# PROJECT MANUAL

**for the**

# CLEAR CREEK AMANA
# DISCUS AND SHOT PUT IMPROVEMENTS

**for the**

# CLEAR CREEK AMANA COMMUNITY SCHOOL DISTRICT

**August 17, 2023**

**Prepared By:**


**MMS CONSULTANTS, INC.**
**1917 South Gilbert Street**
**Iowa City, Iowa**
**Ph (319) 351-8282**
**www.mmsconsultants.net**

THIS PAGE INTENTIONALLY LEFT BLANK

**CCA COMMUNITY**
**SCHOOL DISTRICT**
**SUPPORT SERVICES**

3023 220th Trail
**Facilities Management** Amana, IA 52203
Maury Gallagher, Building and Grounds Director P: 319-622-3255
F: 319-622-3108

# Clear Creek Amana Discus and Shot Put Improvements
# August 17th, 2023

## BID INFORMATION

| | |
|---|---|
| Bids Due: | 2:00 p.m. August 30th, 2023<br><br>CCA District Office<br>1486 Highway 6 NW<br>Oxford, Iowa 52322 |
| Project: | Clear Creek Amana Discus and Shot Put Improvements |
| Location: | CCA High School, 551 W Marengo Rd, Tiffin, Iowa |
| Bid Security: | No bid bond required (competitive quotation) |
| Performance Bond: | One hundred percent (100%) of bid to guarantee the maintenance of the improvements for two (2) years after its completion. |
| Description: | The project includes all labor, materials, and equipment necessary for the installation of discus and shot-put facilities including the following: stripping and stockpiling of topsoil, installation of PCC sidewalk and pavement, new discus net and equipment, new shot put field rock and field circle pads. The project also includes all site preparation, storm water pollution prevention, grading, site restoration, and other related work. |
| Owner Rep: | Maury Gallagher, Building and Grounds Director |
| Project Engineer: | Lucas Newton, P.L.A., MMS Consultants, Inc. |
| Pre-bid meeting: | Pre-bid site tours may be arranged with the Engineer or Owner. |
| Start Date:<br>Final Completion Date: | September 7, 2023<br>October 20, 2023 |
| Bid Documents: | Available at MMS Consultants, Inc.<br>1917 S. Gilbert Street,<br>Iowa City, IA 52240<br>(319) 351-8282<br>or email request for PDF files to:<br>J.Aronson@mmsconsultants.net |
| Engineer's Estimate: | $155,000.00 Base Bid |

Measurements for all work bid are the responsibility of the bidder. Quantities provided herein are drawing measurements and may not reflect final on-site quantities of the project.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**CLEAR CREEK AMANA DISCUS AND SHOT PUT IMPROVEMENTS**
**TABLE OF CONTENTS**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 00 0107

# CERTIFICATIONS

| | |
|---|---|
| | Certification: I hereby certify that this document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Landscape Architect under the laws of the State of Iowa.<br><br>Signed: Date:<br><br>Lucas C. Newton, P.L.A. Iowa Cert. No. **00437**<br>Discipline – Landscape Architecture<br>My bi-annual license renewal date is **June 30, 2025**.<br>Pages or sheets covered by this seal: All |

**THIS PAGE INTENTIONALLY LEFT BLANK**

## SECTION 00 2100

## INFORMATION FOR BIDDERS

### 1. FORM AND SUBMISSION OF PROPOSALS.

The Clear Creek Amana Community School District ("District") invites Proposals in the annexed form. Proposals will be received until 2:00 p.m. on August 30th, 2023, in the CCA District Office, 1486 Highway 6 NW, Oxford, IA 52322 at which time they will be opened and read aloud. Using the forms provided, Proposals can be hand delivered, faxed to 319-622-3108 or a PDF may be emailed to both Maury Gallagher (maurygallagher@ccaschools.org and Lori Robertson (lorirobertson@ccaschools.org) Any bid may be withdrawn prior to the scheduled time for opening bids or any authorized postponement. Any bid received after the time scheduled for receiving bids will not be considered. Award of bid is scheduled to take place at the September 6th, 2023 District School Board meeting or at such later time and place as the Board may then determine.

The Proposal must be submitted upon the blank form found herewith and must give all information required. All blank spaces must be completed, in ink or typewritten, in both words and figures. Mailed bids will NOT be accepted. The Proposal must be signed by the Bidder. A Bid Bond is NOT required for a competitive quotation.

No effort is made to emphasize any particular provision of the Contract, but bidders must familiarize themselves with every provision and its effect.

### 2. QUALIFICATION OF BIDDER

The District may make such investigations as deemed necessary to determine the ability of the bidder to perform the work. The bidder must furnish the District with information and data which the District may request.

If the information and data requested by the District is not furnished, the District may consider the bidder non-responsible. The District reserves the right, in its sole and absolute discretion, to accept the Proposal of a bidder despite the fact that said bidder has not submitted any information, list, data or statement requested.

The District reserves the right to reject any bid if the District determines, in its sole and absolute discretion, that the bidder is not properly qualified to carry out the obligations of the Contract and/or to complete the work contemplated by the Contract. Conditional bids will not be accepted.

### 3. INSPECTION OF SITE

A. Each bidder must inspect the site and must have read and be thoroughly familiar with the Contract documents. The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation regarding his or her bid.

B. To arrange a site visit prior to the bid, contact Lucas Newton or Joe Aronson at MMS Consultants, 319-351-8282.

### 4. SUBCONTRACTORS

Any person or entity to whom it is proposed to award a subcontract under this contract:

A. Must be acceptable to the District.

B. Must comply with the Bidding Requirement and the Contract Documents.

### 5. METHOD OF AWARD

The District may reject all bids or may award the contract to the responsible bidder submitting the lowest Base Bid the District wishes to accept. The District may reject any or all bids which do not allow the work to be completed within the available funds.

The District reserves the unqualified right, in its sole and absolute discretion, to reject all bids or to accept that Bid, if any, which in its judgment, it deems to be in the best interest of the District and to waive defects in any Bid or the bidding procedure.

In the event that a successful bidder defaults upon the Contract by failing to furnish a satisfactory Performance and Payment Bond, if required, and the District terminates the Contract, the District reserves the option to accept the Proposal of any other bidder, in which case such acceptance shall have the same effect as to such other bidder as though he or she were the originally successful bidder.

## 6. PERFORMANCE AND PAYMENT BOND

Upon delivery of the executed Contract, the successful Contractor must furnish the District with a surety bond(s) as security for faithful performance of the Contract and for payment of all persons who perform labor under the Contract and who furnish materials in connection with this Contract as specified in the General Conditions. The surety on the bond(s) must be a duly authorized surety company satisfactory to the District.

## 7. TIME OF COMPLETION

Date of commencement of the Contract shall be the day of execution by the parties, and the on-site construction work shall begin at the contractor's earliest convenience, and following the Owner issued Notice to Proceed. Contractor shall be present at the job site during normal working hours and shall proceed to completion with due diligence. All work under the contract shall be complete by October 20th, 2023. The contractor will be required to perform the work within the allowable time set forth in the Contract. In this connection, attention is directed to the provisions of the General Conditions and Special Conditions, if any, relative to delays and liquidated damages.

The Owner and the Contractor shall agree mutually on any changes in either the schedule or the rate of performance of the work which might either favorably or adversely affect such schedule dates. Unless otherwise specifically agreed in writing, no additional compensation or fee shall be paid by the Owner for any completion of all or any portions of the work earlier than scheduled.

**END OF SECTION**

**SECTION 00 2613**

**SUBSTITUTION REQUEST FORM**

**PROJECT:** Clear Creek Amana Discus and Shot Put Improvements

**MAKE SUBMITTAL A MINIMUM OF 2 BUSINESS DAYS PRIOR TO THE BID DATE TO:**

MMS Consultants, Inc. 1917 S. Gilbert Street, Iowa City, Iowa 52240. Fax: (319) 351-8476
Substitution requests may be emailed to j.aronson@mmsconsultants.net by 2:00 pm on August 28th.

**BID DATE:** August 30th, 2023 at 2:00 P.M.

**REQUEST FROM: _____**

**DATE:** ____/____/2023

**SPECIFICATION SECTION/TITLE:**
**_____-_____**

Description: _____; Article/Paragraph: _____

Proposed Substitution: _____
Manufacturer: _____
Trade Name: _____; Model: _____

**ACKNOWLEDGEMENTS AND ATTACHMENTS**

In submitting this Request, the Undersigned acknowledges and represents that:
Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
Same warranty will be furnished for proposed substitution as for specified product.
Same maintenance service and source of replacement parts, as applicable, is available.
Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
Proposed substitution does not affect dimensions and functional clearances.
Payment will be made for changes to building design, including design, detailing, and construction costs caused by the substitution.

Attachments: The following attachments are considered an integral part of this Request:
_____Product Data, descriptions and specifications necessary for evaluation.
_____Drawings necessary to indicate proper installation in the Work.
_____Tests and Reports consistent with specified performance requirements.
_____Samples:_____

**SUBMITTED BY: _____, (TITLE) _____**
Firm Name: _____
Telephone: _____Fax:_____

**ENGINEER'S REVIEW AND ACTION**
_____Substitution accepted - Make submittals in accordance with Specification Section 01 3300- Construction Submittals.

_____Substitution rejected - Use specified materials

Reviewed by :_____Date:_____

**THIS PAGE INTENTIONALLY LEFT BLACK**

# FORM OF PROPOSAL

NOTICE TO BIDDERS:

PLEASE DO NOT USE THE FORM OF PROPOSAL INCLUDED IN THE BOUND VOLUME OF THE SPECIFICATIONS. SEPARATE COPIES OF THIS PROPOSAL ARE ENCLOSED.

Name of Bidder _____

Address of Bidder _____

SUBMIT BIDS TO: CCA District Office
1486 Highway 6 NW
Oxford, Iowa 52322

Proposals are due **August 30th, 2023** at **2:00 PM** (local time).

The undersigned bidder has carefully examined the site of the proposed Work and is fully informed and satisfied as to the conditions there existing, the character and requirements of the proposed Work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this COMPETITIVE QUOTE, and bidder has carefully read and examined the Drawings, the annexed proposed AGREEMENT, the Specifications, any addenda and other Contract Documents therein referred to and knows and understands the terms and provisions thereof.

The undersigned bidder agrees that if this COMPETITIVE QUOTE is accepted, bidder will contract with the Owner, as provided in the copy of the Contract Documents, this PROPOSAL form being part of said Contract Documents, and that bidder will perform all the work and furnish all the materials and equipment, and provide all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other things required by the Contract Documents in the manner and within the time therein prescribed, and that Bidder will take in full payment therefore the lump sum as stated in the schedule below.

The undersigned bidder agrees to perform the work to complete the **Clear Creek Amana Discus and Shot Put Improvements** as described in the Drawings and Specifications dated August 17th, 2023 including all materials, labor and equipment necessary for the work prepared by MMS Consultants, Inc.

**QUOTE:** _____dollars ($ _____)

**ACCEPTANCE**
This offer shall be open to acceptance and is irrevocable for fifteen (15) days from the bid closing date. If this bid is accepted by the Owner within the time period stated above, we will:

- Execute the Agreement within seven days of receipt of Notice of Award.
- Furnish the required bonds within the three days of execution of the contract.
- Commence work within seven days of receipt of the Owner's Notice to Proceed.

**SUBCONTRACTORS**

The names of those persons, firms, companies or other parties with whom we intend to enter into a subcontract, together with the type of subcontracted work and approximate dollar amount of the subcontract, are as follows:

_____

_____

_____

_____

_____

NOTE: All subcontractors are subject to approval by the Owner.

**BID FORM SIGNATURES**

The undersigned bidder certifies that this proposal is made in good faith, and without collusion or connection with any other person or persons bidding on the work.

The undersigned bidder states that this proposal is made in conformity with the Contract Documents and agrees that, in the event of any discrepancies or differences between any conditions of this proposal and the Contract Documents prepared by the Clear Creek Amana Community School District, the more specific shall prevail.

FIRM: _____

By: _____

(Title) _____

(Business Address) _____

(Work Phone Number(s)) _____

(Name of Contact Person for Bid) _____

Date _____

Signature _____

# CONTRACT

THIS AGREEMENT, made this _____ day of _____, 20___, by and between the Clear Creek Amana Community School District of Oxford, Iowa, hereinafter called "Owner" and _____, of _____, hereinafter called "Contractor."

WHEREAS, the Contractor did on the 30th day of August, 2023, submit a proposal to the Clear Creek Amana Community School District, in Oxford, Iowa, for the Clear Creek Amana Discus and Shot Put Improvements Project, which improvement is described in certain plans, drawings and specifications for such improvement previously filed with the Owner, and which proposal is by reference made a part hereof; and

WHEREAS, it is mutually understood and agreed by the parties hereto that the general and special conditions, the general and detailed specifications, the form of proposal, all proceedings by the governing body of said Owner relating to the subject matter of this Contract, the general and detailed plans and drawings, addenda, all of which documents are hereinafter referred to as the "plans and specifications," are made a part of this Contract by this reference the same as if each had been fully set out and attached hereto.

NOW, THEREFORE, IT IS AGREED, in consideration of the following mutual agreements and covenants to be kept by each party that:

1. The Contractor agrees to furnish and pay for all plant, labor, mechanics, tools, materials, equipment, machinery, supplies, transportation, superintendence, insurance, taxes, utilities and services to perform all items set forth in Proposal hereto attached and made a part hereof and in strict compliance with said plans and specifications for a sum of $_____ subject to adjustment as provided in said documents.

2. The Owner agrees to pay the Contractor in accordance with the provisions of said specifications and the accepted proposal.

3. It is mutually agreed by each party hereto that all provisions of said plans and specifications shall be strictly complied with and conformed to the same as if re-written herein, and that no substitution shall be made except upon written consent of the Owner and of the Owner's Engineer or Architect, in the form of a Change Order, and such allowance shall in no manner be construed to release either party from any specified or implied obligations of said plans and specifications.

4. Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed inserted herein and the Contract shall be read and enforced as though it were included therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party, the Contract shall be amended to make such insertion.

5. If any provision of this Contract shall be such as to destroy its mutuality or to render it invalid or illegal, then, if it shall not appear to have been so material that without it the Contract would not have been made by the parties, it shall not be deemed to form part thereof but the balance of the Contract shall remain in full force and effect.

6. No waiver of any breach of any one of the agreements, terms, conditions or covenants of this Agreement by the Owner shall be deemed or imply or constitute a waiver of any other agreement, term, condition or covenant of this Agreement. The failure of the Owner to insist on strict performance of any agreement, term, condition or covenant, herein set forth, shall not constitute or be construed as a waiver of the Owner's rights thereafter to enforce any other default; neither shall such failure to insist upon strict performance be deemed sufficient grounds to enable the Contractor to forego or subvert or otherwise disregard any other agreement, term, condition or covenant of this Agreement.

This Contract is let subject to the following conditions:

A. Contractor shall commence off-site work under this Contract on the date of execution. Contractor shall commence on-site work on the project after the Owner issues a Notice to Proceed unless Owner issues a notice providing a different date. Contractor shall notify Owner in writing not less than five (5) days before beginning the work, if Owner issues a notice providing a different date to begin work.

B. Contractor shall complete all work no later than the completion date listed below corresponding to the bid schedule awarded, subject to any adjustments as provided in the Contract Documents. All work on the contract must be complete by October 20th, 2023.

C. The Contractor understands and agrees that the completion of the entire project within the time provided is an essential feature of this Agreement and that the Owner will sustain substantial damages, the amount of which is not possible to accurately determine at this time if the work is not so completed. The Contractor, therefore, agrees to proceed with due diligence, taking all precautions and making all necessary arrangements to insure the completion of the work within the prescribed time.

IN WITNESS WHEREOF, the parties hereto affix our signatures and seals at _____, _____, the day and year first above mentioned.

(SEAL)

OWNER: CLEAR CREEK AMANA COMM. SCHOOL DISTRICT

By_____

Title_____

ATTEST:

By_____

Title_____

CONTRACTOR: _____

(SEAL)

By_____

Title _____

ATTEST: (Witness)

By_____

Title_____

**SECTION 00 6200**

**PERFORMANCE AND PAYMENT BOND**

**KNOW ALL PERSONS**: That we _____ hereinafter called the Principal, and _____ _____ hereinafter called the Surety or Sureties, are held and firmly bound unto the Clear Creek Amana Community School District, hereinafter called the Owner, in the sum of _____ Dollars ($_____) for the payment of which the Principal and the Surety or Sureties bind, jointly and severally, themselves, their heirs, executors, administrators, successors and assigns.

**WHEREAS**, the Principal has, by means of a written Agreement, dated _____, entered into a contract with the Owner for the construction of the Clear Creek Amana Discus and Shot Put Improvements in Tiffin, Iowa, for the Clear Creek Amana Community School District, which agreement includes a guarantee of all work against defective workmanship and materials for a period of two (2) years from the date of final acceptance of the work by the obligee, a copy of which Agreement is by reference made a part hereof;

**WHEREAS**, the Agreement requires execution of this Performance and Payment Bond, to be completed by Contractor, in accordance with plans and specifications prepared by _____, which Agreement is by reference made a part hereof, and the agreed-upon work is hereafter referred to as the Project.

**NOW, THEREFORE**, the condition of the Obligation is such that, if the Principal shall faithfully perform the Contract on his or her part and shall fully indemnify and save harmless the Owner from all cost and damage which he or she may suffer by reason of failure so to do and shall fully reimburse and repay the Owner all outlay and expenses which the Owner may incur in making good any such default.

**AND FURTHER**, that if the Principal shall pay all persons who have contracts directly with the Principal for labor or materials, failing which such persons shall have a direct right of action against the Principal and Surety or Sureties under this Obligation, subject to the Owner's Priority.

**THEN**, this Obligation shall be null and void; otherwise, it shall remain in full force and effect.

**PROVIDED**, **HOWEVER**, that no suit, action or proceeding by reason of any default whatever shall be brought on this Bond after two (2) years from the date of final acceptance of the work.

**AND PROVIDED**, that any alterations which may be made in the terms of the Contract, or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Owner or the Principal and the Surety or Sureties, or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alteration, extension or forbearance being hereby waived.

**AND FURTHER PROVIDED**, the Principal and Surety or Sureties on this Bond hereby agree to pay all persons, firms or corporations having contracts directly with the Principal, or with subcontractors, all just claims due them for labor performed or material furnished, in the performance of the Contract on account of which this Bond is given, when the same are not satisfied out of the portion of the Contract price which the Owner shall retain until completion of the improvements, but the Principal and Surety or Sureties shall not be liable to said persons, forms or corporations, unless the claims of said claimants against said portions of the Contract price shall have been established as provided by law.

