

KEYNOTES

- 1 CAP EXISTING DUCT AT THIS LOCATION.
- 2 REBALANCE EXISTING EF-84 FOR 1275 CFM. ADJUST OR REPLACE BELTS AND SHIMS AS REQUIRED.
- 3 EXISTING RETURN DUCT DOWN FROM EXISTING AHU-ER-1.
- 4 EXISTING SUPPLY DUCT DOWN FROM EXISTING AHU-ER-1.
- 5 EXISTING RETURN DUCT DOWN FROM EXISTING AHU-41.
- 6 EXISTING SUPPLY DUCT DOWN FROM EXISTING AHU-41.
- 7 ROUTE NEW 10x10 EXHAUST DUCT UP THROUGH EXISTING CHASE TO NEW FAN 6-EF-2 ON ROOF. COORDINATE WITH ARCHITECTURAL PLANS AND EXISTING CONDITIONS.
- 8 ROUTE NEW 14x12 EXHAUST DUCT UP TO NEW FAN 6-EF-1 ON ROOF.
- 9 ROUTE NEW 14x10 EXHAUST DUCT UP THROUGH EXISTING CHASE TO NEW FAN 6-EF-3 ON ROOF. COORDINATE WITH ARCHITECTURAL PLANS AND EXISTING CONDITIONS.
- 10 ROUTE NEW 16x16 EXHAUST DUCT UP THROUGH EXISTING CHASE TO NEW FAN 6-EF-4 ON ROOF. COORDINATE WITH ARCHITECTURAL PLANS AND EXISTING CONDITIONS.
- 11 PROVIDE NEW VFD FOR EXISTING AHU-ER-1 SUPPLY FAN. LOCATE VFD IN EXISTING SECOND FLOOR MECHANICAL PENTHOUSE.
- 12 PLACE NEW STATIC PRESSURE SENSOR FOR AHU-ER-1 AT THIS LOCATION.
- 13 PLACE NEW STATIC PRESSURE SENSOR FOR AHU-41 AT THIS LOCATION.
- 14 ROUTE NEW 12x10 EXHAUST DUCT UP TO NEW FAN 6-EF-6 ON ROOF.
- 15 ROUTE NEW 14x14 EXHAUST DUCT UP THROUGH NEW CHASE TO NEW FAN 6-EF-5 ON ROOF. COORDINATE WITH ARCHITECTURAL PLANS AND EXISTING CONDITIONS.

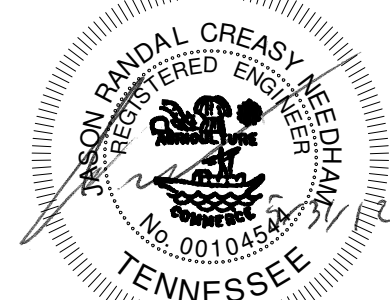
1 PARTIAL FIRST FLOOR MECHANICAL PLAN - NEW WORK
1/8" = 1'-0"

CONSULTANTS:

Allen&Hoshall
since 1915
ENGINEERS

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DRAWING TITLE:
PARTIAL FIRST FLOOR MECHANICAL
PLAN - NEW WORK

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

APPROVED PROJECT DIRECTOR:

PROJECT TITLE:
EXPAND EMERGENCY
ROOM

LOCATION:
VAMC, Memphis, Tennessee

DATE:
May 31, 2012

CHECKED:

DRAWN:

PROJECT NUMBER:
61804

BUILDING NUMBER:
1A

DRAWING NUMBER:
MH-101

DWG. OF

FULLY SPRINKLERED

A
B
C
D
E
F

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths = one foot
one quarter inch = one foot
one eighth inch = one foot

