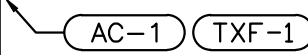


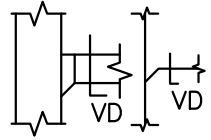
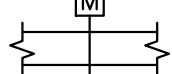
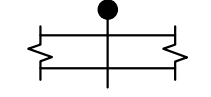


MECHANICAL SYMBOLS LIST			
	TXF-1	EQUIPMENT SYMBOL	DUCTWORK
		POINT OF NEW CONNECTION TO EXISTING	
AIR DEVICES			
		SIDEWALL/DUCT MOUNTED GRILLE--SUPPLY	
DUCT ACCESSORIES			
		VOLUME DAMPER W/ ACCESS DOOR	
		MOTORIZED DAMPER W/ ACCESS DOOR	
		FIRE DAMPER W/ ACCESS DOOR	

MECHANICAL ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AL	ACOUSTIC LINING
MD	MOTORIZED DAMPER
CFM	CUBIC FEET OF AIR PER MINUTE
DN	DOWN
EER	ENERGY EFFICIENCY RATIO
FC	FLEXIBLE CONNECTION
FD/AD	FIRE DAMPER W/ACCESS DOOR
FD	FIRE DAMPER W/FUSIBLE LINK
VD	VOLUME DAMPER
BOE	BOTTOM OF EQUIPMENT
OAF	OUTSIDE AIR FAN
OA	OUTSIDE AIR

APPLICABLE CODES	
A.	2022 CALIFORNIA BUILDING CODE.
B.	2022 CALIFORNIA MECHANICAL CODE.
C.	2022 CALIFORNIA PLUMBING CODE.
D.	2022 CALIFORNIA ELECTRICAL CODE.
E.	2019 CALIFORNIA ENERGY CONSERVATION CODE.

CALIFORNIA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE CALIFORNIA BUILDING CODE, 2022, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

- VENTILATION FOR ALL AREA SHALL COMPLY WITH CALIFORNIA ENERGY CODE 2019, SECTION 120.1--REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY.
- A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE.
- REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE--RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
- THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE CALIFORNIA MECHANICAL CODE 2022:
 - VENTILATION SYSTEM BALANCING CALIFORNIA MECHANICAL CODE 2022 -- 402
- THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
 - DUCT CONSTRUCTION AND INSTALLATION-- CALIFORNIA MECHANICAL CODE 2022 -- 603
 - AIR FILTERS -- CALIFORNIA MECHANICAL CODE 2022 -- 401 (FILTERS SHALL BE A MINIMUM OF MERV 8 AS REQUIRED BY CENC 120.1(C))
 - MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS -- CALIFORNIA MECHANICAL CODE 2022 -- 608
- ALL MECHANICAL EQUIPMENT SHALL BE TESTED BY A CALIFORNIA CERTIFIED ACCEPTANCE TEST TECHNICIAN.

GENERAL NOTES

- CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING A BID AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
- ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
- BEFORE PROCEEDING WITH ANY WORK IN OCCUPIED OR USED AREAS, THE CONTRACTOR SHALL APPLY TO OWNER FOR PERMISSION TO ENTER SUCH AREAS. THE CONTRACTOR IS OBLIGED TO PERFORM HIS WORK ONLY AT THE TIMES DESIGNATED BY OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THE WORK PERFORMED AFTER HOURS OR ON OFF--DAYS WITHOUT PRIOR WRITTEN APPROVAL.
- THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
- THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
- CONTRACTOR SHALL ASCERTAIN THE APPROPRIATE METHOD FOR BRINGING THE UNITS INTO AND THROUGH THE BUILDING TO POSITION UNIT IN LOCATION SHOWN ON THE PLANS. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTIVE SPACES. COORDINATE WITH BUILDING OWNER APPROPRIATE TIMES OF DAY SUCH EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
- DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
- WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
- CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
- PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTION TO MINIMIZE SHUTDOWN TIME.

SCOPE OF WORK

SCOPE OF WORK

- THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS, FLOOR PLAN(S) DESIGN, DETAIL DRAWINGS, NOTES, RFI'S, ETC. FOR THIS PROJECT. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
- THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
- THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

- SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. MULTI--ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
- PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
- SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL (FIBERGLASS INSULATION IS NOT ACCEPTABLE).
- INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- ACCESS DOORS ARE REQUIRED FOR ALL BUILDING SERVICE VALVES THAT RUN THROUGH THE SPACE, AND ACCESS DOOR SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL. COORDINATE ALL LOCATIONS OF ACCESS DOORS WITH THE ARCHITECT.
- REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
- THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
- MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE
- ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST, OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FAILURE OF ANY DUCTWORK SYSTEM OR EQUIPMENT TO FUNCTION PROPERLY UPON COMPLETION OF HIS WORK UPON SAID SYSTEM OR EQUIPMENT.
- SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.
- ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON--SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC) AND CONDITIONS.
- INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
- THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
- SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES, WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
- WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL APPLY. DEFINITIONS:
 - "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
 - "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
 - "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

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MECHANICAL
GENARL NOTES
SYMBOL AND
ABBREVIATIONS

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MECHANICAL SPECIFICATIONS

SECTION 233113 – METAL DUCTS

- 1.1 CONSTRUCTION
- A. EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC SMACNA DUCT PRESSURE CLASSIFICATIONS SHOWN ON THE CONTRACT DRAWINGS. WHERE NO PRESSURE CLASSES ARE SPECIFIED BY THE DESIGNER, THE SMACNA 2–1/2 INCH WG PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THESE STANDARDS, REGARDLESS OF THE VELOCITY IN THE DUCT.

B. ALL DUCTWORK SHALL BE CONSTRUCTED TO SMACNA 2” WG DESIGN AND NOT LESS THAN THE FOLLOWING STANDARDS:

1. DUCTWORK SHALL BE TRANSVERSELY JOINTED BY CONNECTING SEAMS OF COMPANION ANGLES, FORMED FROM 1–1/2”X1–1/2”X1/8” GALVANIZED ANGLES, TACK-WELDED OR RIVETED TO THE DUCT. THE ANGLE FRAME SHALL BE CONTINUOUSLY FLANGED UP INTO UPRIGHT OF ANGLE AND EACH CORNER SHALL BE FILLED IN AND GROUND SMOOTH. JOINTS SHALL BE GASKETED WITH 1/8” THICK REINFORCED GASKET, OVERLAPPED AT CORNERS, GASKET SIMILAR TO 3M–1202 OR APPROVED EQUAL.

2. RECTANGULAR FITTINGS AND ALL TRANSITION PIECES FROM RECTANGULAR TO ROUND SHALL BE NO. 16 GAUGE ALL WELDED CONSTRUCTION.

3. HORIZONTAL DUCTS SHALL BE SUPPORTED ON NOT MORE THAN 6’ CENTERS. VERTICAL RISERS SHALL BE SUPPORTED AT EACH FLOOR.

4. LONGITUDINAL SEAMS FOR RECTANGULAR DUCTWORK SHALL BE PITTSBURGH LOCK SEAMS WITH SEALING

5. 5. COMPOUND, EQUAL TO BENJAMIN FOSTER NO. 30–03 INSERTED INTO SEAM. ALL SEAMS SHALL BE BRUSHED WITH NO. 30–02 AND COVERED WITH APPROVED SEALING TAPE.

6. RECTANGULAR DUCTWORK 18 GAUGE AND HEAVIER, FILLER RODS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR IRON AND STEEL GAS WELDING RODS, ASTM 215; AWG A5.2.

7. 7. ALL FITTINGS SUCH AS ELBOWS, TEES, ETC., SHALL BE NO. 20 GAUGE ZINC COATED STEEL. ELBOWS SHALL BE OF FIVE (5) PIECE WELDED AIRTIGHT CONSTRUCTION.

C. WHERE LATEST EDITION OF SMACNA DOES NOT CLEARLY STATE GAUGES AND/OR STIFFENERS TO BE USED OR, WHERE SMACNA STANDARDS REQUIRE INTERPRETATION, THE FOLLOWING MINIMUM METAL GAUGES AND BRACING SHALL BE USED:

USG

MAX. SIDE INCHES

TRANSVERSE JOINTS AND BRACING

22

UP TO 12

S SLIP, DRIVE SLIP, ONE INCH POCKET LOCK ON 8 FOOT CENTERS

22

13 TO 24

1”X1”X1/8” ANGLES ON 4 FOOT CENTERS

20

25 TO 35

1”X1”X1/8” ANGLES ON 2 FOOT CENTERS

D. PROVIDE TAPPING IN DUCTS FOR THERMOMETERS WHERE SPECIFIED. IN ADDITION, PROVIDE AN AIRTIGHT PLUGGED TAPPING LOCATED AS FOLLOWS:

1. UPSTREAM OF EACH REHEAT COIL AND VAV BOX.

2. DOWNSTREAM OF EACH REHEAT COIL AND VAV BOX.

E. FLAT OVAL OR ROUND DUCTWORK MAY BE PROVIDED IN LIEU RECTANGULAR DUCTWORK WITH THE REINFORCEMENT FOR FLAT SIDES SAME AS SPECIFIED FOR THE RECTANGULAR DUCTWORK, AND AS PER SMACNA FLAT OVAL DUCT CONSTRUCTION STANDARDS SHOWN IN FIG. 3–6 AND AS SHOWN IN FIG. 3–1 AND 3–2 FOR ROUND DUCTWORK.

F. ALL DUCTWORK SHALL BE SEALED TO CLASS “A” AND LEAK TESTED TO MEAT SMACNA CLASS 6 FOR RECTANGULAR AND CLASS 3 FOR ROUND DUCTS.
- 1.2 MATERIALS

C. SINGLE–WALL RECTANGULAR DUCTS AND FITTINGS.

D. SINGLE–WALL ROUND AND FLAT–OVAL DUCTS AND FITTINGS.

E. SHEET METAL MATERIALS:

1. GALVANIZED SHEET STEEL.

2. STAINLESS–STEEL SHEETS.

3. ALUMINUM SHEETS.

4. FACTORY–APPLIED ANTI–MICROBIAL COATING.

D. DUCT LINER:

1. FIBROUS GLASS, TYPE I, FLEXIBLE.

a. WITH ANTI–MICROBIAL EROSION–RESISTANT COATING.

2. FLEXIBLE ELASTOMERIC.

3. NATURAL FIBER.

- E. SEALANT MATERIALS:
1. TWO–PART TAPE SEALING SYSTEM.

2. WATER–BASED JOINT AND SEAM SEALANT.

3. SOLVENT–BASED JOINT AND SEAM SEALANT.

4. FLANGED JOINT SEALANT.

5. FLANGE GASKETS.

6. ROUND DUCT JOINT O–RING SEALS.
- 1.3 DUCT CLEANING
- A. CLEAN EXISTING DUCT SYSTEM(S) BEFORE TESTING, ADJUSTING, AND BALANCING.
- B. CLEAN THE FOLLOWING ITEMS:
1. AIR OUTLETS AND INLETS.

2. SUPPLY, RETURN, AND EXHAUST FANS.

3. AIR–HANDLING UNITS.

4. COILS AND RELATED COMPONENTS.

5. RETURN–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.

6. SUPPLY–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.

7. DEDICATED EXHAUST AND VENTILATION COMPONENTS AND MAKEUP AIR SYSTEMS.
- 1.4 DUCT SCHEDULE
- A. ALL DUCTS SHALL BE GALVANIZED STEEL EXCEPT AS FOLLOWS:
8. MOIST ENVIRONMENT DUCT MATERIAL: ALUMINUM.

9. END OF SECTION 233113

SECTION 233713 – DIFFUSERS, REGISTERS, AND GRILLES

- 1.1 PRODUCTS
- A. DIFFUSERS, REGISTERS AND GRILLES SHALL BE FURNISHED AND INSTALLED FOR CAPACITIES AND IN LOCATIONS INDICATED ON DRAWINGS. ALL REGISTERS AND DIFFUSERS SHALL BE PRIME COATED STEEL OR EXTRUDED ALUMINUM FINISHED UNLESS OTHERWISE NOTED IN BAKED WHITE ENAMEL.
- B. MANUFACTURERS: TITUS
1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING:

a. CARNES.

b. HART & COOLEY INC.

c. KRUEGER.

d. METALAIRE, INC.

e. NAILOR INDUSTRIES INC.

f. RUSKIN
- C. ALL DIFFUSERS SHALL HAVE CONTROLLING/EQUALIZING GRID AND OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.
- D. ALL DUCTED RETURN REGISTERS SHALL HAVE AN OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

END OF SECTION 233713

SECTION 230713 – DUCT INSULATION

- 1.1 QUALITY ASSURANCE
- SURFACE–BURNING CHARACTERISTICS: ALL INSULATION SHALL HAVE COMPOSITE (INSULATION JACKET OR FACING AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) A FLAME–SPREAD INDEX OF 25, AND SMOKE–DEVELOPED INDEX OF 50 FOR INSULATION INSTALLED INDOOR, 75, AND SMOKE–DEVELOPED INDEX OF 150 FOR INSULATION INSTALLED OUTDOORS; ACCORDING TO ASTM E 84.
- 1.2 FIELD QUALITY CONTROL
- A. FIELD INSPECTIONS: BY OWNER–ENGAGED AGENCY.
- 1.3 INDOOR DUCT AND PLENUM INSULATION SCHEDULE;
- A. CONCEALED, RECTANGULAR, ROUND AND FLAT–OVAL, OUTDOOR AIR DUCT INSULATION:
- B. FLEXIBLE ELASTOMERIC, MINERAL–FIBER BLANKET, MINERAL–FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:
- UNCONDITIONED SPACES WITHIN BUILDING: R–4.2

WITHIN BUILDING ENVELOPE ASSEMBLY: R–8

OUTSIDE OF BUILDING: R–8

- 1.4 ITEMS NOT INSULATED:
1. FIBROUS–GLASS DUCTS.

