

Date Bids Due 6/17/2015		Time of Bid Opening 1:00 PM	Bid Opening Location 800 Lincoln Way, Ames, IA	
Proposal Number 14520	Description Ames DOT stair project			
Contract to Begin 6/29/2015	Date of Completion 9/30/2016	Proposal Guaranty Amount \$0.00		Liquidated Damages \$0.00
Purchasing Agent Jody McNaughton	E-Mail Address jody.mcnaughton@dot.iowa.gov	Phone 515-239-1298	Fax 515-239-1538	
Company Name			Federal Tax ID	
Street Address		City	State	Zip Code
Supplier Contact (type or print)	E-Mail Address	Phone	Fax	
Supplier agrees to sell items/services at the same prices under the same terms and conditions to any other state agency, Regent or Political Subdivision upon request. Please check Yes or No. <input type="checkbox"/> YES <input type="checkbox"/> NO			Are you a Iowa Targeted Small Business? <input type="checkbox"/> YES <input type="checkbox"/> NO	

GENERAL INFORMATION/PROPOSAL STATEMENT

The entire contents of this Proposal, Addendums to the Proposal, Specifications, Supplemental Terms and Conditions, Standard Terms and Conditions, and Schedule of Prices shall become part of the contract or purchase order. Faxed or e-mail bids will be accepted.

We certify that all materials, equipment and/or services proposed meet or exceed the specifications and will be supplied in accordance with the entire contents of this proposal including delivery schedules.

Standard Terms and Conditions for Quotations

Acceptance/Rejection: The State of Iowa reserves the right to accept or reject any or all bids and to waive irregularities or technicalities, provided such waiver does not substantially change the offer or provide a competitive advantage to any vendor, in the judgment of the Iowa DOT. The Iowa DOT also reserves the right to accept that bid which is deemed to be in the best interests of the state. Any unauthorized changes, additions, or conditional bids including any ties to another bid or proposal or any reservations about accepting an award or entering into a contract, may result in rejection of the bid.

Method of Award: Award shall be made to the lowest responsible, responsive bidder unless otherwise specified. By virtue of statutory authority preference will be given to products and provisions grown and coal produced within the State of Iowa.

Contracts: Successful contractor(s) may be sent either a formal Contract or a purchase order. The contractor may not assign the contract to another party without written authorization from the Office of Procurement and Distribution.

Pricing and Discount: Unit prices shown on the documents shall be quoted as the price per unit (e.g., gal., case, each, etc.) as stated on the request. If there is a discrepancy between the unit bid prices, extension, or total amount of bid, the unit prices shall prevail. Unless otherwise indicated, prices shall be firm for the duration of the contract or purchase. Discounts for early payment are allowed, but not considered in award of the contract.

Signed: _____ Date: _____



Schedule Of Prices

Number	14520
Date Required	06/17/2015 1:00 PM

Title Ames DOT stair project
Delivery Location AMES, IA 50010
Shipping Terms FOB Destination/Freight Prepaid

Vendor
 PA Name Jody Lea McNaughton
 Phone 515-239-1298
 E-Mail jody.mcnaughton@dot.iowa.gov

Description Contractors shall include their Contractor's Identification # issued by the Iowa Department of Work Force Development.
 As per the attached Scope of Work, Specifications and Plans

Product Availability Days: _____
Price Good Until: _____

All items must be bid.

Item	Qty	Unit	Description	Part #	Unit Price	Total Price
1	1	LOT	Demolition and construction of two exterior concrete stairs, including handrails. Plans and Specifications attached.			
Comments:						

I HEREBY CERTIFY THAT THIS PROPOSAL MEETS OR EXCEEDS THE MINIMUM REQUIREMENT INCLUDING SPECIFICATIONS AND ADDENDUMS.

Signature: _____ Date: _____



Iowa Department of Transportation
Standard Terms and Conditions
For
Bid Proposals/Contracts

-INFORMAL-

Informal - means a limited solicitation type of procurement where a sufficient number of quotation or bids from qualified sources are obtained and the aggregate amount of the purchase is less than \$50,000.

The entire contents of this bid proposal shall become a part of a contract or purchase order. In case of a discrepancy between the contents of the bid documents, the following items listed by descending order shall prevail:

- Addendums to the bid proposal
- Bid Proposal-
 - Schedule of Prices
 - Specifications
 - Plans and Drawings
- Supplemental Terms and Conditions
- Standard Terms and Conditions

(Example -if there is a statement in the specifications that contradicts a statement in the Standard Terms and Conditions, the statement in the specifications shall apply)

Preparation of Bid Response: All bid responses must address all aspects of the proposal including clearly answering all questions within the proposal. Bid responses must be typed or completed in ink and submitted on the forms supplied by the Iowa DOT.

Bid responses must be signed and received prior to the bid opening date and time as indicated on the Bid Response cover page or bid opportunity. The signed, submitted quotation or bidder's proposal shall become the official bid response to be considered for award.

Bid responses may be sent by email, fax, weblink, or delivered by a courier that ensures timely delivery.

A. Bid Proposal

1. **Bid Opening:** Bid openings are made public and conducted at the Iowa DOT, Ames complex unless otherwise specified. Bids received after the time of the bid opening will be rejected to the bidder and considered non-compliant.
2. **Communications:** Questions concerning this proposal should be directed to the purchasing agent listed on the bid proposal. Inquiries can be written, phoned, or faxed. In all cases, written communication will take precedence over verbal communication.
3. **Pricing and Discount:** Unit prices shown on the bid/response shall be quoted as the price per unit (e.g., gal., case, each, etc.) as stated in the bid proposal. If there is a discrepancy between the unit bid prices, extension, or total amount of bid, the unit prices shall prevail. Unless otherwise indicated, prices shall be firm for the duration of the contract or purchase. Discounts for early payment are allowed, but not considered in award of the contract.
4. **Acceptance/Rejection:** The Iowa DOT reserves the right to accept or reject any or all bids and to waive irregularities or technicalities, provided such waiver does not substantially change the offer or provide a competitive advantage to any supplier(s). The Iowa DOT also reserves the right to accept that bid which is deemed to be in the best interests of the state. Any unauthorized changes, additions, or conditional bids including any ties to another bid or proposal or any reservations about accepting an award or entering into a contract, may result in rejection of the bid. Bids must remain available for award for thirty (30) days from date of bid opening.

5. **Bid Results & Disclosure:** A bid tabulation will be sent to all responsive bidders and may be posted on the DOT website at www.iowadot.gov/purchasing under the *Bid Award link* referencing the proposal number with an award recommendation indicated. At the conclusion of the selection process, the contents of all received bid responses will be placed in the public domain and be open to inspection by interested parties, according to state law. Trade secrets or proprietary information that are recognized as such and are protected by law may be withheld if clearly identified as such in the proposal.
6. **Quality:** All material shall be new and of first quality. Items which are used, demonstrators, refurbished, obsolete, seconds, or which have been discontinued are unacceptable without prior written approval by the Iowa DOT.
7. **Recycled Content:** The Iowa Code encourages purchase of products and materials with recycled content, including but not limited to paper products, oils, plastic products, compost materials, aggregate, solvents, and rubber products. Recycled items or alternatives must be noted in the bid response, if known.
8. **Shipping Terms:** Deliveries shall be F.O.B. Destination unless otherwise specified. All deliveries shall be accompanied by a packing slip indicating the Supplier, quantities shipped, and the purchase order number(s). All delivery charges shall be included in the bid price and paid by the Supplier. No collect C.O.D. deliveries shall be accepted. When entering into a contract, the Supplier shall notify the freight company that all freight and delivery charges are to be prepaid by the Supplier. Goods delivered to the Iowa DOT Distribution Center at 800 Lincoln Way, Ames, IA shall be received between the hours of 7:30 a.m. and 3:30 p.m. on any day except Saturday, Sunday, or a holiday. For deliveries to other Iowa DOT locations, the Supplier may contact the destination location for available times to deliver as not all Iowa DOT locations have the same business hours. The Iowa DOT will not be liable for any freight claims or unpaid freight bills arising from contract or purchase order issues.