ROOM AIR BALANCE SCHEDULE																						
ROOM NO	ROOM NAME	AIR HANDLING UNIT NO	TERMINAL UNIT	INDIVIDUAL ROOM TEMP CONTROL	SUPPLY				RETURN OR EXHAUST					ROOM AIR FLOW		ROOM AIR BALANCE	NET INFILTRATION		NET EXFILTRATION		REMARKS	
					# OF AIR DEVICES	AIR DEVICE MARK	SUPPLY FAN	RETURN OR EXHAUST (RE)	ROOM AIR FLOW		# OF AIR DEVICES	AIR DEVICE MARK	RETURN OR EXHAUST FAN				CFM	[L/s]	CFM	[L/s]		CFM
									CFM	L/S				CFM	L/S	CFM						
61-C1	CORRIDOR	AHU-ER-2	6-TU-41-17	N	400	[190]	2	2	-	R	500	[240]	1	12	-	X	-	100	[47]	0	[]	----
61-C1A	VESTIBULE	AHU-ER-2	6-TU-41-24	N	325	[150]	1	5	-	R	300	[140]	1	15	-	X	+	0	[]	25	[12]	----
61-C1B	WC ALCOVE	AHU-ER-2	6-TU-41-24	Y	50	[24]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	50	[24]	----
61-C2	CORRIDOR	AHU-ER-2	6-TU-41-14/ 6-TU-41-17	N	425	[200]	2	2/3	-	R	375	[180]	2	10	-	X	+	0	[]	50	[24]	----
61-C3	CORRIDOR	AHU-ER-2	6-TU-41-14	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
61-C4	CORRIDOR	AHU-ER-1	6-TU-1-4	N	175	[83]	1	2	-	R	150	[71]	1	10	-	X	+	0	[]	25	[12]	----
61-C4A	PASSAGE	AHU-ER-2	6-TU-41-12	Y	75	[35]	1	1	-	R	275	[130]	1	11	-	X	-	200	[94]	0	[]	----
61-C5	CORRIDOR	AHU-ER-2	6-TU-41-4	N	150	[71]	1	2	-	R	375	[180]	1	12	-	X	-	225	[110]	0	[]	----
61-C6	CORRIDOR	AHU-ER-2	6-TU-41-6	N	125	[59]	1	2	-	R	175	[83]	1	10	-	X	-	50	[24]	0	[]	----
61-C7	CORRIDOR	AHU-ER-2	6-TU-41-7	Y	100	[47]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	100	[47]	----
61-C8	CORRIDOR	AHU-ER-2	6-TU-41-5	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
61-C9	CORRIDOR	AHU-ER-2	6-TU-41-3	N	150	[71]	1	2	-	R	0	[]	0	-	-	X	+	0	[]	150	[71]	----
61-C10	CORRIDOR	AHU-ER-2	6-TU-1-2	N	125	[59]	1	2	-	R	0	[]	0	-	-	X	+	0	[]	125	[59]	----
61-C11	AMBULANCE ENT/ VESTIBULE	AHU-ER-2	6-TU-41-8	N	575	[270]	2	3	-	E	450	[210]	1	12	-	X	-	0	[]	150	[71]	----
61-C11A	WC/STR ALCOVE	AHU-ER-2	6-TU-41-8	N	100	[47]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	100	[47]	----
61-C12	CORRIDOR	AHU-ER-1/ AHU-ER-2	6-TU-1-1/ 6-TU-1-2	N	250	[120]	2	2	-	R	225	[110]	1	11	-	X	+	0	[]	25	[12]	----
61-C14	CORRIDOR	AHU-ER-1	6-TU-1-3	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
61-C15	CORRIDOR	AHU-ER-1	6-TU-1-1	N	125	[59]	1	2	-	R	300	[140]	1	11	-	X	-	175	[83]	0	[]	----
61-C16	CORRIDOR	AHU-ER-1	6-TU-1-4	N	225	[110]	2	1/2	-	R	200	[94]	1	10	-	X	+	0	[]	25	[12]	----
61-C16A	MEDS ALCOVE	AHU-ER-1	6-TU-1-4	N	50	[24]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	50	[24]	----
61-C17	CORRIDOR	AHU-ER-1/ AHU-ER-2	6-TU-1-5/ 6-TU-41-21	N	475	[220]	2	3	-	R	425	[200]	1	12	-	X	+	0	[]	50	[24]	----
61-C17A	WC ALCOVE	AHU-ER-2	6-TU-41-21	N	50	[24]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	50	[24]	----
