HVAC NOTES BY SYMBOL "O":

- 1) LINE ALL ROUND, RECTANGULAR AND SQUARE, SUPPLY AND RETURN AIR DUCTWORK AND PLENUM WITH 1" THICK DUCT LINER (TYPICAL).
- 2) CONDENSATE PIPE FROM ROOF SEE DETAIL 4/M304 (TYPICAL).
- 3 8"x8" EXHAUST DUCT UP TO FAN ON ROOF. TRANSITION TO FAN BASE.
- (4) ELECTRIC UNIT HEATER. WALL BRACKET MOUNTED CHROMALOX MODEL MUH, 5KW, 208V/3ø.
- 5 CONDENSATE PIPE DOWN TIGHT TO WALL AND OPEN SITE OVER FLOOR SINK. SECURE TO WALL.
- (6) ROUTE CONDENSATE DRAIN PIPES AS HIGH AS POSSIBLE THRU AND BETWEEN JOIST (TYPICAL).
- (7) 18"x18" DUCT RETURN AIR GRILLE (TYPE 'C').
- 8 24"x18" DUCT RETURN AIR GRILLE (TYPE 'C').
- (9) 18"x12" DUCT RETURN AIR GRILLE (TYPE 'C').
- 12"x12" DUCT RETURN AIR GRILLE (TYPE 'C').
- (11) 30"x16" DUCT RETURN AIR GRILLE (TYPE 'C').
- (12) CONDENSATE DRAIN PIPE DOWN IN WALL AND CONNECT TO LAVATORY/SINK TRAP ADAPTER FITTING.
- (13) SET RETURN AIR GRILLE FLUSH WITH BOTTOM OF JOIST.
- (14) 24"x12" WALL RETURN AIR GRILLE (TYPE 'E').
- 18"x18" WALL TRANSFER GRILLE (TYPE 'E').
- (16) DROP DOWN TO BELOW JOIST.
- ENCLOSE SUPPLY AND RETURN AIR DUCT WITH TWO LAYERS OF 5/8" SHEET ROCK. LINE ENCLOSURE WITH 2" THICK DCUT LINER. SEAL SHEET ROCK TO ROOF DECK (TYPICAL FOR ALL UINITS).

MECHANICAL GENERAL NOTES

- COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- 2. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM. SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS.
- 3. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- 4. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON THE DRAWINGS.
- 5. PROVIDE OFFSETS AND TRANSITIONS AS REQUIRED. COORDINATE WITH OTHER TRADES AND STRUCTURAL.
- 6. ALL DUCT SIZES SHOWN ARE CLEAR AIR STREAM DIMENSIONS. ADJUST SIZES TO ACCOMMODATE INSULATION.
- PROVIDE A FLEXIBLE CONNECTION AT THE INTAKE AND DISCHARGE OF ALL MOTOR DRIVEN EQUIPMENT.
- 8. REFER TO AND COORDINATE WITH STRUCTURAL FOR EXACT ROOF AND FLOOR PENETRATIONS.
- 9. CEILING DIFFUSER SUPPLY DUCT SIZE SHALL BE SAME SIZE AS NECK SIZE SHOWN.
- 10. LABEL ALL AIR VOLUME DAMPERS ON OUTSIDE OF DUCT INSULATION.
- 11. ALL SIZES SHOWN ON PLANS ARE IN INCHES, UNLESS OTHERWISE NOTED.
- 12. 10 250 A INDICATES DIFFUSER NECK SIZE, CFM AND TYPE.
- 13. PROVIDE MANUAL VOLUME DAMPER (TYPICAL) AT ALL SUPPLY, OUTSIDE AIR, RETURNS AND EXHAUST BRANCH DUCTS.
- 14. ALL THERMOSTATS TO HAVE LOCKING METAL COVERS.
- 15. ALL UNITS TO MEET OR EXCEED MINIMUM EER RATINGS OF THE LATEST STATE COMMERCIAL ENERGY CODE.