**EVERY** Surety on this bond shall be deemed and held, any contract to the contrary notwithstanding, to consent without notice:

(a) To the extension of time to the Principal in which to perform the contract.

(b) To changes in the plans, specifications or contract, when such changes do not involve an increase of more than twenty percent (20%) of the total Contract price, and shall be released only as to such excess increase.

(c) That no provision of this Bond or of any other contract shall be valid which limits to less than three (3) years from the date of final acceptance of the work the right to sue on this Bond for defects in workmanship or material not discovered or know to the obligee at the time such work was accepted.

**IT IS A FURTHER CONDITION OF THIS OBLIGATION** that the Principal and Surety, in accordance with provisions of Chapter 573, Code of Iowa, shall pay to all persons, firms or corporations having contracts directly with the Principal, including any of Principal's subcontractors, all claims due them for labor performed or materials furnished in the performance of the Agreement for whose benefit this bond is given. The provisions of Chapter 573, Code of Iowa, are a part of this bond to the same extent as if it were expressly set out herein.

**SIGNED AND SEALED** this _____ day of _____, 20_____.

_____ _____
Principal (Seal) Witness

_____
Title

_____ _____
Surety (Seal) Witness

_____
Title

# SECTION 00 7200
# GENERAL CONDITIONS

## 1. DEFINITION OF TERMS

1.1. "Owner" and "District" shall mean the Clear Creek Amana Community School District, acting through its Board of Directors.

1.2. "Person" shall mean any individual, partnership, society, association, joint stock company, corporation, estate, receiver, trustee, assignee or referee, whether appointed by a court or otherwise, and any combination of individuals.

1.3. "Bidder" shall mean any person who submits a proposal to furnish the work described in the Contract Documents.

1.4. "Contractor" shall mean the person with whom the Owner may enter into contract for the execution of the work specified.

1.5. "Subcontractor" shall mean the person supplying materials, labor, equipment and appurtenances for the work, such person having contractual relations with the Contractor, but not with the Owner.

1.6. "Work" shall mean the work to be done and the furnishings, equipment, supplies and materials to be furnished under the contract; unless some other meaning is indicated by the context.

## 2. CONTRACT DOCUMENTS

2.1. All documents listed or identified as part of the contract are each and all essential and component parts of agreement between Owner and Contractor.

2.2. Contract Documents shall be signed by Owner and Contractor.

2.3. Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of documents is to include all labor and materials, furniture, furnishings, equipment, and transportation necessary for proper execution of work. It is not intended that materials or work not covered by or properly inferable from any heading, branch, class or trade of the specifications shall be supplied unless distinctly noted. Materials or work described in words, which have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

2.4. Contract Documents, sometimes referred to as the "plans and specifications" shall mean and include but are not limited to the following parts as used herein:

2.4.1. Notice of Letting

2.4.2. Notice of Hearing

2.4.3. Information for Bidders

2.4.4. Proposal

2.4.5. Changes issued after the execution of the contract

2.4.6. Contract

2.4.7. Performance Bond, Labor and Material and Payment Bond, and Maintenance Bond

2.4.8. General Conditions

2.4.9. Special Conditions

2.4.10. Detailed Specifications

2.4.11. Addendum(s) issued to the foregoing.

## 3. PLANS

3.1. The work shall conform with the Contract Documents.

## 4. METHOD OF BIDDING

### 4.1. Lump Sum Bid

4.1.1. Each bidder shall submit a lump sum bid for the Project.

4.1.2. Unless otherwise specifically provided herein, the Contractor shall accept the compensation stated in the Contract as full payment for furnishing all the materials, transportation, apparatus, temporary structures, equipment, services, fuel, energy, light, water, labor, and tools, all risks and losses of every kind or description connected with the prosecution of the work, and all other things necessary for the complete and proper execution of the work contemplated by or reasonable implied from the Contract Documents, within the time limits indicated therein.

### 4.2. Substitutions.

4.2.1. General.

4.2.1.1. Certain items of equipment and material are identified in Detailed Specifications or on plans as products of specific manufacturers solely as a Basis of Design.

4.2.1.2. It is intended that products by manufacturers other than those identified in Detailed Specifications or on plans may be permitted. Products proposed shall meet the quality standards, defined herein, established for this project.

4.2.1.3. Where the term "no substitutions" is not stated following an identification of material or equipment as the product of a specific manufacturer, it shall be implied, unless otherwise stipulated. Where the term "or equal" is not stated following an identification of material or equipment as the product of a specific manufacturer, it shall be implied, unless otherwise stipulated.

4.2.1.4. Qualifying statements may be added after identification of material or equipment as the product of a specific manufacturer. Statements such as "to match existing", "no substitutions" or containing similar wording shall indicate that substitutions are not acceptable, and the term "or equal" shall not be implied.

### 4.3. Quality Standard.

4.3.1. Established in Detailed Specifications or on plans by either or both of following:

4.3.1.1. Reference to type or model number of specific manufacturer.

4.3.1.2. Specific requirements set forth.

4.3.1.3. Determines features required for items of equipment and material for this project.

4.3.1.4. Features include construction, type, function, design, finish, appearance, efficiency and general quality.

### 4.4. Data on Substitutions.

4.4.1. Bidders shall:

4.4.2. Submit complete listing of substitutions proposed, with drawings and other data required herein, and Contract price changes pertaining to each proposed substitution.

4.4.3. Furnish drawings or other data required to indicate any modifications which would result from use of proposed substitutions.

4.4.4. Furnish general arrangement drawings, full descriptive data, and any other information required to demonstrate that proposed substitutions are, in fact, equal to products specified.

4.4.5. Proposed substitutions must be submitted to the Owner at least ten (10) days prior to bid opening together with all supporting data.

**4.5. Acceptance or Rejection of Proposed Substitutions.**

4.5.1. The Owner may consider such factors as overall project arrangement, overall project cost and similar factors in determining acceptability of proposed substitutions.

4.5.2. The Owner will determine if proposed substitutions are acceptable or unacceptable, and will inform the successful bidder of the decision, in writing, no later than five (5) days before bid opening.

**4.6. Bidder's responsibility.**

4.6.1. Burden of proof that proposed substitutions meet quality standards established for Project shall in all cases remain with bidder.

4.6.2. Abide by Owner's decision regarding acceptability of proposed substitutions.

4.6.3. Acceptance of proposed substitutions shall not relieve bidder of responsibility for providing workmanship, materials and equipment meeting quality standards established for the project.

**4.7. Contract Price.**

4.7.1. Contract price shall be equal to the bid price adjusted by any of the following prior to execution of the Contract:

4.7.1.1. Net additive and deductive prices submitted for products of approved substitute manufacturers or specified alternates.

4.7.1.2. Any other price changes as agreed upon by Bidder and Owner.

4.7.1.3. The Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment, including a listing of all specified materials and equipment bid upon according to the plans and specifications and the Contractor's Proposal as soon as practicable after bids are received and prior to the awarding of Contract. Any request to substitute approved equals must be made not later than ten (10) days prior to bid opening. If request to substitute materials or equipment is not made prior to award of contract, substitution of an approved equal may be made only upon the written consent of the Owner.

4.7.1.4. As soon as practicable after bids are received and prior to the award of Contract, bidders shall furnish to the Owner in writing a list of the names of the subcontractors or other persons or organizations (including all those who are to furnish all materials or equipment) proposed for such portions of the Work as may be designated in the bidding requirements, or, if none are so designated, the names of the subcontractors proposed for the principal portions of the Work.

4.7.1.5. The Contractor shall, as soon as practicable after bids are received and prior to the award of Contract, submit a detailed listing of all materials and equipment as per the plans and specifications. Any request to substitute an approved equal for specified materials or equipment must be made prior to bid opening, and any substitutions must be approved in writing by the Owner.

4.7.1.6. Subcontractors must furnish the materials or equipment specified in the plans and specifications, and no substitution may be made subsequent to award of Contract, except upon the written approval of the Owner.

4.7.1.7. Prior to the award of the Contract, the Owner shall notify the successful bidder in writing if the Owner, after due investigation, has reasonable objection to any person or

organization on such list. Failure of the Owner to make an objection to any person or organization on the list prior to the award shall constitute acceptance of such person or organization.

**5. QUALIFICATIONS OF BIDDERS**

5.1. Bidders shall be prepared to satisfy Owner as to their integrity, experience, adequacy of equipment and personnel, and financial ability to perform work specified.

5.2. If successful bidder is a non-Iowa corporation, he or she shall submit proof to Owner prior to execution of contract that he or she has been authorized by the Iowa Secretary of State to do business in Iowa.

5.3. Equal Opportunity Policy. Because it is the desire of the Clear Creek Amana Community School District to encourage equal employment policies, all Contractors, including suppliers supplying goods or services to the School District, are expected to comply with the spirit of equal opportunity employment, as well as with the letter of all applicable statutes and regulations. Compliance shall require Contractors not to discriminate and, in addition, to take reasonable affirmative action to ensure that members of protected groups are effectively accorded equal employment opportunities. All subcontractors should be advised of and are obligated to comply with the Equal Opportunity Employment Policy.

**6. PREPARATION OF PROPOSAL**

6.1. Proposals shall be made on unaltered forms of Proposal, included in these Specifications, or an exact facsimile thereof. Fill in all appropriate blank spaces and submit one copy. Each bidder shall bid on each alternate, if any. No qualified or conditional bids will be accepted. The Proposal shall be signed in longhand with the name of the bidder typed below his or her signature. When the bidder is a corporation, bids must be signed with the legal name of the corporation, followed by the legal signature of an officer authorized to bind the corporation to a contract. Co-partnership bids should be signed by all co-partners or by an attorney in fact. If it is signed by an attorney in fact, there should be attached to the bid, a power of attorney evidencing authority to sign.

6.2. Submission of Bids. Submit bids in duplicate on Proposal form included herewith. Submit in an opaque sealed envelope separate from bid security. Envelope shall bear return address of the bidder and shall be addressed as follows:

| TO: | PROPOSAL FOR: |
|---|---|
| CCA District Office<br>1486 Highway 6 NW<br>Oxford, Iowa 52322 | Clear Creek Amana Discus and Shot Put Improvements |

**7. WITHDRAWAL OF BIDS**

7.1. A bidder may withdraw the bid at any time prior to the scheduled closing time for receipt of bids, but no bid shall be withdrawn for a period of thirty (30) calendar days thereafter.

**8. FURNITURE, FURNISHINGS AND EQUIPMENT INFORMATION**

8.1. Submit the following data regarding equipment to be included in Proposal.

8.2. Outline drawings showing overall dimensions, required clearance and general arrangement of proposed equipment.

8.3. Complete manufacturer's specifications and descriptive data for all major items of equipment proposed.

8.4. Submit data at least one day before date of letting.

**9. PERFORMANCE GUARANTEES**

9.1. Bidders shall guarantee that furnishings and equipment shall be free from imperfections in design, materials or erection which would create hazards or operating difficulties; bidders shall further guarantee that all furniture, furnishings and equipment quoted upon shall be capable of continuous and satisfactory performance under normal operating conditions at specified equipment rating and capacity.

9.2. Bidders shall be prepared to submit data obtained from tests and operating experience to substantiate guarantees made.

**10. EVALUATION OF BIDS**

10.1. Owner will evaluate comparative performance of furnishings and equipment bid upon, using guarantees submitted for expected operating conditions.

10.2. Owner may consider such factors as bid price, time for completion of work, delivery dates, materials, methods of construction, experience, and responsibility of bidder, and similar factors in determining which bid it deems to be in its best interests.

10.3. Bidders' attention is directed to General Conditions 5.3 which contains requirements for Equal Opportunity Policy.

10.4. Disqualification of Proposal. The Owner reserves the right to accept any bid or to reject any and all bids, and to waive informalities and to enter into such contract or contracts as shall be deemed in the best interest of the School District.

**11. EXAMINATION OF WORK**

11.1. Bidders shall familiarize themselves with the specifications and with all conditions which will affect the construction. It will be assumed that bidders have made a personal examination of the job and the physical conditions affecting the work.

**12. EXECUTION OF CONTRACT**

12.1. The successful bidder shall enter into a written contract with the Owner, within five (5) days after acceptance of his or her Proposal on the forms included with these specifications, for the performance of the work awarded.

12.2. The Contract, when executed, shall be deemed to include the entire agreement between the parties hereto, and the Contractor shall not claim any modification thereof resulting from any representation or promise made at any time by any representative of the Owner or any other person.

**13. TAXES**

13.1. Successful bidder is subject to payment of Iowa income tax on income from this work in amounts prescribed by law.

13.2. If successful bidder is a non-Iowa partnership, individual or association, he or she shall furnish evidence prior to execution of contract, that bond or securities have been posted with the Iowa State Department of Revenue in the amount required by law.

13.3. Sales Tax:

13.3.1. **The School District is exempt from sales tax (Section 422.4 (5), Code of Iowa), and no such amount of sales tax shall be included in the price quotations.**

13.3.2. If the bidder includes in the price any state or federal tax which may be refunded, he or she shall furnish proof as required by law which will enable the School District to obtain any refund or credit to which it is entitled. If an item is to be sold free of federal tax or any other state tax, the seller shall not include such tax in his or her price and shall furnish all proof required by law to assure that such tax will not be imposed upon the School District.

## 14. PREFERENCE FOR IOWA MATERIALS, PRODUCTS AND SUPPLIES AND DOMESTIC LABOR

14.1. By virtue of statutory authority, a preference will be given to products and provisions grown, and coal produced within the State of Iowa, and to Iowa domestic labor.

## 15. TIME

15.1. Contractor shall commence work in accordance with the time table provided for in the specifications, and shall complete work within time specified in contract.

## 16. DELAYS

16.1. Delays caused by injunction or legal actions, damages by elements, or other causes beyond control of Contractor (of which Owner shall be sole judge) shall entitle Contractor to a reasonable extension of time within which to complete work.

16.2. Application for extension of time shall be made to Owner by Contractor at least two (2) weeks prior to the expiration of the contract time and shall state reasons for request for extension of time.

16.3. No extension of time shall be valid unless made in writing by Owner.

## 17. CHANGES

17.1. Owner shall have the right to make changes in location and quantities of work as may be deemed advisable and without notice to sureties on Contractor's bond.

17.2. No changes shall be made under this paragraph which will increase or decrease total contract amount more than Twenty percent (20%) of original contract price and no changes shall be made in plan of improvement that would necessitate additional or different construction processes and equipment.

17.3. Amount due Contractor shall be adjusted for changes in following manner:

17.4. No changes shall be authorized unless they are shown on revised plans or in written instructions of Owner.

17.5. Authorized changes which require additional time to complete shall entitle Contractor to proportionate extension of time of completion which shall be determined by Engineer.

## 18. EXTRA WORK

18.1. Required extra work not specified under this Contract shall be done at an agreed price satisfactory to Contractor and Owner, or on basis of actual cost of work plus ten percent (10%). Actual cost shall include expense for equipment, materials and labor and shall include no overhead items or profit.

18.2. The term “extra work" as used herein shall not be construed to apply to changes described in “18. CHANGES.”

18.3. No compensation shall be allowed Contractor for extra work unless such work has been authorized in writing and approved by Owner.

18.4. Contractor shall submit a statement of costs to Owner for approval when extra work is performed on an actual cost plus basis.

**19. PAYMENTS**

19.1. Payments shall be made as set forth in "THE SPECIAL CONDITIONS".

**20. OWNERSHIP OF MATERIALS**

20.1. All materials and work covered by partial Payments shall become sole property of Owner, but this provision shall not be construed as relieving Contractor from sole responsibility for all materials and work for which payments have been made for restoration of damaged work, or as a waiver of rights of Owner to require fulfillment of all terms of Contract.

**21. OTHER CONTRACTS**

21.1. Owner reserves right to let other contracts in connection with this work. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall properly connect and coordinate his or her work with theirs.

21.2. When proper execution of Contractor's work depends upon work of another contractor, he or she shall inspect other work and report any defects to Owner. Contractor's failure to inspect and report shall constitute an acceptance of other contractor's work except for defects which may develop in work after completion.

21.3. To insure proper execution of his or her subsequent work, Contractor shall measure work already in place and shall at once report to the Owner any discrepancy between the executed work and drawings.

**22. OWNER'S RIGHT TO DO WORK**

22.1. If Contractor neglects to prosecute work properly or fails to perform any provision of this Contract, Owner, after three (3) days' written notice to Contractor, may, without prejudice to any other remedy he or she may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

**23. OWNER'S RIGHT TO TERMINATE CONTRACT**

23.1. Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) days notice, terminate employment of Contractor for any of the following reasons:

23.1.1. Contractor makes a general assignment for benefit of creditors, or is adjudged a bankrupt.

23.1.2. Receiver is appointed on account of Contractor's insolvency.

23.1.3. Contractor persistently or repeatedly fails or refuses, except when extension of time to complete is granted, to provide enough skilled workers or proper materials.

23.1.4. Contractor fails to make prompt payment to subcontractors for material or labor.

23.1.5. Contractor persistently disregards laws and ordinances or instructions of Owner.

23.1.6. Contractor violates a provision of Contract.

23.2. If Owner terminates employment of Contractor, Owner shall take possession of premises and all materials, tools and appliances thereon and shall finish work by whatever method deemed expedient. In such case Contractor shall not be entitled to receive any further payment until work is finished.

23.3. If unpaid balance of contract price exceeds expense of finishing the work including compensation for additional managerial and administrative services, excess shall be paid to Contractor. If expense exceeds unpaid balance, Contractor shall pay difference to Owner.

## 24. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

24.1. If Owner fails to pay to Contractor within seven (7) days of its maturity and presentation, any sum certified by Owner or awarded by arbitrators, then Contractor may, upon seven (7) days simultaneous written notice to Owner, stop work or terminate this Contract. If Contractor elects to stop work by written notice, work shall be resumed promptly upon payment by Owner. If Contractor elects to terminate this Contract, by written notice, he or she shall recover from Owner payment for all work executed to date of notice and any loss sustained upon any plant or materials plus a reasonable profit.

