

# PROJECT MANUAL

FOR

## 2024 PAVING IMPROVEMENTS

AT

LAGRANGE HIGHLANDS SCHOOL DISTRICT 106  
1750 PLAINFIELD ROAD  
LAGRANGE, ILLINOIS 60525

OWNER:

BOARD OF EDUCATION  
LAGRANGE HIGHLANDS SCHOOL DISTRICT 106  
1750 PLAINFIELD ROAD  
LAGRANGE, ILLINOIS 60525

MARCH 14, 2024

PROJECT NO. 24046



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OWNER:  
LAGRANGE HIGHLANDS SCHOOL DISTRICT 106  
1750 PLAINFIELD ROAD  
LAGRANGE, ILLINOIS 60525

ARCHITECT:  
ARCON ASSOCIATES, INC.  
2050 S. FINLEY ROAD, SUITE 40  
LOMBARD, ILLINOIS 60148

CIVIL CONSULTANT:  
CAGE CIVIL ENGINEERING  
2200 CABOT DRIVE, SUITE 325  
LISLE, ILLINOIS 60532

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#### NOTE:

SEE THE DRAWINGS SHEETS FOR CIVIL SPECIFICATIONS REQUIRED, FOR THE SCOPE OF WORK, FOR THIS PROJECT.

END OF SECTION 00 01 10

**SECTION 00 01 15**

**LIST OF DRAWINGS**

G0.1	Cover Sheet
C0.0	Site Location Map & Civil Legend
C0.1	General Notes & Specifications
C0.2	CCDOTH General Conditions & Construction Notes
C1.0	Existing Conditions & Demolition Plan – North
C1.1	Existing Conditions & Demolition Plan – South
C2.0	Site Layout Plan – North
C2.1	Site Layout Plan – South
C3.0	Construction Details
C3.1	Construction Details

**END OF SECTION 00 01 15**

## ADVERTISEMENT FOR BID

The Board of Education, **LaGrange Highlands School District 106**, Administrative Offices, 1750 W. Plainfield Road, LaGrange, Illinois 60525, will receive sealed bids for:

**2024 PAVING IMPROVEMENTS  
AT  
LaGRANGE HIGHLANDS SCHOOL DISTRICT 106  
PROJECT NO. 24046**

The **Bid Opening** will be on **Thursday, April 4, 2024**, at **2:00 PM** at the **Administrative Offices**. At this time the Bids will be publicly opened and read. A Performance and Payment Bond in the full amount of the contract will be required. A Bid Security of 10% of the Bid is required with the proposal. The Contractor must pay the Prevailing Wage Rates for all work per Illinois Law.

It is the policy of **LaGrange Highlands School District 106** to provide equal opportunity to all qualified business in the awarding of contracts and accordingly promotes the utilization of diversified businesses to the maximum extent feasible in any contract issued against this solicitation to bid.

There will be a Pre-Bid Meeting of all interested bidders. Any bidder submitting a bid on this project should attend this meeting. Location and time are as follows:

Location: LaGrange Highlands School District 106 Administrative Office  
1750 W. Plainfield Rd., LaGrange, Illinois 60525  
Date: **Thursday, March 28, 2024**  
Time: **10:00 A.M. CST**

The Owner reserves the right to reject any or all Bids, to waive irregularities in the bidding procedure, or accept the Bid that in its opinion will serve its best interest. Any such decision shall be considered final. The Owner reserves the right to set aside a Bid from a Contractor who, in the Owner's opinion, does not exhibit experience equal to the size and scope of this project.

**PREVAILING WAGE LAW:** This Contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the current "prevailing rate of wages" (hourly cash wages plus amount for fringe benefits) in the county where the work is performed. The Department publishes the prevailing wage rates on its website at: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>. The Department revises the prevailing wage rates and the contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, *including but not limited to*, all wage, notice and record keeping duties.

The bidder shall have a written sexual harassment policy in place in full compliance with Section 2-105 of the Illinois Human Rights Act.

Obtain Bidding Documents (maximum 3 sets) after **March 14, 2024**, at:

BHFX, LLC  
<http://www.bhfxplanroom.com/>  
[Warrenville@bhfx.net](mailto:Warrenville@bhfx.net)  
30W250 Butterfield Road  
Warrenville, Illinois 60555  
P: 630-393-0777

## SECTION 00 21 13

### INSTRUCTIONS TO BIDDERS

#### 1. INSTRUCTIONS TO BIDDERS

The work is to be performed at:

LaGrange Highlands School District 106  
1750 W. Plainfield Road  
LaGrange, Illinois 60525

The Owner is:

Board of Education  
LaGrange Highlands School District 106  
1750 W. Plainfield Road  
LaGrange, Illinois 60525

#### 2. SCOPE

Scope of Work includes, but is not limited to the following:

##### A. Pavement Improvements:

1. Contractor to remove existing paving &/or layers, soils, etc., as necessary, for installation of proposed work.
2. Work to include demolition and removal of various existing paving, etc., items as needed and shown on the drawings.
3. Contractor to include all Site work (modification, paving, patching, re-striping, etc.),
4. Contractor to protect existing building and site components, etc., to prevent damage during all work. Contractor to remedy all damages related to work.
5. Reference plans, specifications, and complete Bid Documents for full scope of work.
6. Contractors(s) are to field verify the existing equipment and structure rim locations, prior to submitting a bid.
7. Contractor must protect the existing site and any site elements, during the work.
8. See Drawings for locations and full scope of work.

##### B. Scope of Work and Bid Segments:

1. Base Bid: Mill & Overlay, Plus Some Full-Depth Patches, Re-Striping, And Sidewalk, Etc., as shown in the lot located behind the school, off of West 58th Place.
2. Alternate Bid No. 1: Mill & Overlay, Plus Some Full-Depth Patches, And Re-Striping, Etc. as shown in the lot adjacent West Plainfield Road.
3. Alternate Bid No. 2: Sealcoat & Re-Stripe the lot adjacent Laurel Avenue.

The Contractor is notified that Allowances are included in this project.

See Specification Division 01 Section "Allowances."

"Interactive Project Closeout Documents" will be required at the completion of the project.

See Division 01 for details.

### **3. GENERAL**

The Contractor shall supply all labor, transportation, apparatus, scaffolding, and any tools necessary for the completion of the work, maintain and remove temporary equipment, and construct in excellent and workmanlike manner the complete work and everything properly incidental thereto as stated in the contract documents or reasonably implied therefrom. It is not the intent of the contract documents to set forth in detail every item necessary for the construction of this project. Contractor must be qualified for this work and must, without direction, furnish and install everything necessary to provide construction complete and in acceptable order ready for use without additional work. All parts must be coordinated, complete, ready to operate and delivered to the Owner in new condition.

Each Contractor shall coordinate his work with any and all other trades and Contractors on the site. His work shall be performed in a timely fashion to meet the project time schedule for all work.

### **4. BIDDING DOCUMENTS**

1. Advertisement for Bids
2. Bid Form (Proposal)
3. Bid Security
4. Instructions to Bidders
5. General Conditions
6. Supplementary General Conditions
7. Specifications
8. Drawings
9. Addenda

Contractor shall review all existing drawings for the building, especially electrical, structural, mechanical, architectural and fire alarm system drawings. These are on file at the Owner's office.

### **5. CONTRACTOR REQUIREMENTS**

All interested Bidders shall meet the following requirements in order to bid this project:

- (1) Minimum bonding capacity by Contractor - **\$2,000,000**. The bonding company must be licensed in the State of Illinois.
- (2) 5 Years minimum U.S. experience in building contracts.
- (3) Contractors bidding the work shall have their own place of business, equipment, staff, manpower, etc., required for the type of work they are licensed to perform.
- (4) Contractors bidding the project shall have successfully completed similar size and scope projects during the last five years.
- (5) Contractors bidding the work shall provide the necessary financial information to Owner when requested, including, but not limited to, the financial statements for the three previous years of the apparent successful contractor which shall be submitted to Owner. The financial statements shall have been prepared and certified by a C.P.A.
- (6) A list of references and past projects shall be submitted with the bid.
- (7) Contractors bidding the work shall be able to meet the necessary insurance limits required by Contract Documents. The insurance company shall be acceptable to Owner. (See Supplementary General Conditions for insurance.)

- (8) The successful Contractor shall submit to the Owner a list of his subcontractors not listed on his bid form for review and approval by the Owner within three days after being notified that his bid has been accepted.
- (9) Bidders must be pre-qualified with the Architect prior to the Pre-bid Conference, or in the absence thereof, prior to submission of the Bid. Pre-qualification shall be presented on AIA Document A305-1986.

## **6. PROPOSAL (BID) INSTRUCTIONS**

### **6.1 GENERAL**

A Bid, (and one additional copy) as listed below, shall be received for this work only in a sealed opaque envelope bearing the following inscription:

**2024 PAVING IMPROVEMENTS  
AT  
LAGRANGE HIGHLANDS SCHOOL DISTRICT 106  
1750 W. PLAINFIELD AVENUE  
LAGRANGE, ILLINOIS 60525**

**PROJECT NO. 24046  
ATTN: MR. PARIN SCHMIDT**

bearing the name of the bidder also. All bids will be firm for a period of sixty days from the date of the Bid Opening.

Bids shall be opened at the time noted in the Advertisement for Bids. No bids will be accepted after this time.

No oral, telephonic, telegraphic or facsimile proposal will be considered. Proposals shall be signed by the bidder, giving his full name and business address, and stating whether an individual, partnership or corporation.

Erasures or other changes on the Bid Form will be noted by the signature of the bidder.

Each bidder shall fill in all the blanks on the proposal form furnished.

All quotations shall be signed in words and figures; and in case of discrepancy between the amount stated in words and the amount stated in figures, the amount stated in words shall govern.

All overtime or extra costs for working within the specified time limitations must be included in the proposal. The Owner will not pay for any premiums on wages.

Prices quoted shall include all charges for packing, transportation, and delivery to the school building.

The signing of these Bid Forms shall be construed as acceptance of all provisions contained herein.

All proposals shall be submitted with each space properly completed. The special attention of bidders is directed to the policy that no claim for relief because of errors or omissions in the bidding will be considered, and bidders will be held strictly to the proposals as submitted. Should a bidder find any discrepancies in, or omissions from, any of the documents, or be in doubt as to their meanings, he shall advise the Architect, who will issue the necessary clarifications to all prospective bidders by means of Addenda.



## **6.2 INTERPRETATION OF CONTRACT DOCUMENTS PRELIMINARY TO THE SUBMISSION OF BIDS**

If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications, or other bidding documents, he may submit to the Architect a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery.

Any interpretation of the proposed documents will be made only by an Addendum duly issued, and a copy of such Addendum will be mailed, telephoned or delivered to each person issued a set of such contract documents by the Architect or Owner and to such other prospective bidders as have requested that they be furnished with a copy of each Addendum. The Architect is not responsible if a bidder has not received an Addendum. It is the responsibility of each bidder to keep himself informed of current bidding information.

When the Architect issues addenda it is the Bidder's responsibility to copy and insert them into the Bid Documents he has obtained from the Architect or Owner.

## **6.3 PERMITS AND FEES**

All permits, licenses, tap-on fees, tie-in fees, and any other fees and permits shall be coordinated and obtained by the Contractor and paid by the Owner.

## **6.4 EXCEPTIONS**

Any deviation, clarification or exception to these bid documents could be cause for rejection of your bid. Under the State Bidding Laws, exceptions to the bid could be cause for disqualification of the bidder.

## **6.5 BID SECURITY**

Bids shall be accompanied by a Bid Security as noted in the Advertisement for Bids. Such Bid Security shall be in the form of a certified check or Bid Bond in the amount of 10% of the Proposal. All checks and Bonds shall be made in favor of the Owner. Failure to submit the proper form and amount of Bid Security may result in rejection of the bid. Bid Bonds must be issued by the same company that provides the subsequent Performance and Payment Bonds.

The bidder agrees that the proceeds of the Bid Security will become the property of the Owner if for any reason the bidder withdraws his bid prior to the time period noted in the Bid Form. The defaulting bidder shall pay the Owner all costs which exceed the amount of his bid for procuring the performance for the work required by the bidding documents. Such costs include, but are not limited to, additional advertising and architectural and engineering services.

## **6.6 CONFIRMATION OF ADDENDA**

It is the responsibility of each Contractor to determine if any Addenda have been issued by contacting the office of the Architect 630-495-1900.

## **6.7 BIDDER'S RESPONSIBILITY FOR CONDITIONS OF WORK AT SITE**

Each bidder shall inform himself of the conditions under which the work is to be performed, the site of the work, the obstacles which may be encountered and all other relevant matters concerning the work to be performed; also, the bidder, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such bidder might have fully informed himself prior to the bidding.

## 7. TIME SCHEDULE

The Contractor is required to perform his work within the following schedule. By submitting a bid, the Contractor guarantees he can meet this schedule:

**Start Date:** Monday, June 10, 2024  
**Substantial Completion:** Wednesday, July 24, 2024.  
**Construction Complete:** Wednesday, July 31, 2024, at 5:00 PM.  
(Including any restoration and punch list items complete to the satisfaction of the Owner and the Architect.)

## 8. PROJECT VISITATION SCHEDULE

Visitation to the site may be made during normal school or business hours by appointment. The bidder shall contact:

**Mr. Parin Schmidt**  
**Director of Buildings and Grounds**  
**(630) 329-9909**

## 9. PRE-BID MEETING

Pre-Bid Meeting shall be held on:

**Thursday, March 28, 2024, at 10:00 A.M. CST,**  
at the LaGrange Highlands School District 106, District Office,  
at 1750 W. Plainfield Rd, LaGrange, IL 60525.

## 10. RESERVATION OF RIGHTS BY THE DISTRICT

The Owner reserves the right to reject any or all bids, to waive irregularities, and to accept that bid which is considered to be in the best interests of the Owner. Any such decision shall be considered final. The Owner reserves the right to set aside a bid from a Contractor who, in the Owner's opinion, does not exhibit past experience equal to the size and scope of this project.

The Board reserves the right to award each item to different bidders or all items to a single bidder unless otherwise noted on bid request, and to determine whether in the opinion of the Board of Education: (1) an equal or alternate is a satisfactory substitute, (2) an early delivery date is entitled to more consideration than price, (3) an earlier delivery date is to be disregarded because of the reputation of the bidder for not meeting delivery dates, (4) a bidder is determined not to be a responsible bidder and should be disregarded and (5) what exceptions or deviations from written specifications will be accepted.

## 11. STATUTORY REQUIREMENTS

All applicable Federal and State laws, and the rules and regulations of all authorities having jurisdiction over construction of the project, shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though written therein in full. This includes all current regulations with respect to paying the prevailing wage which shall be incorporated into this project.

Purchases of building materials for incorporation into this project are exempt from the Illinois Retailer's Occupation Tax and Use Tax (Sales Tax). The bidder shall exclude such taxes from consideration in preparing his bid.

## **12. NOTICE OF AWARD**

The contract shall be deemed as having been awarded when formal notice of award shall have been duly served upon the intended awardee by some officer or agent of the Owner authorized to give such notice. Such notice shall be in writing.

## **13. POST AWARD REQUIREMENTS**

Within ten (10) days after receiving the contract for signature, the Contractor must furnish the Architect:

Executed Owner-Contractor Agreement (AIA Document A101)

Performance Bond

Payment Bond

Certificate of Insurance

A statement of costs for each major item of work or supplier. This statement shall note what work shall be performed by the Contractor and what shall be performed by his subcontractors.

*The Contractor may obtain a maximum of six (6) additional sets of Bid Documents after contract has been awarded. Prime Contractors who wish to obtain more than the additional six (6) sets of Bid Documents must purchase the Bid Document set(s).*

### **13.1 COMMENCEMENT OF THE WORK**

The Contractor shall purchase and accept delivery thereon of all materials needed to complete his work. The actual work shall be started as noted in the Project Schedule. This work shall be carried on continuously to completion at the earliest possible date thereafter within the limits of the schedule.

If weather does not permit the actual construction to commence, or during construction if weather interferes with the process, the Contractor shall work on every day that conditions are reasonably acceptable to do so.

### **13.2 COORDINATION, PROJECT SUPERVISION AND SAFETY**

The prime or general contractor is solely responsible for supervising, monitoring and maintaining a safe working environment for all workers and visitors.

Each Contractor and Subcontractor must coordinate his work with all trades. He must cooperate to permit interfacing of systems.

The project must be managed and supervised by a competent individual at all times from the contracting company. He must develop a schedule conforming to time limitations noted in these specifications.

It is understood that this is a complex construction project, and the General Contractor is responsible for providing a superintendent who will verify, both existing and new, conditions to make sure that the work described in the drawings will fit. This superintendent shall review all the drawings and become familiar with them, so that work described on one drawing will be compatible with work shown on another. He shall review shop drawings and verify dimensions so that all new work will be compatible with the conditions, dimensions, and elevations.

The contractor shall provide all required investigators, survey, or inspections before demolition of any systems or sections of the building required by any regulatory agency.

### **13.3 PROGRESS PAYMENTS**

Based upon Applications for Payment submitted to the Architect by the Contractor, and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided in the contract documents as follows:

Provided an Application for Payment is received by the Architect not later than the last day of a month, the Owner shall make payment to the Contractor not later than sixty days after receiving the Application for Payment. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than ninety days after the Architect receives the Application for Payment.

Ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the work and seventy-five (75%) of the portion of the Contract Sum properly allocable to materials and equipment properly stored at the site or at some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner; and upon substantial completion of the entire work, a sum sufficient to increase the total payment to ninety-five percent (95%) of the Contract Sum, if acceptable to the Owner, less such amounts as the Architect shall determine for all incomplete work and unsettled claims as provided in the contract documents. All waivers from subcontractors shall accompany the payment request. Final waivers from the Contractor, his subcontractors, and his suppliers must be submitted with the Final Payment Request. Final waivers must include and acknowledge on the form the total contracted amount (including change orders). The Owner, at his option, may exclude the payment of materials not stored on the construction site.

Payment request shall be submitted on AIA Document G702 with AIA G703 Schedule of Values Sheet. All subcontractors and suppliers shall be listed with their respective amounts.

Payments to the Contractor shall be made for materials properly delivered and stored at the site or in the Contractor's warehouse and all materials properly insured by the Contractor who is responsible. A copy of the paid receipt and confirmation of materials stored in the Contractor's warehouse will be required.

### **13.4 PERFORMANCE AND PAYMENT BONDS**

Within ten (10) days of the date of the Notice of Award, the successful Contractor shall enter into a formal contract with the Owner and shall provide a Performance Bond and a Payment Bond, each in the full amount of the contract. The bonds shall be in accordance with AIA Documents A312. The Contractor shall pay the cost of premiums for said bonds.

The bonds shall be signed and sealed by an authorized representative of the bonding company and an authorized officer or representative of the Contractor, and a certificate of the authority of those signing the bonds, if not officers, shall be attached thereto.

The Performance Bond and the Payment Bond shall guarantee the performance of the duties placed on the Contractor by the prevailing Wage Act, as well as all other duties undertaken by him pursuant to the contract with the Owner and shall indemnify the Owner from any liability or loss resulting to the Owner from any failure of the Contractor fully to perform each or all of said duties. The Performance Bond and the Payment Bond shall be deemed to cover all such duties.

The Performance Bond and the Payment Bond herein provided shall be placed with a surety company or companies having a policyholders' rating not lower than "A" and a financial rating not lower than "X" in Best's Insurance Guide (current edition). Company must be licensed in the State of Illinois and shall show evidence of same.

