Wilby High School Science Renovation

Educational Specification

Rationale for the Project:

Currently Wilby High School offers an amalgam of core and elective science courses. Because of the strong link between didactic and kinesthetic approaches to learning in the science classroom, functional student laboratories are essential to achieving local, state and national standards in science education.

12 science teachers offer 63 sections of the following courses to over 1200 students per school day with some students taking multiple science classes.

- Integrated Science
- General Biology (English)
- General Biology (Sheltered)
- Chemistry
- Environmental Science
- Astronomy
- Physics
- Anatomy/Physiology
- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics

Each course has an integral laboratory requirement. Presently there are 11 laboratory classrooms. This means that one teacher conducts a laboratory class in a regular classroom. Normal science class size is usually limited to 24 students with an average lab grouping of 4 students per workstation.

The following points will clarify the need for renovation.

- The laboratory classrooms at Wilby High School were designed and constructed based on circa 1970 technology, curriculum and teaching practices. The majority of the laboratory and work stations have reached the end of their serviceable "life" expectancy.
- A large portion of our modern science curriculum was either unknown or only taught at the college level when these laboratory classrooms were constructed. Current classroom and laboratory spaces cannot support the

latest information technology or experimental/analytical equipment needed for the curriculum.

- Technological advances in the classroom such as DLP projectors, computers, smartboards, DNA analysis equipment, spectrophotomers, etc. had either not been invented yet or were not available at the high school level when these laboratory classrooms were constructed.
- Safety requirements, building codes and handicap access needs have changed to a large extent since these laboratory classrooms were constructed. The current classrooms and laboratory spaces are not compliance with accessibility and OSHA standards.
- Maintenance and repairs to physical fixtures such as faucets, plumbing and casework cannot be made because the original equipment is no longer available and replacement fixtures are incompatible.
- Equipment and consumable supplies cannot be secured within the classroom because of inadequate casework. The exception to this is the chemical storeroom which is secure.

- Due to changes in district/state curriculum and a larger student population, two classrooms that were originally designed to be used only as physical science rooms are now required to be used as life science rooms without the necessary fixtures, equipment or storage.

Memorandum

To: Paul Guidone, Waterbury Department of Education

From: Scott Baillie Program Manager
O&G Industries, Inc.

Date: May 21, 2008

Subject: Educational Specifications for New Project Submissions to the State Department of Education

Pursuant to our discussions, attached please find the Educational Specifications to be submitted to the State of CT, Department of Education along with the Grant Applications, forms EDO-49. The City of Waterbury, Board of Education approval is required for these documents prior to state submission. The attached Ed. Spec's are;

- **Wilby High School North End Middle School – Science Suite Renovations.**
  The attached document has not been modified from the submission to the School Building Committee.

- **Carrington Elementary School - PreK – 8 Renovation / Expansion**
  The attached JCJ, April 2004 Educational Specification document (formally approved by the BOE) has been amended to include The Space Standard Programming completed by Svigals + Partners, March 2007.

- **Allied Health, Manufacturing and Mechanical Arts Intra-District High School**
  The attached document has not been modified from the submission to the School Building Committee.