## 25. PAYMENTS WITHHELD

25.1. Owner may withhold or nullify the whole or a part of payment because of subsequently discovered evidence to such extent as may be necessary to protect Owner from loss due to:

25.1.1. Defective work not remedied.

25.1.2. Claims filed or reasonable evidence indicating probable filing of claims.

25.1.3. Failure of Contractor to make payments properly to subcontractors or for materials or labor.

25.1.4. A reasonable doubt that contract can be completed for balance then unpaid.

25.1.5. Damage to another contractor.

25.1.6. Payments shall be made for amounts withheld when above grounds are removed.

## 26. ACCEPTANCE AND FINAL PAYMENT

26.1. When work has been finally and satisfactorily completed, Owner shall pay Contractor the balance due according to the terms of payment as provided in Contract, provided, however, that any state laws which designate manner of final payment shall be followed in lieu of manner of final payment as outlined in the "SPECIAL CONDITIONS". Prior to receipt of final payment, Contractor shall file with Owner a receipt in full from each manufacturer, subcontractor and dealer for all equipment and materials used on the work and a complete release of all liens, including tax liens, which may have arisen from this Contract. In lieu thereof, Owner, at his or her option, may accept from Contractor a statement showing balance due on all accounts.

26.2. Making and acceptance of final payment shall constitute a waiver of all claims by Owner, except those arising from unsettled liens, from faulty work or materials appearing after final payment or from requirements of the specifications, and of all claims by Contractor, except those previously made and still unsettled.

**27. SUSPENSION OF WORK**

27.1. Owner may suspend the work, or any part thereof, at any time, by giving ten (10) days written notice to Contractor. The work shall be resumed by Contractor within ten (10) days after date fixed in written notice from Owner to Contractor to do so.

27.2. If work, or any part thereof, shall be suspended and if Owner does not give written notice to Contractor to resume work within one (1) year of date of suspension Contractor may abandon suspended portion of work. Contractor will be entitled to estimates and payments for all work done on the portions so abandoned, if any.

**28. CLEANING UP**

28.1. Contractor shall from time to time and at their expense, keep premises free from accumulations of waste material or rubbish caused by Contractor's employees or work. After completion of work Contractor shall remove all his or her rubbish and all his or her tools, scaffolding and surplus materials from work site. Contractor shall leave the work site "broom clean" or its equivalent, unless more exactly specified. In case of dispute, the Owner may remove rubbish and charge such cost to Contractor.

**29. APPROVAL OF MATERIALS**

29.1. Approval of substitutions of any materials or equipment other than that specified shall be obtained in writing from Owner. Otherwise, it will be assumed Contractor will furnish materials or equipment specified.

**30. PERIOD OF GUARANTEE AND BOND**

30.1. Contractor shall guarantee all work against faulty workmanship and materials for a period of two (2) years after date of final acceptance of work by Owner unless otherwise set out in "SPECIAL CONDITIONS" or "GENERAL CONDITIONS". Contractor shall repair or replace any defective workmanship and materials in a manner acceptable to Owner, without expense to Owner, within ten (10) days after written notification by Owner of such defect. If said repairs or replacements are not made within ten (10) days, Owner shall make said repairs or replacements and charge the cost to Contractor.

30.2. Contractor shall provide Owner with an acceptable maintenance bond at time of final acceptance. Maintenance bond shall run for two (2) years from time of acceptance to protect Owner from faulty workmanship and materials as outlined in preceding paragraph.

30.3. Contractor shall furnish a good and sufficient surety bond in full amount of Contract prior to signing Contract. Surety Bond shall guarantee faithful performance of all provisions of Contract and payment of all bills and obligations arising from said Contract. Should surety become irresponsible during time Contract is in force, Owner may require additional and sufficient sureties. Contractor shall furnish said additional sureties to satisfaction of Owner within ten (10) days after written notice to do so. In default thereof, Contract may be suspended as hereinafter provided.

**31. CONTRACTOR'S RESPONSIBILITY**

31.1. Contractor shall assume full responsibility for safekeeping of all materials and equipment and for all unfinished work until final acceptance by Owner. Materials and equipment which are damaged or destroyed from any cause shall be replaced at Contractor's expense.

31.2. Contractor shall indemnify and save harmless Owner against any liens filed for non-payment of Contractor's bills in connection with Contract work. Contractor shall furnish Owner satisfactory

evidence that all persons who have done work or furnished materials, equipment, or service of any type, under this Contract have been fully paid prior to acceptance of work by Owner.

31.3. Contractor shall erect and maintain such barriers and lights as will prevent accidents as a consequence of work. Contractor shall indemnify and save harmless the Owner and Owner's agents from any and all claims brought for any personal injuries or property damage received or sustained by any person or persons by or through Contractor, servants, or agents, in construction of work, or by or in consequence of any acts or omissions or negligence in performing Contract work, whether or not caused by negligence of the Owner and to reimburse the Owner for any damage to its property occasioned thereby.

## 32. SUBCONTRACTS

32.1. Contractor shall not assign, sublet or transfer the whole or any part of work herein specified without written consent of Owner. Assignment, subletting or transfer shall not relieve Contractor from the responsibilities set forth herein.

32.2. Detailed specifications are separated into titled parts for convenience or reference and to facilitate letting of contracts and subcontracts.

## 33. CONTRACTOR'S EMPLOYEES

33.1. Contractor shall personally supervise his or her work or provide a capable superintendent satisfactory to Owner. Superintendent shall be authorized to receive instructions from Owner.

33.2. Incompetent or incorrigible employees shall be dismissed by the Contractor or his or her representative when requested by Owner. Such dismissed persons shall not be permitted to return to work without written consent of Owner.

33.3. Contractor shall give preference to local labor in execution of this Contract, insofar as it is practicable.

## 34. PERMITS AND REGULATIONS

34.1. In execution of work specified herein, Contractor shall conform to regulations and ordinances of any governmental body which may apply in execution of specified work. Contractor shall obtain such permits and licenses as may be required for construction of work.

## 35. PATENTS

35.1. All fees or royalties for patented inventions, equipment or arrangements used in construction or erection of work, or any part thereof, shall be included in Contract price. Contractor shall protect and hold harmless Owner against any and all claims or litigation by reason of infringement of any patent rights on any materials, equipment or construction furnished by Contractor.

## 36. WORKMANSHIP AND MATERIALS

36.1. The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and furniture, furnishings, materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings, and in accordance with the directions of the Owner as given from time to time during the progress of

the work. Contractor shall furnish, erect, and maintain and remove such construction plant and such temporary works as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Owner.

36.2. In absence of detailed specifications in other sections, all materials shall conform to standards of American Society for Testing Materials.

36.3. Wherever items of materials or equipment are specified by a manufacturer's name and type, or approved equal, it is the intent that materials or equipment of other manufacturers, equal in quality and performance, may not be substituted. See, General Condition, 4.

36.4. Wherever items of materials or equipment are specified by manufacturer's name and type, or approved equal, and additional features of items are specifically required by specifications, additional features specified shall be provided whether or not they are normally included in standard manufacturer's items listed.

36.5. Wherever items of materials or equipment are specified by a manufacturer's name and type or approved equal, and specified items are or become obsolete and no longer available, Contractor shall provide approved equal items which are currently available at no change in Contract price.

## 37. WARRANTY SPECIFICATIONS

37.1. Contractor expressly warrants that all the materials and articles covered by specifications will be in exact accordance with such order, description and specification, and free from defects in material and/or workmanship and merchantable. Such warranty shall survive delivery and shall not be deemed waived either by reason of Owner's acceptance of said materials or articles or by payment for them. Any deviations from this order or specification furnished hereunder, or any other exceptions or alterations must be approved in writing by the School District.

## 38. ALTERATION OF TERMS

38.1. None of the terms and conditions contained in these General Conditions, or in the specifications, may be added to, modified, superseded or otherwise altered, except by written instrument signed by an authorized representative of the School District and delivered by the School District to the Contractor. Acceptance of the work shall be deemed to be only upon the terms and conditions contained in the specifications, notwithstanding any terms and conditions that may be contained in any acknowledgment, invoice or other form of the Contractor, and notwithstanding the School District's act of accepting or paying for any materials or equipment or similar act of the School District pursuant to the terms of this Contract.

## 39. INTERPRETATION OF CONTRACT

39.1. This Contract shall be construed according to the laws of the State of Iowa.

## 40. STORAGE OF MATERIALS AND EQUIPMENT

40.1. Limited storage space for materials and equipment will be available in portions of area provided for construction. A reasonable amount of tools, materials or equipment for construction purposes may be stored in such place, but not more than is necessary to avoid delays in construction.

40.2. Storage areas shall be subject to approval of the Owner.

40.3. Store materials and equipment in manner which will preserve their quality and condition.

**41. PARKING**

41.1. The Contractor and all its employees will park vehicles in an area designated by Owner.

**42. SHOP DRAWINGS**

42.1. Contractor shall provide Owner with drawings, data and information regarding materials or equipment specified, or as may be called for by Owner, for his or her approval, within a reasonable time after award of Contract. Owner shall return to Contractor one copy with his or her approval or objections within a reasonable time after receipt.

42.2. Fabrication and shipment of materials or equipment prior to Owner's approval of drawings, data and information mentioned above shall be at Contractor's risk.

42.3. Contractor's responsibility: to check drawings prior to submission for coordination and conformance with Contract; do not submit without checking.

42.4. Approval does not relieve Contractor of responsibility for error in shop drawings and shall not relieve Contractor of any responsibility assumed under Contract.

**43. EMPLOYMENT PRACTICES**

43.1. Contractor, or subcontractors, shall not employ any person whose physical or mental condition will endanger the health and safety of himself or herself, others employed on the project, or any school personnel, including students, teachers, administrators and employees.

**44. CONSTRUCTION FACILITIES BY CONTRACTOR**

44.1. Provide suitable storage buildings necessary for proper storage of materials and equipment.

44.2. Location of all construction facilities is subject to approval by Owner. Remove all construction facilities upon completion of work.

44.3. All construction personnel shall be able to utilize the restrooms on site for the duration of the project.

44.4. If necessary, provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.

44.5. Provide fence, barricades, and/or security to prevent access of unauthorized persons to site where work is in progress.

**45. ORDER OF CONSTRUCTION**

45.1. Coordinate work with Owner to assure orderly and expeditious progress of work.

45.2. Select order of work and establish a schedule of working hours for construction, subject to approval of Owner.

45.3. Schedule construction to minimize use of street and highway barricades and detours; clean up each portion of work as it is completed.

**46. INTERRUPTIONS TO SERVICE**

46.1. Existing utilities shall remain in substantially continuous operation during construction.

46.2. Do work which will interrupt utility service only at times approved by Owner. Hold interruption of service to a minimum.

46.3. Prior to submission of shop drawings and catalog data to Owner affix Contractor's stamp with signature of responsible person showing that material submitted has been checked and approved by Contractor.

## 47. INTERPRETATION OF PLANS AND SPECIFICATIONS

47.1. Plans and specifications shall be interpreted by Owner and his or her decision shall be final and binding on all parties concerned.

47.2. Contractor will not be allowed to take advantage of errors or omissions in plans and specifications. Owner will provide full instructions when errors or omissions are discovered.

## 48. STANDARDS AND CODES

48.1. Do work in accordance with best present-day installation and construction practices.

48.2. Conform with and test materials in accordance with applicable sections of latest revisions or tentative revisions of following codes and standards unless specifically noted to contrary:

48.2.1. American Association of State Highway Officials (AASHO).

48.2.2. American Institute of Steel Construction (AISC).

48.2.3. American Society of Mechanical Engineers (ASME).

48.2.4. American Society for Testing and Materials (ASTM).

48.2.5. American Water Works Association (AWWA).

48.2.6. American Welding Society (AWS).

48.2.7. Hydraulic Institute (RI).

48.2.8. Federal Specification (FS).

48.2.9. Institute of Electrical and Electronic Engineers (IEEE).

48.2.10. Insulated Power Cable Engineers Association (IPCEA).

48.2.11. Iowa State Highway Commission (ISHC).

48.2.12. National Fire Protection Associations National (NFPAN).

48.2.13. National Electrical Manufacturer's Association (NEMA).

48.2.14. National Electrical Safety Code (NESC).

48.2.15. Underwriters' Laboratories, Inc. (UL).

48.2.16. United States of America Standards Institute (USASI).

48.2.17. Standards and codes of the State of Iowa and Clear Creek Amana Community School District.

## 49. MATERIALS TESTS

49.1. All materials are subject to sampling, testing, inspection and rejection by Owner.

**END OF SECTION**

# SECTION 00 7300
# SPECIAL CONDITIONS

## 1. INTENT

1.1. To supplement the provisions of the "GENERAL CONDITIONS" by outlining special conditions applicable to the project.

## 2. LOCATION

2.1. Work is located at CCA High School, 551 West Marengo Road, Tiffin, IA.

## 3. INSURANCE BY CONTRACTOR

3.1. Provide and maintain insurance throughout construction period in the following minimum amounts:

3.1.1. Worker's compensation and occupational disease insurance in accordance with laws of the State of Iowa covering all employees who perform any obligations assumed under the contract. **In case any work is sub-let, the contract shall require the sub-contractor similarly to provide workman's compensation and occupational disease insurance for all of the latter's employees engaged in such work unless such employees engaged in hazardous work on the project under his contract are not protected under Workman's Compensation Statute, the contractor shall provide and shall cause each sub-contractor to provide adequate employer's general liability insurance for the protection of such of his employees not otherwise protected.**

3.1.2. Public liability and property damage liability insurance covering all operations under the contract; limits for bodily injury or death not less than $1,000,000 for one person and $1,000,000 for each accident; for property damage, not less than $2,000,000 for each accident and aggregate.

3.1.3. Automobile liability insurance on all self-propelled vehicles used in connection with the Contract, whether owned, non-owned, or hired; public liability limits of not less than $1,000,000 for one person and $1,000,000 for each accident; property damage limit of $1,000,000 for each accident.

3.1.4. In addition to such fire insurance as the Contractor elects to carry for his or her own protection, Contractor shall effect and maintain for the life of the Contract, insurance upon all structures or other work included in the Contract against loss or damage by fire, and against loss or damage covered by the standard extended coverage insurance endorsement, including in part vandalism and malicious mischief in an insurance company or companies acceptable to the Owner, the amount of the insurance at all times to be at least equal to the amount paid on account of work and materials and plus the value of work or materials furnished or delivered but not yet paid for by the Owner. The policies shall be in the names of the Owner and the Contractor, as their interest may appear.

3.2. Owner shall have right at any time to require public liability insurance and property damage liability insurance greater than required in above paragraphs. Additional premiums payable solely as result of such additional insurance shall be added to bid price.

3.3. Contractor shall furnish Owner with satisfactory proof of the insurance required, by furnishing to the Owner the policies of insurance or duplicate originals thereof before starting the work. The insurance policies shall contain a provision that the coverage afforded under the policies will not be canceled or materially changed until at least thirty (30) days prior written notice has been given to the Owner.

3.4. The Contractor shall provide, at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work. The

Contractor shall notify the Owner of any accidents or injuries which occur in connection with the work.

## 4. PAYMENT

4.1. Payment to the Contractor will be made by the School District from cash on hand from such sources as may be legally available not earlier than thirty-one (31) days from the date of final acceptance of said work by the School District, subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa. No payment will be due until the Contractor has certified to the District that the materials, labor and services involved have been paid for in accordance with the requirements stated in the specifications.

4.2. Each month, the Contractor shall submit to the Owner estimates of labor performed and material delivered which is approved by the Owner. The Owner shall retain payment of five percent (5%) of that amount due according to the estimate.

4.3. Owner will pay Contractor within thirty (30) days of receipt of Contractor's request for progress payment approved by the Owner.

## 5. STARTING AND COMPLETION TIME

5.1. Work shall be commenced as indicated in the Contract Documents, and shall be completed by October 20th, 2023, subject to terms and conditions provided in the Contract Documents.

5.2. Equipment and special material shall be ordered as indicated on detailed specifications, and shall be delivered to the job in accordance with the specifications on or before date indicated in detailed specifications.

## 6. INFORMATION FOR OWNER

6.1. Within thirty (30) days after award of contract, provide construction schedule, showing dates of starting and completing various portions of work and value of each portion of work.

## 7. FIELD TESTS

7.1. After installation is complete, supervise operation of equipment for a reasonable period to assure proper functioning; make necessary observations, tests and adjustments; replace or repair defective parts; notify Owner when installation is considered complete, in operating condition and ready for testing.

7.2. Owner will conduct tests he or she deems necessary to determine that equipment functions properly and guarantees are met.

7.3. Owner will supervise tests deemed necessary as specified hereinafter.

7.4. If performance guarantees or requirements are not met during tests, make necessary corrections, repairs or replacements; demonstrate to Owner that work meets performance guarantees or requirements.

## 8. INSTRUCTION MANUALS, PARTS LISTS AND TOOLS

8.1. Furnish four complete sets of manufacturer's instructions for installation, operation and maintenance of equipment furnished; include assembly drawings and parts lists with identification symbols or part numbers for all replaceable parts and assemblies.

8.2. Furnish special tools, jigs and fixtures necessary for operation, repair or maintenance of equipment.

## 9. TEMPORARY WORK

9.1. Make all temporary service connections necessary for maintaining utility service during the course of the work. Do work as shown on plans or as specified hereinafter.

9.2. Construct temporary drains or bulkheads to keep work in the dry.

## 10. BARRICADES AND LIGHTS

10.1. Erect and maintain barricades and lights and/or provide security for protection and warning of pedestrians and vehicles; prevent access of unauthorized persons to portion of site where work is in progress. All barricades and lights are at expense of Contractor.

10.2. Location and arrangement: conform to ordinances and laws; meet approval of Owner and Engineer.

## 11. ADDENDUM

11.1. Each bidder will receive a notice of addendum for any changes in the contract documents made prior to the time established for the receipt of bids. The notice will be delivered in the manner chosen by the Owner to the bidder's business address with an acknowledgement of receipt required. Acknowledgement of the receipt of the addendum will be as provided in the proposal form.

## 12. AWARD OF CONTRACT

12.1. Contract Document Submittal: Within 10 calendar days after notification by the Engineer, unless otherwise provided in the contract documents, the Contractor shall present the signed and executed contract documents, including contract, performance, payment, and maintenance bond; certificate of insurance; and all other items required by the contract documents. The performance, payment, and maintenance bond and insurance certificate shall meet the requirements of Bonds and Insurance as required by the Owner. The Owner will thereupon receive and file such documents and award the contract.

12.2. Deferred Award: The Owner reserves the right to defer award of any contract for a period not to exceed 60 calendar days from the date of opening of proposals. No claims for compensable delay shall arise as the result of delay in the approval of award.

12.3. Failure to Execute the Contract: It is agreed by the bidder that upon its failure to enter into the contract and furnish the necessary insurance certificate and performance, payment and maintenance bond within 10 calendar days after notification by the Owner, the amount of the bidder's bid security may at the Owner's option be forfeited and shall become the property of the Owner, to be retained not as a penalty, but as liquidated damages. The award of the contract may then, at the discretion of the Owner, be made to the next lowest responsive, responsible bidder, or the work may be re-advertised or may be constructed by the Owner in any legal manner.

