FUEL OIL TANK REPLACEMENT AT LAKEVIEW HIGH SCHOOL

BOILER ROOMS 'A' AND 'B'



REGIONAL SCHOOL DISTRICT #20

35 WAMOGO ROAD

LITCHFIELD, CT 06759

2026

FUEL OIL TANK REPLACEMENT AT LAKEVIEW HIGH SCHOOL
BOILER ROOMS 'A' AND 'B'

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REQUEST FOR PROPOSAL

Sealed Proposals for *Fuel Oil Tank Replacement at Lakeview High School* will be received by Regional School District #20 on:

October 16, 2026 at 9:00 A.M.

at which time the Proposals will be opened publicly and read aloud.

Proposal specifications may be obtained at the District Offices of Regional School District #20, 35 Wamogo Road, Litchfield, CT, 06759.

Regional School District #20 reserves the right to accept or reject any or all Proposals, to waive any technicalities of the Proposal process, and to select the Proposal that meets the best interests of the District.

-End of Request For Proposal-

Instructions to Submitting Contractors

A) Submitting Contractors for this project must have at least ten (10) years experience as their present incorporation, performing commercial fuel oil tank and fuel oil systems installation work with associated mechanical contracting. This requirement applies to any subcontractors the Submitting Contractor intends to engage. All workers shall be properly licensed and registered with the State of Connecticut in accordance with the trades required by the Work of this project. All personnel, including the Contractor's workforce and all subcontractors, shall attain minimum OSHA-10 training certification as a requirement for any performance on this project.

B) All work shall conform to all applicable governing codes, including but not limited to NFPA, CSBC, and NEC latest applicable editions, and other standards as referenced in this document.

C) The successful Submitting Contractor shall proceed expeditiously with forces as required to achieve substantial completion within the schedule guidelines of this document.

D) The Contractor is required, at his own expense, to secure a building permit for construction and schedule inspections as deemed necessary by the local building official and fire marshal.

E) Regional School District #20 is a tax exempt entity. The Contractor's Proposal submission shall not include taxes. The successful Submitting Contractor will be provided with appropriate tax exemption documents.

F) Submitting Contractors and their Subcontractors shall be equal opportunity employers, and shall not discriminate against, in work or hiring practices, any employee or prospective employee, on the basis of race, color, ancestry, religious creed, sex, national origin, or sexual orientation.

G) Addenda to these documents, if any, will be issued in writing to Contractors securing project documents, and receipt of such must be acknowledged on the Proposal Form. Failure to acknowledge receipt of addenda on the Proposal Form may lead to disqualification of the Proposal. Interpretations, changes, or corrections of the documents made in any other form will not be binding and should not be relied upon by submitting Contractors.

H) Completion dates and penalties

1) Substantial completion (system operational): June 30, 2027

2) Final completion: July 31, 2027

I) By submission of a Proposal, the submitting Contractor represents the following:

1) That he/she has read and understands these documents in their entirety.
2) That the submitted Proposal is made in compliance with these documents.
3) That he/she has visited the site and has correlated the Submitting Contractor's personal observations with the requirements of these documents.
4) That the submitted Proposal is based upon the materials, equipment, systems, and methods required by these documents and is without exceptions.

J) No portion of this specification may be reproduced or transmitted without the direct written permission of the Owner; no right of use is extended for any purpose other than the task of preparing and providing a Proposal for the project "Fuel Oil Tank Replacement at Lakeview High School".

K) Preparation of Proposals

1) Proposals shall be submitted in duplicate on the forms contained within these documents. All forms must be included and without omissions, irregularities, or stipulations of any type. Forms shall be notarized where required.
2) All blanks on the Proposal Form shall be legibly executed in a non-erasable medium.
3) Sums shall be expressed in words and figures, the amount written in words shall govern in the case of a discrepancy.
4) Proposal submissions shall include any other specific instructions as noted in the Request For Proposal.
5) Proposal submissions shall include any Proposal security noted in the Request For Proposal.
6) This document details specific product features and requirements; submitting Contractors must make any intended equipment substitutions plain with their Proposals by inclusion of manufacturer's data/cut sheets. Absence of any such literature communicates the intention of Contractor installation of specified products for this project. Failure to provide such notification of intention to substitute with the Proposal, as revealed during the submittal process, or submission of substitution products not meeting the requirements of this document with the Proposal, may cause rejection of the Proposal by the Owner prior to contract execution.
7) Proposal submission shall include pricing as noted on the Proposal Form, including Per Unit pricing as noted. All pricing requests shall be submitted; incomplete pricing submissions shall be disqualified/rejected.

L) Persons executing the Proposal shall have legal authority to bind the submitting entity, and shall provide proof thereof by signature and title. Any Proposal submitted by an agent shall have a current power of attorney document attached certifying the agent's authority to bind the Submitting Contractor.

M) The Owner shall have the right to retain the Proposal security of submitting Contractors to whom an award is being considered for thirty (30) days, or until an award is made, or until Proposals are rejected. No Proposal may be withdrawn for a period of thirty (30) days from the date of Proposal opening.

N) All Proposal submissions with required forms/content shall be submitted in an opaque envelope with the project name ("Fuel Oil Tank Replacement at Lakeview High School "), owner's name (Regional School District #20), and the words "SEALED PROPOSAL ENCLOSED" printed legibly upon the face of the envelope.

O) Proposals shall be deposited with the Business Office Secretary at the District Offies for Regional School District #20, located at 35 Wamogo Road, Litchfield, CT, 06759, prior to the designated Proposal opening date and time. Any Proposals received after the due date/time will not be accepted. Submitting Contractors assume full responsibility for timely delivery at the location designated for receipt of Proposals.

-End of section-

FUEL OIL TANK REPLACEMENT AT LAKEVIEW HIGH SCHOOL
BOILER ROOMS 'A' AND 'B'

PROPOSAL FORM

Project: ***Fuel Oil Tank Replacement at Lakeview High School***

Owner: Regional School District #20
35 Wamogo Road
Litchfield, CT, 06759.

Contractor: Firm: _____

Address: _____

Tel: _____ Email address: _____

Representative & title: _____

Lump Sum Proposal Amount:

_____

(written in words)

$_____

(figures)

- Proposal Form continued on next page -

~ submit with Proposal ~

PROPOSAL FORM

Section 15511: Existing Underground Fuel Oil Storage Tank Removal Procedure (Additional Cost, per tank):

_____

(written in words)

$_____

(figures)

Per unit pricing amounts (specify units; ex., per cu/ft., per sq./yd., per gal., etc. and any minimum quantities):

For removal/disposal of contaminated soils:

_____

(written in words)

$_____

(figures)

For delivered and installed clean fill:

_____

(written in words)

$_____

(figures)

PROPOSAL FORM

By submission of this proposal, the undersigned Contractor acknowledges inclusion of all elements contained and described in the project documents.

Signature: _____

Name (print): _____

Title: _____

Date: _____

Acknowledgement of Addenda (if applicable):

Addendum #: _____ Date: _____ Initial: _____

Addendum #: _____ Date: _____ Initial: _____

Addendum #: _____ Date: _____ Initial: _____

-End of Proposal Form-

~ submit with Proposal ~

NON-COLLUSIVE STATEMENT

The undersigned Contractor certifies the following:

1) This Proposal has been arrived at by the Contractor independently and has been submitted without collusion with, and without any agreement, understanding, or planned course of action with, any other vendor of materials, supplies, equipment, or services, or any company, person(s) or agency, designed or intended to limit independent competition, and

2) The contents of the proposal have not been communicated by the submitting Contractor or its employees or agents to any person not an employee or agent of the submitting Contractor or its surety, and will not be communicated to any such person prior to the official opening of the proposal.

_____

Contractor (company name)

_____

_____

Business address

_____

Signature and Title of authorized agent
(affix seal here)

_____

Date

-submit with Proposal-

CONTRACTOR QUALIFICATIONS STATEMENT

1) Name of company: _____

2) Address: _____

3) Incorporation date: _____

4) How many years have you been engaged in the business under your present firm name?

_____

5) Contracts on hand (with gross amounts and completion dates):

_____

_____

_____

_____

_____

6) Have you ever failed to complete any work awarded to you? _____

7) Have you ever defaulted on a contract? _____

8) List the more important projects recently completed by your company, with approximate cost of each, brief description of project, month and year completed, and a contact person with telephone number.

