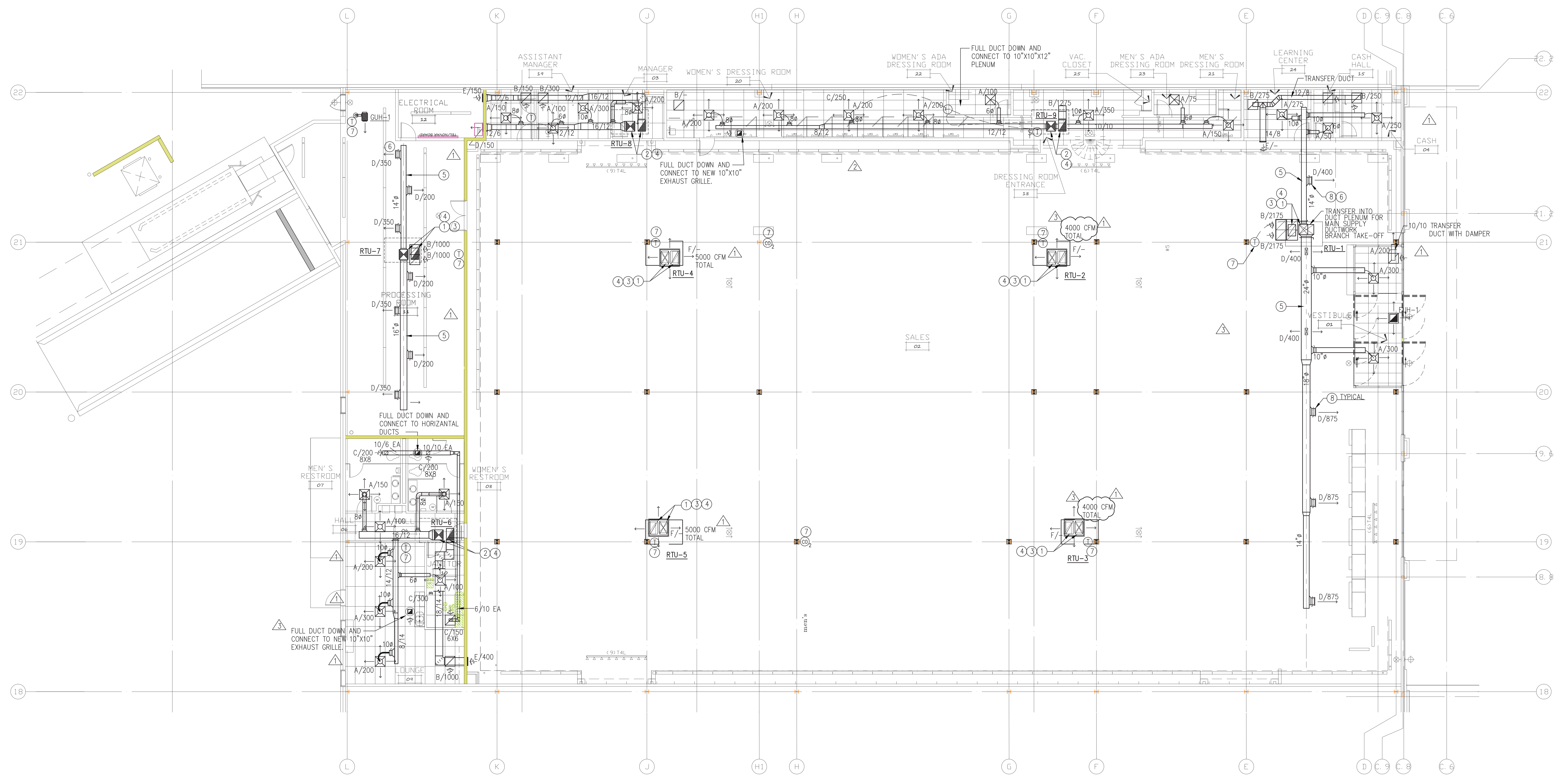


ADDENDUM #1	JUNE 24, 2013
CCD#1	MARCH 11, 2015
CCD#1	APRIL 21, 2015
CCD#3	MAY 22, 2015

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**MARSHALLS BUILD-OUT**  
**CROSSROADS MALL**  
GREENVILLE, TEXAS  
**GREENVILLE PROPERTIES LTD.**  
GREENVILLE, TEXAS