Contractor shall furnish Owner with payment and performance bonds covering Contractor's faithful performance of all obligations under the Contract Documents and the payment of all of Contractor's obligations arising out of the Contract Documents. The Contractor shall fully comply with the Illinois Public Construction Bond Act (30 ILCS 550/0.01 *et seq.*) and include the provisions as found in section 30 ILCS 550/1., entitled, Bond Required - Provisions required in bond as amended by P.A. 89-518, section 3, effective January 1, 1997. Such bond(s) shall be with a surety acceptable to Owner and shall name Owner and Owner's Lender, if any, as obligees thereunder. The amount of the bond shall equal 100% of the Contract Sum. Such bond shall include a provision stating that no modification of any provision of any Contract Document, including, without limitation, a change in the contract time, Contract Sum or other condition of payment, will release the surety either in part or in whole. In any event, such bond(s) shall be in form and substance satisfactory to Owner and Owner's Lender. If from time to time the Contract Sum is increased by \$10,000.00 or more, then the bond thereto shall be increased by the amount which the contract sum was increased.

### **13.5 PROTECTIVE PRECAUTIONS**

The Contractor, upon receiving contract acceptance or letter of intent, shall be able to proceed with work immediately after the published start date, subject to the following conditions.

- a) Submit, discuss, and obtain approval of the proposed schedule of work from the Owner and the Architect.
- b) Every precaution must be taken to prevent any damage, loss or injury to any person, or to any property of the Owner.
- c) All utilities on the properties shall be kept in proper operating conditions at all times. Should there be a need to temporarily disconnect any system, the Contractor shall notify (in writing) the following agencies, when the existing system is going to be inoperative, and that the building will be without a particular service for a period not to exceed one (1) day. Give a minimum of two days' notice to Owner.
  - 1. The Fire Department (where applicable)
  - 3. Owner.
  - 4. Architect.
  - 5. Any other agency or department appropriate or responsible for a specific service.
- d) The same notification shall be provided by the Contractor, if any of the other utilities will be temporarily inoperative.
- e) It is mandatory that the fire lanes be kept free of any obstructions at all times, unless otherwise authorized by the Owner and the Fire Department.
- f) Parking for construction workers will be in areas as discussed with and designated by Owner, and must be strictly adhered to.
- g) All fire alarm, security alarm, and any other type of protection system MUST BE operable at all times when the buildings are occupied or could be occupied. If one of the systems is down, the fire department, Owner, etc., must be notified. The Contractor is responsible for monitoring and maintaining these systems in an operable and safe condition at all times.

### **13.6 PERFORMANCE**

The Contractor may be required to attend meetings with the Owner to report on construction progress. The Owner or Architect shall request attendance, and failure to attend will be reason to delay payment request.

#### **14. OWNER/CONTRACTOR INCLUSION**

The following shall be included and a part of the Owner/Contractor Agreement for this project.

The Contractor is solely responsible for the safety of all workers on this project.

A provision shall be included in the contract with the Contractor and Owner which provides: (1) that the Contractor shall defend and indemnify the Architect and his consultants against any action or claims for construction worker injuries to the full extent permitted by law, but not for an amount of damages for which the Architect and/or his consultants have been found guilty of negligence; and (2) that the Contractor shall purchase and maintain insurance covering liability for claims for construction worker injuries for the benefit of themselves and the Architect and his consultants in settlement of, or as damages for, any such claims. Such insurance shall be for not less than the greatest amount of liability insurance specified in the Contract Documents. This shall not limit any other contractual obligations of the Contractor, Subcontractors, or the parties hereto to indemnify or provide insurance for the benefit of any other party. If any part of this paragraph be deemed invalid by any court, then that part shall be deleted, and the remainder of this paragraph shall continue in full force.

#### **15. FAILURE OF CONTRACTOR TO ADEQUATELY MANAGE HIS PROJECT TO A TIMELY COMPLETION**

The Contractor agrees, by submitting a bid, that he accepts responsibility to pay the Architect for his services at \$220.00 per hour for the Architect's time spent before or after the required completion date. This is for time required by the Architect to expedite the Contractor's efforts because he is not completing in an orderly and timely manner.

Payment for architectural services of preparing a single punch list and final walk-through are not the responsibility of the Contractor.

The Contractor agrees, by submitting a bid, that the Owner has the right to deduct from the Contractor's payment for the additional time of the Architect.

#### **16. LIQUIDATED DAMAGES PROVISIONS - PROJECT COMPLETION**

**The work is to be completed by July 31, 2024.**

Time is of the essence on this project and completion is extremely critical. Completion, in general, is defined as all work required and included in the Bid Documents, Specifications, Drawings, Federal and State Regulations, including inspections, completion of change orders approved by the Owner, Architect and Contractor and do not add days to the construction calendar.

The Contractor agrees that by submitting a bid, he/she realizes he/she may need to work multiple shifts, weekends, and holidays. All premium wages are included in his bid.

Days are noted as calendar days. The Contractor has full access to the site every day for 24 hours, including weekends and holidays.

The Architect and Owner will determine if the Contractor has met the deadlines for the work and if liquidated damages shall be levied. The Architect and Owner's decision on this is final.

#### **Key Dates:**

**Project Substantial Completion:**

**Wednesday, July 24, 2024.**

**Liquidated Damages Begin:**

**\$500/Day, starting July 31, 2024, @ 5:00 P.M. CST**

## **17. NO ASBESTOS PRODUCTS IN THIS-PROJECT**

No forms or types of asbestos or asbestos-containing products are permitted in this building project. By submitting a proposal and constructing this project, the prime contractors and subcontractors, suppliers, etc. guarantee that no asbestos-containing products are being included.

## **18. CERTIFICATION OF COMPLIANCE WITH ARTICLE 33E OF THE CRIMINAL CODE OF 1961**

By signing and submitting the Bid Form to the Owner, the contractor/vendor certifies that the contractor is 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.

## **19. PUBLIC CONTRACTORS - WRITTEN SEXUAL HARASSMENT POLICY**

Public Act 87-1257, effective July 1, 1993, amends the Illinois Human Rights Act (Section 2-105) by requiring that every party to a public contract and every eligible bidder shall have a written sexual harassment policy that shall include, at a minimum, the following information.

- (i) the illegality of sexual harassment;
- (ii) the definition of sexual harassment under state law;
- (iii) a description of sexual harassment, utilizing examples;
- (iv) the contractors internal complaint process including penalties;
- (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission;
- (vi) directions on how to contact the Department and Commission; and
- (vii) protection against retaliation as provided by Section 6-101 of the Human Rights Act.

Finally, the contractor must provide a copy of such written policy to the Department of Human Rights upon request.

## **20. STATEMENT OF NONDISCRIMINATION**

- A. That in the hiring of employees for the performance of work under this contract or any subcontract, no contractor, subcontractor, or any persons acting on his behalf, shall, by reason of race, creed, or color, discriminate against any citizen of the State in the employment of labor or workers who are qualified and available to perform the work to which the employment relates.
- B. That no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, or color.
- C. For the performance of the contract, the contractor shall agree as follows: That all contractors or subcontractors will comply with all state laws regarding nondiscrimination. The contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment, without regard to their race, color, religion, national origin, ancestry or sex.

## **21. PREVAILING WAGES STATEMENT**

It shall be mandatory upon the contractor(s) to whom the contract is awarded and upon any subcontractor thereof to pay all laborers, workmen and mechanics employed by them not less than the up-to-date and current general prevailing rate of wages in the locality for each craft or type of workman or mechanic to perform such work and the current general prevailing rate for legal holidays and overtime pursuant to Illinois Department of Labor and pursuant to Illinois Law and Statutes in such case made and provided. The Illinois Department of Labor will provide each County Clerk with the most recently revised prevailing wage rates determined by the Illinois Department of Labor on the first day of each month.

Contractors and subcontractors must submit certified payroll records on a monthly basis to the Owner along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing records they know to be false is a Class B misdemeanor.

The certified payroll records must include, for every worker employed on the project, the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, number of hours worked each day, and starting and ending time of work each day. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll may be found guilty of a Class B misdemeanor.

## **22. SEX OFFENDER POLICIES**

The contractor shall not send any employee or agent to any school building or school property who is a child sex offender as defined in the Child Sex Offender and Murderer Community Notification Law. At least quarterly, the contractor shall contact the local law enforcement authority each where each employee or agent resides to determine if the employee is on the list of registered felons who have committed sex offenses. The contractor also shall provide the district with the name and address of each employee who will perform work on school property and require, if requested, that the employee submit to a criminal history background investigation.

## **23. OWNER'S TAX-EXEMPT STATUS**

Contractor recognized that Owner is exempt for paying sales and use taxes and agrees to purchase and cause its Subcontractors to purchase all materials used in the Project at prices which take full advantage of Owner's tax-exempt status. Owner agrees to provide to Contractor sufficient copies of evidence of Owner's tax-exempt status to enable Contractor to perform its obligations set forth in the preceding sentence. Contractor will not and will take all necessary steps to prevent its Subcontractors from using Owner's tax-exempt status to reduce costs on any work other than the Project.

**END SECTION 00 21 13**



**BID FORM**

Bid to: Board of Education  
LaGrange Highlands School District 106  
Administrative Offices  
1750 Plainfield Road  
LaGrange, Illinois 60525

Due Date: **April 4, 2024, at  
2:00 P.M. (CST)**

Bidder Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Project: **2024 PAVING IMPROVEMENTS at  
LAGRANGE HIGHLANDS SCHOOL DISTRICT 106  
1750 W. PLAINFIELD ROAD  
LAGRANGE, ILLINOIS 60525  
PROJECT NO. 24046**

I acknowledge receipt of the following Addenda:

No. \_\_\_\_\_ Date \_\_\_\_\_

No. \_\_\_\_\_ Date \_\_\_\_\_

No. \_\_\_\_\_ Date \_\_\_\_\_

I agree to the following:

- A. To hold this Bid open until sixty (60) calendar days after the date of Bid Opening.
- B. To accept the provisions of the Instruction to Bidders regarding disposition of Bid Security.
- C. I have examined the site conditions and all bidding documents.
- D. To enter into and execute a contract with the Owner if awarded on the basis of this Bid.
- E. To furnish Insurance required by the Bidding Documents.
- F. To accomplish the work in accordance with the contract and construction documents.
- G. Totally complete the work as outlined in the Time Schedule.
- H. To provide the required Performance Bond and Payment Bond in an amount equal to 100% of the Contract base bid total.

- I. To provide full coordination and supervision of all subcontractors, suppliers, expedite work, management of payment requests, and general administration of project. To provide supervision and responsibility for all safety on, in and around the construction site at all times.
- J. By signing and submitting the Bid Form to the Owner, the contractor/vendor certifies that the contractor is 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.

Bid Security for \$\_\_\_\_\_ in the form of \_\_\_\_\_ is enclosed.

**REMINDER:**

Bidder is reminded to include in their Base Bid, any Allowances called for in this project manual &/or drawings.

The bidder agrees to perform all the specified work as set forth in the Bidding Documents for the sum of:

**BASE BID: MILL & OVERLAY, PLUS SOME FULL-DEPTH PATCHES, RE-STRIPING, AND SIDEWALK, ETC., AS SHOWN IN THE LOT LOCATED BEHIND THE SCHOOL, OFF OF W. 58<sup>th</sup> PLACE.**

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

**ALTERNATE BID No. 1: MILL & OVERLAY, PLUS SOME FULL-DEPTH PATCHES, AND RE-STRIPING, ETC. AS SHOWN IN THE LOT ADJACENT WEST PLAINFIELD ROAD.**

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

**ALTERNATE BID No. 2: SEALCOAT & RE-STRIPE THE LOT ADJACENT LAUREL AVENUE.**

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

Bidder understands that the Owner may award one General Lump Sum Contract for all the work on the above project.

**Note:**

Bidder must quote on all items called for in the Bid Proposal. Write "No Bid" where a price is not quoted.

## LIST OF REFERENCES - CONSTRUCTION PROJECTS

This list is required to consist of Construction Projects of similar size and cost. The list of projects should be located as near to project site as possible.

Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

## SIGNATURE SHEET

If an Individual:

Signature of Bidder \_\_\_\_\_

Name of Individual \_\_\_\_\_ (Seal)

If a Co-partnership:

Signature of Bidder \_\_\_\_\_

Name of Individual \_\_\_\_\_ (Seal)

If a Corporation:

Name of Corporation \_\_\_\_\_

State of Corporation \_\_\_\_\_

Signature of Officer \_\_\_\_\_

Name of Individual \_\_\_\_\_

President: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Attest \_\_\_\_\_ (Seal)

Signature of Secretary

**CONTRACTOR'S CERTIFICATION**

**BID PROPOSAL**

\_\_\_\_\_, as part of its bid on a contract for  
(Name of Contractor)

\_\_\_\_\_ to \_\_\_\_\_,  
(Name of Project) (Owner)

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 Illinois Criminal Code (720 ILCS 5/33E-3 or 33E-4).

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**CERTIFICATION REGARDING CRIMINAL  
BACKGROUND INVESTIGATION**

\_\_\_\_\_  
(Name of Contractor)

represents, warrants and certifies that none of its owners, officers, or directors have been convicted of a criminal offense which may, in the opinion of the Architect or its client / project owner, be considered as cause to disqualify Contractor as a responsible bidder, or be in violation of the Illinois School Code. Contractor further represents, warrants, and certifies that all of its employees and any Contractor who may work on this project will satisfy the same standard. In order to demonstrate full compliance with that standard, Contractor hereby consents to a full background check being performed on all such individuals at Contractor's expense. At the discretion of the Architect, such background check may include, but not be limited to the investigation of: law enforcement, criminal justice or correction agencies; credit reporting agencies; the accuracy and completeness of financial responsibility information and all references; civil litigation, judgment, lien, employment, education, military and motor vehicle records. Contractor agrees to indemnify and hold harmless any and all persons, firms and entities who may provide or obtain any such background information.

Upon request of the Architect or its client / project Owner, Contractor shall provide the following information about each person requested for a background investigation:

1. Date of Birth
2. Drivers License Number and State of Issue
3. Federal Social Security Number.

Architect or its client / project Owner may request additional information.

Contractor shall return this information to the Architect or its client / project Owner within three business days of the date of receipt.

By: \_\_\_\_\_

Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**PUBLIC CONTRACTORS - WRITTEN SEXUAL HARASSMENT POLICY**

\_\_\_\_\_, ("Contractor"), having submitted a bid/proposal for  
(Name of Contractor)

\_\_\_\_\_ to \_\_\_\_\_,  
(Name of Project) (Owner)

hereby certifies that said Contractor has a written Sexual Harassment Policy in place in full compliance  
with 775 ILCS 5/2-105(A)(4).

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

(Contractors with 25 or more employees)

**CERTIFICATE OF COMPLIANCE WITH  
ILLINOIS DRUG-FREE WORKPLACE ACT**

\_\_\_\_\_, having 25 or more employees, does hereby  
(Name of Contractor)

certify pursuant to Section 3 of the *Illinois Drug-Free Workplace Act* (30ILCD 580/3) that (he, she, 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 (he, she, it) is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC



## NON COLLUSION AFFIDAVIT

**AFFIDAVIT:** "I (we) hereby certify and affirm that my (our) proposal was prepared independently for this project 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."

(If an individual)

Signature of  
Bidder \_\_\_\_\_ (Seal)

Business  
Address \_\_\_\_\_

\_\_\_\_\_

(If a Partnership)  
Firm Name \_\_\_\_\_ (Seal)

By \_\_\_\_\_

Business Address \_\_\_\_\_

of all Partners \_\_\_\_\_

of the Firm \_\_\_\_\_

\_\_\_\_\_

(If a Corporation)  
Corporate Name \_\_\_\_\_

By \_\_\_\_\_

Business Address \_\_\_\_\_

(CORPORATE SEAL)

Name of Officers: President \_\_\_\_\_

Secretary \_\_\_\_\_

Treasurer \_\_\_\_\_

Attest: \_\_\_\_\_  
Secretary

\_\_\_\_\_

Name of Bidder \_\_\_\_\_

Date \_\_\_\_\_

## CERTIFICATION OF MONTHLY PAYROLL

I, \_\_\_\_\_, do hereby certify that attached hereto  
(name of contractor or subcontractor's representative)

are true and correct payroll records for all laborers, mechanics, and other workers

employed by \_\_\_\_\_ on the project known as  
(name of contractor or subcontractor)

\_\_\_\_\_  
(general description of project)

Such records contain a true and accurate statement of each worker's name, address, telephone number (if available), social security number, classification(s), hourly wages paid in each pay period, number of hours worked each day, and starting and ending times of work each day. The hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the *Illinois Prevailing Wage Act*. I am aware that filing a certified payroll that I know to be false is a Class B misdemeanor.

Certified by:

Dated: \_\_\_\_\_

(Name of Contractor or Subcontractor's Representative)

(Title of Representative)

\_\_\_\_\_  
(Name of Contractor or Subcontractor)

\_\_\_\_\_  
(Address of Contractor or Subcontractor)

SUBSCRIBED and SWORN TO before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

Received by \_\_\_\_\_ \_on: \_\_\_\_\_  
(name of public body)

(Name of Public Official Receiving Certification)

## **SECTION 00 72 00**

### **GENERAL CONDITIONS**

#### **GENERAL CONDITIONS**

The General Conditions of this Contract are the American Institute of Architect's Standard Document No. A-201, "General Conditions of the Contract for Construction," 1987 Fifteenth Edition as modified by the Supplementary General Conditions. The document is hereby specifically made a part of the contract documents with the same force and effect as though set forth in full.

A copy is on file at the office of the Architect and may be referred to at any time during normal business hours.

The Contractor is directed to the Supplementary Conditions which modify the General Conditions.

## SECTION 00 73 00

### SUPPLEMENTARY CONDITIONS

The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction", AIA Document A201-1987, Fourteenth Edition, 1987. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article Paragraph, Subparagraph or Clause shall remain in effect.

#### ARTICLE 1: GENERAL PROVISIONS

##### 1.1.1 Add the following to the end of 1.1.1

Contract Documents shall include: Advertisements or Invitation to Bid, Instruction to Bidders; Bid Form; the Bid or Proposal executed by the Bidder; Addenda; Certificates of Insurance; and bonds indicated in the Project Manual, including, but not limited to Bid Bonds, Performance Bonds, and Labor and Material Payment Bonds.

##### 1.2.5 Modify paragraph 1.2.5 by adding the following to the end:

"Large scale details on the Drawings shall take precedence over measurements."

#### ARTICLE 3: CONTRACTOR

##### 3.2.1 Delete the remainder of paragraph 3.2.1 after the first sentence, and replace with:

"The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies, or omissions in the Contract Documents unless the Contractor recognized or should have recognized such error, inconsistency, or omission, and failed to report it to the Architect, in which case the Contractor shall not be entitled to an increase in the Contract Sum or Contract Time and the Contractor shall bear all attributable costs for correction."

##### 3.2.2 Add to end of 3.2.2 the following:

"Liabilities to the Owner and Architect noted in Article 3.2.1 also apply to this paragraph."

##### 3.3.1 Delete paragraph 3.3.1 and replace with:

"The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have charge and control of construction means, methods, techniques, sequences, and procedures for coordinating all portions of the Work. The Contractor shall review any specified construction or installation procedure (including those recommended by any product manufacturer). The Contractor shall advise the Architect:

- (a) If the specified procedure deviates from good construction practice;
- (b) If following the procedure will affect any warranties; or
- (c) of any objections which the Contractor may have to the procedure

##### 3.5.1 Delete paragraph 3.5.1 and replace with:

"The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new, unless otherwise required or permitted by the

Contract Documents and that the Work will be free from faults and defects and in conformance with the Contract Documents. The warranty will not be affected by the specification of any product or procedure, unless the Contractor objects promptly to such product or procedure and advises the Architect of possible substitute products or procedures which will not affect the warranty. This warranty shall not be restricted by the limitations of any manufacturer's warranty. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Liability or refusal of the Subcontractor or supplier responsible for the defective work to correct such work shall not excuse the Contractor from performing under the warranty. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment."

