PROJECT MANUAL

ASBESTOS ABATEMENT

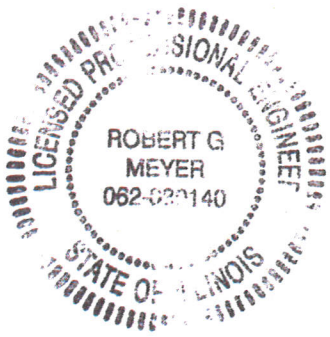
LINCOLN – IRVING ELEMENTARY SCHOOL
1015 16TH AVENUE
MOLINE, ILLINOIS 61265

FOR

MOLINE/COAL VALLEY SCHOOL DISTRICT #40
1900 52ND AVENUE
MOLINE, ILLINOIS 61265

PROJECT NO.: 10790

DATE: FEBRUARY 2026



SIGNATURE: Robert G. Meyer

DATE SIGNED: 02/25/26

P. E. EXP DATE: 11/30/27

IDPH LICENSE: 100-10057

Prepared by:

MORLAND
ENVIRONMENTAL SERVICES

527 COLLEEN STREET
WOODHULL, ILLINOIS 61490
Ph: (309) 236-6819
www.morlandenvironmentalservices.com

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FOR

ASBESTOS ABATEMENT
AT
LINCOLN – IRVING ELEMENTARY SCHOOL
1015 16TH AVENUE
MOLINE, ILLINOIS 61265

FOR

MOLINE/COAL VALLEY SCHOOL DISTRICT #40
1900 52ND AVENUE
MOLINE, ILLINOIS 61265

PROJECT NO. 10790

DATE: FEBRUARY 2026

PREPARED BY:

Morland Environmental Services, LLC.
527 Colleen Street
Woodhull, Illinois 61490
(309) 236-6819

TITLE SHEET

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Morland Environmental Services, LLC.
527 Colleen Street
Woodhull, Illinois 61490
(309) 236-6819

Project Manual for:

Asbestos Abatement
Lincoln – Irving Elementary School
1015 16th Avenue
Moline, Illinois 61265

For

Moline/Coal Valley School District #40

Project No.: 10790

Date: February 2026

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00100	Instructions to Bidders	00100-1 to 00100-8
00300	Bid Form	00300-1 to 00300-18
00305	Prevailing Wage	00305-1 to 00305-2
00430	Bid Bond	00430-1 to 00430-2
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00700	Standard General Conditions	00700-1 to 00700-42
00800	Supplementary Conditions	00800-1 to 00800-8

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01010	Summary of Work	01010-1 to 01010-4
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DIVISION 2 - SITE WORK

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02084	Disposal of Asbestos-Containing Materials	02084-1 to 02084-4

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00100	Instructions to Bidders
00300	Bid Form
00305	Prevailing Wage
00430	Bid Bond
00435	Notice of Award

SECTION 00030

ADVERTISEMENT FOR BIDS

BIDS DUE: March 10, 2026 – 2:00 P.M. CST

ASBESTOS ABATEMENT
FOR
LINCOLN – IRVING ELEMENTARY SCHOOL
FOR MOLINE/COAL VALLEY SCHOOL DISTRICT #40, MOLINE, ILLINOIS

PROJECT NO.: 10790 DATE: FEBRUARY 2026

ENGINEER: Morland Environmental Services, LLC.
527 Colleen Street, P.O. Box 147, Woodhull, Illinois 61490
(309) 236-6819

Moline/Coal Valley School District No. 40 will receive sealed Bids on an Asbestos Abatement Contract for the removal of asbestos containing materials throughout the Lincoln – Irving Elementary School.

Bids shall be on Lump Sum basis; segregated Bids are not acceptable.

Moline/Coal Valley School District No. 40, will receive Bids until 2:00 P.M., prevailing time, on the 10th day of March 2026 for the asbestos abatement at Lincoln – Irving Elementary School at Moline/Coal Valley School District No. 40 District Office located at 1900 52nd Avenue, Moline, Illinois 61265, Attn: District Office.

Pre-Bid Meeting: March 3rd, 2026 at 3:30 P.M. prevailing time at Lincoln – Irving Elementary School located at 1015 16th Avenue, Moline, Illinois.

Bids received after this time will not be accepted. Bids will be opened and publicly read aloud immediately after specified closing time. Interested parties are invited to attend.

Obtain complete sets of Electronic Bidding Documents from the issuing office at:

Morland Environmental Services, LLC.
527 Colleen Street, P.O. Box 147
Woodhull, Illinois 61490
309-236-6819

Contracts for work under this Bid will obligate Contractor and subcontractors not to discriminate in employment practices. Submit compliance report in conformity with Executive Order No. 11246.

Contractor must conform to prevailing wage rates on this project.

Bid Security in amount of 5 percent of Bid must accompany each Bid in accordance with Instructions to Bidders.

Moline/Coal Valley School District No. 40 reserves the right to waive irregularities and to reject Bids.

By Order of Moline/Coal Valley School District No. 40
Mr. Keith Karstens, Director of Facilities

END OF SECTION 00030

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS.

Terms used in these instructions to Bidders which are defined in Standard General Conditions of Construction Contract (NO. C-001) (2002 Edition) have meanings assigned to them in the General Conditions.

Certain additional terms used in these instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof. Term BIDDER means one who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a bid to a Bidder. Term ISSUING OFFICE means the office from which the Bidding Documents are to be issued and where the bidding procedures are to administered. Term SUCCESSFUL BIDDER means lowest, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. Term ADVERTISEMENT FOR BIDS means Section 00015 or Section 00030 appearing in the project manual.

Term SUBSTANTIAL COMPLETION means final air clearances achieved, containments down, and the buildings returned to the Owner.

2. COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of Bidding Documents may be obtained from the issuing office in the number, and for the deposit sum, if any, stated in Advertisement for Bids. Deposit will be **non-refundable** as indicated in Advertisement for Bids.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 Owner and Engineer in making copies of Bidding Documents available on above terms do so only for purpose of obtaining Bids for the Work and do not confer a license or grant for other use.

3. QUALIFICATIONS OF BIDDERS

To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within 5 days after bid opening upon Owner's request, detailed written evidence, such as financial data, previous experience including references and phone numbers, present commitments and other data called for below. Each Bid must contain evidence of Bidder's qualification to do business in the State where the Project is located or covenant to obtain such qualification prior to award of the Contract.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1 It is responsibility of each Bidder before submitting a Bid, to:

a. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents.
b. To visit the site to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work, including load limits and other restriction on local roadways.
c. To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
d. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data; and
e. To promptly notify Engineer of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.

4.2 Before submitting a Bid, each Bidder will, at Bidder's own expense, be responsible for performing or obtaining additional examinations, investigations, explorations, tests and studies and obtain additional information and data which pertain to physical conditions.

4.3 The Submission of Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4; that without exception Bid is premised on performing and furnishing Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof by Engineer is acceptable to Bidder, and that Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

5. PRE-BID CONFERENCE

A Pre-bid Conference will be held at 3:30 p.m., prevailing time on the 3rd day of March 2026 at Lincoln – Irving Elementary School located at 1015 16th Avenue, Moline, Illinois. Representatives of Owner and Engineer will be present to discuss the project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements are not to be relied upon and will not be binding or legally effective.

6. SITE AND OTHER AREAS

The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

7. INTERPRETATIONS AND ADDENDA

7.1 All questions about the meaning or intent of the Bidding Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed, faxed or delivered to all parties recorded by issuing office as having received the Bidding Documents. Questions received less than three days prior to date of Bid opening may not be answered. Only questions answered by formal written Addenda will be binding. Oral minutes of pre-bid meeting, written records of telephone conversations and other interpretations or clarifications will be without legal effect.

7.2 Addenda may also be issued to modify Bidding Documents as deemed advisable by Owner or Engineer.

8. BID SECURITY

8.1 Each Bid must be accompanied by Bid Security made payable to Owner in the percent of maximum bid called for in the Advertisement for Bids and in the form of certified or bank check or Bid Bond (on form attached, if form is prescribed) issued by surety meeting requirements of Paragraph 5.01 of General Conditions. Maximum bid is base bid plus largest alternative bid, or plus the total of all additive bid items.

8.2 The Bid Security of Successful Bidder will be retained until such Bidder has executed the Agreement, furnished the required Contract Security, and met the other conditions of the notice of award whereupon the Bid Security will be returned. If the Successful Bidder fails to execute and deliver Agreement and furnish the required Contract Security within 10 days after the Notice of Award, Owner may annul the Notice of Award, and the Bid Security of that Bidder will be forfeited. The Bid Security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the 7th day after the Effective Date of the Agreement or the day after the bid acceptance period defined in Article 17.02; Bid Security furnished by such Bidders will then be returned. Bid Security with Bids which are not competitive will be returned within 7 days after Bid opening.

9. CONTRACT TIME

The number of days within which, or the dates by which the Work is to be substantially completed and also completed and ready for final payment (Contract Time) (the term "Contract Times" is defined in paragraph 1.01 Article 1, item 14 of the General Conditions) are set forth in Bid Form and will be included in Agreement.

10. LIQUIDATED DAMAGES

Provisions for liquidated damages are set forth in the Supplementary Conditions and will be included in the Agreement.

11. SUBSTITUTE OR "OR EQUAL" ITEMS

Contract, if awarded, will be on basis of materials and equipment described in the Drawings or specified in Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in Drawings or specified in Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in Paragraphs 6.05, Article A., Article B., and Article C. of the General Conditions and may be supplemented in General Requirements.

12. SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.1 If Supplementary Conditions require the identity of certain subcontractors, suppliers and other persons and organizations (including those who are to furnish principal items of material and equipment) to be submitted to Owner in advance of a specified date prior to Effective Date of the Agreement, apparent Successful Bidder, and any other Bidder so requested, shall within 5 days after Bid opening submit to Owner a list of all subcontractors, suppliers and other persons and organizations proposed for these portions of Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such subcontractor, supplier, person or organization if requested by Owner. The Owner or Engineer, who after due investigation, has reasonable objection to any proposed subcontractor, supplier, other person or organization, may, before the Notice of Award is given, request apparent Successful Bidder to submit acceptable substitute without increase in Bid Price.

If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable subcontractors, suppliers and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid Security of any Bidders. Any subcontractor, supplier, other person or organization listed and to

whom Owner or Engineer does not make written objection prior to giving the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of Agreement as provided in Paragraph 6.06, Article B. of General Conditions.

12.2 In contracts where Contract Price is on the basis of "Cost-of-Work Plus A Fee", apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to Owner those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of Work with Owner's written consent.

12.3 No Contractor shall be required to employ subcontractor, supplier, other person or organization against whom Contractor has reasonable objections.

13. PREPARATION OF BID

13.1 Bid Form is included with Bidding Documents; additional copies may be obtained from Engineer.

13.2 All blanks on the Bid Form must be completed by printing in black ink or by typewriter.

13.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

13.4 Bids by partnerships must be executed in partnership name and signed by the partner, whose title must appear under the signature, and the official address of the partnership must be shown below the signature.

13.5 All names must be typed or printed in black ink below signature.

13.6 The bid shall contain acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

13.7 The address and telephone number for communications regarding the Bid must be shown.

13.8 Evidence of authority to conduct business as an out-of-state corporation in the state where the Work is to be performed shall be provided in accordance with Paragraph 3 above. State contractor license number, if any, must also be shown.

14. BASIS OF BID; EVALUATION OF BIDS

14.1 Bids must be priced on a Lump Sum basis for the base contract and include a separate price for each alternative described in the Specifications, as provided for in the Bid Form. The price of the Bid for each alternative will be the amount to be added to or deducted from the price of the Base Bid if Owner selects the alternative.

14.2 Bid Price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances named in the Contract Documents as provided in GC-11.02.

14.3 Bids shall be submitted at the time and place indicated in the Advertisement For Bids and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the Project for which Bid is submitted) and name and address of Bidder, and accompanied by Bid Security and other required documents. If Bid is sent through mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation BID ENCLOSED on the face of it.

15. MODIFICATION AND WITHDRAWAL OF BIDS

15.1 Bids may be modified or withdrawn by appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

15.2 If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid Security will be returned. Therefore, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

16. OPENING OF BIDS

Bids will be opened and (unless obviously non-responsive) read aloud publicly at the place where Bids are to be submitted. Abstract of amounts of Base Bids unit prices and major alternatives (if any) will be made available to Bidders after the Bid opening and will not be read in their entirety.

17. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

Bids will remain subject to acceptance in accordance with the time period defined in the Advertisement for Bids, but Owner may, in its sole discretion, release Bids and return Bid Security prior to that date.

18. AWARD OF CONTRACT

18.1 Owner reserves right to reject any or all Bids, including without limitation the rights to reject any or all non-conforming, non-responsive, unbalanced or conditional Bids and to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project or Owner to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Owner also reserves the right to waive all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful Bidder. Discrepancies between the multiplication of units of Work and Unit Prices will be resolved in favor of Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of correct sum. Discrepancies between words and figures will be resolved in favor of the words.

18.2 In evaluating Bids, Owner will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such Alternatives, Unit Prices and other data requested in Bid Form or prior to Notice of Award.

18.3 Owner may consider the qualifications and experience of subcontractors, suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of subcontractors, suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider operating costs, maintenance requirements, performance data and guaranties of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to Notice of Award.

18.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed subcontractors, suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

18.5 If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that Award will be in the best interests of the Owner and the Project.

18.6 If the Contract is to be awarded, Owner will give Successful Bidder a Notice of Award within the time period prescribed in the Bid Form.

19. CONTRACT SECURITY AND INSURANCE

Paragraph 5.01 of the General Conditions and the Supplementary Conditions sets forth Owner's requirements for Performance and Payment Bonds.

20. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within 5 days, thereafter Contractor shall sign and deliver required number of counterparts of the Agreement and attached documents to Owner with required Bond, and Certification of Insurance conforming to the General and Supplementary Conditions. Within 5 days, Owner shall deliver 1 fully signed counterpart to Contractor.

21. SALES AND USE TAXES

Owner is exempt from Illinois State Sales and Use Taxes on materials and equipment to be incorporated in work. Said taxes shall not be included in the Contract Price.

22. RETAINAGE

Provisions concerning retainage and Contractors' rights to deposit securities in lieu of retainage are set forth in Agreement and Supplementary Conditions.

END OF SECTION 00100

SECTION 00300

BID FORM

BID FOR: **ASBESTOS ABATEMENT**
LINCOLN – IRVING ELEMENTARY SCHOOL
1015 16th AVENUE
MOLINE, ILLINOIS 61265

PROJECT NO.: **10790**

BID TO: **MOLINE/COAL VALLEY SCHOOL DISTRICT 40**
1900 52ND AVENUE
MOLINE, ILLINOIS 61265

BID FROM: _____
_____
_____

1.1 Undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into Agreement with OWNER in form included in Contract Documents to perform and furnish all Work specified or indicated in Contract Documents for Bid Price and within Bid Time indicated in this Bid and in accordance with Contract Documents.

1.2 BIDDER accepts terms and conditions, of Advertisement for Bids and Instructions to Bidders, including, without limitation, those dealing with disposition of Bid Security. This Bid will remain open as stated in the Instructions to Bidders. BIDDER will sign and deliver required number of counterparts of the Agreement, Bonds and Insurance Certifications and other documents required by Contract Documents within 5 days after date of OWNER'S Notice of Award.

1.3 In submitting this Bid, BIDDER represents, as more fully set forth in Agreement, that:

A. BIDDER has carefully studied copies of Bidding Documents and the following addenda:

Date Number

(receipt of which is hereby acknowledged).

B. BIDDER has visited the sites and localities where Work is to be performed and become familiar with and is satisfied as to general, local and site conditions that may affect cost progress, performance and furnishing of the work.

C. BIDDER is familiar with and is satisfied as to all legal requirements (federal, state and local laws, ordinances, rules and regulations) and conditions that may affect cost, progress, performance, and furnishing of Work.

D. BIDDER is aware of the general nature of Work to be performed by Owner and others at the sites that relates to Work for which this Bid is submitted as indicated in the Contract Documents.

E. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the sites, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

F. BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

G. This Bid is genuine and not made in interest of or on behalf of undisclosed person, firm or corporation and is not submitted in conformity with agreement or rules of group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited other bidders to submit false or sham Bids; BIDDER has not solicited or induced person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself advantage over other Bidders or OWNER.

H. Any other representation required by law or regulation.

1.4 BASE BID NO. 1 - ASBESTOS ABATEMENT FOR LINCOLN – IRVING ELEMENTARY SCHOOL

BIDDER will complete all work for following Lump Sum, Base Bid & Contingency Allowance Price:

Base Bid Price _____

Contingency Allowance $5,000.00

Total Contract Price _____

All specific cash allowances, as contained in section 01023, are included in the price(s) set forth above and have been computed in accordance with paragraph 11.8 of the General Conditions

Note: BIDS shall include all applicable taxes, fees and contingencies.

1.5 BIDDER agrees that Work will be completed on or before April 17, 2026, at Lincoln – Irving Elementary School.

BIDDER accepts provision of Agreement as to liquidated damages in event of failure to complete Work on time.

1.6 Following documents are attached to and made condition of this Bid:

A. Required Bid Security in form of check, cash or money order.

B. Vendor Information Form.

C. Civil Rights Certificate of Compliance

D. Vendor Eligibility Certification

E. Drug Free Workplace Certification of Compliance

F. Non-Collusion Affidavit

G. Federal Tax Identification and Disclosure Form

H. Certification Regarding Debarment Form

I. Notification of Lobbying Activity Form

J. List of Area References

K. Certificate of Liability Insurance Form

L. Current IDPH Contractor Asbestos License

1.7 Terms used in this Bid which are defined in General Conditions of Construction Contract included as part of Contract Documents have meanings assigned to them in General Conditions.

SUBMITTED ON _____, 2026.

If BIDDER is:

Individual

By _____ (SEAL)
(Individual's Name)

doing business as _____

Business Address: _____

_____

_____

Phone Number: _____

Partnership

By _____ (SEAL)

_____
(General Partner)

Business Address: _____

_____

Phone Number: _____

Joint Venture

By _____
(Name)

_____
(Address)

By _____
(Name)

_____
(Address)

(Each joint venturer must sign. Manner of signing for each individual, partnership and corporation that is party to joint venture should be in manner indicated).

Corporation

By _____ (SEAL)
(Corporation Name)

_____
(State of Incorporation)

By _____
(Name of person authorized to sign)

_____
(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business Address: _____

_____

_____

Phone Number: _____

(This page intentionally left blank)

Assurance Schedule A
Vendor Information Form

VENDOR INFORMATION FORM

Name of Company: _____

Tax Payer ID #: _____ FCC/USAC "SPIN" Number:_____

Address: _____ Date Business Began:_____

_____

Telephone No: _____ Years at Location:_____

List of contact information for all officers, directors, and principals:

Name: _____
Title: _____
Address: _____
Telephone No: _____
Relationship: _____

Description of services provided:

Description of facilities/resources:

Description of staff (no./type/qualifications, etc.):

Brief history of company:

Client reference list of major customers and projects (include address and telephone number):

Verified by: _____
Date Verified: _____

Assurance Schedule B
Civil Rights Certification of Compliance

CERTIFICATE OF COMPLIANCE
WITH ILLINOIS HUMAN RIGHTS ACT

All successful contractors must comply with the provisions of the Illinois Human Rights Act (ACT) dealing with equal employment opportunities (Section 2-105, 775 ILCS 5/2-105) including equality of employment opportunity and the regulations of the Department of Human Rights of the State of Illinois and also must provide for the adoption and implementation of written Sexual Harassment Policies. The contract with the successful bidder will provide for this requirement. The statutory provisions require that the written Sexual Harassment policy included at a minimum the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under Illinois law; (iii) a description of sexual harassment, utilizing examples; (iv) a vendor's internal complaint process including penalty; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights Commission; (vi) directions on how to contact the Department of Commission; and (vii) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act.

Firm Name_____

Address_____

Signature of Officer

_____

Title

_____

Subscribed and sworn to before me
this _____ day of _____, 20___.

Notary Public

_____

Assurance Schedule C
Vendor Eligibility Certification

BIDDING AND CONTRACT REQUIREMENTS
Vendor Eligibility Certification

Public Act 85-1295 (Illinois Revised Status, 1987, Ch 38, art 33E) requires that all contractors bidding for public agencies in the State of Illinois certify that they are not barred from bidding on public contracts for bid-rigging or bid rotation.

The following certifications must be signed and submitted with bidder's bid proposal. *FAILURE TO DO SO WILL RESULT IN DISQUALIFICATION OF THE BIDDER*.

_____. As part of its bid on contract for
(*Name of Contractor)*

_____. For Moline School
(*Name of Bid Package)*

District No. 40 hereby certifies that said contractor is not barred from bidding on the aforementioned contract as a result of a violation of either Section 33E-3 or 33E-4 of Article 33E of Chapter 38 of the Illinois Revised Statutes.

Firm Name: _____

By: _____

Title: _____

Subscribed and sworn to before me
this _____ day of _____, 20___.

Notary Public

_____

Verified by: _____
Date Verified: _____

Assurance Schedule D
Drug Free WorkPlace

CERTIFICATIONS OF COMPLIANCE WITH ILLINOIS DRUG FREE WORKPLACE ACT

The undersigned, having 25 or more employees, does hereby certify pursuant to section 3 of the Illinois Drug-Free Workplace Act (30 ILCS 580/3) that it shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the Illinois Drug-Free Workplace Act and, further certifies, that it is not ineligible for award of this contract by reason of debarment for violation of the Illinois Drug-Free Workplace Act.

_____ _____

Name of bidder (Please Print) Submitted by (Signature)

_____

Title

Assurance Schedule E
Non-Collusion Affidavit

BIDDING AND CONTRACT REQUIREMENTS
Non-Collusion Affidavit

AFFIDAVIT: "I, (we) hereby certify and affirm that my (our) proposal was prepared independently for this bid package and that it contains no fees or amounts other than for the legitimate execution of this work as specified and that it includes no understanding or agreements in restraint of trade. I further certify that I (we) am not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid rotating under Article 33E of the Criminal Code of 1961."

The following certification must be signed and submitted with bidder's proposal. *FAILURE TO DO SO WILL RESULT IN DISQUALIFICATION OF THE BIDDER.*

(If an individual)
Signature of Proposer:_____
(Seal) *(Signature required)*

Business Address: _____

(If a Partnership)
Firm Name: _____
(Seal)
By _ _____
(Signature required)

Business Address: _____
(of all Partners of the Firm)

(If a Corporation)
Corporate Name: _____

By _____
(Signature required)

Corporate Address: _____

(CORPORATE SEAL)
Names of Officers: (President): _____

(Secretary): _____

(Treasurer): _____

Attest: (Secretary): _____

Assurance Schedule F
Federal Tax ID and Disclosure

Under penalties of perjury, I certify that _____is my correct Federal Taxpayer Identification Number. I am doing business as a (please check one):

_____Individual

_____Sole Proprietorship

_____Partnership

_____Corporation

_____Governmental Entity

_____Not-for-profit Corporation

_____ _____

Signature Date

Return this certification to:

Moline-Coal Valley CUSD 40
Attention: Business Office
1619 11th Avenue
Moline, Illinois 61265

Assurance Schedule G
Certification Regarding Debarment

Instructions for Certification

1. By signing and submitting this Certification, the prospective lower tier participant is providing the certifications set out herein.
2. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue all available remedies, including suspension and/or debarment.
3. Except for transactions authorized under paragraph 3 above, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue all available remedies, including suspension and/or debarment.
4. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used herein, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549 and Executive Order 12689. You may contact the person to which this Certification is submitted for assistance in obtaining a copy of those regulations.
5. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier Covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the "GSA Excluded Parties List System" at http://epls.arnet.gov/.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required herein. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Orders 12549 and 12689, Debarment and Suspension, 7 CFR 3017 Subpart C Responsibilities of Participants Regarding Transactions. The regulations were published as Part IV of the January 30, 1989 Federal Register (pages 4722-4733) and Part II of the November 26, 2003 Federal Register (pages 66533-66646). Copies of the regulations may be obtained by contacting the Illinois State Board of Education.

BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS BELOW.

CERTIFICATION

The prospective lower tier participant certifies, by submission of this Certification, that:
(1) Neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;
(2) It will provide immediate written notice to whom this Certification is submitted if at any time the prospective lower tier participant learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances;
(3) It shall not knowingly enter any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated;
(4) It will include the clause titled Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion—Lower Tier Covered Transactions, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions;
(5) The certifications herein are a material representation of fact upon which reliance was placed when this transaction was entered into; and
(6) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this Certification.

Assurance Schedule H
Notification of Lobbying Activity

NOTICE TO APPLICANTS – CERTIFICATION/DISCLOSURE REQUIREMENTS RELATED TO LOBBYING

Section 319 of Public Law 101-121 (31 U.S.C.), signed into law on October 23, 1989, imposes new prohibitions and requirements for disclosure and certification related to lobbying on recipients of Federal contracts, grants, cooperative agreements, and loans. Certain provisions of the law also apply to Federal commitments for loan guarantees and insurance; however, it provides exemptions for Indian tribes and tribal organizations.

Effective December 23, 1989, current and prospective recipients (and their subtier contractors and/or subgrantees) will be prohibited from using Federal funds, other than profits from a Federal contract, for lobbying Congress or any Federal agency in connection with the award of a particular contract, grant, cooperative agreement or loan. In addition, for each award action in excess of $100,000 (or $150,000 for loans) on or after December 23, 1989, the law requires recipients and their subtier contractors and/or subgrantees to: (1) certify that they have neither used nor will use any appropriated funds for payment to lobbyists; (2) disclose the name, address, payment details, and purpose of any agreements with lobbyists whom recipients or their subtier contractors or subgrantees will pay with profits or **nonappropriated** funds on or after December 23, 1989; and (3) file quarterly updates about the use of lobbyists if materials changes occur in their use. The law establishes civil penalties for noncompliance.

If you are a current recipient of funding or have an application, proposal, or bid pending as of December 23, 1989, the law will have the following immediate consequences for you:

- You are prohibited from using appropriated funds (other than profits from Federal contracts) on or after December 23, 1989, for lobbying Congress or any Federal agency in connection with a particular contract, grant, cooperative agreement, or loan;

- you are required to execute the attached certification at the time of submission of an application or before any action in excess of $100,000 is awarded; and

- you will be required to complete the lobbying disclosure form if the disclosure requirements apply to you.

Regulations Implementing Section 319 of Public Law 101-121 have been published as an Interim Final Rule by the Office of Management and Budget as Part III of the February 26, 1990, **Federal Register** (pages 6736-6746).

(Continued on the next page)

CERTIFICATION REGARDING LOBBYING – CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal amendment, or modification of any Federal contract, grant, loan or cooperative agreement;

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Organization Name | Award Number or Project Name

Name and Title of Authorized Representative

Signature | Date

Organization Name: _____

Name Authorized Representative: _____

Title of Authorized Representative: _____

Signature: _____

Signature Date: _____

Assurance Schedule I

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	[ ] CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 1,000,000
	[ ] POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 1,000,000
	[ ] OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[X] ANY AUTO						BODILY INJURY (Per person)	$
	[ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB [X] OCCUR						EACH OCCURRENCE	$ 5,000,000
	EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 5,000,000
	[ ] DED [X] RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						[X] PER STATUTE [ ] OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$ 100,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 100,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder named as Additional Insured, as their interest may appear.

CERTIFICATE HOLDER

Moline-Coal Valley CUSD 40
ATTN: Dave McDermott
1619 11th Avenue
Moline, IL 61265

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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BIDDING AND CONTRACT REQUIREMENTS

J. List of Area References

Name of Company	**Contact Person**	**Phone**
1.		
2.		
3.		
4.		
5.		

END BID FORM

WAGE RATES

1. GENERAL

   A. Not less than the Prevailing Rate of Wages as found by Moline/Coal Valley School District #40, or the Department of Labor, or determined by the Court of Review, shall be paid to all Laborers, Workmen and Mechanics performing work under this contract.

   B. The Contractor and Subcontractors shall pay wages not less than the prevailing hourly wage rate for work of similar character in the locality where the work is performed for each classification of employee engaged on the Work as determined by the Illinois Department of Labor for Rock Island County. In case of conflict, the wages paid by Contractor shall be not less than the higher of the prevailing wage determination.

   C. Contractor shall comply with the provisions of Wage Rates for Municipal Contracts for Construction of Public Works in Illinois.

   D. The Prevailing Wage Act does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of Work that may be performed by any employee in any particular period of time.

   E. The Contractor shall post a copy of the wage determination in a prominent place at the site of the Work where the employees can easily see it.

   F. Submission of certified payroll reports will be required for this work. All work is subject to the Davis-Bacon Act and all prevailing wage laws. The contractor and all subcontractors shall submit certified copies of his payroll weekly for all work undertaken on the project. Failure to keep current on submittal of payrolls shall be cause to withhold payment for completed work.

   G. Public Act 95-0635 requires that before any contractor or subcontractor begins work on ANY public works project that requires prevailing wages, they must have a written Substance Abuse Prevention Program or have a collective bargaining agreement in effect dealing with the subject matter.

2. WAGE DETERMINATIONS

   A. Current prevailing wages can be found on the Illinois Department of Labor website at https://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/prevailing-wage-rates.aspx

END OF SECTION 00305

(This page intentionally left blank)

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name, and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:

BID

Bid Due Date:

Description *(Project Name— Include Location)*:

BOND

Bond Number:

Date:

Penal sum _____ $ _____

(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
Title	Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

NOTICE OF AWARD

DATED: _____

TO: _____
_____
_____
_____
_____

CONTRACT:

Moline/Coal Valley School District #40
Asbestos Abatement
Lincoln – Irving Elementary School
1015 16th Avenue, Moline, Illinois 61265

You are notified that your Bid dated _____for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a Contract for providing the total Work of the Contract.

The Contract Price of your Contract is _____
($_____).

Three copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award. Additional sets of Contract Documents and Drawings will be delivered separately at a later date.

You must comply with the following conditions precedent within 15 days of the date of this Notice of Award, that is by _____

1. Deliver to the Owner three fully executed counterparts of the Contract Documents. Each of the Contract Documents must bear your signature on the appropriate page of the Agreement.

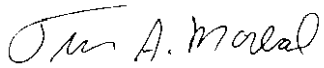
2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders and General Conditions.

3. Deliver with the executed Contract Documents the certificates of insurance (with a copy to each additional insured) which you are required to purchase and maintain in accordance with the Contract Documents as specified in the General Conditions.

Failure to comply with these conditions within the time specified will entitle Owner to consider your Bid in default, to annul this Notice of Award, and to declare your Bid security forfeited.

Within 3 days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Moline/Coal Valley School District #40
(OWNER)



(AUTHORIZED SIGNATURE)

School Representative
(TITLE)

Copy: Engineer

END OF SECTION 00435

CONTRACT REQUIREMENTS

00500	Standard Form of Agreement
00510	Notice to Proceed
00610	Construction Performance Bond
00615	Construction Payment Bond
00700	Standard General Conditions
00800	Supplementary Conditions

EJCDD
STANDARD FOR OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between **Moline/Coal Valley School District #40**

(hereinafter called OWNER) and _____

(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Abatement of asbestos-containing insulations from 3 separate mini-containments throughout Lincoln – Irving Elementary School.**

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **ASBESTOS ABATEMENT**

LINCOLN – IRVING ELEMENTARY SCHOOL

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by: **Morland Environmental Services, LLC.**
527 Colleen Street
Woodhull, Illinois 61490
Tel: 309-236-6819 Fax: 309-334-8466

who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

1.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

1.02 *Dates for Substantial Completion and Final Payment*

A. For Lincoln – Irving Elementary School, the Work will be substantially completed on or before: **April 17, 2026**, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before: **April 24, 2026.**

4.02 *Liquidated Damages*

A. CONTRACTOR and OWNER recognize that time is of the essence of the Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in providing legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER $**500.00** for each day that expires after the time specified in paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER $**500.00** for each day that expires after the time specified in paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for Final Payment.

ARTICLE 5 - CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 5.01.A, 5.01.B, and 5.01.c below:

A. For all Work other than Unit Price Work, a Lump Sum of:

_____	$ _____
(use words)	(figure)

All specific cash allowances are included in the above price and have been computed in accordance with paragraph 11.02 of the General Conditions.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 *Submittal and Progress Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 30th day of each month during performance of the Work as provided in paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less than the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

a. 90% of Work completed (with the balance being retainage). If the Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed less the aggregate of payments previously made; and

b. 90% of cost of materials and equipment not incorporated in the Work (with the balance being retainage)

2. Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 90% of the Work completed, less such amounts as ENGINEER shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 90% of ENGINEER 's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

ARTICLE 7 - INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 1.5% per annum.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary to the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

E. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

F. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

G. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 6, inclusive)

2. Performance Bond (pages 1 to 4, inclusive); (attached)

3. Payment Bond (pages 1 to 4, inclusive); (attached)

4. General Conditions (pages 1 to 42, inclusive); (not attached)

5. Supplementary Conditions (pages 1 to 10, inclusive); (not attached)

6. Specifications as listed in the table of contents of the Project Manual; (not attached)

7. Drawings consisting of sheets numbered ASB-1 through ASB-4, inclusive, with each sheet bearing the following general title: ASBESTOS ABATEMENT; (not attached)

8. Addenda (numbers 0 to 0, inclusive); (not attached)

Exhibits to this Agreement (enumerated as follows):

a. Notice to Proceed (pages 1 to 1, inclusive); (not attached)

b. CONTRACTOR's Bid (pages 1 to 18, inclusive); (not attached)

c. Documentation submitted by CONTRACTOR prior to Notice of Award (pages 0 to 0, inclusive)

d. Requirements of IDPH 855.350 c) and Insurance Certificate; (attached)

11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Written Amendments

b. Work Change Directive

c. Change Order(s)

B. The documents listed in paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.05 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

10.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that may be due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed the Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on April 3, 2026 (which is the Effective Date of the Agreement).

OWNER:

_____

By: _____

[CORPORATE SEAL]

Attest _____

Address for giving notices:

_____

_____

_____

(If OWNER is a corporation, attach evidence of authority to sign. If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of OWNER-CONTRACTOR Agreement).

Designated Representative:

Name: _____

Title: _____

Address: _____

_____

Phone: _____

Facsimile: _____

CONTRACTOR:

_____

By: _____

[CORPORATE SEAL]

Attest _____

Address for giving notices:

_____

_____

_____

License No. _____
(Where applicable)

Agent for service of process: _____

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign).

Designated Representative:

Name: _____

Title: _____

Address: _____

_____

Phone: _____

Facsimile: _____

END OF SECTION 00500

NOTICE TO PROCEED

Dated: _____

TO: _____

ADDRESS: _____

Contract: Asbestos Abatement – Lincoln – Irving Elementary School

Project: Asbestos Abatement – Lincoln – Irving Elementary School

OWNER'S Contract No. 10790

You are notified that the Contract Times under the above contract will commence to run on April 6, 2026, for Lincoln – Irving Elementary School. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement the date of Substantial Completion is April 17, 2026, for Lincoln – Irving Elementary School and the date of readiness for final payment April 24, 2026, for Lincoln – Irving Elementary School.

Before you may start any Work at the Site, paragraph 2.05.C of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Moline/Coal Valley School District #40
(OWNER)

By : Jim A. Morland
(AUTHORIZED SIGNATURE)

Owners Representative
(TITLE)

Copy to ENGINEER

Morland Environmental Services, LLC..
(Use Certified Mail, Return Receipt Requested)

EJCDC No. 1910-22 (2002 Edition)
Prepared by the Engineers Joint Contract Documents Committee and endorsed by The Associated General Contractors of America and the Construction Specifications Institute.

END OF SECTION 00510

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EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT
Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

_____ *(seal)*
Contractor's Name and Corporate Seal

By: _____
Signature

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

SURETY

_____ *(seal)*
Surety's Name and Corporate Seal

By: _____
Signature *(attach power of attorney)*

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than

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the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

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EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND

Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ *(seal)*	_____ *(seal)*
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	**By:** _____
Signature	Signature *(attach power of attorney)*
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	**Attest:** _____
Signature	Signature
_____	_____
Title	Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond shall arise after the following:

    5.1 Claimants who do not have a direct contract with the Contractor,

        5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2 Pay or arrange for payment of any undisputed amounts.

    7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

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12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. **Definitions**

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default**: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

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This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

ACEC
American Council of Engineering Companies

National Society of Professional Engineers
Professional Engineers in Private Practice

ASCE American Society of Civil Engineers

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The Associated General Contractors of America

Knowledge for Creating and Sustaining the Built Environment

Construction Specifications Institute

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

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20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

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administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents, or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

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E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review**:**

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

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1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work

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(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

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4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

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c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

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1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

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in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

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3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

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deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

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Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

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1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

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c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified , and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued . No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

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or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer,, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

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6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

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ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

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with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

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arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

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properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

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8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment , a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

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9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

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promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A.Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

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F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

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resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation , overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

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B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

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by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times , or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

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be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

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B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

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payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

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inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

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Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

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under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

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3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

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governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

END OF SECTION 00700

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SECTION 00800

SUPPLEMENTARY CONDITIONS

1.1 SUPPLEMENTARY CONDITIONS

A. These Supplementary Conditions amend or supplement Standard General Conditions of Construction Contract (EJCDC No. C-700, 2002 Edition) and other provisions of Contract Documents as indicated below. Provisions not so amended or supplemented remain in full force and effect.

1.2 ITEMS

SC-1. Add following Definitions to Article 1 of General Conditions:

"As Indicated - as called for or shown on Drawings.

As Specified - contained in Project Manual Specifications and Notes on Drawings.

SC-1.01 Add to definition #19 "ENGINEER' is defined as Morland Environmental Services, LLC.".

SC-1.01 Add to definition 2.0 "ENGINEER's Consultant is".

SC-2.01 B Amend paragraph 2.01 Article B to read as follows:

"Prior to the OWNER executing the Agreement, CONTRACTOR shall deliver to the OWNER copies of additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which OWNER has reasonably requested) as required to purchase and maintain in accordance with Article 5."

SC-2.02 Amend first line of first sentence of paragraph 2.02 to read as follows:

" OWNER shall furnish to CONTRACTOR up to 2..."

SC-2.06 Amend first line of first sentence of paragraph 2.06 to read as follows:
"If OWNER, ENGINEER, or CONTRACTOR requests a Preconstruction Conference, within twenty days after the Contract Time start to..."

SC-3.01 B Add the following paragraph to paragraph 3.01, Article B:

"In the event there are conflicts in the Bidding Documents, the highest quality and quantity shall govern and be included in the Bid. Deductive Change Order(s) to provide the lower quality and quantity item(s) if desired by OWNER will be issued by the OWNER prior to construction of the item(s) in conflict."

SC-5.04 A: Limits of liability for insurance required by paragraph 5.04 of General Conditions shall provide coverage for not less than following amounts or greater where required by laws and regulations:

Workers' Compensation, etc. under paragraphs 5.04, Article A, items 1 and 2 of General Conditions:

1) State of Illinois: Statutory

2) Applicable Federal
(e.g. Longshoreman's): Statutory

3) Employer's Liability:

Each Accident	$100,000.00
Disease - policy limit	$500,000.00
Disease - each employee	$100,000.00

CONTRACTOR's General Liability Insurance under paragraphs 5.04 Article A, items 3 through 5 of General Conditions (including Premises - Operations; Independent CONTRACTOR's Protection; Products and Completed Operations; Broad Form Property Damage).

General Aggregate

(except Products-Completed Operations)	$1,000,000.00
Products - Completed Operations Aggregate	$1,000,000.00
Personal/Advertising Injury (per Person/ Organizations)	$1,000,000.00
Each Occurrence (Bodily Injury and Property Damage)	$1,000,000.00
Fire Damage (Any One Fire)	$50,000.00
Limit per Person Medical Expense (Any One Person)	$5,000.00

Personal Injury Liability Coverage will include Claims arising out of Employment excluding wrongful termination.

Property Damage Liability Insurance will provide Coverage for Explosion, Collapse and Underground Damages.

Excess Liability

General Aggregate	$5,000,000.00
Each Occurrence	$5,000,000.00

Comprehensive Motor Vehicle Liability under paragraph 5.04, Article A, item 6 of General Conditions); limits as follows:

$1,000,000.00	Combined Single Limit for Bodily Injury and Property Damage Liability for Each Accident

SC-5.04 B: Additional liability coverage for OWNER and ENGINEER will be provided as follows:

By endorsement as additional insureds on CONTRACTOR's General Liability policy.

List here by name and address all persons or entities to be identified in the Contract Documents as insureds or additional insureds under the required liability policies:

MOLINE/COAL VALLEY SCHOOL DISTRICT #40
MORLAND ENVIRONMENTAL SERVICES, LLC.

The Contractual Liability coverage required by paragraph 5.04 Article B, item 4 of the General Conditions shall provide coverage for not less than the following amounts.

(1)	General Aggregate	$2,000,000.00
(2)	Each Occurrence (Bodily Injury and Property Damage)	$2,000,000.00

SC-5.06. Delete paragraph 5.06 of General Conditions in its entirety and insert following in its place:

"CONTRACTOR shall purchase and maintain, until final payment, property insurance on Work at site to full insurable value (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations). This insurance shall include interests of OWNER, CONTRACTOR, subcontractors, ENGINEER and ENGINEER's consultants in Work (all of whom shall be listed as insureds or additional insured parties), shall insure against perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and other perils as may be provided in these Supplementary Conditions, and shall include damages, losses and expenses arising out of or resulting from insured loss or incurred in repair or replacement of insured property (including but not limited to fees and charges of ENGINEERS, Architects, Attorneys and other professionals). If not covered under "all-risk" insurance or otherwise provided in these Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of Work stored on and off site or in transit when portions of

Work are to be included in Application for Payment. Policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph 5.06 shall comply with requirements of GC-5.06 C. Coverage will be in the following form (select one):

Completed value

Reporting

Such insurance will be subject to the following deductible amount $1,000,000.00, in accordance with Paragraph 5.06, Article D of the General Conditions.

SC-6.03. Add new paragraphs after paragraph 6.03, Article C of General Conditions to read as follows:

"D. In the event CONTRACTOR chooses to work overtime (in excess of 12 hours per day), CONTRACTOR shall reimburse OWNER from final payment for charges of ENGINEER and ENGINEER's Engineers for performing engineering inspection and observation services performed as result of CONTRACTOR's scheduling work activities beyond regular working hours.

1. ENGINEER's charges to OWNER and reimbursed by CONTRACTOR are based on following:
   a. Combined APM/ASP, APM and ASP - $90.00 per hour for 1st (Day) Shift; combined APM/ASP, APM and ASP - $120.00 per hour for 2nd (Night) Shift; $15.00 for each PCM air sample; and $1500.00 for each set of TEM samples; which prices include insurance, taxes, mandatory and customary fringe benefits, overhead and profit.
   b. Other reimbursables include expenses such as travel; long distance telephone calls; telegrams; typing; blue printing; postage; and similar items required for construction administration."

SC-6.13: Add new paragraphs immediately after paragraph 6.13, Article D of the General Conditions to read as follows:

"C. Asbestos-Containing Materials: This project is known to have asbestos-containing materials in the area designated for construction. In some cases, friable asbestos is applied onto piping, tank and boilers, and renovation work may have to be performed in direct contact with, or adjacent to, the existing friable asbestos-containing materials.

CONTRACTOR assumes responsibility for notification to all workmen of existing asbestos conditions. Notification shall be made on approved EPA Forms and includes posting of notices in accordance with EPA and OSHA Guidelines.

CONTRACTOR assumes responsibility for compliance with following codes during inspection, handling and removal of all asbestos-containing materials; and during

replacement with specified and indicated alternate materials.

1. American National Standards Institute (ANSI) Z88.2: Practices for Respiratory Protection.
2. Code of Federal Regulations, CFR:

29 CFR 1910.1001: Asbestos

29 CFR 1910.134 : Respiratory Protection

29 CFR 1910.145 : Specifications for Accident Prevention Signs and Tags

40 CFR 61, Subpart A : General Provisions

40 CFR 61, Subpart M : National Emission Standard for Asbestos"

SC-13.0.3 E. Add new paragraphs after paragraph 13.03 Article E of General Conditions to read as follows:

1. Where asbestos TEM Clearance tests are specified, ENGINEER will provide observation services for 1 set of specified tests.
2. When additional tests are required because original test does not fall within limits specified, CONTRACTOR shall reimburse OWNER from final payment for charges of ENGINEER and ENGINEER's Engineers for additional test observations and cost of TEM analysis. Reimbursement shall be based on same charges listed in paragraph 6.03, Article D, item 1. a. and b."

SC-13.07 A. Amend first line of first sentence of paragraph 13.07, Article A to read as follows:

"If within two years after the date of substantial ..."

Replace paragraph 13.07, Article D, of General Conditions to read as follows:

"1. Defective work which is repaired or replaced by CONTRACTOR during 2-year correction period, or longer as specified, shall be inspected and accepted in accordance with SECTION 13, and shall be additionally warranted and guaranteed by CONTRACTOR for an additional 2 years."

SC-14.02 A. Between first and second sentence of paragraph 14.02, Article A., item 1. add the following sentence:

"Supporting documentation includes legally effective partial releases, waivers, or

receipts for which lien could be filed on labor, equipment, and material which were provided under previous Application for Payment and which has been paid to CONTRACTOR by OWNER."

SC-14.02 A. Replace paragraph 14.02, Article A, item 3 of General Conditions to read as follows:

3. Retainage: Until Substantial Completion, OWNER will pay 90 percent of amount due CONTRACTOR on account of progress payments.

SC-14.04. Add 3 new paragraphs immediately after paragraph 14.04 of General Conditions to read as follows:

F. OWNER and CONTRACTOR recognize that time is of the essence for this Project and that OWNER will suffer financial loss if Work is not complete within time specified in Bid Form and Agreement, plus extensions in accordance with Article 12 of General Conditions.

G. Should CONTRACTOR fail to Complete Work within time specified in Section 00300, CONTRACTOR shall reimburse OWNER from final payment for charges of ENGINEER and ENGINEER's Engineers for additional engineering, inspection, observation, and testing services performed as result of CONTRACTOR's failure to complete Work within agreed time. Reimbursement shall be based on same charges listed in paragraph 6.03, Article D, items 1a. and b.