2. METAL DUCTS WITH DUCT LINER OR SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE ANDASHRAE/IESNA 90.1.

3. FACTORY–INSULATED FLEXIBLE DUCTS.

4. FACTORY–INSULATED PLENUMS AND CASINGS.

5. FLEXIBLE CONNECTORS.

6. VIBRATION–CONTROL DEVICES.

7. FACTORY–INSULATED ACCESS PANELS AND DOORS.

8. DUCTS THAT HAVE INTERNAL ACOUSTICAL LINING.

- 1.5 PRODUCTS
- A. THE FOLLOWING INSULATION MANUFACTURERS WILL BE ACCEPTABLE:
1. JOHNS–MANVILLE

2. OWENS–CORNING

- 1.6 ACOUSTICAL TREATMENT
1. WHERE SHOWN ON THE DRAWINGS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1.5” THICK R–6 AS MANUFACTURED BY DUCTMATE, 1–1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED,

END OF SECTION 230713

SECTION 230593 – TESTING, ADJUSTING, AND BALANCING FOR HVAC

- 1.1 SUMMARY
- A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:
1. AIR SYSTEMS: CONSTANT VOLUME

- 1.2 QUALITY ASSURANCE
- A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.
- 1.3 EXECUTION
- A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO NEW WORK PRIOR TO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- C. THE REPORT SHALL INDICATE A SCHEMATIC DIACRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.
- D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.
- E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER’S RECOMMENDATIONS.
- F. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS S3ECTION WITH THE BUILDING MANAGER. BALANCING WORK SHALL NOT CONFLICT WITH OTHER WORK SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIED TIME.
- G. ALL INSTRUMENTS USED FOR TAB SHALL BE MAINTAINED IN GOOD WORKING CONDITION AND ACCURATELY CALIBRATED.
- H. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN VALUES.
- I. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCHITECT TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.
- J. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.

- END OF SECTION 230593

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4	06/26/24	City Comments

Sheet Title:

MECHANICAL SPECIFICATIONS

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

M002

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments

Sheet Title:

P2 LEVEL-
MECHANICAL
FLOOR PLAN

DRAWN BY: NYE

DWG. DATE: 12.30.22

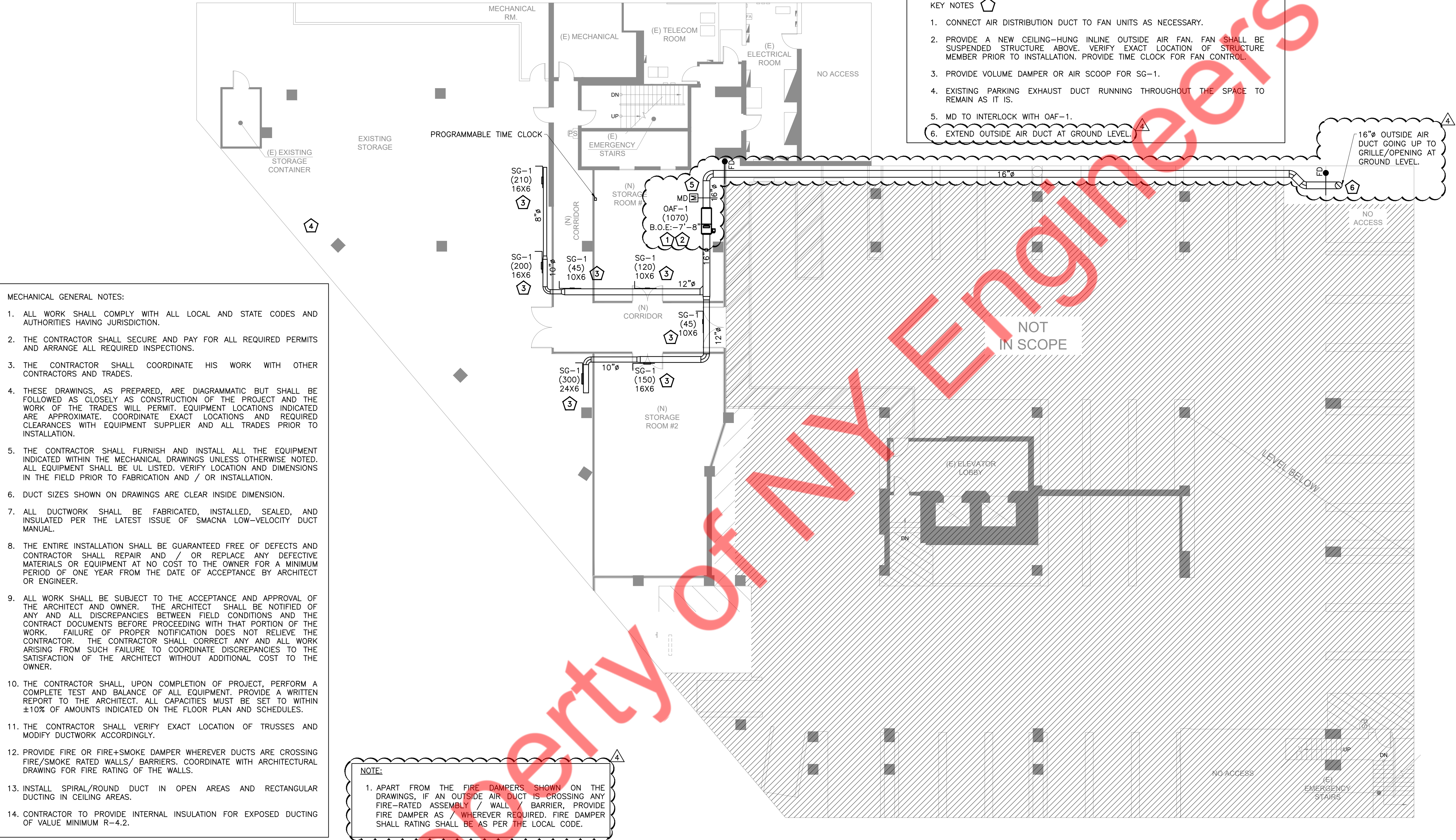
REVIEWED BY: NYE

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SHEET:

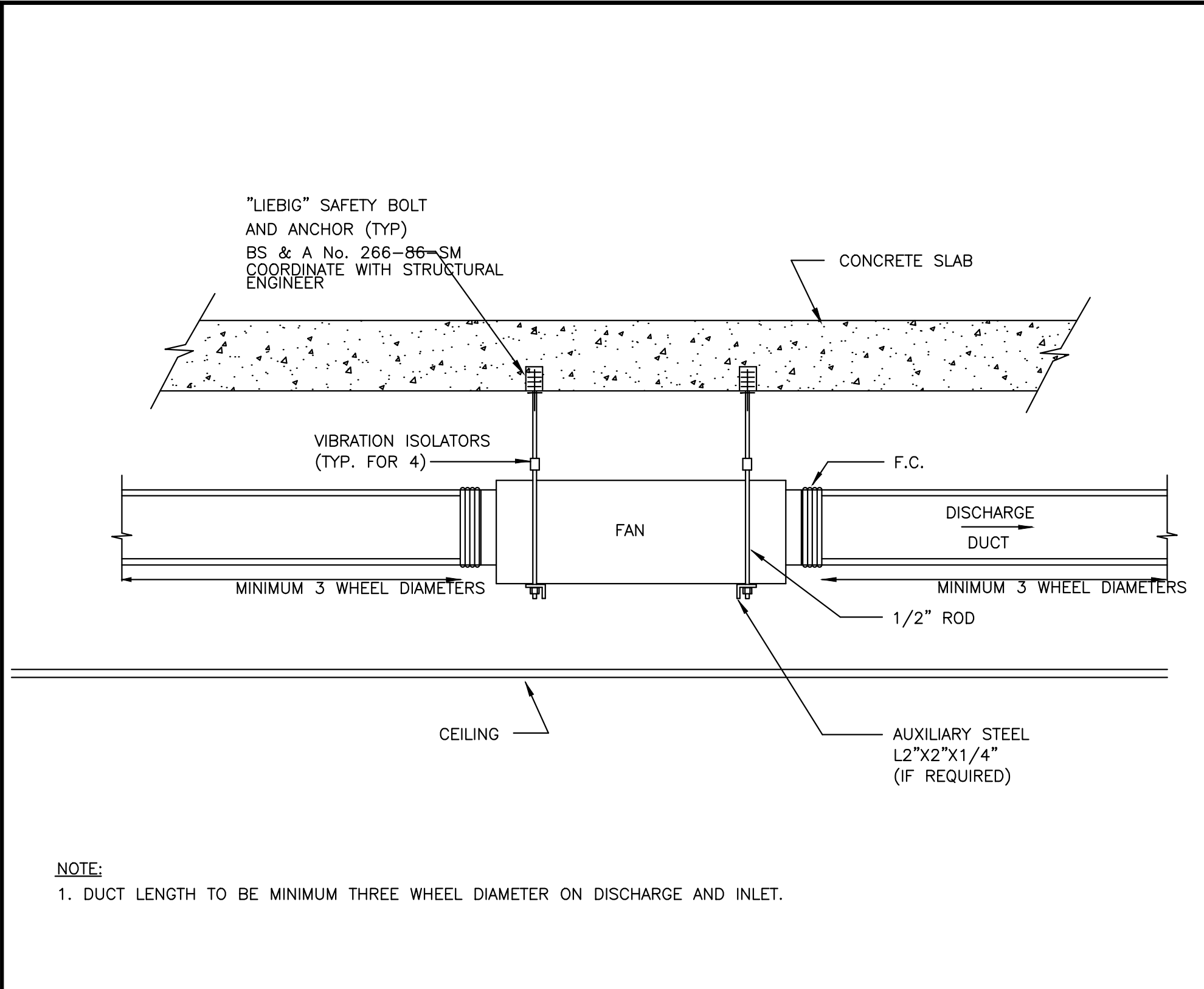
M101



P2 LEVEL- MECHANICAL FLOOR PLAN

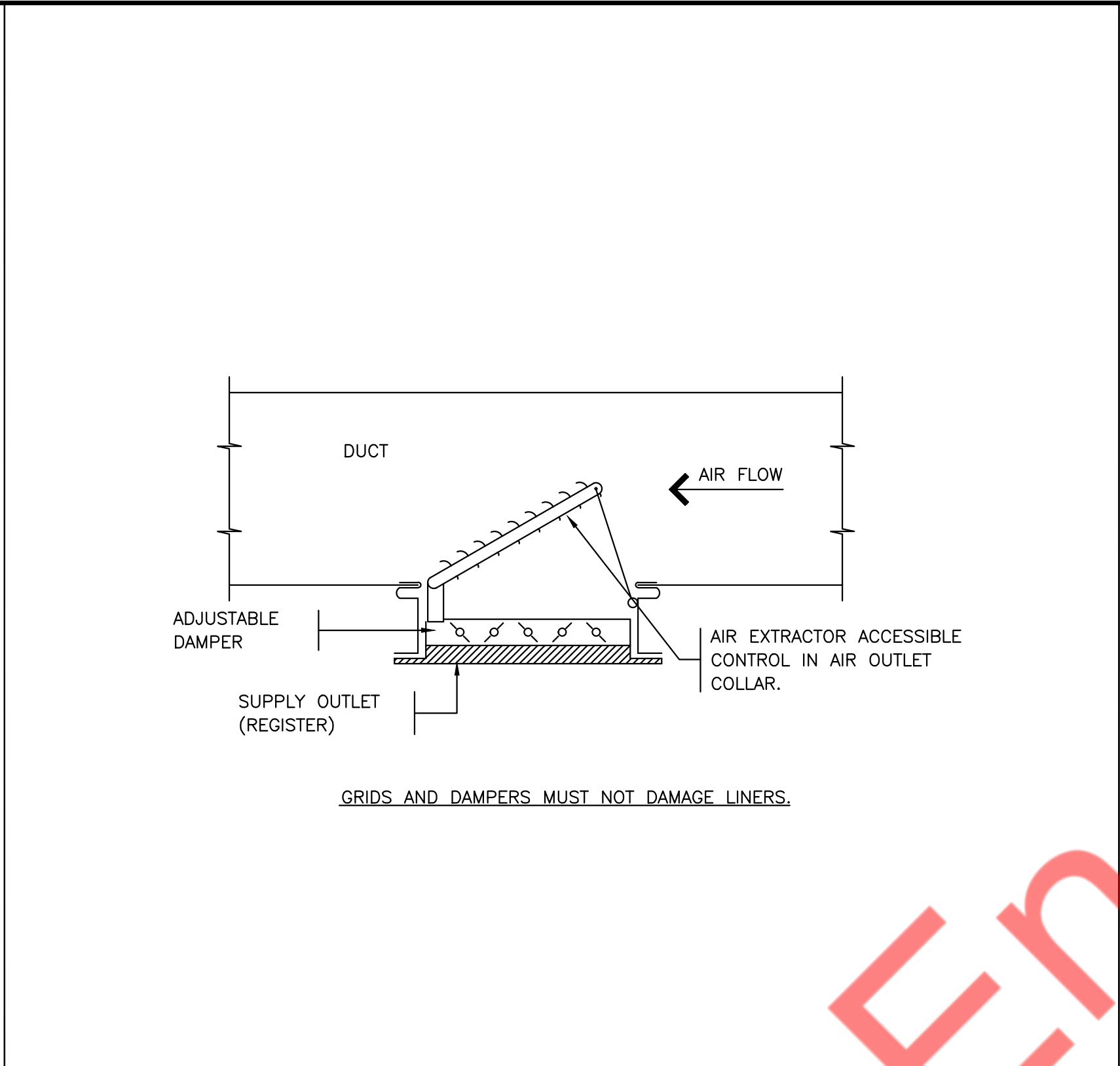
SCALE
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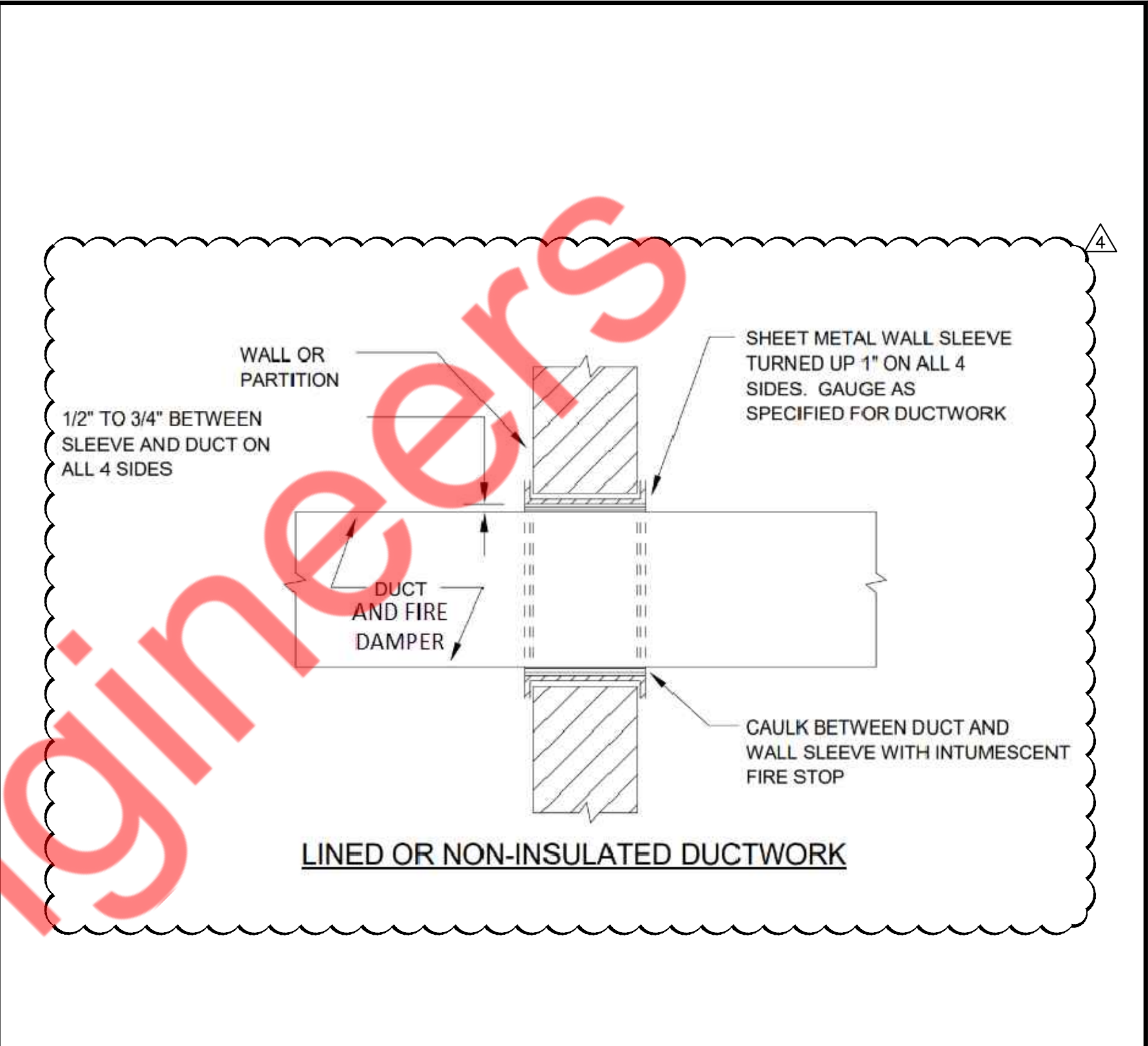
1
M501
N.T.S

INLINE FAN DETAILS



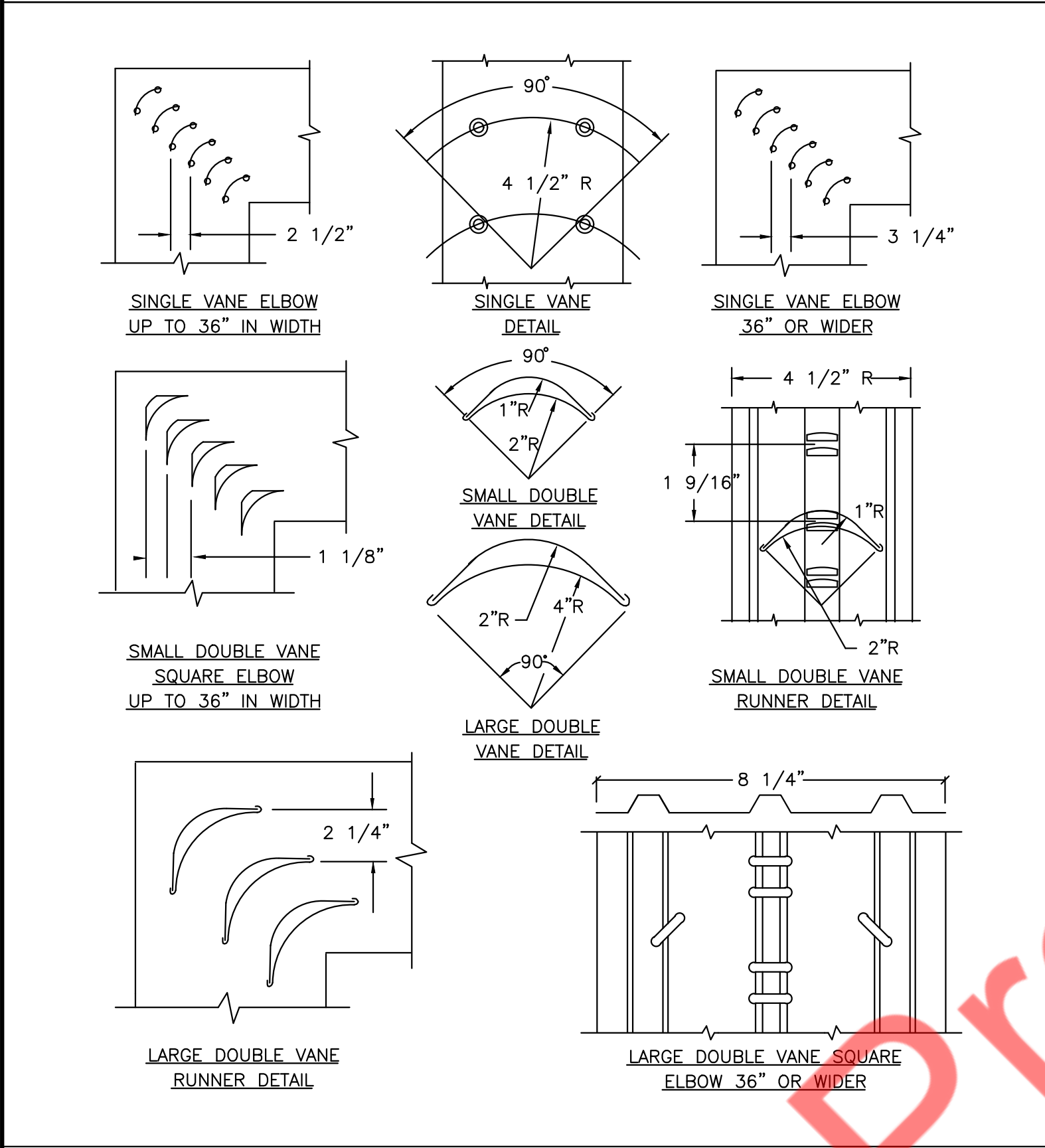
2
M501
N.T.S

REGISTER CONNECTION DETAILS



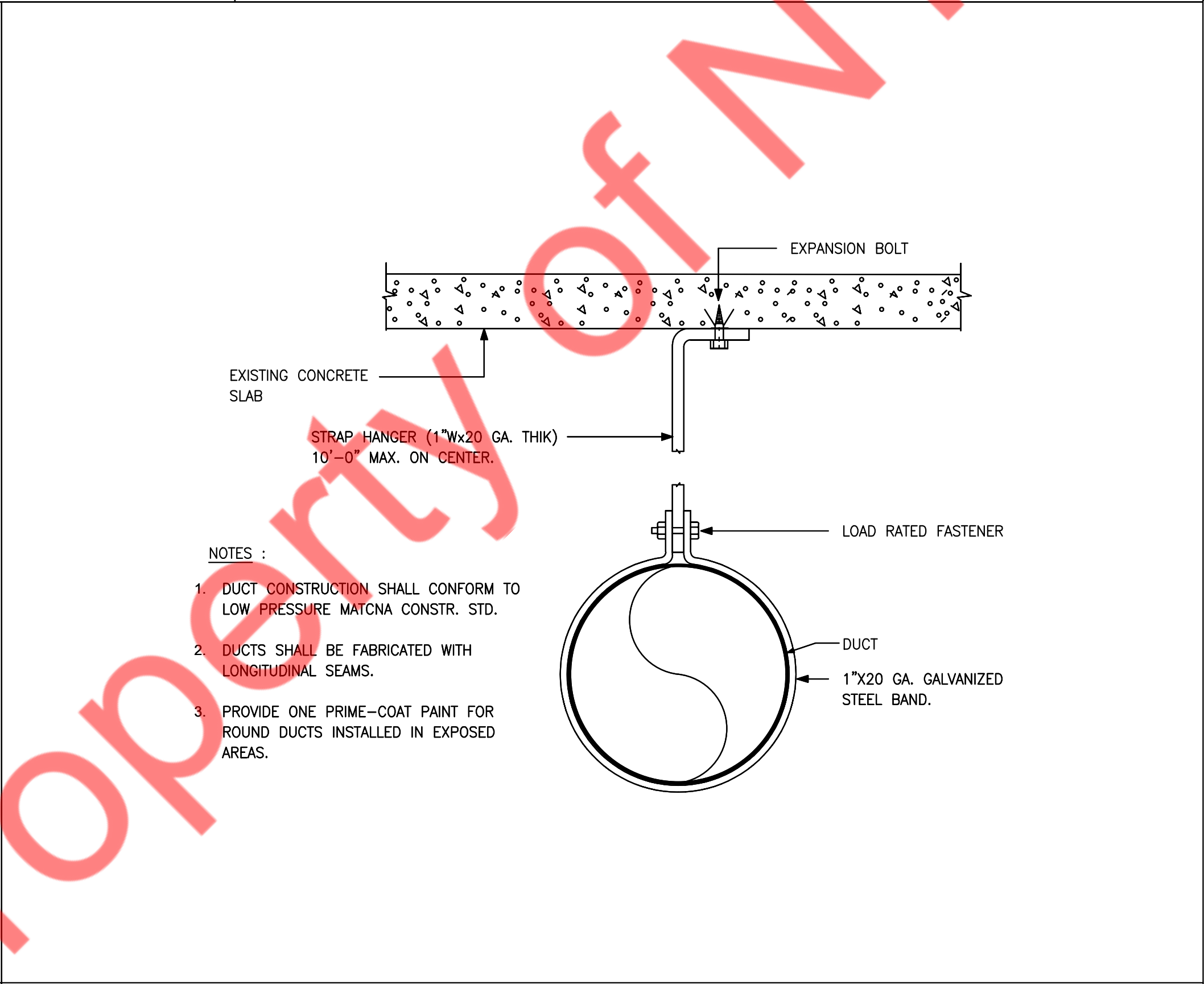
3
M501
N.T.S

WALL PENETRATION DETAIL



4
M501
N.T.S

LOW VELOCITY DUCTWORK ELBOWS



5
M501
N.T.S

METHOD OF HANGING DUCTWORK

Project Owner:

alo

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MECHANICAL
DETAILS

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M501

OUTSIDE AIR FAN SCHEDULE										
UNIT ID	MANUFACTURER	CFM	ESP(IN.W.G.)	RPM	HP	VOLTS/PH	FLA(A)	WEIGHT (LBS)	MODEL	NOTES
OAF-1	GREENHECK	1070	1.48	2352	1	115/1	13	80	SQ-9-M1-VG	1,2,3,4,5,6
REMARK:										
1. THERMAL OVERLOAD PROTECTION.										
2. AMCA AIR & SOUND CERTIFIED.										
3. 2 YEARS PART WARRANTY.										
4. TWO ACCESS DOOR FOR EASY ACCESS.										
5. PROVIDE 2" THICKNESS MERV-8 FILTER.										
6. INTERLOCK OAF-1 WITH PROGRAMMABLE TIME CLOCK.										