3.5.2 Add the following as paragraph 3.5.2.

"The Contractor shall furnish maintenance and 24 hour call-back service for the equipment provided by him for a period of 3 months after completion and acceptance of the Work. This service shall include regular examinations of the installation by competent and trained employees of the Contractor, and shall include all necessary adjustments, greasing, oiling, cleaning, supplies and parts to keep the equipment in proper operation except such parts made necessary by misuse, accidents or negligence not caused by the Contractor or any of its subcontractors."

3.10.1 Add to paragraph 3.10.1:

"The Owner's or Architect's silence to a submitted schedule that exceeds time limits current under the Contract Documents shall not relieve the Contractor of its obligations to meet those limits, nor shall it make the Owner or Architect liable for any of the Contractor's damages incurred as a result of increased construction time or not meeting those time limits. Similarly, the Architect's or Owner's silence to a Contractor's schedule showing performance in advance of such time limits shall not create or infer any rights in favor of the Contractor for performance in advance of such time limits."

3.11.2 Add the following as paragraphs 3.11.2, 3.11.3 and 3.11.4:

"Plans and sections of all concealed work, particularly concealed piping and conduit, and deviations from conditions shown on the Contract Drawings, shall be shown and dimensioned on the As-built drawings. Contractor shall develop layout drawings for all concealed work that is schematically indicated on Contract Drawings."

3.11.3 "The Contractor and his subcontractors shall maintain an accurate record of deviations and changes from the Contract Documents which occur in the work; shall indicate all such deviations and changes on mylar sepias of the Contract Documents; and shall turn over to the Architect upon completion of the work all such documents and information, such as final shop drawings and sketches, marked prints and similar data indicating the As-built conditions. Plumbing, HVAC and Electrical Contractors shall record all changes or deviations in their work from what appears on the Contract Documents. The mylar sepias of the Contract Documents shall be furnished by the Architect and paid for by the Contractor. The cost of recording and transferring the changes or deviations to the mylar sepias shall be included in the contract price for the respective work. The As-built mylar sepias shall be delivered by the Contractor to the Architect prior to the final acceptance of the Project and issuance of final payment."

3.11.4 "The Contractor shall cause each Mechanical and Electrical Contractor to provide the Contractor with the three (3) copies of all operating manuals at the time of delivery of each major piece of equipment."

3.12.11 Replace 3.12.11 with:

"When professional certification of performance criteria of materials, systems, or equipment is required by the Contract Documents, the Contractor shall provide the person or party providing the certification with full information on the relevant performance requirements and on the conditions under which the materials, systems, or equipment will be expected to operate at the project site. The certification shall be based on performance under the operating conditions at the project site. The Architect shall be entitled to rely upon the accuracy and completeness of such certifications."

3.12.12 Add a new paragraph 3.12.12:

"After the award of the Contract, a request by the Contractor for a substitution of materials or equipment in place of those specified in the Contract Documents will be considered only under one or more of the following conditions:

- (a) Required for compliance with interpretation of code requirements or insurance regulations then existing.
- (b) Unavailability of specified products, through no fault of the Contractor.
- (c) Subsequent information discloses inability of specified products to perform properly or to fit in designated space.
- (d) Manufacturer/fabricator refuses to certify or guarantee performance of specified product as required.
- (e) When it is clearly seen, in the judgment of the Architect, that a substitution would be substantially to the Owner's best interests, in terms of cost, time, or other considerations.

Substitution requests shall be written, timely, and accompanied by adequate technical and cost data. Requests shall include a complete description of the proposed substitution, name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data, and any other data or information necessary for a complete evaluation by the Architect.

3.18.1 Delete paragraph 3.18.1 and substitute the following:

"To the fullest extent permitted by law, Contractor waives any right of contribution against and shall defend, indemnify and hold harmless Owner, any Owner's Representative, the Architect and their agents, consultants and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from or in connection with the performance of the Work, provided that any such claim, damage, loss or expense (these are collectively referred to as "claims") is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity or contribution which would otherwise exist as to any party or person described in this Contract.

3.18.2 Delete paragraph 3.18.2 and substitute the following:

"In any and all claims by an employee of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Contract 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 Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts."

3.18.3 Delete paragraph 3.18.3.

3.18.4 Add the following as 3.18.4:

"Claims, damages, losses and expenses" as these words are used in this Contract shall be construed to include, but not be limited to (1) injury or damage consequent upon the failure of or use or misuse by Contractor, its Subcontractors, agents, servants or employees, of any hoist, rigging, blocking, scaffolding, or any and all other kinds of items of equipment, including those covered in the Illinois Structural Work Act whether or not the same be owned, furnished or loaned by Owner; (2) all attorneys' fees and costs incurred in defense of the claim or in bringing an action to enforce the provision of this Indemnity or any other indemnity contained in the Contract Documents; and (3) all costs, expenses, lost time, opportunity costs, etc. incurred by the party being indemnified or its employees, agents or consultants."

3.18.5 Add the following as paragraph 3.18.5:

"Only to the extent prohibited by the Construction Contract Indemnification for Negligence Act 740 ILCS 35/0.01 *et seq.*, the indemnification obligations of Contractor under this Contract shall not extend to the liability of Owner, any Owner's Representative, or the Architect, or their agents, consultants or employees, arising out of their own negligence."

3.19. Add the following as paragraph 3.19:

"If the work is to be performed by trade unions, the Contractor shall make all necessary arrangements to reconcile, without delay, damage, or cost to the Owner and without recourse to the Architect or the Owner, any conflict between the Contract Documents and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities shall not be included in the work of any particular trade. In case the progress of the work is affected by any undue delay in furnishing or installing any items or materials or equipment required under the Contract Documents because of the conflict involving any such agreement or regulation, the Architect may require that other material or equipment of equal kind and quality be provided at no additional cost to the Owner."

#### ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.1.2 Delete paragraph 4.1.2 and replace with:

"Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner and the Architect."

4.1.3 Delete paragraph 4.1.3 and replace with:

"In case of termination of employment of the Architect, the Owner shall appoint an Architect whose status under the Contract Documents shall be that of the former Architect."

4.2.3 Add to paragraph 4.2.3:

"Nothing contained in subparagraphs 1.1.3 or 4.2.2. shall alter the responsibilities established in this subparagraph and in subparagraph 3.3.1."

4.2.7 Add to 4.2.7:

"The Contractor will submit submittals to the Architect in a manner to allow for the Architect's reasonably prompt review and to allow for timely ordering of components of the work to effect no delay in the Work."

- 4.2.12 Delete the remainder of paragraph 4.2.12 after the first sentence and replace with:

"The Architect will be the initial interpreter of the requirements of the Contract Documents; however, the Architect will consult with the Owner prior to making any such interpretations or issuing any approvals. The decisions of the Architect are binding on the Contractor, but are not binding on and may be overridden by the Owner. Anything to the contrary contained in the Contract Documents notwithstanding, the Architect shall be and is the representative of the Owner and not an independent arbiter of the Contract, and although the Architect shall be fully informed by Contractor of the Contractor's performance under the Contract and consulted with regard to any decision and controversies, no decision of the Owner under the Contract shall be made by the Architect without the express written authority of the Owner."

- 4.2.13 Replace paragraph 4.2.13 with:

"The Architect's decisions on matters relating to aesthetic effect will be final if reasonably inferable from the Contract Documents as being necessary to produce the intended results."

- 4.3.2 In paragraph 4.3.2, replace the phrase "arbitration or litigation" in both places it appears with "mediation, arbitration or litigation."

- 4.3.2 In paragraph 4.3.2, delete subparagraph (5).

- 4.3.3 In paragraph 4.3.3, replace the first sentence with:

"Claims by either party must be made within 21 days after occurrence of the event giving rise to such claim, whether or not any impact in money or time has then been determined."

- 4.3.3 Paragraph 4.3.3 is modified to add the following language to the end:

"Failure to comply with the literal language of this provision shall deprive the arbitrator and any court of jurisdiction to consider Contractor's claim, and the issue of the arbitrator's jurisdiction shall be decided by a court of competent jurisdiction, not the arbitrator."

- 4.3.6 Add to paragraph 4.3.6:

"The site conditions contemplated by this Subparagraph include, but are not limited to, materials containing asbestos, polychlorinated biphenyl (PCB), or hazardous materials."

- 4.3.7 Paragraph 4.3.7 is modified to add the following to the end:

"This paragraph is not intended to, and shall not, create any additional grounds upon which the Contractor shall be entitled to an increase in the Contract Sum beyond those grounds provided elsewhere in this Contract. Also, in no event shall the Contractor make a claim for additional costs resulting from any delays in the progress of the work."

- 4.3.10 Add the following as paragraph 4.3.10:

"The Contractor agrees to waive any right which it may have to punitive damages from the Owner and agrees not to make any claim or demand for punitive damages against the Owner."

- 4.4.4 In paragraph 4.4.4, change "subject to arbitration" to "subject to mediation and arbitration".



4.5.1.1 Renumber paragraph 4.5.1 to 4.5.1.2 and add the following paragraph 4.5.1.1:

"4.5.1.1 Mediation. Notwithstanding the provisions of paragraphs 4.5.2.1 and 4.5.4, before any claim or controversy shall be decided by arbitration as provided below, the claim or controversy shall first be submitted to mediation in accordance with this Subparagraph. The mediation shall be in accordance with the Construction Mediation Rules of the American Arbitration Association then obtaining, or with Endispute or American Intermediation Service, unless the parties mutually agree otherwise. The time restrictions given below in paragraphs 4.5.1.2 and 4.5.4 for when arbitration may or must be demanded shall apply to when mediation, not arbitration, may or must be demanded. Notice of demand for mediation shall be filed in writing with the other party, the American Arbitration Association (if applicable), and with the Architect. During mediation proceedings, the Owner and Contractor shall comply with Subparagraphs 4.3.4. Other parties may be joined in the mediation. If the controversy or claim has not been resolved within 90 days of demand for mediation, either party may terminate the mediation by filing a demand for arbitration. This agreement to mediate shall be specifically enforceable under applicable law in any court having jurisdiction thereof."

4.5.5 Delete paragraph 4.5.5 and replace with:

"Other parties may be joined to the arbitration. The foregoing agreement to arbitrate shall be specifically enforceable under applicable law in any court having jurisdiction thereof."

#### ARTICLE 5: SUBCONTRACTORS

5.2.2 Add as the first sentence of paragraph 5.2.2:

"All Subcontracts shall be in writing, and shall be assignable by the Contractor to the Owner."

5.4.2 Delete paragraph 5.4.2.

#### ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1.4 Delete paragraph 6.1.4.

#### ARTICLE 7: CHANGES IN THE WORK

7.1.2 Delete the last word of the sentence. Add "or the Owner".

7.3.6 Add to paragraph 7.3.6:

"Overtime when specifically authorized by the Owner shall be paid for by the Owner on the basis of a premium payment only, plus the cost of insurance and taxes based on the premium payment. Overhead and profit will not be paid by the Owner for overtime. Contractor shall submit a detailed, itemized breakdown of quantities and unit costs, including overhead and profit as separate items with response to request for price.

7.3.7 In paragraph 7.3.7, after the word "increase" in the last line, add the words "or decrease".

7.3.7 Add to paragraph 7.3.7:

"Also, if the amount of either the credit or the addition is in dispute, the amount of the other, nondisputed item may not be included in Applications for Payment. Overhead and profit will be included in credits to the same extent they are included in additions."

7.5 Add a paragraph 7.5 as follows:

## "7.5 AGREED OVERHEAD AND PROFIT RATES

For any adjustments to the Contract Sum based on other than the unit prices method, the Contractor agrees to charge and accept payment for his overhead and profit at the following percentages of the cost attributable to the change in the work:

- (a) Fifteen percent (15%) for Work by the Contractor not involving Subcontractors;
- (b) Five percent (5%) for Work by Subcontractors;
- (c) When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any;
- (d) For additional Work ordered as described above which will be executed by Subcontractors of the Contractor, it is agreed Subcontractors will be permitted to charge fifteen percent (15%) for work not involving Subcontractors and five percent (5%) for work by Sub-subcontractors. To the net Subcontract amount the Contractor may add five percent (5%)."

## ARTICLE 8: TIME

### 8.3.3 Delete paragraph 8.3.3 and substitute the following:

"The Contractor shall not be entitled to an increase in the Contract Sum as a result of any delays in the progress of the Work. The Contractor's sole remedy for delay shall be an extension of time."

### 8.4 Add the following as paragraph 8.4:

"If the Contractor, but for a delay not within its control, would have completed the Work prior to the time set forth in the project schedule, the Contractor shall not be entitled to any recovery of damages arising out of any event or delay which prevented such early completion of the Work."

### 8.5 The date of substantial completion of the Work or designated portion thereof is the date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy and utilize beneficially the Work or designated portion thereof for the use for which it was intended; provided that the date of substantial completion of the Work shall not be later than: See Instructions to Bidders.

### 8.6 The date of final completion of the Work is the date certified by the Architect when construction is finally completed, in accordance with the Contract Documents, and when the Owner has finally accepted the Work; provided that the date of final completion of the Work shall not be later than sixty (60) days after the Architect has certified that the Project is substantially complete.

### 8.7 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically designated.

### 8.8 The foregoing times for commencement of the Work, substantial completion of the Work and final completion of the Work, are material inducements to Owner in entering into this Agreement, and all time limits stated in the Contract Documents are of the essence of this Agreement.

### 8.9 If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Owner or the Architect, or by any employee of either, or by any separate contractor employed by the Owner, or by changes ordered in the Work (if additional days are added as part of the Change Order), or by labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably anticipatable, beyond the Contractor's control, or by delay authorized

by the Owner pending arbitration, or by any other cause which the Owner determines may justify the delay, then the time for Substantial Completion or Final Completion shall be extended by Change Order for such reasonable time as the Owner in good faith may determine.

Delay caused by any Subcontractor shall be the responsibility of the Contractor. The Contractor shall, therefore, ensure that all Subcontractors at all time provide sufficient personnel, equipment and materials to substantially complete the Work in the time specified herein.

Extension of time shall be Contractor's sole remedy for any delay unless the same shall have been caused by acts constituting intentional interference by Owner with Contractor's performance of the Work and then only to the extent that such acts continue after Contractor's notice to the Owner of such interference. Owner's exercise of any of his rights under the Contract Documents, changes to the Work ordered by Owner or Architect regardless of the extent or number of any such changes, or Owner's exercise of any of his remedies of suspension of the Work or requirement of correction or re-execution of any defective Work, shall not under any circumstances be construed as intentional interference with the Contractor's performance of the Work.

8.10 The Contractor will submit a "Progress Schedule" in accordance with the Contract Documents.

#### ARTICLE 9: PAYMENTS AND COMPLETION

9.3.1.2 Change "may" to "shall".

9.3.1.2 Add to paragraph 9.3.1.2:

"However, this paragraph will not apply to routine retainage the Contractor intends to withhold from the Subcontractor pursuant to the Subcontract."

9.3.2 Add to paragraph 9.3.2:

"Contractor shall submit requisitions from suppliers and Subcontractors to substantiate the amounts requested on the Application for Payment for materials or equipment stored on or off site."

9.3.4 Add the following as paragraphs 9.3.4, 9.3.5, and 9.3.6:

"Each partial payment request shall be made monthly and Contractor shall request payment of ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the work less the aggregate of previous payments in each case. The Owner reserves the right to reduce retainage prior to substantial completion."

9.3.5 "A Sworn "Contractor's Affidavit" shall be submitted with each payment request in sufficient form for the Owner to determine Contractor's right to payment and compliance with the Illinois Mechanic's Lien law. Each payment request shall include executed waivers of lien in conformity with information set forth on a properly completed Contractor's Affidavit. In the event that the Owner is satisfied with Contractor's payment procedures, the Owner may accept partial waivers of lien of Subcontractors and suppliers who were included in the immediate preceding payment. The Contractor shall submit waivers on a current basis, but the Owner may allow Subcontractors and suppliers to be not more than one payment late with their partial waivers."

9.3.6 "Upon giving ten (10) days notice in writing to the Contractor, the full contract retainage may be reinstated and the retention restored to the basis established in paragraph 9.3.4 if the manner of completion of the work and its progress do not remain satisfactory to the Owner, or if any surety of Contractor withholds its consent."

9.6.3 Add to paragraph 9.6.3:

"Notwithstanding paragraph 4.2.4, the Architect and Subcontractor may communicate directly on the matters covered by this paragraph."

9.8.2 Paragraph 9.8.2 is modified to add the following language to the end:

"With respect to Work enumerated on the list accompanying the Certificate of Substantial Completion, the guarantee or warranty period shall start at the time of subsequent acceptance of this Work in writing by Owner."

#### ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1.2 Delete paragraph 10.1.2.

10.1.5 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. The Owner, Contractor and Architect shall then proceed in the same manner described in Subparagraph 10.1.2.

10.1.6 The Owner shall be responsible for obtaining the services of a licensed laboratory to verify a presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection.

#### ARTICLE 11: INSURANCE AND BONDS

11.1.2 Add to paragraph 11.1.2:

The Contractor shall provide and maintain insurance in the amounts outlined below with companies acceptable to the Owner, for a minimum of two (2) years after final completion of the project.

11.1.2.1 Such insurance shall be written to include the following coverages and for not less than the following minimum limits, or greater if required by law:

.1 General Liability:

- Commercial General Liability (ISO 1986 Simplified Form)
- Occurrence Basis
- Limits;
- a. General Aggregate - \$2,000,000
- b. Products-Comp/Ops Aggregate - \$2,000,000
- c. Personal & Advertising Injury - \$1,000,000
- d. Each Occurrence - \$1,000,000
- e. Fire Damage (any one fire) - \$ 50,000
- f. Medical Expense (any one person) - \$ 10,000

A. Special Requirements:

1. The Owner, Architect and Architect's Consultants shall be named as 'Additional Insured' on the General Contractor and/or Subcontractor commercial general liability policy, on a Primary, Non-Contributory Basis.
2. Should the General Contractor and/or Subcontractor be unable to add the Owner, Architect and Architect's Consultant as an Additional Insured, then an Owner's and Architect's Protective Liability policy must be obtained by the General Contractor and/or Subcontractor. This policy should show both the Owner, Architect and Architect's Consultants as Named Insureds and have a Limit of Liability not less than \$1,000,000. This policy should also be maintained for the duration of the project.
3. The Contractor agrees to indemnify, defend and hold harmless the Architect and Architect's Consultants against any and all liabilities, damages, losses, expenses, demands, claims, suits or judgments, including reasonable attorneys' fees and expenses, for the death of or bodily injury to any person and for the loss of, damage to or destruction of any property in any manner arising out of the negligent or intentional or alleged negligent or alleged intentional acts or omissions of the Contractor, its agents, employees or Subcontractors the Contractor may be responsible for.

This provision shall not be construed to require the Contractor to indemnify the Architect and Architect's Consultants against the consequences of the Architect's and Architect's Consultants own negligence.

.2 Automobile Liability

- Any Auto Owned by Contractor
  - Hired Autos
  - Non-Owned Autos
  - Limits;
- a. Combined Single Limit - \$1,000,000

.3 Umbrella/Excess Liability

- Limit;
- a. For School/Educational projects;
- |                   |             |
|-------------------|-------------|
| Each Occurrence - | \$5,000,000 |
| Aggregate -       | \$5,000,000 |

.4 Workers' Compensation and Employers' Liability

- Employers' Liability Limits;
- a. Each Accident - \$ 500,000
- b. Disease-Policy Limit - \$ 500,000
- c. Disease-Each Employee - \$ 500,000

11.3.1 In paragraph 11.3.1, in the last sentence, after the word "Owner", add the word "Architect".

11.3.1.1 Add to paragraph 11.3.1.1:

"Property Insurance provided by the Owner shall not cover any tools, apparatus, machinery, scaffolding, hoists, forms, staging, shoring, and other similar items commonly referred to as construction equipment, which may be on the site and the capital value of which is not included in the Work. The Contractor shall make his own arrangements for any insurance he may require on such construction equipment."

11.3.1.3 "With reference to paragraph 11.3.1.3, the property insurance for the Work requires a minimum deductible of: \$2,500 per claim."

