GENERAL NOTES:

1. CODES, RULES AND REGULATIONS– DESIGN OF SYSTEM

   A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES.

   B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.

   C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.

2. VOLUME DAMPERS IN ALL BRANCH DUCTS.

3. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.

4. FLEXIBLE DUCTS TO BE GLASS–FLEX 8'–0", MAXIMUM IN LENGTH, WHERE APPLICABLE.

5. COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE ARCHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON THE JOB BEFORE INSTALLTION. COLOR AS DIRECTED BY ARCHITECT.

6. PROVIDE DUCT LINING TO SUPPLY DUCT OF EACH AC UNIT FOR MINIMUM OF 10 FT. DUCT LINING TO BE EQUAL TO JOHNS–MANVILLE, 1" THICK x 1–1/2 PCF DENSITY DUCT LINER. DUCTWORK TO BE INCREASED IN EACH DIMENSION TO INCORPORATE THICKNESS OF LINING.

7. DUCT INSULATION TO CONFORM TO CALIFORNIA ENERGY CONSERVATION STANDARDS (TITLE 24)

8. WIRING DIAGRAM IS INTENDED TO INDICATE SEQUENCE OF CONTROL AND DOES NOT NECESSARILY SHOW ALL CONNECTIONS REQUIRED BY LOCAL CODES.

9. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING AND HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70°F, AND COOLING AT A TEMPERATURE NOT LESS THAN 78°F.

10. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE.

11. PROVIDE SEISMIC BRACING FOR ALL MECHANICAL EQUIPMENT STRUCTURE MOUNTED, 400 LBS. OR HEAVIER.

12. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.

13. CONCEALED BUILDING SPACES USED AS RETURN AIR PLENUMS SHALL BE OF NON–COMBUSTIBLE MATERIAL.

14. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & VOLUME DAMPERS.

15. PROVIDE MIN. 10'–0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT OSA INTAKE.

16. PROVIDE FIRE DAMPER OR SMOKE AND FIRE DAMPER WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE. CEILING OR WALL IF APPLICABLE.

17. PROVIDE GALVANIZED SHEET METAL DUCTS FABRICATED AND INSTALLED TO LAMC CHAPTER 6, 2013 EDITION.

18. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON–BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.

19. RECTANGULAR DUCTS CAN BE SUBSTITUTED WITH EQUIVALENT ROUND DUCTS WHERE APPLICABLE PER FOLLOWING SCHEDULE:

CFM	DUCT SIZE
0–110	6"ø
110–240	8"ø
240–420	10"ø
420–675	12"ø
675–1050	14"ø
1050–1500	16"ø
1500–2000	18"ø
2000–2600	20"ø

20. THE MECHANICAL CONTRACTOR SHALL SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND FEES.

21. THE PROJECT SHALL BE AIR BALANCED AND A COPY OF THE FINAL REPORT SHALL BE PRESENTED TO THE TENANT AND OWNER.

22. MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY EXISTING LOCATION OF ALL EQUIPMENT AND THEIR WORKING CONDITION PRIOR TO WORK. ANY DISCREPANCY SHALL BE REPORTED TO ARCHITECT.

23. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS.CONTRACTOR SHALL ENLARGE THE DUCT IN ORDER TO ACCOMODATE LINING INSIDE OF DUCT IF REQUIRED.

24. ALL FIRE DAMPERS INSTALLED IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS INTENDED TO OPERATE WITH FAN ON (NO SMOKE DUCT DETECTOR) SHALL BE DYNAMIC TYPE AND SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTING.

25. ENERGY CONSERVATION STANDARDS FOR NEW NON–RESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM.

26. FLEXIBLE DUCTS TO BE GLASS–FLEX FOR STRAIGHT RUNS ONLY. ALL ELBOWS AND TURNS SHALL BE SHEET METAL GALVANIZED.

SPLIT SYSTEM FAN COIL UNIT SCHEDULE (Heat Pump) – BASEMENT & 1ST FLOOR

SYMBOL	UNIT TYPE (INDOOR / OUTDOOR)	SERVICE	LOCATION	MANUFACT. AND MODEL	HEATING CAPACITY BTU/HR OUTPUT	COOLING CAPACITY BTU/HR TH	COOLING CAPACITY BTU/HR SH	INDOOR FAN – FAN CFM	ESP	RPM	BHP	ELECTRIC DATA V	PH	HZ	MOTOR FLA	MCA	COMPRESSOR – COMP RLA (1)	COMP RLA (2)	FAN FLA (1)	FAN FLA (2)	ELEC. DATA V	PH/HZ	UNIT FLA	MCA	MOCP	WEIGHT LBS	EER/SEER	TONS	REMARKS
FC 1	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX360CT	–	–	–	1179	0.5	–	–	240	1	60	3.0	3.8	–	–	–	–	–	– / –	–	–	–	155	/ ––	3.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT
HP 1	OUTDOOR	SEE PLAN	ROOF	YORK YHE36B21	36,000	35500	25500	–	–	–	–	–	–	–	–		14.7	–	1.3	–	208	1 / 60	18.0	19.7	30	295	12 / 14.5	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 2	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX480CT	–	–	–	1487	0.5	–	–	240	1	60	4.6	5.8	–	–	–	–	–	– / –	–	–	–	155	– / ––	4.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 2	OUTDOOR	SEE PLAN	ROOF	YORK YHE48B21	48,000	46,000	31400	–	–	–	–	–	–	–	–		23.6	–	1.3	–	208	1 / 60	24.9	30.8	50	235	12.2 / 15	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 3	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX480CT	–	–	–	1487	0.5	–	–	240	1	60	4.6	5.8	–	–	–	–	–	– / –	–	–	–	155	– / ––	4.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 3	OUTDOOR	SEE PLAN	ROOF	YORK YHE48B21	48,000	46,000	31400	–	–	–	–	–	–	–	–		23.6	–	1.3	–	208	1 / 60	24.9	30.8	50	235	12.2 / 15	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 4	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX480CT	–	–	–	1487	0.5	–	–	240	1	60	4.6	5.8	–	–	–	–	–	– / –	–	–	–	155	– / ––	4.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 4	OUTDOOR	SEE PLAN	ROOF	YORK YHE48B21	48,000	46,000	31400	–	–	–	–	–	–	–	–		23.6	–	1.3	–	208	1 / 60	24.9	30.8	50	235	12.2 / 15	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 5	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX600CT	–	–	–	1929	0.5	–	–	240	1	60	5.6	5.8	–	–	–	–	–	– / –	–	–	–	155	/ ––	5.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 5	OUTDOOR	SEE PLAN	ROOF	YORK YHE60B21	60,000	55500	37900	–	–	–	–	–	–	–	–		24.3	–	1.3	–	208	1 / 60	25.6	31.7	50	256	12 / 14.5	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 6	INDOOR	SEE PLAN	ABOVE CEILING	ADP AX600CT	–	–	–	1929	0.5	–	–	240	1	60	5.6	5.8	–	–	–	–	–	– / –	–	–	–	155	/ ––	5.0	PROVIDE CONDENSATE DRAN PUMP WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 6	OUTDOOR	SEE PLAN	ROOF	YORK YHE60B21	60,000	55500	37900	–	–	–	–	–	–	–	–		24.3	–	1.3	–	208	1 / 60	25.6	31.7	50	256	12 / 14.5	–	WITH SPRING ISOLATOR AND ROOF PLATFORM

* VERYFY POWER REQUIREMENTS BEFORE ORDERING UNITS

EQUIPMENT SCHEDULE

EF 1

Ceiling Exhaust Fan — MARK: EF-1

Qty	Greenheck Model	Volume (CFM)	External SP Total SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information: Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA
6	SP-B80	80	0.125 / 0.12	900	0.01	21	NA	115/60/1	OP	900	1	NA

OPTIONS AND ACCESSORIES

- UL/cUL 507 Listed - Electric Fan
- Round Hooded Wall Cap, (PN: WC-6) Shipped Loose
- Ceiling Radiation Damper, (PN: CRD-320)
- Aluminum Grille with White Enamel Finish, (PN: 504879)
- Motion Detector, Wall Mounted, (PN: 385246) Shipped Loose
- Round Duct Connection
- Transition Duct Reducer, (PN: 473324), Shipped Loose
- Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
- Polypropylene Wheel Material
- Energy Star Rated

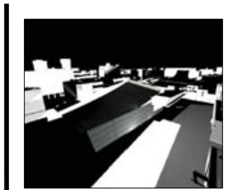
SPLIT SYSTEM FAN COIL UNIT SCHEDULE (Heat Pump)

SYMBOL	UNIT TYPE (INDOOR / OUTDOOR)	SERVICE	LOCATION	MANUFACT. AND MODEL	HEATING CAPACITY BTU/HR OUTPUT	COOLING CAPACITY BTU/HR TH	COOLING CAPACITY BTU/HR SH	INDOOR FAN – FAN CFM	ESP	RPM	HP	ELECTRIC DATA V	PH	HZ	MOTOR FLA	MCA	COMPRESSOR – COMP RLA (1)	COMP RLA (2)	FAN FLA (1)	FAN FLA (2)	ELEC. DATA V	PH/HZ	UNIT FLA	MCA	MOCP	WEIGHT LBS	EER/SEER	TONS	REMARKS
FC 7	INDOOR	UNITS	CEILING	SUNTHERM CEHX–25–00–ED	–	–	–	836	0.2	–	1/4	208	1	60	–	–	–	–	–	–	–	– / –	–	–	–	136	/ ––	2.0	WITH PROGRAMABLE THERMOSTAT SEE PLAN FOR TYPE OF ACCESS PANEL. WITH ISOLATOR. WITH OPTION FOR HIGH SPEED MOTOR PROVIDE NON–LOUVERED PANEL WITH MERV–8 FILTER
HP 7	OUTDOOR	UNITS	ROOF	YORK YHE24B21	23,000	23,000	––	–	–	–	–	–	–	–	–		11.7	–	0.8	–	208	1 / 60	12.5	15.4	25	131	11.75 / 14.0	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 8	INDOOR	UNITS	CEILING	SUNTHERM CEHX–25–00–ED	–	–	–	836	0.2	–	1/4	208	1	60	–	–	–	–	–	–	–	– / –	–	–	–	136	/ ––	2.0	WITH PROGRAMABLE THERMOSTAT SEE PLAN FOR TYPE OF ACCESS PANEL. WITH ISOLATOR. WITH OPTION FOR HIGH SPEED MOTOR PROVIDE NON–LOUVERED PANEL WITH MERV–8 FILTER
HP 8	OUTDOOR	UNITS	ROOF	YORK YHE24B21	23,000	23,000	––	–	–	–	–	–	–	–	–		11.7	–	0.8	–	208	1 / 60	12.5	15.4	25	131	– / 14.0	–	WITH SPRING ISOLATOR AND ROOF PLATFORM
FC 9	INDOOR	ELEV ROOM	WALL MOUNTED	MITSUBISHI MSY–D30NA	–	–	–	848	0.01	–	–	240	1	60	0.33	1.0	–	–	–	–	–	– / –	–	–	–	29	/ ––	2.5	WITH PROGRAMABLE THERMOSTAT WITH SPRING ISOLATOR
HP 9	OUTDOOR	SEE PLAN	ROOF	MITSUBISHI MUY–D30NA	–	30,000	12400	–	–	–	–	–	–	–	–		10	–	0.9	–	208	1 / 60	10.9	15	25	126	12.2 / 16	–	WITH ISOLATOR AND ROOF PLATFORM

