PROJECT MANUAL

Horseheads Central School District

District Wide Technology Upgrades

SED #: 07-09-01-06-7-999-002

Volume 1

The design of this project conforms to all applicable provisions of the New York State Uniform Fire Prevention and Building Code, the New York State Energy Conservation Code, and the building standards of the New York State Education Department

Horseheads Central School District

January 16, 2018

Issued for Bid 7/10/18

HUNT 1923-029

HUNT

Airport Corporate Park
100 Hunt Center
Horseheads, NY 14845
Telephone (607) 358-1000Fax (607) 358-1800

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ADVERTISEMENT FOR BIDS

NOTICE IS HEREBY GIVEN, that sealed proposals, in DUPLICATE, are sought and request by the **Horseheads CSD (hereinafter called "owner"), for the construction of the following Project:**

1923-029 District Wide Tech

Bids are requested for multiple prime contracts for General Trades Work, HVAC Work, and Electrical Work**.** In accordance with Drawings, Project Manual, and other Bidding and contract Documents prepared by Hunt Engineers, Architects & Land Surveyors, P.C., 100 Hunt Center, Airport Corporate Park, Horseheads, NY 14845.

Sealed bids will be received by the Owner until 2:00 P.M. local time on August 14, 2018 at Horseheads Central School District Business Office, Horseheads Central School District Horseheads, NY 14845, at which time and place all bids will be opened and publicly read aloud.

The Bidding Documents and Forms of Proposals may be examined at the following:

Associated Building Contractors, 15 Belden Street, Binghamton NY 13903

Builder's Exchange of Rochester, 180 Linden Oaks, Suite 100, Rochester, NY 14625-2837

Construction Exchange of Buffalo & Western New York. 2660 Williams Street, Cheektowaga, NY 14227

Syracuse Builders Exchange, 6563 Ridings Rd., Syracuse, NY 13206

Southern Tier Builders Association, 65 E. Main. St., Falconer, NY 14733

McGraw-Hill Construction, 3315 Central Ave, Hot Springs, AR, 71913
http://dodgeprojects.construction.com

Reed Construction Data, Subscribers Only: Documents can be viewed electronically at the subscriber website: www.reedconstructiondata.com <http://www.reedconstructiondata.com>

Hunt Engineers, Architects, Land Surveyors & Landscape Architect, DPC Airport Corporate Park, 100 Hunt Center, Horseheads, NY 14845-1019

Documents are also available for view at <www.godataflow.com>; click on "Find Projects", click on "HUNT Engineers, Architects & Land Surveyors, P.C. <http://www.godataflow.com/lilurl/39>" to view Bid Documents electronically and an up to date Plan Holders list.

A Pre-Bid conference for all Bidders will be held on July 31, 2018 at 1:00 P.M. at the Maintenance Building 507 Fletcher Street Horseheads, NY 14845 for the purpose of considering questions posed by Bidders.

Copies of said documents may be obtained from the Horseheads office of Dataflow, Inc., Airport Corporate Park, 100 Hunt Center, Horseheads, NY 14845, phone (607) 562-2196 , fax (607) 562-3214 , email "Corning@GoDataFlow.com" by bidders upon payment of a deposit of $100 for each complete set and a separate, non-refundable $25 shipping and handling payment for each set. Electronic (pdf) files are also available for a non-refundable payment of $25. All checks for sets of Bidding and Contract Documents shall be made payable to the Horseheads Central School District. All checks for shipping and handling, and PDF sets, shall be made payable to Hunt Engineers, Architects & Land Surveyors, P.C.

All Prime Contract Bidders who have paid the aforesaid deposit for an entire set of Bidding and Contract Documents and have submitted a bid with required bid security; **and return such sets to Dataflow Inc.** Horseheads office in **GOOD CONDITION within thirty (30) calendar days after the award of contract or rejection of bids, shall receive a refund of the full amount of such deposit. Any NON-BIDDER may be refunded his deposit only upon returning plans and specifications PRIOR to the bid opening. Postage and HANDLING are NOT REFUNDABLE.**

All questions prior to bid opening must be received by the close of business on August 7, 2018. Questions shall be directed to Chad Snowburg at Hunt Engineers, Architects, & Land Surveyors, P.C. email snowburgc@hunt-eas.com and Brian McGurgan at Welliver, email bmcgurgan@buildwelliver.com. All bidders request for information shall use the form located in specification 00 12 00 - Pre-Bid Form. A digital copy of this form is available upon request.

As bid security, each Bid shall be accompanied by a certified check or Bid Bond made payable to Owner, in accordance with the amounts and terms described in the INSTRUCTIONS TO BIDDERS.

The Owner requires that all bids shall comply with the bidding requirements specified in the INSTRUCTION TO BIDDERS. The Owner may, at his discretion, may waive informalities in bids, but is not obligated to do so, nor does this represent that he will do so. The Owner also reserves the right to reject any and all bids. Under no circumstances will the Owner waive any informality which, by such waiver, would give one Bidder a substantial advantage or benefit not enjoyed by all other Bidders. No Bidder may withdraw his Bid before forty-five (45) days after the actual date of the opening thereof, unless a mistake due to error is claimed by the Bidder in accordance with INSTRUCTIONS TO BIDDERS.

Attention of Bidders is particularly called to requirements as to conditions of employment to be observed and minimum wage rates to be paid under the Contract.

Dr. Thomas Douglas, Superintendent of Schools

Horseheads Central School District

SECTION 00 12 00

PRE-BID REQUEST FOR INFORMATION

DATE: _____.

CONTRACT: _____.

DRAWING: _____.

SPECIFICATION SECTION: _____.

REQUEST: INCLUDE ATTACHMENTS AS REQUIRED TO CLARIFY QUESTION:

_____.

_____.

_____.

_____.

_____.

_____.

Requested by: _____.
Name / Company Name

ANSWER:

_____.

_____.

_____.

_____.

_____.

By: _____ Date: _____ RFI #: _____.

SECTION 00 21 17

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

THE FOLLOWING SUPPLEMENTS THE "INSTRUCTIONS TO BIDDERS," AIA DOCUMENT A701, 1997. WHERE A PORTION OF THE INSTRUCTION TO BIDDERS IS MODIFIED OR DELETED BY THESE SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, THE UNALTERED PORTIONS OF THE INSTRUCTION TO BIDDERS REMAIN IN EFFECT.

ARTICLE 3 - BIDDING DOCUMENTS

A. 3.5 OR EQUAL CLAUSE

B. 3.5.1 The use of manufacturer's brand names, catalog numbers, and similar proprietary identifying data in the contract documents are not intended to eliminate from consideration products that are equivalent in quality, appearance and function to those specified. Where, in the specifications, certain kinds, types, brands, or manufacturers of materials are named, they shall be regarded as the required standard of quality. Where two or more are named, these are presumed to be equal, and the contractor may select one of those items. If the contractor desires to use any kind, type, brand, or manufacture of material other than those named in the Specification, he shall indicate in the Bid Form, or in writing when requested, prior to award of contract, that kind, type, brand, or manufacture is included in the base and/or alternate bids for the specified item(s). Further, the contractor may be requested to submit information describing in specific detail, wherein the bid material differs from the quality and performance required by the base specifications, and such other information as may be required by the Architect. The risk of acceptance of bid equivalents is the responsibility of the contractor.

ARTICLE 4 - BIDDING PROCEDURES

A. 4.2.4 Bid security shall be in the amount of 5% of the bid amount, cash will not be accepted as bid security. Bid security shall be in one of the following forms:
   a. Bid Bond from a company listed on Treasury Circular 570.
   b. Certified Check.
   c. Bank Check.

B. 4.4. The stipulated time period after the receipt of bids during which bids may not be withdrawn is 45 calendar days. The stipulated time period within which alternates may not be withdrawn by the successful bidder is 120 days after acceptance of the bid.

ARTICLE 6 - POST BID INFORMATION

A. 6.1.1 A copy of Contractor's Qualification Statement - AIA Document A305 is included for reference.

B. 6.3.1.4 If requested by Architect, provide a Schedule of Values broken down by Specification Section for al portions of the work.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

A. 7.1. The successful Bidder shall furnish and maintain a Performance Bond and Labor and Material Bond in the amount of at least 100 percent of the Contract Amount with all premiums therefore paid by the Bidder.

B. 7.1.2 The surety for these bonds shall be a duly authorized surety company satisfactory to the Owner, licensed to do business in the state where the Project is located, and listed in the latest issue of the U.S. Treasury Circular 570.

C. 7.1.3 Attorneys-in-fact who sign bonds must file with each bond a certified copy of their power of attorney to sign the bond.

D. 7.1.4 Bonds shall be prepared on AIA Document A312 - Performance Bond and Labor and Material Payment Bond.

ARTICLE 9 - LAWS AND REGULATIONS

A. 9.1 Laws and Regulations

B. 9.1.1 All applicable laws, ordinances, rules, and regulations of federal, state, and municipal authorities having jurisdiction over this Project shall apply to the Contract throughout, and will be deemed to be included in the Contract as though herein written out in full.

C. 9.1.2 The sections of the New York State Labor Law (LL) and the New York state General Municipal Law (GML) include, but are not necessarily limited to, the following which are listed here for references:
(1) LL S220, subd. 2: Eight-hour day, 40-hour week
(2) LL S220, subd. 3 and LL S220-d: Minimum wage rates and supplements
(3) LL S220-3: Anti-discrimination
(4) LL S222-a: Elimination of dust hazard
(5) GML S103: Equivalencies
(6) PGML S103: Background investigation to determine "responsible bidder"
(7) GML S103-d: Non-collusive bidding certificate
(8) GML S103-b: Payment of contractors and subcontractor
(9) GML S108: Workmen's compensation insurance
(10) GML S109: Non-assignment of public contracts

D. 9.1.3 Other applicable laws, rules, and regulations include, but are not necessarily limited to, the following which are listed here for reference.
(1) Title 29, Code of Federal Regulations, Section 1910.1001. Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.
(2) Title 40, Code of Federal Regulations, Part 61, Subparts A and B National Emission Standards for Hazardous Air Pollutants. U.S. Environmental Protection Agency (EPA).
(3) Industrial Code Rule 56 as issued by the State of New York, Department of Labor, Division of Safety and Health, One Main Street, Brooklyn, New York, 11202.
(4) Title 40 Code of Federal Regulations, Part 763 Asbestos Hazard Emergency Response Act. U.S. Environmental Protection Agency.

ARTICLE 10 - PROJECT AND BID INFORMATION

A. 10.1 Project Title: 1923-029 District Wide Tech

B. 10.2.1 Owner: Horseheads CSD

C. 10.2.2 Owner's Representative: Hunt Engineers, Architects, Land Surveyors & Landscape Architect DPC

D. 10.3.1 Access to the Site: Bidders will be permitted access to the site prior to the scheduled bid opening date at times to be arranged with the Owner's representative.

END OF SECTION

SECTION 00 41 13

FORM OF PROPOSAL

(SUBMIT IN DUPLICATE)

Hunt Engineers, Architects, Land Surveyors & Landscape Architect, DPC

Corporate Airport Park, 100 HUNT Center Horseheads, NY 14845

BID SUBMITTED BY: _____

ADDRESS: _____

PHONE NUMBER: _____

FAX NUMBER: _____

FEDERAL EMPLOYER IDENTIFICATION NUMBER: _____

PROJECT NAME: 1923-029 District Wide Tech

HUNT PROJECT NUMBER: 1923-029

DOCUMENT DATE: July 10, 2018

OWNER: Horseheads CSD

The bidder (identified above) hereby certifies that he has examined and fully understands the requirements and intent of the BIDDING AND CONTRACT DOCUMENTS, including Drawings, Project Manual, and Addenda; and proposes to furnish all labor, materials, and equipment necessary to complete the Work on or before, the dates specified in the Contract Documents for the BASE BID sum of:

CONTRACT #:

(Refer to Section 01 10 00 Summary)

_____

(AMOUNT IN WORDS)

_____

(AMOUNT IN FIGURES)

SHOW AMOUNT OF BASE BID IN BOTH WORDS AND FIGURES; IN CASE OF DISCREPANCY BETWEEN WORDS AND FIGURES SHOWN, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

ADDENDA

THE FOLLOWING ADDENDA HAVE BEEN RECEIVED. THE MODIFICATIONS TO THE BID DOCUMENTS NOTED BELOW HAVE BEEN CONSIDERED AND ALL COSTS ARE INCLUDED IN THE BID AMOUNT.

LIST OF ADDENDA RECEIVED

No.	Date	No.	Date
No.	Date	No.	Date
No.	Date	No.	Date

CONTINGENCY ALLOWANCES

The bidder acknowledges that all Contingency Allowances described in Section 01 20 00 – Price and Payment Procedures that are assigned to this work contract ARE INCLUDED in the Bid Amount.

ALTERNATES

Indicate in the spaces provided below the amount to be added to the BASE BID if the following ALTERNATES as described in SECTION 01 20 00 of the Project Manual are accepted by the Owner.

Include in the amount of the ALTERNATES, all labor, materials, overhead and profit, modification of work specified in Contract Documents, and additional work required under your scope of work that may be required by acceptance of the ALTERNATE.

Include a bid amount for all ALTERNATES with work applicable under your scope of work.

Refer to INSTRUCTIONS TO BIDDERS and SECTION 01 20 00 for additional information regarding ALTERNATES.

LIST OF ALTERNATES:

ALTERNATE ALT #1: Smartboard and Markerboard Installation

Deduct

_____

(Amount in Words)

_____

(Amount in Figures)

ALTERNATE ALT #2: Smartboard and Markerboard Installation

Select One: Add

_____

(Amount in Words)

_____

(Amount in Figures)

ALTERNATE ALT #3:Smartboard and Markerboard Installation

Select One: Add

_____

(Amount in Words)

_____

(Amount in Figures)

UNIT PRICES

The following are UNIT PRICES for specific portions of the work listed. Include in the amount of the UNIT PRICES, all labor, material, products, tools, equipment, plant and facilities, transportation, services and incidentals, erection, application or installation of the item of work; overhead and profit.

The amount indicated on the BID FORM is for contract purposes only if additional work is required under a specific UNIT PRICE.

Include a price for all UNIT PRICES for work under your scope of work. Refer to SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES of the Project Manual for additional information regarding UNIT PRICES.

List of Unit Prices:

UNIT PRICE NO. (1): Asbestos Abatement of Pipe and Mudded Joint Packing Insulation

_____

(Amount in Words)

_____

(Amount in Figures)

UNIT PRICE NO. (2): Asbestos Abatement Floor Tile and Mastic

_____

(Amount in Words)

_____

(Amount in Figures)

UNIT PRICE NO. (3): Asbestos Abatement Containment Area

_____

(Amount in Words)

_____

(Amount in Figures)

UNIT PRICE NO. (4): Asbestos Abatement Decontamination System Enclosure

_____

(Amount in Words)

_____

(Amount in Figures)

UNIT PRICE NO. (5): Asbestos Abatement Black Caulk Removal

_____

(Amount in Words)

(Amount in Figures)

EXECUTION OF CONTRACT

If written notice of the acceptance of this BID is mailed, telegraphed, or otherwise delivered to the undersigned within (45) days after the date of opening of the Bids, the undersigned will, within ten (10) days after the date of such delivery, execute and deliver a contract in the form as required by the Architect.

The BID may be withdrawn at any time prior to the scheduled time for the opening of Bids, or any authorized postponement thereof.

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the state finance law.

SIGNATURE_____

NAME OF BIDDER (Corporate Name)_____

( )

( ) SIGNATURE OF CORPORATE OFFICER_____

( )

( )

( )

( )

( ) DATE_____

Signature: _____

Name of Bidder:_____

END OF SECTION

SECTION 00 41 14

NON-COLLUSIVE BIDDING CERTIFICATION

(MUST BE SUBMITTED WITH BID)

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief.

A. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or any competitor;

B. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor;

C. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition;

D. The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing on its behalf;

E. That attached hereto (if a corporate bidder) is a certified copy of a resolution authorizing the execution of this certification by the signature of this bid or proposal in behalf of the corporate bidder.

A bid shall not be considered for award nor shall any award be made where A, B, and C above have not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where A, B, and C above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency, or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition. The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of Paragraph 1.1.

Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work or services performed to be performed or goods sold to or to be sold, where competitive bidding is required by the statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of the section, shall be deemed to have been authorized by the Board of Directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certification as to non-collusion as the act and deed of the corporation.

INDIVIDUAL_____

CORPORATION_____
_

Dated:_____
By:_____

(Signature of Officer)

END OF SECTION

SECTION 00 41 15

CORPORATE RESOLUTION

Resolve that _____

Name of Individual

Be authorized to sign and submit the bid or proposal of:

_____

Name of Corporation

For the following project: 1923-029 District Wide Tech

CONTRACT FOR:_____

List Contract Type

The foregoing is a true and correct copy of the resolution by:

_____

_

Name of Corporation

At a meeting of it's Board of Directors held on:_____

Date

_____

Secretary

Seal of the Corporation

SECTION 00 41 16

FEDERAL AND STATE CERTIFICATION

INTRODUCTION:

An amendment to the General Municipal Law adds a new mandate in the conduct of public bidding. A new law (Subdivision 1-c of General Municipal Law § 103) requires the Board of Education to consider whether the putative low bidder or any substantially owned affiliated entity of the putative low bidder has been found to be in violation of any of three federal laws, specifically, the Davis-Bacon Act, the federal prevailing wage statute, the Copeland Act and the Contract Hours and Safety Standards Act which covers hours of work and safety standards in federal public contracting. If the putative low bidder is not in compliance with the named federal laws, then the District may not award the contract.