This document is released for the purpose of final review under the authority of G. W. Ridgway, P.E. 25928 It is not to be used for bidding, permit or construction purposes Date: July 9, 2013

11520 N. Central Expy. Suite 112 Dallas, Texas 75243 (214) 382-5300

gvbarchitects.com

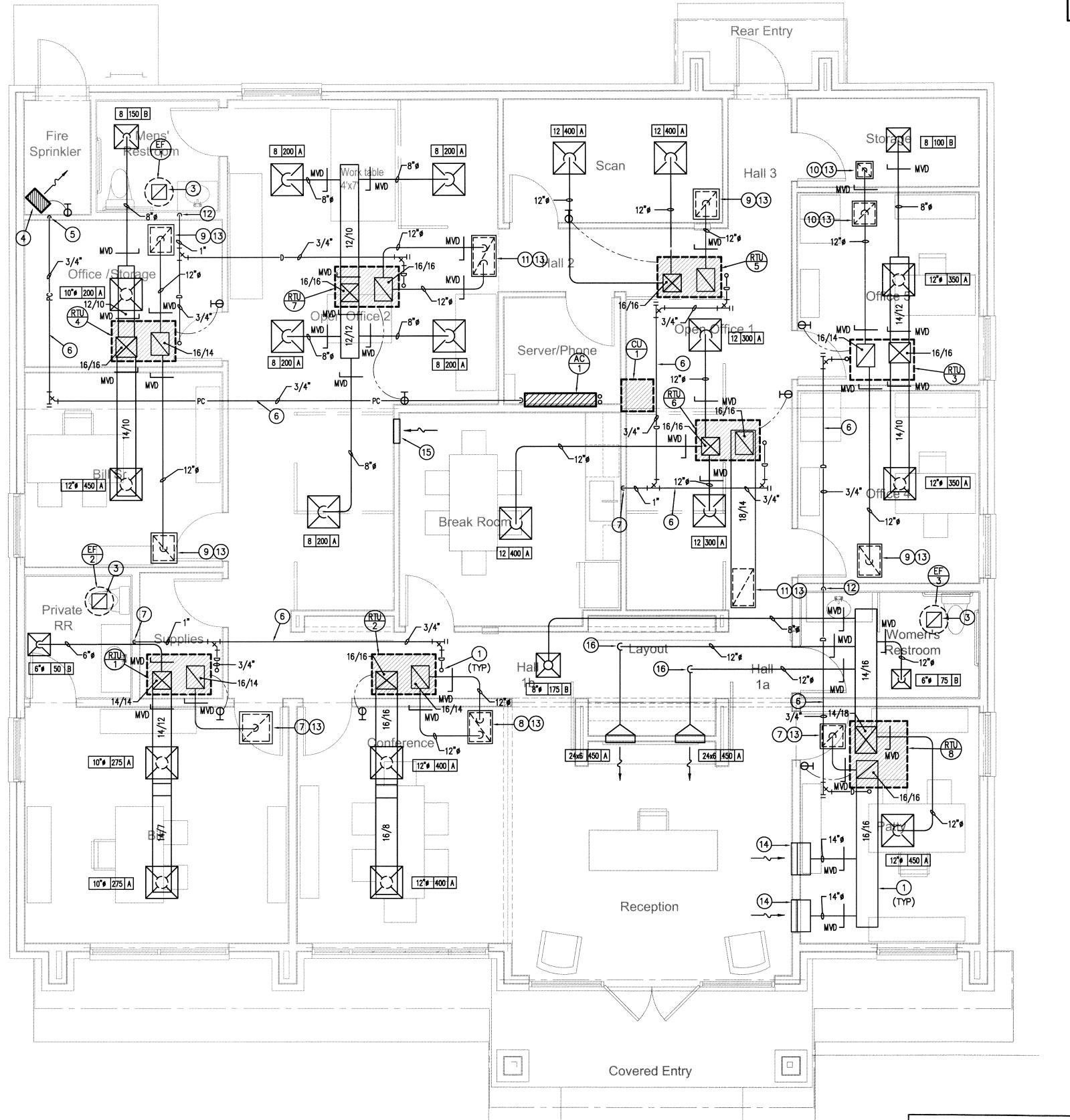
Fax: (214) 382-5303

guy@gvbarchitects.com

Office Building

"AS-BUILT"

Sheet No. Of Sheets





purpose of final review under the authority of G. W. Ridgway, P.E. 25928
It is not to be used for bidding, permit or construction purposes Date: July 9, 2013