VENTILATION CALCULATION AS PER CALIFORNIA ENERGY CODE 2019 - TABLE 120.1-A & B						
ROOM NAME	AREA (SQ.FT.)	AREA OUTDOOR AIR RATE	REQUIRED OA (CFM)	PROVIDED OA (CFM)	EXHAUST AIRFLOW RATE (CFM/SQ.FT OR CFM/UNIT)	TOTAL EXHAUST (CFM)
		CFM/SQ.FT	(CFM)			
STORAGE 1	806	0.15	121	1070	0	0
STORAGE 2	1002	0.15	150		0	0
EXISTING STORAGE	4715	0.15	707		0	0
CORRIDOR	590	0.15	89		0	0
					0	0
TOTAL			1067			0

SCHEDULE OF GRILLES/DIFFUSER				MAKE: TITUS	
TAG	TYPE	CFM RANGE	DIMENSION(IN)	MODEL NO.	MAX NC dBA
SG-1	SUPPLY GRILLE	0-500	SEE ON PLAN	S300FL	25
NOTES FOR DIFFUSERS					
1. ALL GRILLES : CONTRACTOR SHALL COORDINATE WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS PLANS TO ENSURE PROPER AIR DEVICE BORDER SELECTION.					
2. COORDINATE COLOR/FINISH WITH ARCHITECT.					

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MECHANICAL
SCHEDULES

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M601

ELECTRICAL SYMBOLS LIST				GENERAL NOTES	
LIGHTING		ELECTRICAL ABBREVIATIONS			<div>1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CURRENT VERSION OF NATIONAL ELECTRICAL CODE (NEC), LOCAL JURISDICTION REQUIREMENTS AND ALL GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.</div> <div>2. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR FAILURE TO DO SO.</div> <div>3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.</div> <div>4. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER IN ORDER TO MAINTAIN FIRE RATING. ALL PENETRATIONS SHALL BE SLEEVED AND SEALED WATERTIGHT.</div> <div>5. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.</div> <div>6. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.</div> <div>7. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.</div> <div>8. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.</div> <div>9. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.</div> <div>10. CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE-EXISTING CONDITIONS OR BETTER.</div> <div>11. MINIMUM SIZE OF CONDUIT SHALL BE ¾", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.</div> <div>12. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.</div> <div>13. PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CONCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.</div> <div>14. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.</div> <div>15. FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.</div> <div>16. ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAINLIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.</div> <div>17. ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.</div> <div>18. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF NEW WORK WITH THE GENERAL CONTRACTOR AND OTHER ASSOCIATED TRADES IN A TIMELY MANNER. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.</div> <div>19. ALL CONDUITS AND EQUIPMENT TO BE CONCEAL ED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.</div> <div>20. ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.</div> <div>21. OUTLET BOXES AND JUNCTION BOXES ON OPPOSITE SIDES OF FIRE-RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, UNLESS FIRE-RATED BOXES OR PUTTY PADS ARE UTILIZED.</div> <div>22. COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITRH THE ENGINEER AND OWNER BEFORE INSTALLATION.</div> <div>23. COORDINATE THE MOUNTING HEIGHT AND LOCATION OF RACEWAYS, COMMUNICATIONS OUTLETS, AND RECEPTACLES WITH THE ARCHITECTURAL CASEWORK DRAWINGS AND DETAILS. COORDINATE LOCATIONS OF LIGHT FIXTURES, SWITCHES, AND RELATED DEVICES WITH THE ARCHITECTURAL DRAWINGS AND DETAILS.</div> <div>24. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL LUMINAIRES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.</div> <div>25. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.</div> <div>26. LIGHTING FIXTURES PROVIDED WITH EMERGENCY BATTERY PACKS AND INDICATED WITH SWITCH CONTROL SHALL BE WIRED WITH BATTERY CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCH CONTROL.</div> <div>27. NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT NUMBERS IN PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD.</div>
	LIGHTING FIXTURE AND OUTLET BOX. HALF SHADED FIXTURE OR "EM" INDICATES FIXTURES WITH INTEGRAL BATTERY PACK FOR EMERGENCY SERVICE, U.O.N.	A	AMPERES	EA	EACH
	LUMINAIRE TYPE : INDICATE BY LIPPERCASE LETTER SEE LIGHTING EXTURE SCHEDULE.	A/C, AC	AIR CONDITIONING UNIT	EM	EMERGENCY
	CIRCUIT NUMBER : INDICATED BY NUMBER	AF	AMPERE FRAME/AMP FUSE	EMT	ELECTRICAL METALLIC TUBING
	SWITCHING INDICATED BY LOWER CASE LETTERS.	AFF	ABOVE FINISHED FLOOR	EQUIP	EQUIPMENT
	DENOTES LUMINAIRE ON EMERGENCY CIRCUIT.	AS	AMP SWITCH	ER	EXISTING TO BE RELOCATED
		AIC	AMPS INTERRUPTING CAPACITY	FA	FIRE ALARM
		AT	AMP TRIP	E	EXISTING
		ATS	AUTOMATIC TRANSFER SWITCH	FL	FLOOR
		AUTO	AUTOMATIC	G	GROUND
	CEILING/WALL MOUNTED SELF POWERED EXIT LIGHT FIXTURE WITH DIRECTIONALARROWS AS INDICATED. SHADED AREA DENOTES FACE(S). ISOLITE ELITE SERIES LED EXIT SIGN	AWG	AMERICAN WIRE GAUGE	GFI	GROUND FAULT INTERRUPTER
SWITCHES AND CONTROLS		C	CONDUIT	GP	GENERAL PURPOSE
	20A SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE/SWITCHED RECEPTACLE CONTROLLED.	C/B,CB	CIRCUIT BREAKER	HP	HORSEPOWER
	WALL MOUNT OCCUPANCY SENSOR SWITCH	CKT	CIRCUIT	HWH	HOW WATER HEATER
	CEILING OCCUPANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE. 'A' LETTER REFERES TO WIRING DIAGRAM.	CLG	CEILING	HZ	HERTZ
WIRING SYSTEMS		COMM	COMMUNICATION	IC	INTERRUPTING CAPACITY
	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 2#12 Ø, 2#12 N. & 2#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.	CT	CURRENT TRANSFORMER	PP	POWER PANEL
	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 3#12 Ø, 3#12 N. & 3#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.	CU	COPPER	PWR	POWER
	UNDERGROUND	DIA	DIAMETER	R	REMOVE
	EXISTING	DISC	DISCONNECT	RE	RELOCATED EXISTING
	NEW	DN	DOWN	REC	RECEPTACLE
POWER AND TELECOMMUNICATION		DP	DISTRIBUTION PANEL	RGS	RIGID GALVANIZED STEEL
	JUNCTION BOX WITH BLANK COVER PLATE, FLUSH IN FLOOR.	DWG	DRAWING	RR	REMOVE & RELOCATE
	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED. SUFFIXE DENOTES FOLLOWING: A- NEMA 5-15R B- NEMA 6-15R C- NEMA 14-30R D- NEMA 14-50R	JB	JUNCTION BOX	SECT	SECTION
	DUPLEX GFI RECEPTACLE	KCMIL	ONE THOUSAND CIRCULAR MILS	SPDT	SINGLE POLE DOUBLE THROW
	120V GFCI QUAD RECEPTACLE MOUNTED 18" AFF UNLESS NOTED OTHERWISE	KV	KILOVOLT	SPST	SINGLE POLE SINGLE THROW
	QUAD RECEPTACLE	KVA	KILOVOLT-AMPERES	SPEC	SPECIFICATION
	DATA OUTLET	KW	KILOWATTS	SW	SWITCH
MOTORS AND CONTROLS		LTG	LIGHTING	SWBD	SWITCHBOARD
	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.	MAX	MAXIMUM	SYM	SYMMETRICAL
	NON FUSED DISCONNECT SWITCH AMPERAGE, AND NUMBER OF POLES AS NOTED.	MC	MOTOR CONTROLLER	SYS	SYSTEMS
ANNOTATION		MCB	MAIN CIRCUIT BREAKER	TELE	TELEPHONE
	KEYED NOTE REFERENCE	MLO	MAIN LUGS ONLY	TEMP	TEMPERATURE
	INDICATES MOUNTING HEIGHT, CENTER LINE TO FINISHED FLOOR.	MTD	MOUNTED	TXF	TOILET EXHAUST FAN
	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP; DRAWING NUMBER INDICATED ON BOTTOM	MTS	MANUAL TRANSFER SWITCH	TYP	TYPICAL
POWER DISTRIBUTION		N	NEUTRAL	UON	UNLESS OTHERWISE NOTED
	MAJOR ELECTRICAL COMPONENT OR DEVICE. VOLTAGE AND AMPERAGE AS NOTED.	NIC	NOT IN CONTRACT	V	VOLT/VOLTAGE
	DISTRIBUTION PANELBOARD, 120/208V-SURFACE OR FLUSH MOUNTED.	NTS	NOT TO SCALE	VA	VOLT AMPERE
		PNL	PANEL	WP	WEATHER PROOF
		W	WATT	Ø	PHASE
		ELECTRICAL DRAWING LIST			
		E001	ELECTRICAL SYMBOLS & GENERAL NOTES		
		E002	ELECTRICAL SPECIFICATIONS SHEET 1 OF 2		
		E003	ELECTRICAL SPECIFICATIONS SHEET 2 OF 2		
		E101	ELECTRICAL LIGHTING PLAN LEVEL P2		
		E102	ELECTRICAL LIGHTING PLAN LEVEL P3		
		E103	TITLE 24		
		E201	ELECTRICAL POWER PLAN LEVEL P2		
		E202	ELECTRICAL POWER PLAN LEVEL P3		
		E301	ELECTRICAL DETAILS		

Project Owner:

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BELLA+CANVAS/ALO YOGA

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ELECTRICAL SYMBOLS & GENERAL NOTES

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TEMPLATE TYPE:

SHEET:

E001

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4	06/26/24	City Comments
5	01/24/25	City Comments

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

B. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

C. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

D. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

E. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

F. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

G. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

H. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

I. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

J. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

K. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATED OF INSPECTION AND APPROVAL.
2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

1)"PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2)"INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3)"FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE, AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4)"WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5)"WIRING": RACEWAY, FITTINGS, WIRE, BOXES, AND RELATED ITEMS.

6)"CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.

7)"EXPPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

8)"SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. SERVICE: 120/240 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDNEUTRAL.

b. DISTRIBUTION: 120/240 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDNEUTRAL.

C. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAGNITUDE, OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.
- D. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.

- SINGLE ROD: SIMILAR TO GRINNELL FIG. 281.

- MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS.

- CLIP FORM NAILS FLUSH WITH INSERTS.

- MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

E. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.

F. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

G. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

H. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
3. SCOPE OF WORK:
- A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

5. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6808F. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE- QUICK-BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT-TRIPPING, OPEN A NO CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED. FRAMES, IC AND INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

4) 120 VOLTS, 100-AMP FRAME: 10,000 AMPS, 1 POLE.

5) 120/240 VOLTS, 225-AMP FRAME: 22,000 AMPS MINIMUM

F. DISCONNECTS

1) DISCONNECT SWITCHES SHALL CONFORM TO NEMA AND UL STANDARDS, AND SHALL BE HORSEPOWER RATED.

2) SWITCHING MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK, SINGLE THROW WITH EXTERNAL OPERATING HANDLE MECHANICALLY INTERLOCKED WITH ENCLOSURE COVER TO PROVIDE ACCESS TO INTERIOR WHEN DISCONNECT IS IN OFF POSITION ONLY. PROVIDE MEANS TO LOCK OPERATING HANDLE IN THE OPEN AND CLOSED POSITION. DESIGNATE ON THE ENCLOSURE THE OPEN AND CLOSED POSITION OF THE OPERATING HANDLE.

3) SWITCHES SHALL BE OF THE DOUBLE STATIONARY CONTACT TYPE.

4) SWITCHES SHALL BE EQUIPPED WITH REJECTION TYPE FUSE HOLDERS, FUSIBLE AS SHOWN ON THE DRAWINGS; PROVIDE COMPLETE WITH FUSES AS SCHEDULED.

G. IDENTIFICATION

1) PROVIDE NAMEPLATE AT EACH SWITCH IDENTIFYING THE LOAD SERVED.