## 13. COORDINATION OF SPECIFICATIONS, PLANS, AND SPECIAL PROVISIONS

13.1. In case of any discrepancy between the various items included in the contract documents, the items shall prevail, or govern, in the following descending order:

13.1.1. Change Orders

13.1.2. Addenda

13.1.3. Proposal and Contract

13.1.4. Plans including plan notes and technical specifications

13.1.5. Special Conditions

13.1.6. General Conditions

13.1.7. Statewide Urban Design and Specifications, Urban Standard Specifications for Public Improvements.

13.1.8. Iowa Department of Transportation, Standard Specifications for Highway and Bridge Construction.

13.1.9. In case of a discrepancy within any contract document, the following shall prevail, or govern, in descending order: written text, numerals, drawings.

13.2. The Contractor shall not take advantage of any apparent error or omission in the plans or specifications or of any discrepancy between the plans or specifications.

## 14. CONFORMITY WITH THE CONTRACT DOCUMENTS

14.1. Reasonably Close Conformity: All work performed and all materials furnished shall comply with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown in the contract documents. Where tolerances are not specified, work shall comply with reasonable and customary manufacturing and industry standards. The Engineer may, in the Engineer's sole discretion, accept variations beyond such requirements or tolerances where they will not materially affect the value or utility of the work and interests of the Owner.

14.2. Defective Work: Work not in reasonably close conformity with the contract documents, or requirements thereof that, in the sole discretion of the Engineer, has resulted in inferior or unsatisfactory work. Defective work shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

14.3. Deficient Work: Work not in reasonably close conformity with the contract requirements but that, in the sole discretion of the Engineer, may be accepted and allowed to remain in place with a price adjustment and/or extended warranty period. In the event the Engineer agrees to accept deficient work with a price adjustment/extended warranty, the Engineer will document the basis of acceptance by contract modification making appropriate adjustments in the contract price for such work or materials.

## 15. CHANGE ORDERS

15.1. Oral Orders: The Engineer shall have authority to give oral orders for minor or incidental changes in the work not involving extra cost and not inconsistent with the proposed purpose of the work.

15.2. Written Orders: The Engineer may in his/her discretion, and subject to formal approval by the Owner, if required, issue written change orders changing the scope of the work and/or adjusting the amount to be paid to the Contractor for performing such work; however, the Engineer may, in case of emergency of endangering life or property, orally authorize such a change order without formal approval by the Owner. Each written change order for extra work shall be explicit in its instruction and shall be duly executed by the Owner. One copy of said change order shall be filed with the Contractor. Each change order shall stipulate the amount and method of payment.

## 16. CLAIM FOR EXTRA COMPENSATION

16.1. Claims for extra compensation shall proceed according to SUDAS Urban Standard Specification Section 1040, 1.10 – Disputed Claims for Extra Compensation.

**17. ORAL AGREEMENTS, CONVERSATIONS, AND INFORMAL COMMUNICATIONS**

17.1. No oral agreement or conversation made or had with any officer, agent, or employee of the Owner, and no informal written communication from any officer, agent, or employee of the Owner, occurring either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the contract documents. Such oral contact and such informal writings shall be considered as unofficial information and in no way binding upon the Owner.

**18. AUTHORITY OF THE ENGINEER**

18.1. Nothing contained in this section or in the contract documents shall be construed as requiring or permitting the Engineer to direct the means, methods, sequences, or procedures, including safety measures, of performing any work under the contract or contract documents, except to ensure the quality of work conforms to these specifications and other provisions of the contract documents and the contract will be completed as scheduled.

**19. PROVIDING JOB SITE UTILITIES**

19.1. The Contractor shall make all necessary arrangements for the provision to the job site of all required utilities for the project. The Contractor shall arrange its work so it will not be delayed because such regulations or requirements relating to the use of utilities. All costs for the provision of utilities to the job site shall be borne by the Contractor.

19.2. Fire hydrants shall not be used by the Contractor or its subcontractors unless authorization for such use has been obtained from the appropriate water utility agency.

**20. UNAUTHORIZED WORK**

20.1. Unauthorized work is work done contrary to the work shown in the contract documents. The Owner will not pay for unauthorized work.

20.2. Unauthorized work may be ordered to be removed and replaced immediately at the Contractor's expense.

**21. CONTRACTOR'S RESPONSIBILITY FOR THE WORK**

21.1. Until the work is accepted by the Owner, it shall be in the custody of and under the charge, care, and control of the Contractor, who shall take every precaution against damage to the work by action of the elements or any other cause. The Contractor shall rebuild, repair, restore, and make good at its own expense, all damages to any portion of the work before acceptance thereof by the Owner. Issuance of any estimate or partial payment for work done will not be considered as final acceptance of any work completed.

21.2. If the Contractor completes a unit or portion of the work, the Owner may at its discretion accept such work and the Contractor may be relieved of further responsibility for such unit or portion of the work. Such partial acceptance shall not void or alter any of the terms of the contract, nor shall it constitute final acceptance of the work.

**22. PROTECTION OF ABOVEGROUND AND UNDERGROUND FACILITIES**

22.1. The Engineer has attempted to show on the plans all aboveground and underground facilities, including public and private utilities, which may be affected by the work. The location, depth, and size of each such facility shown on the plans is approximate only and is not guaranteed. Other underground facilities may exist and their location may not be presently known or identified. It is

the Contractor's responsibility to determine the existence and exact location of all such facilities located within the construction area to avoid damage.

22.2. The Contractor shall, prior to commencing any excavation or other operation that may affect underground facilities, notify the "Iowa One Call" underground facility locate system, established pursuant to Iowa Code Chapter 480. The Contractor shall, if requested by the operator of an underground facility, assist in the location of its facilities; provided, however, the Owner shall not be responsible to the Contractor or to any operator of an underground facility for the cost of locating such facility, or for any damage to such facility that occurs in attempting to locate it, or for any damage to the facility occasioned by the Contractor's performance of work under the contract.

## 23. EXTENSION OF TIME

23.1. Allowances for Delays: The Contractor expressly covenants and agrees that in undertaking to complete the work within the contract time, it has taken into consideration and made allowance for all delays and hindrances that would ordinarily be anticipated in performing such work.

23.2. Claims for Damages: The Contractor shall have no claim for damages for any extensions or delays requested and/or approved.

23.3. Extension of Time Granted: No extension of time shall be granted or recognized except as specifically approved by the Owner in writing to the Contractor. Oral representations or agreements by Owner’s agents or employees regarding time extension shall not be binding on the Owner.

## 24. LIQUIDATED DAMAGES

24.1. Time is of the essence of the contract. A delay in the diligent prosecution of the work may inconvenience the public, obstruct traffic, interfere with business, and/or increase costs to the Owner such as engineering, administration, and inspection, it is important the work be prosecuted vigorously to completion. Should the Contractor, or in case of default the surety, fail to complete the work within the contract time plus such extensions of time as may be approved by the Owner, a deduction at the liquidated damages rate specified below will be made for each and every calendar day or working day that the contract remains uncompleted after expiration of the contract time. In either event, the Contractor or the Contractor's surety shall be responsible for all costs incident to the completion of the work.

24.2. All work will be completed by end of day October 20th, 2023. Liquidated damages shall be $200.00 per calendar day for failure to meet the final completion date, beginning on October 21st, 2023.

24.3. The liquidated damages rate specified in the contract documents is hereby agreed upon as the true and actual damages due the Owner for loss to the Owner and to the public due to obstruction of traffic, interference with business, and/or increased costs to the Owner such as engineering, administration, and inspection after the expiration of the contract time, or extension thereof. Such liquidated damages may be deducted from any money due or to become due the Contractor under the contract, and the Contractor and its surety shall be liable for any liquidated damages in excess of the amount due the Contractor.

24.4. Allowing the Contractor to continue and finish the work, or any part of it, after the expiration of the contract time or extension thereof shall in no way operate as a waiver on the part of the Owner of any of its rights or remedies under the contract, including its right to liquidated damages pursuant to this provision

## 25. BREACH OF CONTRACT

25.1. The Contractor's failure to perform in any of the following particulars may constitute a breach of contract:

25.1.1. Failure by the Contractor to begin work at the time specified;

25.1.2. Failure or refusal by the Contractor to comply with an order of the Engineer within a reasonable time;

25.1.3. Failure or refusal by the Contractor to remove rejected materials;

25.1.4. Failure or refusal by the Contractor to replace, perform anew, or correct any defective or unacceptable work;

25.1.5. Contractor's discontinuance of the work without authorization by the Owner;

25.1.6. Failure by the Contractor to carry on the work in an acceptable manner.

25.2. Upon Contractor's breach of the contract in any form, the Owner shall be required to give written notice of default to the Contractor. The notice of default shall indicate how the contract has been breached and shall indicate what action the Contractor must take to cure such breach.

25.3. If the Contractor or its surety does not, within the time for cure provided in the notice of default, take action to cure such breach, the Contractor shall relinquish possession and control of the project, and the Owner shall thereupon have full power and authority, without violating the contract or bond, to take over the completion of the work, to appropriate or use any or all materials and equipment at the site that may be suitable and acceptable, to enter into agreements with others for the completion of said contract according to the terms and provisions thereof, or to use such other methods as in the Owner's opinion may be required for the completion of said contract in an acceptable manner.

25.4. Neither the Owner, nor any officer, agent or employee thereof, shall be in any way liable or accountable to the Contractor or the Contractor's surety for the method by which the completion of said work, or any portion thereof, may be accomplished, or for the price paid therefore. Neither by taking over the work nor by declaring the contract in default shall the Owner forfeit the right to recover damages from the Contractor or the Contractor's surety for failure to complete the entire contract.

25.5. The Contractor shall be liable for the Owner’s attorney fees incurred as a result of the Contractor’s breach of contract.

## 26. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

26.1. The contract will be considered completed when the work has been accepted in writing by the Owner as provided in General Conditions, Paragraph 27 - Acceptance and Final Payment hereof. Such final acceptance shall release the Contractor from all further obligation with respect thereto, except as to conditions and requirements as set forth in the bond and Owner's specifications regarding insurance.

## 27. LUMP SUM BREAKDOWNS

27.1. If the contract is based on a lump sum bid price, or contains one or more lump sum items for which progress payments are to be made, the Contractor shall prepare and submit a breakdown estimate covering each lump sum item to the Engineer for approval. The breakdown estimate shall show the estimated value of each kind or item of work. The sum of the lump sum items listed in the breakdown estimates shall equal the contract lump sum. Overhead and profit shall not be listed as separate items.

27.2. The breakdown estimate shall be approved by the Engineer before any progress payments are prepared. An unbalanced breakdown estimate providing for overpayment to the Contractor for items of work to be performed first will not be approved but shall be revised by the Contractor and

resubmitted until acceptable to the Engineer.

## 28. PAYMENT OF RETAINAGE

28.1. Retained funds shall be retained by the Owner for a period of 30 calendar days after the completion and final acceptance of the improvement by the Owner. If at the end of the 30 calendar day period claims are on file as provided, the Owner shall continue to retain from the unpaid funds, a sum equal to double the total amount of all claims on file. The remaining balance of the unpaid fund, or if no claims are on file, the entire unpaid fund, shall be released and paid to the Contractor.

28.2. The Owner, the Contractor, any claimant for labor or material who has filed a claim, or the surety on any bond given for the performance of the contract, may, at any time after the expiration of 30 calendar days, and not later than 60 calendar days, following the completion and final acceptance of said improvement, bring action in equity in the county where the improvement is located to adjudicate all rights to said fund, or to enforce liability on said bond, pursuant to Iowa Code Chapter 573. Upon written demand of the Contractor, served in the manner prescribed for original notices, on the person filing a claim, requiring the claimant to commence action in court to enforce the claim, an action shall be commenced within 30 calendar days otherwise the retained and unpaid funds due the Contractor shall be released to the Contractor.

## 29. FINAL INSPECTION AND ACCEPTANCE

29.1. Final acceptance of construction shall be defined as final approval of the project only in the sense that it has been constructed, cleaned up, and completed in apparent substantial compliance with the contract documents. Said final acceptance is stipulated to mean a written acceptance by the Owner.

29.2. As soon as practicable after the completion of the work, it will be inspected thoroughly by the Engineer. The Contractor will be notified when the inspection is to be made so it or its representative may be present.

29.3. If the inspection reveals any defects in the work as contemplated by the specifications, such defects shall be repaired or unsatisfactory work shall be replaced, as the Engineer may direct, before final acceptance. The cost of all such repairs and replacement shall be borne by the Contractor, and no extension of the contract time shall be granted because of the time required to remedy such defects.

29.4. It is mutually agreed between the parties to the contract that a certification of completion of the project, submitted by the Engineer and approved by the Owner, shall constitute final acceptance of the work and materials included in the contract on the date of the such approval, subject to the provision and such approval, acceptance, or payment as herein provided shall not constitute an acceptance of any unauthorized or defective work, or of any improper material.

29.5. Such final acceptance will not be reopened after having once been made, except in evidence of collusion, fraud, or obvious error.

## 30. FINAL PAYMENT

30.1. Final payment will be based on the actual final total amount of the work accomplished and finally accepted by the Owner under the contract. Under no circumstances or conditions will the Contractor be paid for any work not actually included in the project. The Owner will not give final payment of the work until the Contractor has submitted all documentation required by the contract documents.

30.2. The Engineer shall, after determining the work has been finally and fully competed according to the contract documents, make a final estimate of the amount of work done and the value thereof.

## 31. STORAGE OF MATERIALS

31.1. The Contractor shall be responsible for care and storage of materials delivered to the work site or purchased for use. Material delivered to the work site and damaged before actual incorporation in the work may be rejected by the Engineer even though it may have been previously acceptable. Stored materials shall be located to facilitate thorough inspections, to minimize environmental damage, and not interfere with operations.

## 32. SALVAGE

32.1. When the contract documents specify salvage of materials for the Owner as part of the work, the material to be salvaged shall be carefully salvaged and delivered to the designated location in the best condition and ready for storage or reinstallation. When the contract documents provide for salvage of such materials by the Contractor, the Contractor shall salvage such materials and promptly remove them from the site.

32.2. The Contractor shall not allow inspection or sale of salvage materials to third parties at the site without written approval of the Owner.

## 33. PROTECTION OF LINE AND GRADE STAKES

33.1. The work shall be performed in strict conformity with the contract documents and to the lines and grades as fixed by the Contractor's licensed surveyor, and shall be according to such instructions as may be given by the Engineer. When such stakes or lines are given by the Engineer, the Owner will be responsible for the correctness thereof, and the Contractor will be responsible for their proper use, interpretation, and preservation.

33.2. The Contractor shall protect and preserve in their original position all stakes, points, or marks set for the work by the licensed surveyor according to such instructions as may be given by the Engineer. Where the Engineer shall consider such stakes, points, or marks to have been unnecessarily altered or destroyed, the Engineer may cause the expense of correcting or replacing them to be charged to the Contractor and the amount of such costs deducted form any monies due or which may become due to the Contractor under the contract.

## 34. COOPERATION WITH OTHER CONTRACTORS

34.1. The Owner reserves the right to award other contracts in connection with this work and the total improvement. The Contractor is required to become fully informed of the conditions relating to construction and labor under which the work will be or is now being performed, and the Contractor shall employed, as far as possible, such methods and means in the carrying out of its work as will not cause ant interruption or interruption or interference with any other contractor or agency. The Contractor shall give other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly integrate, incorporate, and/or coordinate its work with theirs.

34.2. If any part of the Contractor's work depends for proper execution or results on the work of any other contractor, the Contractor shall inspect and promptly report to the Engineer any defect in such work by another contractor that renders it unsuitable for such proper execution and results. The Contractor's failure to inspect and report such defects shall constitute an acceptance of the other contractor's work as fit and proper for the integration or incorporation of its work, except as to defects that may develop in the other contractor's work after the execution of the Contractor's work.

34.3. Wherever work being done by the Owner's forces or by other contractors is contiguous to work covered by the contract, the respective rights of the various portions of the work in general

harmony.

34.4. Unless otherwise specified in the contract documents, the Contractor shall give notice, as hereafter provided, to all utilities, public and private agencies, abutting property owners, and all others affected by its operations as to time for starting and for completion of its work. Notification shall be made sufficiently ahead of time to provide proper re-routing of traffic and erecting of signs before the work is to begin.

34.5. The Contractor shall properly coordinate and expedite its work in such a manner as to cause the least amount of conflict and interference between its operation and those of all others affected by its operations. Any or all damages or claims resulting form the improper or insufficient notification of all others affected by its operations shall be the responsibility of the Contractor.

## 35. CONSTRUCTION FACILITIES

35.1. Construction personnel may negotiate utilization of sanitary facilities on site. The contractor shall coordinate with the Owner for access to the facilities.

## 36. MANDATORY BACKGROUND CHECKS

36.1. The Contractor (Company) shall not be owner, operated, or managed by a registered sex offender who has been convicted of a sex offense against a minor in accordance with Iowa Code 692A.113. In addition, the Contractor shall not permit an employee Subcontractor (Company) owned, operated, or managed by, or Subcontractor employee who is a registered sex offender convicted of a sex offense against a minor on real property of the schools of the Owner in accordance with Iowa Code 692A.113. The Contractor shall further acknowledge and certify services provided under this Contract comply with Iowa Code 692A.113.

**END OF SECTION**

# SECTION 01 1000

# SUMMARY OF THE WORK

## PART 1 GENERAL

### 1.01 CONTRACT DESCRIPTION

A. Contract Type: One contract based on a lump sum price.

B. Contract to complete the Clear Creek Amana Discus and Shot Put Improvements as described in the Drawings and Specifications for the Clear Creek Amana Community School District.

### 1.02 PROJECT DESCRIPTION

A. The project includes all labor, materials, and equipment necessary for the installation of discus and shot-put facilities including the following: stripping and stockpiling of topsoil, installation of PCC sidewalk and pavement, new discus net and equipment, new shot put field rock and field circle pads. The project also includes all site preparation, storm water pollution prevention, grading, site restoration, and other related work.

B. Work will occur CCA High School, 551 W Marengo Road, Tiffin, IA 52340

C. Scope of work is shown on drawings

### 1.03 OWNER OCCUPANCY

A. Clear Creek Amana Community School District intends to occupy the Project upon Substantial Completion.

B. Cooperate with Clear Creek Amana Community School District and the City of Tiffin to minimize conflict and to facilitate Clear Creek Amana Community School District's operations.

C. A portion of the work will occur during school operations. Coordinate work to minimize disruption of school activities.

### 1.04 CONTRACTOR USE OF PREMISES

A. Contractor shall limit the use of premises to allow:
   1. Construction operations on property provided by Owner.
   2. Owner occupancy and use of existing parking areas throughout construction.
   3. Use of public rights-of-way for public access.
   4. Provide access for use of park trail.