11520 N. Central Expy. Suite 112 Dallas, Texas 75243

(214) 382-5300 Fax: (214) 382-5303

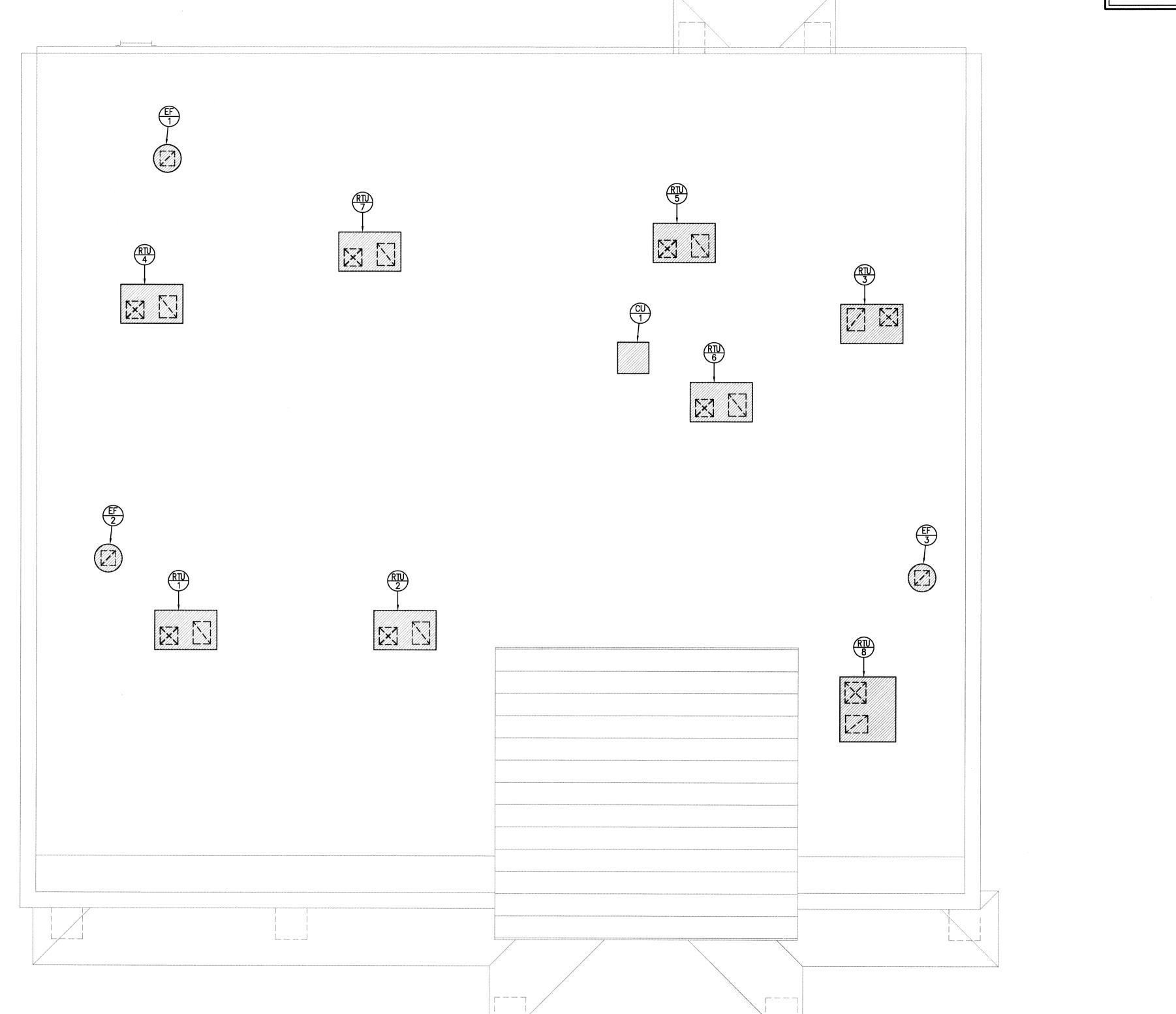
gvbarchitects.com guy@gvbarchitects.com

Office Building allas Aerial Survey

"AS-BUILT"

Sheet No.

Of Sheets





North 1 Roof Plan - HVAC

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

HVAC NOTES BY SYMBOL "O":

1 LINE ALL ROUND, RECTANGULAR AND SQUARE, SUPPLY AND RETURN AIR DUCTWORK AND PLENUM WITH 1" THICK DUCT LINER (TYPICAL).

2 CONDENSATE PIPE FROM ROOF - SEE DETAIL 4/M304 (TYPICAL).

3 8"x8" EXHAUST DUCT UP TO FAN ON ROOF. TRANSITION TO FAN BASE.