2) NAMEPLATES SHALL BE MOUNTED ON THE FRONT COVER SECURED WITH SELF-TAPPING SCREWS OR NUTS AND BOLTS. NAMEPLATES SHALL BE LAMINATED PHENOLIC, BLACK WITH A MINIMUM OF 1/4" HIGH WHITE LETTERING.

H. MATERIALS

1) RACEWAYS:

a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.

b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADED.

c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.

d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

2) FITTINGS AND ACCESSORIES:

a. RIGID STEEL: NONSPILT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.

b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.

c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.

d. BUSHINGS: METALLIC INSULATED TYPE.

8. BOXES:

a. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED, WITHOUT FIXTURE OR DEVICE. FURNISH BLANK COVER, OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.

b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 255/460 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING. FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH ABOVE FLOOR FITTING. TELEPHONE: BUSHED HOLE. POWER: DUPLEX RECEPTACLE OR OTHER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY. FLUSH OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH FLUSH FLOOR FITTING FOR TELEPHONE AND FLUSH DUAL FLAP COVER WITH DUPLEX RECEPTACLE FOR POWER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY.

c. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.

d. PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL FIRE RATED POKE-THROUGH-FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS, TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR.

e. SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER CODE AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE, MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY. EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK. MACHINE SCREWS ON METAL. BEAM CLAMPS ON FRAMEWORK. WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

f. EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

g. MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.

h. EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.

i. RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED. EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES. EMT SHALL NOT BE PERMITTED IN RAISED FLOORS. FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE, PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS.

j. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

k. ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

l. EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION.

m. RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
SPECIFICATION
SHEET 1 OF 2

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E002

ELECTRICAL SPECIFICATIONS (CONT.)

- E. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY; VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.

9. WIRE AND CABLE:

A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

D. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFT-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C. FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).

E. COLOR CODING SHALL BE AS FOLLOWS:

120/240 VOLT SYSTEM:
BLACK FOR A PHASE
RED FOR B PHASE
BLUE FOR C PHASE

1) NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

F. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.

G. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

H. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/240 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

I. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

J. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP.

PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

10. WIRING DEVICES:

A. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.

B. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/208 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).

C. STRAIGHT BLADE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT, DECORA SERIES BY LEVITON. GROUNDED, EXCEPT AS NOTED.

1) SINGLE GANG, RECESSED, DUPLEX RECEPTACLE: TAMPER RESISTANT, 2-POLE, 3-WIRE GROUNDING, 15A, 125V, NEMA 5-20R, LEVITON 689 SERIES (COLOR AS SPECIFIED BY ARCHITECT)

2) USB CHARGER/ DUPLEX TAMPER-RESISTANT RECEPTACLE: TAMPER RESISTANT,

D. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.

E. COLORS: COORDINATE COLORS WITH ARCHITECT.

F. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

11. LIGHTING FIXTURES:

A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.

B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.

C. BALLAST: CLASS P, HIGH POWER FACTOR, LOWEST AVAILABLE NEMA RATED NOISE LEVEL, ET1 AND CBM APPROVED, ENERGY SAVING TYPE. TRIGGER START FOR 24-INCH LAMPS AND RAPID START FOR 48-INCH. TWO LAMP BALLASTS; NO THREE LAMP BALLASTS. BALLASTS SHALL BE ADVANCE MAGNETEK, UNIVERSAL OR EQUAL.

D. LED DRIVERS SHALL BE ELECTRONIC TYPE, LABELED AS COMPLIANT WITH RADIO FREQUENCY INTERFERENCE (RFI) REQUIREMENTS OF FCC TITLE 47, PART 15 AND COMPLY WITH NEMA SSL 1 "ELECTRONIC DRIVERS FOR LED DEVICES, ARRAYS OR SYSTEMS". LED DRIVERS SHALL HAVE A SOUND RATING OF "A", HAVE A MINIMUM EFFICIENCY OF 85% AND BE RATED FOR A THD OF LESS THAN 20% AT ALL INPUT VOLTAGES.

12. PANELBOARDS:

A. PANELBOARDS SHALL BE OF THE DEAD FRONT TYPE MANUFACTURED IN CODE GAUGE AND SIZE BOXES FOR MOUNTING AS INDICATED ON PLANS COMPLETE WITH TRIM, DOORS AND LOCKS. ALL LOCKS SHALL BE KEYED ALIKE.

B. CIRCUIT BREAKERS SHALL BE OF THE BOLT-ON THERMAL MAGNETIC MOLDED CASE TYPE, AND SHALL HAVE THE TRIP RATINGS AND NUMBER OF POLES SHOWN IN SCHEDULES ON THE CONTRACT DRAWINGS. FOR BLANK (SPACE) COMPARTMENTS, PROVIDE FULL RATED BUS. MINIMUM GUTTER SPACES SHALL BE 5-3/4". SIDES, TOP AND BOTTOM, INCREASE FOR THROUGH FEEDERS. PROVIDE 25% COPPER GROUND BUS AND 100% COPPER NEUTRAL BUS AND INCREASE NEUTRAL BUS INDICATED.

C. LOCKING TABS SHALL BE PROVIDED ON ALL CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING, FIRE ALARM SYSTEM, SECURITY SYSTEMS AND OTHER EMERGENCY OR CRITICAL EQUIPMENT AND AS NOTED ON THE CONTRACT DRAWINGS. A TOTAL OF 5 SPARE LOCKING TABS SHALL BE FURNISHED TO THE OWNER.

D. BUSES SHALL BE HARD DRAWN COPPER OF 98 PERCENT CONDUCTIVITY AND SHALL HAVE CROSS SECTIONAL AREAS LARGE ENOUGH TO LIMIT THE TEMPERATURE RISE, WHEN CARRYING FULL LOAD, TO 35 DEGREES C. ABOVE AN AMBIENT INSIDE THE ENCLOSURE OF 55 DEGREES C. AS DEFINED IN IEEE STANDARD RULES. MAIN BUS CAPACITY SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.

E. ENCLOSURES SHALL BE SURFACE OR FLUSH AS INDICATED. TRIMS SHALL BE SECURED TO PANEL WITH MACHINE SCREWS. COVERS SHALL BE HINGED DOOR-IN-DOOR CONSTRUCTION WITH CYLINDER LOCKS AND CATCHES. LOCKS MUST BE COMPATIBLE WITH BUILDING STANDARD KEY SYSTEM AND WHEN NONE EXISTS, THEY SHALL BE SIMILAR TO A YALE NO. 911 KEY.

F. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARD SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

G. ALL STANDARD PANELBOARDS SHALL BE A MINIMUM OF 20" WIDE AND 5 3/4" DEEP.

H. FURNISH ALL PANELBOARDS WITH FEED-THRU LUGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

I. ALL NEW PANELBOARDS SHALL BE PROVIDED WITH AN ENGRAVED WHITE DURE LAMACORD NAMEPLATE, WITH 3/4 IN. WHITE LETTERING ON A BLACK BACKGROUND, WITH DESIGNATION LISTED (PANELBOARD NAME), FASTENED WITH EPOXY CEMENT OR OVAL HEAD CHROME PLATED MACHINE SCREWS.

J. THE CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN AND PROVIDED INSIDE EACH PANEL DOOR TO INDICATE EQUIPMENT AND/OR AREA SERVED. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER. THE TYPEWRITTEN LIST INDICATING CIRCUIT NUMBERS, OUTLETS SUPPLIED AND THEIR LOCATIONS SHALL BE PROVIDED.

K. TIE-BARS SHALL NOT BE USED TO CREATE MULTI-POLE CIRCUITS. MAXIMUM 42 CIRCUITS ALLOWED.

L. ONLY ONE WIRE SHALL BE INSTALLED UNDER EACH CIRCUIT BREAKER LUG.

13. TRANSFORMERS:

A. TRAPEZE MOUNTED TRANSFORMERS SHALL BE SUPPORTED BY HANGER ROD ISOLATORS WITH NEOPRENE-IN-SHEAR ELEMENT ENCASED IN A STEEL RETAINER HOUSING, SELECTED FOR 3/8 INCH STATIC DEFLECTION AS MADE BY MASON INDUSTRIES, INC. TYPE HD, KORFUND DYNAMICS CORP. TYPE H, VIBRATION ELIMINATOR CO. TYPE SNRC OR APPROVED. FLOOR MOUNTED TRANSFORMERS SHALL BE DIRECTLY MOUNTED ON DOUBLE DEFLECTION NEOPRENE-IN-SHEAR ISOLATORS, U.O.N. SELECTED FOR MINIMUM 3/8 INCH STATIC DEFLECTION AND SHALL BE MASON INDUSTRIES, INC. TYPE ND, KORFUND DYNAMICS, CORP. TYPE F, VIBRATION ELIMINATOR TYPE 386 50 OR APPROVED EQUAL.

B. LINE, LOAD AND GROUND CONDUCTORS SHALL BE INSTALLED IN LIQUID TIGHT FLEXIBLE CONDUIT NOT LESS THAN 18 INCHES LONG FOR FINAL CONNECTION TO TRANSFORMERS.

C. TRANSFORMER SECONDARY NEUTRAL SHALL BE CONNECTED TO A LUG AND BOLT INSIDE THE ENCLOSURE.

D. AFTER PERMANENT SERVICE TO THE TRANSFORMER IS ENERGIZED, THE CONTRACTOR SHALL DETERMINE THE VOLTAGE SUPPLIED AND SELECT TRANSFORMER TAPS TO PROVIDE THE VOLTAGE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL RECHECK VOLTAGE AFTER

BUILDING LOADS ARE BEING SERVED BY TRANSFORMER AND CHANGE TAPS WHERE REQUIRED TO PROVIDE THE SPECIFIED VOLTAGE ON THE DRAWINGS. TRANSFORMER TAPS SHALL BE ADJUSTED TO PROVIDE NOMINAL VOLTAGE WITH TOLERANCE OF +1% DURING OFF PEAK LOADS.

E. TRAPEZE MOUNTED TRANSFORMERS SHALL BE SUPPORTED FROM AUXILIARY SUPPORT STEEL BEAMS SECURED TO THE BUILDING SUPPORT BEAMS.

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
SPECIFICATION
SHEET 2 OF 2

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E003

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
LIGHTING PLAN
LEVEL P2

DRAWN BY: NYE

DWG. DATE: 12.30.22

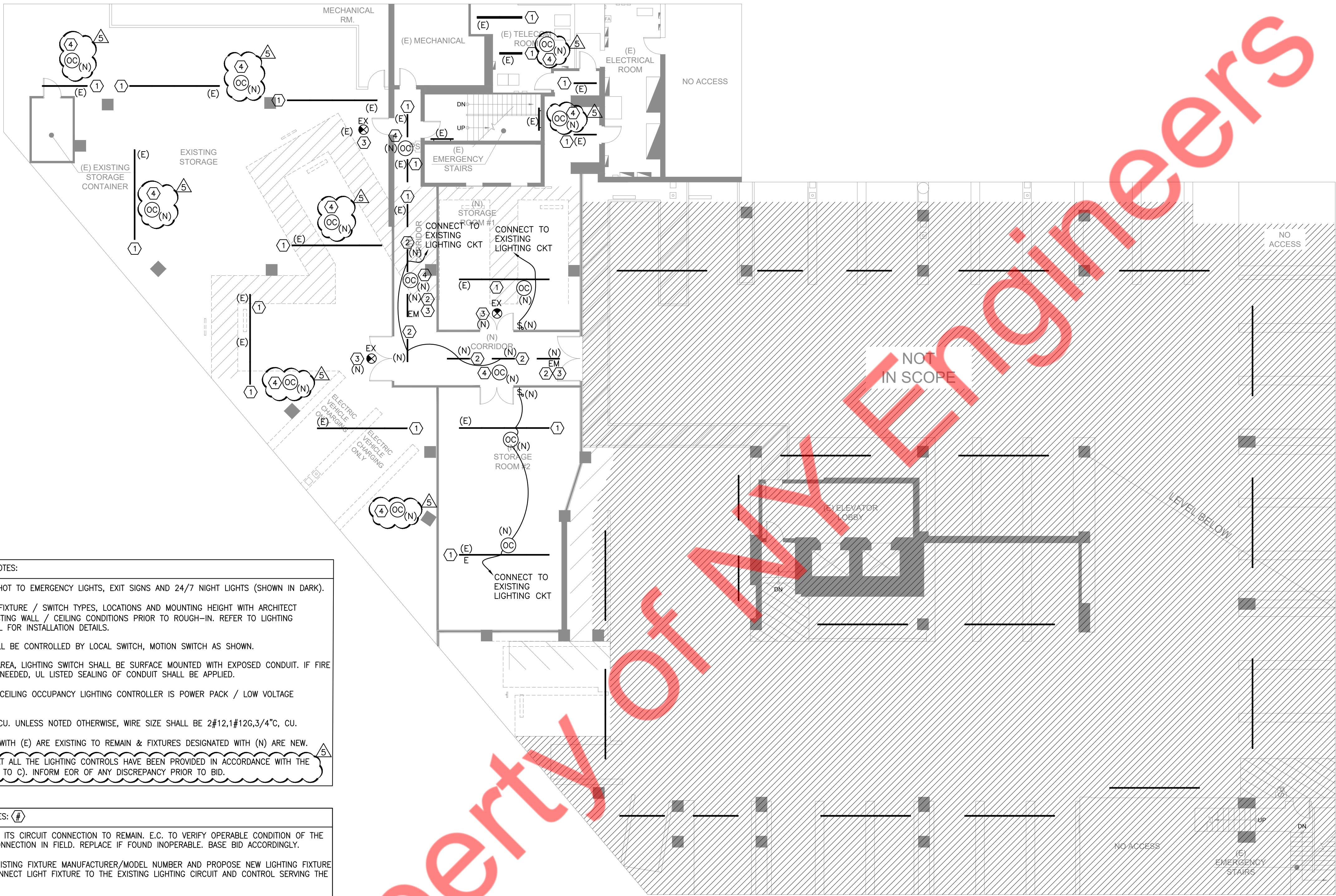
REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E101