### 1.05 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.

B. Provide access to and from site as required by law and by Clear Creek Amana Community School District:
   1. Do not obstruct roadways, sidewalks, or other public ways without permit.

C. Time Restrictions:
   1. 7:00 a.m. to 9:00 p.m. unless otherwise approved by owner or engineer.

## 1.06 SUBSTANTIAL COMPLETION AND BENEFICIAL USE

A. Owner intends to occupy and provide beneficial use of the improvements constructed under this contract by October 23rd, 2023.

## 1.07 COORDINATION WITH UTILITIES

A. Communicate with and inform public utilities of work activities in areas of potential conflict.

B. It is anticipated that some utility conflicts may occur which cannot be resolved ahead of time. Contractor shall work closely with utility companies, public utilities and owner to aid in all relocations to keep the project on schedule.

## 1.08 PERMITS REQUIRED BY CONTRACTOR

A. Contractor shall obtain and pay for all construction permits, building permits and licenses required including the procedures for preparation of any and all plan and all required notices.

B. Erosion Control Permits
   1. Owner will prepare the Iowa Department of Natural Resources, National Pollutant Discharge Elimination System (NPDES) General Permit Number 2, and shall be responsible for paying and obtaining permit. Permit will cover this work under this contract.
   2. Owner will prepare and Contractor shall maintain a Storm Water Pollution Prevention Plan (SWPPP) for use by the Contractor, as required by the NPDES permit. The Contractor shall have the responsibility to conduct work on the site in accordance with the SWPPP. The work under this contract shall be covered under the permit for the entire site.

## 1.09 JOB SITE ADMINISTRATION

A. Contractors shall provide competent, suitable qualified personnel to perform construction as required by Contract Documents. Contractor shall at all times maintain good discipline and order at site.

B. Incompetent or incorrigible employees shall be dismissed from Work by Contractor or its representative when requested by Engineer, and such persons shall not again be permitted to return to Work without written consent of Engineer.

C. Contractor shall provide space/ building for Job Site Office. All contractors shall use and coordinate within provided space. Jobsite office shall be used at a minimum for maintaining a complete set of Project Documents, SWPPP documents and holding Construction Update meetings.

D. Contractor is responsible for the coordination and acceptance of equipment or material deliveries on Clear Creek Amana CSD sites, including handling and storage of said equipment or materials.

## 1.10 EXAMINATION OF SITE, PLANS and SPECIFICATIONS

A. The Contractor must satisfy himself by personal examination of the location of the proposed work, by examination of the plans and specifications and requirements of the work and accuracy of the estimate of the quantities of work to be done, and shall not at any time after submission of a bid, dispute or complain of such estimate or assert that there was any misunderstanding in regard to the nature or amount of work to be done. Submission of a signed proposal by the Contractor shall signify to the Owner that the Contractor has made personal examination of the site and the physical conditions which may affect his bidding and performance under this proposal.

B. The Contractor shall not use or be entitled to use any of the information made available to him as stated above or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

## 1.11 CONSTRUCTION STAKES, LINES AND GRADES

A. The Contractor shall perform all construction layout and reference staking necessary for accurate control and completion of all structures, utilities, grading, paving, drainage, fence, permanent benchmarks, ROW monuments and all other appurtenances required for the complete construction and acceptance of the work.

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 01 2000

# MEASUREMENT AND PAYMENT

## PART 1 - GENERAL

### 1.01 SUMMARY:

A. This Section includes procedures and submittal requirements for schedule of values, applications for payment, and item descriptions.

### 1.02 CONTRACT PRICE:

A. The Contract Sum is lump sum.

B. Any work performed beyond plan quantity shall be first agreed to by change order.

### 1.03 SCHEDULE OF VALUES

A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's construction schedule.

B. Submit the Schedule of Values to the Engineer at the earliest possible date but no later than 7 days before the date of request for initial payment.

C. Include with the Project identification the project name, location, name of the Owner and Engineer, Contractors name and address and date of submittal.

D. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

1. Related Specification Section or Division.
2. Description of work and dollar value.
3. Change Orders, by number which affect contract value.
4. Percentage of Contract to nearest 5 percent and total to 100 percent.

E. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports.

F. Include the total cost and proportionate share of general overhead and profit margin for each item. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractors option.

### 1.04 APPLICATIONS FOR PAYMENT

A. Payment under this contract shall occur no more than once per month for work completed by the Contractor.

B. Periodic payments will be based on an estimate of the total amount and value of work completed minus 5% retainage.

C. The 5% retainage will be released 31 days after the entire project is accepted, provided no claims against the project have been filed within 30 days of project acceptance. Chapter 573 of the Code of Iowa will govern the release of retainage and resolution of claims.

D. Payment Form shall be provided by Contractor and approved by Owner and Engineer. AIA Documents G702 and G703 may be used for pay requests but are not required.

E. Entries shall match data on the Schedule of Values and the Contractors Construction Schedule. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

F. Submit a signed copy of each Application for Payment to the Engineer including waivers of lien and similar attachments, when required.

G. With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors and suppliers for the construction period covered by the previous application. Submit partial waivers on each item for the amount requested, prior to deduction for retainage on each item. When an application shows completion of an item, submit final or full waivers. The Owner reserves the right to designate which entities involved in the Work must submit waivers. Submit waivers of lien on forms, and executed in a manner, acceptable to the Owner.

H. Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
   1. List of subcontractors, principal suppliers and fabricators.
   2. Schedule of Values.
   3. Contractors Construction Schedule (preliminary if not final).
   4. Certificates of insurance and insurance policies.
   5. Performance and payment bonds.

I. Application for Payment at Substantial Completion. Following issuance of the Certificate of Substantial Completion, submit an Application for 95% Payment.

J. Administrative actions and submittals which shall precede or coincide with the application for 95% payment include:
   1. Warranties (guarantees) and maintenance agreements.
   2. List of incomplete Work, recognized as exceptions to Engineers Certificate of Substantial Completion and Occupancy for Beneficial Use.
   3. Removal of temporary facilities and services.
   4. Removal of surplus materials, rubbish, and similar elements.

K. Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
   1. Completion of Project closeout requirements.
   2. Completion of items specified for completion after Substantial Completion.
   3. Ensure that unsettled claims will be settled.
   4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
   5. Transmittal of required Project construction records to the Owner.
   6. Proof that taxes, fees, and similar obligations were paid.

## PART 2 - PRODUCTS

## 2.01 NONE

## PART 3 – EXECUTION

## 3.01 SCOPE OF WORK

A. Refer to Section 13 1200 and Construction Documents for Scope of Work.

**END OF SECTION**

# 01 2200

# UNIT PRICES

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. List of unit prices, for use in preparing Bids.

B. Measurement and payment criteria applicable to Work performed under a unit price payment method.

C. Defect assessment and non-payment for rejected work.

### 1.02 RELATED REQUIREMENTS

A. Section 01 2000 - Measurement and Payment: Additional payment and modification procedures.

### 1.03 COSTS INCLUDED

A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

### 1.04 MEASUREMENT OF QUANTITIES

A. Measurement methods delineated in the individual specification sections complement the criteria of this section.

B. Take all measurements and compute quantities. Measurements and quantities will be verified by Owner.

C. Assist by providing necessary equipment, workers, and survey personnel as required.

D. Measurement by Volume: Measured by cubic dimension using mean length, width and length or thickness.

E. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify Engineer prior to starting work.

### 1.05 PAYMENT

A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Engineer, multiplied by the unit price.

B. Payment will not be made for any of the following:

1. Products wasted or disposed of in a manner that is not acceptable.

2. Products determined as unacceptable before or after placement.

3. Products not completely unloaded from the transporting vehicle.

F. Products placed beyond the lines and levels of the required Work.

5. Products remaining on hand after completion of the Work.

6. Loading, hauling, and disposing of rejected Products.

### 1.06 DEFECT ASSESSMENT

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

B. If, in the opinion of Owner, it is not practical to remove and replace the Work, the Owner will

direct one of the following remedies:

1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Owner.
2. The defective Work will be partially repaired to the instructions of the Owner, and the unit price will be adjusted to a new unit price at the discretion of the Owner.

C. The authority of Owner to assess the defect and identify payment adjustment is final.

**1.07 SCHEDULE OF UNIT PRICES**

A. Unit Price No. 1: Remove unsuitable subgrade materials and replace with compacted modified subbase; Sections 31 2316 and 31 2323

1. Clarification: Unit prices for over-excavation shall be based on dimensions of over-excavation below finish grade elevation
2. Perform excavation of unsuitable subgrade materials as determined by the Engineer and at the direction of the Owner in accordance with requirements specified in Section 31 2316. Excavated materials shall become property of the Contractor and shall be removed from the site or hauled to other Clear Creek Amana CSD projects as directed by Engineer or Owner.
3. Fill over-excavated areas with modified subbase in compliance with Section 31 1123.
4. Basis for determining unit price shall be cubic yard measurement of compacted modified subbase required to reestablish required pavement subgrade elevation and includes related costs of over-excavation
5. Lump sum adjustment to the Contract Amount shall be cumulative net change of compacted fill (in Cu. Yds.) from that required by the Contract Documents, MULTIPLIED by Unit Price No. 1.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**END OF SECTION**

# SECTION 01 3216

# PROGRESS AND SCHEDULES

## PART 1 - GENERAL

### 1.01 SUMMARY:

A. Prepare, submit and update as necessary a schedule of the work.
B. Time is of the essence. Minimizing inconvenience, disruption, and duration of disruption to residences and businesses is a high priority. Scheduling of work shall be planned with this in mind.

### 1.02 SUBMITTALS:

A. The Contractor shall submit prior to the Pre-Construction meeting a detailed schedule of the proposed work with the controlling operation identified. Work may not begin until the schedule is approved by the Engineer.
B. The Contractor shall submit updated construction schedules at two-week intervals throughout the project.

## PART 2 - PRODUCTS

None.

## PART 3 - EXECUTION

### 3.01 MEETINGS PRIOR TO CONSTRUCTION:

A. No Pre-Bid meeting is scheduled. However, contractors are encouraged to visit the site.
Direct questions to: Lucas Newton, P.L.A.
MMS Consultants, Inc.
(319) 351- 8282
l.newton@mmsconsultants.net

B. Site tours may be arranged with the Engineer or Owner.

C. Pre-Construction meeting will be arranged subsequent to the award of the contract.

### 3.02 PROGRESS OF WORK:

A. All work will be completed by October 20th, 2023.
B. No work shall be done between the hours of 9:00 p.m. and 7:00 a.m. without the approval of the Engineer or Owner.
C. Work will proceed in a well organized and continuous manner to minimize the disruption to the general public (both pedestrian and vehicular) and the local businesses and residents. Access to school shall be maintained at all times to greatest extent possible.
D. The Contractor will become an active partner with the Owner in communicating with and providing information to concerned residents and businesses.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 01 3300
# SUBMITTALS

## PART 1 GENERAL

### 1.1 SUBMITTAL PROCEDURES

A. Submittal form to identify Project, Contractor, Subcontractor or supplier and pertinent Contract Document references.

B. Apply Contractor's stamp, signed or initialed and dated, certifying that review, 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.

C. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work. Notify the Engineer in writing, at the time of submission, of variations.

D. Provide space for the Engineer review stamp on each item.

E. Revise and resubmit submittals as required. Identify all changes made since previous submittal.

F. Do not begin fabrication or work which requires a submittal until the return of such submittals by the Engineer with the Engineer stamp marked either "Reviewed" or "Reviewed as Noted".

### 1.2 ENGINEER'S REVIEW

A. The Engineer review and stamp of submittals shall not relieve the Contractor from responsibility for any deviation from the Contract Documents unless the Contractor has, in writing, called the Engineer attention to such deviation at the time of submission, and the Engineer has given written concurrence to Contract Documents to specific deviation, nor shall any concurrence by the Engineer relieve the Contractor from the responsibility for errors or omissions in submittals.

### 1.3 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial progress schedule in duplicate for Engineer review within 5 days after date established in Notice to Proceed

B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

### 1.4 PROPOSED PRODUCTS LIST

A. Within 5 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

### 1.5 SUBSTITUTIONS

A. Within 10 days after date of Notice to Proceed, submit for review, descriptions of any materials or procedure substitutions to contract specifications and rationale for the exception. Contractor shall be prepared to submit cost data for any substitutions.

## 1.6 PRODUCT DATA

A. Submit the number of copies which the Contractor requires, plus four copies which will be retained by the Engineer and Owner.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this project.

## 1.7 SUPPLIER'S CERTIFICATES

A. When specified in individual specification sections, submit certifications by manufacturer to Engineer, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

**END OF SECTION**

# SECTION 01 4000
# QUALITY REQUIREMENTS

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Quality assurance submittals.

B. Control of installation.

C. Tolerances.

D. Testing and inspection services.

E. Manufacturers' field services.

### 1.02 RELATED REQUIREMENTS

A. Section 01 3300 - Submittals.

### 1.03 REFERENCE STANDARDS

A. ASTM C 1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.

B. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2007a.

C. ASTM C 1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2007.

D. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2004a.

E. ASTM E 329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2007a.

F. ASTM E 543 - Standard Specification for Agencies Performing Nondestructive Testing; 2008.

### 1.04 SUBMITTALS

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

B. Test Reports: After each test/inspection, promptly submit two copies of report to Engineer and to Contractor.
   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. Conformance with Contract Documents.
      k. When requested by Engineer, provide interpretation of results.

2. Test report submittals are for Engineer's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner’s information.

C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Engineer, in quantities specified for Product Data.
   1. Indicate material or product conforms to 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 Engineer.

D. 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.

E. Manufacturer's Field Reports: Submit reports for Engineer's review and for Owner documentation.
   1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

**1.05 TESTING AND INSPECTION AGENCIES**

A. Owner will employ and pay for services of an independent testing agency to perform specified testing and inspection of excavation, backfill, and compaction work specified in sections 31 2316 and 31 2323.

B. 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 E 329, ASTM E 543, ASTM C 1021, ASTM C 1077, and ASTM C 1093.
   2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
   3. Laboratory: Authorized to operate in Iowa.
   4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
   5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

**1.06 CONSTRUCTION STAKES, LINES AND GRADES**

A. The Contractor shall perform all construction layout and reference staking necessary for accurate control and completion of all structures, utilities, grading, paving, drainage, fence, permanent benchmarks, ROW monuments and all other appurtenances required for the complete construction and acceptance of the work. The layout shall include, but not be limited to, establishing project control; re-establishing plan benchmarks; setting additional benchmarks as needed; staking clearing line; removal limits; slope staking and slope stake referencing; grade staking blue top dirt grade and base course grade hubs); paving hub staking; staking of water mains, fittings, hydrants and valves; staking of sewer mains, bends, manholes, and services; staking of storm pipes and structures; re-establishing property corners; and performing the miscellaneous staking as described in the plans and in these specifications.

**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 Engineer 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 Engineer 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 required.

B. Testing Agency Duties:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at site. Cooperate with Engineer 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 Engineer and Contractor of observed irregularities or non-conformance of Work or products.
   6. Perform additional tests and inspections required by Engineer.
   7. 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 Engineer and laboratory 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-conformance to specified requirements shall be performed by the same agency on instructions by Engineer. Payment for re testing will be charged to the Contractor by deducting testing charges from the Contract Price.

**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 conforming to specified requirements.

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

**END OF SECTION**

# SECTION 01 5713

# 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 1000 - Site Clearing: Limits on clearing; disposition of vegetative clearing debris.

B. Section 31 2200 - Grading: Temporary and permanent grade changes for erosion control.

C. Section 32 1123 - Aggregate Base Courses: Temporary and permanent roadways.

D. Section 32 9219 - Seeding: Permanent turf for erosion control.

E. Section 32 9300 - Plants: Permanent plantings for erosion control.

### 1.03 REFERENCE STANDARDS

A. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc Type Apparatus; 2007.

B. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 1999a (Reapproved 2014).

C. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2011.

D. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2008.

E. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile; 2012.

F. ASTM D4873 - Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples; 2002 (Reapproved 2009).

G. Iowa DNR and EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit #2; current edition.

H. IDOT - Standard Specifications, Section 4130.

### 1.04 EROSION CONTROL PERMIT

A. The Contractor shall obtain and pay for the NPDES Permit by Iowa DNR for "General Permit No. 2 for Storm Water Discharges Associated With Industrial Activity for Construction Activities". The Owner has prepared the Notice of Intent and Proofs of Publication and will make this information available to the Contractor for submittal to the Iowa DNR.

B. The Contractor and Sub-contractors shall become co-permittees with the Owner and shall conduct their operations in conformance with the project Storm Water Pollution Prevention Plan.

C. Storm Water Pollution Prevention Plan (SWPPP): Contractor shall sign and maintain a copy at the jobsite:

1. A copy of the "Storm Water Pollution Prevention Plan" is available for review at MMS Consultants, 1917 South Gilbert Street, Iowa City, Iowa.

D. The Contractor shall be responsible for preparing and submitting an application to the City of Coralville for a Construction Site Runoff (CSR) Permit. Contractor shall pay the CSR application fee.

**1.05 PERFORMANCE REQUIREMENTS**

A. Comply with provisions of the "Storm Water Pollution Prevention Plan" and all other requirements of Iowa DNR for erosion and sedimentation control.

B. Comply with provisions of the "Construction Site Runoff" ordinance and all other requirements of the City of Iowa City for erosion and sedimentation control.

C. 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.
   1. Contractor shall obtain NPDES permit from the Iowa DNR and pay the fee associated with same. Some of this paperwork has been prepared by the Owner as stated in Part 1.04 above.
   2. Contractor will obtain CSR permit from the City of Coralville and pay the fee associated with same.
   3. Owner will withhold payment to Contractor equivalent to all fines resulting from non-compliance with applicable regulations.

D. 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.

E. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.

F. 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.

G. 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.

H. 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.

I. Sedimentation of Waterways On Site: Prevent sedimentation of waterways on the project site, including rivers, streams, lakes, ponds, wetlands, 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.

J. 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.

K. Open Water: Prevent standing water that could become stagnant.

L. Maintenance: Maintain temporary preventive measures until permanent measures have been established.

### 1.06 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Permits: Copy of NPDES Permit, CSR Permit and Performance Bond.

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.

E. Maintenance Instructions: Provide instructions covering inspection and maintenance for temporary measures that must remain after Substantial Completion.

F. Seed mix tags.

G. Erosion control blanket product information.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Mulch: Use one of the following:
1. Straw or hay.
2. Erosion control matting or netting.
3. Wood waste, chips or bark.
4. Hydromulch.