4) ELECTRIC UNIT HEATER. WALL BRACKET MOUNTED CHROMALOX MODEL MUH, 5KW, 208V/3ø.

5 CONDENSATE PIPE DOWN TIGHT TO WALL AND OPEN SITE OVER FLOOR SINK. SECURE TO WALL.

(6) ROUTE CONDENSATE DRAIN PIPES AS HIGH AS POSSIBLE THRU AND BETWEEN JOIST (TYPICAL).

7) 18"x18" DUCT RETURN AIR GRILLE (TYPE 'C'). 8) 24"x18" DUCT RETURN AIR GRILLE (TYPE 'C').

9) 18"x12" DUCT RETURN AIR GRILLE (TYPE 'C').

10 12"x12" DUCT RETURN AIR GRILLE (TYPE 'C').

(11) 30"x16" DUCT RETURN AIR GRILLE (TYPE 'C').

(12) CONDENSATE DRAIN PIPE DOWN IN WALL AND CONNECT TO LAVATORY/SINK TRAP ADAPTER FITTING.

(13) SET RETURN AIR GRILLE FLUSH WITH BOTTOM OF JOIST.

(14) 24"x12" WALL RETURN AIR GRILLE (TYPE 'E').

15) 18"x18" WALL TRANSFER GRILLE (TYPE 'E').

16) DROP DOWN TO BELOW JOIST.

ENCLOSE SUPPLY AND RETURN AIR DUCT WITH TWO LAYERS OF 5/8" SHEET ROCK. LINE ENCLOSURE WITH 2" THICK DOUT LINER. SEAL SHEET ROCK TO ROOF DECK (TYPICAL FOR ALL UINITS).

PACKAGE ROOFTOP UNIT SCHEDULE

and the state of t		e ligation of the contract of				
	DESIGNATION	RTU-1 THRU RTU-5	RTU-6 AND RTU-7	RTU-8		
Malair Lain e Malair de Principies - may r econstituíasan	CFM (EACH)	800	1000	1600		
ı	MAX. O.A. (EACH)	1	1	100		
COIL	MIN. O.A. (EACH)	1	1	100		
	TOTAL HEAT (BTU)	21,000	26,000	39,600		
COOLING	SENSIBLE HEAT (BTU)	15,900	20,600	31,600		
003	ENT. AIR - DB/WB 'F.	80/67	80/67	80/67		
O	AMBIENT TEMP. *F.	105	105	105		
	WEIGHT OF UNIT (LBS)	600	600	800		
	CARRIER MODEL NUMBER	48ESA24040	48ESA30040	48ESA48060		
	HEATING INPUT (BTUH)	40,000	40,000	60,000		
NG	HEATING OUTPUT (BTUH)	32,000	32,000	48,000		
HEATING	FUEL	NAT. GAS	NAT. GAS	NAT. GAS		
出						
	EXT. S.P.	0.40	0.40	0.60		
OTOR	HORSEPOWER	1/2	1/2	1.0		
MOT	RPM	1750	1750	1750		***************************************
Σ 7	VOLT/PHASE	240/1	240/1	240/1		The same of the sa
FAN	MCA	21.3	15.8	25.9		*
	MIN. SEER MINIMUM	13.0	13.0	13.0		- STORY OF STREET OF STREE
RS	THICKNESS	2"	2"	2"		
FILTERS	TYPE	T/A	T/A	T/A		
	MAX. FACE VEL. FT/MIN	500	500	500		· · · · · · · · · · · · · · · · · · ·

GRILLES, REGISTERS, AND DIFFUSERS

GENERAL NOTES:

- 1. ALL UNITS TO BE FURNISHED WITH FACTORY INSTALLED UNIT MOUNTED NON-FUSED DISCONNECT SWITCH ACCESSIBLE OUTSIDE UNIT.
- 2. ALL UNITS TO BE FURNISHED WITH FACTORY INSTALLED CONVENIENCE OUTLET. UNIT SHALL INCLUDE 15A. GFI RECEPTACLE, FACTORY INSTALLED TRANSFORMER AND SHALL BE ACCESSIBLE OUTSIDE UNIT.
- 3. ALL UNITS TO MEET OR EXCEED MINIMUM EER RATINGS OF THE LATEST STATE COMMERCIAL ENERGY CODE.
- 4. ALL UNITS TO BE ASHRAE 90.1 COMPLIANT.
- 5. ALL UNIT TO BE FURNISHED WITH 410A. REFRIGERANT.
- 6. ALL UNITS TO HAVE HAIL GUARDS.
- 7. ALL UNITS TO HAVE LOW AMBIENT CONTROLS.
- 8. ALL UNITS TO HAVE PROGRAMMABLE THERMOSTATS.