H. Liquidated Damages. OWNER and CONTRACTOR recognize delays, expense and difficulties involved in proving in legal or arbitration proceeding actual loss suffered by OWNER if Work is not Complete on agreed time. Accordingly, instead of requiring proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as penalty) CONTRACTOR
shall pay OWNER the sum of **FIVE HUNDRED DOLLARS ($500.00)** for each day that expires after agreed time of Substantial Completion."

SC-17.07. Add new paragraphs immediately after paragraph 17.06 of General Conditions to read as follows:

"Fair Employment Practices

CONTRACTORS shall familiarize themselves with provisions of Acts referred to in this paragraph and in addition shall make investigation of labor conditions and negotiated labor agreements which may exist or are contemplated at this time. Nothing in Acts referred to in this paragraph shall be construed to prohibit payment of more than prevailing wage scale.

Equal Employment Opportunity

In event of CONTRACTOR's non-compliance with provisions of this Equal Employment Opportunity Clause, Illinois Fair Employment Practices Act or Fair Employment Practices Commission's Rules and Regulations for Public Contracts, CONTRACTOR may be declared non-responsible and therefore ineligible for future contracts or sub-contracts with State of Illinois or its political subdivisions or municipal corporations, and Contract may be canceled or avoided in whole or in part, and other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

In employment and use of labor, CONTRACTOR shall conform to Illinois statutory requirements regarding labor, including but not limited to following Acts:

1) Equal Employment Opportunity - Applicable Laws: State of Illinois policy and law, set out in Illinois Constitution, Article 1, Section 17, requires that employment opportunities be free from discrimination. Equal employment clause contained in Ch. 48, par. 851 et seq. is incorporated into Contract and is intended to ensure compliance with applicable laws and with Illinois Department of Human Rights Rules and Regulations for Public Contracts.
    a) Fair Employment Practices Act, as amended (Illinois Revised Statutes, Ch. 48, par. 851 et seq.).
    b) Act to prohibit discrimination and intimidation on account of race, creed, color, sex or national origin in employment under Contracts for public buildings or public works, as amended (Illinois Revised Statutes, Ch. 29, par. 17 et seq.).
    c) Act to prohibit unjust discrimination in employment because of age and providing penalties, as amended (Illinois Revised Statutes, Ch. 48, par. 818 et seq.).
2) Act to give preference to veterans of United States Military and Naval Service in appointments and employment upon public works by, or for use of, State or its political sub-divisions, as amended (Illinois Revised Statutes, Ch. 126-1/2, par. 23 et seq.).
3) Service Men's Employment Tenure Act, as amended (Illinois Revised Statutes, Ch. 126-1/2, par. 29 et seq.).
4) Act regulating wages of laborers, mechanics, and other workmen employed in public works by State, county, city, or public body or political sub-division or by anyone under CONTRACT for public works, as amended (Illinois Revised Statutes, Ch. 48, par. 39s-1 et seq.) which provides in part that CONTRACTOR, subcontractors, etc. shall pay to laborers, workmen and mechanics performing work under CONTRACT, not less than prevailing rate of wages as determined by Illinois Department of Labor. CONTRACTOR shall prominently post current Schedule of Prevailing Wages at project site.
5) In no event shall minors be employed except as authorized under Act to regulate employment of children and to repeal Act herein named, as amended (Illinois Revised Statutes, Ch. 48, par. 31.1 et seq.).

6) Act to provide preferential hiring of Illinois residents by CONTRACTORS and subcontractors working on public works, as amended. (Illinois Revised Statutes, Ch. 48, Para. 2201).

CONTRACTOR and subcontractors shall keep or cause to be kept accurate record of names, occupations and actual wages paid to each laborer, workman and mechanic employed by him in connection with CONTRACT. Record shall be open at reasonable hours for inspection by representative of Illinois Department of Labor and must be preserved for four years following completion of CONTRACT.

Federal. When project is funded in whole or in part by Federal funds, Federal Equal Employment Opportunity requirements will appear in Supplementary Conditions. Performance of Federal Equal Employment obligations does not relieve CONTRACTOR of his duty to perform in accordance with Illinois Equal Employment Opportunity clause. Illinois and Federal requirements shall be treated as complementary, being read to avoid apparent conflicts between two sets of requirements."

SC-17.08. Add following paragraph and two pages that follow after paragraph 17.07 of General Conditions:

"17.08. Prevailing Wage Rates

The CONTRACTOR and the CONTRACTOR'S subcontractors shall comply with the Illinois statutes requiring the payment of prevailing wages by all CONTRACTORS working on public works.

If, during course of work under this CONTRACT, the Department of Labor revises prevailing rate hourly wages to be paid under this CONTRACT for any trade or occupation, OWNER will notify CONTRACTOR and each subcontractor of the change in prevailing rate of hourly wages. CONTRACTOR shall have sole responsibility and duty to ensure that revised prevailing rate of hourly wages is paid by CONTRACTOR and all subcontractors to each worker to whom revised rate is applicable. Revisions of prevailing wage as set forth following shall not result in increase in Contract Price."

Wage Rates shall be in accordance with Section 00305. BIDDER and CONTRACTOR to verify that these rates are current.

END OF SECTION 00800

DIVISION 1 - GENERAL REQUIREMENTS

01010	Summary of Work
01023	Contingency Allowance
01027	Applications for Payment
01028	Modification Procedures
01091	Definitions and Standards
01092	Codes, Regulations and Standards
01300	Submittals
01410	Air Monitoring - Test Laboratory Services
01510	Temporary Facilities
01515	Temporary Pressure Differential And Air Circulation System
01530	Temporary Enclosures
01560	Worker Protection
01562	Respiratory Protection
01563	Decontamination Units
01630	Product Substitutions
01700	Project Closeout
01711	Project Decontamination
01714	Work Area Clearance

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project/work identification.

B. Plan of action.

C. Inspection.

D. Potential asbestos hazard.

E. Stop work.

F. Contractor use of premises.

G. Submittals.

1.2 RELATED WORK

A. Abatement Work:
   1. Section 01410: Air Monitoring - Test Laboratory Services
   2. Section 01530: Temporary Enclosures
   3. Section 01560: Worker Protection

B. Asbestos Removal Work Procedures:
   1. Section 02081: Removal of Asbestos-Containing Materials
   2. Section 02084: Disposal of Asbestos-Containing Materials

C. Decontamination of Work Area:
   1. Section 01700: Project Closeout
   2. Section 01711: Project Decontamination
   3. Section 01714: Work Area Clearance

1.3 PROJECT/WORK IDENTIFICATION

A. Project Name: ASBESTOS ABATEMENT.

   1. Lincoln – Irving Elementary School:
      1. Glove bag removal of approximately 83 hard elbow insulations throughout Lincoln – Irving Elementary School Wing in 3 separate mini-containments.

2. All quantities are approximate, contractor to verify all quantities. Drawings and Specifications are dated February 2026.

B. Related requirements and conditions indicated in Contract Documents include following:
   1. Applicable codes and regulations.
   2. Notices and permits.
   3. Existing site conditions and restrictions on use of site.
   4. Work performed prior to work under this Contract.
   5. Alterations and coordination with existing work.
      1. Begin abatement activities at Lincoln – Irving Elementary School on April 6th, 2026. Substantial completion by April 17th, 2026, at 3:30 p.m.
      2. Working hours are 7:00 a.m. to 3:30 p.m. Monday thru Friday.
   6. Work to be performed concurrently by Owner.
      1. General Maintenance.
   7. Work to be performed concurrently by separate contractors.
   8. Work to be performed subsequent to work under this Contract.
      1. Removal of all movable objects from all containment areas.
   9. Requirements for Owner occupancy during Contract work.

C. Work of this Contract is unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside Contract Documents.

1.4 PLAN OF ACTION

A. Submit detailed plan of procedures proposed for use in complying with requirements of this Specification.
   1. Include following in plan: sequencing of asbestos work, interface of trades involved in performance of work, methods to be used to ensure safety of building occupants and visitors to site, disposal plan including location of approved disposal site, and detailed description of methods to be employed to control pollution.
   2. Expand upon use of portable HEPA ventilation system, method of removal to prohibit visible emissions in work area, and packaging of removed asbestos debris.
   3. Plan must be approved by APM prior to commencement of work.

1.5 INSPECTION

A. Prior to commencement of work, inspect areas where work will be performed.
   1. Prepare listing of damage to structure, surfaces, equipment, or of surrounding properties which could be misconstrued as damage resulting from work.
   2. Photograph or videotape existing conditions to document conditions.
   3. Submit to APM prior to starting work.

1.6 POTENTIAL ASBESTOS HAZARD

A. Disturbance or dislocation of asbestos-containing materials may cause asbestos fibers to be released into building's atmosphere, creating potential health hazard to workmen and building occupants.
   1. Apprise all workers, supervisory personnel, subcontractors and consultants who will be at job site of seriousness of hazard and of proper procedures which must be followed.

B. When, in performance of work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in immediate vicinity of any identified asbestos-containing materials, take appropriate continuous measures to protect all building occupants from potential hazard of exposure to airborne asbestos.
   1. Measures include procedures and methods of described, and compliance with regulations of applicable Federal, State, and local agencies.

1.7 STOP WORK

A. When Owner or APM presents written Stop Work Order, immediately and automatically stop all work.
   1. Do not recommence work until authorized in writing by APM.
   2. Contractor shall indemnify and hold harmless the APM, Engineer and Owner for all liabilities or costs incurred by issuance of stop work order(s).

1.8 CONTRACTOR USE OF PREMISES

A. Contractor shall limit his use of premises to work indicated, to allow for APM occupancy and use by public.

B. Use of Site:
   1. Confine operations at site to areas permitted under Contract.
   2. Do not disturb portions of site beyond areas on which work is indicated.
   3. Conform to site rules and regulations affecting work while engaged in project construction.
   4. Keep existing driveways and entrances serving premises clear and available to Owner and his employees at all times.
      a) Do not use these areas for parking or storage of materials.
   5. Do not unreasonably encumber site with materials or equipment.
      a) Confine stockpiling of materials and location of storage sheds to areas indicated.
      b) When additional storage is needed, obtain and pay for such storage off-site.
   6. Lock automotive type vehicles, such as passenger cars and trucks, and other mechanized or motorized construction equipment, when parked and unattended, to prevent unauthorized use.
      a) Do not leave such vehicles or equipment unattended with motor running or

ignition key in place or accessible to unauthorized persons.

C. Contractor's Use of Existing Building:
   1. Maintain existing building in safe and weather-tight condition throughout construction period.
   2. Repair damage caused by construction operations.
   3. Take precautions to protect building and its occupants during construction period.
   4. Keep public areas such as hallways, stairs, elevator lobbies, and toilet rooms free from accumulation of waste, rubbish, or construction debris.
   5. Smoking or open fires are not permitted within building enclosure or on premises.

D. Full Owner Occupancy:
   1. Owner will occupy site and existing building during entire period of construction.
   2. Cooperate fully with APM or his representative during construction operations to minimize conflicts and to facilitate usage.
   3. Perform work so not to interfere with Owner's operation.

1.9 SUBMITTALS

A. Before start of work, submit following to APM for review.
   1. Plan of Action: Submit as written report in same manner as product data.
   2. Inspection: Report on inspection carried out as required by this Section.
      a) Include copies of all photographs, videotapes, and other such information.
      b) Submit in same manner as product data.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION 01010

SECTION 01023

CONTINGENCY ALLOWANCE

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDES

A. Monetary amount of allowance in Contract Sum.

B. Disbursement of funds from Allowance.

1.2 RELATED REQUIREMENTS

A. Conditions of the Contract.

1.3 ALLOWANCE

A. Allow Lump Sum of $5,000.00 for disbursal of Owner's instructions for Lincoln – Irving Elementary School.

B. Contractor's costs for products and labor, will be included in Change Orders authorizing expenditure of funds from this Allowance.

1.4 USE OF ALLOWANCE

A. Funds will be drawn from Allowance only by Change Order.

B. At Contract Closeout, funds remaining in Allowance will be credited to Owner by Change Order.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01023

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SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for payment.

1.2 RELATED SECTIONS

A. Agreement: Contract Sum/Price and unit prices, amounts of progress payments and retainages, time schedule for submittals.

B. General Conditions: Progress payments and final payment.

C. Section 01028 - Modification Procedures: Procedures for changes to the Work.

D. Section 01300 - Submittals: Submittal procedures.

E. Section 01700 - Contract Closeout: Final payment.

1.3 FORMAT

A. AIA G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet AIA G722 - Project Application and Project Certificate for Payment and AIA G723 - Project Application Summary including continuation sheets when required.

B. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   3. Scheduled Values.
   4. Previous Applications.
   5. Work in Place under this Application.
   6. Authorized Change Orders.
   7. Total Completed to Date of Application.
   8. Percentage of Completion.
   9. Balance to Finish.
   10. Retainage.

1.4 PREPARATION OF APPLICATIONS

A. Present required information in typewritten form.

B. Execute certification by signature of authorized officer.

C. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed.

D. List each authorized Change Order as an extension on AIA G703 - Continuation Sheet, listing Change Order number and dollar amount as for an original item of Work.

E. Prepare Application for Final Payment as specified in Section 01700.

1.5 SUBMITTAL PROCEDURES

A. Submit three copies of each Application for Payment.

2. Submit an updated construction schedule with each Application for Payment.

C. Payment Period: Submit on the first day of each month.

D. Submit with transmittal letter as specified for Submittals in Section 01300.

E. Submit final waivers.

1.6 SUBSTANTIATING DATA

A. When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question.

B. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01027

SECTION 01028

MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittals.

B. Documentation of change in Contract Sum/Price and Contract Time.

C. Change procedures.

D. Stipulated Price change order.

E. Unit price change order.

F. Time and material change order.

G. Execution of change orders.

H. Correlation of Contractor submittals.

1.2 RELATED SECTIONS

A. Agreement: Monetary values of established Unit Prices and percentage allowances for Contractor's overhead and profit.

B. General Conditions: Governing requirements for changes in the Work, in Contract Sum/Price, and Contract Time.

C. Supplementary Conditions: Percentage allowances for Con-tractor's overhead and profit.

D. Section 01027 - Applications for Payment: Payment applications.

E. Section 01300 - Submittals: Work schedule.

F. Section 01300 - Submittals: Schedule of values.

G. Section 01600 - Material and Equipment: Product options and substitutions.

H. Section 01700 - Contract Closeout: Project record documents.

1.3 SUBMITTALS

A. Submit name of the individual authorized to receive change documents and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. Change Order Forms: EJCDC 1910-8-B Change Order.

1.4 DOCUMENTATION OF CHANGE IN CONTRACT SUM/PRICE AND CONTRACT TIME

A. Maintain detailed records of work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.

B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.

C. On request, provide additional data to support computations:
   1. Quantities of products, labor, and equipment.
   2. Taxes, insurance, and bonds.
   3. Overhead and profit.
   4. Justification for any change in Contract Time.
   5. Credit for deletions from Contract, similarly documented.

D. Support each claim for additional costs, and for work done on a time and material basis, with additional information:
   1. Origin and date of claim.
   2. Dates and times work was performed, and by whom.
   3. Time records and wage rates paid.
   4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.5 CHANGE PROCEDURES

A. The Architect/Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by EJCDC 1990 Edition, Paragraph 9.5 by issuing supplemental instructions on AIA Form G710.

B. The Architect/Engineer may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 3 days.

C. The Contractor may propose a change by submitting a request for change to the 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 01600.

1.6 STIPULATED PRICE CHANGE ORDER

A. Based on Proposal Request and Contractor's fixed price quotation or Contractor's request

for a Change Order as approved by Architect/Engineer.

1.7 UNIT PRICE CHANGE ORDER

A. For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis.

B. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

1.8 TIME AND MATERIAL CHANGE ORDER

A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

B. Architect/Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.

C. Maintain detailed records of work done on Time and Material basis.

D. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

1.9 EXECUTION OF CHANGE ORDERS

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

1.10 CORRELATION OF CONTRACTOR SUBMITTALS

A. 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.

B. 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.

C. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01028

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SECTION 01091

DEFINITIONS AND STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Definitions.

B. Industry standards.

C. Submittals.

1.2 SUMMARY

A. Substantial amount of specification language constitutes definitions for terms found in other Contract Documents, including Drawings.
   1. Drawings must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated.
   2. Certain terms used in Contract Documents are defined in this Section.

1.3 DEFINITIONS

A. Definitions contained in this Section are not necessarily complete but are general to extent that they are not defined more explicitly elsewhere in Contract Documents.

B. Indicated: Refers to graphic representations, notes or schedule on Drawings, or other paragraphs or Schedules in Specifications, and similar requirements in Contract Documents.
   1. Where terms such as "shown", "noted', "scheduled", and "specified" are used, it is to help locate reference; no limitation on location is intended except as specifically noted.

C. Directed: "Directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by APM", "requested by APM", and similar phrases.
   1. No implied meaning shall be interpreted to extend APM's responsibility into Contractor's area of construction supervision.

D. Approve: Where used in conjunction with APM's action on Contractor's submittals, applications, and requests, it is limited to responsibilities and duties of Architect/Engineer stated in General and Supplementary Conditions.
   1. Such approval does not release Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in Contract Documents.

E. Regulation: Includes laws, statutes, ordinances and lawful orders issued by authorities

having jurisdiction, as well as rules, conventions, and agreements within construction industry that control performance of work, whether lawfully imposed by authorities having jurisdiction or not.

F. Furnish: Means supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. Install: Describes operations at project site including actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. Provide: Means to furnish and install, complete and ready for designed use.

I. Project Site: Space available to Contractor for performance of work, either exclusively or in conjunction with others performing other construction as part of project.
   1. Extent of project site is indicated on Drawings and may or may not be identical with description of land upon which project is to be built.

J. Testing Laboratories: Independent entity engaged to perform specific inspections or tests, either at project site or elsewhere; and to report on, and if required, to interpret results of those inspections or tests.

1.4 DEFINITIONS RELATIVE TO ASBESTOS ABATEMENT

A. Accredited or Accreditation, When Referring to Person or Laboratory: Person or laboratory accredited in accordance with Section 206 of Title II of Toxic Substances Control Act (TSCA).

B. Aerosol: System consisting of particles, solid or liquid, suspended in air.

C. Air Cell: Insulation normally used on pipes and ductwork, comprised of corrugated cardboard which is frequently comprised of asbestos combined with cellulose or refractory binders.

D. Air Monitoring: Process of measuring fiber content of specific volume of air.

E. Air Sampling Professional (ASP): Person or organization secured by Asbestos Project Manager (APM), to perform all duties concerning air monitoring; licensed in State where project is to be performed.

F. Amended Water: Water to which surfactant has been added to decrease surface tension to 35 or less dynes.

G. Asbestos: Asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.
   1. For purposes of determining respiratory and worker protection, both asbestiform

and non-asbestiform varieties of above minerals and any of these materials that have been chemically treated or altered is considered as asbestos.

H. Asbestos-Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.

I. Asbestos-Containing Building Material (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of building.

J. Asbestos-Containing Waste Material: Any material which is or is suspected of being, or any material contaminated with, asbestos-containing material which is to be removed from work area for disposal.

K. Asbestos Debris: Pieces of ACBM that can be identified by color, texture, or composition; or means dust, if dust is determined by accredited inspector to be ACM.

L. APM: Asbestos Project Manager.

M. Authorized Visitor: Owner, APM, testing lab personnel, Architect/Engineer, emergency personnel, or representative of any Federal, State, and local regulatory or other agency having authority over project.

N. Barrier: Any surface that seals off work area to inhibit movement of fibers.

O. Breathing Zone: Hemisphere forward of shoulders with radius of approximately 6 to 9 inches.

P. Ceiling Concentration: Concentration of air-borne substance that will not be exceeded.

Q. Certified Industrial Hygienist (CIH): Industrial hygienist certified in Comprehensive Practice by American Board of Industrial Hygiene.

R. Demolition: Wrecking or taking out of any building component, system, finish, or assembly of facility together with any related handling operations.

S. Disposal Bag: Properly labeled 6-mil thick, leak-tight plastic bags used for transporting asbestos waste from work and to disposal site.

T. Encapsulant: Material that surrounds or embeds asbestos fibers in adhesive matrix, to prevent release of fibers.
   1. Bridging Encapsulant: Encapsulant that forms discrete layer on surface of in situ asbestos matrix.
   2. Penetrating Encapsulant: Encapsulant that is absorbed by in situ asbestos matrix without leaving discrete surface layer.
   3. Removal Encapsulant: Penetrating encapsulant specifically designed to minimize

fiber release during removal of asbestos-containing materials rather than for in situ encapsulation.

U. Encapsulation: Treatment of asbestos-containing materials, with encapsulant.

V. Enclosure: Construction of air-tight, impermeable, permanent barrier around asbestos-containing material to control release of asbestos fibers into air.

W. Filter: Media component used in respirators to remove solid or liquid particles from inspired air.

X. Friable Asbestos Material: Material that contains more than 1% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Y. Glovebag: Sack (typically constructed of 6-mil transparent polyethylene or polyvinyl chloride plastic) with inward projecting longsleeve gloves, which are designed to enclose object from which asbestos-containing material is to be removed.

Z. HEPA Filter: High-Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.

AA. HEPA Filter Vacuum Collection Equipment (or Vacuum Cleaner): High-efficiency particulate air (HEPA) filtered vacuum collection equipment with filter system capable of collecting and retaining asbestos fibers.
   1. Filters of 99.97% efficiency for retaining fibers of 0.3 microns or larger.

BB. Negative-Pressure Respirator: Respirator in which air pressure inside respiratory-inlet covering is positive during exhalation in relation to air pressure of outside atmosphere and negative during inhalation in relation to air pressure of outside atmosphere.

CC. Negative-Pressure Ventilation System: Pressure differential and ventilation system.

DD. Personal Monitoring: Sampling of asbestos fiber concentrations within breathing zone of employee.

EE. Powered Air Purifying Respirators: Full-face cartridge type respirator.

FF. Pressure Differential and Ventilation System: Local exhaust system using HEPA filtration, capable of maintaining pressure differential with inside of Work Area at lower pressure than any adjacent area, and which cleans recirculated air or generates constant air flow from adjacent areas into Work Area.

GG. Protection Factor: Ratio of ambient concentration of air-borne substance to concentration of substance inside respirator at breathing zone of wearer.
   1. Protection factor is measure of degree of protection provided by respirator to wearer.

HH. Repair: Returning damaged ACBM to undamaged condition or to intact state to prevent fiber release.

II. Respirator: Device designed to protect wearer from inhalation of harmful atmospheres.

JJ. Surfactant: Chemical wetting agent added to water to improve penetration, reducing quantity of water required for given operation of area.

KK. Time Weighted Average (TWA): Average concentration of contaminant in air during specific time period.

LL. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without aid of instruments; does not include condensed uncombined water vapor.

MM. Wet Cleaning: Process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant; and afterward, thoroughly decontaminated or disposed of as asbestos-contaminated waste.

NN. Work Area: Area where asbestos-related work or removal operations are performed which is defined or isolated to prevent spread of asbestos dust, fibers, or debris, and entry by unauthorized personnel.
1. Work Area: Defined as Regulated Area by 29 CFR 1926.

1.5 INDUSTRY STANDARDS

A. Applicability of Standards:
1. Except where Contract Documents include more stringent requirements, applicable construction industry standards have same force and effect as if bound or copied directly into Contract Documents.
2. Such standards are made part of Contract Documents by reference.
3. Individual Sections indicate which codes and standards Contractor must keep available at project site for reference.