LIGHTING PLAN GENERAL NOTES:

- A. ROUTE UN-SWITCHED HOT TO EMERGENCY LIGHTS, EXIT SIGNS AND 24/7 NIGHT LIGHTS (SHOWN IN DARK).
- B. COORDINATE LIGHTING FIXTURE / SWITCH TYPES, LOCATIONS AND MOUNTING HEIGHT WITH ARCHITECT DRAWINGS. VERIFY EXISTING WALL / CEILING CONDITIONS PRIOR TO ROUGH-IN. REFER TO LIGHTING MANUFACTURER MANUAL FOR INSTALLATION DETAILS.
- C. LIGHTING FIXTURE SHALL BE CONTROLLED BY LOCAL SWITCH, MOTION SWITCH AS SHOWN.
- D. AT FIRE RATED WALL AREA, LIGHTING SWITCH SHALL BE SURFACE MOUNTED WITH EXPOSED CONDUIT. IF FIRE WALL PENETRATION IS NEEDED, UL LISTED SEALING OF CONDUIT SHALL BE APPLIED.
- E. THE BASE DESIGN OF CEILING OCCUPANCY LIGHTING CONTROLLER IS POWER PACK / LOW VOLTAGE OCCUPANCY TYPE.
- F. ALL WIRES SHALL BE CU. UNLESS NOTED OTHERWISE, WIRE SIZE SHALL BE 2#12,1#12G,3/4" CU.
- G. FIXTURES DESIGNATED WITH (E) ARE EXISTING TO REMAIN & FIXTURES DESIGNATED WITH (N) ARE NEW.
- H. E.C. SHALL VERIFY THAT ALL THE LIGHTING CONTROLS HAVE BEEN PROVIDED IN ACCORDANCE WITH THE ENERGY CODE 130.1(A TO C). INFORM EOR OF ANY DISCREPANCY PRIOR TO BID.

LIGHTING PLAN KEYED NOTES: (#)

1. EXISTING LIGHT FIXTURE, ITS CIRCUIT CONNECTION TO REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF THE FIXTURE, ITS CIRCUIT CONNECTION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
2. E.C. TO FIELD VERIFY EXISTING FIXTURE MANUFACTURER/MODEL NUMBER AND PROPOSE NEW LIGHTING FIXTURE TO MATCH EXISTING. CONNECT LIGHT FIXTURE TO THE EXISTING LIGHTING CIRCUIT AND CONTROL SERVING THE AREA.
3. CONNECT ALL EMERGENCY EGRESS(EM) AND EXIT LIGHTS TO THE EMERGENCY CIRCUIT OF THE BASE BUILDING POWER. E.C. TO COORDINATE WITH OWNER/BASE BUILDING REPRESENTATIVE FOR LOCATING EMERGENCY LIGHTING CIRCUIT IN FIELD.
4. E.C. SHALL VERIFY EXISTING CONTROL AND REUSE, VERIFY OPERABLE CONDITION OF CONTROLS IN THE FIELD. PROVIDE NEW AS SHOWN, IF EXISTING INOPERABLE. BASE BID ACCORDINGLY.

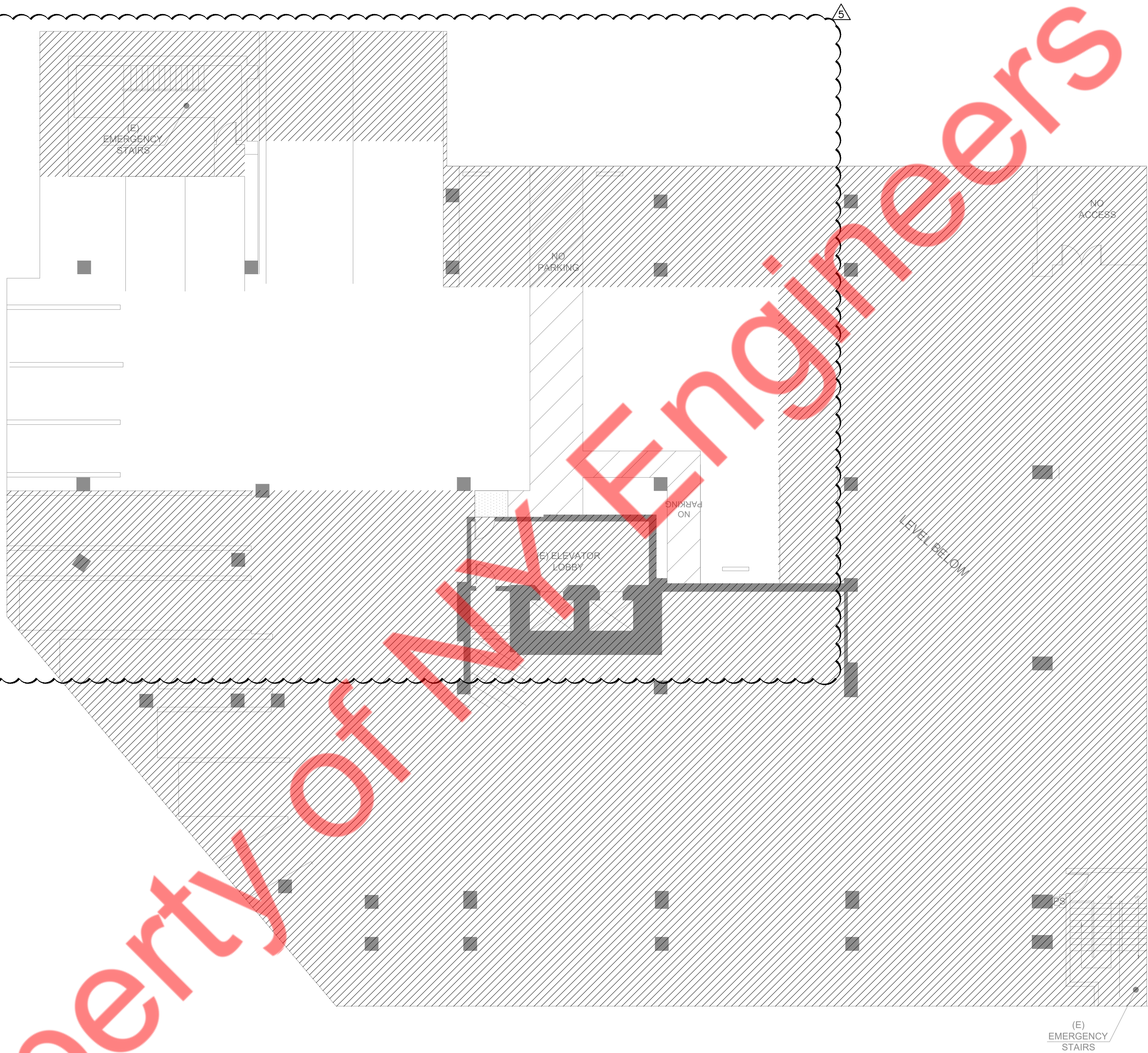
P2 LEVEL- ELECTRICAL LIGHTING PLAN

SCALE
3/32"=1'-0"

1

LIGHTING PLAN GENERAL NOTES:

A. E.C. SHALL VERIFY SCOPE OF WORK WITH OWNER. VERIFY EXISTING ELECTRICAL FIXTURES OPERABLE CONDITION IN THE FIELD. REPLACE IF EXISTING INOPERABLE. BASE BID ACCORDINGLY.



P3 LEVEL- ELECTRICAL LIGHITNG PLAN

SCALE
3/32"=1'-0"

1

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
LIGHTING PLAN
LEVEL P3

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E102

STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name:ALO BEVERLY HILLS

Report Page:(Page 1 of 7)

Project Address:

Date Prepared:2025-01-23T06:27:20-05:00

A. GENERAL INFORMATION

01 Project Location (city)	BEVERLY HILLS	04 Total Conditioned Floor Area (ft²)	8,130
02 Climate Zone	9	05 Total Unconditioned Floor Area (ft²)	0
03 Occupancy Types Within Project (select all that apply):	06 # of Stories (Habitable Above Grade)0		
• Gymnasium			

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces	Unconditioned Spaces		
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
<input type="checkbox"/> New Lighting System	N/A	0	N/A	0
<input type="checkbox"/> New Lighting System - Parking Garage	N/A	0	N/A	0
<input checked="" type="checkbox"/> Altered Lighting System	Complete Building Method	8130	N/A	0
Total Area of Work (ft²)	8130			

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

Report Generated: 2025-01-23 03:27:23

STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 2 of 7)

Date Prepared:

2025-01-23T06:27:20-05:00

C. COMPLIANCE RESULTS

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

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)					Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)			Compliance Results			
	01	02	03	04	05	06	07	08				
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)25 / 170.2(e)4W (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	=	Total Allowed (Watts)	≥	Total Designed (Watts)		PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	=	Total Adjusted (Watts) *Includes Adjustments
(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)				
Conditioned	4,878				=	4,878	≥	1,026		=	1026	COMPLIES
Unconditioned					=		≥			=		
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)												

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

Report Generated: 2025-01-23 03:27:23

STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 3 of 7)

Date Prepared:

2025-01-23T06:27:20-05:00

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change¹	Watts per luminaire²	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector
E	EXISTING	No	NA	18	Mfr. Spec	57	No	1,026	Pass
Total Designed Watts: CONDITIONED SPACES								1,026	

¹FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75%/80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

²Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Field Inspector
		Pass
		Fail
NA < 4,000W subject to multilevel	See Area/Space Level Controls	<input type="checkbox"/>

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

Report Generated: 2025-01-23 03:27:23

STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 4 of 7)

Date Prepared:

2025-01-23T06:27:20-05:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1 / 170.2(e)2A	Field Inspector
								Pass
								Fail
ALO	Gymnasium	Readily Accessible	Multilevel Switch	Occupancy Sensor	NA: Not daylight zone	NA: Not daylight zone	No	<input type="checkbox"/>
13								
Plan Sheet Showing Daylit Zones:								

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment
ALO	Gymnasium	0.6	8,130	4,878	Area Category BMF
TOTALS:		8,130		4,878	No
					See Tables I, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

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Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

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STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 5 of 7)

Date Prepared:

2025-01-23T06:27:20-05:00

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

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STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 6 of 7)

Date Prepared:

2025-01-23T06:27:20-05:00

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

Form/Title

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

Form/Title

Systems/Spaces To Be Field Verified

NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.

