**Liettrim Computer Center**

Application: AHU Silencers (Centrifugal Fans)

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**CHALLENGE**

- Unacceptable Installed Performance

Multiple units delivering 2,500, 5,000 and 10,000 CFM were to be installed at a facility having a specified noise criteria of RC-40 in both the computer room and corridors. Proof-of-performance was to be supplied by witness testing mock-ups of all three unit sizes by the owner.

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**SOLUTION**

**RECOMMENDATIONS OF DESIGN CHANGES & SUPPLY OF STANDARD DUCT SILENCERS**

Each air conditioning unit and its associated ductwork and standard silencers were mocked up and tested. Sound intensity measurements were used to determine the amount of breakout noise through the unit casings. As a result of the subsequent improvements made to the casing, the specified RC-40 criteria was achieved.

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**Noise from 46 computer room air-conditioning units could not exceed RC-40.**

Above: Typical installation drawing of standard no-media silencing system which includes one standard straight and one standard elbow silencer in series. Note: installation space was extremely tight. The solid lines indicate contract drawing and connecting duct sizes. The dotted lines indicate the larger silencer outside body dimensions required to achieve the specified performance.