4. Referenced industry standards take precedence over standards that are not referenced but recognized in construction industry as applicable.
5. Unreferenced industry standards are not directly applicable to work, except as general requirement of whether work complies with recognized construction industry standards.

B. Publication Dates:
1. Where compliance with industry standard is required, comply with standard in effect as of date of Contract Documents.
a) At request of APM, Contractor, or authority having jurisdiction, submit

Change Order proposal where applicable code or standard has been revised and re-issued after date of Contract Documents and before performance of work affected.

b) APM will decide whether to issue Change Order to proceed with updated standard.

C. Conflicting Requirements:

1. Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, most stringent requirement will be enforced, unless Contract Documents indicate otherwise.
2. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to APM for decision before proceeding.
3. Minimum Quantities or Quality Levels:
   a) In every instance, quantity or quality level indicated or specified shall be minimum to be provided or performed.
   b) Actual installation may comply exactly, within specified tolerances, with minimum quantity or quality specified, or it may exceed that minimum within reasonable limits.
   c) In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for context of requirements.
   d) Refer instances of uncertainty to APM for decision before proceeding.

D. Copies of Standards:

1. Each entity engaged in construction on project is required to be familiar with industry standards applicable to that entity's construction activity.
   a) Copies of applicable standards are not bound with Contract Documents.
2. Where copies of standards are needed for performance of required construction activity, Contractor shall obtain copies directly from publication source.

3. Although copies of standards needed for enforcement of requirements may be part of required submittals, APM reserves the right to require Contractor to submit additional copies as necessary for enforcement of requirements.

E. Abbreviations and Names:

1. Trade association names and titles of general standards are frequently abbreviated.
2. Following acronyms or abbreviations as referenced in Contract Documents are defined to mean associated names.
   a) Name and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of Contract Documents:

AIHA American Industrial Hygiene Association
475 Wolf Ledges Parkway
Akron, OH 44311
216/762-7294

AIA American Institute of Architects
1735 New York Ave., NW
Washington, DC 20006
202/626-7474

ANSI American National Standards Institute
1430 Broadway
New York, NY 10018
212/354-3300

ASHRAE American Society for Heating, Refrigerating, and Air Conditioning Engineers
1791 Tullie Circle, NE
Atlanta, GA 30329
404/636-8400

ASMEAmerican Society of Mechanical Engineers
345 East 47th Street
New York, NY 10017
212/705-7722

ASPE American Society of Plumbing Engineers
3716 Thousand Oaks Blvd., Suite 210
Westlake, CA 91362
805/495-7120

ASTMAmerican Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103
215/299-5400

AWCI Association of Wall and Ceiling Industries - International
25 K Street, NW
Washington, DC 20002
202/783-2924

CFR Code of Federal Regulations
Government Printing Office
Washington, DC 20402
202/783-3238

CGA Compressed Gas Association
1235 Jefferson Davis Highway
Arlington, VA 22202
703/979-0900

CS Commercial Standard of NBS
(U.S. Dept. of Commerce)
Government Printing Office
Washington, DC 20402
202/377-2000

DOT Department of Transportation
400 Seventh Street, SW
Washington, DC 20590
202/426-4000

EPA Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
202/382-3949

FS Federal Specifications
7th and D Streets, SW
Washington, DC 20460
202/472-2205 or 2140

GA Gypsum Association
1603 Orrington Avenue
Evanston, IL 60201
708/491-1744

GSA General Services Administration
F Street and 18th Street, NW
Washington, DC 20405
202/655-4000

IEEE Institute of Electrical and Electronic Engineers
345 East 47th Street
New York, NY 10017
212/705-7900

MIL Military Standardization Documents
(U.S. Dept. of Defense)
Naval Publications and Forms Center
5801 Tabor Avenue
Philadelphia, PA 19120

NBS National Bureau of Standards
(U.S. Dept. of Commerce)
Gaithersburg, MD 20234

301/921-1000

NEC National Electrical Code (by NFPA)

NFPA National Fire Protection Association
Batterymarch Park
Quincy, MA 02269
617/770-3000

NRCA National Roofing Contractors Association
6250 River Road
Rosemont, IL 60018
708/3180-6722

OSHA Occupational Safety & Health Administration
(U.S. Dept. of Labor)
Government Printing Office
Washington, DC 20402
202/783-3238

Product Standard of NBS
(U.S. Dept. of Commerce)
Government Printing Office
Washington, DC 20402
202/783-3238

RFCI Resilient Floor Coverings Institute
966 Hungerford Drive, Suite 12-B
Rockville, MD 20805
301/340-8580

UL Underwriter's Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062
708/272-8800

F. Trade Union Jurisdictions:
1. Contractor maintains, and requires subcontractors to maintain, complete current information on jurisdictional matters, regulations, and pending actions, as applicable to construction activities.
2. Manner in which Contract Documents have been organized and subdivided is not intended to indicate of trade union or jurisdictional agreements.
3. Discuss new developments at project meetings at earliest feasible dates; record relevant information and actions agreed upon.
4. Assign and subcontract construction activities, and employ tradesmen and laborers in manner that will not unduly risk jurisdictional disputes that could result in

conflicts, delays, claims, and losses.

1.6 SUBMITTALS

A. Permits, Licenses, and Certificates:
   1. For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of work.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION 01091

SECTION 01092

CODES, REGULATIONS, AND STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Codes and regulations.

B. Standards.

C. EPA guideline documents.

D. Notices.

E. State and local agencies.

F. Permits.

G. Licenses.

H. Posting and filing of regulations.

I. Submittals.

1.2 SUMMARY

A. This Section sets forth governmental regulations and industry standards which are included and incorporated by reference and made part of Specification.
   1. This Section also sets forth those notices and permits which are known to Owner and which either must be applied for and received, or which must be given to governmental agencies before start of work.
   2. Requirements include adherence to work practices and procedures set forth in applicable codes, regulations, and standards.
   3. Requirements include obtaining permits, licenses, inspections, releases, and similar documentation, as well as payments, statements and similar requirements associated with codes, regulations, and standards.

1.3 CODES AND REGULATIONS

A. General Applicability of Codes, Regulations, and Standards:

1. Except to extent that more explicit or more stringent requirements are written directly into Contract Documents, all applicable codes, regulations, and standards have same force and effect, and are made part of Contract Documents by reference, as it copied directly into Contract Documents, or as if published copies are bound in.

B. Contractor Responsibility:
   1. Contractor assumes full responsibility and liability for compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to site, and persons occupying areas adjacent to site.
   2. Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by applicable Federal, State, and local regulations.
   3. Contractor shall hold Owner and APM harmless for failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on part of himself, his employees, or his subcontractors.

C. Federal Requirements: Govern asbestos abatement work or hauling and disposal of asbestos waste materials; including the following:
   1. OSHA: U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), including:
      a) Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 58 of Code of Federal Regulations.
      b) Respiratory Protection, Title 29, Part 1910, Section 134 of Code of Federal Regulations.
      c) Construction Industry, Title 29, Part 1926 of Code of Federal Regulations.
      d) Access to Employee Exposure and Medical Records, Title 29, Part 1910, Section 2 of Code of Federal Regulations.
      e) Hazard Communication, Title 29, Part 1910, Section 1200 of Code of Federal Regulations.
      f) Specifications for Accident Prevention Signs and Tags, Title 29, Part 1910, Section 145 of Code of Federal Regulations.
   2. DOT: U.S. Department of Transportation, including:
      a) Hazardous Substances, Title 49, Part 171 and 172 of Code of Federal Regulations.

3. EPA: U.S. Environmental Protection Agency, including:
      a) Asbestos Abatement Projects; Worker Protection Rule, Title 40, Part 763, Sub-part G of Code of Federal Regulations.
      b) Asbestos Hazard Emergency Response Act (AHERA) Regulation, Asbestos-Containing Materials in Schools Final Rule & Notice, Title 40, Part 763, Sub-part E of Code of Federal Regulations.

c) Training Requirements of AHERA Regulation, Asbestos-Containing Materials in Schools Final Rule & Notice, Title 40, Part 763, Sub-part E, Appendix C of Code of Federal Regulations.

d) National Emission Standard for Hazardous Air Pollutants (NESHAP), National Emission Standard for Asbestos, Title 40, Part 61, Sub-part A, and Sub-part M (Revised Sub-part B) of Code of Federal Regulations.

D. State Requirements: Govern asbestos abatement work or hauling and disposal of asbestos waste materials; including the following:

1. IDPH: Illinois Department of Public Health, Asbestos Abatement Act & Rules and Regulations.

E. Local Requirements:

1. Abide by all local requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

1.4 STANDARDS

A. General Applicability of Standards:

1. Except to extent that more explicit or more stringent requirements are written directly into Contract Documents, all applicable standards have same force and effect, and are made part of Contract Documents, or as if published copies are bound in.

B. Contractor Responsibility:

1. Contractor assumes full responsibility and liability for compliance with all standards pertaining to work practices, hauling, disposal, and protection of workers, visitors to site, and persons occupying areas adjacent to site.
2. Contractor shall hold Owner and APM harmless for failure to comply with any applicable standard on part of himself, his employees, or his subcontractors.

C. Standards: Apply to asbestos abatement work or hauling and disposal of asbestos waste materials; including the following:

1. American National Standards Institute (ANSI), 1430 Broadway, New York, NY 10018 (212) 354-3300.
   a) Fundamentals Governing the Design and Operation of Local Exhaust Systems, Publication Z9.2-79.
   b) Practices for Respiratory Protection, Publication Z88.2-80.
2. American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103 (215) 299-5400.
   a) Safety and Health Requirements Relating to Occupational Exposure to Asbestos, Publication E849.82.
   b) Specification for Encapsulants for Friable Asbestos-Containing Building Materials, Proposal P-189.

1.5 EPA GUIDANCE DOCUMENTS

A. Discuss asbestos abatement work or hauling and disposal of asbestos waste materials listed below for Contractor's information only.
   1. These documents do not describe work and are not part of work of this Contract.
   2. EPA maintains information number: (800) 334-8571.
   3. Publications can be ordered from (800) 424-9065 (554-1404 in Washington, DC).
      a) Asbestos-Containing Materials in School Buildings - A Guidance Document. Part 1 & 2. (Orange Books) EPA C00090 (out of print).
      b) Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book) EPA 560/5-85-024.
      c) Friable Asbestos-Containing Materials in Schools: Identification and Notification Rule (40 CFR Part 763).
      d) Evaluation of the EPA Asbestos-in-Schools Identification and Notification Rule. EPA 560/5-84-005.
      e) Asbestos in Buildings: National Survey of Asbestos-Containing Friable Materials. EPA 560/5-84-006.
      f) Asbestos in Buildings: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018.
      g) Asbestos Waste Management Guidance. EPA 530-SW-85-007.
      h) Asbestos Fact Book. EPA Office of Public Affairs. Asbestos in Buildings. Simplified Sampling Scheme for Friable Surfacing Materials.
      i) Commercial Laboratories with Polarized Light Microscopy Capabilities for bulk asbestos identification.
      j) A Guide to Respiratory Protection for the Asbestos Abatement Industry. EPA 560-OPTS-86-001.

1.6 NOTICES

A. U.S. Environmental Protection Agency.
   1. Send written notifications as required by USEPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Asbestos Regulations (40 CFR 61, Sub-part M) to regional asbestos NESHAP contact minimum 10 days prior to beginning any work on asbestos-containing materials.
   2. Send notifications to following address:

      REGION 5:
      Asbestos NESHAP Contact
      Air Management Division
      USEPA
      230 S. Dearborn Street
      Chicago, IL 60604
      (312) 353-2088

B. Notification:

1. Include following information in notification sent to NESHAP contact:
    a) Name and address of Owner or Operator.
    b) Description of facility being demolished or renovated, including size, age, and prior use of facility.
    c) Estimate of approximate amount of friable asbestos material present in facility in terms of linear feet of pipe, and surface area on other facility components.
        1. For facilities in which amount of friable asbestos materials is less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, explain techniques of estimation.
    d) Location of facility being demolished or renovated.
    e) Scheduled starting and completion dates of demolition or renovation.
    f) Nature of planned demolition or renovation and method(s) to be used.

    g) Procedures to be used to comply with requirements of USEPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Asbestos Regulations (40 CFR 61, Sub-part M).
    h) Name and location of waste disposal site where friable asbestos waste material will be deposited.
    i) For facilities being demolished under order of State or local governmental agency, issued because facility is structurally unsound and in danger of imminent collapse, name, title, and authority of State or local governmental representative who has ordered demolition.
    j) Notification form follows this Section.

1.7 STATE AND LOCAL AGENCIES

A. Send written notification as required by State and local regulations prior to beginning any work on asbestos-containing materials.
    1. Notify Illinois Department of Public Health (IDPH) on approved form at least two weeks prior to start of project.

1.8 PERMITS

A. All asbestos-containing waste is to be transported by entity maintaining current "Industrial Waste Hauler Permit" specifically for asbestos-containing materials, as required for transporting of waste asbestos-containing materials to disposal site.

1.9 LICENSES

A. Maintain current licenses as required by applicable State or local jurisdictions for removal, transporting, disposal, or other regulated activity relative to work of this Contract.

1.10 POSTING AND FILING OF REGULATIONS

A. Post all notices required by applicable Federal, State, and local regulations.
   1. Maintain two copies of applicable Federal, State, and local regulations and standards.
   2. Maintain one copy of each at job site.
   3. Keep on file in Contractor's office one copy of each.

1.11 SUBMITTALS

A. Before start of work, submit following to APM for review.
   1. No work shall begin until these submittals are returned with APM action stamp indicating that submittal is returned for unrestricted use or final-but-restricted use.

B. Permits, Licenses, and Certificates:
   1. For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of work, including:
      a) State and Local Regulations: Submit copies of codes and regulations applicable of work.
      b) Notices: Submit notices required by Federal, State, and local regulations together with proof of timely transmittal to agency requiring notice.
      c) Permits: Submit copies of current valid permits required by State and local regulations.
      d) Licenses: Submit copies of all State and local licenses and permits necessary to carry out work of this Contract.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION 01092

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Contractor's construction schedules.

C. Submittal schedule.

D. Miscellaneous submittals.

E. APM's action.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for submittals required for performance of work, including:
   1. Contractor's construction schedule.
   2. Submittal schedule.
   3. Daily construction reports.
   4. Shop drawings.
   5. Product data.
   6. Miscellaneous submittals.

B. Administrative Submittals: See other Division 1 Sections and other Contract Documents for requirements for administrative submittals, which include following:
   1. Permits.
   2. Applications for Payment.
   3. Performance and Payment Bonds.
   4. Insurance certificates.
   5. List of subcontractors.

C. Schedule of Values submittal is included in Section 01027 - Applications for Payment.

1.3 SUBMITTAL PROCEDURES

A. Coordination:

1. Coordinate preparation and processing of submittals with performance of construction activities.
   2. Transmit each submittal sufficiently in advance of performance of related

construction activities to avoid delay.

3. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
4. Coordinate transmittal of different types of submittals for related elements of work so processing will not be delayed by need to review submittals concurrently for coordination.
5. APM reserves the right to withhold action on submittal requiring coordination with other submittals until related submittals are received.

B. Processing:
   1. Allow sufficient review time so installation will not be delayed as result of time required to process submittals, including time for resubmittals.
   2. Allow one week for initial review.
      a) Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
      b) APM will promptly advise Contractor when submittal being processed must be delayed for coordination.
   3. If intermediate submittal is necessary, process same as initial submittal.
   4. Allow one week for reprocessing each submittal.
   5. No extension of Contract Time will be authorized because of failure to transmit submittals to APM sufficiently in advance of work to permit processing.

C. Submittal Preparation:
   1. Place permanent label or title block on each submittal for identification.
      a) Indicate name of entity that prepared each submittal on label or title block.
   2. Include following information on label for processing and recording action taken.
      a) Project name.
      b) Date.
      c) Name and address of APM.
      d) Name and address of Contractor.
      e) Name and address of Subcontractor.
      f) Number and title of appropriate Specification Section.
      g) Drawing number and detail references, as appropriate.

D. Submittal Transmittal:
   1. Package each submittal appropriately for transmittal and handling.
      a) Transmit each submittal from Contractor to APM using transmittal form.
      b) Submittals received from sources other than Contractor will be returned without action.
   2. On transmittal, record relevant information and requests for data.
      a) On form or separate sheet, record deviations from Contract Documents, including minor variations and limitations.
      b) Include Contractor's certification that information complies with Contract Documents.
   3. Transmittal Form: Use form accepted by APM for transmittal of submittals.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Schedule:
   1. Provide proposed detailed schedule including work dates, work shift time, number of employees, dates of start and completion including dates of preparation work, removals, and final inspection dates.

   2. Indicate completion and clearance of each Work Area in advance of date established for Substantial Completion.
      a) Allow time for testing and other APM's procedures necessary for certification of clearance and Substantial Completion.

B. Phasing:
   1. Provide notations on schedule to show how sequence of work is affected by requirements for phased completion to permit work by separate Contractors and partial occupancy by Owner prior to Substantial Completion.

C. Work Stages:
   1. Indicate important stages of construction for each major portion of work, including testing and installation.
   2. Include indication of start and finish times for following:
      a) Non-asbestos demolition.
      b) Preparation of Work Area.
      c) Asbestos removal.
      d) Clearance testing.
      e) Substantial Completion.

D. Area Separations:
   1. Provide separate time bar to identify each Work Area or major construction area for each major portion of work.
   2. Indicate where each element in area must be sequenced or integrated with other activities.

E. Cost Correlation:
   1. At head of schedule, provide two-item cost correlation line, indicating pre-calculated and actual costs.
   2. On line, show dollar volume of work performed as of dates used for preparation of payment requests.
   3. See Section 01027 - Applications for Payment for cost reporting and payment procedures.

F. Distribution:
   1. Following response to initial submittal, print and distribute copies to APM, Owner, Subcontractors, and other parties required, to comply with schedules dates.
      a) Post copies in Project Administrator's field office, project meeting room, and

temporary field office.

2. When revisions are made, distribute to same parties and post in same locations.
    a) Delete parties from distribution when they have completed their assigned portion of work and are no longer involved in construction activities.

1.5 SUBMITTAL SCHEDULE

A. Listing:
1. At end of this Section is listing of principal submittals required for work.
    a) This listing is not necessarily complete, nor does listing reflect significance of each submittal requirement.
    b) Listing is included only for convenience of users of Contract Documents.
2. After review and action on Contractor's construction schedule, prepare complete schedule of submittals.
    a) Submit schedule of submittals within 3 days of date required for establishment of Contractor's construction schedule.

3. Coordinate submittal schedule with list of subcontracts, Schedule of Values, and list of products, as well as Contractor's construction schedule.
4. Prepare submittal schedule in chronological order; include submittals required before start of construction; provide following information:
    a) Scheduled date for first submittal.
    b) Related Section number.
    c) Submittal category.
    d) Name of Subcontractor.
    e) Description of part of work covered.
    f) Scheduled date for resubmittal.
    g) Scheduled date for APM's final release or approval.

B. Distribution:
1. Following response to initial submittal, print and distribute copies to APM, Owner, Subcontractors, and other parties required to comply with submittal dates indicated.
    a) Post copies in project meeting room and field office.
2. When revisions are made, distribute to same parties and post in same locations.
    a) Delete parties from distribution when they have completed their assigned portion of work and are no longer involved in construction activities.

C. Schedule Updating:
1. Review schedule after each meeting or activity, where revisions have been recognized or made.
2. Issue updated schedule concurrently with report of each meeting.

1.6 MISCELLANEOUS SUBMITTALS

A. Standards:

1. Where submittal of copy of standards is indicated, and except where copies of standards are specified as integral part of product data submittal, submit single copy of standards for APM's use.
2. Where workmanship, whether at project site or elsewhere is governed by standard, furnish additional copies of standard to fabricators, installers, and others involved in performance of work.

B. Closeout Submittals:
   1. See Section 01700 - Project Closeout and individual Sections of these Specifications for specific submittal requirements of project closeout information.

C. Record Documents:
   1. Furnish set of original documents as maintained on project site.

1.7 APM'S ACTION

A. Except for submittals for record, information, or similar purposes, where action and return is required or requested, APM will review each submittal, mark to indicate action, and return promptly.

B. Compliance with specified characteristics is Contractor's responsibility.

C. Action Stamp:
   1. APM will stamp each submittal with uniform, self-explanatory action stamp.
   2. Stamp will be appropriately marked, as follows, to indicate action taken:
      a) Final Unrestricted Release: Where submittals are marked "Approved", that part of work covered by submittal may proceed provided it complies with requirements of Contract Documents; final acceptance will depend upon that compliance.
      b) Final-But-Restricted Release: Where submittals are marked "Approved as Noted", that part of work covered by submittal may proceed provided it complies with notations or corrections on submittal and requirements of Contract Documents; final acceptance will depend on that compliance.
      c) Returned for Re-submittal: Where submittal is marked "Not Approved, Revise and Resubmit", do not proceed with that part of work covered by submittal, including purchasing, fabrication, delivery, or other activity.
   3. Revise or prepare new submittal in accordance with notations; resubmit without delay.
      a) Repeat if necessary, to obtain different action mark.
   4. Do not permit submittals marked "Not Approved, Revise and Resubmit" to be used at project site or elsewhere where work is in progress.

D. Other Action:
   1. Where submittal is primarily for information or record purposes, special processing or other activity, submittal will be returned, marked "Action Not Required".

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION 01300

SECTION 01410

AIR MONITORING - TEST LABORATORY SERVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Air monitoring.

B. Stop action levels.

C. Analytical methods.

D. Sample volumes.

E. Schedule of air samples.

F. Additional testing.

G. Personal monitoring.

1.2 RELATED REQUIREMENTS

A. Section 01714: Work Area Clearance - Air monitoring during Work Area clearance.

1.3 DESCRIPTION OF WORK

A. APM secures services of Air Sampling Professional (ASP), licensed in State where project is located, to perform all air monitoring.

B. This Section describes work being performed by ASP; this work is not in Contract Price.
   1. Air monitoring is carried out by ASP to verify that building beyond Work Area and outside environment remains uncontaminated.
   2. Includes air-borne fiber levels both inside and outside Work Area as action levels, and describes action required by Contractor if action level is met or exceeded.

C. Air monitoring required by OSHA is work of Contractor and is not covered in this Section.

1.4 AIR MONITORING

A. Work Area Isolation:
   1. Purpose of air monitoring is to detect faults in Work Area isolation such as following:

a) Contamination of building outside of Work Area with air-borne asbestos fibers.
b) Failure of filtration or rupture in differential pressure system.
c) Contamination of air outside building envelop air-borne asbestos fibers.

2. When any of above occurs, immediately cease asbestos abatement activities until fault is corrected.
   a) Do not recommence work until authorized by APM.

B. Work Area Air-Borne Fiber Count:
1. ASP will monitor air-borne fiber counts in Work Area.
2. Purpose of this air monitoring will be to detect air-borne asbestos concentrations which may challenge ability of Work Area isolation procedures to protect balance of building or outside of building from contamination by air-borne fibers.

C. Work Area Clearance:
1. to determine when elevated air-borne fiber counts encountered during abatement operations have been reduced to acceptable level, ASP will sample and analyze air in accordance with Section 01714 - Work Area Clearance.