I, _____the _____of_____
(Name) (Title) (Company)

swear of affirm that the following is true:

1. The company, its principles or entities related to the company named above, is not now, nor ever has been, debarred from contracting with the United States Government or any State government.

2. The company is not now under investigation by any agency of the Federal Government or the government of any State for any actions by the company, its principles or any related entity, for any alleged malfeasance or misfeasance of any kind or nature which could lead to a debarment from governmental contracting or criminal prosecution, as well as render any contracts signed in reliance on this certification voidable by the party relying on this certification.

3. I have full legal authority under my company's organizational documents or bylaws to make this certification on the company's behalf.

4. I understand that submission of a false statement on this document will subject me to criminal prosecution

Dated: _____ _____
Signature

END OF SECTION

SECTION 00 44 00

EQUIVALENT LISTING

PRIME CONTRACT: .

SUBMITTED BY 3 LOW BIDDERS WITHIN 72 HOURS AFTER BID OPENING

In accordance with Article 4 and Article 7 of Instructions to Bidders, list proposed equivalents and corresponding specified products below. Complete and submit additional copies of this form as necessary for additional products.

Attach additional sheet identifying any aspect of the Contract Documents that cannot be complied with by the manufacturer or supplier of the proposed equivalent product.

Specified Product	Equivalent Product
Technical Section:_____	Manufacturer:_____
Specified Product:_____	Designation:_____
Technical Section:_____	Manufacturer:_____
Specified Product:_____	Designation:_____
Technical Section:_____	Manufacturer:_____
Specified Product:_____	Designation:_____
Technical Section:_____	Manufacturer:_____
Specified Product:_____	Designation:_____
Technical Section:_____	Manufacturer:_____
Specified Section:_____	Designation:_____
Technical Section:_____	Manufacturer:_____

END OF SECTION

SECTION 01 10 00
SUMMARY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

A. Project Identification

B. Work covered by Contract Documents

C. Work Sequence

D. Contractor use of Premises

E. Occupancy Requirements

1.3 RELATED SECTIONS

A. Section 01 50 00 - Temporary Facilities and Controls

1.4 PROJECT

A. Project Name: 1923-029 District Wide Tech
Contract Documents, dated January 18, 2018 were prepared for the Project by Hunt Engineers, Architects, Land Surveyors & Landscape Architect, DPC, Airport Corporate Park, 100 Hunt Center, Horseheads, NY 14845-1019.

B. Owner's Name: Horseheads CSD.
1 Raider Lane
Horseheads, NY 14845
607-739-5601

C. Architect's Name: Hunt EAS.
Airport Corporate Park
100 Hunt Center
Horseheads, NY 14845-1019
Phone: 607-358-1000
Fax: 607-358-1800
Contact: Chad Snowburg

D. The Project consists of the construction of district wide technology upgrades throughout the district..

1.5 CONTRACT DESCRIPTION

A. The project will be constructed under a multiple Prime Contract Agreement.
1. Prime Contracts are separate contracts between the Owner and independent contractors, representing significant construction activities. Each Prime Contract is performed concurrently, and closely coordinated, with construction activities performed on the Project under other Prime Contracts.

B. Prime Contracts for this Project include:
   1. General Trades
   2. Mechanical
   3. Electrical

C. The work of each separate prime contract is identified in this section .

1.6 OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.
   1. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain mechanical and electrical systems serving occupied portions of the building.
   2. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the building. However, the Owner will not clean up behind contractors; responsibility for any debris caused by contractor operations remains with the Prime Contractor.

D. The Owner reserves the right to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided that such occupancy does not interfere with completion of the work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total work. Cooperate fully with the Owner or its representatives and Architect/Engineer during construction operations to minimize conflicts and facilitate owner’s usage.

1.7 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings. Do not disturb portions of the site beyond the areas in which the work is indicated.

B. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Others.
   3. Use of site and premises by the public.

C. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
      a. All exit and escape windows shall be maintained at all times.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.
   3. Do not use driveways, entrances or sidewalks for parking or storage of materials.
   4. Keep temporary driveways and entrances serving the premises clear and available to the Owner, Architect, Construction Manager and emergency vehicles at all times.

D. Existing building spaces may not be used for storage.

E. Time Restrictions:
   1. Work hours shall be between the hours of 8:00 AM and 5:00 PM daily, Monday through Friday, except when it interferes with the Owner’s activities.
      a. Shift work between the hours of 3:00 PM and 7:00 AM, or on weekends, may occur with the permission the Construction Manager.

2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
3. Limit deliveries to times other than the 45 minutes before school begins to 15 minutes after school begins and from 15 minutes before school lets out to 45 minutes after school lets out.

F. Any work that requires disruption to the occupants, entry/exits, utilities, etc shall be coordinated with and approved by the Construction Manager.

G. Utility Outages and Shutdown:
1. Limit disruption of utility services to hours the building is unoccupied.
2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
3. Prevent accidental disruption of utility services to other facilities.

H. Construction Staging Area:
1. Contractors will be instructed to use designated staging/parking areas before start of construction.
2. All staging of equipment, trailers, storage containers, etc to be coordinated through the Construction Manager and cannot interfere with any other Contractor's work.
3. Activity in the staging area shall be conducted in a manner that causes minimal distruption of the Owner's activities.

1.8 WORK SEQUENCE

A. All Work will be conducted in a number of continuous phases to provide the least possible interference to the activities of the Owner’s personnel and to permit the facilities to be partially utilized during implementation of the work.
1. The Contractor is expressly forewarned that impacts to the construction schedule during any phase or portion of the project will not be permitted.

B. Schedule: Refer to the milestone / phasing schedule included in Section 01 32 16 - Construction Progress Schedule.

C. Should overtime or second shift work be required by a Prime Contractor to ensure the completion within the specified (phased) schedule, all costs for this work is the responsibility of the Contractor. The Construction Manager shall have the authority to direct the contractors and subcontractors to work overtime including weekends to maintain the schedule at no additional cost to the Owner. Prime Contractors warrant that the work shall be physically complete, including punch list, startup, and commissioning, within the early start and late finish schedule milestones.

D. Each Prime Contractor shall provide multiple crews to maintain project schedule. Each crew is to be furnished with its own supervision, cranes, scaffold and other means necessary to maintain the Project Schedule.

E. The intention of the work is to follow a logical sequence; however, the Prime Contractor may be required by the Construction Manager to temporarily omit or leave out any section of his work, or perform his work out of sequence. All such out of sequence work and returning to these areas shall be at no additional cost to the Owner.

F. Each Contractor is responsible for supervision of their Sub-Contractors at all times.

1.9 REQUIREMENTS OF ALL CONTRACTS

A. Extent of Contract: Unless the Contract Documents contain a more specific description of the Work, names and terminology on Drawings and in Specification Sections determine which contract includes a specific element of Project.

1. Unless otherwise indicated, the Work described in this section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
2. Local custom and trade-union jurisdictional settlements do not control the scope of the Work of each contract. When a potential jurisdictional dispute or similar interruption of work is first identified or threatened, affected contractors shall negotiate a reasonable settlement to avoid or minimize interruption and delays.
3. Trenches for the Work of each contract shall be provided by each contractor for its own Work. For trenches at interior slab on grade concrete slabs, the General Trades contractor shall saw cut and remove the concrete. The contractor requiring the trench shall excavate; install the work; backfill and compact up to the subbase level. The General Trades contractor shall install the base material and repair the concrete slab as detailed on the contract documents.
4. Cutting and patching for the Work of each contract shall be provided by each contractor for its own Work.
5. Firestopping for the Work of each contract shall be provided by each contractor for its own Work.
6. Within ten (10) working days after preliminary horizontal bar-chart-type construction schedule submittal has been received from General Trades Contractor, submit a matching preliminary horizontal bar-chart schedule showing construction operations sequenced and coordinated with overall construction.

B. The following Documents are specifically included and defined as integral to each Prime Contract:
   1. Bidding requirements, contract forms and conditions of the Contract:
   2. Notice to Bidders
   3. Instructions to Bidders (AIA Document A701-1997)
   4. Supplementary Instructions to Bidders
   5. Contractors Qualification Statement (AIA Document A305)
   6. Form of Proposal
   7. General Conditions of the Contract for Construction (AIA Document A201)
   8. Supplementary Conditions - Sample Insurance Certificate with Supplemental Attachment (AIA Document G715)
   9. Supplementary Conditions - Wage Rates
   10. Form of Agreement Between Owner an Contractor (AIA Document A101)
   11. Division 00 - Procurement and Contracting Requirments
   12. Division 01 - General Requirements

C. EACH PRIME CONTRACTOR shall be responsible for all work shown on all drawings and sections as it pertains to work of their contract:
   1. Division 00 - Procurement and Contracting Requirments
   2. Division 01 - General Requirements
      a. All Specification Sections within this Division are owed by ALL contracts.
   3. Division 02 - Existing Conditions
      a. Specification Section 02 41 00 – Selective Structural Demolition
   4. Division 07 - Thermal and Moisture Protection
      a. Specification Section 07 84 00 - Firestopping
         1) All contractors to provide Firestopping for their own trade’s penetrations through all fire-rated walls.
      b. Specification Section 07 90 00 - Joint Protection
         1) All contractors to provide joint protection of their own trade’s work.
      c. Specification Section 08 31 13 - Access Doors and Frames
         1) All contractors to provide access doors for their own trade’s work.
         2) Access Doors to be installed by General Trades Contractor.
         3) Include locations of Access Doors in shop drawings and provide to General Trades Contractor.

5. Division 09 - Finishes
    a. Specification Section 09 00 00 - Finish Key
        1) All contractors to refer to Finish Key in coordination with all finishes for each trade.

D. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the Work.

E. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Section 01 50 00 - Temporary Facilities and Controls, each contractor is responsible for the following:
1. The Contractors shall assist the Architect and Owner in identifying a plan detailing how exiting required by the applicable building code will be maintained, and a plan detailing how adequate ventilation will be maintained during construction.
2. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, and costs and use charges associated with each facility.
3. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
4. Its own field office, complete with necessary furniture, utilities, and telephone service. The Contractor shall provide leveling, stone, and/or removals necessary to install Field Offices. At end of construction, when field offices are removed, each Contractor is responsible to return the area to its original condition, including any re-seeding required.
5. Its own storage and fabrication sheds.
6. Temporary enclosures for its own construction activities.
7. Hoisting requirements for its own construction activities, including hoisting material or equipment into spaces below grade, and hoisting requirements outside building enclosure.
8. Progress cleaning of its own areas on a daily basis.
9. Secure lockup of its own tools, materials, and equipment.
10. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.

F. Temporary Heating, Cooling and Ventilation: The HVAC Contract is responsible for temporary heating, cooling, and ventilation.

1.10 CONTRACT NO. 1 - GENERAL CONSTRUCTION

A. The General Trades Contractor shall be responsible for all work shown on Architectural (A)| Structural (S)Abatement (AB) Drawings unless noted otherwise and further defined below:
1. Provide the complete work of Division 2 - Existing Conditions.
2. Provide the complete work of Division 4 - Masonry
3. Provide the complete work of Division 5 - Metals
4. Provide the complete work of Division 6 - Wood, Plastic and Composites
    a. Provide ALL wood blocking on this project
    b. Coordinate wood blocking with all other Primes to ensure all wood blocking is in place prior to wall enclosure. Cutting and patching after wall enclosure will be at the cost of the General Contractor.
5. Provide the complete work of Division 7 - Thermal and Moisture Protection
6. Provide the complete work of Division 8 - Openings
    a. Access Doors and Panels to be provided by other contractors.
7. Provide the complete work of Division 9 - Finishes

B. Furnish and install all labor, material, supervision, equipment, scaffolding, layout, engineering, deliveries, trucking, hoisting, rigging, shop drawings, submittals, and all other items related and required to complete all General Trades Work in accordance with the Contract Documents and all applicable codes having jurisdiction.

C. The Contractor represents they have expertise in the performance of Work for this trade and assures all items to be complete, functional and installed in accordance with the best practices consistent with premium quality material and workmanship.

1.11 CONTRACT NO. 2 - MECHANICAL

A. The Mechanical Contractor shall be responsible for all work shown on the Mechanical (H) Drawings and any mechanical work shown on all other drawings and specifications and further defined below:
   1. Division 22 - Plumbing
      a. Specification Section 22 10 05 - Plumbing Piping And Specialties limited to:
         1) Final connections of equipment condensate made by HVAC Contractor. Storm Water taps provided and installed by Plumbing Contractor.
   2. Provide the complete work of Division 23 - Heating, Ventilating and Air-Conditioning (HVAC)
   3. Division 26 - Electrical
      a. Specification Section 26 29 23 - Variable-Frequency Motor Controllers
         1) Controllers to be furnished, inventoried, and delivered to site to meet the schedule by the HVAC Contractor.
         2) Installation and final connections by Electrical Contractor.

B. Furnish and install all labor, material, supervision, equipment, scaffolding, layout, engineering, deliveries, trucking, hoisting, rigging, shop drawings, submittals, and all other items related and required to complete all Mechanical Work in accordance with the Contract Documents and all applicable codes having jurisdiction.

C. The Contractor represents they have expertise in the performance of Work for this trade and assures all items to be complete, functional and installed in accordance with the best practices consistent with premium quality material and workmanship.

1.12 CONTRACT NO. 3 - ELECTRICAL

A. The Electrical Contractor shall be responsible for all work shown on Landscape (L) Drawings unless noted otherwise, and any electrical work shown on all other drawings and further defined below:
   1. Division 2 - Electrical contractor to be responsible for all demolition of items shown on electrical drawings as well as all electrical feeds to equipment or devices to be demolished by other contractors.
   2. Division 6 - Wood, Plastic and Composites
      a. Specification Section 06 41 00 - Architectural Wood Casework including but not limited to:
         1) Any lighting and electrical work associated with Architectural Wood Casework
   3. Division 8 - Openings
      a. Specification Section 08 71 00 - Door Hardware including but not limited to:
         1) Fire Alarm connection at all electrically operated hardware.
         2) Provide power to all electrically operated hardware.
   4. Division 22 - Plumbing
      a. Specification Section 22 30 00 - Plumbing Equipment including but not limited to:
         1) Provide power and electrical connections to Plumbing equipment.
   5. Division 23 - Heating, Ventilating and Air-Conditioning (HVAC)
      a. Specification Section 23 21 23 - Hydronic Pumps including but not limited to:
         1) Provide electrical connections to all Hydronic Pump equipment per manufacturers' requirements necessary for equipment to operate as intended.
      b. Specification Section 23 33 00 - Air Duct Accessories including but not limited to:

1) Provide electrical connections to all Air duct Accessories per manufacturers' requirements necessary for equipment to operate as intended.

c. Specification Section 23 34 23 - Hvac Power Ventilators including but not limited to:
   1) Provide electrical connections to all HVAC Power Ventilator equipment per manufacturers' requirements necessary for equipment to operate as intended.

d. Specification Section 23 36 00 - Air Terminal Units including but not limited to:
   1) Provide electrical connections to all Air Terminal Unit equipment per manufacturers' requirements necessary for equipment to operate as intended.

e. Specification Section 23 63 13 - Air Cooled Refrigerant Condensers including but not limited to:
   1) Provide electrical connections to all Air Cooled Refrigerant Condensers equipment per manufacturers' requirements necessary for equipment to operate as intended.

f. Specification Section 23 64 23 - Air Cooled Split-System Water Chiller including but not limited to:
   1) Provide electrical connections to all Air Cooled Split-System Water Chiller equipment per manufacturers' requirements necessary for equipment to operate as intended.

g. Specification Section 23 72 23 - Packaged Air-To-Air Energy Recovery Units including but not limited to:
   1) Provide electrical connections to all Packaged air-to-air energy recovery equipment per manufacturers' requirements necessary for equipment to operate as intended.

h. Specification Section 23 73 13 - Central-Station Air-Handling Units including but not limited to:
   1) Provide electrical connections to all Central Station Air Handler equipment, per manufacturers' requirements, necessary for equipment to operate as intended.

i. Specification Section 238101 - Terminal Heat Transfer Units including but not limited to:
   1) Provide electrical connections to all Terminal Heat Transfer Unit equipment, per manufacturer's requirements, necessary for equipment to operate as intended.

6. Provide complete the work of Division 26 - Electrical with the following exceptions:
   a. Specification Section 262923 - Variable-Frequency Motor Controllers
      1) Installation and final connections by Electrical Contractor.
         (a) Controllers to be furnished, inventoried, and delivered to site to meet the schedule by the HVAC Contractor.
7. Provide complete the work of Division 27 - Communications
8. Provide complete the work of Division 28 - Electronic Safety and Security

B. Furnish and install all labor, material, supervision, equipment, scaffolding, layout, engineering, deliveries, trucking, hoisting, rigging, shop drawings, submittals, and all other items related and required to complete all Electrical Work in accordance with the Contract Documents and all applicable codes having jurisdiction.