DUCTLESS SPLIT SYSTEM A.C. UNIT SCHEDULE

	DESIGNATION	AC-1				
	MANUFACTURER/MODEL	CARRIER 40QNQ024-3				
	SERVE	SERVER/PHONE ROOM				
	SEER	13.0				
⊨	TYPE	WALL MOUNTED UNIT				
UNIT	AIRFLOW/CFM	525				
A.	BTUH COOLING	22,800				
INDOOR	BTUH HEATING	22,000				
Z	MIN. AMPACITY, AMPS	0.48				
	VOLT/PHASE	208/1				
	WEIGHT, LBS.	31				
	NOTES:	1				
	DESIGNATION	CU-1				
	MANUFACTURER/MODEL	CARRIER 38QRF024-3				
<u> </u>	BTUH HEATING	22,000				
UNIT	MIN. AMPACITY, AMPS	16.8				
	MAX. FUSE SIZE, AMPS	25.0				
OUTDOOR	VOLT/PHASE	240/1				
UTI	WEIGHT, LBS.	176				
O	NOTES:	2&3				

GENERAL NOTES:

- 1. PROVIDE WALL MOUNTED THERMOSTAT.
- 2. REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
- 3. PROVIDE LOW AMBIENT CONTROL PACKAGE TO OPERATE DOWN TO 20°F AMBIENT.



purpose of final review under the authority of G. W. Ridgway, P.E. 25928 It is not to be used for bidding, permit or construction purposes Date: July 9, 2013

11520 N. Central Expy. Dallas, Texas 75243

^:(214) 382-5303 gvbarchitects.com guy@gvbarchitects.com

(214) 382-5300

EAN SCHEDULE

FAN SCHEDULE														
DESIG.		SERVICE	LOCATION	CFM (EACH)	S.P. IN W.G.	TIP SPEED (FPM)	DRIVE	MOTOR DATA				7/05	DICOLI	DEMARKS
								H.P.	RPM	VOLT/ø	STARTER	TYPE	DISCH.	REMARKS
EF-1, E	F-2 & EF-3	TOILET EXHAUST	ROOF	150	1/4	3000	DIRECT	1/10	1550	120/1	_	CENTRI	DOWN	123
						-								
1	ROOF CENTRIF	UGAL WITH B.C	D. DAMPER,	D.C. SW	ITCH AND	BIRDSCF	REEN.							
2	PREFABRICATED FACTORY ROOF CURB, FOR SLOPING ROOF. SOLID STATE SPEED CONTROLLER.													
3														

BUILDING AIR BALANCE SCHEDULE

DALANCE OCITEDOLE							
ENT. TYPE	OUTSIDE AIR (CFM)	EXHAUST AIR (CFM)					
OOFTOP A.C. UNITS	875	-					
JILDING EXHAUST	-	450					

MECHA	ANICAL SYMBOLS LEGEND								
ALL SYMBOLS NOT NECESSARILY USED									
SYMBOL DESCRIPTION									
	— COLD WATER								
	DOMESTIC HOT WATER								
	DOMESTIC HOT WATER RETURN								
— w —	DOMESTIC WATER OUTSIDE								
——D——	CONDENSATE DRAIN								
—-G—	NATURAL GAS								
	WASTE								
	VENT								
——F——	FIRE SPRINKLER PIPE								
— ▼	GATE VALVE								
─	CHECK VALVE								
	BALANCE COCK								
 > 	STRAINER								
	UNION								
Φ	SENSOR/THERMOSTAT								
-	THERMOMETER								
	GAUGE COCK								
ф нв	HOSE BIBB								
WH	WALL HYDRANT								
——⊠BH	BOX HYDRANT								
M	MOTORIZED DAMPER								
- WW-	FLEXIBLE DUCTWORK								
EDH	ELECTRIC DUCT HEATER								
MVD	MANUAL VOLUME DAMPER								
FD	FLOOR DRAIN								
HD	HUB DRAIN								
VTR	VENT THRU ROOF								
WCO	WALL CLEAN OUT								
FCO	FLOOR CLEAN OUT								
GCO	GRADE CLEAN OUT								
—РС—	PUMPED CONDENSATE								