11.3.1.4 Delete paragraph 11.3.1.4.

11.3.3 Delete the last sentence from paragraph 11.3.3.

11.3.7 In paragraph 11.3.7, delete the first word, "The", and substitute "If permitted by the Owner's and Contractor's insurance companies, without penalties, the..."

11.4.3 Add the following 11.4.3:

"The Contractor, before commencing the work, shall furnish a Performance Bond and a Labor and Material Payment Bond. The Performance Bond shall be in an amount equal to 100 percent of the full amount of the Contract Sum as security for the faithful performance of the obligations of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100 percent of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bond shall be on A.I.A. Document A-312, issued by the American Institute of Architects, shall be issued by a surety satisfactory to the Owner and shall name the Owner as a primary co-obligee."

11.5 Add a paragraph 11.5:

#### "11.5 MISCELLANEOUS REQUIREMENTS

11.5.1 All insurance coverage shall be provided by insurance companies having and A.M. Best Co. policy holder ratings no lower than "A-" and financial ratings not lower than "X" in the Best's Insurance Guide, latest edition in effect as of the date of the Contract.

### ARTICLE 13: MISCELLANEOUS PROVISIONS

13.2.1 Paragraph 13.2.1 is modified to add the following to the end:

"Notwithstanding any of the provisions of this paragraph, however, the Owner may assign the Contract to an affiliated entity without the consent of the Contractor.

The Architect is intended to be a third party beneficiary of this contract."

#### 13.6 INTEREST

13.6.1 Delete Paragraph 13.6.1 and substitute the following:

Payments which are approved by the Consultant and Owner and are due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

### ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

14.1.2 Add to paragraph 14.1.2:

"The amount the Contractor shall be entitled to recover pursuant to this paragraph shall be subject to the provisions of paragraph 7.5."

14.3.2 Delete paragraph 14.3.2 and substitute:

"If suspension, delay or interruption by the Owner constitutes in the aggregate more than 20 percent of the total number of days scheduled for completion, an adjustment shall be made for increases in the cost of performance of this Contract, excluding profit, caused by suspension, delay or interruption. No adjustment shall be made to the extent:

- (a) That performance is, was or would have been so suspended, delayed or interrupted by another cause, including the fault or negligence of the Contractor; or
- (b) That an equitable adjustment is made or denied under another provision of this Contract."

14.3.3 Replace 14.3.3 with:

"Any adjustment made in the Contract Sum pursuant to paragraph 14.3.2 shall be subject to the provisions of paragraphs 7.3.6.1 through 7.3.6.4. Overhead shall be allowed to the extent of one-half the percentages given in paragraph 7.5."

14.4 Add the following as paragraph 14.4:

"14.4 OWNER'S TERMINATION FOR CONVENIENCE

14.4.1 The Owner may, at any time, terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this Paragraph shall be made by a notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

14.4.2 Upon receipt of a notice of termination, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph:

- (a) Cease operation as specified in the notice;
- (b) Place no further orders and enter into no further Subcontracts for materials, labor, services or facilities except as necessary to complete continued portions of the Contract;
- (c) Terminate all Subcontracts and orders to the extent they relate to the work terminated;
- (d) Proceed to complete the performance of work not terminated; and
- (e) Take actions that may be necessary, or that the Owner may direct, for the protection and preservation of the terminated work.

14.4.3 The Contractor shall recover payment for work executed on the terminated portion of the work before the effective date and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including profit and overhead as provided in paragraph 7.5 and damages.

14.4.4 Allowance shall be made for payments previously made to the Contractor for the terminated portion of the work, and claims which the Owner has against the Contractor under the Contract,

and for the value of materials, supplies, equipment or other items that are part of the cost of the work to be disposed of by the Contractor."

#### ARTICLE 15: SPECIAL PROVISION FOR FAIR EMPLOYMENT

Equal Employment Opportunity Policies: For the entire duration of his work under the contract, the Contractor shall conform to the federal and state statutes on equal opportunity and fair employment. The Contractor agrees as follows:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, religion, sex, ancestry, age, marital status, physical or mental handicap, or unfavorable discharge from military service. The Contractor will take affirmative action to insure the applicants are employed, and that employees are treated during employment without regard to their race, creed, color, national origin, religion, sex, ancestry, age, marital status, physical or mental handicap, or unfavorable discharge from military service. Such action will include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for conspicuous places, available to employees and applicants for employment, notices to be provided by the local public agency setting forth the provisions of this nondiscrimination clause.
- B. The Contractor will, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, national origin, religion, sex, ancestry, age, marital status, physical or mental handicap, or unfavorable discharge from military service.
- C. The Contractor will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this contract so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- D. The Contractor shall comply with the Illinois Human Rights Act (775 ILCS 5/1-101 et. seq.) and because the Owner is a public body the Contractor shall fully comply with the Human Rights Act, section 775 ILCS 5/2-105, entitled "Equal employment opportunities - Affirmative action". Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin or ancestry. Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex age or national origin or ancestry. Such action shall include, but not be limited to, the following: employment, job classification, upgrading, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or terminating, rates of pay or other forms of compensations and selection fo an quality of training, including apprenticeship. Contractor shall post in conspicuous places, available by the appropriate agency having jurisdiction over equal employment opportunity. Contractor will, in all solicitations or advertisement for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin or ancestry.

#### ARTICLE 16: ILLINOIS REQUIREMENTS

The Illinois "Employment of Illinois Workers on Public Works Act, 30, ILCS 470/0.01 et. seq." shall prevail on this project.

In the Preference Act, Section 271, every person who is charged with the duty, either by law or contract, or constructing or building any public works project or improvement for the State of Illinois or any political subdivision, municipal corporation or other governmental unit thereof shall employ only Illinois laborers on such projects or improvement, and every contract let by such person shall contain a provision requiring



that such labor be used. In 1975 the Illinois Supreme Court ruled that only Illinois residents could be used on a public works construction project. (People ex rel Holland v Bleigh Construction Co. - 6111.2d258).

#### ARTICLE 17: LIMIT TO AVOID INCORPORATION OF RESPONSIBILITY BY REFERENCE

Where any specification which is incorporated herein by reference, through the words "and/or as directed by the Architect," or phrases having a similar effect appear to give the Architect/Engineer the right to direct something other than that specified, the Architect/Engineer has in fact no such right to except as it may be established in specific instances in portions of this Project Manual other than in said specifications.

#### ARTICLE 18: CONSTRUCTION GENERAL CONDITIONS

In performing its obligations for the Owner, Architect/Engineer and its Consultants may cause expense for the Contractor or its Subcontractor. However, Contractor, its Subcontractors and sureties shall maintain no direct action against Architect/Engineer, its Consultants, their agents and employees, for any claim arising out of, in connection with or resulting from the Work performed or required to be performed. Only the Owner shall be the beneficiary of any undertaking by the Architect/Engineer, its Consultants, their agents and employees.

Note: Contractor has no right of direct action against Architect/Engineer.

#### ARTICLE 19: REPRODUCTION OF DRAWINGS

The drawings and specifications of this project cannot be reproduced without prior permission of the Architect and his consultants.

These drawings cannot be used as Shop Drawings.

#### ARTICLE 20: SPECIAL PROVISIONS FOR PREDETERMINED PREVAILING WAGE:

Prevailing Wage Laws: For the entire duration of his work under the contract, the Contractor shall conform to the federal and state statutes relating to the payment of prevailing wages and to all valid rules and regulations now or hereafter issued pursuant thereto, that are cited in Article 1.11, "Wage Payments and Equal Employment Opportunity," of the Department of Labor. The Contractor and Subcontractor shall pay the general prevailing rate of hourly wages in the locality in which the work is to be performed for each craft or type of worker or mechanic needed to execute the contract or perform such work, also the general prevailing rate for legal holiday and overtime work, as ascertained by the Department of Labor for the Illinois county for each craft or type of worker needed to execute the contract or to perform such work cited in the "Illinois Prevailing Wage Act (Ill. Rev. Stat., 1987 Ch. 48, Sections 39s-1--12 as amended by Public Act 86-693 and 86-799 effected January 1, 1990".

If, during the course of work under this contract, the Department of Labor revises the 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 the prevailing rate of hourly wages. Contractor shall have the sole responsible and duty to ensure that the revised prevailing rate of hourly wages is paid by Contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions of the prevailing wage as set forth above shall not result in an increase in the contract sum.

However, regardless of whether Owner gives such notice of any change in the prevailing rate of wages, the revised prevailing rate of wages shall apply to the contract and contractor shall have the sole responsibility and duty to pay, and ensure that all subcontractors pay, the revised prevailing rate of wages to each person to whom a revised rate is applicable, revision of the prevailing wages shall not result in an increase in the contract sum or other cost to Owner. Contractor shall indemnify, defend and hold Owner harmless from any loss, including but not limited to, Owner's attorney's fees, resulting from Contractor's

failure to comply with this prevailing wage clause. All bonds applicable to the contract shall include such provision as will guarantee the faithful performance of the obligation to pay the prevailing rate of wages.

**Minimum Wages:** All laborers and workers employed or working upon the site of the work, shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate (except for such payroll deductions as the law may permit), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination which the School District shall provide, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and workers. Apprentices, trainees and helpers may, in compliance with applicable regulations, be paid at an apprentice rate, but otherwise must be compensated at no less than prevailing wage rates.

**Withholding:** The School District may withhold or cause to be withheld from the contractor under this contract as much of the accrued payments or advances as may be considered necessary to pay laborers and workers, including apprentices, trainees, and helpers, employed by the contractor or any sub-contractor the full amount of wages required by the contract. In the event of failure to pay any laborer or worker, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the School District may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds, until such violations have ceased.

**Investigation:** The contractor and subcontractors shall make records evidencing compliance with this Section available for inspection or copying by authorized representatives of the School District. They shall permit such representatives to interview employees during working hours on the job to investigate compliance with this Section.

The contractor and each subcontractor shall submit monthly to the Owner a certified payroll consisting of records of all laborers, mechanics, and other workers employed on the project; the records shall include each worker's name, address, telephone number, social security number, classification or classifications, the hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending times of work each day. The certified payroll shall be accompanied by a statement signed by the contractor or subcontractor which avers that: (1) such records are true and accurate (2) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by this Prevailing Wage Act; and (3) the contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.

## ARTICLE 21: OSHA REGULATIONS

The Contractor is responsible as an employer to comply with OSHA Regulations regarding safety to workers at the worksite. This includes, but is not limited to, compliance to provisions of the Code of Federal Regulations, (29 CFR 1926) Construction Standards.

## ARTICLE 22: OTHER PROVISIONS

- 22.1 Contractor shall execute the following documents, which shall become part of the Contract Documents.
1. Certificate of Sexual Harassment Policy
  2. Certificate of Drug-Free Workplace
  3. Certificate of Bidder Eligibility
  4. Non-Collusion Affidavit

**END SECTION 00 73 00**

## **SECTION 01 10 00**

### **SUMMARY**

#### **PART 1 GENERAL**

##### **1.01 PROJECT INFORMATION**

- A. Project Name: 24046 - 2024 Paving Improvements
- B. Owner's Name: LaGrange Highlands School District 106.
- C. Architect's Name: ARCON Associates, Inc..
- D. The Project consists of the construction of asphalt paving (repaving, pavement repairs, pavement replacement, sealcoating, re-striping) and concrete walk work..

##### **1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 52 00 - Agreement Form.

##### **1.03 DESCRIPTION OF ALTERATIONS WORK**

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 41 00.
- B. Scope of alterations work is indicated on drawings.
- C. Plumbing: Alter existing system and add new construction, keeping existing in operation.

##### **1.04 OWNER OCCUPANCY**

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

##### **1.05 PROTECTIVE PRECAUTIONS**

- A. The Contractor, upon receiving contract acceptance or letter of intent, shall be able to proceed with work immediately after the published start date, subject to the following conditions.
- B. Submit, discuss and obtain approval of the proposed schedule of work from the Owner and the Architect.
- C. Every precaution must be taken to prevent any damage, loss or injury to any person, or to any property of the Owner.
- D. All utilities on the properties shall be kept in proper operating conditions at all times. Should there be a need to temporarily disconnect any system, the Contractor shall notify (in writing) the following agencies, when the existing system is going to be inoperative, and that the building will be without a particular service for a period not to exceed one (1) day. Give a minimum of two days notice to Owner.
  - 1. The Fire Department (where applicable)
  - 2. Owner.
  - 3. Architect.
  - 4. Any other agency or department appropriate or responsible for a specific service.
- E. The same notification shall be provided by the Contractor, if any of the other utilities will be temporarily inoperative.
- F. It is mandatory that the fire lanes be kept free of any obstructions at all times, unless otherwise authorized by the Owner and the Fire Department.
- G. Parking for construction workers will be in areas as discussed with and designated by Owner, and shall be strictly adhered to.
- H. All fire alarm, security alarm, and any other type of protection system SHALL BE operable at all times when the buildings are occupied or could be occupied. If one of the systems is down, the fire department, Owner, etc., must be notified. The Contractor is responsible for monitoring and maintaining these systems in an operable and safe condition at all times.

## **1.06 CONTRACTOR USE OF SITE AND PREMISES**

- A. Construction Operations: \_\_\_\_\_.
  - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
- B. Arrange use of site and premises to allow:
  - 1. Owner occupancy.
  - 2. Work by Others.
  - 3. Work by Owner.
  - 4. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:
  - 1. Limit deliveries of products and equipment to before 7:30 a.m. or after 3:30 p.m.
  - 2. The Owner reserves the right to alter permissible delivery times.
  - 3. Limit product and equipment deliveries for exterior work to before 7:30 a.m..
- E. Utility Outages and Shutdown:
  - 1. Limit disruption of utility services to hours the building is unoccupied.
  - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
  - 3. Prevent accidental disruption of utility services to other facilities.

## **1.07 WORK SEQUENCE**

- A. Coordinate construction schedule and operations with Owner and Architect.

## **1.08 LOCAL CODES**

- A. Each Contractor complies with specified and applicable codes and standards. If conflict between codes or standards and drawings, specifications or addenda requirements, more stringent requirements shall govern.

## **1.09 ENVIRONMENTAL REQUIREMENTS**

- A. The Contractor shall comply with all applicable federal, state, and local laws, regulations, ordinances, codes or standards concerning environmental control. Particular attention shall be given, without limitation, to:
  - 1. Reduction of air pollution by control of refuse burning (if permitted), minimization of dust, containment of chemical vapors, control of engine exhaust gases, and control of smoke from temporary heaters.
  - 2. Reduction of water pollution by control of sanitary facilities, proper storage of fuels and other potential contaminants, and prevention of siltation from land erosion.
  - 3. Minimization of noise levels.
  - 4. Proper and legal disposal, off site unless otherwise provided, of waste and soil resulting from construction activities.
  - 5. Proper and legal disposal of excavated spoils resulting from construction activities per Illinois Public Act 96-1416 and the Illinois Environmental Protection Agency.
- B. Proper and legal disposal at acceptable landfill of non-hazardous special waste if soil analysis determines that excavated spoils are not suitable for a CCDD Facility.

## **1.10 DOCUMENTS AND SAMPLES AT PROJECT SITE**

- A. The Contractor shall maintain, at the site, for the Owner, one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction. These shall be available to the Architect. The Drawings, marked to record all changes made during construction shall be delivered to the Architect for the Owner upon completion of the work.
- B. Permit drawings shall be maintained at the site in accordance with local requirements.

### **1.11 CONTRACTOR INSPECTION**

- A. The Contractor shall inspect and supervise the work to be assured that the work is performed in accordance with contract requirements.
  - 1. The Contractor shall reject or stop portions of the work which are not in accordance with contract requirements.
- B. By requesting the Final Payment, Contractor certifies that he has provided his work in compliance with the specifications and drawings.

### **1.12 ACCIDENTS AND SAFETY RESPONSIBILITY**

- A. The general or prime contractor is solely responsible for supervision, monitoring, and maintaining safe working conditions on, in and around the construction site. The Architect, his consultants and owner are not responsible for the safety conditions on the construction site.
  - 1. The Contractor shall report any and all accidents on the site or related to the project in writing to his insurance company and to the Owner and Architect within 24 hours of occurrence. The report shall contain the following information:
    - a. Name and address of injured person or persons;
    - b. Location of occurrence;
    - c. Date and time of occurrence;
    - d. Narrative description of the accident and how it occurred;
    - e. Extent of injuries, hospital where treated name or names of physicians in attendance;
    - f. Names of witnesses and, whenever possible, statements of witnesses and the name of person taking such statement;
    - g. Signature of Contractor's superintendent.
  - 2. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported to the Architect, and to the Owner immediately by telephone or messenger. If any claim is made by anyone against the Contractor or any Subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Architect giving full details of the claim.

### **1.13 SPECIFICATION SECTIONS APPLICABLE TO EVERY CONTRACT**

- A. Unless otherwise noted, all provisions of the Division 01 sections shall apply to all Contracts and all other Project Manual sections.
- B. Section 01 78 00 - Closeout Submittals. - See section for Interactive Closeout procedures. Interactive Project Closeout shall be included in Contractor's Bid. Interactive Project Closeout shall be handled by BHFX.

### **1.14 SPECIFICATION FORMATS AND CONVENTIONS**

- A. Specification Format: The Specifications are organized into Divisions and Sections using the CSI "2004 MasterFormat" numbering system.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

### 1.15 MISCELLANEOUS PROVISIONS

- A. It is understood and agreed by all the Contractors that the materials, tools, equipment, building or work is entirely at their risk until same is completed. The Owner assumes no responsibility for the loss by theft or damage.

### 1.16 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract and as follows:
  - 1. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
  - 2. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
  - 3. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
  - 4. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
  - 5. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations (including cost of delivery and unloading at jobsite).
  - 6. "Install": Operations at Project site including delivery, unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, clean up, disposal, and similar operations.
  - 7. "Provide": Furnish, install, connect and complete and ready for the intended use.
  - 8. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 9. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
  - 10. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
  - 11. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

### 1.17 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
  - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

#### **1.18 WARRANTY**

- A. Warranty Period: Unless otherwise indicated in the General Conditions or Supplementary Conditions:
  - 1. All Work included under this Specification unless extended elsewhere herein, shall be guaranteed against defects in material and workmanship for a period of two (2) years from the date of final acceptance of the Work as evidenced by the issuance of the Final Certificate for Payment and payment by the Owner. In case of conflict between General Conditions or Supplementary Conditions and this paragraph, General Conditions or Supplementary Conditions shall govern.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

**END OF SECTION 01 10 00**

**SECTION 01 20 00**  
**PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 21 00 - Allowances: Payment procedures relating to allowances.

**1.03 SCHEDULE OF VALUES**

- A. Form to be used: AIA G703.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values electronically within 10 days after date Contract Award.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's Construction Schedule (preliminary if not final).
  - 4. Products list.
  - 5. Schedule of unit prices.
  - 6. Submittals Schedule (preliminary if not final).
  - 7. List of Contractor's staff assignments.
  - 8. List of Contractor's principal consultants.
  - 9. Copies of building permits.
  - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 11. Certificates of insurance and insurance policies.
  - 12. Performance and payment bonds.
- B. Payment Period: Submit at intervals stipulated in the Agreement.
- C. Form to be used: AIA G702 and G703.
- D. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- E. Forms filled out by hand will not be accepted.
- F. 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 and Stored Materials under this Application.
    - a. Proof of insurance and documentation of stored materials.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.



- G. Execute certification by signature of authorized officer with notarization.
- H. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- I. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- J. Submit one electronic copy of each Application for Payment.
- K. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.
  - 2. Sworn Contractor's Affidavit (signed and notarized) covering labor and materials for Contractor and Subcontractors on project.
  - 3. Partial release of liens from major subcontractors and vendors.
    - a. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
      - 1) When an application shows completion of an item, submit final or full waivers.
      - 2) Owner reserves the right to designate which entities involved in the Work must submit waivers.
      - 3) Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.
        - (a) Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
    - b. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
  - 4. Certified Payroll. With each Application for payment, submit certified payroll documentation from subcontractors and employees for the construction period covered by the previous application. Form shall contain all information required by Illinois State Law.