_____

_____

_____

_____

9) Supply six (6) references with firm and telephone number that may be contacted by the Owner with regard to your firm and performance thereof:

1.

2.

3.

4.

5.

6.

10) List intended subcontractors with address and telephone number, with dollar amount/percentage of total proposal price for each subcontractor.

_____

_____

_____

11) Provide applicable CT trade licensing numbers and other CT trade registration as applicable for all prospective employees who may work on this project. Include subcontractor CT licensing and registration as applicable. Attach accordingly to this Contractor Qualifications Statement.

The undersigned hereby authorizes any person or agent of Regional School District #20to contact the Contractor or its referenced persons or entities and obtain any information relevant to this statement or its intentions with regard to this proposal, at the Owner's discretion, and authorizes release of that information to Regional School District #20for the purposes of evaluation of this proposal.

_____

Contractor (company name)

_____

Authorized agent (signature) and Title

_____

Date

-End of Contractor Qualifications Statement-

-End of section-

-submit with Proposal-

01010: SUMMARY OF WORK

The goal of this project is to furnish installation of two (2) new above-ground fuel oil storage tanks at Lakeview High School with abatement or removal of the existing two (2) 10,000-gallon underground fuel storage tanks (UST's); the new tanks will provide fuel oil storage for the existing space heating boilers of the facility located in Boiler Rooms 'A' and 'B'.

Work elements of this project include the following: excavation and demolition; certified fuel oil tank cleaning and laboratory soil sampling; fuel oil tank abatement and/or removal; concrete work; equipment rigging; fuel oil tank installation; fuel oil piping and specialties work; fuel oil transfer pump installation; systems startup and commissioning; and finish items, including painting, insulation, warranty service, and staff instruction.

Submitting Contractors shall note that this is an active educational facility. All work shall be performed within the schedule guidelines of Regional School District #20.

-End of section-

01039: PROJECT COORDINATION AND JOB MEETINGS

A) Coordinate the scheduling of site visits, submittals, and the Work of this project effectively to assure efficient and orderly sequence of installation of interdependent construction elements.

B) Recognize that the project involves work at an operating facility; do not interrupt services to the facility for any reason without specific written notice to the Owner's representative, including but not limited to domestic hot water, domestic cold water, electrical power, or electrical circuits other than those of equipment being replaced within the scope of the Work. Required interruption of services may only be scheduled and performed with the Owner's permission.

C) Do not cause disruption in any form to ongoing programs within the facility, including excessive noise, unauthorized presence within the building proper, improper parking, blocking of fire/emergency personnel access, or storage of work materials/goods outside of the equipment room.

D) Do not perform any work without proper safety precautions.

E) Following notice of award, a project startup meeting will be held, attended by the Owner's representatives, project coordinator, and the Contractor. Meeting agenda will include contract execution, submission of insurance certificates, and review of procedures for project field decisions, submittals, applications for payments, and general scheduling criteria.

F) The Contractor shall, at his expense, obtain and furnish the contract document to the Owner for execution; the contract form shall be AIA Form 101, with terms as represented by AIA Form A201 and in this document, and as imparted by the Owner (current and matching editions); or other acceptable form. Execution of the Contract shall take place within ten (10) days following the notice of award.

G) The Contractor shall submit a Schedule of Values prior to the project startup meeting. This Schedule shall provide a breakdown of the project into component areas or work, with respective materials and labor costs data. The Schedule of Values will become the basis for progress payment requests as the project is executed by the Contractor, and will appear as approved on payment request forms AIA A305 as the project is executed. As items of the Schedule are completed and approved by the Owner's representative, according values will be paid by the Owner, per the terms of the Contract, as approved by the Owner's representative upon field inspection. The Schedule of Values must be approved by the Owner's representative prior to execution of the contract, and shall be submitted by the Contractor within five (5) days of notice of award.

H) A project coordination meeting will be held with required attendance by the Contractor and Owner's representative(s) at the site. Meeting agenda will include project responsibilities, coordination, scheduling, and completion of all items necessary to facilitate the Work of both projects.

I) The Contractor shall schedule and administer meetings throughout the progress of the project at minimum monthly intervals, including the Owner's representative, Contractor principal, and job foreman, principal subcontractors, and suppliers as may be necessary. The Contractor shall note that filing for payment application requires site walk-through meetings and inspections, using the proper AIA Form A305 application for payment and continuation sheet forms, which he shall compile based upon the approved Schedule of Values for the project. The Contractor shall submit these forms/payment requests to the Owner's representative at intervals no shorter than thirty (30) days.

J) Use of facility services, such as water, lavatory, and electricity, may be accessed as designated by the Owner for specific use by the Contractor.

-End of section-

01090: REFERENCE STANDARDS

ACI	American Concrete Institute PO Box 19150, Reford Station, Detroit, MI 48219
ADC	Air Diffusion Council 230 North Michigan Avenue, Chicago, IL 60601
AIA	American Institute of Architects 1735 New York Avenue N.W., Washington, D.C 20006
AMCA	Air Movement and Control Association 30 West University Drive, Arlington Heights, IL 60004
ANSI	American National Standards Institute 1430 Broadway, New York, NY 10018
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers 1791 Tullie Circle N.E., Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street, New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street, Philadelphia, PA 19103
AWS	American Welding Society 550 Lejune Road N.W., Miami, FL 33135
AWWA	American Water Works Association 6666 West Quincy Avenue, Denver, CO 80235
CDA	Copper Development Association 57th Floor, Chrysler Bldg., 405 Lexington Avenue, New York, NY 10174
EJMA	Expansion Joint Manufacturer's Association 25 North Broadway, Tarrytown, NY 10591

FM	Factory Mutual System 1151 Boston-Providence Turnpike, PO Box 688, Norwood, MA 02062
ICC	Building Code, latest ed. Plumbing Code, latest ed. Mechanical Code, latest ed.
IEEE	Institute of Electrical and Electronics Engineers 345 East 47th Street, New York, NY 10017
NCMA	National Concrete Masonry Association PO Box 781, Herndon, VA 22070
NEBB	National Environmental Balancing Bureau 8224 Old Courthouse Road, Vienna, VA 22180
NEC	National Electrical Code, latest ed.
NEMA	National Electrical Manufacturer's Association 2101 L Street NW, Washington, D.C. 20037
NFPA	National Fire Protection Association Battery March Park, Quincy, MA 02269
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association 8224 Old Court House Road, Vienna, VA 22180
SSPC	Steel Structures Painting Council 4400 Fifth Avenue, Pittsburgh, PA 15213
UL	Underwriter's Laboratory 333 Pfingston Road, Northbrook, IL 60062

-End of section-

01300: SUBMITTALS

A) Provide two (2) bound copies of submittals for all new products to be installed within the scope of the Work for this project, and specific procedures as noted, to the Owner's representative for approval. Sections of this document note basic submittals requirements to assist the Contractor.

B) Each submittal package shall identify the project by name and number, with project site address, Contractor name and address, and Owner name and address.

C) Each submittal package shall be sequentially indexed and separated by section with respect to this document for ease of review. Each package shall include a contents table referencing the index/section numbers to facilitate review.

D) Apply Contractor's stamp certifying review with signature of principal.

E) Deliver completed submittals within ten (10) days of the notice of award.

F) Clearly identify variations/substitutions for specific review.

G) Provide space for Owner's representative review stamp.

H) Revise and resubmit submittals if product rejection or notice of omission occurs upon review. Clearly identify all revisions from previous submissions.

I) Submittal data should include all pertinent product data, including product features and details, maintenance data, dimensional characteristics, identification data, ratings, etc.

J) Where required or requested, submit product samples to assist in review.

K) The submittals process illustrates the comprehensive understanding of the Contractor with regard to the intentions, design, and requirements of the project specification. The Owner reserves the right to terminate the Contract at the submittal stage without cost or obligation to the Owner if submitted/revised submitted products are not in conformance with the requirements of this document, in the judgment of the Owner/Owner's representative.

L) Submittals review will be performed expeditiously by the Owner's representative. Materials ordering for this project may occur only upon successful completion of the submittals review and according approvals. Any materials

ordered without such review and approval may be removed/returned to the Contractor upon discovery or at any time throughout this project, at the Contractor's expense, with no obligation of any type to the Owner.