B. Award

The binding agreement (award) may be issued in the form a purchase order or contract or both depending on the requirements and complexity of the agreement.

1. **Method of Award:** Award shall be made to the lowest responsible, responsive bidder whose bid meets the requirements of the solicitation and is the most advantageous to the Iowa DOT unless otherwise specified. An Iowa bidder will be given preference over an out-of-state bidder when bid responses are equal in all aspects and are tied in price. By virtue of statutory authority preference will be given to products and provisions grown and coal produced within the State of Iowa.
2. **Award Protests:** Protests of award recommendations are to be addressed to the Director of Purchasing, and shall be made in accordance with paragraph 761--20.4(6)"e" of the Iowa Administrative Code.
3. **Contracts:** Successful contractor(s) may be sent either a formal Contract, Notification of Award or purchase order as confirmation of acceptance and award. Any of these binding agreements shall be for the term stated in the bid proposal or on a purchase order and may be renewed for additional period(s) under the same terms and conditions upon mutual agreement as defined. The successful bidder may not assign a contract to another party without written authorization from the Iowa DOT Purchasing Section. A service contract, including all optional renewals, shall not exceed a term of six years unless a state agency obtains a waiver of this provision pursuant to rule 11-11B.16 (8A).
4. **Payment Terms:** The Iowa DOT typically pays properly submitted vendor invoices within thirty (30) days of receipt, providing goods and/or services have been successfully delivered, installed or inspected (if required), and accepted. Invoices presented for payment must be only for quantities received by the Iowa DOT and must reference the purchase order number to be submitted for processing.
5. **Default:** Failure of the Supplier to adhere to specified delivery schedules or to promptly replace rejected materials shall render the Supplier liable for all costs in excess of the bid price when alternate procurement is necessary. This shall not be the exclusive remedy and the Iowa DOT reserves the right to pursue other remedies available to it by law or under the terms of the binding agreement.

6. **Default:** Failure of a Contractor other than a Supplier to meet any specified project completion deadline shall render the Contractor liable for all costs incurred by DOT that were: a) necessary to meet said deadline; or b) necessary to complete said project after said deadline. This shall not be the exclusive remedy and the Iowa DOT reserves the right to pursue other remedies available to it by law or under the terms of the agreement.

C. General

1. **Administrative Rules:** For Additional details on the rules governing the actions of the Iowa DOT Purchasing Section, refer to 761 IAC, Chapter 20, Iowa Administrative Code, entitled "Procurement of Equipment, Materials, Supplies and Services".
2. **Affirmative Action:** The Contractor (and also subcontractor, vendor or supplier) is prohibited from engaging in discriminatory employment practices forbidden by federal and state law, executive orders and rules of the Iowa Department of Management, pertaining to equal employment opportunity and affirmative action. Contractor may be required to have a copy of their affirmative action program on file, containing goal and time specifications. Contractors doing business with Iowa in excess of \$5,000 annually and employing 50 or more full time employees may be required to file with the Iowa Department of Management a copy of their affirmative action plan. Failure to fulfill these non-discrimination requirements may cause the contract to be canceled and the contractor declared ineligible for future state contracts or subject to other sanctions as provided by law or rule.
3. **Applicable Law:** The contract shall be governed under the laws of the State of Iowa. The contractor shall at all times comply with and observe all federal and state laws, local laws, ordinances, and regulations which are in effect during the period of a contract and which in any manner affect the work or its conduct. Any legal action relating to a contract shall only be commenced in the Story County, Iowa, District Court or the United States District Court for the Southern District of Iowa.
4. **Conflict of Interest:** No state or county official or employee, elective or appointive shall be directly or indirectly interested in any contract issued by the Iowa DOT, see Code of Iowa 314.2.
5. **Debarment and Vendor Suspension:** By submitting a proposal, the contractor is certifying that it and its principals and/or subcontractors are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by the State of Iowa or any Federal department or agency.
6. **Equal Opportunity:** Firms submitting bids must be an "Equal Opportunity Employer" as defined in the Civil Rights Act of 1964 and in Iowa Executive Order Number Thirty-four.
7. **Infringement:** Goods shall be delivered free of the rightful claim of any third party by way of infringement. Contractor shall indemnify and save harmless the State of Iowa and the Iowa DOT against all claims for infringement of, and/or royalties claimed under, patents or copyrights on materials and equipment furnished under this bid.
8. **Records Audit:** The contractor agrees that the Auditor of the State of Iowa or any authorized representative of the state, and where federal funds are involved, the Comptroller General of the U.S. Government, shall have access to and the right to examine, audit, excerpt, and transcribe any directly pertinent books, documents, papers, and records of the contractor relating to orders, invoices, or payments of a contract or purchase order.
9. **Targeted Small Businesses:** The Iowa DOT seeks to provide opportunities for women and/or minority small business enterprises. To apply for certification as an Iowa Targeted Small Business, contact the Iowa Department of Inspection and Appeals (515-281-5796). Contractors shall take documented steps to encourage participation from Targeted Small Businesses for the purpose of subcontracting and supplying of good or services or both.
10. **Taxes:** Prices quoted shall not include state or federal taxes from which the state is exempt. Exemption certificates will be furnished upon request.
11. **Termination:**
 - **Termination Due to Lack of Funds or Change in Law**

The Iowa DOT shall have the right to terminate this Contract without penalty by giving thirty (30) days written notice to the vendor as a result of any of the following:

 - Adequate funds are not appropriated or granted to allow the Iowa DOT to operate as required and to fulfill its obligations under contract.
 - Funds are de-appropriated or not allocated or if funds needed by the Iowa DOT, at the Iowa DOT's sole discretion, are insufficient for any reason.
 - The Iowa DOT's authorization to operate is withdrawn or there is a material alteration in the programs administered by the Iowa DOT.

- The Iowa DOT's duties are substantially modified.

Following a 30 day written notice, the Iowa DOT may terminate a binding agreement in whole or in part without the payment of any penalty or incurring any further obligation to the Supplier. Following termination upon notice, the Supplier shall be entitled to compensation upon submission of invoices and proper proof of claim for goods and services under contract up to and including the date of termination.

**Iowa Department of Transportation
General Requirements
Proposal No.: 14520
Ames DOT stair project
Letting Date: June 17, 2015 1:00 P.M.**

Part 1 General Conditions

1.1 Adoption of General Conditions

- A. The General Requirements of this Contract shall include the "General Conditions", "Instructions to Bidders" and the "Supplementary General Conditions" as herein stated.
- B. "THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", A.I.A. FORM #A-201, LATEST EDITION AND A.I.A. DOCUMENT, "INSTRUCTIONS TO BIDDERS", FORM #A-701, LATEST EDITION, SHALL BE INCLUDED, AS MODIFIED IN THE "SUPPLEMENTARY INSTRUCTIONS TO BIDDERS" AND "SUPPLEMENTARY GENERAL CONDITIONS", AND BOUND WITH THE STANDARD FORM OF AGREEMENT BETWEEN THE CONTRACTOR AND OWNER", A.I.A. FORM #101, LATEST EDITION, AS A PART OF THIS CONTRACT SPECIFICATION.
- C. All bidder information and conditions, bid check lists and similar documents included in the specification by the Iowa Department of Transportation, Finance Department Purchasing Section in Ames, Iowa are hereby made a part of the General Conditions.