VERYFY POWER REQUIREMENTS BEFORE ORDERING UNITS

H.V.A.C. LEGEND

SYMBOL	ABBREV.	DESCRIPTION
R		DUCT RISER
D		DUCT DROP
		DUCT SECTION (SUPPLY)
		DUCT SECTION (RETURN)
		DUCT SECTION (EXHAUST)
	C.D.	CEILING DIFFUSER
	R.A.R.	RETURN AIR REGISTER
	E.G.	EXAUST AIR GRILLE
	S.W.S.	SIDE WALL SUPPLY
	S.W.R.	SIDE WALL RETURN
	S.W.E.	SIDE WALL EXHAUST
	R.G.	RELIEF GRILLE
	M.V.D.	MANUAL VOLUME DAMPER
	A.F.D.	AUTOMATIC FIRE DAMPER
	A.V.D.	AUTOMATIC VOLUME DAMPER
D/L	D.L.	DOOR LOUVER
T	STAT	ROOM THERMOSTAT
	D.H.	DUCT HEATER
U/C	U.C.	UNDER–CUT
CWS	C.W.S.	COND. WATER SUPPLY
CWR	C.W.R.	COND. WATER RETURN
HWS	H.W.S.	HOT WATER SUPPLY
HWR	H.W.R.	HOT WATER RETURN
CHWS	CH.W.S.	CHILLED WATER SUPPLY
CHWR	CH.W.R.	CHILLED WATER RETURN
		DIRECTION OF FLOW
	G.V.	GATE VALVE
	G.L.V.	GLOBE VALVE
	C.V.	CHECK VALVE
	B.V.	BUTTERFLY VALVE
	RED.	REDUCER
	STR.	STRAINER
	U	UNION
	P.G.	PRESSURE GAUGE
	TH.	THERMOSTAT
	A.D.	ACCESS DOOR
	A.P.	ACCESS PANEL
	S.A.	SUPPLY AIR
	R.A.	RETURN AIR
	E.A.	EXHAUST AIR
	C.A.	COMBUSTION AIR
	O.S.A.	OUTSIDE AIR
	DN.	DOWN
	CLG.	CEILING
	S.W.S.	SIDEWALL SUPPLY
	S.W.R.	SIDEWALL RETURN
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN
	N.I.C.	NOT IN CONTRACT
	P.O.C.	POINT OF CONNECTION
	G.C.	GENERAL CONTRACTOR
	P.C.	PLUMBING CONTRACTOR
	E.C.	ELECTRICAL CONTRACTOR
	U.T.R.	UP THRU ROOF
		FLEX. CONN. IN DUCT
		TURNING VANES
		EXTRACTORS
E		FURN. & INST. BY ELEC.
M		FURN. & INST. BY MECH.
		EXPANSION VALVE
	C.A.	CONTROL AIR
		DUCT LINING
	M.C.A.	MAX. CIRCUIT AMPACITY
	T.S.P.	TOTAL STATIC PRESSURE
	F.L.A.	FULL LOAD AMP
	B.D.D.	BACK DRAFT DAMPER
	M.BH	THOUSAND BTUH
	E.R.	EXHAUST REGISTER



Stitch
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Email: stitchstudio3d@gmail.com

A & N DESIGN GROUP
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19126 HAYNES STREET #2
RESEDA, CA 91335
TEL: (818)-288-4361
FAX: (818)-758-0087

REGISTERED PROFESSIONAL ENGINEER
ARASH NAZARI
No. M–34638
EXP. 12–31–17
MECHANICAL
STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

LEGEND, NOTES
& SCHDULES

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M100

Scale

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SUPPLY DIFFUSER & CEILING RETURN CFM TABLE			
(CD) CEILING SUPPLY DIFFUSER		(CR) CEILING RETURN GRILLE	
SIZE	CFM RANGE	SIZE	CFM RANGE
6X6	0–100	6X6	0–100
8X8	101–225	8X8	101–150
10X10	226–350	10X10	151–200
12X12	351–500	12X12	201–340
14X14	501–680	14X14	341–450
16X16	681–900	16X16	451–600
18X18	901–1120	18X18	601–800
20X20	1121–1395	20X20	801–1000
22X22	1396–1680	22X22	1001–1400
24X24	1681–2000	24X24	1401–1800

SIDEWALL DIFFUSERS

SIZE IN.	OUTLET VELOCITY	THROW FEET	CFM
10 X 6	440	8	100
12 X 6	450	9	125
14 X 6	450	10	150
16 X 6	450	11	180
20 X 6	450	12	225
24 X 6	450	14	275
30 X 6	450	15	330
24 X 8	450	16	360

CONTROL LEGEND

————	LINE VOLTAGE WIRING UNDER ELECTRICAL SECTION.
– – – –	LOW VOLTAGE WIRING UNDER THIS SECTION.
⟨E⟩	ITEMS FURNISHED AND INSTALLED UNDER ELECTRICAL SECTION.
NOTE ALL CONDUIT UNDER ELECTRICAL SECTION.	

DIAGRAMS SHOWN ARE SCHEMATIC AND INTEDED TO SHOW SEQUENCE OF OPERATION ONLY. CONTRACTOR TO PROVIDE ALL ITEMS AND WIRING REQUIRED FOR PROPER OPERATION AND COMPLIANCE WITH CODE, VERIFY THE EXACT REQUIREMENTS WITH EQUIPMENT MANUFACTURER.

NOTE

THE GENERAL CONTRACTOR SHALL HIRE A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA TO DESIGN SEISMIC RESTRAINTS FOR THE FOLLOWING:

a. STORAGE RACKS OVER 5'–0" IN HEIGHT.
b. MECHANICAL DUCTWORK AND ROOF MOUNTED MECHANICAL EQUIPMENT.
c. PIPING (AND/OR) SPRINKLERS.
d. ELECTRICAL CABLE TRAYS (AND/OR) CONDUITS RUNS.

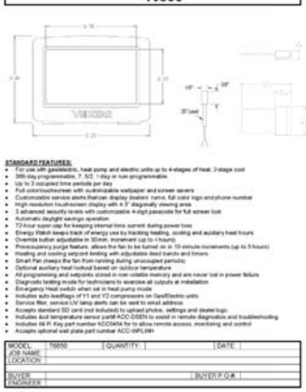
SEISMIC RESTRAINS SHALL BE DEFINED AS BRACINGS, STRUTS, HANGERS AND CONNECTIONS BETWEEN THE ABOVE ITEMS AND THE PRIMARY STRUCTURE AS REQUIRED, PROVIDING LATERAL STABILITY IN THE EVENT OF THE CODE PRESCRIBED EARTHQUAKE.

ALL BRACING, STRUTS, HANGERS AND CONNECTIONS SHALL BE DESIGNED IN CONFORMANCE WITH 2010 CBC, ASCE 7–05, CHAPTER 13. STRUCTURAL CALCULATIONS AND SEISMIC RESTRAINT DETAILS SHALL BE STAMPED AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO INSPECTION.

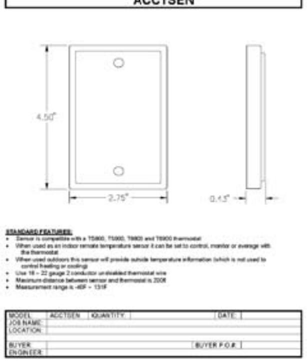
SEISMIC BRACING

ALL SUSPENDED UTILITY SYSTEMS WHICH INCLUDE: ELECTRICAL, MECHANICAL, AND PLUMBING EQUIPMENT AND ASSOCIATED CONDUIT, DUCTWORK, AND PIPING ARE REQUIRED TO HAVE SEISMIC RESTRAINT ATTACHMENTS DESIGNED TO RESIST THE TOTAL DESIGNED SEISMIC FORCES PRESCRIBED IN ASCE 7–05, CHAPTER 13 PROVIDE TYPICAL SEISMIC RESTRAINT DETAILS. DOCUMENTATION SUBSTANTIATING COMPLIANCE WITH 2010 CBC, ASCE 7–05, CHAPTER 13 TO INCLUDE SEISMIC RESTRAINT ASSEMBLY DETAILS. ANCHORAGE TO OVERHEAD STRUCTURE WITH SUPPORTING ENGINEERING STAMPED BY A LICENSED CIVIL OR STRUCTURAL ENGINEER IS REQUIRED AT TIME OF INSPECTION. "CITY POLICY"

Commercial ColorTouch Thermostat T6850



Venstar Indoor/Outdoor Temperature Sensor ACCTSEN



GENERAL NOTES

DUCTWORK:

1. INSTALLATION OF DUCTWORK SHALL BE COORDINATED WITH OTHER TRADES. DUCTS INSTALLED IN LOCATIONS WHERE THEY ARE SUBJECT TO PHYSICAL DAMAGE SHALL BE PROTECTED BY SUITABLE GUARDS.
2. ALL AIR CONDITIONING DUCTS TO COMPLY WITH CHAPTER 6 (2013 EDITION) OF THE LOS ANGELES MECHANICAL CODE. ALL TRANSVERSE JOINTS TO BE SUBSTANTIALLY AIRTIGHT WITH TAPE, MASTIC, GASKETING OR OTHER MEANS; ALL LOW PRESSURE DUCTWORK SIZED EQUAL TO OR LESS THAN 0.1" W.G./100 FT. ALL DUCTS FOR VENTILATION INCLUDING GARAGE VENTILATION SYSTEM TO COMPLY WITH CHARTER 5 OF THE 2013 LOS ANGELES MECHANICAL CODE.
3. DUCT SUPPORTS AND ANCHORAGE SHALL COMPLY WITH 2013 LAMC CHAPTER 6
4. MANUAL VOLUME DAMPERS TO BE INSTALLED IN ALL BRANCH TAKE–OFFS. ALL DAMPERS TO HAVE LOCKING QUADRANTS.
5. DUCT SIZES SHOWN ARE NET SIZES REQUIRED. LINED DUCTS SHALL BE INCREASED IN SIZE TO ACCOMMODATE LINING WITHOUT LOSS OF AREA.
6. PROVIDE MASTIC OR DUCT TAPE JOINT SEALANT TO SEAL TRANSVERSE JOINTS ON AIR SUPPLY DUCTS INSTALLED IN LOCATIONS WHERE AIR LEAKAGE THROUGH THE JOINTS WOULD BE NON–BENEFICIAL TO THE OCCUPIED AREA TEMPERATURE REQUIREMENTS. AND, SEAL LONGITUDINAL JOINTS ON LOW–PRESSURE SUPPLY DUCTS WHERE INTERNAL STATIC PRESSURE EXCEED 0.75" OF WATER PRESSURE.
7. FLEX DUCT SHALL BE ATTACHED TO ALL REGISTERS, GRILLS, COLLARS AND FITTINGS ACCORDING TO ITS LISTINGS. I.E. A MINIMUM OF TWO WRAPS OF UL 181 TAPE AND A PANDUIT STRAP ON THE INSIDE LINER AND A MINIMUM OF TWO WRAP OF UL 181 TAPE OR A PANDUIT STRAP OR BOTH ON THE OUTSIDE COVER.
8. ALL FLEX DUCT SPLICES SHALL BE SLEEVED.
9. ALL AFD SPLICES SHALL BE SLEEVED.
10. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE–DEVELOPED RATING OF NOT MORE THAN 50 PER CBC 2010
11. FLEXIBLE DUCTS TO BE GLASS–FLEX FOR STRAIGHT RUNS ONLY 8'–0", MAXIMUM IN LENGHT. ALL ELBOWS AND TURNS SHALL BE SHEET METAL GALVANIZED.
12. PROVIDE DUCT LINING TO SUPPLY DUCT OF EACH AC UNIT FOR MINIMUM OF 10 FT. DUCT LINING TO BE EQUAL TO JOHNS–MANVILLE, 1" THICK x 1–1/2 PCF DENSITY DUCT LINER. DUCTWORK TO BE INCREASED IN EACH DIMENSION TO INCORPORATE THICKNESS OF LINING.
13. VOLUME DAMPERS IN ALL BRANCH DUCTS.
14. PROVIDE GALVANIZED SHEET METAL DUCTS FABRICATED AND INSTALLED TO UMC EDITION 2012