#### **1.05 MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time(if applicable) 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 shall prepare and submit a fixed price quotation within 7 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Credit for deletions from Contract, similarly documented.
  - 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

## **1.06 APPLICATION FOR FINAL PAYMENT**

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 70 00.
- C. Submit Final Statement reflecting all adjustments.
  - 1. Original Contract Sum.
    - a. Additions and deductions resulting from:
      - 1) Previous Change Orders.
      - 2) Cash Allowances.
      - 3) Other adjustments.
      - 4) Deductions for uncorrected work.
      - 5) Deductions for Reinspection Payments.
      - 6) Deductions for liquidated damages.
    - b. Total Contract Sum, as adjusted.
    - c. Previous payments.
    - d. Sum remaining due.
  - 2. Architect will prepare final Change Order, reflecting approved adjustments to Contract Sum not previously made by Change Orders.
  - 3. Final Certified Payroll.
- D. Evidence of completion of Project closeout requirements.
- E. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
- F. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  - 1. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  - 2. AIA Document G707, "Consent of Surety to Final Payment."
  - 3. Evidence that claims have been settled.
  - 4. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
- G. By requesting the Final Payment, each prime Contractor certifies that he has provided his work in compliance with the specifications and drawings.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION - NOT USED**

**END OF SECTION 01 20 00**

**SECTION 01 21 00  
ALLOWANCES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Cash allowance.
- B. Payment and modification procedures relating to allowances.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

**1.03 CASH ALLOWANCE**

- A. Contractor's costs for including but not limited to the following: insurance, payroll taxes, bonding, equipment rental, tools, overhead and profit shall not be chargeable against the allowance since these costs shall be covered in the Contractor's base bid.
- B. Funds will be drawn from the Allowance by payment application.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

**1.04 ALLOWANCES SCHEDULE**

- A. Allowance No. 1: Include \$20,000 for General Use &/or unforeseen conditions, as deemed and directed by OWNER and Architect.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION 01 21 00**

## **SECTION 01 23 00**

### **ALTERNATES**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Description of Alternates.

##### **1.02 ACCEPTANCE OF ALTERNATES**

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

##### **1.03 SCHEDULE OF ALTERNATES**

- A. Alternate No. 1 - Additional Work in the lot adjacent West Plainfield Road.:
  - 1. Description:
    - a. Work includes, but is not necessarily limited to, additional costs for all work involved for Mill & Overlay work, plus some Full-Depth Patches, Re-Striping Work, as shown on Sheet C1.1 and Sheet C2.1, and associated Details, along West Plainfield Road.
- B. Alternate No. 2 - Additional Work in the lot adjacent Laurel Avenue.:
  - 1. Description:
    - a. Work includes, but is not necessarily limited to, additional costs for all work involved for any Crack Patching, Sealcoating, and Re-Striping Work, as shown on Sheet C2.0, and associated Details, along Laurel Avenue.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

**END OF SECTION 01 23 00**

**SECTION 01 30 00**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General administrative requirements.
- B. Electronic submittals.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meetings.
- F. Construction progress schedule.
- G. Coordination drawings.
- H. Submittals for review, information, and project closeout.
- I. Number of copies of submittals.
- J. Requests for Interpretation (RFI) procedures.
- K. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 60 00 - Product Requirements: General product requirements.
- B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

**1.03 GENERAL ADMINISTRATIVE REQUIREMENTS**

- A. Comply with requirements of Section 01 70 00 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.

**1.04 PROJECT COORDINATOR**

- A. Cooperate with the Owner in allocation of mobilization areas of site, offices, sheds, temporary parking, and site access.
- B. During construction, coordinate use of site and facilities through the Owner.
- C. Comply with procedures of Architect for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- D. Comply with instructions of the Owner for use of temporary utilities and construction facilities.
- E. Coordinate field engineering and layout work under instructions of the Site Superintendent.
- F. Make the following types of submittals to Architect:
  - 1. Requests for Interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.01 ELECTRONIC DOCUMENT SUBMITTALS**

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and transmitted via the internet.
  - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
  - 2. Parties Required to use service: Contractor and Architect.
  - 3. It is the responsibility of the Contractor to submit documents in PDF format.
  - 4. Contractors and Architect's consultants will be permitted to use the service at no extra charge.
  - 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, [www.adobe.com](http://www.adobe.com), or Bluebeam PDF Revu, [www.bluebeam.com](http://www.bluebeam.com)), unless such software capability is provided by the service provider.
  - 6. Paper document transmittals will not be reviewed.
  - 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
  - 8. Contractors will have access to the Architect's submittal service for use in delivering submittals, requests for information, progress documentation. Contractors can deliver other documents (payment applications, punch lists, reports, etc.) via internet/e-mail.
  - 9. Samples and color cards shall be submitted without using electronic processing.
- B. Software: The selected service is:
  - 1. Newforma Project Center: Access to the software will be available through Architect. No special software is required to be provided by Contractor.

### **3.02 PRECONSTRUCTION MEETING**

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
- C. Agenda:
  - 1. Execution of Owner-Contractor Agreement.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.
  - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  - 5. Designation of personnel representing the parties to Contract and Architect.
  - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - 7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.03 SITE MOBILIZATION MEETING (PRECONSTRUCTION MEETING)**

- A. Architect will schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
  - 1. Contractor.
  - 2. Owner.
  - 3. Architect.
  - 4. Special consultants.
  - 5. Contractor's superintendent.

6. Major subcontractors.
- C. Agenda:
  1. Use of premises by Owner and Contractor.
  2. Owner's requirements and partial occupancy prior to completion.
  3. Construction facilities and controls provided by Owner.
  4. Temporary utilities provided by Owner.
  5. Survey and building layout.
  6. Security and housekeeping procedures.
  7. Schedules.
  8. Application for payment procedures.
  9. Procedures for testing.
  10. Procedures for maintaining record documents.
  11. Requirements for start-up of equipment.
  12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.04 PROGRESS MEETINGS**

- A. Attendance Required:
  1. Contractor.
  2. Owner.
  3. Architect.
  4. Special consultants.
  5. Contractor's superintendent.
  6. Major subcontractors.
- B. Agenda:
  1. Review minutes of previous meetings.
  2. Review of work progress.
  3. Field observations, problems, and decisions.
  4. Identification of problems that impede, or will impede, planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Review of RFIs log and status of responses.
  7. Review of off-site fabrication and delivery schedules.
  8. Maintenance of progress schedule.
  9. Corrective measures to regain projected schedules.
  10. Planned progress during succeeding work period.
  11. Maintenance of quality and work standards.
  12. Effect of proposed changes on progress schedule and coordination.
  13. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.05 CONSTRUCTION PROGRESS SCHEDULE**

- A. Within 10 days after date Contract Award, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule every 30 days unless otherwise requested by Architect or Owner.

### **3.06 COORDINATION DRAWINGS**

- A. Provide information required by Contractor for preparation of coordination drawings.

- B. Review drawings prior to submission to Architect.
- C. Architect or Architect's Consultants will furnish at Contractor's request CAD Base Drawings for the sole use in developing Shop Drawings.
  - 1. Contractor shall be required to sign CAD waiver provided by Architect or Architect's Consultants.
  - 2. Contractor shall be charged a handling fee of \$250 for each CAD file.
  - 3. CAD Software Program: The background drawings shall be available only in version of AutoCAD currently in use by Architect or Architect's Consultants.
  - 4. The CAD files will only include walls, doors, windows, room numbers and other generic information to facilitate creation of Shop Drawings. These documents will not be duplications of Contract Documents.

### **3.07 REQUESTS FOR INTERPRETATION(RFI)**

- A. Definition: A request seeking one of the following:
  - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
  - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Prepare using software provided by the Electronic Document Submittal Service.
  - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
  - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section - 01 60 00 - Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
  - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  - 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  - 2. Owner's, Architect's, and Contractor's names.
  - 3. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).



4. Annotations: Field dimensions and/or description of conditions which have engendered the request.
5. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  2. Note dates of when each request is made, and when a response is received.
  3. Highlight items requiring priority or expedited response.
  4. Highlight items for which a timely response has not been received to date.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with a suffix to the original number.
  2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
  3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
  4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

### **3.08 SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
  1. Submit at the same time as the preliminary schedule.
  2. Coordinate with Contractor's construction schedule and schedule of values.
  3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
  4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
    - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

### **3.09 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.

- D. Submittals listed in specific a specification section shall be submitted complete in one single package or may be rejected. Physical samples and shop drawings are permitted to be submitted under separate cover.
- E. After review, provide copies and distribute in accordance with Submittal Procedures article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

### **3.10 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  - 1. Design data.
  - 2. Certificates.
  - 3. Test reports.
  - 4. Inspection reports.
  - 5. Manufacturer's instructions.
  - 6. Manufacturer's field reports.
  - 7. Other types indicated.
- B. Submit to Architect for knowledge as contract administrator or for Owner. No action will be taken.

### **3.11 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 - Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.12 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
  - 1. Shop drawing PDF files shall be generated on one of the following sheet sizes:
    - a. 30" x 42"
    - b. 24" x 36"
    - c. 11" x 17"
- B. Samples: Submit the number specified in individual specification sections one of which will be retained by Architect. If the number of samples is not indicated submit two samples.
  - 1. Retained samples will not be returned to Contractor unless specifically so stated.
  - 2. Samples will be accepted by Architect only if all delivery charges are prepaid.
  - 3. Samples shall bear the identification markings specified in this section.

### **3.13 SUBMITTAL PROCEDURES**

- A. Definitions:
  - 1. Shop Drawings: Graphic depiction of products/assemblies to be reviewed including but not limited to fabrication, erection, layout, setting drawings, schedules, piping, ductwork, conduit systems details of the construction, wiring diagrams, control diagrams, and methods of construction required to show that the materials, equipment or systems and their position confirm to the Contract Documents.
  - 2. Product Data: Illustrations, performance charts, instructions, brochures and other information to illustrate a material, product or system for some portion of the work.
  - 3. Samples: Physical examples which illustrate materials, colors, textures, materials or workmanship and establish standards by which the Work will be judged.
- B. General Requirements:
  - 1. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.

2. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each document.
  3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
  4. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
    - a. Upload submittals in electronic form to Electronic Document Submittal Service website.
  5. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
    - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days. These items include the following:
      - 1) Doors, frames, and hardware.
      - 2) Elevators.
      - 3) Masonry.
      - 4) Louvers.
      - 5) Mechanical equipment curbs.
      - 6) Precast Concrete.
      - 7) Architectural items containing electrically operated components
      - 8) Gymnasium Equipment.
      - 9) Kitchen Equipment.
  6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
  7. Provide space for Contractor and Architect review stamps.
  8. When revised for resubmission, identify all changes made since previous submission.
  9. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  10. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  11. Submittals not requested will be recognized, and will be returned "Not Reviewed",
  12. If the shop drawings or product data show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall make specific mention of such variation in his submittal letter or on the shop drawing or product data documents submitted. Any such variations are subject to review by the Architect.
  13. The Architect shall review shop drawings or product data only for conformance with design intent of the project. The Architect's review will not be construed as:
    - a. Permitting any departure from the Contract requirements;
    - b. Relieving the Contractor of the responsibility for any error in details, dimensions or otherwise that may exist.
    - c. Accepted departures from additional details or instructions previously furnished by the Architect, unless the Architect has specifically accepted the variation in accordance with the provisions of this article.
  14. By approving and submitting shop drawings and product data, the Contractor thereby represents that he has:
    - a. Obtained, determined, and verified all field measurements and conditions, construction criteria, materials and similar data.
    - b. Checked, Reviewed and approved them each shop drawing.
    - c. Checked and coordinated the information contained within such submittals with the requirements of the work and of the Contract Documents.
- C. Product Data Procedures:
1. Submit only information required by individual specification sections.
  2. Collect required information into a single submittal for each individual specification section.
  3. Submit concurrently with related shop drawing submittal.

4. Do not submit (Material) Safety Data Sheets for materials or products unless specifically indicated in specification section.
  5. Indicate product options, model, product etc. on product data sheet using a marking a color other than red.
- D. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
  2. Do not reproduce Contract Documents to create shop drawings.
  3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
  4. Shop drawings shall be in sufficient detail to indicate all conflicts with other Subcontractors.
  5. If highlighting or indicating questions do so in color other than red.
- E. Samples Procedures:
1. Transmit related items together as single package.
  2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
  3. Samples will be accepted by Architect only if all delivery charges are prepaid.
  4. Electronic reproductions (scans) will not be reviewed by Architect. The Architect, to expedite return of samples may stamp the electronic reproduction and return to Contractor with notations and shop drawing stamp. Physical samples may be returned under separate cover.

### **3.14 SUBMITTAL REVIEW**

- A. Submittals with no corrections will be stamped "CONFORMS WITH DESIGN CONCEPT", and those requiring only minor corrections will be stamped "NOTE MARKINGS". Those stamped "CONFORMS WITH DESIGN CONCEPT" can be used for ordering, fabrication and erection. Those stamped "NOTE MARKINGS" can also be used for ordering, fabrication, and erection, but the original drawings must be corrected and new documents submitted for final acceptance. If submittals resubmitted for final acceptance have changes other than those previously noted, such changes shall be identified and explained in the letter of transmittal by which the drawings are submitted.
- B. If major corrections are required, the Architect will return the submittal stamped "RESUBMIT". The Contractor shall correct the original submittal as required and then submit new documents to the Architect for review and comment. The Architect will review the revised submittal and return the submittal to the Contractor until final acceptance has been given.
- C. Shop drawings which do not have the Architect's signature and stamp "CONFORMS WITH DESIGN CONCEPT", or "NOTE MARKINGS" shall not be permitted at the site. At least one complete set of shop drawings bearing the Architect's stamp shall be kept at the site, in the Contractor's field office, for reference at all times.
- D. If product does not comply with the design concept, or is not a specified product, the Architect will return the submittal stamped "REJECTED". After reviewing the appropriate Specification Section for products and submittal requirements, the Contractor shall resubmit new product that is indicated in the specification section. This shall be submitted as an entirely new submittal. Contractor reserves the right to reject any submittal that is not submitted in accordance with the requirements of the Contract Documents.
- E. If a submittal is provided for informational purposes or for record purposes the Architect and Architect's Consultants actions will indicate "Not Reviewed" or language with same legal meaning.
- F. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- G. Architect's Consultants actions on items submitted for review will indicate one of the following (see above for further information):
1. "Conforms with Design Concept" or language with same legal meaning.
  2. "Note Marking" or language with similar legal meaning.
  3. "Revise and Resubmit" or language with similar legal meaning.
  4. "Rejected" or language with similar meaning.

- H. In case of conflict between virtual shop drawing stamp and electronic document submittal software, virtual shop drawing stamp shall govern.
- I. No work in the shop or field shall be started until the Architect has approved the shop drawings and samples for that segment of the work, nor shall work be done from any shop drawings not bearing the Architect's stamp of approval.

### **3.15 SUBMITTAL REVIEW**

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and consultants' actions on items submitted for review:
  - 1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.
    - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
      - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
    - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
  - 2. Not Authorizing fabrication, delivery, and installation:
    - a. "Revise and Resubmit".
      - 1) Resubmit revised item, with review notations acknowledged and incorporated.
    - b. "Rejected".
      - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
  - 1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  - 2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

**END OF SECTION 01 30 00**

**SECTION 01 40 00**  
**QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Contractor's construction-related professional design services.
- F. Contractor's design-related professional design services.
- G. Control of installation.
- H. Tolerances.
- I. Manufacturers' field services.
- J. Defect Assessment.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

**1.03 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES**

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
  - 1. Temporary sheeting, shoring, or supports.
  - 2. Temporary bracing.
  - 3. Investigation of soil conditions to support construction equipment.

**1.04 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES**

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit copies of report to Contractor, Architect, and Architect's Consultants.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Compliance with Contract Documents.

- k. When requested by Architect, provide interpretation of results.
- 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
  - 1. Submit report within 5 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

#### **1.06 QUALITY ASSURANCE**

- A. Testing Agency Qualifications:
  - 1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.

#### **1.07 REFERENCES AND STANDARDS**

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

#### **1.08 TESTING AND INSPECTION AGENCIES AND SERVICES**

- A. Owner will employ and pay for services of an independent testing agency to perform specified testing and special inspections.
- B. As indicated in individual specification sections, Owner or Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- C. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- D. Contractor Employed Agency:
  - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
  - 2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### **3.02 TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

### **3.03 TESTING AND INSPECTION**

- A. See individual specification sections for testing, inspection, and special inspections required.
- B. Testing Agency Duties:
  - 1. Test samples of mixes and materials submitted by Contractor.
  - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
  - 3. Perform specified sampling and testing of products in accordance with specified standards.
  - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
  - 6. Perform additional tests and inspections required by Architect.
  - 7. Attend preconstruction meetings or as requested by Architect or Contractor.
  - 8. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  - 2. Agency may not approve or accept any portion of the Work.
  - 3. Agency may not assume any duties of Contractor.
  - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 3. Provide incidental labor and facilities:
    - a. To provide access to Work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
    - c. To facilitate tests/inspections.
    - d. To provide storage and curing of test samples.



4. Notify testing agency a minimum of 24 hours prior to expected time for operations requiring testing/inspection services.
  5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
  6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

#### **3.04 MANUFACTURERS' FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

#### **3.05 DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.
- C. If, in the opinion of Owner, it is not practical to remove and replace the work, Owner will direct an appropriate remedy or adjust payment.

**END OF SECTION 01 40 00**

**SECTION 01 50 00**  
**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Dewatering
- B. Temporary utilities.
- C. Temporary Controls: enclosures and fencing.
- D. Security requirements.
- E. Vehicular access and parking.
- F. Waste removal facilities and services.

**1.02 TEMPORARY UTILITIES**

- A. Owner will provide the following:
  - 1. Electrical power and metering, consisting of connection to existing facilities.
  - 2. Water supply, consisting of connection to existing facilities.
- B. Provide and pay for all electrical power, lighting, and water required for construction purposes.
- C. Temporary Water Service
  - 1. Cost of Water Used: By Contractor.
  - 2. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
  - 3. Connect to existing water source.
    - a. Exercise measures to conserve water.
    - b. Provide separate metering and reimburse Owner for cost of water used.
  - 4. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.
  - 5. Use trigger-operated nozzles for water hoses, to avoid waste of water.
- D. Temporary Lighting
  - 1. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft .
  - 2. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
  - 3. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.
  - 4. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
  - 5. Maintain lighting and provide routine repairs.
  - 6. Permanent building lighting may be utilized during construction.
- E. Temporary Ventilation
  - 1. Existing ventilation equipment may not be used.

**1.03 FENCING**

- A. Construction: Commercial grade chain link fence.
- B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

**1.04 SECURITY**

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

**1.05 VEHICULAR ACCESS AND PARKING**

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.

- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

#### **1.06 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site weekly.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

#### **1.07 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to specified condition.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

**END OF SECTION 01 50 00**

**SECTION 01 57 13**  
**TEMPORARY EROSION AND SEDIMENT CONTROL**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
- C. Restoration of areas eroded due to insufficient preventive measures.
- D. Performance bond.
- E. Compensation of Owner for fines levied by authorities having jurisdiction due to non-compliance by Contractor.

**1.02 RELATED REQUIREMENTS**

- A. Section 31 22 00 - Grading: Temporary and permanent grade changes for erosion control.
- B. Section 32 11 23 - Aggregate Base Courses: Temporary and permanent roadways.
- C. Section 32 92 23 - Sodding: Permanent turf for erosion control.