Part 2 Supplementary Instructions to Bidders

2.1 General

- A. **Owner:**
The Owner of this project is the Iowa Department of Transportation, 800 Lincoln Way, Ames, Iowa 50010.
- B. **Contract Document Information:**
Questions regarding the bidding documents should be directed to:
Purchasing Section
Purchasing Agent – Jody McNaughton
Phone No.: 515-239-1298 Fax No.: 515-239-1538
Email: jody.mcnaughton@dot.iowa.gov
- C. **SCOPE OF WORK**

This project is for Department of Transportation Stair Project Contractor(s) to provide all materials, labor, and equipment necessary to complete the stair project at the Ames DOT complex parking lot per the attached plans and specifications.

The project is located at:
Iowa Department of Transportation 800 Lincoln Way, Ames IA 50010
North and South Stair way near Materials Lab.

Project completion date is on or before September 30, 2015

**Pre- bid meeting scheduled for June 8, 2015 at 10:00a.m.
Contractors are to meet at the security desk of the Administration Bldg.
at 800 Lincoln Way, Ames, IA 50010**

D. Contract Award:

- Award will be based on the total lump sum amount of bid price shown on the Schedule of Prices. Bid price will include all requirements listed in Specifications and Supplemental Terms to complete this proposed project. The Prime Contractor shall be responsible for taking all sub-bids and for all coordination between trades.
- A single "Prime" contract shall be awarded for all work shown. Contractor shall be responsible for taking all sub-bids and for all coordination between trades.
- Protests of award recommendations shall be made in accordance with Paragraph 761--20.4(6)"e", Iowa Administrative Code.
- Contractor shall return all contractual documents within fourteen (14) calendar days from date indicated in contract cover letter. ***If this is not returned within this time frame, contract may be voided and awarded to the next low bidder.***

2.2 Bidders Representatives

A. Site Visit:

It is highly recommended that prospective bidders on this project visit the job site prior to submitting a quotation for this work.

Site visit is scheduled for Pre- bid meeting scheduled for 6/8/2015 at 1:00 p.m.

To view the site, contact: Brenda Wilder at 515-239-1301 or email at brenda.wilder@dot.iowa.gov. No considerations or revision in the contract price or scope of the project will be considered by the Owner for any item which could have been revealed by a thorough on-site inspection and examination.

B. Conditions of Work:

Bidders must inform themselves fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve successful bidders of their obligation to furnish all material and labor necessary to carry out the provisions of this contract. Insofar as possible, the Contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of, or interference with the work of any other contractor.

C. Obligation of Bidder:

- At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the drawings, specifications, and other contract documents, including all addenda.
- The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to their bid.

D. Codes, Laws and Regulations:

The laws of the State of Iowa in relation to and pertaining to public improvements shall apply to this project. All construction, materials and methods shall comply with the State and Local Building Codes and with Local Ordinances, except where plans and specifications establish a higher standard.

E. Licenses, Permits and Inspections

The Vendor shall give all notices and comply with all codes, laws, ordinances, rules and regulations of any public authority having jurisdiction that bears on the performance of its work. The Vendor shall pay for all licenses, permits and inspection fees required for its work. The Vendor must furnish copies of all approved inspection certificates and approvals from authorities having jurisdiction in a timely fashion upon completion of the work.

2.3 Bidding Documents

A. Plans and Specifications:

- The Specifications are to remain on file at the Iowa DOT, Purchasing Section, 800 Lincoln Way, Ames, IA 50010.
- In the event of a conflict between the specifications and the drawings, the specifications shall take precedence.

B. Contents of the Contract Documents:

- In case of a discrepancy between contents of the contract documents, the following items listed by descending order shall prevail:
 1. Addendum
 2. Proposal Form
 3. Special Provision
 4. Plans
 5. Supplemental Specifications
 6. Standard Specifications

Should there be a discrepancy between figures and drawings on any of the contract documents, the figures shall govern unless they are obviously incorrect.

C. Interpretation of Contract Documents:

- If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the Plans, Specifications or other proposed contract documents, the bidder will submit to the Iowa DOT a written request for an interpretation thereof. Requests for interpretation must be received on or before **1:00 P.M., June 12th, 2015**
- The person submitting a request will be responsible for its prompt delivery.
- No interpretation of the meaning of the drawings, specifications, or other pre-bid documents will be made to any bidder orally. Interpretations will be made only by addendum duly issued.
- A copy of such addendum will be mailed or delivered to each person receiving a copy of the contract documents and to such other prospective bidders having requested that they be furnished with a copy of each addendum.

D. Materials and Equipment:

- Names of Manufacturers and vendors listed in the bidding documents are listed for the bidders only. Manufacturers and vendors, in addition to those specifically listed, are acceptable when it is proven to the satisfaction of the Iowa DOT that:
 - a. The level of quality proposed is equal to or better than that of the referenced manufacturer/vendor's quality.
 - b. The technical characteristics of the proposed product meet or exceed the requirements of the drawings and specifications.
 - c. The use of the materials or equipment does not require major revisions of the drawings and specifications to permit their use.
- Any additional cost in other work incurred as a result of these approvals shall be borne by the Contractor, including all costs for modifying other related materials/systems and the cost of any additional engineering or design fees required to accommodate the substitution/approval.
- The Contractor must be confident that a proposed product or material meets or exceeds the requirements shown on the drawings and specifications. It will be the responsibility of the Contractor to verify and demonstrate that a proposed product meets or exceed the drawings and specifications at time of shop drawing reviews. If a proposed product or material is determined to be technically unacceptable as judged by the Iowa DOT, the Contractor shall be required to supply products or materials that meet the requirements required to supply products or materials that meet the requirements stated in the drawings and specifications at no cost increase to the Iowa DOT. Under no circumstances will the Iowa DOT be required to prove that proposed substitutions is not equal to the project requirements. The decision of the Iowa DOT on all requested proposals/substitutions is final.

E. Addenda:

- Addenda, if issued, will be emailed to all known plan holders, and acknowledgement of receipt of addenda will be indicated on the bidder's proposal form.
- All addenda so issued shall become part of the contract documents.
- **Contact Jody McNaughton to be added to the bidder's list to ensure inclusion on any addendums.** (jody.mcnaughton@dot.iowa.gov or 515-239-1298.)

2.4 Bidding Procedures

A. Proposed Form:

- Each Bid must be submitted on the Schedule of Prices form included in the RFQ.
- All bids received by the Iowa DOT, which require allocation of appropriated state funds, are subject to the acceptance of the issuing department of the State of Iowa.

B. Proposal Guaranty:

None is required for this for this project.

C. Submitting Proposals:

- Each proposal must be submitted in ink or typewritten and may be faxed (515-239-1538), or e-mail jody.mcnaughton@dot.iowa.gov.

- Bids shall be due on or before **1:00 P.M., June 17, 2015.**

D. Withdrawal Period:

Prime bidders, subcontractors and material suppliers on this project agree to guarantee their proposal for a period of thirty (30) days after the date of receipt of bids. No bid may be withdrawn during this period.

E. Extension of Contract Period:

The Iowa DOT will grant an extension of the contract period for additional work requiring additional construction time that adds additional work to the controlling item of work.

F. Facsimile Modifications and Bid Closing:

- Bids received prior to the time of opening will be securely kept, unopened. The officer whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered.
- Modification of the bid price by facsimile of bids already submitted will be considered if received prior to the time set for the opening. The changes shall not reveal the bid price but shall provide the amount to add or subtract to modify the bid so the total amount is not known until the bid is opened.

G. Informalities & Nonmaterial and Material Variances:

The Owner may waive any informality or reject any or all bids.

The Iowa DOT reserves the right to waive or permit cure of nonmaterial variances in the Bidder's Bid Response if, in the judgment of the Iowa DOT, it is in the Iowa DOT best interest to do so. Nonmaterial variances include minor informalities that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other Contractors; that do not change the meaning or scope of the RFB; or that do not reflect a material change in the services. In the event the Iowa DOT waives or permits cure of nonmaterial variances, such waiver or cure will not modify the RFB requirements or excuse the Contractor from full compliance with RFB specifications or other contract requirements if the Contractor is awarded the contract. The determination of materiality is in the sole discretion of the Iowa DOT.

