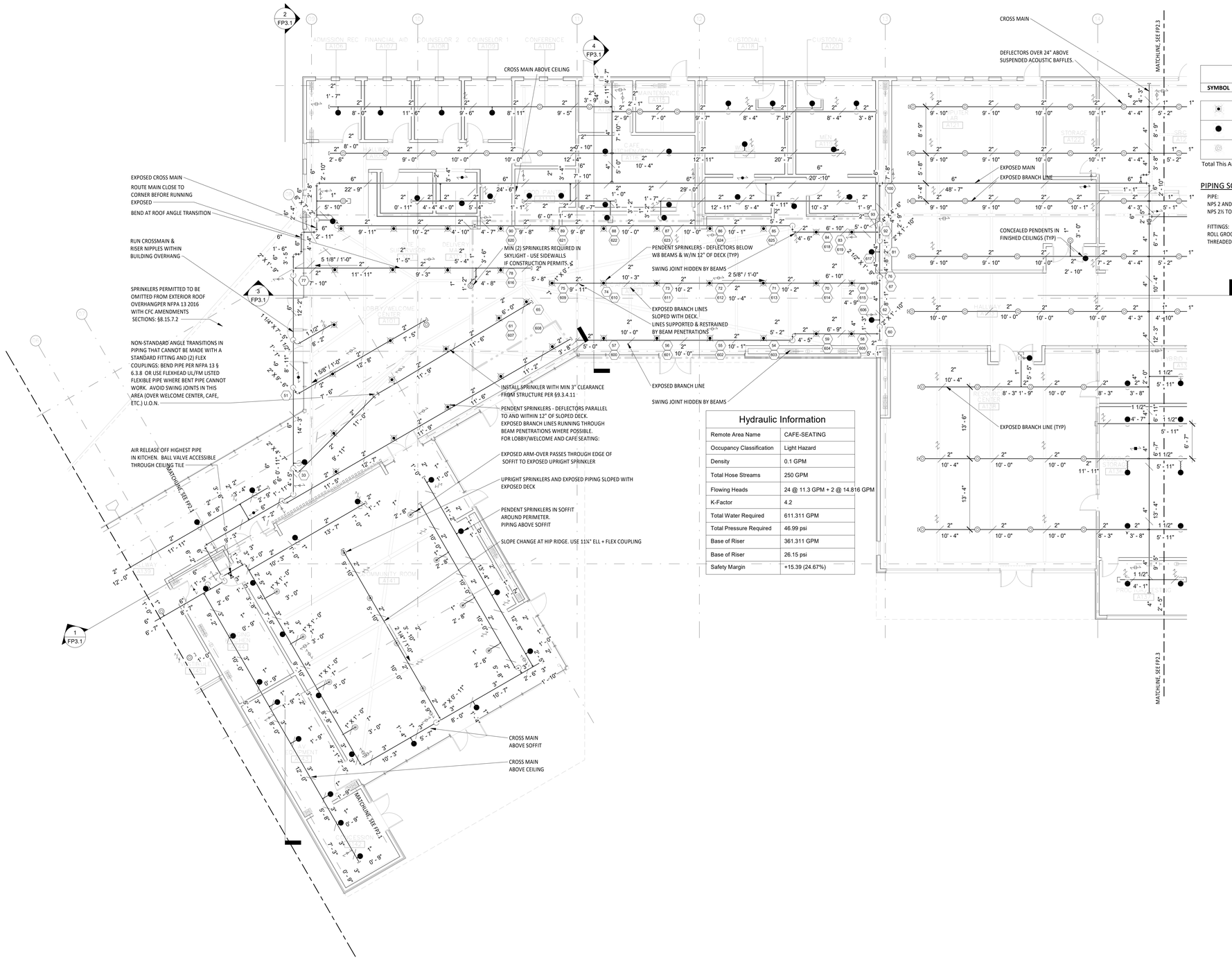

Hydraulic Information

Remote Area Name	CAFE-SEATING
Occupancy Classification	Light Hazard
Density	0.1 GPM
Total Hose Streams	250 GPM
Flowing Heads	24 @ 11.3 GPM + 2 @ 14.816 GPM
K-Factor	4.2
Total Water Required	611.311 GPM
Total Pressure Required	46.99 psi
Base of Riser	361.311 GPM
Base of Riser	26.15 psi
Safety Margin	+15.39 (24.67%)

Sprinkler Legend-Area B

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
	40	VIKING CORP	VK331	PENDENT	Frame Style	1/2"	4.2	175 °F	VK - White Polyester
	57	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
	64	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass

Total This Area:: 161

PIPING SCHEDULE

PIPE:
NPS 2 AND SMALLER: SCHEDULE 40
NPS 2½ TO NPS 6: SCHEDULE 10

FITTINGS:
ROLL GROOVE ENDS WITH GROOVED FITTINGS & COUPLINGS: 1¼ NPS AND LARGER SCHEDULE 40 OR SCHEDULE 10 PIPE
THREADED ENDS WITH THREADED FITTINGS: SCHEDULE 40 PIPE

1 FP2.2 SECTOR B PARTIAL PIPING PLAN - FIRE PROTECTION
1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16' 24'
1/8"= 1'-0"

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
East Bay
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Oakland, CA 94607
(707) 576-0829

Gensler
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San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTOR B PARTIAL PIPING PLAN - FIRE PROTECTION

SHEET NUMBER
FP2.2

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER NO. FP1885 EXP. JUNE 30, 2023 FIRE PROTECTION STATE OF CALIFORNIA

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AE Project # : 20210022
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Sprinkler Legend-Area C

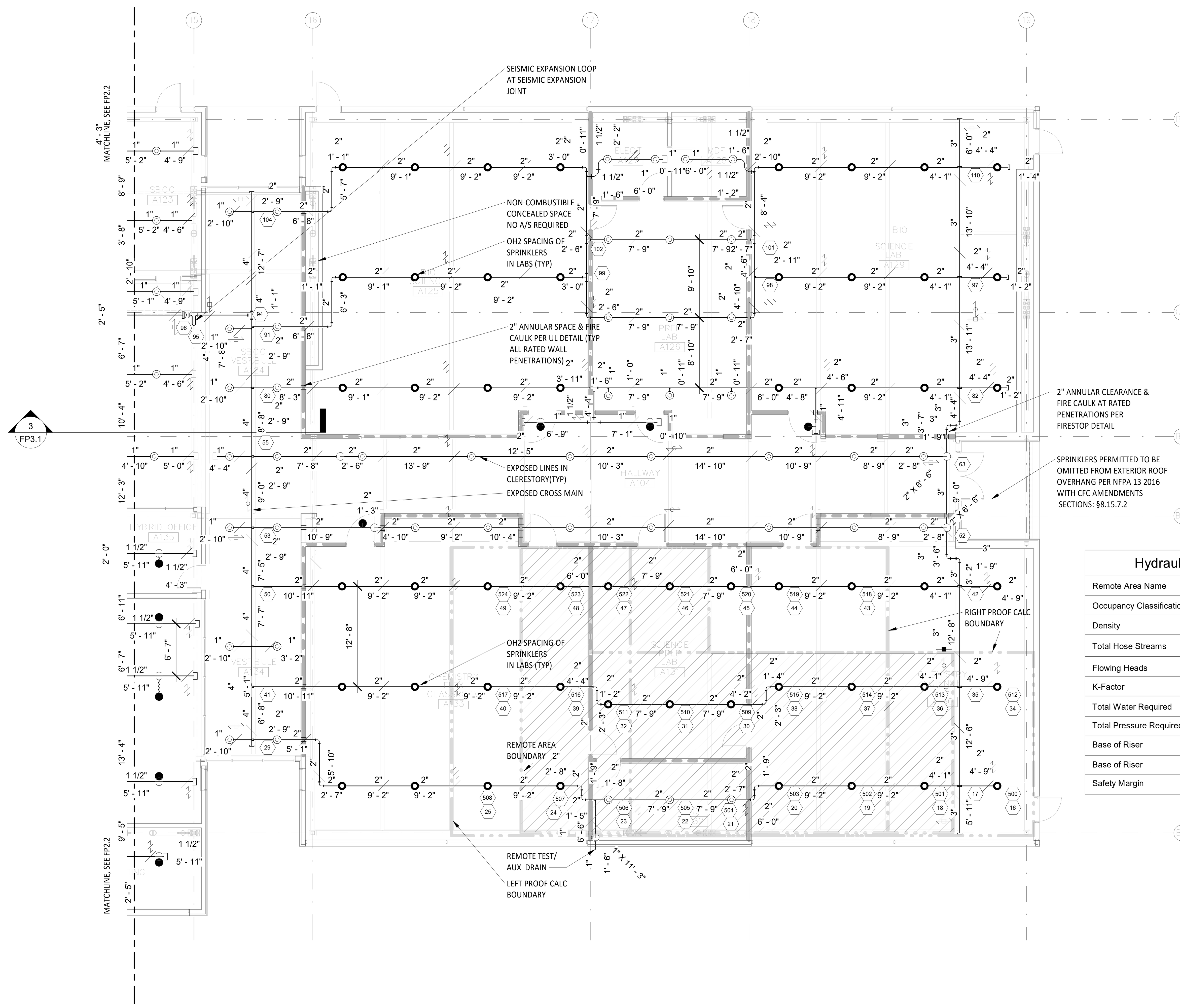
SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
●	9	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
◎	49	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass
○	54	VIKING CORP	VK350	UPRIGHT	Frame Style	1"	8	200 °F	VK - Brass

Total This Area:: 112

PIPING SCHEDULE

PIPE:
NPS 2 AND SMALLER: SCHEDULE 40
NPS 2½ TO NPS 6: SCHEDULE 10

FITTINGS:
ROLL GROOVE ENDS WITH GROOVED FITTINGS & COUPLINGS: 1¼ NPS AND LARGER SCHEDULE 40 OR SCHEDULE 10 PIPE
THREADED ENDS WITH THREADED FITTINGS: SCHEDULE 40 PIPE



Hydraulic Information	
Remote Area Name	LABS
Occupancy Classification	Ordinary Group II
Density	0.2 GPM
Total Hose Streams	250 GPM
Flowing Heads	14 @ 23.2 GPM + 3 @ 15 GPM
K-Factor	8
Total Water Required	635.795 GPM
Total Pressure Required	50.74 psi
Base of Riser	385.795 GPM
Base of Riser	29.77 psi
Safety Margin	+10.68 (17.39%)

1 FP2.3 SECTOR C PARTIAL PIPING PLAN - FIRE PROTECTION
1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16' 24'
1/8"= 1'-0'

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER No. FP1885 EXP. SEPT. 30, 2023 FIRE PROTECTION STATE OF CALIFORNIA

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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

SECTOR C PARTIAL PIPING PLAN - FIRE PROTECTION

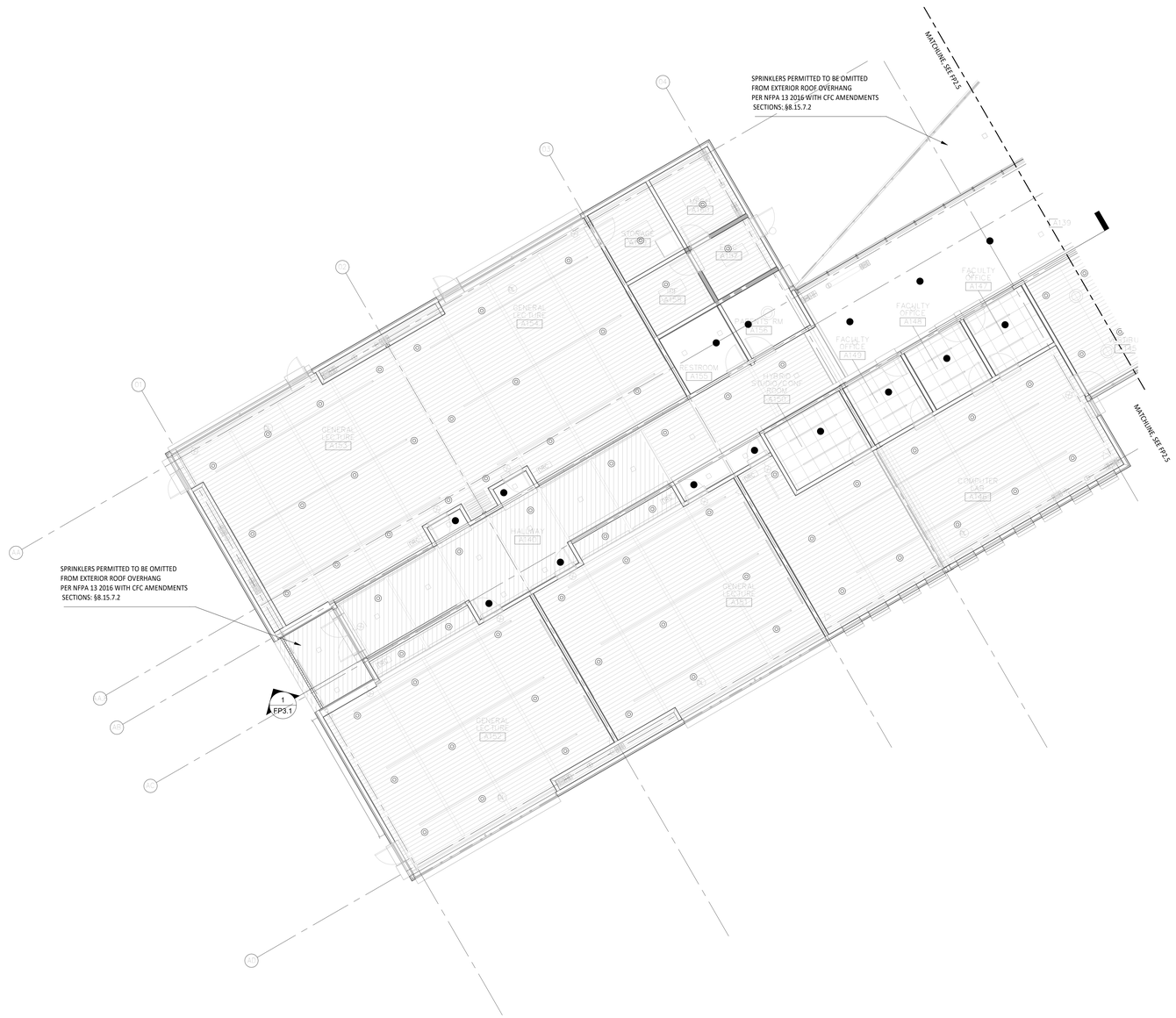
SHEET NUMBER

FP2.3

Sprinkler Legend-Area A

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
●	16	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
◎	67	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass

Total This Area:: 83



1 FP2.4 SECTOR A PARTIAL CEILING PLAN - FIRE PROTECTION
1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16' 24'
1/8"= 1'-0"

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

SECTOR A PARTIAL CEILING PLAN FIRE PROTECTION

SHEET NUMBER

FP2.4

REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER No. FP1885 EXP. JUN 30, 2023 FIRE PROTECTION STATE OF CALIFORNIA

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CONSULTING ENGINEERS
AE Project # : 20210022
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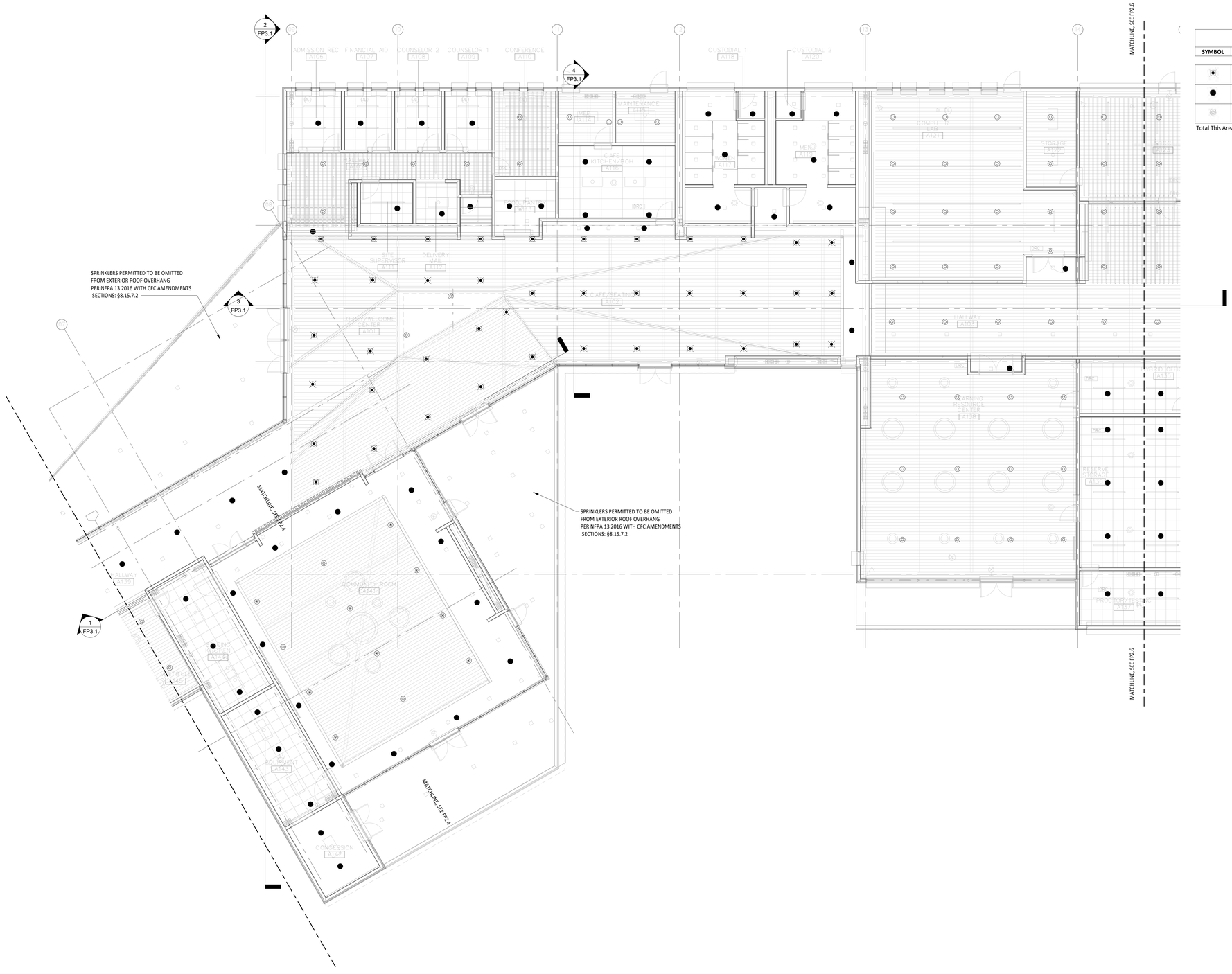
Monterey, California 93940-5788



Sprinkler Legend-Area B

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
	40	VIKING CORP	VK331	PENDENT	Frame Style	1/2"	4.2	175 °F	VK - White Polyester
	57	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
	64	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass

Total This Area:: 161

1 FP2.5 SECTOR B PARTIAL CEILING PLAN - FIRE PROTECTION
1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16' 24'
1/8"= 1'-0"

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HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTOR B PARTIAL CEILING PLAN FIRE PROTECTION

SHEET NUMBER
FP2.5

REGISTERED PROFESSIONAL ENGINEER
JOHN E. KOHLER
No. 21885
EXP. 09-30-2023
FIRE PROTECTION
STATE OF CALIFORNIA

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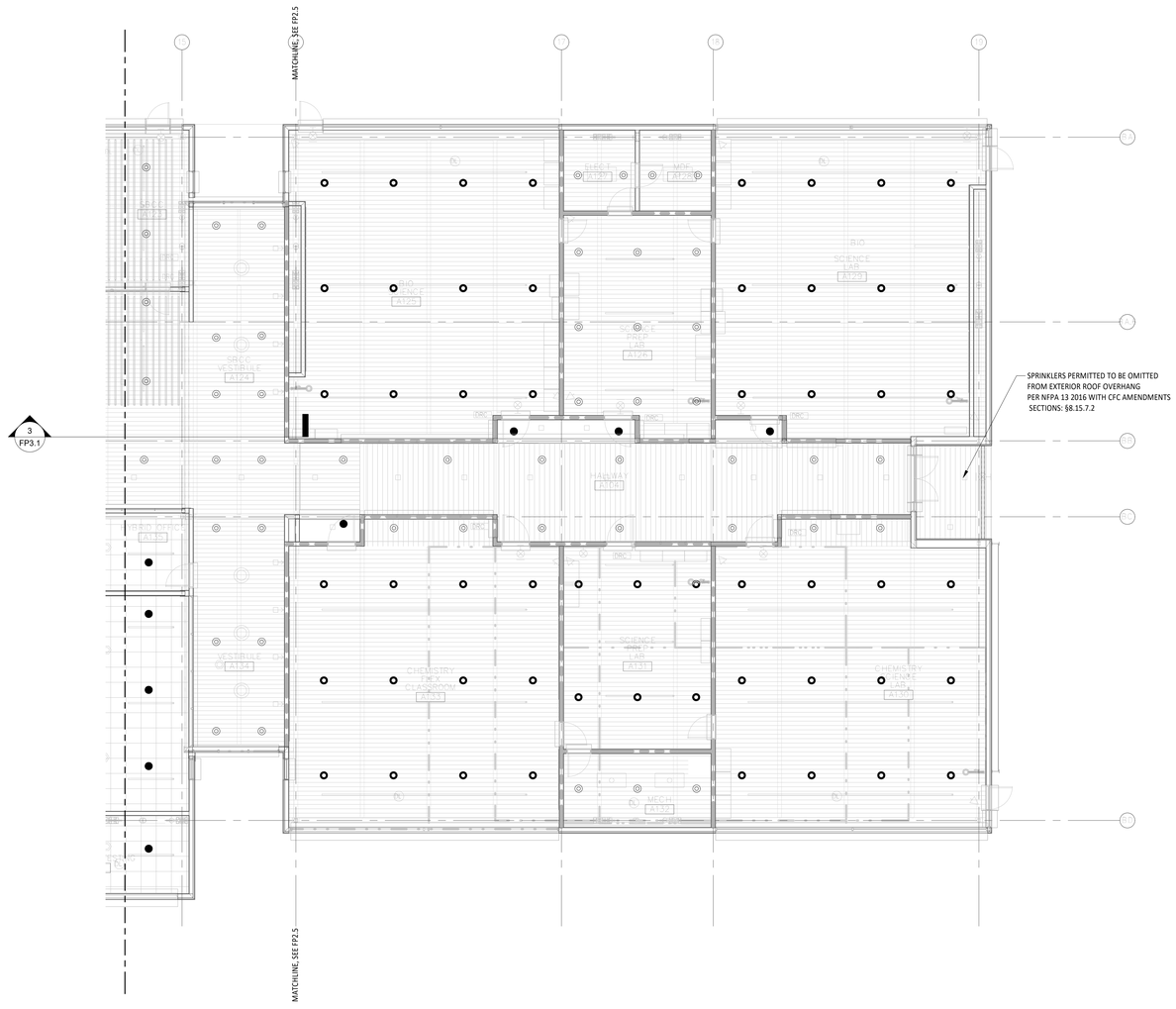
AE Project # : 20210022
22 Lower Ragsdale Dr., Suite A
Monterey, California 93940-5788

Sprinkler Legend-Area C

SYMBOL	QTY	MFR	SIN	ORIENTATION	TYPE	SIZE	K-FACTOR	TEMP	FINISH
●	9	VIKING CORP	VK462	PENDENT	Concealed	1/2"	5.6	200 °F	VK - Brass
◎	49	VIKING CORP	VK300	UPRIGHT	Frame Style	1/2"	5.6	200 °F	VK - Brass
○	54	VIKING CORP	VK350	UPRIGHT	Frame Style	1"	8	200 °F	VK - Brass

Total This Area:: 112



1 FP2.6 SECTOR C PARTIAL CEILING PLAN - FIRE PROTECTION
1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16' 24'
1/8"= 1'-0"

QUATTROCCHI KWOK ARCHITECTS
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REGISTERED PROFESSIONAL ENGINEER JOHN E. KOHLER No. M 21885 EXP. 12-31-2023 MECHANICAL STATE OF CALIFORNIA

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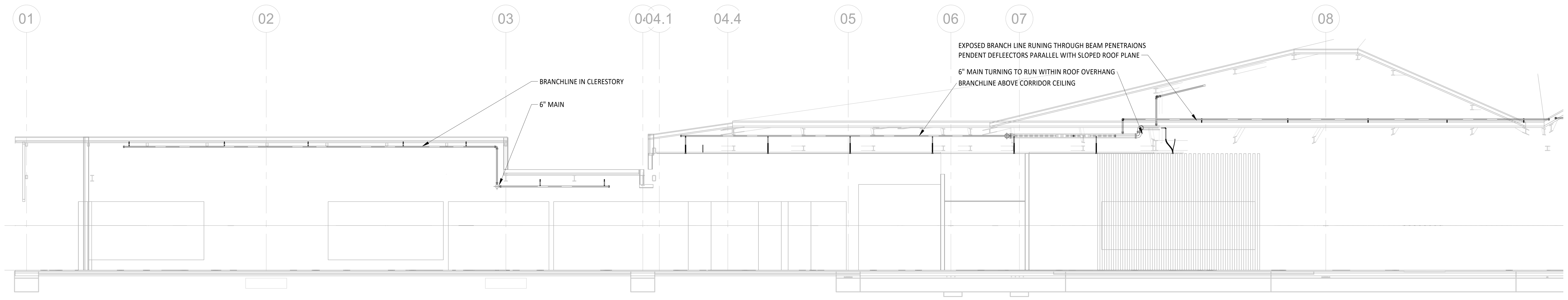
DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

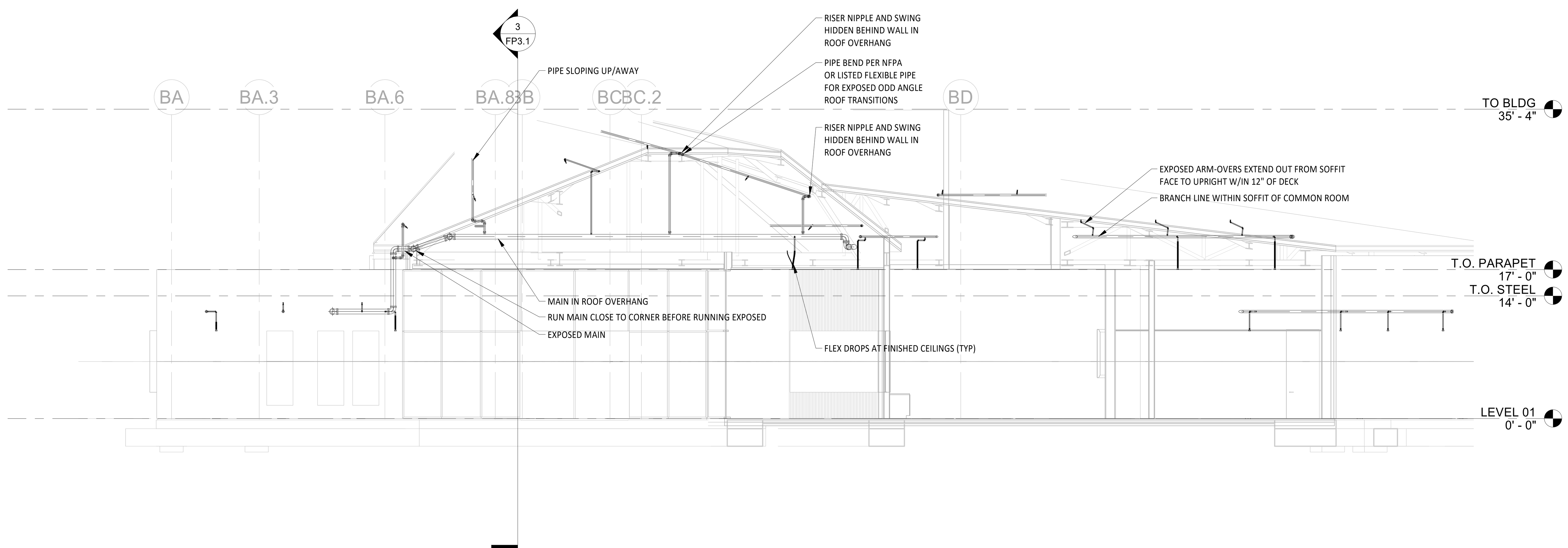
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTOR C PARTIAL CEILING PLAN FIRE PROTECTION

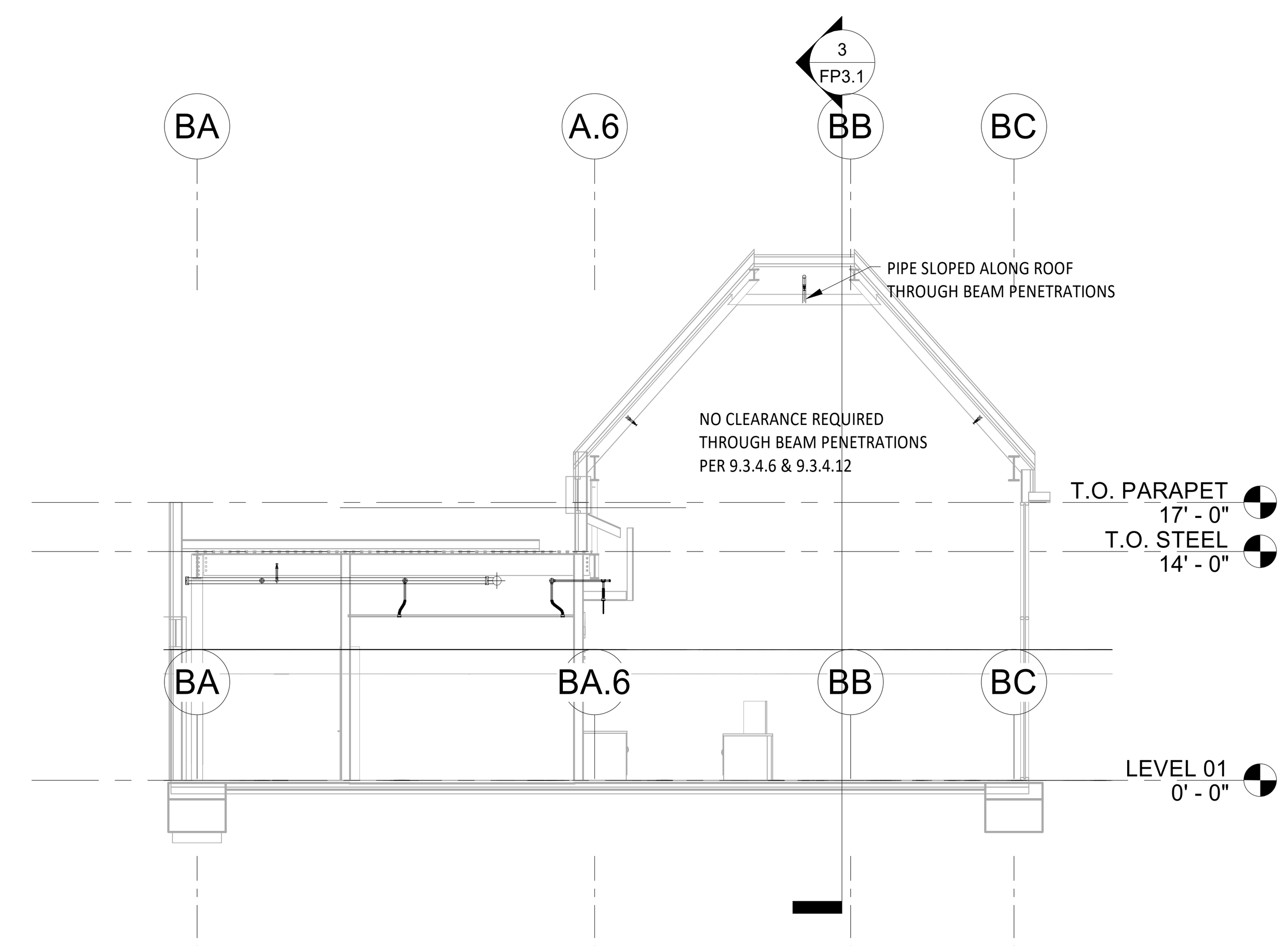
SHEET NUMBER
FP2.6



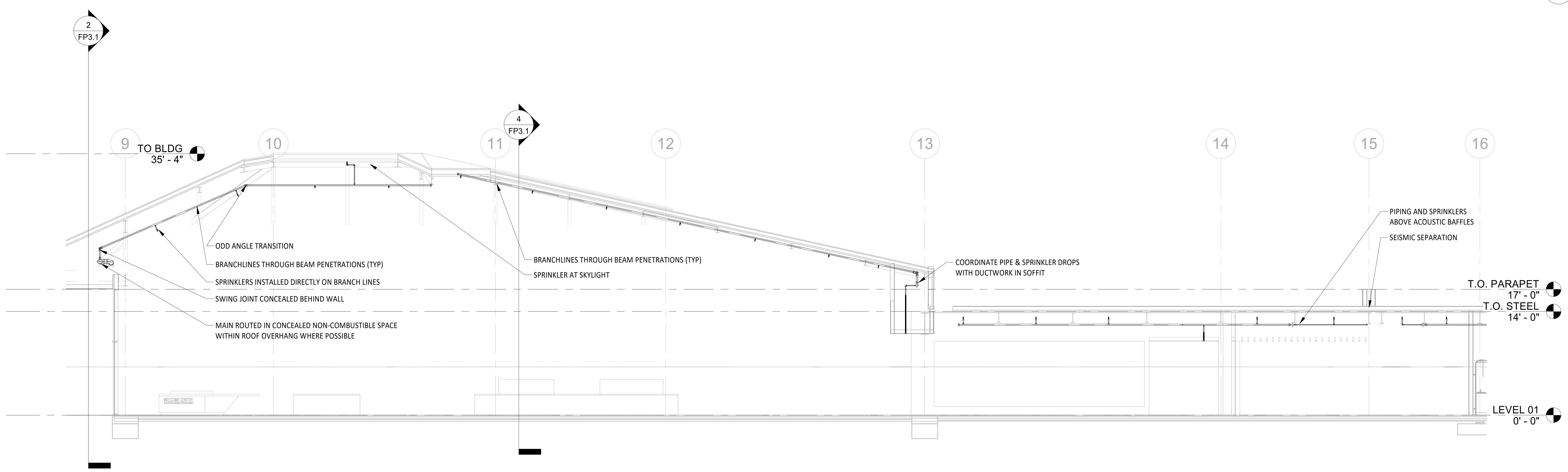
1 FP3.1 ALONG AC LOOKING NW
1/8" = 1'-0"



2 FP3.1 ACROSS WEST SIDE OF CORE
1/8" = 1'-0"



4 FP3.1 SECTION THROUGH CAFE SEATING
1/8" = 1'-0"



3 FP3.1 ALONG BB THROUGH SECTOR B
1/8" = 1'-0"

0' 2' 4' 8' 16' 24'
1/8"= 1'-0'

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SECTIONS - FIRE PROTECTION

REGISTERED PROFESSIONAL ENGINEER
JOHN E. KOHLER
No. FP1885
PROTECTION
STATE OF CALIFORNIA

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AE Project #: 20210022
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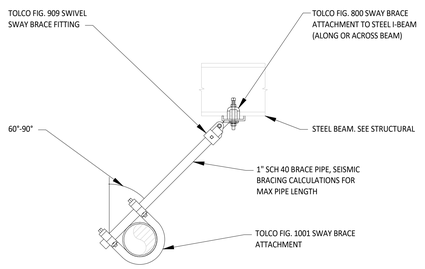
SHEET NUMBER
FP3.1

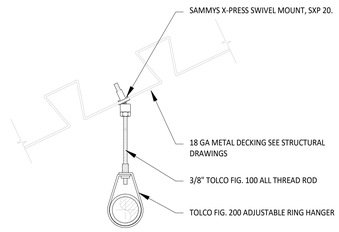


NOTE: SEE SEISMIC BRACING CALCULATION FOR MAX BRACE SPACING

16 FP6.1 SEISMIC BRACE TB,T4W

T4W
TB

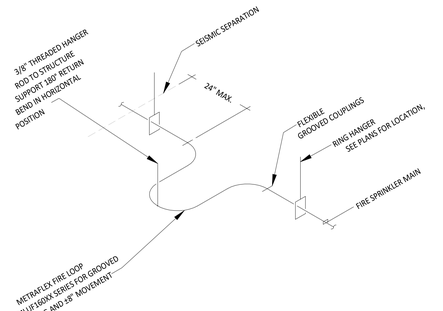
NO SCALE



NOTE: ONLY USE THIS RING HANGER ASSEMBLY FOR PIPE FOR UP TO 2" WHEN UNABLE TO SUPPORT PIPE DIRECTLY FROM STRUCTURAL STEEL. HANGER ASSEMBLY SUPPORTS FIRE SPRINKLER PIPE SIZES UP TO 3" WITH 18GA DECK, PER UES EVALUATION REPORT 0423 REV 09/20/21 pg14

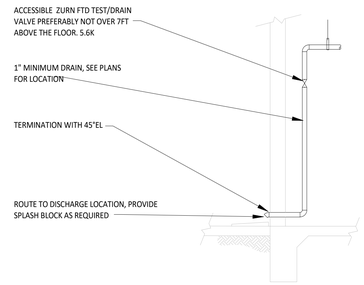
12 FP6.1 RING HANGER FROM VERCO DECK

NO SCALE



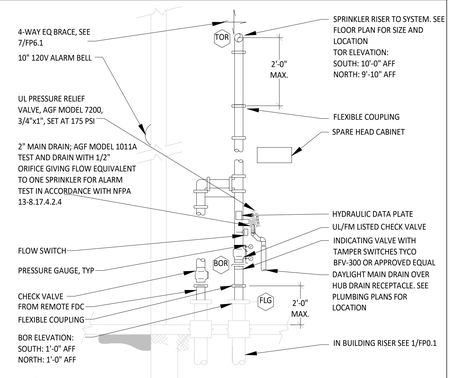
8 FP6.1 SEISMIC JOINT

NO SCALE



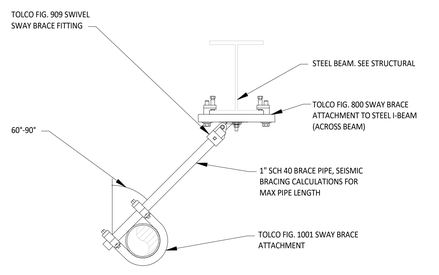
4 FP6.1 INSPECTORS TEST/AUX DRAIN

NO SCALE



1 FP6.1 WET RISER

NO SCALE

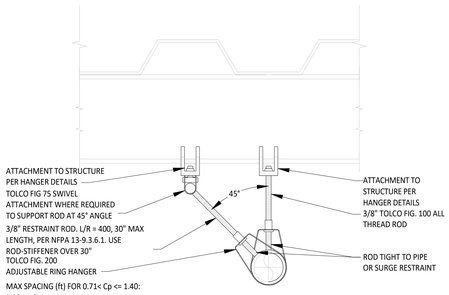


NOTE: SEE SEISMIC BRACING CALCULATION FOR MAX BRACE SPACING

18 FP6.1 SEISMIC BRACE T6

T6

NO SCALE



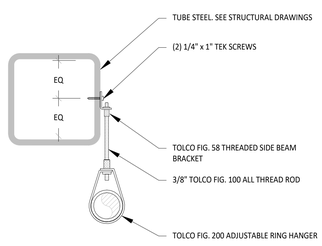
MAX SPACING (ft) FOR 0.71< Cp <= 1.40:

PIPE	LEN
1	26
1¼	27
1½	29
2	31

NOTE: RESTRAINT NOT REQUIRED WHERE THE LENGTH OF HANGER FROM THE TOP OF THE PIPE TO STRUCTURE ATTACHMENT IS LESS THAN 6" PER NFPA 13 §9.3.6.5

14 FP6.1 BRANCH LINE END RESTRAINT

NO SCALE

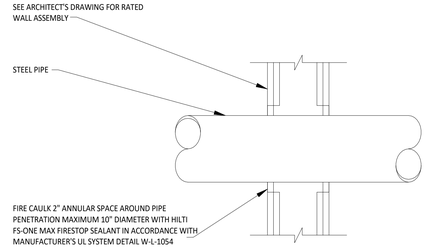


NOTES:

1. FOR PIPE SIZES UP TO 3" WITH MAXIMUM HANGER SPACING OF 15 FEET.

10 FP6.1 RING HANGER

NO SCALE

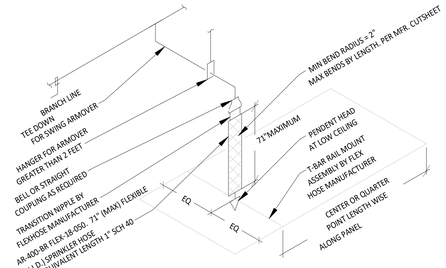


PIPE THROUGH 2 HOUR WALL

6 FP6.1 FIRE CAULKING

NO SCALE

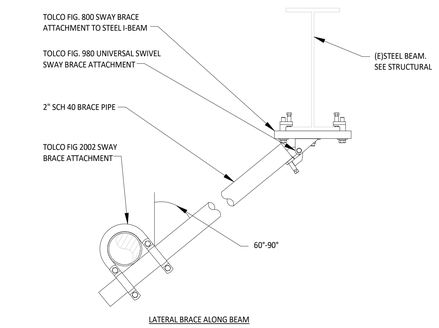
NOTE: WHERE FLEXIBLE SPRINKLER HOSE FITTINGS ARE INSTALLED AND SUPPORTED BY SUSPENDED CEILINGS, THE CEILING SHALL MEET ASTMC635 AND ASTMC636 PER NFPA13:9.2.1.3.3.2. ADDITIONALLY A LABEL LIMITING RELOCATION OF THE SPRINKLER SHALL BE PROVIDED ON THE ANCHORING COMPONENT PER NFPA13:9.2.1.3.3.2.



AT LAY IN PANEL SUSPENDED CEILINGS

3 FP6.1 DROP SUSPENDED CEILING

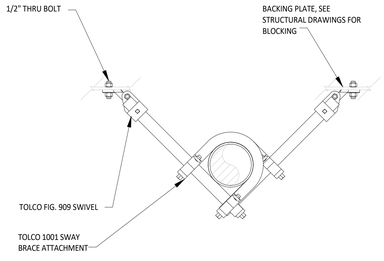
NO SCALE



LATERAL BRACE ALONG BEAM

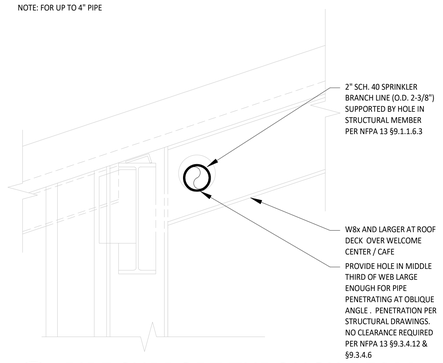
19 FP6.1 SEISMIC BRACE T4X

NO SCALE



15 FP6.1 RISER BRACE

NO SCALE



11 FP6.1 PIPE SUPPORT THROUGH BEAM

NO SCALE

HYDRAULIC - SYSTEM

THIS BUILDING IS PROTECTED BY A HYDRAULIC DESIGN AUTOMATIC SPRINKLER SYSTEM

LOCATION: X

SPRINKLER INFORMATION

NUMBER OF FLOWING SPRINKLERS: XXXXXXX
MANUFACTURER: XXXXX
MODEL: XX
TEMPERATURE: XXXXX
TYPE: QUICK RESPONSE
K-FACTOR: XXX
ORIFICE: XX

BASIS OF DESIGN

STANDARD: NFPA 13, 2016 EDITION
HAZARD GROUP: XXX
DENSITY: XXX
DESIGN AREA OF DISCHARGE: XXX SQ. FT.

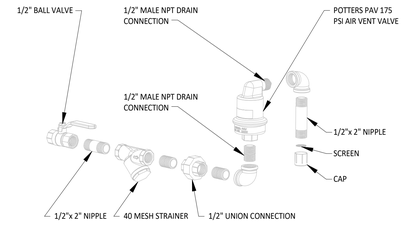
SYSTEM DEMAND

FLOW AT THE BASE OF THE RISER: XXX GPM
RESIDUAL PRESSURE AT THE BASE OF THE RISER: XXX PSI
FLOW AT THE WATER SOURCE: XXX GPM
RESIDUAL PRESSURE AT WATER SOURCE XXX PSI
HOSE STREAM ALLOWANCE:
INSIDE: XXX GPM
OUTSIDE: XXX GPM
TOTAL XXX GPM
REMOTE SPRINKLER FLOW
GPM: XXX GPM @: XXX PSI

NOTE: SEE FP2.1 FOR DATA PLATE INFORMATION FOR EACH SYSTEM

7 FP6.1 HYDRAULIC DATA PLATE

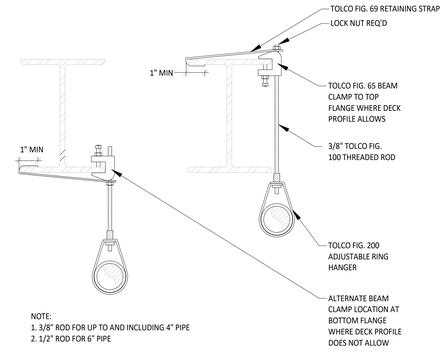
NO SCALE



NOTE: CLOSE VALVE AND CAP AFTER SYSTEM PURGING IS COMPLETE

5 FP6.1 AIR VENT

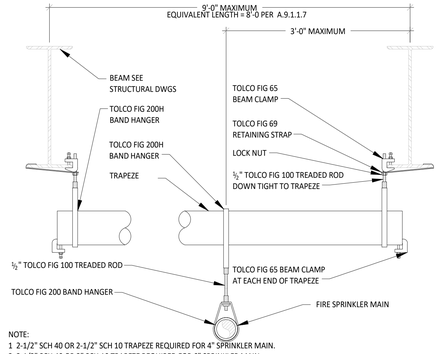
NO SCALE



NOTE:
1. 3/8" ROD FOR UP TO AND INCLUDING 4" PIPE
2. 1/2" ROD FOR 6" PIPE

9 FP6.1 RING HANGER

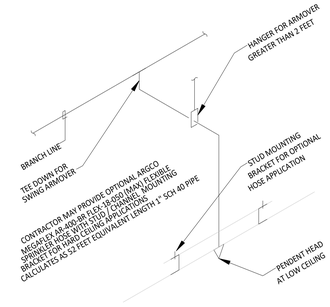
NO SCALE



NOTE:
1 2-1/2" SCH 40 OR 2-1/2" SCH 10 TRAPEZE REQUIRED FOR 4" SPRINKLER MAIN.
2. 2-1/2" SCH 40 OR 3" SCH 10 TRAPEZE REQUIRED FOR 6" SPRINKLER MAIN.

13 FP6.1 TRAPEZE PIPE SUPPORT

NO SCALE



2 FP6.1 DROP HARD CEILING

NO SCALE

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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

DETAILS FIRE PROTECTION

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SHEET NUMBER

FP6.1

Seismic Bracing Calculations
Sheet 5 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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Brace Information
Maximum Spacing: 25'-0"
Maximum Brace Length: 7'-0"
Bracing Material: 1" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.421"
L/R value:* 200
Maximum Horizontal load: 1604 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 909 NO THREAD SWIVEL
Listed load rating: 2015 Adjusted load rating: 1744
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 1001 SWAY CLAMP
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ALONG)
Diameter: N/A
Length: N/A
Maximum load: 1265 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 800
MAXIMUM LOAD = 1265 lbs

Brace identification no. (to be used on plans): T4W

[X] Lateral brace [ ] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
4 in	Sch. 10 Steel	.	25	11.78 lb/ft	294.5 lb
2 in	Sch. 10 Steel	.	132	4.22 lb/ft	557.04 lb
1 in	Sch. 40 Steel	.	18	2.05 lb/ft	36.9 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					888.44 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,021.71 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,052.36 lb

*Excludes tension-only bracing systems

Seismic Bracing Calculations
Sheet 3 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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(831) 649 - 8038 Fax

Brace Information
Maximum Spacing: 40'-0"
Maximum Brace Length: 7'-0"
Bracing Material: 1" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.421"
L/R value:* 200
Maximum Horizontal load: 1604 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 909 NO THREAD SWIVEL
Listed load rating: 2015 Adjusted load rating: 1744
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 4L
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ALONG)
Diameter: N/A
Length: N/A
Maximum load: 1265 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

LONGITUDINAL BRACE: SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 800 ALONG BEAM
MAXIMUM LOAD = 1265 lbs

Brace identification no. (to be used on plans): L6

[ ] Lateral brace [X] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
6 in	Sch. 10 Steel	.	40	23.03 lb/ft	921.2 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					921.2 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,059.38 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,091.16 lb

*Excludes tension-only bracing systems

Seismic Bracing Calculations
Sheet 1 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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(831) 649 - 8038 Fax

Brace Information
Maximum Spacing: 25'-0"
Maximum Brace Length: 7'-0"
Bracing Material: 1" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.421"
L/R value:* 200
Maximum Horizontal load: 1604 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 909 NO THREAD SWIVEL
Listed load rating: 2015 Adjusted load rating: 1744
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 1001 SWAY CLAMP
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ACROSS)
Diameter: N/A
Length: N/A
Maximum load: 2015 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 1"X 7-0 BRACING PIPE
MAXIMUM LOAD = 1604 lbs

Brace identification no. (to be used on plans): T6

[X] Lateral brace [ ] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
6 in	Sch. 10 Steel	.	25	23.03 lb/ft	575.75 lb
2 in	Sch. 10 Steel	.	130	4.22 lb/ft	548.6 lb
1 in	Sch. 40 Steel	.	26	2.05 lb/ft	53.3 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					1,177.65 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,354.30 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,394.93 lb

*Excludes tension-only bracing systems

Seismic Bracing Calculations
Sheet 6 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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Axiom Engineers
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(831) 649 - 8038 Fax

Brace Information
Maximum Spacing: 25'-0"
Maximum Brace Length: 13'-1"
Bracing Material: 2" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.787"
L/R value:* 200
Maximum Horizontal load: 3,475 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 980
Listed load rating: 2765 Adjusted load rating: 2393
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 2002 SWAY CLAMP
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ACROSS)
Diameter: N/A
Length: N/A
Maximum load: 2015 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 2002
MAXIMUM LOAD = 1744 lbs

Brace identification no. (to be used on plans): T4X

[X] Lateral brace [ ] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
4 in	Sch. 10 Steel	.	25	11.78 lb/ft	294.5 lb
2 in	Sch. 10 Steel	.	132	4.22 lb/ft	557.04 lb
1 in	Sch. 40 Steel	.	18	2.05 lb/ft	36.9 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					888.44 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,021.71 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,052.36 lb

*Excludes tension-only bracing systems

Seismic Bracing Calculations
Sheet 4 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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Brace Information
Maximum Spacing: 79'-0"
Maximum Brace Length: 7'-0"
Bracing Material: 1" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.421"
L/R value:* 200
Maximum Horizontal load: 1604 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 909 NO THREAD SWIVEL
Listed load rating: 2015 Adjusted load rating: 1744
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 4L
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ALONG)
Diameter: N/A
Length: N/A
Maximum load: 1265 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

LONGITUDINAL BRACE: SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 800 ALONG BEAM
MAXIMUM LOAD = 1265 lbs

Brace identification no. (to be used on plans): L4

[ ] Lateral brace [X] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
4 in	Sch. 10 Steel	.	79	11.78 lb/ft	930.62 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					930.62 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,070.213 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,102.32 lb

*Excludes tension-only bracing systems

Seismic Bracing Calculations
Sheet 2 of X

Project: GAVILAN COLLEGE, NEW COLLEGE CAMPUS
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Brace Information
Maximum Spacing: 40'-0"
Maximum Brace Length: 7'-0"
Bracing Material: 1" Sch. 40
Angle from Vertical: 60° MINIMUM
Least radius of gyration:* 0.421"
L/R value:* 200
Maximum Horizontal load: 1604 lbs
NFPA 13: Table 9.3.5.11.8(a,b,c)

Seismic Brace Attachments
Structure attachment or tension-only bracing system:
Make: TOLCO Model: FIG 909 NO THREAD SWIVEL
Listed load rating: 2015 Adjusted load rating: 1744
Sway brace (pipe attachment) fitting:
Make: TOLCO Model: FIG 1001 SWAY CLAMP
Listed load rating: 2015 Adjusted load rating: 1744

Fastener Information
Orientation of connecting surface: NFPA Type C
Type: TOLCO FIG 800 (ALONG)
Diameter: N/A
Length: N/A
Maximum load: 1265 lbs
NFPA 13: Figure 9.3.5.12.1

Seismic Brace Assembly Detail
(Provide detail on plans)

LATERAL FOR BULK RUNS: SEE DETAIL X/FP6.1

SEE DETERMINATION OF SEISMIC COEFFICIENT Cp ON FP0.1

NOTE: LOAD LIMITED BY FIG 800 ALONG BEAM
MAXIMUM LOAD = 1265 lbs

Brace identification no. (to be used on plans): TB

[X] Lateral brace [ ] Longitudinal brace

Seismic Coefficient Cp= 1.03 (See Attached NFPA13: Table 9.3.5.9.3)

Diameter	Type	Length	Total (ft)	Weight per ft	Total Weight
6 in	Sch. 10 Steel	.	40	23.03 lb/ft	921.2 lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
.	.	.	.	. lb/ft	. lb
Total Weight of Water Filled Piping					921.2 lb
Wp (Total Weight of Water Filled Piping x 1.15 to account for valves and fittings)					1,059.38 lb
Horizontal Force (NFPA13.9.3.5.9.3) Fpw = Cp x Wp =					1,091.16 lb

*Excludes tension-only bracing systems

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

REGISTERED PROFESSIONAL ENGINEER
JOHN E. KOHLER
No. FP1885
EXP. SEPT. 30, 2023
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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CAD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

SEISMIC BRACING CALCULATIONS FIRE PROTECTION

SHEET NUMBER

FP6.3

LIGHT FIXTURE SCHEDULE

FIXTURE NOTES:

1. ALL LED LIGHT FIXTURE DRIVERS SHALL BE ELECTRONIC TYPE, 10% TOTAL HARMONIC DISTORTION MAXIMUM.
2. ALL LIGHT FIXTURE LAMPS AND LED LIGHT MODULES SHALL BE ENERGY SAVING 3500° K, 80 CRI MINIMUM, U.O.N. (SEE SPECIFICATIONS FOR MORE INFORMATION).
3. ALL LED DRIVERS (AND ASSOC. FIXTS.) SHALL HAVE MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH CALIFORNIA ENERGY COMMISSION STANDARDS AND REQUIREMENTS, WHERE SUCH ARE USED IN CONDITIONED SPACES.
4. EXIT SIGNS , EMERGENCY LIGHTS AND LIGHT FIXTURES WITH EMERGENCY BATTERY BACK-UP SHALL SUPPLY A MINIMUM DURATION OF 90 MINUTES OF POWER IN THE EVENT OF A POWER OUTAGE/FAILURE.

TYPE	DESCRIPTION	LAMPS	MANUFACTURER	MOUNTING
A	2' W x 4' L RECESSED T-BAR LED FIXTURE. STEEL HOUSING, ANGLED LENS, DIFFUSE CENTER OPTICS, SINGLE CIRCUIT, HIGH OUTPUT LUMENS, WHITE FINISH, 0-10V DIMMING DRIVER, 277V.	41W 3500°K	FINELITE HPR LED SERIES	6 E6.104
A1	SAME AS LIGHT FIXTURE TYPE "A" EXCEPT SURFACE MOUNTED	41W 3500°K	FINELITE HPR LED SERIES	8 E6.104
B4	2½" x 2½" x 4 FOOT LONG DIRECT/INDIRECT LED CABLE SUSPENDED FIXTURE. PRECISION CUT EXTRUDED ALUMINUM BODY, STANDARD OUTPUT TOP GLOW UPPER DIFFUSER, VERY HIGH OUTPUT BOTTOM DIFFUSER CONFIGURATION, FULLY ADJUSTABLE PLATED STEEL AIRCRAFT CABLE, FINELITE SIGNAL WHITE FINISH. 277V CONSTANT CURRENT LED DRIVE 0-10V DIMMING.	48W 3500°	FINELITE HPX SERIES	5 E6.104
B6	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 6 FOOT LONG.	40W 3500°K	FINELITE HPX SERIES	
B8	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 8 FOOT LONG.	80W 3500°K	FINELITE HPX SERIES	
B12	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 12 FOOT LONG.	120W 3500°K	FINELITE HPX SERIES	
B13	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 13 FOOT LONG.	130W 3500°K	FINELITE HPX SERIES	
B24	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 24 FOOT LONG.	240W 3500°K	FINELITE HPX SERIES	
B27	SAME AS LIGHT FIXTURE TYPE "B4" EXCEPT 27 FOOT LONG.	270W 3500°K	FINELITE HPX SERIES	
C4	4' DIRECT/INDIRECT WALL MOUNTED LED FIXTURE, EXTRUDED ALUMINUM HOUSING, FLAT ALUMINUM END CAPS, TOP GLOW DIFFUSER, FLUSH DOWNLIGHT DIFFUSER, HIGH OUTPUT UPLIGHT, BOOSTED OUTPUT DOWNLIGHT, MOUNTING BRACKET, WHITE POWDER COAT FINISH, SINGLE CIRCUIT, 0-10 DIMMING DRIVER, 277V.	47W 3500°K	FINELITE HP2 SERIES	
C12	SAME AS LIGHT FIXTURE TYPE "C4" EXCEPT 12 FOOT LONG.	141W 3500°K	FINELITE HP2 SERIES	
D2	2 FT. DIAMETER HIGH PERFORMANCE 4" APERTURE CIRCLE LED LIGHT FIXTURE, DIRECT/INDIRECT LED CABLE SUSPENDED PRECISION CUT EXTRUDED ALUMINUM BODY, STANDARD OUTPUT TOP GLOW UPPER DIFFUSER, VERY HIGH OUTPUT BOTTOM DIFFUSER CONFIGURATION, FULLY ADJUSTABLE PLATED STEEL AIRCRAFT CABLE, FINELITE SIGNAL WHITE FINISH. 277V CONSTANT CURRENT LED DRIVE 0-10V DIMMING.	28W 3500°	FINELITE HP4-C SERIES	5 E6.104 SIMILAR
D3	SAME AS LIGHT FIXTURE TYPE "D2" EXCEPT 3 FOOT DIAMETER.	46W 3500°K	FINELITE HP4-C SERIES	
D4	SAME AS LIGHT FIXTURE TYPE "D2" EXCEPT 4 FOOT DIAMETER.	60W 3500°K	FINELITE HP4-C SERIES	
D6	SAME AS LIGHT FIXTURE TYPE "D2" EXCEPT 6FOOT DIAMETER.	90W 3500°K	FINELITE HP4-C SERIES	
E	CLEAR INJECTION MOLDED ACRYLIC EXIT PLAQUE, CLEAR BACKGROUND, GREEN LETTERS, SEE PLANS FOR NUMBER OF FACES, ARROWS AND MOUNTING REQUIRED, CLEAR BACKGROUND, HIGH STRENGTH SATIN ALUMINUM TRIM, 10 YEAR LED LIFE, 277V.	LED INCLUDED WITH FIXTURE	DUAL LITE LE SERIES	
F	4.5" SQUARE, RECESSED LED DOWNLIGHT FIXTURE, FORMED STEEL HOUSING, MEDIUM ANGLE DISTRIBUTION, FLUSH LENS, CLEAR SEMI SPECULAR REFLECTOR, L20LUMEN PACKAGE, 0-10 DIMMING DRIVER, 277V	23.5W 3500°K	4PS SERIES WILLIAMS LIGHTING	
G	6" DIA., RECESSED LED DOWNLIGHT FIXTURE, DIE-FORMED HOUSING, LOW IRIDESCENT ALUMINUM CLEAR SEMI-EPECULAR REFLECTOR, 0-10 DIMMING DRIVER, 277V	19W 3500°K	WILLIAMS LIGHTING LED60-PH SERIES	
H	8" DIA., RECESSED LED DOWN LIGHT FIXTURE, ALUMINUM EXTRUDED HEAT SINK, CLEAR SPECULAR REFLECTOR, WIDE DISTRIBUTION, 0-10 DIMMING DRIVER, 277V.	72W 3500°K	WILLIAMS LIGHTING H85 SERIES	
H1	SAME AS LIGHT FIXTURE TYPE "H" EXCEPT LOWER WATTAGE.	72W 4000°K	WILLIAMS LIGHTING H85 SERIES	
K3	SURFACE MOUNTED HIGH PERFORMANCE SINGLE CIRCUIT TRACK LIGHTING WITH (3), HEAVY-DUTY DIE-CAST LIGHT FIXTURE ADAPTER AND HOUSING, 277V 0-10V DIMMING.	(3) 25W 3500°K	INTENSE LIGHTING GTW SERIES	
K6	SAME AS LIGHT FIXTURE TYPE "K3" EXCEPT WITH (6) LIGHT FIXTURES.	(6) 25W 3500°K	INTENSE LIGHTING GTW SERIES	
M3	3 FOOT LONG, SURFACE MOUNTED, COMPACT HIGH PERFORMANCE LINEAR GRAZER LED LUMINAIRE, 60 DEGREE BEAM ANGLE, COLOR CHANGING (RGBW) AND POWERSYNC FEATURES. 277V DRIVER.	36W 3500°K	LINEALUX LS9030 SERIES	
M8	SAME AS LIGHT FIXTURE TYPE "M3" EXCEPT 8 FOOT LONG.	96W 3500°K	LINEALUX LS9030 SERIES	
M12	SAME AS LIGHT FIXTURE TYPE "M3" EXCEPT 12 FOOT LONG.	144W 3500°K	LINEALUX LS9030 SERIES	
M20	SAME AS LIGHT FIXTURE TYPE "M3" EXCEPT 12 FOOT LONG.	240W 3500°K	LINEALUX LS9030 SERIES	
N	APPROXIMATELY 23" DIA. PENDANT MOUNTED LED SPHERE LIGHT FIXTURE, WHITE FINISH, 277V 0-10 DIMMING DRIVER.	65W 3000°K	LOUIS POULSEN PATERA SERIES	
P4	2½" x 12" H. x 4 FOOT LONG DIRECT LED CABLE SUSPENDED FIXTURE. ACUSTIC BAFFLE BODY, HIGH OUTPUT, FLUSH DIFFUSER, FULLY ADJUSTABLE PLATED STEEL AIRCRAFT CABLE, 277V CONSTANT CURRENT LED DRIVE 0-10V DIMMING.	28W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	5 E6.104
P6	SAME AS LIGHT FIXTURE TYPE "P4" EXCEPT 6 FOOT LONG.	43W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	
P13	SAME AS LIGHT FIXTURE TYPE "P4" EXCEPT 13 FOOT LONG.	92W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	
P14	SAME AS LIGHT FIXTURE TYPE "P4" EXCEPT 14 FOOT LONG.	99W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	
P16	SAME AS LIGHT FIXTURE TYPE "P4" EXCEPT 16 FOOT LONG.	114W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	
P18	SAME AS LIGHT FIXTURE TYPE "P4" EXCEPT 18 FOOT LONG AND VERY HIGH OUTPUT.	166W 3500°	FINELITE HP2 ACOUSTIC BAFFLE	
X1	15" W. x 33.5" L. POLE MOUNTED SLEEK PROFILE LED LIGHT FIXTURE WITH COMFORT OPTICS, STANDARD ARM MOUNT, DIE-CAST ALUMINUM HOUSING AND DOOR FRAME, TYPE 4 DISTRIBUTION, BRONZE COLOR, INTEGRAL BI-LEVEL INFRARED MOTION RESPONSE MODULE, UNIVERSAL VOLTAGE. MOUNT ON 18 FT. 5" STRAIGHT ROUND ALUMINUM POLE.	130W LED 4000K	PHILIPS GARDCO PUREFORM P26 SERIES POLE: PR5-CB-18 SERIES	1 E6.104
X2A	36" L x 3" W. x 4" H. POLE MOUNTED SLEEK PROFILE LED LIGHT FIXTURE, ALUMINUM EXTRUSION HOUSING WITH CAPTIVE STAINLESS STEEL HARDWARE BRONZE COLOR, INTEGRAL INFRARED MOTION RESPONSE MODULE, UNIVERSAL VOLTAGE. MOUNT ON 20 FT "REED" ROUND ANGLED STEEL POLE WITH CUSTOM BRACKET. COLOR BY ARCHITECT.	76W LED 4000°K TYPE 4 DIST	STRUCTURA LINEAL SERIES POLE:REED-2M2-1	3 E6.104
X2B	36" L x 3" W. x 4" H. POLE MOUNTED SLEEK PROFILE WITH (2) LED LIGHT FIXTURES, ALUMINUM EXTRUSION HOUSING WITH CAPTIVE STAINLESS STEEL HARDWARE BRONZE COLOR, INTEGRAL INFRARED MOTION RESPONSE MODULE, UNIVERSAL VOLTAGE. MOUNT ON 24 FT "REED" ROUND ANGLED STEEL POLE WITH CUSTOM BRACKETS. COLOR BY ARCHITECT.	76W LED 4000°K TYPE 2 DIST 95W LED 4000°K TYPE 4 DIST	STRUCTURA LINEAL SERIES POLE:REED-2M3-2	3 E6.104
X3	APPROX. 30" H x 7" W, MARINE GRADE ALUMINUM, LED BOLLARD LIGHT FIXTURE, DARK BRONZE FINISH, UL WET LABEL, TYPE 2 DISTRIBUTION, 277V DRIVER.	18W LED 4000°K	WE-FE #114-0137	2 E61.04
X4	24" W x 3.9" H x 5.29" D. LED FLOOD LIGHT, EXTRUDED ALUMINUM HOUSING, DARK BRONZE MATTE FINISH, MEDIUM FLOOD OPTICS, UNIVERSAL VOLTAGE DRIVER.	30W LED 4000°K	KIM LIGHTING INT WHITE SERIES	
X5	11" W x 11" H x 5⅜" D. WALL MOUNTED LED LIGHT FIXTURE, ONE PIECE DIE-CAST ALUMINUM HOUSING, BRONZE FINISH, TEMPERED CLEAR GLASS, 277V DRIVER.	30W LED 4000°K	BEGA #33243	
X6	8" DIA., RECESSED LED DOWN LIGHT FIXTURE, DIE-CAST ALUMINUM HOUSING, OPEN REFLECTOR, MEDIUM BEAM SPREAD, EXTRUDED HEAT SINK, CLEAR SPECULAR REFLECTOR, WIDE DISTRIBUTION, WET LOCATION TRIM, 0-10 DIMMING DRIVER, 277V.	108W 4000°K LED	WILLIAMS LIGHTING 8DR SERIES	
X7	59" W x 4" H x 5" D. WALL MOUNTED LED LIGHT FIXTURE, ONE PIECE DIE-CAST ALUMINUM HOUSING, BRONZE FINISH, MATTE SAFETY GLASS, 277V DRIVER.	30W LED 4000°K	BEGA #44419	
X8	APPROX. 13" DIA. IN-GROUND LED LIGHT FIXTURE, ONE-PIECE CAST BRONZE HOUSING, FULLY SEALED WITH HIGH TEMPERATURE ANTI-SYPHON, SEALED CABLE AND TEMPER RESISTANT S.S. FASTENERS, 1/16" S.S. BRUSHED FINISH, WALL WASH, BLUE TOOTH ENABLED OPTICAL MODULE, CLEAR 5/16" THICK TEMPERED GLASS LENS, UNIVERSAL VOLTAGE DRIVER.	44W 3000°K LED	KIM LIGHTING #LTV81SS-WW SERIES	7 E61.04
X9	4' LONG, SURFACE CEILING MOUNTED VAPOR/DUST PROOF LED LIGHT FIXTURE, UL LISTED FOR DRY OR WET LOCATIONS. UNIVERSAL VOLTAGE DRIVER	61W LED 4000°K	WILLIAMS LIGHTING 96 LED SERIES	8 E61.04
X10	RECESSED IN CONCRETE LED STEP LIGHT FIXTURE, IP65 RATED, 120/277V INTEGRAL DRIVER, UL LISTED FOR WET LOCATIONS, BRONZE FINISH.	6W LED 3200°K	BRUCK LIGHTING 138022-BZ-3-HL	
X11	SURFACE MOUNTED DECORATIVE LINEAR LED ROPE LIGHT FIXTURE, FOR DRY OR WET LOCATIONS. 120V DRIVER, WARM WHITE COLOR, WHITE HOUSING.	180W LED 3200°K	CALI ACCENT LIGHTING NLED SERIES	
X12	IN-GROUND, WEATHERPROOF, LANDSCAPE LED LIGHT FIXTURE, COPPER FREE-ALUMINUM HOUSING, ADJUSTABLE HEAD, 277V DRIVER	15W LED 3000°K	BK LIGHTING ALPS SERIES	

ELECTRICAL SYMBOLS & ABBREVIATIONS

SYMBOLS & ABBREVIATIONS SHOWN ARE FOR GENERAL USE. DISREGARD THOSE WHICH DO NOT APPEAR ON THE PLANS.

⊡	FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
◩	EMERGENCY OR NIGHT LIGHT
├─○─┤	STRIP FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
□	LUMINAIRE - RECESSED - SEE SCHEDULE
□→	RECESSED WALL WASHER
○	LUMINAIRE - SURFACE MOUNTED - SEE SCHEDULE
•○	LUMINAIRE - POLE OR POST MOUNTED - SEE SCHEDULE
├○	LUMINAIRE - WALL MOUNTED SEE SCHEDULE
⊙	BOLLARD OR PATH LIGHT - SEE SCHEDULE
⊗→	EXIT LIGHT - DIRECTIONAL ARROWS AS INDICATED - SEE SCHEDULE
○○○	TRACK LIGHTING - SEE SCHEDULE
▬	EMERGENCY LIGHT
⬡	DIGITAL DUAL TECHNOLOGY OCC. SENSOR
◁	LIGHTING CONTROL OCCUPANCY SENSOR CORNER MOUNTED
DRC	DIMMER ROOM CONTROLLER
PC	PLUG LOAD CONTROLLER
RC	ROOM LIGHTING CONTROLLER
LCP	LIGHTING CONTROL PANEL
DL	DIGITAL DAYLIGHT SENSOR
$	SINGLE POLE SWITCH **
$a	SINGLE POLE SWITCH, ** a = CIRCUIT CONTROLLED
$3	THREE WAY SWITCH **
$4	FOUR WAY SWITCH **
$M	MANUAL MOTOR STARTER
$K	KEY OPERATED SWITCH **
($)	LIGHTING DIMMER **
[$]	DIGITAL ON/OFF SWITCH **
[$]D	DIGITAL DIMMER SWITCH **
[$]M#	DIGITAL MULTI SCENE LIGHTING SWITCH **
[$]S	DIGITAL DUAL TECHNOLOGY WALL OCC. SENSOR **
◇$	WALL OCCUPANCY SENSOR **
◇$2	DOUBLE SWITCHED WALL OCCUPANCY SENSOR **
●$	DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **
●$2	2-BUTTON DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **

◆	SECURITY DOOR CONTACTS
MD	SECURITY MOTION DETECTOR
SC	CCTV CAMERA
KP	SECURITY SYSTEM KEYPAD
⊡	DOOR BELL PUSHBUTTON
CH	DOOR CHIME WITH LED
⏀	RECEPTACLE - DUPLEX *
⏀	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
⏀	GFCI CONVENIENCE RECEPTACLE - DUPLEX *
⏀	GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
⏀	RECEPTACLE DOUBLE DUPLEX *
⏀	HALF SWITCHED DUPLEX RECEPTACLE *
⏀	SINGLE RECEPTACLE *
⏀	DUPLEX RECEPTACLE - CEILING MOUNTED
⏀ HC	LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE *
⏀ C	LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE *
⊙	FLOOR MOUNTED DUPLEX RECEPTACLE
⊙▼	FLOOR MOUNTED BOX
◓	POWER OUTLET - SEE PLANS FOR NEMA TYPE *
▚	POWER POLE
▽	WALL TELEPHONE OUTLET **
▼ [#]	VOICE/DATA WALL OUTLET *
▼ [#]	VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
▼ [#]	SURFACE MOUNTED VOICE/DATA WALL OUTLET *
▼ [#]	SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
⊕	WIRELESS ACCESS POINT (WAP) - CEILING MOUNTED
⊕	WIRELESS ACCESS POINT (WAP) - WALL MOUNTED - FIELD VERIFY HEIGHT
● [#]	VOICE/DATA OUTLET - FLOOR MOUNTED
▽	TV OUTLET *
⬢ [#]	VOICE/DATA OUTLET - CEILING MOUNTED
Ⓢ	INTERIOR SPEAKERS CEILING MOUNTED
├Ⓢ	INTERIOR SPEAKERS WALL MOUNTED
├Ⓒ	CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

▬	PANELBOARD - FLUSH MOUNTED
▨	EQUIPMENT PANEL - FLUSH MOUNTED
▬	PANELBOARD - SURFACE MOUNTED
▨	EQUIPMENT PANEL - SURFACE MOUNTED
Ⓜ	METER W/ CURRENT TRANSFORMER
Ⓙ/├Ⓙ	JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES
⌀	MOTOR CONNECTION
□	NON-FUSED DISCONNECT SWITCH
◪	FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFGR'S NAMEPLATE DATA
⊠	COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFGRS NAMEPLATE DATA
⊠	MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED
⌒	CIRCUIT BREAKER
⊡─⏚	GROUND ROD WITH GROUNDWELL BOX
•─⏚	GROUND ELECTRODE
─┤├─	NORMALLY OPEN CONTACT
─┤/├─	NORMALLY CLOSED CONTACT
⊠	TRANSFORMER - SEE SINGLE LINE FOR SIZE
▨	PULLBOX
∿•	FLEX CONDUIT WITH CONNECTION
───○	CONDUIT - UP
───●	CONDUIT - DOWN
▨	SURFACE METAL OR NON-METALLIC RACEWAY
─·─·─	CONDUIT - EXISTING
────	CONDUIT - CONCEALED IN WALLS OR CEILING
- - - -	CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.
⊏──	CAPPED OR STUB-OUT CONDUIT
∫──	CONDUIT CONTINUATION
#10	CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. AS INDICATED RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES WHEN MORE THAN TWO. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSS HATCHES WITH NUMBER ADJACENT INDICATES WIRE SIZE OTHER THAN #12 AWG.
⬡ 2	SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET
◇ 3	SCHEDULE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET

②	DETAIL NOTE REFERENCE SYMBOL SEE ASSOCIATED NOTE ON SAME DETAIL
F301	FEEDER DESIGNATION; SEE ASSOCIATED NOTE ON SAME DETAIL
1 / E3.0	DETAIL NUMBER DETAIL OR SECTION REFERENCE SHEET NUMBER
1 / 2	INDICATES QUANTITY OF TELEPHONE OUTLETS INDICATES QUANTITY OF DATA OUTLETS

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
ALUM/AL	ALUMINUM
ARCH	ARCHITECT
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CATV	CABLE TV
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TV
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
C.O.	CONDUIT ONLY
CTR	CENTER
D	DIMMER
DIM	DIMENSION
DIST	DISTRIBUTION
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
(EL)	EVENING LIGHT
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EV	ELECTRICAL VEHICLE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FIN	FINISH
FL	FLOOR
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
(F)	FUTURE
GC	GENERAL CONTRACTOR
GFCI GFI	GROUND FAULT INTERRUPTING
GND, G	GROUND
GRS	GALVANIZED RIGID STEEL
HT	HEIGHT
IC	INTERCOM
IDF	INTERMEDIATE DISTRIBUTION FRAME
INCAND	INCANDESCENT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LCP	LIGHTING CONTROL PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
KCM	THOUSAND CIRCULAR MILS
M.B.	MAIN CIRCUIT BREAKER
MCA	MINIMUM CIRCUIT AMPS
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MH	METAL HALIDE
MLO	MAIN LUGS ONLY
MPOE	MAIN POINT OF ENTRANCE
MTD	MOUNTED
MTG	MOUNTING
MOCP	MAXIMUM OVER CURRENT PROTECTION
(N)	NEW
NIC	NOT IN CONTRACT
NIEC	NOT IN ELECTRICAL CONTRACT
(NL)	NIGHT LIGHT
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OAH	OVERALL HEIGHT
OC	ON CENTER
OH	OVERHEAD
PA	PUBLIC ADDRESS
PB	PULL BOX
PF	POWER FACTOR
PH	PHASE
PIR	PASSIVE INFRARED
PNL	PANEL
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWR	POWER
(R)	EXISTING TO BE REMOVED
(RP)	REMOVABLE POLE
RECPT'S	RECEPTACLES
REQD	REQUIRED
REQMT'S	REQUIREMENT(S)
SHT	SHEET
SLD	SINGLE LINE DIAGRAM
STC	SYSTEMS TERMINATION CABINET
SW	SWITCH
SWBD	SWITCHBOARD
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UG	UNDERGROUND
V	VOLT
VD	VOLTAGE DROP
W	WATT
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

FIRE ALARM

NOTE: SEE FIRE ALARM DRAWINGS FOR QUANTITIES AND MOUNTING HEIGHTS.

□P	MANUAL PULL STATION
⌧	STROBE ONLY
▽□	HORN ONLY
▽M	MINI HORN
▽⊠	HORN/STROBE
○⊠	CHIME/STROBE
ⓘ	HEAT DETECTOR
Ⓢ	SMOKE DETECTOR
CO	CARBON MONOXIDE ALARM
Ⓢ	DUCT SMOKE DETECTOR
⦸	TAMPER SWITCH
◊	FLOW SWITCH
⋈	POST INDICATING VALVE
Ⓢ	FIRE SMOKE DAMPER
⌓	BELL (GONG)
FCP	FIRE ALARM CONTROL PANEL
APS	AUXILIARY POWER SUPPLY
FSA	FIRE SYSTEM ANNUNCIATOR
FTR	FIRE ALARM TRANSPONDER OR TRANSMITTER
ESR	ELEVATOR STATUS/RECALL
FAC	FIRE ALARM COMMUNICATOR
ANN	REMOTE ANNUNCIATORS
EOL	END OF LINE

* +15" A.F.F. TO BOTTOM OF BOX, U.O.N.
** +48" A.F.F. TO TOP OF BOX, U.O.N.
[#] NUMBER IN BRACKETS DENOTES NUMBER OF CABLE DROPS WHEN MORE THAN (2).

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
3. CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING AND ALLOW FOR ALL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORMATION AND BE FAMILIAR WITH ALL OTHER TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSONAL, PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
5. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6. ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
7. CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
8. CONTRACTOR SHALL PROVIDE ALL REQUIRED "CUTTING, PATCHING, EXCAVATION, BACKFILL AND REPAIRS" NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.
10. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS.
11. ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM: TWO (2) #12s WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR ROUGH ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
12. ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARED NEUTRALS ON MULTIWIRE CIRCUITS IS NOT ALLOWED.
13. ALL 120/277V LIGHT SWITCHES AND WALL OCCUPANT SENSORS SHALL HAVE A NEUTRAL INSTALLED TO THE DEVICE BOX EXCEPT WHERE A CONDUIT OR SURFACE RACEWAY SYSTEM IS INSTALLED.
14. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
15. SEE ARCHITECTURAL DOCUMENTS FOR EXACT PLACEMENT OF LIGHTING FIXTURES AND DEVICES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF CEILING TYPES FROM ARCHITECTURAL DOCUMENTS AND PROVIDE AND INSTALL ALL REQUIRED FIXTURE MOUNTING HARDWARE. PROVIDE AND INSTALL U.L. LISTED FIRE STOP ENCLOSURES FOR ALL RECESSED FIXTURES IN FIRE RATED CEILINGS.
16. FROM ALL NEW FLUSH MOUNT PANELS; THE CONTRACTOR SHALL STUB UP INTO ACCESSIBLE CEILING SPACE A MINIMUM OF FOUR (4) 3/4" CONDUITS FOR FUTURE USE.
17. CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
18. ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAY IN PUBLIC AREAS SHALL BE REVIEWED BY ARCHITECT BEFORE ROUGH-IN. CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICALLY PLEASING MEANS AS DETERMINED BY THE ARCHITECT. NO ALLOWANCE FOR ADDITIONAL COMPENSATION DUE TO ROUTING AS DIRECTED BY THE ARCHITECT WILL BE MADE.
19. CONTRACTOR SHALL COORDINATE WITH PG&E, AT&T & PAY ALL CHARGES FOR TEMPORARY CONSTRUCTION POWER & TELEPHONE.
20. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AND OBTAIN UTILITY COMPANY CONSTRUCTION DOCUMENTS. UTILITY COMPANY CHARGES SHALL BE PAID BY OWNER.

EQUIPMENT ANCHORAGE

M/E/P COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 & 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED(e.g. HARD WIRE) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 120 / 220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

A. COMPONENTS WEIGHTING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHTING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT OF THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8 AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PRE-APPROVED INSTALLATION GUIDE (e.g. OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☐ MD ☐ PP ☐ E ■ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
MP ☐ MD ☐ PP ☐ E ☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #____________.

CODES & STANDARDS

CODES:

1. 2019 CALIFORNIA ADMINISTRATIVE CODE C.C.R., TITLE 24, PART 1.
2. 2019 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS.
3. 2019 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
4. 2019 CALIFORNIA MECHANICAL CODE (CMC) C.C.R., TITLE 24, PART 4 BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) WITH CALIFORNIA AMENDMENTS.
5. 2019 CALIFORNIA PLUMBING CODE (CPC) C.C.R., TITLE 24, PART 5 BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) WITH CALIFORNIA AMENDMENTS.
6. 2019 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
7. 2019 CALIFORNIA FIRE CODE (CFC) C.C.R., TITLE 24, PART 9 BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) WITH CALIFORNIA AMENDMENTS.
8. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
9. 2019 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
10. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
11. NATIONAL FIRE ALARM CODE (NFPA 72) 2016.
12. CITY OF HOLIISTER ORDINANCES, CODES, AND REGULATIONS.

STANDARDS:

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
2. ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
5. NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
6. UNDERWRITER LABORATORIES (UL)
7. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SHEET INDEX

ELDRIDGE O. BELL
No. E17789
EXP. 6/30/22

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 20-237.00
404 W. Franklin St. • Suite 100 • Monterey, CA 93940
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AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023

SIGNED: MONTH DAY, 2021

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Central Electric
ELECTRICAL CONTRACTORS
WATSONVILLE (831) 724-6321
LICENSE # 246326

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY: CADD
DRAWING SCALE: AS NOTED
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES

SHEET NUMBER
E0.100

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)2L for outdoor lighting scopes using the prescriptive path.			
Project Name: Gavilan College		Report Page:	Page 1 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

A. GENERAL INFORMATION

01	Project Location (city)	Hollister	04	Total Illuminated Hardscape Area (ft²)	224,156
02	Climate Zone	4			
03	Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Developed Parkland	☑ LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE

Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My project consists of:

01	02
☑ New Lighting System	Must Comply with Allowances from §140.7.
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ◯ Yes ◯ No

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100*

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)2	+	Ornamental §140.7(d)2	+	Per Specific Area §140.7(d)2	OR	Existing Power §141.0(b)2L	=	Total Allowed (Watts)	≥	Total Actual (Watts)	07 Must be ≥ 08
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		(See Table N)				(See Table F)	
8,763.88	+		+		+		+		OR		=	8,763.88	≥	8,757	COMPLIES
Cutoff Compliance (See Table G for Details)												Not Applicable			
Controls Compliance (See Table H for Details)												COMPLIES			

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name: Gavilan College		Report Page:	Page 2 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

D. EXCEPTIONAL CONDITIONS

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

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

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

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1,2]	How Wattage is determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b)[4]	Field Inspector Pass	Field Inspector Fail
X1	Pole Mounted LED	☐ Linear	130	Mfr. Spec[1]	20	New	☐	2,600	NA: <6,200 lumens	☐	☐
X2A	Pole Mounted LED	☐ Linear	76	Mfr. Spec[1]	10	New	☐	760	NA: <6,200 lumens	☐	☐
X2B	Pole Mounted LED	☐ Linear	75	Mfr. Spec[1]	9	New	☐	675	NA: <6,200 lumens	☐	☐
X3	30" Bollard LED	☐ Linear	18	Mfr. Spec[1]	41	New	☐	738	NA: <6,200 lumens	☐	☐
X5	11"W Wall Mounted LE	☐ Linear	30	Mfr. Spec[1]	12	New	☐	360	NA: <6,200 lumens	☐	☐
X6	8" Dia. Recessed LED	☐ Linear	108	Mfr. Spec[1]	28	New	☐	3,024	NA: <6,200 lumens	☐	☐
X7	59"W Wall Mounted LE	☐ Linear	30	Mfr. Spec[1]	4	New	☐	120	NA: <6,200 lumens	☐	☐
X8	5.5" Dia Pole Mounted L	☐ Linear	150	Mfr. Spec[1]	2	New	☐	300	NA: <6,200 lumens	☐	☐
X11	Surface Mounted LED	☐ Linear	180	Mfr. Spec[1]	1	New	☐	180	NA: <6,200 lumens	☐	☐
							Total Designed Watts:	**8,757**			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).

Table Continued

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name: Gavilan College		Report Page:	Page 3 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How Wattage is determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b)[4]	Field Inspector Pass	Field Inspector Fail

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b).*

G. CUTOFF REQUIREMENTS (BUG)

This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS

Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector Pass	Field Inspector Fail
Pedestrian Walkway	Photocontrol	Yes	Yes	☐	☐
Parking Lot	Photocontrol	Yes	Yes	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).

