

CITY OF COUNCIL BLUFFS



SUPPLEMENTAL SPECIFICATIONS

TO

THE 2022 EDITION

**IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC
IMPROVEMENTS**



January 2022

DIVISION 1 – GENERAL PROVISIONS AND COVENANTS

DELETE IN ITS ENTIRETY and REPLACE with the following:

The City of Council Bluffs utilizes “GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT” and “SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT” Document No. 1910-8 (1983 Edition) prepared by Engineer’s Joint Contract Document Committee.

ADD the following:

COORDINATION OF SPECIFICATIONS, PLANS, AND SPECIAL PROVISIONS

- A. In case of any discrepancy between the various items included in the contract documents, the items shall prevail, or govern, in the following descending order:
 - 1. Change Orders
 - 2. Addenda
 - 3. Proposal and Contract
 - 4. Special Provisions
 - 5. Plans, including plan notes
 - 6. Supplemental Specifications
 - 7. General Supplemental Specifications (SUDAS)
 - 8. Urban Standard Specifications for Public Improvements

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

DIVISION 2 – EARTHWORK

SECTION 2010 – EARTHWORK, SUBGRADE, AND SUBBASE

1.08 MEASUREMENT AND PAYMENT

D. Topsoil:

- 1. On-Site Topsoil:
 - a. Measurement:
DELETE 8 inch AND REPLACE with 4 inch.

E. Class 10, Class 12, or Class 13 Excavation:

- 3. Includes, but is not limited to:
 - ADD the following:
 - e. The furnishing, permits, hauling, placement, and compaction of borrow material.
 - f. The excavation, hauling, disposal, and permits for all waste material.

2.01 TOPSOIL

DELETE C AND REPLACE with the following:

- C. Topsoil shall be considered as the fertile, uppermost part of the soil containing significant organic matter largely devoid of debris and rock and often disturbed in cultivation. The Engineer will approve the source of off-site topsoil. Surface soils supporting growth of noxious weeds or other undesirable vegetation will not be accepted.

2.03 SUITABLE EMBANKMENT MATERIALS

ADD the following:

F. Soils meeting A and B above that have a moisture between 4% and 8% above optimum shall be scarified and air dried by the Contractor to within acceptable limits. Soils meeting A and B above with a moisture content above 8% optimum or unsuitable soils shall be either removed or used in the construction based on the direction of the Engineer. The work described above shall be considered incidental to items for which payment is being made.

2.04 FOUNDATION MATERIALS

C. Subgrade Treatment:

DELETE 3. Fly Ash and REPLACE with the following:

3a. Fly Ash

1. Fly ash shall meet ASTM C 618, Section 4.3 when sampled and tested in accordance with ASTM C 618, Sections 5, 6, and 8, unless otherwise shown on the plans. Note 2 of Section 3.1.2 of ASTM C 618 will not apply.
2. Fly ash shall be Class C containing a minimum of 22% CaO. The source of the ash shall be identified and approved in advance of stabilization operations in order that laboratory testing can be completed prior to commencing work.
3. Fly ash shall be stored and handled in closed weatherproof containers until immediately before distribution. Fly ash exposed to moisture prior to mixing with soils shall be discarded.

3b. Water

Water used for mixing or curing shall be reasonably clean and free of oil, salt acid, alkali, sugar, vegetable, or other substances injurious to the finished product. Water shall meet the requirements of AASHTO T 26. Water known to be of potable quality may be used without testing.

3c. Soil

Soil for this work consists of materials on the site or selected materials from other sources and shall be uniform in quality and gradation, and shall be approved by the Engineer. The soil shall be free of roots, sod, weeds, and stones larger than 1.5 inches.

D. Subbase:

1. Special Backfill

ADD the following:

- c. Only crushed stone or crushed PCC shall be used. Crushed PCC shall be from a single documented source.

3.03 EXCAVATION

ADD the following:

J. Finish Grading:

When topsoil is not included in the contract, excavation shall include all finish grading according to the specified grades and cross-sections. The top 9 inches of backfill behind curbs shall be free of gravel, crushed rock, and other debris.

K. Finish Grading:

When topsoil is included in the contract, a minimum of 4 inches of topsoil shall be placed on all disturbed areas as required by the IDNR NPDES General Permit No. 2. Topsoil shall meet the requirements of Section 2010 or as specified in the Contract Documents.