2.5 Consideration of Bids

A. Rejection of Bids:

- The Iowa DOT reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Iowa DOT that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.
- Conditional bids will not be accepted.

B. Qualification of Bidder:

The Iowa DOT may make such investigations as they deem necessary to determine the ability of the bidder to perform the required work, and the bidder shall furnish to the Iowa DOT all such information and data for this purpose as the Iowa DOT may request.

2.6 Performance and Payment Bonds

A. Bonds:

If the contracted estimated value is \$25,000 or more, the Bidder shall furnish bonds covering the faithful performance of 100% of the Contract and the payment of all obligations arising thereunder. One copy of the bond shall be submitted on Iowa Department of Transportation Form 131070. All items must be properly filled in, including Bidder's signature. Resident commission agent or attorney-in-fact must file a copy of the power of attorney.

B. Power of Attorney:

Attorney-in-fact who signs the proposal guaranty, Performance Bond, and Labor and Material Payment Bond must file with each bond a certified and effectively dated copy of the Power of Attorney.

2.7 Notice of Tax Exempt Status

A Sales Tax Exemption Certificate and authorization letter will be issued to the successfully awarded construction contractor for the purchase of building materials, supplies and equipment used in the performance of this construction contract.

The Department of Transportation is exempt from paying sales and use taxes. ***Do not include sales tax in your bid for this project.***

2.8 Labor Regulations

All contractors, before entering into a contract with the Department, must be registered with the Division of Labor in the Iowa Department of Workforce Development (515-281-3606) according to chapter 91C, Code of Iowa 2003.

2.9 Targeted Small Business Program

The 1986 Iowa Legislature enacted legislation relating to procurement from Iowa Targeted Small Businesses. (Iowa Code, Chapter 73. And Iowa Administrative Code rules 820--[01,B] Chapter 2). It is hereby agreed that when entering into a contract with the State of Iowa, the vendor/contractor will take documented steps to encourage participation from TSB's for the purpose of subcontracting and supplying of materials.

A list of Targeted Small Business Contractors is available on the Internet at <https://dia.iowa.gov/tsb> and click on Search Targeted Small Businesses.

Part 3 Supplementary General Conditions

3.1 The Contractor

A. Guidelines:

- Contractors shall comply with Iowa Occupational Safety and Health Standards as found in 29 CFR Parts 1910 and 1926. Of particular importance are those standards referring to the use of personal protective equipment, fall protection and ventilation.
- Contractor may be required to make available to Iowa DOT at time the apparent low bidder has been determined all Material Safety Data Sheets (MSDS) for all products provided prior to approved contractor and award. These must be faxed to Purchasing 515-239-1538 with cover indicating project the MSDS sheets pertain to. This shall be faxed within two (2) days upon request.

B. Guarantee:

The Contractor shall guarantee all work executed under this contract, both as the workmanship and materials, for a period of twelve (12) months after the date of

acceptance, except that special guarantee provision specified elsewhere in these Specifications shall take precedence. Neither the final payment nor any provision of the contract documents shall relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall remedy any defect thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of the final acceptance. With one month remaining in the guarantee period, the Contractor shall notify the Iowa DOT and set up a complete building walk-through inspection.

- All materials, items of equipment, and workmanship furnished under this division of the specifications shall carry the standard warranty against all defects in material and workmanship. Any fault due to defective or improper material, equipment, or workmanship which may develop, shall be made good, forthwith.
- The Guarantee shall include, but not be limited to the following elements and services:
 - a. Repair or replace defective materials, equipment, workmanship and installation that develops within the guarantee period, promptly and to Iowa DOT's satisfaction and correct damage caused in making necessary repairs and replacements, including all other damage done to areas, materials, and other systems resulting from the failure or defect, under guarantee by and at the expense of the Contractor.
 - b. Replace material or equipment that requires excessive service during guarantee period, as defined and as directed by the Iowa DOT.
 - c. Make all service calls, replacements, repairs and adjustments during the guarantee period without cost to the Iowa DOT.

C. Workmanship

Work shall be performed in best, most workmanlike manner by mechanics, skilled and employed continuously in their respective trade. Installation shall be made by the manufacturer or their authorized installer where specified. Unsatisfactory work shall be replaced at Contractor's expense.

D. Clean-Up:

- Throughout the period of construction, the Contractor shall clean up all work and yard areas and keep the area reasonably free of debris, etc., as required for proper protection of the work. Prior to final acceptance, the Contractor shall remove all debris, tools and equipment from the project site.

E. Immunity of Iowa Department of Transportation

The Contractor shall defend, indemnify and hold harmless the Iowa Department of Transportation, and its officials and employees from liability arising out of or resulting from the Contractor's activities at the rest area, its performance or attempted performance of the contract, as well as the Contractor's activities with Sub-Contractors and all other third parties.

F. Suspensions and Debarment.

The Vendor certifies pursuant to 48 CFR Part 9 that neither it nor its principles are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this Contract by any federal Agency or agency. The Vendor certifies that it is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any contracts with the State of Iowa.

G. Termination Due to Lack of Funds or Change in Law

Notwithstanding anything in this Contract to the contrary, and subject to the limitations set forth below, the Iowa DOT shall have the right to terminate this Contract without penalty and without any advance notice as a result of any of the following:

Adequate funds are not appropriated or granted to allow the Iowa DOT to operate as required and to fulfill its obligations under this Contract.

Funds are de-appropriated, reduced, not allocated, or receipt of funds is delayed, or if any funds or revenues needed by the Iowa DOT to make any payment hereunder are insufficient or unavailable for any other reason as determined by the Iowa DOT in its sole discretion; or

The Iowa DOT's authorization to conduct its business or engage in activities or operations related to the subject matter of this Contract is withdrawn or materially altered or modified; or

The Iowa DOT's duties programs or responsibilities are modified or materially altered; or

If there is a decision of any court, administrative law judge or an arbitration panel or any law, rule, regulation or order is enacted, promulgated or issued that materially or adversely affects the Agency's ability to fulfill any of its obligations under this Contract.

The Agency shall provide Vendor with written notice of termination pursuant to this section.

H. Preference

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the state of Iowa. Preference application: Tied responses to solicitations, regardless of the type of solicitation, are decided in favor of Iowa products and Iowa-based businesses per 11 IAC 105.5(1)-(2), 105.12(4).

3.2 Administration of the Contract

A. Inspection and Supervision:

- All work shall be according to the approved design and shall be under the direct supervision of the Iowa DOT.
- Periodic site inspections will be carried on by the Iowa DOT with the contractor to ensure coordination of the project.
- The owner will provide a list of items requiring inspection prior to or during installation. The Contractor is to give the Owner notice no less than 24 hours in advance of installation.
- The Iowa DOT contact shall be: Brenda Wilder at 515-239-1301.

B. Contractors Construction Schedule:

The successful bidder will, within 10 days after award of contract or at the pre-construction meeting, whichever comes first, submit to the Iowa DOT, Office of Facilities Support, a detailed construction schedule including dates of commencement and completion on each phase of the proposed construction. Upon acceptance of the schedule, the Contractor will be expected to adhere to these dates as proposed.

3.3 Sub Contractors

- Specific attention shall be given by the Contractor to Article 5 of the A.I.A. Document A-201, "The General Conditions of the Contract for Construction".
- The apparent successful contractor for the project shall, within seven (7) calendar days after opening of the bids, furnish the Iowa DOT with a complete list of subcontractors and major material suppliers.