AIR DEVICES:

1. ARROWS AT CEILING DIFFUSERS INDICATE THE AIR THROW PATTERN.
2. COORDINATE WITH ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL DIFFUSERS AND REGISTERS AND LOUVERS.
3. SUPPLY DIFFUSERS AND REGISTERS TO BE TITUS MODEL: TDX–AA, PAS–AA FOR CEILING INSTALLATION AND/OR TITUS 300FS FOR SIDE–WALL INSTALLATION OR APPROVED EQUAL WITH KEY OPERATED OPPOSED BLADE DAMPER UNIT.
4. RETURN AND EXHAUST AIR REGISTERS TO BE TITUS MODEL: 50F–NT FOR CEILING INSTALLATION AND/OR TITUS FLOWBAR FOR SIDE–WALL INSTALLATION OR APPROVED EQUAL WITH KEY OPERATED OPPOSED BLADE DAMPER UNIT.
5. ALL REGISTERS AND GRILLS INSTALLED IN T–BAR CEILINGS SHALL BE ATTACHED AT EACH CORNER TO THE MAIN RUNNERS WITH APPROVED CLIPS OR SM SCREWS.

INSULATION:

1. MINERAL FIBER INSULATION SHALL BE INSTALLED IN JOINT SPACES WHENEVER A PLUMBING PIPE OR DUCT PENETRATES A FLOOR–CEILING ASSEMBLY OR WHERE SUCH PIPE OR DUCT PASSES THROUGH THE PLANE OF FLOOR–CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE INSTALLED TO A POINT 12" BEYOND THE PIPE OR DUCT.
2. COMBUSTION AIR, KITCHEN AND BATHROOM EXHAUST DUCTS WITHIN SOUND SEPARATION ASSEMBLIES SHALL BE WRAPPED WITH TYPE "C" INSULATION AS SHOWN IN TABLE NO. 6–4, UNIFORM MECHANICAL CODE.
3. CEILING CONCEALED SUPPLY AND RETURN DUCTS TO BE COVERED ALL SIDES WITH 2" THICK 3/4 LB./CU. FT. OR WITH 1" THICK 1.5 LB./CU. FT. DENSITY FIBERGLASS INSULATION, OR 1" THICK 3 LB./CU. FT. MINERAL FIBER BOARD, OR MATERIAL WITH A CONDUCTANCE OF 0.30 OR LESS, APPLIED WITH 2" LAPPED JOINTS SECURELY AND NEATLY WIRED AND FASTENED TO DUCT; THE INSULATION TO BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION; (JOHN MANSVILLE IS ACCEPTED) WHEN DUCTWORK PENETRATE INSULATED WALLS OR ROOF, THE HOLE MUST BE SEALED WITH AN APPROVED POLY SEAL MATERIAL.
4. INSULATION INSTALLER SHALL POST IN A CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER AND BUILDER STATING THAT THE INSULATION CONFORMS WITH THE REQUIREMENTS OF TITLE 24, CHAPTER 2–53 AND THAT THE MATERIAL INSTALLED CONFORMS WITH THE REQUIREMENTS OF TITLE 20, CHAPTER 2, SUB–CHAPTER 4, ARTICLE 3.
6. ALL INSULATION MATERIALS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE CALIFORNIA QUALITY STANDARD FOR INSULATION MATERIAL.
7. INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN THE BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE–DENSITY NOT EXCEEDING 50 PER CBC 2010.

PIPING:

1. PROVIDE A 3/4" MINIMUM CONDENSATE DRAIN FROM EACH AC UNIT TO AN APPROVED DISPOSAL AREA. CONDENSATE WATER SHALL NOT DRAIN OVER A PUBLIC WAY. THE DRAIN SHALL HAVE A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT AND SHALL BE OF APPROVED CORROSION–RESISTANT PIPE. (THIS WORK IS UNDER PLUMBING SECTION, REFER TO PLUMBING DRAWINGS).
2. FOR COOLING EQUIPMENT LOCATED IN AN ATTIC OR FURRED SPACE, AN ADDITIONAL WATER–TIGHT PAN OF CORROSION–RESISTANT METAL SHALL BE INSTALLED BENEATH THE COOLING COIL TO CATCH THE OVERFLOW CONDENSATE DUE TO CLOGGED PRIMARY CONDENSATE DRAIN. THE ADDITIONAL PAN SHALL BE PROVIDED WITH A DRAIN PIPE, 3/4 INCH NOMINAL PIPE SIZE, DISCHARGING AT A POINT WHICH CAN BE READILY OBSERVED. (THIS WORK IS UNDER PLUMBING SECTION REFER TO PLUMBING DRAWINGS).

CODE:

1. MOUNT WALL MOUNTED THERMOSTATS 4' – 0" ABOVE FINISHED FLOOR.
2. EACH SINGLE SYSTEM WITH ONE OR MORE AIR CONDITIONING UNITS PROVIDING HEATING OR COOLING IN EXCESS OF 2000 CFM OR AIR SERVING MORE THAN ONE OCCUPANCY, SHALL HAVE SMOKE DETECTORS (PRODUCT OF COMBUSTION) AND SHALL BE INSTALLED IN THE MAIN SUPPLY DUCT DOWNSTREAM OF THE FILTERS. ACTIVATION OF THE SMOKE SHALL CAUSE THE UNIT TO SHUT DOWN AND ACTIVATE THE FIRE ALARM SYSTEM. (WHERE FIRE DETECTION & ALARM SYSTEMS ARE PROVIDED) (2010 CMC, 609). IF THERE ARE A NUMBER OF AIR CONDITIONING UNITS SERVING ONE AREA, OR THERE IS A COMMON RETURN AIR PLENUM FOR A NUMBER OF AIR CONDITIONING UNITS, ALL SMOKE DETECTORS MUST BE INTERCONNECTED TO SHUT–OFF ALL EQUIPMENT EVEN WHEN SMOKE IS DETECTED BY ONLY ONE SMOKE DETECTOR. DUCT VELOCITY AND PRESSURE DIFFERENTIAL MAY HAVE TO BE VERIFIED FOR EACH DUCT SMOKE DETECTOR LOCATION IN ACCORDANCE WITH U.L. LISTING AND EC110–3(B). AUTOMATIC SHUTOFFS NEED NOT BE INSTALLED WHEN ALL ROOMS HAVE DIRECT EXIT TO THE EXTERIOR OF THE BUILDING.
3. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF ALL APPLICABLE CODES, LAWS, ORDINANCES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, ADDITIONAL PLAN CHECK FEES, INSPECTIONS, ETC. AND FURNISH SIGNED, CERTIFIED AND ACCEPTABLE COPIES TO THE OWNER FOR HIS RECORD.
4. CONTRACTOR SHALL PROVIDE FIRE DAMPERS AT FIRE RATED PENETRATIONS.
5. DUCTS OPENING INTO CORRIDOR SHALL HAVE INSTALLED A COMBINATION FIRE/SMOKE DAMPER CONFORMING TO CBC STANDARD SECTION 716 (J) WITH A MINIMUM LEAKAGE CLASSIFICATION OF III. CBC, 4306. FIRE DAMPER DETAIL SHOWN IS FOR REFERENCE ONLY. FIRE DAMPERS SHALL BE OSHPD FIRE MARSHAL APPROVED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
6. DUCT VELOCITY AND PRESSURE DIFFERENTIAL SHALL BE VERIFIED FOR EACH DUCT SMOKE DETECTOR LOCATION IN ACCORDANCE WITH U.L. LISTING AND EC110–3(B). DUCT SMOKE DETECTORS SHALL BE MAGNEHELIC TESTED TO THE LISTED SPECIFICATIONS IN THE PRESENCE OF THE CITY BUILDING INSPECTOR PRIOR TO FINAL APPROVAL.
7. ACCESS TO INSPECT, SERVICE, REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION TO ALL EQUIPMENT SHALL BE PROVIDED. UNLESS OTHERWISE SPECIFIED, NOT LESS THAN 30 INCHES OF WORKING SPACE AND PLATFORM SHALL BE PROVIDED.
8. TOILET ROOMS WITHOUT WINDOWS OR WINDOW AREA LESS THAN 5% OF TOILET FLOOR AREA, SHALL HAVE A MECHANICALLY OPERATED EXHAUST SYSTEM CAPABLE OF PROVIDING A COMPLETE CHANGE OF AIR EVERY 10 MINUTES (6 AIR CHANGE PER HOUR). TOILET EXHAUST DUCTS SHALL BE DIRECTLY CONNECTED TO THE OUTSIDE AND SHALL BE OF SMOOTH, NON–ABSORBENT AND NON–COMBUSTIBLE SURFACE MATERIAL.
9. ALL OSA INTAKES MUST BE 10 FEET MINIMUM AWAY FROM ALL PLUMBING OR APPLIANCE VENTS (OR 3'–0" MINIMUM BELOW APPLIANCE VENTS). OSA INLETS SHALL BE COVERED WITH SCREEN HAVING 1/4" OPENING.
10. ENVIRONMENTAL EXHAUST, SUCH AS BATHROOM, DRYER VENT, ETC. SHALL TERMINATE AT LEAST 3 FEET FROM PROPERTY LINE, ANY OPERABLE WINDOW, AND 10 FEET AWAY FROM ANY FRESH AIR INTAKE. PRODUCT CONVEYING EXHAUST, SUCH AS GARAGE VENTILATION, COMMERCIAL KITCHEN HOOD, ETC. SHALL TERMINATE AT LEAST 10 FEET FROM PROPERTY LINE, OPENINGS INTO THE BUILDING, FRESH AIR INTAKE OPENING, ABOVE ADJOINING GRADE, AND 3 FEET FROM EXTERIOR WALL OR ROOF.
11. ALL PENETRATIONS IN FIRE WALLS AND FLOOR–AND ROOF–CEILING ASSEMBLIES REQUIRING PROTECTED OPENING SHALL BE FIRE–STOPPED PROVIDE FIRE STOPPING SPECIFICATIONS INCLUDING MANUFACTURER AND REPORT OF APPROVED TESTING AGENCY.
12. ALL PENETRATIONS OR OPENINGS IN CONSTRUCTION ASSEMBLIES FOR PIPING, HEATING, VENTILATING OR EXHAUST DUCTS SHALL BE SEALED, LINED, INSULATED OR OTHERWISE TREATED TO MAINTAIN THE REQUIRED RATINGS.
13. ALL RIGID DUCTS, PIPES, AND APPLIANCE VENTS LOCATED IN SOUND ASSEMBLIES SHALL BE ISOLATED FROM THE BUILDING CONSTRUCTION BY MEANS OF RESILIENT SLEEVES, MOUNTS, OR MINIMUM 1/4" THICK APPROVED RESILIENT MATERIAL. (EXCEPTION: GAS PIPING NEED NOT BE LINED).
14. CLOTHES DRYER EXHAUST DUCTS MUST BE OF METAL.
15. ALL GAS FIRED HEATING EQUIPMENT SHALL BE "IID" (PILOT–LESS) TYPE.
16. PROVIDE A 6" CLEARANCE ON FRONT, SIDES AND BACK OF THE FURNACE.
17. SEAL THE CEILING MOUNTED EXHAUST FAN HOUSING TO THE CEILING MEMBRANE. USE U.L. APPROVED FIRE STOPPING SEALANT.
18. THIS PROJECT SHALL COMPLY W/ THE 2010 EDITION OF THE CALIFORNIA BUILDING CODE (T–24), WHICH ADOPTS THE 2006 IBC, 2006 UMC, 2006 UPC.
19. WHEN MORE THAN ONE HEATING, COOLING, VENTILATING OR REFRIGERATING SYSTEM IS INSTALLED ON THE ROOF OF A BUILDING OR WITHIN A BUILDING, IT SHALL BE PERMANENTLY IDENTIFIED AS TO THE AREA OR SPACE SERVED BY THE EQUIPMENT.