I. LIGHTING POWER ALLOWANCE (per §140.7)

Table Continued

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name: Gavilan College		Report Page:	Page 4 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

Table Continued

Table Instructions	01				
Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lost it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.	☑ General Hardscape Allowance	"Use it or lose it" Allowances (select all that apply): ☐ Per Application	☐ Sales Frontage	☐ Ornamental	☐ Per Specific Area
	Table I (below)	Table J	Table K	Table L	Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 2 & 3)

02	03	04	05	06	07	08	09	10
		Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			
Area Description	Surface Type	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)
Pedestrian Walkway/ Parking Lot	Concrete	224,156	0.03	6,724.68	4,223	0.4	1,689.2	8,413.88
							Initial Wattage Allowance for Entire Site (Watts):	**350**
							Total General Hardscape Allowance (Watts):	**8,763.88**

J. LIGHTING ALLOWANCE: PER APPLICATION

This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL

This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This Section Does Not Apply

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name: Gavilan College		Report Page:	Page 5 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections 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/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	◯	NRCI-LTO-01-E - Must be submitted for all buildings.	☐	☐
◉	◯	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections 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 must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	◯	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	☐	☐

Outdoor Lighting

NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name: Gavilan College		Report Page:	Page 6 of 6
Project Address: 505 Fairview Road, Hollister CA 95023		Date Prepared:	12/10/21

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Eldridge O. Bell	Documentation Author Signature:	
Company:	Aurum Consulting Engineers	Signature Date:	
Address:	404 W. Franklin St., Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Monterey, CA 93940	Phone:	831-646-3330

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **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)**
3. **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 and Part 6 of the California Code of Regulations.**
4. **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.**
5. **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 builder provides to the building owner at occupancy.**

Responsible Designer Name:	Eldridge O. Bell	Responsible Designer Signature:	
Company :	Aurum Consulting Engineers	Date Signed:	
Address:	404 W. Franklin St., Suite 100	License:	E17789
City/State/Zip:	Monterey, CA 93940	Phone:	831-646-3330

REGISTERED PROFESSIONAL ENGINEER — ELDRIDGE O. BELL — No. E17789 — EXP. 6/30/22 — ELECTRICAL — STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
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55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829

LICENSED ARCHITECT — AARON JOBSON — LICENSE # C30620 — EXP OCTOBER 31, 2023 — STATE OF CALIFORNIA

SIGNED: MONTH DAY, 2021

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LICENSE # 246326

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

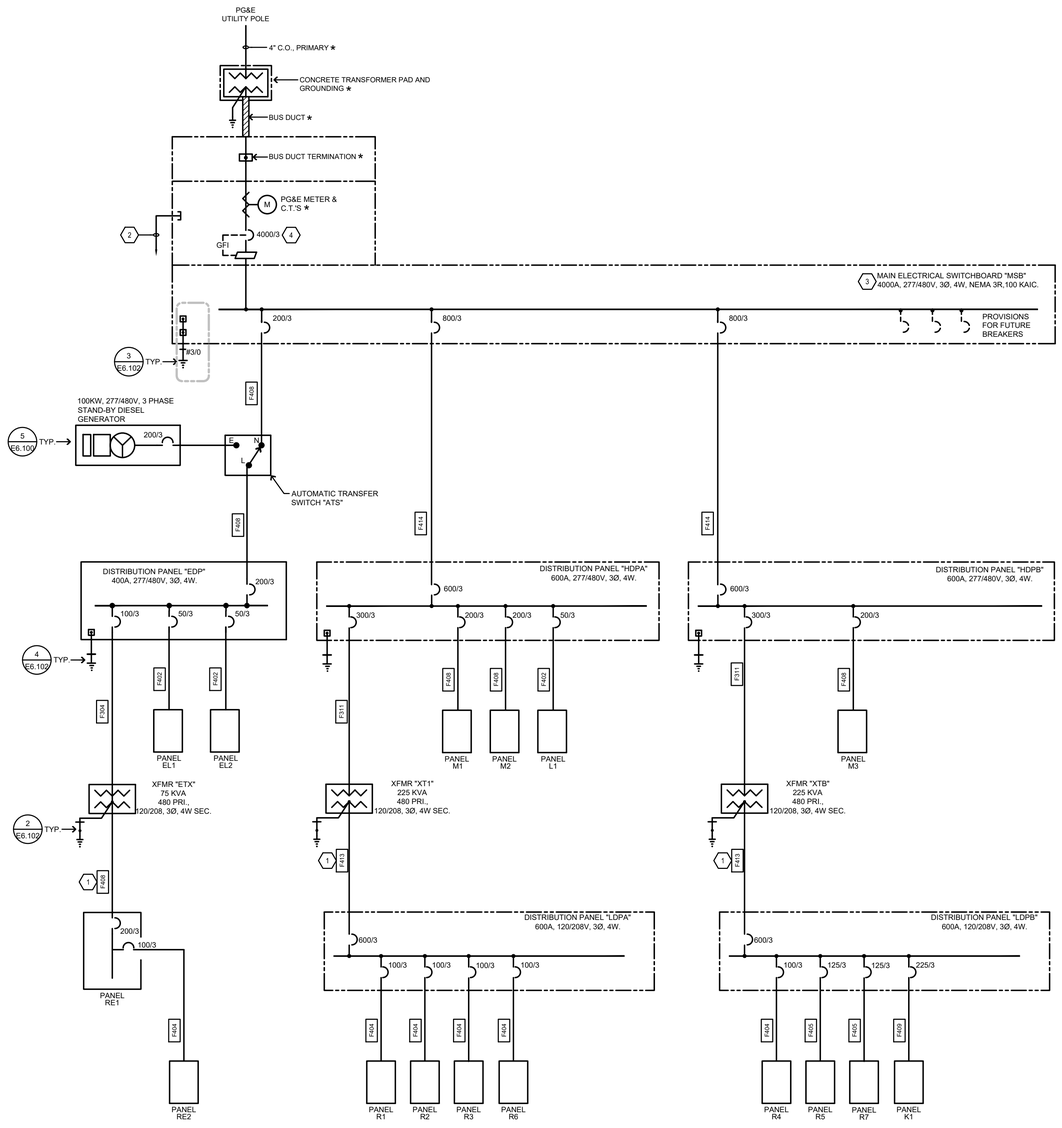
CALIFORNIA ENERGY COMPLIANCE T-24 - EXTERIOR

SHEET NUMBER

E0.101

SHEET NOTES

1. CONDUCTOR LENGTH SHALL NOT EXCEED 10'-0".
2. INSTALL DEDICATED PHONE LINE IN 1" C. FROM AT&T MPOE IDF LOCATION, FIELD VERIFY.
3. CONTRACTOR SHALL PLACE A PERMANENT WARNING LABEL ON FACE OF SWITCHBOARD WITH THE AVAILABLE FAULT CURRENT. LABEL SHALL INCLUDE DATE OF INSTALLATION.
4. SEE ELECTRICAL SPECIFICATIONS FOR TRIP STUDIES REQUIRED TO SET ELECTRONIC BREAKER TRIP SETTINGS.



* PER PG&E RULES, REGULATIONS, AND STANDARDS

1 SINGLE LINE DIAGRAM
NO SCALE

SINGLE LINE DIAGRAM LEGEND

WALL MOUNTED EQUIPMENT

FLOOR/PAD MOUNTED EQUIPMENT

FEEDER SCHEDULE

DESIGNATION	AMPACITY	CONDUIT & CONDUCTORS SIZES
F301	40	3/4" C., 3 #8 & 1 #10 GND.
F302	50/60	1" C., 3 #6 & 1 #10 GND.
F303	70	1 1/4" C., 3 #4 & 1 #8 GND.
F304	100	1 1/4" C., 3 #2 & 1 #8 GND.
F305	125	1 1/2" C., 3 #1 & 1 #6 GND.
F306	150	1 1/2" C., 3 #1/0 & 1 #6 GND.
F307	175	2" C., 3 #2/0 & 1 #6 GND.
F308	200	2" C., 3 #3/0 & 1 #6 GND.
F309	225	2" C., 3 #4/0 & 1 #4 GND.
F310	250	3" C., 3 #250kcm & 1 #4 GND.
F311	300	3" C., 3 #350kcm & 1 #4 GND.
F312	400	3 1/2" C., 3 #500kcm & 1 #2 GND.
F313	600	(2) 3" C., EACH W/3 #350kcm & 1 #1/0 GND (PARALLEL).
F314	800	(2) 3 1/2" C., EACH W/3 #500kcm & 1 #1/0 GND (PARALLEL).
F315	1000	(3) 3 1/2" C., EACH W/3 #400kcm & 1 #2/0 GND (PARALLEL).
F316	1200	(4) 3" C., EACH W/3 #350kcm & 1 #3/0 GND (PARALLEL).
F401	40	3/4" C., 4 #8 & 1 #10 GND.
F402	50/60	1" C., 4 #6 & 1 #10 GND.
F403	70	1 1/4" C., 4 #4 & 1 #8 GND.
F404	100	1 1/2" C., 4 #2 & 1 #8 GND.
F405	125	2" C., 4 #1 & 1 #6 GND.
F406	150	2" C., 4 #1/0 & 1 #6 GND.
F407	175	2" C., 4 #2/0 & 1 #6 GND.
F408	200	2 1/2" C., 4 #3/0 & 1 #6 GND.
F409	225	2 1/2" C., 4 #4/0 & 1 #4 GND.
F410	250	3" C., 4 #250kcm & 1 #4 GND.
F411	300	3 1/2" C., 4 #350kcm & 1 #4 GND.
F412	400	4" C., 4 #500kcm & 1 #2 GND.
F412T	400	4" C., 4 #600kcm & 1 #2 GND.
F413	600	(2) 3 1/2" C., EACH W/4 #350kcm & 1 #1/0 GND (PARALLEL).
F414	800	(2) 4" C., EACH W/4 #500kcm & 1 #1/0 GND (PARALLEL).
F414T	800	(2) 4" C., EACH W/4 #600kcm & 1 #1/0 GND (PARALLEL).
F415	1000	(3) 4" C., EACH W/4 #400kcm & 1 #2/0 GND (PARALLEL).
F416	1200	(4) 3 1/2" C., EACH W/4 #350kcm & 1 #3/0 GND (PARALLEL).

REGISTERED PROFESSIONAL ENGINEER
No. E17789
EXP. 6/30/22
ELDRIDGE O. BELL
ELECTRICAL
STATE OF CALIFORNIA

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DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY: CADD
DRAWING SCALE: AS NOTED
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

ELECTRICAL SINGLE LINE DIAGRAM

SHEET NUMBER

E1.100

PANEL L1

1 4

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: SURFACE
3 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
LTG - PARKING LOT (NL)	1300			20/1	1		2	20/1	1045			LTG - PATHWAYS (NL)
LTG - PARKING LOT		1170		20/1	3		4	20/1		1235		LTG - PATHWAYS
SPARE					5		6	20/1			200	LTG - FLAG POLES/SIGN
SPACE ONLY					7		8					SPARE
SPACE ONLY					9		10					SPACE ONLY
SPACE ONLY					11		12					SPACE ONLY
SPACE ONLY					13		14					SPACE ONLY
SPACE ONLY					15		16					SPACE ONLY
SPACE ONLY					17		18					SPACE ONLY
	1300	1170	0						1045	1235	200	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	2.3
KVA Phase B	2.4
KVA Phase C	0.2

Total Connected Load KVA	5.0
Total Load Amperes	6

DISTRIBUTION PANEL LDPA

1 4

Voltage: 120/208V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 225A
Feed: BOTTOM
Mounting: SURFACE
3 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
PANEL R1	5260			100/3	1		2	100/3	4380			PANEL R6
PANEL R1		5120			3		4			4055		PANEL R6
PANEL R1			1780		5		6				4190	PANEL R6
PANEL R2	4170			100/3	7		8	-				SPACE ONLY
PANEL R2		4240			9		10	-				SPACE ONLY
PANEL R2			2590		11		12	-				SPACE ONLY
PANEL R3	3370			100/3	13		14	-				SPACE ONLY
PANEL R3		2660			15		16	-				SPACE ONLY
PANEL R3			2160		17		18	-				SPACE ONLY
SPACE ONLY				-	19		20	-				SPACE ONLY
SPACE ONLY				-	21		22	-				SPACE ONLY
SPACE ONLY				-	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
SPACE ONLY				-	31		32	-				SPACE ONLY
SPACE ONLY				-	33		34	-				SPACE ONLY
SPACE ONLY				-	35		36	-				SPACE ONLY
SPACE ONLY				-	37		38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41		42	-				SPACE ONLY
	12800	12020	6530						4380	4055	4190	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	17.2
KVA Phase B	16.1
KVA Phase C	10.7

Total Connected Load KVA	44.0
Total Load Amperes	122

PANEL R1

1 4

Voltage: 120/208V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: SURFACE
3 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
RECEPTS - RM A153	540			20/2	1		2	20/1	390			RECEPTS - A155
RECEPTS - RM A153		540			3		4	20/1		720		RECEPTS - A156
RECEPTS - RM A154			360	20/2	5		6	20/1			360	RECEPTS - A15X
RECEPTS - RM A154	540				7		8	20/1	360			RECEPTS - A160
PROJECTOR - RM A154		500		20/1	9		10	20/1		360		FLOOR RECEPTS - A139
PROJECTOR - RM A153			500	20/1	11		12	20/1			360	RECEPTS - ELEC. RM A157
WATER HEATER WH-3	3000			40/2	13		14	15/1	360			EXHAUST FAN EF-1
WATER HEATER WH-3		3000			15		16	20/1				SPARE
[2] RPS #2			200	20/1	17		18	20/1				SPARE
PADDLE FANS	70			20/1	19		20	20/1				SPARE
SPARE				20/1	21		22	-				SPACE ONLY
SPARE				20/1	23		24	-				SPACE ONLY
SPARE				20/1	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
SPACE ONLY				-	31		32	-				SPACE ONLY
SPACE ONLY				-	33		34	-				SPACE ONLY
SPACE ONLY				-	35		36	-				SPACE ONLY
SPACE ONLY				-	37		38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41		42	-				SPACE ONLY
	4150	4040	1060						1110	1080	720	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	5.3
KVA Phase B	5.1
KVA Phase C	1.8

Total Connected Load KVA	12.2
Total Load Amperes	34

PANEL R2

1 3

Voltage: 120/208V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: FLUSH
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
RECEPTS - RM A149/A150	1080			20/1	1		2	20/2	720			RECEPTS - FLOOR A146
RECEPTS - RM A147/A148		1080		20/1	3		4			720		RECEPTS - FLOOR A146
RECEPTS - COMP. LAB A146			540	20/2	5		6	20/2			720	RECEPTS - FLOOR A146
RECEPTS - COMP. LAB A146	540				7		8		720			RECEPTS - FLOOR A146
RECEPTS - PROJECTOR A146		500		20/1	9		10	20/1		720		RECEPTS - FLOOR A146
RECEPTS - RM A151			540	20/2	11		12	20/1			70	PADDLE FANS
RECEPTS - RM A151	540				13		14	20/1	70			PADDLE FANS
RECEPTS - RM A152		720		20/2	15		16	20/1				SPARE
RECEPTS - RM A152			720		17		18	20/1				SPARE
RECEPTS - PROJECTOR A151	500			20/1	19		20	20/1				SPARE
RECEPTS - PROJECTOR A152		500		20/1	21		22	-				SPACE ONLY
SPARE				20/1	23		24	-				SPACE ONLY
SPARE				20/1	25		26	-				SPACE ONLY
SPARE				20/1	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
SPACE ONLY				-	31		32	-				SPACE ONLY
SPACE ONLY				-	33		34	-				SPACE ONLY
SPACE ONLY				-	35		36	-				SPACE ONLY
SPACE ONLY				-	37		38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41		42	-				SPACE ONLY
	2660	2800	1800						1510	1440	790	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	4.2
KVA Phase B	4.2
KVA Phase C	2.6

Total Connected Load KVA	11.0
Total Load Amperes	31

PANEL RE2

1 3

Voltage: 120/208V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
RECEPTS - A128	360			20/1	1		2	15/1	360			EXHAUST FAN EF-4
RECEPTS - A128		540		20/1	3		4	X/2		1415		CU-2/FC-2
RECEPTS - MDF RACKS			360	20/1	5		6				1415	CU-2/FC-2
RECEPTS - MDF RACKS	360			20/1	7		8	20/1				SPARE
RECEPTS - MDF RACKS		360		20/1	9		10	20/1				SPARE
RECEPTS - MDF RACKS			360	20/1	11		12	20/1				SPARE
RECEPTS - MDF RACKS	360			20/1	13		14	-				SPACE ONLY
RECEPTS - MDF RACKS		360		20/1	15		16	-				SPACE ONLY
ACCESS CONTROL PANEL			200	20/1	17		18	-				SPACE ONLY
SPARE				20/1	19		20	-				SPACE ONLY
SPARE				20/1	21		22	-				SPACE ONLY
SPARE				20/1	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
	1080	1260	920						360	1415	1415	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	1.4
KVA Phase B	2.7
KVA Phase C	2.3

Total Connected Load KVA	6.5
Total Load Amperes	18

DISTRIBUTION PANEL HDPA

1 4

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 600A
Feed: BOTTOM
Mounting: SURFACE
3 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
PANEL M1	29965			200/3	1		2	50/3	2345			PANEL L1
PANEL M1		29965			3		4			2345		PANEL L1
PANEL M1			29965		5		6				2345	PANEL L1
PANEL M2	32460			200/3	7		8	200/3	17110			TRANSFORMER TXA
PANEL M2		32460			9		10			15675		TRANSFORMER TXA
PANEL M2			32460		11		12				10650	TRANSFORMER TXA
SPACE ONLY					13		14					SPACE ONLY
SPACE ONLY					15		16					SPACE ONLY
SPACE ONLY					17		18					SPACE ONLY
SPACE ONLY					19		20					SPACE ONLY
SPACE ONLY					21		22					SPACE ONLY
SPACE ONLY					23		24					SPACE ONLY
SPACE ONLY					25		26					SPACE ONLY
SPACE ONLY					27		28					SPACE ONLY
SPACE ONLY					29		30					SPACE ONLY
SPACE ONLY					31		32					SPACE ONLY
SPACE ONLY					33		34					SPACE ONLY
SPACE ONLY					35		36					SPACE ONLY
SPACE ONLY					37		38					SPACE ONLY
SPACE ONLY					39		40					SPACE ONLY
SPACE ONLY					41		42					SPACE ONLY
	62425	62425	62425						19455	18020	12995	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	81.9
KVA Phase B	80.4
KVA Phase C	75.4

Total Connected Load KVA	237.7
Total Load Amperes	286

PANEL M1

1 4

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 3R
Mains: M.L.O.

Bussing: 250A
Feed: BOTTOM
Mounting: SURFACE
3 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
HEAT PUMP HP-1	3330			20/3	1		2	20/3	3330			HEAT PUMP HP-4
HEAT PUMP HP-1		3330			3		4			3330		HEAT PUMP HP-4
HEAT PUMP HP-1			3330		5		6				3330	HEAT PUMP HP-4
HEAT PUMP HP-2	3330			20/3	7		8	20/3	3330			HEAT PUMP HP-5
HEAT PUMP HP-2		3330			9		10			3330		HEAT PUMP HP-5
HEAT PUMP HP-2			3330		11		12				3330	HEAT PUMP HP-5
HEAT PUMP HP-3	3330			20/3	13		14	50/3	13315			HEAT PUMP HP-6
HEAT PUMP HP-3		3330			15		16			13315		HEAT PUMP HP-6
HEAT PUMP HP-3			3330		17		18				13315	HEAT PUMP HP-6
SPACE ONLY				-	19		20	-				SPACE ONLY
SPACE ONLY				-	21		22	-				SPACE ONLY
SPACE ONLY				-	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
	9990	9990	9990						19975	19975	19975	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	30.0
KVA Phase B	30.0
KVA Phase C	30.0

Total Connected Load KVA	89.9
Total Load Amperes	108

PANEL M2

1 3

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 3R
Mains: M.L.O.

Bussing: 250A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
HEAT PUMP HP-7	13315			50/3	1		2	15/3	2500			HEAT PUMP HP-9
HEAT PUMP HP-7		13315			3		4			2500		HEAT PUMP HP-9
HEAT PUMP HP-7			13315		5		6				2500	HEAT PUMP HP-9
HEAT PUMP HP-8	2500			15/3	7		8	20/3	3330			HEAT PUMP HP-10
HEAT PUMP HP-8		2500			9		10			3330		HEAT PUMP HP-10
HEAT PUMP HP-8			2500		11		12				3330	HEAT PUMP HP-10
SPACE ONLY				-	13		14	40/3	10815			HEAT PUMP HP-13
SPACE ONLY				-	15		16			10815		HEAT PUMP HP-13
SPACE ONLY				-	17		18				10815	HEAT PUMP HP-13
SPACE ONLY				-	19		20	-				SPACE ONLY
SPACE ONLY				-	21		22	-				SPACE ONLY
SPACE ONLY				-	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
	15815	15815	15815						16645	16645	16645	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	32.5
KVA Phase B	32.5
KVA Phase C	32.5

Total Connected Load KVA	97.4
Total Load Amperes	117

DISTRIBUTION PANEL DEP

1 3

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
TRANSFORMER ETX	2520			100/3	1		2	50/3	9110			PANEL EL1
TRANSFORMER ETX		5170			3		4			6530		PANEL EL1
TRANSFORMER ETX			4670		5		6				3240	PANEL EL1
SPACE ONLY				-	7		8	50/3	5300			PANEL EL2
SPACE ONLY				-	9		10			4240		PANEL EL2
SPACE ONLY				-	11		12				3700	PANEL EL2
SPACE ONLY				-	13		14	-				SPACE ONLY
SPACE ONLY				-	15		16	-				SPACE ONLY
SPACE ONLY				-	17		18	-				SPACE ONLY
SPACE ONLY				-	19		20	-				SPACE ONLY
SPACE ONLY				-	21		22	-				SPACE ONLY
SPACE ONLY				-	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
SPACE ONLY				-	31		32	-				SPACE ONLY
SPACE ONLY				-	33		34	-				SPACE ONLY
SPACE ONLY				-	35		36	-				SPACE ONLY
SPACE ONLY				-	37		38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41		42	-				SPACE ONLY
	2520	5170	4670						14410	10770	6940	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	16.9
KVA Phase B	15.9
KVA Phase C	11.6

Total Connected Load KVA	44.5
Total Load Amperes	53

PANEL EL1

1 3

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
LIGHTING - A153 - A160	2280			20/1	1		2	20/1	2290			LIGHTING - A141 - A144
LIGHTING - A151 & A152		1950		20/1	3		4	20/1		3240		LIGHTING - LOBBY A106/A102
LIGHTING -			1285	20/1	5		6	20/1			1955	LIGHTING - A106 - A119
LIGHTING - HALLWAYS A139/A140	2690			20/1	7		8	20/1	1850			LIGHTING - EXTERIOR
LIGHTING - EXTERIOR		1340		20/1	9		10	20/1				SPARE
SPARE				20/1	11		12	20/1				SPARE
SPARE				20/1	13		14	20/1				SPARE
SPARE				20/1	15		16	20/1				SPARE
SPARE				20/1	17		18	20/1				SPARE
SPACE ONLY					19		20					SPACE ONLY
SPACE ONLY					21		22					SPACE ONLY
SPACE ONLY					23		24					SPACE ONLY
SPACE ONLY					25		26					SPACE ONLY
SPACE ONLY					27		28					SPACE ONLY
SPACE ONLY					29		30					SPACE ONLY
	4970	3290	1285						4140	3240	1955	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	9.1
KVA Phase B	6.5
KVA Phase C	3.2

Total Connected Load KVA	18.9
Total Load Amperes	23

PANEL EL2

1 3

Voltage: 277/480V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 125 A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
LIGHTING-A135-A138	1720			20/1	1		2	20/1	2460			LIGHTING-A125-A129
LIGHTING-A121-A124		1780		20/1	3		4	20/1		2460		LIGHTING-A130-A133
LIGHTING EXT. PATHWAY			2225	20/1	5		6	20/1			1475	LIGHTING-HALLWAY A104
SPARE	800			20/1	7		8	20/1	320			LIGHTING EXTERIOR
SPACE ONLY				20/1	9		10	20/1				SPARE
SPACE ONLY					11		12					SPACE ONLY
SPACE ONLY					13		14					SPACE ONLY
SPACE ONLY					15		16					SPACE ONLY
SPACE ONLY					17		18					SPACE ONLY
	2520	1780	2225						2780	2460	1475	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	5.3
KVA Phase B	4.2
KVA Phase C	3.7

Total Connected Load KVA	13.2
Total Load Amperes	16

PANEL RE1

1 3

Voltage: 120/208V,3ø
Wire: 4W
Type: NEMA 1
Mains: M.L.O.

Bussing: 225A
Feed: BOTTOM
Mounting: SURFACE
2 A.I.C.: SERIES RATED

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
RECEPTS - IDF A158	360			20/1	1		2	20/1				SPARE
RECEPTS - IDF A158		360		20/1	3		4	25/2		1415		CU-1/FC-1
RECEPTS - IDF RACKS			360	20/1	5		6				1415	CU-1/FC-1
RECEPTS - IDF RACKS	360			20/1	7		8	20/1				SPARE
RECEPTS - IDF RACKS		360		20/1	9		10	20/1				SPARE
RECEPTS - IDF RACKS			360	20/1	11		12	20/1				SPARE
RECEPTS - IDF RACKS	360			20/1	13		14	-				SPACE ONLY
RECEPTS - IDF RACKS		360		20/1	15		16	-				SPACE ONLY
ACCESS CONTROL PANEL			200	20/1	17		18	-				SPACE ONLY
SPARE				20/1	19		20	-				SPACE ONLY
SPARE				20/1	21		22	-				SPACE ONLY
SPARE				20/1	23		24	-				SPACE ONLY
SPACE ONLY				-	25		26	100/3	1440			PANEL 'RE2"
SPACE ONLY				-	27		28			2675		PANEL 'RE2"
SPACE ONLY				-	29		30				2335	PANEL 'RE2"
	1080	1080	920						1440	4090	3750	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	2.5
KVA Phase B	5.2
KVA Phase C	4.7

Total Connected Load KVA	12.4
Total Load Amperes	34

KEY MAP

PNL M1	PNL RE2	PNL DEP
DISP LDPA	DIST HDPA	PNL EL1
PNL R1	PNL M1	PNL EL2
PNL R2	PNL M2	PNL RE1

ELDRIDGE O. BELL
No. E17789
EXP. 6/30/22

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LICENSE # C30620
EXP OCTOBER 31, 2023

SIGNED: MONTH DAY, 2021

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WATSONVILLE (831) 724-6321
LICENSE # 246326

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

PANELBOARD SCHEDULES

SHEET NUMBER

E1.101

PANEL R4

Notes: 1 3

Voltage:	120/208V,3ø	Bussing:	125 A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	FLUSH
Mains:	M.L.O.	2 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
RECEPTS - COMP - LAB A121	360				1	2	20/2	720			RECEPS - A122/A123
RECEPTS - COMP - LAB A121		360		20/3	3	4			540		RECEPS - A122/A123
RECEPTS - COMP - LAB A121			360		5	6	20/1			360	RECEPS - HALLWAY A103
RECEPTS - COMP - LAB A121	360				7	8	20/1	360			RECEPTS - COURTYARD
RECEPTS - COMP - LAB A121		360		20/3	9	10	20/1		360		RECEPTS - COURTYARD IN GROUND
RECEPTS - COMP - LAB A121			360		11	12	20/1			360	RECEPTS - RESOURCE CTR. A138
RECEPTS - COMP - LAB A121	360				13	14	20/1	500			RECEPTS - PROJECTOR A138
RECEPTS - COMP - LAB A121		360		20/3	15	16	20/1		360		RECEPTS - RESOURCE CTR. A138
RECEPTS - COMP - LAB A121			360		17	18				360	RECEPTS - RESOURCE CTR. A138
RECEPTS - COMP - LAB A121	360				19	20	20/3	360			RECEPTS - RESOURCE CTR. A138
RECEPTS - COMP - LAB A121		360		20/3	21	22			360		RECEPTS - RESOURCE CTR. A138
RECEPTS - COMP - LAB A121			360		23	24	20/1			720	RECEPTS - OFFICE A135
RECEPTS - OFFICE A137	540			20/1	25	26	20/1	360			RECEPTS - STORAGE A136
RECEPTS - OFFICE A137		540		20/1	27	28	20/1		540		RECEPTS - STORAGE A136
RECEPTS - COMP - LAB A121			720	20/1	29	30					SPARE
RECEPTS - COMP - LAB A121	720			20/1	31	32					SPARE
RECEPTS - PROJECTOR A121		500		20/1	33	34					SPARE
SPARE				20/1	35	36					SPACE ONLY
SPARE				20/1	37	38					SPACE ONLY
SPARE				20/1	39	40					SPACE ONLY
SPARE				20/1	41	42					SPACE ONLY
	2700	2480	2160					2300	2160	1800	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	5.0	Total Connected Load KVA	13.6
KVA Phase B	4.6	Total Load Amperes	38
KVA Phase C	4.0		

PANEL R3

Notes: 1 3

Voltage:	120/208V,3ø	Bussing:	125A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	SURFACE
Mains:	M.L.O.	2 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
RECEPTS - MAINT. A115	360			20/1	1	2	15/1	670			EXHAUST FAN EF-3
RECEPTS - MAINT. A115		360		20/1	3	4	15/1		720		RECEPTS - ADMIN. A111
RECEPTS - A108/A109			1080	20/1	5	6	15/1			540	RECEPTS - LOBBY A101
RECEPTS - A106/A107	1080			20/1	7	8	15/1	720			RECEPTS - LOBBY A101
RECEPTS - CONF. RM A110		540		20/1	9	10	15/1		500		FLAT PANEL CONF. A110
RECEPTS - CONF. RM A110			540	20/1	11	12	15/1				SPARE
RECEPTS - WOMEN A117	540			20/1	13	14	15/1				SPARE
RECEPTS - MEN A119		540		20/1	15	16	15/1				SPARE
SPARE				20/1	17	18	15/1				SPARE
SPARE				20/1	19	20	-				SPACE ONLY
SPARE				20/1	21	22	-				SPACE ONLY
SPARE				20/1	23	24	-				SPACE ONLY
SPACE ONLY				-	25	26	-				SPACE ONLY
SPACE ONLY				-	27	28	-				SPACE ONLY
SPACE ONLY				-	29	30	-				SPACE ONLY
SPACE ONLY				-	31	32	-				SPACE ONLY
SPACE ONLY				-	33	34	-				SPACE ONLY
SPACE ONLY				-	35	36	-				SPACE ONLY
SPACE ONLY				-	37	38	-				SPACE ONLY
SPACE ONLY				-	39	40	-				SPACE ONLY
SPACE ONLY				-	41	42	-				SPACE ONLY
	1980	1440	1620					1390	1220	540	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	3.4	Total Connected Load KVA	8.2
KVA Phase B	2.7	Total Load Amperes	23
KVA Phase C	2.2		

PANEL R5

Notes: 1 4

Voltage:	120/208V,3ø	Bussing:	125 A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	SURFACE
Mains:	M.L.O.	3 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
2 FACP/RPS-1	300			20/1	1	2	30/1	1590			EXHAUST FAN EF-5
RECEPTS-LAB A125		540			3	4	30/1		1590		EXHAUST FAN EF-6
RECEPTS-LAB A125			720	20/3	5	6	15/1			360	EXHAUST FAN EF-4
RECEPTS-LAB A125	720				7	8		900			RECEPTS-LAB A129
RECEPTS-LAB A125		720			9	10	20/3		720		RECEPTS-LAB A129
RECEPTS-LAB A125			900	20/3	11	12				920	RECEPTS-LAB A129
RECEPTS-LAB A125	900				13	14		360			RECEPTS-LAB A129
CEILING PROJECTOR A125		500		20/1	15	16	20/2		360		RECEPTS-LAB A129
RECEPTS-LAB A125			540		17	18				900	RECEPTS-LAB A129
RECEPTS-VEST A134	540			20/2	19	20	20/2	900			RECEPTS-LAB A129
RECEPTS-LAB A125		360			21	22	20/1		540		RECEPTS-LAB A129
RECEPTS-LAB A125			360	20/2	23	24	20/1			500	CEILING RECEPTS PROJECTOR A129
RECEPTS-CORD REELS A125	540			20/1	25	26	20/1	720			RECEPTS-CORD REELS A129
RECEPTS-CORD REELS A125		720		20/1	27	28	20/1		540		RECEPTS-CORD REELS A129
RECEPTS-PREP LAB A126			360		29	30				1500	RECPETS- FUME HOOD A126
RECEPTS-PREP LAB A126	720			20/3	31	32	20/2	1500			RECPETS- FUME HOOD A126
RECEPTS-PREP LAB A126		720			33	34	20/1				SPARE
RECEPTS-PREP LAB A126			540		35	36	20/1				SPARE
RECEPTS-PREP LAB A126	540			20/2	37	38	20/1				SPARE
SPARE				20/1	39	40	20/1				SPARE
SPARE				20/1	41	42	20/1				SPARE
	4260	3560	3420					5970	3750	4180	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	10.2	Total Connected Load KVA	25.1
KVA Phase B	7.3	Total Load Amperes	70
KVA Phase C	7.6		

PANEL R6

Notes: 1 3

Voltage:	120/208V,3ø	Bussing:	125A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	FLUSH
Mains:	M.L.O.	2 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
RECEPTS - STAGE KITCHEN	720			20/1	1	2		360			FLOOR RECEPTS - A141
RECEPTS - REFRIDGERATORS		1295		20/1	3	4	20/3		360		FLOOR RECEPTS - A141
RECEPTS - ICE MACHINE			1430	20/1	5	6				360	FLOOR RECEPTS - A141
RECEPTS - VEST A145	720			20/1	7	8		360			FLOOR RECEPTS - A141
FLAT PANEL DISPLAY		500		20/1	9	10	20/3		360		FLOOR RECEPTS - A141
RECEPTS - CONCESSION A142			500	20/1	11	12				360	FLOOR RECEPTS - A141
RECEPTS - CONCESSION A142	500			20/1	13	14		500			RECPETS - COMM. ROOM A141
RECEPTS - CONCESSION A142		500		20/1	15	16	20/3		500		RECPETS - COMM. ROOM A141
RECEPTS - CONCESSION A142			540	20/1	17	18				500	RECPETS - COMM. ROOM A141
REDCEPTS - STORAGE A143	540			20/1	19	20	20/2	180			RECEPTS - OUTDOOR
REDCEPTS - STORAGE A143		360		20/1	21	22			180		RECEPTS - OUTDOOR
REDCEPTS - COMMUNITY RM A141			500	20/1	23	24	20/1				SPARE
RECEPTS - FLAT PANEL DISPLAY	500			20/1	25	26	20/1				SPARE
RECEPTS - FLAT PANEL DISPLAY				20/1	27	28	20/1				SPARE
SPARE				20/1	29	30	20/1				SPARE
SPARE				20/1	31	32					SPACE ONLY
SPARE				20/1	33	34					SPACE ONLY
SPARE ONLY				20/1	35	36					SPACE ONLY
SPARE ONLY					37	38					SPACE ONLY
SPARE ONLY					39	40					SPACE ONLY
SPARE ONLY					41	42					SPACE ONLY
	2980	2655	2970					1400	1400	1220	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	4.4	Total Connected Load KVA	12.6
KVA Phase B	4.1	Total Load Amperes	35
KVA Phase C	4.2		

PANEL R7

Notes: 1 3

Voltage:	120/208V,3ø	Bussing:	125 A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	SURFACE
Mains:	M.L.O.	2 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
RECEPTS-FLEX CLASSROOM A133	540				1	2	30/1	1590			EXHAUST FAN EF-7
RECEPTS-FLEX CLASSROOM A133		720		20/3	3	4			540		RECEPTS-LAB A130
RECEPTS-FLEX CLASSROOM A133			720		5	6	20/3			720	RECEPTS-LAB A130
RECEPTS-FLEX CLASSROOM A133	720			20/2	7	8		720			RECEPTS-LAB A130
RECEPTS-VEST A134		540			9	10	20/2		540		RECEPTS-LAB A130
CEILING PROJECTOR A133			500	20/1	11	12				540	RECEPTS-LAB A130
RECEPTS-PREP LAB A133	720				13	14		540			RECEPTS-LAB A130
RECEPTS-PREP LAB A133		720		20/3	15	16	20/1		500		CEILING PROJECTOR A130
RECEPTS-PREP LAB A133			900		17	18	20/1			720	RECEPTS-CORD REEL
RECEPTS-PREP LAB A133	540			20/2	19	20	20/1	540			RECEPTS-CORD REEL
RECEPTS-PREP LAB A133		720			21	22	20/2		1500		FUME HOOD A130
RECEPTS-FUME HOOD			1500	20/2	23	24				1500	FUME HOOD A130
RECEPTS-FUME HOOD	1500				25	26	20/2	1500			FUME HOOD A130
RECEPTS-MECH A132		540		20/1	27	28			1500		FUME HOOD A130
SPARE				20/1	29	30	40/2			3000	WATER HEATER WH-2
SPARE				20/1	31	32		3000			WATER HEATER WH-2
SPARE				20/1	33	34	20/1				SPARE
SPACE ONLY					35	36	20/1				SPARE
SPACE ONLY					37	38	20/1				SPARE
SPACE ONLY					39	40					SPACE ONLY
SPACE ONLY					41	42					SPACE ONLY
	4020	3240	3620					7890	4580	6480	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
3. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	11.9	Total Connected Load KVA	29.8
KVA Phase B	7.8	Total Load Amperes	83
KVA Phase C	10.1		

DISTRIBUTION PANEL HDPB

Notes: 1 4

Voltage:	277/480V,3ø	Bussing:	600A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	SURFACE
Mains:	M.L.O.	3 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
PANEL M3	25520				1	2		52675			TRANSFORMER TXB
PANEL M3		25520		200/3	3	4	200/3		35870		TRANSFORMER TXB
PANEL M3			25520		5	6				38010	TRANSFORMER TXB
SPACE ONLY					7	8					SPACE ONLY
SPACE ONLY					9	10					SPACE ONLY
SPACE ONLY					11	12					SPACE ONLY
SPACE ONLY					13	14					SPACE ONLY
SPACE ONLY					15	16					SPACE ONLY
SPACE ONLY					17	18					SPACE ONLY
SPACE ONLY					19	20					SPACE ONLY
SPACE ONLY					21	22					SPACE ONLY
SPACE ONLY					23	24					SPACE ONLY
SPACE ONLY					25	26					SPACE ONLY
SPACE ONLY					27	28					SPACE ONLY
SPACE ONLY					29	30					SPACE ONLY
SPACE ONLY					31	32					SPACE ONLY
SPACE ONLY					33	34					SPACE ONLY
SPACE ONLY					35	36					SPACE ONLY
SPACE ONLY					37	38					SPACE ONLY
SPACE ONLY					39	40					SPACE ONLY
SPACE ONLY					41	42					SPACE ONLY
	25520	25520	25520					52675	35870	38010	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	78.2	Total Connected Load KVA	203.1
KVA Phase B	61.4	Total Load Amperes	244
KVA Phase C	63.5		

PANEL K1

Notes: 1 4

Voltage:	120/208V,3ø	Bussing:	250A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 1	Mounting:	SURFACE
Mains:	M.L.O.	3 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
HEAT LAMP	1800			20/1	1	2	30/2	3100			RAPID COOK OVEN
DROP -IN SOUP WELLS		1000		20/1	3	4			3100		RAPID COOK OVEN
REFRIGERATED DISPLAY			1440	20/1	5	6	20/2			1500	PANINI GRILL
ESPRESSO MACHINE	2500			30/2	7	8		1500			PANINI GRILL
ESPRESSO MACHINE		2500			9	10	20/1		875		REFRIGERATE TABLE
ESPRESSO MACHINE			2500	30/2	11	12	20/1			1825	BLENDER
ESPRESSO MACHINE	2500				13	14	20/1	1825			BLENDER
S-WELL FOOD WARMER		3000		30/1	15	16	20/1		1850		HOT WATER DISPENSER
RECEPT - KITCHEN/BOH			540	20/1	17	18	20/1			685	COFFEE GRINDER
ICE MACHINE	1430			20/1	19	20	20/1	1900			COFFEE MACHINE
RECEPT - SINK COUNTER		500		20/1	21	22	20/1		275		UNDERCOUNTER FREEZER
RECEPT - PANTRY			360	20/1	23	24	20/1			1500	RO WATER FILTER
SPARE				20/1	25	26	40/2	3000			WATER HEATER WH-3
SPARE				20/1	27	28			3000		WATER HEATER WH-3
SPARE				20/1	29	30	80/2			6000	WATER HEATER WH-4
SPACE ONLY				-	31	32		6000			WATER HEATER WH-4
SPACE ONLY				-	33	34	20/1				SPARE
SPACE ONLY				-	35	36	20/1				SPARE
SPACE ONLY				-	37	38	20/1				SPARE
SPACE ONLY				-	39	40	-				SPACE ONLY
SPACE ONLY				-	41	42	-				SPACE ONLY
	8230	7000	4840					17325	9100	11510	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	25.6	Total Connected Load KVA	58.0
KVA Phase B	16.1	Total Load Amperes	161
KVA Phase C	16.4		

PANEL M3

Notes: 1 3

Voltage:	277/480V,3ø	Bussing:	250A
Wire:	4W	Feed:	BOTTOM
Type:	NEMA 3R	Mounting:	SURFACE
Mains:	M.L.O.	2 A.I.C.	SERIES RATED

Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load
HEAT PUMP HP-11	3330				1	2		3330			HEAT PUMP HP-14
HEAT PUMP HP-11		3330		20/3	3	4	20/3		3330		HEAT PUMP HP-14
HEAT PUMP HP-11			3330		5	6				3330	HEAT PUMP HP-14
HEAT PUMP HP-12	7210				7	8		11650			HEAT PUMP HP-15
HEAT PUMP HP-12		7210		30/3	9	10	50/3		11650		HEAT PUMP HP-15
HEAT PUMP HP-12			7210		11	12				11650	HEAT PUMP HP-15
SPACE ONLY				-	13	14	-				SPACE ONLY
SPACE ONLY				-	15	16	-				SPACE ONLY
SPACE ONLY				-	17	18	-				SPACE ONLY
SPACE ONLY				-	19	20	-				SPACE ONLY
SPACE ONLY				-	21	22	-				SPACE ONLY
SPACE ONLY				-	23	24	-				SPACE ONLY
SPACE ONLY				-	25	26	-				SPACE ONLY
SPACE ONLY				-	27	28	-				SPACE ONLY
SPACE ONLY				-	29	30	-				SPACE ONLY
	10540	10540	10540					14980	14980	14980	

1. SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
2. PROVIDE & INSTALL LOCK-ON DEVICE.
3. SERIES RATED TO ____AMP WITH THE PANEL MAIN OR NEXT UPSTREAM BREAKER FOR MAIN LUG PANEL.
4. LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	25.5	Total Connected Load KVA	76.6
KVA Phase B	25.5	Total Load Amperes	92
KVA Phase C	25.5		

KEY MAP

-	PNL R4	PNL R3
-	PNL R5	PNL R6
-	PNL R7	DISP HDPB
-	PNL K1	PNL M3

REGISTERED PROFESSIONAL ENGINEER
ELDRIDGE O. BELL
No. E17789
EXP. 6/30/22
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 20-237.00
404 W. Franklin St. • Suite 100 • Monterey, CA 93940
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QUATTROCCHI KWOK ARCHITECTS
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Oakland, CA 94607
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LICENSED ARCHITECT
AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023
STATE OF CALIFORNIA
SIGNED: MONTH DAY, 2021

Gensler
45 Fremont Street
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Central Electric
ELECTRICAL CONTRACTORS
WATSONVILLE (831) 724-6321
LICENSE # 246326

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

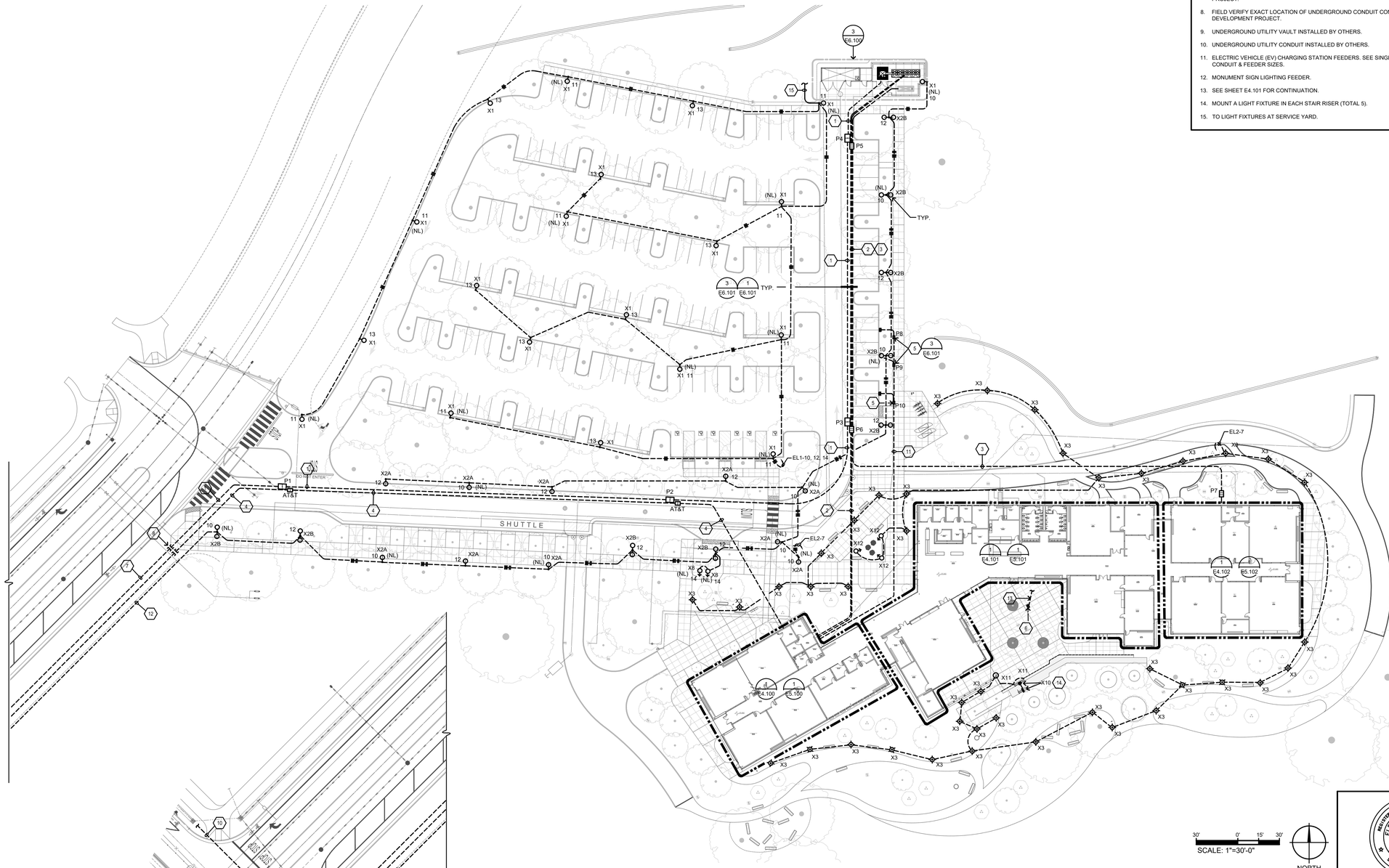
PANELBOARD SCHEDULES

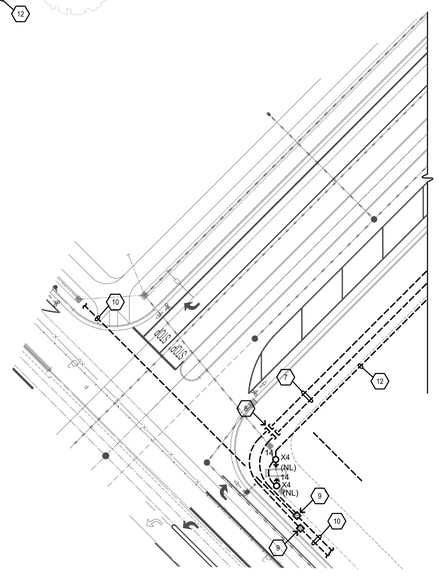
SHEET NUMBER

E1.102

SHEET NOTES

1. PG&E UNDERGROUND ELECTRICAL PRIMARY.
2. FEEDER TO DISTRIBUTION PANEL "DPH1" AND TO EMERGENCY PANEL "EP1". SEE SINGLE LINE DIAGRAM FOR FEEDER AND CONDUIT SIZE.
3. FEEDER TO DISTRIBUTION PANEL "DPH2", SEE SINGLE LINE DIAGRAM FOR FEEDER AND CONDUIT SIZE.
4. (2) 4" COMMUNICATIONS SERVICE CONDUIT.
5. FOR ELECTRIC VEHICLE CHARGERS (EV).
6. IN-GROUND POWER/COMMUNICATIONS BOX; VERIFY EXACT LOCATION WITH LANDSCAPE DRAWINGS.
7. UNDERGROUND UTILITY CONDUITS INSTALLED BY OTHERS UNDER STREET DEVELOPMENT PROJECT.
8. FIELD VERIFY EXACT LOCATION OF UNDERGROUND CONDUIT CONNECTIONS WITH STREET DEVELOPMENT PROJECT.
9. UNDERGROUND UTILITY VAULT INSTALLED BY OTHERS.
10. UNDERGROUND UTILITY CONDUIT INSTALLED BY OTHERS.
11. ELECTRIC VEHICLE (EV) CHARGING STATION FEEDERS. SEE SINGLE LINE DIAGRAM FOR CONDUIT & FEEDER SIZES.
12. MONUMENT SIGN LIGHTING FEEDER.
13. SEE SHEET E4.101 FOR CONTINUATION.
14. MOUNT A LIGHT FIXTURE IN EACH STAIR RISER (TOTAL 5).
15. TO LIGHT FIXTURES AT SERVICE YARD.





NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER.

B. ALL WIRING FOR SITE LIGHTING SHALL BE #10 AWG MINIMUM, U.O.N.

C. ALL UTILITIES (PG&E, AT&T AND CATV) ARE SHOWN IN SCHEMATIC FORM ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY ENGINEERED DRAWINGS PRIOR TO START OF CONSTRUCTION AND PROVIDE FACILITIES ACCORDINGLY.

REGISTERED PROFESSIONAL ENGINEER
ELDRIDGE O. BELL
No. E17789
EXP. 6/30/22
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

Project No. 20-237.00

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NEW COLLEGE CAMPUS

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

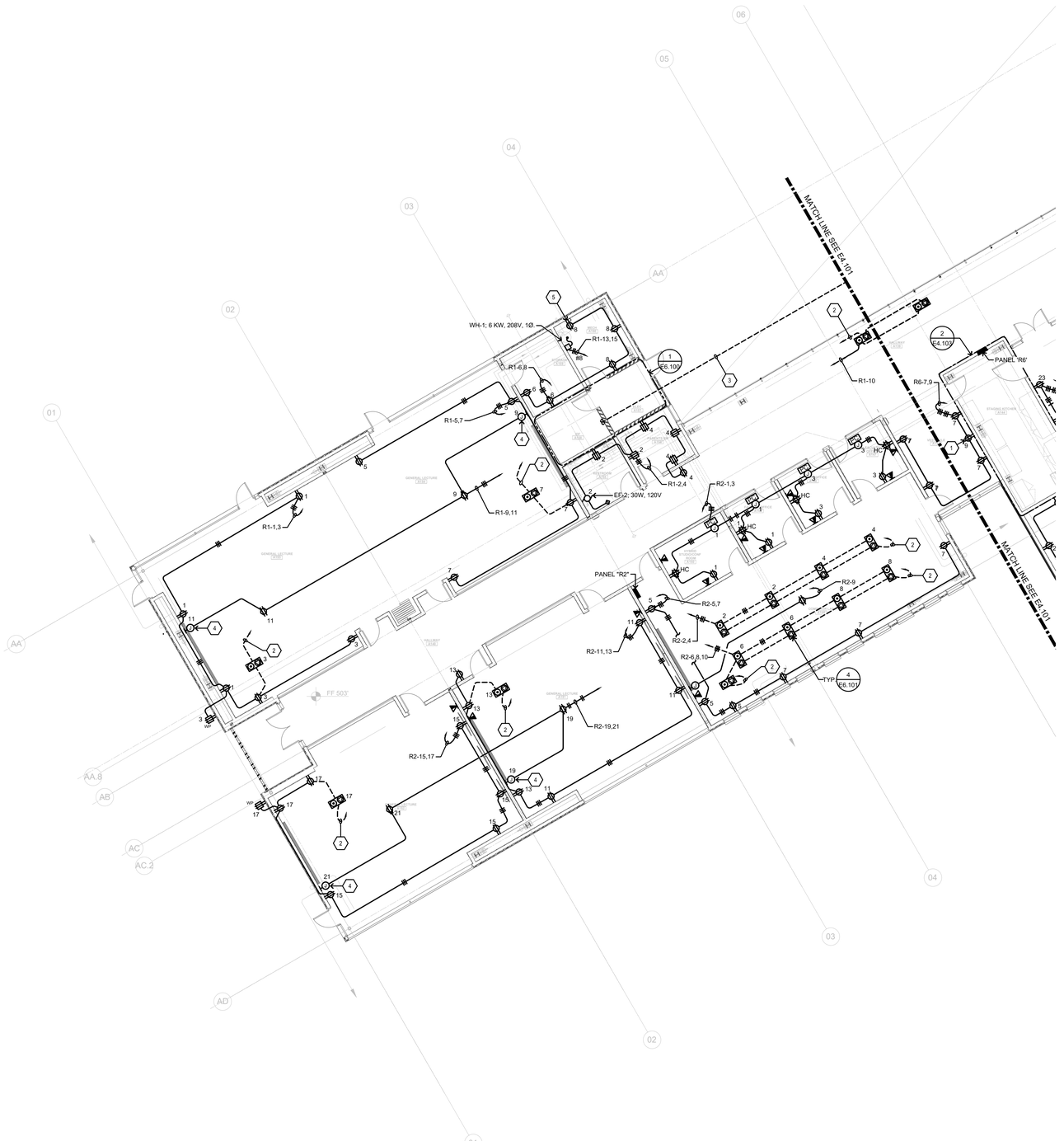
ELECTRICAL SITE PLAN

SHEET NUMBER

E2.100

SHEET NOTES

1. FOR FLAT SCREEN TV; COORDINATE HEIGHT WITH AV CONTRACTOR BEFORE ROUGH-IN.
2. 1½"C.O. TO IDF ROOM A158; SEE SHEET E4.100. COORDINATE CONDUIT TERMINATION POINT WITH LOW VOLTAGE SYSTEMS CONTRACTOR.
3. 1½"C.O. TO MDF ROOM A128; SEE SHEET E4.102. COORDINATE CONDUIT TERMINATION POINT WITH LOW VOLTAGE SYSTEMS CONTRACTOR.



FIRE RATED WALL LEGEND

1-HR FIRE RATED BARRIER
2-HR FIRE RATED BARRIER

8' 0' 2' 4' 6' 8'
SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

A. DATA OUTLETS SHOWN FOR REFERENCE ONLY. SEE "LV" SERIES DRAWINGS FOR EXACT REQUIREMENTS.

B. COORDINATE EXACT LOCATION OF POWER OUTLET FOR TV MONITORS WITH "AV" SERIES DRAWINGS BEFORE ROUGH-IN.

C. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ELECTRICAL RECEPTACLES WITH ARCHITECTURAL CASE WORK DRAWINGS AND ELEVATIONS.

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DSA APP NO. 01-119906
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PTN: 43-C4 FILE NO: N/A

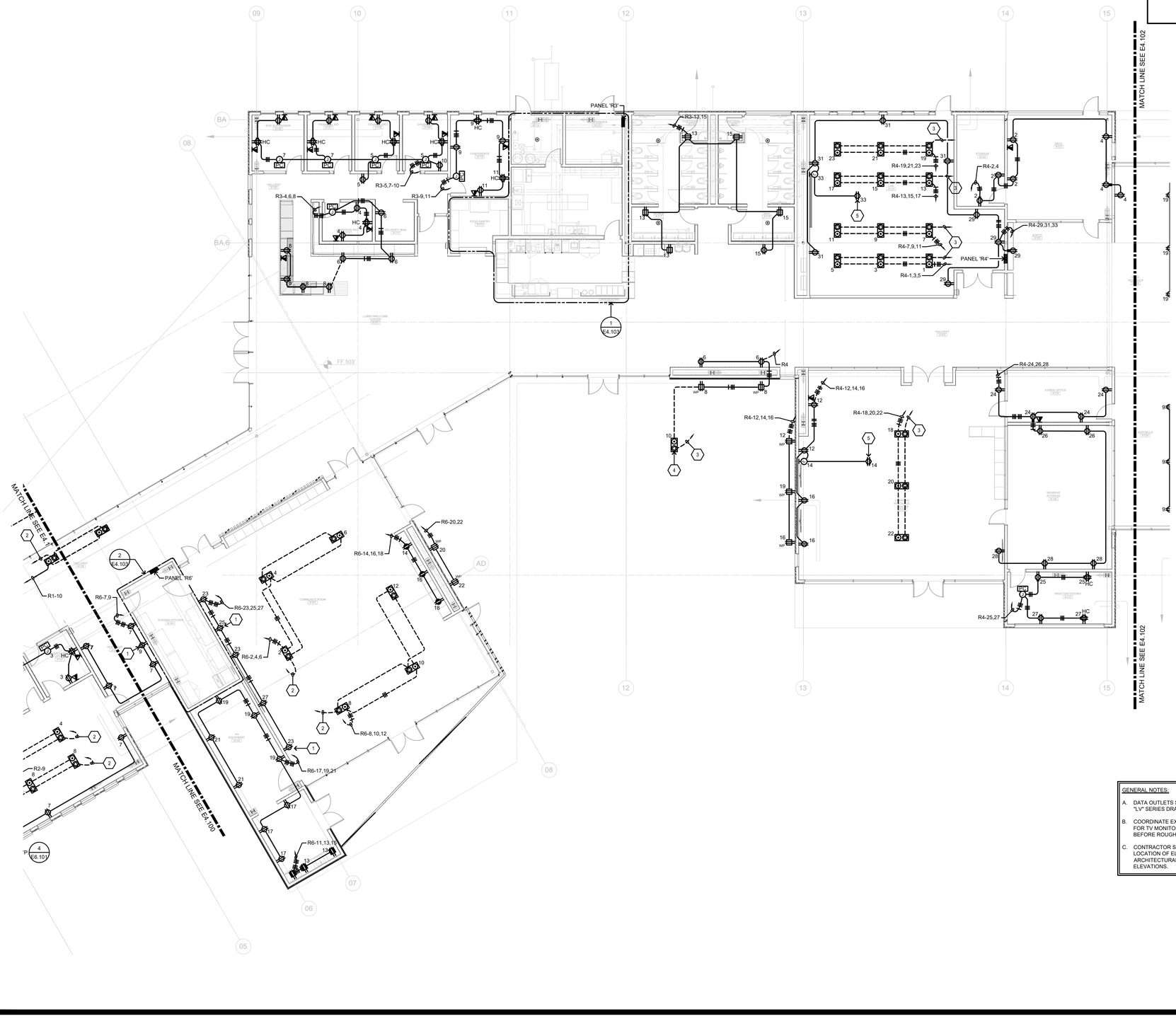
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
PARTIAL POWER PLAN - SECTOR A

SHEET NUMBER
E4.100

SHEET NOTES

1. FOR FLAT SCREEN TV; COORDINATE HEIGHT WITH AV CONTRACTOR BEFORE ROUGH-IN.
2. ½"C.O. TO IDF ROOM A158; SEE SHEET E4.100. COORDINATE CONDUIT TERMINATION POINT WITH LOW VOLTAGE SYSTEMS CONTRACTOR.
3. ½"C.O. TO MDF ROOM A128; SEE SHEET E4.102. COORDINATE CONDUIT TERMINATION POINT WITH LOW VOLTAGE SYSTEMS CONTRACTOR.
4. SEE LANDSCAPE DRAWINGS FOR EXACT LOCATION.
5. FOR CEILING MOUNTED PROJECT; FIELD VERIFY EXACT LOCATION BEFORE ROUGH-IN.



FIRE RATED WALL LEGEND

1-HR FIRE RATED BARRIER
2-HR FIRE RATED BARRIER

SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

A. DATA OUTLETS SHOWN FOR REFERENCE ONLY. SEE "LV" SERIES DRAWINGS FOR EXACT REQUIREMENTS.

B. COORDINATE EXACT LOCATION OF POWER OUTLET FOR TV MONITORS WITH "AV" SERIES DRAWINGS BEFORE ROUGH-IN.

C. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ELECTRICAL RECEPTACLES WITH ARCHITECTURAL CASE WORK DRAWINGS AND ELEVATIONS.

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DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

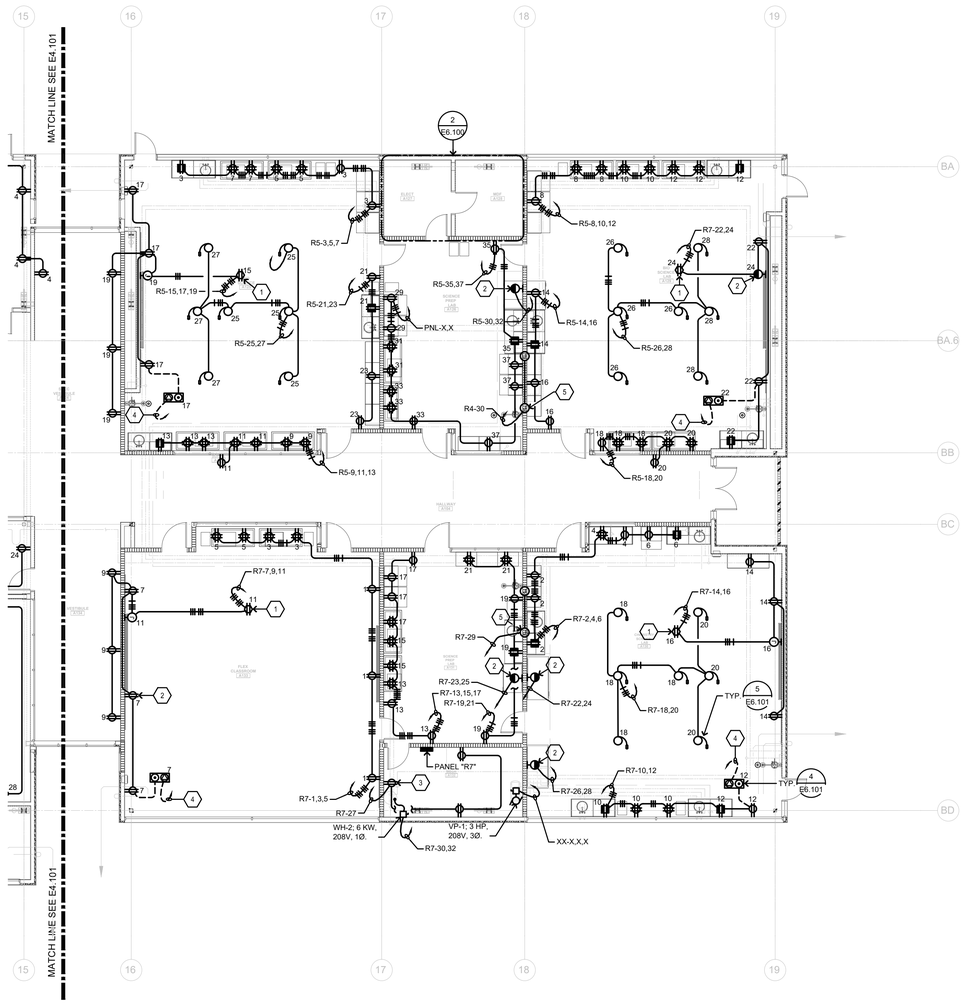
PARTIAL POWER PLAN - SECTOR B

SHEET NUMBER

E4.101

SHEET NOTES

1. FOR CEILING MOUNTED PROJECTOR; COORDINATE HEIGHT WITH AV CONTRACTOR BEFORE ROUGH-IN.
2. FUME HOOD.
3. CIRCULATION PUMP.
4. ¾"C.O. TO MDF ROOM A128; COORDINATE EXACT TERMINATION LOCATION WITH LOW VOLTAGE CONTRACTOR.
5. FOR FIRE SMOKE DAMPER; COORDINATE INSTALLATION WITH MECHANICAL AND FIRE ALARM CONTRACTORS.



FIRE RATED WALL LEGEND

1-HR FIRE RATED BARRIER
2-HR FIRE RATED BARRIER

SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

A. DATA OUTLETS SHOWN FOR REFERENCE ONLY. SEE "LV" SERIES DRAWINGS FOR EXACT REQUIREMENTS.

B. COORDINATE EXACT LOCATION OF POWER OUTLET FOR TV MONITORS WITH "AV" SERIES DRAWINGS BEFORE ROUGH-IN.

C. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ELECTRICAL RECEPTACLES WITH ARCHITECTURAL CASE WORK DRAWINGS AND ELEVATIONS.

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DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

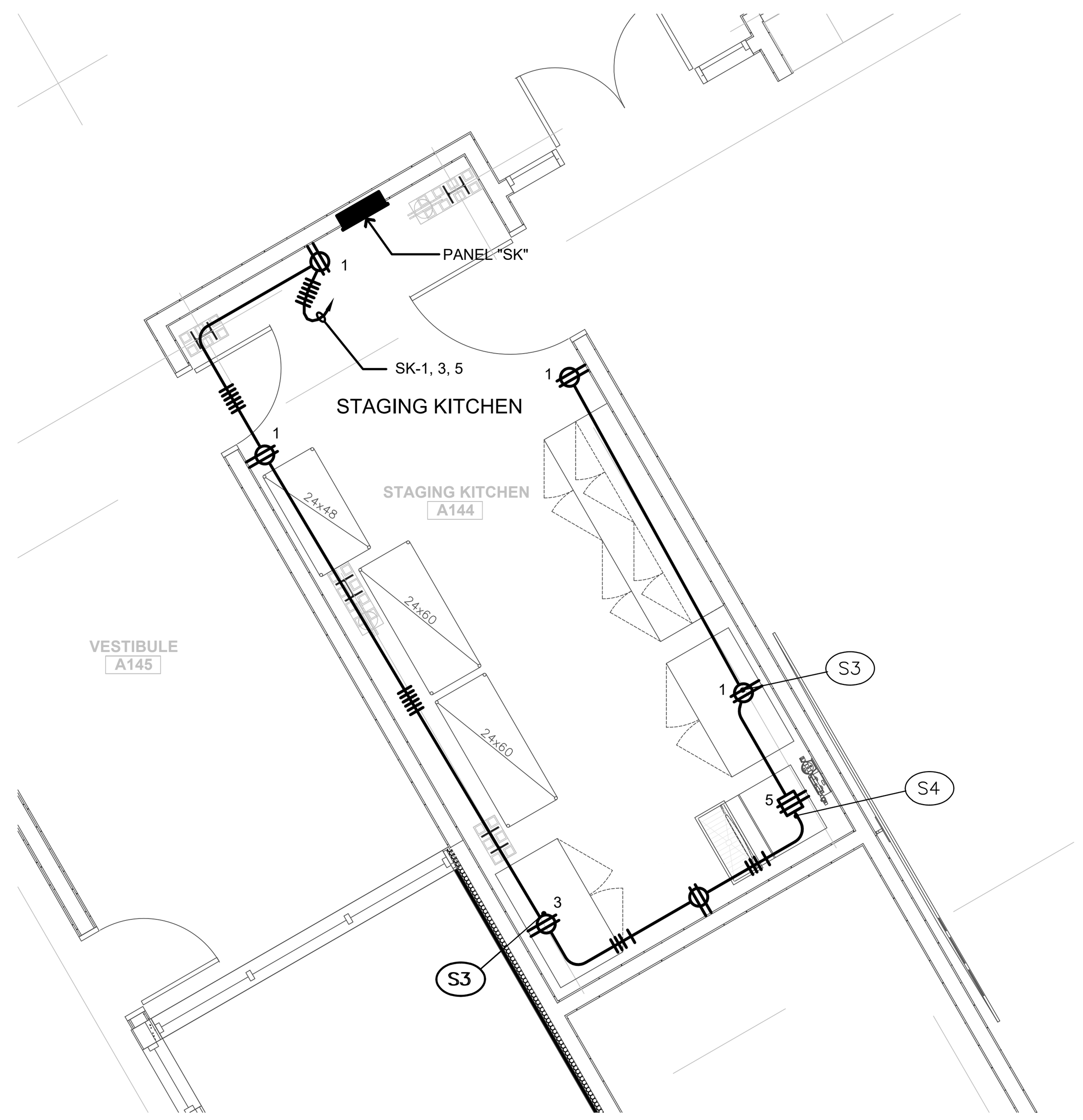
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

PARTIAL POWER PLAN - SECTOR C

SHEET NUMBER

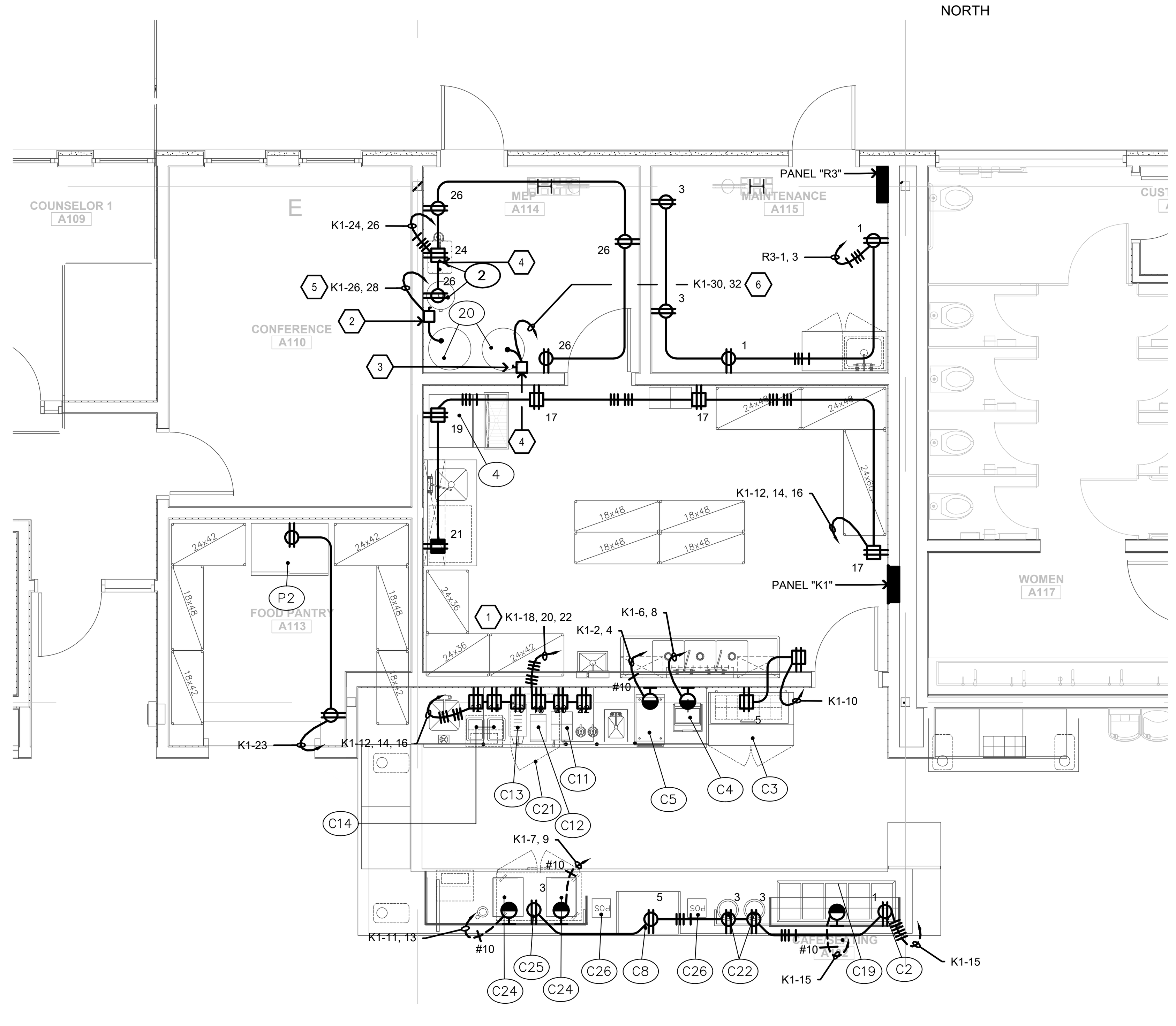
E4.102



2 STAGING KITCHEN ELECTRICAL PLAN

SCALE: 1/4"=1'-0"

NORTH



1 CAFE ELECTRICAL PLAN

SCALE: 1/4"=1'-0"

NORTH

SHEET NOTES

1. FOR CIRCUIT #20 (COFFEE MACHINE), USE #10 WIRE.
2. ELECTRIC WATER HEATER WH-3; 6KW, 208V, 1Ø NON-SIMULTANEOUS ELEMENTS.
3. ELECTRICAL WATER HEATER WH-4; 12KW, 208V, 1Ø SIMULTANEOUS ELEMENTS.
4. CIRCULATING RAMP; 117W, 120V.
5. 3/4" C. 3 #8 & 1 #10 GND.
6. 1 1/4 " C. 3 #4 & 1 #8 GND.

EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION	MFG	MODEL	BY	ELECTRICAL				
						VOLTS	PHASE	AMPS	CONN	HT
		BOH EQUIPMENT								
2	1	RO WATER FILTER SYSTEM & 20 GAL TANK	EVERPURE	EV997700	KEC	120-240	1	15.0	PLUG	+84"
4	1	ICE MACHINE - S/C	MANITOWOC	IYT0450A	KEC	115	1	11.9	PLUG	+72"
20	2	WATER HEATER	TBD	TBD	GC	VERIFY REQUIREMENTS				
		CAFE EQUIPMENT								
C2	1	HEAT LAMP	HATCO	GRNM	KEC	115	1	15.0	JBOX	CAB
C3	1	REFRIGERATED TABLE W/PAN OPENINGS	TRUE	TSU-48-12-HC	KEC	115	1	5.8	PLUG	+15"
C4	1	PANINI GRILL	EQUIPEX	PANINI	KEC	208/240	1	14.0	PLUG	+48"
C5	1	RAPID COOK OVEN	TURBOCHEF	SOTA	KEC	208/240	1	30.0	PLUG	+48"
C8	1	REFRIGERATED GRAB 'N GO DISPLAY UNIT - S/C	STRUCTURAL	CO3324R-CH	KEC	115	1	12.0	PLUG	CAB
C11	1	COFFEE MACHINE	FETCO	CBS-51H-15	KEC	115	1	15.8	PLUG	+48"
C12	1	COFFEE GRINDER	FETCO	GR-2.2	KEC	115	1	5.7	PLUG	+48"
C13	1	HOT WATER DISPENSER	BUNN	H5X	KEC	115	1	15.4	PLUG	+48"
C14	2	BLENDER	BLENDTEC	825	KEC	115	1	15.0	PLUG	+48"
C19	1	5-WELL DROP-IN FOOD WARMER	ALTO-SHAAM	500-HWI/D6	KEC	115	1	25.0	PLUG	CAB
C21	1	UNDERCOUNTER FREEZER - S/C	TRUE	TUC-27F-LP-HC	KEC	115	1	2.3	PLUG	CAB
C22	2	DROP-IN SOUP WELL	ALTO-SHAAM	1100-RW	KEC	115	1	4.2	PLUG	CAB
C24	2	ESPRESSO MACHINE	SCHAERER	ARTS PLUG	KEC	208	1	30.0	JBOX	CAB
C25	1	UNDERCOUNTER REFRIGERATOR - S/C	TRUE	TUC-48-LP-HC	KEC	115	1	3.0	PLUG	CAB
		FOOD PANTRY EQUIPMENT								
P2	1	2-SECTION SLIDING GLASS DOOR REFRIGERATOR - S/C	TRUE	GDM-37-HC-LD	KEC	115	1	6.5	PLUG	+15"
		STAGING KITCHEN EQUIPMENT								
S3	2	2-DOOR REACH-IN REFRIGERATOR	TRUE	T-49-HC	KEC	115	1	5.4	PLUG	+15"
S4	1	ICE MACHINE & BIN	MANITOWOC	IYT0450A	KEC	115	1	11.9	PLUG	+72"

GENERAL NOTES:

A. COORDINATE EXACT LOCATION OF ELECTRICAL RECEPTACLES WITH KITCHEN CONSULTANT DRAWINGS
B. CONTRACTOR SHALL FIELD VERIFY PLUG/RECEPTACLES REQUIREMENTS BEFORE ROUGH-IN.

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DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

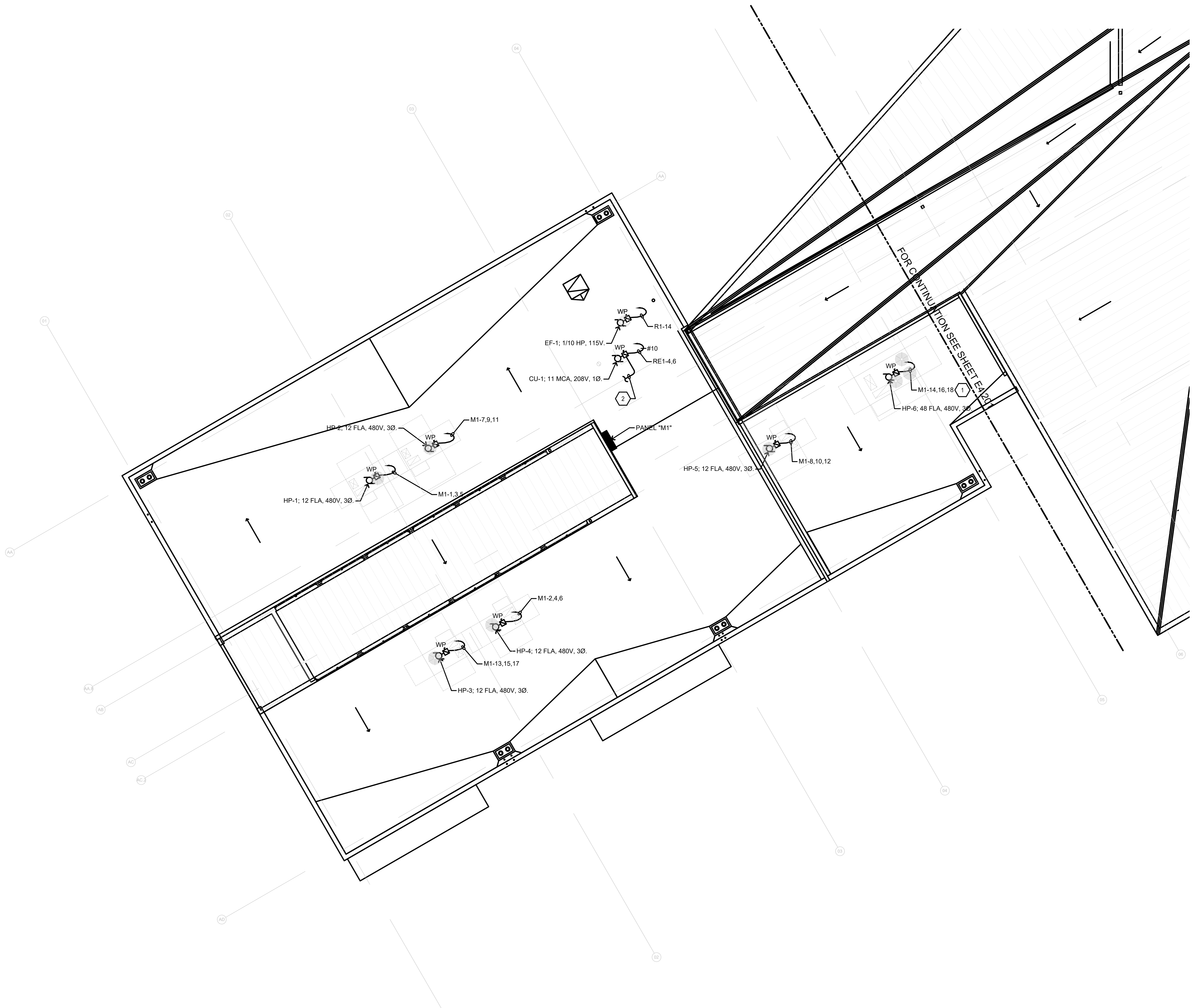
CAFE & STAGING KITCHEN POWER PLAN

SHEET NUMBER

E4.103

SHEET NOTES

1. 1"C., 3 #6 & 1 #10 GND.
2. FOR FC-1 POWER CONNECTION; SEE 1/E6.100 FOR CONTINUATION.



8' 0' 2' 4' 6' 8'
SCALE: 1/8"=1'-0"

NORTH

REGISTERED PROFESSIONAL ENGINEER
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No. E17789
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DRAWING SCALE:	AS NOTED
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DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

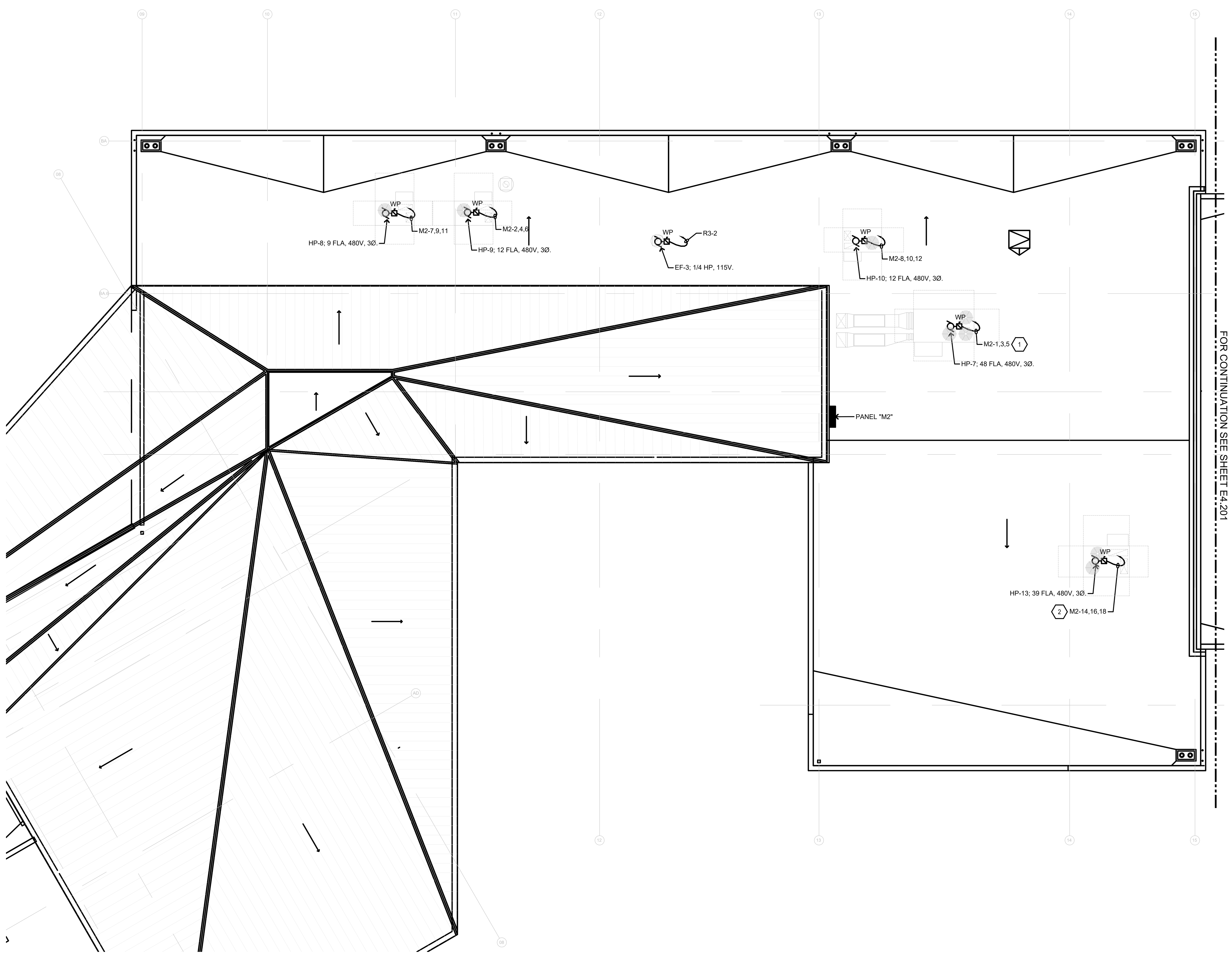
PARTIAL POWER ROOF PLAN - SECTOR A

SHEET NUMBER

E4.200

SHEET NOTES

1. 1"C. 3 #6 & 1 #10 GND.
2. 3/4"C. 3 #8 & 1 #10 GND.



SCALE: 1/8"=1'-0"

NORTH

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DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

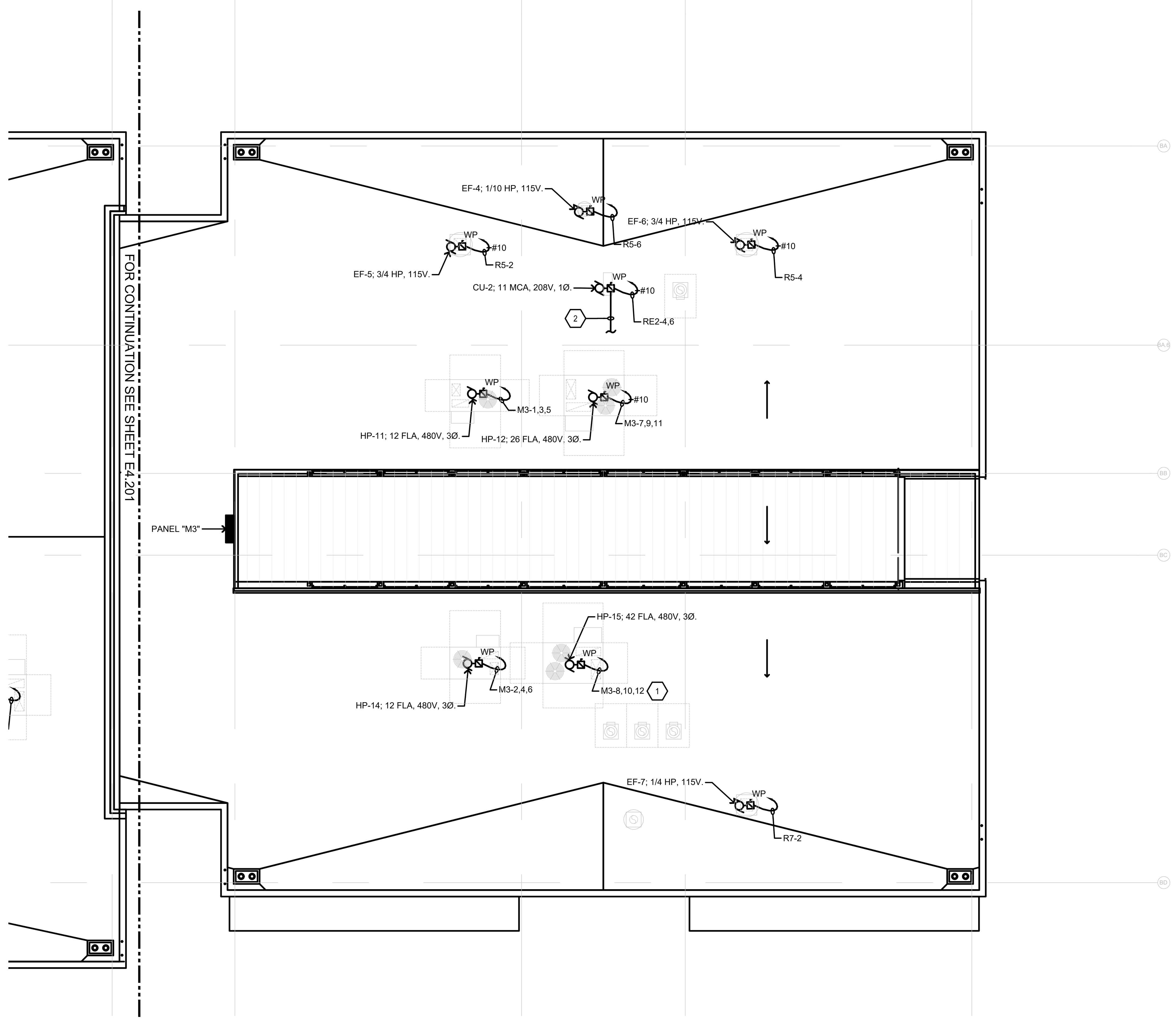
PARTIAL POWER ROOF PLAN - SECTOR B

SHEET NUMBER

E4.201

SHEET NOTES

1. 1"C, 3 #6 & 1 #10 GND.
2. TO FC-2; SEE 2/E6.100.