M) Submit three (3) bound copies of project Operations and Maintenance Manuals, to include all manufacturers' installation, operating, and maintenance data for all equipment, controls, and products installed as part of this project, supplemented with all project records, as-built drawings, equipment reports, and specific instructions by the installer/Contractor. Manuals shall include a table of contents and shall be sequentially indexed and separated by section for ease of review and reference. Manuals will be reviewed for completeness by the Owner's representative and shall be returned for reworking by the Contractor if judged to be incomplete. Submission shall take place at the project's conclusion as part of the Final Completion fulfillment phase.

N) Submit written certification of warranty of the project, specifying that all elements of the project are covered under the warranty requirements of this document for the specified period, and include any manufacturer's warranty certificates requiring submission by the Owner. Provide this certification part of the submitted Operations and Maintenance manual, at the project's conclusion.

-End of section-

01400: QUALITY CONTROL

A) The Contractor shall monitor quality control of manufacturers, products, suppliers, and workmanship, to assure project execution and Work of the highest quality, and in accordance with the requirements of this document.

B) All work shall be performed by CT properly-licensed and registered personnel only.

C) The intention of this specification and project is to provide a complete, working mechanical system as detailed. The Contractor is encouraged to visit the site, and is responsible for all governing factors of the installation of this project. This document covers specific guidelines of this project. Omissions of this document do not excuse the Contractor from responsibility for a proper, working, and workman-like completed project.

D) Comply with specified standards as a minimum basis for quality for the Work, except where provisions of this document require higher standards of workmanship or precision.

E) Inspect material shipments immediately upon delivery to assure compliance with this document, to assure that goods are undamaged, and that goods are complete with quantities and components specified.

F) Schedule inspections as deemed necessary by the Owner's representative and local building inspection official to assure staged review of quality control. Provide corrections and adjustments to the Work as required to comply with applicable standards of quality.

-End of section-

01500: SITE PERFORMANCE REQUIREMENTS

A) The Contractor shall clean the equipment rooms and grounds following the completion of all demolition and prior to the onset of any part of the construction phase. Safeguard electrical devices, lighting, and remaining controls, components, and equipment from any damage as a result of demolition processes.

B) The equipment rooms shall be left broom clean following the completion of each work day. The Contractor shall keep the work area and facility grounds free of debris.

C) The Contractor shall collect/remove any fuel contained in piping/equipment within the demolition scope promptly from the work area and site. No fuel or gases required for demolition or welding processes shall be stored within the work area or facility for any purpose.

D) Parking for Contractor vehicles shall be provided in designated areas for close access to the work. Do not park vehicles on non-paved surfaces or sidewalks. Damages from vehicles of the Contractor, his subcontractors, or from materials deliveries of the Work will be repaired to the satisfaction of the Owner, to his discretion, by the Contractor, at his own expense.

E) Cordon off areas of demolition and excavation activities and any dumpsters/containers with safety fencing and assure safe transport of demolished materials to demolition containers. Minimize time duration of on-site outside dumpsters/containers. Locate and store dumpsters and containers with direct permission of the Owner.

F) The Contractor is responsible to maintain a clean and safe work environment at all times and at his expense. The Contractor is totally responsible for any damage to any part of the facility that may occur as a result of the work of this project. The Contractor shall repair or replace any damages caused as the result of his work, to the discretion of the Owner, at his own expense.

-End of section-

01600: MATERIALS HANDLING AND RIGGING

A) Transport, handle, move, and adjust new materials in accordance with manufacturer's instructions. Assure personnel are properly equipped, trained, and clothed for safe handling of materials and goods. Cordon off areas of delivery, rigging, and materials movement and handling. Provide notice to the Owner of any deliveries of materials that will encumber areas of egress, parking, through-passage by vehicles, or any facility program or activity.

B) Inspect material shipments immediately upon delivery to assure compliance with this document, to assure that goods are undamaged, and that goods are complete with quantities and components specified.

C) Provide equipment and properly-trained personnel as required for rigging and handling of materials and goods. File safety procedures and plans for rigging/deliveries/removals of heavy materials as part of the submittal package for this project.

D) Do not cause overstrain or otherwise cause risk to any parts of the facility through rigging or handling processes. The Contractor is directly responsible for any damages to the facility or grounds caused by the performance of the Work and shall provide repair or repair compensation of any damages to the sole discretion and satisfaction of the Owner.

E) Provide safe storage for contract goods. If goods are stored on-site, such storage must occur within the equipment room, and shall be executed to protect the goods from damages or encumbrances to entrances/exits. The Contractor shall provide, at his own expense, any required off-site storages of the contract goods, when job site storage is inappropriate or not feasible. Arrange stored products to permit access for inspection.

F) The Contractor shall maintain the workspace for the duration of this project in a safe manner. The Contractor shall properly safeguard the materials of the work and adhere to the Owner's standard for fire safety in all regards. The Contractor shall not restrict egress to/from the facility or impose any other restriction through the handling or storage of materials that would impact the safety of the facility or its occupants.

G) Use of cranes and/or other rigging machinery and tools shall be in strict accordance with respective OSHA guidelines and equipment manufacturer's instructions.

H) Submittals: Submit plans for rigging that involve large machinery or cranes that will potentially impact parking or facility programs and egress. Include equipment operation timing and coordinated methods for equipment use for rigging and placement of materials and equipment.

-End of section-

02019: DEMOLITION; CUTTING AND PATCHING

A) Equipment or appurtenances to be demolished shall be removed and disposed of in a legal manner. Any arrangements for the presence of dumpsters or other equipment must be made with the approval of the owner's representative.

B) No demolition shall commence without the direct permission of the Owner's representative. Supply any parts or components from equipment to be demolished to the Owner as spare parts for remaining equipment at his/her request.

C) The Contractor shall safeguard the facility during this phase with protective paper and coverings for building flooring as appropriate for work to be performed. The equipment room and all access ways shall be left broom clean following the demolition phase.

D) Demolition scope shall include the following:

1) Underground fuel oil storage tank (UST) components as required for abatement procedure, as specified in Section 15510.

2) Fuel oil system pumpsets, components, and related piping, electrical, and appurtenances

3) Underground and fuel transfer fuel oil supply/return piping, from existing UST's to fuel transfer pumpsets

4) UST fill piping, spill containment, and accessories

5) UST vent piping

6) All obsolete/non-functioning controls, tubing, gauges, piping, hangers, equipment, and appurtenances as relates to the existing UST's or systems listed above

E) Drain existing fuel piping within the scope of work; collect all fuel contained in piping and deposit in the site fuel oil tank. Container and remove any sludge/impurities collected and remove and dispose of in accordance with State of Connecticut and local requirements and law.

F) Submittals: Submit schedule indicating proposed methods and sequence of operations for demolition work to Owner's representative for review prior to commencement of Work. Include coordination for any shutoff, capping,

and continuation of any utility services as required, together with details for dust and noise control protection, fire protection plans, and demolition safety procedures.

G) In the event of any damage to facility resulting from the demolition phase, the Contractor shall repair damaged portions of the property, at his own expense, to the Owner's satisfaction.

H) All cuts and holes made in the course of work, for hanging, piping support, and pipe transverse, shall be accordingly patched and repaired. Use similar materials/methods to restore the integrity and appearance of the initial structure. Cutting and patching must be performed in a workmanlike manner, and produce neat and sound penetrations and repairs.

I) Any through-cuts required for piping or electrical traverse through brick or concrete materials shall be core-drilled. Sleeve piping and raceways as required by applicable codes when installing any traverse through walls, ceilings, or floors.

J) Adhere to NFPA regulations with regard to firestopping and heat transfer regarding penetrations.

K) Obsolete piping abandoned between walls and in inaccessible construction shall be cut as close as possible to wall/floor faces.

L) All existing abandoned or disused mechanical work and items shall be removed completely back to the last active device, regardless of the location of said device, as part of this project.

-End of section-

03010: CONCRETE WORK

A) This project includes concrete work and fabrication, to erect bases for new equipment, and patching as required.

B) The Contractor will construct the following:

1) Concrete above-ground fuel oil storage tank (AST) support and housekeeping base

C) AST base shall conform to the following specifications:

1) Minimum eight inch (8") height

2) Clear extension around equipment of twelve inches (12") on all sides, edged

3) Base location beneath tank as detailed

D) All concrete work shall conform to the following requirements:

1) Prepare ground at specified location for pad construction. Excavate and dig out site location to provide level surface in all planes as applicable. Provide removable forms to furnish specified base pad dimensions and location, square and level in all planes.