ENERGY:

1. BACK–DRAFT DAMPERS FOR ALL EXHAUST AND FAN SYSTEMS SHALL BE PROVIDED. EXCEPTION: NO BACK–DRAFT DAMPERS IN GREASE DUCTS.
2. ALL WATER HEATING AND AIR CONDITIONING EQUIPMENT, SHOWER HEADS AND FAUCETS SHALL BE C.E.C. CERTIFIED.
3. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE EQUIPPED WITH NIGHT SET BACK AND HAVE THE ABILITY TO OPERATE THE HEATING AND THE COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 10 DEGREES F BETWEEN FULL HEATING AND FULL COOLING AND HAVE A CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F AND COOLING AT A TEMPERATURE NO LESS THAN 78 DEGREES F.
4. AT LEAST ONE AUTOMATIC SPACE TEMPERATURE CONTROL DEVICE (THERMOSTAT) SHALL BE PROVIDED FOR EACH ZONE AND/OR EACH SEPARATE HVAC SYSTEM. (NOT MORE THAN ONE FLOOR OF BUILDING SHALL BE INCLUDED).
5. ALL AIR CONDITIONING UNITS TO BE FURNISHED WITH MAINTENANCE MANUALS, SCHEDULES AND TAGS.
6. ALL AIR CONDITIONING UNITS TO BE EQUIPPED WITH A READILY ACCESSIBLE MANUALLY ADJUSTABLE AUTOMATIC MEANS OF REDUCING THE ENERGY USED FOR HVAC DURING PERIOD OF NON USE OR ALTERNATE USE OF THE BUILDING SPACE OR ZONES SERVED BY THE SYSTEM, SUCH AS A TIME CLOCK OR TIME SWITCH.
7. EACH MECHANICAL OR GRAVITY VENTILATING UNIT, EXCEPT ATTIC VENTILATORS SHALL BE EQUIPPED WITH AN AUTOMATIC TYPE NORMALLY CLOSED OUTSIDE AIR DAMPER TO SERVE AS A MEANS OF PROVIDING AIR VOLUME REDUCTION AND/OR SHUT–OFF WHEN VENTILATION IS NOT REQUIRED. (DOES NOT APPLY TO COMBUSTION AIR OPENINGS).

QUALITY CONTROL:

1. PROVIDE AS BUILT DRAWINGS AND SUBMIT COPIES TO THE OWNER.
2. CONTRACTOR SHOULD SUBMIT SHOP DRAWINGS. EQUIPMENT HANGERS, ANCHOR BOLTS AND METHODS OF INSTALLATION MUST HAVE CITY APPROVAL AND MAY BE SUPPLIED BY HILTI OR EQUAL.
3. IT IS THE SPECIFIC INTENT OF THIS DESIGN CONDITIONS THAT THE ENTIRE SYSTEM INCLUDING EQUIPMENT, DUCTWORK, AIR OUTLETS/INLETS AND ALL OTHER PARTS BE NOISELESS AND FREE OF VIBRATION TRANSMISSION. PROVIDE AND INSTALL VIBRATION ISOLATORS OR DAMPERS, SOUND INSULATION PADS, FLEXIBLE CONNECTORS AND SIMILAR MATERIAL AS REQUIRED. INSTALL VOLUME DAMPERS ON ALL DUCTS AS FAR AS POSSIBLE FROM AIR INLET/OUTLET. MAKE THE NECESSARY NOISE OR VIBRATION CORRECTIONS BY INSTALLING THESE ITEMS AT NO COST TO THE OWNER.

4. THE DRAWINGS ARE IN PART DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF THE WORK; THEY INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE SIZES OF EQUIPMENT, DUCTWORK, PIPING, OUTLETS, ETC. FOLLOW THE DRAWINGS AS CLOSELY AS PRACTICAL IN LAYING OUT THE WORK, BE GUIDED BY THE CONDITIONS AT THE JOB AND CONSULT THE CONSTRUCTION DRAWINGS OF THE OTHER TRADES TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE WORK.
5. UPON COMPLETION OF AND AFTER CLEANING OF SYSTEM AND EQUIPMENT, CAREFULLY ADJUST FOR NORMAL OPERATION OF THE AUTOMATIC PARTS OF HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS.
6. EQUIPMENT AND DUCTWORK EXPOSED TO WEATHER MUST BE WEATHERPROOFED.
7. ROOF MOUNTED EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES. (WHEN MORE THAN ONE HEATING OR COOLING UNIT SERVES DIFFERENT OCCUPANTS.)
8. CONTRACTOR SHALL BALANCE AIR SYSTEM TO THE CFM CAPACITY AS SHOWN ON FLOOR
9. ALL APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE PER 2010 CMC, 304.4 (FOR SECURED FASTENING AND SUPPORT OF APPLIANCES)
10. FURNISHING AND INSTALLATION OF ALL LOW VOLT. WIRING FOR MECHANICAL SYSTEMS SHALL BE BY THE MECHANICAL CONTRACTOR.
11. ALL NECESSARY EQUIPMENT CURBS, RUNNERS, PLATFORMS, ROOFING, PATCHING, CUTTING, RATING SHAFTS, FURRING, FLASHING AND PAINTING SHALL BE BY THE GENERAL CONTRACTOR.
12. ALL NECESSARY DRAINS, GAS, CONDENSATE DRAINS WITH TRAPS, MAKE–UP WATER, INCLUDING FINAL CONNECTIONS SHALL BE BY THE PLUMBING CONTRACTOR.
13. FURNISHING AND INSTALLATION OF ALL LINE VOLT. WIRING, ALL LOW AND LINE VOLT CONDUITS AND AUXILIARIES FOR MECHANICAL SYSTEMS SHALL BE BY THE ELECTRICAL CONTRACTOR. THE CONDUIT FOR LOW VOLTAGE WIRING OF MECHANICAL SYSTEM EXPOSED TO THE WEATHER SHALL BE APPROVED FOR EXTERIOR USE AND BE BY THE ELECTRICAL CONTRACTOR.
14. ALL COMBINATION SMOKE/ FIRE DAMPERS SHALL INTERLOCKED FOR GLOBAL SHUTDOWN WITH ALL DUCT SMOKE DETECTORS, SMOKE AREA DETECTORS, ALL AIR HANDLING EQUIPMENT AND THE ALARM SYSTEM IF PROVIDED.
15. ALL DUCT DETECTORS SHALL BE MAGNEHELIC TESTED TO THE MANUFACTURERS SPECIFICATIONS IN THE PRESENCE OF THE CITY OF LOS ANGELES BUILDING INSPECTOR PRIOR TO THE FINAL APPROVAL.
16. ALL EXTERIOR MOUNTED DUCT DETECTORS SHALL BE RATED AT 150 DEGRESS F. OR HIGHER AND BE MOUNTED IN A NEMA RATED ENCLOSURE OF 3–R OR HIGHER.
17. ALL ROOFTOP EQUIPMENT REQUIRES EXTERNAL DISCONNECTS.
18. ALL EQUIPMENT SHALL BE LABELED OR LISTED BY A RECOGNIZED APPROVAL AGENCY.
19. A RETURN AIR PLENUMS ARE NOT PERMITTED ON THIS JOB WITHOUT PLAN CHECK APPROVAL.
20. ALL MECHANICAL EQUIPMENT DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE. OTHER EQUIPMENT THAT IS OVER 5 FEET IN HEIGHT, IT SHALL BE SECURED IF ONE OF THE FOLLOWING APPLY: (T–16–P)
    a. EXCEEDS HEIGHT TO WIDTH RATIO OF 1–1/2 : 1.
    b. CENTER OF GRAVITY IS LOCATED ABOVE MID–HEIGHT.
21. ALL APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE PER BUILDING CODE REQUIREMENTS.
22. ROOF MOUNTED EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES.
23. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE FLAMESPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE–DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH CBC SECTION 703.4.2
24. NO ANALYSIS HAS BEEN MADE WITH REGARD TO SOURCES OR POTENTIAL SOURCES OF INDOOR OR OUTDOOR AIR CONTAMINANTS OR LEVELS OF CONTAMINATION.
25. IT IS THE RESPONSIBILITY OF THE GENERAL AND MECHANICAL CONTRACTOR TO INFORM THE TENANT'S REPRESENTATIVE, LANDLORD AND TENANT'S ARCHITECT IF ANY SOURCE OR POTENTIAL SOURCE OF INDOOR AIR CONTAMINATION IS IDENTIFIED.
26. PRIOR TO ENCLOSING SPACES SUCH AS PLUMBING CHASES, AIR SHAFTS AND RETURN AIR PLENUMS CLEAN ALL AREAS THOROUGHLY. THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER USED FOR RECIRCULATING OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS, EXHAUST DISCHARGES AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
27. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES SHUT OFF THE HVAC SYSTEM, BLOCK OFF AIR GRILLS, DIFFUSERS AND OTHER OPENINGS OUTSIDE THE IMMEDIATE CONSTRUCTION AREA. OPENINGS TO ADJACENT TENANT SPACES SHALL BE COVERED WITH FILTER MEDIA TO PREVENT DUST AND OTHER AIRBORNE CONTAMINANTS FROM PASSING TO ADJOINING SPACES.
28. CONTRACTORS TO INSTALL TEMPORARY EXHAUST SYSTEM TO VENTILATE CONSTRUCTION SITE AND KEEP SITE UNDER SLIGHT NEGATIVE PRESSURE DURING ALL HOURS OF CONSTRUCTION, EVEN IF AFTER NORMAL BUSINESS HOURS.
29. CONTRACTORS TO INSTALL TEMPORARY BARRIERS TO PROTECT ADJACENT SPACES FROM DUST, PARTICULATES, VAPORS AND NOISE. WHERE TEMPORARY BARRIERS ARE INSTALLED ALWAYS MAINTAIN FIRE EXITS AND EXITWAYS.