3.06 SUBGRADE PREPARATION

A. Uniform Composition:

ADD the following:

5. Fly Ash Treated Subgrade:

a. Fly Ash

Fly ash shall be applied at the rate and depth specified in the plans.

b. Tolerances

At final compaction, the fly ash and water content for each course of subgrade treatment shall conform to the following tolerances unless specified otherwise:

<u>Material</u>	<u>Tolerance</u>
Fly Ash	+2%, -2%
Water	+2%, -3%

3.07 SUBGRADE TREATMENT

A. Lime, Cement, Fly Ash, or Asphalt: REMOVE Fly Ash from this subsection.

ADD the following:

C. Fly Ash:

1. Weather Limitations

The fly ash-treated subgrade shall not be mixed while the atmospheric temperature is below 40° F or when conditions indicate that temperatures may fall below 40° F within 24 hours, when it is foggy, rainy, or when soil or subgrade is frozen.

2. Equipment

The equipment required shall include all equipment necessary to complete this item such as: grading and scarifying equipment, a spreader for the fly ash, mixing or pulverizing equipment, sheepsfoot and pneumatic or vibrating rollers, sprinkling equipment, and trucks.

3. Construction Methods

a. General

It is the primary requirement of this specification to secure a completed stabilized subgrade containing a uniform fly ash mixture, free from loose or segregated areas, of uniform density and moisture content, well bound for its full depth, and with a smooth surface suitable for placing subsequent courses. The Contractor shall regulate the sequence of work, to use the proper amount of fly ash, maintain the work, and rework the courses as necessary to meet the above requirements.

b. Application

Fly ash shall be spread only on areas where the mixing and compaction operations can be completed within 2 hours. The amount of fly ash spread shall be the amount required to obtain the rate and depth specified in the plans.

The fly ash shall be spread uniformly over the top of the subgrade by an approved screwtype spreader box or other approved spreading equipment. The fly ash shall be distributed in such manner that scattering by wind will be minimal. Fly ash shall not be applied when wind conditions, in the opinion of the Engineer, are detrimental to a proper application.

c. Mixing

The full depth of the treated subgrade shall be mixed with the pulvamixer. Fly ash shall not be left exposed for more than 30 minutes after application. The pulvamixer shall make two passes to incorporate the fly ash into the soil. Water shall be added through use of a pulvamixer equipped with a spray bar in the mixing drum capable of applying sufficient quantities of water to achieve the required moisture content of the soil-fly ash mixture. The system shall be capable of being regulated to the degree as to maintain moisture contents within the specified range.

Specified moisture contents shall be established based on laboratory tests with the site soils and the specific fly ash to be used for the treatment. Final moisture content of the mix, immediately prior to compaction, shall not be more than 3% below nor more than 2% above the optimum moisture content for maximum density of the mix as determined in accordance with ASTM D 698. If the moisture content exceeds the specified limits, additional fly ash may be added to lower the moisture content to the required limits. Lowering moisture contents by aeration following addition of the fly ash will not be permitted.

d. Compaction

Compaction of the soil-fly ash mixture shall begin immediately after mixing of the fly ash and be completed within two hours following incorporation of the fly ash. The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D 698.

The in-place density of the fly ash-treated subgrade layer shall be determined in accordance with ASTM D 2922 at intervals so that each test shall represent no more than 300 square yards.

Irregularities, depressions, or weak spots, which develop, shall be corrected immediately by scarifying the area affected, adding or removing material as required, and reshaping and re-compacting. The surface of the course shall be maintained in a smooth condition, free from undulations and ruts, until other work is placed thereon or the work is accepted.

In addition to the requirements specified for density, the full depth of the material shown on the plans shall be compacted to the extent necessary to remain firm and stable under construction equipment. After each section is completed, tests will be made by the Engineer. If the material fails to meet the density requirements, it shall be reworked to meet these requirements. Throughout this operation, the shape of the course shall be maintained by blading, and the surface upon

completion shall be smooth and shall conform with the typical section shown on the plans and to the established lines and grades. Should the material lose the required stability, density, and finish before the next course is placed or the work is accepted, it shall be recompacted and refinished at no additional cost to the Contracting Authority.