ALO

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

Report Generated: 2025-01-23 03:27:23

STATE OF CALIFORNIA

Indoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTI-E

Project Name:ALO BEVERLY HILLS

Report Page:(Page 7 of 7)

Project Address:

Date Prepared:2025-01-23T06:27:20-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:

Documentation Author Signature:

Company:

Signature Date:

Address:

CEA/HERS Certification Identification (if applicable):

City/State/Zip:

Phone:

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:

Responsible Designer Signature:

Company:

Date Signed:

Address:

License:

City/State/Zip:

Phone:

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 258633-0125-0003

Schema Version: rev 20220101

Report Generated: 2025-01-23 03:27:23

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

TITLE 24

DRAWN BY: NYE

DWG. DATE: 12.30.22

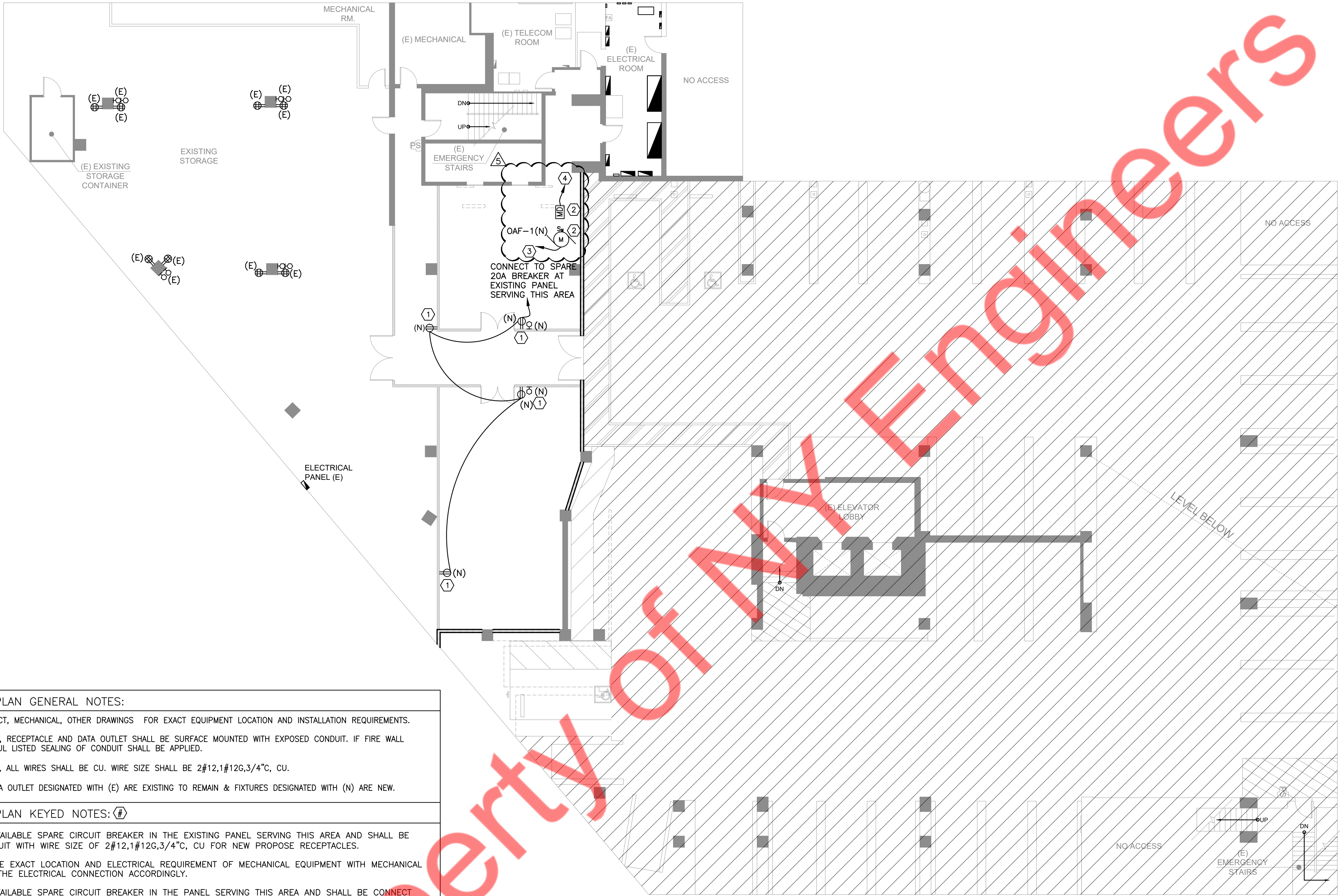
REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E103



ELECTRICAL POWER PLAN GENERAL NOTES:	
A.	COORDINATE WITH ARCHITECT, MECHANICAL, OTHER DRAWINGS FOR EXACT EQUIPMENT LOCATION AND INSTALLATION REQUIREMENTS.
B.	AT FIRE RATED WALL AREA, RECEPTACLE AND DATA OUTLET SHALL BE SURFACE MOUNTED WITH EXPOSED CONDUIT. IF FIRE WALL PENETRATION IS NEEDED, UL LISTED SEALING OF CONDUIT SHALL BE APPLIED.
C.	UNLESS NOTED OTHERWISE, ALL WIRES SHALL BE CU. WIRE SIZE SHALL BE 2#12,1#12G,3/4"C, CU.
G.	POWER RECEPTACLE & DATA OUTLET DESIGNATED WITH (E) ARE EXISTING TO REMAIN & FIXTURES DESIGNATED WITH (N) ARE NEW.
ELECTRICAL POWER PLAN KEYED NOTES: (E)	
1.	E.C TO FIELD VERIFY AVAILABLE SPARE CIRCUIT BREAKER IN THE EXISTING PANEL SERVING THIS AREA AND SHALL BE CONNECT BRANCH CIRCUIT WITH WIRE SIZE OF 2#12,1#12G,3/4"C, CU FOR NEW PROPOSE RECEPTACLES.
2.	E.C. TO COORDINATE THE EXACT LOCATION AND ELECTRICAL REQUIREMENT OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. PROVIDE THE ELECTRICAL CONNECTION ACCORDINGLY.
3.	E.C TO FIELD VERIFY AVAILABLE SPARE CIRCUIT BREAKER IN THE PANEL SERVING THIS AREA AND SHALL BE CONNECT BRANCH CIRCUIT WITH WIRE SIZE OF 2#12,1#12G,3/4"C, CU FOR OAF-1 FAN.
4.	E.C TO FIELD VERIFY AVAILABLE SPARE CIRCUIT BREAKER IN THE PANEL SERVING THIS AREA AND SHALL BE CONNECT BRANCH CIRCUIT WITH WIRE SIZE OF 2#12,1#12G,3/4"C, CU FOR MOTORIZED DAMPER.

P2 LEVEL- ELECTRICAL POWER PLAN

SCALE
3/32"=1'-0"

1

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
POWER PLAN
LEVEL P2

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

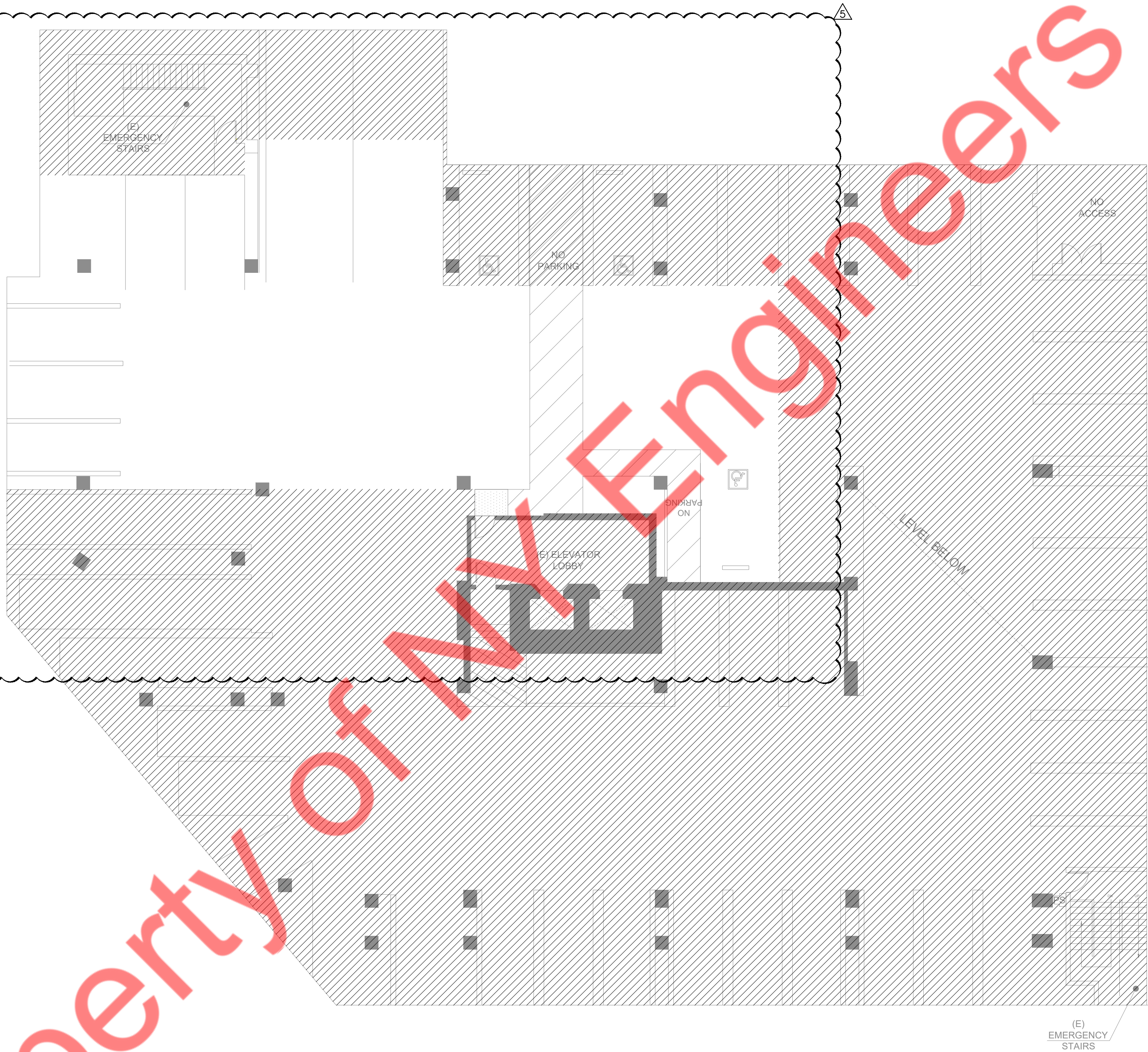
TEMPLATE TYPE:

SHEET:

E201

ELECTRICAL POWER PLAN GENERAL NOTES:

A. E.C. SHALL VERIFY SCOPE OF WORK WITH OWNER. VERIFY EXISTING ELECTRICAL FIXTURES OPERABLE CONDITION IN THE FIELD. REPLACE IF EXISTING INOPERABLE. BASE BID ACCORDINGLY.



P3 LEVEL- ELECTRICAL POWER PLAN

SCALE
3/32"=1'-0"

1

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
POWER PLAN
LEVEL P3

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

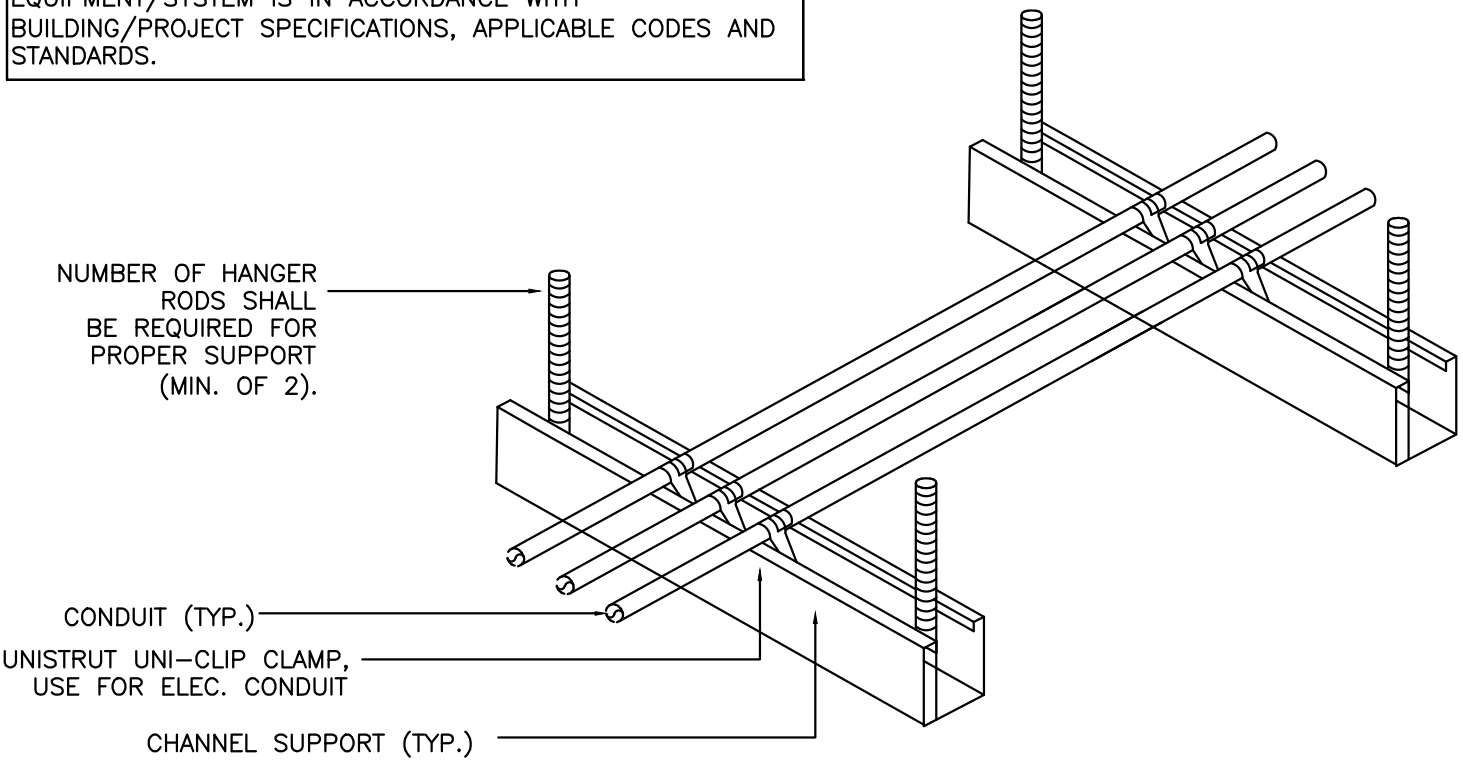
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TEMPLATE TYPE:

SHEET:

E202

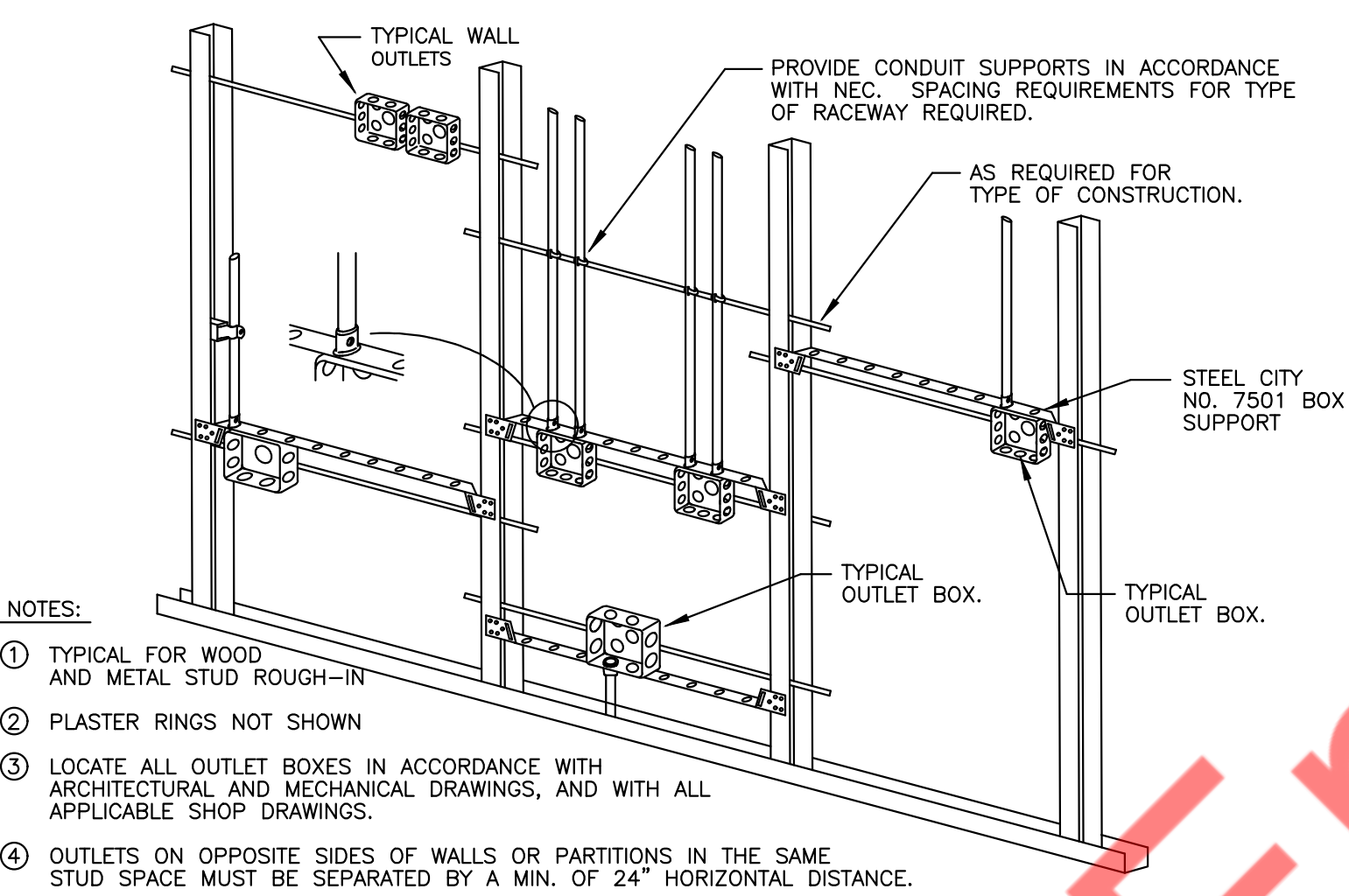
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS
REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION
MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE
DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE
USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE
EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH
BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND
STANDARDS.



- NOTES:
1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
 2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
 3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
 4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

1
E301
N.T.S.

CONDUIT SUPPORT DETAIL



2
E301
N.T.S.

DETAIL TYPICAL ROUGH-IN REQUIREMENTS

AUTOMATIC MODE OPERATION

1. WHEN SENSOR ACTIVATES, LOAD TURNS ON.
2. LOAD TURNS OFF, WHEN SENSOR TIMES OUT.

RECOMMENDED WIRE

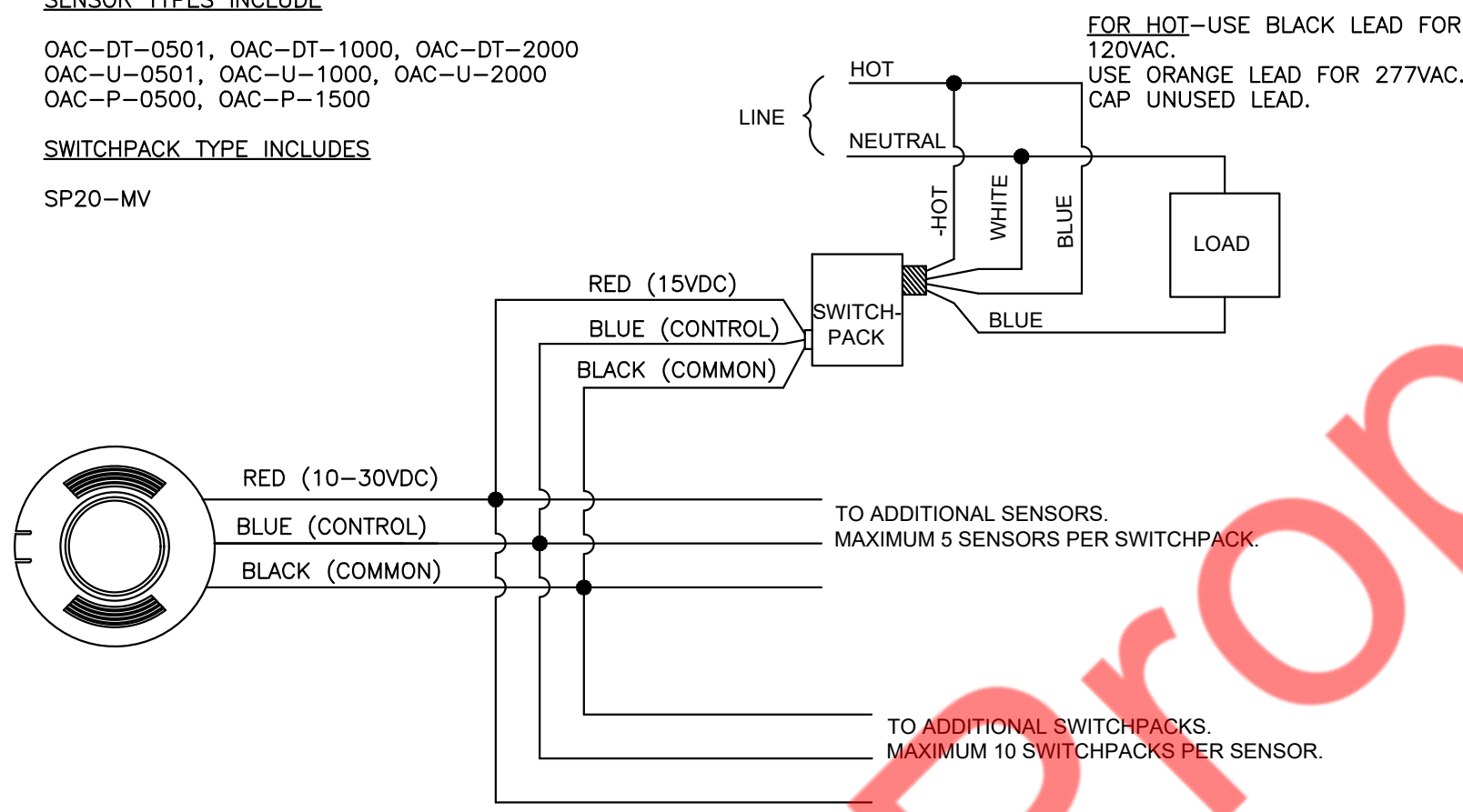
18-3 AWG STRANDED WIRE SHIELDED OR NON-SHIELDED

SENSOR TYPES INCLUDE

OAC-DT-0501, OAC-DT-1000, OAC-DT-2000
OAC-U-0501, OAC-U-1000, OAC-U-2000
OAC-P-0500, OAC-P-1500

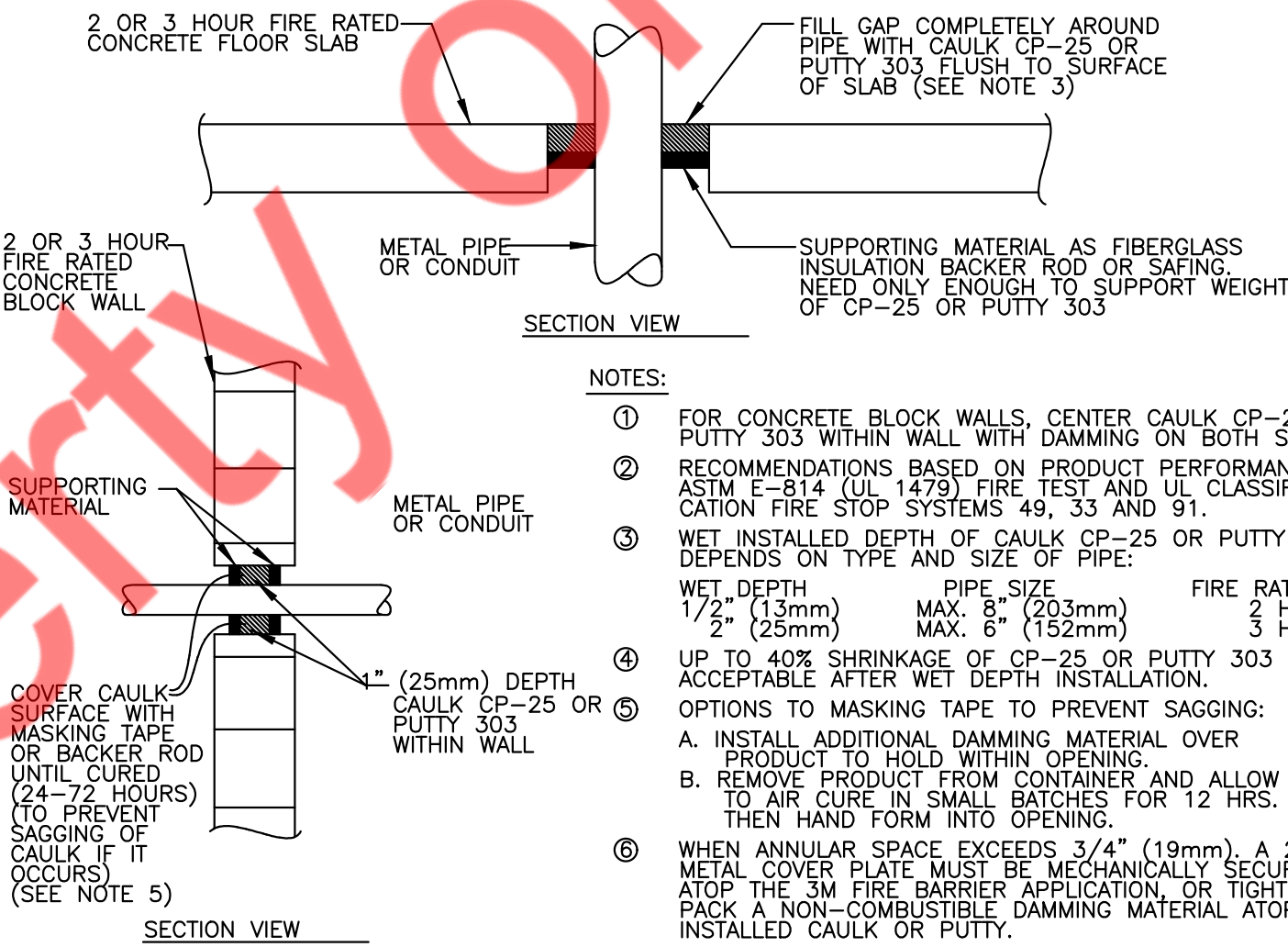
SWITCHPACK TYPE INCLUDES

SP20-MV



3
E301
N.T.S.

OCCUPANCY - AUTO ON/OFF.
WIRING DIAGRAM - LOW VOLTAGE CEILING SENSOR



4
E301
N.T.S.

FIRE STOP DETAIL

Project Owner:

alo

Consultant:

Project Address:

BELLA+CANVAS/ALO YOGA

Stamp:

No.	Date	Description
1	04/24/23	City Comments
2	09/26/23	ALO Comments
3	03/13/24	City Comments
4	06/26/24	City Comments
5	01/24/25	City Comments

Sheet Title:

ELECTRICAL
DETAILS

DRAWN BY: NYE

DWG. DATE: 12.30.22

REVIEWED BY: NYE

PROJECT NUMBER: 26756

TEMPLATE TYPE:

SHEET:

E301