**1.03 PERFORMANCE REQUIREMENTS**

- A. Develop and follow an Erosion and Sedimentation Prevention Plan and submit periodic inspection reports.
- B. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
- C. Provide to Owner a Performance Bond covering erosion and sedimentation preventive measures only, in an amount equal to 100 percent of the cost of erosion and sedimentation control work.
- D. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.
- E. Storm Water Runoff: Control increased storm water runoff due to disturbance of surface cover due to construction activities for this project.
  - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
  - 2. Anticipate runoff volume due to the most extreme short term and 24-hour rainfall events that might occur in 25 years.
- F. Erosion On Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.
  - 1. Control movement of sediment and soil from temporary stockpiles of soil.
  - 2. Prevent development of ruts due to equipment and vehicular traffic.
  - 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- G. Erosion Off Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
  - 1. Prevent windblown soil from leaving the project site.
  - 2. Prevent tracking of mud onto public roads outside site.
  - 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
  - 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- H. Sedimentation of Waterways On Site: Prevent sedimentation of waterways on the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
  - 1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
  - 2. If sediment basins are used as temporary preventive measures, pump dry and remove deposited sediment after each storm.

- I. Sedimentation of Waterways Off Site: Prevent sedimentation of waterways off the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
  - 1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
- J. Open Water: Prevent standing water that could become stagnant.
- K. Maintenance: Maintain temporary preventive measures until permanent measures have been established.

#### **1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Erosion and Sedimentation Control Plan:
  - 1. Include:
    - a. Site plan identifying soils and vegetation, existing erosion problems, and areas vulnerable to erosion due to topography, soils, vegetation, or drainage.
    - b. Site plan showing grading; new improvements; temporary roads, traffic accesses, and other temporary construction; and proposed preventive measures.
    - c. Where extensive areas of soil will be disturbed, include storm water flow and volume calculations, soil loss predictions, and proposed preventive measures.
    - d. Schedule of temporary preventive measures, in relation to ground disturbing activities.
    - e. Other information required by law.
    - f. Format required by law is acceptable, provided any additional information specified is also included.
  - 2. Obtain the approval of the Plan by authorities having jurisdiction.
  - 3. Obtain the approval of the Plan by Owner.
- C. Certificate: Mill certificate for silt fence fabric attesting that fabric and factory seams comply with specified requirements, signed by legally authorized official of manufacturer; indicate actual minimum average roll values; identify fabric by roll identification numbers.
- D. Inspection Reports: Submit report of each inspection; identify each preventive measure, indicate condition, and specify maintenance or repair required and accomplished.

### **PART 2 PRODUCTS**

#### **2.01 MATERIALS**

- A. Mulch: Use one of the following:
  - 1. Erosion control matting or netting.
- B. Silt Fence Fabric: Polypropylene geotextile resistant to common soil chemicals, mildew, and insects; non-biodegradable; in longest lengths possible; fabric including seams with the following minimum average roll lengths:
  - 1. Average Opening Size: 30 U.S. Std. Sieve, maximum, when tested in accordance with ASTM D4751.
  - 2. Permittivity:  $0.05 \text{ sec}^{-1}$ , minimum, when tested in accordance with ASTM D4491/D4491M.
  - 3. Ultraviolet Resistance: Retaining at least 70 percent of tensile strength, when tested in accordance with ASTM D4355/D4355M after 500 hours exposure.
  - 4. Tensile Strength: 100 pounds-force, minimum, in cross-machine direction; 124 pounds-force, minimum, in machine direction; when tested in accordance with ASTM D4632/D4632M.
  - 5. Elongation: 15 to 30 percent, when tested in accordance with ASTM D4632/D4632M.
  - 6. Tear Strength: 55 pounds-force, minimum, when tested in accordance with ASTM D4533/D4533M.
  - 7. Color: Manufacturer's standard, with embedment and fastener lines preprinted.
- C. Silt Fence Posts: One of the following, minimum 5 feet long:
- D. Gravel: See Section 32 11 23 for aggregate.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine site and identify existing features that contribute to erosion resistance; maintain such existing features to greatest extent possible.

### 3.02 PREPARATION

- A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

### 3.03 SCOPE OF PREVENTIVE MEASURES

- A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.
- B. Construction Entrances: Traffic-bearing aggregate surface.
  - 1. Width: As required; 20 feet, minimum.
  - 2. Length: 50 feet, minimum.
  - 3. Provide at each construction entrance from public right-of-way.
  - 4. Where necessary to prevent tracking of mud onto right-of-way, provide wheel washing area out of direct traffic lane, with drain into sediment trap or basin.
- C. Linear Sediment Barriers: Made of silt fences.
  - 1. Provide linear sediment barriers:
    - a. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
  - 2. Space sediment barriers with the following maximum slope length upslope from barrier:
    - a. Slope of Less Than 2 Percent: 100 feet..
    - b. Slope Between 2 and 5 Percent: 75 feet.
    - c. Slope Between 5 and 10 Percent: 50 feet.
    - d. Slope Between 10 and 20 Percent: 25 feet.
    - e. Slope Over 20 Percent: 15 feet.
- D. Storm Drain Curb Inlet Sediment Trap: Protect each curb inlet using one of the following measures:
  - 1. Filter fabric wrapped around hollow concrete blocks blocking entire inlet face area; use one piece of fabric wrapped at least 1-1/2 times around concrete blocks and secured to prevent dislodging; orient cores of blocks so runoff passes into inlet.
  - 2. Straw bale row blocking entire inlet face area; anchor into pavement.
- E. Storm Drain Drop Inlet Sediment Traps: As detailed on drawings.
- F. Temporary Splash Pads: Stone aggregate over filter fabric; size to suit application; provide at downspout outlets and storm water outlets.
- G. Soil Stockpiles: Protect using one of the following measures:
  - 1. Cover with polyethylene film, secured by placing soil on outer edges.
  - 2. Cover with mulch at least 4 inches thickness of pine needles, sawdust, bark, wood chips, or shredded leaves, or 6 inches of straw or hay.
- H. Mulching: Use only for areas that may be subjected to erosion for less than 6 months.
- I. Temporary Seeding: Use where temporary vegetated cover is required.

### 3.04 INSTALLATION

- A. Traffic-Bearing Aggregate Surface:
  - 1. Excavate minimum of 6 inches.
  - 2. Place geotextile fabric full width and length, with minimum 12 inch overlap at joints.
  - 3. Place and compact at least 6 inches of 1 1/2 to 3 1/2 inch diameter stone.
- B. Silt Fences:
  - 1. Store and handle fabric in accordance with ASTM D4873/D4873M.
  - 2. Where slope gradient is less than 3:1 or barriers will be in place less than 6 months, use nominal 16 inch high barriers with minimum 36 inch long posts spaced at 6 feet maximum, with fabric embedded at least 4 inches in ground.
  - 3. Where slope gradient is steeper than 3:1 or barriers will be in place over 6 months, use nominal 28 inch high barriers, minimum 48 inch long posts spaced at 6 feet maximum, with fabric embedded at least 6 inches in ground.
  - 4. Where slope gradient is steeper than 3:1 and vertical height of slope between barriers is more than 20 feet, use nominal 32 inch high barriers with woven wire reinforcement and steel posts spaced at 4 feet maximum, with fabric embedded at least 6 inches in ground.
  - 5. Install with top of fabric at nominal height and embedment as specified.

6. Do not splice fabric width; minimize splices in fabric length; splice at post only, overlapping at least 18 inches, with extra post.
7. Wherever runoff will flow around end of barrier or over the top, provide temporary splash pad or other outlet protection; at such outlets in the run of the barrier, make barrier not more than 12 inches high with post spacing not more than 4 feet.

### **3.05 MAINTENANCE**

- A. Inspect preventive measures weekly, within 24 hours after the end of any storm that produces 0.5 inches or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Silt Fences:
  1. Promptly replace fabric that deteriorates unless need for fence has passed.
  2. Remove silt deposits that exceed one-third of the height of the fence.
  3. Repair fences that are undercut by runoff or otherwise damaged, whether by runoff or other causes.
- D. Clean out temporary sediment control structures weekly and relocate soil on site.
- E. Place sediment in appropriate locations on site; do not remove from site.

### **3.06 CLEAN UP**

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by Architect.
- B. Clean out temporary sediment control structures that are to remain as permanent measures.
- C. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

**END OF SECTION 01 57 13**

**SECTION 01 60 00**  
**PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 40 00 - Quality Requirements: Product quality monitoring.
- B. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

**1.03 SUBMITTALS**

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
  - 1. Submit within 15 days after date of Notice to Proceed.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

**PART 2 PRODUCTS**

**2.01 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 01 40 00 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
  - 1. Made using or containing CFC's or HCFC's.
  - 2. Containing lead, cadmium, or asbestos.
- D. Where other criteria are met, Contractor shall give preference to products that:
  - 1. If used on interior, have lower emissions, as defined in Section 01 61 16.
  - 2. If wet-applied, have lower VOC content, as defined in Section 01 61 16.

**2.02 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

**2.03 MAINTENANCE MATERIALS**

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



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

## **PART 3 EXECUTION**

### **3.01 SUBSTITUTION PROCEDURES - PRIOR TO BID OPENING**

- A. The Contractor or any Subcontractor's Proposal shall be based upon the materials, equipment, or processes specifically named in the Contract Documents. The word "processes" as used herein includes methods or systems of construction.
  - 1. Products are generally specified by ASTM or other reference standard, and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed.
  - 2. Before the Pre-bid Meeting, or in the absence thereof 10 days prior to the Bid Opening, the Owner and Architect will consider a formal request for the substitution of products in place of those specified under the following conditions:
    - a. The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract Documents, including product identification and description, performance and test data, references and samples where applicable, and an itemized comparison of the proposed substitution with the products specified with data relating to Contract Time Schedule, design and artistic effect where applicable, and its relationship to separate contracts.
    - b. The request is accompanied by accurate cost data on the proposed substitution in comparison with the product specified, whether or not modification of the Contract Sum is to be a consideration.
- B. Request for substitution based on paragraph above, when forwarded by the Contractor to the Architect, are understood to mean that the Contractor:
  - 1. Represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
    - a. Will provide the same guarantee for the substitution that he would for that specified;
    - b. Certifies that the cost data presented is complete and includes all related costs under this contract, but excludes costs under separate contracts and the Architect's re-design cost, and that he waives all claims for additional costs related to the substitution which subsequently become apparent; and
    - c. Will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be completed in all respects.
    - d. The Owner and Architect do not have to consider substitutions after the Pre- bid Meeting. No substitutions shall be made unless acceptable to the Owner and Architect in writing.

### **3.02 SUBSTITUTION PROCEDURES - AFTER BID OPENING**

- A. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- B. The Owner and Architect will consider a formal request for the substitution of products in place of those specified under the following conditions:
  - 1. Required for compliance with local authority interpretation of code requirement or insurance regulations then existing as approved in writing by Architect.
  - 2. Unavailability of specified products through no fault of Contractor.
  - 3. Subsequent information discloses inability of specified products to perform properly or to fit in designated space.
  - 4. Manufacturer/Fabricator refuses to certify or guarantee performance of specified products as required.
  - 5. When it is clearly seen in the judgement of the Architect that a substitution would be substantially to the Owner's best interest, in terms of cost, time or other considerations.
- C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request.

### **3.03 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.04 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Do not store products directly on the ground.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- L. Prevent contact with material that may cause corrosion, discoloration, or staining.
- M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- N. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION 01 60 00**

## **SECTION 01 61 16**

### **VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.

##### **1.02 DEFINITIONS**

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Exterior applied products (for Healthcare and Schools projects only).
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.
- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
  - 1. Concrete.

##### **1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

##### **1.04 QUALITY ASSURANCE**

- A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), ASTM D3960, or State of Illinois Title 35, unless otherwise indicated.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Report of laboratory testing performed in accordance with requirements.
    - b. Published product data showing compliance with requirements.
    - c. Certification by manufacturer that product complies with requirements.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. VOC/VOM Content-Restricted Products: VOC/VOM content not greater than required by the following:
  - 1. All applicable products used on Project shall comply with requirements of State of Illinois Title 35 whether or not specifically referenced.
  - 2. All Interior Products: Products shall comply with VOC/VOM content limits when calculated according to State of Illinois Title 35. In case of conflict between reference standards, the more stringent shall be required.
    - a. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule and State of Illinois Title 35.
    - b. Aerosol Adhesives: GreenSeal GS-36 and State of Illinois Title 35.
    - c. Joint Sealants: SCAQMD 1168 Rule and State of Illinois Title 35.
    - d. Paints and Coatings: Each color and type; most stringent of the following:
      - 1) 40 CFR 59, Subpart D.

- 2) State of Illinois Title 35
  3. Wet-Applied Roofing and Waterproofing: Comply with State of Illinois Title 35.
  4. Exterior Applied Coatings, sealers and other wet applied coatings: Comply with State of Illinois Title 35.
- C. Products containing ozone depleting compounds: Comply with State of Illinois Title 35.

### **PART 3 EXECUTION**

#### **3.01 FIELD QUALITY CONTROL**

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

#### **3.02 SCHEDULE OF REQUIREMENTS**

- A. The following list incorporates commonly used construction products with their required VOC/VOM requirements. This list is for reference and does not include all products. For a complete list see State of Illinois Title 35. VOM content limit is given in grams/liter with (pounds/gallon) unless otherwise noted.
  1. Coatings
    - a. Flat Coatings: 100 (0.8)
    - b. Non-Flat Coatings: 150 (1.3)
    - c. Non-Flat-High-Gloss Coatings: 250 (2.1)
  2. Bituminous Roof Coatings: 300 (2.5)
  3. Bituminous Roof Primers: 350 (2.9)
  4. Bond Breakers: 350 (2.9)
  5. Clear Wood Coatings
    - a. Clear Brushing Lacquers: 680 (5.7)
    - b. Lacquers (including lacquer sanding sealers): 550 (4.6)
    - c. Sanding Sealers (other than lacquer sanding sealers): 350 (2.9)
    - d. Varnishes: 350 (2.9)
  6. Concrete Curing Compounds: 350 (2.9)
  7. Concrete Surface Retarder: 780 g/l (6.5)
  8. Dry Fog Coatings: 400 (3.3)
  9. Fire Resistive Coatings: 350 (2.9)
  10. Fire Retardant Coatings
    - a. Clear: 650 (5.4)
    - b. Opaque: 350 (2.9)
  11. Floor Coatings: 250 (2.1)
  12. Primers, Sealers, and Undercoaters: 200 (1.7)
  13. Quick-Dry Enamels: 250 (2.1)
  14. Quick-Dry Primers, Sealers and Undercoaters: 200 (1.7)
  15. Roof Coatings: 250 (2.1)
  16. Roof Coatings: 250 (2.1)
  17. Rust Preventative Coatings: 400 (3.3)
  18. Shellacs
    - a. Clear: 730 (6.1)
    - b. Opaque: 550 (4.6)
  19. Specialty Primers, Sealers, and Undercoaters: 350 (2.9)
  20. Stains: 250 (2.1)
  21. Swimming Pool Coatings: 450 (2.8)
  22. Swimming Pool repair and Maintenance Coatings: 340 (2.8)
  23. Thermoplastic Rubber Coatings and Mastics: 550 (4.6)
  24. Traffic Marking Coatings: 150 (1.3)
  25. Waterproofing Concrete/Masonry Sealers: 400 (3.3)
  26. Waterproofing Sealers: 250 (2.1)

- 27. Wood Preservatives: 350 (2.9)
- 28. Coatings not listed: See State of Illinois Title 35,

**END OF SECTION 01 61 16**

**SECTION 01 70 00**  
**EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, et al.
- C. Cutting and patching.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Demonstration and instruction of Owner personnel.
- G. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- H. General requirements for maintenance service.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 45 33 - Code-Required Special Inspections and Procedures: Code related special inspections.
- E. Section 01 50 00 - Temporary Facilities and Controls: Temporary enclosures and partitions.
- F. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- G. Section 01 79 00 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections
- H. Section 02 41 00 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.
- I. Individual Product Specification Sections:
  - 1. Advance notification to other sections of openings required in work of those sections.

**1.03 REFERENCE STANDARDS**

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

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
  - 1. On request, submit documentation verifying accuracy of survey work.
  - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
  - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

**1.05 QUALIFICATIONS**

- A. For demolition work, employ a firm specializing in the type of work required.
  - 1. Minimum of 5 years of documented experience.

- B. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,
- C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located. Employ only individual(s) trained and experienced in establishing and maintaining horizontal and vertical control points necessary for laying out construction work on project of similar size, scope and/or complexity.
- D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

#### **1.06 PROJECT CONDITIONS**

- A. Use of explosives is not permitted.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
  - 1. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
  - 2. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
- H. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.

#### **1.07 COORDINATION**

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## **PART 2 PRODUCTS**

### **2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 - Product Requirements.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### **3.02 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### **3.03 LAYING OUT THE WORK**

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- E. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- F. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- G. Utilize recognized engineering survey practices.
- H. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
  - 2. Grid or axis for structures.
  - 3. Building foundation, column locations, ground floor elevations.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.



### **3.04 GENERAL INSTALLATION REQUIREMENTS**

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

### **3.05 ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to Architect before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
  - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
  - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
  - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Relocate items indicated on drawings.
  - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Services (Including but not limited to Plumbing, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    - b. Provide temporary connections as required to maintain existing systems in service.
  - 4. Verify that abandoned services serve only abandoned facilities.
  - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- F. Protect existing work to remain.

1. Prevent movement of structure; provide shoring and bracing if necessary.
  2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  3. Repair adjacent construction and finishes damaged during removal work.
- G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
  2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
  3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
  4. Trim existing wood doors as necessary to clear new floor finish. Refinish trim as required.
- H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- I. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- J. Clean existing systems and equipment.
- K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- L. Do not begin new construction in alterations areas before demolition is complete.
- M. Comply with all other applicable requirements of this section.

### **3.06 CUTTING AND PATCHING**

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
1. Complete the work.
  2. Fit products together to integrate with other work.
  3. Provide openings for penetration of mechanical, electrical, and other services.
  4. Match work that has been cut to adjacent work.
  5. Repair areas adjacent to cuts to required condition.
  6. Repair new work damaged by subsequent work.
  7. Remove samples of installed work for testing when requested.
  8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- J. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  2. Match color, texture, and appearance.

3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### **3.07 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

### **3.08 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### **3.09 SYSTEM STARTUP**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- C. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- D. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### **3.10 DEMONSTRATION AND INSTRUCTION**

- A. See Section 01 79 00 - Demonstration and Training.

### **3.11 ADJUSTING**

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- B. Testing, adjusting, and balancing HVAC systems: See Section 23 05 93 - Testing, Adjusting, and Balancing for HVAC.

### **3.12 FINAL CLEANING**

- A. Execute final cleaning prior to final project assessment.
  1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

- F. Clean filters of operating equipment.
- G. Clean debris from downspouts, scuppers, overflow drains, area drains, and drainage systems.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.13 CLOSEOUT PROCEDURES - SUBSTANTIAL COMPLETION**

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Architect.
- B. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
  - 1. Inspection: Submit a written request for inspection for Substantial Completion. Upon receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. The Architect will make an inspection within ten (10) working days after receipt of certification, together with Owner's Representative. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
    - a. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
    - b. Results of completed inspection will form the basis of requirements for Final Completion.
- C. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- D. Owner will occupy all of the building as specified in Section 01 10 00.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Owner's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request
  - 1. Prepare a list of items to be completed and corrected (punch list).
  - 2. Submit written certification, to Architect, that work is substantially complete.
  - 3. Advise Owner of pending insurance changeover requirements.
  - 4. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 5. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 6. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 7. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 8. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  - 9. Complete startup testing of systems.
  - 10. Submit test/adjust/balance records.
  - 11. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 12. Advise Owner of changeover in heat and other utilities.
  - 13. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
  - 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- G. Should Architect consider that work is substantially complete:
  - 1. Architect will prepare a Certificate of Substantial Completion, containing:
    - a. Proposed Date of Substantial Completion.
    - b. Contractor's list of items to be completed or corrected, verified and amended by Architect.
    - c. The time within which Contractor shall complete or correct work of listed items.