e. Finishing and Curing

After the final layer or course of the fly ash-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The finished surfaces shall not vary more than 3/8 inch when tested with a 16 foot straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor, at no additional cost to the Contracting Authority, and in a manner satisfactory to the Engineer. After the fly ash-treated course has been finished as specified herein, the surface shall be protected against rapid drying and maintained in a thorough and continuously moist condition by sprinkling for a period of not less than three days or until the pavement section is placed.

f. Thickness

The thickness of the fly ash-treated subgrade shall be determined by depth checks or cores taken at intervals so that each test will represent no more than 300 square yards. When the base thickness is deficient by more than 0.5 inch, the Contractor shall correct such areas in a manner satisfactory to the Engineer. The Contractor shall replace, at no additional cost to the Contracting Authority, the base material where borings are taken for test purposes.

g. Maintenance

The Contractor shall maintain the fly ash-treated subgrade in good condition from the start of work until all the work has been completed, cured, and accepted by the Engineer.

4. Testing Requirements

- a. ASTM D 698 Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5 lb Rammer and 12 inch Drop
- b. ASTM D 1556 Density of Soil in Place by the Sand-Cone Method
- c. ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- d. AASHTO T 26 Quality of Water to be Used in Concrete

3.09 FIELD QUALITY CONTROL

B. Moisture Content and Density:

DELETE 1 and REPLACE with the following:

1. Ensure that moisture content falls within the specified limits.

ADD the following:

3. The top 9 inches of backfill behind the curb shall be compacted to 90% of maximum Standard Proctor Density.

DIVISION 3 – TRENCH AND TRENCHLESS CONSTRUCTION

SECTION 3010 – TRENCH EXCAVATION AND BACKFILL

1.08 MEASUREMENT FOR PAYMENT

C. Trench Foundation:

ADD the following to 1:

Foundation rock shall only be used at the direction of the Engineer.

2.02 BEDDING MATERIAL

A. Class 1 Material:

DELETE 1 and REPLACE with the following:

1. Crushed stone or crushed PCC complying with the following gradation:

Sieve	Percent Passing
1-1/2"	100
3/4"	65-95
3/8"	36-70
#4	5-45
#10	10-30
#200	<8

OR

2. 3/4" Class A IDOT Gradation No. 11

Sieve	Percent Passing
1-0"	100
3/4"	95-100
1/2"	70-90
#4	30-55
#8	15-40
#200	6-16

DIVISION 4 – SEWERS AND DRAINS

SECTION 4010 – SANITARY SEWERS

1.08 MEASUREMENT AND PAYMENT

A. Sanitary Sewer Gravity Main:

1. Trenched:

c. DELETE “wyes”, “testing, and inspection”

2. Trenchless:

c. DELETE “testing; and inspection”

B. Sanitary Sewer Gravity Main With Casing Pipe:

1. Trenched:

c. DELETE “testing, and inspection”

2. Trenchless:

c. DELETE “testing; and inspection”

C. Sanitary Sewer Force Main:

1. Trenched:

c. DELETE “wyes”, “testing, and inspection”

2. Trenchless:

c. DELETE “testing; and inspection”

D. Sanitary Sewer Force Main with Casing Pipe:

1. Trenched:

c. DELETE “testing, and inspection”

2. Trenchless:

c. DELETE “testing; and inspection”

E. Sanitary Sewer Service Stub:

DELETE and REPLACE paragraph with the following:

E. Sanitary Sewer Service Stub: The portion of the sanitary sewer service from the main to a point that is 2 feet beyond the back of the curb or as specified by the contract documents.

F. Sanitary Sewer Service Relocation:

DELETE 1, 2, 3 and REPLACE with the following:

Sewer Service Relocations shall be measured and paid according to 4010-1.08-E, M, and N.

ADD the following:

M. Service Wyes: Measurement and payment for Service Wyes used in both new sanitary sewer construction and tap of existing sanitary sewers shall be in units of each for each size installed. Saddle Wyes shall not be used for new sewer main construction. Payment shall be full compensation for all materials, tools, labor, and equipment necessary to install each Wye.

ADD the following:

N. Tapping Existing Sanitary Sewer: Measurement and payment for tapping an existing sanitary sewer shall be in units of each. Payment shall be full compensation for all materials, tools, labor, equipment, pumping, and tap fitting except a wye, when used.