D. ASP will be conducting air monitoring throughout course of project.

1.5 STOP ACTION LEVELS

A. Outside Work Area:
1. When any sample taken outside of Work Area exceeds base line established below, immediately and automatically stop all work except corrective action.
2. ASP will determine source of high reading and notify Contractor, in writing.
3. When high reading was result of failure of Work Area isolation measures, initiate following actions:
   a) Immediately erect new critical barriers as described in Section 01530 - Temporary Enclosure, to isolate affected area from balance of building.
      1. Erect critical barriers at next existing structural isolation of involved space, e.g., wall, ceiling, or floor.
   b) Decontaminate affected area in accordance with Section 01711 - Project Decontamination.
   c) Require that respiratory protection described with Section 01711 - Project Decontamination.
   d) Leave critical barriers in place until completion of work and ensure that operation of pressure differential system in Work Area results in flow of air from balance of building into affected area.
   e) When exit from Clean Room of personnel decontamination unit enters affected area, establish decontamination facility consisting of Shower Room and Changing Room as described in Section 01563 - Decontamination Units, at entry point to affected area.
   f) After Certification of Visual Inspection in Work Area, remove critical barriers separating Work Area from affected area.

1. Final air samples will be taken within entire area as specified in Section 01714 - Work Area Clearance.

4. When high reading was result of other causes, initiate corrective action as determined by APM.

B. Effect on Contract Price:
1. Complete corrective work with no change in Contract Price when high air-borne fiber counts were caused by Contractor's activities.
2. Contract Price and schedule will be adjusted for additional work caused by high air-borne fiber counts beyond Contractor's control.

C. Fibers Counted:
1. Following procedure will be used to resolve all disputes regarding fiber types when project has been stopped due to excessive air-borne fiber counts.

D. Large Fibers:
1. Air-borne fibers, referred to above, include all fibers regardless of composition as counted by phase contrast microscopy (PCM), unless additional analysis by transmission or scanning electron microscopy demonstrates to satisfaction of APM that non-asbestos fibers are being counted.
2. Air-borne fibers counted in samples analyzed by scanning or transmission electron microscopy are asbestos fibers greater than 5 microns in length and greater than 0.25 microns in diameter.
3. For purposes of stop action levels, subsequent to analysis by electron microscopy, number of air-borne fibers is determined by multiplying number of fibers, regardless of composition, counted by PCM by number equal to asbestos fibers counted, divided by all fibers counted in electron microscopy analysis.

E. Small Structures:
1. Air-borne fibers, referred to above, include asbestos structures (fibers, bundles, clusters, or matrices) of any diameter and any length greater than 0.5 microns.

1.6 ANALYTICAL METHODS

A. Following method will be used by ASP in analyzing filters used to collect air samples.
1. Sampling rates may be varied from printed standards to allow for high volume sampling.
2. Phase Contrast Microscopy (PCM) will be performed using NIOSH 7400 method, "A" Counting Rules.

1.7 SAMPLE VOLUMES

A. Number and volume of air samples taken by ASP will be in accordance with schedule in Article 1.08.
   1. Sample volumes given may vary depending on analytical method used.

1.8 SCHEDULE OF AIR SAMPLES

A. Before Start of Work:
   1. ASP will secure following air samples to establish base line before start of work.
   2. Samples will be collected on 25 mm. cassettes as follows:
      a) PCM: 0.8 micrometer mixed cellulose ester.
   3. Sampling sensitivity in table below refers to detection limit for PCM analysis as described in analytical method used.

Location Sampled	Number of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	2	PCM	0.01	1,500	1-12
Outside Each Work Area	2	PCM	0.01	1,500	1-12
Outside Building	1	PCM	0.01	1,500	1-12

   4. Base Line:
      a) Action level expressed in fibers per cubic centimeter which is 25% greater than largest of following:
         1. Average of PCM samples collected outside each Work Area.
         2. Average of PCM samples collected outside building.
         3. 0.01 fibers per cubic centimeter.
      b) Samples collected for TEM analysis will be held without analysis.
         1. These samples will be analyzed under conditions and terms specified in Fibers Counted and Effect on Contract Price.
   5. Daily:
      a) From start of work of Section 01530 - Temporary Enclosures, through work of Section 01711 - Project Decontamination, ASP may be taking following samples on daily basis.

b) Samples will be collected on 25 mm. cassettes with following filter media:
1. PCM: 0.8 micrometer mixed cellulose ester.

Location Sampled	Number of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Inside Work Area	2	PCM	0.01	1,500	1-12
			OR AS REQUIRED BY CONDITIONS		
Personal Inside Work Area	1	PCM	0.01	1,500	1-12
Outside Work Area at Critical Barrier	1	PCM	0.01	1,500	1-12
Clean Room	1	PCM	0.01	1,500	1-12
Output Pressure Differential System	(each) 1	PCM	0.01	1,500	1-12

c) Additional samples may be taken at APM's discretion.
1. When airborne fiber counts exceed allowed limits, additional samples will be taken to monitor fiber levels.
2. Sample(s) may be submitted for T.E.M. analysis if positive fiber identification is required by APM request.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 ADDITIONAL TESTING

A. Contractor may conduct his own air monitoring and laboratory testing.
1. When he elects to do this, cost of such air monitoring and laboratory testing will be at no additional cost to Owner.

3.2 PERSONAL MONITORING

A. ASP will not be performing air monitoring to meet Contractor's OSHA requirements for personal sampling or any other purpose.
   1. Contractor shall submit OSHA sampling results to APM weekly.

END OF SECTION 01410

SECTION 01510

TEMPORARY FACILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Scaffolding.

B. Water service.

C. Electrical service.

D. First aid.

E. Fire extinguishers.

F. Temporary lighting.

G. Sanitary facilities.

1.2 DESCRIPTION OF WORK

A. Provide temporary connection to existing building utilities, or provide temporary facilities required or necessary to carry out work.

1.3 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.
   1. Scaffolding: Submit list of rolling and fixed scaffolding intended for use on project.
   2. Hot Water Heater: Submit manufacturer's name, model number, size in gallons, heating capacity, and power requirements.
   3. Decontamination Unit Sub-Panel: Submit product data.
   4. Ground-Fault Circuit Interrupters (GFCI): Submit product data.
   5. Lamps and Light Fixtures: Submit product data.
   6. Fire Extinguishers: Submit product data, and schedule indicating location at job site.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Provide new or used materials and equipment that are undamaged and in serviceable condition.

1. Provide only materials and equipment recognized as being suitable for designed use, by compliance with appropriate standards.

2.2 SCAFFOLDING

A. Provide all scaffolding, ladders, and staging to accomplish work of this Contract.
   1. Scaffolding: Suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type, or cantilever type.
   2. Type, erection, and use of all scaffolding shall comply with all applicable OSHA provisions.

B. Equip rungs of all metal ladders with abrasive non-slip surface.

C. Provide non-skid surface on all scaffold surfaces subject to foot traffic.

2.3 WATER SERVICE

A. Temporary Water Service Connection:
   1. All connections to Owner's water system include backflow protection.
   2. Valves: Temperature and pressure rated for operation of temperatures and pressures encountered.
   3. After completion of use, remove connections and fittings without damaging or altering existing water piping and equipment.
   4. Pipe leaking or dripping valves to nearest drain or locate over existing sink or grade where water will not damage existing finishes or equipment.

B. Water Hoses:
   1. Employ heavy-duty, abrasion-resistant hoses with pressure rating greater than maximum pressure of water distribution system, to provide water into each Work Area and to each decontamination unit.
   2. Provide fittings to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles, and equipment.

C. Hot water may be secured from building hot water system, provided backflow protection is installed at point of connection as described in Paragraph A. above, and when authorized in writing by APM.

2.4 ELECTRICAL SERVICE

A. Comply with applicable NEMA, NECA, and UL standards and governing regulations for materials and layout of temporary electric service.

B. Temporary Power:
   1. Provide service to decontamination unit sub-panel with minimum 60-amp, two-pole

circuit breaker connected to building's main distribution panel.
2. Sub-panel and disconnect sized and equipped to accommodate all electrical equipment required for completion of work.

C. Voltage Differences:
1. Provide identification warning signs at power outlets which are other than 110 to 120 volt power.
2. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110 to 120 volt plugs into higher voltage outlets.
3. Provide dry-type transformers to provide voltages required for work operations.

D. Ground-Fault Protection:
1. Equip all circuits for any purpose entering Work Area with ground-fault circuit interrupters (GFIs).
2. Locate GFIs exterior to Work Area so all circuits are protected prior to entry to Work Area.
3. Provide circuit breaker type ground-fault circuit interrupters (GFIs) equipped with test button and reset switch for all circuits to be used in Work Area, decontamination units, exterior, or as otherwise required by National Electrical Code (NEC), OSHA, or other authority.
4. Locate panel exterior to Work Area.

E. Electrical Power Cords:
1. Use only grounded extension cords; use "hardservice" cords where exposed to abrasion and traffic.
2. Use single lengths or waterproof connectors to connect separate lengths of electric cords, when single lengths will not reach areas of work.

F. Lamps and Light Fixtures:
1. Provide general service incandescent lamps or fluorescent lamps of wattage required for adequate illumination.
2. Protect lamps with guard cages or tempered glass enclosures, where fixtures are exposed to breakage by construction operations.
3. Provide vapor-tight fixtures in Work Area and decontamination units.
4. Provide exterior fixtures where fixtures are exposed to weather or moisture.

2.5 FIRST AID SUPPLIES

A. Comply with governing regulations and recognized recommendations within construction industry.

2.6 FIRE EXTINGUISHERS

A. Provide Type A fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires.
1. In other locations, provide Type ABC dry chemical extinguishers, or combination of

several extinguishers of NFPA recommended types for exposures in each case.

PART 3 EXECUTION

3.1 SCAFFOLDING

A. During erection and moving of scaffolding, exercise care so polyethylene floor covering is not damaged.

B. Clean debris from non-slip surfaces.

C. At completion of abatement work, clean all construction aids within Work Area, wrap in one layer of 6 mil polyethylene sheet, and seal before removal from Work Area.

3.2 INSTALLATION

A. Use qualified tradesmen for installation of temporary services and facilities.
   1. Locate temporary services and facilities where they will serve entire project adequately and result in minimum interference with performance of work.
   2. Require that tradesmen accomplishing this work be licensed as required by local authority for work performed.
   3. Relocate, modify, and extend services and facilities during course of work to accommodate entire work of project.

3.3 WATER SERVICE

A. Water connection, without charge, to Owner's existing potable water system is limited to one 3/4 inch pipe size connection, and maximum flow of 10 GPM each to hot and cold water supply.
   1. Install using vacuum breakers or other backflow preventer required by local authority.
   2. Hot water supplied at minimum temperature of 100° F.
   3. Supply hot and cold water to decontamination unit.

3.4 ELECTRICAL SERVICE

A. Provide weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of work during construction period.
   1. Install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of work.

B. Lockout:
   1. Lockout all existing power to or through Work Area as described below.

2. Unless specifically indicated otherwise, existing power and lighting circuits to Work Area are not to be used.
3. All power and lighting to Work Area and decontamination facilities are provided from temporary electrical panel described below.
4. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in Work Area.
    a) Label breakers with tape over breaker with notation DANGER, CIRCUIT BEING WORKED ON.
    b) Lock panel and have all keys under control of Contractor's Superintendent or APM.

C. Temporary Electrical Panel:
1. Provide temporary electrical panel sized and equipped to accommodate all electrical equipment and lighting for work.
2. Connect temporary panel to existing building electrical system.
3. Protect with circuit breaker [or fused disconnect].
4. Locate temporary panel as directed by Owner or APM.

D. Power Distribution System:
1. Provide circuits of adequate size and proper characteristics for each use.
2. In general, run wiring overhead and rise vertically where wiring will be least exposed to damage from construction operations.

E. Circuit Protection:
1. Protect each circuit with ground-fault circuit interrupter (GFCI) of proper size, located in temporary panel.
2. Do not use outlet type GFCI devices.

3.5 TEMPORARY LIGHTING

A. Lockout:
1. Lockout all existing power to lighting circuits in Work Area.
2. Unless specifically indicated otherwise, existing lighting circuits to Work Area are not to be used.
3. All lighting to Work Area and decontamination facilities is provided from temporary electrical panel described above.

B. Provide following or equivalent where natural lighting or existing building lighting does not meet required light level.

C. Provide lighting in areas where work is being performed to supply 100 foot-candle minimum light level.

D. Provide lighting in any area being subjected to visual inspection to supply 100 foot-candle minimum light level.

E. Provide lighting in decontamination unit to supply 50 foot-candle minimum light level.

F. Number of Lighting Circuits:
   1. Provide sufficient lighting circuits required by work.
   2. All lighting circuits originate at temporary electrical panel.

G. Circuit Protection:
   1. Protect each circuit with ground-fault circuit interrupter (GFCI) of proper size, located in temporary panel.

3.6 SANITARY FACILITIES

A. Toilets:
   1. Use of Owner's existing toilet facilities, as indicated will be permitted as long as these facilities are properly cleaned and maintained in condition acceptable to Owner.
   2. At Substantial Completion, restore these facilities to condition prevalent at time of initial use.
   3. Obtain written permission from Owner and meet all provisions of these specifications regarding leaving Work Area.

3.7 FIRE EXTINGUISHERS

A. Comply with applicable recommendations of NFPA 10, Standard for Portable Fire Extinguishers.
   1. Locate fire extinguishers where most convenient and effective for their designed purpose, but provide minimum one extinguisher in each Work Area, equipment room, and one outside Work Area in Clean Room.

END OF SECTION 01510

SECTION 01515

TEMPORARY PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Monitoring.

B. HEPA filtered fan units.

C. Pressure differential isolation.

D. Air circulation in Work Area.

E. Exhaust system.

F. Air circulation in decontamination units.

1.2 MONITORING

A. Continuously monitor and record pressure differential between Work Area and building outside of Work Area with monitoring device incorporating continuous recorder, e.g., strip chart.

1.3 SUBMITTALS

A. Before start of work, submit design of pressure differential system to APM for review, in accordance with Section 01300; include following at minimum in submittal.
   1. Number of HEPA filtered fan units required and calculations necessary to determine number of machines.
   2. Description of projected air flow within Work Area and methods required to provide adequate air flow in all portions of Work Area.
   3. Anticipated pressure differential across Work Area enclosures.
   4. Description of methods of testing for correct air flow and pressure differentials.
   5. Manufacturer's product data on HEPA filtered fan units to be used.
   6. Location of machines in Work Area.
   7. Method of supplying adequate power to machines and designation of building electrical panel(s) which will be supplying power.
   8. Description of work practices to ensure that airborne fibers travel away from workers.
   9. Manufacturer's product data on equipment used to monitor pressure differential between inside and outside of Work Area.

B. On weekly basis, submit print-out from pressure differential monitoring equipment.
   1. Mark print-out with date and start of time each day.
   2. Use print-out paper that indicates elapsed time in maximum 12-hour intervals.
   3. Indicate on each day's record, times of starting and stopping abatement work, type of work in progress, breaks for lunch or other purposes, periods of stop work, and filter changes.
   4. Cut print-out into segments by day; attach to 8-1/2 inch by 11 inch paper.
      a) Label with project name, Contractor's name, and date.

PART 2 PRODUCTS

2.1 HEPA FILTERED FAN UNITS

A. Supply required number of HEPA filtered fan units to site, in accordance with these specifications.
   1. Use units that meet following requirements.

B. Fans:
   1. Rate capacity of fan according to usable air-moving capacity under actual operating conditions.

C. HEPA Filters:
   1. Provide units whose final filter is HEPA type with filter media, folded into closely pleated panels, completely sealed on all edges with structurally rigid frame.
   2. Provide units with continuous rubber gasket located between filter and filter housing to form tight seal.
   3. Provide HEPA filters that are individually tested and certified by manufacturer to have minimum efficiency of 99.97% when challenged with 0.3 um dioctylphthalate (DOP) particles when tested in accordance with Military Standard 292 and Army Instruction Manual 136-300-175A.
      a) Provide filters that bear UL 586 label to indicate ability to perform under specified conditions.
   4. Provide filters that are marked with name of manufacturer, serial number, air flow rating, efficiency and resistance, and direction of test air flow.

D. Prefilters, which protect final filter by removing larger particles, are required to prolong operating life of HEPA filter.
   1. Two stages of prefiltration are required.
      a) First-Stage Prefilter: Low-efficiency type, for particles 100 um and larger.
      b) Second Stage or Intermediate Filter: Medium efficiency, effective for particles down to 5 um.
   2. Provide units with prefilters and intermediate filters installed either on or in intake grid of unit and held in place with special housings or clamps.

E. Instrumentation:
   1. Magnehelic gauge or manometer to measure pressure drop across filters and indicate when filters have become loaded and need to be changed.
   2. Table indicating usable air handling capacity for various static pressure readings on magnehelic gauge affixed near gauge for reference, or magnehelic reading indicating at what point filters should be changed, noting cubic feet per minute (CFM) air delivery at that point.
   3. Elapsed time meter to show total accumulated hours of operation.

F. Safety and Warning Devices:
   1. Electrical or mechanical lockout to prevent fan from operating without HEPA filter.
   2. Automatic shut-down system to stop fan in event of rupture in HEPA filter or blocked air discharge.
   3. Warning lights to indicate:
      a) Green: Normal operation.
      b) Yellow: Too high pressure drop across filters, i.e., filter overloading.
      c) Red: Too low pressure drop, i.e., rupture in HEPA filter or obstructed discharge.
   4. Audible alarm when unit shuts down due to operation of safety system.

G. Electrical Components:
   1. Provide units with electrical components approved by National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories, Inc. (UL).
   2. Each unit equipped with overload protection sized for equipment.
   3. Motor, fan, fan housing, and cabinet are to be grounded.

PART 3 EXECUTION

3.1 PRESSURE DIFFERENTIAL ISOLATION

A. Isolate Work Area from all adjacent areas or systems of building with pressure differential that will cause movement of air from outside to inside at any breach in physical isolation of Work Area.

B. Relative Pressure in Work Area:
   1. Continuously maintain Work Area at air pressure that is lower than that in any surrounding space in building, or at any location in immediate proximity outside of building envelope.
   2. This pressure differential, when measured across any physical or critical barrier, must equal or exceed static pressure of 0.02 inch of water.

C. Accomplish pressure differential by exhausting sufficient number of HEPA filtered fan units from Work Area.

1. Number of units required will depend on machine characteristics, seal at barriers, and required air circulation.

D. Required number of units is number determined above, plus one additional unit.

E. Vent HEPA filtered fan units to outside of building.
   1. Mount units to exhaust directly or through disposable ductwork.
   2. Use only new ductwork except for sheet metal connections and elbows.
   3. Use ductwork and fittings of same diameter or larger than discharge connection on fan unit.
   4. Use inflatable, disposable plastic ductwork in maximum 100-foot lengths.
   5. Use spiral wire-reinforced flex duct in maximum 50-foot lengths.
   6. Arrange exhaust to inflate duct to rigidity sufficient to prevent flapping.
   7. When direction of discharge from fan unit is not aligned with duct, use sheet metal elbow to change direction.
      a) Use six feet of spiral wire-reinforced flex duct after direction change.

3.2 AIR CIRCULATION IN WORK AREA

A. For purposes of this Section, air circulation refers to either introduction of outside air to Work Area or circulation and cleaning of air within Work Area.

B. Air circulation in Work Area is minimum requirement intended to help maintain air-borne fiber counts at level that does not significantly challenge Work Area isolation measures.
   1. Contractor may also use this air circulation as part of engineering controls in his worker protection program.

C. Determining Air Circulation Requirements:
   1. Provide fully operational air circulation system supplying minimum of following air circulation rate: 4 changes per hour.

D. Determining number of units needed to achieve required air circulation according to following formula:
   1. Air Circulation Required in Cubic Feet of Air per Minute (CFM) =

$$\frac{\text{Volume of Work Area (Cu.Ft.) X Number of Air Changes per Hour}}{\text{60 (minutes per hour)}}$$

   2. Divide air circulation requirement (CFM) above by capacity of HEPA filtered fan unit(s) used; capacity of unit for purposes of this Section is capacity in cubic feet per minute (CFM) with fully loaded filters (pressure differential which causes loaded filter warning light to come on) in machine's labeled operating characteristics.
      a) Number of Units Needed =

$$\frac{\text{Air Circulation Requirement (CFM)}}{\text{Capacity of Unit With Loaded Filters (CFM)}}$$

b) Round up to next higher whole number of units.

3. Add one additional unit as back-up in case of equipment failure or machine shut-down for filter changing.

3.3 EXHAUST SYSTEM

A. Pressure differential isolation and air circulation in Work Area are accomplished by exhaust system as described below.

B. Exhaust all units from Work Area to meet air circulation requirements of this Section.

C. Location of HEPA Filtered Fan Units:
1. Locate fan unit(s) so make-up air enters Work Area primarily through decontamination facilities and traverses Work Area as much as possible.
2. This is accomplished by positioning HEPA filtered fan unit(s) at maximum distance from worker access opening or other make-up air sources.

D. Place end of unit intake duct or its exhaust duct through opening in plastic barrier or wall covering.
1. Seal plastic around unit or duct with tape.

E. Vent to outside of building, unless authorized in writing by APM.

F. Decontamination Units:
1. Arrange Work Area and decontamination units so majority of make-up air comes through decontamination units.
2. Use only one personnel or equipment decontamination unit at any one time and seal the other so make-up air passes through unit in use.

G. Supplemental Make-Up Air Inlets:
1. Provide where required for proper air flow through Work Area in location approved by APM, by making openings in plastic sheeting that allows air from outside building into Work Area.
2. Locate auxiliary make-up air inlets as far as possible from fan unit(s), e.g., on opposite wall, off floor (preferably near ceiling), and away from barriers that separate Work Area from occupied clean areas.
3. Cover with flaps to reseal automatically when pressure differential system should shut down for any reason.
4. Spray flap and around opening with spray adhesive so when flap closes, meeting surfaces are both covered with adhesive.

5. Use adhesive that forms contact bond when dry.

3.4 AIR CIRCULATION IN DECONTAMINATION UNITS

A. Pressure Differential Isolation:
   1. Continuously maintain pressure differential required for Work Area in following:
      a) Personnel Decontamination Unit: Across Shower Room with Equipment Room at lower pressure than Clean Room.
      b) Equipment Decontamination Unit: Across Holding Room with Wash Room at lower pressure than Clean Room.

B. Air Circulation:
   1. Continuously maintain air circulation in decontamination units at same level required for Work Area.

C. Air Movement:
   1. Arrange air circulation through personnel decontamination unit so it produces movement of air from Clean Room through Shower Room into Equipment Room.

3.5 USE OF PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

A. Each unit is serviced by dedicated minimum 115 volt, 20 amp circuit with ground-fault circuit interrupter (GFCI) supplied from temporary power supply installed under requirements of Section 01510 - Temporary Facilities.
   1. Do not use existing branch circuits to power fan units.

B. Testing System:
   1. Test pressure differential system before any asbestos-containing material is wetted or removed.
   2. After Work Area has been prepared, decontamination facility is set up, and fan unit(s) are installed, start unit(s) one at a time.
   3. Demonstrate operation and testing of pressure differential system to APM.

C. Demonstrate condition of equipment for each HEPA filtered fan unit and pressure differential monitoring equipment including proper operation of following:
   1. Squareness of HEPA filter.
   2. Condition of seals.
   3. Proper operation of all lights.
   4. Proper operation of automatic shut down when exhaust is blocked.
   5. Proper operation of alarms.
   6. Proper operation of magnehelic gauge.
   7. Proper operation and calibration on pressure monitoring equipment.