**1 MECHANICAL FLOOR PLAN**  
SCALE 1/8" = 1'-0"

AIR DEVICE SCHEDULE								
TAG	SERVICE	MANUFACTURER AND MODEL	FACE SIZE	NECK SIZE	CFM	FINISH	MATERIAL	NOTES
A	SUPPLY	TITUS TMS MODEL 24"x24" LAY-IN / HARD CEILING	24"x24"	6" 50-100 8" 101-225 10" 226-350 12" 301-500		WHITE	ALUM	1, 2, 3, 4
B	RETURN	TITUS TF-50F 24"x24" 1/2"x1/2"x1/2" GRID LAY-IN / HARD CEILING	24"x24"	8"x8" 0-125 10"x10" 126-225 12"x12" 226-350 15"x15" 351-600 18"x18" 601-1275		WHITE	ALUM	2, 3, 4
C	EXHAUST	TITUS TF-50F 1/2"x1/2"x1/2" GRID LAY-IN / HARD CEILING	-	8"x8" 0-125 10"x10" 126-225 12"x12" 226-350 15"x15" 351-600 18"x18" 601-1275		WHITE	ALUM	2, 4
D	SUPPLY	TITUS 300RS MODEL	-	10" X 6" 0-125 12" X 6" 126-225 16" X 6" 226-350 24" X 6" 351-600 36" X 10" 601-1275		WHITE	ALUM	2, 3, 5
E	RETURN	TITUS 350R MODEL	-	10" X 6" 0-125 12" X 6" 126-225 16" X 6" 226-350 24" X 6" 351-600 36" X 10" 601-1275		WHITE	ALUM	4
F	SUPPLY	ROOFTOP SYSTEMS SERIES 530 CONCENTRIC CEILING DIFFUSER	01-530-50	-	5000	WHITE	ALUM	4, 6

NOTES:  
1. TYPE 1 BORDER (ONLY FOR SURFACE MOUNTED)  
2. PROVIDE OPPOSED BLADE DAMPER  
3. ADJUSTABLE AIR BLADE PATTERN  
4. PROVIDE BACK PANEL INSULATION  
5. MOUNTED ON 15 DEGREE DOWNWARD ANGLE  
6. ALUM. DIFF. WITH DIFF BOX, DOUBLE DEFLECTION, RETURN EGGRATE

ELECTRIC UNIT HEATER SCHEDULE									
MARK	SERVICE	FLOW (CFM)	WATTS	VOLTS	PH	AMPS	MOUNTING TYPE	MANUFACTURER MODEL	NOTES
EUH-1	HEATER	150	3000	277	1	10.8	CEILING MTD T-BAR FRAME	QMARK EFF3007	1

KEYED NOTES:  
1 HEATER TO BE CONTROLLED BY (BMS) SYSTEM TEMPERATURE SENSORS AND CONTROL RELAYS, NOT CONVENTIONAL THERMOSTAT.

GAS UNIT HEATER SCHEDULE									
MARK	SERVICE	FLOW (CFM)	MOTOR	VOLTS	PH	AMPS	GAS INPUT/OUTPUT	MANUFACTURER MODEL	NOTES
GUH-1	HEATER	3200	1/3 HP	115	1	5.8	200 MBH / 166 MBH	STERLING MODEL TF200	1

KEYED NOTES:  
1 HEATER TO BE CONTROLLED BY NOVAR SAVVY CONTROLLER TEMPERATURE SENSOR AND CONTROL RELAYS, NOT CONVENTIONAL THERMOSTAT.

