VENTILATION CHART FOR NEW SYSTEM (AC-1)

Room	Description	Area (sqft)	OA per IMC Table 403.3	Area OA (CFM)	Occupants per IMC Table 403.3 (people/1000 sqft)	Occupants	Occupants OA per IMC Table 403.3	Occupants Outdoor Air	Breathing Zone OA	Zone Air Distribution Effectiveness	Zone OA (CFM)	Supply Air (CFM)	OA Fraction
MGR Office	Office	120	0.06	7.2	5	1	5	5	12.2	0.8	15.3	150	0.10
Assist. MGR	Office	128	0.06	7.68	5	1	5	5	12.7	0.8	15.9	150	0.11
Work Room	Office/storage	162	0.06	9.72	5	1	5	5	14.7	0.8	18.4	170	0.11
Break Room	Lounge	122	0.06	7.32		2	5	10	17.3	0.8	21.7	200	0.11
Bathroom	Bathroom	46	0	0		0	5	0	0.0	0.8	0.0	50	0.00
Lease office 1	Office	158	0.06	9.48	5	2	5	10	19.5	0.8	24.4	220	0.11
Lease office 2	Office	140	0.06	8.4	5	2	5	10	18.4	0.8	23.0	220	0.10
Lobby	Lobby	266	0.06	15.96	10	3	5	15	30.96	0.8	38.7	440	0.09
		1142										1600	

Total OA requirement	157.2 CFM
Total Supply Air	1600 CFM
Percent OA required	0.10

Percentage of Outside Air from the existing system:

Total OA	240 CFM
Total Supply Air	1600 CFM
Existing OA ratio	0.15

New unit brings in adequate outside air into the space. Unit is in compliance with the ventilation requirements.

VENTILATION CHART FOR NEW SYSTEM (AC-2)

Room	Description	Area (sqft)	OA per IMC Table 403.3	Area OA (CFM)	Occupants per IMC Table 403.3 (people/1000 sqft)	Occupants	Occupants OA per IMC Table 403.3	Occupants Outdoor Air	Breathing Zone OA	Zone Air Distribution Effectiveness	Zone OA (CFM)	Supply Air (CFM)	OA Fraction
Fitness Room	Health Club	890	0.06	53.4	10	9	20	178	231.4	0.8	289.3	1950	0.15
Bathroom	Bathroom	46	0	0		0	5	0	0.0	0.8	0.0	50	0.00
Jan. Closet	Jan. Closet	16	0	0	0	0	5	0	0.0	0.8	0.0	0	0.00
Utility	Utility	40	0	0	0	0	5	0	0.0	0.8	0.0	0	0.00
		992										2000	

Total OA requirement	289.3 CFM
Total Supply Air	2000 CFM
Percent OA required	0.14

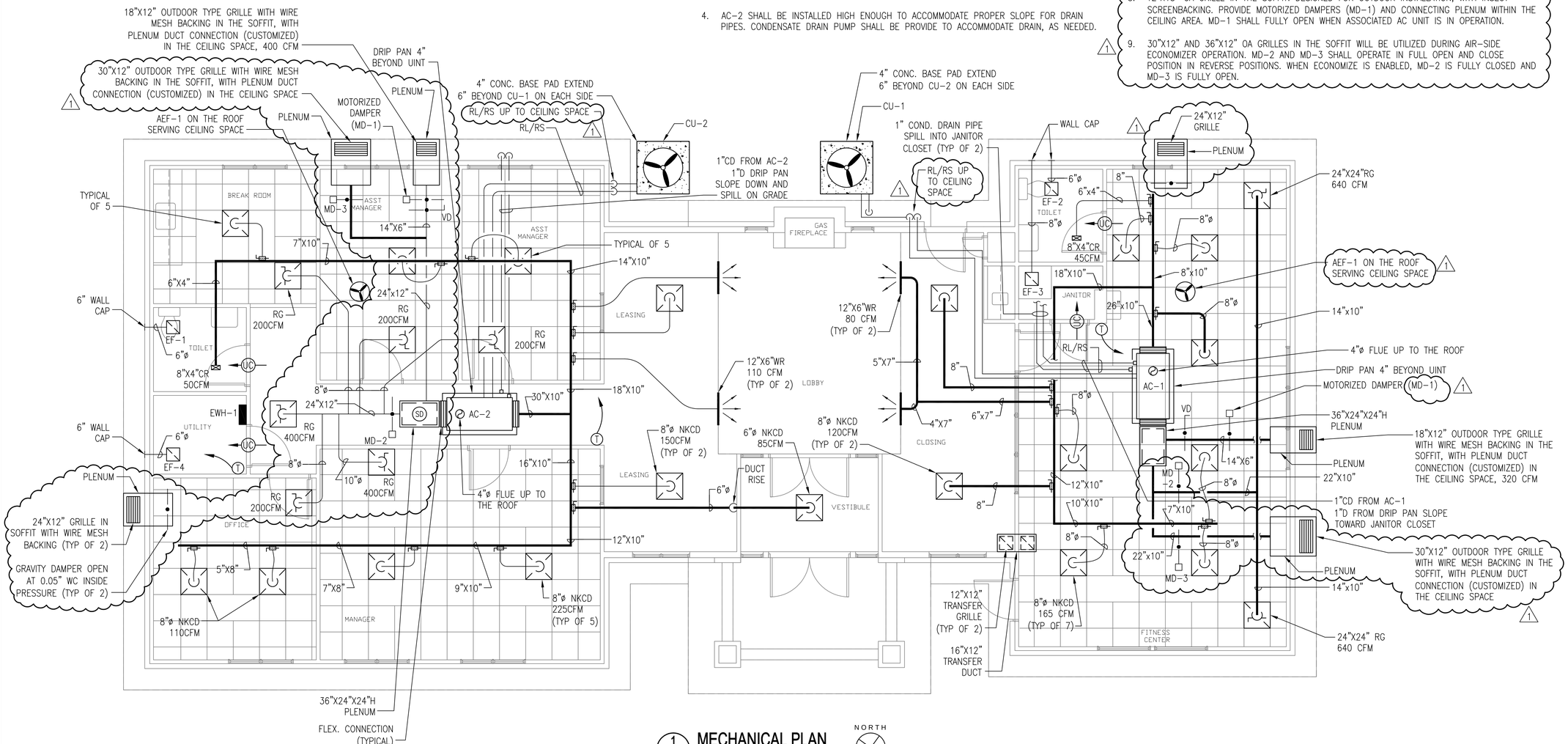
Percentage of Outside Air from the existing system:

Total OA	400 CFM
Total Supply Air	2000 CFM
Existing OA ratio	0.2

New unit brings in adequate outside air into the space. Unit is in compliance with the ventilation requirements.

PLAN NOTES

1. ALL AC UNITS SHALL BE SUPPORTED AND LOCATED ON PLATFORMS, DESIGNED BY OTHERS. UNITS SHALL BE PROVIDED WITH VIBRATION ISOLATORS.
2. PROVIDE 1" LINING FOR THE FIRST 10' OF MAIN SUPPLY DUCT FROM THE UNIT DISCHARGE AND ALL RETURN AIR PLENUMS.
3. EXACT LOCATION OF AC UNITS SHALL BE COORDINATED WITH THE ARCHITECT AND STRUCTURAL ENGINEER. STRUCTURAL TRUSSES SHALL BE MODIFIED TO ACCOMMODATE SPACE FOR THE UNITS.
4. AC-2 SHALL BE INSTALLED HIGH ENOUGH TO ACCOMMODATE PROPER SLOPE FOR DRAIN PIPES. CONDENSATE DRAIN PUMP SHALL BE PROVIDE TO ACCOMMODATE DRAIN, AS NEEDED.
5. 4ø FLUE FROM FURNACE SHALL BE TERMINATE 3'-0" ABOVE NEAREST STRUCTURE WITHIN 2'-0". PROVIDE RAIN CAP ON TOP.
6. EXACT LOCATION OF CEILING SPACE EXHAUST FANS (AEF-1 & 2) SHALL BE COORDINATED BY THE PROJECT MANAGER.
7. MOTORIZED DAMPERS SHALL BE INTERLOCKED TO THE ASSOCIATED AC UNITS.
8. 12"X18" OA GRILLE IN THE SOFFIT. DESIGNED FOR OUTDOOR INSTALLATION, WITH INSECT SCREENBACKING. PROVIDE MOTORIZED DAMPERS (MD-1) AND CONNECTING PLENUM WITHIN THE CEILING AREA. MD-1 SHALL FULLY OPEN WHEN ASSOCIATED AC UNIT IS IN OPERATION.
9. 30"X12" AND 36"X12" OA GRILLES IN THE SOFFIT WILL BE UTILIZED DURING AIR-SIDE ECONOMIZER OPERATION. MD-2 AND MD-3 SHALL OPERATE IN FULL OPEN AND CLOSE POSITION IN REVERSE POSITIONS. WHEN ECONOMIZE IS ENABLED, MD-2 IS FULLY CLOSED AND MD-3 IS FULLY OPEN.



1 M3 **MECHANICAL PLAN**
SCALE: 1/4"=1'-0"

NORTH

LEASING OFFICE
CLUB HOUSE
Walker Mill Apartments

1926 Rochelle Avenue
Forestville, Maryland 20747

FEDERAL CAPITAL PARTNERS

5425 Wisconsin Avenue • Suite 202
Chevy Chase MD 20815
240 395 2000

NOVITSKE ARCHITECTS

201 North Fairfax Street • Suite 33
Alexandria VA 22314
703 535 7899 • 703 535 8840 fax

NATIONAL CONSULTING ENGINEERS
14415 MARINE DRIVE, SILVER SPRING MD. 20905
TEL: (301) 989-9142 FAX: (301) 989-0830
E-MAIL: massoud@ncengineers.com

I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 16869,
EXPIRATION DATE: March 25, 2016

graphic scales
0' 5' 10'
1/4"=1'-0"

project: 21418
phase: Permit
date: 17 April 2015
revisions: 1 6/10/2016 NOTES & MOTORIZED DAMPER ARE ADDED AND WORD OF ATTIC IS CHANGE TO CEILING SPACE

MECHANICAL PLAN

M3