B. Grass Seed For Temporary Cover: Select a species appropriate to climate, planting season, and intended purpose. If same area will later be planted with permanent vegetation, do not use species known to be excessively competitive or prone to volunteer in subsequent seasons.

C. 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 (0.600 mm), maximum, when tested in accordance with ASTM D4751.
2. Permittivity: 0.05 sec^-1, minimum, when tested in accordance with ASTM D4491.
3. Ultraviolet Resistance: Retaining at least 70 percent of tensile strength, when tested in accordance with ASTM D4355 after 500 hours exposure.
4. Tensile Strength: 100 lb-f (450 N), minimum, in cross-machine direction; 124 lb-f (550 N), minimum, in machine direction; when tested in accordance with ASTM D4632.
5. Elongation: 15 to 30 percent, when tested in accordance with ASTM D4632.
6. Tear Strength: 55 lb-f (245 N), minimum, when tested in accordance with ASTM D4533.
7. Color: Manufacturer's standard, with embedment and fastener lines preprinted.

D. Silt Fence Posts: One of the following, minimum 5 feet (1500 mm) long:
1. Steel U- or T-section, with minimum mass of 1.33 lb per linear foot (1.98 kg per linear m).

E. Erosion Stone: Broken stone complying with IDOT Standard Specifications, Division 41, Section 4130.05 - Erosion Stone.

F. Gravel: See Section 32 1123 for aggregate.

G. Erosion Control Blanket: North American Green, SC150BN or approved equal.

## 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 (7 m), minimum.
   2. Length: 50 feet (16 m), 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.
      b. Along the toe of cut slopes and fill slopes.
      c. Perpendicular to flow across the bottom of existing and new drainage channels and swales that traverse disturbed areas or carry runoff from disturbed areas; space as indicated on drawings.
      d. Across the entrances to culverts and around storm intakes that receive runoff from disturbed areas.
   2. Space sediment barriers as indicated in the "Storm Water Pollution Prevention Plan" and with the following maximum slope length upslope from barrier:
      a. Slope of Less Than 2 Percent: 100 feet (30 m)..
      b. Slope Between 2 and 5 Percent: 75 feet (23 m).
      c. Slope Between 5 and 10 Percent: 50 feet (15 m).
      d. Slope Between 10 and 20 Percent: 25 feet (7.5 m).
      e. Slope Over 20 Percent: 15 feet (4.5 m).

D. Storm Drain Drop Inlet Sediment Traps: As detailed on drawings.

E. 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 2 inches thickness of pine needles, sawdust, bark, wood chips, or shredded leaves, or 2 inches of straw or hay.

F. Mulching: Use only for areas that may be subjected to erosion for less than 6 months.

G. Temporary Seeding: Use where temporary vegetated cover is required. Use anywhere disturbed soil is to be untouched by further grading operations or other construction for more than 14 days.

### 3.04 INSTALLATION

A. Traffic-Bearing Aggregate Surface:
   1. Excavate minimum of 12 inches.
   2. Place geotextile fabric full width and length, with minimum 12 inch (300 mm) overlap at joints.
   3. Place and compact at least 12 inches of 1.5 to 3.5 inch (40 to 90 mm) diameter stone.

B. Silt Fences:
   1. Store and handle fabric in accordance with ASTM D4873.

2. Where slope gradient is less than 3:1 or barriers will be in place less than 6 months, use nominal 16 inch (405 mm) high barriers with minimum 36 inch (905 mm) long posts spaced at 6 feet (1830 mm) maximum, with fabric embedded at least 4 inches (100 mm) in ground.
3. Where slope gradient is steeper than 3:1 or barriers will be in place over 6 months, use nominal 28 inch (710 mm) high barriers, minimum 48 inch (1220 mm) long posts spaced at 6 feet (1830 mm) maximum, with fabric embedded at least 6 inches (150 mm) in ground.
4. Where slope gradient is steeper than 3:1 and vertical height of slope between barriers is more than 20 feet (6 m), use nominal 32 inch (810 mm) high barriers with woven wire reinforcement and steel posts spaced at 4 feet (1220 mm) maximum, with fabric embedded at least 6 inches (150 mm) 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 (460 mm), with extra post.
7. Fasten fabric to steel posts using wire, nylon cord, or integral pockets.
8. 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 (300 mm) high with post spacing not more than 4 feet (1220 mm).

C. Mulching Over Small and Medium Areas:
1. Dry Straw and Hay: Apply 1 to 2 inches depth.
2. Erosion Control Matting: Comply with manufacturer's instructions.

D. Temporary Seeding:
1. When hydraulic seeder is used, seedbed preparation is not required.
2. When surface soil has been sealed by rainfall or consists of smooth undisturbed cut slopes, and conventional or manual seeding is to be used, prepare seedbed by scarifying sufficiently to allow seed to lodge and germinate.
3. If temporary mulching was used on planting area but not removed, apply nitrogen fertilizer at 1 pound per 1000 sq ft (0.5 kg per 100 sq m).
4. On soils of very low fertility, apply 10-10-10 fertilizer at rate of 12 to 16 pounds per 1000 sq ft (6 to 8 kg per 100 sq m).
5. Incorporate fertilizer into soil before seeding.
6. Apply seed uniformly; if using drill or cultipacker seeders place seed 1/2 to 1 inch deep (12 to 25 mm) deep.
7. Irrigate as required to thoroughly wet soil to depth that will ensure germination, without causing runoff or erosion.
8. Repeat irrigation as required until grass is established.

E. Erosion Control Blanket.

**3.05 MAINTENANCE**

A. Inspect preventative measures weekly and as required by the Iowa DNR or City of Iowa City

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 Engineer/Owner.

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**

# SECTION 02 4100
# DEMOLITION

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Selective demolition of built site elements.

B. Abandonment and removal of existing utilities and utility structures.

### 1.02 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use.

B. Section 01 5713 - Temporary Erosion and Sediment Controls:

C. Section 31 2200 - Grading: Topsoil removal.

D. Section 31 2323 - Fill

### 1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

### 1.04 PROJECT CONDITIONS

A. Comply with other requirements specified here within.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Fill Material: As specified in Section 31 2323 – Grading

## PART 3 EXECUTION

### 3.01 SCOPE

A. Remove trees and shrubs to the extents shown on the plan. Protect existing trees and shrubs that are to remain.

B. Remove concrete slabs on grade and asphalt pavement and concrete curb and gutter to the extents shown on the plan.

C. Remove other items indicated, for salvage, relocation, recycling, and as required for project completion.

D. Construct and maintain temporary board walk and egress route.

### 3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. 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.
   3. Provide, erect, and maintain temporary barriers and security devices.
   4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
   5. Conduct operations to minimize effects on and interference with adjacent structures and

occupants.
6. Do not close or obstruct roadways or sidewalks without permit.
7. 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.

B. Do not begin removal until receipt of notification to proceed from the Owner.

C. 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.

D. If hazardous materials are discovered during removal operations, stop work and notify the engineer and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

## 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.

H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

## 3.04 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**

# SECTION 03 3000

# CAST-IN-PLACE CONCRETE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement.

### 1.3 INFORMATIONAL SUBMITTALS

A. Material certificates.

B. Material test reports.

### 1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete,"

2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

## PART 2 - PRODUCTS

### 2.1 STEEL REINFORCEMENT

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than [25] [60] <Insert number> percent.

B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

1. Galvanized Reinforcing Bars: ASTM A 767/A 767M, [Class I] [Class II] zinc coated after fabrication and bending.

2. Epoxy-Coated Reinforcing Bars: ASTM A 775/A 775M, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

E. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from galvanized-steel wire into flat sheets.

F. Epoxy-Coated Welded Wire Reinforcement: ASTM A 884/A 884M, Class A coated, Type 1, [plain] [deformed] steel.

G. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice.

## 2.2 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I

B. Normal-Weight Aggregates: ASTM C 33, graded.

1. Maximum Coarse-Aggregate Size: 1 inch nominal.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M.

## 2.3 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

## 2.4 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.

## 2.5 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

C. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.

2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

D. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.

2. Maximum Water-Cementitious Materials Ratio: 0.45.

3. Slump Limit: 5 inches plus or minus 1 inch.

4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

### 2.6 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

### 2.7 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Chamfer exterior corners and edges of permanently exposed concrete.

### 3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

### 3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

### 3.4 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 301.

### 3.5 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view.

## 3.6 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

## 3.7 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

## 3.8 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

**END OF SECTION**

# SECTION 31 1000
# SITE CLEARING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Clearing and protection of vegetation.

B. Removal of existing debris.

### 1.02 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.

B. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

C. Section 01 5713 - Temporary Erosion and Sediment Control.

D. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.

E. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

F. Section 02 4100 - Demolition: Removal of built elements and utilities.

G. Section 02 6500 – Underground Storage Tank Removal.

H. Section 31 2200 - Grading: Topsoil removal.

I. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

J. Section 32 9300 - Plants: Pruning of existing trees to remain.

### 1.03 REFERENCE STANDARDS

A. A.29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition

B. IDOT, Standard Specifications

### 1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Site Plan: Showing:
   1. Vegetation removal limits.
   2. Areas for temporary construction and field offices.
   3. Contractor work area to be enclosed by security fence.

C. Project record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

### 1.05 QUALITY ASSURANCE

A. Perform the work of this section in accordance with provisions in the following divisions and sections of IDOT Standard Specifications:
   1. Division 24, Structures; Section 2401 - Removal of Existing Structures.
   2. Division 25, Miscellaneous Construction; Section 2510 - Removal of Pavement
   3. Division 25, Miscellaneous Construction; Section 2515 - Removal and Construction of Paved Driveways.

### 1.06 REGULATORY REQUIREMENTS

A. Disposal sites: Use only sites which comply with all applicable Iowa DNR and United States EPA regulations.

B. Hauling and disposal of waste and debris: Comply with applicable State and local ordinances and other requirements of authorities with jurisdiction.

### 1.07 PROJECT CONDITIONS

A. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

B. Confine construction activities to the limits of construction or construction easements where applicable. Protect adjacent properties and areas outside the limits of construction from damage resulting from construction operations.

C. Comply with other requirements specified in Section 01 7000.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Fill Material: As specified in Section 31 2323 - Fill

## PART 3 EXECUTION

### 3.01 SITE CLEARING

A. Comply with other requirements specified in Section 01 7000.

B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

### 3.02 EXISTING UTILITIES AND BUILT ELEMENTS

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 utility branches or take-offs that are in use without prior approval from the Owner and the City of North Liberty.

E. 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.

F. Remove exposed piping, valves meters, equipment, supports and foundations of disconnected and abandoned utilities.

G. Excavate test pits when location of pipe or other underground structure is necessary for doing work properly. Discontinue digging by machinery when excavation approaches pipes, conduits, or other underground structures. Continue excavation by use of hand tools.

H. Protect existing structures and other elements that are not to be removed.

### 3.03 STRIPPING VEGETATION AND ORGANIC MATERIALS

A. Scope: Remove trees, shrubs, brush, and stumps in areas to be covered by building structure, paving, lawns, and planting beds.

B. In preparing the site areas covered by building structure and pavement, remove topsoil, root zone, vegetation and other "unsuitable" materials, defined below. Stripping depth for topsoil, root zone, vegetation and organics approximates 8 inches; actual removal depth beyond 8 inches may vary based on geotechnical engineer's evaluation and identification of "unsuitable materials". Do not contaminate topsoil with other debris, construction materials or rock (gravel).
   1. Deleterious and unsuitable materials include:
      a. Organic soils with greater than 5% organic material.
      b. Topsoil and root zone materials
      c. Loose, soft and frozen materials.
      d. Existing fill soils, as well as demolition debris and rubble.

C. Do not remove or damage vegetation beyond the limits indicated on drawings.
   1. Exception: Specific trees and vegetation indicated on drawings to be removed.

D. Install substantial, highly visible fences at least 4 feet high to prevent inadvertent damage to vegetation to remain:
   1. At vegetation removal limits.
   2. Around trees to remain within vegetation removal limits; locate no closer to tree than at the drip line, unless approved by Engineer.
   3. Around other vegetation to remain within vegetation removal limits.
   4. See Section 01 5000 for fence construction requirements.

E. Vegetation Removed: Do not burn, bury, landfill, or leave on site, except as indicated.
   1. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
   2. Trees: Sell if marketable; if not, treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches (450 mm).
   3. Sod: Re-use on site if possible; otherwise sell if marketable, and if not, treat as specified for other vegetation removed.
   4. Fill holes left by removal of stumps and roots, using suitable fill material, with top surface neat in appearance and smooth enough not to constitute a hazard to pedestrians.

F. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to Owner.

**3.04 PREDRAINING / DEWATERING THE BUILDING SITE**

A. In accordance with recommendations included in the "Geotechnical Engineering Report:, groundwater conditions shall be controlled and evaluated prior to performing grading and excavation of the building site.

B. Perform trenching for storm sewers and subdrainage as far in advance of excavation work as practical as a means of controlling and lowering the groundwater level.

**3.05 DEBRIS**

A. Remove debris, junk, and trash from site.

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

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 31 1200
# SITE PREPARATION

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Preparation of the site for the improvements

### 1.02 REFERENCE STANDARDS

A. Iowa Department of Transportation Standard Specifications

## PART 2 PRODUCTS

**NONE**

## PART 3 EXECUTION

### 3.01 TECHNIQUES

A. Except as amended below, the work in this section will conform with the following divisions and sections of the IDOT Standard Specifications:

Division 21. Earthwork, Subgrades and Subbases.

### 3.02 EXISTING SITE PAVING

A. All site paving shall remain and be protected from damage unless specifically noted as "REMOVE" on the project plans or as otherwise directed by the Engineer.

B. No construction materials and/or equipment are to be stored, piled, or parked within ballfield work area. Material storage and parking shall be coordinated with. Storage and parking will be available on parking lot area.

C. Contractor is responsible for damages outside limits of construction as indicated, and any paving not designated for removal.

### 3.03 EXISTING STRUCTURES AND PROPERTY

A. All site structures shall remain and be protected from damage unless specifically noted as "REMOVE" on the project plans or as otherwise directed by the Engineer.

B. All site structures that are marked as “SALVAGE” on the project plans shall be removed, salvaged, protected from damage and taken to a designated storage area that has been coordinated with the Owner until they are ready to be reinstalled on site.

C. Site fences shall remain and be protected. Anywhere fence removals are necessary for equipment access, the fence shall be salvaged and stored. Reinstall all fence upon completion of site access needs.

### 3.04 EXISTING UTILITIES

A. Contact appropriate utility representative to verify the presence and location of buried utilities which may interfere with construction.

## 3.05 EROSION CONTROL

A. Comply with Section 01 5713 TEMPORARY EROSION AND SEDIMENT CONTROL.

**END OF SECTION**

# SECTION 31 2200
# GRADING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Removal and storage of topsoil.

B. Rough grading the site for paving and sidewalks

C. Replacement of topsoil and finish grading.

### 1.02 RELATED REQUIREMENTS

A. Section 01 5713 - Temporary Erosion and Sediment Control

B. Section 31 2316 - Excavation.

C. Section 31 2323 - Fill: Filling and compaction.

D. Section 32 9219 - Seeding: Finish ground cover.

### 1.03 SUBMITTALS

A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

### 1.04 PROJECT CONDITIONS

A. Protect above- and below-grade utilities that remain.

B. Protect existing underground utilities and other features to remain as a portion of final landscaping.

C. Protect bench marks, survey control points, fences, sidewalks, and paving from grading equipment and vehicular traffic.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Topsoil: See Section 31 2323.

B. Topsoil: Topsoil excavated on-site.
   1. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
   2. If there is insufficient on-site topsoil to meet the requirements for this project, the Contractor shall import sufficient topsoil to meet project needs at no additional cost to the Owner. See item 3.08G of this section for minimum topsoil depth requirements.

C. Other Fill Materials: See Section 31 2323.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that survey bench mark and intended elevations for the Work are as indicated.

### 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.

## 3.03 DRAINAGE AND DEWATERING:

A. During grading operations, maintain positive drainage for areas under construction and adjacent areas affected by the work. Provide positive drainage away from the building foundation excavation at all times. If pumping is required for dewatering, the Contractor shall meet the requirements of the NPDES permit and CSR permit for this project.

B. Sumps created by grading operations shall be dewatered sufficiently to allow grading operations to proceed. Provide and operate all pumps and other equipment needed to carry out such dewatering.

C. Dispose of all pumped or drained water without undue interference to other work. or causing damage to pavements, other surfaces, or property. Provide suitable temporary pipes, flumes, or channels for water that may flow along or across the work site.

D. Take all precautions necessary to prevent damage to the work by rain or by water entering the site, whether water entry is direct or through the ground.

## 3.04 EXISTING DRAINAGE TILES:

A. The Contractor shall investigate and document the location and elevation of any tile lines encountered. The Contractor shall notify the Engineer whenever a tile is encountered and submit the proposed method of restoring the tile to the Engineer for review and approval.

## 3.05 TOPSOIL REMOVAL AND STOCKPILING

A. Strip existing playground mulch (top 4”) from area to be regraded or disturbed

B. Stockpile playground mulch on site in location as directed by owner.

C. Strip existing topsoil (top 4”) from area to be regraded or disturbed.

D. Stockpile topsoil to be re-used on site; maintain remainder of topsoil on site as indicated on plan or in location as directed by Owner.

E. Remove all unsuitable subsoil material from site.

F. Stockpile excavated subsoil on site in location as directed by owner.

### 3.06 ROUGH GRADING

A. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
   1. Remove all topsoil from areas to receive greater than 6” of increase in elevation. (All areas to receive subsoil fill.)
   2. Do not remove topsoil when wet.

B. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
   1. Remove unsatisfactory subsoil from inside building lines upon specific direction of Geotechnical Engineer.
   2. Compensation for overexcavation and related fill shall be in accordance with approved unit prices and actual quantities of materials placed as verified by Geotechnical Engineer.

C. When excavating through roots, perform work by hand and cut roots with sharp axe.

D. See Section 31 2323 - Fill, for filling procedures.

E. Benching Slopes: Horizontally bench existing slopes greater than 1:4 to key fill material to slope for firm bearing.

F. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

### 3.07 SOIL REMOVAL AND STOCKPILING

A. Stockpile topsoil to be re-used on site; no topsoil may be removed from site. Stock piles shall be graded with smooth sides and seeded with temporary seed.

B. Suitable site excavated subsoil may be used as fill material under the proposed parking area, and playground. Remove all excess suitable subsoil material from site.

C. Remove all unsuitable subsoil material from site.

## 3.08 FINISH GRADING

A. Before Finish Grading:
   1. Verify trench backfilling has 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 6 inches.