2.01 SANITARY SEWER (Gravity Mains)

A. Solid Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 15 inch:

DELETE 1 and REPLACE with the following:

1. Comply with ASTM D 3034, SDR 35, unless specified otherwise.

3.02 GRAVITY SEWER INSTALLATION

A. General:

ADD the following:

8. Inspect pipe for defects before installation. Do not install damaged or defective pipe.

B. Trenched:

ADD the following:

8. Correct misalignment, displacement, or otherwise defective pipe by removing, relaying, or replacing pipe (at no additional cost to the Jurisdiction).

3.06 SANITARY SEWER SERVICE STUBS

C. DELETE and REPLACE paragraph with the following:

- C. Install service stub from the sewer main to a location 2 feet beyond the back of the curb or as specified by the contract documents.

FIGURE 4010.201 SHEETS 1 AND 2

Modify as follows:

DELETE 10' Typ. Dimension for service stub out. Stub out shall extend 2 feet beyond the back of the curb or as specified by the contract documents.

SECTION 4020 – STORM SEWERS

1.03 SUBMITTALS

ADD the following:

If the manufacturer's allowable joint opening tolerances are greater than those allowed herein, the shop drawing submittal for Reinforced Concrete Pipe shall include published product information stating the maximum allowable joint openings at the top and bottom of the pipe for each size of pipe in order to meet the pipe and joint specifications.

1.08 MEASUREMENT FOR PAYMENT

A. Storm Sewer:

1. Trenched:

- c. DELETE "testing, and inspection"

2. Trenchless:

- c. DELETE "testing and inspection"

B. Storm Sewer with Casing Pipe:

1. Trenched:

- c. DELETE "testing, and inspection"

2. Trenchless:

- c. DELETE "testing; and inspection"

3.02 PIPE INSTALLATION

A. General:

ADD the following:

8. Provide proper facilities for lowering the sections into place without damaging the pipe.
9. Inspect pipe for defects before carefully lowering into trench. Do not install damaged or defective pipe.

B. Trenched:

ADD the following:

7. At no additional cost to the Jurisdiction, correct misalignment, displacement, or otherwise defective pipe by removing, relaying, or replacing pipe.

3.05 PIPE JOINTING

B. Reinforced Concrete Pipe (RCP), Reinforced Concrete Arch Pipe (RCAP), and Reinforced Concrete Elliptical Pipe (RCEP):

DELETE 3 and REPLACE with the following:

3. Place pipe such that the joint openings on the outside or inside of the pipe do not exceed 1/8 inch at the bottom and 5/8 inch at the top or the tolerances specified in a previously approved shop drawing submittal.

ADD the following:

3.08 CONFLICTS

- D. Provide temporary support for existing water, gas, telephone, power, and other utilities or services that cross the trench.
- E. Compact backfill material under existing utility crossing as specified in Section 3010, or construct utility line supports where specified in the contract documents or as directed by the Engineer.

SECTION 4030 – PIPE CULVERTS

1.08 MEASUREMENT FOR PAYMENT

A. Pipe Culverts:

1. Trenched:

- c. DELETE “testing, and inspection”

2. Trenchless:

- c. DELETE “testing; and inspection”

SECTION 4040 – SUBDRAINS AND FOOTING DRAIN COLLECTORS

2.05 SUBDRAIN OUTLETS

DELETE sections B and C.

FIGURE 4040.233

Modify as follows:

DELETE the following from note 2:

“corrugated, double-walled HDPE; or PVC”

SECTION 4060 – CLEANING, INSPECTION, AND TESTING OF SEWERS

1.08 MEASUREMENT AND PAYMENT

DELETE and REPLACE with the following:

- A. Clean, Inspect, and Test Sanitary Sewer:** Measurement and payment shall be in lineal feet of pipe cleaned, inspected, and tested as measured from the center of structures. Payment shall be full compensation for all materials, tools, labor, and equipment necessary to complete all cleaning, inspection, and testing requirements within this section. Leakage testing is not required for sanitary sewer sections with active service stubs. Inspection and Testing shall be performed before paving activity takes place.
- B. Clean and Inspect Storm Sewer:** Measurement and payment shall be in lineal feet of pipe cleaned and inspected from the center of structures. Payment shall be full compensation for all materials, tools, labor, and equipment necessary to complete the cleaning all inspection requirements for storm sewers within this section.