DESIG.	DESCRIPTION	TYPE	MATERIAL	FINISH	N.C.	OPPOSED BLADE DAMPER	EQUALIZING GRID	MFG./MODEL	REMARKS:
'A'	SUPPLY DIFFUSER	DUCT MOUNT	STEEL	WHITE	30	NO	NO	TITUS/TMS	24x24 LOUVER FACE
'8'	SUPPLY DIFFUSER	DUCT MOUNT	STEEL	WHITE	30	NO	NO	TITUS/TMS	12x12 LOUVER FACE
,c,	RETURN GRILLE	DUCT MOUNT	ALUMINUM	WHITE	30	NO	NO	TITUS/50FL	1/2"x1/2"x1" EGGCRATE
'D'	EXHAUST GRILLE	DUCT MOUNT	ALUMINUM	WHITE	30	YES	NO	TITUS/3FL	30 DEGREE DEFLECTION
'E'	WALL RETURN GRILLE	SURFACE MOUNT	ALUMINUM	WHITE	30	NO	NO	TITUS/4FL	45 DEGREE DEFLECTION

- 1. INSULATE BACK OF ALL CEILING MOUNTED DIFFUSERS.
- 2. SEE PLAN FOR NECK SIZE AND CFM.
- 3. SEE PLAN FOR DUCT CONNECTION SIZE.
- 4. GRILLES AND DIFFUSERS AS MANUFACTURED BY PRICE AND KRUEGER ARE ACCEPTABLE.
- 5. ALL DIFFUSERS ARE 4-WAY THROW UNLESS OTHERWISE NOTED.

"AS-BUILT"

Sheet No.

Of Sheets

purpose of final review under the authority of G. W. Ridgway, P.E. 25928
It is not to be used for bidding, permit or construction purposes Date: July 9, 2013

11520 N. Central Expy. Suite 112 Dallas, Texas 75243 Phone: (214) 382-5300

Fax: (214) 382-5303 gvbarchitects.com Email:

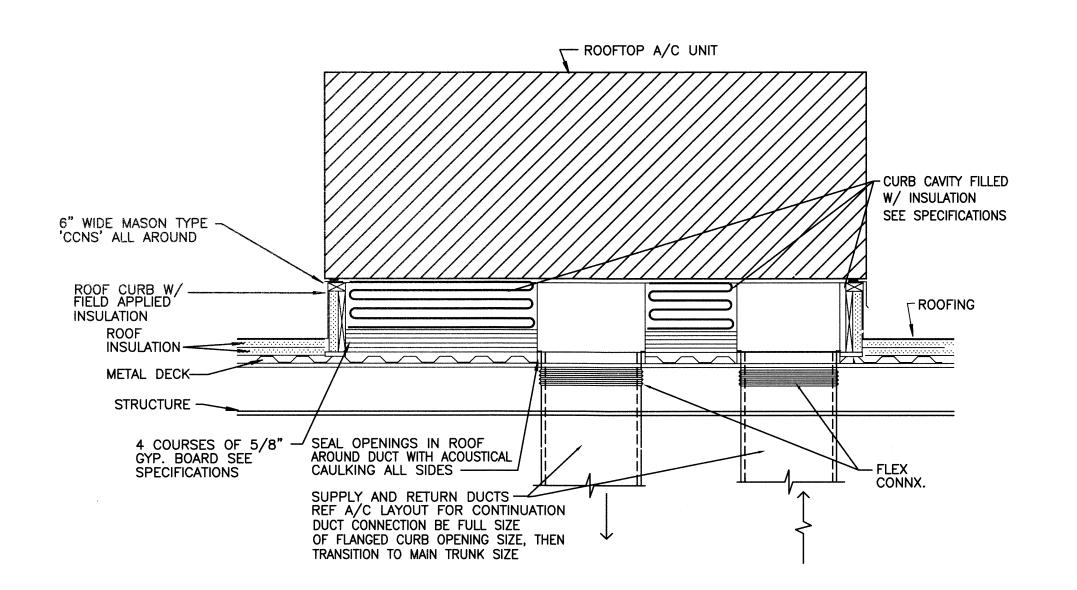
guy@gvbarchitects.com

Office Building Dallas Aerial Survey

"AS-BUILT"