C. The Contractor represents they have expertise in the performance of Work for this trade and assures all items to be complete, functional and installed in accordance with the best practices consistent with premium quality material and workmanship.

1.13 ADDITIONAL NOTES TO CONTRACT DOCUMENTS

A. The following notes are integral to each Prime Contract:
   1. All bidders are forewarned to review all information of the Contract Documents.
   2. Review Section 01 20 00 for Allowances that may be included in Prime Contractors scope of work.
   3. Review Section 01 20 00 for Alternate bid pricing required in Prime Contractors scope of work.

4. Review Section 01 50 00 for work requirements of temporary construction activities in Prime Contractor's scope of work.
5. All contractors are responsible for the layout and survey of their own work or work requirements.
6. All contractors are required to construct the project per the phasing and staging plan. Specific areas of the site and building must be completed for the intended use by the District, at the Milestone dates so listed. All contractors shall cooperate fully with the intentions of the plan. Contractors are forewarned that any delay caused indirectly or directly by the acts, omissions, and/or failure to perform by a contractor will result in the Owner, or its agents, accomplishing the work by any means possible. The contractor causing the delay will be responsible for any and all costs associated with such issues, including Owner costs, Architect/Engineer costs, inspections, etc.
7. All Contractors shall provide any and all temporary shoring, bracing, supports or protection systems necessary to expedite the work requirements including the maintenance of worker safety.
8. All contractors are responsible for the safety of their own workers, subcontractors, work area, and other personnel on site. Each and every contractor is responsible for maintaining a safe work site and utilizing best safety procedures.
9. In case of discrepancy between the Drawings and Specifications, interpretation shall be given preference in the following order, with later dates taking precedence over earlier dates:
    a. Addenda
    b. Amendments to the Drawings and Specifications
    c. Drawings and Specifications
    d. Schedules, Piping & Wiring Diagrams take precedence over other data shown on the drawings.
    e. Notes take precedence over other data shown on the drawings, except Schedules, Piping & Wiring Diagrams.
10. If discrepancies are found between the plans and specifications, include the more costly detail to the bid price.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 CONSTRUCTION MANAGER

A. Coordination activities of the Construction Manager include, but are not limited to, the following:
    1. Provide overall coordination of the Work.
    2. Provide overall coordination of temporary facilities and controls.
    3. Coordinate, schedule, and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.
    4. Coordinate construction and operations of the Work with work performed by each contract.
    5. Coordinate sequencing and scheduling of the Work. Include the following:
        a. Initial Coordination Meeting: At earliest possible date, arrange and conduct a meeting with separate contractors for sequencing and coordinating the Work; negotiate reasonable adjustments to schedules.
        b. Distribute copies of schedules to Architect, Owner, and separate contractors.
    6. Provide construction photography.

7. Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
8. Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
9. Coordinate cutting and patching.
10. Coordinate protection of the Work

3.2 COORDINATION

A. Each Prime Contractor shall coordinate scheduling and installation of work with the work of other Contractors, sub-contractors and other trades. Each Prime Contractor is also required to coordinate all work of their Contract with Owner-supplied materials, direct contacts and normal building operations.

B. Each Prime Contractor shall supply and coordinate exact locations of embedded items in concrete or masonry work with the General Contractor. Each Prime Contractor shall monitor such items throughout concrete/masonry activities to ensure proper placement.

C. MECHANICAL, ELECTRICAL, AND PLUMBING Prime Contractors shall be responsible for providing any rough opening or masonry opening dimensions to the General Trades Contractor. FOR ALL NEW WORK. MECHANICAL, ELECTRICAL, AND PLUMBING Prime Contractors shall be responsible for any rework or additional work required due to their failure to provide this information prior to the schedule start of wall construction.

D. Each Contractor shall coordinate all device and rough-in locations required with the casework shop drawings.

E. Each Contractor shall take special care in verifying that his equipment matches the characteristic of the power being supplied. The Electrical Contractor shall coordinate electrical power requirements with Each Contractor for all equipment requiring power

END OF SECTION

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Allowances.

B. Schedule of Values.

C. Applications for payments.

D. Change procedures.

E. Defect assessment.

F. Alternates.

G. Unit Prices.

H. Schedule of Allowances.

I. Schedule of Unit prices.

J. Schedule of Alternates.

1.2 RELATED REQUIREMENTS

A. Section 01 30 00 - Administrative Requirements: General submittal procedures.

B. Section 01 60 00 - Product Requirements: Substitution limitations and procedures.

C. Section 01 70 00 - Execution and Closeout Requirements: Project record documents.

1.3 ALLOWANCES

A. Costs Included in Allowances: Cost of product to Contractor or Subcontractor, less applicable trade discounts; delivery to site and applicable taxes.

B. Costs Not Included in Allowances But Included in Contract Sum/Price: Product delivery to site and handling at site, including unloading, uncrating, and storage; protection of products from elements and from damage; and overhead and profit.

C. Architect Responsibilities:
   1. Consult with Contractor for consideration and selection of products, suppliers, and installers.
   2. Select products in consultation with Owner and transmit decision to Contractor.
   3. Prepare Change Order.

D. Contractor Responsibilities:
   1. Assist Architect/Engineer in selection of products, suppliers and installers.
   2. Obtain proposals from suppliers and installers and offer recommendations.
   3. On notification of selection by Architect/Engineer, Owner, execute purchase agreement with designated supplier and installer.
   4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
   5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.

E. Differences in costs will be adjusted by Change Order.

F. At Project closeout, credit unused amounts remaining in the allowance to the Owner by Change Order.

G. Refer to the Allowance Schedule at the end of this Section.

1.4 SCHEDULE OF VALUES

A. Submit printed schedule on Form: AIA G703 - Continuation Sheet for G702.

B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement established in Notice to Proceed.

C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization and bonds and insurance. Separate by SED numbers, listing SED number and Building name. When applicable, further separate each builidng by additionals and alterations, include a subtotal for each.

D. Provide 1% of contract value for execution of closeout documents.

E. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.

F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.

G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.5 APPLICATIONS FOR PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Use Form _____.

C. Content and Format: Use data from approved Schedule of Values for listing items in Application for Payment.

D. Submit one electronic and three hard-copies of each Application for Payment.

E. Include the following with the application:
   1. Transmittal letter as specified for submittals in Section 01 30 00.
   2. Updated Construction schedule.Section 01 32 16.

F. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include with Application for Payment:
   1. Partial release of liens from major subcontractors and vendors.
   2. Project record documents as specified in Section 01 78 00, for review by Owner which will be returned to the Contractor.
   3. Affidavits attesting to off-site stored products.
   4. Certified payrolls.
   5. Updated project schedule and timelines.

1.6 CHANGE PROCEDURES

A. Change Order Forms: AIA G701 Change Order.

B. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to the Contract Documents.

C. For minor changes not involving an adjustment to the Contract Sum/Price or Contract Time, Architect will issue supplemental instructions on AIA Form G710 directly to Contractor.

D. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

E. The Architect/Engineer may issue a Proposal Request that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change. Contractor shall prepare and submit a estimated price quotation within 15 days.

F. Contractor may propose a change by submitting a request for change to Architect/Engineer, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 60 00.

G. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
   1. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's price quotation.
   2. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on fixed unit prices. For unit costs or quantities of units of work which are not pre-determined, execute Work under Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
   3. Construction Change Directive: Architect/Engineer may issue directive, on AIA Form G713 Construction Change Directive signed by Owner, instructing contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
   4. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Architect/Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
      a. Maintain daily detailed records of work completed on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work. Daily Time and Material tickets must be validated and signed by the Owner's Representative to be acceptable for issuance of the change order.

H. Substantiation of Costs: Provide full information for change in cost or time with sufficient data to allow evaluation of quotation..

I. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

J. Correlation of Contractor Submittals:
   1. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum/Price.

2. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
3. Promptly enter changes in Project Record Documents.

1.7 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the ArchtiectEngineer, it is not practical to remove and replace the Work, the Architect/Engineer will direct appropriate remedy of adjust payment.

C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer and Owner.

D. Defective Work will be partially repaired to instructions of Architect/Engineer and Owner, and unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer and Owner.

E. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.

F. Authority of Architect/Engineer to assess defects and identify payment adjustments, is final.

G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
1. Products wasted or disposed of in a manner that is not acceptable.
2. Products determined as unacceptable before or after placement.
3. Products not completely unloaded from transporting vehicle.
4. Products placed beyond lines and levels of require Work.
5. Products remaining on hand after completion of the Work.
6. Loading, hauling and desposing of rejected products.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

B. Coordination: Modify or adjust affected adjacent Work as necessary to complete and fully integrate that Work into the Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to, or required for a complete installation whether or not mentioned as part of the Alternate.
2. Include, as part of each alternate, all related construction coordination, modifications or adjustments.

C. Notification: Immediately following the award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

D. Execute accepted alternates under the same conditions as other Work of this Contract

E. Schedule: A “Schedule of Alternates” is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.

F. The successful Bidder agrees to hold all Alternate Bids firm and unchanged for a period not to exceed 60 calendar days following the closing date for bidding.

1.9 UNIT PRICES

A. Authority: Measurement methods are delineated in Schedule at the end of this section.

B. Take measurements and computer quantities. Architect/Engineer and/or Owner will verify measurements and quantities.

C. Unit Quantities: Quantities and measurements indicated in Bid Form are for contract purposes only.
   1. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at unit sum/priced contracted.
   2. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim for Contract Price adjustment.

D. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of item of the Work; overhead and profit.

E. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Architect/Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.

F. Measurement of Quantities:
   1. Weigh Scales: Inspected, tested and certified by applicable State Weights and Measures Department within past year.
   2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.
   3. Metering Devices: Inspected, tested and certified by applicable State department withing past year.
   4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
   5. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
   6. Measurement by Area: Measured by square dimension using mean length and width of radius.
   7. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
   8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

1.10 SCHEDULE OF ALLOWANCES

A. General Trades Contract: Include the stipulated sum of $25,000

B. HVAC Contract: Include the stipulated sum of $20,000

C. Plumbing Contract: Include the stipulated sum of $3,000

D. Electrical Contract: Include the stipulated sum of $75,000

1.11 SCHEDULE OF UNIT PRICES

A. General Trades-Unit Prices

   1. Unit Price No. 1 - : Asbestos Abatement of Pipe and Pipe Joint Insulation:
      a. Description: Remove and dispose of asbestos containing pipe and pipe joint insulation.
      b. Unit of Measurement: Linear Foot

2. Unit Price No. 2 -: Asbestos Abatement Floor Tile and Mastic:
   a. Description: Remove and dispose of asbestos containing floor tile and mastic. Estimated Quantity: (600) square feet. Price shall include all costs to provide removal in a single contained work space with containment enclosure currently in place.
   b. Unit of Measurement: 10 Square Feet
3. Unit Price No. 3 -: Asbestos Abatement Containment Area:
   a. Description: Provide a single 10'-0" X10'-0" containment area at locations where additional asbestos abatement is to be performed.
   b. Unit of Measurement: Each enclosure
4. Unit Price No. 4 - :Asbestos Abatement Decontamination System Enclosure:
   a. Description: Cost to mobilize and construct a decontamination enclosure to the project site.
   b. Unit of Measurement: Each mobilization and construction.
5. Unit Price No. 5 - :Asbestos Abatement Black Caulk Removal:
   a. Description: Remove and dispose of asbestos containing black caulk
   b. Unit of Measurement: Linear Foot.

1.12 SCHEDULE OF ALTERNATES

A. ALTERNATE 1: Smartboard and Markerboard: Provide all work associated with removal of existing markerboards, tack boards and smartboards as shown on A, AB, E and T drawings. Work occurs at all

B. ALTERNATE 2: Smartboard and Markerboard: Provide all work associated with removal of existing markerboards, tack boards and smartboards as shown on A, AB, E and T drawings.

C. ALTERNATE 3: Smartboard and Markerboard: Provide all work associated with removal of existing markerboards, tack boards and smartboards as shown on A, AB, E and T drawings.

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination and project conditions.

B. Field engineering.

C. Preconstruction meeting.

D. Site mobilization meeting.

E. Progress meetings.

F. Superintendent's meetings.

G. Preinstallation meetings.

H. Number of copies of submittals.

I. Submittal procedures.

J. Electronic submittal procedure.

1.2 RELATED REQUIREMENTS

A. Section 01 32 16 - Construction Progress Schedule: Form, content, and administration of schedules.

B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.

C. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.3 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.

C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

D. Coordination Document: The HVAC/Mechanical, Plumbing and Electrical Trades Contractors shall execute a coordination document identifying primary utilities in shared spaces. Circulation of the coordination document will be in the order contract trades are listed above. Conflicts in utility coordination are to be brought to the attention of the Construction Manager. Copies of the final coordination document will be distributed to each trade.

E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements. Install utilities parallel with structure and as inconspicuous as possible in exposed spaces.

F. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.

G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 FIELD ENGINEERING

A. Employ Land Surveyor registered in State of New York and acceptable to Architect/Engineer.

B. Locate and protect survey control and reference points. Promptly notify Architect/Engineer of discrepancies discovered.

C. Control datum for survey is shown on Drawings.

D. Verify set-backs and easements; confirm drawing dimensions and elevations.

E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

F. Submit copy of site drawing and certificate signed by Land Surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.

G. Maintain complete and accurate log of control and survey work as Work progresses.

H. On completion of foundation walls and major site improvements, prepare certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

I. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

J. Promptly report to Architect/Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.

K. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect/Engineer.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PRECONSTRUCTION MEETING

A. Construction Manager will schedule a meeting after Notice of Award.

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Contractor.
   4. Construction Manager.

C. Agenda:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties to Contract and Architect.
   6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   7. Scheduling.

D. Construction Manager will record minutes and distribute copies two days after meeting to participants, with copies to participants, and those affected by decisions made.

3.2 SITE MOBILIZATION MEETING

A. Construction Manager will schedule a meeting at the Project site prior to Contractor occupancy.

B. Attendance Required:
   1. Contractor.
   2. Owner.
   3. Architect.
   4. Special consultants.
   5. Contractor's superintendent.
   6. Major subcontractors.
   7. Construction Manager.

C. Agenda:
   1. Use of premises by Owner and Contractor.
   2. Owner's requirements and occupancy prior to completion.
   3. Construction facilities and controls provided by Owner.
   4. Temporary utilities provided by Owner.
   5. Security and housekeeping procedures.
   6. Schedules.
   7. Application for payment procedures.
   8. Procedures for testing.
   9. Procedures for maintaining record documents.
   10. Requirements for start-up of equipment.
   11. Inspection and acceptance of equipment put into service during construction period.

D. Construction Manager will record minutes and distribute copies within two days after meeting to participants, with copies to participants, and those affected by decisions made.

3.3 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.

B. Construction Manager will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Architect, Construction Manager as appropriate to agenda topics for each meeting.

D. Agenda:
   1. Review minutes of previous meetings.
   2. Review of work progress.

3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to work.

E. Construction Manager will record minutes and distribute copies within two days after meeting to participants, with copies to participants, and those affected by decisions made.

3.4 PREINSTALLATION MEETING

A. When required in individual specification sections, convene preinstallation meeting at Project site prior to commencing work of specific section.

B. Require attendance of parties directly affecting, or affected by, Work of specific section.

C. Notify Architect/Engineer seven days in advance of meeting date.

D. Prepare agenda and preside at meeting:
1. Review conditions of installation, preparation and installation procedures.
2. Review coordination with related work.

E. Construction manger will record minutes and distribute copies after meeting to participants, with copies to Architect/Engineer, Owner, and those affected by decisions made.

3.5 COORDINATION MEETINGS

A. The Construction Manager will conduct Project Coordination Meetings weekly or on an "as-needed" basis. Project Coordination Meetings are in addition to specific meetings held for other purposes, such as regular Project Meetings and special Pre-Installation Meetings.

B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.

C. The Construction Manager will record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

3.6 ARCHITECT'S SUBMITTAL ACTION

A. Except for submittals for the record or information, where action and return is required, the Architect or his consultant will review each submittal, mark to indicate action taken, and return
1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
1. Final Unrestricted Release: When the Architect marks a submittal "Reviewed" the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
2. Final-But-Restricted Release: When the Architect marks a submittal "Reviewed as Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.

3. Returned for Re-submittal: When the Architect marks a submittal " Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
   a. Do not use, or allow others to use, submittals marked " Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
4. Rejected: When the Architect marks a submittal “Rejected,” do not proceed with any Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Prepare a new submittal conforming to the product characteristics specified by the contract documents; resubmit without delay. Repeat if necessary to obtain different action mark.
5. Submit Specified Item: When submittal is marked “Submit Specified Item”, the Contractor shall immediately resubmit the specified item.

C. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned marked “Action Not Required”.

3.7 ELECTRONIC SUBMITTAL PROCEDURES - NEWFORMA

A. Using the electronic cover sheet provided by the Architect in Excel format, fill out the information required for the submittal. Each submittal must be provided with the submittal cover sheet.

B. Convert/print cover sheet to a PDF format.

C. Combine PDF cover sheet with product submittal. Cover sheets are to precede the product submittal information.

D. If shop drawings are over 11" x 17" in size, hard copies are to be provided.

E. Electronic submittals shall be up-loaded to the Project Team through Newforma Info Exchange. Directions to access Newforma will be provided by the Architect.