3.02 VIDEO INSPECTION

A. General:

DELETE 1 and REPLACE with the following:

1. Conduct video inspection of all new and rehabilitated sanitary sewers, storm sewers, and pipe culverts after all backfill, subgrade preparation, subbase, and compaction operations are completed, but prior to paving.

ADD the following:

5. If any pipe damage exists, remove and replace sewer as necessary and re-inspect and test.

C. Inspection Reporting:

ADD the following to 1:

Video shall be provided on a DVD media disk or flash drive.

3.03 SANITARY SEWER LEAKAGE TESTING

ADD the following:

All new Sanitary Sewer Mains shall be tested prior to the installation of laterals. The Contractor shall provide a written report for each segment of Sanitary Sewer Main tested.

3.04 DEFLECTION TESTING

ADD the following:

- G.** The Contractor shall provide written report(s) for each segment of Sanitary Sewer Main tested.

DIVISION 5 – WATER MAINS AND APPURTENANCES

DELETE in its entirety

DIVISION 6 – STRUCTURES FOR SANITARY AND STORM SEWERS

SECTION 6010 –STRUCTURES FOR SANITARY AND STORM SEWERS

1.08 MEASUREMENT AND PAYMENT

A. Manhole

3. Includes:
REMOVE "infiltration barriers"

E. Manhole or Intake Adjustment, Minor

3. Includes:
REMOVE "and installing new infiltration barrier (sanitary sewer manholes only)"

F. Manhole or Intake Adjustment, Major

3. Includes:
REMOVE "installing new infiltration barrier (sanitary sewer manholes only)"
ADD the following:

- I. Infiltration Barrier:** Measurement and payment shall be by each infiltration barrier installed. Payment shall be full compensation for all materials, tools, labor, and equipment necessary to properly install the infiltration barrier.

2.03 REINFORCEMENT

MODIFY AS FOLLOWS:

1. Comply with Iowa DOT Article 2404.
2. All deformed bars used for Storm and Sanitary Sewer Structures shall be epoxy coated.

2.10 CASTINGS (Ring, Cover, Grate, and Extensions)

D. Casting Types:

1. Manholes:

ADD the following:

All sanitary and storm sewer manhole castings shall be fixed unless specified otherwise.

All sanitary and storm sewer manholes and inlets shall have "City of Council Bluffs" cast on the covers. A shop drawing submittal shall be provided.

2.11 ADDITIONAL MATERIALS FOR SANITARY SEWER MANHOLES

B. Riser Section Coating:

DELETE Section 1 and REPLACE with the following:

- 1. Exterior:** Coat the exterior of all Sanitary Sewer Manholes with TNEMEC 46-465 Coal Tar Coating or approved Equal.

DELETE Section 2 and REPLACE with the following:

- 2. Interior:** Coat the interior of all Sanitary Sewer Manholes with TNEMEC 46H-413 Hi-Build Tneme-Tar or Approved Equal.

3.03 ADDITIONAL REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES

ADD the following:

- F. Field Adjustments:** When precast structures are used and a field adjustment is required, the adjustment shall be at the expense of the Contractor.

SECTION 6030 – CLEANING, INSPECTION, AND TESTING OF STRUCTURES

1.08 MEASUREMENT AND PAYMENT

DELETE sentence and REPLACE with the following:

Cleaning of structures is incidental to construction and will not be paid for separately. Air testing manholes is not required unless specified in the contract documents.

DIVISION 7 – STREETS AND RELATED WORK

SECTION 7010- PORTLAND CEMENT CONCRETE PAVEMENT

1.08 MEASUREMENT FOR PAYMENT

A. PCC Pavement:

ADD the following:

4. A partial payment for all PCC Pavement of 80% will be made until backfill is completed in accordance with Section 2010 to the specified grades and cross-sections.

I. PCC Pavement Samples and Testing:

DELETE and REPLACE 3 with the following:

3. **Includes:** Lump sum price includes, but is not limited to, pavement thickness cores and profilograph pavement smoothness measurement (when required by the contract documents).

ADD the following:

N. Pavement Markings: Measurement and payment shall be by lineal feet of each type of pavement marking and by each symbol and legend installed according to IDOT Section 2527. Payment shall be full compensation for all traffic control, materials, tools, labor, and equipment necessary to properly install the symbols and/or pavement markings.

Items shall include the following, as well as the type of paint and tape specified according to IDOT Section 2527.