D. Demonstrate operation of pressure differential system to APM including following:
   1. Plastic barriers and sheeting move lightly in toward Work Area.
   2. Curtain of decontamination units moves lightly in toward Work Area.
   3. There is noticeable movement of air through decontamination unit.
   4. Use smoke tube to demonstrate air movement from Clean Room through Shower Room to Equipment Room.
   5. Use smoke tube to demonstrate definite motion of air across all areas in which work is to be performed.
   6. Use differential pressure meter or manometer to demonstrate required pressure differential at every barrier separating Work Area from balance of building, equipment, ductwork, or outside.

E. Modify pressure differential system to demonstrate successfully above.

F. Use of System During Abatement Operations:
   1. Start fan units before beginning work, before any asbestos-containing material is disturbed.
      a) After abatement work has begun, run units continuously to maintain constant pressure differential and air circulation until decontamination of Work Area is complete.
      b) Do not turn off units at end of work shift or when abatement operations temporarily stop.
   2. Do not shut down air pressure differential system during encapsulating procedures, unless authorized by APM in writing.
   3. Start abatement work at location farthest from fan units and proceed toward them.
      a) When electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and fan units are operating again.
   4. At completion of abatement work, allow fan units to run as specified in Section 01711, to remove air-borne fibers that may have been generated during abatement work and clean-up, and to purge Work Area with clean make-up air.
      a) Units may be required to run for longer time after decontamination if dry or only partially wetted asbestos material was encountered during any abatement work.

G. Dismantling System:
   1. When final inspection and results of final air test indicate that area has been decontaminated, fan units may be removed from Work Area.
   2. Before removal from Work Area, remove and properly dispose of prefilter, decontaminate exterior of machine, and seal intake to machine with 6 mil polyethylene to prevent environmental contamination from filters.

END OF SECTION 01515

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SECTION 01530

TEMPORARY ENCLOSURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Sheet plastic.

B. Miscellaneous materials.

1.2 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.

B. Spray Cement:
1. Product description including major components and solvents.
2. Manufacturer's installation instructions; indicate portions applicable to project.
3. Material Safety Data Sheet (MSDS): Submit MSDS or equivalent in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200) for spray cement material proposed for use on work.
a) Include separate attachment for each sheet indicating specific worker protective equipment proposed for use with material indicated.

Sheet Plastic:
4. For fire-retardant plastic, submit test reports on NFPA 701 test.

C. Sign:
1. Submit samples of signs to be used.

PART 2 PRODUCTS

2.1 SHEET PLASTIC

A. Polyethylene Sheet:
1. Provide largest size possible to minimize seams, 4 or 6 mils thick as indicated.

2.2 MISCELLANEOUS MATERIALS

A. Duct Tape: 2- or 3-in widths, with adhesive formulated to stick aggressively to sheet polyethylene.

B. Spray Cement: Spray adhesive in aerosol cans specifically formulated to stick tenaciously to sheet polyethylene.

PART 3 EXECUTION

3.1 SEQUENCE OF WORK

A. Carry out work of this Section sequentially; complete each activity before proceeding to next.

B. Work Area: location where asbestos abatement work occurs.
   1. It is variable of extent of work of Contract.
   2. It may be portion of room, single room, or complex of rooms.
   3. Work Area is considered contaminated during work and must be isolated from balance of building and decontaminated at completion of asbestos control work.

C. Completely isolate Work Area from other parts of building to prevent asbestos-containing dust or debris from passing beyond isolated area.
   1. When area beyond Work Area(s) becomes contaminated with asbestos-containing dust or debris as consequence of work, clean those areas in accordance with procedures indicated in Section 01711.
   2. Perform all required cleaning or decontamination at no additional cost to Owner.

D. Place all tools, scaffolding, and staging necessary for work in area to be isolated prior to completion of Work Area isolation.

E. Disable ventilating systems or any other system bringing air into or out of Work Area.
   1. Disable system by disconnecting wires, removing circuit breakers by lockable switch, or other positive means that will prevent accidental premature restarting of equipment.

F. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in Work Area.
   1. Label breakers with tape over breaker with notation DANGER, CIRCUIT BEING WORKED ON.
   2. Lock panel and have all keys under control of Contractor's Superintendent or APM.

G. Lockout power to circuits running through Work Area where possible by switching off all breakers or removing fuses serving these circuits.
   1. Label breakers with tape over breaker with notation DANGER, CIRCUIT BEING WORKED ON.
   2. Lock panel and have all keys under control of Contractor's Superintendent or APM.
   3. When circuits cannot be shut down for any reason, label at intervals 4 feet on center with tags reading DANGER, LIVE ELECTRIC CIRCUIT. ELECTROCUTION HAZARD.
   4. Label circuits in hidden locations but which may be affected by work in similar manner.

3.2 CONTROL ACCESS

A. Isolate Work Area to prevent entry by building occupants into Work Area or surrounding controlled areas; accomplish isolation by following:
   1. Submit to APM a list of doors and other openings that must be secured to isolate Work Area; include on list notation if door or opening is in indicated exit route.
      a) After receiving written authorization from APM, lock all doors into Work Area; or, if doors cannot be locked, chain shut.
      b) Cover any signs that direct emergency existing, either outside or inside of Work Area, to locked doors.
      c) Do not obstruct doors required for emergency exits from Work Area or from building.
   2. After receiving written authorization from APM, construct partitions or closures across any opening into Work Area.
      a) Partitions: Minimum 8 feet high.

B. Locked Access:
   1. Arrange Work Area so only access into Work Area is through lockable doors to personnel and equipment decontamination units.
   2. Install temporary doors with entrance type locksets that are key lockable from outside and always unlocked and operable from inside.
      a) Do not use deadbolts or padlocks.

C. Provide one key for each door to Owner and APM and maintain one key in Clean Room of decontamination unit (three total).

D. Visual Barrier:
   1. Where Work Area is immediately adjacent to or within view of occupied areas, provide visual barrier of opaque polyethylene sheeting minimum 6 mil thick so work procedures are not visible to building occupants.
   2. Where this visual barrier would block natural light, substitute frosted or woven rip-stop sheet plastic in locations approved by APM.

E. Provide warning signs at each locked door leading to Work Area reading as follows:

LEGEND	NOTATION
KEEP OUT	3 inch Sans Serif Gothic or Block
BEYOND THIS POINT	1 inch Sans Serif Gothic or Block
ASBESTOS ABATEMENT WORK	1 inch Sans Serif Gothic or Block
IN PROGRESS	1 inch Sans Serif Gothic or Block

BREATHING ASBESTOS
DUST MAY BE
HAZARDOUS TO
YOUR HEALTH
14 Point Gothic

F. Provide warning signs at each locked door leading to Work Area.
   1. Immediately inside door and outside critical barriers, post approximately 20 inch by 14 inch manufactured caution sign displaying following legend with letter sizes and styles of visibility required by 29 CFR 1926.

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

   2. Provide spacing between respective lines at least equal to height of respective upper line.

3.3 ALTERNATE METHODS OF ENCLOSURE

A. Alternate methods of containing Work Area may be submitted to APM for approval in accordance with procedures specified in Section 01630 - Product Substitution.
   1. Do not proceed with any such method(s) without prior written approval of APM.

3.4 RESPIRATORY AND WORKER PROTECTION

A. Before proceeding beyond this point in providing temporary enclosures:
   1. Provide worker protection in accordance with Section 01560.
   2. Provide respiratory protection in accordance with Section 01562.
   3. Provide personnel decontamination unit in accordance with Section 01563.

3.5 CRITICAL BARRIERS

A. Completely separate Work Area from other portions of building and outside by closing all openings with sheet plastic barriers minimum 6 mil thick, or by sealing cracks leading out of Work Area with duct tape.

B. Individually seal all ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, convectors and speakers, and other openings into Work Area with duct tape along or with polyethylene sheeting minimum 6 mil thick, taped securely in place with duct tape.
   1. Maintain seal until all work including project decontamination is completed.
   2. Take care in sealing of lighting fixtures to avoid melting or burning of sheeting.

C. Provide sheet plastic barriers minimum 6 mil thick as required to seal openings completely from Work Area into adjacent areas.
   1. Seal perimeter of all sheet plastic barriers with duct tape or spray cement.

D. Mechanically support sheet plastic independently of duct tape or spray cement seals so seals do not support weight of plastic.
   1. Following are acceptable methods of supporting sheet plastic barriers.
   2. Alternative support methods may be used if approved in writing by APM.

E. Provide pressure differential system in accordance with Section 01515.

F. Clean housings and ducts of all overspray materials prior to erection of any critical barrier that will restrict access.

3.6 PREPARE AREA

A. Scaffolding:
   1. If fixed scaffolding is to be used to provide access, HEPA vacuum and wet clean area prior to scaffolding installation.

B. Remove all electrical and mechanical items, such as lighting fixtures, clocks, diffusers, registers, and escutcheon plates which cover any part of surface to be worked on with work.

C. Clean all surfaces in Work Area with HEPA filtered vacuum or by wet wiping prior to installation of primary barrier.

3.7 PRIMARY BARRIER

A. Protect building and other surfaces in Work Area from damage from water and high humidity or from contamination from asbestos-containing debris, slurry or high air-borne fiber levels by covering with primary barrier as described below.

B. Sheet Plastic:
   1. Protect surfaces in Work Area with two layers of plastic sheeting on floor and ceilings, or as otherwise directed by APM.
   2. Cover all walls and ceilings in Work Area including critical barrier sheet plastic barriers with one layer of polyethylene sheeting, minimum 6 mil thick, mechanically supported and sealed with duct tape or spray-glue in same manner as critical barrier sheet plastic barriers.
      a) Tape all joints with duct tape.
   3. Stairs and Ramps:
      a) Do not cover stairs or ramps with unsecured sheet plastic.
      b) Where stairs or ramps are covered with plastic, provide 3/4 inch exterior grade plywood treads securely held in place, over plastic.
      c) Do not cover rungs or rails with any type of protective materials.

4. Repair of Damaged Polyethylene Sheeting:
    a) Remove and replace plastic sheeting damaged by removal operations or where seal has failed, allowing water to seep between layers.
    b) Remove affected sheeting and wipe down entire area.
    c) Install new sheet plastic only when area is completely dry.

3.8 ISOLATION AREA

A. Maintain isolation areas between Work Area and adjacent building area:
    1. In unoccupied rooms located between Work Area and adjacent occupied portions of building.
    2. In locations where separation between Work Area and occupied portions of building is formed by sheet plastic or temporary barriers.

B. Form isolation area by controlling access to space in same manner as Work Area.
    1. Physically isolate space from Work Area and adjacent areas.
    2. Accomplish physical isolation by:
        a) Installing critical barriers in unoccupied space.
        b) Erecting second critical barrier minimum 3 feet away from Work Area.

3.9 STOP WORK

A. If critical or primary barrier falls or is breached in any manner, stop work immediately.
    1. Do not start work until authorized in writing by APM.

3.10 EXTENSION OF WORK AREA

A. If critical barrier is breached in manner that could allow passage of asbestos debris or air-borne fibers, then add affected area to Work Area, enclose it as required by this Section, and decontaminate it as described in Section 01711 - Project Decontamination.

3.11 SECONDARY BARRIER

A. Secondary layer of plastic as drop cloth to protect primary layer from debris generated by asbestos abatement work is specified in appropriate work Sections.

END OF SECTION 01530

SECTION 01560

WORKER PROTECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Equipment and procedures for protecting workers against asbestos contamination and other workplace hazards, except for respiratory protection.

1.2 RELATED WORK

A. Section 01562: Respiratory Protection

1.3 WORKER TRAINING

A. AHERA Accreditation: All workers accredited as State of Illinois Asbestos Abatement Workers as required by AHERA regulation 40 CFR 763, Appendix C, to Subpart E, April 30, 1987.

B. State and Local License: All workers trained, certified, and accredited as required by State of Local codes or regulations.

1.4 MEDICAL EXAMINATIONS

A. Provide medical examinations for all workers who may encounter airborne fiber level of 0.1 f/cc or greater for 8-hour Time Weighted Average.
   1. In absence of specific air-borne fiber data, provide medical examinations for all workers who will enter Work Area for any reason.
   2. Examination shall meet, as minimum, OSHA requirements set forth in 29 CFR 1926.
   3. In addition, provide evaluation of individual's ability to work in environments capable of producing heat stress in worker.

1.5 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.

B. AHERA Accreditation:
   1. Submit copies of certificates from EPA-approved AHERA Abatement Workers Course for each worker as evidence that each asbestos abatement worker is accredited as required by AHERA Regulation 40 CFR 763, Appendix C, to Subpart E, April 30, 1987.

C. State and Local License:
   1. Submit evidence that all workers have been trained, certified, and accredited as required by State or Local codes or regulations.

D. Certificate Worker Acknowledgment:
   1. Submit original signed copy of Certificate of Worker's Acknowledgment found at end of this Section, for each worker who is to be at job site or enter Work Area.

E. Report from Medical Examination:
   1. Conducted within last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter Work Area; submit, at minimum, following for each worker:
      a) Name and Social Security Number.

b) Physicians written opinion from examining physician including following at minimum:
   1. Whether worker has any detected medical conditions that would place worker at increased risk of material health impairment from exposure to asbestos.
   2. Any recommended limitations on worker or on use of personal protective equipment such as respirators.
   3. Statement that worker has been informed by physician of results of medical examination and of any medical conditions that may result from asbestos exposure.

c) Copy of information that was provided to physician in compliance with 29 CFR 1926.

d) Statement that worker is able to wear and use type of respiratory protective proposed for project, and is able to work safely in environment capable of producing heat stress in worker.

F. Notarized Certifications:
   1. Submit certification signed by officer of abatement contracting firm and notarized that exposure measurement, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

PART 2 PRODUCTS

2.1 PROTECTIVE CLOTHING

A. Coveralls:
   1. Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in Work Area.
   2. Provide sufficient number for all required changes, for all workers in Work Area.

B. Gloves:
   1. Provide work gloves to all workers and require that they be worn at all times in Work Area.
   2. Do not remove gloves from Work Area and dispose of as asbestos-contaminated waste at end of work.

2.2 ADDITIONAL PROTECTIVE EQUIPMENT

A. Contractor provides respirators, disposable coveralls, head covers, and footwear covers for Owner, APM, ASP, and other authorized representatives who may inspect job site.
   1. Provide two respirators and six complete coveralls and, where applicable, six respirator filter changes per day.

PART 3 EXECUTION

3.1 GENERAL

A. Provide worker protection as required by most stringent State, OSHA or EPA standards applicable to work.
   1. Following procedures are minimums to be adhered to regardless of fiber count in Work Area.

B. Each time Work Area is entered, remove street clothes in Changing Room of personnel decontamination unit and put on new disposable coveralls, new head cover, and clean respirator.
   1. Proceed through Shower Room to Equipment Room and put on work boots.

3.2 DECONTAMINATION PROCEDURES

A. Require all workers to adhere to following personal decontamination procedures whenever they leave Work Area.

B. Type C Supplied Air or Powered Air-Purifying Respirators:

1. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in Equipment Room.
2. Still wearing respirators, proceed to showers; SHOWERING IS MANDATORY; take care to follow reasonable procedures in removing respirator to avoid asbestos fibers while showering; following procedure is required as minimum:
   a) Thoroughly wet body including hair and face; if using powered air-purifying respirator (PAPR), hold blower unit above head to keep canisters dry.
   b) With respirator still in place, thoroughly wash body, hair, respiratory face piece, and all parts of respirator except blower unit and battery pack on PAPR; pay particular attention to seal between face and respirator and under straps.
   c) Take deep breath, hold it or exhale slowly; completely wet hair, face, and respirator; while still holding breath, remove respirator and hold it away from face before starting to breath.
   d) Carefully wash face piece of respirator inside and out.
   e) When using PAPR, shut down in following sequence: first, cap inlets to filter cartridges, then turn off blower unit (this sequence will keep debris which has collected on inlet side of filter from dislodging and contaminating outside of unit).
      1. Thoroughly wash blower unit and hoses.
      2. Carefully wash battery pack with wet rag.
      3. Be extremely cautious of getting water in battery pack as this will short out and destroy battery.
   f) Shower completely with soap and water.
   g) Rinse thoroughly.
   h) Rinse Shower Room walls and floor prior to exit.
   i) Proceed from Shower Room to Changing Rooms and change into street clothes or into new disposable work items.

C. Air Purifying-Negative Pressure Respirators:
1. Require that all workers use following decontamination procedure as minimum requirement whenever leaving Work Area with half- or full-face cartridge type respirator.
2. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in Equipment Room.

3. Still wearing respirators, proceed to showers; SHOWERING IS MANDATORY; take care to follow reasonable procedures
   in removing respirator to avoid asbestos fibers while showering; following procedure is required as minimum:
   a) Thoroughly wet body from neck down.
   b) Wet hair as thoroughly as possible without wetting respirator filter if using air purifying type respiratory.
   c) Take deep breath, hold it or exhale slowly; completely wet hair, face, respirator, and filter (air purifying respirator); while still holding breath, remove respirator and hold it away from face before starting to breath.
   d) Dispose of wet filters from air purifying respirator.
   e) Carefully wash face piece of respirator inside and out.
   f) Shower completely with soap and water.

4. Proceed from Shower Room to Changing Rooms and change into street clothes or into new disposable work items.

D. Remote Shower:
   1. Procedures above are to be used when decontamination facility is used as remote shower.
   2. When worker cannot gain direct access to Equipment Room, require that he enter decontamination unit and proceed directly through Shower Room to Equipment Room.
   3. Decontamination procedure is then completed as required above.

E. Within Work Area, require that workers NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in work Area.
   1. To eat, drink, or smoke, workers shall follow procedure described above, then dress in street clothes before entering non-Work Areas of building.

END OF SECTION 01560

SECTION 01562

RESPIRATORY PROTECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Instruct and train each worker involved in asbestos abatement or maintenance and repair of friable asbestos-containing materials in proper respiratory use and require that each worker always wear respirator, properly fitted on face in Work Area, from start of any operation which may cause airborne asbestos fibers until Work Area is completely decontaminated.
   1. Use respiratory protection appropriate for fiber level encountered in work place or as required for other toxic or oxygen-deficient situations encountered.

1.2 STANDARDS

A. Except to extent that more stringent requirements are written directly into Contract Documents, following regulations and standards have same force and effect, and are made part of Contract Documents by reference, as if copied directly into Contract Documents, or as if published copies were bound in.

B. When there is conflict in requirements set forth in these regulations and standards, meet more stringent requirement.
   1. OSHA: U.S. Department of Labor, Occupational Safety and Health Administration, Safety and Health Standards 29 CFR 1910, Section 1001 and Section 1910.134. 29 CFR 1926.58.
   2. CGA: Compressed Gas Association, Inc., New York, Pamphlet G-7, Compressed Air for Human Respiration, and Specification G-7.1 Commodity Specification for Air.
   3. CSA: Canadian Standard Association, Rexdal, Ontario, Standards Z180.1-1978, Compressed Breathing Air.
   4. ANSI: American National Standards Institute, Z88.2-1980, Standard Practices for Respiratory Protection.
   5. NIOSH: National Institute for Occupational Safety and Health.
   6. MSHA: Mine Safety and Health Administration.

1.3 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.
B. Product Data:
   1. Submit manufacturer's product information for each component used, including NIOSH and MSHA Certifications for each component in assembly or for entire assembly.

C. System Diagram:
   1. When Type C supplied air respiratory system is required by work, submit drawing showing assembly of components into complete supplied air respiratory system.
   2. Include diagram showing location of compressor, filter banks, back-up air supply tanks, hose line connections in Work Area(s), and routing of air lines to Work Area(s) from compressor.

D. Operating Instructions:
   1. Submit complete operating and maintenance instructions for all components and systems as a whole.
   2. Submittal is to be in bound manual form suitable for field use.

E. Respiratory Protection Program:
   1. Submit Contractor's written respiratory protection program manual as required by OSHA 1926.58.

F. Respiratory Protection Schedule:
   1. Submit level of respiratory protection intended for each operation required by project.
   2. Submit this information on Respiratory Protection Schedule on form included at end of this Section.

1.4 AIR QUALITY FOR SUPPLIED AIR RESPIRATORY SYSTEMS

A. Provide air used for breathing in Type C supplied air respiratory systems that meets or exceeds standards set for CGA Type 1 (Gaseous Air), Grade H, or CSA Z180.1, whichever presents more stringent quality standard.

1.5 ALLOWABLE CONTAMINANTS

A. Supply air that has concentration no greater than outside ambient conditions.

1.6 DELIVERY

A. Deliver replacement parts, not otherwise labeled by NIOSH or MSHA, to job site in manufacturer's containers.

PART 2 PRODUCTS

2.1 AIR PURIFYING RESPIRATORS

A. Respirator Bodies: Half-face or full-face type.
   1. Equip full-face respirators with nose cup or other anti-fogging device appropriate for use in air temperature less than 32° F.

B. Filter Cartridges: At minimum, HEPA type filtered, labeled with NIOSH and MSHA

Certification for Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists, and color coded in accordance with ANSI Z228.2-1980.

1. In addition, chemical cartridge section may be added when required for solvents in use.
2. In this case, provide cartridges that have each section of combination canister labeled with appropriate color code and NIOSH/MSHA Certification.

C. Non-Permitted Respirators:
   1. Do not use single-use, disposable, or quarter-face respirators.

2.2 SUPPLIED AIR RESPIRATOR SYSTEMS

A. Provide equipment capable of producing air of quality and volume required by above reference standards applied to job site conditions and crew size.
   1. Comply with provisions of this Specification when more stringent than governing standard.

B. Face Piece and Hose: Full-face piece and hose by same manufacturer that has been certified by NIOSH/MSHA as approved Type C respirator assembly operating in pressure demand mode with positive pressure face piece.

C. Auxiliary Back-Up System:
   1. In atmospheres which contain sufficient oxygen, greater than or equal to 19.5% oxygen, provide pressure-demand full-face piece supplied air respirator equipped with emergency back-up HEPA filter.

D. Warning Device:
   1. Provide warning device that will operate independently of building's power supply.
   2. Locate so alarm is clearly audible above noise level produced by equipment and work procedures in use, in all parts of Work Area, and at compressor; connect alarm to warn of following:
      a) Compressor shut-down or other fault requiring use of back-up air supply.
      b) Carbon monoxide (CO) levels in excess of 5 PPM/V.

E. Carbon Monoxide (CO) Monitor:
   1. Continuously monitor and record on strip chart recorder carbon monoxide (CO) levels.
   2. Place monitors in air line between compressor and back-up air supply and between back-up air supply and workers.
   3. Connect monitors so they also sound alarm as specified under paragraph D. above.

F. Compressor Shut-Down:
   1. Interconnect monitors, alarms, and compressor so compressor is automatically shut down and alarms sounded if any of following occur:
      a) Carbon monoxide (CO) concentrations exceed 5 PPM/V in air line between filter bank and back-up air supply.

b) Compressor temperature exceeds normal operating range.

G. Compressor Motor:
1. Provide compressor driven by electric motor.
2. Do not use gas or diesel engines to drive compressor.
3. Ensure that electrical supply available at work site is adequate to energize motor.

H. Compressor Location:
1. Locate compressor outside of building in location that will not impede access to building, and that will not cause nuisance by virtue of noise or fumes to occupied portions of building.