F. Notification will be automatically be generated by Newforma to the Project Team when a new submittal has been created.

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preliminary schedule.

B. Construction progress schedule, bar chart type.

1.2 RELATED SECTIONS

A. Section 01 10 00 - Summary: Work sequence.

1.3 SUBMITTALS

A. Within 10 days after date established in Notice to Proceed, submit preliminary schedule .

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Submit updated schedule with each Application for Payment.

D. Submit under transmittal letter form specified in Section 01 30 00 - Administrative Requirements.

1.4 SCHEDULE FORMAT

A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

B. Scale and Spacing: To allow for notations and revisions.

PART 2 SCHEDULE

2.1 GENERAL

A. A milestone/phasing construction schedule including start and completion dates has been prepared. The milestone schedule has been included as part of the bidding documents within this section.

B. Upon Notice to Proceed the overall Project CPM Schedule will be prepared by the **General Trades Contractor** in accordance with the following.

PART 3 EXECUTION

3.1 GENERAL

A. The CPM Schedule network plan including any appropriate milestone dates and the computer produced reports shall be part of the Owner/Contractor agreement as stipulated herein.

B. All Prime Contractors shall provide all information required by the Construction Manager to the General Contractor for development of a network plan and schedule for this in accordance with the requirements of this section of the General Requirements.

C. The purpose of the plan and schedule will be to assure adequate planning, coordination and execution of the work of the various Prime Contractors, and to assist the Construction Manager in monitoring the progress of the work and evaluating proposed changes to the contract and schedule.

D. The project management tool commonly called the Critical Path Method (CPM) will be employed for the planning, scheduling and report of all work to be performed under the contract. The precedence diagramming method shall be utilized in preparing the CPM Schedule network diagrams.

E. There are other contracts and work which will run concurrently with this Contract, and may run subsequently with this Contract, and may run subsequently to the work of this Contract. The project network diagram and schedule will reflect the major interfaces between the work of this Contract and the concurrent and succeeding work of the other contracts.

F. The Construction Manager may modify the network diagram to provide interface points for other contracts for this Project.

G. Activity time delays shall not automatically mean that an extension of the Contract Completion Date is warranted or due the Contractor. A Contract Modification or delay may not affect existing critical activities or cause noncritical activities to be become critical. A Contract Modification or delay may resulted in only absorbing part of the available total float that may exist within an activity chain on the Network, thereby not causing any effect of any interim milestone date or the Contract Completion Date.

H. Total float is defined as the amount of time between the early start date and late start date, or the early finish date and the late finish date, for each and every activity in the schedule. Float is for the exclusive use or benefit of the Owner. Extensions of time to milestone dates for the Contract Completion Date under the Contract will be granted only to the extent that is equitable time adjustments to the activity or activities affected by the Contract Modification or delay exceeds the total float of the affected or subsequent paths and extends any interim milestone date or the Contract Completion Date.

3.2 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

B. To the extent necessary for the General Trades Contractor to reflect in a computerized CPM Schedule network diagram each Prime Contractor’s proposed plan for completion of their work, all Prime Contractors shall be prepared to meet with and assist the General Contractor, and furnish information subsequent to award of the contract.

C. Within (3) calendar days following the Contract Issuance, the Construction Manager will meet with the Prime Contractors and conduct a review of the Prebid Milestone/phasing to assure their understanding of said project schedule requirements and contractual milestone dates.

D. Within four (4) calendar days after the meeting to review the Milestone/Phasing Schedule, all Prime Contractors will provide their proposed plans of operation to the General Contractor. The Contractor’s plan of operations shall consist of, but not limited to, the following:
   1. List of proposed Construction Activities
   2. List of proposed Durations of Construction Activities (in workdays)
   3. List of proposed Durations for major procurement items (in workdays).
   4. Proposed Sequencing of Construction Activities.

E. The Construction Manager, the General Trades Contractor and each Prime Contractor will meet and jointly review the CPM project schedule, based on the General Contractor's proposed plan and sequences of operation. Any areas of such plans which, in the opinion of the Construction Manager, will conflict with timely completion of the project will be subject to revision by the General Contractor unless adequate justification for these plans, durations and logic (as determined by Construction Manager) is provided by the Prime Contractor within (10) calendar days of the Construction Manager's notice to the Prime Contractor of the Construction Manager's intent to revise the schedule. At these meetings, the General Contractor and the Prime Contractors, with the aid of the Construction Manager, will manually construct a precedence diagram describing the activities to be accomplished, their dependency relationships and their durations. The General Contractor will then, using the manual precedence diagram, prepare a computer produced schedule showing starting and completion dates for each activity.

F. In preparing the manual precedence diagram, each Prime Contractor will be responsible for assuring that any/all subcontractor work, as well as his own work, is included and that the diagram shows a coordinated plan of work.

G. The manually prepared precedence diagram, when fully developed, will show the sequence and interdependence of activities required for complete performance of all the work under all of the Prime Contracts. In developing the precedence diagram, the work will be divided into activities with a maximum duration of twenty (20) working days each, unless otherwise directed by the Construction Manager, except for non-construction activities such as procurement of materials, delivery of equipment, and concrete curing.

H. Proposed durations assigned to each activity shall reflect each Prime Contractor's best estimate of time required to complete activity considering the scope and resources planned for activity.

I. Failure by the General Contractor, and of the Prime Contractors or Construction Manager to include the element of work required for performance of the contract shall not excuse the Prime Contractors from completing all their work within the Contract Completion Date. If the Construction Manager questions any of the Prime Contractor's proposed durations, the Prime Contractor shall within ten (10) calendar days provide estimates of his labor and intended crew and/or equipment sizes required for the activity which support the proposed duration to the satisfaction of the Construction Manager.

J. Seasonal weather conditions will be considered in the planning and scheduling of all work influenced by high or low ambient temperatures to insure the completion of all contract work within the allotted contract time milestone completion dates.

3.3 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by specification section number.

C. Identify work of separate stages and other logically grouped activities.

D. Provide sub-schedules to define critical portions of the entire schedule.

E. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

F. Provide legend for symbols and abbreviations used.

3.4 BAR CHARTS

A. Include a separate bar for each major portion of Work or operation.

B. Identify the first work day of each week.

3.5 REVIEW AND EVALUATION OF SCHEDULE

A. Within seven (7) calendar days after receipt of the computer produced CPM Schedule and reports provided by the General Contractor, each Prime Contractor shall meet with the Construction Manager, if required, for joint review, correction, or adjustment of the proposed plan and schedule; After these joint meetings, the computer produced CPM Schedule and report will be revised in accordance with agreements reached during the joint reviews. Final review and acceptance by the Owner will take place after all Prime Contractors have approved the revised CPM Schedule.

B. Upon establishment of an agreed upon schedule, each Prime Contractor will sign the CPM Schedule network drawings and computer produced reports, which will then indicate the acceptance and approval of the project schedule, sequence of activities and times for completion. Acceptance of the approved project schedule by all Prime Contractors and the Construction Manager will be a condition precedent to the making of any partial payments under the Contract.

C. Participate in joint review and evaluation of schedule with Architect at each submittal.

D. Evaluate project status to determine work behind schedule and work ahead of schedule.

E. After review, revise as necessary as result of review, and resubmit within 10 days.

3.6 UPDATING SCHEDULE

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity.

C. Annotate diagrams to graphically depict current status of Work.

D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

E. Indicate changes required to maintain Date of Substantial Completion.

F. Submit reports required to support recommended changes.

G. The Approved Project Schedule will be updated by the General Contractor and reviewed by the Construction Manager on a monthly basis for the purpose of recording and monitoring the progress of work. The Prime Contractors shall meet with the Construction Manager each month to review actual progress made to date, dates of activities started and completed, and the percentage of work completed to date on each activity started but not completed.

H. Upon completion of the joint reviews, the General Contractor will revise the network to reflect progress to date plus any approved revisions to the network, and carry out a computer calculation to determine status which will be privided to each Prime Contractor.

I. Based on the result of the monthly progress update, when the schedule no longer represents the actual prosecution and progress of the work, a revision to the schedule logic sequence and the precedence diagram may be required by the Construction Manager or requested by the Prime Contractors.

J. A Prime Contractor may also request revisions to the logic sequence and precedence diagram in the event his planning for the project is revised. If a Prime Contractor desires to make changes in the Approved Project Schedule to reflect revisions in his method of operating and scheduling, he shall notify the Construction Manager in writing stating the reasons for the proposed revision.

K. If a revision to the schedule logic sequence is contemplated, a Prime Contractor or the Construction Manager shall so advise the other in writing at least two (2) weeks prior to the next Schedule Update meeting, describing the revision and setting forth the reasons therefore.

L. All reasonable requests by the Prime Contractors for revisions will be implemented by the Construction Manager if not reasonably objected to by any of the other Prime Contractors.

M. Construction Manager directed revisions to the schedule will not be implemented without written notice to the Prime Contractors, who shall respond within ten (10) days, either agreeing with the Construction Manager's proposed revision or setting forth justification why it should not be accomplished. If the Prime Contractor's justification for not accomplishing the change is reasonable, such change will not be implemented.

N. Updating the schedule to reflect actual progress made up to the date of an update shall not be considered revisions to logic sequence and schedule; in case of disagreements concerning actual progress to date, the Construction Manager's determination shall govern.

O. If a Prime Contractor does not record any exceptions to the published Project Schedule update within ten (10) calendar days of its receipt, he will be deemed to have accepted and approved it.

3.7 RESPONSIBILITY FOR COMPLETION

A. Each Prime Contractor shall furnish sufficient forces, plant and equipment, and shall work such hours including night shift and overtime operations, as necessary to ensure the prosecution of the work in accordance with the current monthly update of the Project Schedule. If, in the opinion of the Construction Manager, a Prime Contractor falls behind in meeting the schedule as presented in the current monthly update, the Contractor shall take such steps as may be necessary to improve his progress, and the Construction Manager may require him to increase the hours of work, the number of shifts, overtime operations and/or the amount of construction plant and equipment without additional cost to the Owner or Construction Manager. All additional expenses incurred by the Owner, Construction Manager and Architect due to such work will be deducted from the amount due the Prime Contractor. The provisions of this section shall not be construed as prohibiting work on Saturdays, Sundays and holidays if the Prime Contractor so elects and if approved by the Construction Manager.

B. Failure of a Prime Contractor to comply with the requirements of this subsection shall be a basis for determination by the Owner that the Prime Contractor is not prosecuting the work with such diligence as will ensure completion within the time stipulated. Upon such determination, the Owner may terminate the Prime Contractor's right to proceed with the work or any separable part thereof, in accordance with the provisions of the General Conditions, or may take such other actions as may be deemed appropriate.

C. It shall be the responsibility of all Prime Contractors to maintain their progress so as not to delay the progress of the project or the progress of other Prime Contractors. If a Prime Contractor delays the progress of the projected or the progress of other Prime Contractors, it shall be the responsibility of Prime Contractor causing the delay to increase the number of shifts, days of work, and/or to the extent permitted by law, to institute or increase overtime operations all without additional cost to the Owner to regain the time lost and to maintain the over schedule. Each Prime Contractor is required by virtue of this Contract to cooperate in

every way possible with all other Prime Contractors in order to maintain the scheduled completion date. No additional compensation will be considered for such cooperation.