1. **Painted Pavement Markings**
2. **Permanent Tape Markings**
3. **Painted Symbols and Legends**
4. **Precut Symbols and Legends**

ADD the following:

O. Traffic Control: Measurement and payment for Traffic Control shall be based on lump sum. Payment for Traffic Control shall be made as a percentage of the project is complete, as determined by the Engineer.

Payment shall be full compensation for all materials, tools, labor, and equipment necessary to provide the traffic control required by the contract documents. The unit

price includes, but is not limited to, furnishing and maintaining all necessary barricades, signs, fencing, flagmen, cones, and appurtenances necessary.

Price adjustments will be applied for failure to comply with the traffic control requirements in the contract documents. Contract price adjustments will be assessed for each noncompliance with a progressively doubling price adjustment, beginning at \$250.

2.01 MATERIALS

A. DELETE A and REPLACE with the following:

Cement: Only Type IPF cement shall be used. The blended cement shall meet the requirements of Iowa DOT Section 4101.

B. Supplementary Cementitious Materials (SCM):

1. Fly Ash: Comply with Iowa DOT Section 4108. The maximum amount of Fly Ash allowed shall be 15%. Only Class C fly ash shall be used.
2. **ADD:** If Ground Granulated Blast Furnace Slag (GGBFS) is proposed, a mix design shall be submitted to the Engineer for approval.
3. DELETE

D. Coarse Aggregate for Concrete:

DELETE 1 and ADD the following:

1. Crushed stone shall comply with Iowa DOT Section 4115 and meet the requirements for Class 3i Durability.

2.02 CONCRETE MIXES:

A. Mix Design:

ADD the following:

3. For all street pavements, curb and gutter, and recreational trails unless noted otherwise use:
CV-SUD-C15 as shown in Iowa DOT I.M. 529 Proportion Table 4 (SUDAS Concrete Mixes) with Class V aggregates, 15% max Class C Fly Ash, and a max w/c ratio of 0.400.
For driveways, sidewalks, intersection returns and street patches (25 square yards or less) use: CV-SUD-C15 mix with a max w/c ratio of 0.420.

B. Consistency and Workability:

2. Air Content

- a. ADD the following:

Air content tests shall be taken from behind the paving machine at the discretion of the Engineer. The Contractor shall be responsible for repairing the concrete at no additional cost to the Owner.

C. Use of Fly Ash and Ground Granulated Blast Furnace Slag (GGBFS) as Supplementary Cementitious Materials

DELETE and REPLACE with the following:

Mix proportions for the various mixes using fly ash are included in Iowa DOT Materials I.M. 529. The maximum allowable fly ash substitution rate shall be 15%. Use of GGBFS shall be reviewed and approved by the Engineer. Between October 16 and March 15, supplementary cementitious materials will be allowed only when maturity

method is used to determine time of opening. Transport, store, haul, and batch fly ash in such a manner to keep it dry.

ADD the following:

2.03 PAVEMENT MARKINGS

A. Markings and Symbols:

Comply with IDOT Section 2527.

3.02 PAVEMENT CONSTRUCTION

C. Surface Fixture Adjustment:

ADD the following:

4. Fixtures placed within areas to be paved without box-outs shall be adjusted to within 0.5 inches of the finished vertical grade prior to paving. Adjustments greater than 0.5 inches within the plastic concrete shall not be allowed.

K. Construction of Joints:

1. General:

ADD the following:

f. Misaligned joints that vary by more than one inch may be subject to repair or pavement replacement at no cost to the Contracting Authority. Use repair methods approved by the Engineer. Repair or replace at the direction of the Engineer.

2. Saw Joints:

ADD the following to a:

All transverse contraction joints shall be sawed at a maximum spacing of $21T$, where T is the thickness of the pavement.

ADD the following to d:

Discontinue sawing a joint if the joint is raveling.

ADD the following to h:

Raveling or moving of aggregate by joint sawing for transverse and longitudinal joints may be subject to repair or pavement replacement at no cost to the Contracting Authority.

3.07 QUALITY CONTROL

A. Testing:

DELETE and REPLACE notes 2 and 3 in Table 7010.02 with the following:

² Certified plant inspection per Iowa DOT Materials I.M. 527 is not required for local let City projects unless specified in the contract documents.