SCALE: 1/8"=1'-0"

NORTH

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DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

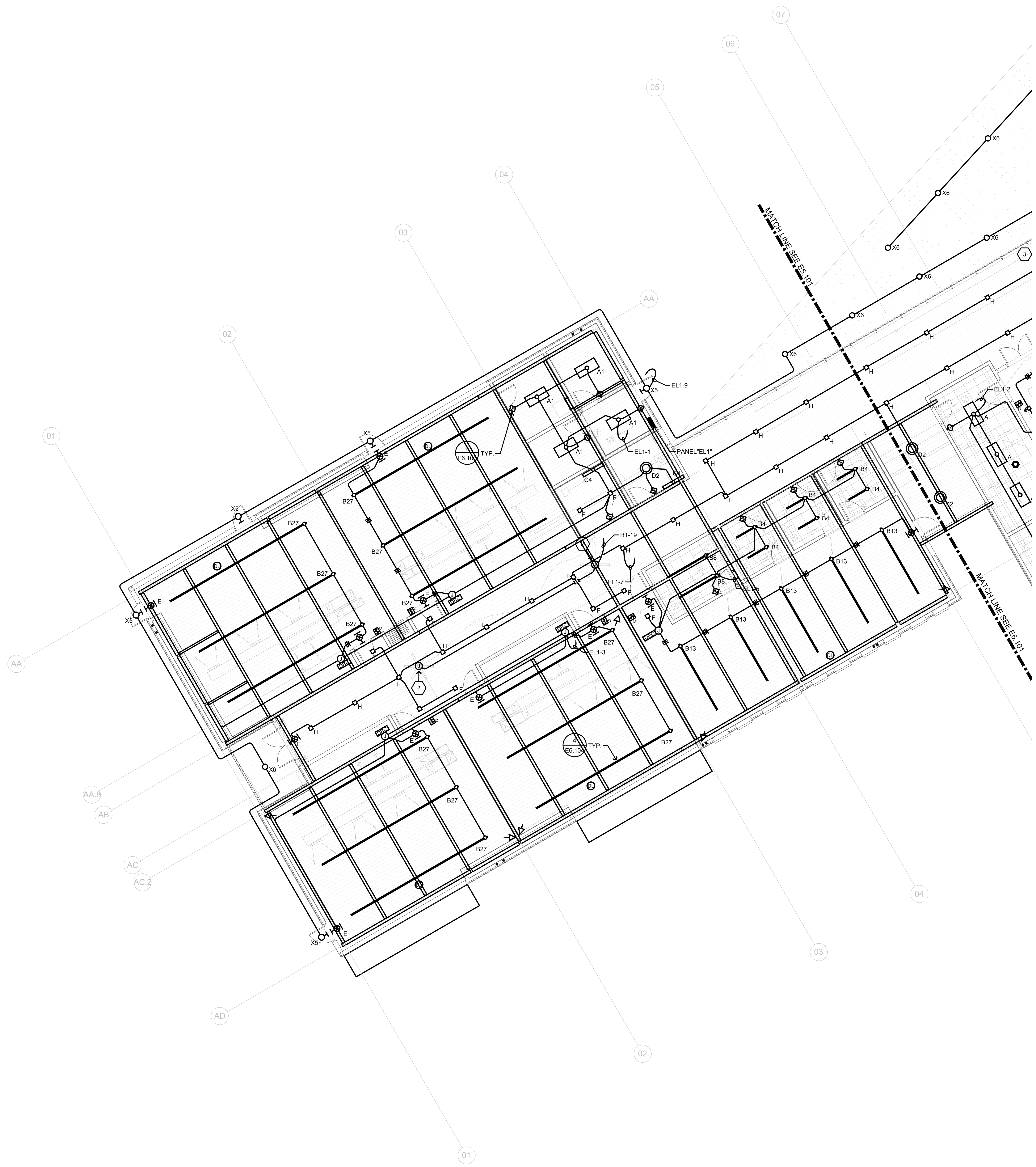
PARTIAL POWER ROOF PLAN - SECTOR C

SHEET NUMBER

E4.202

SHEET NOTES

1. MOUNT PADDLE FAN CONTROLS AND TRACK LIGHTING DIMMER IN RECESSED LOCKABLE ENCLOSURE.
2. PADDLE FAN, 35W, 120V.



DAYLIT ZONES LEGEND

- PRIMARY DAYLIT ZONE
- SECONDARY DAYLIT ZONE

GENERAL NOTE:

SEE SHEET E__ FOR LIGHTING CONTROLS AND SEQUENCE OF OPERATION.

SCALE: 1/8"=1'-0"

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FEBRUARY 4, 2022

SHEET TITLE

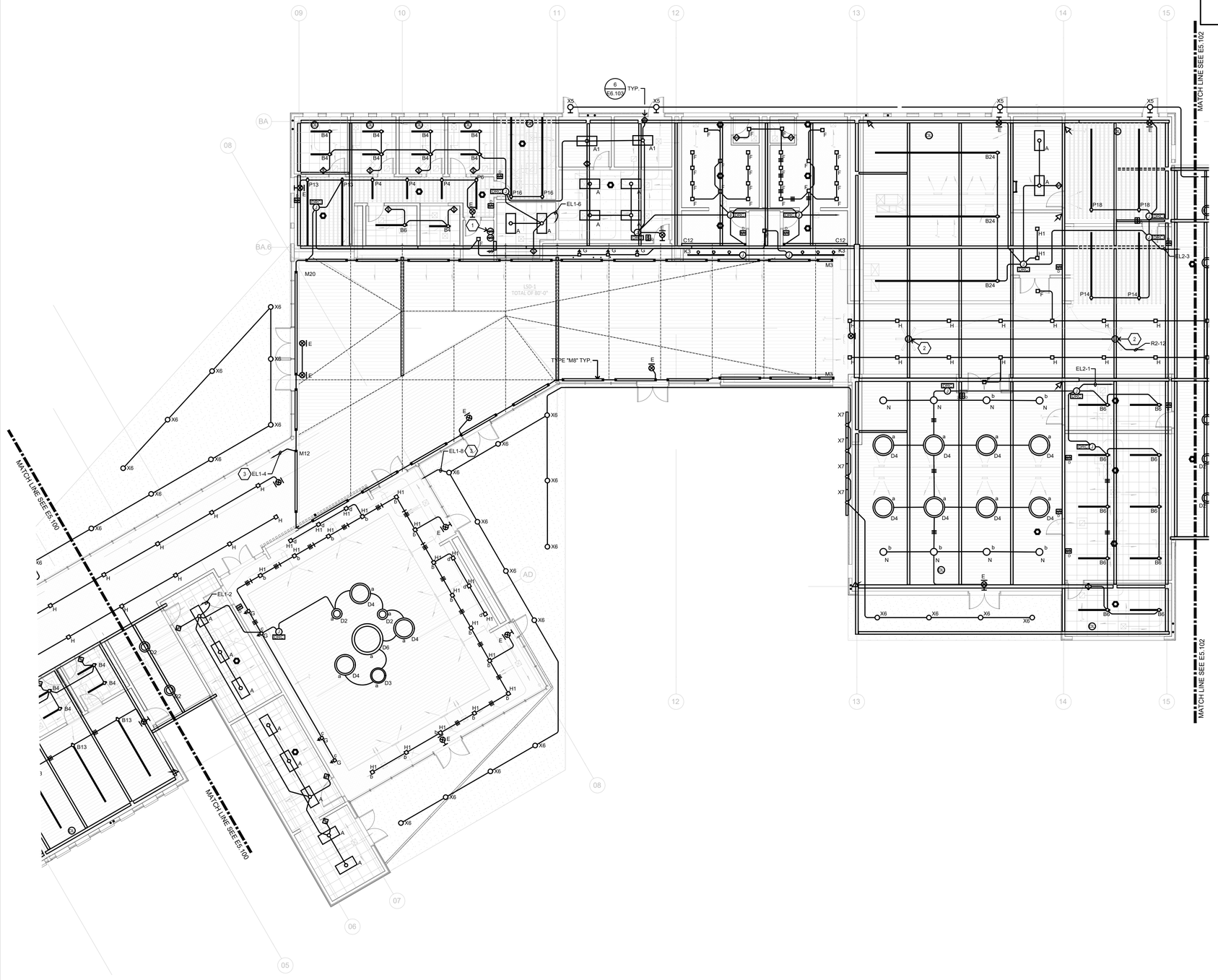
PARTIAL LIGHTING PLAN - SECTOR A

SHEET NUMBER

E5.100

SHEET NOTES

1. MOUNT PADDLE FAN CONTROLS AND TRACK LIGHTING DIMMER IN RECESSED LOCKABLE ENCLOSURE.
2. PADDLE FAN, 35W, 120V.
3. VIA LIGHTING CONTROL PANEL "LCP1" LOCATED IN ELECTRICAL ROOM A157.



DAYLIT ZONES LEGEND

- PRIMARY DAYLIT ZONE
- SECONDARY DAYLIT ZONE

GENERAL NOTE:

SEE SHEET E_._ FOR LIGHTING CONTROLS AND SEQUENCE OF OPERATION.

REGISTERED PROFESSIONAL ENGINEER
No. E17789
EXP. 6/30/22
ELDRIDGE O. BELL
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

Project No. 20-237.00

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8" 0" 2" 4" 6" 8"
SCALE: 1/8"=1'-0"

NORTH

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LICENSED ARCHITECT
AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023
STATE OF CALIFORNIA

SIGNED: MONTH DAY, 2021

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

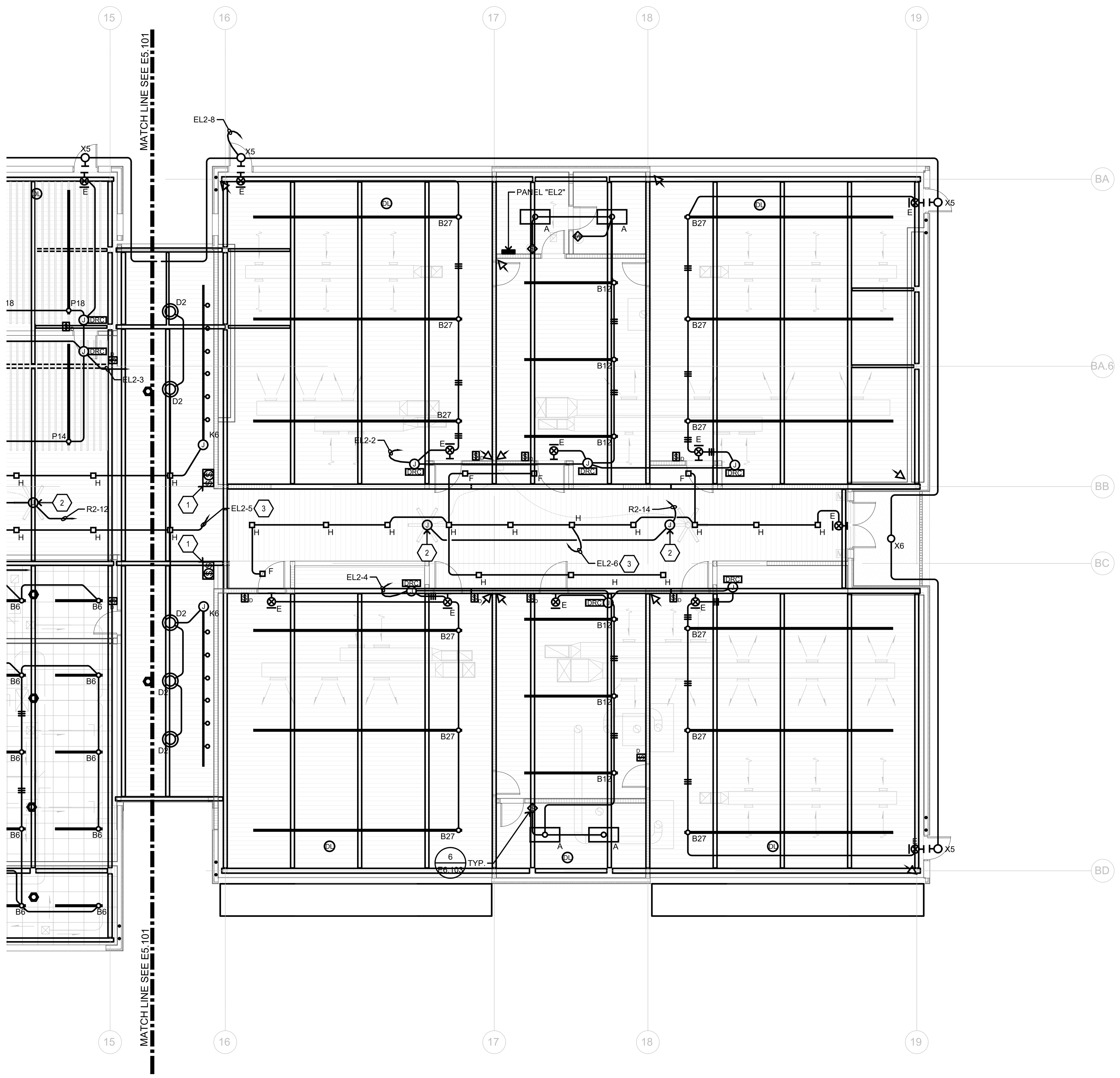
PARTIAL LIGHTING PLAN - SECTOR B

SHEET NUMBER

E5.101

SHEET NOTES

1. MOUNT PADDLE FAN CONTROLS AND TRACK LIGHTING DIMMER IN RECESSED LOCKABLE ENCLOSURE.
2. PADDLE FAN, 35W, 120V.
3. VIA LIGHTING CONTROL PANEL "LCP2" LOCATED IN ELECTRICAL ROOM A127.



DAYLIT ZONES LEGEND

- PRIMARY DAYLIT ZONE
- SECONDARY DAYLIT ZONE

GENERAL NOTE:
SEE SHEET E__ FOR LIGHTING CONTROLS AND SEQUENCE OF OPERATION.

SCALE: 1/8"=1'-0"

NORTH

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ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

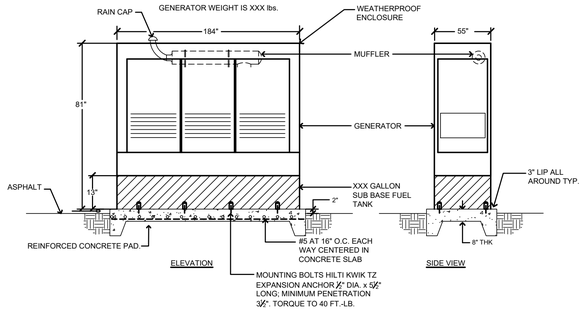
FEBRUARY 4, 2022

SHEET TITLE

PARTIAL LIGHTING PLAN - SECTOR C

SHEET NUMBER

E5.102



GENERATOR DETAIL NOTES:

1. VERIFY EXACT DIMENSIONS AND CONDUIT STUB-UP LOCATIONS WITH MANUFACTURER'S SHOP DRAWINGS PRIOR TO START OF WORK.
2. GENERATOR SHALL COMPLY WITH MONTEREY BAY AIR RESOURCE DISTRICT (MBARD) REGULATIONS & SHALL HAVE MBARD PERMIT PRIOR TO PURCHASE AND INSTALLATION OF GENERATOR.
3. ALL CONSTRUCTION NOT SPECIFICALLY DETAILED SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE (CBC) AND ANY LOCAL CODE REQUIREMENTS. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED.
4. CHECK ALL DIMENSIONS IN RELATION TO SITE CONDITIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL COORDINATE WORK OF ALL TRADES. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE PROCEEDING WITH WORK. DURING CONSTRUCTION PHASE THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE BUILDING AND PERSONNEL. PROVIDE ADEQUATE SHORING AND/OR BRACING IN ACCORDANCE WITH APPROPRIATE LOCAL, STATE AND NATIONAL SAFETY CODES.
5. FOOTINGS SHALL BE AS DETAILED ON THE DRAWINGS. THE FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF (DL+LL) PLUS ONE THIRD INCREASE FOR WIND AND SEISMIC LOADS. FOOTINGS SHALL BEAR 12" MIN. INTO FIRM UNDISTURBED ORIGINAL SOIL OR ENGINEERED FILL.
6. CONCRETE SHALL BE PROPORTIONED TO GIVE A MINIMUM OF 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI UNLESS INDICATED OTHERWISE. THE SLUMP SHALL BE THE MINIMUM CONSISTENT WITH PLACING CONDITIONS BUT SHALL NOT EXCEED 4 1/2".
7. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM STANDARD SPECIFICATION A615-68 GRADE 60. #4 AND SMALLER BARS MAY BE GRADE 40. BARS SHALL BE PLACED IN AS LONG LENGTHS AS POSSIBLE AND SHALL LAP 60 DIAMETER AT SPLICES UNLESS OTHERWISE SHOWN OR NOTED ON PLANS. SPLICES SHALL BE STAGGERED AND BARS MAY BE WIRED TOGETHER AT SPLICES. ALL STEEL SHALL BE RIGIDLY HELD IN PLACE WITH APPROVED METAL DEVICES.

BAR COVERAGE (FACE OF BAR TO FACE OF CONCRETE) SHALL BE AS FOLLOWS:

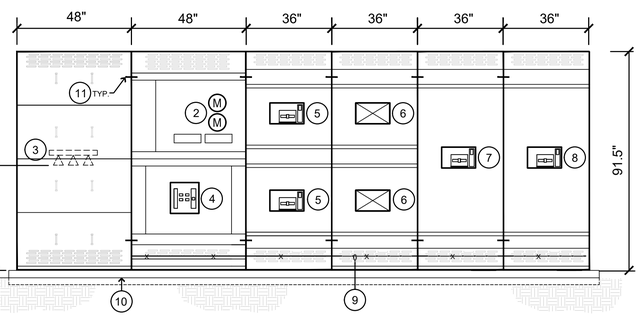
CONCRETE SLAB ON GRADE ..... 1-1/2" MIN.
CONCRETE SURFACE AGAINST EARTH ..... 3" MIN.
WHEN POURED AGAINST FORMS ..... 2" MIN.
ALL OTHERS..... SEE DETAILS.

5 GENERATOR MOUNTING DETAIL

NO SCALE

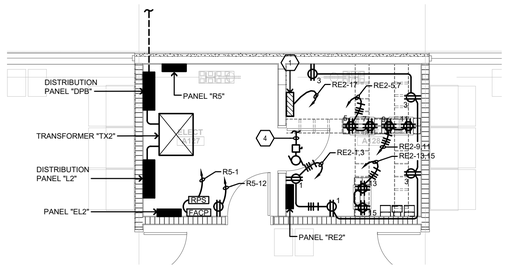
SHEET NOTES

1. FOR ACCESS CONTROL PANEL; FIELD VERIFY EXACT LOCATION AND REQUIREMENTS BEFORE ROUGH-IN.
2. CONNECTED TO ROOF MOUNTED UNIT CU-1; SEE SHEET E4-200 FOR CONTINUATION.
3. FIRE ALARM REMOTE POWER SUPPLY "RPS-1".
4. CONNECTED TO ROOF MOUNTED UNIT CU-2; SEE SHEET E4-202 FOR CONTINUATION.
5. SEE ELECTRICAL SITE PLAN E2.100 FOR CONTINUATION.



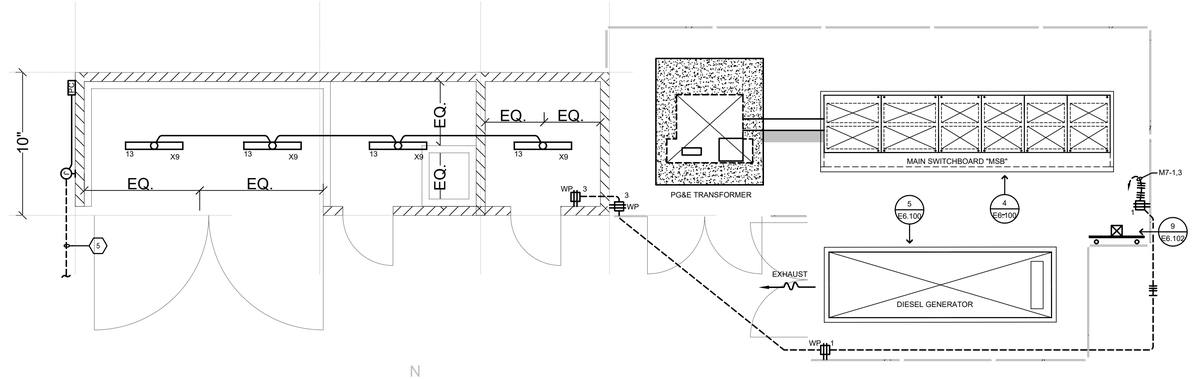
4 MAIN SWITCHBOARD ELEVATION

SCALE: 1/2" = 1'-0"



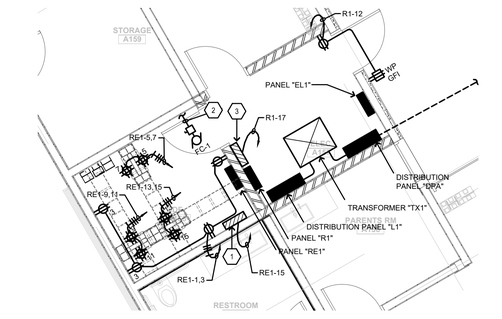
2 ELEC/MDF ROOMS A127/A128

SCALE: 1/4" = 1'-0"



3 ELECTRIC SERVICE YARD DETAIL

SCALE: 1/4" = 1'-0"



1 ELEC/IDF ROOMS A157/A158

SCALE: 1/4" = 1'-0"

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DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY: CADD
DRAWING SCALE: AS NOTED
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E6.100

REGISTERED PROFESSIONAL ENGINEER
ELDRIDGE O. BELL
No. E17789
EXP. 6/30/22
ELECTRICAL
STATE OF CALIFORNIA

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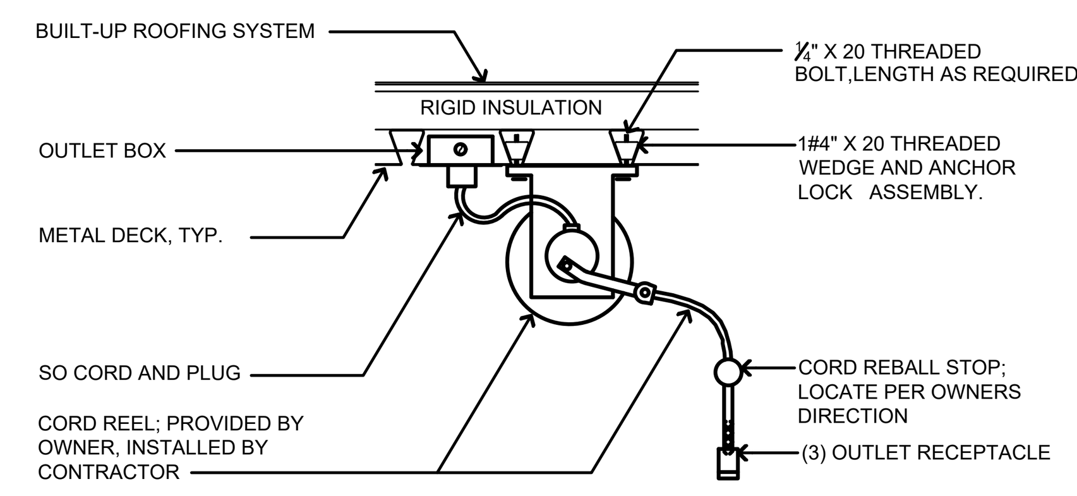
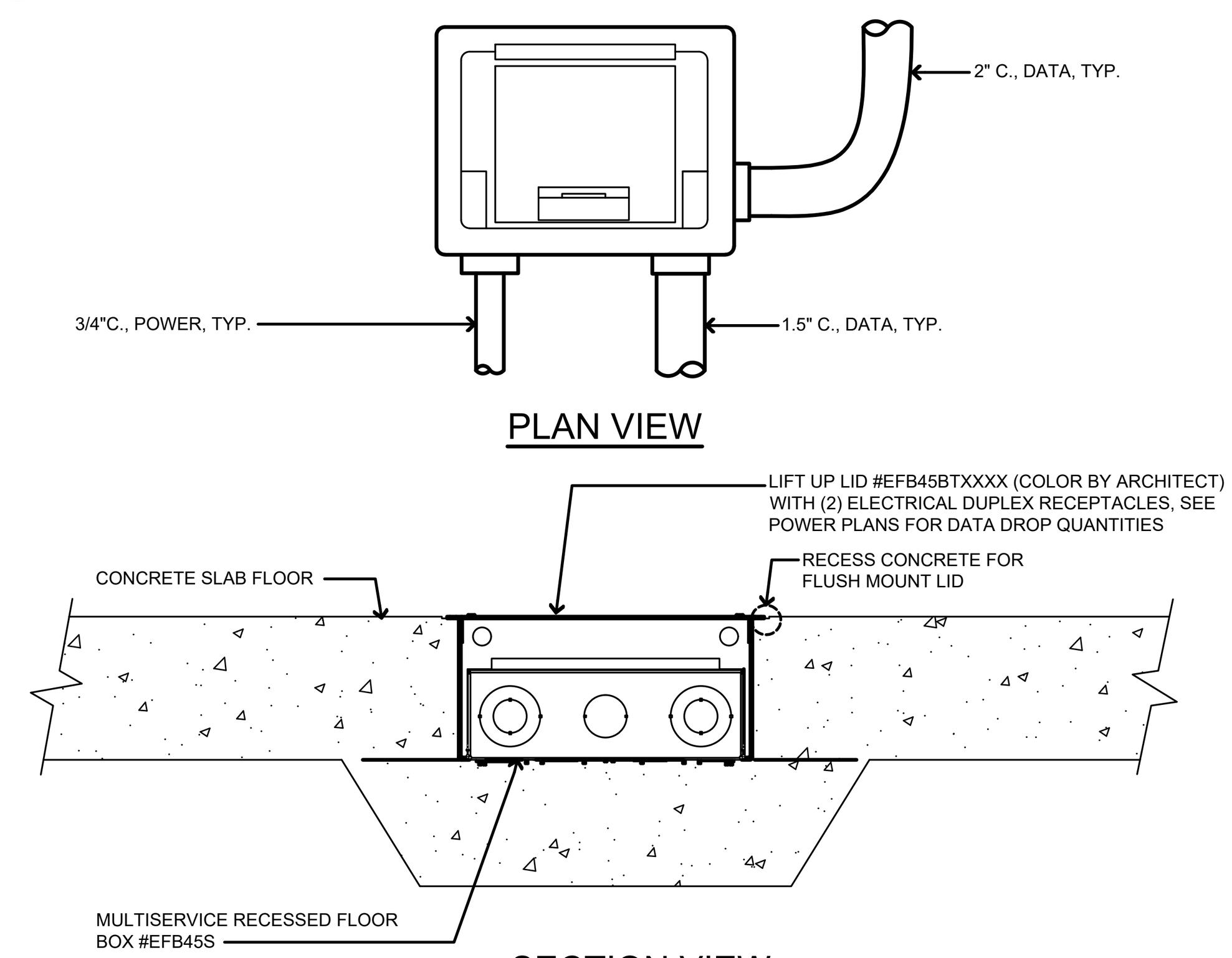
PULLBOX SCHEDULE

DWG ID.	DESCRIPTION	MFGR	LABEL
P1, P2, P3, P4	3' x 5' x 30" DEEP ELECTRICAL VAULT, HEAVY DUTY REINFORCE CONCRETE BOX, 2 PIECE STEEL CHECKERED PLATE, H/20 LOADING, BOLT DOWN.	CHRISTY T95	ELECTRICAL
P5, P6, P7	30" x 48" HIGH DENSITY REINFORCED CONCRETE BOX, 3 PIECE STEEL CHECKERED PLATE, H/20 LOADING, BOLT DOWN.	CHRISTY B3048	ELECTRICAL
P8, P9, P10	17" x 30" HIGH DENSITY REINFORCED CONCRETE BOX, AND CONCRETE LID.	CHRISTY N36	ELECTRICAL
LIGHTING BOXES	12" x 22" HIGH DENSITY REINFORCED CONCRETE BOX, AND CONCRETE LID.	CHRISTY N16	LIGHTING
AT&T	24" x 36" HIGH DENSITY REINFORCED CONCRETE BOX, 2 PIECE STEEL CHECKERED PLATE, H/20 LOADING, BOLT DOWN.	CHRISTY B2436	AT&T
CATV	24" x 36" HIGH DENSITY REINFORCED CONCRETE BOX, 2 PIECE STEEL CHECKERED PLATE, H/20 LOADING, BOLT DOWN.	CHRISTY B2436	CATV

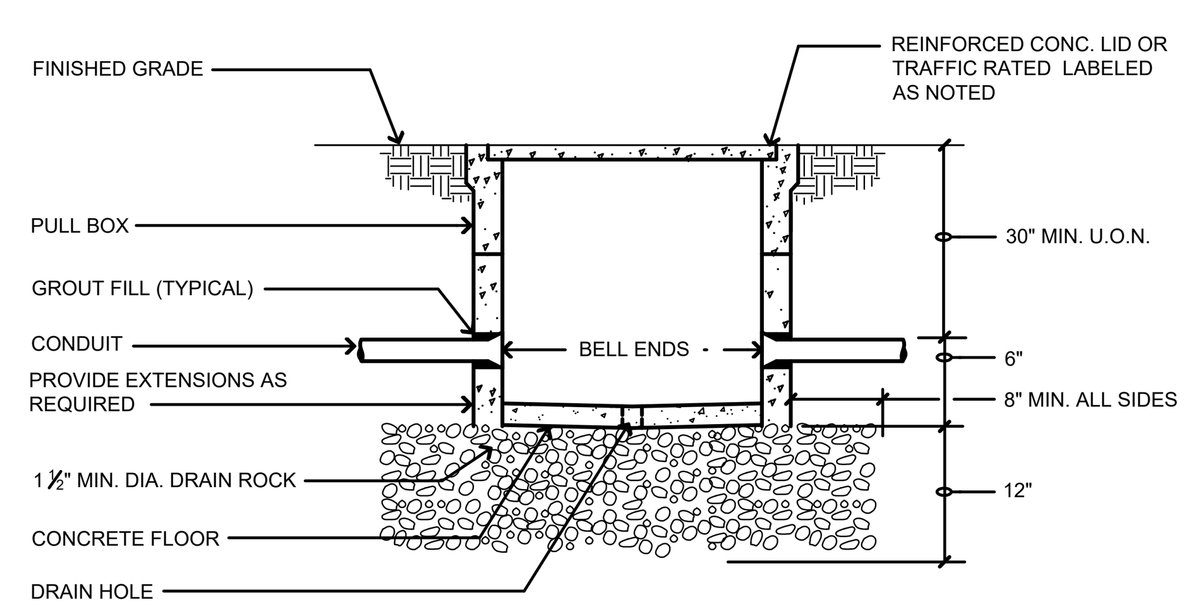


7 CORD REEL DETAIL
NO SCALE



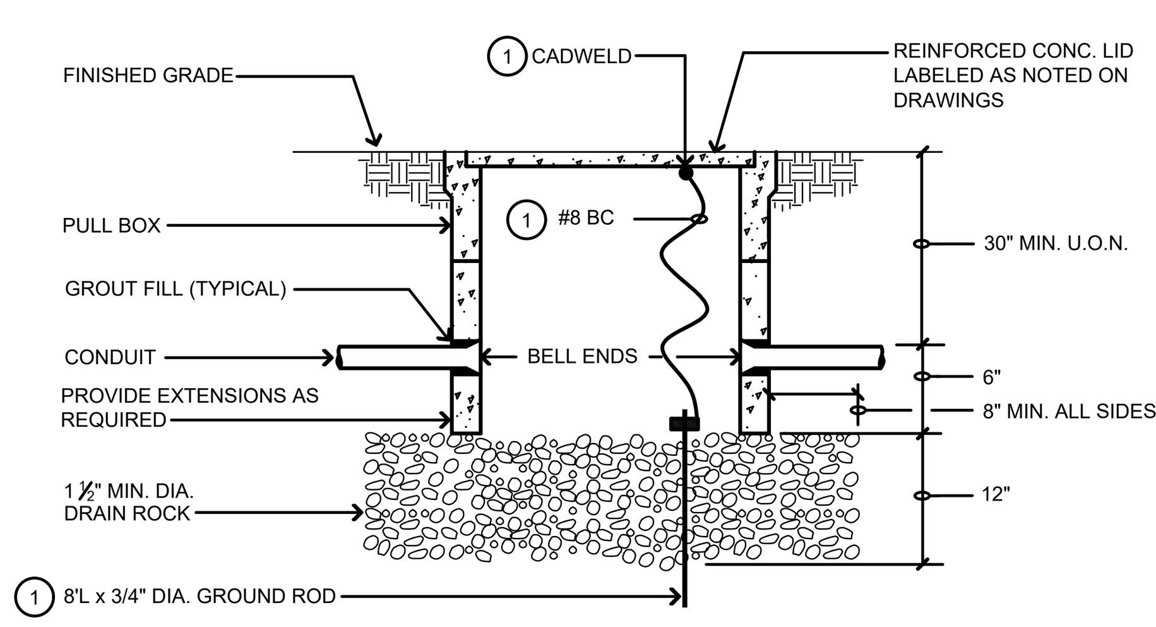
NOTES:
1. ALL PART #'S SHOWN ARE LEGRAND.
2. CONDUITS IN AND OUT OF FLOOR BOXES SHALL BE INSTALLED IN CONCRETE SLAB. COORDINATE INSTALLATION WITH STRUCTURAL DRAWINGS.

6 FLOOR OUTLET MOUNTING DETAIL - CONC.
NO SCALE

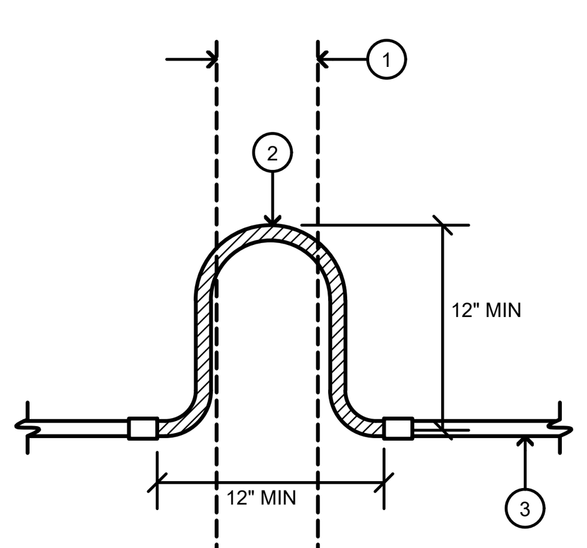


5 PULLBOX DETAIL - LOW VOLTAGE SYSTEMS
NO SCALE CLOSED BOTTOM

DETAIL NOTE:
1. FOR BOXES WITH METAL LIDS ONLY, PROVIDE GROUND ROD W/BC CABLE. PROVIDE ENOUGH SLACK TO ALLOW FOR REMOVAL OF LID (120/208 & 277/480V ONLY)

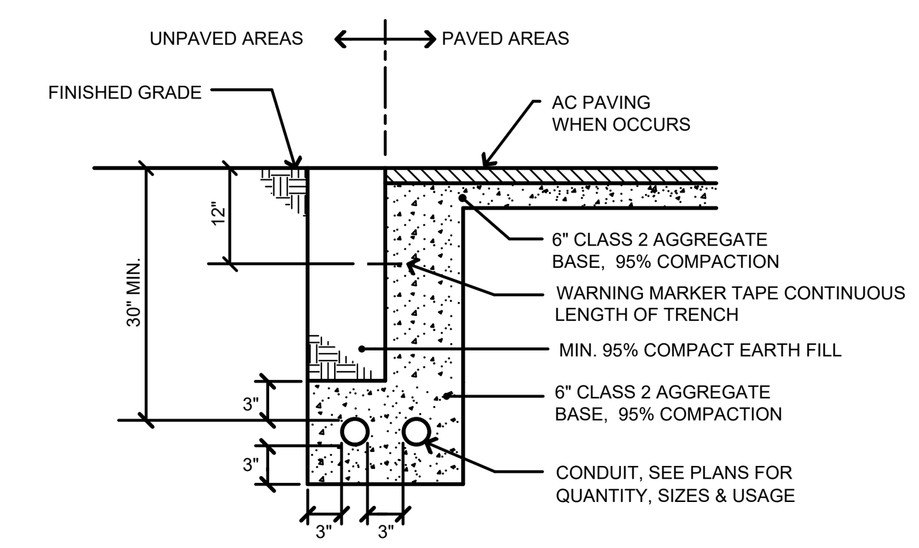


4 PULLBOX DETAIL - POWER
NO SCALE



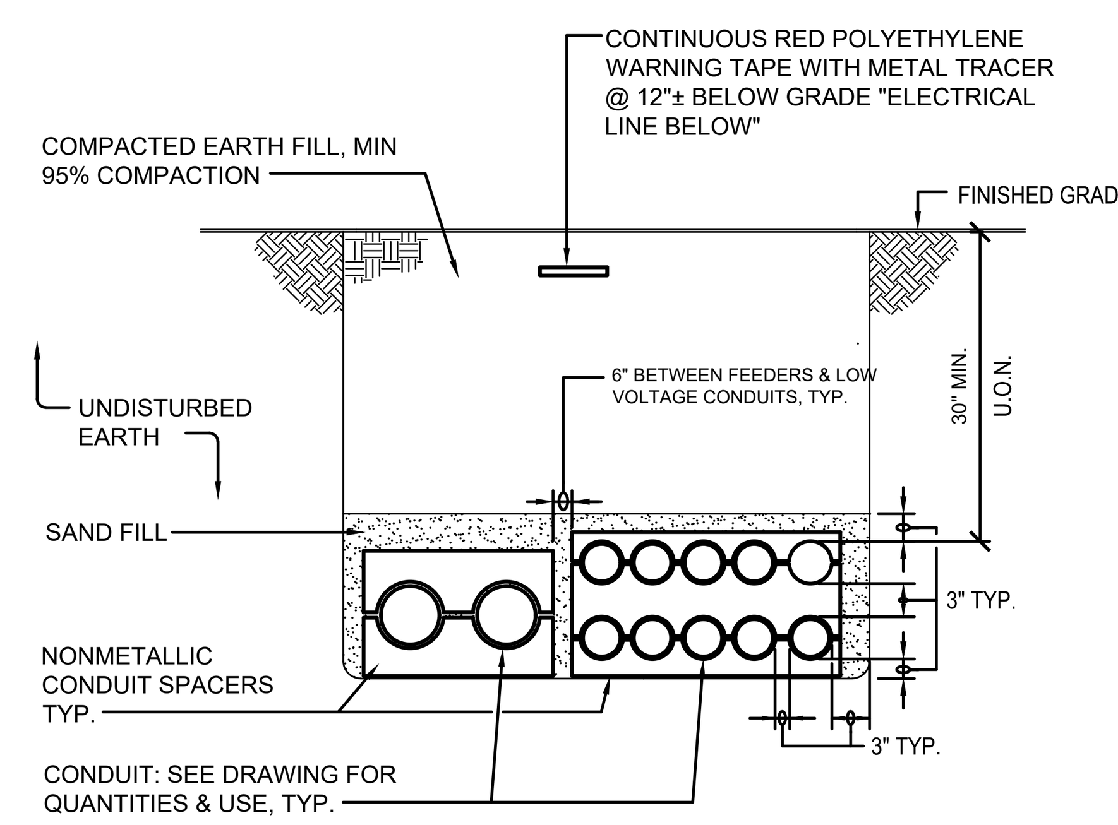
DETAIL NOTES:
1. EXPANSION JOINT.
2. SEALTITE FLEX CONDUIT (½" TO 4") TYP. (PROVIDE SEPERATE GROUND WIRE IN CONDUIT).
3. EMT (½" TO 4") TYP.

8 TYPICAL EXPANSION JOINT CROSSING
NO SCALE

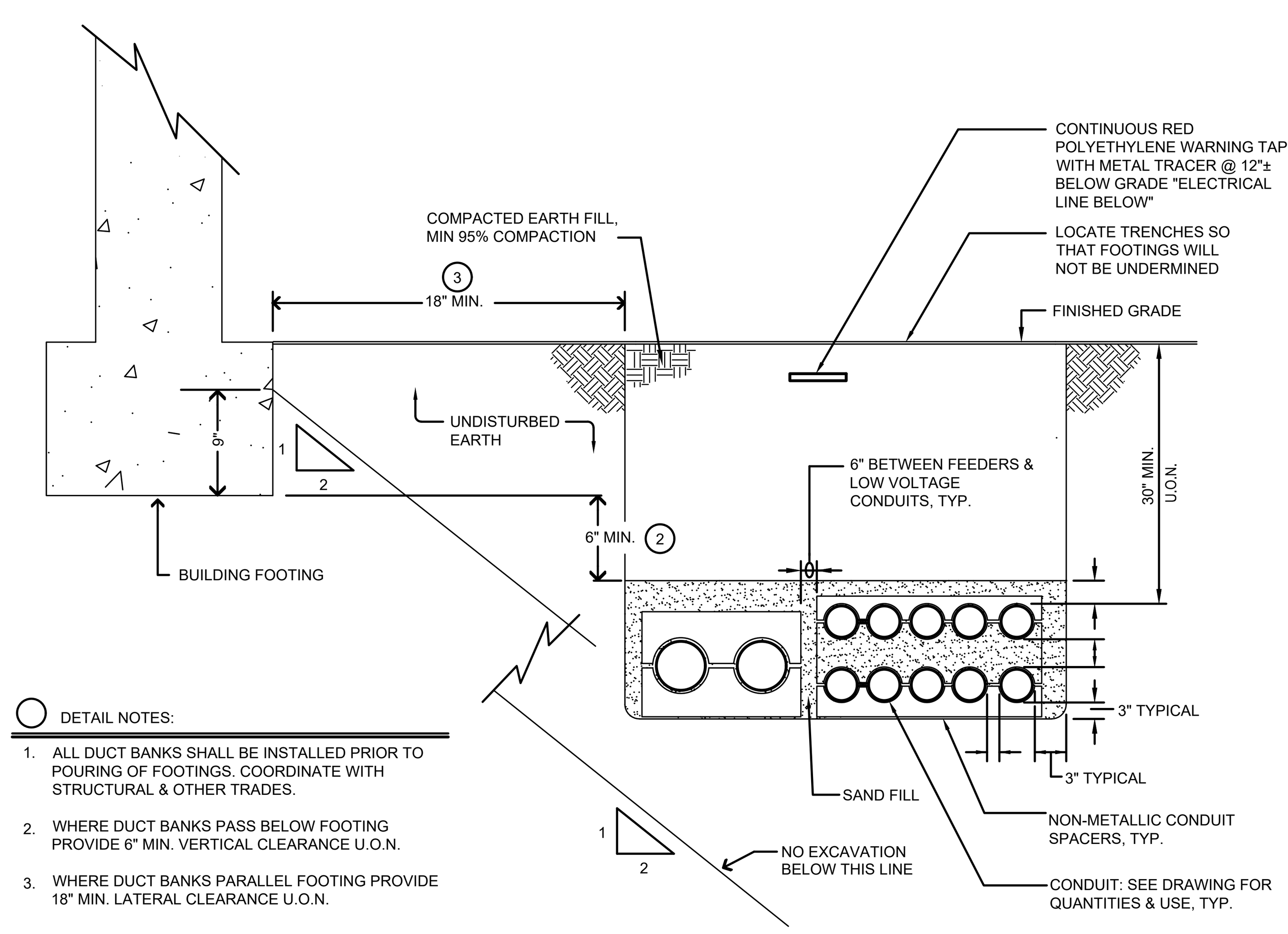


NOTES:
1. BASE MATERIAL TO BE REPLACED TO THE DEPTH OF EXISTING BASE AND COMPACTED TO A MIN. 95% RELATIVE COMPACTION. IF APPROVED, A.C. MAY BE SUBSTITUTED FOR BASE MATERIAL WHEN USED AS BACKFILL, CLASS 100-E-100 P.C.C. MAY BE SUBSTITUTED FOR BASE MATERIAL.
2. COORDINATE WORK WITH LANDSCAPE DRAWINGS AND LANDSCAPE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. SEE DETAIL 3/1-E5.0 FOR ADDITIONAL INFORMATION.

3 TYPICAL TRENCH SECTION DETAIL
NO SCALE



2 TYPICAL TRENCH SECTION
NO SCALE



DETAIL NOTES:
1. ALL DUCT BANKS SHALL BE INSTALLED PRIOR TO POURING OF FOOTINGS. COORDINATE WITH STRUCTURAL & OTHER TRADES.
2. WHERE DUCT BANKS PASS BELOW FOOTING PROVIDE 6" MIN. VERTICAL CLEARANCE U.O.N.
3. WHERE DUCT BANKS PARALLEL FOOTING PROVIDE 18" MIN. LATERAL CLEARANCE U.O.N.

1 TYPICAL TRENCH SECTION 1
NO SCALE

REGISTERED PROFESSIONAL ENGINEER
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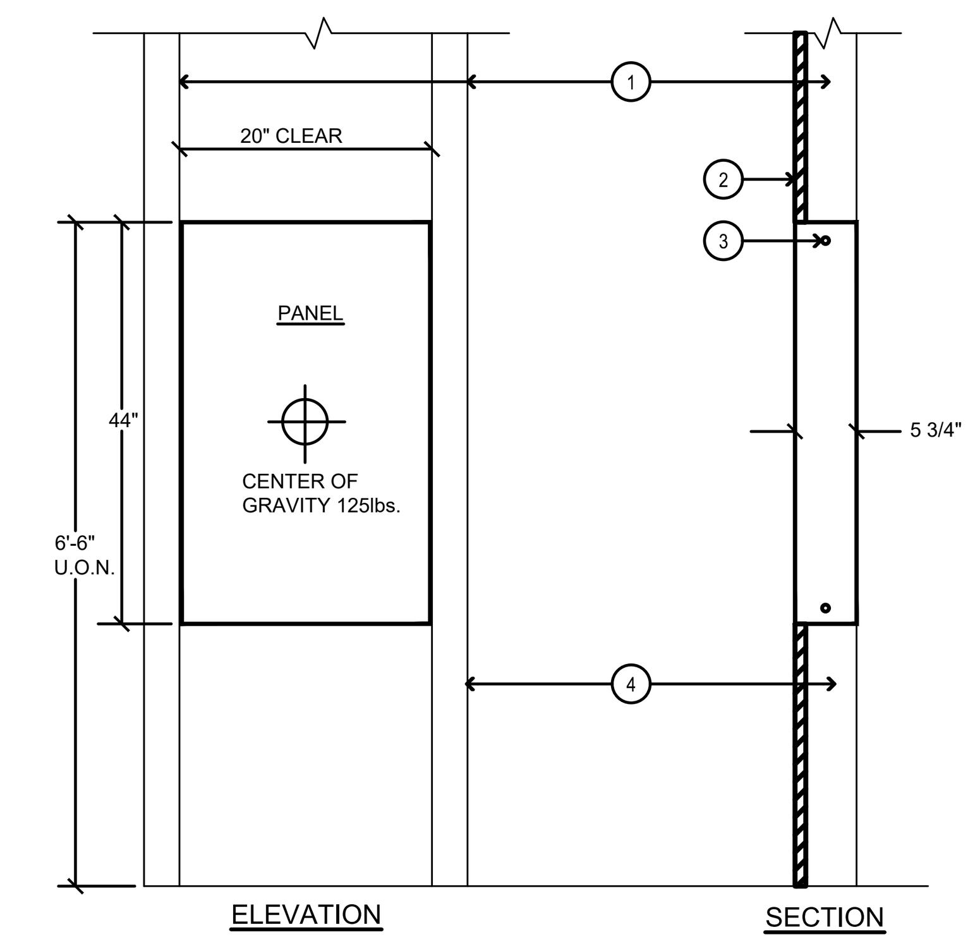
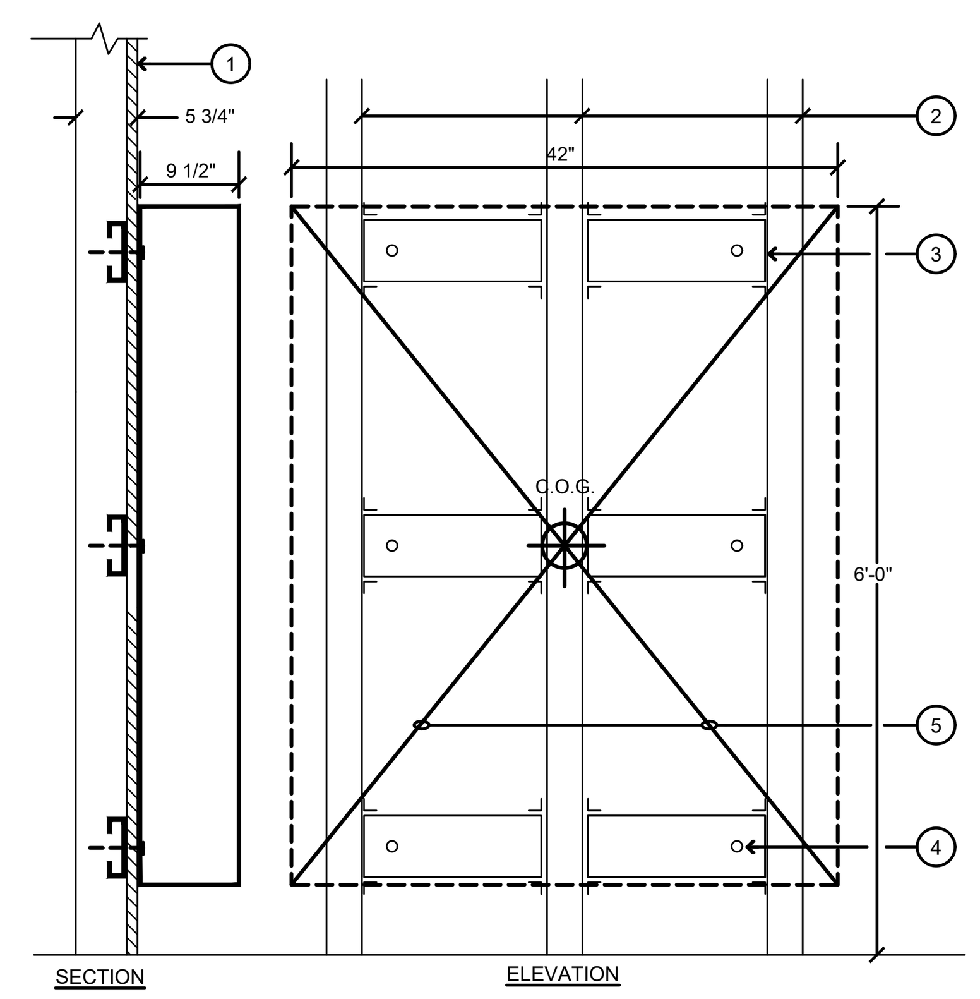


DETAIL NOTES:

1. STUD BESIDE PANEL
2. FACE OF WALL
3. #14 SHEET METAL SCREWS
4. 2" x 6" 16 GA. STUDS FOR FRAMING

8 FLUSH PANEL MOUNTING DETAIL

NO SCALE (METAL STUD WALL)

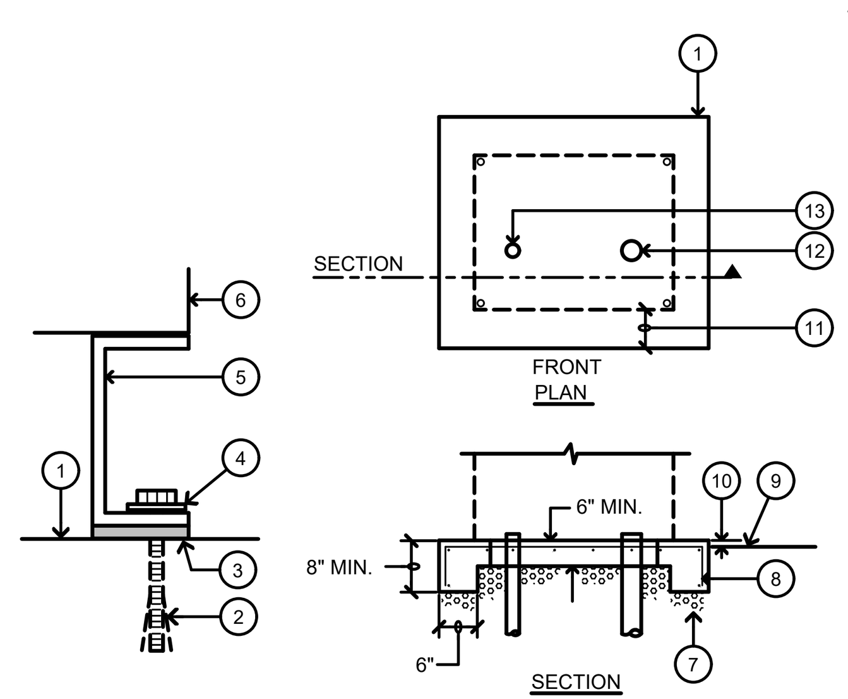


DETAIL NOTES:

1. FACE OF WALL
2. METAL STUDS
3. 6" x 16 GA. UN-PUNCHED METAL STUDS, INSTALL PER STRUCTURAL DETAIL 14/2-25.2.2.
4. #14 SELF-TAPPING SCREWS INTO METAL BLOCKING TYPICAL
5. PANEL APPROXIMATE WT. 300 LBS.

7 SURFACE DISTRIBUTION PANEL MOUNTING DETAIL

NO SCALE (METAL STUD WALL)

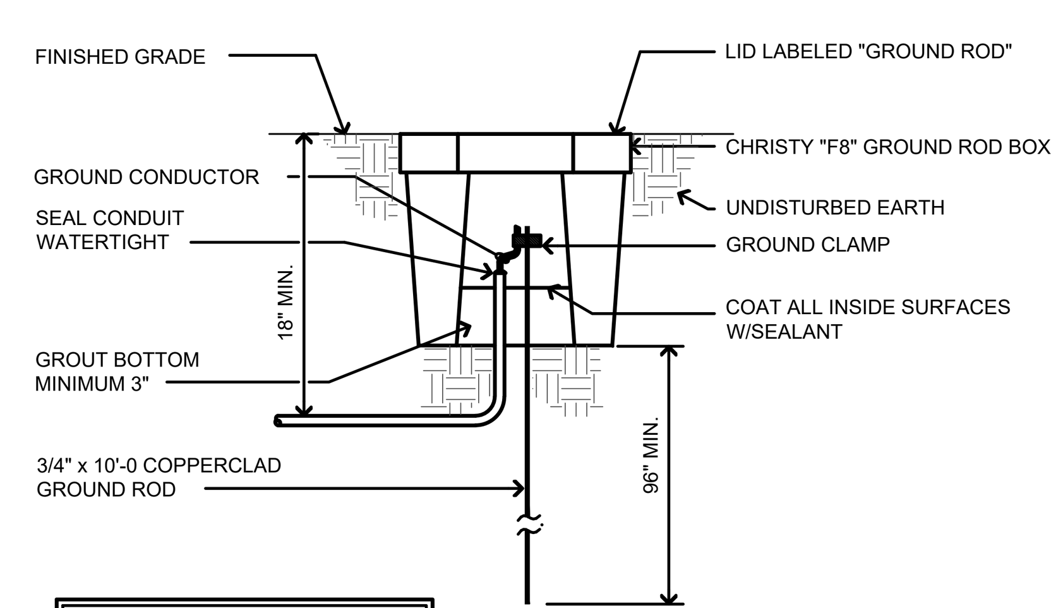


DETAIL NOTES

1. REINFORCED CONCRETE PAD EXACT L&W AS REQUIRED FOR XFMR. SUPPLIED. (MIN. 2500 PSI AT 28 DAYS.
2. ⅜" Ø BOLT WITH 3 ⅜" EMBEDMENT; HILTI KB-TZ. SEE STRUCTURAL CALCULATION PACKAGE PAGE E2.41
3. KORFUND ISOLATION PAD.
4. LOCK WASHER.
5. TRANSFORMER MOUNTING CHANNEL.
6. TRANSFORMER HOUSING.
7. MIN. 6" THICK LAYER OF CRUSHED BASE ROCK.
8. #4 BAR @ 12" O.C. EA. WAY 2" BELOW TOP OF PAD.
9. FINISHED GRADE OR FINISHED FLOOR.
10. 2" MAX.
11. 4" TYP. ALL AROUND.
12. SECONDARY CONDUIT.
13. PRIMARY CONDUIT.

6 TRANSFORMER MOUNTING DETAIL

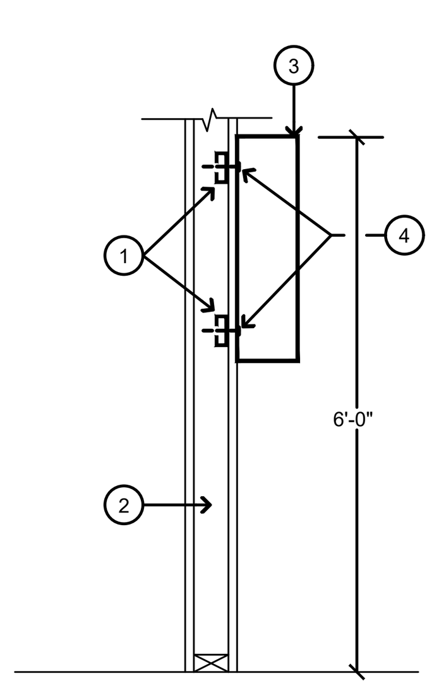
NO SCALE



NOTE:
WHERE METAL CONDUIT USED IN LIEU OF PVC, PROVIDE GROUND BUSHINGS & BONDS PER CODE.

5 GROUND ROD BOX DETAIL

NO SCALE

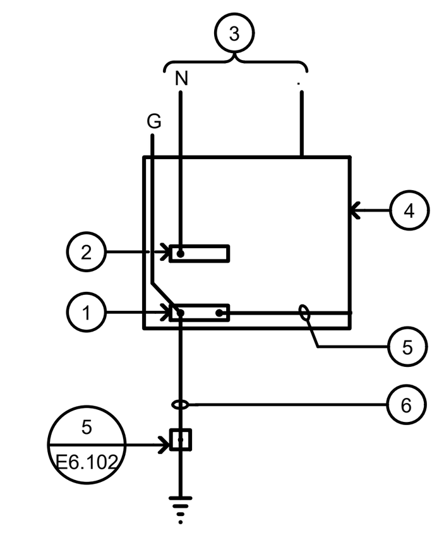


DETAIL NOTES:

1. 16 GA. "C" SHAPE BLOCKING BEHIND PANEL AT FASTENER LOCATIONS. BLOCK FLANGES AND FASTEN WEB OF 16 GA. BLOCK TO FLANGE OF TYPICAL STUDS - (2) #6 EA. END
2. METAL STUD WALL FRAMING
3. PANEL (WEIGHT 125 LBS MAX).
4. #14 SELF-TAPPING SCREWS INTO METAL BLK'G TYPICAL (4) PER PANEL AT CORNERS

9 SURFACE PANEL MOUNTING DETAIL

NO SCALE (METAL STUD WALL)



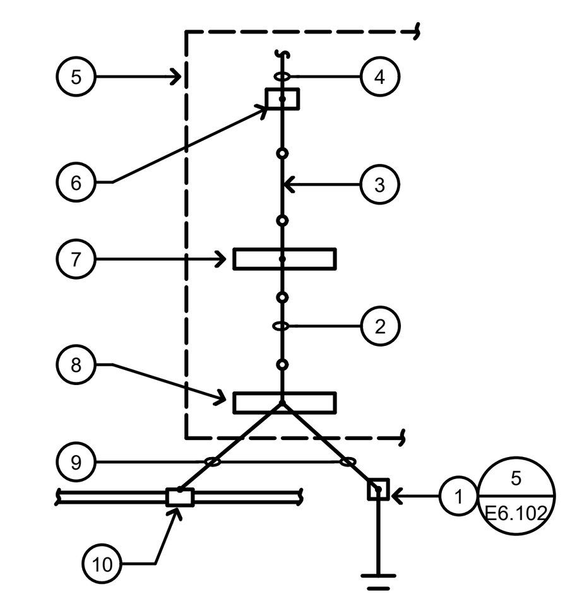
DETAIL NOTES:

1. GROUND BUS.
2. NEUTRAL BUS.
3. TO TRANSFORMER OR MAIN SWITCHBOARD.
4. DISTRIBUTION PANEL.
5. #4 EQUIPMENT BONDING JUMPER.
6. SEE E003-1 FOR SIZES.

NOTE:
IF AVAILABLE ON THE PREMISES AT EACH BUILDING OR STRUCTURE SERVED EACH OF THE FOLLOWING SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM:
a. METAL UNDERGROUND WATER PIPE
b. METAL FRAME OF BUILDING
c. GROUND RING
d. OTHER ELECTRODES PER CEC 250-50

4 DIST. PANEL GROUNDING

NO SCALE



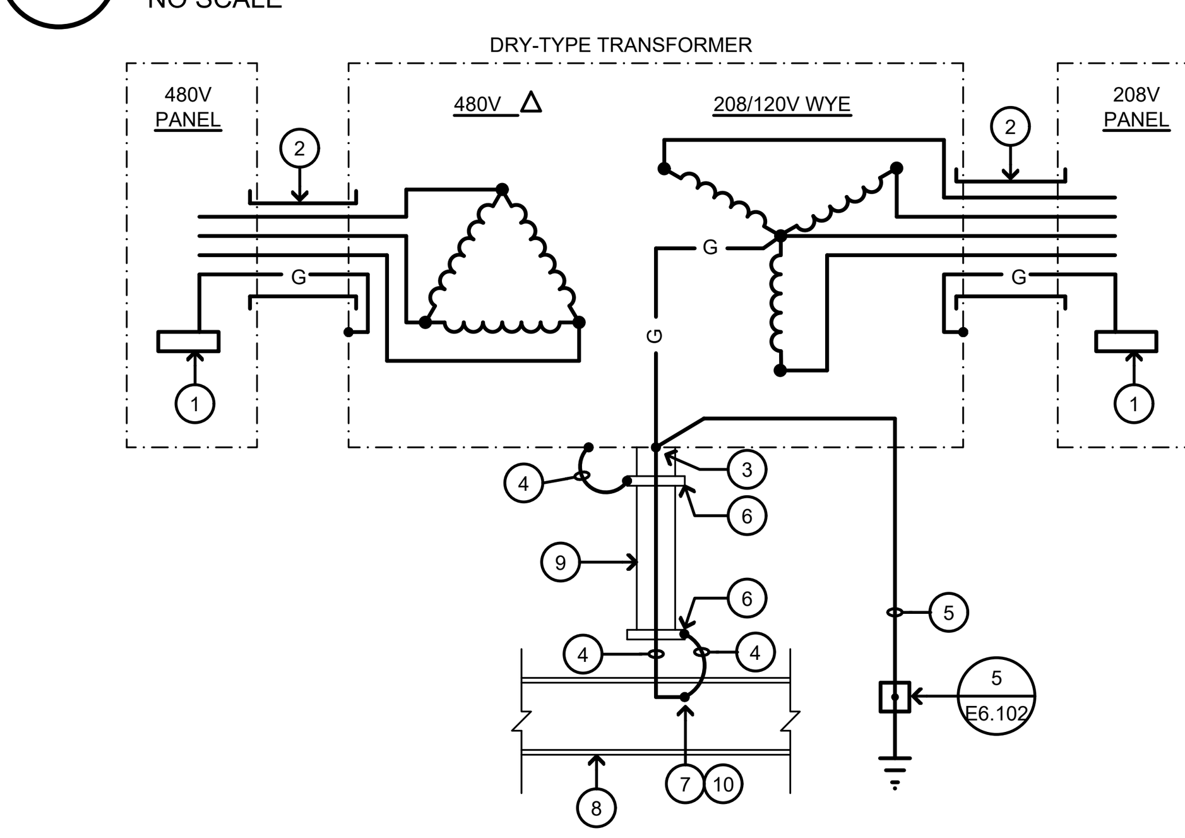
DETAIL NOTES:

1. SERVICE GROUND ROD
2. REMOVABLE LINK OR MAIN BONDING JUMPER FURNISHED WITH SWITCHBOARD & CONNECTED BY CONTRACTOR
3. REMOVABLE LINK
4. INCOMING NEUTRAL
5. SERVICE EQUIP.
6. SERVICE NEUTRAL LANDING LUG
7. NEUTRAL BUS
8. GROUND BUS
9. 1" PVC; #3/0 BARE COPPER GROUND
10. COLD WATER PIPE IN BUILDING WITHIN 5 FEET OF ENTRANCE OF BUILDING THAT MEETS REQUIREMENT'S OF CEC 250-50

NOTE:
IF AVAILABLE ON THE PREMISES AT EACH BUILDING OR STRUCTURE SERVED EACH OF THE FOLLOWING SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM:
a. METAL UNDERGROUND WATER PIPE
b. METAL FRAME OF BUILDING
c. GROUND RING
d. OTHER ELECTRODES PER CEC 250-50

3 ELECTRICAL SERVICE GROUND

NO SCALE

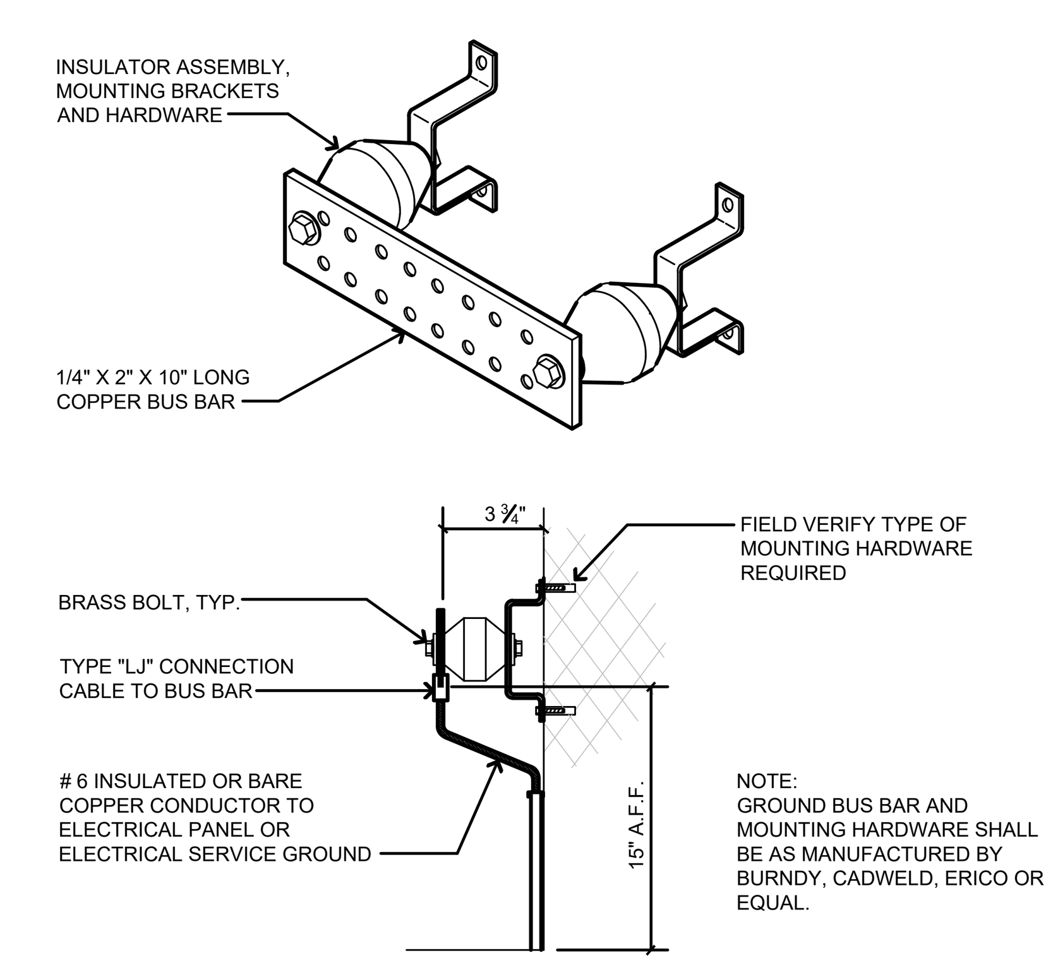


DETAIL NOTES:

1. PANEL OR SWITCHBOARD EQUIPMENT GROUND BUS.
2. CONDUIT WITH SEAL-TITE FLEX CONNECTION TO TRANSFORMER.
3. TRANSFORMER CASE GROUND.
4. BARE COPPER GROUND, PER CEC 250-66.
5. PVC WITH BARE COPPER GROUND, SEE E003-1 FOR SIZE.
6. GROUNDING BUSHINGS.
7. THERMOWELD CONNECTION.
8. BUILDING STEEL STRUCTURE FRAMING.
9. ELECTRICAL METALLIC TUBING (EMT).
10. METAL WATER PIPE (CEC 250-30) OR OTHER ELECTRODES PER 250-50 & 250-52 IF BUILDING STEEL OR WATER PIPE ARE NOT AVAILABLE

2 DRY TYPE TRANSFORMER GROUNDING DETAIL

NO SCALE



NOTE:
GROUND BUS BAR AND MOUNTING HARDWARE SHALL BE AS MANUFACTURED BY BURNDY, CADWELD, ERICO OR EQUAL.

1 GROUND BUS BAR MOUNTING DETAIL

NO SCALE

REGISTERED PROFESSIONAL ENGINEER
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AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023
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SIGNED: MONTH DAY, 2021

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LICENSE # 246326

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO.	01-119906
ARCH PROJECT NO:	1897.00
DRAWN BY:	CADD
DRAWING SCALE:	AS NOTED
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E6.102

INTERIOR LIGHTING & RECEPTACLE CONTROLS SEQUENCE OF OPERATION

Columns (FUNCTION): 1 = OCCUPANCY SENSOR - MANUAL ON; 2 = OCCUPANCY SENSOR - AUTO ON; 3 = OCCUPANCY SENSOR - PARTIAL ON; 4 = OCCUPANCY SENSOR - AUTO OFF; 5 = OCCUPANCY SENSOR - PARTIAL OFF; 6 = CONTINUOUS DIMMING TO OFF; 7 = ON/OFF SWITCH; 8 = MULTI ZONE DIMMING; 9 = AUTO TIME CLOCK-OFF; 10 = AUTO TIME CLOCK-ON; 11 = DAY LIGHT SENSOR - AUTO DIMMING (WHERE SHOWN ON PLANS); 12 = OVERRIDE SWITCH CONTROL; 13 = SET LIGHT LEVEL FC TO IES RECOMMENDATIONS; 14 = SET LIGHT LEVEL TO 100% ON; 15 = ACCEPTANCE TESTING OF CONTROLS BY CLCATT

ROOM TYPE	OCCUPANCY SENSOR - MANUAL ON	OCCUPANCY SENSOR - AUTO ON	OCCUPANCY SENSOR - PARTIAL ON	OCCUPANCY SENSOR - AUTO OFF	OCCUPANCY SENSOR - PARTIAL OFF	CONTINUOUS DIMMING TO OFF	ON/OFF SWITCH	MULTI ZONE DIMMING	AUTO TIME CLOCK-OFF	AUTO TIME CLOCK-ON	DAY LIGHT SENSOR - AUTO DIMMING (WHERE SHOWN ON PLANS)	OVERRIDE SWITCH CONTROL	SET LIGHT LEVEL FC TO IES RECOMMENDATIONS	SET LIGHT LEVEL TO 100% ON	ACCEPTANCE TESTING OF CONTROLS BY CLCATT	REMARKS
OPEN OFFICE						•		•	•	•	•	•	•		•	'ON' AND 'OFF' TIME SET PER OWNER.
PRIVATE OFFICE < 250 FT²	•			•		•							•		•	
PRIVATE OFFICE > 250 FT²	•			•		•		•			•		•		•	
MEETING ROOMS			•	•		•		•			•			•	•	
BREAK ROOMS	•			•		•		•			•			•	•	
KITCHEN			•	•		•		•			•			•	•	
CORRIDORS/HALLWAYS/LIBRARY STACKS/WAREHOUSE AISLE		•			•		•		•	•		•		•	•	DIM TO 50% WHEN UNOCCUPIED/'ON' AND 'OFF' TIME SET PER OWNER.
SMALL RESTROOMS < 100 FT²	•			•			•							•	•	
LARGE RESTROOMS		•		•										•	•	
RECEPTION/LOBBY								•	•	•	•	•		•	•	'ON' AND 'OFF' TIME SET PER OWNER.
ELECTRICAL/MECHANICAL/UTILITY ROOMS							•	•	•	•	•	•		•	•	'ON' AND 'OFF' TIME SET PER OWNER.
EXAM ROOMS			•	•		•		•			•			•	•	
PROCEDURE ROOMS			•	•		•		•			•			•	•	
CLASSROOMS			•	•		•		•					•		•	
MULTI PURPOSE ROOM < 1000 FT²			•	•		•		•						•	•	
CONFERENCE ROOM			•	•		•		•						•	•	
PRIVATE OFFICE WITHOUT DAY LIGHTING	•		•	•		•							•		•	
ANY SPACE < 100 FT²	•			•			•							•	•	
CONTROLLED RECEPTACLES		•		•											•	

GENERAL NOTE:

LIGHTING CONTROL SYSTEMS SHALL BE CAPABLE OF MEETING DEMAND RESPONSE REQUIREMENTS OF CALIFORNIA TITLE 24.

GENERAL DETAIL NOTES:

A. ALL PART #s ARE WATTSTOPPER.

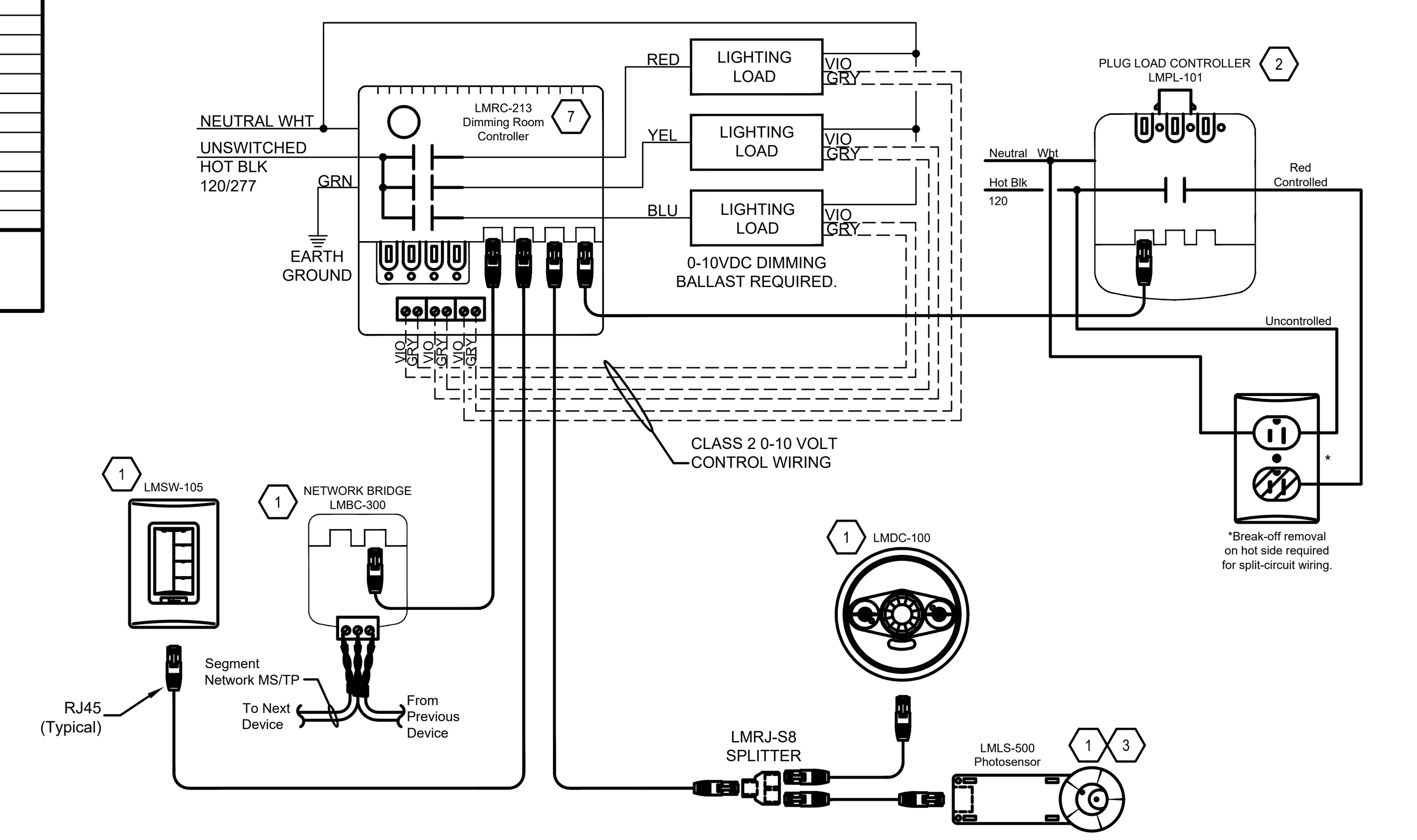
B. THIS DETAIL IS FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL OBTAIN AND FURNISH AUTOCAD DRAWINGS FROM FACTORY REPRESENTATIVE PER SPECIFICATION SECTION 16950,1.05B.

C. FOR CORRIDOR/HALLWAY/STAIRWELL LOCATIONS CONTROLLED BY OCCUPANCY SENSOR. SENSOR SHALL REDUCE THE LIGHTING POWER IN CORRIDOR/HALLWAY/STAIRWELL TO 50% MINIMUM WHEN SPACE IS UNOCCUPIED.

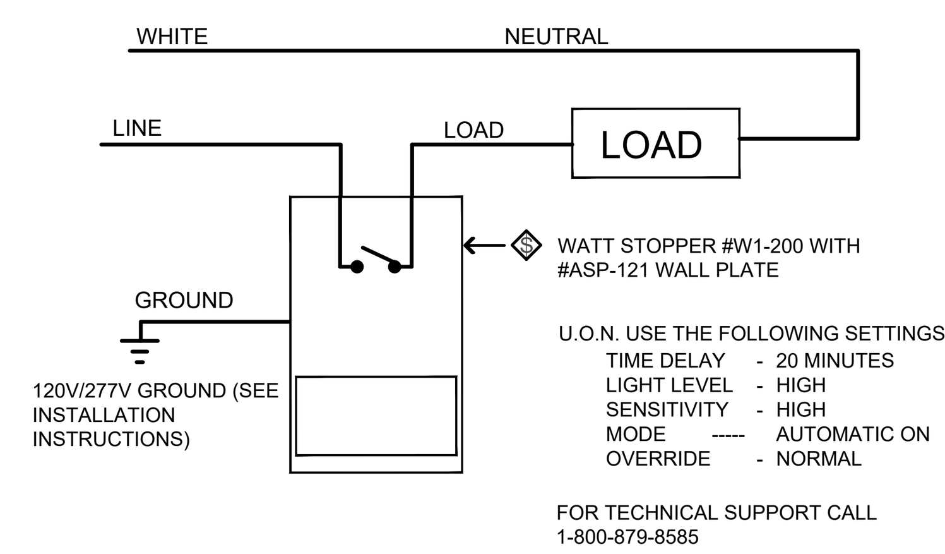
D. WHEN NETWORKING, ENSURE ONLY ONE (1) NETWORK BRIDGE PER ROOM.

SHEET NOTES

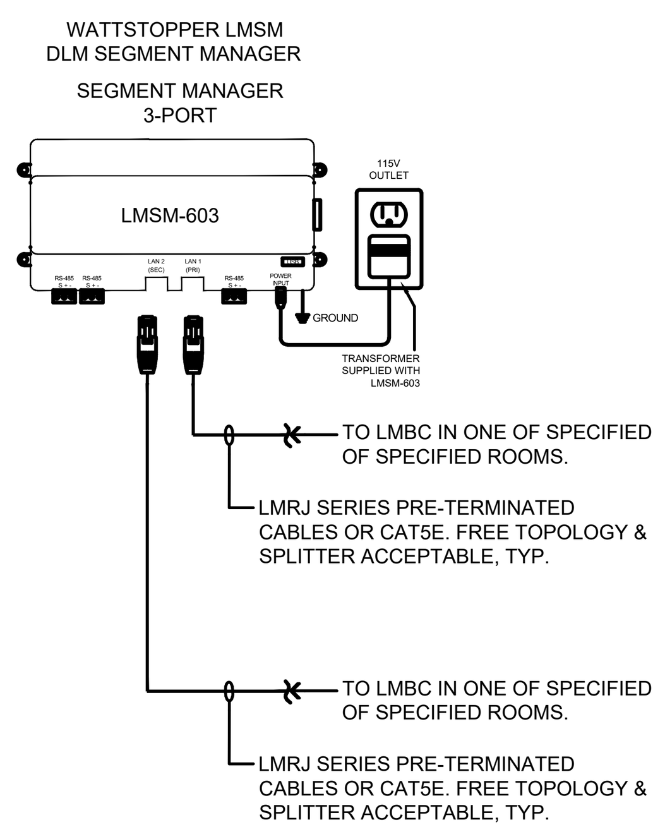
1. FOR DEVICE QUANTITY AND LOCATION; SEE LIGHTING FLOOR PLANS.
2. FOR DEVICE QUANTITY AND LOCATION; SEE POWER FLOOR PLANS.
3. TWO ZONE DAY LIGHT PHOTOCELL; SEE PLANS FOR QUANTITIES & LOCATIONS. PROGRAM ZONE 1 (PRIMARY DAY LIT ZONE) AT 40FC AND ZONE 2 (SECONDARY DAY LIT ZONE) DIMMED TO 25% LESS THAN ZONE 1.
4. LMRC-101 IS A (1) LOAD ON/OFF ROOM CONTROLLER THAT WILL CONTROL A SINGLE (1) 20A CIRCUIT.
5. LMRC-211 IS A (1) LOAD ROOM CONTROLLER THAT WILL CONTROL A SINGLE (1) 20A CIRCUIT 0-10V CONTROL.
6. LMRC-212 IS A (2) LOAD CONTROLLER THAT WILL CONTROL A SINGLE (1) 20A CIRCUIT 0-10V CONTROL.
7. LMRC-213 IS A (3) LOAD CONTROLLER THAT WILL CONTROL A SINGLE (1) 20A CIRCUIT 0-10V CONTROL.
8. WALL OR CORNER MOUNTED OCCUPANCY SENSOR SHALL BE INSTALLED IN ROOMS/AREAS WHERE SHOWN ON PLANS.