2) Construct all concrete fabrications from #5000-test fiberglass-impregnated concrete. Deposit concrete continuously or in layers of such thickness such that no concrete will be placed on concrete that has already hardened sufficiently to cause the formation of seams or planes of weakness.

3) Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading or tamping.

4) Install minimum 3/16" reinforcing mesh, 6" x 6" squares, approximately 3" from finished surface.

5) Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface and render free of humps and hollows.

6) Protect freshly-placed concrete from premature drying and excessive hot temperatures. Avoid rapid drying by watering concrete surface as soon as free water has disappeared from new concrete curing.

E) Submittals: Submit plans for bases and construction, timetable for any concrete deliveries, concrete psi test, form, and composition certification receipt.

-End of section-

09010: FINISHES

A) Prime (one coat) and finish paint (two coats) all uninsulated piping and equipment supplied as part of this project. Scope items include the following:

1) Fuel piping

B) Provide the following specific color code painting to interior piping, as applicable to this project:

Fuel oil piping:	Orange
Vent piping:	Gray

Paint exterior piping in a complimentary color to tank, facility and grounds.

C) Provide mechanical identification of painted piping as detailed within Division 15 of this document.

D) Acceptable products/manufacturers include Sherwin Williams, Benjamin Moore, Devoe, and Glidden. Do not apply propellant-based processes or paints. Apply paints per manufacturer's instructions.

E) Clean/prepare all surfaces prior to applications of finishes in accordance with manufacturer's instructions. Promptly clean/remove overcoverages and drips to other materials. Safeguard equipment and structures not to be painted with sufficient coverings and masking. Perform finishing work in a neat and workmanlike manner. Poor finishing quality, in the judgment of the Owner's representative, shall be refinished to the overall satisfaction of the Owner's representative.

F) Submittals: Submit manufacturer's cuts on all products in this section.

-End of section-

15010: BASIC MECHANICAL REQUIREMENTS

A) Coordinate with other contractors, subcontractors, owner's agents, and facility schedule to produce expeditious execution of the Work.

B) Install equipment to provide required access for maintenance and service. Allow ample space for removal of all parts that require replacement/servicing.

C) The Contractor is solely responsible for the delivery, entrance, and installation of equipment to the locations specified for the Work. Provide openings and access ways for delivery if the existing entrances are not adequate. Provide any repairs required to structural or finished construction for access, including any temporary construction during delivery.

D) Provide any demolition per the requirements of Division 2 of this document as necessary for fulfillment of the mechanical portion of the Work.

E) Each piece of mechanical equipment involving fuel piping shall include isolation service valves and unions at each connection, whether or not specifically shown on the mechanical drawings or details, in accordance with sound work practice, with specified materials of this document.

F) All equipment placement and locations, as well as piping and electrical runs/installation, shall be installed in square planes with the building construction and in dead level planes (unless pitch is specifically required for correct operation).

G) Provide any relocation of existing piping or electrical runs/services to fulfill the Work.

H) All existing abandoned or disused mechanical work and items shall be removed completely back to the last active device, regardless of the location of said device, as part of this project. Terminate at equipment room walls per Division 2 of this document.

I) Any active or remaining items or equipment within the contract work area shall be maintained as active and not disturbed by the Work for the duration of the Work.

-End of section-

15140: SUPPORTS AND ANCHORS

A) Install piping hangers and supports as required to meet specified Standards.

B) Black steel piping

1) ½"-8"; carbon steel, clevis type.

2) Approved manufacturers include Grinnell Corp., B-line, and Master-Fit.

C) Copper piping, Type M/L

1) ½"-4"; copper-plated steel, bell-type or auto-grip swivel-ring type, as applicable.

2) Approved manufacturers include Grinnell Corp., B-line, and Master-Fit.

D) Spacing: 1/2"-3/4", 4' minimum; 1"-2", 6' minimum; 2-1/2"-4", 8' minimum; all types.

E) Hanger rods: Grade #5 steel, plated or non-plated (requires painting per Division 9); sized as dictated by hanger opening/specification.

F) Provide locking heavy hex nuts at all hangers at both ends of hanger and at rod meeting to structure. Provide washer at structure. Lock accordingly when piping support positioning is finalized during installation of piping.

G) Install drop-in or wedge-type anchors for attachment to concrete structures as required by the work per manufacturer's specific instructions and ratings per duty encountered. Approved manufacturers/models include Molly Inc. and Redhead.

H) Submittals: Provide product submittals for elements described in this section, including rated loads and tolerances, with intended installation application.

-End of section-

15190: MECHANICAL IDENTIFICATION

A) All piping shall be labeled with manufactured labeling system markers denoting duty, function, and flow direction, and shall appear a maximum of every six feet (6') of linear pipe.

B) Labels shall be factory-fabricated, flexible, semi-rigid plastic.

C) Color coding of label shall conform to ASME A13.1.

D) Acceptable manufacturers include Seton Nameplate and Brady Signmark.

E) Services marked shall include but are not limited to the following:

1) Fuel Oil Supply
2) Fuel Oil Return

F) Perform installation of identification as a finish item, following insulation of all heating and domestic piping and painting of all other piping, as specified within this document.

G) Clean surfaces as necessary prior to installation.

H) Submittals: Provide manufacturer's cuts for all products required by this section.

-End of section-

15260: PIPING INSULATION

A) New piping insulation shall be furnished on outside fuel oil supply and return piping.

B) Insulation shall be installed only by companies specializing in this work for a minimum of five (5) years.

C) Insulation shall be of rigid molded fiberglass, with aluminum metallic jacketing and fittings. All fittings shall be insulated with lap and aluminum molded fitting coverings. Joints shall be vapor-sealed with lap adhesive.

D) Insulation thickness schedule shall conform to the following:

Fuel oil piping: All sizes: 2"

E) Scope of work includes fuel oil piping from AST to facilty exterior.

F) Maximum service temperature of insulation should be 800F or greater. Maximum service temperature of plastic fittings should be 150F or greater.

G) Acceptable insulation manufacturers include Owens Corning, Johns Manville, and Schuller. Acceptable lap adhesive manufacturers include 3M, Armstrong, and Arrow Adhesives Co. Acceptable fittings manufacturers include Zeston, Johns Manville, and Schuller.

H) Do not insulate any piping until all pressure tests and inspections are made by concerned parties with regard to the piping system.

I) Submittals: Provide manufacturer's cuts for all products required by this section.

-End of section-

15480: FUEL OIL PIPING

A) Fuel piping shall be sch. #40 steel piping, ¾" NPT, or jointless Type 'L' copper soft tubing, ¾" I.D. nominal, with all outdoor piping being ¾" steel.

B) All fuel piping shall be installed as detailed, per applicable code requirements, and as per fuel oil pump and burner manufacturer's literature.

C) New fuel oil piping shall be installed from each tank inlet/outlet through the equipment room wall, to the new fuel oil transfer pumps assembly supply and return points of connection.

D) Install fuel oil piping per applicable codes. Include fusomatic safety valve at each fuel oil tank and at the supply line connection to the pump equipment. Do not install manual shutoff valves at fuel oil return.

E) All piping shall be supported per applicable codes, and be installed as detailed on drawings and in a neat and workmanlike manner.

F) Provide fuel oil specialties as specified in Section 15481 and 15482 of this document.

G) Air-test all piping to 50 psi for a period of not less than two (2) hours. Inspect all joints and connections and verify that all piping is leak-free. Coordinate inspections accordingly as required by the building official.

H) No fuel oil piping shall be buried.

I) Fuel oil piping to serve Boiler Room 'A' shall be installed either through the building at/in the area ceiling location or through the existing crawlspace upon piping entrance to the building.

J) Fuel oil piping to serve Boiler Room 'B' shall be installed through the building at/in the area drop ceiling location.

K) The intention of this installation is to conceal piping where traversing from the tank to the equipment room; avoid open and exposed piping runs. Provide finishes and mechanical identification for piping in ceiling spaces. Adhere to penetration and firestopping standards as required by this document.

L) Submittals: Provide manufacturer's cuts for all products required by this section.

-End of section-

15481: FUEL OIL SPECIALTIES

A) Fusomatic safety shutoff valve, ¾", installed at equipment fuel inlet and at tank fuel outlet (supply piping ONLY).