³ The Supplier/Contractor is responsible for developing the maturity curve for the specified mix and delivering a copy of the results to the Engineer. The Engineer will measure the field maturity and strength of concrete placed unless specified in the contract documents.

REMOVE and REPLACE E with the following:

E. Defects or Deficiencies: Prior to final acceptance of the project, pavement containing excessive cracks, fractures, spalls or other defects shall be removed and replaced or repaired at no cost to the City. The General Conditions of the Construction Contract include a two-year warranty and guarantee for all pavement. Repairs shall be based on AASHTO guide specification Section 501.03Q Repair of Defective Pavement Slabs as follows:

Defect Type	Orientation	Location ^a	Description	Recommended Repair	Alternate Procedures
Plastic Shrinkage	Any	Anywhere penetrates depth	Only partially	Do nothing HMWM ^b	Fill width
Unc. Crack	Transverse	Mid-slab	Full-depth	Saw & seal crack	LTR ^c
Unc. Crack	Transverse	Crosses or ends at transverse joint	Full-depth	Saw & seal the crack; Epoxy uncracked joint	
Unc. Crack	Transverse	Relatively parallel & w/in 1.5 m of joint	Full-depth	Saw & seal the crack; Seal joint	FDR ^d to replace crack & joint
Saw cut or Unc. Crack	Transverse	Anywhere	Spalled	Repair spall by PDR ^e if crack not removed	
Unc. Crack	Longitudinal	Relatively parallel & w/in 0.3m of joint; May cross or end at longitudinal joint	Full-depth	Saw & seal the crack; Epoxy uncracked joint	Cross-stitch ^f or Slot-stitch crack
Unc. Crack	Longitudinal	Relatively parallel & wheel path (0.3-1.35 m from joint)	Full-depth, hairline or spalled	Remove & replace slab	Cross-stitch ^f or Slot-stitch crack
Unc. Crack	Longitudinal	Relatively parallel further than 1.35m from a long, joint or edge	Full-depth	Cross-Stitch ^f or Slot-stitch crack; Seal long. joint	
Saw cut of Unc. Crack	Longitudinal	Anywhere	Spalled	Repair spall by PDR ^e if crack not removed	
Unc. Crack	Diagonal	Anywhere	Full-depth	FDR ^d	
Unc. Crack	Multiple per slab	Anywhere	Two cracks dividing slab into 3 or more pieces	Remove & replace slab	

^s 1m = 3.28 ft.

^b HMWM = High molecular weight methacrylate poured over surface and sprinkled with sand for skid resistance.

^c LTR = Load-transfer restoration; 3 dowel bars per wheel path grouted into slots sawed across the crack; Slots must be parallel to each other and the longitudinal joint. Backfill with non-shrink, cement-based mortar (see reference 4).

^d FDR = full-depth repair; 3 m (10 ft) long by one lane wide. Extend to nearest transverse contraction joint if 3-m (10-ft) repair would leave a segment of pavement less than 3 m (10ft) long.

^e PDR = partial-depth repair; Saw around spall leaving 50 mm (2 in.) between spall and 50 mm (2 in.) deep perimeter saw cuts. Chip concrete free, then clean and apply bondbreaker to patch area. Place a separating medium along any abutting joint or crack. Fill area with patching mixture.

^f Cross-stitching; fro longitudinal cracks only, drill holes at 35° angle, alternating from each side of joint on 750 – 1000 mm (30-36 in.) spacing. Epoxy deformed steel tiebars into holes. (See reference 4).

^g Slot-stitching; for longitudinal cracks only. Deformed bars grouted into slots sawed across the crack; Backfill with non-shrink, cement-based mortar.

ADD the following:

3.08 PAVEMENT MARKINGS

Comply with IDOT Section 2527.

SECTION 7030 – SIDEWALKS, SHARED USE PATHS AND DRIVEWAYS

2.07 DETECTABLE WARNINGS

ADD the following:

Detectable warning panels shall be 2' x 2', composite, red, removable panels manufactured by, Detectile Slimtek II or approved equal.

3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

B. Concrete Pavement Placement

ADD the following:

- 4. Pavement Thickness:** When specified, Recreational Trail, Sidewalk, and/or Driveway pavement thickness samples and deficiencies shall be provided, measured, and paid according to Section 7010, parts 1.08 and 3.07.

3.10 CLEANING

ADD the following:

- D. The Contractor shall clean detectable warning panels of all concrete and cure.