I. Air Intake:
1. Locate air intake remotely from any source of automobile exhaust or any exhaust from engines, motors, auxiliary generator, or buildings.

J. After-Cooler:
1. Provide after-cooler at entry to filter system, capable of reducing temperatures to outside ambient air temperatures.

PART 3 EXECUTION

3.1 GENERAL

A. Respiratory Protection Program: Comply with ANSI Z88.2-1980, Practices for Respiratory Protection, and OSHA 29 CFR 1910 and 1926.

B. Require that respiratory protection be used at all times that there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental.

C. Require that respirator be worn by anyone in Work Area at all times, regardless of activity, during period that starts with any operation which could cause airborne fibers until area has been cleared for re-occupancy in accordance with Section 01714.

D. Regardless of airborne fiber levels, require that minimum level of respiratory protection used by half-face air-purifying respirators with high efficiency filters.

E. Do not allow use of single-use, disposable, or quarter-face respirators for any purpose.

3.2 TYPE OF RESPIRATORY PROTECTION REQUIRED

A. Type C Supplied-Air Respirators:
1. Full-face piece pressure-demand supplied air respirators are to be used by all workers engaged in removal of asbestos, or in removal or demolition of asbestos insulation or coverings, or any other activity which results in or may result in air-borne asbestos fibers, unless a negative exposure assessment is provided.

3.3 TYPE C RESPIRATOR

A. Air Systems Monitor:
   1. Continuously monitor air system operation including compressor operation, filter system operation, back-up air capacity, and all warning and monitoring devices at all times that system is in operation.
   2. Assign individual, trained by manufacturer of equipment in use or by Certified Industrial Hygienist, in operation and maintenance of system to provide this monitoring.
   3. Assign no other duties to this individual which will take him away from monitoring air system.

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RESPIRATORY PROTECTION SCHEDULE

PROJECT NAME _____

LOCATION _____

DATE _____

Based on air-borne asbestos fiber counts encountered on previous projects of similar type, working on materials similar to those found on above referenced project. Following level of respiratory protection is proposed for indicated operations to maintain Air-Borne Fiber Count below specified Permissible Exposure Limit (PEL) inside respirator face piece.

Operation	Anticipated f/cc	Respiratory Protection	Protection Factor	f/cc in Mask
Installing sheet plastic				
Removing trim				
Removal of finish or fireproofing				
Removal of pipe wrap				
Removal of fitting ACM				
Encapsulation of ACM				
Gross debris removal				
Cleaning primary sheet plastic				
Cleaning critical barrier				
Removing Decontami-nation Unit				
Disposal at landfill				
Other				

Contractor certifies that to best of his knowledge and belief, above represents true and accurate representation of Air-Borne Fiber Counts to be expected for operations indicated, and are based on air-borne fiber data from past projects with similar materials and operations.

Contractor _____

Signed By:

_____ _____

Signature Date

_____ _____

Print Name Title

END OF SECTION 01562

SECTION 01563

DECONTAMINATION UNITS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Provide separate personnel and equipment decontamination facilities.
   1. Require that personnel decontamination unit be only means of ingress and egress for Work Area.
   2. Require that all materials exit Work Area through equipment decontamination unit.

1.2 RELATED WORK

A. Section 01510: Temporary Facilities - Electrical requirements and requirements relative to connection of decontamination facilities to building systems such as water, sewer, and electrical.

1.3 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.

B. Personnel Decontamination Unit: Provide shop drawings showing location and assembly of personnel decontamination unit.

C. Equipment Decontamination Unit: Provide shop drawings showing location and assembly of equipment decontamination unit.

D. Shower Pan: Provide shop drawing.

E. Shower Walls, Head, and Control: Provide product data.

F. Filters: Provide product data and shop drawings of installation on decontamination unit.

G. Hose Bibb: Provide product data.

H. Shower Stall: For Wash-Down Station, provide product data and shop drawings showing any modifications.

I. Lumber: Provide product data on fire resistance treatment.

J. Sump Pump: Provide product data.

K. Signs: Submit samples of signs to be used.

PART 2 PRODUCTS

2.1 DECONTAMINATION UNITS

A. Polyethylene Sheet:
   1. Provide flame-resistant polyethylene film that conforms to requirements of NFPA 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.
   2. Provide largest size possible to minimize seams, 4 or 6 mil thick.

B. Duct Tape: 2-inch or 3-inch widths as indicated, with adhesive formulated to stick aggressively to sheet polyethylene.

C. Spray Adhesive: In aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

D. Shower Pan: One-piece, waterproof; 4 feet by 8 feet by 6 inches deep.
   1. Fabricate from seamless fiberglass minimum 1/16 inch thick, reinforced with wood, 18 gauge stainless, or galvanized steel with welded seams, copper or lead with soldered seams, or seamless liner or minimum 60 mil thick elastomeric membrane.

E. Shower Walls: 8 foot long by approximately 7 foot high.
   1. Fabricated from rigid, impervious, waterproof material, either corrugated fiberglass roofing or equivalent.
   2. Structurally support as necessary for stability.

F. Shower Head and Controls:
   1. Provide factory-made shower head producing spray of water which can be adjusted for spray size and intensity.
   2. Feed shower with water mixed from hot and cold supply lines.
   3. Arrange so control of water temperature, flow rate, and shut off is from inside shower without outside aid.

G. Filters:
   1. Provide cascaded filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from Work Area.
   2. Provide units with disposable filter elements as indicated below; connect so discharge water passes primary filter and output of primary filter passes through secondary filter.
      a) Primary filter: Passes particles 20 microns and smaller.
      b) Secondary filter: Passes particles 5 microns and smaller.

H. Hose Bibb: Heavy bronze angle type with wheel handle, vacuum breaker, and 3/4 inch National Standard male hose outlet.

I. Shower Stall:
   1. For Wash-Down Station, provide leak-tight shower enclosure with integrated drain

pan fabricated from fiberglass or other durable waterproof materials, approximately 3 feet square with minimum 6-foot high sides and back.
2. Structurally support as necessary for stability.
3. Equip with hose bibb as specified in this Section, mounted at approximately 4 feet above drain pan.
4. Connect drain to reservoir, pump water from reservoir through filters to drain or store and use for amended water.
5. Mount filters inside shower stall on back wall beneath hose bibb.

J. Lumber: Kiln-dried, of any grade or species.

K. Sump Pump: Totally submersible, waterproof type, with integral float switch.
1. Unit sized to pump two times flow capacity of all showers or hoses supplying water to sump, through filters specified, when they are loaded to extent that replacement is required.
2. Provide unit capable of pumping debris, sand, plaster, or other materials washed off during decontamination procedures without damage to mechanism of pump.
3. Adjust float switch so minimum of 3 inches remains between top of liquid and top of sump pan.

PART 3 EXECUTION

3.1 PERSONNEL DECONTAMINATION UNIT

A. Provide unit consisting of serial arrangement of connected rooms or spaces, Changing Room, Drying Room, Shower Room, and Equipment Room.
1. Require all persons without exception to pass through this decontamination unit for entry into and exiting from Work Area for any purpose.
2. Do not allow parallel routes for entry or exit.
3. Do not remove equipment or materials through personnel decontamination unit.
4. Provide temporary lighting within decontamination units as necessary.

B. Changing Room (Clean Room): Room that is physically and visually separated from rest of building for purpose of changing into protective clothing.

1. Construct using polyethylene sheeting minimum 6 mil thick, to provide airtight seal between Changing Room and rest of building.
2. Locate so access to Work Area from Changing Room is through Shower Room.
3. Separate Changing Room from building by sheet plastic flapped doorway.
4. Require workers to remove all street clothes in this room, dress in clean, disposable coveralls, and don respiratory protection equipment.
   a) Do not allow asbestos-contaminated items to enter this room.
   b) Require workers to enter this room either from outside structure dressed in street clothes, or naked from showers.
5. Existing room may be used as Changing Room if it is suitably located and of configuration where workers may enter Changing Room directly from Shower Room.

a) Protect all surfaces of room with sheet plastic specified in Section 01530 - Temporary Enclosures.
b) Obtain authorization for this from APM in writing prior to start of construction.
c) Submit written request in accordance with Section 01630 - Product Substitutions, detailing layout and protective measures proposed.

6. Maintain floor of Changing Room dry and clean at all times; do not allow overflow water from shower to wet floor in Changing Room.
7. Damp wipe all surfaces twice after each shift change with disinfectant solution.
8. Provide posted information for all emergency phone numbers and procedures.
9. Provide one storage locker per employee.

C. Drying Room: Airlock; place for workers to dry after showering.
1. Construct room by providing pan continuous with or draining to Shower Room pan.
a) Install freely draining wooden or non-skid metal floor in pan at elevation of top of pan.
2. Separate this room from rest of building with airtight walls fabricated of 6 mil polyethylene.
a) Separate from Changing Room by sheet plastic flapped doorway.
b) Provide continuously adequate supply of disposable bath towels.

D. Shower Room: Completely watertight, operational shower to be used for transit by cleanly dressed workers heading for Work Area from Changing Room, or for showering by workers headed out of Work Area after undressing in Equipment Room.
1. Construct room by providing shower pan and two shower walls in configuration that will cause water running down walls to drip into pan.
a) Install freely draining wooden floor in shower pan at elevation of top of pan.
2. Separate this room from rest of building with airtight walls fabricated of 6 mil polyethylene.
3. Provide splash-proof entrances to Drying Room and Airlock.
4. Arrange so water from showering does not splash into Changing or Equipment Room.
5. Arrange water shut-off and drain pump operation controls so single individual can shower without assistance from either inside or outside of Work Area.
6. Provide flexible hose shower head.
7. Pump waste water to drain or to storage for use in amended water.
a) When pumped to drain, provide 20 micron and 5 micron waste water filters in line to drain or waste water storage.
b) Change filters daily or more often if necessary.
c) Locate filters inside shower unit so water lost during filter changes is caught by shower pan.
8. Provide hose bibb.

E. Airlock: Located between Shower Room and Equipment Room; transit area for workers.
1. Separate this room from rest of building with airtight walls fabricated of 6 mil polyethylene.
2. Separate from Equipment Room by sheet plastic flapped doorway.

F. Equipment Room (Contaminated Area): Change and transit area for workers; all work equipment, footwear and additional contaminated work clothing are left here.
   1. Separate this room from Work Area by 6 mil polyethylene flapped doorway.
   2. Separate this room from rest of building with airtight walls fabricated of 6 mil polyethylene.
   3. Provide drop cloth layer of sheet plastic on floor in Equipment Room for every shift change expected.
      a) Roll drop cloth layer of plastic from Equipment Room into Work Area after each shift change.
      b) Replace before next shift change.
      c) Provide minimum two layers of plastic at all times.
      d) Use only clear plastic to cover floors.

G. Airlock: Located between Equipment Room and Work Area; transit area for workers.
   1. Separate this room from Equipment Room and Work Area by sheet plastic flapped doorway.
   2. Separate this room from rest of building with airtight walls fabricated of 6 mil polyethylene.

H. Work Area:
   1. Separate Work Area from Equipment Room by polyethylene barriers.

I. Decontamination Sequence: Require all workers to adhere to following sequence when entering or leaving Work Area.
   1. Entering Work Area:
      a) Worker enters Changing Room and removes street clothing, puts on clean disposable overalls and respirator, and passes through Shower Room into Equipment Room.
      b) All additional clothing and equipment left in Equipment Room needed by worker are put on in Equipment Room.
      c) Worker proceed to Work Area.
   2. Exiting Work Area:
      a) Before leaving Work Area, require worker to remove all gross contamination and debris from overalls and feet.
      b) Worker then proceeds to Equipment Room and removes all clothing except respiratory protection equipment.
      c) Extra work clothing such as boots, hard hats, goggles, and gloves are to be stored in contaminated end of Equipment Room.
      d) Disposable coveralls are placed in bag for disposal with other material.
      e) Decontamination procedures described in Section 01560 must be followed by all individuals leaving Work Area.
      f) After showering, worker moves to Changing Room and dresses in either new coveralls for another entry or street clothes, if leaving.

3.2 EQUIPMENT DECONTAMINATION UNIT

A. Provide unit consisting of serial arrangement of rooms, Clean Room, Holding Room for removal of equipment and material from Work Area.
   1. Do not allow personnel to enter or exit Work Area through equipment decontamination unit.

B. Arrange with airlocks between rooms as required below.

C. Wash Room: For cleaning of bagged or containerized asbestos-containing waste materials passed from Work Area.
   1. Construct of nominal 2 inch wood framing and polyethylene sheeting, minimum 6 mil thick; located so packaged materials, after being wiped clean, can be passed to Holding Room.
   2. Separate this room from Work Area by single flapped door of 6 mil polyethylene sheeting.
      a) Provide drop cloth layer of plastic on floor in Wash Room for every load-out operation.
      b) Roll this drop cloth layer of plastic from Wash Room into Work Area after each load-out.
      c) Provide minimum two layers of plastic at all times.
      d) Use only clear plastic to cover floors.

D. Airlock: Between Wash Room and Holding Room; transit area.
   1. Separate this room from adjacent spaces by sheet plastic flapped doorway.
   2. Separate this room from rest of building and adjacent spaces with airtight walls fabricated of 6 mil polyethylene.

E. Holding Room: Drop location for bagged asbestos-containing materials passed from Work Area.

F. Load-Out Area: Transfer area from building to truck or dumpster.
   1. May be Clean Room of equipment decontamination unit or separate room or loading dock area.
   2. Erect critical and primary barriers as described in Section 01530 - Temporary Enclosures in load-out area.
   3. During transfer of material from load-out area, erect primary barriers as described in Section 01530 - Temporary Enclosures, as necessary to seal path from load-out area to truck or dumpster.

3.3 CONSTRUCTION OF DECONTAMINATION UNITS

A. Walls and Ceiling:
   1. Construct airtight, using polyethylene sheet, minimum 6 mil thick.
   2. Attach to existing building components or temporary framework.

B. Floors:
   1. Use minimum two layers of 6 mil polyethylene sheeting to cover floors in all areas of

decontamination units.
2. Use only clear plastic to cover floors.

C. Flap Doors:
1. Fabricate from three overlapping sheets with openings minimum 3 feet wide.
2. Configure so sheeting overlaps adjacent surfaces.
3. Weigh sheets at bottoms as required so they quickly close after being released.
4. Put arrows on sheets to indicated direction of overlap or travel.
5. Provide minimum 6 feet between entrances and exit of any room.
6. Provide minimum 3 feet between doors to airlocks.

D. Visual Barrier:
1. Where decontamination area is immediately adjacent to and within view of occupied areas, provide visual barrier of opaque polyethylene sheeting minimum 6 mil thick, so worker privacy is maintained and work procedures are not visible to building occupants.
2. Where area adjacent to decontamination area is accessible to public, construct solid barrier on public side of sheeting to protect sheeting.
3. Construct barrier with wood or metal studs covered with minimum 1/4 inch thick hardboard or ? inch plywood.
4. Where solid barrier is provided, sheeting need not be opaque.

E. Alternate methods of providing decontamination facilities may be submitted to APM for approval.
1. Do not proceed with any such method(s) without written authorization of APM.

F. Electrical:
1. Provide sub-panel at Changing Room to accommodate all removal equipment.
2. Power sub-panel directly from building electrical panel.
3. Connect all electrical branch circuits in decontamination unit and particularly any pumps in Shower Room to ground-fault circuit protection device.

3.4 CLEANING OF DECONTAMINATION UNITS

A. Clean debris and residue from inside of decontamination units on daily basis or as otherwise indicated on Drawings.
1. Damp wipe or hose down all surfaces after each shift change.
2. Clean debris from shower pans on daily basis.

B. When Changing Room of personnel decontamination unit become contaminated with asbestos-containing debris, abandon entire decontamination unit and erect new decontamination unit.
1. Use former Changing Room as inner section of new Equipment Room.

3.5 SIGNS

A. Post approximately 20 inch by 14 inch manufactured caution sign at each entrance to Work Area displaying following legend with letter sizes and styles of visibility required by 29 CFR 1926:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

1. Provide spacing between respective lines at least equal to height of respective upper line.

2. Post approximately 10 inch by 14 inch manufactured sign at each entrance to each Work Area displaying following legend with letter sizes and styles of visibility at least equal to following:

Legend	Notation
NO FOOD, BEVERAGES OR TOBACCO PERMITTED	3/4 inch Block
ALL PERSONS SHALL DON PROTECTIVE CLOTHING (COVERINGS) BEFORE ENTERING WORK AREA	3/4 inch Block
ALL PERSONS SHALL SHOWER IMMEDIATELY AFTER LEAVING WORK AREA AND BEFORE ENTERING CHANGING AREA	3/4 inch Block

END OF SECTION 1563

SECTION 01630

PRODUCT SUBSTITUTIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Substitutions.

1.2 RELATED WORK

A. Section 01091: Definitions and Standards

B. Section 01300: Submittals

1.3 DEFINITIONS

A. Definitions used in this Article are not intended to change or modify meaning of other terms used in Contract Documents.

B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by Contractor after award of Contract; following not considered substitutions:
   1. Substitutions requested by Bidders during bidding period and accepted prior to award of Contract are considered as included in Contract Documents and are not subject to requirements specified in this Section for substitutions.
   2. Revisions to Contract Documents requested by Owner or APM.
   3. Specified options of products and construction methods included in Contract Documents.
   4. Contractor's determination of compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

A. Substitution Request Submittal:
   1. Requests for substitution will be considered if received within 3 weeks prior to beginning work affected by substitution.

   2. Requests received less than 3 weeks before commencement of affected work may be considered or rejected at discretion of APM.

3. Submit 3 copies of each request for substitution for consideration; in form and in accordance with procedures required for Change Order proposals.

4. Identify product, or fabrication or installation method, to be replaced in each request; include related Specification Section and Drawing numbers, and provide complete documentation showing compliance with requirements for substitutions, and following information, as appropriate:
    a) Product data, including drawings and descriptions of products, fabrication, installation procedures, and manufacturer's instructions for use.
    b) Samples, where applicable or requested.
    c) Detailed comparison of significant qualities of proposed substitution with those of work specified; significant qualities may include elements such as size, weight, durability, performance, and visual effect.
    d) Coordination information, including list of changes or modifications needed for other parts of work and for construction performed by Owner and separate contractors that will become necessary to accommodate proposed substitution.
    e) Statement indicating substitution's effect on Contractor's Construction Schedule compared to schedule without approval of substitution, and indication of effect of proposed substitution on overall Contract Time.
    f) Cost information, including proposal of net change, if any, in Contract Price.
    g) Certification by Contractor that substitution proposed is in every significant respect equal to or better than that required by Contract Documents, and that it will perform adequately in application indicated.
        1. Include Contractor's waiver or rights to additional payment or time that may subsequently become necessary because of failure of substitution to perform adequately.

B. APM's Action:
    1. Within one week of receipt of request for substitution, APM will request additional information or documentation necessary for evaluation of request.
    2. Within 2 weeks of receipt of request, or one week or receipt of additional information or documentation, whichever is later, APM will notify Contractor of acceptance or rejection of proposed substitution.
    3. If decision on use of proposed substitute cannot be made or obtained within time allocated, use product specified by name.
    4. Acceptance will be in form of Change Order.

PART 2 PRODUCTS

2.1 SUBSTITUTIONS

A. Contractor's substitution request will be received and considered by APM when one or more of following conditions are satisfied, as determined by APM; otherwise, requests will be returned without action except to record non-compliance with these requirements.
    1. Extensive revisions to Contract Documents are not required.

2. Proposed changes are in keeping with general intent of Contract Documents.
3. Request is timely, fully documented, and properly submitted.
4. Request is directly related to "or equal" clause or similar language in Contract Documents.
5. Specified equipment, product, or method of construction cannot be provided within Contract Time.
    a) Request will not be considered if equipment, product, or method cannot be provided as result of failure to pursue work promptly or coordinate activities properly.
6. Specified equipment, product, or method of construction cannot receive necessary approval by governing authority, and requested substitution can be approved.
7. Substantial advantage is offered Owner, in terms of safety, cost, time, energy conservation, or other considerations of merit, after deducting off-setting responsibilities Owner may be required to bear.
    a) Additional responsibilities for Owner may include additional compensation to APM for re-design and evaluation services, increased cost of other construction by Owner or separate Contractors, and similar considerations.
8. Specified equipment, product, or method of construction cannot be provided in manner that is compatible with other materials, and Contractor certifies that substitution will overcome incompatibility.
9. Specified equipment, product, or method of construction cannot be coordinated with other materials, and Contractor certifies that proposed substitution can be coordinated.
10. Specified equipment, product, or method of construction cannot provide warranty required by Contract Documents and Contractor certifies that proposed substitution provides required warranty.

B. Contractor's submittal and APM's acceptance of shop drawings, product data, or samples that relate to construction activities not complying with Contract Documents does not constitute acceptable or valid request for substitutions, nor does it constitute approval.

PART 3 EXECUTION

NOT USED.

END OF SECTION 1630

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SECTION 01700

PROJECT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Inspection procedures.

B. Project Record Document submittal.

C. Submittal of warranties.

D. Final cleaning.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete following; list exceptions in request.

B. In Application for Payment that coincides with, or first follows, date Substantial Completion is claimed, show 100% completion for portion of work claimed as substantially complete; include supporting documents for completion as indicated in these Contract Documents and statement showing accounting of changes to Contract Price.
   1. When 100% completion cannot be shown, include list of incomplete items, value of incomplete construction, and reasons work is not complete.
   2. Advise Owner of pending insurance change-over requirements.
   3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
   4. Obtain and submit releases enabling Owner unrestricted use of work and access to services and utilities; include occupancy permits, operating certificates, and similar releases.
   5. Submit record drawings, final project photographs, damage or settlement survey, and similar final record information.
   6. Complete start-up testing of systems; discontinue or change over and remove temporary facilities from site, along with construction tools and similar elements.

C. Complete final clean-up requirements, including touch-up painting.
   1. Touch up and otherwise repair and restore marred exposed finishes.

   2. Complete repairs as necessary to walls, floors, ceilings, woodwork, (etc.,) damaged by abatement activity.
      a) Repair item(s) by professional installation if replacement is required.

b) Replacement items, patching or repair shall be aesthetically compatible with surroundings.

c) Floor, ceiling and/or wall coverings, if damaged, shall be replaced in the entire room, divided area, or section thereof if aesthetically compatible with surrounding finishes and written approval of sectional replacement is obtained from Owner.

D. Inspection Procedures:

1. On receipt of request for inspection, APM will either proceed with inspection or advise Contractor of unfilled requirements.
2. APM will prepare Certificate of Substantial Completion following inspection, or advise Contractor of construction that must be completed or corrected before certificate will be issued.
3. APM will repeat inspection when requested and assured that work has been substantially completed.
4. Results of completed inspection will form basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for Certification of Final Acceptance and Final Payment, complete following; list exceptions in request.

1. Submit Final Payment Request with releases and supporting documentation not previously submitted and accepted; include Certificates of Insurance for products and completed operation where required.
2. Submit updated final statement, accounting for final additional changes to Contract Price.
3. Submit certified copy of APM's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and list has been endorsed and dated by APM.
4. Submit consent of surety to Final Payment.
5. Submit final liquidated damages settlement statement.
6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Re-inspection Procedure: APM will re-inspect work upon receipt of notice that work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to APM.