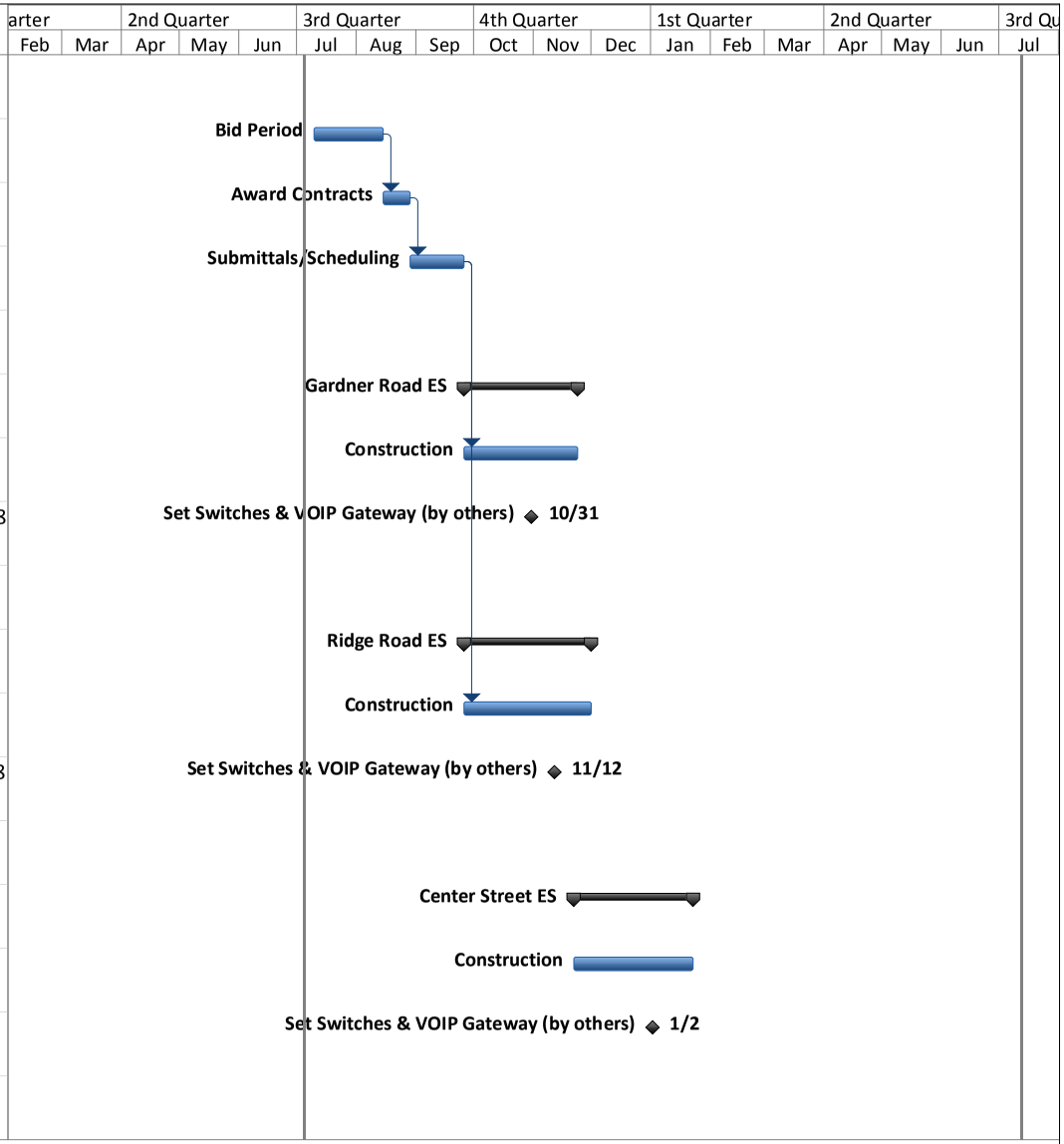
3.8 DISTRIBUTION OF SCHEDULE

A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

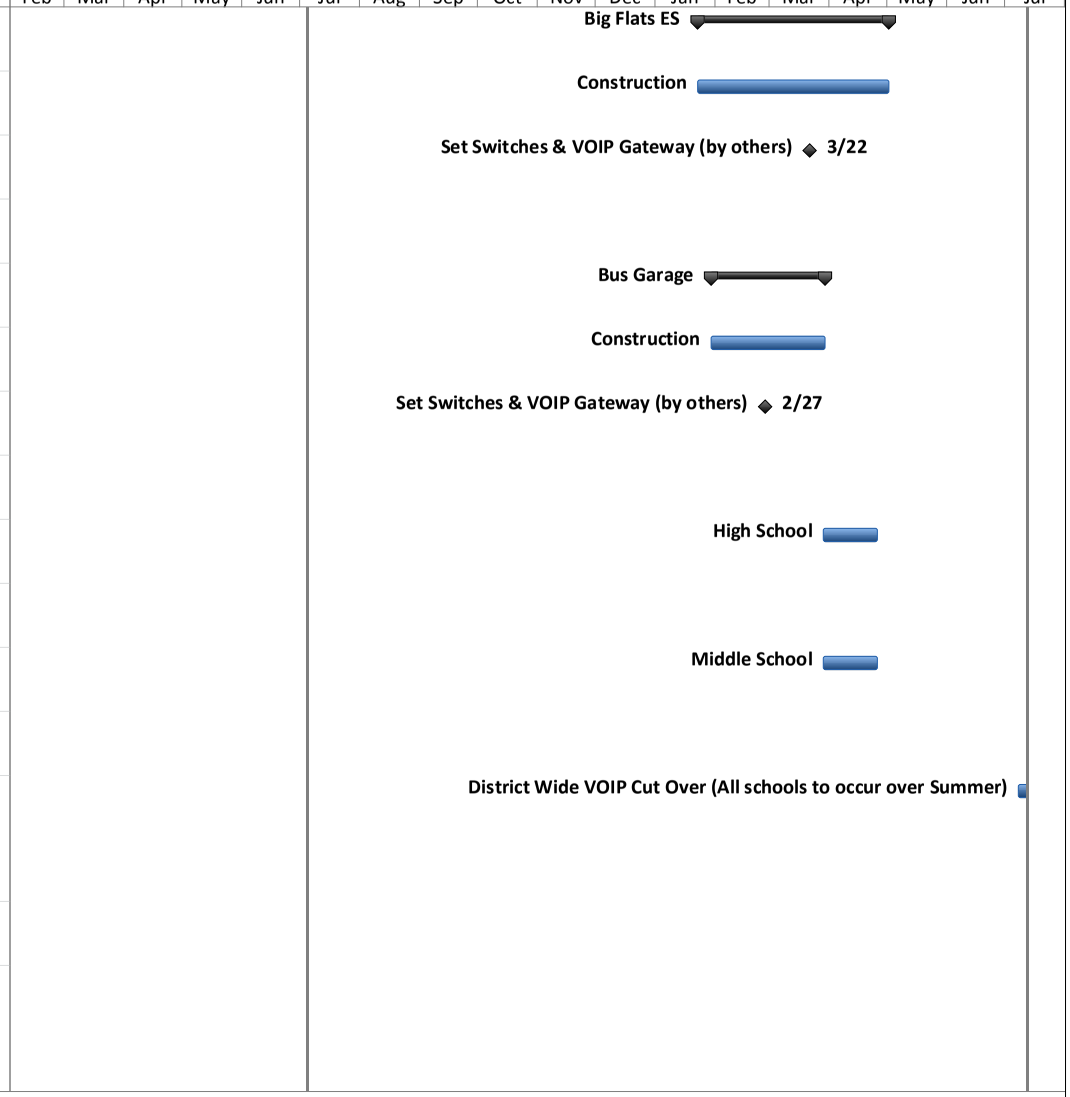
ID	Task Mode	Task Name	Duration	Start	Finish
1					
2		Bid Period	26 days	Tue 7/10/18	Tue 8/14/18
3		Award Contracts	10 days	Wed 8/15/18	Tue 8/28/18
4		Submittals/Scheduling	20 days	Wed 8/29/18	Tue 9/25/18
5					
6		**Gardner Road ES**	**43 days**	**Wed 9/26/18**	**Fri 11/23/18**
7		Construction	43 days	Wed 9/26/18	Fri 11/23/18
8		Set Switches & VOIP Gateway (by others)	0 days	Wed 10/31/18	Wed 10/31/18
9					
10		**Ridge Road ES**	**48 days**	**Wed 9/26/18**	**Fri 11/30/18**
11		Construction	48 days	Wed 9/26/18	Fri 11/30/18
12		Set Switches & VOIP Gateway (by others)	0 days	Mon 11/12/18	Mon 11/12/18
13					
14		**Center Street ES**	**44 days**	**Thu 11/22/18**	**Tue 1/22/19**
15		Construction	44 days	Thu 11/22/18	Tue 1/22/19
16		Set Switches & VOIP Gateway (by others)	0 days	Wed 1/2/19	Wed 1/2/19
17					



Project: DWT - Phasing Schedule B
Date: Thu 7/5/18

Task	External Tasks	Manual Task	Finish-only
Split	External Milestone	Duration-only	Deadline
Milestone	Inactive Task	Manual Summary Rollup	Progress
Summary	Inactive Milestone	Manual Summary	
Project Summary	Inactive Summary	Start-only	

ID	Task Mode	Task Name	Duration	Start	Finish
18		**Big Flats ES**	**71 days?**	**Wed 1/23/19**	**Wed 5/1/19**
19		Construction	71 days?	Wed 1/23/19	Wed 5/1/19
20		Set Switches & VOIP Gateway (by others)	0 days	Fri 3/22/19	Fri 3/22/19
21					
22		**Bus Garage**	**43 days**	**Wed 1/30/19**	**Fri 3/29/19**
23		Construction	43 days	Wed 1/30/19	Fri 3/29/19
24		Set Switches & VOIP Gateway (by others)	0 days	Wed 2/27/19	Wed 2/27/19
25					
26		High School	20 days	Fri 3/29/19	Thu 4/25/19
27					
28		Middle School	20 days	Fri 3/29/19	Thu 4/25/19
29					
30		District Wide VOIP Cut Over (All schools to occur over Summer)	5 days	Mon 7/8/19	Fri 7/12/19
31					
32		Smartboard Alternate replacements to occur over breaks or Summer of 2019			



Project: DWT - Phasing Schedule B
Date: Thu 7/5/18

Task	External Tasks	Manual Task	Finish-only
Split	External Milestone	Duration-only	Deadline
Milestone	Inactive Task	Manual Summary Rollup	Progress
Summary	Inactive Milestone	Manual Summary	
Project Summary	Inactive Summary	Start-only	

7 Construction

Once data rooms are built, cable trey has been run and cable is coiled above corridor ceilings the following will occur (typical for all buildings):

- District will move items away from walls as required for all work
- Demolition of raceway, televisions and support brackets to take place. New raceway and power to be installed (must be live by next morning). All existing data will be temporarily kept live and left free-hanging.
- EC to install new data and terminate new data prior to demolition of existing cabling. The existing phone terminations/cabling will be left live until the Summer VOIP cutover by district.
- Patching/Painting of walls to occur once existing raceway has been demolished prior to new raceway installation.
- The existing phone patch panels, switches, punch down blocks, ect. (entire system) to be demolished once VOIP cutover is completed.

30 District Wide VOIP Cut Over (All schools to occur over Summer)

All existing phone connections must remain in place prior to the VOIP cutover at ALL buildings. Once VOIP system is cut over the existing phone lines are to be removed.

SECTION 01 35 17
ALTERATION PROJECT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Requirements for protection of existing facilities.
   2. Demolition and removals.
   3. Cutting and Patching Requirements
   4. Hazardous materials procedures.

1.2 SUBMITTALS

A. Comply with requirements of Section 01 30 00 as modified below:
   1. Submit Samples of all materials used in patch to match work, specifically ceramic tile, quarry tile, terrazzo, grout, glazed block, ground face block, brick, faux finishes, fabrics, vct, carpet, stained finishes, and any other material deemed necessary by the Architect to ensure appropriate matching of existing finishes.
   2. Submit written explanation of “cutting and patching” procedures when construction means and methods deviate from standard industry practices. At a minimum provide the following:
      a. Describe extent of cutting and patching, and methods to be used.
      b. Products to be used.
      c. Utilities that will be affected.
      d. Details and Engineering calculations when structural members will be affected either by adding reinforcement or altering the structural member.

1.3 DEFINITIONS

A. "Cutting and Patching” – The process of “opening up”, or “exposing” new or existing construction to facilitate the coordination of work, the installation of new work, the testing or inspection of work or building components, and the subsequent “closing up” or “restoration” of affected area back to it’s original condition.
   1. Cutting: Physical modification of construction work, both new and existing, or removal of existing or installed materials necessary to permit installation or performance of other work, including but not limited to; cutting, drilling, core-drilling, chopping, excavating, saw-cutting, trenching, backfill and compaction and other similar operations.
   2. Patching: Restoration, replacement and installation of construction material, new and existing, required to restore surfaces to original conditions and maintain fire rated assemblies after installation of other work.

1.4 PROTECTION OF EXISTING FACILITIES

A. Responsibilities of Each Prime Contractor
   1. Provide and maintain protective measures required to prevent damage to existing facilities and to protect workmen and public, including protective construction required by applicable state and municipal laws, OSHA regulations, Contract Documents, site conditions, and as considered normal for operations involved in the work.
      a. Construct protective measures of types and materials that provide required protection continuously.
      b. Remove protective measure only when need for protection no longer exists.

c. Provide additional protection as directed by Construction Manager or Architect.

2. Roof Protection: During operations on existing or newly-constructed roofs, provide protection for roof in work area in adjacent roof areas.
   a. Where construction operations on roof require removal of existing roofing system, apply roof protection to roof areas adjacent to work area and to approved access routes to work area.
   b. Where construction operations on roof do not required removal of existing roofing system, apply roof protection to all roof areas in work area and to approved access routes to work area.
   c. Limit traffic on roof to protected areas.
   d. Strictly comply with roof protection recommendations of agency, or agencies, holding bond, guarantee, or warranty in force for existing roof; however, if such recommendations are not available, provide minimum protection as follows:
      1) Minimum 1 layer of 1/2" exterior grade plywood laid over existing roof with 1 layer of 1/8" asphalt saturated protection board on top of plywood.
      2) On loose-laid elastic sheet roofing systems with stone ballast, remove existing ballast from area to receive protection, and apply minimum 6 mil. thick polyethylene sheeting over exposed membrane before laying plywood, unless otherwise recommended by roofing system manufacturer.
   e. Where roofing is cut to permit new construction, provide temporary roofing, temporary curbs, temporary coverings, and similar measures to prevent entrance of water. Refer to Section 01 50 00. Remove minimum amount of existing roofing and insulation required to accomplish new construction.

B. Damage to Existing Construction
   1. Each Prime Contractor shall be responsible for damage to existing and newly installed construction caused by his, or his subcontractor's personnel and he shall repair, replace, or restore damaged construction immediately without additional cost to Owner.
      a. If Prime Contractor fails to immediately make efforts to repair, replace, or restore damaged construction, Owner may, after due notice, accomplish required repair, restoration, or replacement in accordance with provisions in General Conditions.
      b. Reimburse any other Prime Contractor for additional cost resulting from failures described above.
      c. The Owner will make no additional payment to the Contractor for additional work resulting from failures described above.
      d. When damage to existing facilities occur and Contractors do not admit to damage the Construction Manager will research to find responsible party. If party cannot be determined all trades will share the cost of appropriate repairs to return the damaged area to original condition.
   2. Provide work required to repair, reconstruct, or replace existing construction due to failure of protective measures provided or due to failure of Prime Contractor to provide adequate protective measures.
      a. Coordinate all repair, replacement, or restoration activities through the Construction Manager.
      b. Patch damaged surfaces and refinish to match existing surfaces as required or as directed by Construction Manager and Architect.

1.5 DEMOLITION AND REMOVALS

A. Responsibility for Demolition and Removals
   1. Each Prime Contractor shall provide cutting and patching of existing surfaces disturbed by the work of their contract unless noted to be provided by another contract.
   2. Each Prime Contractor shall make provisions for removal, demolition, or disconnection of existing construction, equipment, and similar items as required for completion of his contract as shown in the Contract Documents, or encountered during the Project.

a. Coordinate requirements for removal, disconnection, or demolition with other Prime Contractors.
b. Remove all related items not shown or specified as required to complete removals shown on Drawings, including but not limited to insulation, hangers, supporting construction, and similar items. Consult Architect for instructions when such removals involve removal or cutting of structural components.

3. Equipment removal:
   a. Owner shall remove furniture and small loose equipment, unless otherwise specified. Review removals with Owner prior to beginning demolition and removals.
   b. Prime Contractor requiring work shall remove, relocate, and reinstall existing equipment, built-in cabinets, casework, and similar items, including disconnection and capping of utility connections at existing location unless noted to be provided by others.
      1) Connection of utilities at new locations shall be by trade that would normally have installed the item.
      2) Comply with requirements for "Disposal of Removed Materials" below for equipment designated to be turned over to Owner.

B. Verification of Conditions: Each Prime Contractor shall be responsible for visiting the site and building, studying the Drawings, making his own determination as to items and quantities of demolition and removal required, and including required demolition and removals in his bid.
   1. Additional payment will not be made on claims resulting from incomplete estimate of demolition or removals by Prime Contractor.
   2. Any definition of scope of demolition and removals within Contract Documents is intended to establish general limits and responsibilities for demolition and removal work.
      a. Where details in Construction Documents indicate a typical situation requiring demolition or removals, consider such situation to apply to similar conditions throughout and make required demolition or removals.
      b. Verify exact locations of existing piping shown on Drawings.
      c. Check load bearing function of walls and partitions before starting removal.

C. Concealed Conditions
   1. Where structural items, piping, conduit, or other items are exposed during demolition whose function is unknown, notify Architect and await instructions before proceeding with removal.
   2. Where exact locations of existing piping differs from locations shown on drawings, modify indicated connections, relocations, and deletions as required by project conditions, including necessary extensions with new piping to nearest approved point of connection.

D. Safety: carefully perform demolition and removals in such manner to insure safety in handling and to prevent damage to construction and materials indicated to remain.
   1. Provide shoring, bracing, and other temporary measures as required to maintain safe conditions, including structural safety of building.
   2. Provide rigging, hoists, cutting equipment, and similar items required for demolition and removals.

E. Removal of existing ceilings: where existing ceiling finish is scheduled for removal, include existing suspension system in suspended ceiling systems, existing gypsum backer boards in adhesive-applied acoustical tile installation, and other ceiling system components as applicable.

F. Disposal of removed materials
   1. Materials, fixtures, and equipment requested by owner while still in place, or before removal from site, shall be left on site in location designated by owner. itemize in memorandum of transmittal, and obtain receipt from construction manager for all such items.

2. Carefully remove and store in protected locked location items noted in contract documents and items designated to be turned over to owner until they can be relocated and reinstalled.
    a. Where storage in protected, locked location is not possible, provide proper protection against weather and damage by suitable temporary enclosures.
    b. Items damaged or lost during removal or storage shall be replaced in kind and quantity, at expense of responsible prime contractor.
3. Materials, fixtures, and equipment not designated to be reinstalled, relocated, or turned over to owner and all waste materials and debris shall be promptly removed to dumpsters and legally disposed of.
    a. Materials or fixtures suitable for re-use may be used in temporary structured or partitions only.
    b. No removed materials, fixtures, or equipment items shall be reused in permanent structure, unless specified in contract documents.

1.6 CUTTING AND PATCHING

A. Unless otherwise noted, each Contractor shall be responsible for all cutting and patching, required in conjunction with the work of their contract and to:
    1. Be familiar with all the Contract Documents, including other trades, to determine the extent of the cutting and patching requirements to be performed.
    2. Ensure all components fit properly.
    3. Remove out of sequence work installed prematurely.
    4. Remove and correct defective work and work not conforming to requirements of Contract Documents.

B. Coordination:
    1. Coordinate the installation of work with the work of other Contractors to minimize cutting and patching.

C. In addition to contract requirements, upon written instructions of the Architect/Engineer:
    1. All new work must be inspected prior to enclosing. If inspection has not been conducted, Contractor shall uncover newly installed work to provide for Architect/Engineer's observation.

D. All Contractors shall bear the responsibility not to cut or otherwise alter the Owner’s property or any separate Contractors’ work except with the written consent of the Owner and of such separate Contractor. The Contractor shall not un-reasonably withhold from the Owner or any separate Contractor, consent to cutting or otherwise altering the work.

E. Provide equipment, labor, materials, and incidentals necessary for cutting and patching as required for the installation of new work.

F. Prior to Cutting:
    1. Provide shoring, bracing and support as required to maintain structural integrity of project. Contractor shall pay all cost of engineering associated with design of shoring system.
    2. Provide protection for materials on adjacent surfaces.
    3. Provide protection when work will be exposed to the elements.
    4. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the project that might be exposed during cutting and patching operation. Each Prime Contractor is responsible to cover and protect furniture, equipment, etc. not being used in rooms where furniture and equipment will remain during Contractors working hours.

G. Take all precautions necessary to avoid cutting existing pipe, conduit, or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

H. Cut back around removals to point where removal can be concealed with construction matching existing adjacent surfaces.

I. Trim edges of cuts neatly and properly where cuts are to be left exposed or where replacement work is to be installed.

J. Cap, plug, or otherwise seal disconnected items, openings, or devices.

K. Each prime contractor is responsible for all expenses related to “cutting and patching” procedures required to complete the work of their contract.

L. Do not cut and patch structural elements in a manner that would change their load bearing capacity or load - deflection ratio without first receiving approval from the Architect.
   1. Specific items include:
      a. Foundation construction.
      b. Bearing and retaining walls.
      c. Structural concrete.
      d. Structural steel.
      e. Lintels.
      f. Timber and primary wood framing.
      g. Structural decking.
      h. Stair systems.
      i. Miscellaneous structural metals.
      j. Exterior curtain-wall construction.
      k. Equipment supports.
      l. Piping, ductwork, vessels, and equipment.
      m. Structural systems of special construction.

M. Do not cut and patch operating elements or related components that would result in reducing their capacity to perform as intended or increase maintenance or decrease operational life or safety.
   1. specific items include:
      a. Primary operational systems and equipment.
      b. Air or smoke barriers.
      c. Water, moisture, or vapor barriers.
      d. Membranes and flashings.
      e. Fire protection systems.
      f. Noise and vibration control elements and systems.
      g. Control systems.
      h. Communication systems.
      i. Conveying systems.
      j. Electrical wiring systems.

N. Do not cut and patch construction that would, in the Architects opinion reduce the buildings aesthetic qualities.

O. Unless otherwise specified, provide patching materials to match adjacent materials in type, construction, installation, and detailing.
   1. Plaster: do not use plaster patching compounds containing asbestos.
   2. Ceramic tile/structural glazed tile: match existing color and pattern of existing tile units.
   3. Resilient floor tile: match thickness, color, and composition of existing tile units.

P. Provide cutting and patching operations to ensure new work is flush with existing adjacent surfaces and terminations.

Q. When finished surfaces are cut so that smooth transition with new work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect/Engineer for review.

R. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition; to Architect/Engineer for review.

S. Prepare substrates to receive new finish as required for proper application of new finish in accordance with new finish manufacturer's recommendations for existing conditions, including patching holes, leveling uneven surfaces, and similar work. Remove existing finishes where new wall, floor, or ceiling finishes are indicated.

T. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
1. Fit the several parts together, to integrate with other Work.
2. Uncover Work to install or correct ill-timed Work.
3. Remove and replace defective work and work not conforming to requirements of Contract Documents.
4. Provide equipment, labor, materials and incidentals necessary for cutting and patching as required for the installation of new work.
5. Remove samples of installed Work for testing.
6. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

U. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.

1.7 EXECUTION

A. Plaster - patch existing plaster surfaces as follows:
1. Missing plaster or plaster damaged to extent removal is required:
   a. Areas 20 sq. in. or less: apply plaster directly to substrate.
   b. Areas more than 20 sq. in.: use metal lath and plaster system over substrate.
2. Cracked plaster not requiring removal: clean / remove any loose plaster, apply new plaster directly over crack w/ fiber mesh tape. complete finish to extend a minimum 6" on both sides of crack and minimum 6" beyond both ends of crack. match existing texture.

B. Ceramic tile: match patterns and installation methods of existing tile.

C. Ceilings: review revised ceiling patterns with Architect in field prior to removal of existing ceiling.

D. Resilient flooring: clean mastic, dirt, and similar contaminants from substrate after removal of existing resilient flooring, and prepare substrate in accordance with recommendations of new flooring manufacturer.
1. Where patching of existing resilient flooring constitutes more than 50 percent of existing floor surface in room, replace entire floor.

E. Hard surface floor: remove hard surfaces to required depth for installation of new finish materials, and prepare substrate as recommended by new finish material manufacturer, including acid etch or similar method.

F. Painting
1. Where alteration work involves 1 or 2 walls in room or area, paint entire surface of only the walls involved in alteration.
2. Where alteration work involves more than 2 walls in room or area, paint all walls in room or area, unless otherwise indicated.

1.8 QUALITY ASSURANCE

A. General: Structural and other conditions shall be verified with the Architect before proceeding with cutting, demolition and alterations work. Inspect structures prior to start of Work and notify the Architect in writing of any conditions detrimental to the execution of the Work.

B. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

C. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

D. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

E. Costs caused by out of sequence work prematurely installed, defective work, or work not conforming to the Contract Documents, including costs for additional services of the Architect/Engineer, will be paid for by the party responsible for out of sequence, rejected or non-conforming work.

F. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
   1. Water, moisture, or vapor barriers.
   2. Membrane and flashings.
   3. Exterior curtain-wall construction.
   4. Equipment supports.
   5. Piping, ductwork, vessels, and equipment.
   6. Noise and vibration-control elements and systems.

G. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

H. Cut masonry and concrete materials using masonry saw or core drill.

I. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

J. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

K. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of penetrated element.

1.9 HAZARDOUS MATERIALS PROCEDURES

A. Hazardous materials: each prime contractor is advised that if materials suspected to be lead, pcb, or to contain asbestos are encountered during construction, he shall immediately notify owner and take precautions as required to avoid disturbing materials until directed by owner.

PART 2 PRODUCTS

2.1 NOT USED.

PART 3 EXECUTION

3.1 PERFORMANCE

A. Remove and store in protected location, material, which is to be reused and relocated.

B. Cutting shall be done in a manner that will not adversely affect the strength of the building. Holes and openings shall be neatly cut so as to provide a finished appearance and shall be patched around the edge where required for a finished appearance.

C. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances and finishes.

D. Restore work, which has been cut or removed. Provide new products to complete work in accordance with requirements of Contract Documents.

E. Refinish entire surfaces as necessary to provide an even finish:
   1. Continuous Surfaces: to nearest intersections.
   2. Assembly: entire refinishing.

F. Fill and patch openings and holes in existing construction when bolts, piping, ducts, conduit and other penetrating items are removed.

G. Visual requirements: Do no cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities or result in visual evidence of cutting and patching. Remove and replace work cut and patched in a visually unsatisfactory manner.

H. Fire resistive integrity: Where holes or gaps remain from removed elements, fill void using solid fire resistive materials full depth of structure; terminate below finishes to allow new finish to be installed (see patching). Maintain the fire resistive and structural integrity of the structures.

I. Firestopping: All products used for through-penetration firestop systems shall be tested and meet all federal, state, and local codes.

J. Cutting: cut existing construction use methods least likely to damage elements to be retained or adjoining construction. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
   1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. To avoid marring existing surfaces, cut or drill from the exposed or finished side into concealed surfaces.
   3. Cut through concrete and masonry using a cutting machine such as a Carborundum saw or diamond core drill.

K. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removal of walls or partitions extends from one finished are to another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new.
4. Patching around piping and penetrations: Provide firestopping at perimeter of penetrations for smoke-tight seal to maintain integrity of fire resistive and smoke barrier qualities.
5. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch, after the patched area has received primer and second coat.
    a. If two walls or more of a room are patched and painted, prepare and repaint the entire room - all wall surfaces.

L. Patch, repair, or rehang existing ceiling as necessary to provide an even plane surface of uniform appearance.

3.2 CLEANING

A. Daily cleaning of alteration areas of the building shall be the responsibility of each Contractor.

B. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely, paint, mortar, oils, putty, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

C. Dust generated by cutting and patching shall be controlled in a manner so as to prevent infiltration into occupied spaces. Contractor(s) responsible for dust infiltrating the existing duct systems shall bare the cost of cleaning these systems.

D. Demolished Materials shall be removed from the project site at frequent intervals. Piles of demolished materials will not be allowed to accumulate.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. References and standards.

B. Testing and inspection agencies and services.

C. Control of installation.

D. Mock-ups.

E. Tolerances.

F. Manufacturers' field services.

G. Defect Assessment.

H. Examination and Preparation

1.2 RELATED REQUIREMENTS

A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.3 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on BID DATE, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

G. Definitions:
   1. General: Basic contract definitions are included in the Conditions of the Contract.
   2. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited.

3. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
4. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
5. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
6. "Furnish": The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
7. "Install": The term "install" describes operations at the Project Site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
8. Product: The term “product” refers to materials, systems and equipment.
9. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
10. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
    a. The term "experienced," when used with the term "installer," means having a minimum of 5 previous projects similar in size and scope to this project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.
    b. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trade persons of the corresponding generic name.
    c. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
        1) This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.
11. “Project Site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
12. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

H. Specification Format and Content Explanation:
1. Specification Format: These Specifications are organized into Divisions and Sections based on the CSI-04 -Division format and Master Format numbering system.
2. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
    a. Specifying Methods: The techniques or methods of specifying to record requirements varies throughout text and may include “prescriptive”, “open

generic-descriptive", "compliance with standards", "performance", "proprietary" or a combination of these. The method used for specifying one unit of work has no bearing on requirements for another unit of work.

b. Abbreviated Language: Language used in Specifications and other Contract Documents are abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated, as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

c. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

1) The words "shall be" are implied where a colon (:) is used within a sentence or phrase.

d. Overlapping and Conflicting Requirements: Where compliance with two or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, the most stringent is intended and will be enforced, unless specifically detailed language written into contract documents clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently-equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to the Architect for a decision before proceeding.

e. Minimum Quality/Quantity: In every instance, the quality level or quantity shown or specified is intended to be the minimum for the work to be performed or provided. Except as otherwise specifically indicated, the actual work may either comply exactly with the minimum (within specified tolerances), or may exceed that minimum (within reasonable limits). In complying with these requirements, indicated numeric values are either minimums or maximums as noted or as appropriate for context of the requirements. Refer instances of uncertainty to the Architect for decisions before proceeding.

f. Specialists, Assignments: In certain instances, specification of text (requires or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the contractor has no choice or option. These requirements should not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the work; they are also not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party of entity involved in a specific unit of work is recognized as "expert" for the indicated construction process or operation. Nevertheless, the final responsibility for fulfillment of the entire set of requirements remains with the Contractor.

3. Conflict: If there be conflicting variance between the Drawings and the Specifications, the provisions of the Specifications shall control. In case of conflict on the drawings between larger and small scale details and plans, the larger scale plans and details shall control.

I. Industry Standards:

1. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
2. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.
3. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and

requirements that are different but apparently equal to the Architect for a decision before proceeding.

a. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

4. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

a. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

1.4 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Owner will employ and pay for services of an independent testing agency to perform other specified testing and inspection. Refer to Section 01 41 00 - Special Inspections and Structural Testing.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.2 MOCK-UPS

A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the

following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.

B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.

C. Integrated Exterior Mock-ups: construct integrated exterior mock-up as indicated on Drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.

D. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

E. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

F. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.

G. Accepted mock-ups shall be a comparison standard for the remaining Work.

H. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.4 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect 15 days in advance of required observations.
   1. Observer subject to approval of Architect.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.5 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

3.6 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

3.7 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substrate.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section specifies requirements for temporary construction, utilities, facilities, and controls required to support the successful construction of the Project and maintain services until the permanent utilities, facilities, and controls are complete. They shall be installed, maintained, and removed as required to meet project conditions and contract requirements.
   1. General
      a. Quality Assurance
      b. Project Conditions
      c. Installation
   2. Materials & Equipment
      a. Deliveries
      b. Material Inventories
      c. Materials
      d. Equipment
   3. Utilities & Systems
   4. Facilities
      a. Temporary sanitary facilities.
   5. Construction Aids
      a. Lifts and Hoists
   6. Enclosures
      a. Barricades, Warning Signs, and Lights
      b. Site Enclosure Fence
   7. Vehicular Considerations.
      a. Access, Staging & Parking
   8. Waste removal and progress cleaning.
   9. Operation, Termination & Removal
   10. Protection of Property

1.2 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary.

B. Section 01 51 00 - Temporary Utilities.

1.3 GENERAL

A. Quality Assurance
   1. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
      a. New York State Uniform Building Code
      b. Health and safety regulations
      c. Utility company regulations
      d. Police, Fire Department and Rescue Squad rules
      e. Environmental protection regulations
   2. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits. Submit copies to the Construction Manager.

B. Project Conditions
   1. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit to interfere with progress. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site. Remove, relocate and replace temporary facilities and controls as required by the progress of the Work, or as requested by the Construction Manager. The above will be done at no cost to the Owner.
   2. No firearms, alcoholic beverages, tobacco products or controlled substances shall be allowed on the Project at any time per local, state and federal laws/regulations. Any violators will be immediately and permanently removed from the job site.

C. Installation
   1. Use of qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
   2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

1.4 MATERIALS AND EQUIPMENT

A. Deliveries
   1. Contractors shall coordinate delivery and storage on the jobsite of all significant materials. Deliveries will not be permitted from forty-five (45) minutes before the start of the school day to fifteen (15) minutes after the start of the school day and from (15) minutes before the end of the school day to forty-five (45) minutes after the end of the school day unless written permission is obtained from the Owner through the Construction Manager.
   2. All Contractors are required to properly instruct material suppliers and vendors to address deliveries to them specifically by named responsible party at the jobsite and require advance notice.
   3. All deliveries addressed to the project in general, the Owner, Construction Manager or Architect/Engineer shall be refused and returned to the shipper.
   4. The Owner will not be responsible for receipt, handling, or loss of any materials which are shipped to the Owner in error and received unknowing of relationship to the Project.
   5. Contractors shall provide his superintendent with a telephone to enable locating the superintendent on and off site.

B. Material Inventories
   1. Contractors shall coordinate the delivery and storage on the jobsite of all signification materials.
   2. Each Contractor shall be responsible for the proper location, secure, and weather resistant storage as required of all materials. This includes placement of materials not to obstruct passage on site or within building structures or in any way which causes impediment or obstruction to the Work.
   3. All material inventories must be stored by the Contractor to avoid excessive loads on building structure.
   4. When required for the progress of the project, a Contractor shall remove or relocate material inventories.

C. Materials
   1. General: Provide new, undamaged materials in serviceable condition may be used. Provide materials suitable or the use intended.
   2. Lumber and Plywood: Comply with requirements in Section 06 10 00 - Rough Carpentry.

3. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride fire retardant tarpaulins. Each Contractor shall provide tarpaulins as required for their work.
4. Water: Each Contractor shall provide potable drinking water for their workmen approved by local health authorities.

D. Equipment
1. General: Provide new equipment, or undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable or use intended.
2. Water Hoses: Each Contractor requiring water shall provide their own ¾" heavy-duty, abrasion-resistant, flexible rubber hoses, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at host discharge.
3. Electrical Power Cords: Each Contractor shall provide their own grounded extension cords (12 Gauge minimum); use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. All power cords are to be elevated, supported and hung from structure above wherever possible to avoid trip hazards.
4. Electrical Welding Outlets: These will not be provided. Each Contractor will be responsible for his own welding power.
5. First Aid Supplies: Comply with governing regulations.
6. Fire Extinguishers: The General Contractor shall provide hand-carried, portable UL-rated, class "ABC" fire extinguishers for the entire construction area, as defined by OSHA Standards. In other locations, provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers. Comply with NFPA10 classification, extinguishing agent and size required by locations and class of fire exposure. Each Contractor shall provide fire extinguishers for their own use.

1.5 UTILITIES

A. Utilities and Systems:
1. Contractors interrupting services due to their construction operations shall provide temporary utility lines, as required, to maintain services.
2. The Electrical Contractor shall provide temporary electrical power service where required to construction offices for all contractors and shall remove temporary service at completion of the Project. Power will be made available twenty-four (24) hours per day.

B. Temporary Utilities - See Section 01 51 00

C. Temporary Telecommunications Services
1. It is the responsibility of Each Contractor to provide and maintain (including any cost) any data or phone line they deem necessary for their day to day operations.

1.6 FACILITIES

A. Temporary Sanitary Facilities
1. The Plumbing Contractor shall provide and maintain required facilities and enclosures with sanitary handwash. Facilities shall be located at staging areas and in reasonable proximity of all work areas as directed by Construction Manager. Provide at time of project mobilization.
a. Unit provided shall be self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber, reinforced polyester shell or similar nonabsorbent material.
2. Provide at least one unit of each twelve (12) construction personnel on site. Refer to Site Safety and Logistics plans for locations.

3. Use of existing facilities is not permitted.
4. New permanent facilities may not be used during construction operations.
5. The Plumbing Contractor shall be responsible to maintain weekly in clean and sanitary condition.
   a. Provide all toilet supplies including toilet paper, hand sanitizer and waster receptor.
6. At end of construction, remove temporary sanitary facilities and return site to same or better condition as originally found.
7. Provide a minimum of one facility at each building site. Location of units to be field coordinated with Construction Manager.

1.7 CONSTRUCTION AIDS & PROTECTION

A. Protection:
   1. The General Trades Contractor shall provide handrails and barricades on all perimeters, stairs and landings according to OSHA regulations. Provide barricades at all elevator shaft.
   2. Each Contractor shall install safety coverings, as needed to protect workers from hazards associated with any open holes or other openings, including but not limited to floors, walls and roofs. This work shall comply with all OSHA requirements and remain in place until permanent construction fills those openings.
   3. All Contractor upon working in any of the areas named in the above paragraph shall remove the safety covering and handrail to perform their work. Upon completion of his work for the day, lunch, or breaks, or any time when the individual Contractor is not working in that opening, the safety covering and handrail must be replaced by The Contractor removing it. At the end of each day, the General Trades Contractor shall inspect the site and install all safety coverings and handrails. At the end of the Project, or in order to install permanent construction, Each Contractor shall remove coverings and handrails.
   4. Each Contractor requiring access to above grade work are responsible for providing ladders, scaffolding and appropriate methods to access their work. The Contractor desiring use of in-place above grade work platforms must arrange directly with the party that owns the equipment and make all rental and insurance arrangements directly with that party.
   5. All work platforms, scaffolding, etc. on the Project shall be available for access by the Owner, Construction Manager, Architect/Engineer, Authorities having jurisdiction, and Testing Agencies.

B. Lifts and Hoists
   1. Lifting and hoisting of all materials and equipment will be the responsibility of Each Contractor.
   2. Truck cranes and similar devices used for hoisting materials are considered “tools and equipment” and shall be provided by the contractor requiring the tools and equipment.
   3. Each Contractor shall be responsible to provide all site and subsurface modification preparation and replacement required to use his lifting and hoisting equipment.

1.8 ENCLOSURES

A. Barriers
   1. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from construction operations.
   2. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
   3. Provide protection for plants designated to remain. Replace damaged plants.
   4. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

B. Site Enclosure Fencing

1. Construction: Commercial grade chain link fence with privacy screening.
2. Provide 6 foot high fence around construction site; equip with vehicular gates with locks.
3. The General Trades Contractor shall perform all fencing and barrier work to limit access to the contract area immediately upon mobilizing for Work at the beginning of the Project.
4. The General Trades Contractor shall maintain permanent and temporary fencing throughout the duration of the Project, particularly maintaining security function of gate devices.
5. The General Trades Contractor shall remove and replace temporary fencing as required to accommodate the work of this project.
6. The Construction Manager during the course of construction may require the fence to be relocated as needed and as indicated on site staging plan.