CONDENSATE WASTE SIZING

EQUIPMENT CAPACITY IN TONS OF REFRIGERATION (kW)	MINIMUM CONDENSATE PIPE DIAMETER IN INCHES (mm)
UP to 20 (Up to 70.34)	3/4" (20)

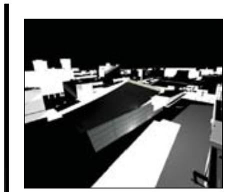
THE SIZE OF CONDENSATE WASTE PIPES MAY BE FOR ONE UNIT OR A COMBINATION OF UNITS, OR AS RECOMMENDED BY THE MANUFACTURER. THE CAPACITY OF WASTE PIPES ASSUMES A ⅛ INCH PER FOOT (10.5 mm/m) OR ONE PERCENT SLOPE, WITH THE PIPE RUNNING THREE–QUARTERS FULL:

Outside Air – 20%		Room Air – 80%	
DB	WB	DB	WB
90°F	73°F	75°F	62.5°F
(32°C)	(23°C)	(24°C)	(17°C)

NOTES:

1. PRIOR TO ANY DUCT OR PIPING FABRICATION, EQUIPMENT INSTALLATION OR DUCT AND PIPE INSTALLATION, MECHANICAL CONTRACTOR SHALL COORDINATION WITH ALL OTHER TRADES AND CEILING CLEARANCES AND PROVIDE COMPLETE SHOP DRAWING. OBTAIN APPROVAL FOR SHOP DRAWING FROM ARCHITECT/ENGINEER. DUCT MAY BE RESIZED TO EQUIPMENT SIZES IN ORDER TO ACCOMMODATE AVAILABLE SPACE, VERIFY WITH ENGINEER. NO EXTRA COST IS ALLOWABLE FOR LACK OF COORDINATION AFTER SHOP DRAWINGS ARE SUBMITTED.
2. SITE INSPECTION: CONTRACTORS SHALL VISIT THE SITE OF WORK PRIOR TO SUBMISSION OF HIS BID AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE WORKING CONDITIONS AND EXACT NATURE OF THE WORK. SUBMISSION OF A BID ACKNOWLEDGES FULL RESPONSIBILITY FOR FURNISHING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN CONTRACT WILL BE MADE TO ACCOMMODATE OR ALLOW EXTRA FUNDS FOR ANY SUBMISSION WHICH RESULTS FROM A FAILURE TO THOROUGHLY MAKE THE EXAMINATION.

3– CONTRACTOR TO PROVIDE FLOW SWITCH OR LIQUID SWITCH. IF SECONDARY UNIT IS OPERATIONAL OR FLOWING. FLOAT SWITCH HAS BEEN USED OR WET SIGNAL SWITCH WITHIN SECONDARY PIPE HAS BEEN INSTALLED BY MANUFACTURER.



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REGISTERED PROFESSIONAL ENGINEER
ARASH NAZARI
No. M–34638
EXP. 12–31–17
MECHANICAL
STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

MECHANICAL NOTES

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M101

Scale

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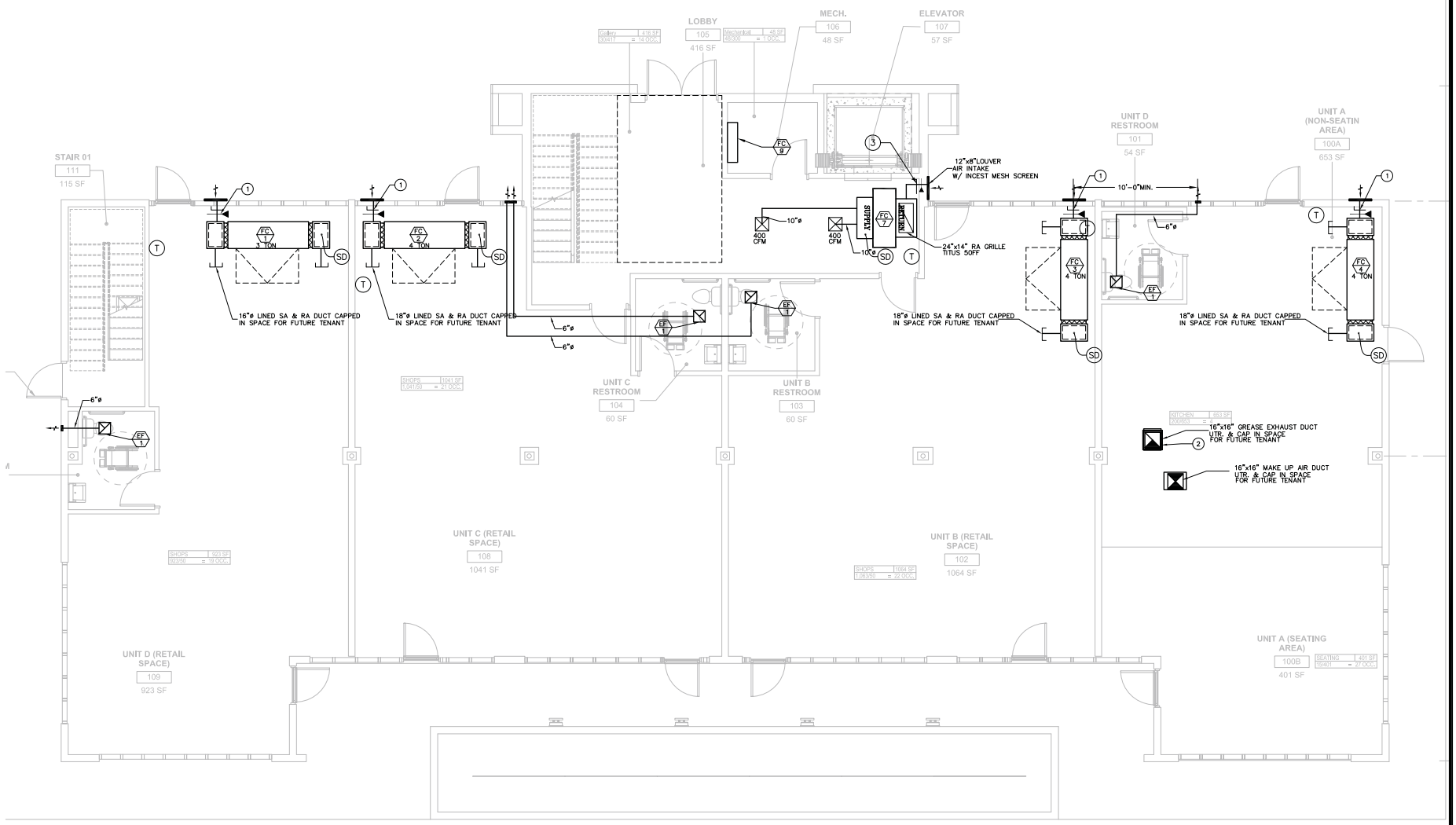

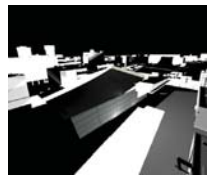

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REGISTERED PROFESSIONAL ENGINEER
ANISH NOURI
No. M-34638
EXP. 12-31-17
MECHANICAL
STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

FIRST FLOOR PLAN

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M201

Scale	1/4" = 1'-0"

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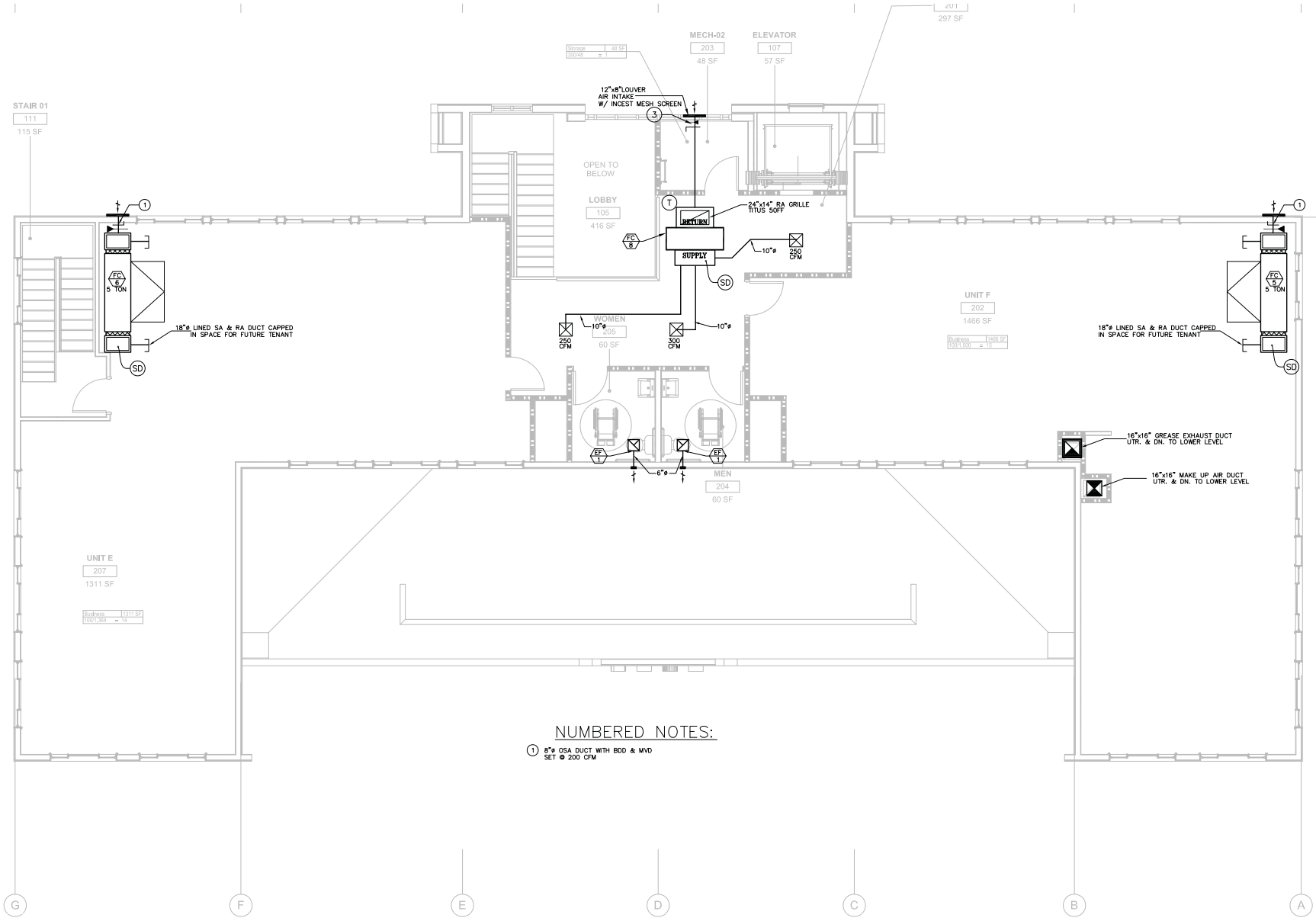
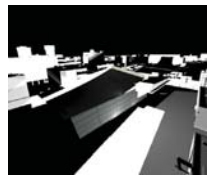


NUMBERED NOTES:

1. 8"ø OSA DUCT WITH BDD & MVD SET @ 200 CFM



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REGISTERED PROFESSIONAL ENGINEER ARASH NOURI No. M-34638 EXP. 12-31-17 MECHANICAL STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

SECOND FLOOR PLAN
PLAN

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M202

Scale 1/4" = 1'-0"

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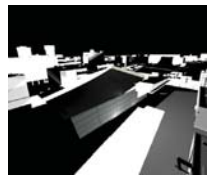

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REGISTERED PROFESSIONAL ENGINEER
ANISH NOJRI
No. M-34638
EXP. 12-31-17
MECHANICAL
STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

MECHANICAL
ROOF PLAN

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M203

Scale	1/4" = 1'-0"