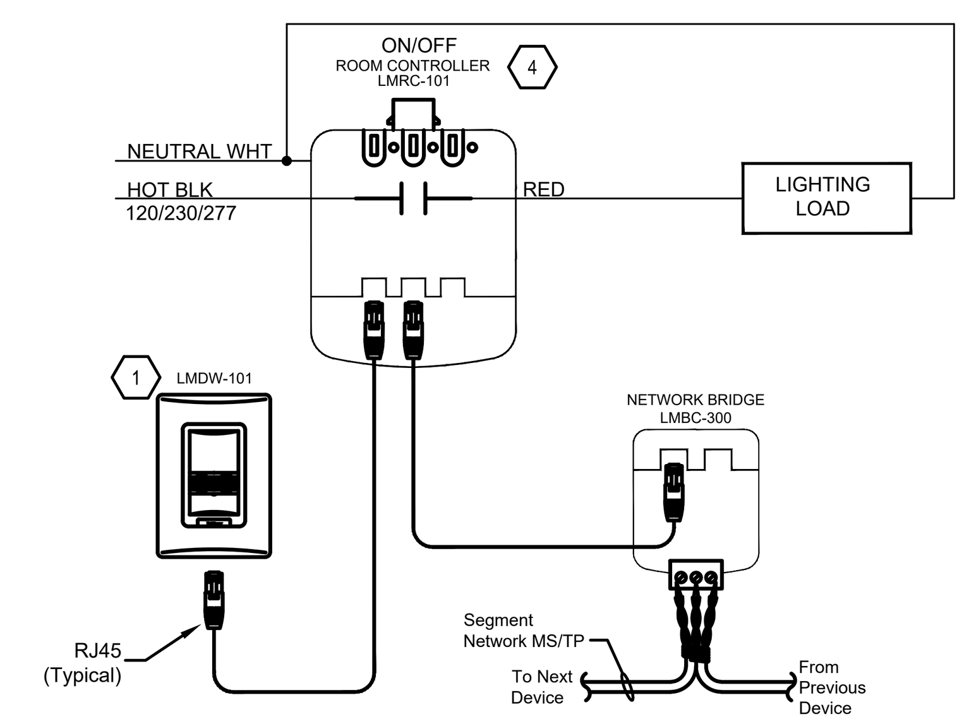
3 3-ZONE DIMMING WITH DAYLIGHTING & PLUG LOAD CONTROL
NO SCALE



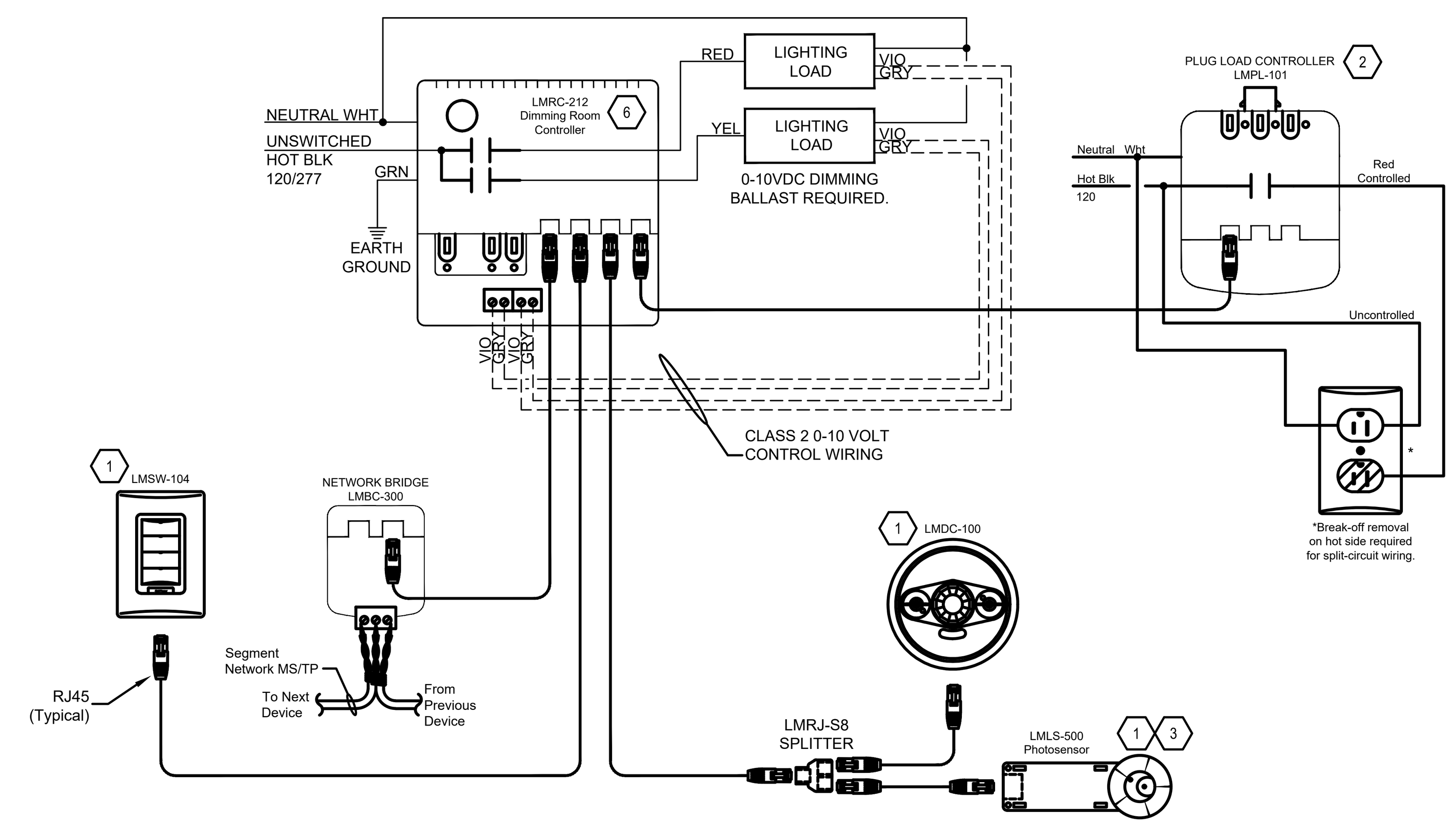
6 WALL OCCUPANCY SENSOR WIRING
NO SCALE



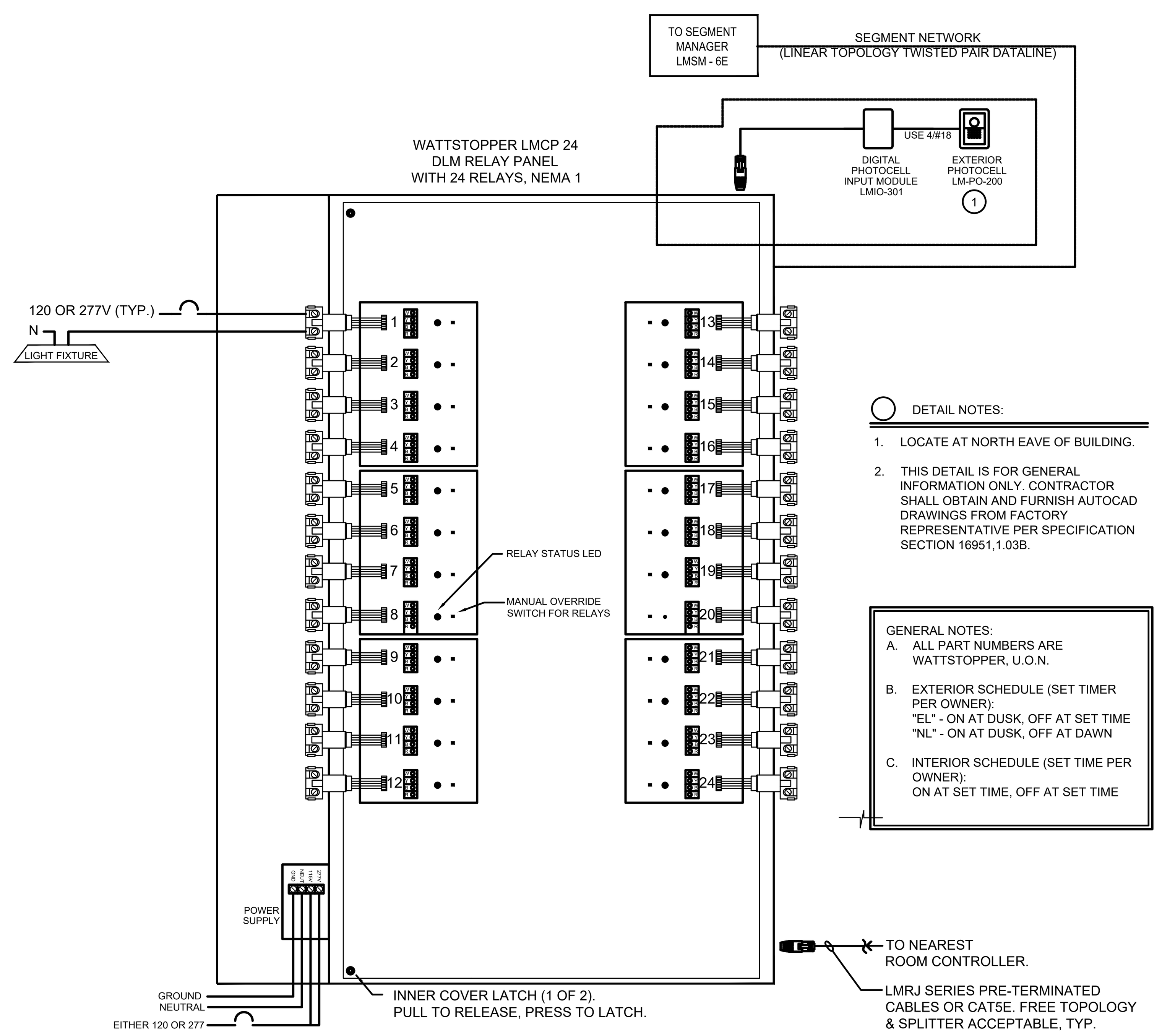
5 SEGMENT MANAGER
NO SCALE



4 1-ZONE DIMMING CONTROL
NO SCALE



2 2-ZONE DIMMING WITH DAYLIGHTING & PLUG LOAD CONTROL
NO SCALE

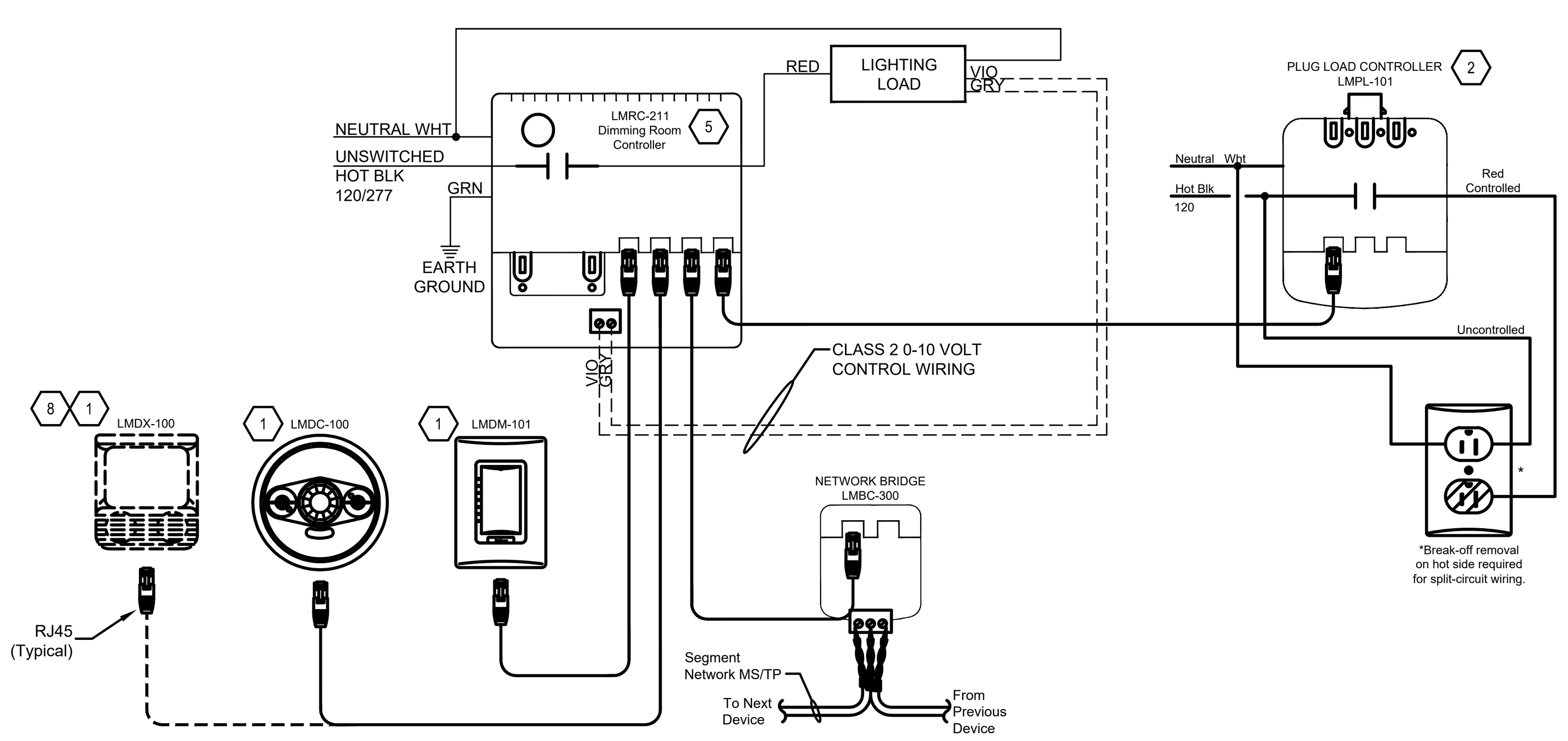


DETAIL NOTES:

1. LOCATE AT NORTH EAVE OF BUILDING.
2. THIS DETAIL IS FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL OBTAIN AND FURNISH AUTOCAD DRAWINGS FROM FACTORY REPRESENTATIVE PER SPECIFICATION SECTION 16951,1.03B.

GENERAL NOTES:
A. ALL PART NUMBERS ARE WATTSTOPPER, U.O.N.
B. EXTERIOR SCHEDULE (SET TIMER PER OWNER):
"EL" - ON AT DUSK, OFF AT SET TIME
"NL" - ON AT DUSK, OFF AT DAWN
C. INTERIOR SCHEDULE (SET TIME PER OWNER):
ON AT SET TIME, OFF AT SET TIME

7 INTERIOR/EXTERIOR LIGHTING CONTROL PANEL "LCP"
NO SCALE



1 1-ZONE DIMMING WITH PLUG LOAD CONTROLS
NO SCALE

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DSA APP NO. 01-119906
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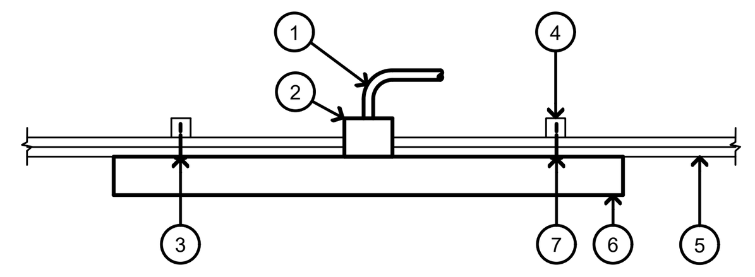
DRAWN BY: CADD
DRAWING SCALE: AS NOTED
PTN: 43-C4 FILE NO: N/A
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

8 SURFACE MOUNTED FIXTURE DETAIL
NO SCALE



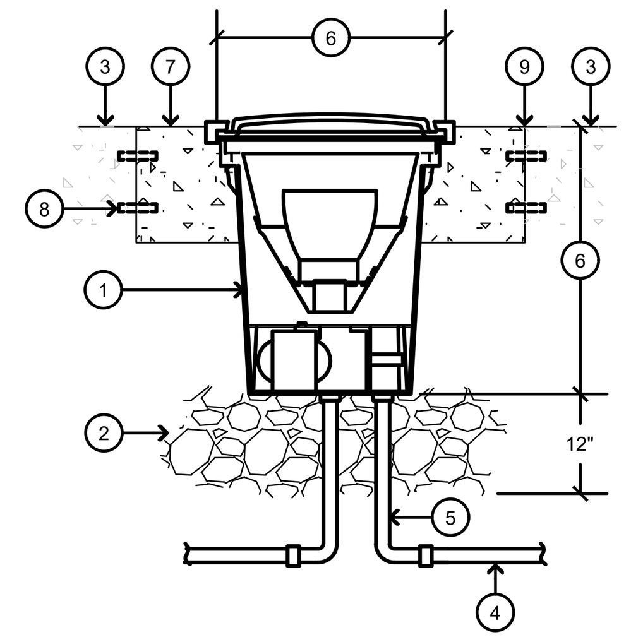
DETAIL NOTES:

1. BRANCH CIRCUIT CONDUIT.
2. FIXTURE OUTLET BOX.
3. ALL SCREWS TO HAVE MIN. 1½" PENETRATION INTO FRAMING.
4. 2 x _ JOIST OR BLOCKING.
5. FINISHED CLG. MATERIAL. (SEE ARCH).
6. SURFACE MOUNT FIXTURE.
7. FASTEN FIXTURE TO FRAMING W/ ¼" DIA. LAG SCREW AT EACH CORNER.

GENERAL NOTE:

A. PRE-DRILL ALL FRAMING TO MINIMIZE POSSIBILITY OF SPLITTING BLOCKING.

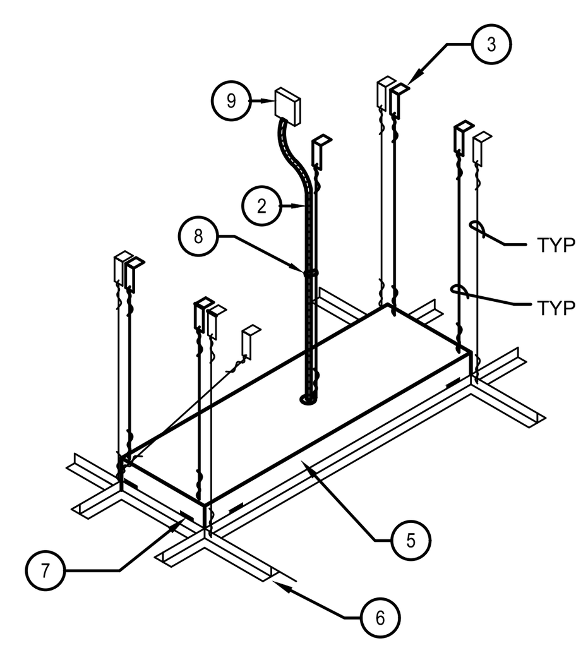
7 LIGHT FIXT. TYPE "X8" DETAIL
NO SCALE



DETAIL NOTES:

1. SINGLE PIECE COMPOSITE HOUSING.
2. DRAIN ROCK BASE.
3. EXISTING CONCRETE WALKWAY.
4. CONDUIT PER PLAN
5. WRAPPED GRS CONDUIT.
6. SEE LIGHT FIXTURE SCHEDULE FOR SIZES.
7. NEW CONCRETE TO MATCH EXISTING.
8. METAL DOWELS AS REQUIRED.
9. SEE ELECTRICAL PLAN ON SHEET 1-E2.1 FOR CONCRETE WORK.

6 T-BAR LIGHT FIXTURE DETAIL
NO SCALE



DETAIL NOTES:

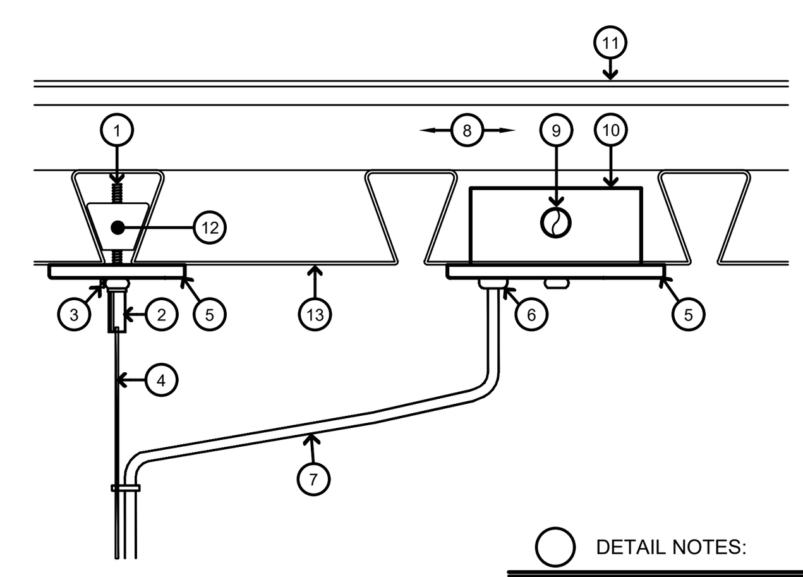
1. WIRE TO SUPPORT "T-BAR" CEILING GRID
2. 1/2" FLEX CONDUIT, 2#12 & 1#12GND. 6'-0" MAX. LENGTH
3. TYPICAL ANCHOR TO SUPPORT STRUCTURE. FOR ANCHORAGE REQMT'S, SEE ARCHITECTURAL DRAWINGS.
4. INSTALL ONE #12 GA TAUT WIRE AT EACH CORNER OF FIXTURE W/ THREE (3) FULL TURNS FOR EACH #12 WIRE IN 1/2" DISTANCE.
5. LIGHT FIXTURE PER PLAN. 2' x 2' FIXT. = 18LBS, 2' x 4' FIXT = 28LBS
6. HEAVY DUTY CEILING GRID SYSTEM
7. EARTHQUAKE CLIPS, 4 ea. TYP.
8. IF FLEX CONDUIT LENGTH EXCEEDS 6 FOOT, FASTEN FLEX CONDUIT TO FLEX CONDUIT SUPPORT WIRE PER C.E.C. SPACING.
9. J-BOX; FIELD VERIFY

FIXTURE MOUNTING GENERAL NOTES:

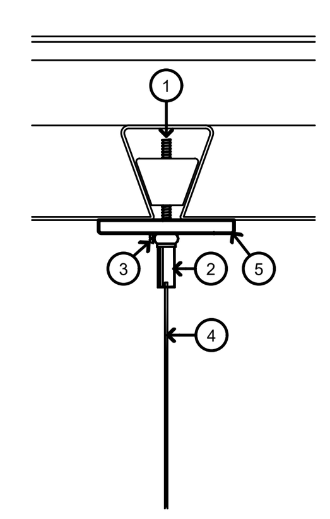
ATTACH ALL LIGHT FIXTURES TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE.

THE FOUR (4) TAUT #12 GAUGE WIRES INCLUDING THEIR ATTACHMENT TO THE STRUCTURE NOTED ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE COMPLETE UNIT.

5 LIGHT FIXTURE TYPE " " MOUNTING DETAIL
NO SCALE



FEED POINT

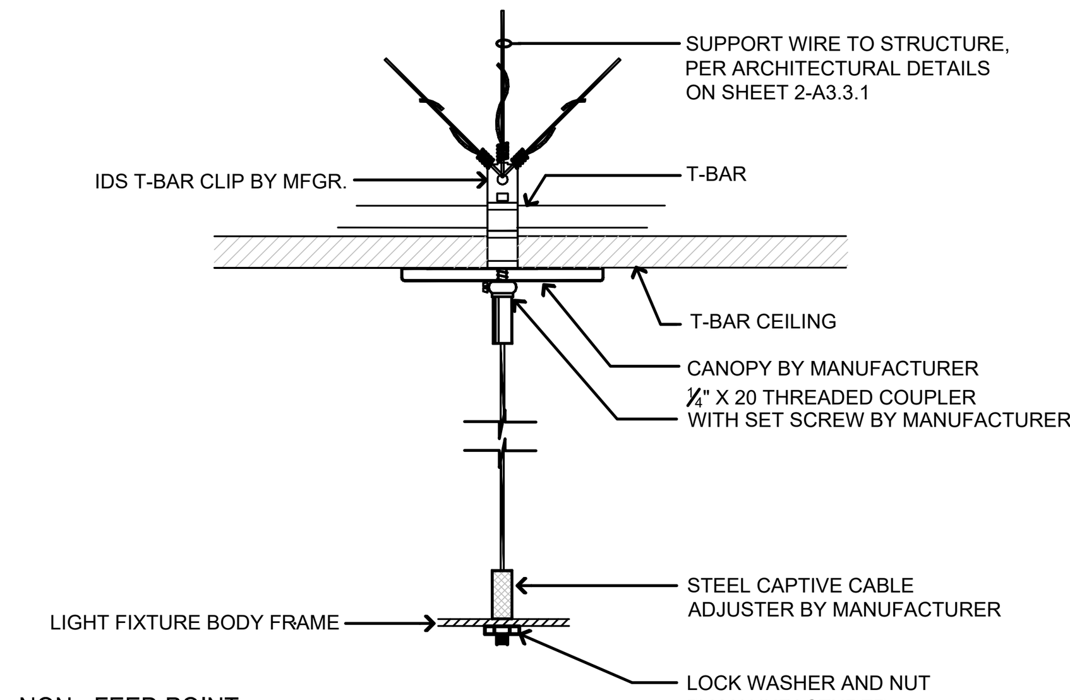


NON-FEED POINT

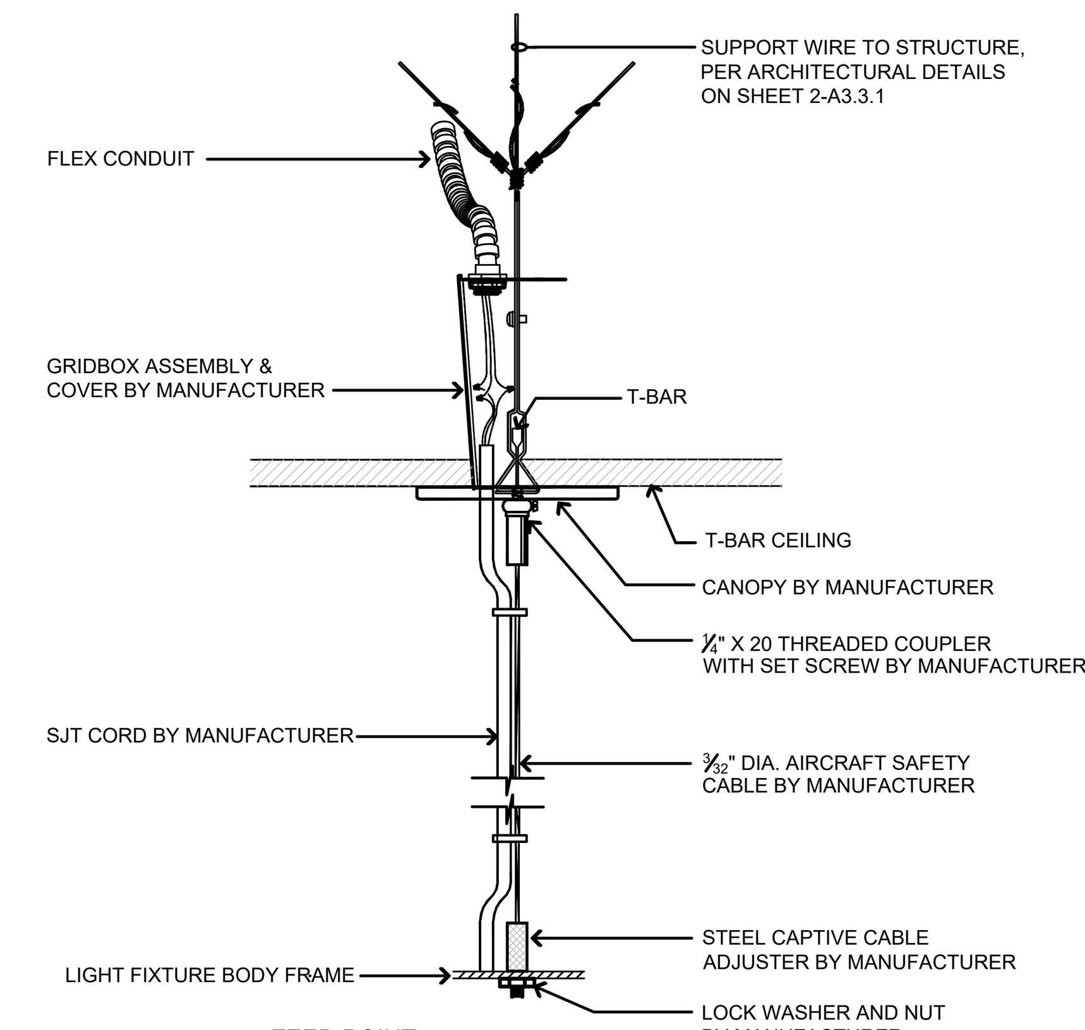
DETAIL NOTES:

1. ¼" x 20 THREADED BOLT, LENGTH AS REQUIRED.
2. ¼" x 20 THREADED CABLE RETAINER BY MFGR.
3. SLIP RING AND SET SCREW BY MFGR.
4. ³⁄₃₂" DIA. AIRCRAFT SAFETY CABLE BY MFGR., SECURE TO FIXT. SEE LIGHTING PLANS FOR QUANTITY AND LOCATION.
5. CANOPY BY MFGR.
6. STRAIN RELIEF BY MFGR.
7. SJT CORD BY MFGR.
8. RIGID INSULATION.
9. CONDUIT, SEE DWGS. FOR SIZE.
10. OUTLET J-BOX.
11. BUILT-UP ROOFING SYSTEM.
12. ¼" x 20 THREADED WEDGE AND ANCHOR LOCK ASSEMBLY.
13. "EPICORE" METAL DECK.

4 CABLE MOUNTED LIGHT FIXTURE DETAIL
NO SCALE

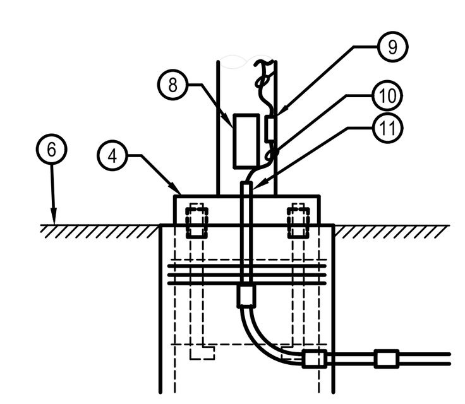


NON - FEED POINT



FEED POINT

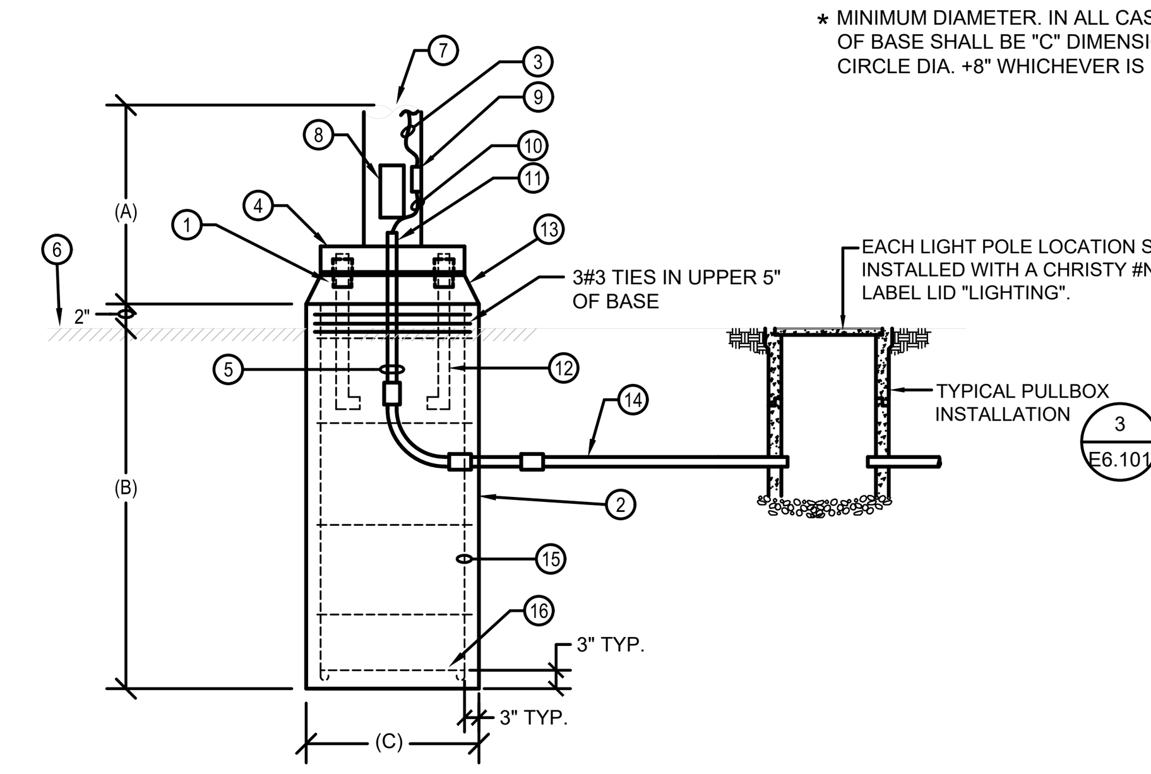
3 FLUSH POLE BASE DETAIL TYPE "X2A" & X2B"
NO SCALE



MOUNTING AT PATHWAYS AND SIDEWALKS

A	B	C
POLE LENGTH	FOOTING DEPTH BELOW GRADE	* FOOTING DIAMETER
8'-0" TO 15'-0"	3'-0"	1'-6"

* MINIMUM DIAMETER. IN ALL CASES, DIAMETER OF BASE SHALL BE "C" DIMENSION OR BOLT CIRCLE DIA. +8" WHICHEVER IS GREATER.



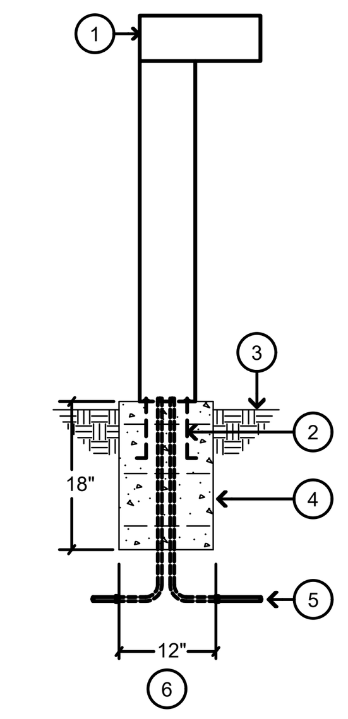
MOUNTING AT LANDSCAPE AREAS

DETAIL NOTES:

1. LEVELING NUTS.
2. CONCRETE BASE, MINIMUM 3000 PSI (COMPRESSIVE STRENGTH - 28 DAYS MIN).
3. #10 EQUIPMENT GROUNDING CONDUCTOR FROM POLE GROUND LUG TO LUMINAIRE.
4. BASE COVER.
5. RIGID STEEL ELBOW AND CONDUIT, WRAP WITH PVC TAPE OVERLAPPED 50%.
6. FINISHED GRADE.
7. LUMINAIRE POLE.
8. HAND HOLE.
9. GROUNDING LUG.
10. GROUND CONDUCTOR.
11. BUSHING, ON CONDUIT(S), CAP BEFORE POURING CONCRETE.
12. ANCHOR BOLT; QUANTITY & SIZE PER POLE MFGR. FURNISHED WITH POLE. ANCHOR BOLTS SHALL BE WITHIN VERTICAL REBAR CAGE.
13. GROUT FILL WITH 45° BEVEL.
14. PVC SCH 40 FROM RIGID STEEL ELBOWS TO PULLBOX.
15. SIX VERTICAL REBAR (#4 @ 1'-6" DIA. BASE & #6 @ 2'- 0" BASE), EQUAL SPACING & HOOK ENDS.
16. HORIZONTAL TIES REBAR (#4 GRADE 40 MINIMUM), 9" 0.C. TERMINATE TIE @ VERTICAL REBAR WITH 135° HOOK AND MINIMUM 6" LAP.

NOTES:
POLE BASE IS EXEMPT FROM DSA REVIEW.

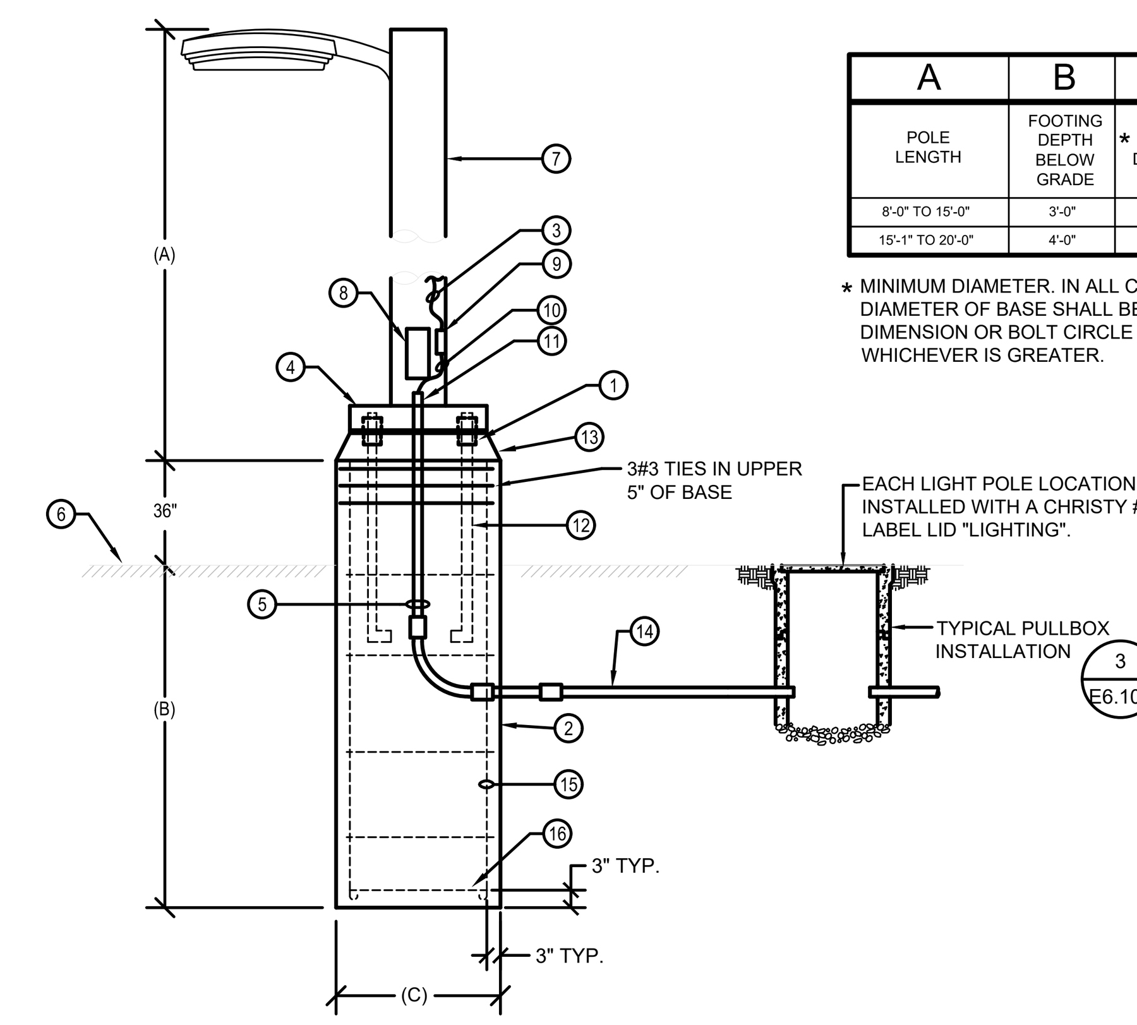
2 FIXTURE TYPE "X3" MOUNTING
NO SCALE LTG21



DETAIL NOTES:

1. FIXTURE.
2. ANCHOR BOLT QUANTITY & SIZE PER FIXT. MFGR.
3. FINISH GRADE.
4. CONCRETE AND REBAR. #3 VERTICAL AND #3 TIES AT TOP AND BOTTOM. MINIMUM 2" INSIDE OF BASE DIAMETER.
5. PVC. SCHED. 40 BRANCH CONDUIT.
6. VERIFY ANCHOR BOLT PATTERN AND ADJUST REBAR LAYOUT TO NOT INTERFER WITH ANCHOR BOLTS. INCREASE BASE SIZE IF NECESSARY.

1 POLE BASE DETAIL TYPE "XA"
NO SCALE



A	B	C
POLE LENGTH	FOOTING DEPTH BELOW GRADE	* FOOTING DIAMETER
8'-0" TO 15'-0"	3'-0"	1'-6"
15'-1" TO 20'-0"	4'-0"	2'-0"

* MINIMUM DIAMETER. IN ALL CASES, DIAMETER OF BASE SHALL BE "C" DIMENSION OR BOLT CIRCLE DIA. +8" WHICHEVER IS GREATER.

DETAIL NOTES:

1. LEVELING NUTS.
2. CONCRETE BASE, MINIMUM 3000 PSI (COMPRESSIVE STRENGTH - 28 DAYS MIN).
3. #10 EQUIPMENT GROUNDING CONDUCTOR FROM POLE GROUND LUG TO LUMINAIRE.
4. BASE COVER.
5. RIGID STEEL ELBOWS AND CONDUIT, WRAP WITH PVC TAPE OVERLAPPED 50%.
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10. GROUND CONDUCTOR.
11. BUSHING, ON CONDUIT(S), CAP BEFORE POURING CONCRETE.
12. ANCHOR BOLT; QUANTITY & SIZE PER POLE MFGR. FURNISHED WITH POLE. ANCHOR BOLTS SHALL BE WITHIN VERTICAL REBAR CAGE.
13. GROUT FILL WITH 45° BEVEL.
14. PVC SCH 40 FROM RIGID STEEL ELBOWS TO PULLBOX.
15. SIX VERTICAL REBAR (#4 @ 1'-6" DIA. BASE & #6 @ 2'- 0" BASE), EQUAL SPACING & HOOK ENDS.
16. HORIZONTAL TIES REBAR (#4 GRADE 40 MINIMUM), 9" 0.C. TERMINATE TIE @ VERTICAL REBAR WITH 135° HOOK AND MINIMUM 6" LAP.

NOTES:
POLE BASE IS EXEMPT FROM DSA REVIEW.

REGISTERED PROFESSIONAL ENGINEER
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ELECTRICAL
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DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E6.104

EMERGENCY RESPONDER RADIO COVERAGE SYSTEM

GAVILAN COLLEGE SAN BENITO COUNTY CAMPUS

PREPARED FOR ICS INTEGRATION

505 FAIRVIEW RD

HOLLISTER, CA 95023

SAN BENITO COUNTY

SYSTEM INFORMATION

San Benito County - Sherriff

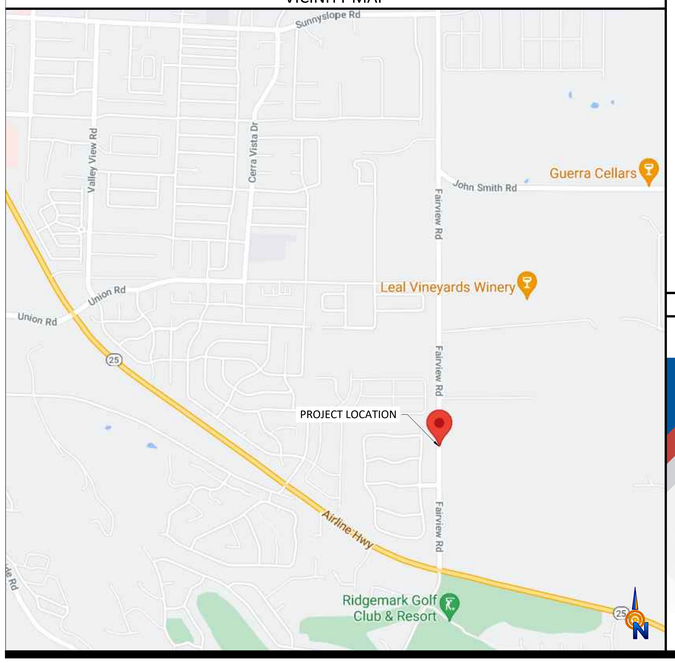
Ch.	Frequencies Tx	Frequencies Rx	Callsign	Alph Tag	City	County
1	158.77500	153.87500	WPVY817	SANBENITOCO SO	N/A	San Benito

City of Hollister - Fire

Ch.	Frequencies Tx	Frequencies Rx	Callsign	Alph Tag	City	County
1	155.80500	153.90500	KUZ854	HOLLISTER FD	Hollister	San Benito
2	151.02500	156.12000	KYB975	HOLLISTER FD/PD		
3	155.52000	1555.52000	WPVY817	TAC1		
4	155.55000	1555.55000	WPVU574	TAC2		
5	155.28000	1555.28000		TAC3		
	SIMPLEX CHANNELS					

THIS DESIGN SUPPORTS THE FREQUENCIES LISTED ABOVE. HETNET WIRELESS, LLC HAS VERIFIED THESE ARE IN FACT THE CORRECT FREQUENCIES. HOWEVER, IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR THE BUILDING OWNER TO VALIDATE THE LIST ABOVE BEFORE EQUIPMENT CAN BE ORDERED. HETNET WIRELESS, LLC IS NOT LIABLE AND ASSUMES NO RISK FOR EQUIPMENT, PARTS, ETC. ORDERED BY THE INSTALLER OR BUILDING OWNER IF THESE FREQUENCIES ARE NOT VERIFIED BEFORE ORDERING. IF A FREQUENCY DISCREPANCY ARISES, HETNET WIRELESS, LLC IS TO BE MADE AWARE SO THE DESIGN CAN BE UPDATED.

VICINITY MAP



SCOPE OF WORK

TO PROVIDE AN EMERGENCY RESPONDER RADIO COVERAGE SYSTEM THAT MEETS STATE AND LOCAL CODES AND REQUIREMENTS.

THIS IS ACCOMPLISHED BY AMPLIFYING THE EXISTING OUTDOOR NETWORK AND DISTRIBUTING THE COVERAGE THROUGHOUT THE BUILDING USING A SERIES OF SPLITTERS AND COUPLERS INTERCONNECTED WITH COAXIAL CABLE

PROJECT / BUILDING INFORMATION

STORIES:	1	CONSTRUCTION TYPE:	V-A, V-B
BUILDING HEIGHT:	25'-0" +/-	OCCUPANCY:	B, F-1, S-1, U, S2, H2
BUILDING AREA:	34,354 SQ FT +/-	SPRINKLERS:	FULLY SPRINKLERED

APPLICABLE CODES

CALIFORNIA BUILDING CODE (CBC)	2019 EDITION	NFPA 70	2017 EDITION
CALIFORNIA ELECTRICAL CODE (CEC)	2019 EDITION	NFPA 72	2016 EDITION
CALIFORNIA FIRE CODE (CFC)	2019 EDITION	NFPA 1221	2016 EDITION

CODE REFERENCE GUIDE

CBC	GENERAL CONSTRUCTION
CEC	GENERAL ELECTRICAL
CFC	GENERAL FIRE, SECTION 510 EMERGENCY RESPONDER RADIO COVERAGE
NFPA 70	NATIONAL ELECTRICAL CODE. CHAPTER 6, ARTICLE 47, CHAPTER 7, SECTION 770 (OPTICAL) & CHAPTER 8 COMMUNICATION SYSTEMS
NFPA 72	FIRE ALARM & SIGNAL CODING: CHAPTER 12 (CIRCUITS AND PATHWAYS) AND CHAPTER 24 (EMERGENCY COMMUNICATIONS SYSTEMS)
NFPA 1221	STANDARD FOR THE INSTALLATION, MAINTENANCE, AND USE OF EMERGENCY SERVICES COMMUNICATIONS SYSTEMS

DESIGNED & COMMISSIONED BY

HETNET WIRELESS DESIGN & CONSULTING

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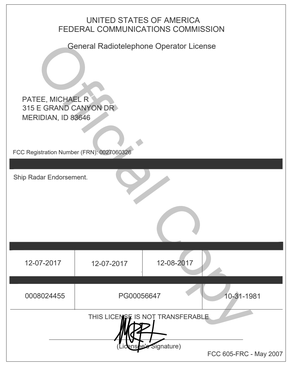


RF ENGINEER / ERRCS PROJECT MANAGER

SHEET INDEX

- ● SHEET ISSUED
- ❍ SHEET REISSUED W/O REVISIONS
- △ SHEET REISSUED W/ REVISIONS
- ▲ NEW SHEET

SHEET TITLE	PLAN NAME	ISSUED FOR PERMIT (REVISION 0)	FLOOR PLAN UPDATE (REVISION 1)	TITLE BLOCK UPDATE (REVISION 2)	FLOOR PLAN UPDATE (REVISION 3)
ERRCS 0.0	COVER SHEET	●	❍	△	❍
ERRCS 0.1	NOTES, BOM, & DONOR INFORMATION	●	❍	△	❍
ERRCS 0.2	EQUIPMENT INFORMATION	●	❍	△	❍
ERRCS 1.0	RISER	●	❍	△	❍
ERRCS 2.0	LEVEL 1 - OVERALL	●	△	△	△
ERRCS 2.0A	LEVEL 1 - SEGMENT A	●	△	△	△
ERRCS 2.0B	LEVEL 1 - SEGMENT B	●	△	△	△
ERRCS 2.1	ROOF - OVERALL	●	❍	△	△
ERRCS 3.0	EQUIPMENT ROOM DETAILS	●	❍	△	△
ERRCS 3.1	DONOR & ROOF PENETRATION DETAILS	●	❍	△	❍
ERRCS 3.2	STANDARD DETAILS	●	❍	△	❍
ERRCS 4.0	PROPAGATION	●	❍	△	❍

ABBREVIATIONS

A	ANTENNA
AHJ	AUTHORITY HAVING JURISDICTION
ANN	ANNUNCIATOR PANEL
ATT	ATTENUATOR
B	BIAS-T
BDA	BI-DIRECTIONAL AMPLIFIER
BOM	BILL OF MATERIAL
C	COAXIAL CABLE
DA	DONOR ANTENNA
DAS	DISTRIBUTED ANTENNA SYSTEM
dBm	DECIBEL MILLIWATTS
DC	DONOR CABLE
DI	DIPLEXER
DL	DOWNLINK
DS	DONOR SITE
DU	DUPLEXER
EPO	EMERGENCY POWER OFF BUTTON
ERRC	EMERGENCY RESPONDER RADIO COVERAGE
ERRCS	EMERGENCY RESPONDER RADIO COVERAGE SYSTEM
F	FILTER
FPP	FIBER PATCH PANEL (PROVIDED BY OTHERS)
GND	GROUND
HE	HEADEND
J	JUMPER
N.C.	NORMALLY CLOSED
MHz	MEGAHERTZ
NF	N-FEMALE
NM	N-MALE
N.O.	NORMALLY OPEN
PP	POLYPHASER
RF	RADIO FREQUENCY
RSSI	RECEIVED SIGNAL STRENGTH INDICATOR
Rx	RECEIVE
S	SPLITTER / COUPLER / TAPPER
Tx	TRANSMIT
UL	UPLINK
UPS	UNINTERRUPTIBLE POWER SUPPLY

CABLE RUNS & PASSIVE EQUIP. INSTALLED BY

ICS INTEGRATION
6680 VIA DEL ORO
SAN JOSE, CA 95119
408-491-6000
LIC. NO. C-10: 814203

SYMBOL LEGEND

- OMNI ANTENNA
- DONOR ANTENNA
- 2-WAY SPLITTER
- COUPLER
- BDA — BI-DIRECTIONAL AMPLIFIER
- UPS — UNINTERRUPTIBLE POWER SUPPLY
- ANN — ANNUNCIATOR PANEL
- EPO — EMERGENCY POWER OFF
- (P) — POLYPHASER
- (B) — BIAS-T
- GROUNDING KIT

CABLE LEGEND

- AL4RPV-50 - (Tx PATH / 1/2" PLENUM COAX)
- AL4RPV-50 - (Rx PATH / 1/2" PLENUM COAX)
- LDF4-50A - (1/2" OUTDOOR COAXIAL CABLE)
- 3MF — 3MF — 3MF — 3' N-MALE - N-FEMALE JUMPER
- 3NM — 3NM — 3NM — 3' N-MALE - N-MALE JUMPER
- 400 — 400 — 400 — 3' LMR-400 N-MALE - N-FEMALE JUMPER
- 6MF — 6MF — 6MF — 6' N-MALE - N-FEMALE JUMPER

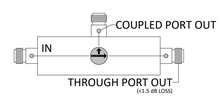
PART IDENTIFICATION SCHEDULE

L#- #
- COMPONENT ID (A = ANTENNA, S = SPLITTER, C = COAX)
- LEVEL ASSIGNED

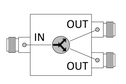
PASSIVE DEVICE MODEL NUMBERS

D2-41FN - (2-WAY SPLITTER)
DN-51FN - (TAPPER)

PASSIVE COMPONENT RF PATH



TAPPER



2-WAY SPLITTER

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829

LICENSED ARCHITECT
AARON JOBSON
LICENSE # C30920
EXP OCTOBER 31, 2023
STATE OF CALIFORNIA

SIGNED: MONTH DAY, 2021

Gensler
45 Fremont Street
Suite 1500
San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00

DRAWN BY:

DRAWING SCALE: N.T.S.

PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

COVER SHEET

SHEET NUMBER

ERRCS 0.0

1 OF 12 SHEETS

PROJECT NOTES

RESPONSIBILITIES OF THE INSTALLER / SCOPE OF WORK

GENERAL

1. DRAWINGS AND DESIGN ARE NOT FINALIZED UNTIL APPROVED BY THE AHJ. CONTRACTOR ASSUMES ALL RISK AND LIABILITY IF INSTALLATION AND/OR CONSTRUCTION OF ANY PART OF THESE DRAWINGS IS DONE PRIOR TO APPROVAL BY THE AHJ.
2. APPLY AND PAY FOR ALL NECESSARY PERMITS.
3. INSTALL THE ERRCS/DAS TO MEET OR EXCEED THE REQUIREMENTS OF ALL APPLICABLE CODES AND GUIDELINES SET FORTH BY THE STATE, COUNTY, CITY AND AHJ. THIS INCLUDES BUT IS NOT LIMITED TO NFPA 1221 SECTION 9.6, "STANDARD FOR THE INSTALLATION, MAINTENANCE, AND USE OF EMERGENCY SERVICES COMMUNICATIONS SYSTEMS.
4. PROCURE ALL EQUIPMENT (PASSIVE AND ACTIVE) INCLUDING BUT NOT LIMITED TO; CONDUIT, JUNCTION BOXES, SUPPORT SYSTEMS, WIRE, ALARM WIRE, FIBER (IF APPLICABLE), AND WATERPROOFING MATERIAL.
5. PROPERLY INSTALL ALL CABLES AND CONNECTORS, WEATHERPROOF WHEN APPLICABLE.
6. TEST AND PROVIDE A REPORT FOR ALL CABLE SEGMENTS TO ENSURE RF LOSSES MEET MANUFACTURER SPECIFICATIONS PRIOR TO COMMISSIONING.
7. VERIFY ALL PASSIVE DEVICES ARE PROPERLY INSTALLED (SEE PASSIVE COMPONENT RF PATHWAY ON ERRCS 0.0).
8. ENSURE ALL RISER CABLES (TYPICALLY VERTICAL, BUT SOMETIMES HORIZONTAL) ARE ROUTED THROUGH A 2-HOUR-RATED ENCLOSURE PER NFPA 72 24.3.13.8.3.
9. ENSURE THE CONNECTION OF FEEDER CABLES (TYPICALLY HORIZONTAL) TO THE RISER CABLE (TYPICALLY VERTICAL) MEETS THE NFPA 72 24.3.13.8.4 GIDELINE.
10. ENSURE THAT THE FEEDER CABLES (TYPICALLY HORIZONTAL) MEET A MINIMUM OF A LEVEL 1 SURVIVABILITY PER NFPA 24.3.13.8.1.
11. *LEVEL 1 SURVIVABILITY, PATHWAYS IN A BUILDING THAT ARE PROTECTED BY AN AUTOMATIC SP*RINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 WITHOUT ANY INTERCONNECTING CONDUCTORS, CABLES, OR OTHER PHYSICAL PATHWAYS INSTALLED IN METAL RACEWAYS. SEE NFPA 1221 5.10.2.
12. PROVIDE SIGNAGE OUTSIDE ALL ROOMS HOUSING ACTIVE ERRCS EQUIPMENT, REFERENCE STANDARD DETAILS.
13. ENSURE ALL ROOMS HOUSING ACTIVE EQUIPMENT HAVE PROPER VENTILATION AND AIR CONDITIONING.
14. SIZE ALL WIRE GAUGE FOR BDA POWER, RELAY, EPO, AND ALARMING CONNECTIONS.
15. UL LISTING TYP4, 4X OR 2524 OF INSTALLED SYSTEM PROVIDED BY OTHERS IF ENFORCED BY THE AHJ.

ALARMING

1. ENSURE THAT THE FIRE ALARMING COMPLIES WITH NFPA 72.
2. PROVIDE ALARMING TO THE DEDICATED MONITORING PANEL (ANN) FOR ALL RF EMITTING DEVICES & SYSTEM COMPONENTS PER NFPA 1221 9.6.13.2.
3. NORMAL AC POWER - UPS
4. LOSS OF NORMAL AC POWER - UPS
5. BATTERY CHARGER FAILURE - UPS
6. LOW BATTERY CAPACITY (TO 70% DEPLETION) - UPS
7. DONOR ANTENNA MALFUNCTION - BDA(s)
8. ACTIVE RF EMITTING DEVICE MALFUNCTION - BDA(S) AND/OR REMOTE
9. SYSTEM COMPONENT MALFUNCTION - BDA(S) AND/OR REMOTE
10. PER NFPA 72-12.4.4 A 2HR FIRE RATED CIRCUIT INTEGRITY CABLE IS REQUIRED BETWEEN THE ANN AND THE ERRCS EQUIPMENT WHEN NOT LOCATED IN THE SAME 2HR FIRE RATED ROOM (IF APPLICABLE).

ROOF

1. MOUNT DONOR ANTENNA TO MAST PER MANUFACTURER SPECIFICATIONS. USE NON-PENETRATING ROOF MOUNT WHEN APPLICABLE.
2. CORRECTLY POSITION DONOR ANTENNA(S) AZIMUTH (SEE DESIGN).
3. INSTALL NEMA 4 (L-COMM) BOX TO MAST PER MANUFACTURER SPECIFICATIONS WHEN APPLICABLE AND ENSURE ALL PENETRATIONS ARE WEATHERPROOF.
4. GROUND LDF4-50A (OUTDOOR RATED COAX) DONOR CABLE(S) USING GROUNDING KIT(S) NO MORE THAN 50' FROM ROOF PENETRATION.
5. PROVIDE AND INSTALL WEATHERPROOF ROOF PENETRATION.
6. PROPERLY PROTECT DONOR CABLE(S) ON ROOF USING CONDUIT AND CONDUIT SUPPORTS.
7. CONTRACTOR TO PROVIDE BUILDING GROUND AT DONOR ANTENNA LOCATION.

HEADEND / REMOTE LOCATION

1. INSTALL AND GROUND POLYPHASERS PER MANUFACTURER SPECIFICATIONS.
2. GROUND AL4RPV-50 (PLENUM RATED) DONOR CABLE(S) USING GROUNDING KIT (SEE BOM).
3. LIGHTNING PROTECTION MUST COMPLY WITH NFPA 780, PER NFPA 1221 9.6.3.
4. MOUNT AND INSTALL ALL PASSIVE EQUIPMENT AND ACTIVE DEVICES (BDA, UPS, ANN, ANTENNAS, SPLITTERS, & CABLE) PER MANUFACTURER SPECIFICATIONS AND APPLICABLE BUILDING CODES, INCLUDING PROPER GROUNDING OF EQUIPMENT WHERE REQUIRED.
5. PROPERLY INSTALL ALL CABLES (1/2" COAX AND JUMPERS) AND PASSIVE EQUIPMENT.
6. SECURE ALL FLOOR MOUNTED EQUIPMENT TO MEET ALL APPLICABLE BUILDING CODES.
7. PROVIDE A DEDICATED 20 AMP POWER SOURCE WITH BREAKER LOCK TO POWER, CHARGE AND MAINTAIN THE HARD WIRED UPS.
8. FIRESTOP ALL PENETRATIONS.

RISER

1. VERIFY THE VERTICAL RISER ON EACH FLOOR IS 2HR FIRE RATED, PER NFPA 72 24.3.13.8.3 AND ALL COMPONENTS (SPLITTERS), CABLES AND CONNECTIONS ARE ACCESSIBLE.
2. IF A NON-ACCESSIBLE RISER IS BEING USED, ENSURE THAT A 2HR FIRE RATED ACCESS PANEL IS INSTALLED AND ALL COMPONENTS (SPLITTERS), CABLES AND CONNECTIONS ARE ACCESSIBLE VIA THE ACCESS PANEL.
3. FIRESTOP ALL PENETRATIONS.

INFRASTRUCTURE (HORIZONTAL)

1. VERIFY ALL CABLES OUTSIDE OF RISER AND/ OR HE ROOM ARE ROUTED IN CONDUIT AND MEET A LEVEL 1 SURVIVABILITY AS NOTED ABOVE.
2. ENSURE ALL CABLES DO NOT EXCEED A MINIMUM 5" BEND RADIUS OR MINIMUM BEND RADIUS SPECIFIED BY THE MANUFACTURER.
3. ENSURE EACH CABLE SEGMENT HAS LESS THAN 15 BENDS.
4. FREE AIR MOUNT ALL PASSIVE DEVICES (SPLITTER) IN JUNCTION BOXES, AND VERIFY ALL CABLE ENTERING AND EXITING JUNCTION BOX IS PROPERLY CONNECT TO EACH PASSIVE DEVICE. 3' NM-NF JUMPERS ARE PROVIDED ON BOM TO ENSURE PROPER INSTALLATION.
5. WHEN CONNECTING MULTIPLE PASSIVE DEVICES IN A SINGLE JUNCTION BOX VERIFY THAT A 3' NM-NM JUMPER IS USED TO INTERCONNECT ALL DEVICES AND 1/2" COAX ENTER AND EXITING BOX MEETS INSTALLATION REQUIREMENT NOTED ABOVE.
6. WHEN PASSIVE DEVICES ARE USED IN HARDLID CEILINGS AN ACCESS PANEL MUST BE PROVIDED. CONTRACTOR TO SIZE AND LOCATE.
7. MOUNT ANTENNAS TO CEILING, OR JUNCTION BOX WHEN APPLICABLE. ANTENNA MUST NOT BE IMPEDED TO ENSURE PROPER FUNCTION OF THE SYSTEM.
8. DISTANCE FROM 1/2" COAXIAL CABLE TO THE ANTENNA JUMPER MIGHT BE GREATER THAN THE ANTENNA JUMPER LENGTH. ENSURE THAT THE CABLES ARE NOT STRETCHED THUS COMPROMISING THE FUNCTIONALITY. A 3' NM-NF JUMPER IS INCLUDED ON THE BOM FOR THIS PURPOSE.
9. INSTANCES WHERE AN ANTENNA DIRECTLY CONNECTS TO A SPLITTER OR COUPLER A 3' NM-NM JUMPER IS REQUIRED TO COMPLETE THE CONNECTION. THESE JUMPERS ARE INCLUDED ON THE BOM. VERIFY ALL THESE CONNECTIONS ARE PROPERLY MADE. ALSO SEE PASSIVE COMPONENT RF PATH (ERRCS 0.0) TO ENSURE RF PATH IS CORRECT.

GENERAL NOTES

1. PRIOR TO THE SUBMISSION OF PRE-CONSTRUCTION DRAWINGS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL FIELD CONDITIONS AND CONFIRM THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF A HETNET WIRELESS REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL RECEIVE AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER GUIDELINES UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
4. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK WITH THE SITE REPRESENTATIVE AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
5. PENETRATIONS OF ROOF MEMBRANES SHALL BE PATCHED/FLASHED AND MADE WATERTIGHT.
6. CABLE LENGTHS ARE CRITICAL TO SYSTEM PERFORMANCE, INSTALLATION THAT DEVIATES FROM THE DESIGN REQUIRES APPROVAL FROM HETNET WIRELESS.
7. ANTENNA PLACEMENT AND CABLE ROUTING IS SCHEMATIC ONLY. ACTUAL ANTENNA PLACEMENT TO BE WITHIN 10' RADIUS OF DESIGN DRAWING AS LONG AS THE ANTENNA FUNCTION IS NOT BEING IMPEDED BY STRUCTURE NOT ALREADY ACCOUNTED FOR IN THE DESIGN MODEL. HETNET WIRELESS SHALL BE NOTIFIED IF THE RELOCATED ANTENNA POSITION EXCEEDS THE 10' RADIUS.
8. ALL PENETRATIONS THROUGH A FIRE RATED WALL SHALL BE SEALED AS SPECIFIED BY THE MANUFACTURER OF THE FIRE RATED SLEEVE.
9. A SECONDARY POWER SOURCE IS REQUIRED BY CODE, SOME AHJ MAY REQUIRE A SECONDARY POWER SOURCE EVEN IF EMERGENCY GENERATOR POWER IS AVAILABLE.
10. ANNUAL TESTING AND MAINTENANCE REQUIRED PER CFC 510.
11. PER NFPA 1221 CHAPTER 12.3(1) AND NFPA 72 CHAPTER 7.2.1(14) AS-BUILT DRAWINGS SHALL BE KEPT ON RECORD.
12. THE DESIGN OF THE ERRCS AS PROVIDED ON THE PLANS COMPLIES WITH THE CALIFORNIA FIRE CODE, ALL APPLICABLE NFPA STANDARDS AND MEETS ALL LOCAL REQUIREMENTS FOR EMERGENCY RESPONDER RADIO COMMUNICATIONS.
13. CONTRACTOR IS REQUIRED TO LABEL ALL DEVICES AND CABLES PER RISER DIAGRAM AND FLOOR PLANS. CABLES TO BE LABELED AT EACH END OF THE SEGMENTS. SEE STANDARD DETAILS FOR REFERENCE.

CABLE AND COMPONENT TESTING

1. PERFORM AND RECORD A TEST OF EVERY INSTALLED CABLE SEGMENT USING AN RF FDR. (CABLE SEGMENTS SHALL BE TEMPORARILY TERMINATED AT ONE END IN A 50-OHM RESISTIVE LOAD TERMINATION FOR THESE TESTS).
2. TEST ALL CABLES SEGMENTS (AS DEFINED BELOW) AT FREQUENCY SWEEPS REFLECTIVE OF COMMON SPECTRUM BANDS IN THAT FREQUENCY RANGE (I.E, 136-174 MHZ COVERS THE VHF BAND).
3. TEST EVERY SEGMENT OF CABLE THAT HAS NO MORE THAN A PAIR OF CONNECTORS INDIVIDUALLY WITH A TERMINATION AT ONE END.
4. THE RETURN LOSS AT ANY CONNECTOR ALONG A LENGTH OF CABLE SEGMENT SHALL NOT BE GREATER THAN 20dB. INSPECT THE FDR TRACE FOR ANY LOCATIONS OTHER THAN CONNECTORS WHERE RETURN LOSS IS BELOW NOMINAL VALUE. IF APPARENT CAUSE IS IN PROXIMITY TO EXTERNAL METAL DEVICES, CORRECT THE ROUTING OF THE CABLE AND RE-TEST. IF STRETCHING,TEARING OF CABLE OR ITS MATERIALS OCCURS REPLACE THE SECTION OF CABLE AND RE-TEST.
5. A COPY OF THE CABLE TEST REPORTS SHALL BE KEPT ON-SITE AND INCLUDED IN THE AS-BUILT RECORDS.

ELECTRICAL NOTES

1. BACK BOXES, PULL BOXES, CONDUIT, AND PULL STRINGS IN CONDUIT ARE TO BE PROVIDED BY ELECTRICAL CONTRACTOR. CONDUIT ROUTE MAY REQUIRE MODIFICATION DUE TO CONSTRUCTION FIELD CONDITIONS.
2. A LICENSED ELECTRICIAN SHALL SIZE AND INSTALL THE CONNECTIONS FROM THE POWER SOURCE TO THE EQUIPMENT PER MANUFACTURER'S GUIDELINES AND ALL APPLICABLE CODES.

PATHWAY NOTES

1. ALL CABLE PATHWAYS SHALL MEET CURRENT REQUIREMENTS SET FORTH BY STATE, CITY, AND LOCAL ORDINANCES.
2. ALL HORIZONTAL CABLE MUST BE PLACED IN CONDUIT UNLESS OTHERWISE NOTED. CONDUIT SIZING DONE BY INSTALLER.
3. CONDUIT SHALL BE PLACED IN PARALLEL WITH WALLS UNLESS OTHERWISE NOTED.
4. CONDUIT RUNS SHALL NOT CONTAIN LB'S.
5. CONDUIT RUNS SHALL HAVE ADEQUATE PULL BOXES ON EXTENDED RUNS.
6. REAM ALL CONDUIT ENDS. FIT STUBBED CONDUITS WITH AN INSULATED BUSHING. DEBURR SHARP EDGES THAT MAY DAMAGE CABLE DURING INSTALLATION OR SERVICE. EQUIP ALL CONDUIT WITH PULL CORD WITH A MINIMUM TEST RATING OF 200LBS.
7. CONTRACTOR SHALL MAINTAIN PROPER BEND RADIUS FOR ALL CONDUIT RUNS UNLESS NOTED OTHERWISE.
8. PULL BOXES AND JUNCTION BOXES SHALL BE SIZED AND PROVIDED BY THE INSTALLER.

CABLING NOTES

1. DO NOT USE METAL STAPLES OR OTHER METHODS THAT KINK OR DEFORM CABLE JACKET. CABLE HANGERS DESIGNED FOR THE SIZE OF THE COAX SHALL BE USED.
2. NO SPLICES ARE PERMITTED.
3. ALL EXPOSED CONNECTION HARDWARE SHALL BE PROTECTED FROM PLASTER, PAINT AND OTHER SUCH MATERIALS.
4. ALL LOW-VOLTAGE WIRING SHOULD BE RUN AT LEAST ONE STUD BAY APART (12" MINIMUM) FROM ANY PARALLEL HIGH-VOLTAGE WIRING, AND CROSS AT RIGHT ANGLES WHENEVER NECESSARY. WHERE THERE IS SUFFICIENT CLEARANCE TO MEET THAT REQUIREMENT, THE CABLING MUST BE ARRANGED TO PROVIDE THE MAXIMUM POSSIBLE SEPARATION, OVER AS MUCH DISTANCE AS POSSIBLE (UNDER NO CIRCUMSTANCES SHALL THE LATERAL DISTANCE BE LESS THAN 4" WITHOUT SUPPLEMENTAL SHIELDING). THE ONLY EXCEPTION IS WHERE CABLES CROSS AT RIGHT ANGLES, WHERE A 2" MINIMUM SEPARATION MUST BE MAINTAINED.
5. PROTECTING CABLING FROM DAMAGE IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR. ALL CABLING MUST BE RUN WHERE IT IS UNLIKELY TO BE DAMAGED AFTER INSTALLATION, NAIL PLATES SHOULD BE INSTALLED WHERE CABLING PASSES THROUGH WALL STUDS. WHERE STEEL FRAMING IS USED, PLASTIC BUSHINGS MUST BE INSTALLED WHEREVER CABLES PASS THROUGH METAL STRUCTURAL MEMBERS. CABLES MUST NOT TOUCH ANY EDGES OF METAL FRAMING.
6. ALL CABLING MUST BE PROPERLY SUPPORTED AND SECURED IN A WAY THAT WILL NOT COMPRESS OR DEFORM THE CABLES.
7. THIS DESIGN INCLUDES JUMPERS IN THE BOM THAT DESPITE NOT BEING ILLUSTRATED IN THE DRAWINGS ARE TO BE INSTALLED IMMEDIATELY BEFORE AND AFTER EACH SPLITTER, COUPLER AND/OR TAPPER WHERE APPLICABLE.
8. IF APPLICABLE, SINGLE MODE FUSION SPLICED FIBER PROVIDED BY OTHERS. SC/APC CONNECTORS PROVIDED IN BOM.
9. COMMUNICATION AND SIGNAL CIRCUITS SHALL BE IDENTIFIED BY A DISTINCTIVE COLOR ON COVERS OR DOORS. THE WORDS "EMERGENCY COMMUNICATIONS-SIGNAL CIRCUIT" SHALL BE CLEARLY MARKED ON ALL TERMINAL AND JUNCTION LOCATIONS.
10. CONTRACTOR, AT THEIR DISCRETION, MAY USE SHORTER JUMPERS WHEN FEASIBLE TO DO SO.

FUNCTIONS & CAPABILITIES

1. THE ERRCS PROVIDES A METHOD TO AMPLIFY AND DISTRIBUTE EMERGENCY SERVICE PROVIDER RADIO SYSTEM TRANSMISSIONS WITHIN BUILDINGS.
2. WHEN REQUIRED, CONTRACTORS SHALL HAVE AN FCC-CERTIFIED TECHNICIAN WHO IS QUALIFIED WITH A GENERAL RADIO/TELEPHONE OPERATOR LICENSE (GROL/PG), OR EQUIVALENT, TO REVIEW DESIGN PLANS, PERFORM THE INSTALLATION, AND TEST THE SYSTEM.
3. CONTRACTORS SHALL PROVIDE AND INSTALL ALL RACKS, FIBER TRAYS, BI-DIRECTIONAL AMPLIFIERS, BACK-UP BATTERY SYSTEMS, AUTO DIALERS, REMOTE HUB/UNITS, ROOF ANTENNAS, MULTI-BAND DIRECTIONAL AND OMNI-DIRECTIONAL ANTENNAS, POWER SUPPLIES PLENUM RATED COAXIAL CABLE, PLENUM RATED RISER COAXIAL CABLE, POWER CONDITIONERS, CONNECTORS, SPLITTERS, COUPLERS, FIBER OPTIC CABLE, FIBER OPTIC MATERIALS AND CONNECTORS, GROUNDING, AS NEEDED TO PROVIDE A COMPLETE SYSTEM AS DEPICTED ON THE PLANS.
4. ENCASE ALL ACTIVE DEVICES IN A NEMA 4 DUST/WATER PROOF CABINET IF NOT ALREADY NEMA 4 RATED.
5. EMERGENCY RESPONDER RADIO COVERAGE SYSTEMS SHALL BE PROVIDED WITH AN APPROVED SECONDARY SOURCE OF POWER. THE SECONDARY POWER SUPPLY SHALL BE CAPABLE OF OPERATING THE EMERGENCY RESPONDER RADIO COVERAGE SYSTEM FOR A PERIOD OF AT LEAST 24 HOURS. WHEN PRIMARY POWER IS LOST, THE POWER SUPPLY TO THE EMERGENCY RESPONDER RADIO COVERAGE SYSTEM SHALL AUTOMATICALLY TRANSFER TO THE SECONDARY POWER SUPPLY.
6. INSTALLING CONTRACTOR TO HAVE FIRE DEPARTMENT APPROVED CERTIFIED TECHNICIAN WHO WILL REVIEW CONSTRUCTION PLANS IN ORDER TO ENSURE THAT SUCH PLANS MEET THE AFOREMENTIONED RADIO COMMUNICATION CRITERIA, INCLUDING THE LOCATION OF ALL NECESSARY CONDUIT.
7. ALL CRITICAL AREAS NOT LIMITED TO, FIRE CONTROL ROOMS, FIRE PUMP ROOMS, EXIT STAIRS, EXIT PASSAGEWAYS, FIRE SPRINKLER SECTIONAL AREAS, ELEVATORS, AND LOBBIES. RADIO COVERAGE MUST ACHIEVE 99% OF THE FLOOR IN CRITICAL AREAS.
8. SIGNAL STRENGTH OF -95dBM SHALL BE RECEIVED IN 90% OF THE GENERAL BUILDING AREA.

BILL OF MATERIAL

Type	Manufacturer	Model	Description	Qty
Antenna	Comprod Communications	F-3741	0 dBi Gain Tri-Band Omnidirectional Antenna - VHF / UHF / 760-960 MHz	5
Antenna	PCTEL	MYA1503KN	MAXRAD 150-174 MHz 3 element yagi. Field tuneable. 7.1dB gain, 300 watt. Direct N female termination. Includes mounting hardware	2
Attenuator	Mini Circuits	BW-N3W5+	N - TYPE, 3dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-N6W5+	N - TYPE, 6dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-N10W5+	N - TYPE, 10dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-N20W5+	N - TYPE, 20dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-S3W5+	SMA - TYPE, 3dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-S6W5+	SMA - TYPE, 6dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-S10W5+	SMA - TYPE, 10dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	BW-S20W5+	SMA - TYPE, 20dB Attenuator, 5 Watts	2
Attenuator	Mini Circuits	K1 UNAT+	Attenuator Kit - 'N' TYPE	2
Attenuator	Mini Circuits	K1 VAT+	Attenuator Kit - SMA	2
BDA	Fiplex	DH14CA-AV-ND	Digital Class A Repeater, VHF band - +24dBm composite output power per band - 4 Port - External Duplexer Required	1
Cable	CommScope	AL4RPV-50	HELIAX® Plenum Rated Air Dielectric Coaxial Cable - Corrugated Aluminum - 1/2 in - Off White PVC Jacket	800 feet
Cable	CommScope	LDF4-50A	HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket	400 feet
Cable	Tessco Technologies	6' NM-NF-RG142	Teflon Jumper Cable 6' RG142 N-Male / N-Female - Dual Silver Shields - Brown Tinted FEP Jacked	4
Cable	Tessco Technologies	RG-142 NF-NF-3'	Teflon Jumper Cable 3' RG142 N-Female / N-Female - Dual Silver Shields - Brown Tinted FEP Jacked	4
Cable	Tessco Technologies	RG-142 NM-NF-3'	Teflon Jumper Cable 3' RG142 N-Male / N-Female - Dual Silver Shields - Brown Tinted FEP Jacked	6
Cable	Times Microwave Systems	3' LMR-400 NM-NF	3' LMR-400 JUMPER (N-Male - NFemale) Flexible Low Loss Communications Coax Jumper	2
Connector	CommScope	L4TNF-PSA	N Female Positive Stop for 1/2 in AL4RPV50, LDF450A cable	2
Connector	CommScope	L4TNM-PSA	N Male Positive Stop for 1/2 in AL4RPV-50, LDF450A, HL4RPV50 cable	20
Miscellaneous	CommScope	241088-1	Standard Grounding Kit for 1/2 in corrugated coaxial cable and elliptical waveguide	2
Miscellaneous	Fiplex	BTTY-100100	Battery Backup Unit, 24 VDC, 100W / 24hs or 200W / 12hs	1
Miscellaneous	L-Com	HGX-PMT13	Enclosure Pole Mounting Kit - Pole Diameters 3 to 4 inches	2
Miscellaneous	L-Com	NB161406	16x14x6 Inch Non-Powered Weatherproof Industrial NB Series Enclosure	2
Miscellaneous	Mini Circuits	ZNBT-60-1W+	Bias-Tee - Coaxial - NM-NF-BNC (Place at Donon)	2
Miscellaneous	Panasonic	HE2aN-DC48V	General Purpose Relay SPST-NO (2 Form A) 48VDC Coil Chassis Mount	4
Miscellaneous	Panasonic	JH2-SF	Terminal Socket for HE Relay	4
Miscellaneous	Pasternack	PE6012	BNC Male Shorting Dust Cap	2
Miscellaneous	PolyPhaser	BGXZ-60NFNF-ALT	40-400 MHz. DC PASS COAX PROTECTION, NF TO NF	2
Miscellaneous	RFS	NM-NM	Adapter - N Male - N Male	2
Miscellaneous	ROHN	FZ1757	2.88" O.D. x 0.203" wall x 5.0' (HDG)	2
Miscellaneous	Safty Technology International	SS-2222PO	Emergency Power Off - Stopper® Station with Stopper® Station Shield	1
PS DAS Annunciator	DASalert	1221B	Public Safety DAS Annunciator System	1
Splitter	Microlab/FXR	D2-41FN	2-way Reactive Splitter, PIM <-158 dBc, 100 W Power Splitter, 138-960 MHz, Low PIM - Type N Connectors	2
Splitter	Microlab/FXR	DN-51FN	Unequal Power Splitter (Tapper), PIM <-161 dBc, 4:1 (6.0 dB), 137 - 960 MHz, Public Safety, Type N Connectors, Low PIM	1

NOTES:
1. ANTENNAS MUST BE FACTORY TUNED WHEN ORDERED. PROVIDE DESIGN FREQUENCIES TO MANUFACTURER WHEN ORDERING.
2. JUMPER QUANTITIES AT PASSIVE DEVICES ARE SUGGESTED. CONTRACTOR MAY CHOOSE TO INSTALL MORE THAN OR LESS THAN QUANTITY STATED IN BOM.

DONOR SITE INFORMATION

San Benito County Sheriff

System: San Benito County Sheriff
Band: VHF
Callsign:
High Frequency: 158.77500
Donor Site Name or Address: 451 Fourth Street
Latitude: 36°51'8.16"N
Longitude: 121°24'17.79"W
Azimuth: 310° T.N.

DL DONOR SITE CALCULATION

1. Donor Site Information
Distance 3.0000 miles, DA to DS

2. Find Free Space Path Loss
Freq. 158.7750 MHz
Distance 3.0000 miles
90.1581 dB Path Loss

3. Donor Site Transmit Power
Watts 110.0000 watt
Watts to dBm **50.4139** dBm

Expected RSSI = **-45.7441**
Design RSSI = **-54**

Hollister City Fire

System: Hollister City Fire
Band: VHF
Callsign:
High Frequency: 155.80500
Donor Site Name or Address: 451 Fourth Street
Latitude: 36°51'8.16"N
Longitude: 121°24'17.79"W
Azimuth: 310° T.N.

DL DONOR SITE CALCULATION

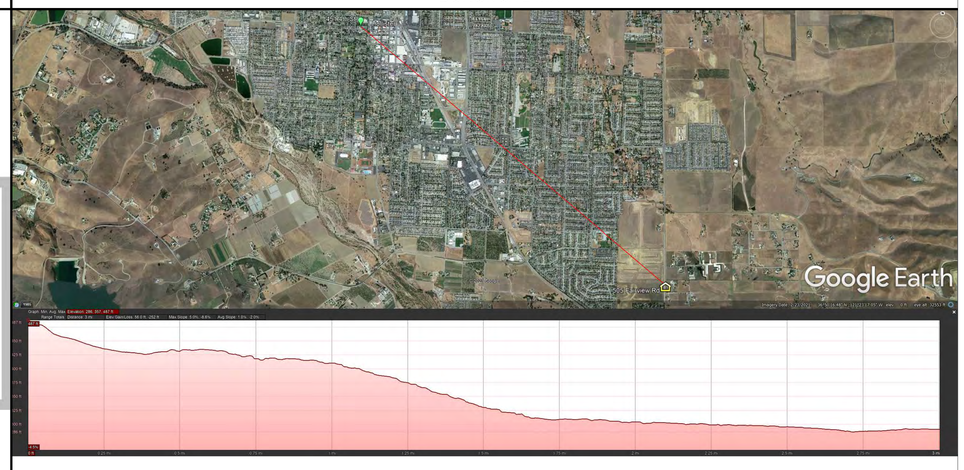
1. Donor Site Information
Distance 3.0000 miles, DA to DS

2. Find Free Space Path Loss
Freq. 155.8050 MHz
Distance 3.0000 miles
89.9941 dB Path Loss

3. Donor Site Transmit Power
Watts 100.0000 watt
Watts to dBm **50.0000** dBm

Expected RSSI = **-45.9941**
Design RSSI = **-54**

DONOR SITE MAP



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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
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DRAWING SCALE: N.T.S.
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FEBRUARY 4, 2022

SHEET TITLE

NOTES, BOM, & DONOR INFORMATION

SHEET NUMBER

ERRCS 0.1

2 OF 12 SHEETS

BDA INFORMATION

VHF DIGITAL SIGNAL BOOSTERS
137 - 164 MHz

DH124-004
DH124-005

Product Features

- Channel Selective, software programmable
- Fully digital signal boosters, FPGA based
- Auto diagnostic
- Uplink squelch, per channel and per time slot
- User adjustable gain control, UL and DL independent, per channel
- Automatic Gain Control, per channel and per time slot
- Weatherproof enclosure, IP67/NEMA4X
- NFPA compliant
- Built in spectrum analyzer

Applications

- Indoor coverage: tunnels and mobile fast-deploy communication units
- Outdoor coverage: oil rigs, stadiums, dense urban areas, rural areas, cliffs

Specification	Value
Type	Digital Signal Boosters (without Antenna Feedback Cancellation)
Frequency range	136 - 164 MHz
Passband BW	2MHz max; 3MHz min banguard
Internal Duplexer	Yes
Number of Channels	Channel Selective (90KHz, 45KHz, 30KHz, 20KHz, and 15KHz BW), 1 to 32
Gain, maximum	80 dB
Passband ripple	+/- 2.0 dB
Gain, manual control	28dB range, digitally controlled in 1dB steps
Antenna isolation	Max Gain + 15 dB
Composite output power, DL	+24 dBm composite
Composite output power, UL	+24 dBm composite
IM and spurious generation	< -13 dBm
Simplex option	Configurable
Noise figure	9.0 dB max at maximum gain
Impedance	50 Ω
Group delay	Channel Selective 90KHz, 14µS Channel Selective 45KHz, 23µS Channel Selective 30KHz, 32µS Channel Selective 20KHz, 45µS Channel Selective 15KHz, 55µS
Maximum input power, no damage	0 dBm (UL) -35dBm (DL)
Connectors	N(f) as standard
RF Input/Output impedance	50Ω
Uplink squelch function	Yes, user selectable, to avoid UL noise when no carriers present, by time slot and by channel (Channel Selective model only)
Self diagnostic platform	Microprocessor based

VHF DIGITAL SIGNAL BOOSTERS
137 - 164 MHz

DH124-004
DH124-005

Specification	Value
Alarms	Yes, amplifiers status, power amplifiers status, power supply failure, battery backup failure, temperature, AGC, RF overload, poor antenna isolation.
Local management and supervising	Local access via USB and Ethernet (web browser)
Remote management and supervising	Remote access via Ethernet. Wireless modem, SNMP as optional.
RoHS compliance	Yes
Power Supply	see table
Power Consumption	170 W
Housing	IP67 / NEMA4X
Temperature range	-13º to 131º F • -25º to +55º C
Cooling	Natural convection
Dimension	20.2 x 18.2 x 9 inches • 514 x 462 x 230 mm
Weight	55 lbs • 25 kg
Mounting	Wall mounting
MTBF	<50.000 hours

Product Code	Class	Config.	Composite Output Power	Power Supply Option
DH124-004	A - 32 channels UL 32 channels DL	01	+ 24dBm per band	AC
DH124-005	A - 32 channels UL 32 channels DL	01	+ 24dBm per band	DC

UPS INFORMATION

BATTERY BACKUP SYSTEMS

BTTY Series

Product Features

- NFPA Compliant
- Up to 24 hour version
- Batteries included
- AC Input, 24 Volt DC Output
- NEMA-4 Rated BBU Enclosure
- Up to 4 Annunciators may be connected to one BBU
- Tamper Proof with Lock and Key Accessibility
- Flush Wall Mounted Annunciators
- IFC & NFPA compliance; UL2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524.

Specification	Value
Type	Battery Backup Unit
Input	120 VAC 50/60 Hz
Size	24 x 20 x 10 in

Specifications	BTTY-100050
Storage capacity	100W / 12hs
Annunciator	AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail
Max Load	270 W (contact Fiplex for battery duration at different loads)
Batteries	Included
BDA Annunciator	Built in, port for additional external annunciators
Weight (batteries included)	150lbs

Specifications	BTTY-100100
Storage capacity	100 W / 24 hs or 200 W / 12 hs
Annunciator	AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail
Max Load	270 W (contact Fiplex for battery duration at different loads)
Batteries	Included
BDA Annunciator	Built in, port for additional external annunciators
Weight (batteries included)	210lbs

UPS Sizing Calculation			Model No.:	BTTY-100100	
MIN. UPS REQUIRMENTS BY TOTAL WATTAGE DRAW					
Watts (Total)	V	Battery Run Time (Hrs.)	Watts (Hrs)	Battery Efficiency	Min. Draw (Amps)
100	48	24	2400	90.00%	2.08
UPS PERFORMANCE SIZED					
Battery (Ah)	V	Battery Strings	Total Battery (Ah)	Runtime (Hrs)	Actual Runtime (Hrs)
55	48	1	55	26.40	24.00

ALARMING INFORMATION

ALARMING NOTES

1. INSTALLER SHALL REFERENCE UPS, BDA, AND ANN INSTALLATION GUIDES FOR ALL ALARMING CONTACTS.
2. INSTALLER IS RESPONSIBLE FOR ALL ALARMING CONNECTIONS TO THE ANN.
3. FIRE ALARM CONTRACTOR SHALL BRIDGE THE ALARMING FROM THE ANN TO MAIN FIRE ALARM PANEL. A SEPARATE PERMIT IS REQUIRED.
4. FIRE ALARMING SHALL COMPLIES WITH NFPA 72.
5. PER NFPA 9.6.13.2, THE DEDICATED MONITORING PANEL (ANN) MUST BE LOCATED IN THE FIRE COMMAND CENTER IF APPLICABLE. ERRCS HE SHALL BE LOCATED IN FIRE COMMAND CENTER IF APPLICABLE. IF NOT APPLICABLE, ANN SHALL BE LOCATED NEXT TO FACP.
6. ALARMING POINTS (ANN MUST COMPLY) PER NFPA 1221 9.6.13.2:
   - -NORMAL AC POWER - UPS
   - -LOSS OF NORMAL AC POWER - UPS
   - -BATTERY CHARGER FAILURE - UPS
   - -LOW BATTERY CAPACITY (TO 70% DEPLETION) - UPS
   - -DONOR ANTENNA MALFUNCTION - BDA(S)
   - -ACTIVE RF EMITTING DEVICE MALFUNCTION - BDA(S) AND/OR REMOTE
   - -SYSTEM COMPONENT MALFUNCTION - BDA(S) AND/OR REMOTE
7. THE COMMUNICATIONS LINK BETWEEN THE FIRE ALARM SYSTEM AND THE TWO-WAY RADIO COMMUNICATIONS ENHANCEMENT SYSTEM MUST BE MONITORED FOR INTEGRITY.