- d. Time and date Owner will assume possession of work or designated portion thereof.
- e. Responsibilities of Owner and Contractor for:
  - 1) Insurance
  - 2) Utilities
  - 3) Operation of mechanical, electrical and other systems
  - 4) Maintenance and cleaning
  - 5) Security
- f. Signatures of:
  - 1) Architect
  - 2) Contractor
  - 3) Owner
- 2. Owner occupancy of Project or Designated Portion of Project:
  - a. Contractor shall:
    - 1) Obtain certificate of occupancy
    - 2) Perform final cleaning in accordance with article "Cleaning".
  - b. Owner will occupy project, under provisions in Certificate of Substantial Completion.
- 3. Contractor: Complete work listed for completion or correction, within designated time.
- 4. Contractor shall submit closeout documents in accordance with requirements specified in 01 78 00 - Closeout Submittals.
- H. Should Architect consider that work is not substantially complete:
  - 1. Architect shall notify the Contractor stating the reasons.
  - 2. Architect and Owner's Representative will reinspect work.
  - 3. Correct items of work listed in Punch List and comply with requirements for access to Owner-occupied areas.

### **3.14 FINAL COMPLETION**

- A. Notify Architect in writing when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
  - 1. Contractor shall submit written certification that:
    - a. Contract documents have been reviewed.
      - 1) Portion of project for which he is responsible has been inspected for compliance with contract documents.
      - 2) Work has been completed in accordance with contract documents.
      - 3) Equipment and systems have been tested in presence of Owner's Representative and are operational.
      - 4) Project is completed and ready for final inspection with all punch list items completed.
    - b. Architect will make final inspection within ten (10) days after receipt of certification, with Owner's Representative.
- B. Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
    - a. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
    - b. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
    - c. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
  - 2. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
    - a. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 3. Contractor shall submit written certification that:
    - a. Contract documents have been reviewed.

- b. Portion of project for which he is responsible has been inspected for compliance with contract documents.
  - c. Work has been completed in accordance with contract documents.
  - d. Equipment and systems have been tested in presence of Owner's Representative and are operational.
  - e. Project is completed and ready for final inspection with all punch list items completed.
- 4. Contractor shall submit receipt indicating that all closeout documents have been received by BHFX for interactive closeout.
- 5. Architect will make final inspection within ten (10) days after receipt of certification, with Owner's Representative.
- C. Should Architect consider that work is not finally complete:
  - 1. He shall notify the Contractor and state reasons.
  - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice certifying that work is complete.
  - 3. Architect will reinspect work.
  - 4. Complete items of work determined by Architect and listed on Certificate of Substantial Completion.

### **3.15 REINSPECTION COSTS**

- A. Should Architect be required to perform additional inspections because of failure of work to comply with original certifications of Contractor, Owner will compensate Architect for additional services, and deduct amount paid from final payment to Contractor. Contractor shall pay Architect same hourly rate of \$207.00/hr.

### **3.16 MAINTENANCE**

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than two years from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
  - 1. The Contractor agrees to repair and replace all defective work including all labor and materials for the warranty period. The Contractor agrees to perform the corrective work within five (5) days of receiving notice from the Architect or Owner. Emergency conditions shall require the Contractor to perform corrective work within two (2) days. The Architect and Owner shall determine if the corrective work is part of the warranty. Their decision is binding. If the warranty work is not completed expeditiously as determined by the Owner and Architect, the Owner reserves the right to have the corrective work completed as well as any professional fees and the Contractor agrees he is liable for all costs within thirty (30) days of notice. After that date 1.5% interest per month shall be applied to the cost. The Contractor's bonds shall remain in effect for the warranty period.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

**END OF SECTION 01 70 00**

**SECTION 01 78 00**  
**CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.
- D. Electronic Closeout Documentation.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

- A. Project Record Documents: Submit documents to Architect minimum of ten days prior to submission of final payment application pencil copy..
- B. Operation and Maintenance Data:
  - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
  - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
  - 4. Submit one set of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
  2. Product substitutions or alternates utilized.
  3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured depths of foundations in relation to finish first floor datum.
  2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  4. Field changes of dimension and detail.
  5. Details not on original Contract drawings.
- G. Submit the following (No later than 14 days after substantial completion):
1. Project Record Documents.
  2. Operation and Maintenance Data.
  3. Guarantees and Bonds, if specified.
  4. Keys and Keying Schedule, if applicable.
  5. Spare Parts and Maintenance Materials, if specified.
  6. Certificate of Insurance for Products and Completed Operations.
  7. Evidence of compliance with requirements of governing authorities:
    - a. Certificates of Inspection/Startup Documentation:
      - 1) Mechanical and Plumbing equipment.
      - 2) Electrical equipment.
      - 3) Fire Protection systems.
    - b. Contractor shall furnish written certification that materials furnished on project meet all requirements of the Occupational Safety and Health Act. They shall also furnish written certifications that all materials comply with the requirements of the current NFPA #102 and NFPA #101, Code for Safety to Life from Fire in Buildings and Structures (Life Safety Code).
  8. Letter from each Contractor and Prime Contractor certifying that no asbestos-containing products were used in this project.
  9. Consent of Surety.
  10. Balancing Reports.
  11. Warranties.
  12. Property Survey (If specified in 31 23 16 - Excavation).
- H. At project closeout, Contractor shall submit preliminary documents following procedures outlined in Section 01 30 00 - Administrative Requirements to Architect for review. Revise documents in accordance with Architect's comments and resubmit.
1. After acceptance of closeout documents, Contractor shall submit electronic documents to BHFX for Electronic Closeout Document processing.

### **3.02 OPERATION AND MAINTENANCE DATA**

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For Each Product, Applied Material, and Finish:
  1. Product data, with catalog number, size, composition, and color and texture designations.
  2. Information for re-ordering custom manufactured products.



- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

### **3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS**

- A. For Each Item of Equipment and Each System:
  - 1. Description of unit or system, and component parts.
  - 2. Identify function, normal operating characteristics, and limiting conditions.
  - 3. Include performance curves, with engineering data and tests.
  - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer's printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Include test and balancing reports.
- O. Additional Requirements: As specified in individual product specification sections.

### **3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS**

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Follow BHFx Interactive Project Closeout requirements
- C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- D. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- E. Tables of Contents: List every item; where multiple volumes are required, include all volumes in Tables of Contents in each volume, with the current volume clearly identified.

- F. Drawings: Provide PDF file formatted for hardcopy sizes no greater than 30 x 42 inches and minimum size 11 x 17 inches. All text, dimensions and notes shall be readable with text heights no smaller than 1/16 inch height.

### **3.06 ELECTRONIC CLOSEOUT DOCUMENTATION**

- A. General: Provide a complete project closeout documentation package in electronic format. This package shall include:
1. Issued for Construction Plans, Specs.
  2. Project Record Documents.
  3. Approved Submittals.
  4. Operation and Maintenance Manuals.
  5. Warranties.
  6. Owner training Videos (.WMV or .MP4 Format).
  7. Project Contact Directory.
- B. The Electronic Closeout Documentation shall be prepared by BHFX Imaging. Contractor is responsible for all Electronic Closeout Fees.
- C. In order to facilitate the Electronic Closeout Documentation process, comply with the following procedures:
1. Contact BHFX Imaging for a Project Order Form a minimum of three months prior to the date of Substantial Completion to schedule a pre-closeout meeting.
    - a. BHFX Contact: 847-593-3161 for pricing information and closeout requirements.
  2. In order to facilitate the Electronic Closeout Documentation process, comply with the following procedures:
    - a. Review the following:
      - 1) Format of documents: PDF electronic format for all documents.
      - 2) Folder structure for storage and transfer of files.
      - 3) Schedule for collection and turn-over of closeout documentation.
      - 4) Record Document format procedures: Provide clean and accurate paper copies of the marked-up Record Documents (Drawings and Specifications) for scanning.
      - 5) Provide contact information for the individual responsible for the collection and transfer of the Electronic Closeout Documentation.
      - 6) Package contents.
      - 7) Review a complete listing of Electronic Closeout Documentation Package contents.
  3. Multi-building projects shall be organized by building.
    - a. Each submittal must be assigned to a building
    - b. Submittals pertaining to multiple buildings must be labeled or tagged with all buildings associated with that particular file.
    - c. Building specific folders can be generated. Files pertaining to multiple buildings must be added to all appropriate folders.
  4. Provide all documentation to BHFX Imaging for processing no later than 30 days after the date of Substantial Completion.
  5. Schedule a training conference with BHFX Imaging, Owner's Representative, and Construction Manager to present the completed Electronic Closeout Documentation Package.
  6. Provide documentation to Architect that BHFX Imaging has received all documents for their use.

### **3.07 WARRANTIES AND BONDS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.

- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

**END OF SECTION 01 78 00**

**SECTION 01 79 00**  
**DEMONSTRATION AND TRAINING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
  - 1. Landscape irrigation.
  - 2. Asphalt and concrete care and maintenance..
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
  - 1. Any weather-exposed or moisture protection products.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 78 00 - Closeout Submittals: Operation and maintenance manuals.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
  - 1. Submit to Architect for transmittal to Owner.
  - 2. Submit not less than four weeks prior to start of training.
  - 3. Revise and resubmit until acceptable.
  - 4. Provide an overall schedule showing all training sessions.
  - 5. Include at least the following for each training session:
    - a. Identification, date, time, and duration.
    - b. Description of products and/or systems to be covered.
    - c. Name of firm and person conducting training; include qualifications.
    - d. Intended audience, such as job description.
    - e. Objectives of training and suggested methods of ensuring adequate training.
    - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
    - g. Media to be used, such a slides, hand-outs, etc.
    - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
  - 1. Include applicable portion of O&M manuals.
  - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
  - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Training Reports:
  - 1. Identification of each training session, date, time, and duration.
  - 2. Sign-in sheet showing names and job titles of attendees.
  - 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.
- E. Video Recordings: Submit digital video recording of each demonstration and training session for Owner's subsequent use.
  - 1. Format: DVD Disc.
  - 2. Label each disc and container with session identification and date.

**1.04 QUALITY ASSURANCE**

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
  - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.

2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.01 DEMONSTRATION - GENERAL**

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstration may be combined with Owner personnel training if applicable.
- C. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
  1. Perform demonstrations UPON COMPLETION of Substantial Completion.

### **3.02 TRAINING - GENERAL**

- A. Conduct training on-site unless otherwise indicated.
- B. Owner will provide classroom and seating at no cost to Contractor.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
  1. The location of the O&M manuals and procedures for use and preservation; backup copies.
  2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
  3. Typical uses of the O&M manuals.
- F. Product- and System-Specific Training:
  1. Review the applicable O&M manuals.
  2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
  3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
  4. Provide hands-on training on all operational modes possible and preventive maintenance.
  5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
  6. Discuss common troubleshooting problems and solutions.
  7. Discuss any peculiarities of equipment installation or operation.
  8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
  9. Review recommended tools and spare parts inventory suggestions of manufacturers.
  10. Review spare parts and tools required to be furnished by Contractor.
  11. Review spare parts suppliers and sources and procurement procedures.
- G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

**END OF SECTION 01 79 00**

**SECTION 02 41 00**  
**DEMOLITION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Selective demolition of built site elements.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 23 00 - Alternates: Descriptions of items, administrative requirements.
- C. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 57 13 - Temporary Erosion and Sediment Control.
- E. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- F. Section 31 10 00 - Site Clearing: Vegetation and existing debris removal.
- G. Section 31 22 00 - Grading: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- H. Section 31 23 23 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- I. Section 32 92 19 - Seeding: To reestablish any disturbed grass areas.

**1.03 REFERENCE STANDARDS**

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards.
- B. 40 CFR 82 - Protection of Stratospheric Ozone.
- C. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
  - 1. Areas for temporary construction.
  - 2. Areas for temporary and permanent placement of removed materials.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

**1.05 QUALITY ASSURANCE**

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
  - 1. Minimum of 5 years of documented experience.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Fill Material: As specified in Section 31 23 00 - Earthwork and on the Civil drawings..

**PART 3 EXECUTION**

**3.01 SCOPE**

- A. Remove other items indicated, for recycling.
- B. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 31 22 00.

**3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Comply with other requirements specified in Section 01 70 00.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.

1. Obtain required permits.
  2. Comply with applicable requirements of NFPA 241.
  3. Use of explosives is not permitted.
  4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
  5. Provide, erect, and maintain temporary barriers and security devices.
  6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
  7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  8. Do not close or obstruct roadways or sidewalks without permit.
  9. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
  10. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
- F. Protect existing structures and other elements that are not to be removed.
1. Provide bracing and shoring.
  2. Prevent movement or settlement of adjacent structures.
  3. Stop work immediately if adjacent structures appear to be in danger.
- G. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- H. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
1. Inform Architect of hazardous materials including but not limited to PCB's, mercury and asbestos.
- I. Perform demolition in a manner that maximizes salvage and recycling of materials.
1. Dismantle existing construction and separate materials.
  2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- J. Burning of removed materials is not permitted.
- K. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

### **3.03 EXISTING UTILITIES**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

### **3.04 SELECTIVE DEMOLITION FOR ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to Architect before disturbing existing installation.
  - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
- E. Services (Including but not limited to Plumbing): Remove existing systems and equipment as indicated.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
  - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
  - 3. See Section 01 10 00 for other limitations on outages and required notifications.
  - 4. Remove abandoned pipe, ducts, conduits, and equipment; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
  - 4. Patch as specified for patching new work.

### **3.05 PLUMBING, FIRE SUPPRESSION AND HVAC DEMOLITION**

- A. Disconnect, demolish, and remove plumbing equipment and components indicated to be removed.
  - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
  - 2. Equipment to Be Removed: Disconnect and cap services and remove equipment.
  - 3. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
  - 4. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- B. Cut off exterior pipe a minimum of 24 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
  - 1. Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving portion(s) of building to be demolished.
- C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

### **3.06 REPAIR AND CLEANUP**

- A. Repair demolition performed in excess of that required. Return adjacent areas to condition existing prior to start of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.
- B. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave areas clean.

### **3.07 DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.



- C. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION 02 41 00**

**SECTION 07 92 00**  
**JOINT SEALANTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.

**1.03 REFERENCE STANDARDS**

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.
- B. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- D. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.
- E. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- F. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants.
- G. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- H. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
- I. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness.
- J. ASTM D638 - Standard Test Method for Tensile Properties of Plastics.
- K. State of Illinois Title 35 - Environmental Protection.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
- C. Joint-Sealant Schedule: Include the following information using designations provided here in "Sealant Schedule":
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
- D. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- E. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- F. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.
- G. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.
- H. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.

- I. Installation Log: Submit filled out log for each length or instance of sealant installed.
- J. Field Quality Control Log: Submit filled out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.

#### **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.
- C. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
  - 1. Adhesion Testing: In accordance with ASTM C794.
  - 2. Compatibility Testing: In accordance with ASTM C1087.
  - 3. Allow sufficient time for testing to avoid delaying the work.
  - 4. Deliver to manufacturer sufficient samples for testing.
  - 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
  - 6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.
- D. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
  - 1. Identification of testing agency.
  - 2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
    - a. Test date.
    - b. Copy of test method documents.
    - c. Age of sealant upon date of testing.
    - d. Test results, modeled after the sample form in the test method document.
    - e. Indicate use of photographic record of test.
- E. Field Adhesion Test Procedures:
  - 1. Allow sealants to fully cure as recommended by manufacturer before testing.
  - 2. Have a copy of the test method document available during tests.
  - 3. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
  - 4. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
  - 5. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect.
- F. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure.
  - 1. Sample: At least 18 inches long.
  - 2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch by that percentage; if adhesion failure occurs before the "1 inch mark" is that distance from the substrate, the test has failed.
  - 3. If either adhesive or cohesive failure occurs prior to minimum elongation, take necessary measures to correct conditions and re-test; record each modification to products or installation procedures.
- G. Field Adhesion Tests of Joints: Test for adhesion using most appropriate method in accordance with ASTM C1521, or other applicable method as recommended by manufacturer.

#### **1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

- B. Correct defective work within a two year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal , exhibit loss of adhesion or cohesion, or do not cure.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
  - 1. Dow Corning Corporation: [www.dowcorning.com/construction/sle](http://www.dowcorning.com/construction/sle).
  - 2. Master Builders Solutions; \_\_\_\_\_: [www.master-builders-solutions.com/en-us/#sle](http://www.master-builders-solutions.com/en-us/#sle).
  - 3. Momentive Performance Materials, Inc (formerly GE Silicones): [www.momentive.com/sle](http://www.momentive.com/sle).
  - 4. Pecora Corporation: [www.pecora.com](http://www.pecora.com).
  - 5. QUIKRETE Companies; \_\_\_\_\_: [www.quikrete.com/#sle](http://www.quikrete.com/#sle).
  - 6. Sika Corporation: [www.usa-sika.com](http://www.usa-sika.com).
  - 7. Tremco Commercial Sealants & Waterproofing: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - 8. W.R. Meadows, Inc: [www.wrmeadows.com/sle](http://www.wrmeadows.com/sle).
  - 9. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 JOINT SEALANTS - GENERAL**

- A. Sealants and Primers: Provide products with acceptable levels of volatile organic compound (VOC) content; see Section 01 61 16.
- B. Sealants and Primers: Compliance with VOC Content limits and other requirements of State of Illinois Title 35.

### **2.03 NONSAG JOINT SEALANTS**

- A. Type SS-1 - Non-Staining Hybrid Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 50 percent.
  - 2. Non-Staining To Porous Stone: Non-staining to light-colored marble when tested in accordance with ASTM C1248.
  - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
  - 4. Color: To be selected by Architect from manufacturer's standard range. Minimum 14 color options; if full range includes fewer than 14 color options, custom color options shall be made available to Architect for selection.
  - 5. Cure Type: \_\_\_\_\_.
  - 6. Products:
    - a. BASF Construction Chemicals-Building Systems; Masterseal NP100: [www.masterseal.basf.com](http://www.masterseal.basf.com)
    - b. Pecora Corporation; Dynatrol II Hybrid: [www.pecora.com](http://www.pecora.com).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Type PS-1 - Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
  - 1. Movement Capability: Plus and minus 35 percent, minimum.
- C. Type US-3 - Non-Sag "Traffic-Grade" Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Range: 20 to 30, Shore A, when tested in accordance with ASTM C661.
  - 3. Color: To be selected by Architect from manufacturer's standard range.
  - 4. Products:
    - a. Pecora Corporation; 300 SL.
    - b. Sika Corporation; Sikaflex 2C-SL.
    - c. Tremco Incorporation; Vulkem 45SSL.
    - d. Substitutions: See Section 01 60 00 - Product Requirements.

- D. Type ES-2 - Two-Component Epoxy Sealant: Flexible epoxy joint filler, solvent-free, used for embedding and sealing wire and traffic detection loops in concrete and asphalt pavement, and filling saw-cut control joints of interior concrete slabs.
  - 1. Hardness: 62, Shore D, when tested in accordance with ASTM D2240.
  - 2. Tensile Strength: 1,400 psi, when tested in accordance with ASTM D638.
- E. Type PS-1 - Polysulfide Sealant for Continuous Water Immersion: Polysulfide; ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and expected to withstand traffic.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
  - 3. Color: To be selected by Architect from manufacturer's standard range.
  - 4. Service Temperature Range: Minus 40 to 180 degrees F.
  - 5. Products:
    - a. Pecora Corporation; Synthcalk GC2+: [www.pecora.com](http://www.pecora.com).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.

## **2.04 SELF-LEVELING SEALANTS**

- A. Type SS-5 - Self-Leveling Silicone Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent, explicitly approved by manufacturer for traffic exposure when recessed below traffic surface; not expected to withstand continuous water immersion.
  - 1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.
  - 2. Color: Gray.
  - 3. Service Temperature Range: Minus 40 to 180 degrees F.
  - 4. Products:
    - a. Pecora Corporation; 300SL.
    - b. Sika Corporation; Sikasil 728SL.