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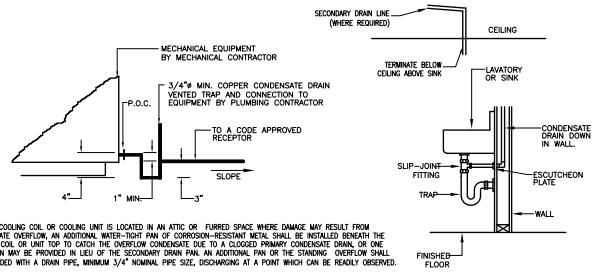
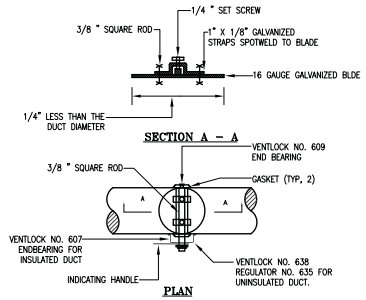


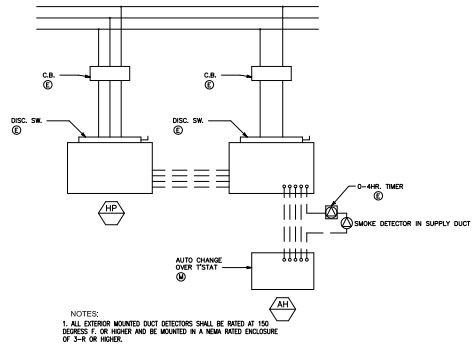
NOTE: WHEN A COOLING COIL OR COOLING UNIT IS LOCATED IN AN ATTIC OR FURRED SPACE WHERE DAMAGE MAY RESULT FROM CONDENSATE OVERFLOW, AN ADDITIONAL WATER-TIGHT PAN OF CORROSION-RESISTANT METAL SHALL BE INSTALLED BENEATH THE COOLING COIL OR UNIT TOP TO CATCH THE OVERFLOW CONDENSATE DUE TO A CLOGGED PRIMARY CONDENSATE DRAIN, OR ONE PAN DRAIN MAY BE PROVIDED IN LIEU OF THE SECONDARY DRAIN PAN. AN ADDITIONAL PAN OR THE STANDING OVERFLOW SHALL BE PROVIDED WITH A DRAIN PIPE, MINIMUM 3/4" NOMINAL PIPE SIZE, DISCHARGING AT A POINT WHICH CAN BE READILY OBSERVED.

CONDENSATE DRAIN CONNECTION — SCALE NONE: C



SCALE NONE: B

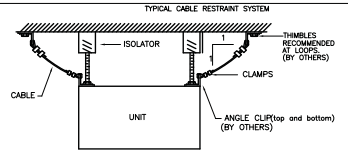
SCALE NONE: A



NOTES:
1. ALL EXTERIOR MOUNTED DUCT DETECTORS SHALL BE RATED AT 150 DEGREES F. OR HIGHER AND BE MOUNTED IN A NEMA RATED ENCLOSURE OF 3-R OR HIGHER.

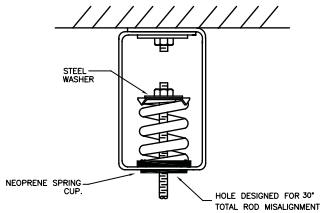
AC-UNIT WIRING DIAGRAM — SCALE NONE: E

SCALE NONE: F

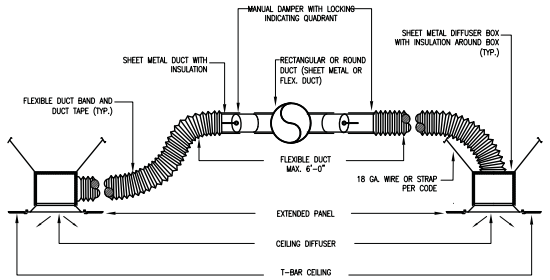


3) FOR CABLE AND ANCHORAGE SIZES SEE DRWG -
2) CABLE IS 7 X 19 AIRCRAFT CABLE.
NOTES: 1) CABLES TO BE INSTALLED 1/4" SLACK.

TYPICAL CABLE RESTAINT DETAIL



VIBREX TYPE RMXA



NOTE:
1. SEE GENERAL NOTES FOR FURTHER INSTALLATION INSTRUCTIONS.

CEILING DIFFUSER DETAIL — SCALE NONE: I

VALUES ARE O.S.A. APPROVED (I.C.B.O. VALUES WITH 20% REDUCTION).

BOLT DIA.	MIN. EMBED.	KWIK-BOLT 2000 PSI TENSION	KWIK-BOLT 2000 PSI SHEAR	KWIK-BOLT 3000 PSI TENSION	KWIK-BOLT 3000 PSI SHEAR	PULL OUT TEST VALUES
1/4"	2 1/2"	516	304	592	412	500
3/8"	3"	564	688	670	852	1300
1/2"	4"	1064	1368	1252	1516	2000
5/8"	4"	1152	2056	1484	2184	2900
3/4"	5"	2152	2440	2720	2928	4300
1"	7"	3232	3580	3960	4150	6400

BOLT DIA.	MIN. EMBED. (WOOD ONLY)	MACHINE BOLT A-307 TENSION	MACHINE BOLT A-307 SHEAR	WOOD LAG DOUGLAS FIR TENSION	WOOD LAG DOUGLAS FIR SHEAR	PULL OUT TEST VALUES
1/4"		643	490			
3/8"	4"	1596	1104	393	290	NOT REQUIRED
1/2"	4"	2832	1963	488	320	
5/8"	4"	4520	3070	576	360	
3/4"	5"	6690	2940	924	660	
1"		12110	7850			

NOTES :1) VALUES ARE BASED ON 12 DIA. SPACING AND 6 DIA. EDGE DISTANCE.
2) TENSION VALUES ARE WITH SPECIAL INSPECTION (WITHOUT SPECIAL INSPECTION, VALUES ARE x .5).
3) A SIMULTANEOUS VERTICAL FORCE = 1/3 x HORZ. FORCE SHALL BE APPLIED IN THE DESIGN OF ALL EQUIPMENT ANCHORS.
4) IMPORTANCE FACTOR : I = 1.5

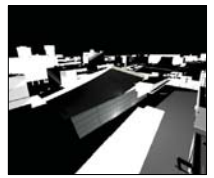
ANCHOR BOLT - SELECTION CHART

CABLE DIA.	MIN BREAKING STRENGTH	ALLOWED LOADS (POUNDS)
3/32	1000	330
1/8	2000	660
5/32	2800	930
3/16	4200	1400
7/32	5600	1800
1/4	7000	2300
9/32	8000	2600
5/16	9800	3200
3/8	14000	4600
7/16	17600	5800
1/2	22800	7600
5/8	35000	11600

CABLE IS 7 X 19 GALVANIZED AIRCRAFT CABLE.
ALLOWED LOADS ARE CALCULATED ON A SAFETY FACTOR OF 3.
CABLES ARE CLAMPED WITH A MINIMUM OF TWO U-BOLT CLIPS AT EACH END.

CABLE RESTRAINTS - LOADING CHART

VIBRATION ISOLATOR DETAIL — SCALE NONE: G



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REGISTERED PROFESSIONAL ENGINEER ARASH NOURI No. M-34638 EXP. 12-31-17 MECHANICAL STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

MECHANICAL DETAILS

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M300

Scale NTS

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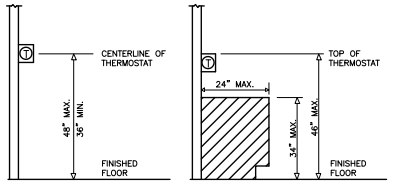
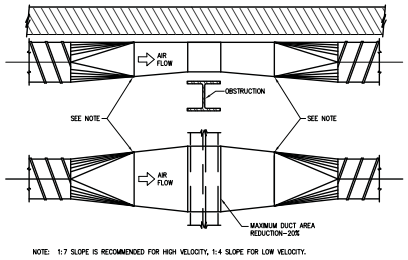


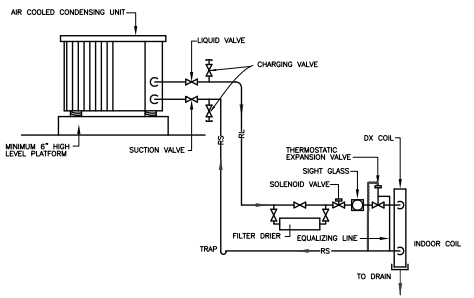
THERMOSTAT MOUNTING



NOTE: 1:7 SLOPE IS RECOMMENDED FOR HIGH VELOCITY, 1:4 SLOPE FOR LOW VELOCITY.

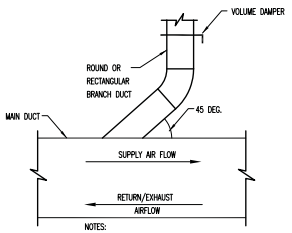
Beam Box Detail

SCALE	
NONE:	B



SPLIT SYSTEM REFRIGERATION PIPING DETAIL

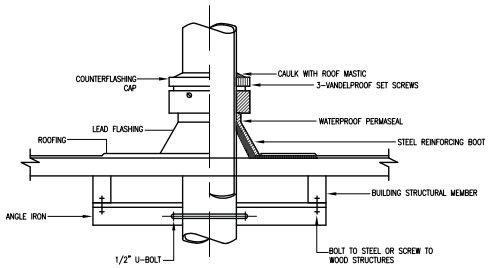
SCALE	
NONE:	A



NOTES:
FURNISH THIS TYPE CONNECTION WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW

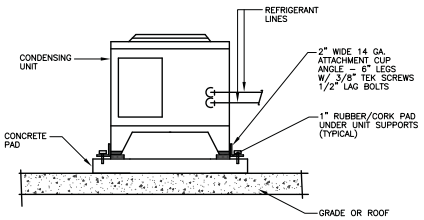
ROUND OR RECTANGULAR DUCT BRANCH CONNECTION DETAIL

SCALE	
NONE:	C



DUCT THRU ROOF DETAIL

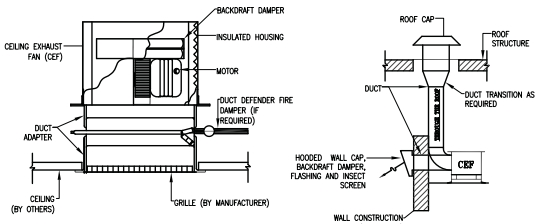
SCALE	
NONE:	E



NOTES:
1. PIPE CONDENSING UNIT IN ACCORDANCE W/ UNIT MANUFACTURER INSTRUCTIONS.
2. CONCRETE PAD TO BE MINIMUM 6" WIDER THAN UNIT BASE AT EACH END.

