

JS Woodworth Senior Public School, Toronto, Ontario



LOCATION : 120 Sedgemount Drive
Toronto, Ontario

OWNER : Toronto District School Board
TDSB.

TEAM MEMBERS : **Mechanical Consultant**
Mr. Imran Majeed
Advanced Buildings Solutions Inc.

Electrical Consultants
Suri & Associates Ltd.



MECHANICAL ENGINEERING SERVICES:

Mr. Majeed was engaged to provide following services:

- Mechanical - Roof top unit Assessment
- Site review
- Concept Studies & Design Development
- Preparation of Construction Documents
- Estimating Construction Cost
- Cost Control & Value Analysis throughout the Design Process
- General Administration & Design Coordination throughout the work

PROJECT DESCRIPTION:

The project include upgrade existing roof top units, ductwork, piping, condensing units, Refrigerant compressors in mechanical room, cooling coil addition in central air handling unit, electrical upgrades in support of mechanical upgrades and services.

Existing System:

The building has rooftop equipment detailed as follows:

1. There are three (3) condenser units close to the north edge of the roof. Each of the unit is 35 ton each of Carrier make. The units are connected to indoor direct drive compressors. The units are 30 years old. The compressors are noted as maintenance hazard by the caretaker and the school's maintenance technician.
2. There are three (3) air-conditioning units of Carrier make and 7.5 ton capacity each. The units are approx. 30 years old. The units exposed ductwork has water penetration problem. Both the unit housing and electrical disconnect switch and conduit work are showing rust.
3. The air-conditioning unit serving Family Studies and Sewing room is also of Carrier make and appears of the same age as other rooftop equipment. The unit was noted to have operational problem. No equipment detail label is present on the machine. The only identification is TDSB #10004822.

Recommendations:

Most of the rooftop equipment have recommended lifespan of 15-20 years. As noted above number of equipment exceeded their lifespan and have operational issues and are recommended to be replaced. It is recommended that three (3) 35 ton condenser units shall be changed to outdoor type condensing units, three (3) 7.5 ton air-conditioning units and one (1) 12.5 ton (To be verified) air-conditioning unit shall be considered for replacement based on the age and condition of the equipment.