C. Barricades, Warning Signs and Lights
1. The General Trades Contractor, at the interior and entrances of the building, and the General Trades Contractor on site and at the exterior of the building, shall comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against.

D. Exterior Enclosures
1. Each contractor shall be responsible for proper enclosure of their own openings for protection of exterior construction in progress and completed from exposure, bad weather, other construction operations, and similar activities and to maintain the progress schedule.
2. The General Trades Contractor shall provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
   a. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
3. Install tarpaulins securely with noncombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.

E. Interior Enclosures
1. The General Trades Contractor shall provide temporary partitions as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture from all trades' work into Owner-occupied areas, and to prevent damage to existing materials and equipment.
2. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:
   a. Insulated to R 16.
   b. STC rating of 35 in accordance with ASTM E90.
   c. Maximum flame spread rating of 75 in accordance with ASTM E84.
3. Paint surfaces exposed to view from Owner-occupied areas.

1.9 VEHICULAR CONSIDERATIONS

A. Access, Staging and Parking
1. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
   a. Maintain 20 feet wide driveways with turning space between and around combustible materials.
2. Coordinate access and haul routes with governing authorities and Owner.
3. Provide and maintain access to fire hydrants and control valves, free of obstructions.
4. The General Trades Contractor shall provide means of dust/dirt/debris control from vehicles leaving the Construction Site and entering surrounding publuc streets.

5. Existing on-site roads may be used for construction traffic.
6. Maintenance:
    a. All site areas shall be maintained by The General Trades Contractor including public roads immediately outside property.
    b. Snow removal for all construction roads, access roads, staging areas, Construction Manager Trailer and parking will be provided by the Site Contractor. Each Contractor is responsible for all other snow removal as it pertains to their work.
    c. The General Trades Contractor shall maintain traffic and parking areas in sound condition free of excavated material, construction equipment, product, mud, snow, and ice.
    d. The General Trades Contractor shall maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.
7. Use of site and premises for Contractor staging, access and employee parking shall be coordinated with the Construction Manager and approved by the Owner.
8. The General Trades Contractor shall provide all work required to restore site, including but not limited to construction staging area, parking, and roads during the latter time of the Project in addition to all other patching required as a result of disturbances for work of the Project including underground electric, communication, network, etc.
9. Existing parking areas may be used for construction parking. Tracked vehicles not allowed on pavement.
10. Permanent Pavements and Parking Facilities:
    a. Prior to Substantial Completion, bases for permanent roads and parking areas may be used for construction traffic.
    b. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.
    c. Use of permanent parking structures is not permitted.
11. Removal, Repair:
    a. The General Trades Contractor shall provide all work required to restore site, including but not limited to construction staging area, parking, and roads prior to Substantial Completion, in addition to all other patching required as a result of disturbances for work of the Project including underground electric, communication, network, etc.
    b. Remove temporary materials and construction when permanent paving is usable.
    c. Remove underground work and compacted materials to depth of 2 feet; fill and grade site as specified.
    d. Repair existing and permanent facilities damaged by use, to original and/or specified condition.

1.10 WASTE REMOVAL AND PROGRESS CLEANING

A. Each Contractor is responsible for general clean-up and trash removal resulting from the work or employees of that contract. The General Trades Contractor shall provide dumpster(s) as required for the purpose of trash removal for all Contractors, location to be coordinated with Construction Manager. Hazardous materials shall not be placed in dumpsters, but shall be removed from the site by the Contractor's licensed subcontractor responsible for the material. The Construction Manager will also organize a weekly project clean up with Each Contractor. All Contractors on site shall provide labor to assist in this clean up.

B. Each Contractor on the Project will be required to clean up, and deposit in the dumpster, all debris generated by his Contract Work on a daily basis. This requirement will be enforced and will result in cost assessment against the Contractor who fails to perform daily cleanup. The General Trades Contractor will be responsible for flattening or crushing all trash as necessary when placed into the dumpster.

C. The General Trades Contractor will be responsible for weekly broom cleaning of all floor surfaces, for dust, dirt and general trash. He will deposit the same in the dumpster.

D. Remove trash from site weekly or when dumpster is full.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

F. Comply with requirements of NFPA 241 for removal of combustible waste material and debris.

G. Dumpsters shall be located at the site, accessible to building and roads.

H. Contractors may load legally acceptable construction debris to the Dumpster (from this project only). Cost of all disposal fees shall be the responsibility of the General Trades Contactor.

I. Dumpsters shall remain on the project until project completion, or as directed by Construction Manager.

J. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.

1.11 OPERATION, TERMINATION AND REMOVAL

A. Supervision: Each Contractor shall enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance: Each Contractor shall maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
   1. Maintain operation of temporary enclosures, heating cooling, humidity control, ventilation and similar facilities on a 24-hour a day basis where required to achieve indicated results and to avoid possible damage.
   2. Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

C. Termination and Removal: Unless the Construction Manager requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility or not later than Substantial Completion. Complete or, if necessary restore, permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
   1. Materials and facilities that constitute temporary facilities are property of the Contractor. The Owner reserves the right to take possession of Project identification signs.

1.12 PROTECTION OF PROPERTY

A. General:
   1. Each Contractor shall continuously protect the Work, other work, and the property of the Owner and others from damage, injury or loss arising in connection with the Work. Owner, Architect, and Construction Manager shall not be responsible for any loss or damage to the Work, however caused, until after final acceptance thereof by the Owner, nor shall Owner, Architect, or Construction Manager be responsible for loss of or damage (however caused) to materials, equipment, appliances and other personal property of Contractors used in the performance of the Work.
   2. The General Trades Contractor shall provide, erect and maintain barricades, warning signs, flags, lights as may be necessary to protect the Work and safeguard the workers and the general public. As such protection shall comply with the requirements of the proper authorities having jurisdiction.
   3. Each Contractor shall begin repair of damages resulting from any occurrence immediately if it is a life safety or security issue or presents the eminent possible of

further damage. Otherwise repairs must begin within three days after (in the judgment of the Construction Manager) the commencement of repairs is possible.

B. Fire Safety:
   1. Each Contractor shall store combustible materials in containers in fire-safe locations.
   2. Each Contractor shall maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas. **Smoking is not permitted on the School District property.**
   3. Each Contractor shall provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
   4. Construction Manager shall be notified prior to any and all hot work.
      a. Each Contractor performing hot work shall provide a fire watch during and for at least 30-minutes after potential fire ignition work has been performed.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 51 00
TEMPORARY UTILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities: Provision of electricity, lighting, heat, ventilation, and water.

1.2 RELATED REQUIREMENTS

A. Section 01 50 00 - Temporary Facilities and Controls:
   1. Temporary telecommunications services for administrative purposes.
   2. Temporary sanitary facilities required by law.

1.3 TEMPORARY ELECTRICITY

A. Service Cost: By Electrical Contractor.

B. Energy Costs: By Owner.

C. Connect to Owner's existing power service.
   1. Do not disrupt Owner's need for continuous service.
   2. Exercise measures to conserve energy.

D. Provide temporary electric feeder from existing building electrical service at location as directed.

E. Power Service Characteristics: Provide GFCI distribution system, for voltages up to 220/208 volt.
   1. Temporary system shall be sufficient to accommodate temporary lighting and construction operations, including the use of power tools, and start-up of specified building equipment which must be tested, started or placed into use prior to completion of its permanent power connections.
   2. Provide weatherproof, grounded wiring with overload protection; with direct wired connections, where feasible.
   3. Locate multiple outlets for 120 volt power, not less than 4 gang, at each story and area of construction, spaced so that the entire area of construction can be reached by power tools on a single 100’ extension cord. Maximum 20 Amp circuit breaker, four (4) receptacles per circuit breaker.

F. Complement existing power service capacity and characteristics as required.

G. Provide adequate number and size breakers and power outlets for all construction trades, with branch wiring and distribution boxes located as required. Each Contractor shall provide flexible power cords as required.
   1. The Electrical Contractor shall have a cord inspection program in place and shall maintain the inspection records on site. This requirement does not relieve any other user of the power or any other party in the area of the temporary power from their legal responsibilities for seeing that the system is maintained to OSHA and NEC requirements.

H. Provide main service disconnect and over-current protection at convenient location and meter.

I. Permanent convenience receptacles may be utilized during construction.

J. Provide adequate distribution equipment, wiring, and outlets to provide single phase branch circuits for power and lighting.

1. Provide 20 ampere duplex outlets, single phase circuits for power tools for every 100 sq ft of active work area.
2. Provide 20 ampere, single phase branch circuits for lighting.
3. Construction circuits shall be separate and independent from temporary lighting.

K. The Electrical Contractor shall provide and pay for all maintenance, servicing, operation, equipment, and supervision of lines installed.

L. As permanent power distribution system is accepted as substantially complete, either entire system or usable portions thereof, the Electrical Contractor shall make suitable provisions for temporary use thereof, and remove unused portions of temporary system.

M. When temporary electrical lines are no longer required, they shall be remove by the Electrical Contractor and any part, or parts of the grounds or building disturbed or damaged shall be brought back to their original condition.

N. The Electrical Contractor shall maintain and operate permanent electrical supply and distribution system until time of final acceptance and transfer of operation to Owner's personnel.

O. The Electrical Contractor shall provide temporary power connections to all mechanical and any additional equipment indicated on E series drawings until permanent power/new electric feeds and new electric components are in place.

P. The Electrical Contractor will provide 24-hour temporary power to any heat tape (installed by others) on temporary water and/or fire line. All temporary heat work shall comply with existing OSHA requirements.

1.4 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. The Electrical Contractor shall provide and maintain temporary lighting throughout construction site as required by local construction codes with the installation meeting the NEC and local code enforcement requirements.

B. The Electrical Contractor shall provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight and general lighting as stated below:
1. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of ____ watt/sq ft .
2. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
3. Provide safety lighting in the stairways, hallways, and exterior security lighting on a 24-hour basis
4. Provide exterior fixtures where exposed to moisture.

C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required. Provide guard cages or tempered glass enclosures where exposed to breakage.

D. Provide switching controls for all lighting which will enable turning off temporary lighting during off-construction hours.

E. The Electrical Contractor shall maintain and operate temporary lighting and provide routine repairs.

F. Special lighting required for construction activities shall be provided by the contractor requiring it.

G. Permanent building lighting may be utilized during construction.

1. As the permanent lighting system is substantially complete for each story or usable portion thereof, The Electrical Contractor shall make suitable provisions for temporary use thereof and remove unused portions of temporary lighting system.
2. The Electrical Contractor shall maintain and operate permanent lighting system until time of final acceptance and transfer of operation to Owner's personnel, including turning off lighting during off-construction hours.
3. The Electrical Contractor shall replace bulbs that are burned out or substantially dimmed by substantial hours of use or broken by construction.

1.5 TEMPORARY HEATING

A. Cost of Equipment: By Mechanical Contractor.

B. Cost of Energy: By Owner.

C. Enclose building prior to activating temporary heat in accordance with Section 01 50 00.

D. The following temporary heating specification is to be utilized and provided by The Mechanical Contractor:
1. Heaters shall be direct-fired Make-up Air units with discharge modulation. Units must be designed to operate either inside or outside the building while positioned to draw 100% outside air.
2. All equipment must employ squirrel cage blower for quiet operation. Noisy propane heaters will not be allowed.
3. Temperature control units must have discharge modulation with remote space thermostats. Discharge temperature not to exceed 180 degrees F. No open flame visible for discharge will be allowed.
4. Units must ignite pilot and prove flame before main burner is opened.
5. Units to include high and low temperature shutdown.
6. Heaters shall comply with all applicable state, local and OSHA regulations and shall have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
7. It is required that a routine maintenance is performed at least once a month to insure the units are operating properly. This cost will be figured into the equipment unit rates and there will be no additional costs for these visits.
8. All equipment to be utilized will meet the design criteria in Items 1 through 7 above.

E. In the event of equipment failure or repairs, alternate equipment must be in place within 12 hours of failure or the Owner and CM shall have the right to take action necessary to restore the heat to the design temperature and will deduct any and all charges from The Mechanical Contractor.

F. Maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.
1. If the permanent heating system is not available for use when any Contractor requires that the temperature be maintained above 50 degrees (for proper installation of finishes for example), the Mechanical Contractor shall be responsible to provide the additional heating.

G. Humidification: Where control of ambient humidity is required for proper performance of the work, or for curing/drying of installed work or for protection of installed work from deterioration due to variations ambient conditions, Each Contractor shall provide their own temporary humidification or dehumidification equipment to maintain the required conditions. Coordinate the use of the equipment with temporary heating to produce the required conditions with a minimum overall use of energy.

H. The Electrical Contractor shall provide power for oil or gas fired temporary heaters. It will be connected so that it can remain "live" when the temporary lighting has been turned off.

I. The Plumbing Contractor shall provide a temporary natural gas service (as directed by Construction Manager) for required temporary heat. All supply lines for natural gas fired temporary heaters to be provided by Mechanical Contractor.

J. As permanent heating system is substantially complete and operational for each story or usable portion thereof, The Mechanical Contract shall make suitable provisions for use thereof in temporary heating. The Mechanical Contractor shall maintain and operate permanent system for temporary heating purposes, including service to occupied areas, if any, until time of final acceptance or transfer of operation to Owner's personnel, for major parts of system if not for entire heating system.
   1. Warranty: the warranty, as required by the Contract Specifications, will not begin until final acceptance of the system has been given by the Architect/Engineer for all or part of a system. The warranty period does not start with the use of the equipment for temporary heating and cooling.
   2. All permanent heating equipment used to supply temporary heat shall be completely cleaned and reconditioned by The Mechanical Contractor prior to final acceptance. Radiator traps and valves used in the heating system during the period of its operation to supply temporary heat shall not be reinstalled in the permanent system. Install new disposable filters and clean non-disposable filters prior to final acceptance. Replace worn parts and parts that have been subject to unusual operating conditions.

K. The Mechanical Contractor shall remove all soot, smudges, and other deposits from walls ceilings and all exposed surfaces which are the result of the use of any temporary heating equipment including the use of the permanent heating system for temporary heat purposes. Finish work shall not be done until all such surfaces are properly cleaned.

1.6 TEMPORARY VENTILATION

A. A contractor requiring ventilation for work shall provide fans or other necessary equipment to ventilate and condition air as the work requires.

1.7 TEMPORARY WATER SERVICE

A. Cost of Service: By Plumbing Contractor.

B. Cost of Water Used: By Owner.

C. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
   1. The Plumbing Contractor shall provide ¾" hose bib terminations at each level and area of construction work, so that any area of the building construction can be reached with 150' length of hose. Water service may be run from a temporary or permanent source.
      a. Sterilization: Sterilize temporary water piping prior to use.
      b. Protect system from freezing.
      c. Maintain 30 psig. Water pressure with 5 gpm flow rate.

D. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 51 10

LIFE SAFETY REQUIREMENTS DURING SCHOOL CONSTRUCTION

PART 1 GENERAL

1.1 SAFETY AND SECURITY STANDARDS

A. Each contractor shall adhere to and be responsible for but not be limited to the life safety requirements stated in this section.

B. General safety and security standards for construction projects:
   1. All construction, reconstruction and Renovation work shall be performed in a manner to protect the workers and public from injury. Adjoining property and structures shall be protected from damage at all times by the Contractor(s).
   2. All construction materials shall be stored in a safe and secure manner.
   3. Fences around construction supplies or debris shall be maintained.
   4. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
   5. During exterior renovation work, overhead protection shall be provided for any sidewalks or areas immediately beneath the work site or such areas shall be fenced off and provided with warning signs to prevent unauthorized entry.
   6. Comply with Regulations of the Commissioner of Eductation Section 155.5 Uniform Safety Standards for School Construction and Maintenance Project.
   7. Workers shall be required to wear photo-identification badges at all times for identification and security purposes while working at the project site. Costs of such identification shall be borne by each individual contractor. Badges shall conform to the samples given within this specification for workers who are fingerprint cleared, and those who are not.
      a. Workers without fingerprint clearance.
         1) All workers who are not reasonably expected to have more than 5 days of face to face personal contact or interaction with students in a given school year do not need to be fingerprinted. Their identification badges will conform to example A.
         2) Workers without such clearance shall be required to stay in the separated area for construction described in section 1.2 below unless accompanied by a school employee.
      b. Workers with fingerprint clearance.
         1) Workers who are reasonably expected to perform more than 5 days of work involving face to face personal contact or interaction with students in any school year must be fingerprinted according to the following procedure.
            (a) The district must receive a list of all those contractors who will be undergoing the fingerprinting procedure and will in turn need ID badges, along with location(s) for which they need clearance.
            (b) A contractor may not get an ID badge until after he/she has completed the fingerprinting procedure and the district has received clearance.
            (c) For fingerprinting, the contractor obtains paperwork from the Human Resources Office (South Wing of the High School).
            (d) The NYSED website will indicate clearance status; the district will also receive written notification from NYSED. The contractor should check their account on the NYSED site to see when they have cleared. Once the contractor sees that the state has granted clearance, the contractor should print the page from the NYSED site as proof. Once clearance has been granted, the badge process can begin.