3.4 Contract Period

- The starting and completion dates are stated on the front page of the proposal. The date of completion shall be stated in calendar days on the Contractor's proposal, and if necessary, adjusted by mutual agreement between the Iowa DOT and Contractor prior to executing the contract documents.
- The Iowa DOT realizes that deliveries and condition will have a definite bearing on the completion date. The Iowa DOT will demand diligence in the prosecution of the work, but with good cause and satisfactory past performance by the Contractor, the Iowa DOT may revise that completion date to another mutually-acceptable date, when requested in writing and in good faith by the Contractor.

3.5 Payments and Completion

- A. Final payment shall be authorized not later than thirty (30) days following the completion and final acceptance of satisfactory services rendered.
- B. No notification of payment being processed, no payment made to the Contractor, no partial payment, nor the entire use or occupancy of the work by the Iowa DOT shall be held to constitute an acceptance, in whole or in part, by the Iowa DOT prior to making the final payment and acceptance in full completion of the contract.

3.6 Protection of Persons and Property

A. Safety and Health Regulations:

The Contractor, serving in the role of the employer for the project, shall exercise at all times the protection of all persons and property. Contractor shall comply with all requirements of the Occupational Safety and Health Act of 1970, Iowa Bureau of Labor and all applicable state and municipal laws, as well as building and construction codes. It is the Contractor's responsibility to enforce all regulations that apply to this project.

B. Protection of Site:

The Contractor shall furnish all permanent and temporary guards, signs, fencing, shoring, and underpinning and other protection necessary in the performance of the contract and for the necessary protection of all public and private property and shall be responsible for any damage caused by failure to comply with this requirement.

- After building operations are completed, the Contractor shall replace or satisfactorily repair all damaged walks or pavements which shall have become damaged due to operations of this project.
- The Contractor shall take care of all underground pipes, conduits, etc.,

encountered in the excavations, and protect same from damage until such time as they can be permanently disposed of.

- The Contractor shall continuously maintain adequate protection of all work from damage and shall protect the Owner's property and adjacent property from damage arising in connection with this contract.

3.7 Insurance Requirements

Contractor's Insurance

- It shall be the Contractor's responsibility to have liability insurance covering all of the project operations incident to contract completion and the Contractor(s) must have on file with the Contracting Authority a current "Certificate of Insurance" prior to award of contract. The certificate shall identify the insurance company firm name and address, contractor firm name, policy period, type of policy, limits of coverage, and scope of work covered (single contract or statewide). This requirement shall apply with equal force, whether the work is performed by persons employed directly by the Contractor(s) including a subcontractor, persons employed by a subcontractor(s), or by an independent contractor(s).
- In addition to the above, the Contracting Authority shall be included as an insured party, or a separate owner's protective policy shall be filed showing the Contracting Authority as an insured party.
- The liability insurance shall be written by an insurance company (or companies) qualified to do business in Iowa. For independent contractors engaged solely in the transportation of materials, the minimum coverage provided by such insurance shall be not less than that required by Chapter 325A, Code of Iowa, for such truck operators or contract carriers as defined therein. For all other contractors, subcontractors, independent contractors, and the Contracting Authority, the minimum coverage by such insurance shall be as follows:
 - Comprehensive General Liability including Contractual Liability;
 - Contingent Liability; Explosion, Collapse and Underground Drainage
 - Damage; Occurrence Basis Bodily Injury; Broad Form Personal Injury; Broad Form Property Damage.

Bodily Injury

The contractor will purchase and maintain throughout the term of this contract the follow minimum limits and coverage:

- Each person \$750,000
- Each accident/occurrence \$750,000
- Workers Compensation \$750,000
- Statutory Limits \$750,000
- Employer's liability \$750,000
- Pollution Liability \$750,000
- Occupation Disease \$750,000

Operations

- Property Damage \$250,000 each occurrence

Builders Risk Insurance:

- Each Contractor holding a valid contract with the Owner shall furnish and pay for builder's risk insurance, providing coverage for at least the following losses: fire, extended coverage, vandalism and malicious damage to materials incorporated in the project, and materials purchased to be incorporated in the project, either stored on or off the permanent job site. If this insurance coverage is not provided, the Contractor shall assume all responsibility for the perils outlined above which may occur prior to project completion and acceptance.
- Failure on the part of the Contractor(s) to comply with the requirements of this Article will be considered sufficient cause to suspend the work, withhold estimates, and to deny the Contractor(s) any further contract awards, as provided in Article 1103.01.
- The Contractor(s) shall require all subcontractor(s) meet the above insurance requirements.

The Certificate of Insurance must include the following;

- Iowa Department of Transportation must be listed as an additional insured

3.8 Miscellaneous Provisions

A. Iowa State Building Code:

- All construction under this section shall conform to the requirements of the Iowa State Building Code. The provisions of the Iowa State Building Code will be strictly adhered to, and will take precedence over any local Governmental Body Regulations. Work not regulated by the Iowa State Building Code shall be performed in accordance with local Governmental Body Regulations.
- All construction shall conform to the Standard Specifications for Highway and Bridge Construction, Series 2009 where applicable.

B. Discriminatory Practices:

- All contractors or subcontractors working under the terms of this project are prohibited from engaging in discriminatory employment practices as forbidden by the Iowa Civil Rights Act of 1965. These provisions shall be fully enforced, as directed through Executive Order Number 34 dated July 22, 1988. Any breach of the provisions contained in the Iowa Civil Rights Acts of 1965 shall be regarded as a material breach of contract.
- Bidder agrees that if awarded a contract to construct and/or remodel any portion of the project described in these Specifications, neither the contractor nor any subcontractors will engage in any discriminatory employment practices based on race, color, creed, religion of natural origin and that they will in all contracts comply with all statutes of the State of Iowa against discrimination. Failure to do so could be deemed a material breach of contract.

3.9 Public Contract Termination:

The provisions of Iowa Law as contained in Chapter 573A of the Code of Iowa, an Act to provide for termination of contracts for the construction of public improvements when construction or work thereon is stopped because of national emergency, shall apply to and be a part of this Contract, and shall be binding upon all parties hereto, including sub-contractors and sureties upon any bond given or filed in connection herewith.

**SECTION 00 0101
PROJECT TITLE PAGE**



AMES PARKING LOT STAIR REPLACEMENTS

**800 LINCOLN WAY
AMES, IA 50010**

**PROJECT MANUAL
BUILDING SPECIFICATIONS FOR AMES PARKING LOT STAIR REPLACEMENTS
DATE: APRIL 27, 2015
PROJECT NUMBER: BG-9A10(036)-80-85**

**SECTION 00 0110
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PROCUREMENT AND CONTRACTING REQUIREMENTS

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

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- B. 00 0110 - Table of Contents
- C. 00 0115 - List of Drawing Sheets

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- B. 01 2000 - Price and Payment Procedures
- C. 01 3000 - Administrative Requirements
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- E. 01 5000 - Temporary Facilities and Controls
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- G. 01 7000 - Execution and Closeout Requirements

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- A. 02 4100 - Demolition

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**SECTION 00 0115
LIST OF DRAWING SHEETS**

**ARCHITECTURAL DRAWINGS:
A-1 NORTH AND SOUTH STAIRS**

END OF LIST OF DRAWINGS

SECTION 01 1000
SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Ames Parking Lot Stair Replacements.
- B. Owner's Name: Iowa Department of Transportation.
- C. The Project consists of the removal of existing concrete stair and handrail, drainage gutter-North only and partial sidewalk at two exterior locations. Replace with new concrete stair, drainage gutter-North only, handrail and partial sidewalk. Regrade slope to accommodate. Re-sod as required.

1.02 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is shown on drawings and specified in Section 02 4100.

1.03 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the site during the entire construction period.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

1.04 CONTRACTOR USE OF SITE AND PREMISES

- A. Arrange use of site and premises to allow:
 - 1. Owner occupancy.