6101	WAITING	AHU-ER-2	6-TU-41-19	Y	1300	[610]	5	2/3	-	E	1500	[710]	3	12	-	X	-	200	[94]	0	[]	----
6102	CONSULT	AHU-ER-2	6-TU-41-22	Y	100	[47]	1	1	-	R	75	[35]	1	9	-	X	+	0	[]	25	[12]	----
6103	RECEPTIONIST	AHU-ER-2	6-TU-41-21	Y	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----
6104	TRIAGE 1	AHU-ER-2	6-TU-41-20	Y	225	[110]	1	3	-	E	275	[130]	1	11	-	X	-	50	[24]	0	[]	----
6105	TRIAGE 2	AHU-ER-2	6-TU-41-20	N	325	[150]	1	3	-	E	375	[180]	1	12	-	X	-	50	[24]	0	[]	----
6106	SECURITY	AHU-ER-2	6-TU-41-23	Y	100	[47]	1	1	-	R	75	[35]	1	9	-	X	+	0	[]	25	[12]	----
6107	RECEPTIONIST	AHU-ER-2	6-TU-41-17	Y	75	[35]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	75	[35]	----
6108	OFFICE	AHU-ER-2	6-TU-41-18	Y	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----
6109	OFFICE	AHU-ER-2	6-TU-41-18	N	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----
6110	HOLDING TRANSITION	AHU-ER-2	6-TU-41-18	N	25	[12]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	25	[12]	----
6110A	HOLDING	AHU-ER-2	6-TU-41-18	N	50	[24]	1	1	-	R	25	[12]	1	9	-	X	+	0	[]	25	[12]	----
6113	MMA	AHU-ER-2	6-TU-41-13	Y	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----
6114	HOUSEKEEPING	AHU-ER-2	6-TU-41-13	N	75	[35]	1	1	-	E	125	[59]	1	10	-	X	-	50	[24]	0	[]	----
6115	EXISTING ELECTRICAL	AHU-ER-2	6-TU-41-13	N	450	[210]	1	4	-	R	400	[190]	1	12	-	X	±	0	[]	0	[]	----
6116	BREAK ROOM	AHU-ER-2	6-TU-41-12	N	250	[120]	2	2	-	R	225	[110]	0	-	-	X	+	0	[]	250	[120]	----
6116A	EXISTING TOILET	AHU-ER-2	6-TU-41-12	N	25	[12]	1	1	-	E	50	[24]	1	9	-	X	-	25	[12]	0	[]	----
6117	NURSE STATION	AHU-ER-2	6-TU-1-2	Y	500	[240]	2	2	-	R	0	[]	0	-	-	X	+	0	[]	350	[170]	----
6118	ER EXAM 1	AHU-ER-2	6-TU-41-4	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6119	ER EXAM 2	AHU-ER-2	6-TU-41-4	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6120	ER EXAM 3	AHU-ER-2	6-TU-41-4	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6121	ER EXAM 4	AHU-ER-2	6-TU-41-2	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6122	ER EXAM 5	AHU-ER-2	6-TU-41-1	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----
6123	SOILED HOLDING	AHU-ER-2	6-TU-41-1	N	50	[24]	1	1	-	E	100	[47]	1	9	-	X	-	50	[24]	0	[]	----
6124	NOURISH	AHU-ER-2	6-TU-41-7	N	25	[12]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	25	[12]	----
6125	CLEAN SUPPLY	AHU-ER-2	6-TU-41-7	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6126	PATIENT TOILET	AHU-ER-2	6-TU-41-7	N	50	[24]	1	1	-	E	100	[47]	1	9	-	X	-	50	[24]	0	[]	----
6127	ER EXAM 10	AHU-ER-2	6-TU-41-11	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----
6128	ER EXAM 11	AHU-ER-2	6-TU-41-10	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----
6129	ER EXAM 12	AHU-ER-2	6-TU-41-10	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----