(e) If the contractor has previously completed the clearance procedure with NYSED, they must visit the district Human Resources Office with photo ID and a copy of the clearance from the website from the previous year (if possible). The HR office will confirm state clearance and print a new clearance page from the website. This must be done before the badge can be created.
(f) To get the ID badge, the contractor must go to the Superintendent's Office (South Wing of the High School) to have his/her photo taken. The contractor must bring identification (driver's license) and proof of clearance (a printout from the NYSED site). The badge will be created in approximately one week after the photo has been taken.
(g) Once the badge is completed, it will be sent to the Facilities Office for pick-up.
(h) The District reserves the right to decide in its sole judgment to determine a worker needs to be fingerprinted. If the worker is unable to pass fingerprint clearance, the Contractor shall remove the worker from the site.

1.2 SEPARATION

A. Separation of construction areas from occupied spaces.
1. Construction areas that are under the control of a contractor and therefore not occupied by district staff or students shall be separated from occupied areas by code compliant construction.
2. Provisions shall be made to prevent the passage of dust and contaminants into occupied parts of the building. Periodic inspection and repairs of the containment barriers must be made to prevent exposure to dust or contaminants.
3. Gypsum board on metal studs must be used in exit ways or other areas that require fire rated separation.
4. Heavy-duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.
5. School buildings occupied during a construction project shall maintain required health, safety and educational capabilities at all times that classes are in session.
6. A specific stairwell and/or elevator should be assigned for construction worker use during work hours. In general, workers may not use corridors, stairs or elevators designated for students or school staff.
7. Large amounts of debris must be removed by using enclosed chutes or a similar sealed system. There shall be no movement of debris through halls of occupied spaces of the building. No material shall be dropped or thrown outside the walls of the building.
8. All occupied parts of the building affected by renovation activity shall be cleaned at the close of each workday utilizing HEPA filtered vacuum system.

1.3 VENTILATION

A. Mechanical Contractor shall provide temporary exhaust ventilation to maintain indoor air quality.
1. Provide an exhaust air system for the active project areas. Exhaust layout and capacities shall be adequate for removal of VOC's, off-gases, gases, dusts, mists, or other emissions. Points of intakes and discharges shall be field determined to protect student occupied areas. Exhaust systems shall terminate at the building exterior.
2. Objective:
a. Maintain a negative pressure between the work area and student occupied areas
b. Before start of work, submit a proposed layout for the exhaust air system. Do not begin work until approval of the Architect, Engineer, and owner is obtained. Indicate on submission locations of fans, intake points, CFM capacities and electrical requirements. Electrical contractor shall furnish power wiring to temporary equipment.

3. System operation requirements:
   a. Provide sufficient quantity of exhaust fans in existing window openings or other approved locations to eliminate pockets of stagnant contaminated air. Capacities for equipment shall be operated in accordance with the following standards:
   b. System operation:
      1) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated in accordance with the following standards:
         (a) Provide one work place air change every 15 minutes.

To calculate total air flow requirement:

$$\text{TOTAL FT/3 MIN} = \frac{\text{VOLUME OF WORK AREA (IN FT3)}}{\text{15 MINUTES}}$$

To calculate the number of units needed for the work area:

$$\text{NUMBER OF UNITS NEEDED} = \frac{\text{TOTAL FT3/MIN}}{\text{(CAPACITY OF UNIT IN FT3/MIN)}}$$

      2) Work area shall be defined as phased zone ie. R-1.
      3) Exhaust air system shall operate for a minimum of 72 hours after work is completed, or until all materials have cured sufficiently as to stop off-gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
      4) Maintain clearance from all temporary exhaust outlets to all active building areas. Exhaust duct locations shall be approved by Architect/Engineer.

1.4 EXITING

A. Required building exiting shall be maintained at all times so that there are no dead end conditions or corridor pockets greater than 1 1/2 x the corridor or pocket width.

B. The General Contractor, at each building, shall provide temporary exists and related construction as required in the Construction Drawings.

1.5 FIRE AND HAZARD PREVENTION

A. Areas of buildings under construction that are to remain occupied shall maintain a Certificate of Occupancy. In addition, all requirements itemized on the Fire Safety Inspection Report shall be in compliance during periods of student or staff occupancy; the following shall be strictly enforced.
   1. No smoking is allowed on public school property, including construction areas.
   2. During construction daily inspections of district occupied areas shall be conducted by school district personnel to assure that construction materials, equipment or debris do not block fire exits or emergency egress windows. Each Contractor shall promptly move any or all construction debris, materials and/or equipment as required to maintain exist passages at all times and clear during student or staff occupancy.
   3. Proper operation of fire extinguishers, fire alarm, and smoke/fire detection systems shall be maintained throughout the duration of the project.

1.6 NOISE ABATEMENT

A. Construction activities and operations shall not produce noise in excess of 60 dBA in occupied spaces. If noise levels in occupied classroom spaces exceed 60 dBA the Contractor

exceeding this limit shall provide acoustical abatement procedures or schedule activities during unoccupied times. Each Contractor is advised that the School District may schedule "no work" periods during the project. Such schedules shall not impact the Construction Schedule or Budget.

1.7 HAZARD CONTROL

A. The Contractor shall take every precaution to eliminate the potential of construction fumes entering the occupied building. The Contractor shall take care to assure fresh air intakes do not draw construction related fumes into the building.

B. Each Contractor shall provide for "off-gassing" of volatile organic compounds introduced during construction before occupancy. Specific attention is warranted for activities including glues, paint, furniture, carpeting, wall coverings, and drapery. Manufacturers shall be contacted to obtain information regarding appropriate temperatures and times needed to cure or ventilate the product during use and before safe occupancy of a space can be assured. Building materials or furnishings which "off-gas" chemical fumes, gases, or other contaminants shall be aired out in a well-ventilated heated warehouse before it is brought to the project for installation or the manufacturer's recommended "off-gassing" periods must be scheduled between installation and use of the space. If the work will generate toxic gases that cannot be contained in an isolated area, the work must be done when school classes and programs are not in session. The work areas must be properly ventilated and the material must be given proper time to cure or "off gas" before re-occupancy.

C. Each Contractor shall maintain the Manufacturer's Material Safety Data Sheets (MSDS) at the site for all products used in the project. MSDS sheets shall be provided to the School District when requested. MSDS indicate chemicals used in the product, product toxicity, and typical side effects of exposure to the product and safe procedures for use of the product.

D. Asbestos abatement protocols. All asbestos abatement projects shall comply with all applicable Federal and State laws including but not limited to the New York State Department of Labor industrial code rule 56(12 NYCRR 56), and the federal Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763 (Code of Federal Regulations, 1998 Edition, Superintendent of Public Documents, U.S. Government Printing Office, Washington, DC 20402; 1998; downloading and reading at the Department of Housing and Urban Renewal, 451 7th Street SW, Washington, DC 20410, (202) 401-0388, web site; www.hud.gov/search.html, scroll web page to Reading Room, click on Bookshelf 10: Lead Paint). Large and small asbestos projects as defined by 12 NYCRR 56 shall not be performed while the building is occupied. Minor asbestos projects defined by 12 NYCRR 56 as an asbestos project involving the removal, disturbance, repair, encapsulation, enclosure or handling of 10 square feet or less of asbestos or asbestos material, or 25 linear feet or less of asbestos or asbestos material may be performed in unoccupied areas of an occupied building in accordance with the above referenced regulations. For more information on Asbestos Abatement see Section 02 21 10 Asbestos Abatement.

E. Lead Based paint: Lead based paint has been identified as being applied to some building components that are to be selectively demolished. Lead based paint testing has been performed and a report is on file and available for review and use. It is the Contractor’s responsibility to become familiar with areas containing lead based paint and to communicate the presence of lead based paint to all employees.
   1. Effective April 22, 2010 all contractors are required to conform to the Environmental Protection Agency’s (EPA) Lead Renovation, Repair and Painting (RRP) program. This regulation has been developed to prevent lead contamination when performing renovation, repair and painting projects which disturbs lead based paint in homes, child care facilities and schools built before 1978 if these buildings are visited regularly by any child under 6 years of age.

2. Any abatement work required shall be performed by a certified firm employing workers trained and certified for lead based paint activities. All work is to be performed in accordance with all applicable regulations including: 40 CFR 745 (USEPA), 29 CFR 1926 (OSHA), (HUD) Federal Housing and Urban Development Regulations and New York State Education Department requirements.
3. All contractors involved with lead based paint activities shall be certified in lead-safe practices as detailed in the Code of Federal Regulation 40 CFR, Part 745.
4. Contractors must document compliance with this requirement. EPA's <http://www.epa.gov/lead/pubs/renovaterightbrochuresp.pdf>may be used for this purpose.
5. For more information regarding this regulation visit the EPA website at www.epa.gov/lead/pubs/renovation.htm for requirements.
6. A summary of the lead-based paint testing report is attached to the end of this section.
7. Should paint suspected of containing lead, but not identified within the report be encountered, do not disturb the suspect material, and immediately notify the Architect.

1.8 POST CONSTRUCTION INSPECTION

A. Each Contractor is advised that the School District shall be provided the opportunity for a walk-through inspection by the School District's health and safety committee members to confirm building safety during construction and that the area is ready to be reopened for occupancy.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. General product requirements.

B. Re-use of existing products.

C. Transportation, handling, storage and protection.

D. Product option requirements.

E. Substitution limitations.

F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.2 RELATED REQUIREMENTS

A. Section 01 25 00 - Substitution Procedures: Substitutions made during and after the Bidding/Negotiation Phase.

B. Section 01 40 00 - Quality Requirements: Product quality monitoring.

1.3 SUBMITTALS

A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 15 days after date of Agreement.
   2. For products specified only by reference standards, list applicable reference standards.

PART 2 PRODUCTS

2.1 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.

B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.2 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. DO NOT USE products having any of the following characteristics:
   1. Made using or containing CFC's or HCFC's.
   2. Made of wood from newly cut old growth timber.
   3. Containing lead, cadmium, asbestos.

C. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.

D. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.

E. Furnish interchangeable components from same manufacturer for components being replaced.

F. All electrical work to conform to current national electric code requirements.

G. All electrical products, components and packaged systems are to be approved and labeled by a nationally recognized testing agency such as Underwriters Laboratory (UL) or equal.

H. The Electrical Trades Contractor shall provide a third party certificate of inspection, such as the New York State Board of Fire Underwriters or equivalent inspection agency.

2.3 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.4 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.1 SUBSTITUTION LIMITATIONS

A. See Section 01 25 00 - Substitution Procedures.

B. Architect will consider requests for substitutions only within 30 days after date of Agreement.

3.2 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.3 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Provide off-site storage and protection when site does not permit on-site storage or protection.

G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

H. Comply with manufacturer's warranty conditions, if any.

I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

J. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

K. Prevent contact with material that may cause corrosion, discoloration, or staining.

L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination.

B. Examination.

C. Preparation.

D. General installation requirements.

E. Progress cleaning.

F. Protection of installed work.

G. System start-up.

H. Cleaning and protection.

I. Starting of systems and equipment.

J. Demonstration and instruction of Owner personnel.

K. Testing, adjusting and balancing.

L. Final cleaning.

M. Closeout procedures.

N. General requirements for maintenance service.

1.2 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.

B. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

1.3 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.4 COORDINATION

A. See Section 01 10 00 for occupancy-related requirements.

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas , conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate sections.

H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.3 GENERAL INSTALLATION REQUIREMENTS

A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.

B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

F. Make neat transitions between different surfaces, maintaining texture and appearance.

3.4 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site daily and dispose off-site; do not burn or bury.

3.5 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.

G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.6 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Architect and owner seven days prior to start-up of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Verify that wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.7 DEMONSTRATION AND INSTRUCTION

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of final inspection.

B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Provide a qualified manufacturer's representative who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

3.8 TESTING, ADJUSTING AND BALANCING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.9 FINAL CLEANING

A. The Contractor shall be responsible for final cleaning. All contractors shall be responsible for daily cleaning of work areas as described elsehwere in this section.

B. Execute final cleaning prior to final project assessment.
   1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.

C. Use cleaning materials that are nonhazardous.

D. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

E. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

F. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

G. Clean filters of operating equipment.

H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
   1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
      a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
      b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
   2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
   3. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases, including but not limited to:
      a. Affidavit of Release of Liens on AIA Form G706-A:
         1) From Contractor
         2) From Subcontractor(s)
         3) From Major Material Supplier(s)
      b. Affidavit of Debts and Claims Payment on AIA G706:
         1) From Contractor
         2) From all tiers of Subcontractor(s)
      c. Consent of Surety on AIA G707 From Contractor.
      d. One (1) year warranty from date of Substantial Completion.
   4. Submit final record information.
   5. Complete final cleanup requirements, including touchup painting.
   6. Touch up and otherwise repair and restore marred, exposed finishes.

B. Inspection Procedures: Upon receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
   1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
   2. Results of the completed inspection will form the basis of requirements for final acceptance.

3.11 FINAL ACCEPTANCE

A. Each Contractor shall submit, prior to requesting final inspection, written certification that:
   1. Work has been completed in accordance with contract documents, listing any exceptions.
   2. Project has been inspected for compliance with contract documents.
   3. Equipment and systems have been tested in the presence of the Construction Manager and are operational and video-taped instructions prepared and submitted through the Construction Manager to the Architect and Owner.
   4. Owner’s designated staff have been instructed on all equipment and systems and an Owner signed receipt furnished to the Architect through the Construction Manager.

5. Operational and Maintenance Manuals have been submitted through the Construction Manager and reviewed by the Architect.
6. Owner has been furnished the specified warranties, guarantees and spare parts and an Owner signed receipt furnished to the Architect.
7. Project has been completed and is ready for final inspection.

B. If the Architect and Construction Manager considers the work complete in accordance with the requirements of the Contract Documents, the Contractor will submit his final requisition (including final changes to the Contract Sum) together with the following through the Construction Manager to the Architect.
1. AIA G706 - Contractor's Affidavit of Payments of Debts and Claims.
2. Contractor's Release of Liens and Waiver of Liens.
3. AIA G707 Consent of Surety to Final Payment.
4. Evidence of continuing insurance coverage.

C. If the Architect and/or Construction Manager does not consider the work finally complete, the Contractor will be notified, in writing by the Architect with a copy to the Construction Manager, with the reasons stated.

D. Re-inspection Procedure: The Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.
1. Upon completion of re-inspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. The Contractor shall achieve FINAL COMPLETION of all Work, including correction of punch list items, preparation and delivery of manuals, presentation of training and completion of final paper submissions not later than sixty (60) days following the Contract-scheduled Substantial Completion date. In the event the Contractor shall fail to achieve Final Completion in a timely manner in accordance with this provision, the Contractor and the Contractor's Surety shall be liable for and shall reimburse the Owner for any and all Architectural or Construction Manager fees, materials or expenses made necessary by the Contractor's failure. Additional fees and expenses shall be charged by the Owner against any Final Payment due or which may become due the Contractor.

3.12 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities. Refer to Section 01 78 00 - Closeout Submittals.
1. Provide copies to Architect/Engineer.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Substantial Completion.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Accompany Project Coordinator on Contractor's preliminary final inspection.

H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

I. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

J. Submit final application for payment identifying total adjusted contract sum, previous payments and sum remaining due.

3.13 GENERAL REQUIREMENTS FOR MAINTENANCE SERVICE

A. Provide service and maintenance of components indicated in specification sections.

B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project Record Documents.

B. Operation and Maintenance Data.

C. Manual for Materials and Finishes

D. Manual for Equipment and Systems

E. Warranties and bonds.

F. Spare Parts and Maintenance Products

1.2 RELATED REQUIREMENTS

A. Section 00 72 00 - General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.

B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.

D. Individual Product Sections: Specific requirements for operation and maintenance data.

E. Individual Product Sections: Warranties required for specific products or Work.

1.3 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
   2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
   3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
   4. Submit two sets of revised final documents in final form within 10 days after final inspection.

C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
   2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   3. Field changes of dimension and detail.
   4. Details not on original Contract drawings.

3.2 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.3 MANUAL FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:

1. Product data, with catalog number, size, composition, and color and texture designations.
2. Information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

F. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.

G. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

H. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of document sets as required prior to final submission.

I. Submit two sets of revised final volumes in final form within 10 days after final inspection, also provide an electronic copy of the complete manual tabbed and in a searchable format.

3.4 MANUAL FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
1. Description of unit or system, and component parts.
2. Identify function, normal operating characteristics, and limiting conditions.
3. Include performance curves, with engineering data and tests.
4. Complete nomenclature and model number of replaceable parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

D. Include color coded wiring diagrams as installed.

E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

G. Provide servicing and lubrication schedule, and list of lubricants required.

H. Include manufacturer's printed operation and maintenance instructions.

I. Include sequence of operation by controls manufacturer.

J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

K. Provide control diagrams by controls manufacturer as installed.

L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.

M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

O. Include test and balancing reports.

P. Additional Requirements: As specified in individual product specification sections.

3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants,Contractorand subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:
   1. Project Directory.
   2. Table of Contents, of all volumes, and of this volume.
   3. Operation and Maintenance Data: Arranged by system, then by product category.
      a. Source data.
      b. Product data, shop drawings, and other submittals.
      c. Operation and maintenance data.
      d. Field quality control data.
      e. Photocopies of warranties and bonds.
   4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

3.6 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

3.7 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

END OF SECTION