D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 9 inches and recompact to specified minimum/maximum percent compaction.

E. Place topsoil in areas where seeding and sodding are indicated.

F. Place topsoil where required to level finish grade.

G. Place topsoil to the following compacted thicknesses:
   1. Areas to be Seeded with Grass: 6 inches.
   2. Areas to be Sodded: 5 inches.

H. Place topsoil during dry weather.

I. Remove roots, weeds, rocks, and foreign material while spreading.
   1. Rake finished surface as necessary to remove rocks greater that 1/2 inch in size.

J. Near existing and new plants spread topsoil manually to prevent damage.

K. Fine grading operations shall be performed with laser-guided turf equipment.

L. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.

M. Lightly compact placed topsoil with turf roller or other engineer approved equipment.

## 3.09 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 0.10 foot from required elevation.

B. Top Surface of Finish Grade: Plus or minus 1/2 inch.

## 3.10 CLEANING

A. Maintain stockpiled topsoil and subsoil. Grade stockpile area to prevent standing water.

B. Leave site clean and raked, ready to receive landscaping.

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 31 2316
# EXCAVATION

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Excavating for building volume below grade, footings, slabs-on-grade, paving, and utilities within the building.

B. Trenching for utilities outside the building.

### 1.02 RELATED REQUIREMENTS

A. Section 01 5713 - Temporary Erosion and Sediment Control

B. Section 31 1200 - Site Preparation

C. Section 31 2200 - Grading: Grading.

### 1.03 QUALITY ASSURANCE

A. Perform work in accordance with Public Works Standards and other requirements of the City of Iowa City, Iowa

### 1.04 REGULATORY REQUIREMENTS

A. Comply with applicable provisions of "Safety and Health Regulations for Construction" (Chapter XVII of Title 29. Code of Federal Regulations (CFR), Part 1926); promulgated by U.S. Department of Labor.

B. Comply with IDOT Standard Specifications Section 2102, 2104 and 2107.

### 1.05 PROJECT CONDITIONS

A. Verify that survey bench mark and intended elevations for the Work are as indicated.

B. Protect plants, lawns, and trees to remain.

C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION

### 3.01 PREPARATION

A. Identify required lines, levels, contours, and datum locations.

B. Verify location and route of underground utilities before starting work.

C. See Section 31 2200 for additional requirements.

D. Locate, identify, and protect utilities that remain and protect from damage.

### 3.02 EXCAVATING

A. Excavate to accommodate new structures and shape ground to proposed contours shown on the plans.

B. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.

C. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.

D. Do not interfere with 45 degree bearing splay of foundations.

E. Cut utility trenches wide enough to allow inspection of installed utilities.

F. Correct areas that are over-excavated and load-bearing surfaces that are disturbed.

G. Grade top perimeter of excavation to prevent surface water from draining into excavation.

H. Remove excavated material that is unsuitable for re-use from site.

I. Spread excavated material to be re-used in area designated on site in accordance with Section 31 2200.

J. Remove excess excavated material from site.

## 3.03 FIELD QUALITY CONTROL

A. Provide for visual inspection of load-bearing excavated surfaces before placement of foundations.

## 3.04 PROTECTION

A. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.

B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

**END OF SECTION**

# SECTION 31 2323

# FILL

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Filling, backfilling, and compacting for retaining walls and paving.

B. Backfilling and compacting for utilities.

C. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

### 1.02 RELATED REQUIREMENTS

A. Section 01 5713 - Temporary Erosion and Sediment Control

B. Section 31 2200 - Grading: Site grading.

C. Section 31 2316 - Excavation: Removal and handling of soil to be re-used.

D. Section 31 2316.13 - Trenching: Excavating for subdrainage

E. Section 33 4600 - Subdrainage: Filter aggregate and filter fabric for drainage systems.

### 1.03 REFERENCE STANDARDS

A. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2007.

B. ASTM D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.

C. ASTM D 2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2006.

D. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.

E. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.

F. ASTM D 4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2005.

### 1.04 DEFINITIONS

A. Finish Grade Elevations: Indicated on drawings.

B. Subgrade Elevations: Indicated on drawings.

### 1.05 SUBMITTALS

A. See Section 01 3300 Construction Submittals, for submittal procedures.

B. Materials Sources: Submit name of imported materials source.

C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.

D. Compaction Density Test Reports.

### 1.06 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.

B. Separate differing materials with dividers or stockpile separately to prevent intermixing.
   1. Prevent contamination.
   2. Protect stockpiles from erosion and deterioration of materials.

C. Verify that survey benchmarks and intended elevations for the Work are as indicated.

## PART 2 PRODUCTS

### 2.01 FILL MATERIALS

A. General Fill: Subsoil excavated on-site and/or imported to the site conforming to the following:
   1. Low-plasticity, cohesive type.
      a. Liquid Limit: Less than 45 percent
      b. Plasticity Index: Less than 23 percent
   2. Moisture Content Range, from optimum; -2% TO +3% as determined by the Standard Proctor test (ASTM D-698).
   3. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.
   4. Conforming to ASTM D 2487 Group Symbol CL.

B. Structural Fill: Structural Fill shall consist of the following materials, subject to the Geotechnical Engineer's review and approval:
   1. Sub-soil excavated on-site and/or imported to the site and conforming to the following
      a. Low-plasticity, cohesive type:
         1) Liquid Limit: Less than 45 percent
         2) Plasticity Index: Less than 23 percent
         3) Moisture Content Range, from optimum; -2% TO +3% as determined by the Standard Proctor test (ASTM D-698).
      b. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris
      c. Conforming to ASTM D 2487 Group Symbol CL
   2. Cohesive soil stabilized with Class C fly ash (for moderate to high plasticity clay soils).
   3. Dense graded, processed aggregate. Conforming to State of Iowa DOT Standard Specification for aggregate base course, latest Supplemental Specification Thereof.
      a. Moisture Content Range, from optimum; -3% TO +3%

C. Granular Drainage Fill: Angular crushed washed stone; open-graded, processed aggregate, free of shale, clay, friable material and debris; and conforming to the following:
   1. ASTM C33, Class Designation 2S, course aggregate for concrete; IDOT Standard Specification Sections 4121, 4123 or 4132.
      a. Minimum size: No. 200 sieve; 0 to 10 percent passing
      b. Maximum size: 1 inch
   2. Moisture Content Range, from optimum; -3% TO +3%

D. Granular Fill - Pea Gravel - Fill Type IDOT Porous Backfill or Section 4131 criteria or an alternative free-draining granular material encapsulated with suitable filter fabric: Natural stone; washed, free of clay, shale, organic matter.

E. Topsoil: Topsoil excavated on-site
   1. Select.
   2. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
   3. Acidity range (pH) of 5.5 to 7.5.
   4. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.

F. Crushed Limestone: Well graded crushed limestone conforming to Iowa DOT Specification Section 4117.

### 2.02 ACCESSORIES

A. Filter Fabric: Polypropolene type, black non-biodegradable, non-woven, needle punched; "ADS-6000" manufactured by Advanced Drainage Systems, Inc.

## 2.03 SOURCE QUALITY CONTROL

A. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.

B. If tests indicate materials do not meet specified requirements, change material and retest.

C. Provide materials of each type from same source throughout the Work.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Identify required lines, levels, contours, and datum locations.

B. See Section 31 2200 for additional requirements.

C. Verify subdrainage, damp proofing, or waterproofing installation has been inspected.

D. Verify structural ability of unsupported walls to support imposed loads by the fill.

## 3.02 PREPARATION

A. Scarify the subgrade soils to a depth of 8 inches, moisture condition, and compact to the minimum specified percent compaction.

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. Fill up to subgrade elevations unless otherwise indicated.

C. Employ a placement method that does not disturb or damage other work.

D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.

E. Maintain optimum moisture content of fill materials to attain required compaction density.

F. Structural Fill: Place and compact materials in equal continuous layers not exceeding 4 to 6 inches.

G. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.

H. Soil Fill: Place and compact material in equal continuous layers not exceeding 4 to 6 inches compacted depth.

I. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.

J. Correct areas that are over-excavated.
   1. Load-bearing foundation surfaces: Use approved structural fill, flush to required elevation, compacted to at least 98 percent of maximum dry density as determined by "Laboratory Compaction Characteristics of Soil using Standard Effort (ASTM D-698).
   2. Other areas: Use general fill, flush to required elevation, compacted to the minimum specified percent compactions.

K. Reshape and re-compact fills subjected to vehicular traffic.

## 3.04 FILL AT SPECIFIC LOCATIONS

A. Granular Fill Material, where specified and/or authorized:
   1. Relative Density (ASTM D4353 and D4254): 70%
   2. Minimum Percent Compaction (ASTM D698): 98%
   3. Moisture Content Range, from optimum: Generally -3% to +3% (specific evaluation for each material)
   4. If granular material is a coarse sand or gravel, is of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate.
   5. The gradation of a granular material may affect its stability and the moisture content required for proper compaction. Samples of all proposed fill materials should be submitted to the Geotechnical Engineer for testing and approval prior to use.

B. Pavement Subgrade:
   1. Low Plasticity Cohesive soil (e.g. lean clay or sandy lean clay)
   2. Minimum Percent Compaction (ASTM D698):
      a. Upper 12 inches of pavement subgrade: 98%
      b. Below upper 12 inches of pavement subgrade: 95%
   3. Moisture Content Range, from optimum -2% to +3%
   4. Cohesive Stabilized with Class C fly ash (For moderate to high plasticity clay soils);

C. Over Subdrainage Piping at Foundation Perimeter, Under Slabs, and pavement sub-drains:
   1. Drainage fill and geotextile fabric: Section 33 4600.
   2. Cover drainage fill with granular fill.
   3. Fill to within 18 inches below finish grade elevation.
   4. Compact to 98 percent of maximum dry density.

D. Over Buried Utility Piping, Conduits, and Duct Bank in Trenches:
   1. Bedding: Use Fill Type Structural Fill.
   2. Fill up to subgrade elevation.
   3. Compact in maximum 6 inch lifts to 98 percent of maximum dry density.

E. At Lawn Areas:
   1. Use general fill.
   2. Fill up to 6 inches below finish grade elevations.
   3. Compact to 95 percent of maximum dry density.
   4. See Section 31 2200 for topsoil placement.

## 3.05 TOLERANCES

A. Top Surface of General Filling: Plus or minus 1 inch from required elevations.

B. Top Surface of Filling Under Paved Areas: Plus or minus one-half inch from required elevations.

## 3.06 FIELD QUALITY CONTROL

A. Perform compaction density testing on compacted fill in accordance with ASTM D1556.

B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 ("Standard Proctor").

C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

D. Frequency of Tests: Comply with recommendations of Engineer.

E. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

   1. Contractor shall contact Engineer to schedule proof roll upon completion of filling and compacting activating.

## 3.07 CLEANING

A. Remove unused stockpiled materials; leave area in a clean and neat condition, properly prepared for subsequent grading operations.

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 32 1123
# AGGREGATE BASE COURSES

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Aggregate base course.

B. Paving aggregates.

### 1.02 RELATED REQUIREMENTS

A. Section 31 2200 - Grading: Preparation of site for base course.

B. Section 31 2323 - Fill: Compacted fill under base course.

C. Section 31 2316.13 - Trenching: Compacted fill over utility trenches under base course.

D. Section 32 1216 - Asphalt Paving: Binder and finish asphalt courses.

E. Section 32 1313 - Concrete Paving: Finish concrete surface course.

F. Section 33 0513 - Manholes and Structures: Manholes including frames.

G. Section 33 4600 - Subdrainage: Filter aggregate and filter fabric for foundation drainage systems.

H. Section 31 2323 - Fill: Topsoil fill at areas adjacent to aggregate base course.

### 1.03 REFERENCE STANDARDS

A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; American Association of State Highway and Transportation Officials; 1965 (2004).

B. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2006.

C. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012.

D. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.

E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.

F. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.

G. ASTM D 2940 - Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways and Airports; 1992.

H. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2010.

I. IDOT Standard Specifications, Sections 4120, 4121 and 4123, plus all applicable Supplemental Specifications.

### 1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Materials Sources: Submit name of imported materials source.

C. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.

D. Compaction Density Test Reports.

### 1.05 DELIVERY, STORAGE, AND HANDLING

A. Provide sufficient quantities of aggregate to meet project schedule and requirements.

B. When aggregate materials need to be stored on site:

1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
2. Prevent contamination.
3. Prevent stockpiles from erosion and deterioration of materials.

C. Stockpiles in turf areas should be avoided.
1. Topsoil contaminated with gravel or other aggregate used for construction shall be thoroughly raked clean or replaced.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Modified Subbase
1. Comply with Iowa DOT Standard Specification Section 4123, Gradation Number 14 under pavement slabs.

B. Granular Subbase
1. Comply with IDOT 4121, Gradation Number 12.

C. Granular Drainage Fill:
1. As specified in Section 31 2323.

### 2.02 SOURCE QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of aggregate materials.

B. Test and analyze samples for compliance before delivery to site.

C. If tests indicate materials do not meet specified requirements, change material and retest.

D. Provide materials of each type from same source throughout the Work.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

### 3.02 PREPARATION

A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.

B. Do not place aggregate on soft, muddy, or frozen surfaces.

C. Proof-roll with loaded tandem axle dump truck.

D. Areas where unsuitable conditions exist should be repaired by removing and replacing the unsuitable materials with properly compacted fill.

### 3.03 INSTALLATION

A. Place aggregate base over compacted subgrade to a minimum compacted thickness of 6 inches under pavement slabs unless otherwise noted on plans.

B. Compact to 98 percent of the maximum dry density as determined by "Laboratory Compaction Characteristics of Soil Using Standard Effort (ASTM D-698).

C. Place aggregate in maximum 4 inch (100 mm) layers and roller compact to specified density.

D. Level and contour surfaces to elevations and gradients indicated.

E. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.

F. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

G. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

### 3.04 TOLERANCES

A. Flatness: Maximum variation of 1/4 inch (6 mm) measured with 10 foot (3 m) straight edge.

B. Scheduled Compacted Thickness: Within 1/4 inch (6 mm).

C. Variation From Design Elevation: Within 1/2 inch (12 mm).

**3.05 FIELD QUALITY CONTROL**

A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.

B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556.

C. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor").

D. If tests indicate work does not meet specified requirements, remove work, replace and retest.

E. Frequency of Tests: In accordance with the requirements of the Geotechnical Engineer, but no fewer than one for each 2500 sf.

**3.06 CLEANING**

A. Remove unused stockpiled materials, leave area in a clean and neat condition, properly prepared for subsequent project Work.

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 32 1270
# SPORTS EQUIPMENT

## PART 1 GENERAL

### 1.01 SUMMARY

A. This section covers all labor and materials required to install the sports equipment.

B. The Contractor is responsible for the purchase and installation of all sports equipment.

### 1.02 CODES AND STANDARDS

A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (lAAF), the National Collegiate Athletic Association (NCAA) and National Federation of State High School Associations (NFHS). Where discrepancies are noted between these various governing bodies, the rules of the NFHS shall be enforced.

### 1.03 SUBMLLTTALS

A. The following information shall be submitted prior to installation of specified work.
   1. Standard printed specifications and diagrams or drawings depicting installation directions and dimensions for all sports equipment.
   2. Installation process and requirements for materials and any conditions that may limit the installation or affect quality of installation.
   3. Material safety data sheets on all products, as necessary.

### 1.04 QUALITY ASSURANCE

A. The Contractor shall only accept bids from those vendors or manufacturers that have been pre-approved or identified as approved equal.

## PART 2 PRODUCTS

### 2.01 FIELD EQUIPMENT

A. The Contractor is responsible to provide and install all permanent and/or temporary equipment as specified by these specifications and shown on the project drawings.

B. The track and field equipment is available from the following:
   1. Sportsfield Specialties, Inc., www.sportsfieldspecialties.com Tel: 815-885-1199
   2. Gill Athletics, www.gillathletics.com Tel: 800-637-3090

C. Track and Field
   1. In ground Equipment-(Gill Athletics Product Number-or pre-approved equivalent)
      a. Two (2) Shot Put Throw Rings -level pad, Model 366
      b. Two (2) Discus Throw Rings-Level Pad, Model 367

   2. High School Discus Cage(Sportsfield Specialties Product Number or approved equivalent
      a. One (1) High School Discuss Cages, Model DCHS
         1) DCHS including six (6) poles 14' and six (6) ground sleeves
      b. One (1) set of six (6) ground sleeves, if existing sleeves are not salvaged.

## PART 3 EXECUTION

### 3.01 INSTALLATION OF SPORTS EQUIPMENT

A. The installation of the sports equipment shall follow the directions of the manufacturer and/or vendor. Shop drawings must he submitted and approved prior to installation of equipment.

### 3.02 FOOTINGS, NET POSTS, AND FIXTURES

A. Footings: Footings shall be two (2) feet by two (2) feet by three (3) feet in depth, with a minimum 30 inch belled bottom.

B. Ground sleeves shall be schedule 40 PVC pipe, 24" long, six (6) inches above top of 2 inch base course.

C. Tie downs: Install center tie-down anchors, compatible with nets. Anchors shall be set in twelve (12) inch by twelve (12) inch by twelve (12) inch deep footings. Top of footings shall protrude four (4) inches above top of 2 inch base course.

**3.03 NETS AND ACCESSORIES**

A. Install nets and winding devices in accordance with manufacturer's written instructions.

**END OF SECTION 32 1270**

# SECTION 32 1313

# CONCRETE PAVING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Concrete sidewalks, stair steps and integral curbs.

### 1.02 RELATED REQUIREMENTS

A. Section 31 2200 - Grading: Preparation of site for paving and base and preparation of subsoil at pavement perimeter for planting.

B. Section 31 2323 - Fill: Compacted subbase for paving.

C. Section 32 1123 - Aggregate Base Courses: Aggregate base course.

D. Section 32 1116 – Field Event Equipment: Long jump

### 1.03 REFERENCE STANDARDS

A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).

B. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2005.

C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.

D. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 1999.

E. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 1988 (Reapproved 2002).

F. ASTM A 185/A 185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.

G. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2007.

H. ASTM C 33 - Standard Specification for Concrete Aggregates; 2007.

I. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2005.

J. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2007.

K. ASTM C 150 - Standard Specification for Portland Cement; 2007.

L. ASTM C 173/C 173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2007.

M. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2006.

N. ASTM C 309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2007.

O. ASTM C 494/C 494M - Standard Specification for Chemical Admixtures for Concrete; 2008.

P. ASTM C 618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2005.

Q. ASTM C 685/C 685M - Standard Specification for Concrete Made by Volumetric Batching and

Continuous Mixing; 2007.