1.05 SPECIFICATION SECTIONS APPLICABLE TO ALL CONTRACTS

- A. Unless otherwise noted, all provisions of the sections listed below apply to all contracts. Specific items of work listed under individual contract descriptions constitute exceptions.
- B. Section 01 2000 - Price and Payment Procedures.
- C. Section 01 3000 - Administrative Requirements.
- D. Section 01 4000 - Quality Requirements.
- E. Section 01 6000 - Product Requirements.
- F. Section 01 7000 - Execution and Closeout Requirements.

END OF SECTION

SECTION 01 2000
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 SCHEDULE OF VALUES

- A. Form to be used: AIA G702 - Application and Certificate of Payment, AIA G703 - Continuation Sheet.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization, bonds and insurance, and General Requirements as separate line items.
- E. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Form to be used: AIA G702 - Application and Certificate of Payment and AIA G703 - Continuation Sheet.
- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. Submit three copies of each Application for Payment.
- H. Include the following with the application:
 - 1. Construction progress schedule, revised and current as specified in Section 01 3000.
 - 2. Updated Submittal Log.
 - 3. Progress meeting minutes.

- I. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.04 MODIFICATION PROCEDURES

- A. For other required changes, Architect will issue an AIA Document G701 change order document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 1. The document will describe the required changes and will designate method of determining any change in Contract Price or Contract Time.
 2. Promptly execute the change.
- B. For changes for which advance pricing is desired, Architect will issue an AIA Document G709 work change proposal request that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- C. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 1. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 2. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- E. Substantiation of Costs: Provide full information required for evaluation.
 1. provide following data:
 - a. Quantities of products, labor, and equipment.
 - b. Overhead and profit.
 - 1) Profit and overhead not to exceed 15 percent total between General Contractor and Sub Contractor.
 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified in Section 01 7000.
 2. All punch list items have been completed.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Construction progress schedule.
- C. Coordination drawings.
- D. Submittals for review, information, and project closeout.
- E. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.

PART 3 EXECUTION

2.01 PRECONSTRUCTION MEETING

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

2.02 CONSTRUCTION PROGRESS SCHEDULE

- A. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- B. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule with each Application for Payment.

2.03 SUBMITTALS FOR REVIEW

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

- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below .

2.04 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

2.05 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- B. Submit for Owner's benefit during and after project completion.

2.06 NUMBER OF COPIES OF SUBMITTALS

- A. Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

2.07 SUBMITTAL PROCEDURES

- A. Transmit each submittal with a copy of approved submittal form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- G. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Architect review stamps.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Control of installation.
- C. Tolerances.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.
- B. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES AND STANDARDS

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

PART 3 EXECUTION

2.01 CONTROL OF INSTALLATION

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

2.02 TOLERANCES

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

2.03 DEFECT ASSESSMENT

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

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Security requirements.
- D. Vehicular access and parking.
- E. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power , consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities located at Iowa Department of Transportation is permitted.
- B. Maintain daily in clean and sanitary condition.
- C. At end of each use, return facilities to same or better condition as originally found.

1.04 BARRIERS

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

1.05 FENCING

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

1.06 SECURITY

- A. Coordinate with Owner's security program.

1.07 VEHICULAR ACCESS AND PARKING - SEE SECTION 01 5500

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Existing on-site roads may be used for construction traffic. Coordinate with Iowa Department of Transportation.
- D. Existing parking areas located at Iowa Department of Transportation may be used for construction parking. Coordinate with Iowa Department of Transportation.

1.08 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site weekly.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure

unless otherwise approved by the authorities having jurisdiction. Coordinate location with Iowa Department of Transportation.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.

1.02 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

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

2.03 PRODUCT OPTIONS

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

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Will provide the same warranty for the substitution as for the specified product.
 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitution Submittal Procedure:
1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 3. The Architect will notify Contractor in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Prevent contact with material that may cause corrosion, discoloration, or staining.
- I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Closeout procedures, except payment procedures.
- G. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures.
- C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
- D. Section 02 4100 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

1.03 REFERENCE STANDARDS

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

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.05 QUALIFICATIONS

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

1.06 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.07 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean-up of work of separate sections.
- C. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

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

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Promptly notify Architect of any discrepancies discovered.
- B. Control datum for survey is that indicated on Drawings.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- F. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
- G. Periodically verify layouts by same means.

3.05 GENERAL INSTALLATION REQUIREMENTS

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

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 3. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- C. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
- D. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
 - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
 - 2. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- E. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- F. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- G. Do not begin new construction in alterations areas before demolition is complete.
- H. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.

- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Match work that has been cut to adjacent work.
 4. Repair areas adjacent to cuts to required condition.
 5. Repair new work damaged by subsequent work.
 6. Remove and replace defective and non-conforming work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Patching:
 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Prohibit traffic from landscaped areas.
- E. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.10 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.11 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.

- B. Notify Architect when work is considered ready for Substantial Completion.
- C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.
- D. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- E. Accompany Iowa Department of Transportation on preliminary final inspection.
- F. Notify Architect when work is considered finally complete.
- G. Complete items of work determined by Architect's final inspection.

3.12 MAINTENANCE

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

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of built site elements.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. 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; temporary bracing and shoring.
- C. Section 31 2200 - Grading: Topsoil removal.
- D. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

PART 2 PRODUCTS

2.01 MATERIALS

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

PART 3 EXECUTION

3.01 SCOPE

- A. Remove concrete stairs, gutter along North stairs, cut curb and sidewalk and remove sections per drawings, and as required to accomplish new work.
- B. Remove handrails.
- C. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 31 2200.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Use of explosives is not permitted.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permit.
 - 6. 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.
 - 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. 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.

- E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- G. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
- C. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

3.04 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

1.01 SECTION INCLUDES

- A. Concrete formwork.
- B. Concrete reinforcement.
- C. Joint devices associated with concrete work.
- D. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 07 9200 - Joint Sealants: Products and installation for sealants for saw cut joints and isolation joints in slabs.
- B. Section 32 1313 - Concrete Paving: Sidewalks, curbs and gutters.

1.03 REFERENCE STANDARDS

- A. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; American Concrete Institute International; 2010.
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- C. ACI 301 - Specifications for Structural Concrete; American Concrete Institute International; 2010.
- D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- E. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.
- F. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- G. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001 (Reapproved 2008).
- H. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2011.
- I. ACI 347 - Guide to Formwork for Concrete; American Concrete Institute International; 2004.
- J. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon Billet-Steel Bars for Concrete Reinforcement; 2014.
- K. ASTM A775/A775M - Standard Specification for Epoxy-Coated Steel Reinforcing Bars; 2007b (Reapproved 2014).
- L. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2013.
- M. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2014.
- N. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2014.
- O. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2012.
- P. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- Q. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2014.
- R. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a.
- S. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2012.
- T. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2013.

- U. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2012.
- V. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy Coated Reinforcing Steel Bars; 2001 (Reapproved 2007).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
 - 2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 306R when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Formwork Design and Construction: Comply with guidelines of ACI 347 to provide formwork that will produce concrete complying with tolerances of ACI 117.
- B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
 - 2. Form Coating: Release agent that will not adversely affect concrete .
 - 3. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 40 - 40,000 psi.
 - 1. Type: Deformed billet-steel bars.
 - 2. Finish: Unfinished, unless otherwise indicated.
 - 3. Finish: Epoxy coated in accordance with ASTM A775/A775M at stair tread nosing.
- B. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch.
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - 3. Provide galvanized components for placement within 1-1/2 inches of weathering surfaces.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I - Normal Portland type.
 - 1. Acquire all cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C 33.
- C. Fly Ash: ASTM C618, Class C or F.
- D. Calcined Pozzolan: ASTM C618, Class N.
- E. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.
- F. Water: Clean and not detrimental to concrete.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. Total volume of add mixtures should not exceed 20% of the portland cement volume.
- D. Concrete should be 5-8% air entrainment.