DASalert — NFPA-Compliant Public Safety Radio Enhancement System Monitoring Unit and Annunciator Panel (NFPA MEMBER)

DASalert Models 1221-A & 1221-B
Meets NFPA-72 (2010, 2013 & 2016) and current NFPA-1221 codes for a Dedicated Annunciator and Monitoring Panel

Displays Status of:

- BDA
- Donor Antenna
- AC Power
- Battery Capacity
- Battery Charger
- System Status

Includes Form-C relay contacts to interface with any fire alarm system

Monitors communications link for integrity

Includes independent circuitry to check antenna, AC power, battery capacity, charger and overall system status

Mates with or augments monitoring of any BDA, antenna, charger, battery or UPS

Low cost, easy to install and program
Small size NEMA-4: 10"H x 8"W x 4"D

Backed up by internal battery (included)

Specifications

Dimensions	10" x 8" x 4"	Fault inputs from Radio Enhancement System	Donor Antenna OK / Fail
Weight	11.7 lbs		Amplifier OK / Fail
			Charger OK / Fail
			Battery Capacity OK / Low
Form C Dry Relay Outputs to Fire Alarm System	AC Power		AC Power ON / OFF
	System (Summary Alarm)	Analog Inputs	Donor Antenna Sense
	Amplifier (BDA)		DAS Battery +/-
	Antenna	Certifications	UL: E194432, ETL: 4001276
	Battery Charger		
	Battery Capacity		
	Communications Fault	Power	15 VDC (180 ma) from supplied Power Supply

www.DASalert.com | 303-526-1965 | sales@DASalert.com

EMERGENCY POWER OFF

BUTTONS AND SWITCHES

STI STOPPER® STATION SERIES

KEY FEATURES

General Information
- Multipurpose push button switches cover a wide range of applications both indoors and outdoors.
- Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

Design
- Unique, curved design helps protect against accidental activation.

Construction
- Station housing molded of tough polycarbonate.
- UL Listed to U.S. and Canadian safety standards.
- Models used with LT-1UL Latching Timer Module are Listed for access control.
- Stainless steel backplate.
- Push buttons are ADA Compliant (excludes "3" key switch button).

Installation
- 5VA flammability rating on backplate and spacer.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).
- Polycarbonate complies with FDA regulations for food contact applications.

Options
- Your choice of colors — red, green, yellow, white or blue.
- Standard or custom text or hi-res logo.
- Custom text in any language.
- Protect with STI indoor/outdoor protective covers.

PRODUCT OVERVIEW

These ADA Compliant, multipurpose push button switches cover a wide range of applications both indoors and outdoors. They're called Stopper Stations. They incorporate a unique, patented design that helps dramatically to stop accidental activation. A number of standard models are available or we can create custom units to meet your needs exactly. You have your choice of any of five universal shell colors, several button styles, standard or custom wording and language.

HOW THEY WORK

Because of their superior, patented design combined with quality construction throughout, you can expect outstanding performance for years to come. In fact, many STI customers are surprised to find that all this quality is available at no increase in price. Plus, customers appreciate the option to protect the switches with STI protective covers that carry a three year guarantee against breakage in normal use, one year on electro mechanical and electronic components. For indoor applications, you can order your Stopper Station with a pre-alarm cover to help stop malicious and accidental activation.

For more information, call 1-800-888-4784 (4STI) or visit www.sti-usa.com

Safety Technology International

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SIGNED: MONTH DAY, 2021

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GAVILAN COLLEGE

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DSA APP NO. 01-119906

ARCH PROJECT NO:	1897.00
DRAWN BY:	
DRAWING SCALE:	N.T.S.
PTN: 43-C4	FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

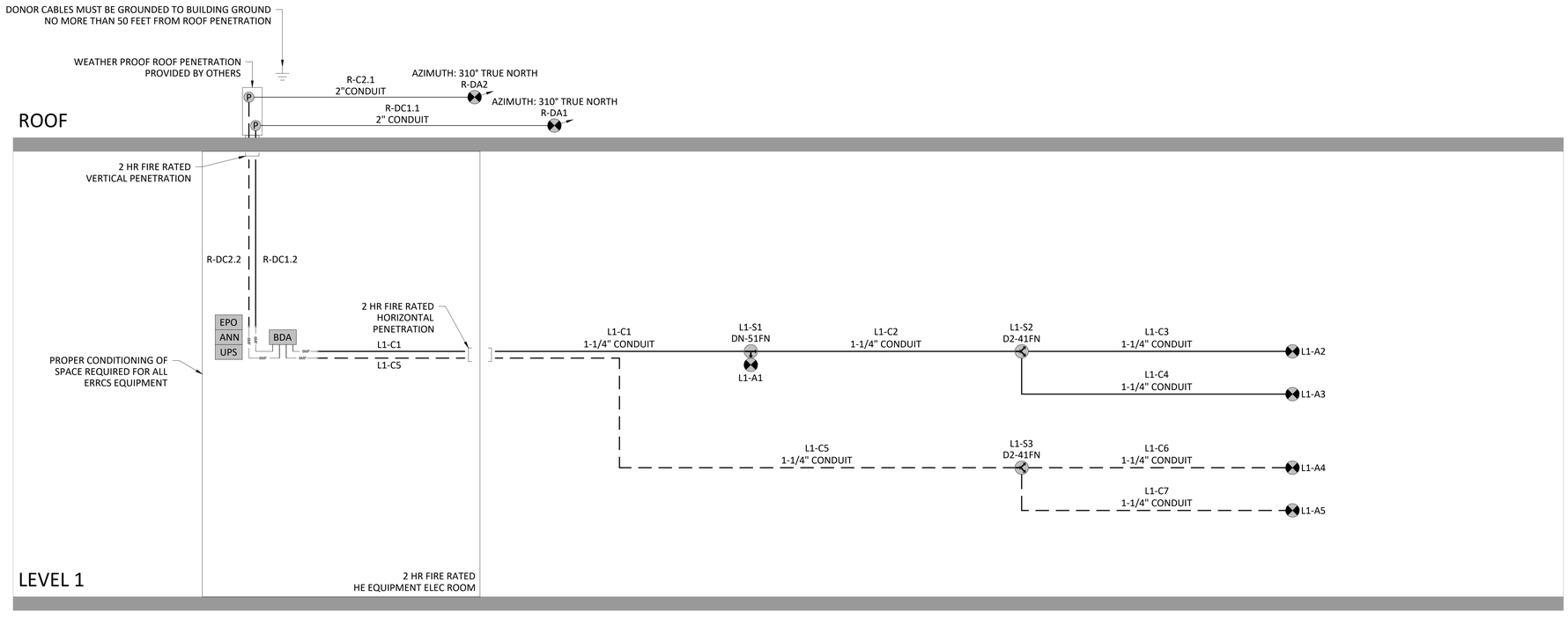
EQUIPMENT INFORMATION

SHEET NUMBER

ERRCS 0.2

NOTE:

1. CONDUIT NOT SHOWN FOR CLARITY.



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DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00

DRAWN BY:

DRAWING SCALE: N.T.S.

PTN: 43-C4 FILE NO: N/A

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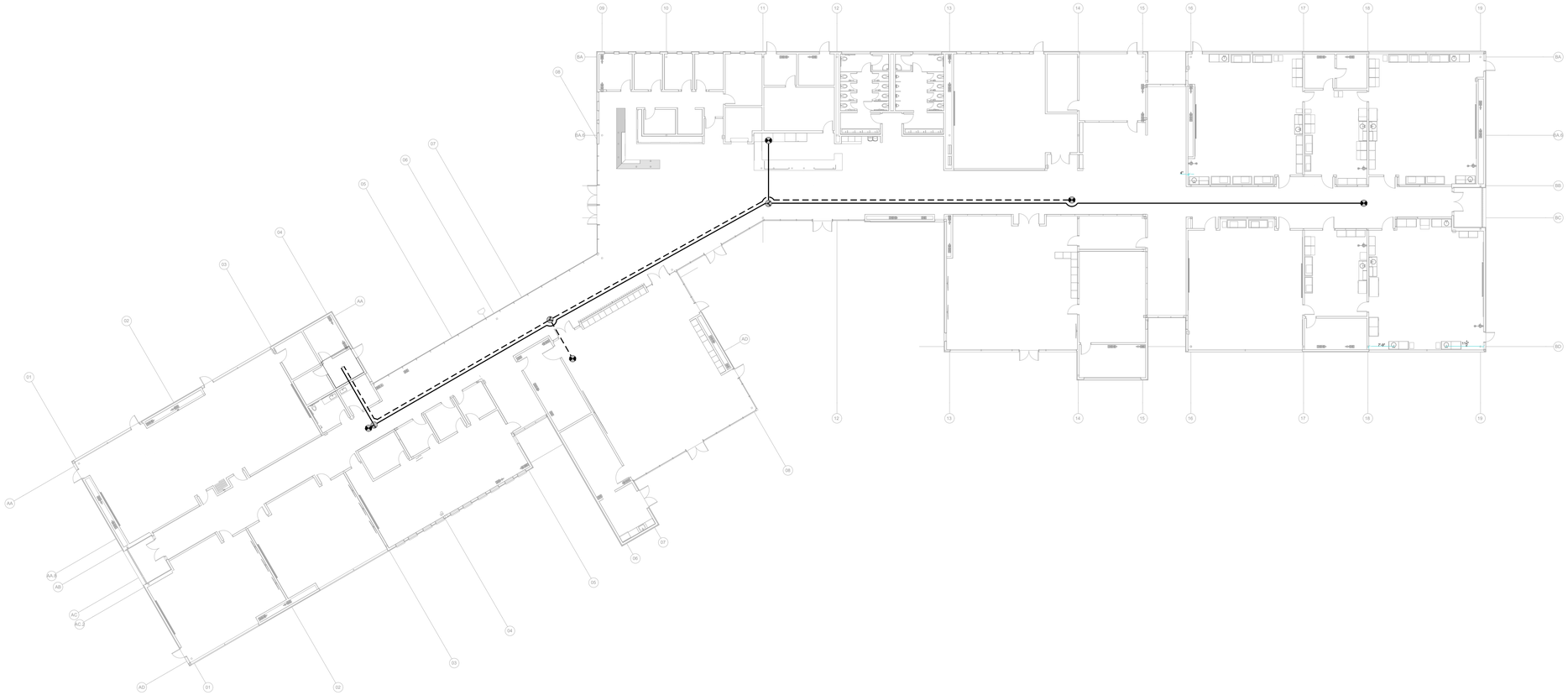
FEBRUARY 4, 2022

SHEET TITLE

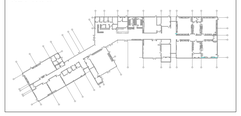
RISER

SHEET NUMBER

ERRCS 1.0



KEY MAP



LEVEL 1 - OVERALL

SCALE: 0'- 1/16"=1'-0"

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3

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00

DRAWN BY:

DRAWING SCALE: 1/16" = 1'

PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

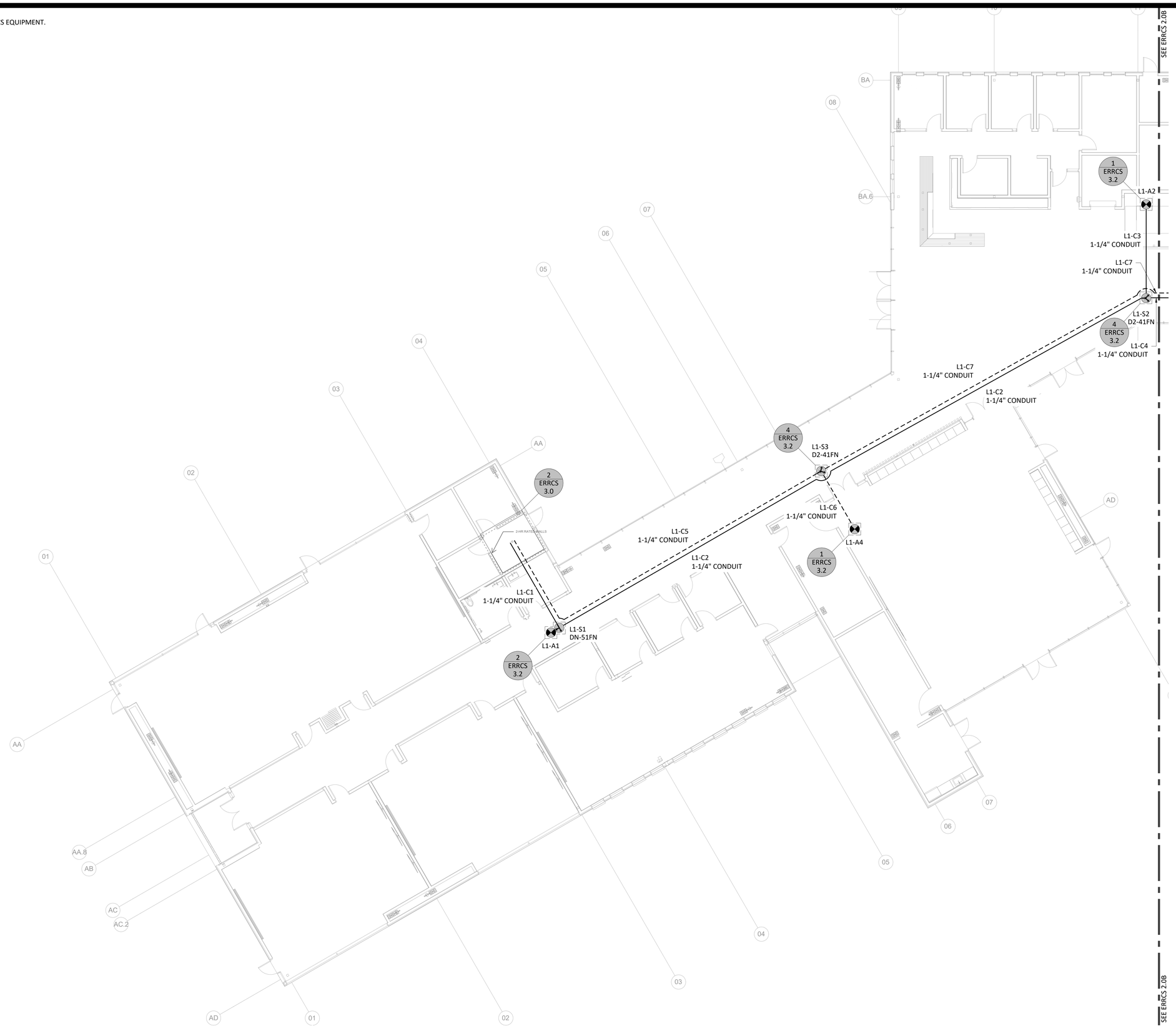
LEVEL 1 - OVERALL

SHEET NUMBER

ERRCS 2.0

5 OF 12 SHEETS

NOTE:
1. PROPER CONDITIONING OF SPACE REQUIRED FOR ALL ERRCS EQUIPMENT.
2. CONDUIT NOT SHOWN FOR CLARITY.



KEY MAP

LEVEL 1 - SEGMENT A

SCALE: 0'- 1/8"=1'-0"

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COLLEGE DISTRICT

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DRAWN BY:
DRAWING SCALE: 1/8" = 1'
PTN: 43-C4 FILE NO: N/A

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FEBRUARY 4, 2022

SHEET TITLE

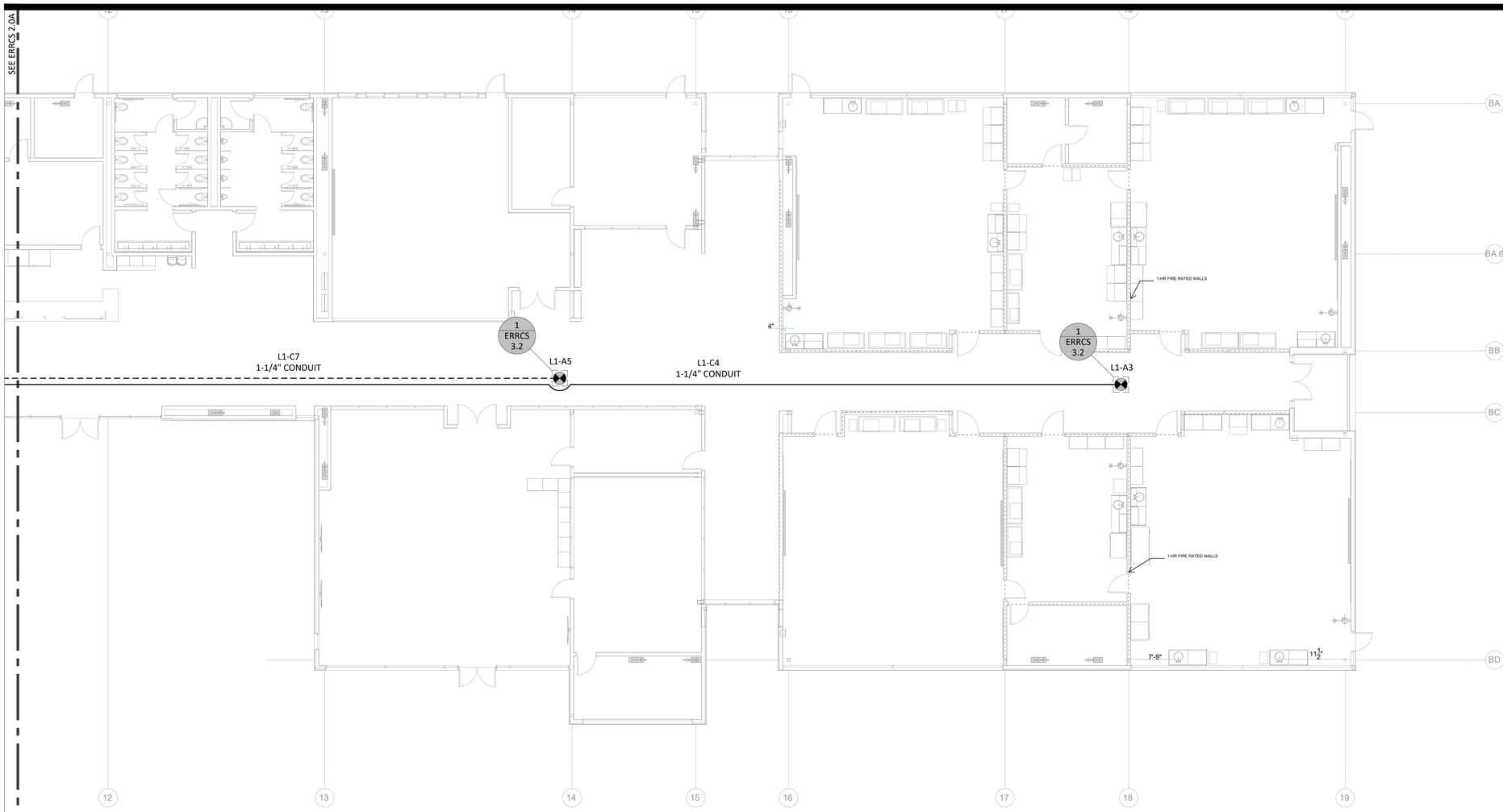
LEVEL 1 - SEGMENT A

SHEET NUMBER

ERRCS 2.0A

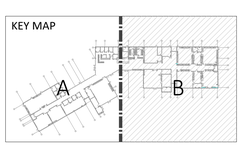
6 OF 12 SHEETS

SEE ERRCS 2.0A



SEE ERRCS 2.0A

KEY MAP



LEVEL 1 - SEGMENT B

SCALE: 0'- 1/8"=1'-0"

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East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829

LICENSED ARCHITECT
AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023
STATE OF CALIFORNIA

SIGNED: MONTH DAY, 2021

Gensler
45 Fremont Street
Suite 1500
San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

3

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

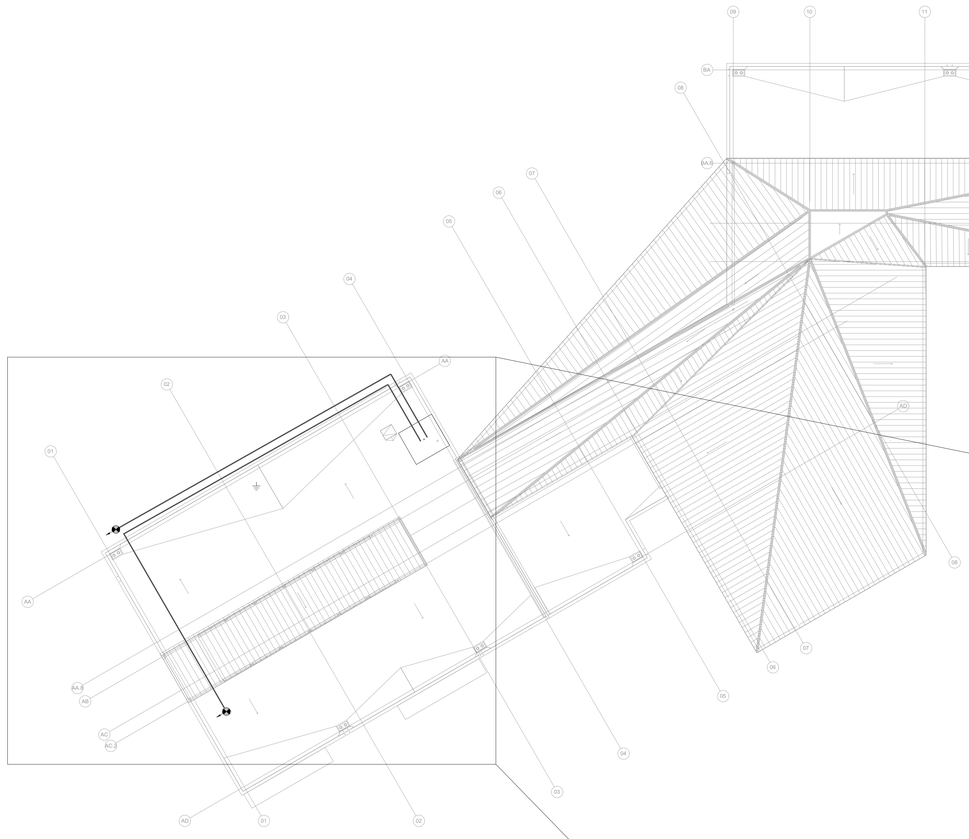
DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: 1/8" = 1'
PTN: 43-C4 FILE NO: N/A
DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

LEVEL 1 - SEGMENT B

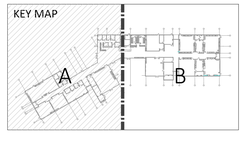
SHEET NUMBER

ERRCS 2.0B

NOTE:
1. DONOR ANTENNAS MUST CLEAR PARAPET OF ANY OBSTRUCTION BY 3'. NOT DOING SO WILL COMPROMISE RADIO TRANSMISSION.
2. 10' MINIMUM DISTANCE REQUIRED BETWEEN DONOR ANTENNAS.

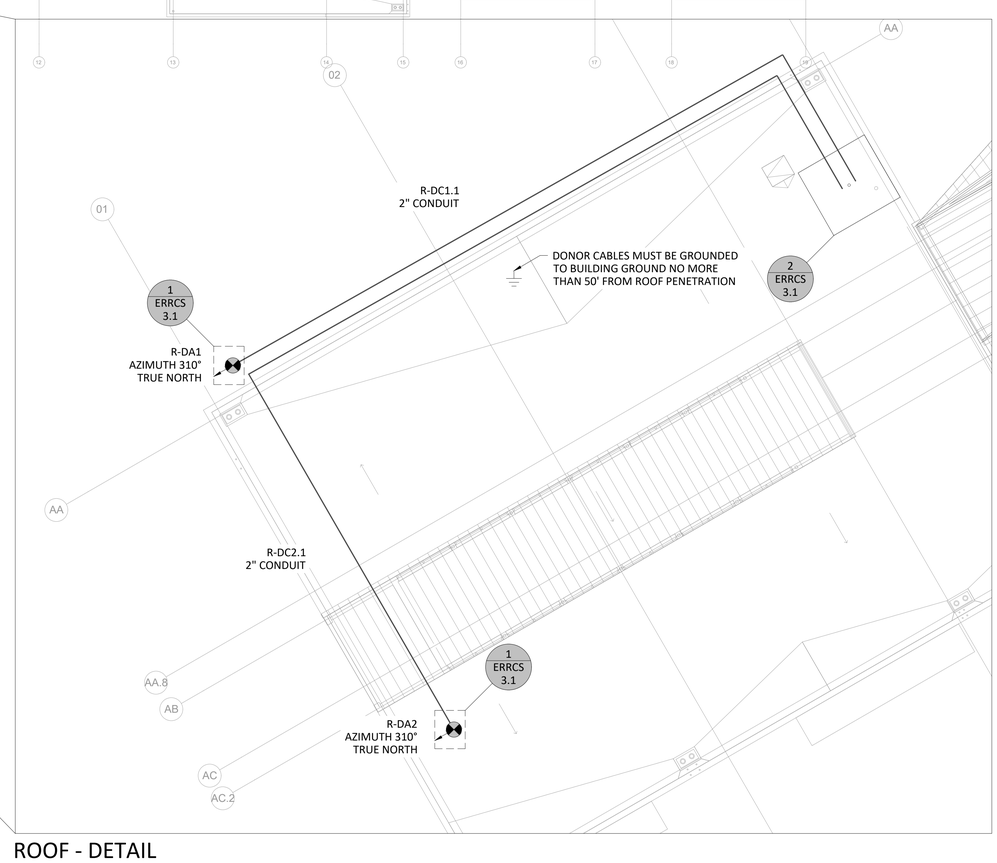


KEY MAP



ROOF - OVERALL

SCALE: 0'- 1/16"=1'-0"



ROOF - DETAIL

SCALE: 0'- 1/8"=1'-0"

QUATTROCCHI KWOK
ARCHITECTS
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GAVILAN JOINT
COMMUNITY
COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: VARIES
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL

FEBRUARY 4, 2022

SHEET TITLE

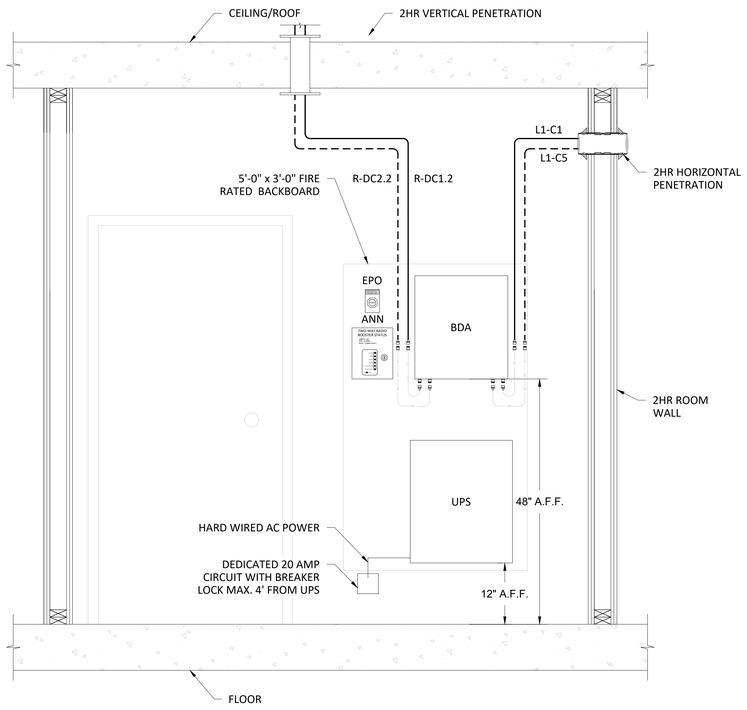
ROOF - OVERALL

SHEET NUMBER

ERRCS 2.1

8 OF 12 SHEETS

NOTE:
1. PROPER CONDITIONING OF SPACE REQUIRED FOR ALL ERRCS EQUIPMENT.
2. CONDUIT NOT SHOWN FOR CLARITY.



DETAIL 1
LEVEL 1 2HR FIRE RATED HE EQUIPMENT ELEC ROOM WALL DETAIL

NOTE:
1. PROPER CONDITIONING OF SPACE REQUIRED FOR ALL ERRCS EQUIPMENT

DETAIL 2
LEVEL 1 2HR FIRE RATED HE EQUIPMENT ELEC ROOM FLOOR DETAIL

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: 0'-1" = 1'-0"
PTN: 43-C4 FILE NO: N/A

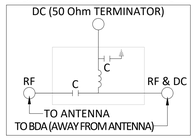
DSA SUBMITTAL
FEBRUARY 4, 2022

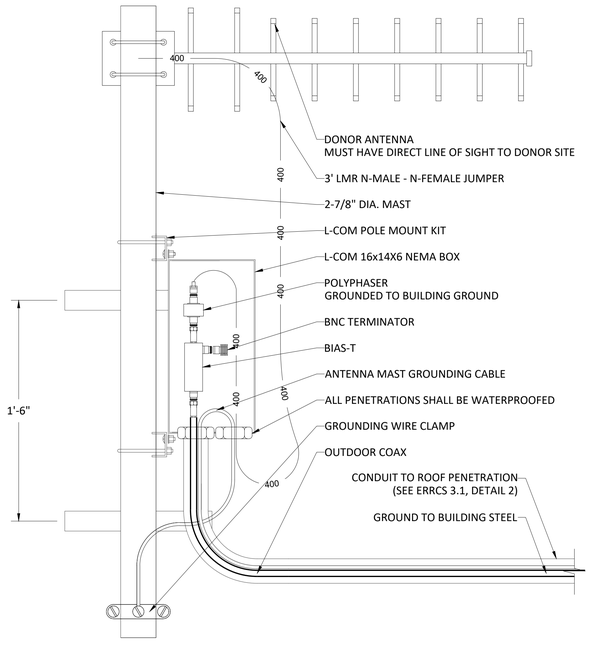
SHEET TITLE
EQUIPMENT ROOM DETAILS

SHEET NUMBER
ERRCS 3.0

NOTE:
1. DONOR ANTENNAS MUST CLEAR PARAPET OF ANY OBSTRUCTION BY 3'. NOT DOING SO WILL COMPROMISE RADIO TRANSMISSION.
2. 10' MINIMUM DISTANCE REQUIRED BETWEEN DONOR ANTENNAS.

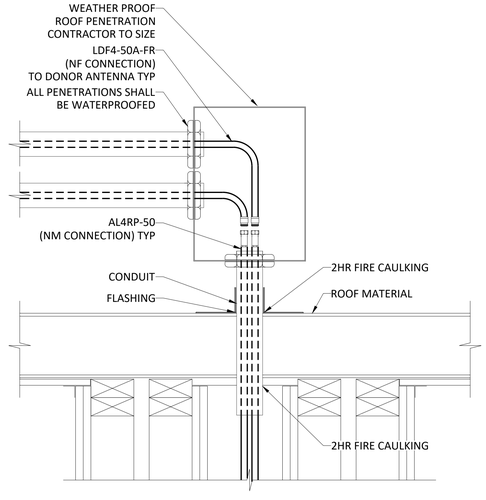
BIAS-T ELECTRICAL SCHEMATIC





DETAIL 1
DONOR ANTENNA DETAIL

NOTE: CABLE MUST BE GROUNDED NO MORE THAN 50 FT FROM ROOF PENETRATION. SEE ERRCS 3.2 DETAIL 9



DETAIL 2
ROOF PENETRATION DETAIL

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GAVILAN JOINT
COMMUNITY
COLLEGE DISTRICT

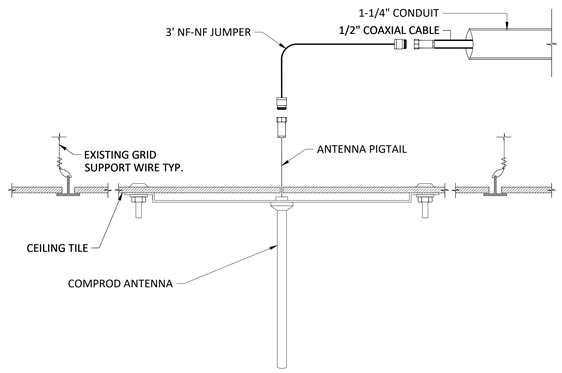
DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: N.T.S.
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
DONOR & ROOF PENETRATION DETAILS

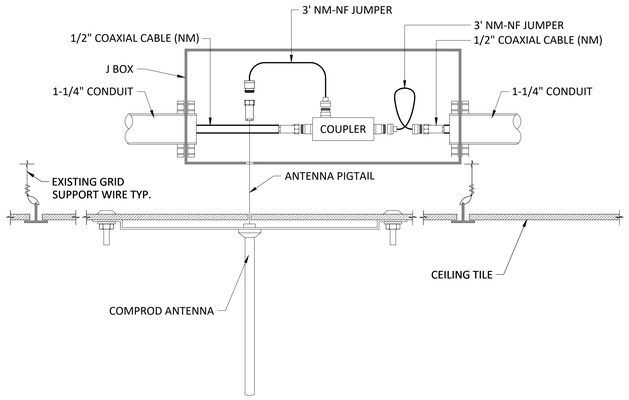
SHEET NUMBER
ERRCS 3.1

NOTE:
1. ANTENNAS MUST BE FACTORY TUNED WHEN ORDERED.
2. PROVIDE DESIGN FREQUENCIES TO MANUFACTURER WHEN ORDERING.



DETAIL 1
ANTENNA DETAIL

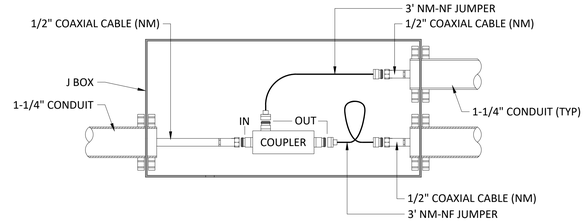
NOTE:
1. ANTENNAS MUST BE FACTORY TUNED WHEN ORDERED.
2. PROVIDE DESIGN FREQUENCIES TO MANUFACTURER WHEN ORDERING.
3. JUMPER QUANTITIES AT PASSIVE DEVICES ARE SUGGESTED. CONTRACTOR MAY CHOOSE TO INSTALL MORE THAN OR LESS THAN QUANTITY STATED IN BOM ON ERRCS 0.1



DETAIL 2
ANTENNA AND COUPLER DETAIL

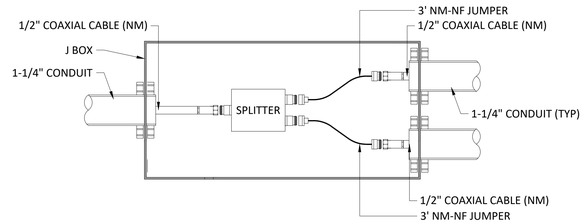
NOTE:
1. JUMPER QUANTITIES AT PASSIVE DEVICES ARE SUGGESTED. CONTRACTOR MAY CHOOSE TO INSTALL MORE THAN OR LESS THAN QUANTITY STATED IN BOM ON ERRCS 0.1

NOTE: USE PATHWAY ARROWS ON COUPLER TO ENSURE RF DIRECTION IS CORRECT.

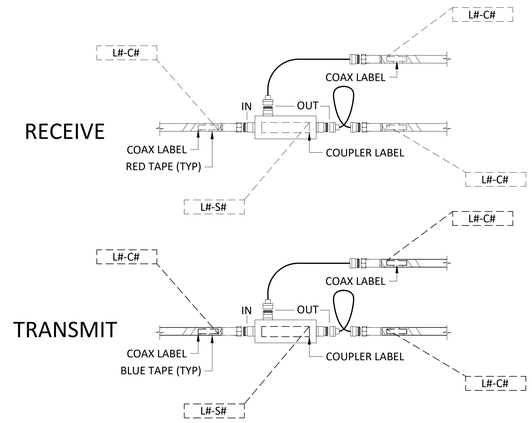


DETAIL 3
COUPLER DETAIL

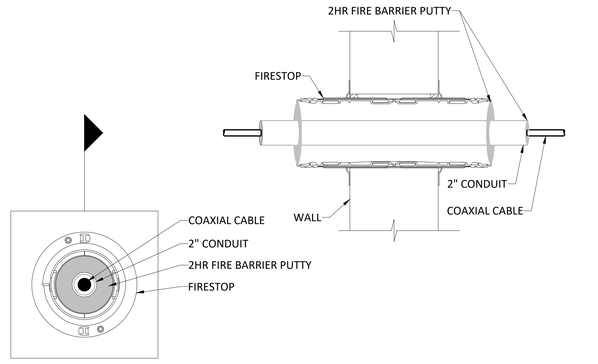
NOTE:
1. JUMPER QUANTITIES AT PASSIVE DEVICES ARE SUGGESTED. CONTRACTOR MAY CHOOSE TO INSTALL MORE THAN OR LESS THAN QUANTITY STATED IN BOM ON ERRCS 0.1



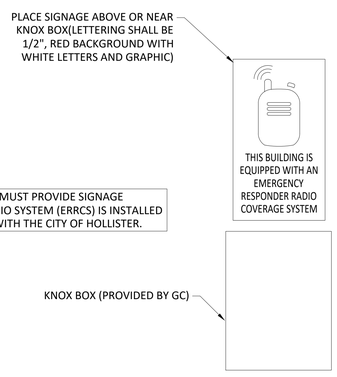
DETAIL 4
SPLITTER DETAIL



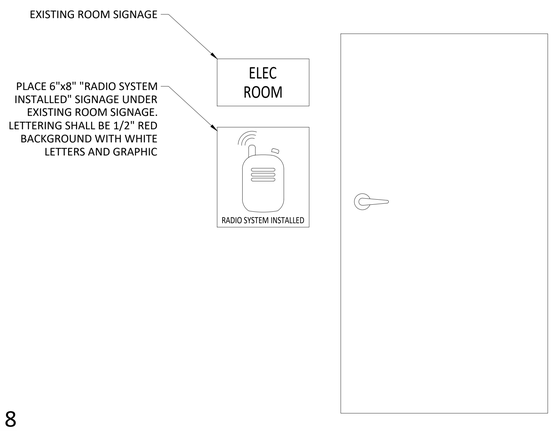
DETAIL 5
LABELING DETAIL



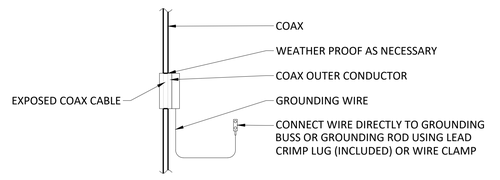
DETAIL 6
2HR FIRE RATED PENETRATION DETAIL



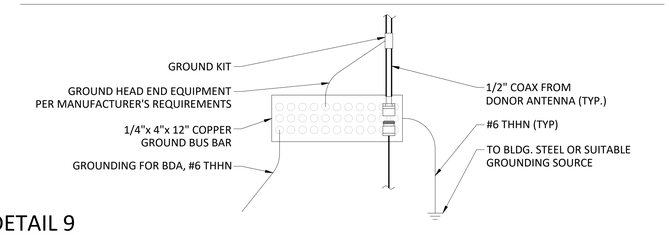
DETAIL 7
ERRCS SIGNAGE DETAIL



DETAIL 8
ERRCS ROOM SIGNAGE DETAIL



DONOR CABLE GROUNDING DETAIL



DETAIL 9
GROUNDING DETAIL

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
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Oakland, CA 94607
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EXP OCTOBER 31, 2023
STATE OF CALIFORNIA

SIGNED: MONTH DAY, 2021

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: N.T.S.
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
STANDARD DETAILS

SHEET NUMBER
ERRCS 3.2
11 OF 12 SHEETS

INDOOR PREDICTION LEGEND

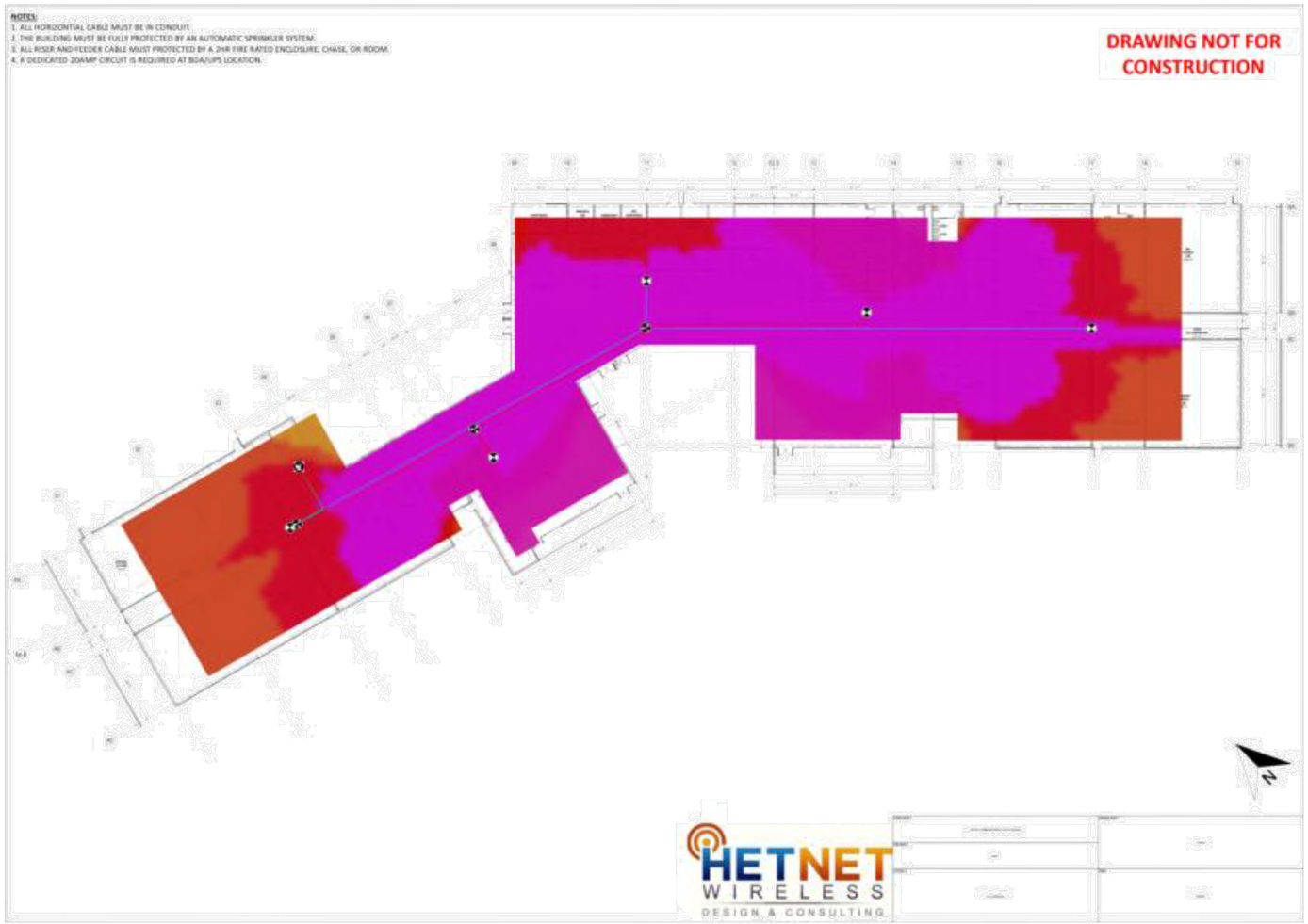
Power
[dBm]

>-40.00
-50.00
-55.00
-60.00
-65.00
-75.00
-80.00
-85.00
-95.00
<-100.00

1. SYSTEM MEETS A MIN. OF -95 dBm @ 95% ON ALL FLOORS
2. SYSTEM MEETS A MIN. OF -95 dBm @ 99% IN ALL CRITICAL SPACES
3. SYSTEM WAS DESIGNED TO MEET A MIN. DAQ OF 3.4.

Hollister Public Safety - VHF - Analog / Signal strength

Building 1: Level 1



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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE: N.A.
PTN: 43-C4 FILE NO: N/A

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
PROPAGATION

SHEET NUMBER
ERRCS 4.0

12 OF 12 SHEETS

FIRE LIFE SAFETY SYSTEM

PROJECT NAME AND LOCATION:

GAVILAN COLLEGE
SAN BENITO COUNTY CAMPUS
505 Fairview Road
Hollister, CA 95023

FIRE ALARM SYSTEM DESIGNED AND PROVIDED BY:

Integrated Communication Systems
6680 Via Del Oro
San Jose, CA 95119

ICS Integrated Communication Systems
CALIFORNIA CONTRACTORS LICENSE :C10-814203

DRAWING INDEX

	SHEET NUMBER	SHEET CONTENTS OR DESCRIPTION
1	FA-0.01	COVER SHEET
2	FA-0.02	SITE PLAN
3	FA-1.01	FLOOR PLAN - WEST
4	FA-1.02	FLOOR PLAN - EAST
5	FA-1.03	ROOF PLAN & RISER DIAGRAM
6	FA-2.01	CALCULATIONS
7	FA-3.01	DETAILS
8	FA-3.02	DETAILS
9	FA-3.03	DETAILS
10	FA-3.04	DETAILS
11		
12		
9	TOTAL NUMBER OF SHEETS IN THIS PACKAGE	

LOCATION PLAN

DEVICE LEGEND

	DESCRIPTION	MANUFACTURE	MODEL NUMBER	CSFM NUMBER	QTY
FACP	FIRE ALARM CONTROL PANEL	EST	EST-4	7165-1657:0508	1
	LIQUID CRYSTAL DISPLAY MODULE	EST	4-LCDLE	7165-1657:0508	1
	24 SWITCH/LED MODULE	EST	4-24L24S	7165-1657:0508	1
	CENTRAL PROCESSING UNIT MODULE	EST	4-CPU4	7165-1657:0508	1
	COMMON RELAY MODULE	EST	4-COMREL	7165-1657:0508	1
	NETWORK CONTROLLER CARD	EST	4-NET-TP	7165-1657:0508	2
	MODEM/DIALER	EST	3-MODCOM	7165-1657:0508	1
	LOOP CONTROLLER	EST	3-SSDC1	7165-1657:0508	1
	AUDIO & TELE INTERFACE/RISER MODULE	EST	4-AUDTELS	7165-1657:0508	1
	PAGING MICROPHONE	EST	4-MIC	7165-1657:0508	1
	95 WATT ZONED AUDIO AMPLIFIER	EST	3-ZA95	7165-1657:0508	1
	PRIMARY POWER SUPPLY	EST	3-PPS/M	7165-1657:0508	1
	BOOSTER POWER SUPPLY	EST	3-BPS/M	7165-1657:0508	1
	CHASSIS ASSEMBLY - 7 MODULE SPACES	EST	3-CHAS7	7165-1657:0508	2
	INNER DOOR FILLER PLATE	EST	4-FIL	7165-1657:0508	9
	WALLBOX ONLY	EST	3-CAB14B	7165-1657:0508	1
	INNER & OUTER DOORS FOR WALLBOX	EST	4-CAB24DR	7165-1657:0508	1
	BATTERY CABINET	EST	BC-1	7165-1657:0508	1
	12V, 35AH BATTERY	EST	-	7165-1657:0508	2
ANN	REMOTE ANNUNCIATOR	EST	4-2ANN	7120-1657:0509	1
	NETWORK CONTROLLER CARD	EST	4-NET-TP	7120-1657:0509	1
CELL	CELLULAR ALARM COMMUNICATOR	HONEYWELL	IPGSM-4G	7300-1645:0199	1
	12V, 7AH BATTERY				1
RPS	REMOTE POWER SUPPLY	EST	BPS-10A	7300-1657:0229	2
	12V, 7AH BATTERY				4
SD	SMOKE DETECTOR	EST	SIGA-OSD	7272-1657:0511	
	DETECTOR BASE		SIGA-SB4	7272-1657:0120	2
HD	HEAT DETECTOR	EST	SIGA-HRD	7270-1657:0333	
	DETECTOR BASE		SIGA-SB4	7272-1657:0120	0
DD	DUCT SMOKE DETECTOR	EST	SIGA-SD	3242-1657:0223	6
MS	MANUAL PULL	EST	SIGA-278	7272-1657:0129	20
MM	MONITORING MODULE	EST	SIGA-CT1	7300-1657:0121	6
RM	RELAY MODULE	EST	SIGA-CR	7300-1657:0121	8
AV	70V SPEAKER STROBE (CEILING)	EST	GCSVWF	7320-1657:0516	33
V	STROBE (CEILING)	EST	GCVWF	7125-1657:0510	11
W	SPRINKLER WATERFLOW	BY OTHERS			1
TS	SPRINKLER TAMPER SWITCH	BY OTHERS			1
PIV	SPRINKLER PIV	BY OTHERS			1

SCOPE OF WORK

THE SCOPE OF THIS FIRE ALARM SYSTEM PROJECT CONSISTS OF THE FOLLOWING:

1. FIRE ALARM CONTROL PANEL, CELLULAR ALARM COMMUNICATOR AND REMOTE POWER SUPPLY IN ELECTRICAL ROOM
2. REMOTE ANNUNCIATOR AT FRONT ENTRANCE (FIELD VERIFY EXACT LOCATION)
3. SMOKE DETECTOR ABOVE CONTROL PANEL AND REMOTE POWER SUPPLY.
4. MANUAL PULL STATION AT EACH EXIT.
5. MODULES FOR SPRINKLER SYSTEM MONITORING (FIELD VERIFY EXACT LOCATION)
6. DETECTORS AND MODULES FOR ROOF HVAC UNIT (FIELD VERIFY EXACT LOCATION)
7. NOTIFICATION DEVICES THROUGHOUT IN COMMON AREAS.

VOICE EVACUATION MESSAGE

"ATTENTION PLEASE, THERE HAS BEEN A REPORT OF AN EMERGENCY. PROCEED CALMLY TO THE NEAREST EXIT AND LEAVE THE BUILDING IMMEDIATELY."

PAGING ZONES

ALL CALL, GENERAL ALARM

BUILDING INFORMATION

BUILDING OCCUPANCY TYPE	GROUP B
	–
TYPE OF CONSTRUCTION	TYPE V–B
NUMBER OF FLOORS	1
OCCUPIED FLOORS	1
OCCUPANCY LOAD	<500
FIRE SPRINKLERS	FULL COVERAGE
EVACUATION METHOD	GENERAL ALARM SPEAKER/STROBES

WIRING LEGEND

CABLE LEGEND
ALL DETECTION AND CONTROL WIRING IN CONDUIT
CI CABLE = 2–HOUR RATED CABLE

A	DATA CABLE 2–#16 AWG TWISTED PAIR 3,800 FEET MAXIMUM DISTANCE 79 OHMS MAXIMUM RESISTANCE	P	24VDC POWER CABLE 2–#12 AWG TWISTED PAIR
DB	DIRECT BURIAL CABLE	PRN	PRINTER CABLE – RS–232 5–#24 AWG TWISTED SHIELDED
F	PHONE JACK CABLE 2–#16 AWG TWISTED SHIELDED PAIR	S	SPEAKER CABLE 2–#16 AWG TWISTED SHIELDED PAIR
V	VISUAL NOTIFICATION CABLE 2–#12 AWG TWISTED PAIR	SR	SPEAKER RISER CABLE 2–#16 AWG TWISTED SHIELDED PAIR
ND	NETWORK DATA CABLE 2–#16 AWG TWISTED PAIR	VP	ASD SYSTEM POWER 2–#12 AWG TWISTED PAIR

APPLICABLE CODES

THIS SYSTEM WAS DESIGNED UTILIZING THE FOLLOWING CODES:

2019 CALIFORNIA UNIFORM BUILDING CODE
2019 CALIFORNIA UNIFORM MECHANICAL CODE
2019 CALIFORNIA UNIFORM FIRE CODE
2019 NFPA 72

GENERAL NOTES

A. THE "MAIN DISCONNECT" OR FROM THE EMERGENCY GENERATOR (IF APPLICABLE), WITH THE DISCONNECTING MEANS MARKED "FIRE ALARM CONTROL CIRCUIT." THE LOCATION OF THE DISCONNECT MUST BE LABELED AT THE FACU AND POWER SUPPLIES.ALL ALARM CIRCUIT BREAKERS MUST BE CLEARLY MARKED AND LOCKED TO PREVENT ANY UNAUTHORIZED TAMPERING.

B. ALL DEVICES SHALL BE LABELED WITH THEIR ADDRESS OR CIRCUIT NUMBER. THE LABELING SHALL BE APPROPRIATE FOR THE ENVIRONMENT WHICH THE DEVICE IN LOCATED. THE LABEL SHALL LAST FOR THE LIFE OF THE DEVICE.

C. A READILY VISIBLE SIGN SHALL IDENTIFY THE LOCATION OF THE FIRE ALARM CONTROL PANEL.

D. PROVIDE WEATHER PROOF NEMA ENCLOSURES FOR ALL DEVICES THAT ARE EXPOSED TO THE OUTSIDE ENVIRONMENT.

E. ALL FIRE ALARM DEVICES MUST BE INSTALLED PER MANUFACTURES INSTRUCTIONS. NO DEVICE SHALL BE INSTALLED WITHOUT AN APPROPRIATE BACKBOX.

FIRE ALARM SYSTEM OPERATIONAL MATRIX

	FACP, ANN & MONITORING STATION: ALARM	FACP, ANN & MONITORING STATION: SUPERVISORY	FACP, ANN & MONITORING STATION: TROUBLE	ACTIVATE ALL NOTIFICATION APPLIANCES	ACTIVATE INTERFLOOR BELL (BY OTHERS)	SHUT DOWN ASSOCIATED HVAC UNIT
Smoke Detector	X		X			
Manual Pull Station	X		X			
Waterflow Switch	X		X	X		
Duct Detector	X				X	
Tamper Switch or PIV or OS&Y	X					
Voice Evacuation Panel: Trouble		X				
Remote Power Supply: Trouble		X				
Cellular Alarm Communicator: Trouble		X				
SIGNALING LINE CIRCUIT STYLE 4 (CLASS B)						
OPEN WIRE		X				
GROUNDED WIRE		XR				
SHORTED WIRES		X				
INITIATING ALARM CIRCUIT STYLE B (CLASS B)						
OPEN WIRE		X				
GROUNDED WIRE		XR				
SHORTED WIRES		X				
NOTIFICATION CIRCUIT STYLE Y (CLASS B)						
OPEN WIRE		X				
GROUNDED WIRE		XR				
SHORTED WIRES		X				

R=ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS IS REQUIRED

SYSTEM CONFIGURATION

TYPE OF ALARM SYSTEM
AUTOMATIC AND MANUAL FIRE ALARM
(PER NFPA 72, 2019 EDITION)
CENTRAL STATION

ALARM CIRCUIT CLASSIFICATIONS
(PER NFPA 72, 2019 EDITION)

NAC = CLASS B NOTIFICATION APPLIANCE CIRCUIT
SLC = CLASS A SIGNALING LINE CIRCUIT
IDC = CLASS B INITIATING DEVICE CIRCUIT

CIRCUIT LEGEND SCHEDULES

(PP) NODE PANEL NUMBER
(CC) NODE CARD SLOT NUMBER
(DDDD) DEVICE ADDRESS

PPCCDDDD
01030125 (NODE #1, CARD #3 DEVICE #125)

(FN) FLOOR / BPS NUMBER
(C) CIRCUIT NUMBER
(D) DEVICE NUMBER

FNC.D
N1A1.1 (FL1 BPS 1 / VISUAL / CIRCUIT 1 / DEVICE 1)

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street,
Santa Rosa, CA 95404
East Bay:
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Oakland, CA 94607
(707) 576-0829

Gensler
45 Fremont Street
Suite 1500
San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

	06/07/21	DESIGN INITIATED
	09/17/21	50% CD
	12/09/21	80% CD
	01/22/22	-

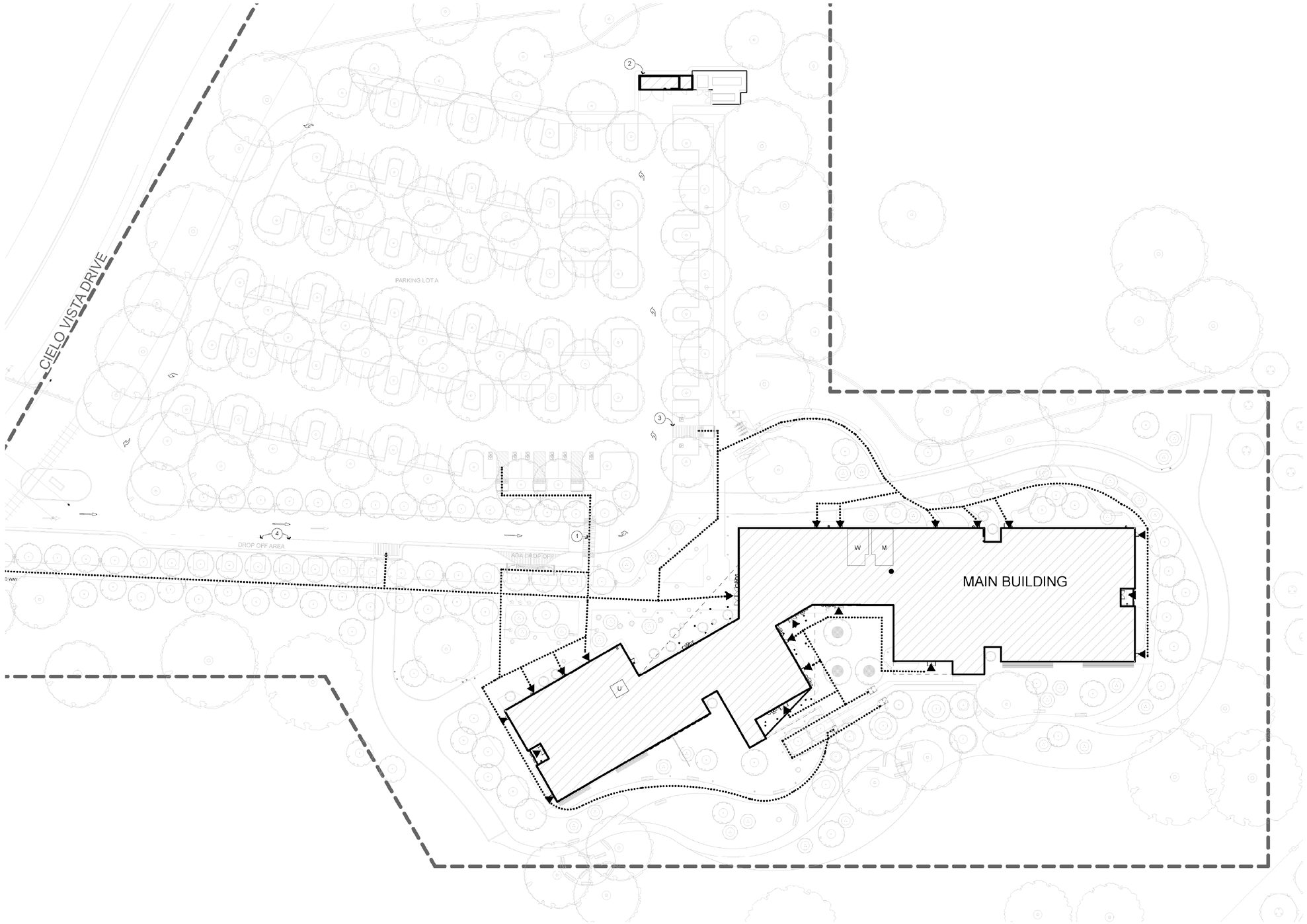
DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

COVER SHEET

SHEET NUMBER

FA-0.01



SITE PLAN
NOT TO SCALE

QUATTROCCHI KWOK
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636 Fifth Street,
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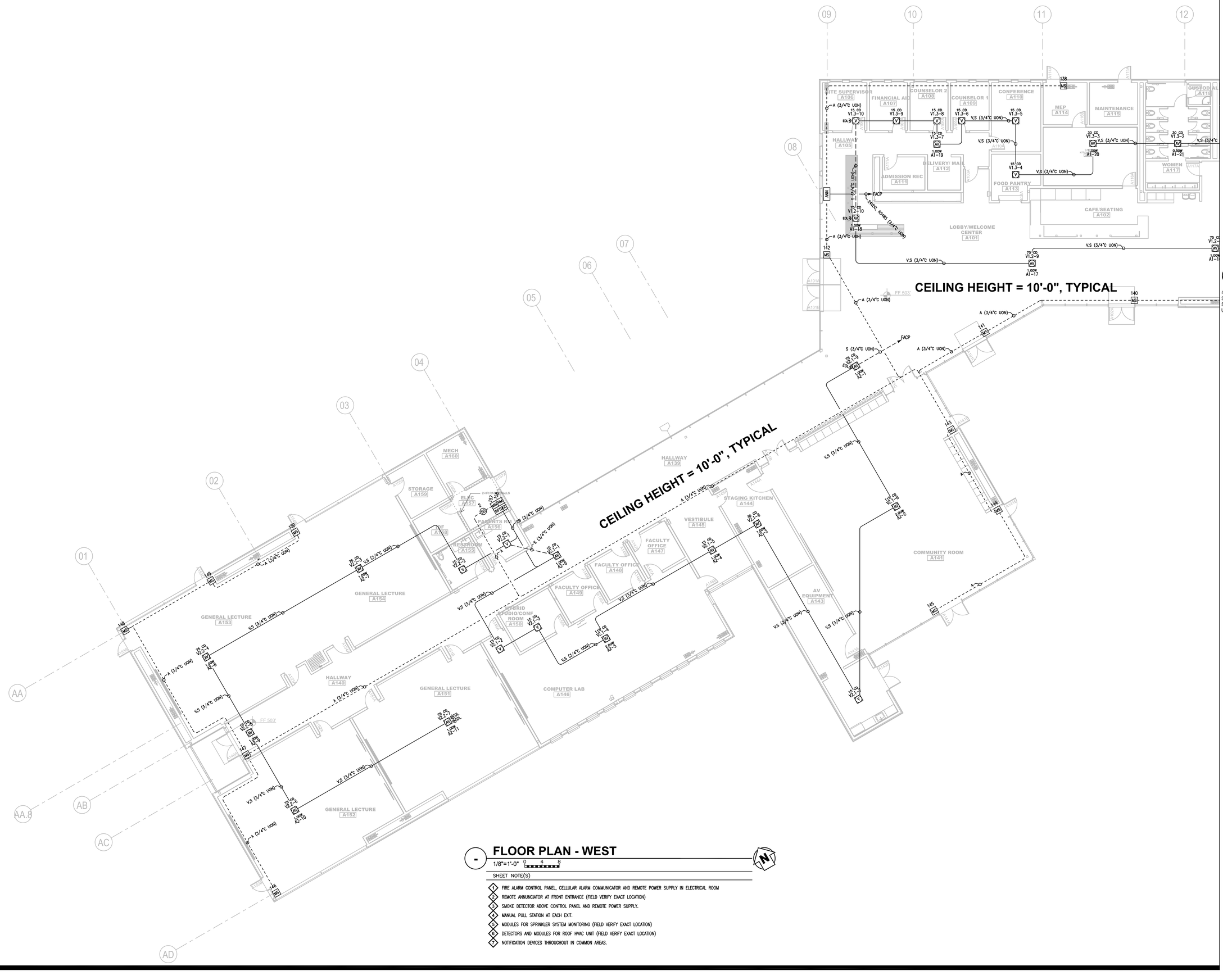
FEBRUARY 4, 2022

SHEET TITLE
SITE PLAN

SHEET NUMBER
FA-0.02



FLOOR PLAN - WEST

1/8"=1'-0" 0 4 8

SHEET NOTE(S)

1. FIRE ALARM CONTROL PANEL, CELLULAR ALARM COMMUNICATOR AND REMOTE POWER SUPPLY IN ELECTRICAL ROOM
2. REMOTE ANNUNCIATOR AT FRONT ENTRANCE (FIELD VERIFY EXACT LOCATION)
3. SMOKE DETECTOR ABOVE CONTROL PANEL AND REMOTE POWER SUPPLY.
4. MANUAL PULL STATION AT EACH EXIT.
5. MODULES FOR SPRINKLER SYSTEM MONITORING (FIELD VERIFY EXACT LOCATION)
6. DETECTORS AND MODULES FOR ROOF HVAC UNIT (FIELD VERIFY EXACT LOCATION)
7. NOTIFICATION DEVICES THROUGHOUT IN COMMON AREAS.

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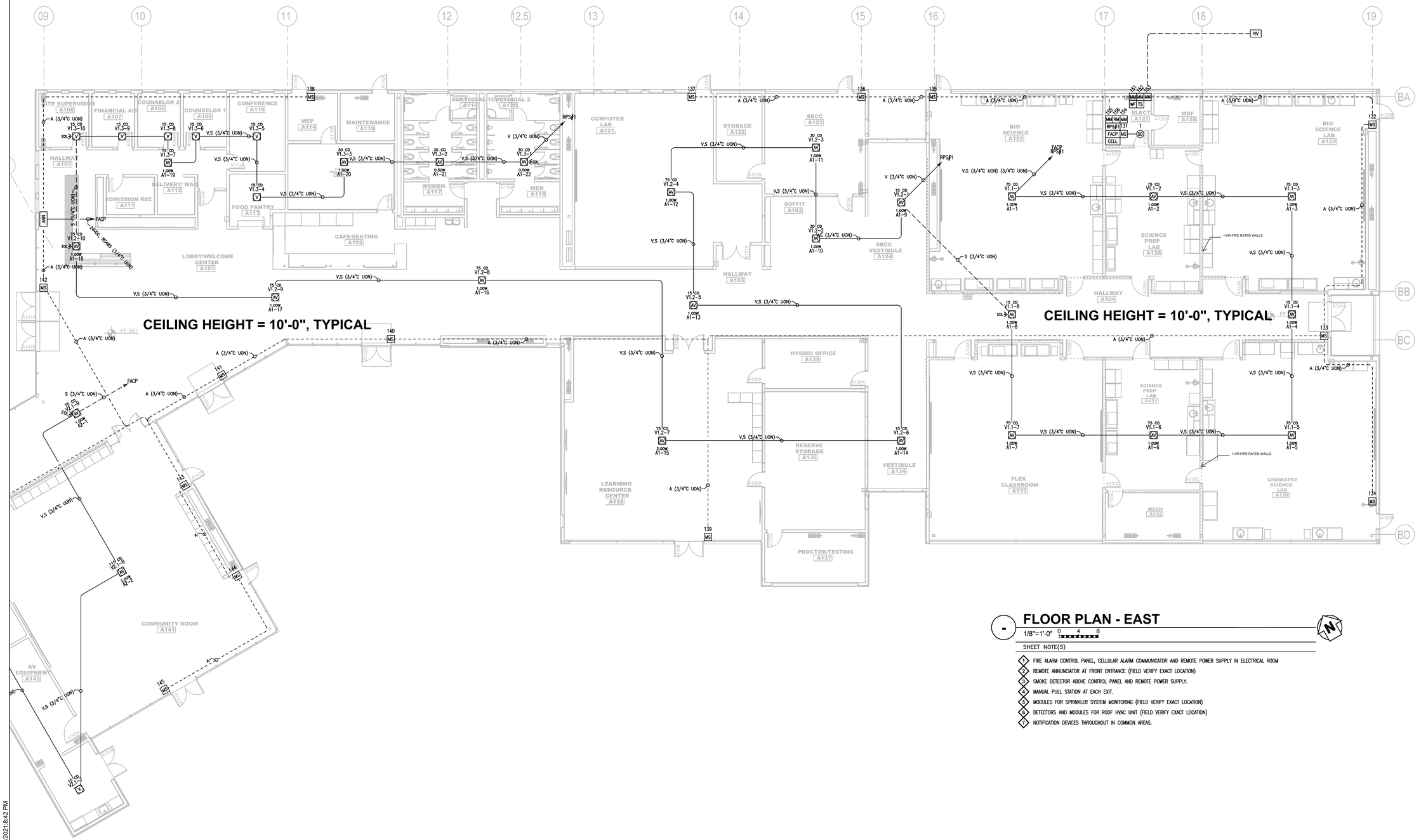
SHEET TITLE

FLOOR PLAN WEST

SHEET NUMBER

FA-1.01



FLOOR PLAN - EAST

1/8"=1'-0"

SHEET NOTE(S)

1. FIRE ALARM CONTROL PANEL, CELLULAR ALARM COMMUNICATOR AND REMOTE POWER SUPPLY IN ELECTRICAL ROOM
2. REMOTE ANNUNCIATOR AT FRONT ENTRANCE (FIELD VERIFY EXACT LOCATION)
3. SMOKE DETECTOR ABOVE CONTROL PANEL AND REMOTE POWER SUPPLY.
4. MANUAL PULL STATION AT EACH EXIT.
5. MODULES FOR SPRINKLER SYSTEM MONITORING (FIELD VERIFY EXACT LOCATION)
6. DETECTORS AND MODULES FOR ROOF HVAC UNIT (FIELD VERIFY EXACT LOCATION)
7. NOTIFICATION DEVICES THROUGHOUT IN COMMON AREAS.

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	01/22/22	-

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PTN: N/A FILE NO: 43-C4

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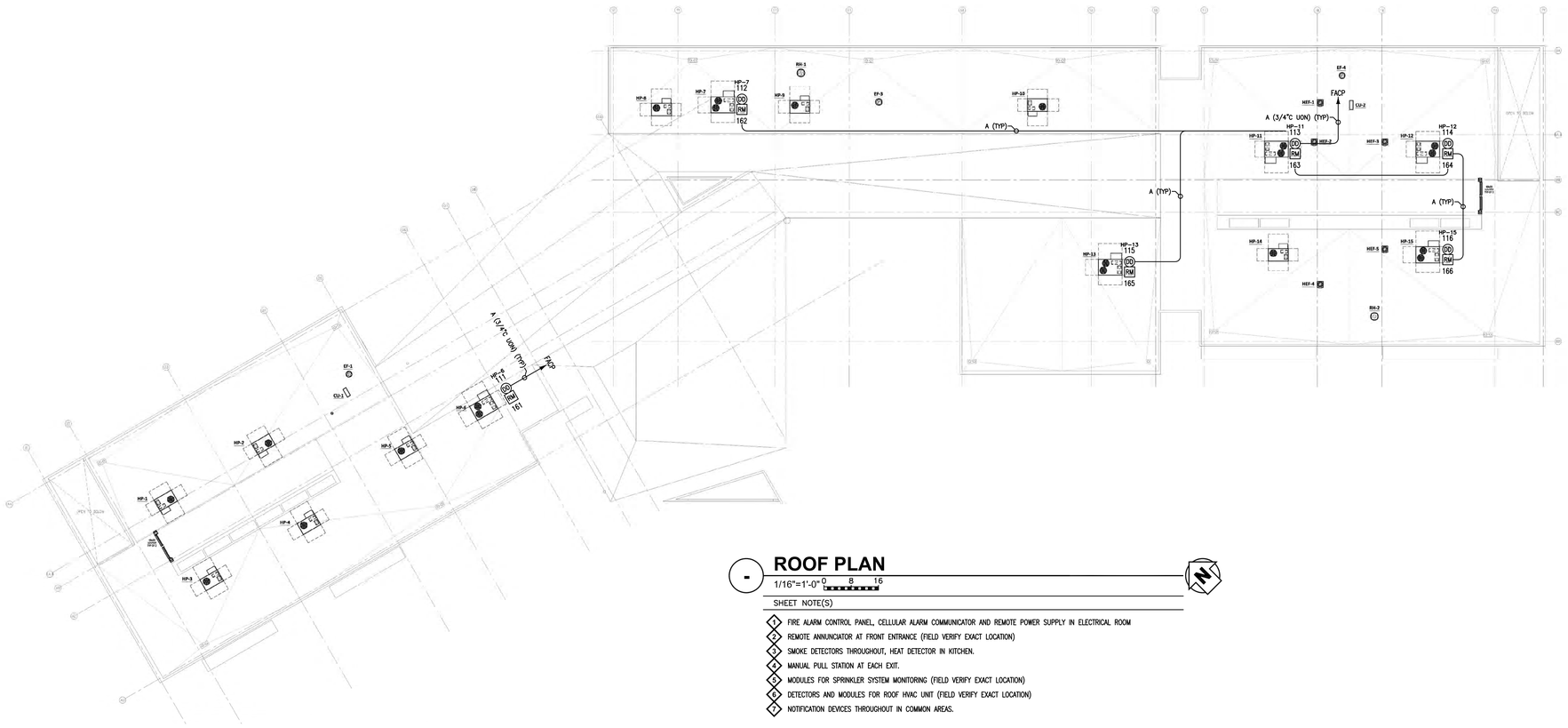
FEBRUARY 4, 2022

SHEET TITLE

FLOOR PLAN EAST

SHEET NUMBER

FA-1.02

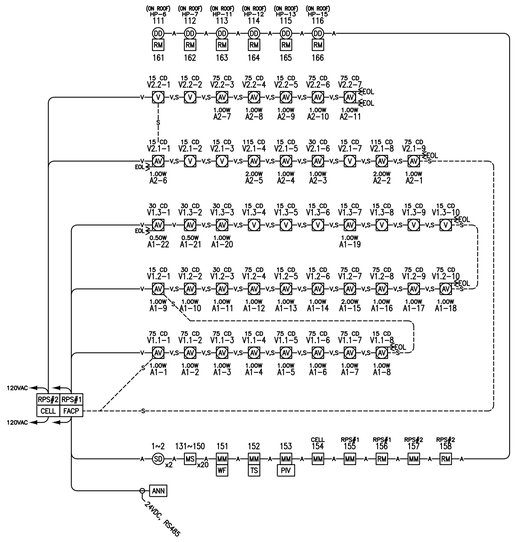


ROOF PLAN

1/16"=1'-0" 0 8 16

SHEET NOTE(S)

1. FIRE ALARM CONTROL PANEL, CELLULAR ALARM COMMUNICATOR AND REMOTE POWER SUPPLY IN ELECTRICAL ROOM
2. REMOTE ANNUNCIATOR AT FRONT ENTRANCE (FIELD VERIFY EXACT LOCATION)
3. SMOKE DETECTORS THROUGHOUT, HEAT DETECTOR IN KITCHEN.
4. MANUAL PULL STATION AT EACH EXIT.
5. MODULES FOR SPRINKLER SYSTEM MONITORING (FIELD VERIFY EXACT LOCATION)
6. DETECTORS AND MODULES FOR ROOF HVAC UNIT (FIELD VERIFY EXACT LOCATION)
7. NOTIFICATION DEVICES THROUGHOUT IN COMMON AREAS.



RISER DIAGRAM

NOT TO SCALE

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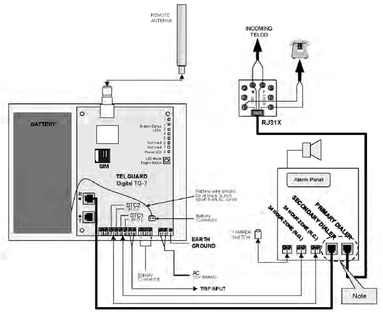
SHEET TITLE

ROOF PLAN RISER DIAGRAM

SHEET NUMBER

FA-1.03



Note: When using this scheme, the use of the primary or secondary dialer to connect to Telco is what determines whether the TG-7 is meant to work as a back-up or primary communicator.

TG-7FS BATTERY CALCULATION

DEVICE TYPE	DEVICE QTY	DEVICE STANDBY CURRENT	DEVICE ALARM CURRENT	TOTAL STANDBY CURRENT	TOTAL ALARM CURRENT
PANEL					
TG-7FS STANDBY	1	0.060		0.060	
TG-7FS TRANSMISSION	1		0.250		0.250
TOTAL CURRENT DRAWS				0.060	0.250

STANDBY TIME REQUIRED (4,24,60)	24	HRS
A.H. FOR STANDBY	1.440	AH
TOTAL A.H. FOR STANDBY	1.440	AH
LEGTH OF ALARM OPERATION	0.083	HRS
A.H. FOR ALARM	0.021	AH
TOTAL ALARM AND STANDBY A.H.	1.461	AH
BATTERY DERATING VALUE	1.2	
REQUIRED BATTERY A.H. RATING	1.753	AH
BATTERIES SUPPLIED	7	AH

- CELLULAR ALARM COMMUNICATOR

BATTERY CALCULATION

BATTERY CALCULATIONS - EST-4 FIRE ALARM CONTROL PANEL

QTY.	MODEL NUMBER	TYPE	STANDBY CURRENT		ALARM CURRENT	
1	4-CPU4 / 3-PPS/M	CPU and Power Supply	0.2110	0.2110	0.2110	0.2110
1	3-SSDC1	Data Card - Maximum Load	0.1440	0.1440	0.2040	0.2040
1	4-LCD	Display Module	0.0400	0.0400	0.0930	0.0930
1	4-24L24S	24 Switch/Display Module	0.0056	0.0056	0.0056	0.0056
2	4-NET-TP	Network Controller Card	0.0320	0.0640	0.0320	0.0640
1	3-BPS/M	Booster Power Supply 120V	0.0500	0.0500	0.0500	0.0500
1	3-MODCOM	Modem/Dialer	0.0600	0.0600	0.0950	0.0950
1	4-MIC	Paging Microphone	0.0080	0.0080	0.0380	0.0380
1	4-AUDTELS	Audio-Telephone Interface Module	0.0850	0.0850	0.1010	0.1010
1	3-ZA95	95 Watt Zoned Amplifier 70 Vrms	0.0640	0.0640	5.5400	5.5400
1	4-ANNCPU	Annunciator CPU	0.1830	0.1830	0.1830	0.1830
1	4-NET-TP	Network Controller Card	0.0320	0.0320	0.0320	0.0320
				(A) TOTAL ALARM CURRENT		6.6166
				(B) HOURS OF ALARM (5 MINUTES = .084)		0.084
				TOTAL FOR ALARM = A X B		0.5558
				(C) TOTAL STANDBY CURRENT		0.9466
				(D) STANDBY HOURS		24
				TOTAL STANDBY = C X D		22.7184
				ALARM CURRENT + STANDBY CURRENT		23.2742
				20% SAFETY MARGIN		1.2
				BATTERY TOTAL		**27.9290**
				BATTERY SIZE		**35AH**

Speaker Circuit		A1
Circuit #	Device #	Watts
A1	1	1.00
A1	2	1.00
A1	3	1.00
A1	4	1.00
A1	5	1.00
A1	6	1.00
A1	7	1.00
A1	8	1.00
A1	9	1.00
A1	10	1.00
A1	11	1.00
A1	12	1.00
A1	13	1.00
A1	14	1.00
A1	15	2.00
A1	16	1.00
A1	17	1.00
A1	18	1.00
A1	19	1.00
A1	20	1.00
A1	21	0.50
A1	22	0.50
Total		22.00

Speaker Circuit		A2
Circuit #	Device #	Watts
A2	1	1.00
A2	2	2.00
A2	3	1.00
A2	4	1.00
A2	5	2.00
A2	6	1.00
A2	7	1.00
A2	8	1.00
A2	9	1.00
A2	10	1.00
A2	11	1.00
A2	12	
A2	13	
A2	14	
A2	15	
A2	16	
A2	17	
A2	18	
A2	19	
A2	20	
A2	21	
A2	22	
Total		13.00

Total	**35.00**
Supplied	**95.00**
Percentage Used	**36.84**
Percentage Remain	**63.16**

- FIRE ALARM CONTROL PANEL

CALCULATION

BPS-10A #1 BATTERY CALCULATION

DEVICE TYPE	DEVICE QTY	DEVICE STANDBY CURRENT	DEVICE ALARM CURRENT	TOTAL STANDBY CURRENT	TOTAL ALARM CURRENT
PANEL					
BPS-10A STNDBY	1	0.070		0.070	
BPS-10A ALARM	1		0.270		0.270
NOTIFICATION DEVICES					
V1.1	1		0.280		0.280
V1.2	1		0.350		0.350
V1.3	1		0.350		0.350
V1.4	1		0.000		0.000
AUXILIARY DEVICES					
TOTAL CURRENT DRAWS				0.070	1.250

STANDBY TIME REQUIRED (4,24,60)	24	HRS
A.H. FOR STANDBY	1.680	AH
A.H. FOR AC REPORT DELAY	0	AH
TOTAL A.H. FOR STANDBY	1.680	AH
LEGTH OF ALARM OPERATION	0.250	HRS
A.H. FOR ALARM	0.313	AH
TOTAL ALARM AND STANDBY A.H.	1.993	AH
BATTERY DERATING VALUE	1.2	
REQUIRED BATTERY A.H. RATING	2.391	AH
BATTERIES SUPPLIED	7	AH

- RPS#1

CALCULATION

BPS-10A #2 BATTERY CALCULATION

DEVICE TYPE	DEVICE QTY	DEVICE STANDBY CURRENT	DEVICE ALARM CURRENT	TOTAL STANDBY CURRENT	TOTAL ALARM CURRENT
PANEL					
BPS-10A STNDBY	1	0.070		0.070	
BPS-10A ALARM	1		0.270		0.270
NOTIFICATION DEVICES					
V2.1	1		0.316		0.316
V2.2	1		0.245		0.245
V2.3	1		0.000		0.000
V2.4	1		0.000		0.000
AUXILIARY DEVICES					
TOTAL CURRENT DRAWS				0.070	0.831

STANDBY TIME REQUIRED (4,24,60)	24	HRS
A.H. FOR STANDBY	1.680	AH
A.H. FOR AC REPORT DELAY	0	AH
TOTAL A.H. FOR STANDBY	1.680	AH
LEGTH OF ALARM OPERATION	0.250	HRS
A.H. FOR ALARM	0.208	AH
TOTAL ALARM AND STANDBY A.H.	1.888	AH
BATTERY DERATING VALUE	1.2	
REQUIRED BATTERY A.H. RATING	2.265	AH
BATTERIES SUPPLIED	7	AH

- RPS#2

CALCULATION

Notification Appliance Circuit Voltage Drop Calculation

DEVICE CURRENT REQUIREMENTS

PART NUMBER	DESCRIPTION	DEVICE CURRENT
GCSVWF (15CD)	SPEKER STROBE	0.035
GCSVWF (30CD)	SPEKER STROBE	0.035
GCSVWF (75CD)	SPEKER STROBE	0.035
GCSVWF (115CD)	SPEKER STROBE	0.035
GCVWF (15CD)	STROBE	0.035
GCVWF (30CD)	STROBE	0.035
GCVWF (75CD)	STROBE	0.035
GCVWF (115CD)	STROBE	0.035

VOLTAGE DROP TABLE

Ckt #	GCSVWF (15CD)	GCSVWF (30CD)	GCSVWF (75CD)	GCSVWF (115CD)	GCVWF (15CD)	GCVWF (30CD)	GCVWF (75CD)	GCVWF (115CD)	WIRE GAUGE	Total Current	Dist. (FT)	Voltage Drop (V)	Percent Drop (%)
V1.1	2		6						12	0.280	350	0.3881	**1.90**
V1.2	3	2	5						12	0.350	350	0.4851	**2.38**
V1.3	1	3			6				12	0.350	350	0.4851	**2.38**
V1.4									12	0.000	0	0.0000	**0.00**
V2.1	2	1	1	2	3				12	0.316	350	0.4377	**2.15**
V2.2	1		4		2				12	0.245	350	0.3396	**1.66**
V2.3									12	0.000	0	0.0000	**0.00**
V2.4									12	0.000	0	0.0000	**0.00**

Typical Voltage Drop Calculation Formula
(Total device amp draw x distance (2) x Wire Gauge Resistance OHM/100Ft)
12 Gauge Copper Wire Resistance = 1.98 Ohm/km
14 Gauge Copper Wire Resistance = 3.14 Ohm/km
AMPS x FEET (2) x R (OHM/1000Ft) =**VOLTAGE DROP**

VOLTAGE DROP / 20.4 x 100 = PERCENT DROP

The operating voltage on these devices is listed for 16-31.2 VDC.

- STROBE CIRCUITS

CALCULATION

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CALCULATIONS

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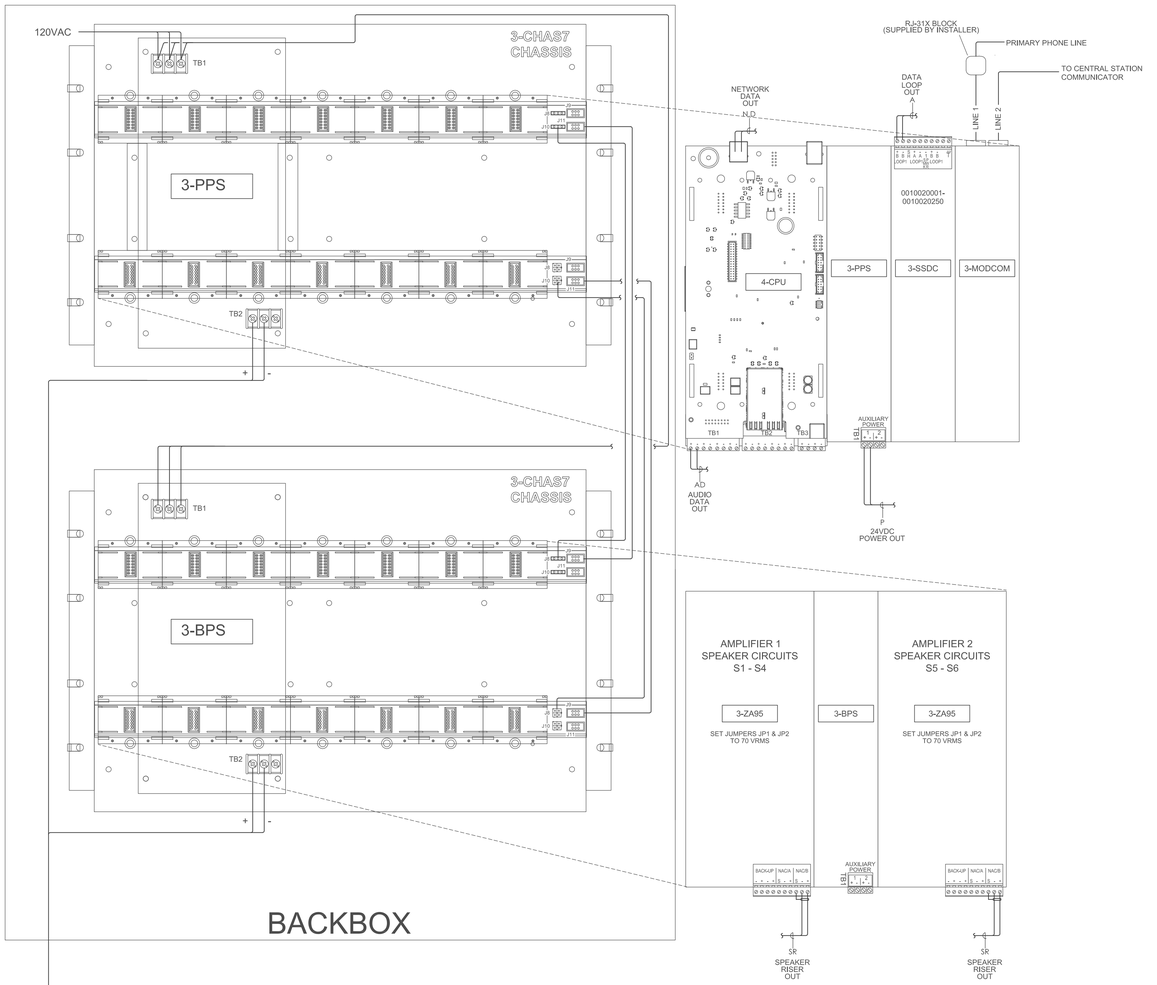
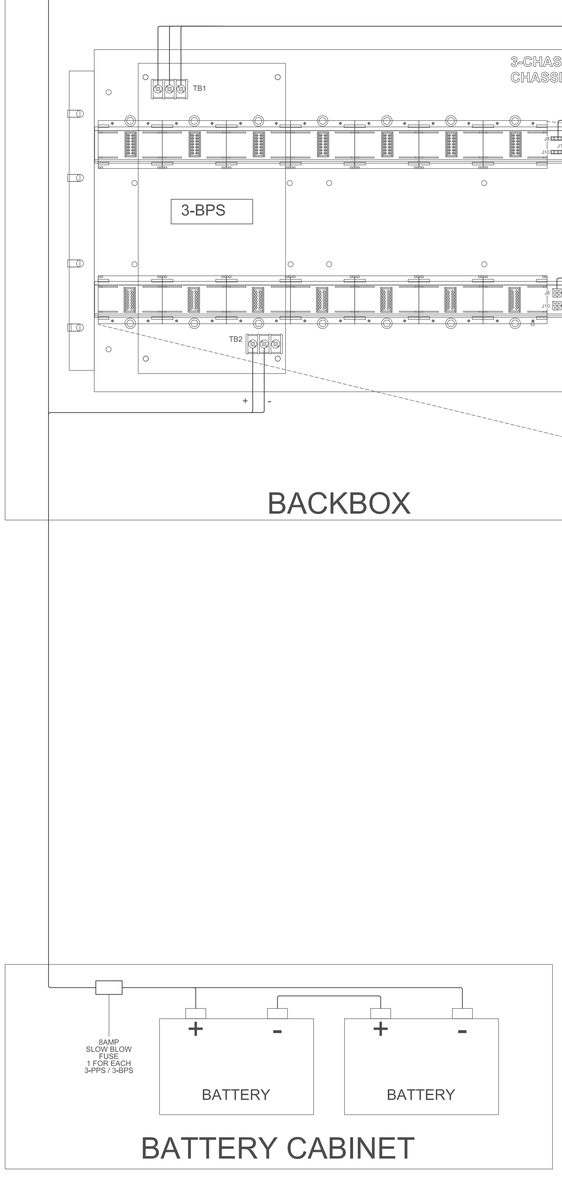
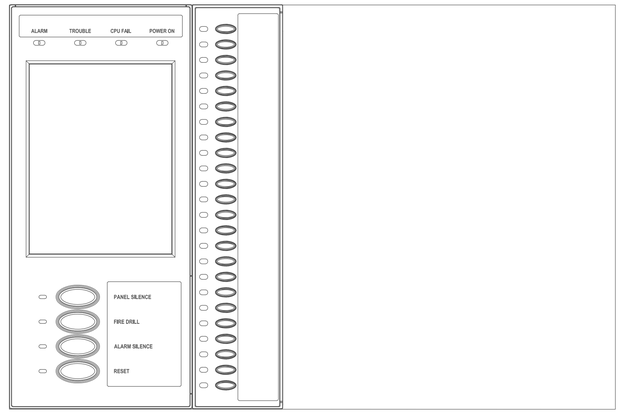


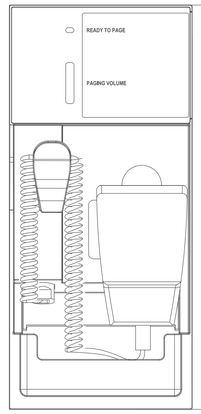


POWER SONIC BATTERY DATE CODE LEGEND
THE FIRST FIVE NUMERIC CHARACTERS REPRESENT THE MONTH, DAY AND YEAR OF MANUFACTURE (MM/DD/Y).