ROOM AIR BALANCE SCHEDULE																							
ROOM NO	ROOM NAME	AIR HANDLING UNIT NO	TERMINAL UNIT	INDIVIDUAL ROOM TEMP CONTROL	SUPPLY					RETURN OR EXHAUST					ROOM AIR FLOW		ROOM AIR BALANCE	NET INFILTRATION		NET EXFILTRATION		REMARKS	
					ROOM AIR FLOW		# OF AIR DEVICES	AIR DEVICE MARK	SUPPLY FAN	RETURN OR EXHAUST (RE)	ROOM AIR FLOW		# OF AIR DEVICES	AIR DEVICE MARK	RETURN OR EXHAUST FAN	CFV		VAV	CFM	[L/s]	CFM		[L/s]
					CFM	L/S					CFM	L/S											
6130	ER EXAM 9	AHU-ER-2	6-TU-41-5	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6131	ER EXAM 8	AHU-ER-2	6-TU-41-5	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6132	ER EXAM 6	AHU-ER-2	6-TU-41-6	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6133	ER EXAM 7	AHU-ER-2	6-TU-41-6	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6134	RESUSCITATION	AHU-ER-2	6-TU-41-3	Y	450	[210]	2	3	-	R	400	[190]	1	12	-	X	+	0	[]	50	[24]	----	
6135	ER PROCEDURE	AHU-ER-2	6-TU-41-9	Y	350	[170]	1	3	-	R	300	[140]	1	11	-	X	+	0	[]	50	[24]	----	
6136	CYLINDER STORAGE	AHU-ER-2	6-TU-41-8	N	25	[12]	1	1	-	R	0	[]	0	-	-	X	-	0	[]	25	[12]	----	
6137	DECONTAM	AHU-ER-2	6-TU-41-8	Y	275	[130]	2	2	-	E	300	[140]	1	11	-	X	-	50	[24]	0	[]	----	
6138	ER EXAM 13	AHU-ER-1	6-TU-1-13	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6139	ER EXAM 14	AHU-ER-1	6-TU-1-12	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6140	ER EXAM 15	AHU-ER-1	6-TU-1-12	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6141	ER EXAM 16	AHU-ER-1	6-TU-1-14	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6142	ER EXAM 17	AHU-ER-1	6-TU-1-14	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6142D	OBSERVATION 3	AHU-ER-1	6-TU-1-17	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----	
6142E	OBSERVATION 4	AHU-ER-1	6-TU-1-16	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----	
6143	CORRIDOR	AHU-ER-1	6-TU-1-16	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6143A	OBSERVATION 1	AHU-ER-1	6-TU-1-15	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----	
6143B	OBSERVATION 2	AHU-ER-1	6-TU-1-18	Y	175	[83]	1	2	-	E	250	[120]	1	11	-	X	-	75	[35]	0	[]	----	
6143C	OBSERVATION NURSE	AHU-ER-1	6-TU-1-17	N	50	[24]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	50	[24]	----	
6144	NOURISH	AHU-ER-1	6-TU-1-3	Y	25	[12]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	25	[12]	----	
6145	SOILED HOLDING	AHU-ER-1	6-TU-1-3	N	50	[24]	1	1	-	E	75	[35]	1	9	-	X	-	25	[12]	0	[]	----	
6146	CLEAN SUPPLY	AHU-ER-1	6-TU-1-3	N	50	[24]	1	1	-	R	25	[12]	1	9	-	X	+	0	[]	25	[12]	----	