2.05 BONDING AND JOINTING PRODUCTS

- A. Epoxy Bonding System:
 - 1. Complying with ASTM C881/C881M and of Type required for specific application.
 - 2. Products:
 - a. Adhesives Technology Corporation; Crackbond SLV302, Crackbond LR321, Crackbond LR321 LPL, Ultrabond 2100 LPL, Ultrabond 2100, Ultrabond 1, Ultrabond 2, Ultrabond 4CC, or Ultrabond HS200: www.atcepoxy.com.
 - b. Dayton Superior Corporation; Slow Set Bonding Agent: www.daytonsuperior.com.
 - c. SpecChem, LLC; SpecPoxy 1000, SpecPoxy 2000, SpecPoxy 3000, or SpecPoxy 3000FS: www.specchemllc.com.
 - d. W.R. Meadows, Inc.; Rezi-Weld Gel Paste, Rezi-Weld Gel Paste State, Rezi-Weld 1000: www.wrmeadows.com.
 - e. Substitutions: See Section 01 6000 - Product Requirements.
- B. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.
 - 1. Material: Closed-cell, non-absorbent, compressible polyethylene or polymer foam in sheet form.
 - 2. Products:
 - a. W.R. Meadows, Inc; Deck-O-Foam Joint Filler with pre-scored top strip: www.wrmeadows.com.
 - b. Reflectix; Expansion Joint: relectixinc.com..
 - c. Substitutions: See Section 01 6000 - Product Requirements.

2.06 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for concrete on the basis of field experience, as specified in ACI 301.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
- D. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch.
 - 2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
 - 3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
 - 4. Silica Fume Content: Maximum 5 percent of cementitious materials by weight.
 - 5. Water-Cement Ratio: Maximum 40 percent by weight.
 - 6. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
 - 7. Maximum Slump: 3 inches.
 - 8. Maximum Aggregate Size: 5/8 inch.

2.07 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

- B. Verify that forms are clean and free of rust before applying release agent.
- C. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
 - 1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
- D. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Fabricate and handle epoxy-coated reinforcing in accordance with ASTM D3963/D3963M.
- B. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
- C. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.
- D. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Notify Architect not less than 24 hours prior to commencement of placement operations.
- C. Ensure reinforcement will not be disturbed during concrete placement.
- D. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- E. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.05 SLAB JOINTING

- A. Locate joints as indicated on the drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
 - 1. Install wherever necessary to separate slab from other building members, including columns, walls, equipment foundations, footings, stairs, manholes, sumps, and drains.
- D. Load Transfer Construction and Contraction Joints: Install load transfer devices as indicated; saw cut joint at surface as indicated for contraction joints.
- E. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch thick blade and cut at least 1 inch deep but not less than one quarter (1/4) the depth of the slab.
- F. Construction Joints: Where not otherwise indicated, use metal combination screed and key form, with removable top section for joint sealant.

3.06 FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete: 1/4 inch in 10 ft or as shown on drawings
- B. Correct the slab surface if tolerances are less than specified.
- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.07 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.

3.08 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
 - 1. Normal concrete: Not less than 7 days.
- C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.
- D. Surfaces Not in Contact with Forms:
 - 1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
 - a. Ponding: Maintain 100 percent coverage of water over slab areas, continuously for 4 days.
 - 2. Final Curing: Begin after initial curing but before surface is dry.

3.09 FIELD QUALITY CONTROL

- A. An Iowa Department of Transportation will perform field quality control tests, as specified in Section 01 4000.
- 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 Iowa Department of Transportation 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 C39/C39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cu yd or less of concrete placed.
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.10 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

3.11 PROTECTION

- A. Do not permit traffic over unprotected concrete surface until fully cured.

END OF SECTION

**SECTION 05 5213
PIPE AND TUBE RAILINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Free-standing railings at steps.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Placement of anchors in concrete.

1.03 REFERENCE STANDARDS

- A. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.
- B. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- C. ASTM E985 - Standard Specification for Permanent Metal Railing Systems and Rails for Buildings; 2000 (Reapproved 2006).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

PART 2 PRODUCTS

2.01 RAILINGS - GENERAL REQUIREMENTS

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of ASTM E985 and applicable local code.
- B. Allow for expansion and contraction of members and building movement without damage to connections or members.
- C. Dimensions: See drawings for configurations and heights.
 - 1. Top Rails and Wall Rails: 1 1/4 inches inside diameter, round.
 - 2. Posts: 1 1/4 inches inside diameter, round.
- D. Provide anchors and other components as required to attach to structure.
 - 1. For anchorage to concrete, provide 4 per post, 1/2" x 3" Stainless steel wedge anchors.
- E. Provide welding fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.
- F. Powder coat all handrails and posts: Hi-gloss black per Powder Coat Industry (PCI) standards.
- G. Spray steel post bases and 3" up posts with black undercoat after powder coating.
 - 1. Manufacturer: 3M, www.bondo.com
 - a. Bondo Rubberized Undercoat Aerosol, 737
 - b. Substitutions: See Section 01 6000 - Product Requirements.

2.02 STEEL RAILING SYSTEM

- A. Steel Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- B. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.

2.03 FABRICATION

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.

- C. Fabricate components with joints tightly fitted and secured.
- D. Welded Joints:
 - 1. Exterior Components: Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
 - 2. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.
- C. Anchor railings securely to structure.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION

SECTION 07 9005
JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.
- B. Precompressed foam sealers.
- C. Epoxy adhesive.

1.02 REFERENCE STANDARDS

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with other sections referencing this section.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating sealant chemical characteristics and performance criteria.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- C. Applicator Qualifications: Company specializing in performing the work of this section with minimum three years documented experience and approved by manufacturer.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Gunnable and Pourable Sealants:
 - 1. Tremco Global Sealants: www.tremcosealants.com.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Preformed Compressible Foam Sealers:

2.02 SEALANTS

- A. Type 1 - General Purpose Exterior Sealant: Polyurethane; ASTM C920, Grade NS, Class 25 minimum; Uses M, G, and A; single component.
 - 1. Color: limestone.
 - 2. Applications: Use for:
 - a. Control, expansion, and soft joints in masonry.
 - b. Joints between concrete and other materials.
 - c. Other exterior joints for which no other sealant is indicated.
 - 3. Polyurethane Products:

- a. Tremco: Vulkem 116 high performance.
- b. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints concave.
- H. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.

3.04 CLEANING

- A. Clean adjacent soiled surfaces.

3.05 PROTECTION

- A. Protect sealants until cured.

3.06 SCHEDULE

- A. Control and Expansion Joints in Sidewalks and Paving: Type 1.

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 .
- C. Finish grading for planting.

1.02 RELATED REQUIREMENTS

- A. Section 31 2323 - Fill: Filling and compaction.
- B. Section 32 9223 - Sodding: Finish ground cover.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with State of Iowa, Highway Department standards: 1.03 DOT SSHBC- SERIES 2012.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: See Section 31 2323 for any additional Topsoil required.
- B. Topsoil: Topsoil excavated on-site.
 - 1. Graded.
 - 2. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
- C. Other Fill Materials: See Section 31 2323.

PART 3 EXECUTION

3.01 PREPARATION

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

3.02 ROUGH GRADING

- A. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
- B. Do not remove topsoil when wet.
- C. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- D. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
- E. When excavating through roots, perform work by hand and cut roots with sharp axe.
- F. See Section 31 2323 for filling procedures.
- G. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

3.03 SOIL REMOVAL

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

3.04 FINISH GRADING

- A. Before Finish Grading:
 - 1. Verify building and trench backfilling have been inspected.
 - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.

- C. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches.
- D. Place topsoil where required to level finish grade.
- E. Place topsoil to nominal depth of 4 inches.
- F. Place topsoil during dry weather.
- G. Remove roots, weeds, rocks, and foreign material while spreading.
- H. Near plants spread topsoil manually to prevent damage.
- I. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- J. Lightly compact placed topsoil.