B) Tank isolation valve; full-ported ball-type, stamped and rated for service utilized; installed at tank outlet/equipment supply line at tank exit. Isolation valve shall be installed at equipment supply ONLY and NOT at equipment return piping.

C) Supply/return check vales; bronze-bodied, Teflon-seated; stamped and rated for service utilized; installed at tank supply/return inlet/outlet.

D) Pressure/vacuum gauge, 30" Hg-0-30 psi, 2-1/2" face, ¼" L, liquid-filled, stainless steel case and internals, with isolation valve as specified; installed at equipment fuel inlet(s).

E) Fuel oil safety valve (OSV), ½" threaded ends, 60 psi maximum inlet pressure; Webster OSV or equivalent, installed as indicated on drawings.

F) Fuel oil tank inventory gauge, cast aluminum body, stainless steel gears and hardware, Kevlar string and float design; OPW # 200TG or equivalent.

G) Anti-siphon valve, anodized aluminum with stainless steel spring and nitrile seal; OPW # 199ASV-1100.

H) Fuel oil transfer pumps' duplex inlet strainer; 1-1/2" NPT piping size, ASTM A126 Gr. B ANSI class 125 cast iron body, 200 psi rated pressure, #100 mesh stainless steel straining basket; equivalent to TITAN BS-CI BS25l0150.

I) Submittals: Provide manufacturer's cuts for all products required by this section.

-End of section-

15490: FUEL OIL TRANSFER PUMPSETS

A) This section includes technical specifications to be applied to each boiler room [Rm. 'A' and 'B'; for total quantities of two (2)].

B) Provide a duplex fuel oil transfer pump and straining set that is assembled with components piped and mounted on a continuously welded steel plate containment basin with minimum one-inch (1") steel side rails. Provide a containment basin plugged drain connection. The basin shall be sized to contain (capture) potential leaks from all factory installed piping and components. Pipe shall be schedule #40 ASTM A-53 Grade "A" with ANSI B16.3 Class 150 malleable iron threaded fittings.

C) Assembly shall contain two (2) positive displacement rotary-type pumps with cast iron housing and self-adjusting mechanical seals.

D) Assembly shall contain two (2) open drip proof, rigid base, standard NEMA frame motors. Pump and motor assemblies shall be factory assembled on a structural steel channel. Rotating parts shall have a steel OSHA guard.

E) Assembly shall contain one (1) duplex strainer with #100 mesh baskets, located on the suction side of the pumps.

F) Assembly shall contain two (2) pump isolation valves, located on the suction side of each pump. Isolation valves must allow off-line pump maintenance without system loss of availability. Isolation valves shall be ball type valves to provide full flow while open and positive shutoff when closed. Additionally, two (2) check valves shall be provided and mounted, one (1) located on the discharge of each pump. Isolation valves shall be provided to facilitate strainer maintenance.

G) Assembly shall contain a compound gauge on the suction side of the strainers, 30" Hg-0-15 psig, glycerin liquid-filled, stainless steel internals, stainless steel case, 2" dial, ¼" NPT male lower tapping.

H) Assembly shall contain a gauge on the discharge side of the pumps, 30 psig, glycerin liquid-filled, stainless steel internals, stainless steel case, 2" dial, ¼" NPT male lower tapping.

I) Each gauge shall be equipped with an isolation ball valve as specified.

J) Provide a completely pre-wired and tested control cabinet to ensure job site reliability. The control cabinet shall be constructed to NEMA 12/13 standards. Doors shall be fully gasketed with turned edges, piano hinges, and a three point lockable latching mechanism. Cabinet interior shall be primed and finished in a gloss, chemical resistant enamel. Cabinet exterior shall be primed and finished in durable, chemical resistant, textured enamel, suitable for industrial environments. All control wiring shall be terminated at a numbered terminal strip to facilitate field

connections to remote equipment. All switches shall have maintained contacts. All cabinet front devices shall be identified as specified in section 15190.

1) Cabinet shall consist of, but not be limited to, the following:

a) Magnetic motor starters with overload protection

b) Motor circuit breakers

c) "Hand-off-Auto" switch for each pump

d) Pump Selector Switch for selection of Lead Pump

e) Power on indicating light

f) Pump running indicating lights

2) The control cabinet shall be manufactured and labeled in accordance with UL508A.

K) Pumpsets must be fully tested prior to shipment. Following a pressure and vacuum test the pump set shall be given a full operational test. The pump set shall be connected to a fuel oil supply and return and operated normally. Motor amps shall be noted at no load and full load for each motor. The motor amps shall be within 10% of rated motor amps. Operation of pump set instrumentation shall be tested.

L) Fuel Oil Transfer Pump and Straining Set shall be Preferred Utilities Mfg. Corp. Model SATPS-10-120-50-D, or approved equal; quantity = 2.

M) The assembly shall contain a pressure switch located at the discharge pumpset common piping that will signal the EMS upon pump failure. Set the switch to activate upon a loop pressure of less than 2 psi. Switch must be approved for use with fuel oil. Provide one (1) Mercoid pressure switch DA-3-153-1, or approved equal.

N) Installation

1) Installation of the pumpset assembly shall be in accordance with manufacturer's instructions and the standards of this document.

2) Installation shall include all devices, components, piping, wiring, and incidental items required to render a complete and working assembly.

3) Installation shall include repairs and renovation of the existing assembly concrete base, in accordance with Section 03010.

4) Location and placement of the assembly shall be as existing, and square to facility construction.

O) Submittals: Provide submittal data of all products in this section, including wiring diagrams and component arrangement schematic, and testing/commissioning procedures and reports.

-End of section-

15510: EXISTING UNDERGROUND FUEL OIL STORAGE TANKS ABATEMENT PROCEDURE

A) This Section outlines specific procedures for abatement of each of the existing underground fuel oil storage tanks (UST's). Nothing in this Section shall be construed or interpreted to supersede any provision of applicable code or regulation of the State of Connecticut, Regional School District #20, or the authority of the local fire marshal. Perform all procedures and methods for abatement in accordance with current regulations, codes, and ordinances of these jurisdictional authorities. The submitting Contractor shall provide itemized pricing for this section, as noted on the Proposal Form. The Owner recognizes that the existing UST's must be abated or removed within twelve (12) months from the date of which it is removed from service. If the Owner elects to perform this work later, the existing UST shall be emptied/pumped free of all product.

B) Observe OSHA regulations for excavation, confined space procedures, worker safety, and other procedures to be performed as part of performance of the work of this Section.

C) The existing 10,000-gallon fiberglass UST's shall be abandoned in place and abated. Each abatement procedure shall include the following:

1) Pump-out of the existing UST inventory, including the following:

a) Remove entire inventory of the UST

b) Exclude any sludge; sludge to be removed by tank cleaning processes outlined in this Section

2) Excavate a minimum five-foot diameter (5') area exposing the top of the tank (manway), located in the grass area over the tank.

3) Open tank manway, or cut an opening in the top of tank a minimum of three feet (3') in diameter.

4) Perform State of Connecticut-certified UST cleaning procedure; only a firm currently certified for such work may perform cleaning of the UST. Container and legally remove and dispose of sludge and cleaning by-products.

5) Perform soil sampling following conclusion of tank cleaning. Soil sampling shall be performed in accordance with applicable regulations, and laboratory analysis shall be performed by firms certified by the State of Connecticut Department of Health. Perform TPH analysis for a minimum of eight (8) samples; take samples from the following locations:

a) One sample from beneath each longitudinal end of the tank (2)

b) One sample from beneath the center of the tank (1)

c) One sample from the left centerline of the tank (1)

d) One sample from the right centerline of the tank (1)

e) One sample from the top of the tank, within three linear feet (3') of the tank fill piping, approximately three feet (3') depth (1)

6) Soil sample results in excess of TPH mandated limits shall institute contamination procedures as additional work to this project. Submitting Contractors shall note proposal form line items for additional work.

7) Assuming negative TPH analyses, the Contractor shall fill the UST with inert sand. Fill the UST with sand to nearly 80 percent of its capacity and fill the remaining capacity using a free-flowing concrete slurry. Assure that the UST is completely filled; provide additional openings to facilitate filling as part of this project.

8) Notify the Owner's representative, the State of Connecticut Department of Energy And Environmental Protection (in conformance with their notice requirements), the local inspection official, and the local fire marshal of schedule of abatement procedure. Arrange for inspections as required for conformance with jurisdictional authorities.