- FIRST TWO NUMBERS = MONTH (01 TO 12)
- SECOND TWO NUMBERS = DAY OF THE MONTH (01 TO 31)
- FIFTH DIGIT = YEAR (0 TO 9). THIS DIGIT IS REPEATED EVERY 10 YEARS. FOR EXAMPLE, 1 = 2001, 4 = 2004 ETC.

EXAMPLE: 07079 WOULD BE JULY 7TH, 2009. THERE MAY BE ADDITIONAL ALPHA-NUMERIC CHARACTERS AT THE END OF THE DATE CODE. THESE ARE INTERNAL LOT NUMBERS OR INJECTION MOLD NUMBERS AND THEY HAVE NO BEARING ON THE DATE OF MANUFACTURER.

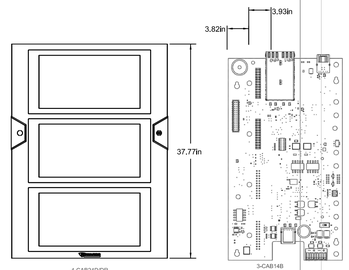


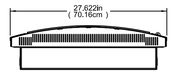


INSTALLATION DIAGRAMS

ALL KNOCKOUTS FOR 3/4" CONDUIT

MAINTAIN 1/4" BETWEEN POWER LIMITED & NON-POWER LIMITED WIRING





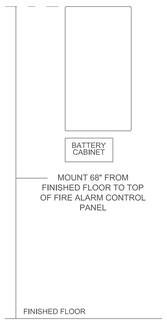
BACKBOXES

CAB SERIES CABINETS

FOR ROUGH-IN: ADD 1/4" TO HEIGHT AND WIDTH
TO ALLOW FOR KNOCKOUTS WHEN FRAMING IN BACKBOX
FOR SEMI-FLUSH MOUNTING

3-CAB14B
ROUGH-IN: 35.5"H X 24.12"W X 3.86"D
FINISHED SURFACE MOUNT: 37.5"H X 27.34"W X 5.51"D

MOUNTING



NOTE: IF CONTROL PANEL IS LOCATED IN AN AREA WITH A HIGH CEILING IN EXCESS OF 15', MOUNT SMOKE DETECTOR ON WALL ABOVE AND WITHIN 60" OF THE TOP OF THE CONTROL PANEL TO BE PROTECTED.

A

EST-4 FIRE ALARM CONTROL PANEL
TYPICAL WIRING DETAIL

FACP

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636 Fifth Street,
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DETAILS

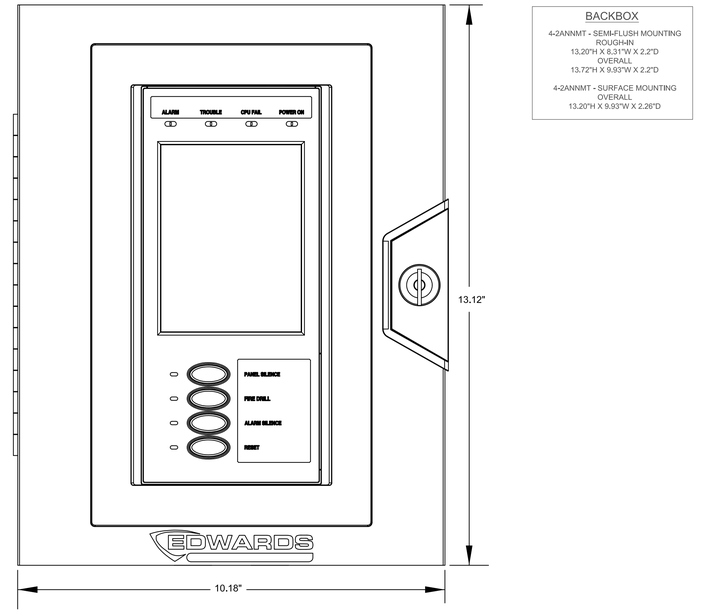
SHEET NUMBER

FA-3.01

A — NOT USED

B — NOT USED

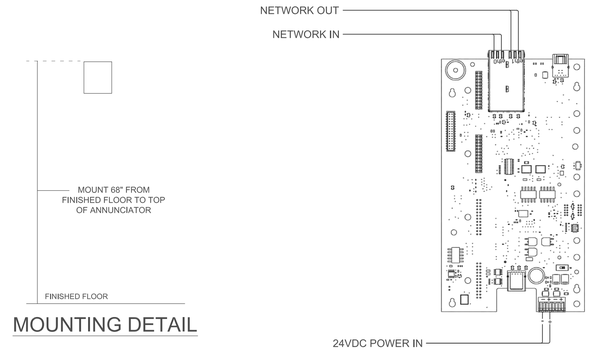
E — NOT USED



BACKBOX

4-2ANNMT - SEMI-FLUSH MOUNTING
ROUGH-IN
13.20"H X 8.31"W X 2.2"D
OVERALL
13.72"H X 9.93"W X 2.2"D

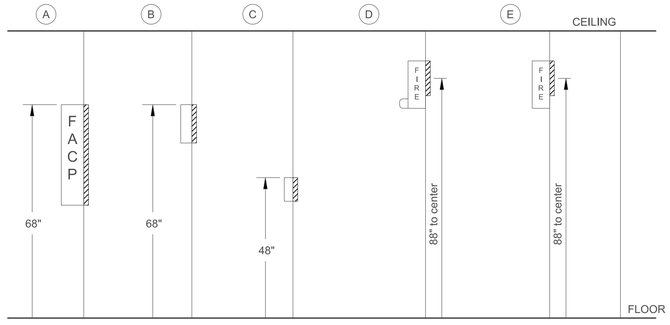
4-2ANNMT - SURFACE MOUNTING
OVERALL
13.20"H X 9.93"W X 2.26"D



MOUNTING DETAIL

D — 4-2ANN REMOTE ANNUNCIATOR TYPICAL WIRING DETAIL — 2ANN

F — TYPICAL MOUNTING HEIGHTS



A. FIRE ALARM CONTROL PANEL. Fire Alarm Panels must not be higher than 6 feet and system status display should be at eye level (60 inches AFF). If control panel is located in an area with a high ceiling in excess of 15', mount smoke detector on wall above and within 60" of the top of the control panel to be protected.

B. FIRE ALARM ANNUNCIATORS. Mount top of annunciator 68 inches AFF.

C. FIRE ALARM PULL STATIONS.
The operable part of each manual fire alarm box shall be not less than 42 in. and not more than 48 in. above floor level.

D. FIRE ALARM SPEAKER/STROBE OR STROBE NOTIFICATION APPLIANCES.
Wall-mounted appliances shall be mounted such that the entire lens is not less than 80 in. and not greater than 96 in. above the finished floor. Mount Speaker/Strobe back box at 88" from finished floor to center line of box.

E. FIRE ALARM SPEAKER/AUDIBLE ONLY NOTIFICATION APPLIANCES. If ceiling heights allow, wall-mounted appliances shall have their tops above the finished floors at heights of not less than 90 in. and below the finished ceilings at heights of not less than 6 in. This requirement shall not preclude ceiling-mounted or recessed appliances. Mount Speaker back box at 88" from finished floor to center line of box.

QUATTROCCHI KWOK
ARCHITECTS
Main:
636 Fifth Street,
Santa Rosa, CA 95404
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Suite 1500
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United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT
COMMUNITY
COLLEGE DISTRICT

	06/07/21	DESIGN INITIATED
	09/17/21	50% CD
	12/09/21	80% CD
	01/22/22	-

DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

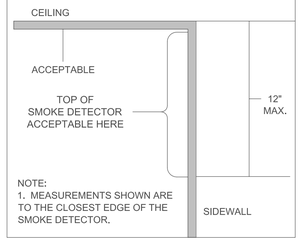
SHEET TITLE

DETAILS

SHEET NUMBER

FA-3.02

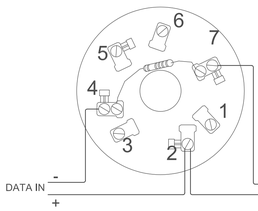
SMOKE DETECTOR TYPICAL MOUNTING DETAIL



NOTE:
1. MEASUREMENTS SHOWN ARE TO THE CLOSEST EDGE OF THE SMOKE DETECTOR.

COMPATIBLE BACKBOXES

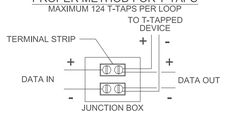
NORTH AMERICAN 1-GANG BOX
3-1/2" BY 1-1/2" DEEP OCTAGON BOX
4" BY 1-1/2" DEEP OCTAGON BOX
4" BY 1-1/2" DEEP SQUARE BOX
(USING OUTER MOUNTING BRACKETS ON BASE)



TERM	DESCRIPTION
1	NOT USED
2	DATA IN/OUT (+)
3	NOT USED
4	DATA IN (-)
4	REMOTE LED (-)
5	REMOTE LED (+)
6	NOT USED
7	DATA OUT (-)

PROPER METHOD FOR T-TAPS

MAXIMUM 124 T-TAPS PER LOOP



BARCODE LABELS

WRITE THE ADDRESS ASSIGNED TO THE MODULE ON THE LABEL PROVIDED AND PLACE ON MODULE. PEEL OFF THE REMOVABLE SERIAL NUMBER LABEL FROM THE MODULE AND PLACE IT IN THE APPROPRIATE LOCATION IN THE SERIAL NUMBER LOGBOOK.

WIRE STRIPPING GUIDE

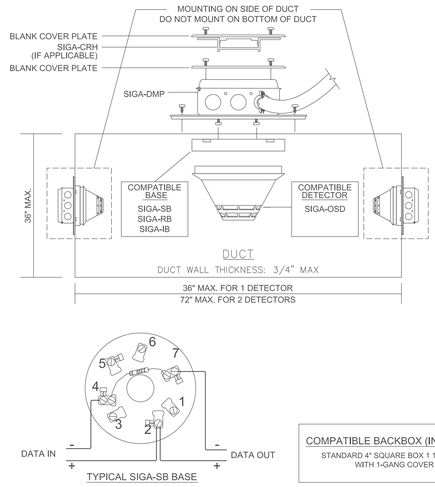
#16 AWG WIRE

STRIP 1/4" FROM THE ENDS OF ALL WIRES THAT CONNECT TO THE TERMINAL BLOCK OF THE MODULE.

CAUTION

EXPOSING MORE THAN 1/4" OF WIRE MAY CAUSE A GROUND FAULT.
EXPOSING LESS THAN 1/4" OF WIRE MAY RESULT IN A FAULTY CONNECTION.

A SIGA-OSD SMOKE DETECTOR WITH SIGA-SB4 BASE TYPICAL WIRING DETAIL

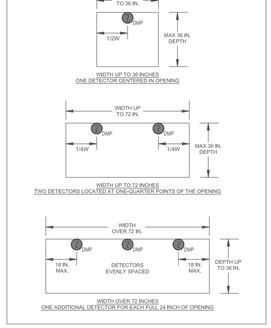


TYPICAL SIGA-SB BASE

COMPATIBLE BACKBOX (INCLUDED)

STANDARD 4" SQUARE BOX 1 1/2" DEEP WITH 1-GANG COVER

DMP SMOKE DETECTOR SPACING DETAIL



SPECIFICATIONS

SIGA-OSD

AIR VELOCITY RATING: 0 - 4,000 FT/MIN.
TEMPERATURE: 32° - 120°F
HUMIDITY: 0 - 93% RH

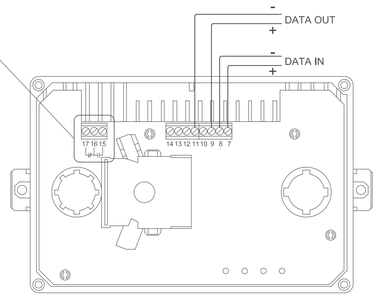
B SIGA-DMP WITH SIGA-OSD & SIGA-SB BASE TYPICAL WIRING DETAIL

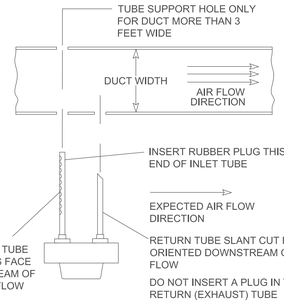
DMP

FOR AUXILIARY EQUIPMENT

CONTACT RATINGS

FORM "C"
2.0 AMPS AT 30VDC RESISTIVE



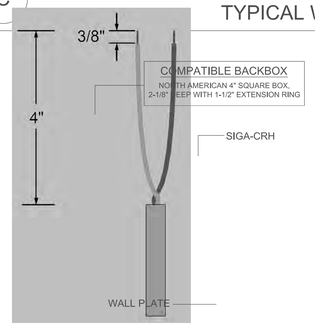


SPECIFICATIONS

DIMENSION: 8.7W X 5.45H X "1.9D
PRESSURE: 0.005 TO 1.0 INCHES OF WATER
AIR VELOCITY RATING: 100 TO 4,000 FT/MIN
TEMPERATURE: -20 TO 158°F
HUMIDITY: 93% RH, NONCONDENSING

NOTE:
FOR EXTERIOR APPLICATION, MOUNT IN WEATHERPROOF ENCLOSURE.

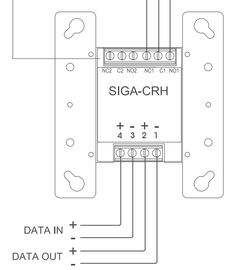
C SIGA-SD DUCT SMOKE DETECTOR TYPICAL WIRING DETAIL



SIGA-CRH TO BE MOUNTED WITHIN 3' OF CONTROLLED DEVICE

CONTACT RATINGS

FORM "C"
24 VDC = 6A RESISTIVE
120 VAC = 7A (PF 0.75), 3.0A (PF 0.35)
240 VAC = 7A (PF 0.75), 1.5A (PF 0.35)



BARCODE LABELS

WRITE THE ADDRESS ASSIGNED TO THE MODULE ON THE LABEL PROVIDED AND PLACE ON MODULE. PEEL OFF THE REMOVABLE SERIAL NUMBER LABEL FROM THE MODULE AND PLACE IT IN THE APPROPRIATE LOCATION IN THE SERIAL NUMBER LOGBOOK.

WIRE STRIPPING GUIDE

TERMINALS ARE SUITED FOR #12 TO #18 AWG WIRE SIZE

STRIP 1/4" FROM THE ENDS OF ALL WIRES THAT CONNECT TO THE TERMINAL BLOCK OF THE MODULE.

CAUTION

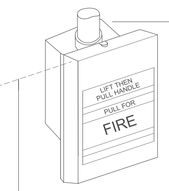
EXPOSING MORE THAN 1/4" OF WIRE MAY CAUSE A GROUND FAULT.
EXPOSING LESS THAN 1/4" OF WIRE MAY RESULT IN A FAULTY CONNECTION.

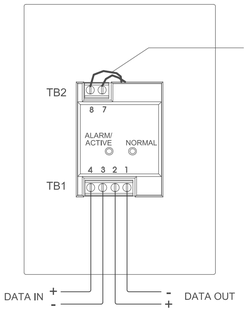
F SIGA-CRH HIGH POWER CONTROL RELAY MODULE TYPICAL WIRING DETAIL

COMPATIBLE BACKBOXES

NORTH AMERICAN 2-1/2" DEEP 1-GANG BOX AND STANDARD 4" SQUARE BOX 1-1/2" DEEP BOX W/ 1-GANG COVER

2-1/2" 1-GANG BOX - CONDUIT CAN ENTER THE ELECTRICAL BOX THROUGH ONE OR BOTH KNOCKOUT HOLES.





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WIRE STRIPPING GUIDE

TERMINALS ARE SUITED FOR #12 TO #18 AWG WIRE SIZE

STRIP 1/4" FROM THE ENDS OF ALL WIRES THAT CONNECT TO THE TERMINAL BLOCK OF THE MODULE.

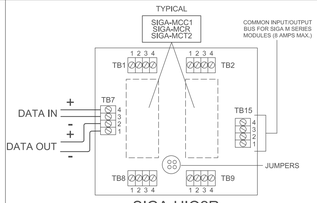
CAUTION

EXPOSING MORE THAN 1/4" OF WIRE MAY CAUSE A GROUND FAULT.
EXPOSING LESS THAN 1/4" OF WIRE MAY RESULT IN A FAULTY CONNECTION.

D SIGA-278 MANUAL PULL STATION TYPICAL WIRING DETAIL

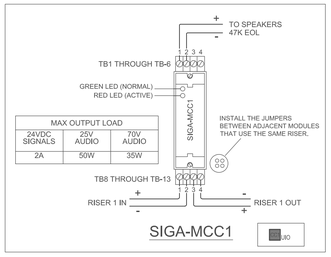
TYPICAL
SIGA-MCC1
SIGA-MCR
SIGA-MCT2

COMMON INPUT/OUTPUT BUS FOR SIGA M SERIES MODULES (8 AMPS MAX.)



SIGA-UIO2R

DIMENSIONS: 5.4" L (ACROSS MOUNTING FEET) X 4.3"W X 3.2"H

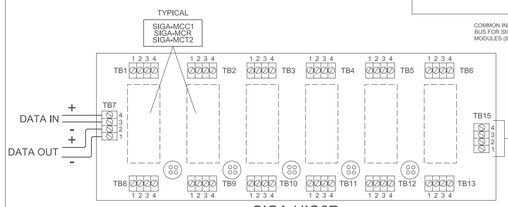


MAX OUTPUT LOAD		
24VDC SIGNALS	25V AUDIO	70V AUDIO
2A	50W	35W

SIGA-MCC1

TYPICAL
SIGA-MCC1
SIGA-MCR
SIGA-MCT2

COMMON INPUT/OUTPUT BUS FOR SIGA M SERIES MODULES (8 AMPS MAX.)



SIGA-UIO6R

DIMENSIONS: 9.56" L (ACROSS MOUNTING FEET) X 4.3"W X 3.2"H

MAINTAIN 1/4" BETWEEN POWER LIMITED & NON-POWER LIMITED WIRING OR USE FPL, FPLP, FPLR OR EQUIVALENT IN ACCORDANCE WITH NEC.

GROUP ALL MODULES WITH NON-POWER LIMITED SOURCES TO THE RIGHT OF THE MOTHERBOARD AND ROUTE WIRING TO THE RIGHT.

GROUP ALL MODULES WITH POWER LIMITED SOURCES TO THE LEFT OF THE MOTHERBOARD AND ROUTE WIRING TO THE LEFT.

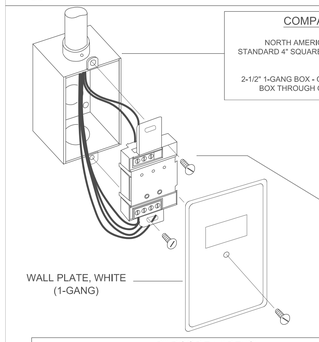
E SIGA-UIO2R/6R UNIVERSAL INPUT/OUTPUT MODULE MOTHERBOARD AND SIGA-MCC1 TYPICAL WIRING DETAIL

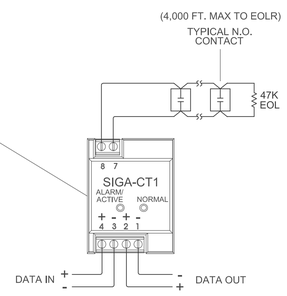
UIO

COMPATIBLE BACKBOXES

NORTH AMERICAN 2-1/2" DEEP 1-GANG BOX AND STANDARD 4" SQUARE BOX 1-1/2" DEEP BOX W/1-GANG COVER

2-1/2" 1-GANG BOX - CONDUIT CAN ENTER THE ELECTRICAL BOX THROUGH ONE OR BOTH KNOCKOUT HOLES.





BARCODE LABELS

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WIRE STRIPPING GUIDE

TERMINALS ARE SUITED FOR #12 TO #18 AWG WIRE SIZE

STRIP 1/4" FROM THE ENDS OF ALL WIRES THAT CONNECT TO THE TERMINAL BLOCK OF THE MODULE.

CAUTION

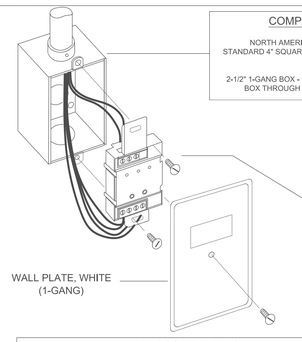
EXPOSING MORE THAN 1/4" OF WIRE MAY CAUSE A GROUND FAULT.
EXPOSING LESS THAN 1/4" OF WIRE MAY RESULT IN A FAULTY CONNECTION.

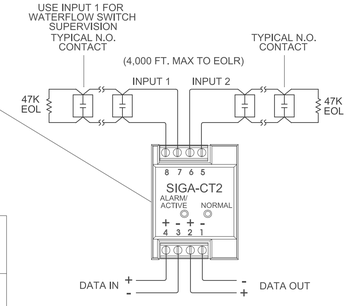
G SIGA-CT1 SINGLE INPUT MODULE TYPICAL WIRING DETAIL

COMPATIBLE BACKBOXES

NORTH AMERICAN 2-1/2" DEEP 1-GANG BOX AND STANDARD 4" SQUARE BOX 1-1/2" DEEP BOX W/1-GANG COVER

2-1/2" 1-GANG BOX - CONDUIT CAN ENTER THE ELECTRICAL BOX THROUGH ONE OR BOTH KNOCKOUT HOLES.





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WIRE STRIPPING GUIDE

TERMINALS ARE SUITED FOR #12 TO #18 AWG WIRE SIZE

STRIP 1/4" FROM THE ENDS OF ALL WIRES THAT CONNECT TO THE TERMINAL BLOCK OF THE MODULE.

CAUTION

EXPOSING MORE THAN 1/4" OF WIRE MAY CAUSE A GROUND FAULT.
EXPOSING LESS THAN 1/4" OF WIRE MAY RESULT IN A FAULTY CONNECTION.

H SIGA-CT2 DUAL INPUT MODULE TYPICAL WIRING DETAIL

I NOT USED

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street,
Santa Rosa, CA 95404
East Bay:
55 Harrison Street,
Suite 525,
Oakland, CA 94607
(707) 576-0829

Gensler
45 Fremont Street
Suite 1500
San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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	09/17/21	50% CD
	12/09/21	80% CD
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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

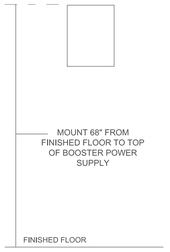
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE

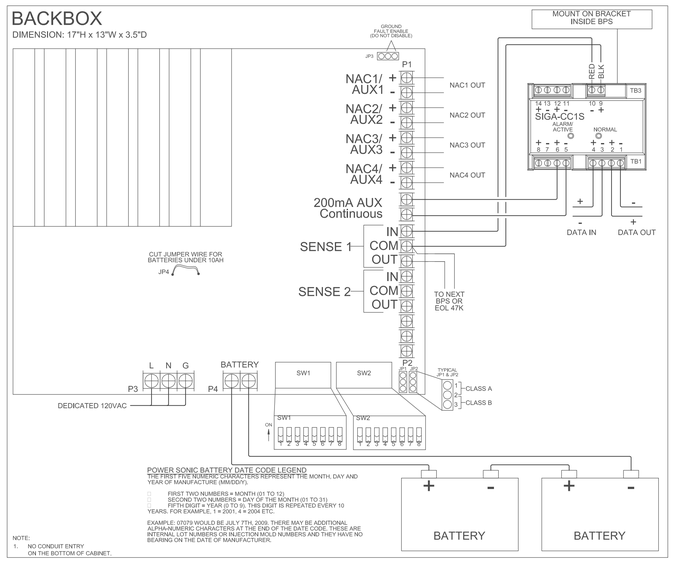
DETAILS

SHEET NUMBER

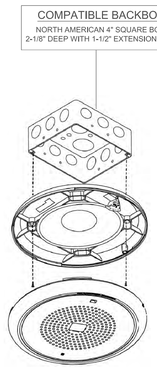
FA-3.03

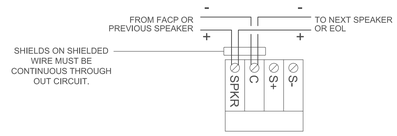


MOUNTING DETAIL



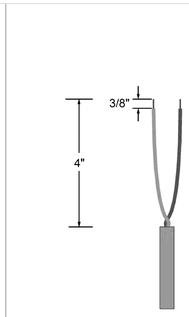
A BPS10A BOOSTER POWER SUPPLY WITH SIGA-CC1S
TYPICAL WIRING DETAIL

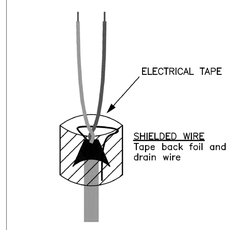


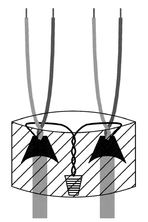


TO CHANGE OUTPUT SETTINGS, OPEN
THE DEVICE AND SWITCH TO DESIRED
SETTING. SPEAKER DOES NOT HAVE
TO BE REMOVED.

B GC SERIES CEILING SPEAKER
TYPICAL WIRING DETAIL



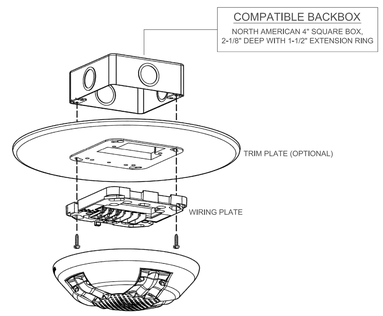


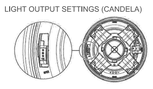


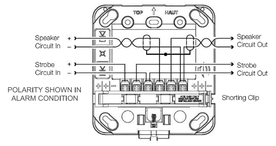
TO PREVENT GROUND-FAULTS:

1. STRIP OUTER INSULATION JACKET. DO NOT TO NICK THE INSULATION SURROUNDING THE COPPER.
2. STRIP BACK THE INSULATION SURROUNDING THE COPPER BY 3/8", LEAVING 4" OF INSULATION COPPER EXPOSED.
3. IF SHIELDED WIRE IS USED, MAKE SURE THAT THE SHIELDS ARE ISOLATED AND CONTINUOUS.

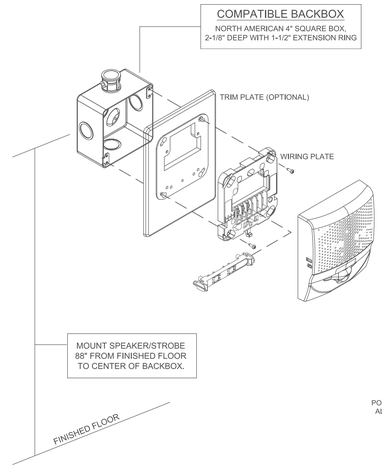
C WIRING PREPARATION
INSTALLATION DETAIL

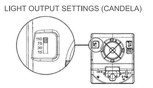


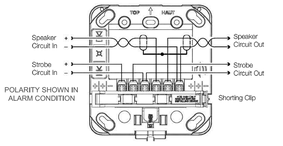




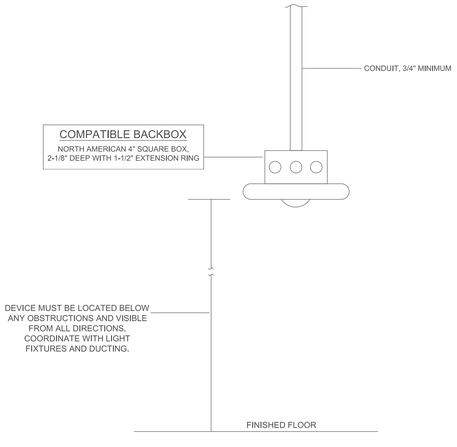
D GCSVWF CEILING SPEAKER/STROBE
TYPICAL WIRING DETAIL



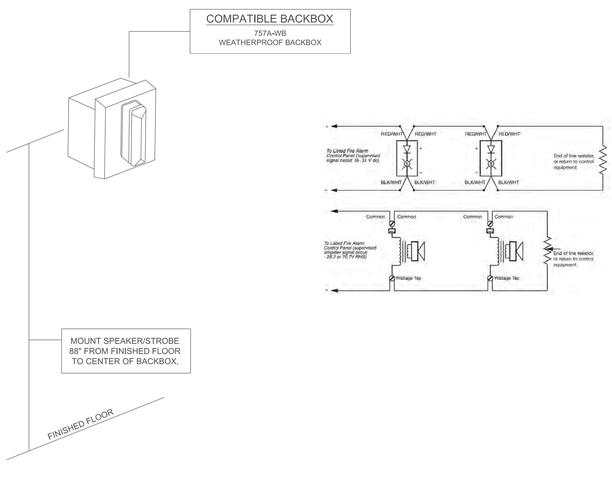




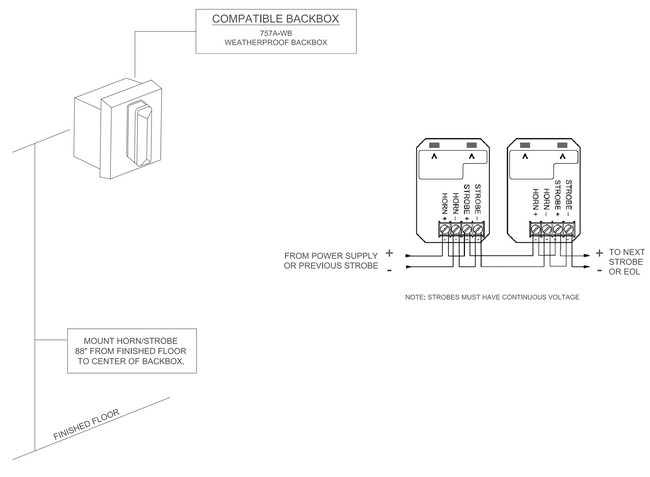
E G4SVWF SPEAKER/STROBE
TYPICAL WIRING DETAIL



PENDANT MOUNT
CEILING SPEAKER/STROBE
TYPICAL DETAIL



G 757 SERIES WEATHERPROOF WALL SPEAKER/STROBE
TYPICAL WIRING DETAIL



H 757 SERIES WEATHERPROOF HORN STROBE
TYPICAL WIRING DETAIL

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT
COMMUNITY
COLLEGE DISTRICT

	06/07/21	DESIGN INITIATED
	09/17/21	50% CD
	12/09/21	80% CD
	01/22/22	-

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

DETAILS

SHEET NUMBER

FA-3.04

GAVILAN COLLEGE
VOICE / DATA SYSTEM

505 FAIRVIEW ROAD,
HOLLISTER, CA 95023

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
LOW VOLTAGE DRAWINGS	
LV001	TITLE SHEET
LV003	KEY PLAN AND BACKBONE RISER
LV101	LEVEL 01 - SECTOR A
LV102	LEVEL 01 - SECTOR B
LV103	LEVEL 01 - SECTOR C
LV501	LEVEL 01 - DETAILS

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DRAWN BY: JC
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PTN: N/A FILE NO: 43-C4

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FEBRUARY 4, 2022

SHEET TITLE

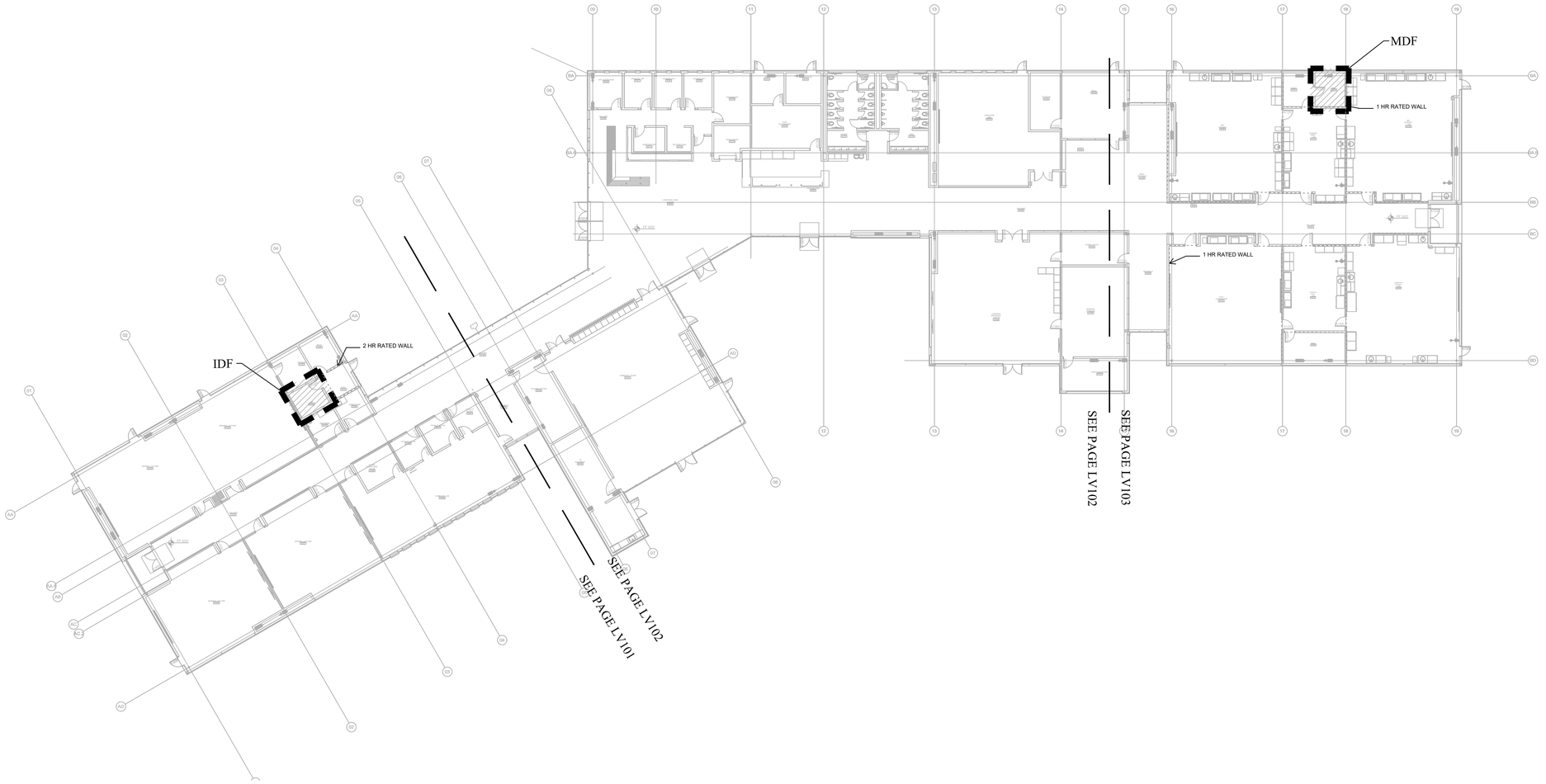
TITLE SHEET

SHEET NUMBER

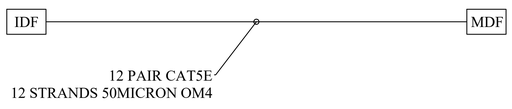
LV001

KEY PLAN LEGEND

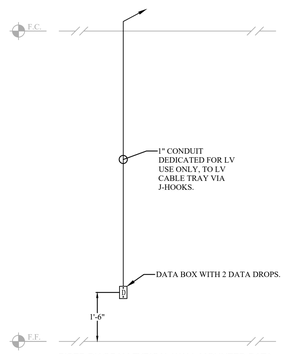
AREAS IN SCOPE.



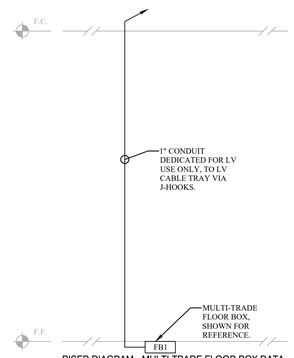
1 KEY PLAN
SCALE: NTS



2 BACKBONE RISER
SCALE: NTS



3 RISER DIAGRAM TYPICAL WALL MOUNTED DATA CONNECTION PLATE
SCALE: N.T.S.



4 RISER DIAGRAM - MULTI-TRADE FLOOR BOX DATA CONNECTION PATH
SCALE: N.T.S.

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
KEY PLAN AND BACKBONE RISER

SHEET NUMBER
LV003

LOW VOLTAGE NOTES:

NOTE 1: AV DATA DROPS WILL BE PROVIDED AFTER COORDINATION WITH AV EQUIPMENT, T.B.D.

1V — DATA VOIP LINE - 1 X CAT6A DATA DROP.

2D — DATA OUTLET - 2 X CAT6A DATA DROP. HOLD STANDARD PROJECT OUTLET HEIGHT UNLESS NOTED WITH +XX" AT SYMBOL LOCATION.

1V,1D — DATA/VOIP OUTLET - 2 X CAT6A DATA DROP.

2D WAP — WAP LOCATION - 2 X CAT6A DATA DROP.

PR — PRINTER LOCATION (BY OTHERS).

2D — IN FLOORBOX OR MULTI-TRADE FLOOR POKE-THRU DATA OUTLET - 2 X CAT6A DATA DROP.

1 LOW VOLTAGE PLAN - LEVEL 01 - SECTOR A
SCALE: 1/8" = 1'-0"

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DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

LEVEL 01 - SECTOR A

SHEET NUMBER

LV101

LOW VOLTAGE NOTES:

NOTE 1: AV DATA DROPS WILL BE PROVIDED AFTER COORDINATION WITH AV EQUIPMENT, T.B.D.

1V — DATA VOIP LINE - 1 X CAT6A DATA DROP.

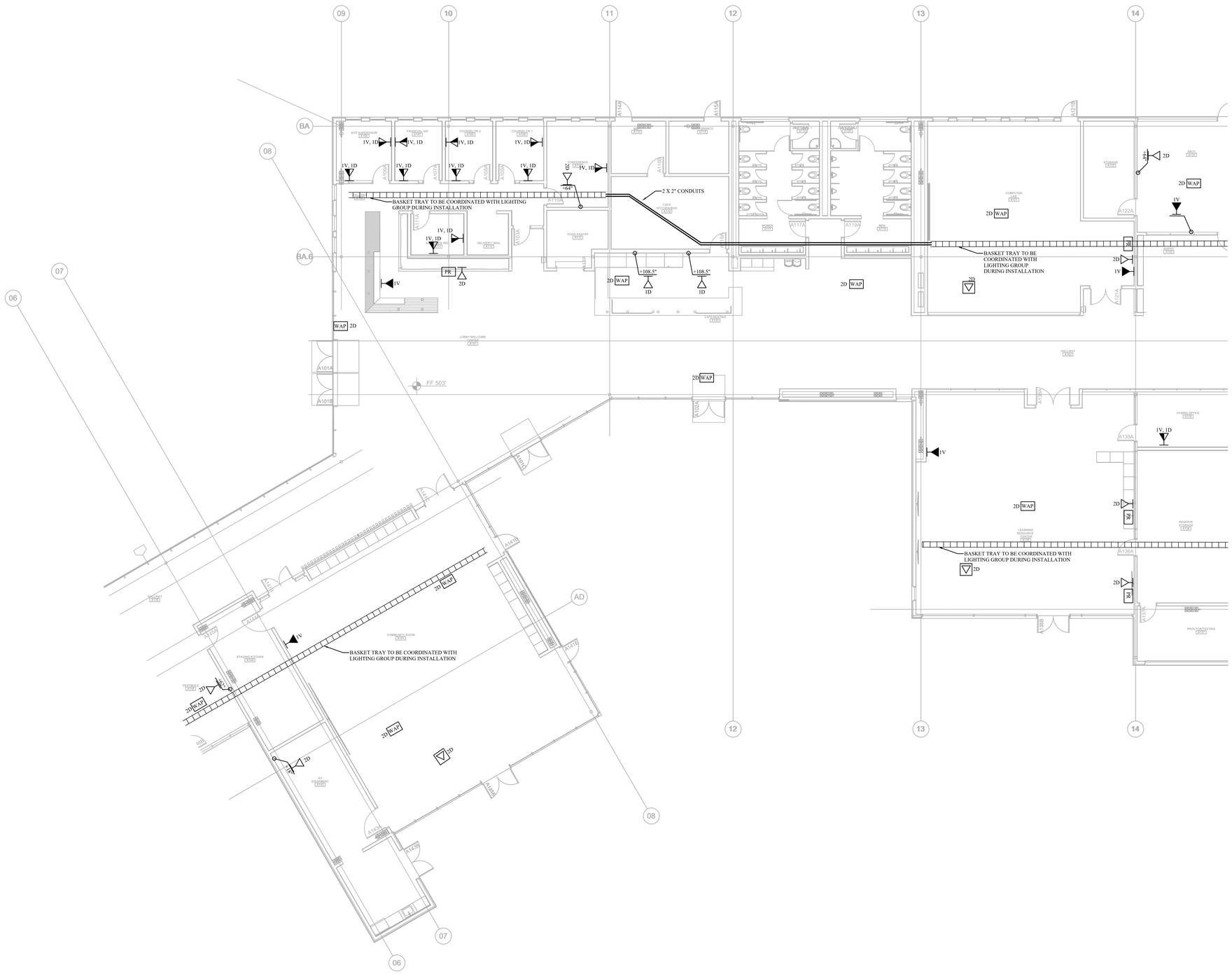
2D — DATA OUTLET - 2 X CAT6A DATA DROP. HOLD STANDARD PROJECT OUTLET HEIGHT UNLESS NOTED WITH +XX" AT SYMBOL LOCATION.

1V,1D — DATA/VOIP OUTLET - 2 X CAT6A DATA DROP.

2D WAP — WAP LOCATION - 2 X CAT6A DATA DROP.

PR — PRINTER LOCATION (BY OTHERS).

2D — IN FLOORBOX OR MULTI-TRADE FLOOR POKE-THRU DATA OUTLET - 2 X CAT6A DATA DROP.



1 LOW VOLTAGE PLAN - LEVEL 01 - SECTOR B
SCALE: 1/8" = 1'-0"

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FEBRUARY 4, 2022

SHEET TITLE
LEVEL 01 - SECTOR B

SHEET NUMBER
LV102

LOW VOLTAGE NOTES:

NOTE 1: AV DATA DROPS WILL BE PROVIDED AFTER COORDINATION WITH AV EQUIPMENT, T.B.D.

1V — DATA VOIP LINE - 1 X CAT6A DATA DROP.

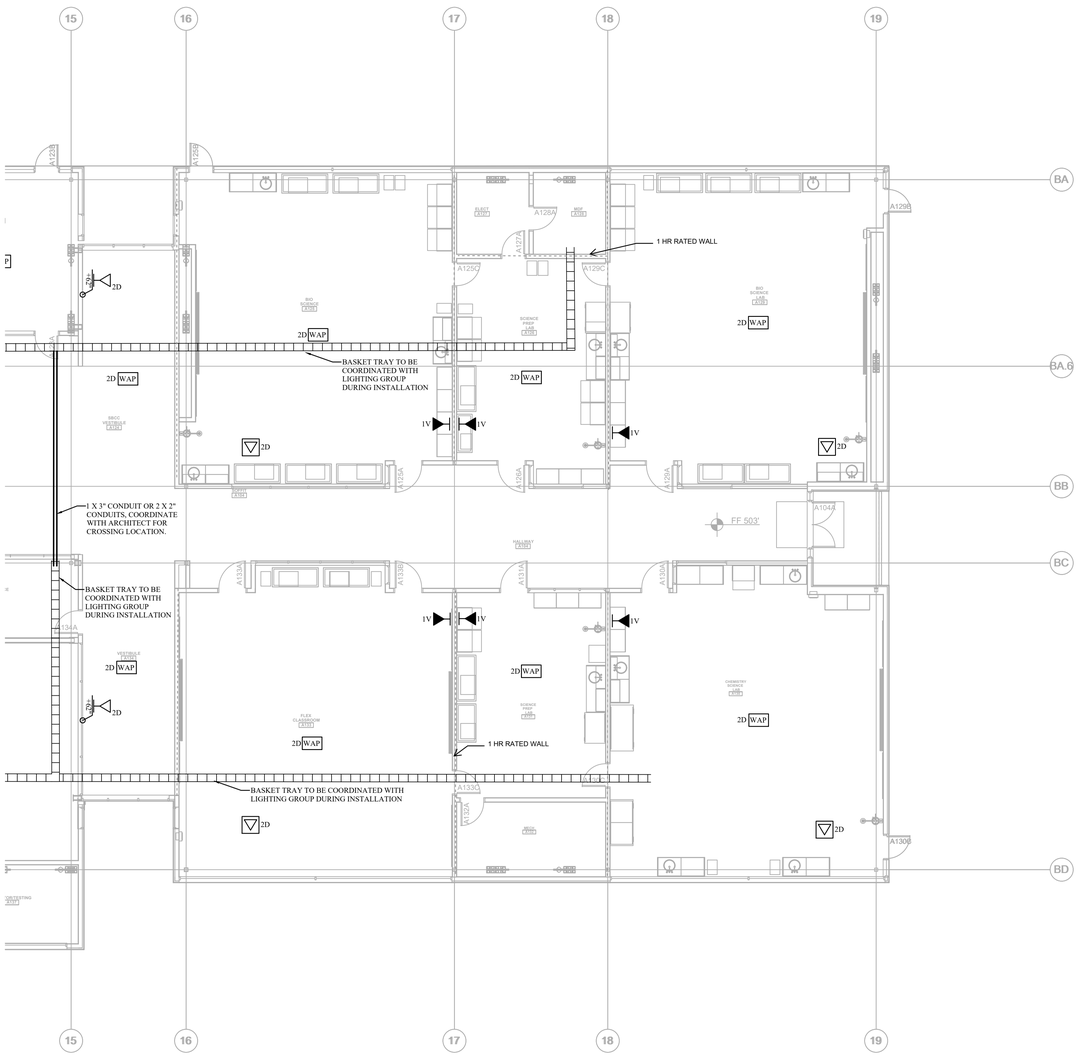
2D — DATA OUTLET - 2 X CAT6A DATA DROP. HOLD STANDARD PROJECT OUTLET HEIGHT UNLESS NOTED WITH +XX" AT SYMBOL LOCATION.

1V.1D — DATA/VOIP OUTLET - 2 X CAT6A DATA DROP.

2D WAP — WAP LOCATION - 2 X CAT6A DATA DROP.

PR — PRINTER LOCATION (BY OTHERS).

2D — IN FLOORBOX OR MULTI-TRADE FLOOR POKE-THRU DATA OUTLET - 2 X CAT6A DATA DROP.



1 LOW VOLTAGE PLAN - LEVEL 01 - SECTOR C
SCALE: 1/8" = 1'-0"

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

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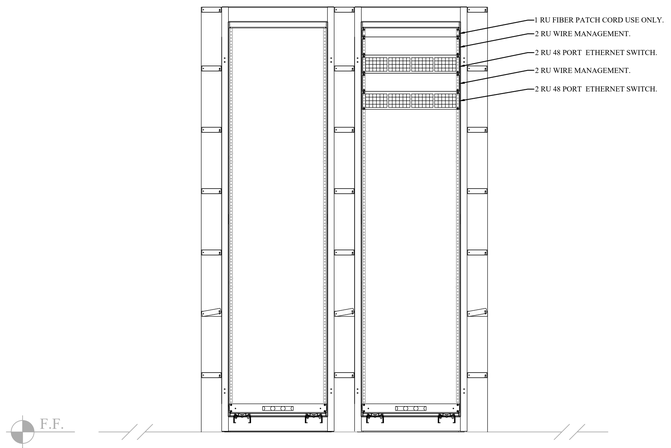
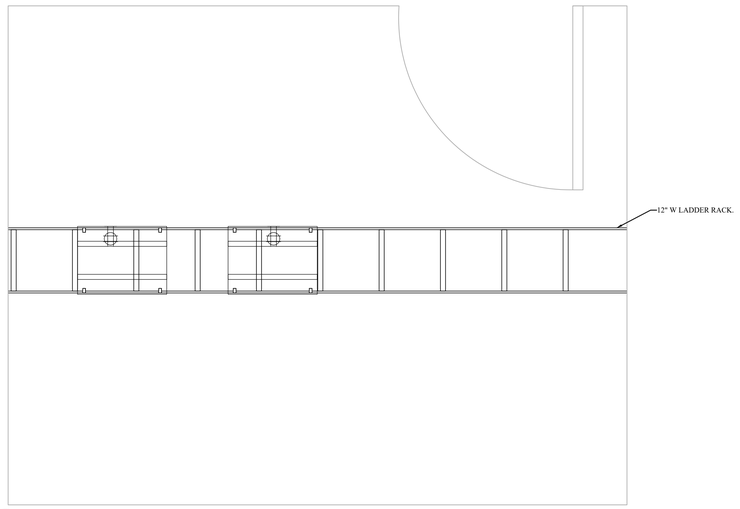
FEBRUARY 4, 2022

SHEET TITLE
LEVEL 01 - SECTOR C

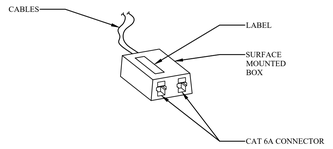
SHEET NUMBER
LV103



1 RACK ELEVATION
SCALE: N.T.S.

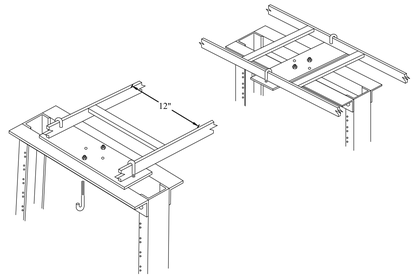


2 DETAIL-LADDER RACK PLAN
SCALE: N.T.S.

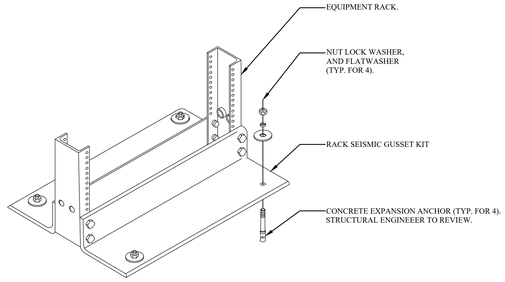


3 DETAIL-WAP SURFACE MOUNT BOX
SCALE: N.T.S.

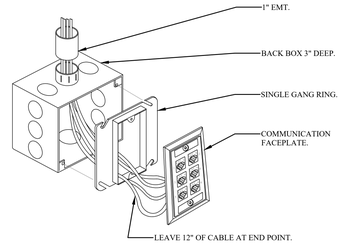
4 DETAIL-TYPICAL OUTLETS
SCALE: N.T.S.



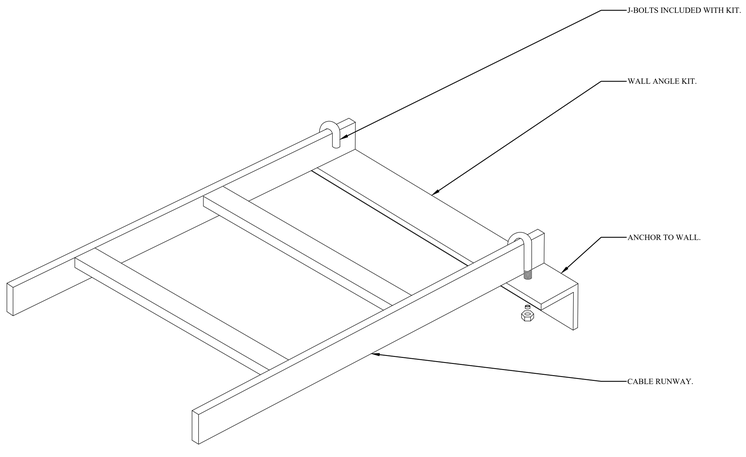
5 DETAIL-RACK TO RUNWAY
SCALE: N.T.S.



6 DETAIL-RACK TO FLOOR
SCALE: N.T.S.



7 DETAIL-BACK BOX
SCALE: N.T.S.



8 DETAIL-CABLE TRAY END-TO-WALL BRACKET DETAIL
SCALE: N.T.S.

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DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

LEVEL 01 - DETAILS

SHEET NUMBER

LV501

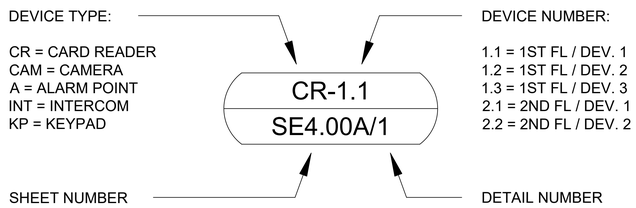
Gavilan College

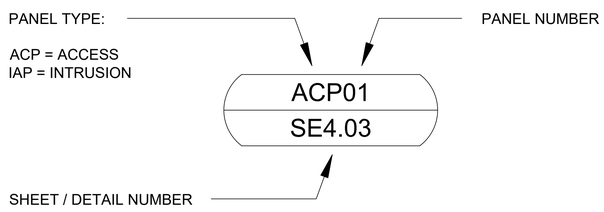
Gilroy, CA
95020

LEGEND

CR	CARD READER	WR	WIRELESS RECEIVER
CR K	CARD READER WITH KEYPAD	PS	POWER SUPPLY
CR M	CARD READER MULLION MOUNT	J	SECURITY JUNCTION BOX
DC	MAGNETIC DOOR CONTACT	DSA	DOOR STATUS ANNUNCIATOR
R	REQUEST TO EXIT MOTION SENSOR	ARM	ARMING STATION
ACP	ACCESS CONTROL PANEL	PoE	POWER OVER ETHERNET SWITCH
IAP	INTRUSION ALARM PANEL	IC	INTERCOM STATION
EL	ELECTRIFIED LOCKSET	ICM	INTERCOM MASTER STATION
EL R	ELECTRIFIED LOCKSET WITH REX	IC V	VIDEO INTERCOM STATION
ES	ELECTRIC STRIKE	ICM V	VIDEO INTERCOM MASTER STATION
CB	CRASH BAR	ET	ENTRY/EMERGENCY TELEPHONE
CB R	CRASH BAR WITH REX	BP	BADGE PRINTER
ML	MAGNETIC LOCK	WS	WORK STATION
BL	ELECTRIC BOLT LOCK	BR	BIOMETRIC READER
EDR	EMERGENCY DOOR RELEASE	LB	LOCK BOX
DR	DOOR RELEASE BUTTON	TS	TEMPERATURE SENSOR
EB	EXIT BUTTON	MS	MOISTURE SENSOR
A	ALARM POINT - DOOR CONTACT	NVR	NETWORK VIDEO RECORDER
LA	LOCAL ALARM	DVR	DIGITAL VIDEO RECORDER
M	MOTION DETECTOR - WALL MOUNT	UPS	UPS BATTERY BACKUP
M	MOTION DETECTOR - CEILING MOUNT	IR	IR-LED ILLUMINATOR
LM	LONG RANGE MOTION DETECTOR	FIX	IP FIXED DOME CAMERA
GB	GLASS BREAK - CEILING MOUNT	PTZ	IP PAN/TILT/ZOOM DOME CAMERA
GB	GLASS BREAK - WALL MOUNT	FIX	IP 180° F.O.V. DOME CAMERA
FA	FIRE ALARM RELAY (BY OTHERS)	FIX	IP 360° F.O.V. DOME CAMERA
KP	KEYPAD		
S	SOUNDER		
DB	DURESS BUTTON		
DB W	WIRELESS DURESS BUTTON		

CONVENTIONS





ABBREVIATIONS

ACAMS	- ACCESS CNTRL & ALRM MONITOR SYS.	NC	- NORMALLY CLOSED
ACP	- ACCESS CONTROL PANEL	NIC	- NOT IN CONTRACT
A.F.F.	- ABOVE FINISHED FLOOR	NO	- NORMALLY OPEN
AWG	- AMERICAN WIRE GAUGE	No.	- NUMBER
C.	- CONDUIT	NTS	- NOT TO SCALE
CAT6	- CATEGORY 6 TWISTED PAIR CABLE	NVR	- NETWORK VIDEO RECORDER
CCTV	- CLOSED CIRCUIT TELEVISION	O.H.	- OPPOSITE HAND
COND	- CONDUCTOR	OC	- ON CENTER
DVR	- DIGITAL VIDEO RECORDER	PNL	- PANEL
DWG	- DRAWING	PR.	- PAIR
(E)	- EXISTING	P.S.	- POWER SUPPLY
EMT	- ELECTRICAL METALLIC TUBING	PTZ	- PAN/TILT/ZOOM
(F)	- FUTURE	REX	- REQUEST TO EXIT
FA	- FIRE ALARM	TBD	- TO BE DETERMINED
FACP	- FIRE ALARM CONTROL PANEL	TS	- TAMPER SWITCH
F.C.	- FLEX CONDUIT	TYP.	- TYPICAL
IAP	- INTRUSION ALARM PANEL	U.O.N.	- UNLESS OTHERWISE NOTED
IFP	- INTELLIGENT FIELD PROCESSOR	UPS	- UNINTERUPTABLE POWER SUPPLY
JB	- JUNCTION BOX	VAC	- VOLTS A.C. POWER
MAX	- MAXIMUM	VDC	- VOLTS D.C. POWER
MIN	- MINIMUM	TBD	- TO BE DETERMINED
MTG	- MOUNTING	TS	- TAMPER SWITCH
(N)	- NEW	WP	- WEATHERPROOF

SHEET INDEX

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JOB NUMBER
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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
COVER SHEET

SHEET NUMBER
SE0.01

GENERAL NOTES

1. THIS DRAWING SET HAS BEEN APPROVED BY AND MEETS NETRONIX INTERGRATION STANDARDS FOR SECURITY EQUIPMENT INSTALLATIONS. DO NOT DEVIATE FROM THESE PLANS. FOLLOW ALL INSTALLATION SPECIFICATIONS, DETAILS AND NOTES. IF THERE ARE INSTALLATION ISSUES THAT REQUIRE DEVIATION FROM THESE PLANS, CONTACT THE NETRONIX INTEGRATION PROJECT MANAGER FOR APPROVAL BEFORE PROCEEDING. ANY CHANGES TO THIS PROJECT INSTALLATION THAT ARE NOT APPROVED WILL REQUIRE REWORK AT THE SECURITY VENDORS EXPENSE TO MEET THE PROJECT SPECIFICATIONS ON THIS PLAN SET.

2. SECURITY DRAWINGS ARE NOT TO BE USED FOR ARCHITECTURAL OR ENGINEERING PURPOSES. THE SECURITY SYSTEM DRAWINGS SHOULD ONLY BE USED FOR SECURITY SYSTEMS INSTALLATION AND COORDINATION.

3. LOCAL SECURITY VENDOR SHALL COORDINATE WITH GENERAL CONTACTOR/CUSTOMER/FIRE SYSTEM PROVIDER TO PROVIDE ALL NECESSARY DRY CONTACT OUTPUTS FROM THE FIRE SYSTEM TO INTERFACE WITH THE LOCK POWER SUPPLIES AS REQUIRED TO MEET LOCAL CODE.

4. LOCAL SECURITY VENDORS MAY NOT SUBCONTRACT ANY SCOPE OF WORK WITHOUT PRIOR WRITTEN AUTHORIZATION FROM NETRONIX INTEGRATION.

5. VERIFY AND COORDINATE THE EXACT MOUNTING LOCATION OF ALL DEVICES PRIOR TO INSTALLATION.

6. DRAWINGS INDICATE APPROXIMATE LOCATIONS OF CEILING MOUNTED DEVICES. COORDINATE EXACT LOCATIONS WITH LIGHTING FIXTURES AND OTHER DEVICES.

7. MOUNTING HEIGHT ARE FROM FINISHED FLOOR TO THE HORIZONTAL CENTERLINE OF THE DEVICE UNLESS OTHERWISE NOTED.

8. MOUNTING HEIGHT OF ALL USER INTERFACE EQUIPMENT (CARD READERS, KEYPADS, ETC.) SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).

RESPONSIBILITY SCHEDULE

TASK	SUPPLIED BY:			INSTALLED BY:		
	GEN. CONT.	CLIENT	NETRONIX	GEN. CONT.	CLIENT	NETRONIX
CONDUITS / CABLE TRAYS / CONTAINMENT	X			X		
ACCESS CONTROL SYSTEM (ACS)						
DEVICES			X			X
CABLING			X			X
ACCESS CONTROL PANEL (ACP) MOUNTING BOARD			X			X
ACP & POWER SUPPLY UNIT (PSU)			X			X
DEDICATED MAINS OUTLET FOR ACS	X			X		
NETWORK PORT		X			X	
DOOR HARDWARE						
DEVICES (ELECTRONIC DOOR HARDWARE)- LOCKS	X			X		
CABLING			X			X
CCTV SYSTEM:						
DEVICES			X			X
CABLING			X			X
EXTERNAL CONDUITS (IF NEEDED)	X			X		
DEDICATED MAINS OUTLET FOR CCTV EQUIPMENT	X			X		
NETWORK PORT (PoE)		X			X	
INTRUSION SYSTEM:						
DEVICES			X			X
CABLING			X			X
INTRUSION SYSTEM PSU			X			X
DEDICATED MAINS OUTLET FOR IDS	X			X		
NETWORK PORT		X			X	
SECURITY PROJECT CLOSE OUT:						
IT INFORMATION RECORD		X				X
TESTING / COMMISSIONING	X	X			X	X
O & M MANUALS (OR AGREED ALTERNATIVE)		X				X
AS-BUILTS DRAWINGS		X				X

CABLE SCHEDULE

I.D.	DESCRIPTION	REMARKS
A	24 AWG / 4 PAIR / SHIELDED	DATA, CARD READER
B	24 AWG / 2 PAIR / SHIELDED	DATA
C	24 AWG / 8 CONDUCTOR / SHIELDED	DEVICE
D	23 AWG / 4 PAIR (CAT6)	DATA
E	22 AWG / 4 CONDUCTOR / SHIELDED	DATA
F	22 AWG / 6 CONDUCTOR / SHIELDED	CARD READER
G	22 AWG / 4 CONDUCTOR / UNSHIELDED	DEVICE
H	22 AWG / 2 PAIR / SHIELDED	CARD READER (OSDP)
J	18 AWG / 2 CONDUCTOR / UNSHIELDED	POWER, DEVICE
K	18 AWG / 2 CONDUCTOR / SHIELDED	POWER, DEVICE
L	18 AWG / 4 CONDUCTOR / UNSHIELDED	POWER
M	18 AWG / 6 CONDUCTOR / SHIELDED	CARD READER
N	18 AWG / 4 CONDUCTOR / SHIELDED	POWER, DATA
P	16 AWG / 2 CONDUCTOR / UNSHIELDED	LOCK POWER
Q	FIBER OPTIC	DATA
R	RG-6/U COAXIAL CABLE	ANALOG VIDEO
S	RG-59U COAXIAL CABLE	ANALOG VIDEO
T	COMPOSITE - 22/3 PR SHLD, 18/4, 22/4, 22/2 UNSHLD	CARD READER DOOR
U	22 AWG / 2 CONDUCTOR / UNSHIELDED	DEVICE

CONDUIT/CABLE NOTES

1. ALL CONDUIT AND BACK BOXES SHALL CONFORM TO BUILDING STANDARD ELECTRICAL SPECIFICATIONS. ALL CABLES SHALL BE PLENUM RATED WHERE REQUIRED.

2. ALL CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED.

3. ALL CONDUIT USED IN POTENTIALLY DAMP OR WET LOCATIONS, EXPOSED OUTDOORS, OR IN HAZARDOUS AREAS SHALL BE INTERMEDIATE STEEL CONDUIT (IMC). ALL EXTERIOR CONDUIT IN CONCRETE SLAB SHALL BE PVC. ALL CONDUIT OTHER THAN SPECIFIED TO BE IMC OR PVC SHALL BE ELECTRICAL METALLIC TUBING (EMT).

4. ALL CONDUIT SHALL BE ROUTED ABOVE CEILINGS, BELOW FLOORS, OR WITHIN WALLS. NO CONDUIT SHALL BE EXPOSED WITHOUT APPROVAL BY THE ARCHITECT.

5. ALL CONDUITS SHALL HAVE PLASTIC BUSHINGS INSTALLED AT OPEN ENDS BEFORE PULLING CABLE.

6. ALL BACKBOXES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED.

7. ALL BACKBOXES MOUNTED WITHIN FIRE RATED PARTITIONS SHALL MEET THE FIRE RATING OF THE PARTITION AS REQUIRED BY CODE.

8. COORDINATE EXACT LOCATION OF ALL PULL AND BACKBOXES WITH ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.

9. PROVIDE WATERTIGHT SEALING ASSEMBLIES WITH PRESSURE BUSHINGS AS REQUIRED FOR EXTERIOR PENETRATIONS.

10. JUNCTION, PULL, AND MOUNTING BOXES IN EXTERIOR LOCATIONS SHALL BE WATERPROOF. ALL SEALS, GASKETS, OR OTHER WATERPROOFING DEVICES SUPPLIED WITH BOXES AND DEVICES SHALL BE IN PLACE AND USED AS INTENDED.

11. ALL CABLE RUNS IN CEILING AREAS WHERE CONDUIT OR CABLE TRAY IS NOT SPECIFIED SHALL BE SUPPORTED WITH SIMILAR SUPPORT OR WITH THE USE OF J-HOOKS AT 5' INTERVALS ABOVE CEILING TILES.

12. ALL CABLE PATHWAYS AND CONDUIT TO BE PROVIDED BY OTHERS UNLESS OTHERWISE NOTED.

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CONTACT: 408-643-1242

JOB NUMBER
2578C21E

GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

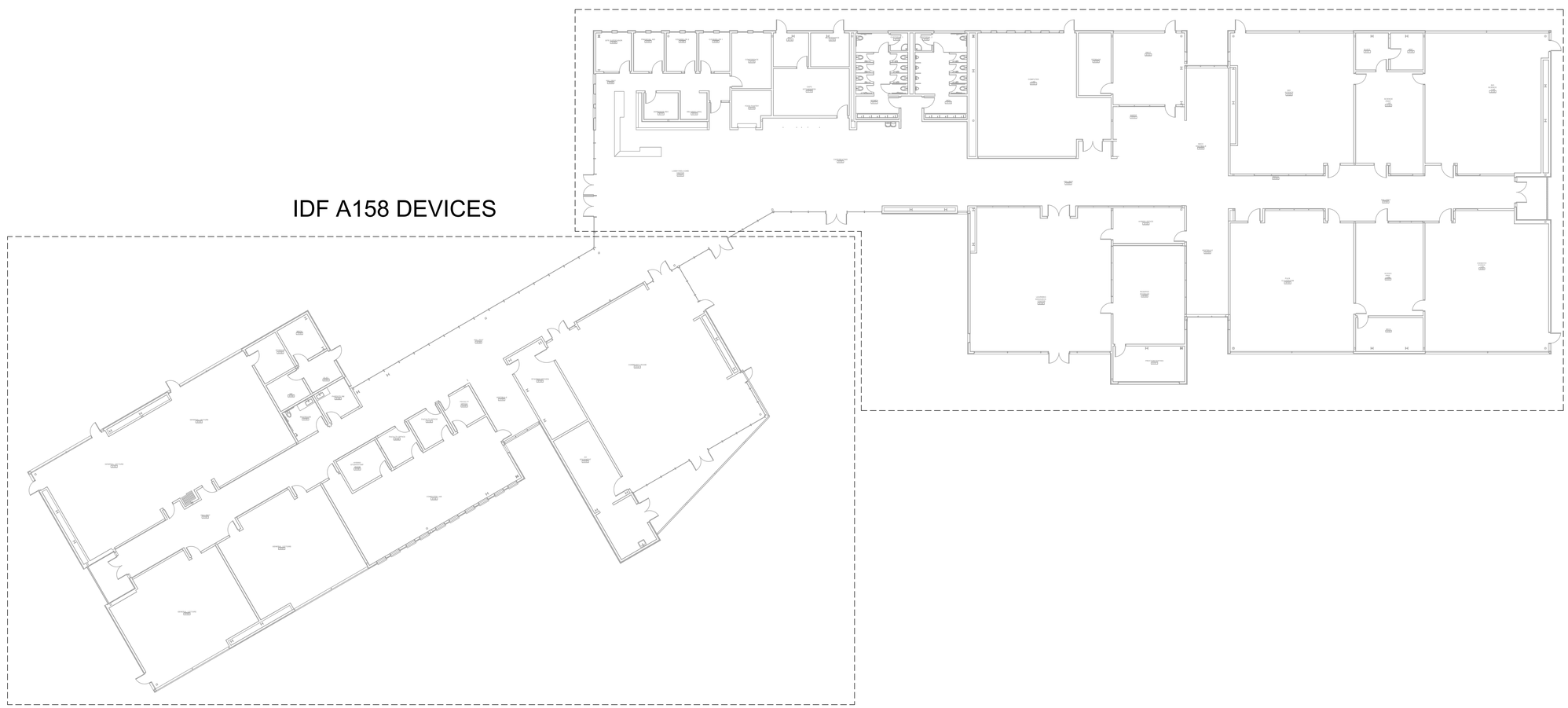
DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
GENERAL NOTES & INFORMATION

SHEET NUMBER
SE0.02

MDF A128 DEVICES

IDF A158 DEVICES



0 5 10 20 30 FEET
0 1 3 6 9 METERS

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DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

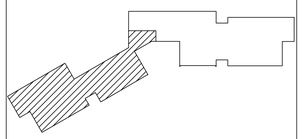
SHEET TITLE
1ST FLOOR
SITE PLAN

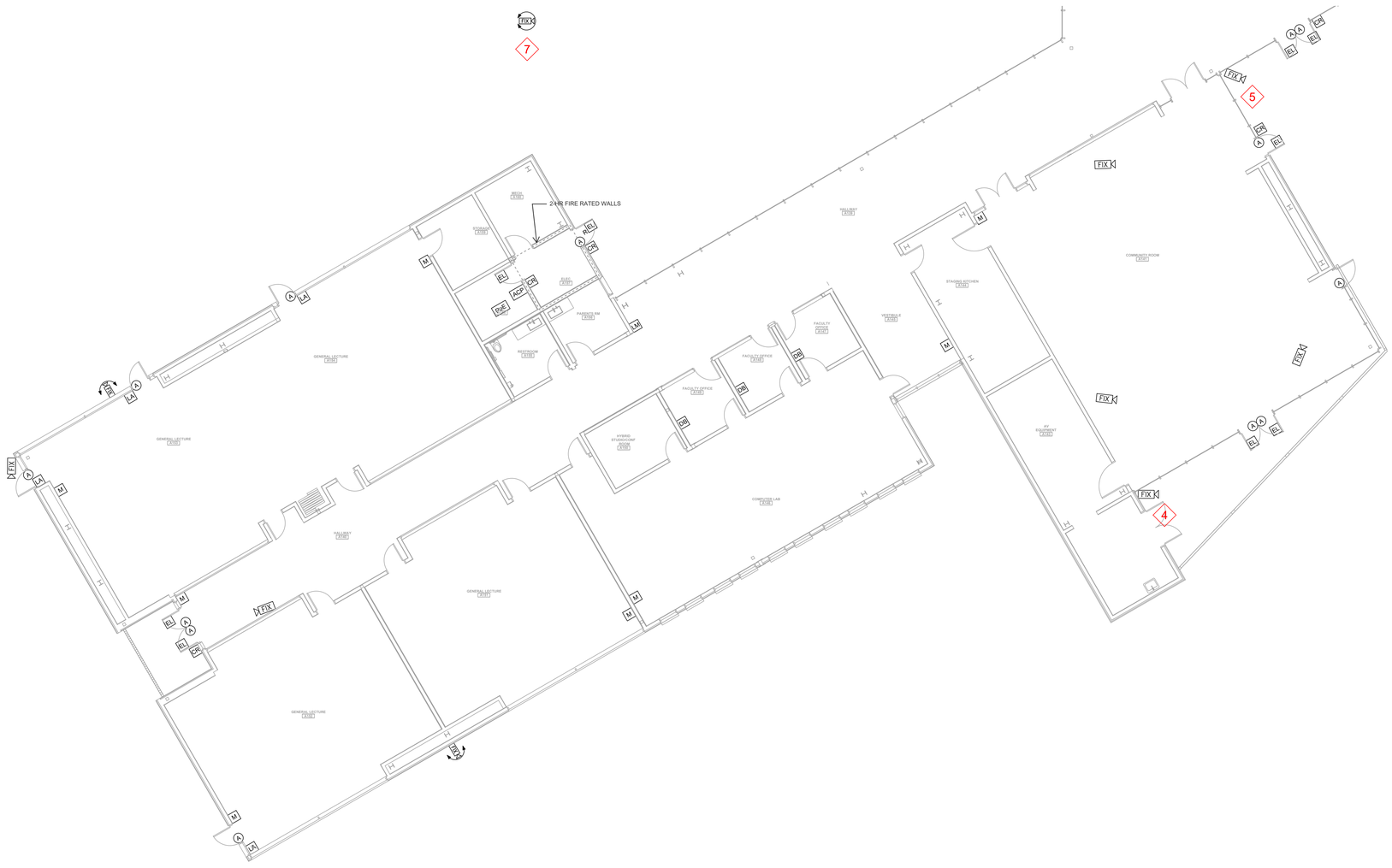
SHEET NUMBER
SE1.00

SHEET NOTES

1. ALL MOTION DETECTORS ARE CONNECTED TO THE INTRUSION PANEL AND ALSO INTEGRATED INTO THE ACCESS CONTROL SYSTEM THROUGH THE NETWORK FOR REDUNDANCY.
2. ALL DOOR CONTACTS ARE MONITORED ON INTRUSION SYSTEM ONLY.
3. ALL READERS ARE TO BE CONNECTED USING OSDP COMMUNICATIONS.
4. CAMERAS NOTED TO BE MOUNTED APPROXIMATELY 9' AFF.
5. CAMERAS NOTED TO BE SURFACE MOUNTED UNDER SOFFIT.
6. ALL DURESS BUTTONS ARE HARDWIRED TO ACCESS AND INTRUSION SYSTEMS TO PROVIDE PERIMETER DOOR LOCKDOWN AND ALERT THE OFFSITE MONITORING COMPANY.
7. POLE MOUNTED CAMERA. CONNECTS VIA CAT6 OSP CABLE TO IDF ROOM A158 AND PAINT TO MATCH COLOR OF LIGHT POLE.

KEY PLAN





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JOB NUMBER
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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

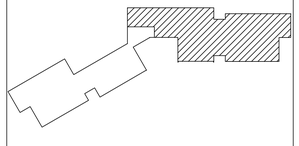
SHEET TITLE
1ST FLOOR SOUTH SECURITY PLAN

SHEET NUMBER
SE1.00A

SHEET NOTES

1. ALL MOTION DETECTORS ARE CONNECTED TO THE INTRUSION PANEL AND ALSO INTEGRATED INTO THE ACCESS CONTROL SYSTEM THROUGH THE NETWORK FOR REDUNDANCY.
2. ALL DOOR CONTACTS ARE MONITORED ON INTRUSION SYSTEM ONLY.
3. ALL READERS ARE TO BE CONNECTED USING OSDP COMMUNICATIONS.
4. CAMERAS NOTED TO BE MOUNTED APPROXIMATELY 9' AFF.
5. CAMERAS NOTED TO BE SURFACE MOUNTED UNDER SOFFIT.
6. ALL DURESS BUTTONS ARE HARDWIRED TO ACCESS AND INTRUSION SYSTEMS TO PROVIDE PERIMETER DOOR LOCKDOWN AND ALERT THE OFFSITE MONITORING COMPANY.
7. POLE MOUNTED CAMERA. CONNECTS VIA CAT6 OSP CABLE TO IDF ROOM A158 AND PAINT TO MATCH COLOR OF LIGHT POLE.
8. CAMERAS NOTED TO BE PENDENT MOUNTED FROM CEILING.

KEY PLAN



0 5 10 20 30 FEET
0 1 3 6 9 METERS

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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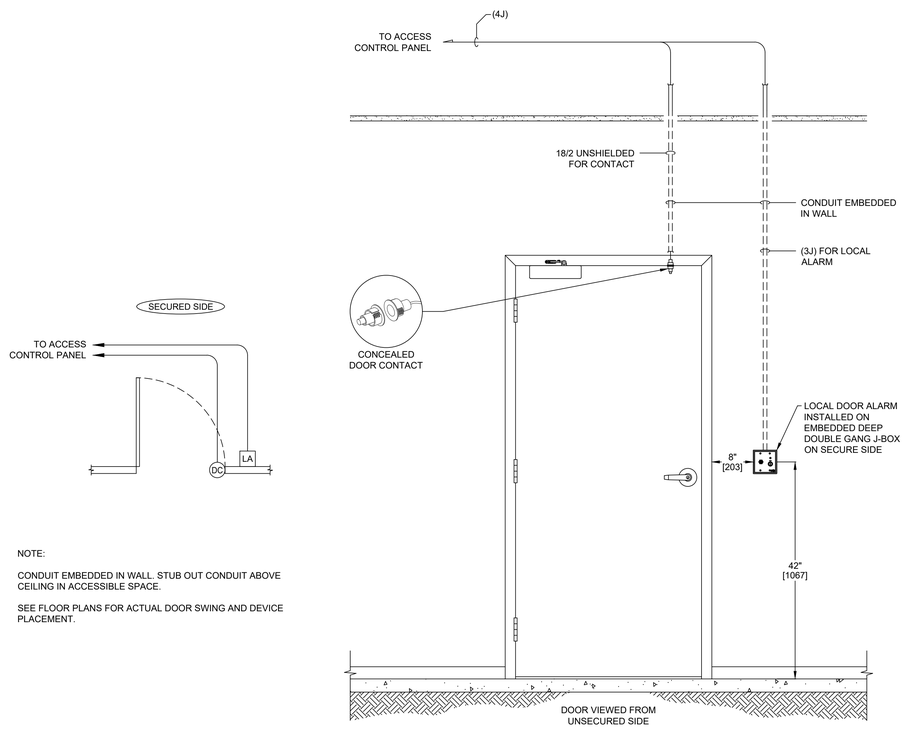
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
1ST FLOOR NORTH SECURITY PLAN

SHEET NUMBER
SE1.00B

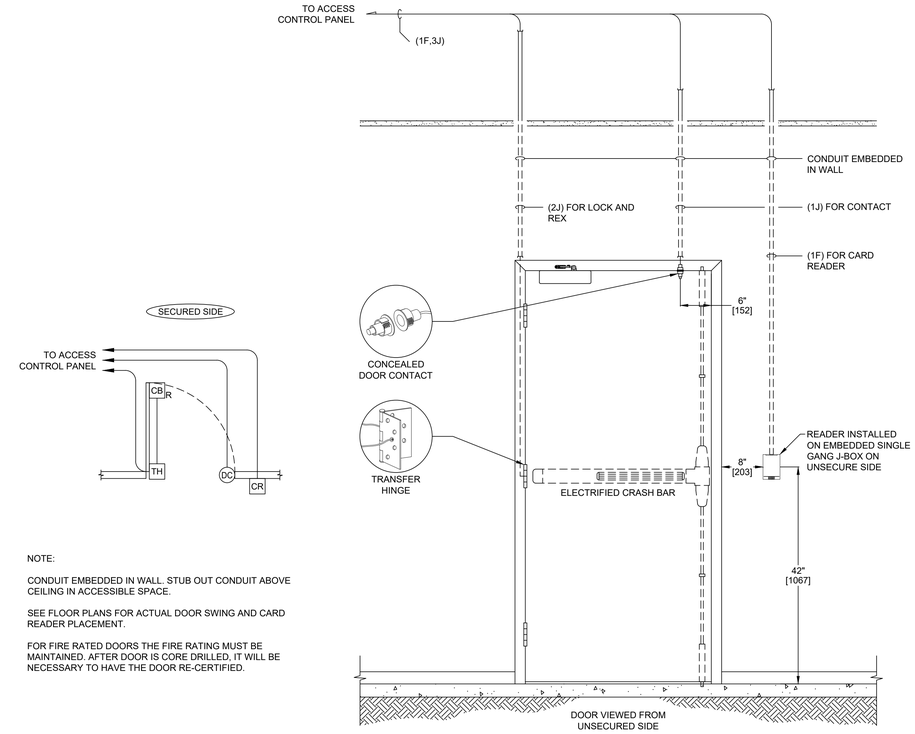


NOTE:

CONDUIT EMBEDDED IN WALL. STUB OUT CONDUIT ABOVE CEILING IN ACCESSIBLE SPACE.

SEE FLOOR PLANS FOR ACTUAL DOOR SWING AND DEVICE PLACEMENT.

1 SINGLE DOOR WITH DOOR CONTACT AND LOCAL DOOR ALARM
N.T.S.



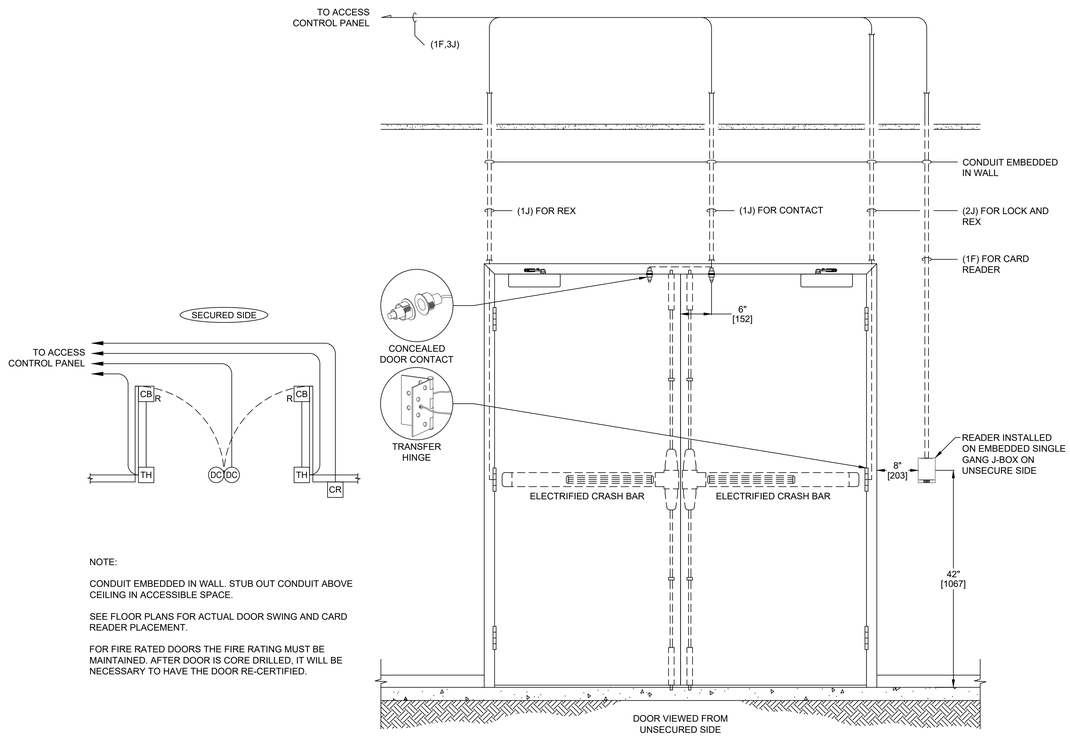
NOTE:

CONDUIT EMBEDDED IN WALL. STUB OUT CONDUIT ABOVE CEILING IN ACCESSIBLE SPACE.

SEE FLOOR PLANS FOR ACTUAL DOOR SWING AND CARD READER PLACEMENT.

FOR FIRE RATED DOORS THE FIRE RATING MUST BE MAINTAINED. AFTER DOOR IS CORE DRILLED, IT WILL BE NECESSARY TO HAVE THE DOOR RE-CERTIFIED.

2 SINGLE DOOR WITH CARD READER WITH CRASH BAR W/REX
N.T.S.



NOTE:

CONDUIT EMBEDDED IN WALL. STUB OUT CONDUIT ABOVE CEILING IN ACCESSIBLE SPACE.

SEE FLOOR PLANS FOR ACTUAL DOOR SWING AND CARD READER PLACEMENT.

FOR FIRE RATED DOORS THE FIRE RATING MUST BE MAINTAINED. AFTER DOOR IS CORE DRILLED, IT WILL BE NECESSARY TO HAVE THE DOOR RE-CERTIFIED.