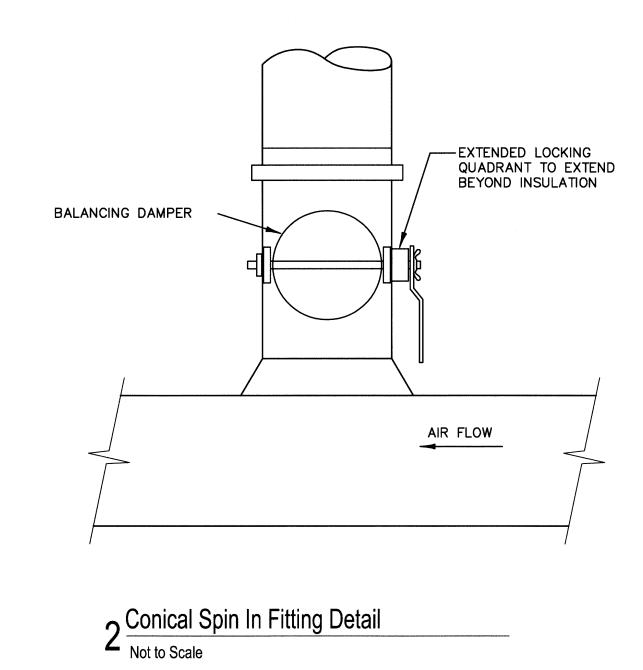
Sheet No.

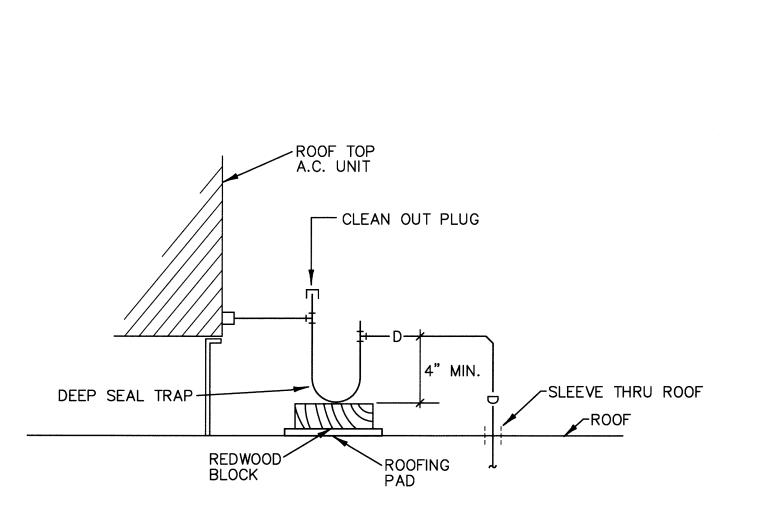
M2.2 Of Sheets

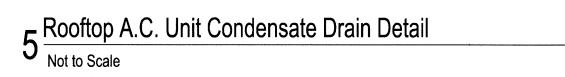


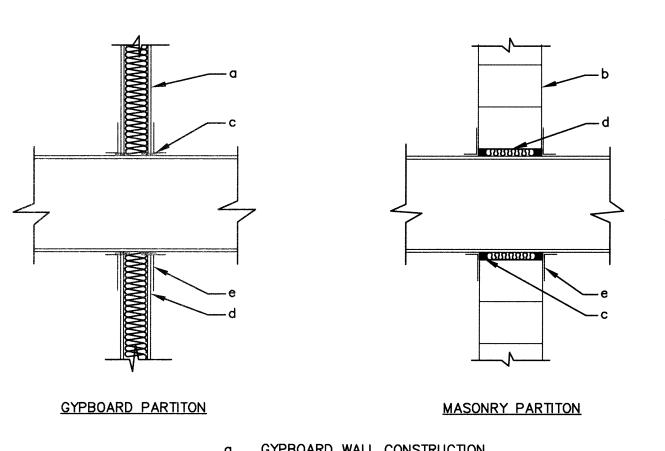
Rooftop A.C. Unit Mounting Detail

Not to Scale









GYPBOARD WALL CONSTRUCTION
MASONRY WALL CONSTRUCTION
ACOUSTICAL SEALANT
PACK WITH FIBERGLASS INSULATION (3# TO 6# DENSITY)
SHEET METAL ENCLOSURE

Typical Wall Duct Penetration Detail

Not to Scale

FACTORY FABRICATED-UP-DRAFT DAMPER

2 Roof Mounted Exhaust Fan Detail