CONDENSING UNIT MOUNTING DETAIL

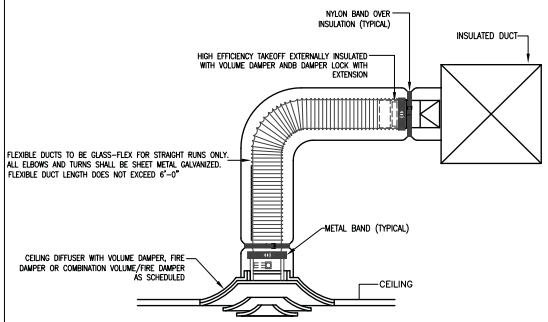
SCALE	
NONE:	D



INSULATION NOTES:

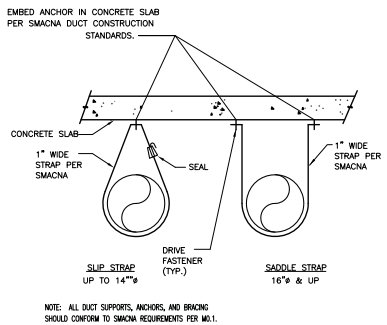
1. WALL AND / OR ROOF PENETRATIONS SHALL BE PROVIDED WITH WEATHERTIGHT SEAL: COORDINATE WITH GENERAL CONSTRUCTION.
2. INSTALL MINIMUM 16 GAUGE SHEET STEEL SUPPORTS TO RIGIDLY ATTACH FAN HOUSING TO STRUCTURE: FIELD VERIFY EXACT REQUIREMENTS. INSURE ADEQUATE VIBRATION ISOLATION.
3. INSTALLATION SHALL BE NEAT AND COMPLETED TIMELY AND IN SUCH A MANNER TO ALLOW CC TO FINISH SURFACES UNIFORMELY.
4. ALL ELECTRICAL WIRING AND CONNECTIONS SHALL BE BY ELETRICAL CONTRACTOR.

CEILING EXHAUST FAN



LAY-IN CEILING DIFFUSSER

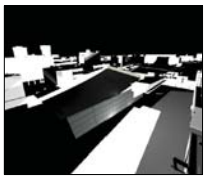
SCALE	
NONE:	H



NOTE: ALL DUCT SUPPORTS, ANCHORS, AND BRACING SHOULD CONFORM TO SMACNA REQUIREMENTS PER M0.1.

DUCTWORK SUPPORT

SCALE	
NONE:	G



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REGISTERED PROFESSIONAL ENGINEER ANISH NOJRY No. M-34638 EXP. 12-31-17 MECHANICAL STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

MECHANICAL DETAILS

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M301

Scale	NTS

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Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 1 of 17
Project Address:	5707 Pacific Blvd, Huntington Park 90255	Calculation Date/Time:	10:45, Thu, Feb 23, 2017
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	5707 PACIFIC BLVD, HUNTINGTON PARK, CA.cibd16x

A. PROJECT GENERAL INFORMATION

1.	Project Location (city)	Huntington Park	8.	Standards Version	Compliance2016
2.	CA Zip Code	90255	9.	Compliance Software (version)	EnergyPro 7.1
3.	Climate Zone	8	10.	Building Orientation (deg)	(E) 90 deg
4.	Total Conditioned Floor Area in Scope	10,000 ft^2	11.	Permitted Scope of Work	NewEnvelopeAndMechanical
5.	Total Unconditioned Floor Area	0 ft^2	12.	Building Type(s)	Nonresidential
6.	Total # of Stories (Habitable Above Grade)	2	13	Gas Type	NaturalGas
7.	Total # of dwelling units	0			

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ^{2}-yr) § 140.1

BUILDING COMPLIES

1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard
Space Heating	3.22	1.23	1.99	61.8%
Space Cooling	123.63	115.56	8.07	6.5%
Indoor Fans	68.39	77.62	-9.23	-13.5%
Heat Rejection	--	--	--	--
Pumps & Misc.	0.23	--	0.23	--
Domestic Hot Water	8.36	8.36	--	0.0%
Indoor Lighting	102.19	102.19	--	0.0%
COMPLIANCE TOTAL	**306.02**	**304.96**	**1.06**	**0.3%**
Receptacle	89.79	89.79	0.0	0.0%
Process	179.57	179.57	0.0	0.0%
Other Ltg	--	--	--	--
TOTAL	**575.38**	**574.32**	**1.1**	**0.2%**

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 2 of 17
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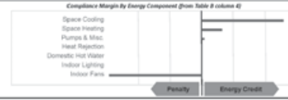
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	5707 PACIFIC BLVD, HUNTINGTON PARK, CA.cibd16x

C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Space Cooling: Check envelope and mechanical
2nd	Space Heating: Check envelope and mechanical
3rd	Pumps & Misc.: Check mechanical
4th	Heat Rejection: Check envelope and mechanical
5th	Domestic Hot Water: Check mechanical
6th	Indoor Lighting: Check lighting
7th	Indoor Fans: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)



D. EXCEPTIONAL CONDITIONS

The project shows partial compliance, either envelope only or mechanical only, excluding lighting systems. The building must show partial compliance including lighting or full new building compliance or show prescriptive lighting compliance before operation

The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

None Provided

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 3 of 17
Project Address:	5707 Pacific Blvd, Huntington Park 90255	Calculation Date/Time:	10:45, Thu, Feb 23, 2017
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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components use the performance or prescriptive path for compliance. "NA"= not in project

For components that utilize the performance path, indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms *(required for submittal)*	Location of Mandatory Notes on Plans
Envelope	☒ Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
	☐ NA		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	☐ NA		
Domestic Hot Water	☐ Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PLB-01-E	
	☒ NA		
Lighting (Indoor Conditioned)	☐ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	☒ NA		
Covered Process: Commercial Kitchens	☐ Performance	S2 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 03-E	
	☒ NA		
Covered Process: Computer Rooms	☐ Performance	S3 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 04-E	
	☒ NA		
Covered Process: Laboratory Exhaust	☐ Performance	S4 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 09-E	
	☒ NA		

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 4 of 17
Project Address:	5707 Pacific Blvd, Huntington Park 90255	Calculation Date/Time:	10:45, Thu, Feb 23, 2017
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	5707 PACIFIC BLVD, HUNTINGTON PARK, CA.cibd16x

G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building components are only eligible for prescriptive compliance. Indicate which are relevant to the project.				*The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.*			
Yes	**NA**	**Prescriptive Requirement**	**Compliance Forms**	**Yes**	**NA**	**Mandatory Requirement**	**Compliance Forms**
☐	☒	Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	☐ ☐	☒ ☒	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
☐	☒	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E	☐	☒	Electrical: §130.5	NRCC-ELC-01-E
☐	☒	Lighting (Sign) §140.8	NRCC-LTS-01-E	☐	☒	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
☐	☒	Solar Thermal Water Heating: §140.5	NRCC-STH-01-E	☐ ☐ ☐ ☐ ☐	☒ ☒ ☒ ☒ ☒	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 5 of 17
Project Address:	5707 Pacific Blvd, Huntington Park 90255	Calculation Date/Time:	10:45, Thu, Feb 23, 2017
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	5707 PACIFIC BLVD, HUNTINGTON PARK, CA.cibd16x

H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed: Pass	Confirmed: Fail
Envelope	☒ NRCI-ENV-01-E - For all buildings	☐	☐
	☒ NRCA-ENV-02-F- NFRC label verification for fenestration	☐	☐
Mechanical	☒ NRCI-MCH-01-E - For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A- Outdoor Air	☐	☐
	☒ NRCA-MCH-03-A – Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-H- Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A- Air Economizer Controls	☐	☐
	☒ NRCA-MCH-06-A- Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A – Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A- Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A – Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A- Hydronic System Variable Flow Controls	☐	☐
	☐ NRCA-MCH-11-A – Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A- Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A- Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A – Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A- Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A – Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A- Energy Management Controls Systems	☐	☐
	☐ NRCV-MCH-04-H- Duct Leakage Test	☐	☐

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 6 of 17
Project Address:	5707 Pacific Blvd, Huntington Park 90255	Calculation Date/Time:	10:45, Thu, Feb 23, 2017
Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	5707 PACIFIC BLVD, HUNTINGTON PARK, CA.cibd16x

H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed: Pass	Confirmed: Fail
Plumbing	☐ NRCI-PLB-01-E - For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-21-H- HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-STH-01-E - Any solar water heating	☐	☐
Indoor Lighting	☐ NRCI-LTI-01-E - For all buildings	☐	☐
	☐ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)	☐	☐
	☐ NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio	☐	☐
	☐ NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls.	☐	☐
	☐ NRCA-LTI-03-A - Automatic daylighting controls	☐	☐
	☐ NRCA-LTI-04-A - Demand responsive lighting controls	☐	☐
Outdoor Lighting	☐ NRCI-LTO-01-E – Outdoor Lighting	☐	☐
	☐ NRCI-LTO-02-E- EMCS Lighting Control System	☐	☐
	☐ NRCA-LTO-02-A - Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTS-01-E – Sign Lighting	☐	☐
Electrical	☐ NRCI-ELC-01-E - Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed: Pass	Confirmed: Fail
Covered Process	☐ NRCI-PRC-01-E Refrigerated Warehouse	☐	☐
	☐ NRCA-PRC-01-F- Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-F- Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-F- Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor	☐	☐
	☐ NRCA-PRC-08-F- Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

						Confirmed	
1.	Total Conditioned Floor Area	10,000 ft^2	5.	Number of Floors Above Grade	2	Pass	Fail
2.	Total Unconditioned Floor Area	0 ft^2	6.	Number of Floors Below Grade	0		
3.	Addition Conditioned Floor Area	0 ft^2					
4.	Addition Unconditioned Floor Area	0 ft^2					

7. Opaque Surfaces & Orientation	8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio	Pass	Fail
North Wall	1,166 ft^2	281 ft^2	24.1%	☐	☐
East Wall	2,736 ft^2	1,383 ft^2	50.5%	☐	☐
South Wall	1,166 ft^2	260 ft^2	22.3%	☐	☐
West Wall	2,736 ft^2	1,036 ft^2	37.9%	☐	☐
Total	**7,804 ft^2**	**2,959 ft^2**	**37.9%**	☐	☐
Roof	5,000 ft^2	0 ft^2	00.0%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY § 110.6 — Confirmed

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type / Product Type / Frame Type	3. Certification Method[1]	4. Assembly Method	5. Area ft^2	6. Overall U-factor	7. Overall SHGC	8. Overall VT	9. Status[2]	Pass	Fail
Kawneer TrifabTM VG 451T	VerticalFenestration GlazedDoor N/A	NFRC Rated	SiteBuilt	2208	0.37	0.36	0.35	N	☐	☐
PPG Solarban 70XL glass- Door Low E	VerticalFenestration GlazedDoor N/A	NFRC Rated	SiteBuilt	252	0.26	0.26	0.64	N	☐	☐
Fleetwood Windows Series 250T	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	499	0.44	0.18	0.44	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

Taking compliance credit for fenestration shading devices? (if "Yes", see NRCC-PRF-ENV-DETAILS for more information)	No

K. OPAQUE SURFACE ASSEMBLY SUMMARY § 120.7/ § 140.3 — Confirmed

1. Surface Name	2. Surface Type	3. Area (ft^2)	4. Framing Type	5. Cavity R-Value	6. Continuous R-Value	7. U-Factor / F-Factor / C-Factor	8. Status[1]	Pass	Fail
R-25 Wall5	ExteriorWall	7804	Wood	25	NA	U-Factor: 0.064	N	☐	☐
Slab On Grade21	UndergroundFloor	5000	NA	0	NA	F-Factor: 0.730	N	☐	☐
R-30 Roof55	Roof	5000	Wood	30	NA	U-Factor: 0.034	N	☐	☐
R-19 Floor67	InteriorFloor	5000	Wood	19	NA	U-Factor: 0.045	N	☐	☐

[1] Status: N - New, A – Altered, E – Existing

L. ROOFING PRODUCT SUMMARY § 140.3 — Confirmed

1. Product Type	2. Product Density (lb/ft^2)	3. Aged Solar Reflectance	4. Thermal Emittance	5. SRI	6. Cool Roof Credit	7. Roofing Product Description	Pass	Fail
R-30 Roof55	4.65104	0.63	0.85	Not Provided	Yes	CRRC Prod. ID: R-30 Roof	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) § 110.1 / § 110.2