9) Upon successful completion of abatement, provide proper disposition notification of the UST to the State of Connecticut Department of Energy And Environmental Protection, per Connecticut Regulations of State Agencies (CRSA) requirements. The Contractor shall file copies of all disposition forms with the local fire marshal and Regional School District #20.

D) Submittals: Provide laboratory firm information and testing forms. Provide DEEP tank disposition notification forms and contact. Include schedule of activity detail and any required interruptions in facility operations or parking.

-End of section-

15511: EXISTING UNDERGROUND FUEL OIL STORAGE TANK REMOVAL PROCEDURE

A) This Section outlines specific procedures for removal of the existing underground fuel oil storage tanks (UST's) if necessary, as prescribed by the presence of contamination or other regulation or requirement. Nothing in this Section shall be construed or interpreted to supersede any provision of applicable code or regulation of the State of Connecticut, Regional School District #20, or the authority of the local fire marshal. Perform all procedures and methods for removal in accordance with current regulations, codes, and ordinances of these jurisdictional authorities. The submitting Contractor shall provide pricing for this section separate from the tank installation work, as noted on the Proposal Form.

B) Observe OSHA regulations for excavation, confined space procedures, worker safety, and other procedures to be performed as part of performance of the work of this Section.

C) Each tank removal procedure shall include the following:

1) Pump-out of the existing UST inventory, including the following:

a) Remove entire inventory of the UST

b) Exclude any sludge; sludge to be removed by tank cleaning processes outlined in this Section

2) Excavate a minimum five-foot diameter (5') area exposing the top of the tank (manway), located in the grass area over the tank, adjacent to the existing emergency generator facility enclosure.

3) Open tank manway, or cut an opening in the top of tank a minimum of three feet (3') in diameter.

4) Perform State of Connecticut-certified UST cleaning procedure; only a firm currently certified for such work may perform cleaning of the UST. Container and legally remove and dispose of sludge and cleaning by-products.

5) Perform soil sampling following conclusion of tank cleaning. Soil sampling shall be performed in accordance with applicable regulations, and laboratory analysis shall be performed by firms certified by the State of Connecticut Department of Health. Perform
TPH analysis for a minimum of eight (8) samples; take samples from the following locations:

a) One sample from beneath each longitudinal end of the tank (2)

b) One sample from beneath the center of the tank (1)

c) One sample from the left centerline of the tank (1)

d) One sample from the right centerline of the tank (1)

e) One sample from the top of the tank, within three linear feet (3') of the tank fill piping, approximately three feet (3') depth (1)

6) Soil sample results in excess of TPH mandated limits shall institute contamination procedures as additional work to this project. Submitting Contractors shall note proposal form line items for additional work.

7) Assuming negative TPH analyses, the Contractor shall excavate and remove the UST. The Contractor shall be responsible for OSHA compliance with respect to tank grave-hole standards, as well as the secure excavation of the tank with respect to surrounding equipment and foundations/bases.

8) Notify the Owner's representative, the local inspection official, and the local fire marshal of schedule of the removal procedure. Arrange for inspections as required for conformance with jurisdictional authorities.

9) Upon successful completion of removal, provide clean and compacted fill of the tank site; provide proper disposition notification of the UST to the State of Connecticut Department of Environmental Protection, per Connecticut Regulations of State Agencies (CRSA) requirements. The Contractor shall file copies of all disposition forms with the local fire marshal and Regional School District #20.

10) Repair all ground areas to original conditions, including grass, stonework, sidewalk, and asphalted areas.

D) Submittals: Provide laboratory firm information and testing forms. Provide DEEP tank disposition notification forms and contact. Include schedule of activity detail and any required interruptions in facility operations or parking.

-End of section-

15520: INSTALLATION OF NEW ABOVE-GROUND FUEL OIL STORAGE TANKS

A) New, 5,000-gallon above-ground fuel oil storage tanks (AST's) shall be furnished and installed as part of this project.

B) Each tank shall conform to the following material specification:

1) The tank shall be of secondary containment design. The tank shall be designed, constructed, and listed in accordance with Underwriters Laboratories, Inc. Standard UL 142. The tank shall meet requirements for atmospheric tanks of the National Fire Protection Association Sections 30, 30A, 31 and The Uniform Fire Code Article 79.

2) The tank shall be designed and UL listed as an atmospheric tank with a maximum working pressure of 1 PSI. The primary tank and the secondary containment tank shall have passed a proof of design hydrostatic pressure test of 25 PSI.

3) The tank shall be equipped with six (6) NPT openings, and include an emergency vent tapping. The emergency vent shall be sized per NFPA & UL 142 requirements. Tappings shall include watertight PVC plug installation for shipping safeguard.

4) The tank shall incorporate an additional two (2) NPT openings, for monitoring the interstitial space and a containment emergency vent. The emergency vent shall be sized per NFPA & UL 142 requirements. Tappings shall include watertight PVC plug installation for shipping safeguard.

5) All openings will be located at the top of the tank. The tank shall be equipped with a minimum two (2) lifting lugs.

6) The tank shall include a one (1)-year limited warranty.

7) The tank shall be provided with a minimum of four (4) anchoring feet.

8) The primary storage tank shall be cylindrical in design. The primary tank shall be constructed of UL 142 specified steel thickness, with continuous welds. The primary storage tank shall be constructed of ASTM A-569 or A-36 carbon steel, as required for compatibility of product being stored.

9) The primary tank shall be fitted with the following tappings:

a) One (1) 2" fill port

b) One (1) 2" normal vent port

c) One (1) 6" emergency vent port

d) One (1) 2" liquid gauging port

e) Two (2) 2" spare ports

10) The secondary containment tank shall be cylindrical in design and constructed of UL 142 specified steel thickness, with continuous welds. The secondary containment tank shall be listed by Underwriters Laboratories as secondary containment under UL 142 standard.

11) The secondary containment tank shall provide a minimum of 110% secondary containment.

12) The secondary containment tank shall be equipped with a 2" monitoring port and a 6" emergency vent port as required by Underwriters Laboratories, Inc.

13) The exterior surface of the secondary tank shall be cleansed of foreign material and coated with a corrosion resistant industrial paint (3 to 5 mils dry film thickness) at the manufacturer's factory. The total coating dry thickness shall be a minimum of 1/8 inch. All threaded openings and flanges shall be protected during the coating process. The coating shall be applied only when the work area and the secondary steel tank are between the temperatures of 60 and 103 degrees F.

14) The tank color shall be White, or as consented by the Owner's representative.

15) The tank manufacturer shall provide proof (upon request) of a minimum 10 years of experience manufacturing UL 142-listed rectangular tanks.

16) The tank shall be engineered and certified to pass a strict 2-hour, 2,000-degree Fahrenheit fire test under Southwest Research Institute standard SwRI97-04.

17) Acceptable products include 5,000-gallon FlameShield, as manufactured by Highland Tank, Inc.; or approved equivalent. Nominal tank dimensions shall be 96" diameter x 160" length.

C) Installation

1) The tank shall be tested at the jobsite by the installing Contractor. Testing shall take place upon arrival to the site, while still on the delivery truck, for a period of not less than one (1) hour, and after the tank has been finally placed at its operating location, before any product is introduced into the tank.

2) The tank shall be tested to the following procedure:

a) Install tapping plugs with soft-setting pipe dope sealant.

b) The inner tank should be pressurized with air to a maximum of 3 psig. Use a gauge with a 0 to 15 psig dial span. Set pressure relief valve in test air supply line at 3 psig.

c) Then the outer tank should be pressurized to a maximum of 2 psig. Use a gauge with a 0 to 15 psig dial span. Set pressure relief valve in test air supply line at 2 psig.

d) While the tank is holding pressure, apply a soap solution on the weld seams and inspect entire vessel for leakage.

e) Do not leave pressurized tank unattended. Do not stand in front of tank heads or fittings when pressurizing tank.

f) Do not apply air pressure to the interstitial space between the walls of the double wall tank without air pressure first in the primary tank. Do not apply air pressure to the interstitial space that is higher than the air pressure in the primary tank.

3) Handle tank carefully. Use cables or chains of adequate length (not more than 90 degrees between the chains) attached to lifting lugs provided. Use proper lift attachments/shackles. Do not use oversize hooks of lift the tank other than by the lifting lugs provided and as directed by the manufacturer's instructions for rigging.