3 DOUBLE DOOR WITH CARD READER WITH CRASH BAR W/REX
N.T.S.

4 NOT USED
N.T.S.

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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DSA APP NO. 01-119906
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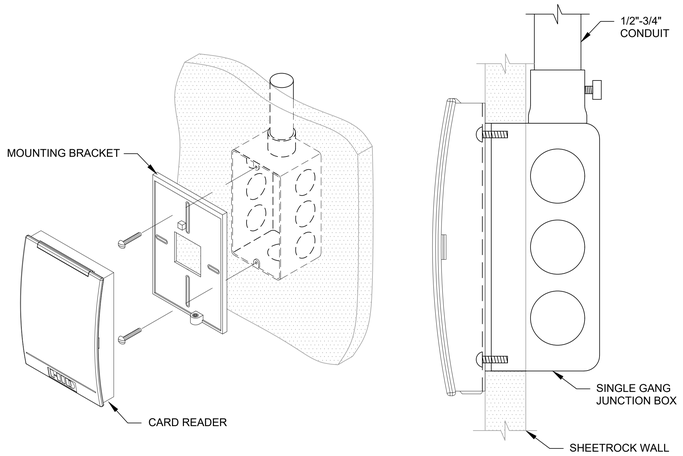
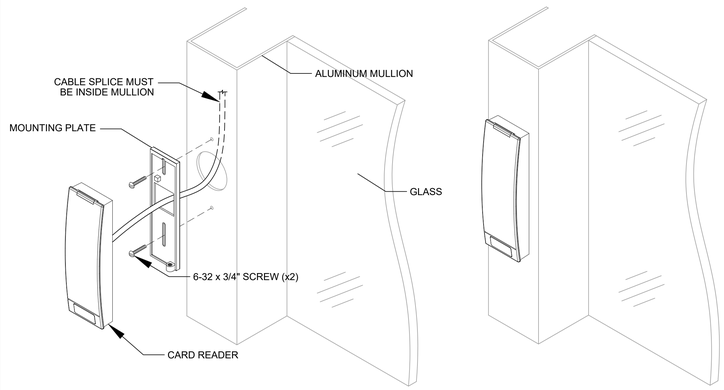
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
DOOR DETAILS

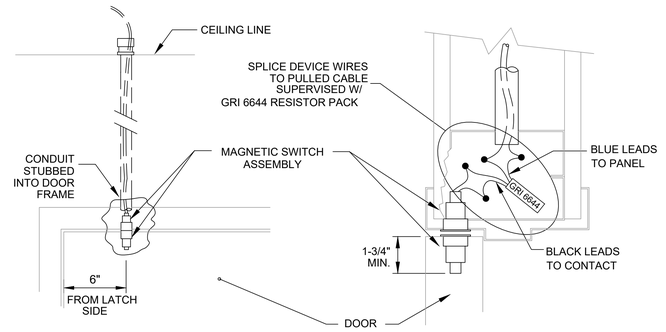
SHEET NUMBER
SE4.00



1 CARD READER MOUNTING DETAIL - J-BOX AND CONDUIT
N.T.S.



2 CARD READER MOUNTING DETAIL - MULION MOUNT
N.T.S.



DRILL/PUNCH 3/4" DIA. HOLE OR DRILL

PRESS SWITCH OR MAGNET IN PLACE. APPLICATION OF EPOXY OR CONTACT CEMENT MAY BE NECESSARY.

NOTES:
1. LEAVE 48" CABLE SLACK AT EACH DEVICE
2. BACK BOX NOT REQUIRED

3 CONCEALED DOOR CONTACT MOUNTING DETAIL
N.T.S.

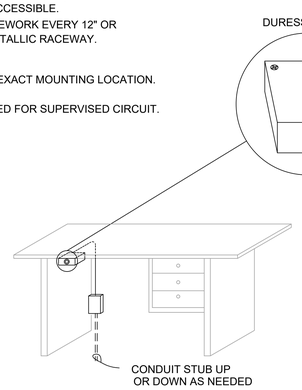
NOTES:

ADEMCO MODEL 269R DURESS BUTTON.

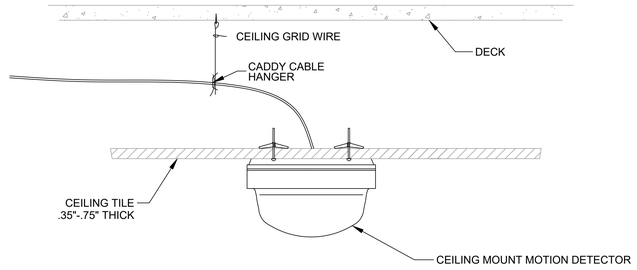
WIRING SHALL BE RUN CONCEALED IN CASEWORK, WHERE WIRING HAS TO BE RUN EXPOSED & ACCESSIBLE. SECURELY ATTACH TO WALL AND CASEWORK EVERY 12" OR CONCEAL INSIDE SURFACE MOUNT METALLIC RACEWAY. SECURED TO WALL AND CASEWORK.

COORDINATE WITH ARCHITECTS FOR EXACT MOUNTING LOCATION.

PROVIDE E.O.L. RESISTOR AS REQUIRED FOR SUPERVISED CIRCUIT.



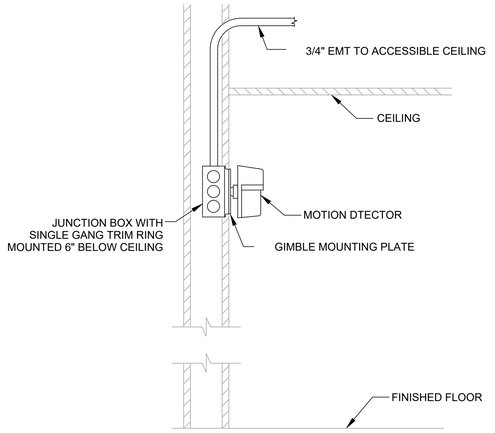
4 DURESS BUTTON MOUNTING DETAIL
N.T.S.



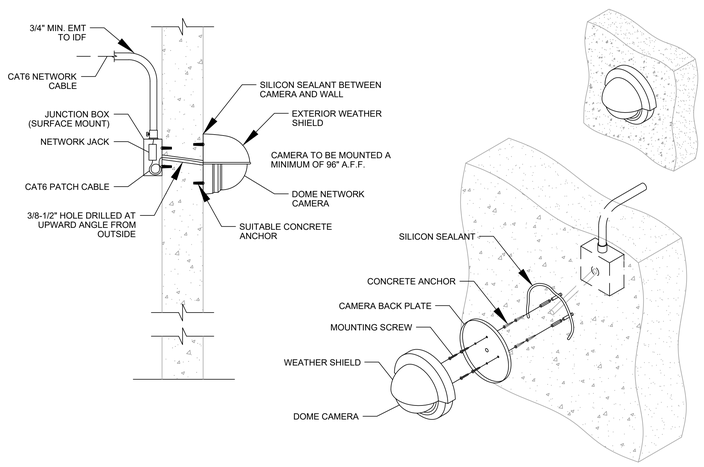
NOTES:

MOUNT MOTION DETECTOR ACCORDING TO MFGR. RECOMMENDATION

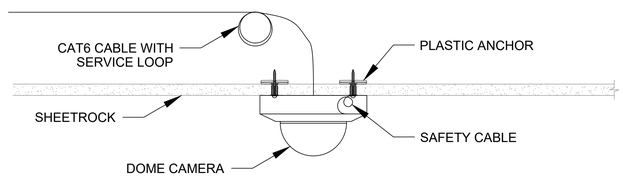
5 SUSPENDED CEILING MOTION DETECTOR MOUNTING DETAIL
N.T.S.



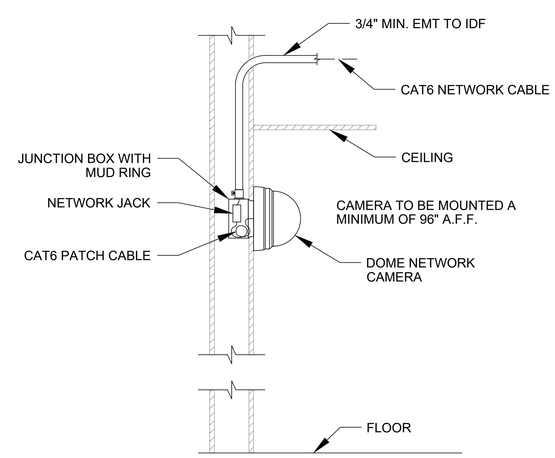
6 WALL MOUNT MOTION DETECTOR w/GIMBLE - MOUNTING DETAIL
N.T.S.



7 INTERIOR SURFACE MOUNT CAMERA - WALL MOUNT
N.T.S.



8 INTERIOR SURFACE MOUNT CAMERA - HARD CAP
N.T.S.



9 INTERIOR WALL MOUNT CAMERA - WITH CODUIT A J-BOX
N.T.S.

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JOB NUMBER
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GAVILAN COLLEGE

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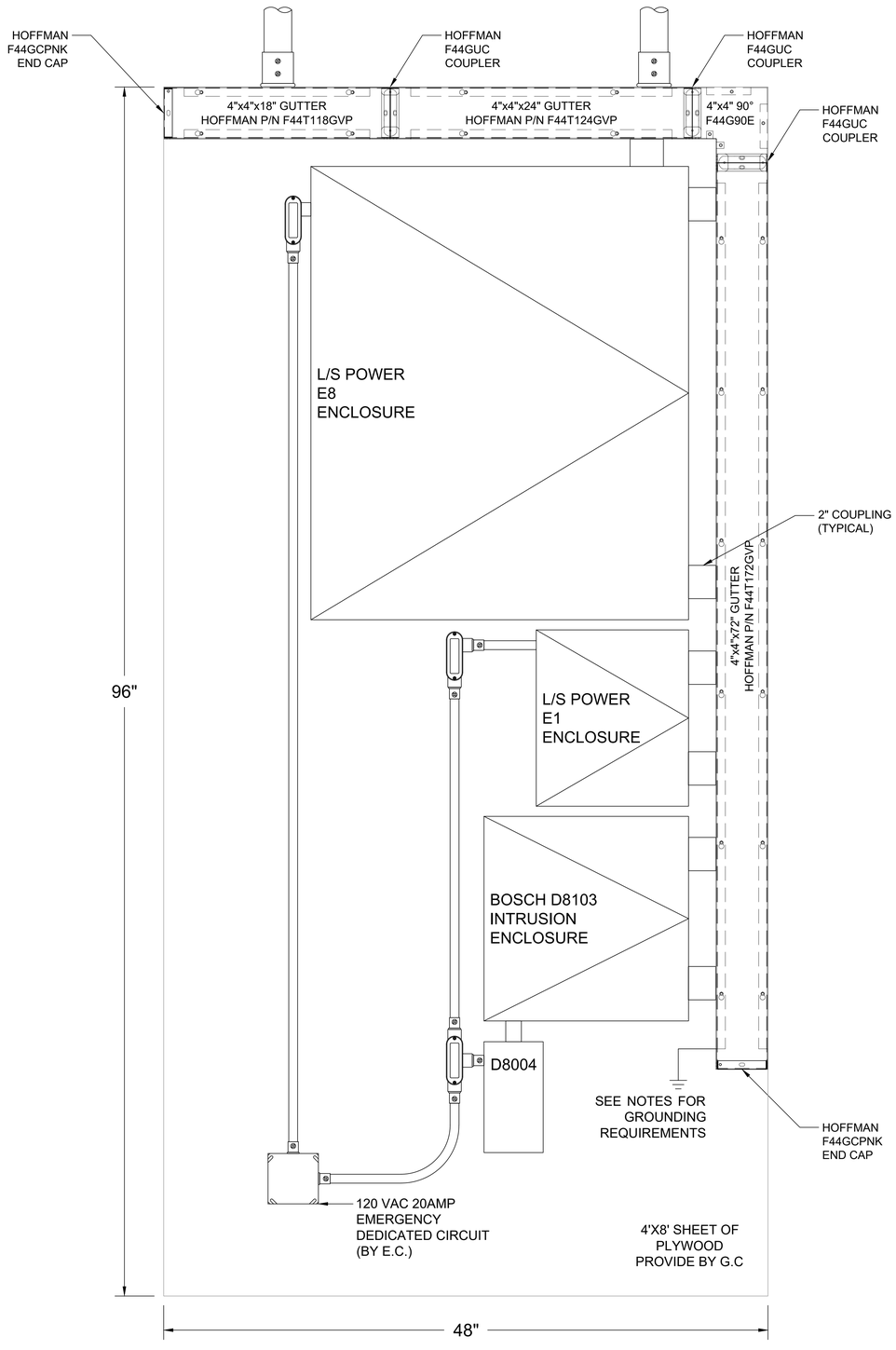
GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

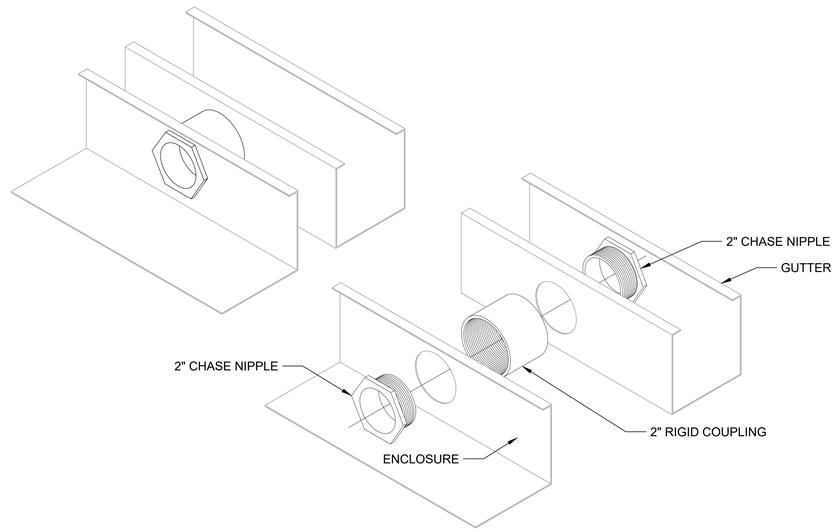
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
DEVICE MOUNTING DETAILS

SHEET NUMBER
SE4.02



1 SECURITY EQUIPMENT SINGLE PANEL LAYOUT (TYPICAL)



NOTE: 120VAC MUST BE INSTALLED AS SHOWN. ENCLOSURES AND GUTTERS CAN NOT BE USED AS A RACEWAY TO RUN 120VAC. 120VAC MUST ENTER ENCLOSURES AS SHOW TO KEEP LOW VOLTAGE SEPARATION FROM HIGH VOLTAGE.

GUTTERS AND ALL ENCLOSURES MUST BE GROUNDED TO TELECOM ROOM GROUND BUSS BAR. IF GROUND BUSS BAR NOT AVAILABLE, CONFIRM THAT AC CIRCUIT TO POWER SUPPLIES HAS A GROUND AND ALL ENCLOSURES AND GUTTERS ARE GROUNDED TO ELECTRICAL GROUND.

BILL OF MATERIAL

MANUFACTURER	DESCRIPTION	PART NUMBER	QTY.
LSP	ACCESS CONTROL ENCLOSURE	E8	1
LSP	POWER SUPPLY ENCLOSURE	E1	1
BOSCH	INTRUSION ENCLOSURE	D8103	1
BOSCH	TRANSFORMER ENCLOSURE	D8004	1
HOFFMAN	4"x4"X18" GUTTER	F44T118GVP	1
HOFFMAN	4"x4"X24" GUTTER	F44T124GVP	1
HOFFMAN	4"x4"X72" GUTTER	F44T172GVP	1
HOFFMAN	4"x4" - 90 ° CORNER GUTTER	F44G90E	1
HOFFMAN	4"x4" GUTTER END CAP	F44GCPNK	2
HOFFMAN	4"x4" GUTTER COUPLING	F44GUC	3
N/A	2" RIGID PIPE COUPLING	N/A	7
N/A	1" RIGID PIPE COUPLING	N/A	1
N/A	2" CHASE NIPPLE	N/A	10
N/A	1" CHASE NIPPLE	N/A	2

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
PANEL MOUNTING DETAILS

SHEET NUMBER
SE4.03

GAVILAN COLLEGE
AV SYSTEMS

505 FAIRVIEW ROAD,
HOLLISTER, CA 95023

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
FACILITES & ELECTRICAL DRAWINGS	
AV001	TITLE SHEET
AV002	STANDARD NOTES & ABBREVIATIONS
AV003	KEY PLAN
AV101	FACILITIES PLAN - SECTION A
AV102	FACILITIES PLAN - SECTION B
AV103	FACILITIES PLAN - SECTION C
AV201	ELECTRICAL PLAN - SECTION A
AV202	ELECTRICAL PLAN - SECTION B
AV203	ELECTRICAL PLAN - SECTION C
AV301	FACILITIES RCP - SECTION A
AV302	FACILITIES RCP - SECTION B
AV303	FACILITES RCP - SECTION C
AV401	ELECTRICAL RCP - SECTION A
AV402	ELECTRICAL RCP - SECTION B
AV403	ELECTRICAL RCP - SECTION C
AV501	DETAILS & ELEVATIONS 1 OF 2
AV502	DETAILS & ELEVATIONS 2 0F 2
FUNCTIONAL DIAGRAMS	
AV701	COMMUNITY ROOM
AV702	GENERAL LECTURE
AV703	L&R CENTER, FLEX CLASS-STUDIO, COMPUTER LABS, SCIENCE LABS
AV704	OPEN COLLAB, CONFERENCE, SBCC, CAFE MENU, DS, SPARE ALS
AV801	RACK ELEVATIONS

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ICS
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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906

ARCH PROJECT NO: 1897.00

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FEBRUARY 4, 2022

SHEET TITLE

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SHEET NUMBER

AV001

ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
AES	AUDIO ENGINEERS SOCIETY
AES67	AES STANDARD FOR AUDIO APPLICATIONS OF NETWORKS
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
AJF	AUDIO JACKFIELD
ALS	ASSISTED LISTENING SYSTEM
AMP	AUDIO AMPLIFIER
ANSI	AMERICAN NATION STANDARDS INSTITUTE
ANT	ANTENNA
APB	AUDIO PATCH BAY
A/R	AS REQUIRED
ARCH'L	ARCHITECTURAL
ARCH'T	ARCHITECT
ARF	ABOVE RAISED FLOOR
ATSC	ADVANCED TELEVISION SYSTEM COMMITTEE
AV	AUDIOVISUAL
AVB	AUDIO BRIDGING
AVC	AUDIOVISUAL CONTRACTOR
AVIXA	AUDIOVISUAL AND INTEGRATED EXPERIENCE ASSOCIATION
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BCT	BONDING CONDUCTOR - TELECOM
BFD	BUILDING DISTRIBUTION FACILITY
BFC	BELOW FINISHED CEILING
BLDG	BUILDING
BR	BLURAY
BTU	BRITISH THERMAL UNITS
BTU/HR	BRITISH THERMAL UNITS PER HOUR
C	CONDUIT
CAM	CAMERA
CAT5E	CATEGORY 5E (UTP CABLE)
CAT6	CATEGORY 6 (UTP CABLE)
CAT6A	AUGMENTED CATEGORY 6 (UTP CABLE)
CATV	COMMUNITY ANTENNA TELEVISION
CBL	CABLE
CC	CLOSED CAPTIONING
CG	GRAPHICS GENERATOR
CJF	CONTROL JACKFIELD
℄	CENTER LINE
CMR	COMMUNICATION MEDIA RISER
CNV	CONVERTER
CPU	CENTRAL PROCESSING UNIT
CR	CONTROL ROOM
CRCT	CIRCUIT
CS	CAPTIVE SCREW
CTL	CONTROL
CTRL	CONTROLLER
CVID	COMPOSITE VIDEO
DA	DISTRIBUTION AMPLIFIER
DAS	DISTRIBUTED ANTENNA SYSTEM
DB	DECIBEL
DG	DEDICATED GROUND
DIS	DISTANCE
DIV	DIVISION
DN	DOWN
DOC	VIDEO DOCUMENT CAMERA
DP	DEEP (DEPTH)
DSP	DIGITAL SIGNAL PROCESSOR
DVD	DIGITAL VIDEO DISC
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
ELV	ELEVATOR
EMT	ELECTRIC METALLIC TUBING
EQUIP	EQUIPMENT
ESW	ETHERNET SWITCH
ETC	ET CETERA
(F)	FUTURE
FAC	FACILITIES
FB	FLOOR BOX
FJF	FIBER JACKFIELD
FL	FLOOR
FO	FIBER OPTIC
FPD	FLAT PANEL DISPLAY
FT	FEED THRU
GC	GENERAL CONTRACTOR
GRS	GALVANIZED RIGID STEEL
GSW	GIGABIT ETHERNET SWITCH
H	HIGH
HDBT/DM	HIGH DEFINITION VIDEO OVER CATEGORY CABLE PROTOCOL
HDCP	HIGH BANDWIDTH DIGITAL CONTENT PROTECTION
HDMI	HIGH DEFINITION MULTIMEDIA INTERFACE
HH	HAND HELD
HT	HEIGHT
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FACILITY
IETF	INTERNET ENGINEERING TASK FORCE
IFP	INTERFACE PANEL
I/F	INTERFACE
IG	ISOLATED GROUND
INC	INCORPORATED
I/O	INPUT/OUTPUT PANEL
IP	INTERNET PROTOCOL
IR	INFRARED
ISO	INTERNATIONAL STANDARDS ASSOCIATION
ITU	INTERNATIONAL TELECOMMUNICATION UNION
JB	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LG	LONG
LT	LEFT
LTD	LIMITED
LV	LOW VOLTAGE
LVC	LOW VOLTAGE CONTROLLER
MA	MAINTENANCE ACCESS
MAX	MAXIMUM
MIN	MINIMUM
MBGRB	MAIN BUILDING GROUNDING REFERENCE BUS
MDF	MAIN DISTRIBUTION FACILITY
MIC	MICROPHONE
MM	MULTIMODE
MON	MONITOR
MPEG	MOVING PICTURE EXPERTS GROUP
MTD	MOUNTED
MTX	MATRIX
(N)	NEW
NC	NORMALLY CLOSED
NCX	NOISE CRITERIA RATING
NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
NET	NETWORK
NJF	NETWORK JACKFIELD
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPF	NETWORK PATCHING FACILITY
NTS	NOT TO SCALE
NTSC	NATIONAL TELEVISION SYSTEM COMMITTEE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFCP	OPTICAL FIBER CONDUCTIVE PLENUM
OFCR	OPTICAL FIBER CONDUCTIVE RISER
OFE	OWNER FURNISHED EQUIPMENT
OFOI	OWNER FURNISHED, OWNER INSTALLED
OFNP	OPTICAL FIBER NON-CONDUCTING PLENUM
OFNR	OPTICAL FIBER NON-CONDUTING RISER
OS	OCCUPANCY SENSOR
PB	PULLBOX
PBC	PROVIDED BY OTHERS
PHX	PHOENIX CONNECTOR
PL	PLENUM
PNL	PANEL
POTS	PLAIN OLD TELEPHONE SERVICE
PR	PAIR
PRJ	PROJECTOR
PS	POWER SUPPLY
PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
PTZ	PAN/TILT/ZOOM
PVC	POLYVINYL CHLORIDE
PWR	POWER
QTY	QUANTITY
R&S	RING AND STRING
RCP	REFLECTED CEILING PLAN
REQ	REQUIRED
RF	RADIO FREQUENCY
RGBHV	RED, GREEN, BLUE, HORIZONTAL, VERTICAL SYNC
RT	RIGHT
RT60	TIME REQUIRED FOR REFLECTIONS OF A DIRECT SOUND TO DECAY 60 DB SPL
RX	RECEIVER
SAT	SATELLITE
SEC	SECURITY EQUIPMENT CABINET
SIM	SIMILAR
SM	SINGLEMODE
SPL	SOUND PRESSURE LEVEL
SPK	LOUDSPEAKER
SRP	SURROUND PROCESSOR
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STR	STRANDS (OF FIBER OPTIC CABLE)
SVHS	SUPER VHS
SW	SWITCH (NETWORK)
SWR	SWITCHER (AUDIO/VIDEO)
TB	TERMINATION BLOCK
TBD	TO BE DETERMINED
TC	AUDIO TELECONFERENCE
TEMP	TEMPORARY
TP	TOUCH PANEL
TR	TELECOMMUNICATIONS ROOM
TS	TERMINATION STRIP
TVT	TV TUNER
TX	TRANSMITTER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VC	VOLUME CONTROL
VCA	VOLTAGE CONTROLLED AMPLIFIER
VHS	VIDEO HOME SYSTEM
VJF	VIDEO JACKFIELD
VO	VOICE OVER
VOIP	VOICE OVER INTERNET PROTOCOL
VTC	VIDEO TELECONFERENCE
WAN	WIDE AREA NETWORK
WAP	WIRELESS ACCESS POINT
WB	WALL BOX
WIFI	WIRELESS FIDELITY COMPLIANT WIRELESS NETWORK
WP	WALL PLATE OR PANEL
WMRX	WIRELESS MIC RECEIVER
WTP	WIRELESS TOUCH PANEL
XFMR	TRANSFORMER

ELECTRICAL SYMBOLS LEGEND

WALL MOUNTED AV J-BOX, NEMA BOX, OR MUD RING.
XX = AV, N, OR R
AV = J-BOX, N = NEMA BOX, AND R = MUD RING.
#G = GANG SIZE.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED LOW VOLTAGE WIRING BOX.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

FLOOR BOX OR FLOOR MOUNTED CABLE POKE THRU.
SEE FACILITIES PLAN FOR MANUFACTURER AND MODEL INFORMATION.
#G = HOW MANY GANGS TO BE HELD FOR DEDICATED AV USE ONLY.

CEILING MOUNTED AV J-BOX, NEMA BOX, OR MUD RING.
XX = AV, N, OR R
AV = J-BOX, N = NEMA AND R = MUD RING.
#G = GANG SIZE.

ABOVE CEILING MOUNTED AV J-BOX, NEMA BOX, OR MUD RING.
XX = AV, N, OR R
AV = J-BOX, N = NEMA BOX, AND R = MUD RING.
#G = GANG SIZE

WALL MOUNTED DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED , DEDICATED, DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED, DEDICATED, QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED 3 PHASE OR SPECIAL USE POWER OUTLET.
= INDICATES AMP LOAD.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED SWITCH OR CLOCK OUTLET, DEDICATED FOR AV USE ONLY.
#G = GANG SIZE.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

FLOOR MOUNTED DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

FLOOR MOUNTED, DEDICATED, DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

FLOOR MOUNTED QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

FLOOR MOUNTED, DEDICATED, QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

CEILING MOUNTED DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

CEILING MOUNTED, DEDICATED, DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

CEILING MOUNTED QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

CEILING MOUNTED, DEDICATED, QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

ABOVE CEILING MOUNTED DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

ABOVE CEILING MOUNTED, DEDICATED, DUPLEX POWER OUTLET.
= INDICATES AMP LOAD.

ABOVE CEILING MOUNTED QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

ABOVE CEILING MOUNTED, DEDICATED, QUADPLEX POWER OUTLET.
= INDICATES AMP LOAD.

WALL MOUNTED DATA CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED DATA/VOICE CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.
#V = INDICATED QUANTITY OF VOICE DROPS REQUIRED.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED VOICE CONNECTION PLATE.
#V = INDICATES QUANTITY OF VOICE DROPS REQUIRED.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

WALL MOUNTED RF./MISCELLANEOUS CONNECTION PLATE.
#RF = INDICATES QUANTITY OF RF DROPS REQUIRED.
+XX" = HEIGHT ABOVE FINISHED FLOOR, U.O.N.

FLOOR MOUNTED DATA CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.

FLOOR MOUNTED DATA/VOICE CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.
#V = INDICATED QUANTITY OF VOICE DROPS REQUIRED.

FLOOR MOUNTED VOICE CONNECTION PLATE.
#V = INDICATES QUANTITY OF VOICE DROPS REQUIRED.

FLOOR MOUNTED RF./MISCELLANEOUS CONNECTION PLATE.
#RF = INDICATES QUANTITY OF DATA DROPS REQUIRED.

CEILING MOUNTED DATA CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.

CEILING MOUNTED DATA/VOICE CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.
#V = INDICATES QUANTITY OF VOICE DROPS REQUIRED.

CEILING MOUNTED VOICE CONNECTION PLATE.
#V = INDICATES QUANTITY OF VOICE DROPS REQUIRED.

CEILING MOUNTED RF./MISCELLANEOUS CONNECTION PLATE.
#RF = INDICATES QUANTITY OF RF DROPS REQUIRED.

ABOVE CEILING MOUNTED DATA CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.

ABOVE CEILING MOUNTED DATA/VOICE OUTLET CONNECTION PLATE.
#D = INDICATES QUANTITY OF DATA DROPS REQUIRED.
#V = INDICATED QUANTITY OF VOICE DROPS REQUIRED.

ABOVE CEILING MOUNTED VOICE CONNECTION PLATE.
#V = INDICATES QUANTITY OF VOICE DROPS REQUIRED.

ABOVE CEILING MOUNTED RF./MISCELLANEOUS CONNECTION PLATE.
#RF = INDICATES QUANTITY OF RF DROPS REQUIRED.

CEILING MOUNTED ANTENNA.

CEILING MOUNTED MICROPHONE.

CEILING MOUNTED LOUDSPEAKER.

IN-WALL MULTI-SERVICE BACKBOX, PAC BOX, OR SIMILAR.
AV, POWER, AND VOICE/DATA/RF CONNECTIONS.
USE ELECTRICAL LEGEND TO REFERENCE LOADOUT.

DESIGNATES CONDUIT RUN OR STUB-UP.

DESIGNATES MOUNTING LOCATION.

ELECTRICAL SYMBOLS KEY

TAIL INDICATES WALL MOUNTED, U.O.N.

SOLID CIRCLE INDICATES CEILING MOUNTED, U.O.N.

DASHED CIRCLE INDICATES ABOVE CEILING MOUNTED, U.O.N.

SQUARE INDICATES FLOOR MOUNTED, U.O.N.

AV GENERAL NOTES

1. IN THE CASE THAT A STRUCTURAL ENGINEER DETERMINES SEISMIC BRACING PROJECT STANDARDS, THE A.V.C. WILL ADHERE TO THE MOST STRINGENT STANDARD PROVIDED BY THE STRUCTURAL ENGINEER.
2. A.V.C WILL INSTALL SEISMIC BRACING OF AV EQUIPMENT IN ACCORDANCE WITH NATIONAL, LOCAL, OR OTHER APPLICABLE CODES.
3. WHEN REQUIRED, A.V.C. SHALL PROVIDE THERMAL MANAGEMENT FOR AV SYSTEMS. THE G.C. IS TO PROVIDE LARGE SCALE THERMAL MANAGEMENT SYSTEMS WHEN REQUIRED BY THE A.V.C. THE A.V.C. WILL PROVIDE POWER AND HEAT LOAD SCHEDULES AS REQUIRED.
4. ALL CONSTRUCTION WORK SHOWN ON THESE DRAWINGS SHALL BE PERFORMED BY THE G.C., U.O.N.
5. VERIFY ALL SIZES, DIMENSIONS, AND LOCATIONS WITH THE ARCHITECTURAL DRAWINGS. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE IN CASE OF DISCREPANCY OR CONFLICT BETWEEN DRAWING SETS.
6. AV EQUIPMENT LOCATIONS ARE APPROXIMATE. REFER TO THE APPROVED ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
7. WHERE EXACT DIMENSIONS ARE NOT INDICATED THE DRAWING MAY BE SCALED FOR DETERMINING APPROXIMATE LOCATIONS OF EQUIPMENT. WHERE DRAWING SCALE IS PROVIDED.
8. AV DISPLAYS AND PROJECTION SCREENS WILL BE CENTERED TO THE CENTER LINE OF THE ROOM BY DEFAULT AND WILL BE INSTALLED AS SUCH UNLESS OTHERWISE REQUESTED IN WRITING BY ARCHITECT, G.C., OR E.C.

AV ELECTRICAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL, LOCAL, AND OTHER APPLICABLE CODES.
2. ANY ELECTRICAL INFRASTRUCTURE REQUESTED BY A.V.C. WHICH IS TO BE LOCATED IN THE PLENUM WILL BE PLENUM RATED IN ACCORDANCE WITH LOCAL JURISDICTIONAL STANDARDS AND LAWS. ANY CABLE WIRING REQUESTED IN THE PLENUM SPACE THAT IS NOT PLENUM RATED MUST BE REQUESTED BY G.C., CLIENT ARCHITECT, ETC. IN WRITING PRIOR TO PROJECT BID PROCESS, U.O.N.
3. ALL ELECTRICAL PLAN INFORMATION ON A.V.C. PLAN SET SHALL BE FOR DESIGN REFERENCE AND IS A SUGGESTION BY THE A.V.C. ONLY. HEIGHTS, LOCATIONS, SIZES, AND DIMENSIONS FOR ALL AV INFRASTRUCTURE IN/ON FLOOR, WALL, CEILING, ABOVE CEILING, OR IN/ON ANY OTHER LOCATION WITHIN THE PROJECT, IS TO BE CONFIRMED BY ARCHITECT, GENERAL CONTRACTOR, OR ELECTRICAL ENGINEER. THEIR PLANS AND DESIGN WILL TAKE PRECEDENCE.
4. PROJECT SWITCH HEIGHT SHALL BE DETERMINED BY THE ARCHITECTURAL DRAWINGS. IF THIS IS NOT DEFINED IN THE ARCHITECTS DRAWINGS, +48" AFF IS TO BE ASSUMED AS PROJECT SWITCH HEIGHT, U.O.N.
5. PROJECT OUTLET HEIGHT SHALL BE DETERMINED BY THE ARCHITECTURAL DRAWINGS. IF THIS IS NOT DEFINED IN ARCHITECTURAL DRAWINGS, +18" AFF IS TO BE ASSUMED AS PROJECT OUTLET HEIGHT, U.O.N.
6. ALL AV J-BOXES, AC POWER RECEPTACLES, AND CONDUITS SHALL BE MARKED FOR AV USE ONLY.
7. ALL AV EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY THE A.V.C., U.O.N.
8. ALL CONSTRUCTION WORK SHALL BE PROVIDED BY THE G.C., U.O.N.
9. WHERE AC POWER AND AV JUNCTION BOXES ARE TO BE PLACED ADJACENTLY, E.C. TO PROVIDE SUFFICIENT SEPARATION FOR COVER PLATES.
10. ALL AV SYSTEM AC POWER CIRCUITS SHALL BE 120V/20A, U.O.N.
11. CONDUIT RUNS SHOWN ON THESE DRAWINGS ARE INTENDED TO ONLY CONVEY CONNECTIVITY BETWEEN DEVICES OR BOX LOCATIONS. ICS TAKES NO RESPONSIBILITY OR LIABILITY FOR EXACT CONDUIT PATHWAY ROUTING.
12. THERE SHALL BE A MINIMUM OF ONE PULL BOX FOR EVERY 100' OF CONDUIT RUN, WITH AN EXTRA PULL BOX FOR EVERY 90 DEGREE BEND IN THE CONDUIT RUN. PULL BOXES WILL NOT BE LOCATED ABOVE HARD-LID INACCESSIBLE CEILING SPACES.
13. ALL EMPTY CONDUIT OR CONDUIT DESIGNATED FOR FUTURE USE SHOWN ON THESE DRAWINGS SHALL BE DEBURRED, CLEANED, CAPPED, TAGGED, AND FURNISHED WILL PULLSTRINGS.
14. AC POWER RECEPTACLES SHOWN ON THESE DRAWINGS ARE DEDICATED FOR USE WITH SPECIFIC AV, DATA, AND COMMUNICATIONS EQUIPMENT. ADDITIONAL CONVENIENCE AC POWER RECEPTACLES SHALL BE PROVIDED AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS REQUIRED BY CODE.
15. AV SYSTEM CONDUIT MUST BE SEPARATED FROM PARALLEL AC POWER BY A MINIMUM OF 6", AND PERPENDICULAR AC POWER CONDUIT BY A MINIMUM OF 6".
16. ALL HARD-LID, NON-ACCESSIBLE, CEILING AREAS SHALL HAVE CONTINUOUS CONDUIT.
17. CABLE TRAYS FOR AUDIOVISUAL SYSTEM WIRING SHALL BE SEPARATED BY A MINIMUM OF 2' FROM PARALLEL AC POWER CIRCUITS, AND 2' FROM PERPENDICULAR AC POWER CIRCUIT CROSSINGS.
18. ALL AV SYSTEM CONDUIT IS TO BE EITHER EMT OR RIGID CONDUIT U.O.N.
19. ALL CONDUIT REQUESTED FOR AV PURPOSES WILL BE 3/4" MINIMUM, U.O.N.
20. PROVIDE AT LEAST 12 INCH CLEARANCE ABOVE CABLE TRAY FOR AV SYSTEM CABLE ACCESS.
21. EC TO PROVIDE CLEAN GROUNDING AT RACK LOCATIONS, SEPARATE FROM POWER GROUNDING.

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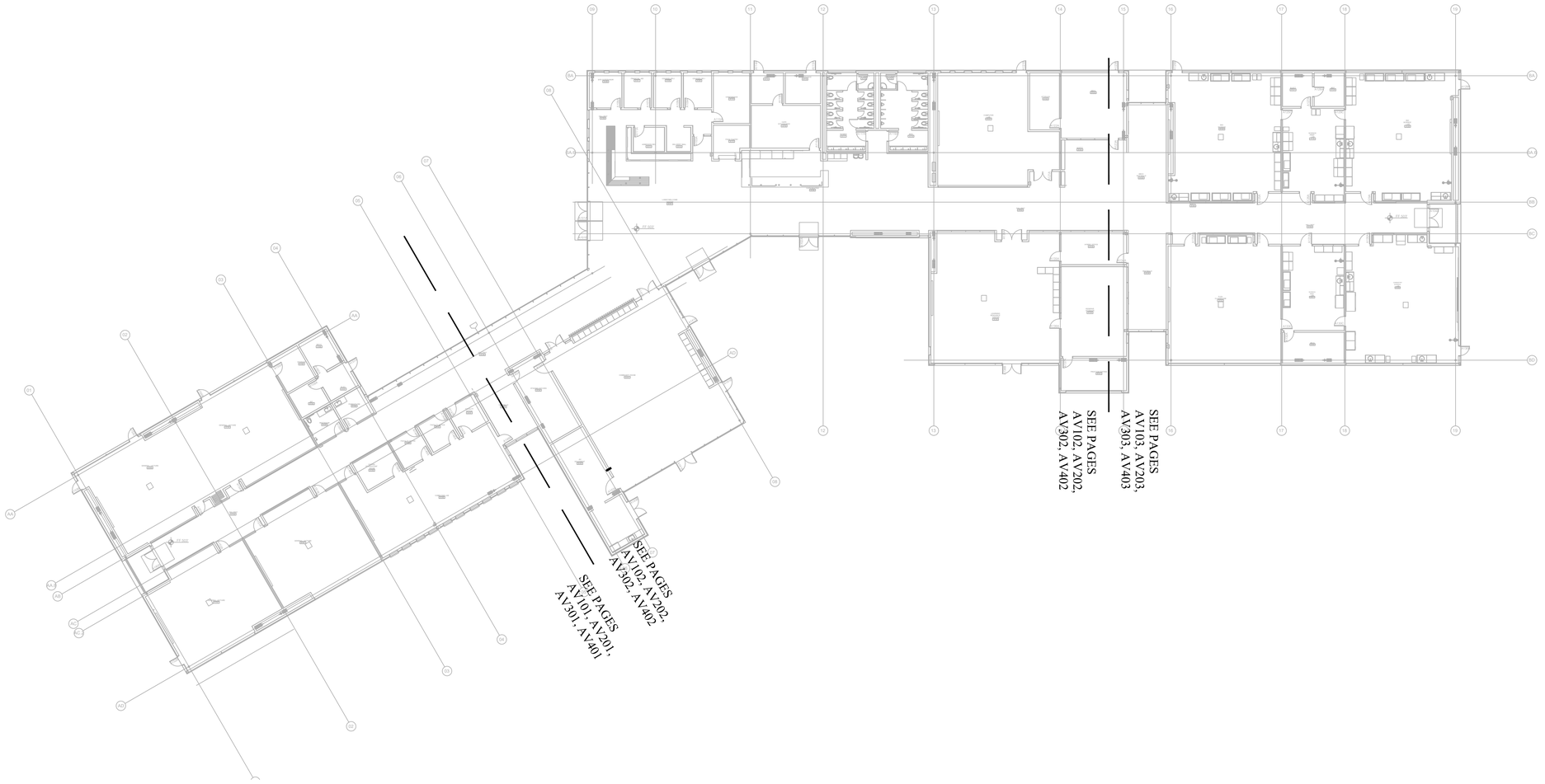
STANDARD NOTES & ABBREVIATIONS

SHEET NUMBER

AV002

KEY PLAN LEGEND

AREAS IN SCOPE.



1 KEY PLAN
SCALE: NTS

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KEY PLAN

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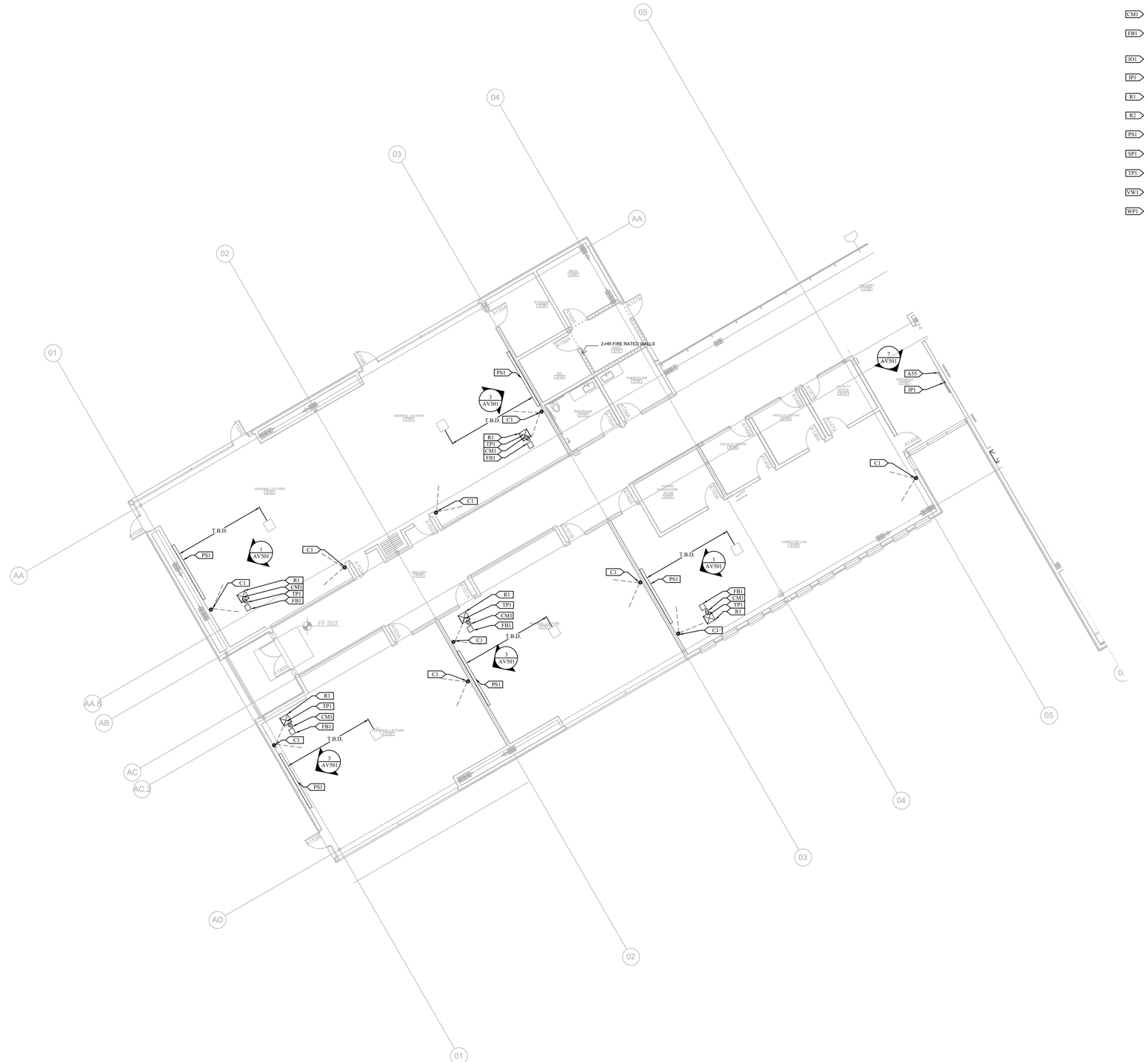
AV003



1 FACILITIES PLAN - FACILITIES PLAN - SECTION A
SCALE: 1/8" = 1'-0"

FACILITIES NOTES:

- A5S — WALL MOUNTED 55" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
- A55A — WALL MOUNTED 55" DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT).
- A6S — WALL MOUNTED 65" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
- A8S — WALL MOUNTED 85" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
- AL1 — WALL MOUNTED ASSISTED LISTENING ANTENNA. MFR./MODEL: T.B.D.(ANTENNA).
- BP1 — WALL MOUNTED BUTTON PANEL. MFR./MODEL: T.B.D. (BUTTON PANEL)
- C1 — WALL MOUNTED PTZ CAMERA. MFR./MODEL: VADDIO 999-9950-200W (CAMERA), VADDIO 999-2225-021 (RECESSED MOUNT).
- CM1 — TABLE MOUNTED 22" CONFIDENCE MONITOR. MFR./MODEL: T.B.D. (MONITOR), T.B.D. (MOUNT).
- FB1 — MULTI-TRADE IN FLOOR BOX. SEE ELECTRICAL PLANS FOR REQUESTED LOADOUT FOR AV USE ONLY. MFR./MODEL: T.B.D. (FLOORBOX)
- IO1 — WALL MOUNTED AV INPUT/OUTPUT PLATE. MFR./MODEL: T.B.D.(PLATE).
- IP1 — WALL MOUNTED AV HDMI INPUT PLATE. MFR./MODEL: EXTRON WPD 100 [70-726-63] (PLATE).
- R1 — DESK MOUNTED AV RACK. MFR./MODEL: T.B.D. (RACK)
- R2 — FLOOR MOUNTED AV RACK. MFR./MODEL: T.B.D.(RACK).
- PS1 — WALL MOUNTED 123" DIAGONAL 16:10 PROJECTION SCREEN. MFR./MODEL: T.B.D. (SCREEN)
- SP1 — WALL MOUNTED LOUDSPEAKER. MFR./MODEL: T.B.D.
- TP1 — 7" TABLE STANDING ROOM TOUCH PANEL. MFR./MODEL: EXTRON TLP PRO 725T [60-1562-02] (CONTROL PANEL).
- VW1 — WALL MOUNTED 135" VIDEO WALL. MFR./MODEL: T.B.D. (VIDEO WALL), T.B.D. (MOUNT).
- WP1 — WALL MOUNTED WIRELESS MICROPHONE WAP. MFR./MODEL: SHURE MXWAPT8 (WAP).

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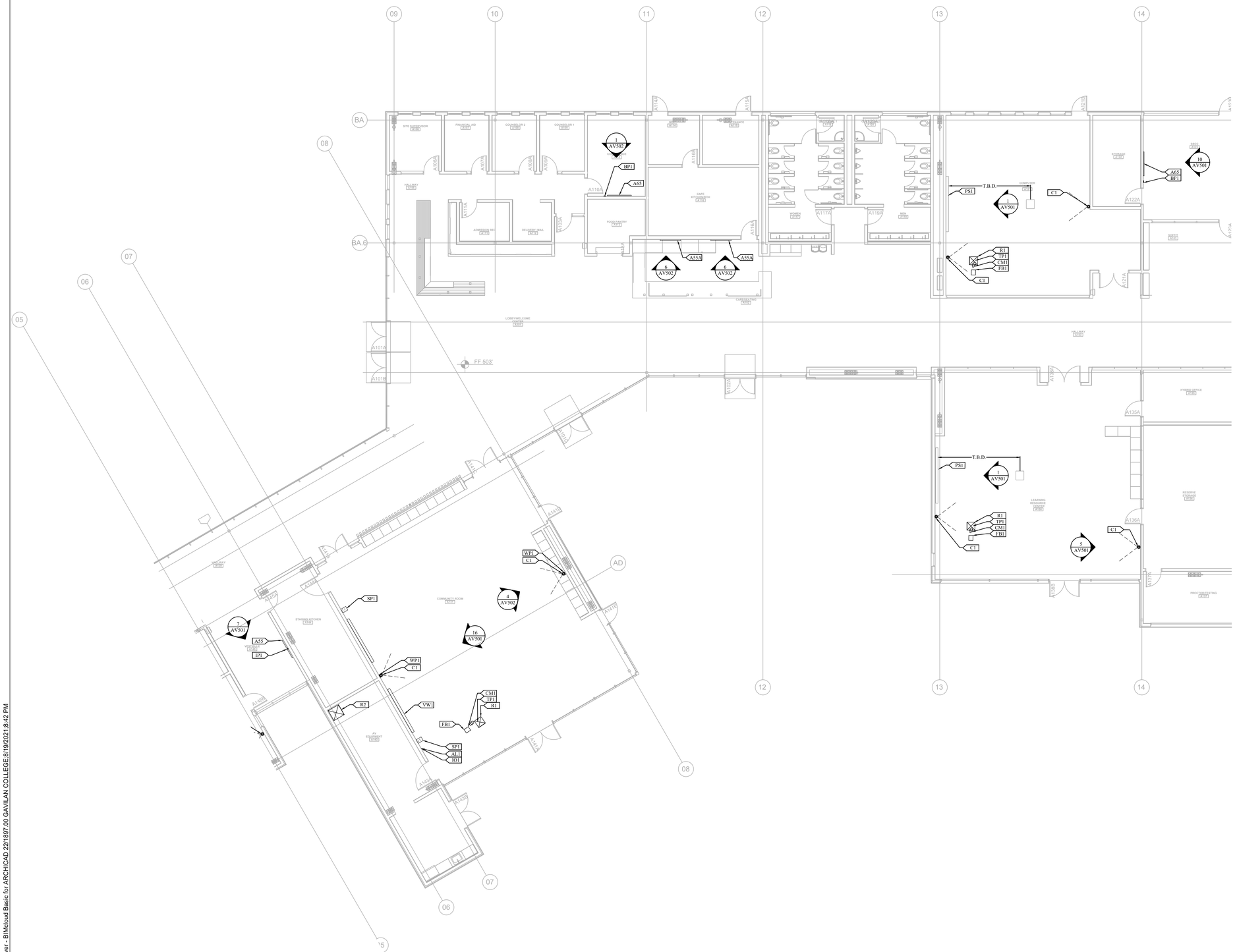
FACILITIES PLAN - SECTION A

SHEET NUMBER

AV101



1 FACILITIES PLAN - FACILITIES PLAN - SECTION B
SCALE: 1/8" = 1'-0"

FACILITIES NOTES:

A55	WALL MOUNTED 55" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
A55A	WALL MOUNTED 55" DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT).
A65	WALL MOUNTED 65" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
A85	WALL MOUNTED 85" DISPLAY WITH WALL BOX BEHIND DISPLAY. MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).
AL1	WALL MOUNTED ASSISTED LISTENING ANTENNA. MFR./MODEL: T.B.D.(ANTENNA).
BP1	WALL MOUNTED BUTTON PANEL. MFR./MODEL: T.B.D. (BUTTON PANEL)
C1	WALL MOUNTED PTZ CAMERA. MFR./MODEL: VADDIO 999-9950-200W (CAMERA), VADDIO 999-2225-021 (RECESSED MOUNT).
CM1	TABLE MOUNTED 22" CONFIDENCE MONITOR. MFR./MODEL: T.B.D. (MONITOR), T.B.D. (MOUNT).
FB1	MULTI-TRADE IN FLOOR BOX. SEE ELECTRICAL PLANS FOR REQUESTED LOADOUT FOR AV USE ONLY. MFR./MODEL: T.B.D. (FLOORBOX)
IO1	WALL MOUNTED AV INPUT/OUTPUT PLATE. MFR./MODEL: T.B.D.(PLATE).
IP1	WALL MOUNTED AV HDMI INPUT PLATE. MFR./MODEL: EXTRON WPD 100 [70-726-63] (PLATE).
R1	DESK MOUNTED AV RACK. MFR./MODEL: T.B.D. (RACK)
R2	FLOOR MOUNTED AV RACK. MFR./MODEL: T.B.D.(RACK).
PS1	WALL MOUNTED 123" DIAGONAL 16:10 PROJECTION SCREEN. MFR./MODEL: T.B.D. (SCREEN)
SP1	WALL MOUNTED LOUDSPEAKER. MFR./MODEL: T.B.D.
TP1	7" TABLE STANDING ROOM TOUCH PANEL. MFR./MODEL: EXTRON TLP PRO 725T [60-1562-02] (CONTROL PANEL).
VW1	WALL MOUNTED 135" VIDEO WALL. MFR./MODEL: T.B.D. (VIDEO WALL), T.B.D. (MOUNT).
WP1	WALL MOUNTED WIRELESS MICROPHONE WAP. MFR./MODEL: SHURE MXWAPT8 (WAP).

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COMMUNITY
COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
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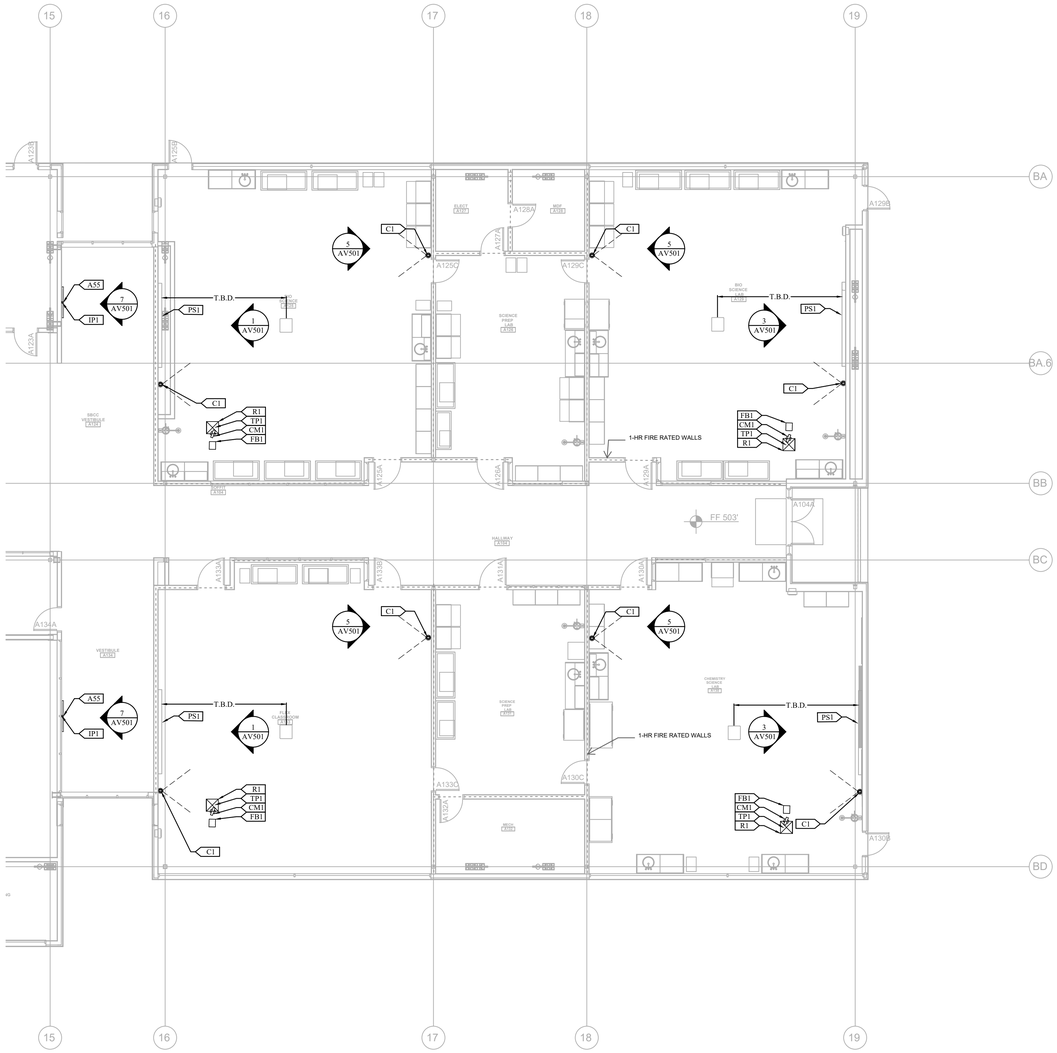
FEBRUARY 4, 2022

SHEET TITLE

FACILITIES PLAN - SECTION B

SHEET NUMBER

AV102



1 FACILITIES PLAN - FACILITIES PLAN - SECTION C
SCALE: 1/8" = 1'-0"

FACILITIES NOTES:

A55 WALL MOUNTED 55" DISPLAY WITH WALL BOX BEHIND DISPLAY.
MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).

A55A WALL MOUNTED 55" DISPLAY.
MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT).

A65 WALL MOUNTED 65" DISPLAY WITH WALL BOX BEHIND DISPLAY.
MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).

A85 WALL MOUNTED 85" DISPLAY WITH WALL BOX BEHIND DISPLAY.
MFR./MODEL: T.B.D. (DISPLAY), SLIM PROFILE (MOUNT), CHIEF PAC526 (WALL BOX).

AL1 WALL MOUNTED ASSISTED LISTENING ANTENNA.
MFR./MODEL: T.B.D.(ANTENNA).

BP1 WALL MOUNTED BUTTON PANEL.
MFR./MODEL: T.B.D. (BUTTON PANEL)

C1 WALL MOUNTED PTZ CAMERA.
MFR./MODEL: VADDIO 999-9950-200W (CAMERA), VADDIO 999-2225-021 (RECESSED MOUNT).

CM1 TABLE MOUNTED 22" CONFIDENCE MONITOR.
MFR./MODEL: T.B.D. (MONITOR), T.B.D. (MOUNT).

FB1 MULTI-TRADE IN FLOOR BOX. SEE ELECTRICAL PLANS FOR REQUESTED LOADOUT FOR AV USE ONLY.
MFR./MODEL: T.B.D. (FLOORBOX)

IO1 WALL MOUNTED AV INPUT/OUTPUT PLATE.
MFR./MODEL: T.B.D.(PLATE).

IP1 WALL MOUNTED AV HDMI INPUT PLATE.
MFR./MODEL: EXTRON WPD 100 [70-726-63] (PLATE).

R1 DESK MOUNTED AV RACK.
MFR./MODEL: T.B.D. (RACK)

R2 FLOOR MOUNTED AV RACK.
MFR./MODEL: T.B.D.(RACK).

PS1 WALL MOUNTED 123" DIAGONAL 16:10 PROJECTION SCREEN.
MFR./MODEL: T.B.D. (SCREEN)

SP1 WALL MOUNTED LOUDSPEAKER.
MFR./MODEL: T.B.D.

TP1 7" TABLE STANDING ROOM TOUCH PANEL.
MFR./MODEL: EXTRON TLP PRO 725T [60-1562-02] (CONTROL PANEL).

VW1 WALL MOUNTED 135" VIDEO WALL.
MFR./MODEL: T.B.D. (VIDEO WALL), T.B.D. (MOUNT).

WP1 WALL MOUNTED WIRELESS MICROPHONE WAP.
MFR./MODEL: SHURE MXWAPT8 (WAP).

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ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
FACILITIES PLAN - SECTION C

SHEET NUMBER
AV103

ELECTRICAL NOTES:

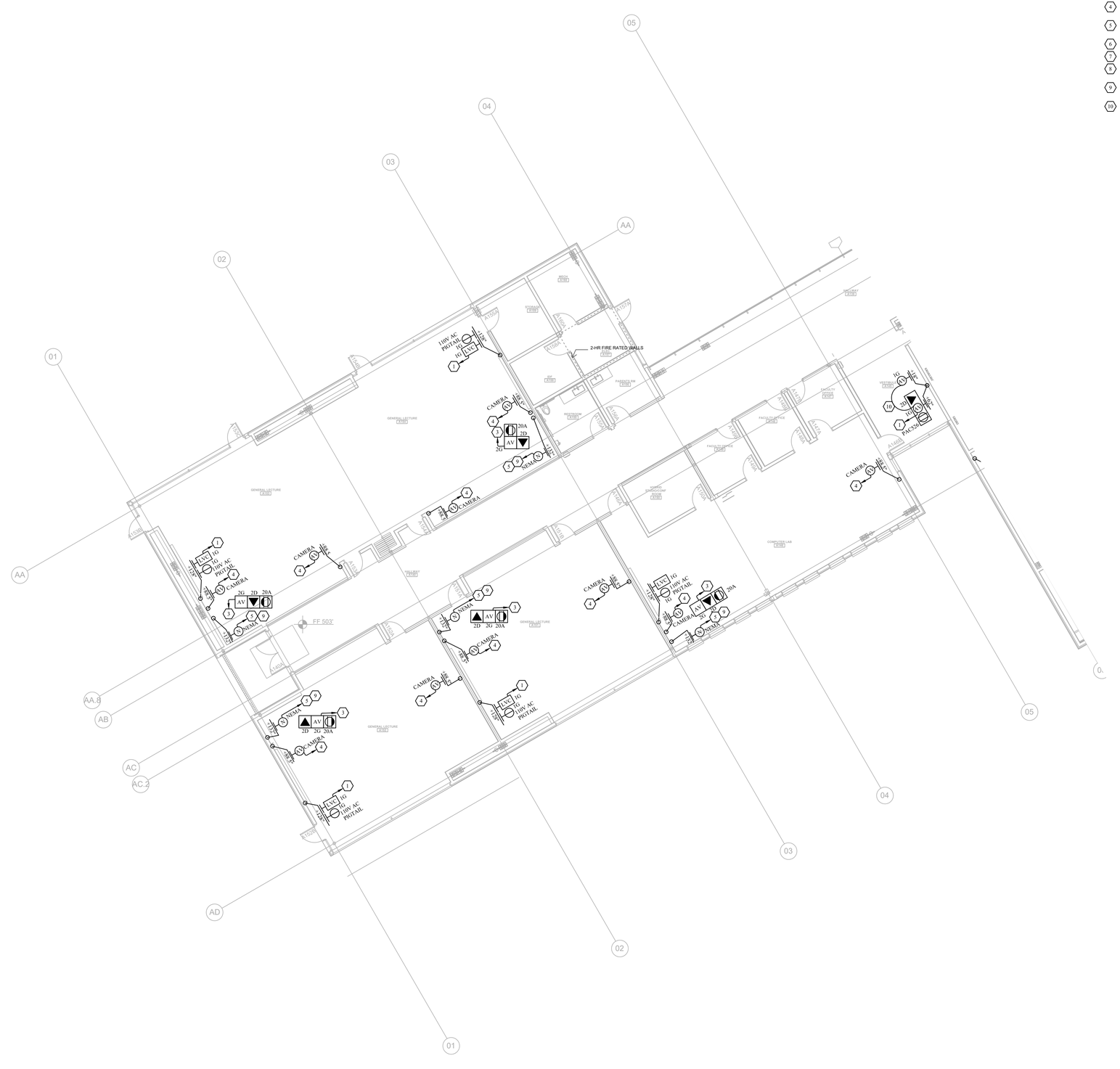
NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

NOTE 3: ALL CONDUITS AND INFRASTRUCTURE REQUESTED ARE FOR AV USE ONLY AND WILL NOT BE SHARED WITH ANY OTHER CONTRACTOR.

NOTE 4: DATA DROPS AND ANY DATA CONDUITS REFER TO DATA CONTRACTORS PLANS. AV REQUESTS DATA DROPS AS SHOWN AND ARE FOR AV USE ONLY.

1. PROVIDE 3/4" CONDUIT TO AV COLLECTION BOX VIA ACCESSIBLE CEILING SPACE.
2. PROVIDE 1-1/4" CONDUIT TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
3. PROVIDE 2 X 1-1/4" CONDUITS VIA FLOORCORE TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
4. PROVIDE 1" CONDUIT FROM BOX TO AV COLLECTION BOX VIA ACCESSIBLE CEILING SPACE.
5. PROVIDE 2 X 1-1/4" CONDUITS FROM NEMA COLLECTION BOX TO FLOORBOX LOCATION VIA FLOORCORE.
6. PROVIDE 3 X 1.25" CONDUITS TO OVERHEAD CABLE TRAY.
7. PROVIDE 2 X 1.25" CONDUIT BETWEEN BOXES.
8. PROVIDE 2 X 1.25" CONDUITS FROM AV COLELCTION TO BOX TO AV RACK LOCATION VIA CONSUIT SLEEVES AND CABLE TRAY.
9. PROVIDE 2 X 1-1/4" CONDUIT STUBS AT AV COLLETION BOX FOR AV CABLE ROUTING.
10. PROVIDE 1-1/4" CONDUIT BETWEEN BOXES.



1 ELECTRICAL PLAN - ELECTRICAL PLAN - SECTION A
SCALE: 1/8" = 1'-0"

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ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
ELECTRICAL PLAN - SECTION A

SHEET NUMBER
AV201

ELECTRICAL NOTES:

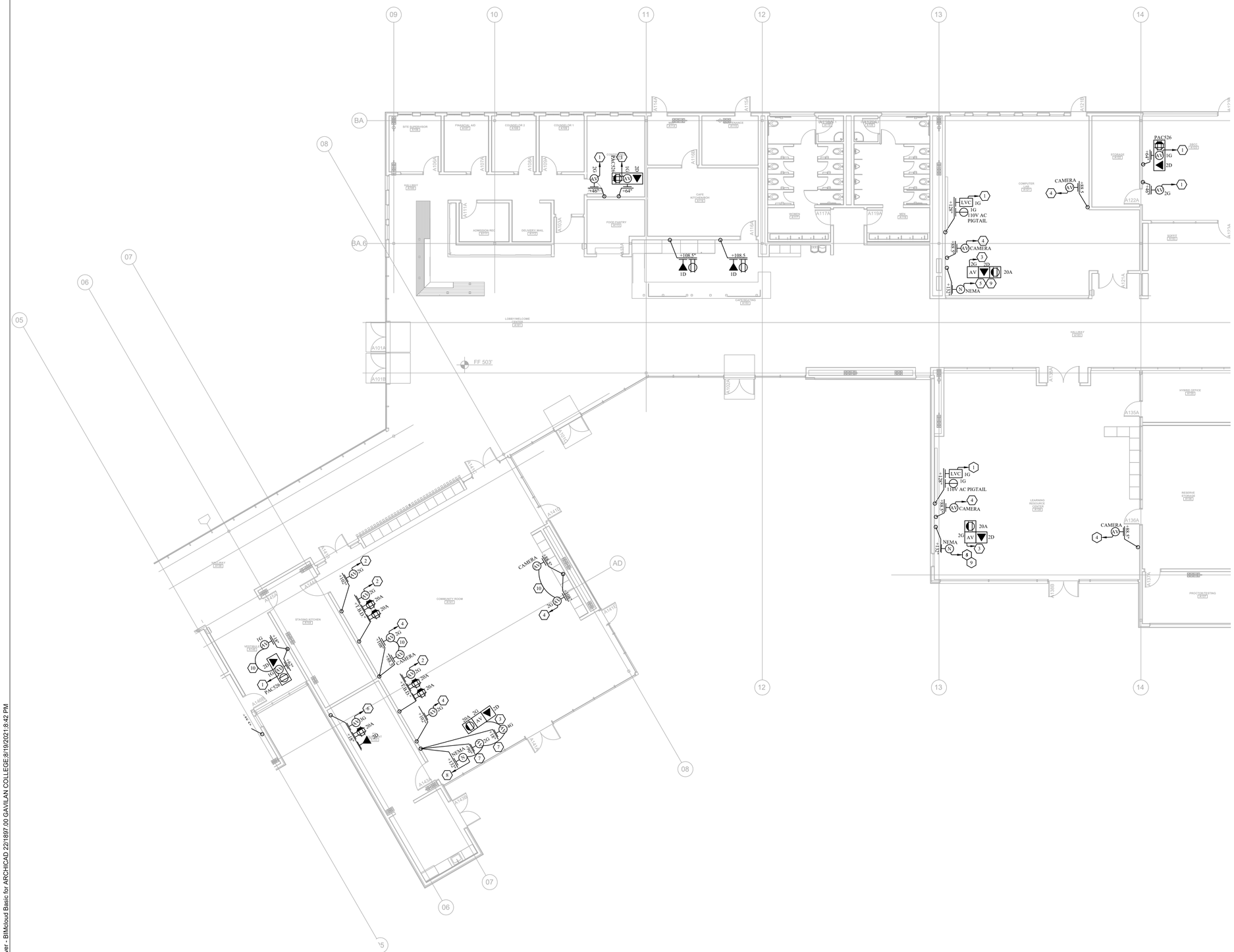
NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

NOTE 3: ALL CONDUITS AND INFRASTRUCTURE REQUESTED ARE FOR AV USE ONLY AND WILL NOT BE SHARED WITH ANY OTHER CONTRACTOR.

NOTE 4: DATA DROPS AND ANY DATA CONDUITS REFER TO DATA CONTRACTORS PLANS. AV REQUESTS DATA DROPS AS SHOWN AND ARE FOR AV USE ONLY.

1. PROVIDE 3/4" CONDUIT TO AV COLLECTION BOX VIA ACCESSIBLE CEILING SPACE.
2. PROVIDE 1-1/4" CONDUIT TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
3. PROVIDE 2 X 1-1/4" CONDUITS VIA FLOORCORE TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
4. PROVIDE 1" CONDUIT FROM BOX TO AV COLLECTION BOX VIA ACCESSIBLE CEILING SPACE.
5. PROVIDE 2 X 1-1/4" CONDUITS FROM NEMA COLLECTION BOX TO FLOORBOX LOCATION VIA FLOORCORE.
6. PROVIDE 3 X 1.25" CONDUITS TO OVERHEAD CABLE TRAY.
7. PROVIDE 2 X 1.25" CONDUIT BETWEEN BOXES.
8. PROVIDE 2 X 1.25" CONDUITS FROM AV COLELCTION TO BOX TO AV RACK LOCATION VIA CONSUIT SLEEVES AND CABLE TRAY.
9. PROVIDE 2 X 1-1/4" CONDUIT STUBS AT AV COLLETION BOX FOR AV CABLE ROUTING.
10. PROVIDE 1-1/4" CONDUIT BETWEEN BOXES.



1 ELECTRICAL PLAN - ELECTRICAL PLAN - SECTION B
SCALE: 1/8" = 1'-0"

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PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
ELECTRICAL PLAN - SECTION B

SHEET NUMBER
AV202

ELECTRICAL NOTES:

NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

NOTE 3: ALL CONDUITS AND INFRASTRUCTURE REQUESTED ARE FOR AV USE ONLY AND WILL NOT BE SHARED WITH ANY OTHER CONTRACTOR.

NOTE 4: DATA DROPS AND ANY DATA CONDUITS REFER TO DATA CONTRACTORS PLANS. AV REQUESTS DATA DROPS AS SHOWN AND ARE FOR AV USE ONLY.

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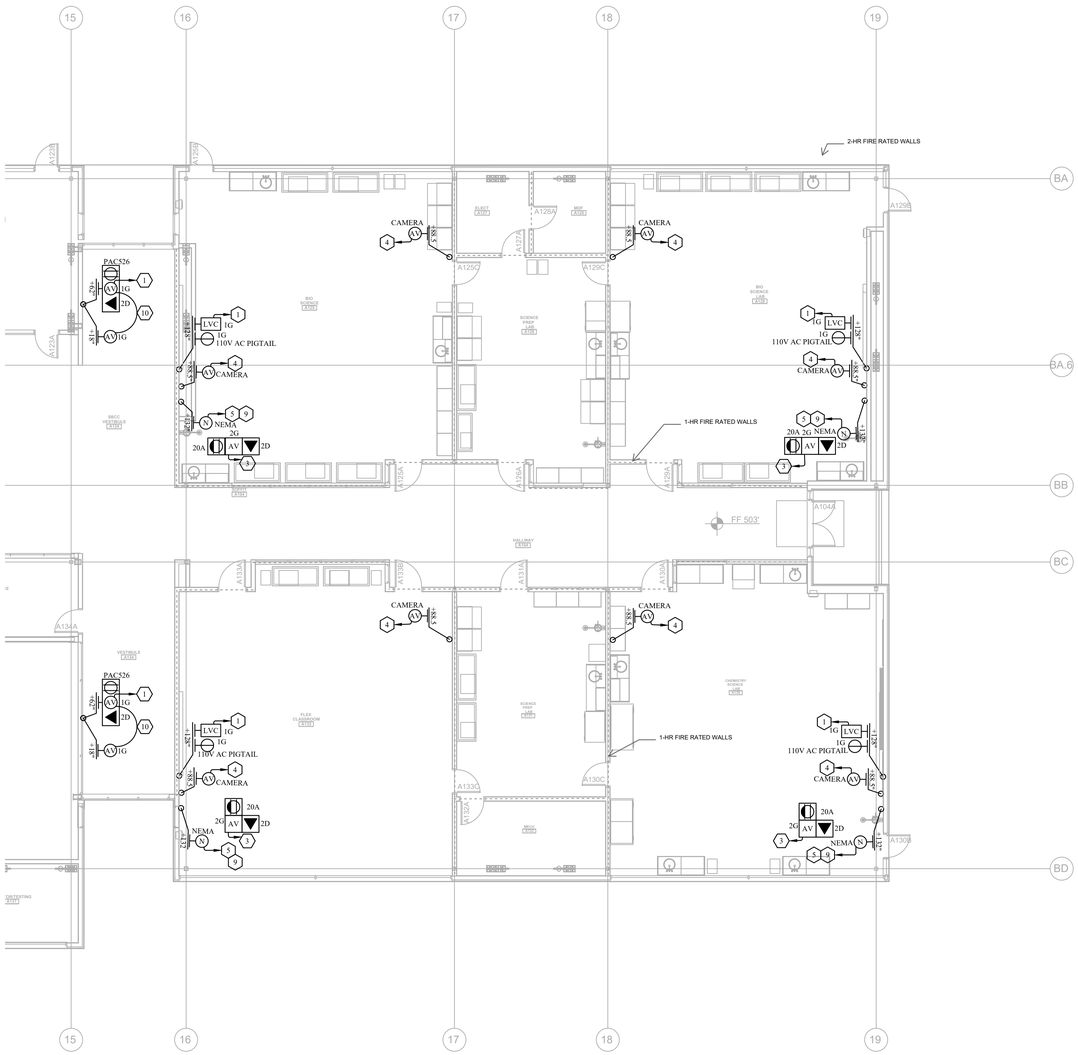
2. PROVIDE 1-1/4" CONDUIT TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
3. PROVIDE 2 X 1-1/4" CONDUITS VIA FLOORCORE TO AV COLLECTION BOX IN ACCESSIBLE CEILING SPACE.
4. PROVIDE 1" CONDUIT FROM BOX TO AV COLLECTION BOX VIA ACCESSIBLE CEILING SPACE.
5. PROVIDE 2 X 1-1/4" CONDUITS FROM NEMA COLLECTION BOX TO FLOORBOX LOCATION VIA FLOORCORE.
6. PROVIDE 3 X 1.25" CONDUITS TO OVERHEAD CABLE TRAY.
7. PROVIDE 2 X 1.25" CONDUIT BETWEEN BOXES.
8. PROVIDE 2 X 1.25" CONDUITS FROM AV COLELCTION TO BOX TO AV RACK LOCATION VIA CONSUIT SLEEVES AND CABLE TRAY.
9. PROVIDE 2 X 1-1/4" CONDUIT STUBS AT AV COLLETION BOX FOR AV CABLE ROUTING.
10. PROVIDE 1-1/4" CONDUIT BETWEEN BOXES.



1 ELECTRICAL PLAN - ELECTRICAL PLAN - SECTION C
SCALE: 1/8" = 1'-0"

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DSA APP NO. 01-119906
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PTN: N/A FILE NO: 43-C4

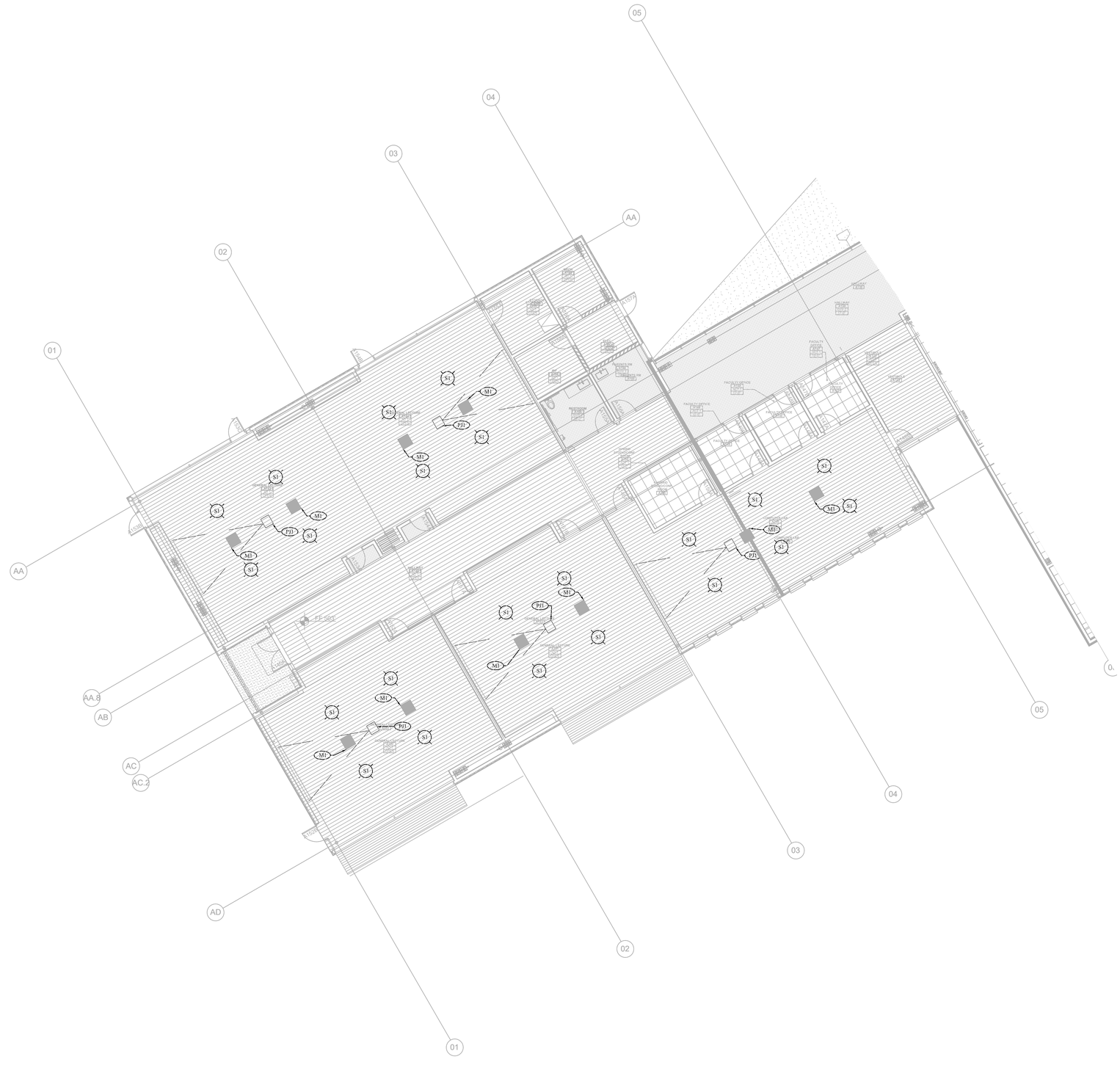
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
ELECTRICAL PLAN - SECTION C

SHEET NUMBER
AV203

FACILITIES REFLECTED CEILING NOTES:

- C1 — CEILING MOUNTED UHD PTZ CAMERA.
  MFR./MODEL: T.B.D. (CAMERA), VADDIO 999-82000-000 (CEILING MOUNT).
- M1 — CEILING MOUNTED FROM POLE, MULTI-ELEMENT MICROPHONE. SEE DETAIL 10/AV502.
  MFR./MODEL: SHURE MXA910 (ANTENNA).
- PJ1 — CEILING MOUNTED PROJECTOR. SEE DETAIL 9/AV502 .
  MFR./MODEL: T.B.D. (PROJECTOR), T.B.D. (MOUNT), T.B.D. (CEILING INTERFACE BRACKET), T.B.D. (POLE)
- S1 — CEILING MOUNTED PENDENT LOUDSPEAKER. SEE DETAIL 8/AV502.
  MFR./MODEL: EXTRON SF 26PT [60-1752-03] (LOUDSPEAKER).
- S2 — CEILING MOUNTED PENDENT LOUDSPEAKER. BOTTOM OF SPEAKER TO MATCH BOTTOM OF SOFFIT AT +17' AFF. SEE DETAIL 8/AV502.
  MFR./MODEL: T.B.D. (LOUDSPEAKER)



1 FACILITIES REFLECTED CEILING PLAN - FACILITIES RCP - SECTION A
SCALE: 1/8" = 1'-0"

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
FACILITIES RCP - SECTION A

SHEET NUMBER
AV301

FACILITIES REFLECTED CEILING NOTES:

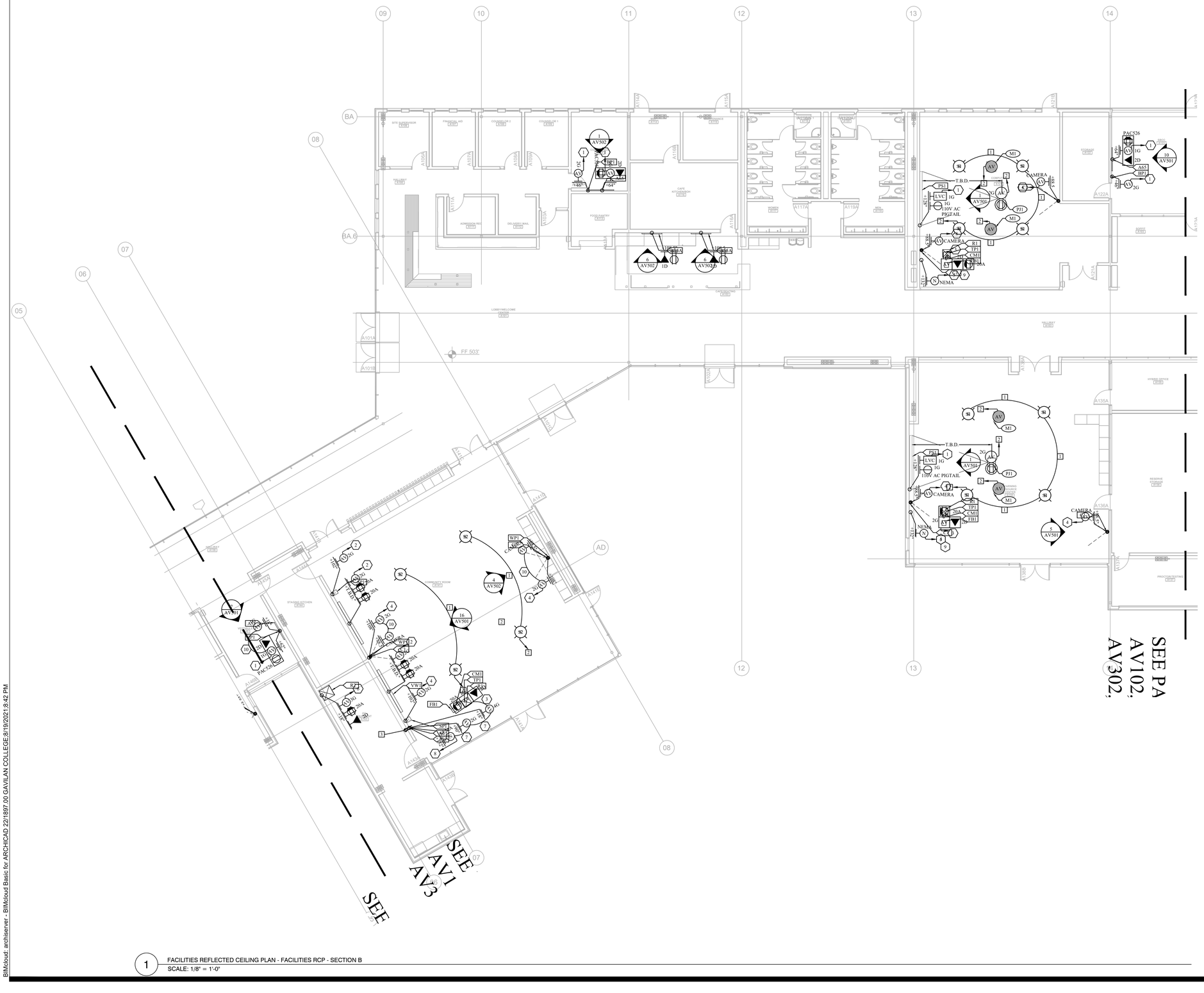
C1 — CEILING MOUNTED UHD PTZ CAMERA.
MFR./MODEL: T.B.D. (CAMERA), VADDIO 999-82000-000 (CEILING MOUNT).

M1 — CEILING MOUNTED FROM POLE, MULTI-ELEMENT MICROPHONE. SEE DETAIL 10/AV502.
MFR./MODEL: SHURE MXA910 (ANTENNA).

PJ1 — CEILING MOUNTED PROJECTOR. SEE DETAIL 9/AV502 .
MFR./MODEL: T.B.D. (PROJECTOR), T.B.D. (MOUNT), T.B.D. (CEILING INTERFACE BRACKET), T.B.D. (POLE)

S1 — CEILING MOUNTED PENDENT LOUDSPEAKER. SEE DETAIL 8/AV502.
MFR./MODEL: EXTRON SF 26PT [60-1752-03] (LOUDSPEAKER).