EXHAUST FAN SCHEDULE																	
UNIT NO.	NOM. TONS	SUPPLY AIR CFM	OUTSIDE AIR CFM	MTR HP	CH MBTU	CSH MBTU	CAP. (MBH) INPUT	CAP. (MBH) OUTPUT	POWER V/PH/Hz	MCA AMP.	MOCF AMP.	(SEER) EER @ ARI	UNIT WEIGHT (LBS)	POWER EXH	ECONO-MIZER	CONV. OUTLET	MODEL & MAKE
RTU-1	12.5	4950	600	3	145	123	240	192	480/3/60	42.2	50	12.0	1750	YES	YES	YES	YORK MODEL ZJ150
RTU-2	10	4000	400	2	113	98	-	-	480/3/60	29.2	35	12.0	1500	YES	YES	YES	YORK MODEL ZJ120
RTU-3	10	4000	400	2	113	98	-	-	480/3/60	29.2	35	12.0	1500	YES	YES	YES	YORK MODEL ZJ120
RTU-4	12.5	5000	600	3	145	123	-	-	480/3/60	42.2	50	12.0	1750	YES	YES	YES	YORK MODEL ZJ150
RTU-5	12.5	5000	600	3	145	123	-	-	480/3/60	42.2	50	12.0	1750	YES	YES	YES	YORK MODEL ZJ150
RTU-6	3	1200	200	1 1/2	29	26	80	65	480/3/60	14.7	15	(15.0)	1050	NO	YES	YES	YORK MODEL ZJ037
RTU-7	5	2000	200	1 1/2	52	43	120	97	480/3/60	19.7	25	(15.0)	1050	NO	YES	YES	YORK MODEL ZJ061
RTU-8	3	900	150	1 1/2	26	21	80	65	480/3/60	14.7	15	(15.0)	1050	NO	YES	YES	YORK MODEL ZJ037
RTU-9	4	1500	250	1 1/2	42	33	80	65	480/3/60	15.9	20	(15.0)	1050	NO	YES	YES	YORK MODEL ZJ049

NOTES: \* WEIGHTS INCLUDE CURBS.  
1. FILTER SHALL BE THROWAWAY TYPE, 2" THICK, POLYESTER OR APPROVED EQUAL.  
2. SUMMER OUTDOOR AIR ENTERING CONDENSER TEMPERATURE IS 125°F DB  
3. WINTER OUTDOOR DESIGN CONDITIONS SHALL BE BASED ON 27°F.  
4. UNITS SHALL BE R-410A WITH CONDENSER COIL HAIL GUARD GRILLE.  
5. UNITS SHALL BE PROVIDED WITH PREMIUM EFFICIENCY MOTORS.  
6. UNITS SHALL BE PROVIDED WITH BROWN-OUT AND PHASE LOSS PROTECTION  
7. PROVIDE MULTI-STAGE HEATING WHERE APPLICABLE. (2-STAGE MIN.)  
8. PROVIDE FACTORY-FURNISHED NON-FUSED SAFETY DISCONNECT.  
9. STAINLESS STEEL HEAT EXCHANGER  
10. 2-POSITION MOTORIZED OUTDOOR AIR DAMPER  
11. 24" MANUFACTURER FURNISHED ROOF CURB, REFER TO ARCH DWG. FOR ROOF PITCH.  
12. 120V GFCI OUTLET (CIRCUIT BY ELECTRICAL CONTRACTOR)  
13. SINGLE POINT POWER CONNECTION  
14. PROVIDE 10 YEARS WARRANTY FOR COMPRESSORS AND HEAT EXCHANGER

FLEXIBLE DUCT SCHEDULE	
CFM RANGE	ROUND DUCT SIZE
0 - 100	6"Ø
101 - 225	8"Ø
226 - 300	10"Ø
301 - 500	12"Ø
501 - 700	14"Ø
701 - 1000	16"Ø

NOTE:  
BASED ON FLEXMASTER 8M ACOUSTICAL INSULATED FLEXIBLE DUCT AT LENGTHS NOT TO EXCEED 4'. IF LONGER THAN 4' USE THE NEXT LARGER SIZE DUCT.