4) Tank locations shall be as follows:

a) The fuel oil tank to serve Boiler Room 'A' shall be located at/near the existing 'A' UST site. Tank shall be located a minimum of five feet (5') from the facility exterior in all directions, and a minimum of fifteen feet (15') from any electrical components (notably existing site transformer and electrical). The fuel oil tank shall be located adjacent-left to the existing facility overhead door, and shall not encroach upon the door entrance driveway when enclosed.

b) The fuel oil tank to serve Boiler Room 'B' shall be located at the rear of the facility, adjacent-left to the Agricultural Science and Technology wing entrance doors, within the existing fenced area and within the corner-building space of the building architecture. Tank shall be located a minimum of five feet (5') from the facility exterior in all directions.

5) For each tank, furnish and install the primary tank fill pipe inlet. Provide a two-inch (2') NPT twelve-inch (12") length pipe nipple with locking fill cap, equivalent to Flow Security Systems Inc., 2" NPT Female threaded end, brass/bronze construction with lockable latch/hinge. Use soft-setting pipe dope sealant appropriate for use with fuel oil.

6) For each tank, furnish and install the primary tank vent pipe outlet. Provide a two-inch (2') NPT twelve-inch (12") length pipe nipple with vent cap, equivalent to Morrison Bros. Co., 2", mushroom with screen, galvanized steel construction. Furnish and install audible Scully 'Ventalarm', 2", a vent outlet piping base to tank. Use soft-setting pipe dope sealant appropriate for use with fuel oil.

7) For each tank, furnish and install the primary tank 6" emergency vent as supplied with the tank from the manufacturer. Use soft-setting pipe dope sealant appropriate for use with fuel oil. Vent shall be equivalent to Morrison Bros. Co., 6" male NPT, 8 oz/in^2 opening pressure, cast iron painted cover, brass seal, aluminum body.

8) For each tank, furnish and install the secondary tank 6" emergency vent as supplied with the tank from the manufacturer. Use soft-setting pipe dope sealant appropriate for use with fuel oil. Vent shall be equivalent to Morrison Bros. Co., 6" male NPT, 8 oz/in^2 opening pressure, cast iron painted cover, brass seal, aluminum body.

9) For each tank, furnish and install NPT plugs in any unused tappings. Use soft-setting pipe dope sealant appropriate for use with fuel oil.

10) For each tank, apply finishes to any non-coated piping, tappings, or devices per Section 09010.

D) Requirements of this Section do not alleviate the installer from insuring that the entire installation is provided in strict accordance with NFPA 30, NFPA 30A and/or NFPA 31 codes, in addition to other jurisdictional applicable state and local codes, regulations, and ordinances.

E) Tank installation shall include installation of access stairs at each tank to facilitate delivery of product, gauge viewing, and inspection of tank components. Stairs shall be OSHA-listed units and purchased as an accessory to the fuel oil storage tank unit.

F) Submittals: Provide equipment cuts, manufacturer's drawings, and installation instructions for all products in this section. Provide detailed delivery and rigging plans. Include schedule of delivery and any required interruptions in facility operations or parking.

-End of section-

15920: AESTHETIC FENCING

A) This project includes the installation of fencing at the tank location for concealment, security, and general aesthetics.

B) Install fencing as a tank enclosure surround, allowing for 24" inspection space around the tank and for adequate space for gate operation and stair access for filling. Fencing may be three-sided to the exterior of the existing facility.

C) The base metal of the fencing fabric shall be of good commercial quality steel wire minimum #12 gauge. The zinc coating of the fabric shall be minimum .30 oz./sq. ft. of uncoated wire surface. The weight of zinc coating on the fabric shall be determined in accordance with ASTM A-90. Wire shall be coated with a minimum of 7 mils of poly-vinyl chloride permanently bonded to the galvanized wire by the thermal fusion bonded method. Chain link fabric shall conform to the requirements of ASTM F-668, class 2b. Fence fabric shall have a minimum breaking strength of 1,290 pounds. Fabric shall be woven in a 2" mesh and both selvages shall be knuckled. Fence fabric height shall be 72".

D) Fence framework members shall be 2" round tube steel, 3.07 lbs./lin. ft. Framework weight of zinc coating shall be 2.0-oz./sq. ft. Posts shall have moisture proof post caps with acorn type design. Posts shall be coated with 10 to 15 mils of PVC. Posts shall have pre-formed or fitted feet for bolting/anchoring mount.

E) End, gate, and corner posts shall be 2-½" square tube steel weighing at least 3.98 pounds per lineal foot and shall have a 2.0 oz. /sq. ft. zinc coating minimum and shall have moisture proof post caps with acorn type design. Posts shall be coated with 10 to 15 mils of PVC. Posts shall have pre-formed or fitted feet for bolting/anchoring mount.

F) Tension wire shall be 7-gauge coil spring wire located at top and bottom of fabric, and shall be PVC coated to match the fabric. Top wire shall pass through the barb arm on the line post.

G) All fence and gate fittings shall be galvanized malleable cast iron or pressed steel and shall be coated with 10 to 15 mils of PVC. Fabric shall be secured to all terminal posts with 5/16" Hook bolts, specifically designed for that purpose, painted to match the color of the posts and fabric. Fabric shall be secured to all top and/or bottom tension wires with 9 gauge vinyl coated aluminum hog rings.

H) Gate shall be of the swing type and fabricated from 2" square aluminum tubing with welded corners. Fabric shall be fastened to the frame on all four sides by means of "J" bolts and 5/16" tension rods and as recommended by the fence manufacturer. All gate frames shall be coated with 10 to 15 mils of PVC and mounting hardware shall be painted to match the fence fabric and framework. Gate equipment shall include gate stop and a through frame, fulcrum latch padlocking device, furnished as standard equipment by the fencing manufacturer.

I) Provide evergreen lattice for masking the fence and for rendering a finished hedge appearance. Lattice should be maintenance-free and manufactured of uniform plastic material. Acceptable products include For-Evergreen or approved equivalent.

J) Fence fabric, posts, and construction shall be Forest Green color.

K) Installation

1) Fence shall be erected by skilled mechanics in accordance with best working practices, and in accordance with the recommendations of the Chain Link Fence Manufacturers" Institute and ASTM F-567. All fencing and fence members shall be plumb, level, and square to features of existing construction.

2) Stretch top tension wire through loop caps and fasten to terminal posts. Stretch bottom tension wire between terminal posts 6" above grade and fasten to outside of line posts with tie wires.

3) Pull fabric taut with bottom selvage 2" above grade. Fasten to terminal posts with tension bars threaded through mesh and secured with tension bands at maximum 15" intervals. Tie to line posts and top rails with tie wires spaced at maximum 12" on posts and 24" on rails. Attach to bottom tension wire with top rings at maximum 24" intervals.

4) Install gate plumb, level and secure for full opening without interference, and as located on drawings, with lockable hasp.

5) Install nuts for fittings, bands and hardware bolts on inside of fence.

6) Apply evergreen fencing lattice to fence to create a hedge-like appearance. Install evergreen lattice per manufacturer's instructions and in thicknesses and quantities sufficient to mask the fence material and obscure the fuel oil tank from view.

7) The area of installation shall be kept and left free of debris caused by the installation of the fence. Abrasioned PVC or painted surfaces shall be touched up with vinyl paint recommended by the manufacturer.

-End of section-

20010: EQUIPMENT STARTUP AND COMMISSIONING

A) Factory-authorized startup of the existing boilers and commissioning of the new fuel oil transfer pumps are required. This includes the employ of the boiler manufacturer's certified startup agent for initial lightoff of the burners, with subsequent combustion adjustments and certification of correct operation. Printout reporting of final adjustments and efficiency results following electronic flue gas sampling and analysis is required, including draft, flue gas temperature, and O_2/CO_2 content reporting at each firing rate. Five-day notice of the startup date shall be filed with Regional School District #20's representative so that she/he may be in attendance. Final startup procedure shall include (but is not limited to) fuel oil filter replacement, setting unit firing to rated input, low and high fire rate setpoint adjustment, checkout of all controls, limit switches, and lockout devices, pump vacuum and pressure settings adjustment, and gauge calibration/operation, and certification of correct installation/piping of boiler. Final reporting shall include verification of all of the above.

B) Submittals: Provide boiler startup analysis data with closeout O&M manuals as specified. Provide submittals as noted in other Divisions for items reviewed in this section.