S2 — CEILING MOUNTED PENDENT LOUDSPEAKER, BOTTOM OF SPEAKER TO MATCH BOTTOM OF SOFFIT AT +17' AFF. SEE DETAIL 8/AV502.
MFR./MODEL: T.B.D. (LOUDSPEAKER)



1 FACILITIES REFLECTED CEILING PLAN - FACILITIES RCP - SECTION B
SCALE: 1/8" = 1'-0"

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
FEBRUARY 4, 2022
SHEET TITLE

FACILITIES RCP - SECTION B

SHEET NUMBER

AV302

FACILITIES REFLECTED CEILING NOTES:

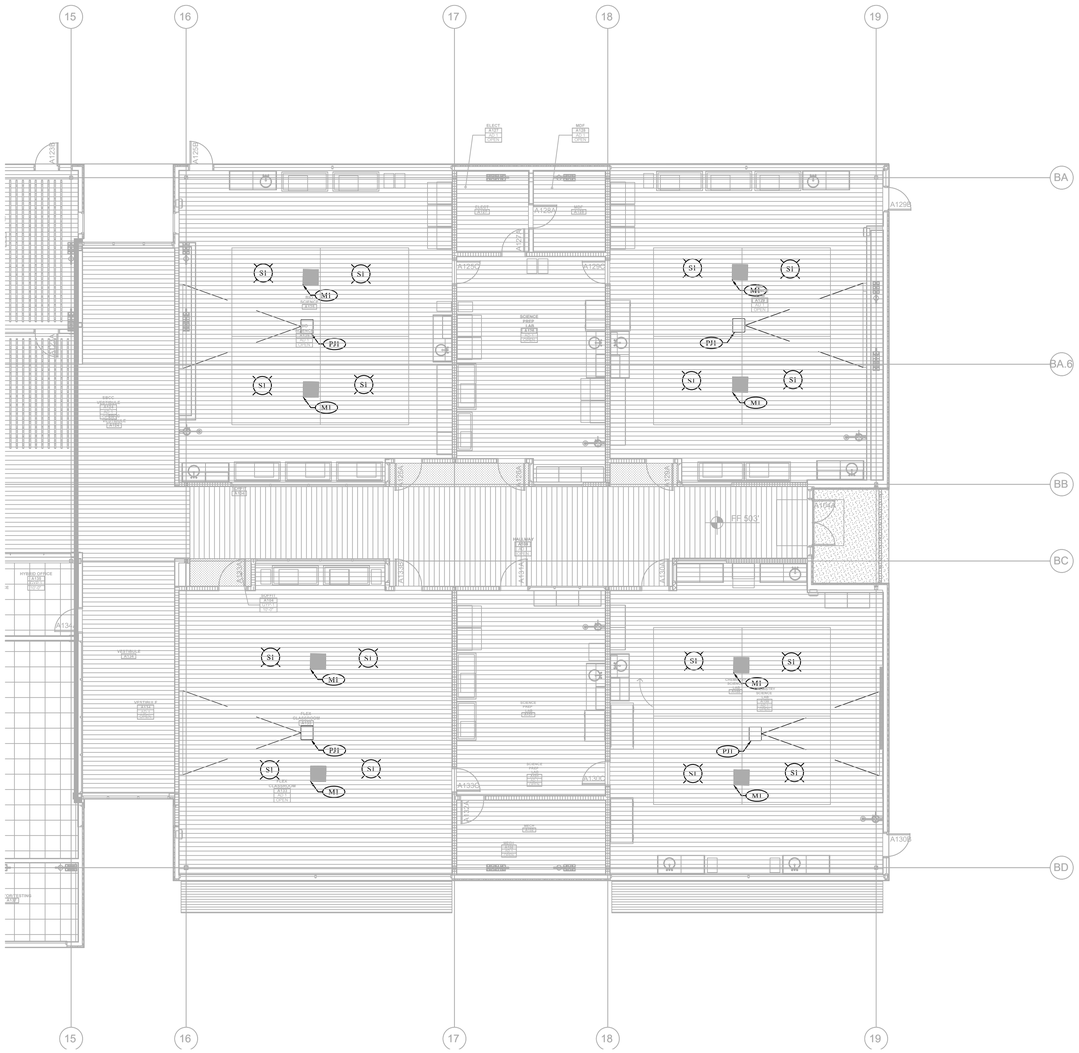
C1 — CEILING MOUNTED UHD PTZ CAMERA.
MFR./MODEL: T.B.D. (CAMERA), VADDIO 999-82000-000 (CEILING MOUNT).

M1 — CEILING MOUNTED FROM POLE, MULTI-ELEMENT MICROPHONE. SEE DETAIL 10/AV502.
MFR./MODEL: SHURE MXA910 (ANTENNA).

P1 — CEILING MOUNTED PROJECTOR. SEE DETAIL 9/AV502 .
MFR./MODEL: T.B.D. (PROJECTOR), T.B.D. (MOUNT), T.B.D. (CEILING INTERFACE BRACKET), T.B.D. (POLE)

S1 — CEILING MOUNTED PENDENT LOUDSPEAKER. SEE DETAIL 8/AV502.
MFR./MODEL: EXTRON SF 26PT [60-1752-03] (LOUDSPEAKER).

S2 — CEILING MOUNTED PENDENT LOUDSPEAKER. BOTTOM OF SPEAKER TO MATCH BOTTOM OF SOFFIT AT +17' AFF. SEE DETAIL 8/AV502.
MFR./MODEL: T.B.D. (LOUDSPEAKER)



1 FACILITIES REFLECTED CEILING PLAN - FACILITES RCP - SECTION C
SCALE: 1/8" = 1'-0"

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DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 4, 2022

SHEET TITLE
FACILITES RCP - SECTION C

SHEET NUMBER
AV303

ELECTRICAL REFLECTED CEILING NOTES:

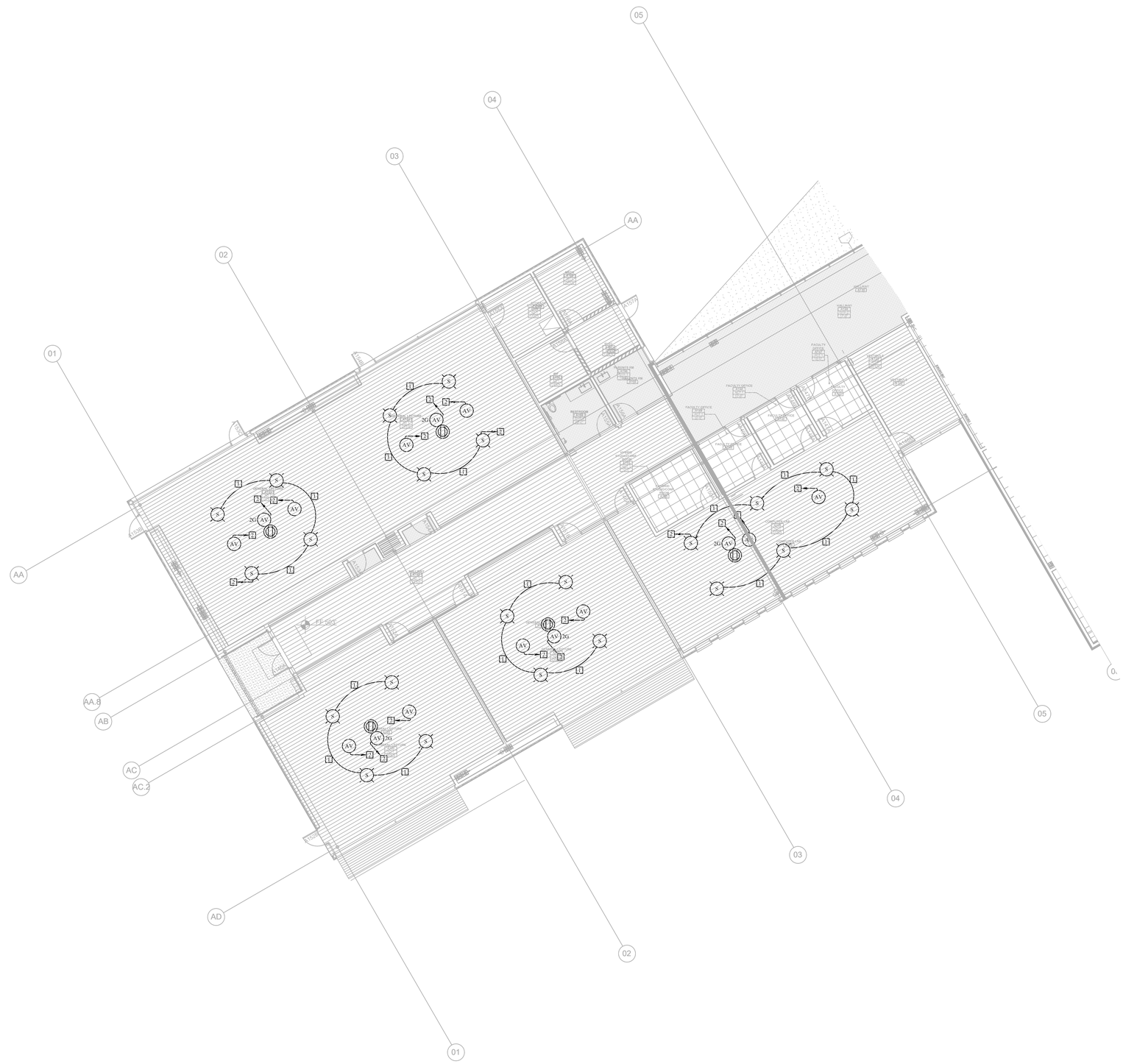
NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

[1] PROVIDE CABLE PATHWAY VIA 3/4" FLEX CONDUIT OR FREEFLOAT CABLE FROM SPEAKER TO SPEAKER.

[2] PROVIDE CABLE PATHWAY TO CONDUIT STUB ABOVE AV RACK LOCATION.

[3] PROVIDE 2 X 2" CONDUIT SLEEVES BETWEEN ROOMS.



1 ELECTRICAL REFLECTED CEILING PLAN - ELECTRICAL RCP - SECTION A
SCALE: 1/8" = 1'-0"

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
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DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

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FEBRUARY 4, 2022

SHEET TITLE

ELECTRICAL RCP - SECTION A

SHEET NUMBER

AV401

ELECTRICAL REFLECTED CEILING NOTES:

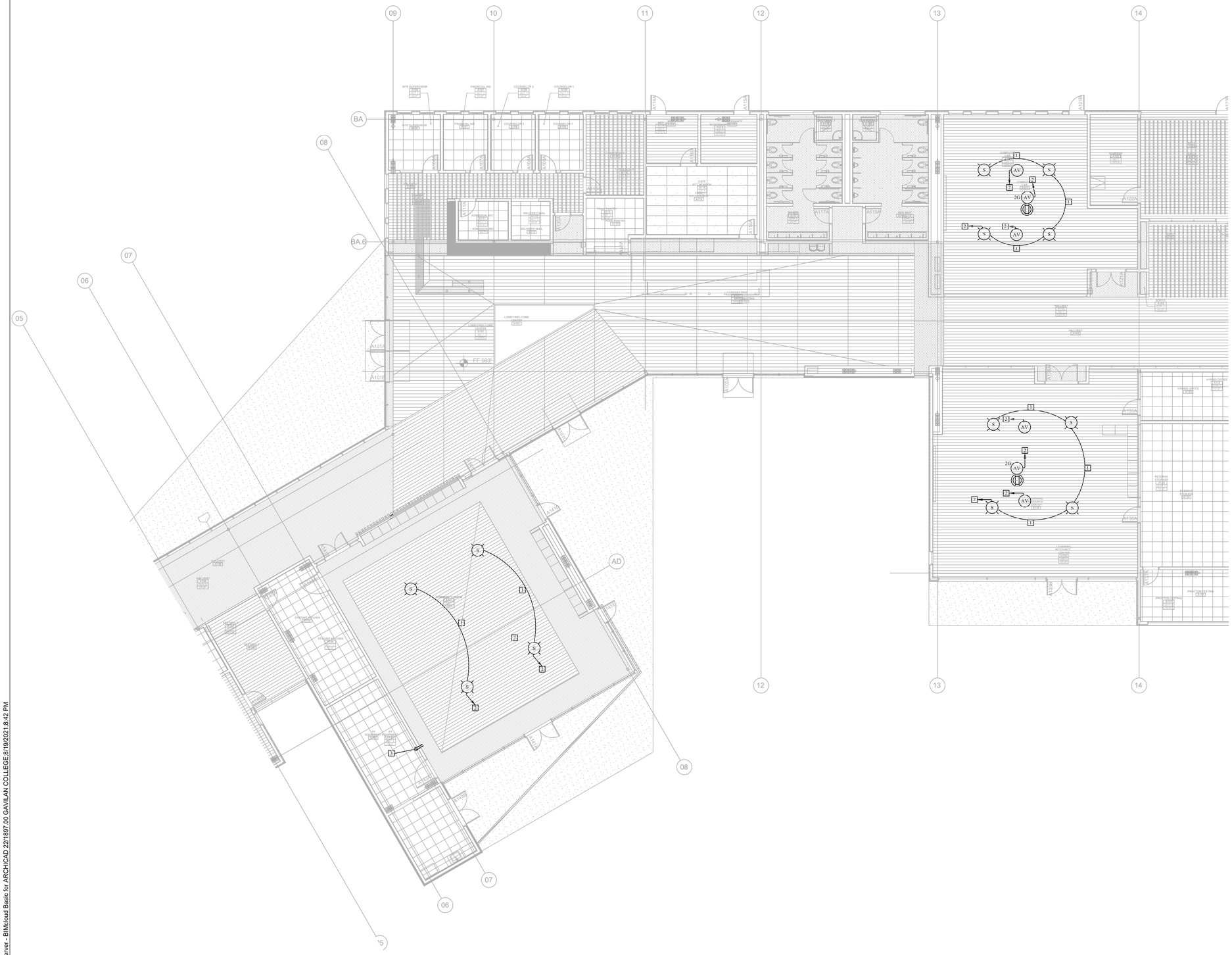
NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

[1] PROVIDE CABLE PATHWAY VIA 3/4" FLEX CONDUIT OR FREEFLOAT CABLE FROM SPEAKER TO SPEAKER.

[2] PROVIDE CABLE PATHWAY TO CONDUIT STUB ABOVE AV RACK LOCATION.

[3] PROVIDE 2 X 2" CONDUIT SLEEVES BETWEEN ROOMS.



1 ELECTRICAL REFLECTED CEILING PLAN - ELECTRICAL RCP - SECTION B
SCALE: 1/8" = 1'-0"

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DRAWING SCALE:
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SHEET TITLE
ELECTRICAL RCP - SECTION B

SHEET NUMBER
AV402

ELECTRICAL REFLECTED CEILING NOTES:

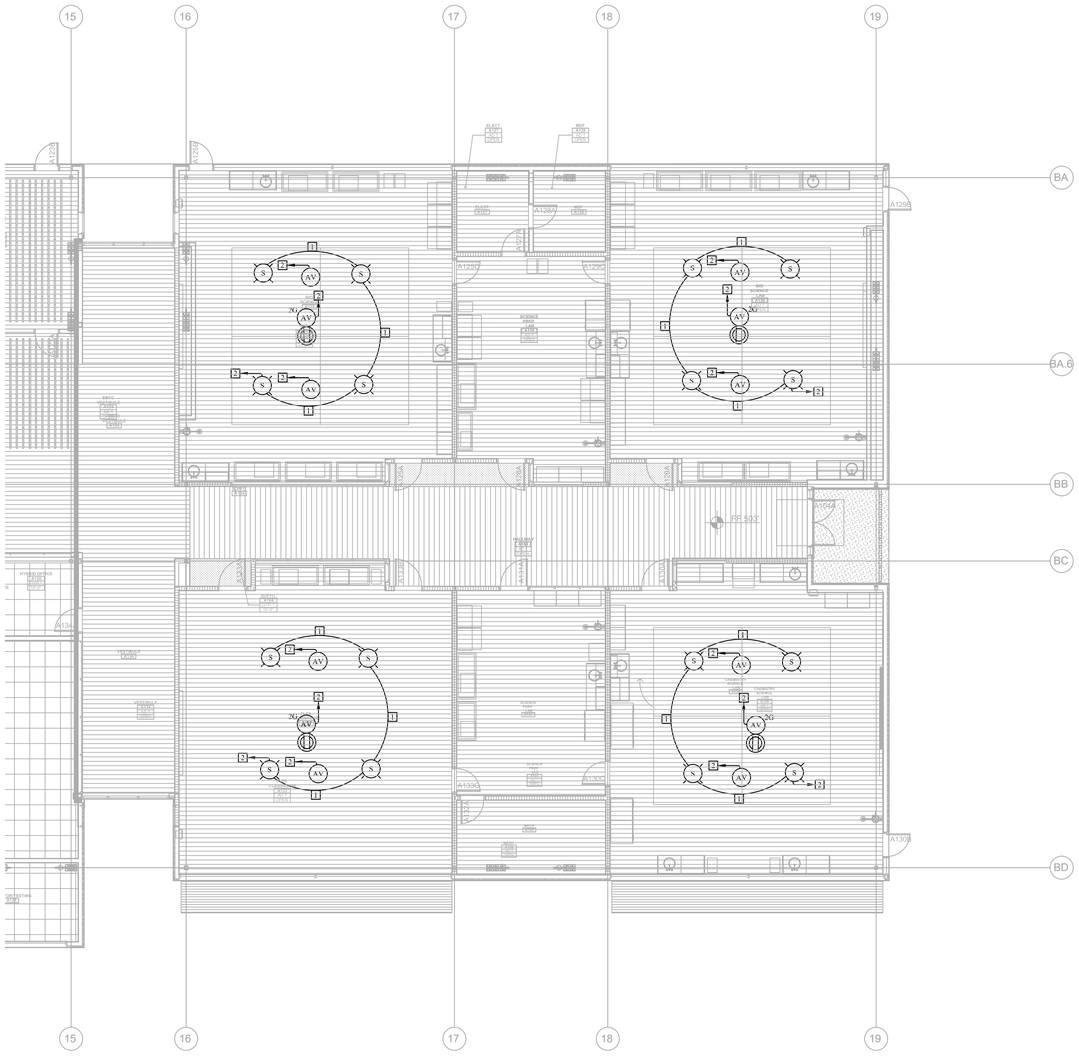
NOTE 1: ALL ELECTRICAL PLAN INFORMATION IS A SUGGESTION. HEIGHTS AND LOCATIONS FOR ALL AV EQUIPMENT TO BE CONFIRMED BY THE PROJECT ARCHITECT OR GENERAL CONTRACTOR.

NOTE 2: ALL HEIGHTS NOTED ON THESE PLANS ARE TO CENTERLINE OF BOX, OUTLET OR CONDUIT.

[1] PROVIDE CABLE PATHWAY VIA 3/4" FLEX CONDUIT OR FREEFLOAT CABLE FROM SPEAKER TO SPEAKER.

[2] PROVIDE CABLE PATHWAY TO CONDUIT STUB ABOVE AV RACK LOCATION.

[3] PROVIDE 2 X 2" CONDUIT SLEEVES BETWEEN ROOMS.



1 ELECTRICAL REFLECTED CEILING PLAN - ELECTRICAL RCP - SECTION C
SCALE: 1/8" = 1'-0"

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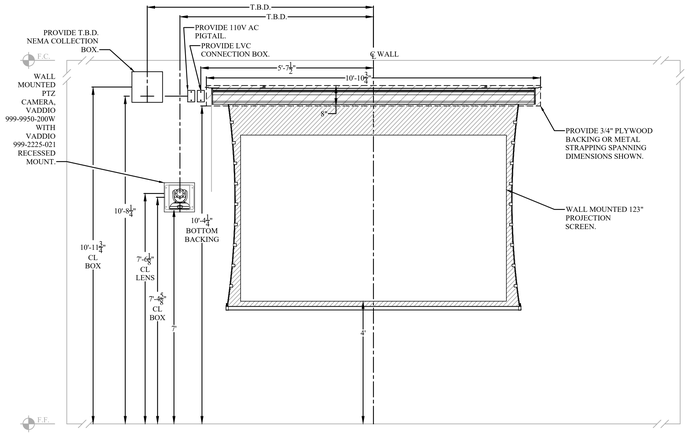
DSA SUBMITTAL
FEBRUARY 4, 2022

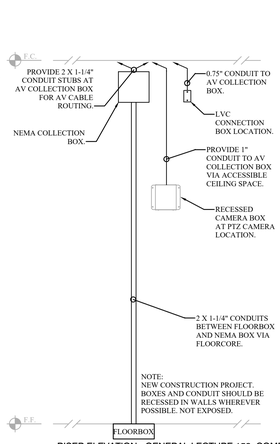
SHEET TITLE
ELECTRICAL RCP - SECTION C

SHEET NUMBER
AV403



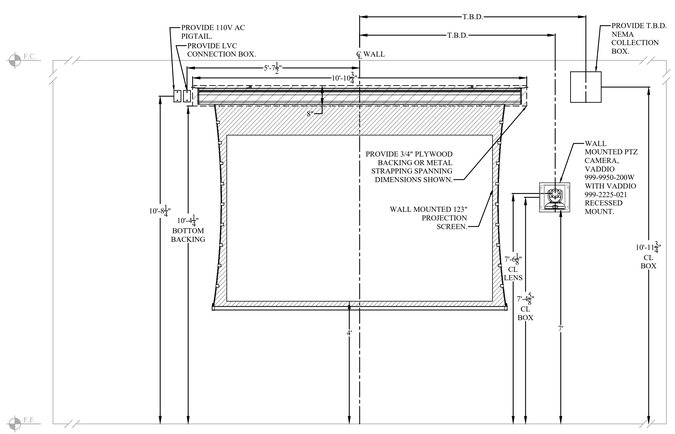
1 DISPLAY ELEVATION - GENERAL LECTURE 153, COMPUTER LAB 121, 146, SCIENCE A125, FLEX CLASSROOM A133

SCALE: 1/2" = 1'-0"



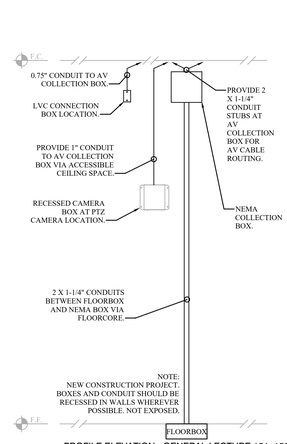
2 RISER ELEVATION - GENERAL LECTURE 153, COMPUTER LAB 121, 146, SCIENCE A125, FLEX CLASSROOM A133

SCALE: 1/2" = 1'-0"



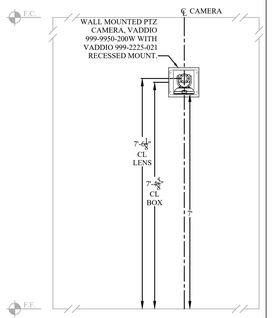
3 DISPLAY ELEVATION - GENERAL LECTURE 151, 152, 154, SCIENCE A129, A130

SCALE: 1/2" = 1'-0"



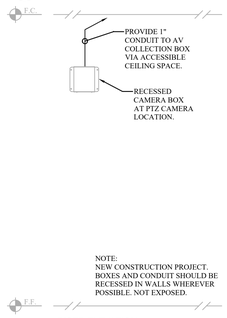
4 PROFILE ELEVATION - GENERAL LECTURE 151, 152, 154, SCIENCE A129, A130

SCALE: 1/2" = 1'-0"



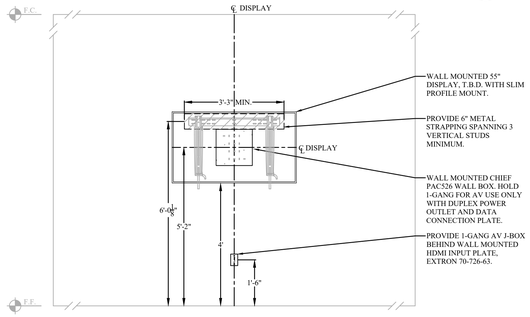
5 TYPICAL ELEVATION - IN-WALL PTZ CAMERA

SCALE: 1/2" = 1'-0"



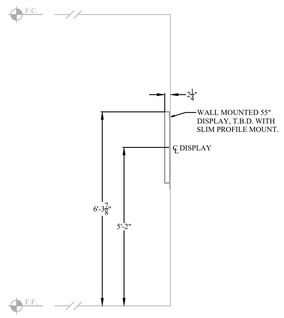
6 RISER ELEVATION - IN-WALL PTZ CAMERA

SCALE: 1/2" = 1'-0"



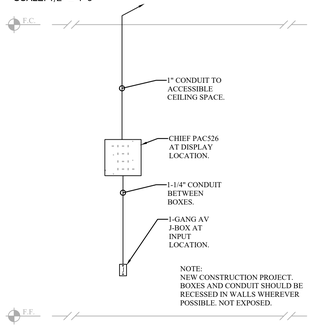
7 DISPLAY ELEVATION - TYPICAL 55" DISPLAY WITH INPUT BELOW

SCALE: 1/2" = 1'-0"



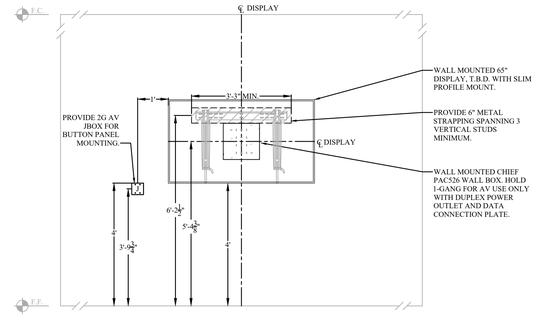
8 PROFILE ELEVATION - TYPICAL 55" DISPLAY WITH INPUT BELOW

SCALE: 1/2" = 1'-0"



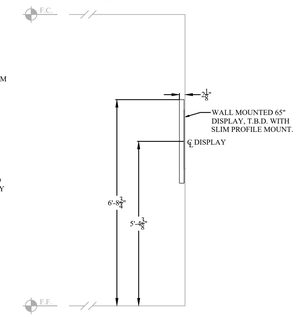
9 RISER ELEVATION - TYPICAL 55" DISPLAY WITH INPUT BELOW

SCALE: 1/2" = 1'-0"



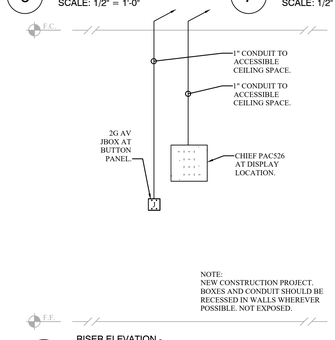
10 DISPLAY ELEVATION - TYPICAL 65" DISPLAY WITH BUTTON PANEL

SCALE: 1/2" = 1'-0"



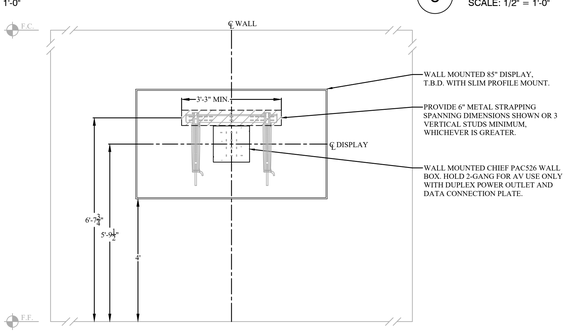
11 PROFILE ELEVATION - TYPICAL 65" DISPLAY WITH BUTTON PANEL

SCALE: 1/2" = 1'-0"



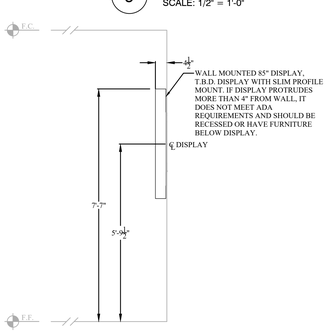
12 RISER ELEVATION - TYPICAL 65" DISPLAY WITH BUTTON PANEL

SCALE: 1/2" = 1'-0"



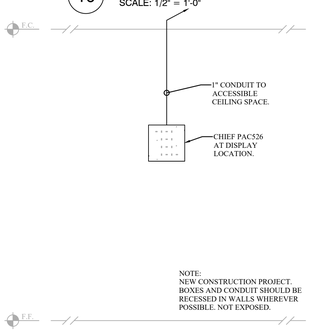
13 DISPLAY ELEVATION - TYPICAL 85" DISPLAY

SCALE: 1/2" = 1'-0"



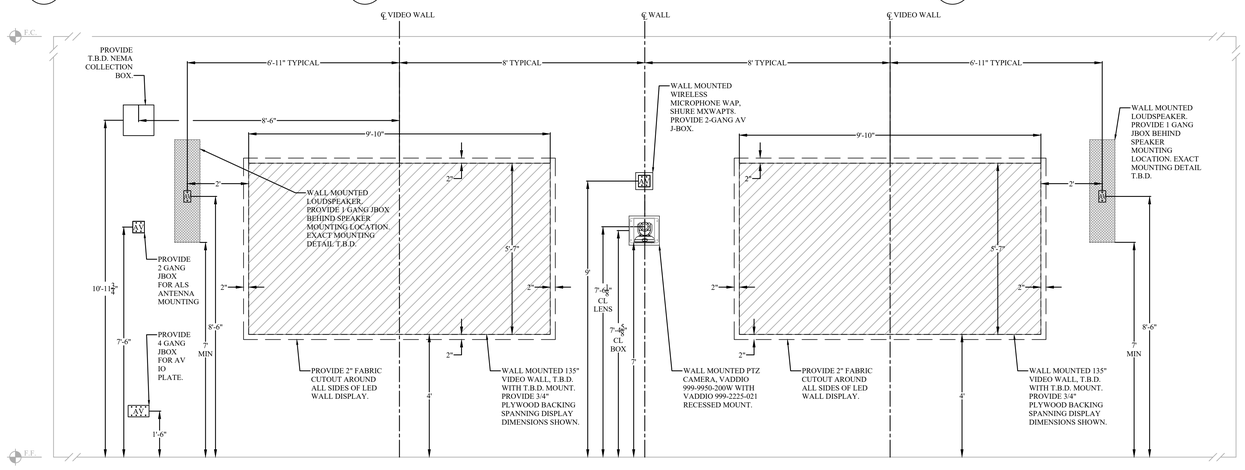
14 PROFILE ELEVATION - TYPICAL 85" DISPLAY

SCALE: 1/2" = 1'-0"



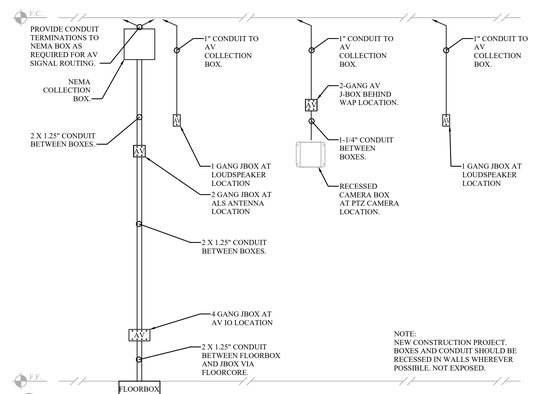
15 RISER ELEVATION - TYPICAL 85" DISPLAY

SCALE: 1/2" = 1'-0"



16 DISPLAY ELEVATION - COMMUNITY ROOM 141

SCALE: 1/2" = 1'-0"



17 RISER ELEVATION - COMMUNITY ROOM 141

SCALE: 1/2" = 1'-0"

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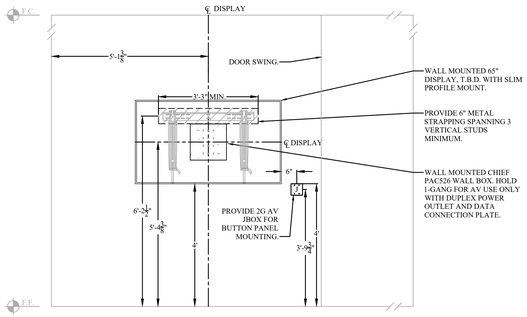
FEBRUARY 4, 2022

SHEET TITLE

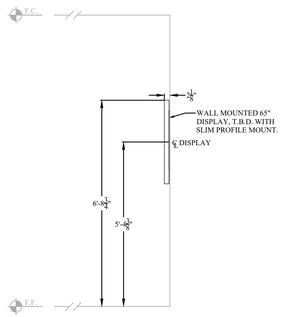
DETAILS & ELEVATIONS 1 OF 2

SHEET NUMBER

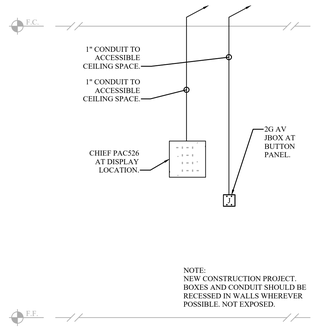
AV501



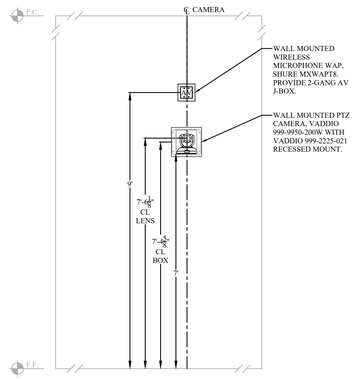
1 DISPLAY ELEVATION - CONFERENCE ROOM A110 - DISPLAY WITH BUTTON PANEL
SCALE: 1/2" = 1'-0"



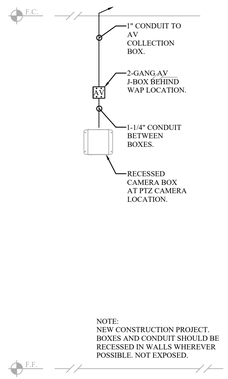
2 PROFILE ELEVATION - CONFERENCE ROOM A110 - DISPLAY WITH BUTTON PANEL
SCALE: 1/2" = 1'-0"



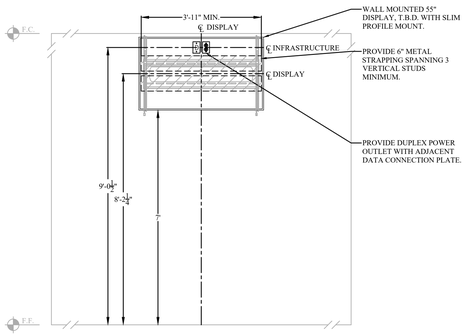
3 RISER ELEVATION - CONFERENCE ROOM A110 - DISPLAY WITH BUTTON PANEL
SCALE: 1/2" = 1'-0"



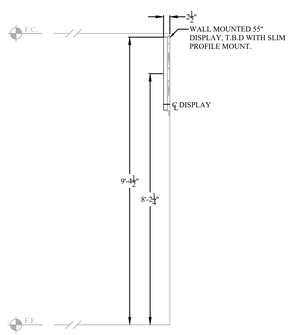
4 TYPICAL ELEVATION - IN-WALL PTZ CAMERA WITH WAP
SCALE: 1/2" = 1'-0"



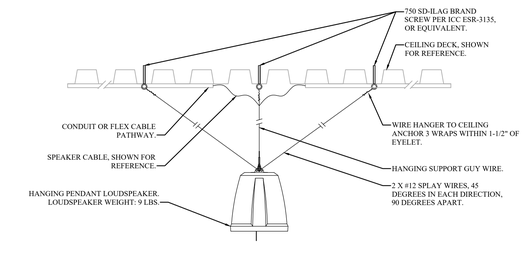
5 RISER ELEVATION - IN-WALL PTZ CAMERA WITH WAP
SCALE: 1/2" = 1'-0"



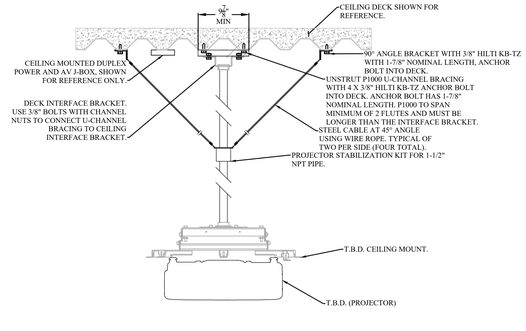
6 DISPLAY ELEVATION - CAFE
SCALE: 1/2" = 1'-0"



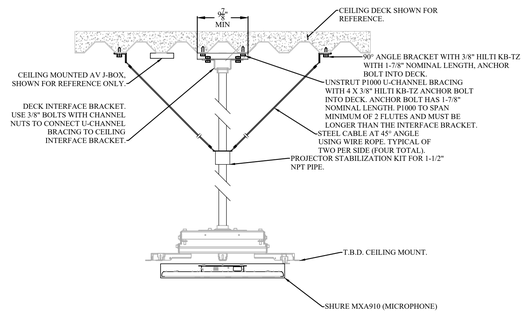
7 DISPLAY ELEVATION - CAFE
SCALE: 1/2" = 1'-0"



8 PROJECT DETAILS - PENDANT LOUDSPEAKER MOUNTING
SCALE: NTS



9 PROJECT DETAILS - PROJECTOR MOUNTING AT OPEN CEILING
SCALE: NTS



10 PROJECT DETAILS - MXA910 MOUNTING AT OPEN CEILING
SCALE: NTS

WIRING DIAGRAMS T.B.D. UPON CLARIFICATION OF AV SCOPE.

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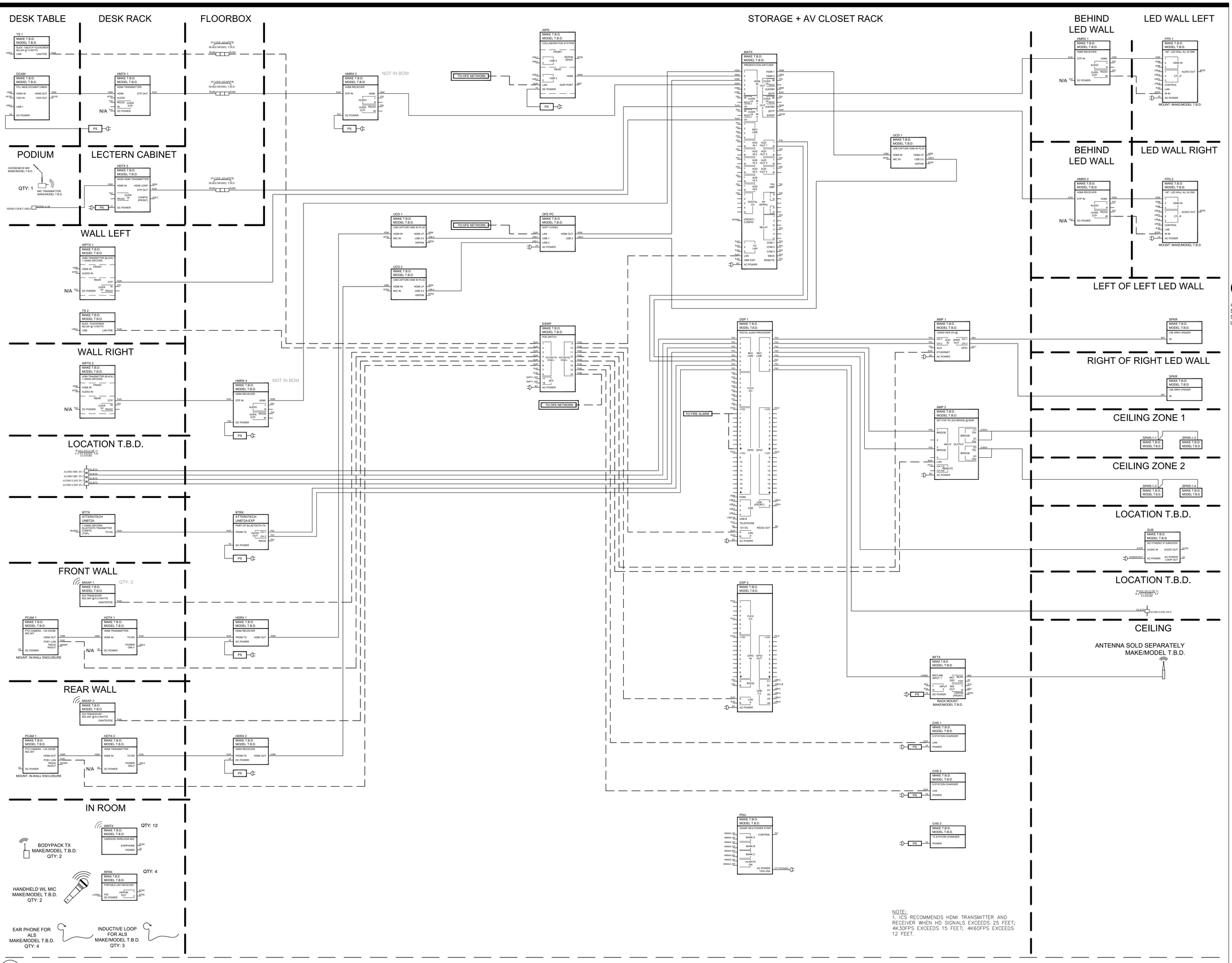
DETAILS & ELEVATIONS 2 0F 2

SHEET NUMBER

AV502



1 COMMUNITY ROOM - TYP 1
SCALE: NTS

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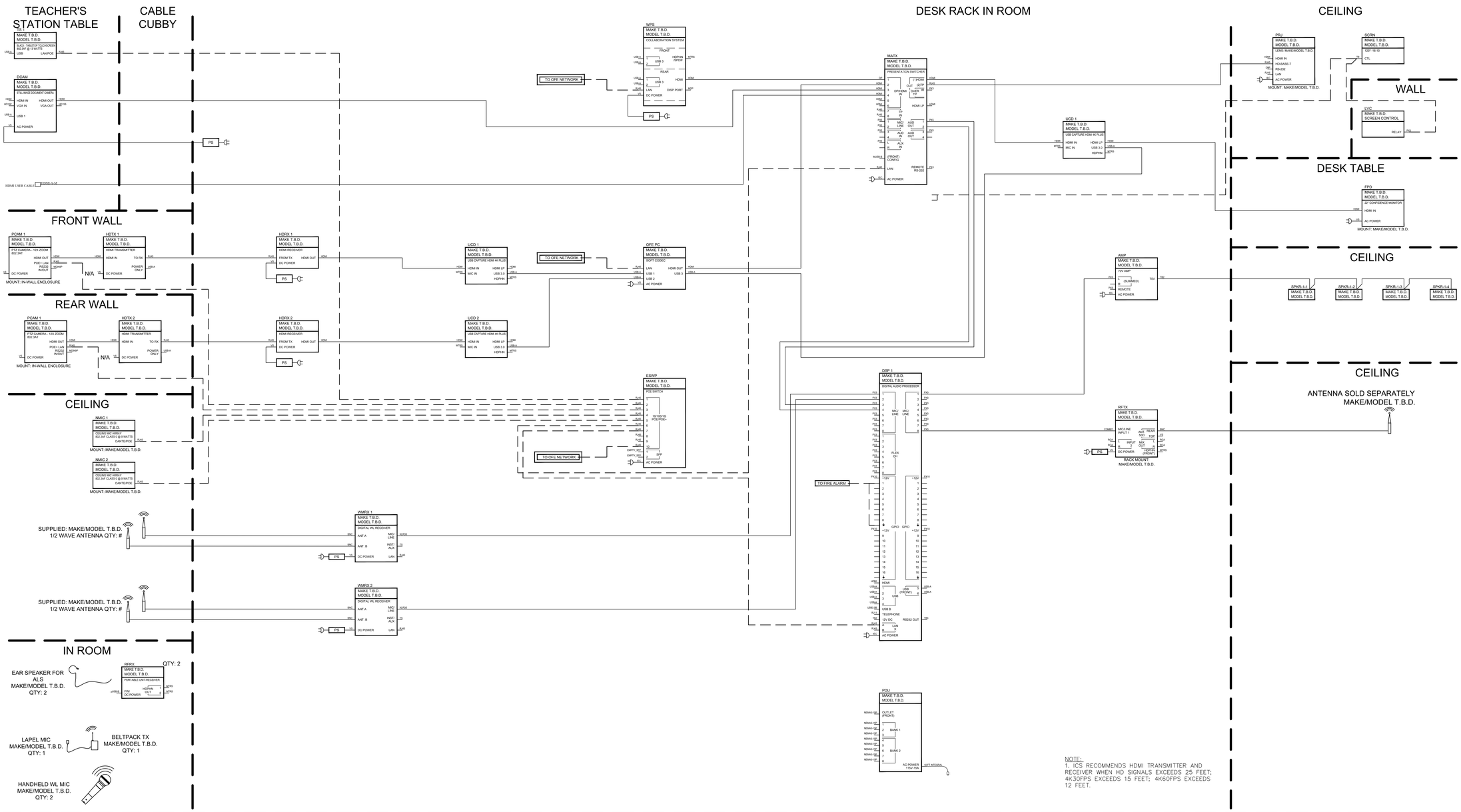
DECEMBER 17, 2021

SHEET TITLE
COMMUNITY ROOM

SHEET NUMBER
AV701



1 GENERAL LECTURE - TYP 4
SCALE: NTS

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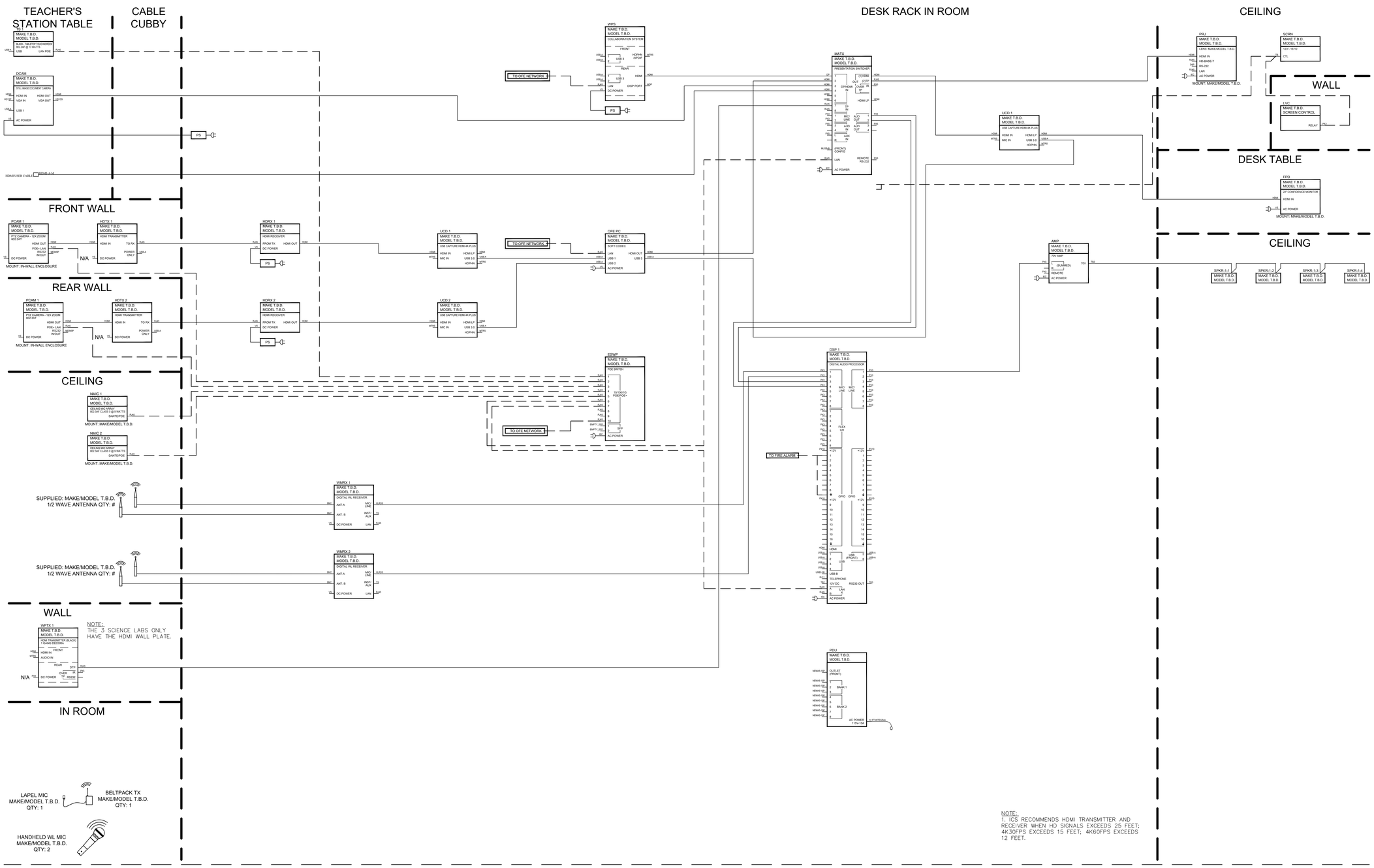
SHEET TITLE

GENERAL LECTURE

SHEET NUMBER

AV702



1 LEARNING & RESOURCE CENTER - TYP 1, FLEXIBLE CLASSROOM/STUDIO - TYP 1, COMPUTER LABS - TYP 2, SCIENCE LABS - TYP 3
SCALE: NTS

1 LEARNING & RESOURCE CENTER - TYP 1, FLEXIBLE CLASSROOM/STUDIO - TYP 1, COMPUTER LABS - TYP 2, SCIENCE LABS - TYP 3
SCALE: NTS

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

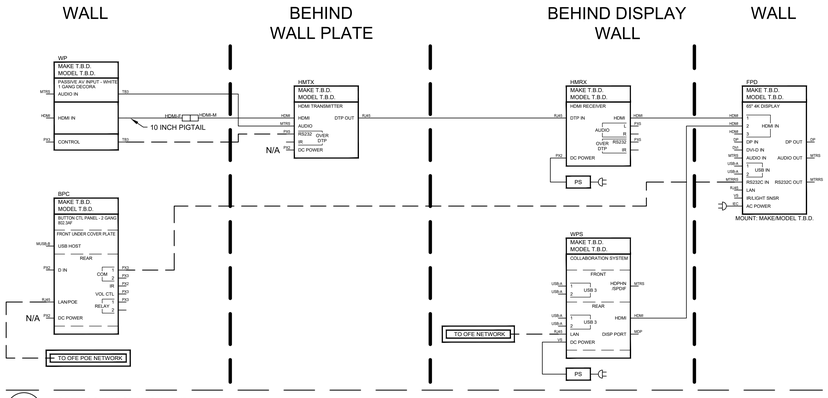
GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

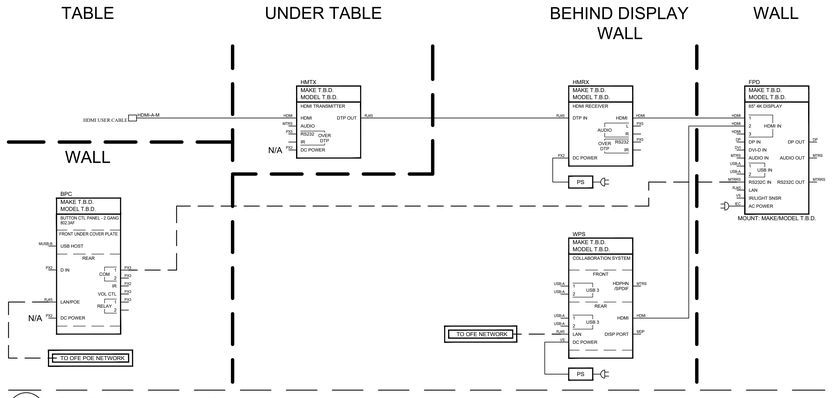
DSA SUBMITTAL
DECEMBER 17, 2021

SHEET TITLE
L&R CENTER, FLEX CLASS-STUDIO, COMPUTER LABS, SCIENCE LABS

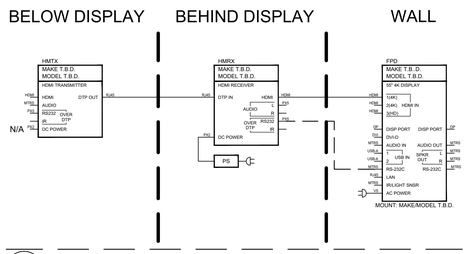
SHEET NUMBER
AV703



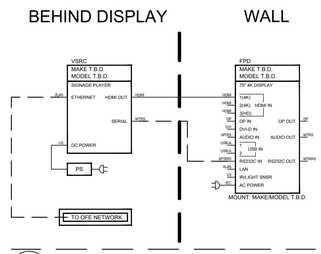
1 OPEN COLLABORATION - TYP 3
SCALE: NTS



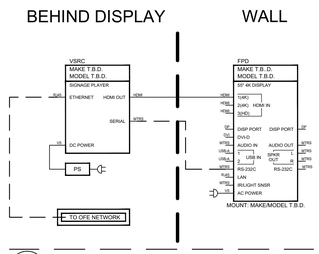
2 CONFERNCE ROOM - TYP 1 & SBCC - TYP 1
SCALE: NTS



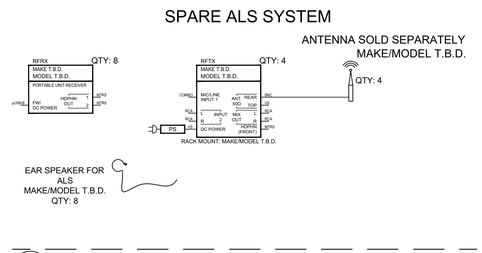
3 CAFE MENU - TYP 2
SCALE: NTS



4 DIGITAL SIGNAGE LOBBY 75" - TYP 1
SCALE: NTS



5 DIGITAL SIGNAGE 55" - TYP 3
SCALE: NTS



6 SPARE ALS SYSTEMS - TYP 4
SCALE: NTS

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525, Oakland, CA 94607
(707) 576-0829

Gensler
45 Fremont Street
Suite 1500
San Francisco, CA 94105
United States
Tel 415.433.3700
Fax 415.836.4599

ICS
INTEGRATED COMMUNICATION SYSTEMS
6680 VIA DEL ORO
SAN JOSE, CA 95119
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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
DECEMBER 17, 2021

SHEET TITLE
OPEN COLLAB, CONFERENCE, SBCC, CAFE MENU, DS, SPARE ALS

SHEET NUMBER
AV704

COMMUNITY ROOM

UNITS	HEIGHT				
31	54.25	RFTX (ALS TX) MAKE/MODEL T.B.D.		ALS SHELF MAKE/MODEL T.B.D.	
30	52.5				
29	50.75				
28	49.0				
27	47.25	CHS 1 (FOR MICS) MAKE/MODEL T.B.D.		CHS 2 (FOR MICS) MAKE/MODEL T.B.D.	
26	45.5				
25	43.75				
24	42.0	CHS 3 (FOR ALS) MAKE/MODEL T.B.D.			
23	40.25				
22	38.5	AMP 1 MAKE T.B.D. MODEL T.B.D.			
21	36.75				
20	35.0				
19	33.25	AMP 2 MAKE T.B.D. MODEL T.B.D.			
18	31.5				
17	29.75				
16	28.0	DSP 2 MAKE/MODEL T.B.D.		WPS (COLLAB SYS) MAKE/MODEL T.B.D.	
15	26.25				
14	24.5	DSP 1		MAKE T.B.D. MODEL T.B.D.	
13	22.75				
12	21.0	ESWP POE SWITCH		MAKE T.B.D. MODEL T.B.D.	
11	19.25				
10	17.5	HDRX 1 MAKE MODEL T.B.D.	HDRX 2 MAKE MODEL T.B.D.	HMRX 3 MAKE MODEL T.B.D.	HMRX 4 MAKE MODEL T.B.D.
9	15.75				
8	14.0	OFE PC SOFT CODEC		MAKE T.B.D. MODEL T.B.D.	
7	12.25				
6	10.5	UCD 1 MAKE MODEL T.B.D.	UCD 2 MAKE MODEL T.B.D.	UCD 3 MAKE MODEL T.B.D.	
5	8.75				
4	7.0	MATX MAKE T.B.D. MODEL T.B.D.		PRESENTATION SWITCHER	
3	5.25				
2	3.5				
1	1.75	PDU PWR SEQ		MAKE T.B.D. MODEL T.B.D.	

17 POWER OUTLETS REQUIRED

1 COMMUNITY ROOM - TYP 1
SCALE: NTS

GENERAL LECTURE

UNITS	HEIGHT			
12	21.0	RFTX (ALS TX) MAKE/MODEL T.B.D.	ALS SHELF MAKE/MODEL T.B.D.	
11	19.25			
10	17.5	WMRX 1 (DIGITAL WL RX) MAKE/MODEL T.B.D.	WMRX 2 (DIGITAL WL RX) MAKE/MODEL T.B.D.	
9	15.75	AMP MAKE/MODEL T.B.D.		
8	14.0	DSP 1		MAKE T.B.D. MODEL T.B.D.
7	12.25	ESWP POE SWITCH		MAKE T.B.D. MODEL T.B.D.
6	10.5			
5	8.75	HDRX 1 MAKE MODEL T.B.D.	HDRX 2 MAKE MODEL T.B.D.	WPS (COLLAB SYS) MAKE/MODEL T.B.D.
4	7.0	OFE PC SOFT CODEC		MAKE T.B.D. MODEL T.B.D.
3	5.25	UCD 1 MAKE MODEL T.B.D.	UCD 2 MAKE MODEL T.B.D.	UCD 3 MAKE MODEL T.B.D.
2	3.5	MATX PRESENTATION SWR		MAKE T.B.D. MODEL T.B.D.
1	1.75	PDU PWR SEQ		MAKE T.B.D. MODEL T.B.D.

12 POWER OUTLETS REQUIRED

2 GENERAL LECTURE - TYP 4
SCALE: NTS

LEARNING & RESOURCE CENTER
FLEXIBLE CLASSROOM/STUDIO
COMPUTER LABS
SCIENCE LABS

UNITS	HEIGHT			
12	21.0			
11	19.25			
10	17.5	WMRX 1 (DIGITAL WL RX) MAKE/MODEL T.B.D.	WMRX 2 (DIGITAL WL RX) MAKE/MODEL T.B.D.	
9	15.75	AMP MAKE/MODEL T.B.D.		
8	14.0	DSP 1		MAKE T.B.D. MODEL T.B.D.
7	12.25	ESWP POE SWITCH		MAKE T.B.D. MODEL T.B.D.
6	10.5			
5	8.75	HDRX 1 MAKE MODEL T.B.D.	HDRX 2 MAKE MODEL T.B.D.	WPS (COLLAB SYS) MAKE/MODEL T.B.D.
4	7.0	OFE PC SOFT CODEC		MAKE T.B.D. MODEL T.B.D.
3	5.25	UCD 1 MAKE MODEL T.B.D.	UCD 2 MAKE MODEL T.B.D.	UCD 3 MAKE MODEL T.B.D.
2	3.5	MATX PRESENTATION SWR		MAKE T.B.D. MODEL T.B.D.
1	1.75	PDU PWR SEQ		MAKE T.B.D. MODEL T.B.D.

11 POWER OUTLETS REQUIRED

3 LEARNING & RESOURCE CENTER - TYP 1, FLEXIBLE CLASSROOM/STUDIO - TYP 1,
COMPUTER LABS - TYP 2, SCIENCE LABS - TYP 3
SCALE: NTS

QUATTROCCHI KWOK ARCHITECTS
Main:
636 Fifth Street, Santa Rosa, CA 95404
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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

505 FAIRVIEW ROAD
HOLLISTER, CA 95023

GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4
DSA SUBMITTAL
DECEMBER 17, 2021
SHEET TITLE

RACK ELEVATIONS

SHEET NUMBER

AV801

Project Name:	Gavilan CollegeSan Benito County Campus	NRCC-PRF-01-E	Page 1 of 37
Project Address:	505 Fairview Road Hollister 95023	Calculation Date/Time:	08:21, Wed, Dec 15, 2021
Input File Name:	QKA-082_Gavilan_DSA.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	Hollister	8	Standards Version	Compliance2019
2	CA Zip Code	95023	9	Compliance Software (version)	EnergyPro 8.2
3	Climate Zone	4	10	Weather File	SAN-JOSE-REID_724946_CZ2010.epw
4	Total Conditioned Floor Area in Scope	34,948 ft²	11	Building Orientation (deg)	(W) 315 deg
5	Total Unconditioned Floor Area	213 ft²	12	Permitted Scope of Work	NewComplete
6	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance						Building Components Complying Prescriptively	
Envelope (see Table G)	☒	Performance	Covered Process: Commercial Kitchens	☐	Performance	*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐	Not Included		☒	Not Included		
Mechanical (see Table H)	☒	Performance	Covered Process: Computer Rooms	☐	Performance	Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐	Not Included		☒	Not Included	Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒	Performance	Covered Process: Laboratory Exhaust	☐	Performance	Sign Lighting §140.8	*NRCC -LTS-E*
	☐	Not Included		☒	Not Included	Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☒	Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)*	
	☐	Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐	Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒	Not Included				Solar Ready §110.10	*NRCC-SRA-E*

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	12.69	10.90	1.79
Space Cooling	69.38	38.36	31.02
Indoor Fans	23.18	44.46	-21.28
Heat Rejection	--	--	--
Pumps & Misc.	0.07	--	0.07
Domestic Hot Water	11.29	26.31	-15.02
Indoor Lighting	42.27	38.09	4.18
ENERGY STANDARDS COMPLIANCE TOTAL	**158.88**	**158.12**	**0.76 (0.5%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	65.75	65.75	--
Process	1.42	1.42	--
Other Ltg	0.14	0.14	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**226.19**	**225.43**	**0.8 (0.3%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

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C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	0.0	15.5	--	216.9	--	--
Space Cooling	54.1	26.8	27.3	--	--	--
Indoor Fans	25.8	49.9	-24.1	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	0.1	--	--	--	--	--
Domestic Hot Water	8.6	34.7	-26.1	91.4	--	--
Indoor Lighting	51.7	46.6	5.1	--	--	--
Compliance Total	**140.3**	**173.5**	**-33.2**	**308.3**	**0.0**	**--**
Receptacle	81.5	81.5	0.0	1.5	1.5	0.0
Process	1.8	1.8	0.0	--	--	--
Other Ltg	0.2	0.2	0.0	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**223.8**	**257.0**	**-33.2**	**309.8**	**1.5**	**308.3**

D. EXCEPTIONAL CONDITIONS

The proposed building claims credit for non-mandatory lighting control credits via Power Adjustment Factors (PAFs) as outlined in Standards Table 140.6-A. Review NRCC-PRF-LTI DETAILS Table A to ensure that credit is not claimed for mandatory controls.

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.

E. HERS VERIFICATION

This Section Does Not Apply

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	**Total Gross Surface Area (ft²)**	**Total Fenestration Area (ft²)**	**Window to Wall Ratio (%)**
North-Facing[1]	4,181 ft²	749 ft²	17.9%
East-Facing[2]	8,937 ft²	4,043 ft²	45.2%
South-Facing[3]	4,872 ft²	879 ft²	18.0%
West-Facing[4]	9,274 ft²	3,538 ft²	38.2%
Total	**27,264 ft²**	**9,209 ft²**	**33.8%**
Roof	34,010 ft²	80 ft²	00.2%

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	**Surface Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**Units**	**Value**	**Description of Assembly Layers**	**Status[1]**
Ext Wall10	ExteriorWall	27556	Wood	21	10	U-Factor	0.038	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Compliance Insulation R10.00 Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N
Slab On Grade15	UndergroundFloor	35161	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	N

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G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	**Surface Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**Units**	**Value**	**Description of Assembly Layers**	**Status[1]**
Project Roof17	Roof	34223	Metal	15	30	U-Factor	0.028	Metal Standing Seam - 1/16 in. Gypsum Board - 5/8 in. Compliance Insulation R30.00 Gypsum Board - 5/8 in. Metal framed wall, 16in. OC, 3.5in., R-15 Metal Deck - 1/16 in.	N
Int Wall19	InteriorWall	31631	Wood	21	NA	U-Factor	0.063	Gypsum Board - 5/8 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N
Project Roof171	Ceiling	939	Metal	15	30	U-Factor	0.028	Metal Standing Seam - 1/16 in. Gypsum Board - 5/8 in. Compliance Insulation R30.00 Gypsum Board - 5/8 in. Metal framed wall, 16in. OC, 3.5in., R-15 Metal Deck - 1/16 in.	N

[1] *Status: N - New, A – Altered, E – Existing*

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	**Overall U-factor**	**Status[1]**
Metal Door425	0.700	N

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G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	**Fenestration Type / Product Type / Frame Type**	**Certification Method[1]**	**Assembly Method**	**Area ft²**	**Overall U-factor**	**Overall SHGC**	**Overall VT**	**Status[2]**
Project Glazing	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	9209	0.45	0.23	0.55	N
Project Skylight	Skylight FixedWindow N/A	NFRC Rated	Manufactured	80	0.45	0.23	0.55	N

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A – Altered, E – Existing*

G6. OVERHANG DETAILS

1	2	3	4	5	6
Fenestration Tag/ID	**Orientation**	**Depth(ft.)**	**Height from Bottom of Sill to Overhang(ft)**	**Right Extent(ft)**	**Left Extent(ft)**
103	South	12.0	8.6	0.0	12.0
105	East	4.0	8.6	0.0	0.0
119	East	4.0	8.6	0.0	0.0
133	East	1.0	8.6	0.0	0.0
134	East	1.0	8.6	0.0	0.0
135	East	1.0	8.6	0.0	0.0
136	East	1.0	8.6	0.0	0.0
137	East	1.0	8.6	0.0	0.0
138	East	1.0	8.6	0.0	0.0
139	East	1.0	8.6	0.0	0.0
140	East	1.0	8.6	0.0	0.0
141	East	1.0	8.6	0.0	0.0
142	East	1.0	8.6	0.0	0.0
197	North	15.0	17.1	10.0	0.0
198	North	15.0	17.1	10.0	0.0

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G6. OVERHANG DETAILS

1	2	3	4	5	6
Fenestration Tag/ID	**Orientation**	**Depth(ft.)**	**Height from Bottom of Sill to Overhang(ft)**	**Right Extent(ft)**	**Left Extent(ft)**
200	East	10.0	17.1	0.0	15.0
202	East	10.0	17.1	0.0	15.0
242	East	10.0	17.1	0.0	15.0
249	South	15.0	17.1	10.0	0.0
303	West	8.0	17.1	8.0	8.0
593	East	4.0	7.1	0.0	0.0
608	East	4.0	7.1	0.0	0.0
612	North	12.0	7.1	0.0	12.0
630	North	10.0	5.1	0.0	15.0

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1	2	3	4	5	6	7	8	9	10	11	12
			Heating				Cooling				
Equipment Name	**Equipment Type**	**Qty**	**Total Heating Output (kBtu/h)**	**Supp Heat Output (kBtuh)**	**Efficiency Unit**	**Efficiency**	**Total Cooling Output (kBtu/h)**	**Efficiency Unit**	**Efficiency**	**Economizer Type (if present)**	**Status[1]**
HP-1	SZHP (Packaged3Phase)	1	46	0	HSPF	8.30	48	SEER EER	14.00 12.20	NoEconomizer	N
HP-2	SZHP (Packaged3Phase)	1	46	0	HSPF	8.30	48	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-3	SZHP (Packaged3Phase)	1	46	0	HSPF	8.30	48	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-4	SZHP (Packaged3Phase)	1	46	0	HSPF	8.30	48	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-5	SZHP (Packaged3Phase)	1	46	0	HSPF	8.30	48	SEER EER	16.20 11.70	DifferentialDryBulb	N

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H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1	2	3	4	5	6	7	8	9	10	11	12
			Heating				Cooling				
Equipment Name	**Equipment Type**	**Qty**	**Total Heating Output (kBtu/h)**	**Supp Heat Output (kBtuh)**	**Efficiency Unit**	**Efficiency**	**Total Cooling Output (kBtu/h)**	**Efficiency Unit**	**Efficiency**	**Economizer Type (if present)**	**Status[1]**
HP-6	SZVAVHP (Packaged3Phase)	1	116	0	COP	3.50	124	EER	12.3	DifferentialDryBulb	N
HP-7	SZVAVHP (Packaged3Phase)	1	116	0	COP	3.50	124	EER	12.3	DifferentialDryBulb	N
HP-8	SZHP (Packaged3Phase)	1	34	0	HSPF	8.30	36	SEER EER	14.00 12.20	NoEconomizer	N
HP-9	SZHP (Packaged3Phase)	1	34	0	HSPF	8.30	36	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-10	SZHP (Packaged3Phase)	1	47	0	HSPF	8.30	50	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-11	SZHP (Packaged3Phase)	1	47	0	HSPF	8.30	50	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-12	SZVAVHP (Packaged3Phase)	1	69	0	COP	3.40	73	EER	12.0	DifferentialDryBulb	N
HP-13	SZVAVHP (Packaged3Phase)	1	85	0	COP	3.40	92	EER	12.2	DifferentialDryBulb	N
HP-14	SZHP (Packaged3Phase)	1	47	0	HSPF	8.30	50	SEER EER	16.20 11.70	DifferentialDryBulb	N
HP-15	SZVAVHP (Packaged3Phase)	1	97	0	COP	3.40	101	EER	12.9	DifferentialDryBulb	N
FC-2/CU-2	SZHP (Split1Phase)	1	19	0	HSPF	13.000	19	SEER EER	22.000 12.500	NoEconomizer	N
FC-1/CU-1	SZHP (Split1Phase)	1	19	0	HSPF	13.000	19	SEER EER	22.000 12.500	NoEconomizer	N

[1] *Status: N - New, A – Altered, E – Existing*

Project Name:	Gavilan CollegeSan Benito County Campus	NRCC-PRF-01-E	Page 9 of 37
Project Address:	505 Fairview Road Hollister 95023	Calculation Date/Time:	08:21, Wed, Dec 15, 2021
Input File Name:	QKA-082_Gavilan_DSA.cibd19x		

H2. FAN SYSTEMS SUMMARY[1]

1	2	3	4	5	6	7	8	9	10	11	12	13
				Supply Fan			Return Fan					
Name or Item Tag	**System Type packaged, DOAS, etc.**	**Design OA CFM**	**CFM**	**BHP**	**Watts**	**Control**	**CFM**	**BHP**	**Watts**	**Control**	**Economizer Type (if present)**	**Status[2]**
HP-1	SZHP	497	1605	0.740	645.3	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N
HP-2	SZHP	507	1605	0.740	645.3	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-3	SZHP	406	1605	0.740	645.3	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-4	SZHP	391	1605	0.740	645.3	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-5	SZHP	531	1600	0.740	645.3	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-6	SZVAVHP	1701	4000	1.950	1680.8	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
HP-7	SZVAVHP	2449	4000	1.950	1680.8	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
HP-8	SZHP	189	1200	0.540	470.9	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N
HP-9	SZHP	0	1200	0.540	470.9	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-10	SZHP	669	1990	0.960	837.2	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-11	SZHP	733	1990	0.960	837.2	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-12	SZVAVHP	860	2400	1.610	1387.8	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
HP-13	SZVAVHP	408	3000	1.300	1120.6	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
HP-14	SZHP	543	1980	0.960	837.2	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N
HP-15	SZVAVHP	816	3400	1.650	1422.2	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
FC-2/CU-2	SZHP	0	380	0.057	49.4	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N
FC-1/CU-1	SZHP	0	380	0.057	49.4	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N

[1] *Status: N - New, A – Altered, E – Existing*

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DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

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SHEET TITLE

TITLE 24 ENERGY CALCULATIONS

SHEET NUMBER

T-1.1

H3. EXHAUST FAN SUMMARY

1	2	3	4	5	6	7
System ID	Zone Name	Qty	CFM	Motor BHP	Motor Watts	Total Static Pressure (in H20)
Cafe BOH400	9-Cafe BOH	1	1,300	0.250	218.0	0.79

H4. Wet System Equipment (boilers, chillers, cooling towers, etc.)

1	2	3	4	5	6	7	8	9	10	11	12
Name or Item Tag	Equipment Type	Qty	Vol (gal)	Rated Capacity (kBtu/h)	Efficiency	Standby Loss	Pumps				Status[1]
							Qty	GPM	HP	VSD (Y/N)	

[1] Status: N – New, A – Altered, E – Existing

H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
HP-1	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
HP-2	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-3	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-4	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-5	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control

H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
HP-6	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-7	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-8	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
HP-9	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-10	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-11	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-12	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-13	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
HP-14	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control

H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
HP-15	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
FC-2/CU-2	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
FC-1/CU-1	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
DHW-11 - SHW	NA	NA	NA	NA	Fixed Temperature Control, No DDC
DHW-2639 - SHW	NA	NA	NA	NA	Fixed Temperature Control, No DDC

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
1-Classroom	Education - Lecture/postsecondary classroom General - Corridors	0	30.51	0	497	0	1582	NA
2-Classroom	Education - Lecture/postsecondary classroom General - Corridors Exhaust - Toilets, public	0	32.15	0	507	0	2093	NA
3-Classroom	Education - Lecture/postsecondary classroom	0	27.09	0	406	0	1084	NA
4-Classroom	Education - Lecture/postsecondary classroom	0	26.04	0	391	0	1041	NA

H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
5-Classroom	Education - Lecture/postsecondary classroom Office - Office space General - Conference/meeting	0	33.87	0	531	0	1555	NA
6-Community Room	General - Conference/meeting General - Unoccupied	0	113.86	0	1701	0	3712	NA
7-Lobby	Office - Main entry lobbies General - Corridors Exhaust - Toilets, public Office - Office space	0	149.26	0	2449	0	8420	NA
8-Conference	General - Conference/meeting Office - Office space	0	9.66	0	189	0	789	NA
9-Cafe BOH	Exhaust - Kitchenettes General - Unoccupied	0	1.50	0	0	1300	693	NA
10-Classroom	Education - Lecture/postsecondary classroom Office - Office space General - Conference/meeting	0	43.66	0	669	0	1763	NA
11-Classroom	Education - Lecture/postsecondary classroom General - Corridors	0	43.09	0	733	0	2644	NA
12-Classroom	Education - Lecture/postsecondary classroom General - Corridors	0	54.36	0	860	0	2651	NA

H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
13-LRC	Assembly - Libraries (reading rooms and stack areas) Office - Office space Office - Occupiable storage rooms for dry materials	0	19.27	0	408	0	2722	NA
14-Classroom	Education - Lecture/postsecondary classroom	0	36.20	0	543	0	1448	NA
15-Classroom	Education - Lecture/postsecondary classroom	0	54.42	0	816	0	2177	NA
17-Elec/Mech	General - Unoccupied	0	0.35	0	0	0	232	NA
18-Elec/Mech	General - Unoccupied	0	0.51	0	0	0	341	NA

Multifamily or Hotel/Motel Occupancy? (if "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)	No
Does the Project include Zonal Systems?	No

H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
1-Classroom-Trm	1-Classroom	Uncontrolled	NA	NA	1605	NA	0.00	NA	NA	NA	☐
2-Classroom-Trm	2-Classroom	Uncontrolled	NA	NA	1605	NA	0.00	NA	NA	NA	☐
3-Classroom-Trm	3-Classroom	Uncontrolled	NA	NA	1605	NA	0.00	NA	NA	NA	☐
4-Classroom-Trm	4-Classroom	Uncontrolled	NA	NA	1605	NA	0.00	NA	NA	NA	☐

H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
5-Classroom-Trm	5-Classroom	Uncontrolled	NA	NA	1600	NA	0.00	NA	NA	NA	☐
6-Community Room-Trm	6-Community Room	VAVNoReheatBox	NA	NA	4000	2640	0.66	NA	NA	NA	☐
7-Lobby-Trm	7-Lobby	VAVNoReheatBox	NA	NA	4000	2640	0.66	NA	NA	NA	☐
8-Conference-Trm	8-Conference	Uncontrolled	NA	NA	1200	NA	0.00	NA	NA	NA	☐
9-Cafe BOH-Trm	9-Cafe BOH	Uncontrolled	NA	NA	1200	NA	0.00	NA	NA	NA	☐
10-Classroom-Trm	10-Classroom	Uncontrolled	NA	NA	1990	NA	0.00	NA	NA	NA	☐
11-Classroom-Trm	11-Classroom	Uncontrolled	NA	NA	1990	NA	0.00	NA	NA	NA	☐
12-Classroom-Trm	12-Classroom	VAVNoReheatBox	NA	NA	2400	1585	0.66	NA	NA	NA	☐
13-LRC-Trm	13-LRC	VAVNoReheatBox	NA	NA	3000	1980	0.66	NA	NA	NA	☐
14-Classroom-Trm	14-Classroom	Uncontrolled	NA	NA	1980	NA	0.00	NA	NA	NA	☐
15-Classroom-Trm	15-Classroom	VAVNoReheatBox	NA	NA	3400	2245	0.66	NA	NA	NA	☐
17-Elec/Mech-Trm	17-Elec/Mech	Uncontrolled	NA	NA	380	NA	0.00	NA	NA	NA	☐
18-Elec/Mech-Trm	18-Elec/Mech	Uncontrolled	NA	NA	380	NA	0.00	NA	NA	NA	☐

H8. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	Heat Pump Type	1st Hour Rating or Flow Rate (gal)	Tank Location or Ambient Condition
RHEEM - ELDS2-TB2	Electricity	Storage	2	50.00	6.0	kW	0.94	UEF	NA	NA	NA	NA	NA

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	Heat Pump Type	1st Hour Rating or Flow Rate (gal)	Tank Location or Ambient Condition
RHEEM - ELDB0-TB3	Electricity	Storage	2	80.00	12.0	kW	0.94	UEF	NA	NA	NA	NA	NA
Bradford White - LEH2W3-164D	Electricity	Storage	1	12.00	4.0	kW	0.94	EF	NA	NA	NA	NA	NA

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5	6
Occupancy Type [1]	Conditioned Floor Area [2] (ft²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance	
				Area Category Footnotes (Watts)	Tailored Method (Watts)
Classroom, Lecture, Training, Vocational Areas	13,796	8,820	713	0	0
Corridor Area	5,891	4,706	0	0	0
Restrooms	1,254	1,056	0	0	0
Office Area (<250 square feet)	1,520	882	0	0	0
Convention, Conference, Multipurpose and Meeting Area	4,143	2,803	0	0	0
Electrical, Mechanical, Telephone Rooms	1,120	410	0	0	0
Main Entry Lobby	3,782	2,726	0	0	0
Office Area (>250 square feet)	701	254	0	0	0
Kitchenette or Residential Kitchen	457	246	0	0	0

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5	6
Occupancy Type [1]	Conditioned Floor Area [2] (ft²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance	
				Area Category Footnotes (Watts)	Tailored Method (Watts)
Library (Reading Area)	1,644	1,000	52	0	0
Commercial/Industrial Storage (Warehouse)	641	240	0	0	0
Building Totals:	**34,949**	**23,143**	**765**	**0**	**0**

[1] See Table 140.6-C
[2] See NRCC-LTI-03-E for unconditioned spaces
[3] Lighting information for existing spaces modeled is not included in the table

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)

1	2	Installed Watts (Conditioned)			
		3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
A	A	41	According to §130.0(c)	24	984
B12	B12	120	According to §130.0(c)	6	720
B13	B13	130	According to §130.0(c)	5	650
B24	B24	240	According to §130.0(c)	3	720
B27	B27	270	According to §130.0(c)	24	6,480
B4	B4	40	According to §130.0(c)	15	600
B6	B6	40	According to §130.0(c)	11	440

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)

1	2	Installed Watts (Conditioned)			
		3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
B8	B8	80	According to §130.0(c)	2	160
C12	C12	141	According to §130.0(c)	2	282
C4	C4	47	According to §130.0(c)	2	94
D2	D2	28	According to §130.0(c)	10	280
D3	D3	46	According to §130.0(c)	1	46
D4	D4	60	According to §130.0(c)	11	660
D6	D6	90	According to §130.0(c)	1	90
F	F	24	According to §130.0(c)	41	963
G	G	19	According to §130.0(c)	7	133
H	H	72	According to §130.0(c)	53	3,816
H1	H1	72	According to §130.0(c)	21	1,512
K3 (3 @ 25W)	K3 (3 @ 25W)	75	According to §130.0(c)	2	150
K6 (6 @ 25W)	K6 (6 @ 25W)	150	According to §130.0(c)	2	300
M12	M12	144	According to §130.0(c)	1	144

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TITLE 24 ENERGY CALCULATIONS

SHEET NUMBER

T-1.2

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

		Installed Watts (Conditioned)			
1	2	3	4	5	6
Name or Item Tag	Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Installed Watts
M20	M20	240	According to §130.0(c)	1	240
M3	M3	36	According to §130.0(c)	2	72
M8	M8	96	According to §130.0(c)	21	2,016
N	N	65	According to §130.0(c)	8	520
P13	P13	92	According to §130.0(c)	2	184
P14	P14	99	According to §130.0(c)	2	198
P16	P16	114	According to §130.0(c)	2	228
P18	P18	166	According to §130.0(c)	2	332
P4	P4	28	According to §130.0(c)	3	84
P6	P6	43	According to §130.0(c)	1	43

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-2-Corridors	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	H	216.0	3	216	0
S-2-Corridors	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	F	47.0	2	47	0
S-3-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-4-Corridors	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	F	94.0	4	94	0
S-4-Corridors	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	H	432.0	6	432	0
S-5-Restroom	Restrooms	NA	0.00 0.00	F	47.0	2	47	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00					
S-5-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	C4	47.0	1	47	0
S-5-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	D2	28.0	1	28	0
S-5-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	C4	47.0	1	47	0
S-5-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-6-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-7-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00	B27	810.0	3	810	81

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00					
S-8-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00	F	23.5	1	24	0
S-8-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00	B13	650.0	5	650	65
S-9-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-9-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-9-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-10-Conference	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	B8	160.0	2	160	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	D2	56.0	2	56	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	D3	46.0	1	46	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	D4	180.0	3	180	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	D6	90.0	1	90	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	H1	1512.0	21	1512	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	G	76.0	4	76	0
S-11-Community Room	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00	A	123.0	3	123	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00					
S-12-4V Closet	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00	A	123.0	3	123	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	F	23.5	1	24	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	M20	240.0	1	240	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	M12	144.0	1	144	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	M8	1056.0	11	1056	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	G	57.0	3	57	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00					
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	F	23.5	1	24	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	M3	72.0	2	72	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	M8	960.0	10	960	0
S-13-Lobby	Main Entry Lobby	NA	0.00 0.00 0.00 0.00 0.00	K3 (3 @ 25W)	150.0	2	150	0
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	H	1008.0	14	1008	0
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	F	47.0	2	47	0
S-14-Corridor	Corridor Area	NA	0.00	H	936.0	13	936	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00 0.00 0.00					
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	D2	56.0	2	56	0
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	P6	43.0	1	43	0
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	P4	84.0	3	84	0
S-14-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	P13	184.0	2	184	0
S-15-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	C12	141.0	1	141	0
S-15-Restroom	Restrooms	NA	0.00 0.00 0.00	F	282.0	12	282	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00					
S-15-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	C12	141.0	1	141	0
S-15-Restroom	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	F	282.0	12	282	0
S-16-Office	Office Area (>250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	P14	198.0	2	198	0
S-16-Office	Office Area (>250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	D2	56.0	2	56	0
S-17-Conference	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00	P16	228.0	2	228	0
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0

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LICENSED ARCHITECT
AARON JOBSON
LICENSE # C30620
EXP OCTOBER 31, 2023
STATE OF CALIFORNIA

SIGNED: FEBRUARY 04, 2022

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GAVILAN COLLEGE

NEW COLLEGE CAMPUS

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GAVILAN JOINT COMMUNITY COLLEGE DISTRICT

DSA APP NO. 01-119906
ARCH PROJECT NO: 1897.00
DRAWN BY:
DRAWING SCALE:
PTN: N/A FILE NO: 43-C4

DSA SUBMITTAL
FEBRUARY 04, 2022

SHEET TITLE

TITLE 24 ENERGY CALCULATIONS

SHEET NUMBER

T-1.3

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B4	80.0	2	80	0
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B6	40.0	1	40	0
S-18-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B4	40.0	1	40	0
S-19-Cafe BOH	Kitchenette or Residential Kitchen	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	164.0	4	164	0
S-19-Cafe BOH	Kitchenette or Residential Kitchen	NA	0.00 0.00	A	82.0	2	82	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00					
S-20-Maintenance	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-20-Maintenance	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-21-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00 0.00	H	144.0	2	144	0
S-21-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00 0.00	B24	720.0	3	720	0
S-22-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	82.0	2	82	0
S-23-Conference	Convention, Conference, Multipurpose and Meeting Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	P18	332.0	2	332	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00					
S-24-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-25-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	F	70.5	3	71	0
S-25-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	H	576.0	8	576	0
S-25-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	D2	84.0	3	84	0
S-25-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	H	144.0	2	144	0
S-25-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	K6 (6 @ 25W)	300.0	2	300	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-26-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-26-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00 0.00	B12	360.0	3	360	0
S-27-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	H	360.0	5	360	0
S-27-Corridor	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	F	23.5	1	24	0
S-28-LRC	Library (Reading Area)	DaylightDimmingPlusOff- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00 0.00	N	520.0	8	520	52
S-28-LRC	Library (Reading Area)	NA	0.00 0.00 0.00 0.00 0.00 0.00	D4	480.0	8	480	0
S-29-Office	Office Area (<250 square feet)	NA	0.00 0.00	B6	80.0	2	80	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00					
S-29-Office	Office Area (<250 square feet)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B6	80.0	2	80	0
S-30-Storage	Commercial/Industrial Storage (Warehouse)	NA	0.00 0.00 0.00 0.00 0.00 0.00	B6	240.0	6	240	0
S-31-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-32-Classroom	Classroom, Lecture, Training, Vocational Areas	DaylightDimmingPlusOff- none specified -- none specified -- none specified -	0.10 0.00 0.00 0.00 0.00 0.00	B27	810.0	3	810	81
S-32-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00 0.00	B12	360.0	3	360	0
S-32-Classroom	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	82.0	2	82	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00					
S-34-Elec/Mech	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-34-Elec/Mech	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-35-Elec/Mech	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-35-Elec/Mech	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0
S-35-Elec/Mech	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00 0.00	A	41.0	1	41	0

K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Building Level Controls

1	2
Mandatory Demand Response §110.12(c)	**Shut-Off Controls §130.1(c)**
Required	Required

Area Level Controls (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)

4	5	6	7	8	9	10
Area Description	**Area Category Primary Function Area**	**Area Controls 130.1(a)**	**Multi-Level Controls 130.1(b)**	**Shut-Off Controls 130.1(c)**	**Primary Daylighting 130.1(d)**	**Secondary Daylighting 140.5(d)**

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and 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/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Indoor Lighting	NRCI-LTI-01-E - Must be submitted for all buildings
	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
	NRCA-LTI-04-A - Demand Responsive Lighting Controls
Mechanical	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	NRCA-MCH-03-A Constant Volume Single Zone HVAC
	NRCA-MCH-05-A Air Economizer Controls
	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints
	NRCA-MCH-07-A Supply Fan Variable Flow Controls
	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units
	NRCA-MCH-20 Multifamily Ventilation

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Matt Hargadon	Signature: Matt Hargadon
Company: Guttmann & Blaevoet Consulting Engineers	
Address: 2351 Powell St	Signature Date: 2021-12-15
City/State/Zip: San Francisco CA 94133	CEA/ HERS Certification Identification (if applicable):
Phone: 4156554000	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. 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)
3. 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 and Part 6 of the California Code of Regulations.
4. 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.
5. 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 builder provides to the building owner at occupancy.

Responsible Envelope Designer Name: Aaron Jobson	Signature:	
Company: Quattrocchi Kwok Architects		
Address: 636 Fifth Street	Date Signed: 12-15-21	
City/State/Zip: Santa Rosa CA 95404		
Phone: 707.576.0829	Title: Principal	License #: C30620
Responsible Lighting Designer Name: Eldridge O. Bell	Signature:	
Company: Aurum Consulting Engineers		
Address: 404 W. Franklin St. #100	Date Signed: 12/15/2021	
City/State/Zip: Monterey CA 93940		
Phone: 831-646-3330	Title: Electrical Engineer	License #: E17789
Responsible Mechanical Designer Name: - specify - William Estes	Signature:	
Company: Axiom Engineers, Inc.		
Address: 22 Lower Ragsdale, Suite A	Date Signed: 12/15/2021	
City/State/Zip: Monterey, CA 93940		
Phone: 831.649.8000	Title: Mechanical Engineer	License #: M24908

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SIGNED: FEBRUARY 04, 2022

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FEBRUARY 04, 2022
SHEET TITLE

TITLE 24 ENERGY CALCULATIONS

SHEET NUMBER

T-1.4