Dry System Equipment [1] (Fan & Economizer info included below in Table N) — Confirmed

1. Equip Name	2. Equip Type	3. System Type (Simple [3] or Complex [4])	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtuh)	8. Total Cooling Output (kBtu/h)	9. Efficiency: Cooling	9. Efficiency: Heating	10. Acceptance Testing Required? (Y/N) [5]	11. Status[6]	Pass	Fail
AH-*/HP-*	SZHP (Split1Phase)	Simple	6	48	No	0	44	SEER-15.0 / EER-12.5	HSPF-9.0	Yes	N	☐	☐
1st floor1	Exhaust ((null))	Simple	3	0	No	0	0	NA	NA	No	N	☐	☐
FC-*/HP-*	SZHP (Split1Phase)	Simple	2	58	No	0	53	SEER-14.5 / EER-12.0	HSPF-9.0	Yes	N	☐	☐
2nd floor32	Exhaust ((null))	Simple	3	0	No	0	0	NA	NA	No	N	☐	☐

Wet System Equipment [2] / *Pumps* — Confirmed

12. Equip Name	13. Equip Type	14. Qty	15. Vol (gal)	16. Rated Capacity (kBtu/h)	17. Efficiency	18. Standby Loss	19. Tank Ext. R Value	20. Qty	21. GPM	22. HP	23. VSD (Y/N)	24. Status[6]	Pass	Fail
NonResBaseWaterHeater	Storage	1	15	15	EF: 0.653	NA	NA	NA	NA	NA	No	N	☐	☐
BaseResWtrHtr	Storage	1	0		EF: 0.820	NA	12.0	NA	NA	(kW)	NA	N	☐	☐

[1] Dry System Equipment includes furnaces, air handling units, heat pumps, etc.
[2] Wet System Equipment includes boilers, chillers, cooling towers, water heaters, etc.
[3] Simple Systems must complete NRCC-CXR-03-E commissioning design review form
[4] Complex Systems must complete NRCC-CXR-04-E commissioning design review form
[5] A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS
[6] Status: N - New, A – Altered, E – Existing

Discrepancy between modeled and designed equipment sizing? (if "Yes", see Table F. "Additional Remarks" for an explanation)	No

Stitch
Studio
Contact: Jorge Escamilla
4082 Pomona Street
Ventura, California 93003
Direct: 818.523.7201
Email: stitchstudio3d@gmail.com

A & N DESIGN GROUP
MECHANICAL · PLUMBING · ELECTRICAL
19126 HAYNES STREET #2
RESEDA, CA 91335
TEL: (818)-288-4361
FAX: (818)-758-0087

REGISTERED PROFESSIONAL ENGINEER
ARASH NAZARI
No. M-34638
EXP. 12-31-17
MECHANICAL
STATE OF CALIFORNIA

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

TITLE-24
REPORT

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

M400

Scale	NTS

8/6/2016 8:44:07 PM

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N. ECONOMIZER & FAN SYSTEMS SUMMARY[1] — § 140.4

1.	2.	3.					4.					5.	Confirmed	
Equip Name	Outside Air	Supply Fan					Return Fan					Economizer Type (if present)	Pass	Fail
	CFM	CFM	HP	BHP	TSP (inch WC)	Control	CFM	HP	BHP	TSP (inch WC)	Control			
AH-*/HP-*	208	1487	0.750	0.750	1.60	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
FC-*/HP-*	625	1929	1.000	1.000	1.64	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] *Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section*

O. EQUIPMENT CONTROLS — § 120.2

1.	2.	3.	Confirmed	
Equip Name	Equip Type	Controls	Pass	Fail
AH-*/HP-*	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	☐	☐
1st floor1	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	☐	☐
FC-*/HP-*	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	☐	☐
2nd floor32	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	☐	☐
NonResBaseSHWSystem	Service Hot Water, Primary Only	Fixed Temperature Control, No DDC	☐	☐

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P. SYSTEM DISTRIBUTION SUMMARY — § 120.4/ § 140.4(l)

		Dry System Distribution				Confirmed	
1.	2.	3.	4.	5.		Pass	Fail
Equip Name	Equip Type	Duct Leakage and Sealing Required per 140.4(l)	Duct Leakage will be verified per NA1 and NA2	Ducts: Insulation R-Value	Ducts: Location		
AH-*/HP-*	SZHP	No	No	8	Unconditioned	☐	☐
FC-*/HP-*	SZHP	No	No	8	Unconditioned	☐	☐

Does the Project Include Zonal Systems? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project Include a Solar Hot Water System? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (if "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)

This Section Does Not Apply

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)[1] — § 130.0

This Section Does Not Apply

[1] *If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.*

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES — § 140.9

This Section Does Not Apply

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS — § 140.9

This Section Does Not Apply

S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS — § 140.9

This Section Does Not Apply

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS — § 140.9

This Section Does Not Apply

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T. UNMET LOAD HOURS

Thermal Zone Name	Cooling Unmet Load Hour Limit for Thermal Zone	Proposed Cooling Unmet Load Hours	Heating Unmet Load Hour Limit for Thermal Zone	Proposed Heating Unmet Load Hours
2-2nd floor	150	699.25	150	0

U. 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	0.7	--	20.5	--	--
Space Cooling	36.2	37.9	-1.7	--	--	--
Indoor Fans	24.7	33.3	-8.6	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	0.1	--	--	--	--	--
Domestic Hot Water	--	--	--	58.0	58.0	0.0
Indoor Lighting	41.5	41.5	0.0	--	--	--
COMPLIANCE TOTAL	**102.5**	**113.4**	**-10.9**	**78.5**	**58.0**	**20.5**
Receptacle	36.4	36.4	0.0	--	--	--
Process	72.7	72.7	0.0	--	--	--
Other Ltg	--	--	--	--	--	--
TOTAL	**211.6**	**222.5**	**-10.9**	**78.5**	**58.0**	**20.5**

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT — § 10-103

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

Documentation Author Name: Arash Nazari, P.E.	Signature:
Company: A & N Design Group	
Address: 19126 Haynes St. Unit 2	Signature Date:
City/State/Zip: Reseda CA 91335	CEA Identification (If applicable): M34638
Phone: 818-288-4361	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
2	I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
3	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name: Jorge Escamilla	**Signature:**	
Company: Stitch Studio		
Address: 4082 Pomona Street	Date Signed:	
City/State/Zip: Ventura CA 93003	Declaration Statement Type:	
Phone: 818.523.7201	Title:	License #:
Responsible Lighting Designer Name: Jorge Escamilla	**Signature: NOT IN SCOPE**	
Company: Stitch Studio		
Address: 4082 Pomona Street	Date Signed:	
City/State/Zip: Ventura CA 93003	Declaration Statement Type:	
Phone: 818.523.7201	Title:	License #:
Responsible Mechanical Designer Name: A. Nazari, PE	**Signature:** A. Nazari	
Company: A & N Design Group		
Address: 19126 Haynes St.#2	Date Signed: 02–23–17	
City/State/Zip: Reseda CA 91335	Declaration Statement Type:	
Phone: (818) 288-4361	Title:	License #: M34638

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS

1.	2.	3.	4.	Confirmed	
Surface Name	Surface Type	Description of Assembly Layers	Notes	Pass	Fail
R-25 Wall5	ExteriorWall	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 5.5in., R-25 Gypsum Board - 1/2 in.		☐	☐
Slab On Grade21	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0		☐	☐
R-30 Roof55	Roof	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 9.25in., R-30 Gypsum Board - 1/2 in.		☐	☐
R-19 Floor67	InteriorFloor	Wood framed floor, 16in. OC, 11.25in., R-19 Plywood - 1/2 in. Carpet - 3/4 in.		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY

This Section Does Not Apply

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT *(Adapted from 2013-NRCC-MCH-03-E)*

	1. DESIGN AIR FLOWS							2. VENTILATION (§ 120.1)											Confirmed	
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fail
1-1st floor	AH-*/HP-*	1,487	NA	NA	NA	NA	N	AH-*/HP-*	5,000	NA	83	15.0	1,250	1,250	NA	N	NA	☐	☐
2-2nd floor	FC-*/HP-*	1,929	NA	NA	NA	NA	N	FC-*/HP-*	5,000	NA	83	15.0	1,250	1,250	NA	N	NA	☐	☐
								TOTAL	10,000		NA		NA	NA	NA			☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY — § 140.4

1.	2.	3.	4.		5.	6.	7.			8.			Confirmed	
System ID	System Type	Qty	Rated Capacity (kBtuh): Heating	Rated Capacity (kBtuh): Cooling	Economizer	Zone Name	Airflow (cfm): Design	Min.	Min. Ratio	Fan: BHP	Cycles	ECM Motor	Pass	Fail
1-1st floor-Trm	Uncontrolled	6	NA	NA	NA	1-1st floor	1487	NA	NA	NA	NA	☐	☐	☐
2-2nd floor-Trm	Uncontrolled	2	NA	NA	NA	2-2nd floor	1929	NA	NA	NA	NA	☐	☐	☐

C. EXHAUST FAN SUMMARY

1.	2.	3.	4.	5.	6.	Confirmed	
System ID	Zone Name	Qty	CFM	Motor BHP	Total Static Pressure (in H20)	Pass	Fail
1st floor1	1-1st floor	3	100	0.125	4.76	☐	☐
2nd floor32	2-2nd floor	3	100	0.125	4.76	☐	☐

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D. DHW EQUIPMENT SUMMARY – *(Adapted from NRCC-PLB-01)*

This Section Does Not Apply

E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2013-NRCC-MCH-01-E)* — § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
NonResBase SHWSystem	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
AH-*/HP-*	6	X	X	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
1st floor1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
FC-*/HP-*	2	X	X	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
2nd floor32	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

H. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

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NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) — § 140.6

This Section Does Not Apply

B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) — § 130.1

This Section Does Not Apply

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E) — § 140.6

This Section Does Not Apply

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) — § 140.6-D

This Section Does Not Apply

E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) — § 140.6(c) 3H

This Section Does Not Apply

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

This Section Does Not Apply

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)

This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E) — § 130.4

This Section Does Not Apply

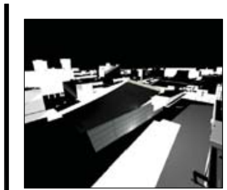
ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL — ENV-MM

Project Name	Date
Prajin Development	*2/23/2017*

DESCRIPTION

Building Envelope Measures:

§110.8(a):	Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3.
§110.8(c):	All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2.
§110.8(f):	The opaque portions of framed demising walls in nonresidential buildings shall have insulation with an installed R-value of no less than R-13 between framing members.
§110.7(a):	All Exterior Joints and openings in the building that are observable sources of air leakage shall be caulked, gasketed, weatherstripped or otherwise sealed.
§110.6(a):	Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft.² of window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging).
§110.6(a):	Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor.
§110.6(a) :	Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC.
§110.6(b):	Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors).



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REGISTERED PROFESSIONAL ENGINEER
ARASH NAZARI
No. M–34638
EXP. 12–31–17
MECHANICAL
STATE OF CALIFORNIA

A. Nazari

No.	Description	Date

PRAJIN DEVELOPMENT

NEW BUILDING
PRAJIN BROTHERS, LLC
5707 PACIFIC BLVD.
HUNTINGTON PARK, CA 90255

TITLE-24
REPORT

Project number	Project Number
Date	02-23-17
Drawn by	A.N.
Checked by	A.N.

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