**MECHANICAL KEYED NOTES:**

- FULL SIZE SUPPLY AND RETURN DUCT DOWN AND CONNECT TO PLENUM.
- FULL SIZE SUPPLY AND RETURN DUCT DOWN AND TRANSITION AS SHOWN.
- PROVIDE SMOKE DUCT DETECTOR IN SUPPLY DUCT.
- UNIT SHALL BE COMPLETE WITH A SOLID STATE ENTHALPY CONTROLLED ECONOMIZER SYSTEM.
- EXPOSED SPIRAL DUCTWORK TO BE SINGLE WALL TYPE G60 PHOSPHATIZED GALVANIZED.
- COORDINATE DIFFUSER ELEVATION WITH LIGHTING FIXTURES. (TYPICAL TO ALL)
- TENANTS REQUIRES THE MECHANICAL CONTRACTOR TO PURCHASE THE TENANT NOVAR PACKAGE, WHICH INCLUDES CONTROL EQUIPMENT, DESIGN AND PROGRAMMING SERVICES, INSTALLATION AND START UP FROM NOVAR.
- DIFFUSER SHALL BE MOUNTED ON A 15 DEGREE DOWNWARD ANGLE

**MECHANICAL GENERAL NOTES:**

- UPON COMPLETION OF THE INSTALLATION OF THE AIR SYSTEM COMPONENTS, THE SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR VOLUME FOR EACH AIR HANDLING UNIT, SUPPLY FAN, AND EXHAUST FAN; AND THE SUPPLY, EXHAUST OR RETURN AIR VOLUME FOR EACH AIR DISTRIBUTION DEVICE SHALL BE ADJUSTED TO WITHIN 5% OF DESIGN AIR FLOW.
- RE: SPECIFICATIONS, SHEET M2.1, FOR DUCTWORK/PIPING INSULATION REQUIREMENTS.
- SUPPLY AND RETURN DUCTWORK SHALL BE EXTERNALLY INSULATED. NEW DUCTWORK SHALL NOT BE INTERNALLY LINED (EXCEPT AT INTERNAL ACOUSTIC LINING AT EQUIPMENT, RE: DETAILS). BACKSIDES OF SUPPLY AIR GRILLES SHALL ALSO BE INSULATED.
- ALL AIR HANDLING UNITS SHALL BE EQUIPPED WITH DUCT SMOKE DETECTORS IN SUPPLY AND RETURN.
- ALL 2X2 SUPPLY AIR GRILLES ARE TYPE "A" UNLESS NOTED OTHERWISE.
- ALL NEW DUCTWORK SHALL BE INSULATED SHEETMETAL. EXTERNALLY WRAPPED INSULATION TO MEET OR EXCEED IECC REQUIREMENTS.

EXHAUST FAN SCHEDULE												
MARK	SERVICE	FLOW (CFM)	RPM	S.P. (°WC)	DRIVE TYPE	MOTOR VOLTS	PH	POWER	MOUNTING TYPE	MANUFACTURER/MODEL	NOTES	KEYED FAN NOTES:
EF-1	EXHAUST	550	1413	0.35	DIRECT	120	1	1/5	ROOF	PENNBARRY DX11Q	1 2 3 4 5 9	1 PROVIDE FACTORY CURB.
EF-2	EXHAUST	300	1158	0.2	DIRECT	120	1	1/12	ROOF	PENNBARRY DX10R	1 2 3 4 5 8	2 PROVIDE DISCONNECT SWITCH.
EF-3	EXHAUST	250	1051	0.2	DIRECT	120	1	1/12	ROOF	PENNBARRY DX10R	1 2 3 4 5 6	3 PROVIDE FAN SPEED CONTROLLER 4 PROVIDE BIRDSCREEN. 5 PROVIDE BACKDRAFT DAMPERS. 6 CONTROL SHALL BE VIA LIGHT SWITCH 7 PROVIDE THERMOSTAT 8 PROVIDE ON/OFF SWITCH CONTROL 9 CONTROL BY OCCUPANCY SENSOR

**M1.1**  
MECHANICAL FLOOR PLAN