R. ASTM D 1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (nonextruding and Resilient Bituminous Types); 2004.

## 1.04 SUBMITTALS

A. See Section 01 3300 - Submittals, for submittal procedures.

B. Product Data: Provide data on joint filler, admixtures, and curing compound.

C. Proposed mix designs: Material proportions for each class of concrete indicate compressive strength development at 7, 28 and 90 days; indicate alkalinity (pH) of hardened concrete.

## 1.05 QUALITY ASSURANCE

A. Perform work in accordance with Iowa DOT "Standard Specifications for Highway and Bridge Construction", Sections 2301 and 2515 (Series 2001), and procedures and regulations of the Jurisdictional Engineer for Municipalities where the project is located.

B. Obtain cementitious materials from same source throughout Work.

C. Follow recommendations of ACI 305R when concreting during hot weather.

D. Follow recommendations of ACI 306R when concreting during cold weather.

E. Where accessible routes are shown, running slopes greater than 5% or cross slopes greater than 2% are unacceptable along the route. The Owner is planning an as-built survey of sidewalk and any other accessible routes within the proposed work of this project following construction. ADA accessible routes that are found to not be in compliance with ADA standards will require replacement of work or portions of the work not conforming to specified requirements at the Contractor’s expense.

## 1.06 ENVIRONMENTAL REQUIREMENTS

A. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

# PART 2 PRODUCTS

## 2.01 FORM MATERIALS

A. Form Materials: Conform to ACI 301.

B. Joint Filler: Preformed; flexible, closed-cell foam.
   1. Thickness: 1/2 inch.
   2. Product: "Sealtight Ceramar" manufactured by W.R. Meadows, Inc.
   3. Substitutions: See Section 01 3300 - Submittals.

## 2.02 REINFORCEMENT

A. Reinforcing Steel: ASTM A 615/A 615M Grade 40 (280); deformed billet steel bars; unfinished finish.

B. Steel Welded Wire Reinforcement: Plain type, ASTM A 185/A 185M; in flat sheets; unfinished.

## 2.03 ACCESSORIES

A. Curing Compound: ASTM C 309, Type 2, Class B.
   1. Product: "L & M Cure R-2" manufactured by L & M Construction Chemicals, Inc.
   2. Substitutions: See Section 01 60 00 - Product Requirements.

B. Joint filler: Preformed, flexible, closed-cell foam:

1. Thickness: 1/2 inch
2. Product: "Sealtight Ceramar" manufactured by W.R. Meadows, Inc.
3. Substitutions: See Section 01 3300 - Submittals

## 2.04 CONCRETE MIX DESIGN - NORMAL WEIGHT CONCRETE

A. Iowa DOT IM 529: Class C mix with air entraining.

B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
   1. Air Entrainment Admisture: ASTM C 260.
   2. Water-Reducing Admixture (Mid-Range): ASTM C 494, Type A; providing for 12 - 15 percent reduction of water content in concrete mix.

C. Concrete Properties:
   1. Compressive Strength, when tested in accordance with ASTM C 39/C 39M at 28 days: 4000 psi.
   2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
   3. Slag Content: Maximum 35 percent of cementitious materials by weight.
   4. Water-Cement Ratio: Maximum 48 percent by weight.
   5. Total Air Content: 6 percent, determined in accordance with ASTM C 173/C 173M.
   6. Maximum Aggregate Size: 1 inch.

## 2.05 MIXING

A. Transit Mixers: Comply with ASTM C 94/C 94M.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.

B. Verify gradients and elevations of base are correct.

## 3.02 SUBBASE

A. See Section 32 1123 for construction of base course for work of this Section.

## 3.03 PREPARATION

A. Moisten base to minimize absorption of water from fresh concrete.

B. Coat surfaces of manhole frames with oil to prevent bond with concrete pavement.

C. Notify MMS Consultants minimum 24 hours prior to commencement of concreting operations.

## 3.04 FORMING

A. Place and secure forms to correct location, dimension, profile, and gradient.

B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

D. Secure storm water inlet frames and manhole frames in final position.

## 3.05 REINFORCEMENT

A. Place reinforcement as indicated.

B. Place dowels to achieve pavement and curb alignment as detailed.

## 3.06 PLACING CONCRETE

A. Place concrete in accordance with IDOT Specifications for Highway and Bridge Construction. Division 23, surface course, Division 25, Section 2512 PCC curb and gutter.

B. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.

C. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.

## 3.07 JOINTS

A. Provide scored joints:
   1. At intervals approximately equal to the width of the sidewalk.

B. Provide sawn joints:
   1. At a maximum of 15.5 feet for longitudinal joints.
   2. At a maximum of 12 feet for transverse joints.

C. Provide keyed joints as indicated.

D. Saw cut contraction joints 1/8 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

## 3.08 FINISHING

A. Area Paving: Light broom, texture perpendicular to pavement direction.

B. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/2 inch radius.

C. Inclined Vehicular Ramps: Broomed perpendicular to slope.

D. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

## 3.09 JOINT SEALING

A. See Section 07 9005 for joint sealer requirements.

## 3.10 TOLERANCES

A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.

B. Maximum Variation From True Position: 1/4 inch.

## 3.11 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

D. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.

E. Compressive Strength Tests: ASTM C 39/C 39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 75 cu yd or less of each class of concrete placed.
   1. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
   2. Perform one slump test for each set of test cylinders taken.

F. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

## 3.12 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

B. Do not permit vehicular traffic over pavement until 75 percent design strength of concrete has been achieved.

C. When concrete is being placed in cold weather and temperatures may be expected to drop below 35 degrees, the following requirements must be met for concrete less than 36 hours old:
   1. 24-hour forecast minimum temperature 35-32 degrees: 1 layer plastic or burlap
   2. 24-your forecast minimum temperature 31-25 degrees: 1 layer plastic and 1 layer burlap or 2 layers burlap.
   3. 24-hour forecast below 25 degrees: 6 inches straw and 2 layers burlap.
   4. Equivalent commercial insulating material, approved by the Architect may be used.

D. Concrete shall be protected from freezing temperatures until it is at least 5 days old.

E. Concrete damaged by cold weather shall be removed and replaced at the contractor's expense.

F. Maximum allowable concrete temperature: 90 degrees.

G. If concrete is placed when the temperature could exceed 90 degrees, the contractor shall employ effective means, such as precooling of aggregates and/or mixing water as necessary to maintain the temperature of the concrete as is placed below 90 degrees.

## 3.13 TESTING

A. Air and slump testing in accordance with Iowa OT Materials IM 204 Appendix E shall be performed by owner testing agency, contractor shall coordinate testing. Contractor shall cooperate with owner’s testing agency for making test cylinders to determine pavement strength.

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

SECTION 32 9219

# SEEDING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Preparation of subsoil .

B. Placing topsoil.

C. Seeding, mulching and fertilizer.

### 1.02 RELATED REQUIREMENTS

A. Section 31 2200 - Grading: Topsoil material

B. Section 31 2200 – 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.

### 1.04 SUBMITTALS

A. See Section 01 3000 – Administrative Requirements, for submittal procedures.

B. Submit seed tags, fertilizer tags and specifications including application rates.

### 1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable. Deliver seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

## PART 2 PRODUCTS

### 2.01 SEED MIXTURE

A. Seed Mixture for lawn areas: Proportion of Kentucky Blue Grass, Creeping Red Fescue and Perennial Rye.

B. Acceptable Mix:
   1. Kentucky Blue Grass:70 percent
   2. Creeping Red Fescue Grass:20 percent
   3. Norlea Perennial Rye:10 percent

C. Use SUDAS Type 1 seed mixture (or approved equivalent) for permanent seeding

### 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.

**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: Provide commercial grade, liquid or granular, controlled release type conforming to current requirements of the Iowa Department of Agriculture; recommended for grass, with 50 percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as per soil testing laboratory fertilizer mix recommendations.

C. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

**3.02 PREPARATION**

A. Prepare subgrade in accordance with Section 31 2200.

B. Place topsoil in accordance with Section 31 2200

**3.03 FERTILIZING**

A. Apply fertilizer in accordance with manufacturer's instructions.

B. Apply after smooth raking of topsoil.

C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.

D. Mix thoroughly into upper 2 inches of topsoil.

E. Lightly water to aid the dissipation of fertilizer.

**3.04 SEEDING**

A. Apply seed at a rate of 5 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. Do not sow immediately following rain, when ground is too dry, or during windy periods.

D. Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inches. Maintain clear of shrubs and trees.

F. Apply water with a fine spray immediately after each area has been mulched. Saturate to 2-3 inches of soil.

G. Following germination, immediately re-seed areas without germinated seeds that are larger than 4 by 4 inches.

**3.05 PROTECTION**

A. Identify seeded areas with stakes and string around area periphery. Set string height to 36 inches. Space stakes at 72 inches.

B. Cover seeded slopes where grade is 2 inches per foot or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.

C. 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.

D. Secure outside edges and overlaps at 36 inch intervals with stakes.

**3.06 MAINTENANCE**

A. Provide maintenance at no extra cost to Owner; Owner will provide water if available on site.

B. Maintain seeded areas immediately and continue maintenance until grass is well established and exhibits a vigorous growing condition and has stabilized the soil.

C. Mow grass at regular intervals to maintain at a maximum height of 3 inches. Do not cut more than 1/3 of grass blade at any one mowing. Mow seeded areas a minimum of three times.

D. Neatly trim edges.

E. Immediately remove excess clippings after mowing and trimming which would create dead-spots up to and thru the next planting season.

F. Water, weed, mow, fertilize, spray, cultivate and otherwise maintain and protect all seeding.

G. Water to prevent grass and soil from drying out after "Substantial Completion" of the work.
   1. Supply and/or coordinate water supply availability with owner.
   2. Provide and maintain temporary piping, hoses, and lawn watering equipment to convey water from sources to keep soil moist to a uniform depth of four (4) inches.
   3. Schedule watering to prevent wilting, puddling, erosion, or displacement of seed.

H. Roll surface to remove minor depressions or irregularities. Regrade and reseed any areas impacted by other construction processes prior to final acceptance of the work.

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 which show bare spots or eroded areas with original mixtures, watering, or as necessary to establish a close stand of grasses specified, free of weeds and undesirable grasses.

K. Protect seeded areas with warning signs during maintenance period.

L. Contractor shall be responsible for maintenance of all seeded areas up to and through the Spring or Fall Planting Season, whichever is applicable, following "Substantial Completion" of the Work.
   1. Planting Seasons:
      a. Spring Planting Season: April 15 to May 30
      b. Fall Planting Season: August 1 to September 15

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SECTION 32 9223
# SODDING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Fertilizing.

B. Sod installation.

C. Maintenance.

### 1.02 RELATED REQUIREMENTS

A. Section 01 57 13 - Temporary Erosion and Sediment Control

B. Section 31 2200 - Grading: Preparation of subsoil and placement of topsoil in preparation for the work of this section.

C. Section 32 93 19 - Seeding

D. Section 32 93 00 - Plants

### 1.03 REFERENCE STANDARDS

A. TPI (SPEC) - Guideline Specifications to Turfgrass Sodding; Turfgrass Producers International; 2006.

### 1.04 DEFINITIONS

A. Weeds: Includes 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.

### 1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Certification: Submit certification of grass species and location of sod source.

C. Test Reports: Indicate results of analysis of existing topsoil and recommendations for eliminating identified deficiencies.

D. Provide topsoil samples to:
   1. Soil Testing Laboratory, G501 Agronomy, Iowa State University, Ames, Iowa 50011.
   2. Soil Testing Laboratory, Agsource Belmond Labs, 1245 Highway 69, Belmond, Iowa 50421.

### 1.06 QUALITY ASSURANCE

A. Sod Producer: Company specializing in sod production and harvesting with minimum five years experience and certified by the State of Iowa.

B. Installer Qualifications: Company approved by the sod producer.

### 1.07 REGULATORY REQUIREMENTS

A. Comply with regulatory agencies for fertilizer and herbicide composition.

### 1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver sod on pallets or in rolls. Protect exposed roots from dehydration.

B. Do not deliver more sod than can be laid within 24 hours.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Sod: TPI, Certified Turfgrass Sod quality; cultivated grass sod; type indicated below; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1000 sq ft (100 sq m). Minimum age of 18 months, with root development that will

support its own weight without tearing, when suspended vertically by holding the upper two corners.

1. Norlea Perennial Rye Grass Type: 10 percent.
2. Creeping Red Fescue Grass Type: 20 percent.
3. Kentucky Blue Grass Type: 70 percent.

B. Topsoil: Excavated from site and/or imported to site and free of weeds.

C. Fertilizer: Granular, controlled release type; recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated by analysis.

D. Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of grass.

**2.02 HARVESTING SOD**

A. Machine cut sod and load on pallets, or in rolls, in compliance with TPI Guidelines.

B. Cut sod with minimum 1/2 inch and maximum 1 inch topsoil base.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

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

**3.02 FERTILIZING**

A. Apply fertilizer at a rate of 5 pounds per 1000 square feet.

B. Apply after smooth raking of topsoil and prior to installation of sod.

C. Apply fertilizer no more than 48 hours before laying sod.

D. Mix thoroughly into upper 2 inches (50 mm) of topsoil.

E. Lightly water to aid the dissipation of fertilizer.

**3.03 LAYING SOD**

A. Moisten prepared surface immediately prior to laying sod.

B. Lay sod immediately after delivery to site to prevent deterioration.

C. Lay sod smooth and tight with no open joints visible, and no overlapping; stagger end joints 12 inches (300 mm) minimum. Do not stretch or overlap sod pieces.

D. Lay smooth. Align with adjoining grass areas.

E. Water sodded areas immediately after installation. Saturate sod to 4 inches (100 mm) of soil.

F. After sod and soil have dried, roll sodded areas to ensure good bond between sod and soil and to remove minor depressions and irregularities. Roll sodded areas with roller not exceeding 100 lbs.

**3.04 MAINTENANCE**

A. Provide maintenance at no extra cost to Owner; Owner will provide water if available on site.

B. Water, weed, mow, fertilize, spray, cultivate and otherwise maintain and protect all sod.

C. Maintain sodded areas immediately and continue maintenance until, until grass is well established and exhibits a vigorous growing condition and has stabilized soil.

D. Maintain sodded areas by mowing at an approximate height of three (3) inches thru a minimum of three mowings after "Substantial Completion" of the project. Mow often to ensure cutting no more than 1/3 of the grass blade at any one mowing.

E. Neatly trim edges.

F. Immediately remove clippings after mowing and trimming.

G. Water to prevent grass and soil from drying out and/or going dormant until six (6) months after "Substantial Completion" of the project.

1. Supply and/or coordinate water supply availability with owner.
2. Provide and maintain temporary piping, hoses, and lawn watering equipment to convey water from sources to keep sod moist to a uniform depth of four (4) inches.
3. Schedule watering to prevent wilting, puddling, erosion, or displacement of sod.

H. Roll surface to remove irregularities. Re-grade and re-sod any areas impacted by other construction processes prior to final acceptance of the work.

I. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.

J. Immediately re-sod and re-fertilize areas which show deterioration, dormancy or bare spots.

K. Protect sodded areas with warning signs during maintenance period.

L. Contractor shall be responsible for maintenance of all sodded areas up to and thru the next planting season after "Substantial Completion" of the project.

M. Contractor shall repair or replace all sod, which in the judgement of the Landscape Architect, that has not survived and grown in a satisfactory manner until the end of the Planting Season following "Substantial Completion" of the project.
   1. Planting Seasons:
      a. Spring Planting Season: April 15 to May 30
      b. Fall Planting Season: August 1 to September 15

**END OF SECTION**

**THIS PAGE INTENTIONALLY LEFT BLANK**

# CLEAR CREEK AMANA DISCUS AND SHOT PUT IMPROVEMENTS
# SCOPE OF WORK

A. Site Prep –
   a. Install construction fence as deemed necessary for protection of the jobsite, students and other site visitors.
   b. Perform One-Call and contact CCA Administrative Office for Private Utility Locates.
   c. Coordinate construction staking.
   d. Remove gravel path and stockpile, to be reused onsite if possible.
   e. Remove existing aggregate and sand from existing shot put fields.
   f. Remove existing storm sewer RCP/Metal/and/or HDPE pipe, intake, manhole structures, and flared end section.
   g. Protect existing fence during construction. If necessary remove and reinstall. Replace if damaged.
   h. Protect existing concrete during construction. Repair/replace damaged concrete upon completion of project.
   i. Remove existing fence, posts, and gates. Stockpile on-site and reuse if possible.
   j. Use existing fence gate for construction access.
   k. Protect existing electric lines and above ground features during construction.
   l. Remove existing concrete paving for discus and shot put. Remove associative netting and features. Netting will be reused in new location.
   m. Protect existing sanitary manholes during construction.
   n. Salvage discus cage ground sleeves with footings.
   o. Strip and stockpile topsoil as necessary.
   p. Install erosion control measures.

B. Field Improvements –
   a. Cut to subgrade elevation and remove excess material from site or stockpile on site in location approved by owner.
   b. Grade site; use site and imported fill material to build up path areas and proposed fields.
   c. Install field cage pole bases and footings.
   d. Install paths with 5” thick PCC paving on 4” thick 3/4” drainable rock subbase.
   e. Install 8’ wide x 6” thick gravel trail
   f. Install field circle pads and surrounding PCC slabs with 5” thick PCC paving, with rebar reinforcement on 4” thick 3/4” drainable rock subbase.
   g. Install PCC paving per plan dimensions and notes.
   h. Install shot put field rock.
   i. Install 12’ wide, 4’ high galvanized chain link gate.
   j. Backfill adjacent to new paving to match existing grade.
   k. All paving work shall comply with SUDAS Specifications, including cold weather protection at no additional cost to owner.

C. Restoration –
   a. Remove excavation spoils from site.
   b. Backfill adjacent to new and existing pavement with onsite topsoil
   c. Scarify all disturbed / compacted areas during construction to a min. depth of 8”.
   d. Restore stockpiled fence material and gates to original location.
   e. Once grass is established, paint field markings on both hard surface and turf.

D. Seed –
   a. Install seed on all disturbed areas.
   b. Ensure 4” topsoil is fine graded and smooth. Ensure topsoil is not contaminated with subsoil, aggregate, or other debris.
   c. Install erosion control blanket matting on all slopes 6:1 or greater immediately after final grading and topsoil placement. Seed matting areas.

E. Bidders Responsibility –
   a. All bidders shall be responsible for the actual quantities of work required to complete the project and the

total bid shall be considered full payment for the work required as shown on the plans and described above.

b. A unit price payment will only be used if there are changes in the scope of work after bid.

**END OF SECTION**