3.05 TOLERANCES

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

3.06 REPAIR AND RESTORATION

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

3.07 FIELD QUALITY CONTROL

- A. See Section 31 2323 for compaction density testing.

3.08 CLEANING

- A. Remove unused stockpiled topsoil and subsoil. Grade stockpile area to prevent standing water.
- B. Leave site clean and raked, ready to receive landscaping.

END OF SECTION

SECTION 31 2323

FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Filling, backfilling, and compacting for slabs-on-grade and stairs.
- B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 DEFINITIONS

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

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 2010
- 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 D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN m/m³)); 2012.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Compaction Density Test Reports.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. Sand - Fill Type 1: Conforming to State of Iowa Highway Department standard.
- B. Topsoil - Fill Type 2 - any topsoil required in addition to that removed in the area of the stair construction and stored at the beginning of construction: Conforming to State of Iowa Highway Department standard.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Identify required lines, levels, contours, and datum locations.
- B. See Section 31 2200 for additional requirements.

3.02 PREPARATION

- A. Scarify subgrade surface to a depth of 6 inches to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with sand.
- 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. Correct areas that are over-excavated.
 - 1. Other areas: Use sand, flush to required elevation, compacted to minimum 97 percent of maximum dry density.
- G. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under paving, slabs-on-grade, and similar construction: 97 percent of maximum dry density.
- H. Reshape and re-compact fills subjected to vehicular traffic.

3.04 FILL AT SPECIFIC LOCATIONS

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 1 inch from required elevations.

3.06 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

3.07 CLEANING

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

END OF SECTION

**SECTION 32 1313
CONCRETE PAVING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete sidewalks, stair steps, integral curbs, and gutters.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 - Concrete Reinforcing.
- B. Section 03 3000 - Cast-in-Place Concrete.
- C. Section 31 2323 - Fill: Compacted subbase for paving.

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; 2010.
- 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; 2010.
- E. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2014.
- G. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2013.
- H. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2014.
- I. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2014.
- J. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- K. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a.
- L. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2012.
- M. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2004 (Reapproved 2013).
- N. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction; 2004a (Reapproved 2013).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on joint filler, admixtures, and curing compound.
- C. Design Data: Indicate pavement thickness, designed concrete strength, reinforcement, and typical details.

PART 2 PRODUCTS

2.01 FORM MATERIALS

- A. Form Materials: Conform to ACI 301.

2.02 REINFORCEMENT

- A. Reinforcing Steel and Welded Wire Reinforcement: Types specified in section 03 3000, paragraph 2.02.

2.03 CONCRETE MATERIALS

- A. Concrete Materials: As specified in Section 03 3000.

2.04 BONDING AND JOINTING PRODUCTS

- A. Joint Filler: 1/2" thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.
 - 1. Reflectix: Expansion Joint (www.reflectixinc.com)
- B. Joint Sealer: Tremco, Vulkem 116, one part high-performance polyurethane sealant, limestone color.

2.05 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
- D. Concrete Properties:
 - 1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 4000 psi.
 - a. Add air-entraining agent to normal weight concrete mix for work exposed to exterior.
 - b. Slump may be increased for improved workability to a maximum of 5 inches by adding a mid-range water reducer at the ready-mix plant. Concrete shall not be less than 4 inches.
 - c. No water shall be added to the mix on site.
 - 2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
 - 3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
 - 4. Silica Fume Content: Maximum 5 percent of cementitious materials by weight.

2.06 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.

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.
- C. Verify anchors, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.02 SUBBASE

- A. See Section 31 2323 for Sand - Fill Type 1.

3.03 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.

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.

3.05 REINFORCEMENT

- A. Place reinforcement at top of slabs-on-grade.

- B. Interrupt reinforcement at contraction joints.
- C. Place dowels to achieve pavement and curb alignment as detailed.
- D. Provide doweled joints 18" inch on center at transverse joints.

3.06 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

3.07 PLACING CONCRETE

- A. Coordinate installation of snow melting components.
- B. Place concrete in accordance with ACI 304R.
- C. Do not place concrete when base surface is wet.
- D. Place concrete using the slip form technique.
- E. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- F. 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.
- G. Apply surface retarder to all exposed surfaces in accordance with manufacturer's instructions.

3.08 JOINTS

- A. Align curb, gutter, and sidewalk joints.
- B. Place 3/8 inch wide expansion joints at 20 foot intervals and to separate paving from vertical surfaces and other components and in pattern indicated.
 - 1. Form joints with joint filler extending from bottom of pavement to within 1/2 inch of finished surface.
 - 2. Secure to resist movement by wet concrete.
- C. Provide sawn joints.
 - 1. As shown on drawings.
 - 2. Between sidewalks and curbs.
 - 3. Between curbs and pavement.
- D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

3.09 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 1/4 inch radius.
- C. Curbs and Gutters: Light broom, texture parallel to pavement direction.

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. Compressive Strength Tests: ASTM C39/C39M; for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 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.

- B. 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 pedestrian traffic over pavement for 7 days minimum after finishing.

END OF SECTION

SECTION 32 9223

SODDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fertilizing.
- B. Sod installation.
- C. Maintenance.

1.02 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.

1.03 REFERENCE STANDARDS

- A. TPI (SPEC) - Guideline Specifications to Turfgrass Sodding; Turfgrass Producers International; 2006.

1.04 SUBMITTALS

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

1.05 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.

1.06 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sod on pallets. 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. 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. Kentucky Blue Grass percentages per local supplier's recommendation
 - 2. Fescue, tall (Fineleaf-Rebel, Olympic or equiv)
 - 3. Fescue, Creeping Red
 - 4. Ryegrass, Perennial (Fineleaf Var-Pennfine, Derby, Manhattan or equiv)
- B. 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.
- C. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.

2.02 ACCESSORIES

- A. Wood Pegs: Softwood, sufficient size and length to ensure anchorage of sod on slope.
- B. Wire Mesh: Interwoven hexagonal metal wire mesh of 2 inch size.

2.03 SOURCE QUALITY CONTROL

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

- A. 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 and prior to installation of sod.
- C. Apply fertilizer no more than 48 hours before laying sod.
- D. Mix thoroughly into upper 2 inches of topsoil.
- E. Lightly water to aid the dissipation of fertilizer.

3.04 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 minimum. Do not stretch or overlap sod pieces.
- D. Where new sod adjoins existing grass areas, align top surfaces.
- E. Where sod is placed adjacent to hard surfaces, such as curbs, pavements, etc., place top elevation of sod 1/2 inch below top of hard surface.
- F. On slopes 6 inches per foot and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on center. Drive pegs flush with soil portion of sod.
- G. Prior to placing sod, on slopes exceeding 8 inches per foot or where indicated, place wire mesh over topsoil. Securely anchor in place with wood pegs sunk firmly into the ground.
- H. Water sodded areas immediately after installation. Saturate sod to 4 inches of soil.
- I. After sod and soil have dried, roll sodded areas to ensure good bond between sod and soil and to remove minor depressions and irregularities.

3.05 MAINTENANCE

- A. Provide maintenance at no extra cost to Owner; Owner will pay for water.
- B. See Section 01 7000 - Execution Requirements, for additional requirements relating to maintenance service.
- C. Maintain sodded areas immediately after placement until grass is well established and exhibits a vigorous growing condition.
- D. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.
- E. Neatly trim edges and hand clip where necessary.
- F. Immediately remove clippings after mowing and trimming.
- G. Water to prevent grass and soil from drying out.
- H. Roll surface to remove irregularities.
- I. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
- J. Immediately replace sod to areas that show deterioration or bare spots.

K. Protect sodded areas with warning signs during maintenance period.

END OF SECTION