6147	PSYCH SALLY PORT	AHU-ER-1	6-TU-1-8	N	50	[24]	1	6	-	R	25	[12]	1	6	-	X	+	0	[]	25	[12]	----	
6147A	PSYCH OBSERVATION	AHU-ER-1	6-TU-1-8	Y	150	[71]	1	7	-	R	125	[59]	1	7	-	X	+	0	[]	25	[12]	----	
6147B	PSYCH FLEX ROOM	AHU-ER-1	6-TU-1-6	Y	125	[59]	1	7	-	R	100	[47]	1	6	-	X	+	0	[]	25	[12]	----	
6147C	PSYCH FLEX ROOM	AHU-ER-1	6-TU-1-8	N	125	[59]	1	7	-	R	100	[47]	1	6	-	X	+	0	[]	25	[12]	----	
6147D	PSYCH HOLD 2	AHU-ER-1	6-TU-1-8	N	100	[47]	1	6	-	R	75	[35]	1	6	-	X	+	0	[]	25	[12]	----	
6147E	PSYCH HOLD 1	AHU-ER-1	6-TU-1-7	Y	75	[35]	1	6	-	R	50	[24]	1	6	-	X	+	0	[]	25	[12]	----	
6147F	PSYCH TOILET	AHU-ER-1	6-TU-1-7	N	50	[24]	1	6	-	E	75	[35]	1	6	-	X	-	25	[12]	0	[]	----	
6148	RESIDENT WORK	AHU-ER-1	6-TU-1-5	Y	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----	
6149	PATIENT TOILET	AHU-ER-1	6-TU-1-5	N	50	[24]	1	1	-	E	100	[47]	1	9	-	X	-	50	[24]	0	[]	----	
6150	STAFF TOILET	AHU-ER-2	6-TU-1-9	N	50	[24]	1	1	-	E	100	[47]	1	9	-	X	-	50	[24]	0	[]	----	
6151	FAST TRACK	AHU-ER-2	6-TU-1-10	N	225	[110]	1	3	-	R	200	[94]	1	10	-	X	+	0	[]	25	[12]	----	
6151A	SOILED HOLDING	AHU-ER-2	6-TU-1-9	N	50	[24]	1	1	-	E	75	[35]	1	9	-	X	-	25	[12]	0	[]	----	
6151B	NURSE STATION/ MEDS	AHU-ER-2	6-TU-1-9	Y	100	[47]	1	1	-	R	75	[35]	1	9	-	X	+	0	[]	25	[12]	----	
6151C	FAST TRACK EXAM 1	AHU-ER-2	6-TU-1-10	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6151D	FAST TRACK EXAM 2	AHU-ER-2	6-TU-1-10	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6151E	FAST TRACK EXAM 3	AHU-ER-2	6-TU-1-11	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6151F	FAST TRACK EXAM 4	AHU-ER-2	6-TU-1-11	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6152	PHLEBOTOMY	AHU-ER-2	6-TU-41-16	Y	125	[59]	1	2	-	E	150	[71]	1	10	-	X	-	25	[12]	0	[]	----	
6153	PHYS CAIL ROOM	AHU-ER-2	6-TU-41-15	Y	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----	
6153A	PHYS TOILET/ SHOWER	AHU-ER-2	6-TU-41-15	N	50	[24]	1	1	-	E	100	[47]	1	9	-	X	-	50	[24]	0	[]	----	
6153B	PANTRY	AHU-ER-2	6-TU-41-15	N	25	[12]	1	1	-	R	0	[]	0	-	-	X	+	0	[]	25	[12]	----	
6154	EQUIP STORAGE	AHU-ER-2	6-TU-41-14	N	150	[71]	1	2	-	R	125	[59]	1	10	-	X	+	0	[]	25	[12]	----	
6155	ER EXAM 18	AHU-ER-1	6-TU-1-1	Y	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6156	ER EXAM 19	AHU-ER-1	6-TU-1-1	N	125	[59]	1	2	-	R	100	[47]	1	9	-	X	+	0	[]	25	[12]	----	
6157	PHYS WORK VIEWING	AHU-ER-1	6-TU-1-4	Y	100	[47]	1	1	-	R	75	[35]	1	9	-	X	+	0	[]	25	[12]	----	
6158	OFFICE	AHU-ER-2	6-TU-41-15	N	75	[35]	1	1	-	R	50	[24]	1	9	-	X	+	0	[]	25	[12]	----	
6159	EXISTING TELEPHONE	AHU-ER-2	6-TU-41-17	N	150	[71]	1	8	-	R	150	[71]	1	EXIST	-	X	±	0	[]	0	[]	----	