-End of section-

20020: SUBSTANTIAL AND FINAL COMPLETION

A) "Substantial Completion" is achieved by the Contractor when all system equipment and components are installed as specified and in accordance with manufacturer's instructions and applicable codes, and operating to full capacity, such that the system may be utilized for its intended purpose (heating of the facility). At achievement of Substantial Completion, remaining items for full project completion are minor in scope and would typically include finish-type work and punch-list items following inspection for contract closeout. Judgment of achievement of Substantial Completion by the Contractor rests solely with the Owner's representative.

B) "Final Completion" is achieved by the Contractor when all elements of the project are complete and no work items remain to be performed. Final Completion includes the performance of all finish and punch-list items.

C) Final Completion includes submission of three (3) bound copies of Operation and Maintenance manuals, additionally including all project records, as-built drawings, equipment reports, and specific instructions and final adjustments/settings of equipment for this project.

D) Final Completion includes execution and closeout/signoff of the construction permit with the local building official.

E) Judgment of achievement of Final Completion by the Contractor rests solely with the Owner's representative.

-End of section-

20030: PROJECT WARRANTY

The installing Contractor shall, at his own expense, warrant all materials and workmanship included in this project for a period of one (1) year from the date of completed installation. Such warranty shall include 24-hr., 7-day service to any equipment reported problematic by the Owner's representative, within a 4-hour response time window. Continued problems with warranty service or proper equipment operation, at the Owner's discretion, permit the Owner to seek resolution from other Contractors or service agents. Cost of any such service will be borne by the installing Contractor. This warranty in no way excludes any additional manufacturers' warranties as required in these documents or otherwise in effect through the manufacturer.

-End of section-

20040: PROJECT CLOSEOUT

A) Achieve project Final Completion as defined in Section 20020 of this document.

B) Provide an instructional seminar for facility staff and designated personnel of the Owner to review the project installation, and discuss maintenance and operation of all new equipment. Schedule this seminar at the convenience of the Owner at the conclusion of the project, following completion of all items of the Work. Field questions of personnel and arrange for any necessary presence of personnel of the various products manufacturers/agents to conduct proper training/operating instruction of the project equipment. Allow for four (4) hours of time for this closeout seminar. Provide training in shifts if required to accommodate the Owner's schedule, up to the four hour seminar time cumulative limit. Reference approved copies of the Operation and Maintenance Manuals prepared/submitted for this project.

C) Demonstrate that all equipment is fully operational. Display final adjustments/settings of equipment. Review all written startup commissioning of equipment data and with the Owner's representative at the final job meeting.

D) Provide final cleaning to the equipment and equipment room. Wash equipment surfaces and remove dirt/debris. Remove all construction tools and elements of construction from the equipment room. Wash/clean the equipment room floor and stairs.

E) Submit written certification of warranty of the project, specifying that all elements of the project are covered under the warranty requirements of this document for the specified period, and include any manufacturer's warranty certificates requiring submission by the Owner. Provide this certification with the submitted Operations and Maintenance manual.

-End of section-

APPENDIX A:

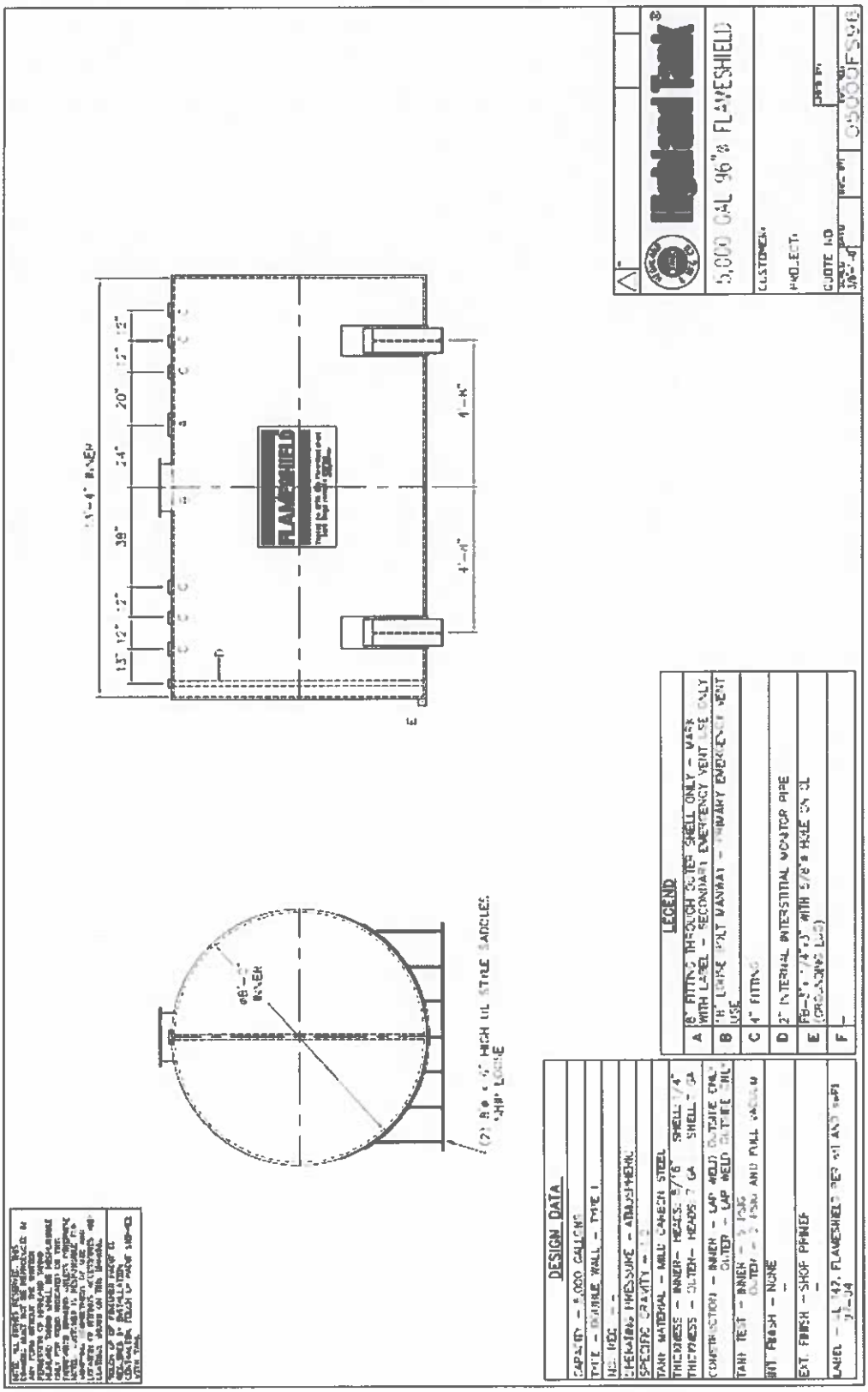
Insurance Requirements

The successful Submitting Contractor and his subcontractors shall maintain insurance in the following amounts for the duration of this project, and submit proof of insurance prior to the start of any work:

1) Worker's compensation insurance for all employees
2) Comprehensive general liability insurance (bodily injury: $1,000,000.00 each person; $1,000,000.00 each occurrence; property damage: $1,000,000.00 each person; $1,000,000.00 each occurrence); additional liability umbrella coverage of $1,000,000.00
3) Comprehensive automobile liability insurance ($1,000,000.00 each person; $1,000,000.00 each occurrence)
4) Excess liability umbrella coverage: $3,000,000.00
5) Proposal and performance securities as noted on the Request for Proposal

The successful Submitting Contractor and his subcontractors shall name Regional School District #20 as additional insured.

-End of Appendix A-


5,000 GAL 96" ø FLAMESHIELD
DESIGN DATA
LEGEND
FLAMESHIELD



THIS PHOTOGRAPH SHOWS THE LOCATION OF THE NEW AST TO SERVE BOILER ROOM 'A'; OBSERVE CLEARANCE FROM EXISTING ELECTRICAL AND ADJACENT OVERHEAD DOOR AS DETAILED.



THIS PHOTOGRAPH SHOWS THE LOCATION OF THE NEW AST TO SERVE BOILER ROOM 'B'; LOCATE TANK IN FACILITY CORNER AREA; OBSERVE CLEARANCES AS DETAILED.