## **2.05 ACCESSORIES**

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  - 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
  - 2. Open Cell: 40 to 50 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.
- D. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.
  - 1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
  - 2. Notify Architect of date and time that tests will be performed, at least seven days in advance.
  - 3. Record each test on Preinstallation Adhesion Test Log as indicated.
  - 4. If any sample fails, review products and installation procedures, consult manufacturer, or take whatever other measures are necessary to ensure adhesion; re-test in a different location; if unable to obtain satisfactory adhesion, report to Architect.

5. After completion of tests, remove remaining sample material and prepare joint for new sealant installation.

### **3.02 PREPARATION**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

### **3.03 INSTALLATION**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

### **3.04 SEALANT SCHEDULE**

- A. SS-1 (Hybrid Silicone Sealant)
  1. Exposure / Traffic: Exterior joints in vertical surfaces and non-traffic horizontal surfaces.
  2. Uses / Applications:
    - a. Control and expansion joints in cast-in-place concrete.
    - b. Vertical control and movement joints at exterior masonry.
    - c. Aluminum window and between windows and other materials.
    - d. Aluminum storefront, entrances and curtain wall between storefront and entrances and other materials.
    - e. Joints between materials listed above and frames of doors and windows.
    - f. Control and expansion joints in plaster soffit and overhead surfaces.
    - g. Concealed roofing sheet metal joints
- B. SS-3 (Mildew Resistant Silicone Sealant)
  1. Exposure / Traffic: Interior wet areas
  2. Uses / Applications:
    - a. Locker rooms, Toilet rooms, Shower areas, Kitchens, Janitor Closets
    - b. Joints between plumbing fixtures and adjoining walls, floors, and counters.
    - c. Tile control and expansion joints.
    - d. Metal Lockers and walls in locker rooms
- C. SS-4 (Silicone Sealant)
  1. Exposure / Traffic: Exterior joints in vertical surfaces.
  2. Uses / Applications:
    - a. Aluminum window and between windows and other materials.
    - b. Aluminum storefront, entrances and curtain wall between storefront and entrances and other materials.
- D. SS-5 (Silicone Sealant)
  1. Exposure / Traffic: Exterior joints in horizontal traffic surfaces.
  2. Uses / Applications:
    - a. Sealing of concrete roadway and sidewalk joints.

- b. Sealing of asphalt pavement joints.
- E. US-1 (Single Part Urethane Sealant)
  - 1. Exposure / Traffic: Interior moving joints in vertical surfaces and horizontal ceiling surfaces.
  - 2. Uses / Applications:
    - a. Joints between tops of non-fire rated walls and underside of floors and beams.
    - b. Vertical control joints on exposed surfaces of interior unit masonry and concrete walls and partitions
    - c. Perimeter joints between interior wall surfaces and frames.
    - d. Other joints between differing materials and as indicated.
- F. BR-1 (Butyl Sealant)
  - 1. Exposure / Traffic: Interior or Concealed Exterior
  - 2. Uses / Applications
    - a. Sealing thresholds.
    - b. Sealing between metal, wood and masonry in concealed roofing locations.

**END OF SECTION 07 92 00**

## **SECTION 31 22 00**

### **GRADING**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Removal of topsoil.
- B. Rough grading the site for grading and restoration of soils..
- C. Finish grading.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 32 92 19 - Seeding: Finish ground cover.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. Topsoil - Soil Type \_\_\_\_: Topsoil excavated on-site.
  - 1. Graded.
  - 2. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.

#### **PART 3 EXECUTION**

##### **3.01 EXAMINATION**

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.
- B. Verify the absence of standing or ponding water.

##### **3.02 PREPARATION**

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect from damage above- and below-grade utilities to remain.
- D. Provide temporary means and methods to remove all standing or ponding water from areas prior to grading.
- E. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
- F. Protect trees to remain by providing substantial fencing around entire tree at the outer tips of its branches; no grading is to be performed inside this line.

##### **3.03 ROUGH GRADING**

- A. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
- B. Do not remove topsoil when wet.
- C. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- D. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
- E. When excavating through roots, perform work by hand and cut roots with sharp axe.
- F. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
- G. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack surface water control.

##### **3.04 SOIL REMOVAL**

- A. Stockpile excavated topsoil on site.
- B. Stockpile excavated subsoil on site.
- C. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; protect from erosion.

##### **3.05 FINISH GRADING**

- A. Before Finish Grading:
  - 1. Verify building and trench backfilling have been inspected.



2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.
- C. Where topsoil is to be placed, scarify surface to depth of 3 inches.
- D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches.
- E. Place topsoil in areas indicated.
- F. Place topsoil during dry weather.
- G. Remove roots, weeds, rocks, and foreign material while spreading.
- H. Near plants spread topsoil manually to prevent damage.
- I. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- J. Lightly compact placed topsoil.
- K. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

### **3.06 TOLERANCES**

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
- B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch).

### **3.07 REPAIR AND RESTORATION**

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
- C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

### **3.08 FIELD QUALITY CONTROL**

- A. See Section 31 23 23 for compaction density testing.

### **3.09 CLEANING**

- A. Confirm if Owner wants the unused stockpiled topsoil and subsoil. If yes, grade stockpile area to prevent standing water and locate pile where Owner wishes to have it placed.
- B. Leave site clean and raked, ready to receive landscaping.

**END OF SECTION 31 22 00**

## **SECTION 31 23 23**

### **FILL**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Filling, backfilling, and compacting for paving and side-walks..
- B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 01 57 13 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- B. Section 31 22 00 - Grading: Site grading and removal and handling of soil to be re-used.

##### **1.03 DEFINITIONS**

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.
- C. Subgrade Elevations: 4 inches below finish grade elevations indicated on drawings, unless otherwise indicated.
- D. Finish Grade Elevations: 4 inches above subgrade elevations indicated on drawings, unless otherwise indicated.

#### **PART 2 PRODUCTS**

##### **2.01 FILL MATERIALS**

- A. General Fill - Fill Type (see project drawings): Complying with State of Illinois Highway Department standard.

#### **PART 3 EXECUTION**

##### **3.01 EXAMINATION**

- A. Identify required lines, levels, contours, and datum locations.
- B. Verify areas to be filled are not compromised with surface or ground water.

##### **3.02 PREPARATION**

- A. Scarify and proof roll subgrade surface to a depth of 6 inches to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

##### **3.03 FILLING**

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- F. Correct areas that are over-excavated.
  - 1. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.
- G. Compaction Density Unless Otherwise Specified or Indicated:
- H. Reshape and re-compact fills subjected to vehicular traffic.
- I. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.

### **3.04 FILL AT SPECIFIC LOCATIONS**

- A. Use general fill unless otherwise specified or indicated.
- B. Over Buried Utility Piping in Trenches:
  - 1. Compact in maximum 8 inch lifts to 95 percent of maximum dry density.
- C. At Lawn Areas:
  - 1. Use general fill.
  - 2. Fill up to subgrade elevations.
  - 3. Compact to 95 percent of maximum dry density.
  - 4. See Section 31 22 00 for topsoil placement.

### **3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

### **3.06 CLEANING**

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

**END OF SECTION 31 23 23**

**SECTION 32 16 23**  
**SIDEWALKS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Concrete sidewalks.

**1.02 REFERENCE STANDARDS**

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
- B. ACI 305R - Guide to Hot Weather Concreting.
- C. ACI 306R - Cold Weather Concreting.
- D. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- E. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
- F. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
- G. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- H. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- I. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Concrete: Provide data on admixtures.
- C. Design Data: Indicate pavement thickness, design strength, reinforcement, and typical details.
- D. Weather Data: Records during placement of asphalt or concrete, including date, location of placement, quantity, and air temperature.

**1.04 FIELD CONDITIONS**

- A. Follow recommendations of ACI 305R and ACI 306R when concreting during hot and cold weather, respectively.

**PART 2 PRODUCTS**

**2.01 CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS**

- A. Concrete Forms: Wood.
- B. Concrete Materials: Comply with ASTM C94/C94M.
- C. Aggregate: Pit Run, washed, 3/8 inch (1 cm) stone; free of shale, clay, friable material and debris.
- D. Reinforcement:
  - 1. Steel Welded Wire Reinforcement: ASTM A1064/A1064M, plain type, flat sheets, unfinished.
- E. Joint Filler: Preformed expansion, with a thickness of 1/2 inch.
- F. Curing Compound: Synthetic, Type 1, Class A, according to ASTM C309.
- G. Surface Sealer: Topical, Type 1, Class A, according to ASTM C1315.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify gradients and elevations of the subgrade are correct as shown on drawings. Where poor subgrade material is encountered, remove and replace with suitable material.
- B. Verify compacted subgrade is acceptable, ready to support imposed loads and paving, and ready to receive work.

### **3.02 SUBBASE PREPARATION**

- A. Maintain subgrade in a smooth, compacted condition with required section and established grade until concrete is placed.

### **3.03 CONCRETE SIDEWALK AND WHEELCHAIR RAMP INSTALLATION**

- A. Forming:
  - 1. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
  - 2. Sidewalk Forms: Place and secure forms to location, dimension, profile, and gradient shown on drawings. Height equal to the full depth of the finished sidewalk.
  - 3. Wheelchair Ramps: Place and secure forms to location, dimension, profile, and gradient shown on drawings. Comply with ADA Standards.
- B. Reinforcement:
  - 1. Place wire-mesh reinforcement mid-height of forms.
- C. Placement:
  - 1. Place concrete in a single lift.
  - 2. Consolidate concrete by tamping and spading.
- D. Joints:
  - 1. Spacing: Provide scored joints every 10 feet (3 m).
  - 2. Filler height equal to the full depth of the finished concrete.
- E. Finishing:
  - 1. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge, 1/4 inch radius.
  - 2. Wheelchair Ramps: Broomed perpendicular to slope.
  - 3. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.
  - 4. Place surface sealer on exposed concrete surfaces after hardening. Apply in accordance with manufacturer's instructions.

### **3.04 TOLERANCES**

- A. Surface Flatness: 1/4 inch, maximum, measured with 10 foot straight edge.

### **3.05 PROTECTION**

- A. Immediately after placement, protect sidewalk from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Do not permit pedestrian traffic over sidewalk for 7 days minimum after finishing.

**END OF SECTION 32 16 23**

## **SECTION 32 92 19**

### **SEEDING**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Finish Grading.
- B. Seeding, mulching and fertilizer.
- C. Maintenance.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 01 23 00 - Alternates: Descriptions of items, administrative requirements.
- B. Section 31 22 00 - Grading: Topsoil material.
- C. Section 31 22 00 - Grading: Preparation of subsoil and placement of topsoil in preparation for the work of this section.

##### **1.03 DEFINITIONS**

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil when mixed with soil amendments.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

##### **1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each type of product indicated.
- C. Product certificates.
- D. Planting schedule: Indicating anticipated planting dates.
- E. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

##### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Seed: Packed for delivery in suitable bags in accordance with standard commercial practice. Bags shall be tagged or labeled as required by State of Illinois Seed Law.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

##### **1.06 PROJECT CONDITIONS**

- A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit. Do not seed prior to March 15 nor after October 15.
- B. Utilities: Determine location of above grade and underground utilities and perform work in a manner which will avoid damage. Hand excavate, as required. Maintain grade stakes until removal is mutually agreed upon by parties concerned.

#### **PART 2 PRODUCTS**

##### **2.01 SEED MIXTURE**

- A. Seed Mixture (State certified):
  - 1. Kentucky Blue Grass (98/85): 50 percent.
  - 2. Academy Perennial Ryegrass: 15 percent.
  - 3. Chariot Hard Fescue: 10 percent.

4. Pearl Perennial Ryegrass: 10 percent.
5. Flash Perennial Ryegrass: 10 percent.
6. Penlawn Creeping Red Fescue Grass: 5 percent.

## 2.02 SOIL MATERIALS

- A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds and roots; pH value of minimum 5.4 and maximum 7.0.
  1. Topsoil shall be free of stones 3/4 inch or larger in any dimension and other extraneous materials harmful to plant growth.
  2. Topsoil Source: Reuse surface soil stockpiled on-site and supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Verify suitability of stockpiled surface soil to produce topsoil.
- B. Planting Soil Mix: Mix topsoil with the following soil amendments in the following quantities:
  1. Ratio of Loose Compost to Topsoil by Volume: 1:4
  2. Ratio of Loose Peat to Topsoil by Volume: 1:8

## 2.03 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
- B. Fertilizer: 12-12-12 analysis (prior to seeding); recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, to the following proportions:
  1. Nitrogen: 12 percent. Minimum 25% from an urea-formaldehyde source.
  2. Phosphate: 12%
  3. Potash: 12%; source to be potassium sulfate or potassium nitrate.
  4. Use specified fertilizer spread at a rate to provide 8 pounds of bulk fertilizer per 1,000 sq. ft. of seeded or sodded area.
  5. Contents or nutrient sources shall not include manures, sewage, sludges, vermiculite carriers, and muriate of potash. No combinations with herbicides.
- C. Fertilizer (Established turf and second fertilizing only: 20-3-8 analysis; recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, to the following proportions:
  1. Nitrogen: 20 percent. Minimum 25% from an urea-formaldehyde source.
  2. Phosphate: 3%
  3. Potash: 8%; source to be potassium sulfate or potassium nitrate.
  4. Use specified fertilizer spread at a rate to provide 5 pounds of bulk fertilizer per 1,000 sq. ft. of seeded or sodded area.
  5. Contents or nutrient sources shall not include manures, sewage, sludges, vermiculite carriers, and muriate of potash. No combinations with herbicides.
- D. Inorganic Soil Amendments
  1. Lime: ASTM C602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
    - a. Class: Class T, with a minimum 99 percent passing through No. 8 sieve and a minimum 75 percent passing through No. 60 sieve.
  2. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a passing through No. 6 (3.35 mm) sieve and a maximum 10 percent passing through No. 40 (0.425 mm) sieve.
  3. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
  4. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Organic Soil Amendments
  1. Compost: Well-composted, stable, and weed-free organic matter, pH rate of 5.5 to 8.
  2. Peat: Finely divided or granular texture, with pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having water-absorbing capacity of 1100 to 2000 percent.

- F. Planting Soil Mix - Mix topsoil with the following soil amendments in the following quantities:
  - 1. Ratio of Loose Compost to Topsoil by Volume: 1:4
  - 2. Ratio of Loose Peat to Topsoil by Volume: 1:8
- G. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.
- H. Stakes: Softwood lumber, chisel pointed.
- I. String: Inorganic fiber.

## **2.04 EROSION CONTROL MATERIALS**

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include biodegradable stakes to secure the erosion control blankets. Stakes shall be made of a bio-plastic resin and shall be Bio-STAKE by North American Green or similar approved biodegradable stakes.
- B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb/sq. yd, with 50 to 65 percent open area. Include biodegradable stakes to secure the erosion control blankets. Stakes shall be made of a bio-plastic resin and shall be Bio-STAKE by North American Green or similar approved biodegradable stakes.

## **2.05 TESTS**

- A. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.
- B. Submit minimum 10 oz sample of topsoil proposed. Forward sample to approved testing laboratory in sealed containers to prevent contamination.
- C. Testing is not required if recent tests are available for imported topsoil. Submit these test results to the testing laboratory for approval. Indicate, by test results, information necessary to determine suitability.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that prepared soil base is ready to receive the work of this Section.

### **3.02 PREPARATION**

- A. New/Modified Subgrades - Prepare subgrade and place topsoil in accordance with Section 31 23 00 - Earthwork and as follows:
  - 1. Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 3/4 inch in any dimension, and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
    - a. Apply soil amendments on surface, and thoroughly blend planting soil mix.
  - 2. Apply soil amendments on surface, and thoroughly blend planting soil mix.
  - 3. Spread planting soil mix to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- B. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
  - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
  - 2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
  - 3. Remove stones larger than 3/4 inch in any dimension, and sticks, roots, trash, and other extraneous matter.
  - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- D. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.



- E. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

### **3.03 FERTILIZING**

- A. Apply fertilizer (first) in accordance with manufacturer's instructions.
  - 1. New/Modified Subgrades - Apply specified fertilizer (first) to surface at the rate of 8 pounds of bulk fertilizer per 1,000 sf.
  - 2. Unchanged Subgrades - Apply specified fertilizer (first) at the rate of 5 pounds of bulk fertilizer per 1,000 sf.
- B. Apply after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.
- D. Mix thoroughly into upper 1/2 inches of topsoil.
- E. Lightly water to aid the dissipation of fertilizer.
- F. Apply fertilizer (second) in accordance with manufacturer's instructions after turf establishment.
  - 1. New/Modified Subgrades - Apply specified fertilizer to surface at the rate of 5 pounds of bulk fertilizer per 1,000 sf.
  - 2. Unchanged Subgrades - Apply specified fertilizer at the rate of 5 pounds of bulk fertilizer per 1,000 sf.

### **3.04 SEEDING**

- A. Apply seed at a rate of four to five lbs per 1000 sq ft evenly in two intersecting directions. Rake in lightly.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Rake seed lightly into top 1/8 to 1/4 inch of topsoil, roll lightly, and water with fine spray.
- D. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of 3/16 inch and roll to a smooth surface.
  - 1. Roll seeded area with roller not exceeding 112 lbs.
- E. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- F. Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inches. Maintain clear of shrubs and trees.
- G. Apply erosion control blanket / mesh to all seeded slopes exceeding 3:1 gradient.
- H. Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.
- I. Following germination, immediately re-seed areas without germinated seeds that are larger than 4 by 4 inches.

### **3.05 SATISFACTORY LAWNS**

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, dense stand of grass plants has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sf. and bare spots not exceeding 2 by 2 inches.
- B. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

### **3.06 CLEANING AND PROTECTION**

- A. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established. Treat, repair, or replace damaged landscape work as directed.
- B. Erosion control blanket/mesh where grade is 4 inches per foot or greater.
  - 1. Lay fabric smoothly on surface, bury top end of each section in 6 inch deep excavated topsoil trench. Provide 12 inch overlap of adjacent rolls. Backfill trench and rake smooth, level with adjacent soil.
  - 2. Secure outside edges and overlaps at 36 inch intervals with stakes.
  - 3. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.

- 4. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 6 inches.
- C. During landscaping, keep pavements clean and work area in an orderly condition.
- D. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- E. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of it off the Owner's property.
- F. Remove erosion-control measures after grass establishment period.
- G. Power-wash pavements to remove tire marks and dirt.

### **3.07 MAINTENANCE**

- A. Provide maintenance at no extra cost to Owner; Owner will not pay for water.
- B. See Section 01 70 00 - Execution Requirements, for additional requirements relating to maintenance service.
- C. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
  - 1. Seeded Lawns: 90 days from date of Substantial Completion.
  - 2. When full maintenance period has not elapsed at the end of the growing season, or if lawn areas are not fully established at that time, the Contractor's maintenance responsibilities will continue during the next growing season and will not end until a satisfactory lawn has been established.
- D. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.
- E. Neatly trim edges and hand clip where necessary.
- F. Immediately remove clippings after mowing and trimming.
- G. Water to prevent grass and soil from drying out.
  - 1. Insure a moist condition to a depth of 2 inches below surface, or to a point of run-off. Care should be taken and appropriate equipment used to prevent erosion, puddling and dislocation of seed.
- H. Roll surface to remove minor depressions or irregularities.
- I. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
- J. Immediately reseed areas that show bare spots.
- K. Second fertilizing:
  - 1. Seeded areas, 60 days after first fertilizing and seeding. Use specified fertilizer spread at a rate to provide 5 pounds of bulk fertilizer per 1,000 sf. of seeded area.
- L. Protect seeded areas with warning signs during maintenance period.

**END OF SECTION 32 92 19**