1. Upon completion of re-inspection, APM will prepare Certificate of Final Acceptance, or advise Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for Final Acceptance.

C. When necessary, re-inspection will be repeated.

1.4 RECORD DOCUMENTS SUBMITTALS

A. Do not use Record Documents for construction purposes.
   1. Protect from deterioration and loss in secure, fire-resistive location; provide access to Record Documents for APM's reference during normal working hours.

B. Record Drawings:
   1. Maintain clean, undamaged set of blue or black line white prints of Contract Drawings and shop drawings.
   2. Mark set to show actual installation where installation varies substantially from work as originally indicated.
   3. Mark whichever drawing is most capable of showing conditions fully and accurately.
      a) Where shop drawings are used, record cross-reference at corresponding location on Contract Documents.
   4. Given particular attention to concealed elements that would be difficult to measure and record at later date.
   5. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of work.
   6. Mark new information that is important to Owner, but was not indicated on Contract Drawings or shop drawings.
   7. Note related Change Order numbers where applicable.
   8. Organize Record Drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on cover of each set.

C. Record Specifications:
   1. Maintain one complete copy of Project Manual, including Addenda, and one copy of other written construction documents such as Change Orders and modifications issued, in printed form during construction.
   2. Mark these documents to show substantial variations in actual work performed in comparison with text of Specifications and modifications.
   3. Give particular attention to substitutions, selection of options, and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
   4. Note related Record Drawing information and product data.
   5. Upon completion of work, submit Record Specifications to APM for Owner's records.

D. Record Product Data:
   1. Maintain one copy of each product data submittal.
   2. Mark these documents to show significant variations in actual work performed in comparison with information submitted.
   3. Include variations in products delivered to site, and from manufacturer's installation instructions and recommendations.

4. Give particular attention to concealed products and portions of work which cannot otherwise be readily discerned later by direct observation.
5. Note related Change Orders and mark up of Record Drawings and Specifications.
6. Upon completion of mark up, submit complete set of Record products data to APM for Owner's records.

E. Miscellaneous Record Submittals:
1. See other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of work.
2. Immediately prior to date(s) of Substantial Completion, complete miscellaneous records and place in good order, properly identified, and bound or filed, ready for continued use and reference.
3. Submit to APM for Owner's records.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

3.1 FINAL CLEANING

A. General cleaning during construction is required by General Conditions and included in Section 01510 - Temporary Facilities.

B. Cleaning: Comply with manufacturer's instructions.
1. Employ experienced workers or professional cleaners for final cleaning.
2. Clean each surface or unit to condition expected in normal, commercial building cleaning and maintenance program.
3. Complete following cleaning operations before requesting inspection for Certification of Substantial Completion.
a) Remove labels that are not permanent labels.
b) Clean transparent materials, including mirrors and glass in doors and windows.
1. Remove glazing compound and other substances that are noticeable vision-obscuring materials.
2. Replace chipped or broken glass and other damaged transparent materials.
c) Clean exposed exterior and interior hard-surfaced finishes to dust-free condition, free of stains, films, and similar foreign substances.
1. Restore reflective surfaces to their original reflective condition.
2. Leave concrete floors broom clean.
3. Vacuum carpeted surfaces.
d) Wipe surfaces of mechanical and electrical equipment; remove excess lubrication and other substances.

1. Clean plumbing fixtures to sanitary condition.
2. Clean light fixtures and lamps.

e) Clean site, including landscape development areas, of rubbish, litter, and foreign substances.
   1. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits.
   2. Rake grounds that are neither paved nor planted, to smooth even-textured surface.

C. Removal of Protection: Remove temporary protection and facilities installed for protection of work during construction.

D. Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
   1. Do not burn waste material.
   2. Do not bury debris or excess materials on Owner's property.
   3. Do not discharge volatile, harmful or dangerous materials into drainage systems.
   4. Remove waste materials from site and dispose of in lawful manner.
   5. Where extra materials of value remaining after completion of associated work have become Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 1700

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SECTION 01711

PROJECT DECONTAMINATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Decontamination of Work Area following asbestos abatement.
   1. When asbestos abatement work is on damaged or friable materials, work is four-step procedure with two cleanings of primary barrier plastic prior to its removal and two cleanings of room surfaces to remove any new or existing contamination.
   2. Unless specifically indicated otherwise, all materials are considered damaged or friable for purposes of this Section.

1.2 RELATED WORK

A. Section 01714: Work Area Clearance

B. Section 02081: Removal of Asbestos-Containing Materials

1.3 SUBMITTALS

A. Submit test report from independent testing laboratory on fire resistance rating of assembly of sprayback fireproofing on lockback encapsulant used.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

3.1 GENERAL

A. Work of this Section includes decontamination of air in Work Area which has been, or may have been, contaminated by elevated airborne asbestos fiber levels generated during abatement activities, or which may previously have had elevated fiber levels due to friable asbestos-containing materials in space.

B. Work of this Section includes cleaning, decontamination, and removal of temporary facilities installed prior to abatement work, including:
   1. Pressure differential system installed by work of Section 01515.
   2. Primary and critical barriers erected by work of Section 01530.
   3. Decontamination unit erected by work of Section 01563.

C. Work of this Section include cleaning and decontamination of all surfaces (ceilings, walls, and floor) of Work Area.

3.2 START OF WORK

A. During completion of asbestos abatement work specified in other Sections, secondary barrier of polyethylene sheeting will have been removed and disposed of along with any gross debris generated by asbestos abatement work.

B. Work of this Section begins with cleaning of primary barrier; at start of work, following will be in place:
   1. Primary Barrier: Two layers of polyethylene sheeting on ceiling and on walls.
   2. Critical Barrier: Airtight barrier between Work Area and other portions of building or outside.
   3. Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers, and other openings.
   4. Decontamination Units: For personnel and equipment in operating condition.
   5. Pressure Differential System: In operation.

3.3 FIRST CLEANING

A. Carry out first cleaning of all surfaces of Work Area including items of remaining sheeting, tools, scaffolding, or staging by use of damp-cleaning and mopping, or High-Efficiency Particulate Air (HEPA) filtered vacuum:
   1. HEPA vacuum may fail if used with wet material.
   2. Do not perform dry dusting or dry sweeping.
   3. Use each surface of cleaning cloth one time only and then dispose of as contaminated waste.
   4. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces.

B. Remove all filters in air handling system(s) and dispose of as asbestos-containing waste in accordance with requirements of Section 02084 - Disposal of Asbestos-Containing Material.

C. Wait 12 hours to allow HEPA filtered fan units to clean air of air-borne asbestos fibers.
   1. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period.
   2. Maintain pressure differential system in operation for entire period.

3.4 SECOND CLEANING

A. Removal of First Layer of Polyethylene Sheeting:
   1. At the conclusion of the 12 hour waiting period, if no water is visible on surfaces, the cleaned first layer of plastic sheeting shall be removed from the walls and floor. The sheeting shall be folded inward and bagged for disposal.
   2. Second Cleaning: The second layer of plastic sheeting and all objects and surfaces in the contained area shall be HEPA vacuumed and/or wet cleaned.

B. Wait 12 hours to allow HEPA filtered fan units to clean air of airborne asbestos fibers.
   1. Use oscillating fans as necessary to assure circulation of air in all parts of work areas

during this period.
2. Maintain pressure differential system in operation for entire period.

3.5 FINAL CLEANING

A. Removal of Second Layer of Polyethylene Sheeting:
1. If no visible moisture remains on surfaces in the contained area at the conclusion of the 12 hour period, the cleaned second layer of plastic sheeting shall be removed from the walls and floors. The sheeting shall be folded inward and bagged for disposal.
2. Third Cleaning: Windows, doors HVAC system vents and all other openings shall remain sealed. All objects and surfaces in the work area shall be HEPA vacuumed and/or wet cleaned.

3.6 VISUAL INSPECTION

A. Twelve (12) hours after final cleaning, perform complete visual inspection of entire Work Area including all surfaces, ceilings, walls, floor, decontamination unit, all plastic sheeting, seals over ventilation openings, doorways, windows, and other openings; look for debris from any sources, residue on surfaces, dust, or other matter.
1. During visual inspection, inspect entire work area including walls, ceilings, ledges, floors, and other surfaces in room.
2. If any debris, residue, dust, or other matter is found, repeat final cleaning and continue decontamination procedure from that point.
3. When area is visually clean, and if after inspection of all surfaces no debris, residue, dust, or other material is found, complete certification at end of this Section.
4. Visual inspection is not complete until confirmed in writing, on certification, by Project Manager.
B. Temporary Lighting:
1. Provide minimum 100 foot-candles of lighting on all surfaces in areas to be subjected to visual inspection.
2. Provide hand-held lights providing 150 foot-candles at 4 feet capable of reaching all locations in work area.
C. Lifts:
1. Provide ladders, scaffolding, and lifts as required to provide access to all surfaces in area to be subjected to visual inspection.
2. Access is to allow touching of all surfaces.

3.7 ENCAPSULATION

A. Encapsulation of Base:
1. Perform encapsulation of base at end of Second Cleaning. prior to 12 hour waiting period.
2. Maintain pressure differential system in operation during encapsulation work.

3.8 REMOVAL OF WORK AREA ISOLATION

A. After all requirements of this Section and Section 01714 - Work Area Clearance have been met:
   1. Shut down and remove pressure differential system; seal HEPA filtered fan units, HEPA vacuums, and similar equipment with 6 mil polyethylene sheet and duct tape to form tight seal at intake end before being moved from Work Area.
   2. Remove personnel decontamination unit.
   3. Remove critical barriers separating Work Area from rest of building.
      a) Remove any small quantities of residual material found upon removal of plastic sheeting with wet wiping, HEPA filtered vacuum cleaners and local area protection.
      b) If significant quantities, as determined by APM, are found, then entire area affected shall be decontaminated.
   4. Remove all equipment, materials, and debris from work site.
   5. Dispose of all asbestos-containing waste material as specified in Section 02084 - Disposal of Asbestos-Containing Material.

3.9 SUBSTANTIAL COMPLETION OF ABATEMENT WORK

A. Asbestos abatement work is substantially complete upon meeting requirements of this Section and Section 01714 - Work Area Clearance, including submission of following:
   1. Certificate of Visual Inspection.
   2. Receipts documenting proper disposal as required by Section 02084 - Disposal of Asbestos-Containing Material.
   3. Punch list detailing repairs to be made and incomplete items.

3.10 CERTIFICATE OF VISUAL INSPECTION

A. At end of this Section is Certificate of Visual Inspection.
   1. This certification is to be completed by Contractor and certified by Asbestos Project Manager.
   2. Submit completed Certificate with Application for Final Payment.
   3. Final payment will not be made until this certification is executed.

CERTIFICATION OF VISUAL INSPECTION

In accordance with Section 01711 - Project Decontamination, Contractor hereby certifies that he has visually inspected Work Area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, decontamination unit, and sheet plastic) and has found no dust, debris, or residue.

By: _____ _____
Signature Date

_____ _____
Print Name Title

ASBESTOS PROJECT MANAGER (APM) CERTIFICATION

APM hereby confirms that he has accompanied Contractor on his visual inspection and verifies that this inspection has been thorough, and to the best of his knowledge and belief, Contractor's Certification above is true and honest.

By: _____ _____
Signature Date

_____ _____
Print Name Title

END OF SECTION 1711

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SECTION 01714

WORK AREA CLEARANCE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Required post-abatement airborne asbestos concentrations in Work Area and describes testing procedures Owner will use to measure these levels.

B. Not in Contract Price: This Section describes work being performed by ASP; this work shall not be included in the Contractor's in Contract Price.
   1. Air Sampling Professional (ASP), licensed in State of Illinois, will be secured to perform work of this Section.

1.2 RELATED WORK

A. Section 01410: Air Monitoring - Test Laboratory Services

B. Section 01711: Project Decontamination

1.3 CONTRACTOR RELEASE CRITERIA

A. Asbestos Abatement Work Area is cleared when Work Area is visually clean and airborne asbestos structure concentrations of fiber levels have been reduced to level specified below.

1.4 VISUAL INSPECTION

A. Work of this Section will not begin until visual inspection described in Section 01711 - Project Decontamination is complete and has been certified by APM.

1.5 AIR MONITORING

A. To determine when elevated airborne asbestos structure of fiber concentration encountered during abatement operations has been reduced to specified level, ASP will secure samples and analyze them according to following procedures.
   1. Aggressive sampling procedures as described below will be followed.
   2. PCM samples will be secured as indicated below; PCM samples will be transmitted to a laboratory.

1.6 AGGRESSIVE SAMPLING

A. All clearance air samples will be taken using aggressive sampling techniques as follows:
   1. Before sampling pumps are started, exhaust from forced air equipment (leaf blower

with approximately 1 HP electric motor) will be swept against all walls, ceilings, floors, ledges, and other surfaces in room; this procedure will be continued for 5 minutes per 10,000 cubic feet of room volume.

2. One 20-inch diameter fan per 10,000 cubic feet of room volume will be mounted in central location at approximately 12 inches above floor, directed toward ceiling and operated at low speed for entire period of sample collection.
3. Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites new windows, doors or vents.
4. After air sampling pumps have been shut off, fans will be shut off.

1.7 SCHEDULE OF AIR SAMPLES

A. Number and volume of air samples taken and analytical methods used by ASP will be in accordance with following schedule.
   1. Sample volumes given may vary depending on analytical instruments used.

1.8 PHASE CONTRAST MICROSCOPY

A. In each homogeneous work area or mini-containment, after completion of all cleaning work, a minimum of 10 samples will be taken and analyzed as follows:

Location Sampled LPM	Number of Samples	Analysis Method	Analytical Sensitivity Fibers/cc.	Recommended Volume (Liters)	Rate
Inside Each Work Area	5	PCM	0.01	1,300- to 1,800	1-10
Outside Each Work Area	5	PCM	0.01	1,300- to 1,800	1-10
Field Blank	1	PCM	0.01	0	Do Not Open
Laboratory Blank	1	PCM	0.01	0	Do Not Open

B. Analysis will be performed using analysis method set forth in NIOSH 7400 Method A.

C. Asbestos structures referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.

D. Release Criteria: Decontamination of work site is complete when either of following two sets of conditions are met:
   1. Work Area samples are below filter background levels.

a) All Work Area sample volumes are greater than 1,200 liters for 25 mm. sampling cassette.
b) Concentration of asbestos on each Work Area sample does not exceed filter background level of 0.01 fibers/cc.

2. Work Area samples are not statistically different from outside samples.
a) All sample volumes except for blanks are greater than 560 liters for 25 mm. sampling cassette.
b) Average asbestos concentration of three blanks is below filter background level of 0.01 fibers/mm

E. When these conditions are not met, then decontamination is incomplete and cleaning procedures of Section 01700 shall be repeated.

1.9 LABORATORY TESTING

A. Phase Contrast Microscopy:
1. Samples will be read at Morland Environmental Services. asbestos lab in Woodhull, Illinois.
2. Verbal results will normally be available within six hours of sampling.
3. All Phase Contrast Microscopy results will be available to Contractor.

PART 2 PRODUCTS
NOT USED.

PART 3 EXECUTION
NOT USED.

END OF SECTION 1714

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DIVISION 2 - SITE WORK

02081	Removal of Asbestos-Containing Materials
02084	Disposal of Asbestos-Containing Materials

SECTION 02081

REMOVAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Procedures for removal of asbestos-containing materials.

1.2 RELATED WORK

A. Section 01530: Temporary Enclosures

B. Section 01711: Project Decontamination

C. Section 02084: Disposal of Asbestos-Containing Materials

1.3 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.

B. Surfactant:
1. Submit product data, use instructions and recommendations from manufacturer of surfactant intended for use.
2. Include data substantiating that material complies with requirements.

C. Removal Encapsulant:
1. Submit product data, use instructions and recommendations from manufacturer of removal encapsulant intended for use.
2. Include data substantiating that material complies with requirements.

D. NESHAP Certification:
1. Submit certificate from manufacturer of surfactant or removal encapsulant that, to extent required by this Specification, material, if used in accordance with manufacturer's instructions, will wet asbestos-containing materials to which it is applied as required by National Emission Standard for Hazardous Pollutants (NESHAP) Asbestos Regulations (40 CAR 61, Sub-part M).

E. Material Safety Data Sheet (MSDS):
1. Submit MSDS, or equivalent, in accordance with OSHA Hazard Communication Standard (29 CAR 1910.1200) for each surfactant, encapsulating material and solvent proposed for use on work.

2. Include separate attachment for each sheet indicating specific worker protective equipment proposed for use with material indicated.

PART 2 PRODUCTS

2.1 WETTING MATERIALS

A. For wetting prior to disturbance of asbestos-containing materials, use either amended water or removal encapsulant:
   1. Amended Water:
      a) Provide water to which surfactant has been added.
      b) Use mixture of surfactant and water which results in wetting of asbestos-containing material and retardation of fiber release during disturbance of material equal to or greater than that provided by use of 1 ounce of surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with 5 gallons of water.
   2. Removal Encapsulant:
      a) Provide penetrating type encapsulant designed specifically for removal of asbestos-containing material.
      b) Use material which results in wetting of asbestos-containing material and retardation of fiber release during disturbance of material equal to or greater than that provided by water amended with surfactant consisting of 1 ounce of mixture of 50% polyoxyethylene ester and 50% polyoxyethylene ether in 5 gallons of water.
   3. Mastic Remover:
      a) Removal of asbestos containing mastic from vinyl tile shall be conducted using a low odor mastic remover such as Sentinel 7200, Abatement Technologies Citrus 200 Plus, Certified Technologies Certane 77B or equivalent. Mechanical buffers may be used in the removal of the mastic.
      b) After completion of mastic removal, the entire floor is to be neutralized with a detergent type wash such as Spic and Span, Simple Green, Lysol, Tri-Sodium Phosphate or equivalent. Mechanical Buffers or a mop may be used in the removal of the mastic.

B. Polyethylene Sheet: Flame-resistant polyethylene film that conforms to requirements described by NFPA 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.
   1. Provide largest size possible to minimize seams, 4 or 6 mil thick as indicated, frosted or black as indicated.

C. Duct Tape: 2-inch or 3-inch widths as indicated, with adhesive formulated to stick aggressively to sheet polyethylene.

D. Spray Cement: In aerosol cans, specifically formulated to stick tenaciously to sheet polyethylene.

E. Disposal Bags: 6 mil thick, leak-tight, polyethylene type; labeled as required by Section 02084 - Disposal of Asbestos-Containing Materials.

PART 3 EXECUTION

3.1 WORKER PROTECTION

A. Before beginning work with any material for which MSDS has been submitted, provide workers with required protective equipment.
   1. Require that appropriate protective equipment be used at all times.

3.2 WET REMOVAL

A. Thoroughly wet to satisfaction of APM, asbestos-containing materials to be removed prior to stripping or tooling to reduce fiber dispersal into air.
   1. Accomplish wetting by fine spray (mist) of amended water or removal encapsulant.
   2. Saturate material sufficiently to wet to base without causing excess dripping.
   3. Allow time for amended water or removal encapsulant to penetrate material thoroughly.
   4. When amended water is used, spray material repeatedly during work process to maintain continuously wet condition.
   5. When removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.
   6. Perforate outer covering of any insulation which has been painted or jacketed in order to allow penetration of amended water or removal encapsulant, or use injection equipment to wet material under covering.
   7. Where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on insulation to minimize dispersal of asbestos fibers into air.

B. Mist Work Area continuously with amended water when necessary to reduce air-borne fiber levels.

C. Remove saturated asbestos-containing material in small sections from all areas.
   1. Do not allow material to dry out.
   2. As it is removed, simultaneously pack material while still wet into disposal bags.
   3. Twist neck of bags, bend over, and seal with minimum three wraps of duct tape.
   4. Clean outside and move to Wash-Down Station adjacent to material decontamination unit.
   5. Evacuate air from disposal bags with HEPA filtered vacuum cleaner before sealing.

END OF SECTION 2081

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SECTION 02084

DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Procedures for disposal of asbestos-containing materials.
   1. Disposal includes packaging of asbestos-containing waste materials.
   2. Disposal may be accomplished either by landfilling or converting asbestos-containing materials to non-asbestos waste.

1.2 RELATED WORK

A. Section 01092: Codes and Regulations

B. Section 02081: Removal of Asbestos-Containing Materials

1.3 SUBMITTALS

A. Before start of work, submit following to APM for review, in accordance with Section 01300.
   1. Copy of State or Local license for waste hauler.
   2. Name and address of landfill where asbestos-containing waste materials are to be buried; include contact person and telephone number, copy of handling procedures, and protective equipment utilized at the landfill, prepared and signed by landfill owner.
   3. Chain of Custody form and form of waste manifest proposed.
   4. Sample of disposal bag and any added labels to be used.

B. On weekly basis, submit copies of all manifests and disposal site receipts to APM.

PART 2 PRODUCTS

2.1 DISPOSAL BAGS

A. Provide 6 mil thick, leak-tight polyethylene bags, labeled with four labels with text as follows:
   1. First Label:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH

   2. Second Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard

Communication standard:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIR-BORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH

3. Third Label: Provide in accordance with U.S. Department of Transportation regulation on hazardous waste marking; 49 CFR parts 171 and 172. Hazardous Substances: Final Rule; published November 21, 1986, and revised February 17, 1987:

RQ HAZARDOUS
SUBSTANCE,
SOLID, NOS,
ORM-E, NA 9188
(ASBESTOS)

4. Fourth Label: Label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated.

PART 3 EXECUTION

3.1 COMPLIANCE

A. Comply with following Sections during all phases of this work:
   1. Section 01560 - Worker Protection.
   2. Section 01562 - Respiratory Protection.

3.2 DISPOSAL

A. All waste is to be hauled by waste hauler with all required licenses from all State and Local authorities with jurisdiction.

B. Load all asbestos-containing waste material in disposal bags or leak-tight drums; all materials to be contained in one of following:
   1. Two 6-mil disposal bags.
   2. Burlap bag and two 6-mil disposal bags.
   3. Sealed steel drum with no bag.

C. Protect interior of truck or dumpster with critical and primary barriers as described in Section 01530 - Temporary Enclosures.

D. Carefully load containerized waste in fully enclosed dumpsters, trucks, or other appropriate vehicles for transport.

1. Exercise care before and during transport, to ensure that no unauthorized persons have access to material.

E. Do not store containerized materials outside of Work Area.
   1. Take containers from Work Area directly to sealed truck or dumpster.

F. Do not transport disposal bagged materials on open trucks.
   1. Label drums with same warning labels as bags.
   2. Uncontaminated drums may be reused.
   3. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this Specification.

G. Advise landfill operator or processor, minimum 10 days in advance of transport, of quantity of material to be delivered.

H. At disposal site, unload containerized waste.
   1. At disposal site, sealed plastic bags must be carefully unloaded from truck.
      a) If bags are broken or damaged, return to work site for rebagging.
      b) Clean entire truck and contents using procedures specified in Section 01711 - Project Decontamination.
   2. At processing site, truck and loading dock are arranged as controlled work area and containerized waste is transferred to storage area by site personnel.
      a) All bags, including broken ones, will be transferred.
      b) Clean truck using procedures specified in Section 01711 - Project Decontamination.

I. Retain receipts from landfill or processor for materials disposed of.

J. At completion of hauling and disposal of each load, submit copy of waste manifest, Chain of Custody form, and landfill receipt to APM.

END OF SECTION 2084

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