DIVISION 8 - TRAFFIC CONTROL

REFER TO THE CITY OF COUNCIL BLUFFS TRAFFIC SIGNAL SPECIAL PROVISIONS, APRIL 2020 EDITION.

DIVISION 9- SITE WORK AND LANDSCAPING

SECTION 9010 – SEEDING

1.08 MEASUREMENT FOR PAYMENT

A. Conventional Seeding:

1. Seeding:

DELETE the following from c:
“and furnishing water”

ADD the following:

- F. Weed Control:** Measurement and payment for weed control of seeded areas shall be based on lump sum. Payment shall be full compensation for all labor, tools, materials, and equipment necessary to maintain seeded areas weed free for a period of one year following final completion of the project.

2.02 SEED MIXTURES AND SEEDING DATES

DELETE and REPLACE with the following:

A. CLASS U1-Urban (Typical between back of curb and sidewalk)

Slopes less than 3:1 horizontal to vertical

Shall be United Seeds Super Turf II or equal in proportions as follows:

Four varieties of Tall Fescue minimum 87% of mixture

Two varieties of Kentucky Bluegrass minimum 7% of mixture

One variety of Perennial Ryegrass minimum 5% of mixture

Application rate 10 lbs per 1000 sq-ft, 436 lbs/acre

Over seeding rate 5 lbs per 1000 sq-ft, 218 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

B. CLASS U2-Urban (Typical between sidewalk and front lawn)

Slopes less than 3:1 horizontal to vertical

Shall be United Seeds Sun and Shade Mixture or equal in proportions as follows:

Two varieties of Kentucky Bluegrass minimum 33% of mixture

One variety of Creeping Red Fine Fescue 33% of mixture

One variety of Perennial Ryegrass 33% of mixture

Application rate 6 lbs per 1000 sq-ft, 261 lbs/acre

Over seeding rate 3 lbs per 1000 sq-ft, 131 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

C. CLASS R -Rural (Slopes less than 3:1 cut or fill)

Shall be United Seeds City/County/NRD Mixture or equal in proportions as follows:

Linn Perennial Ryegrass 20% of mixture

Seed Oats minimum 20% of mixture

Tall Fescue minimum 30% of mixture

Smooth Brome minimum 30% of mixture

Application rate 100 lbs/acre

Over seeding rate 50 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

D. CLASS S2B -Urban and Rural (Slopes 3:1 up to 2:1 cut and fill)

Shall be United Seeds All Purpose Pasture Mixture or equal as follows:

Seed Oats minimum 20% of mixture

Smooth Brome minimum 17% of mixture

Festulolium minimum 10% of mixture

Intermediate Wheatgrass minimum 10% of mixture

Ryegrass minimum 10% of mixture

Timothy minimum 10% of mixture

Application rate 4 lbs per 1000 sq-ft, 160 lbs/acre

Over seeding rate 2 lb per 1000 sq-ft, 80 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

E. CLASS S1B -Urban and Rural (Slopes 2:1 up to 1:1)

Shall be Steep Slope Mix as follows:

Seed Oats minimum 29% of mixture

Smooth Brome minimum 18% of mixture

Festulolium minimum 6% of mixture

Tall Fescue minimum 6% of mixture

Timothy minimum 6% of mixture

Application rate 6 lbs per 1000 sq-ft, 261 lbs/acre

Over seeding rate 2 lb per 1000 sq-ft, 87 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

F. CLASS F – Floodplain (Detention basin)

Shall be United Seeds Floodplain mix or equal as follows:

Western Wheatgrass minimum 28% of mixture

Virginia wild rye minimum 24% mixture

Big Bluestem minimum 14% mixture

Switch grass minimum 8% mixture

Canada wild rye minimum 7% mixture

Red Top minimum 5% mixture

Fox Sedge minimum 4% mixture

Application rate 2 lbs per 1000 sq-ft, 87 lbs/acre

Over seeding rate 1 lb per 1000 sq-ft, 44 lbs/acre

Seeding dates: March 1 – June 30, August 10 – September 30 or as directed by the Iowa DOT Roadside Development Section

RE-LETTER B, C, D, E, F, G, and H to G, H, I, J, K, L and M

ADD the following:

2.08 WEED CONTROL

The Contractor shall submit a herbicide application plan and agreement from a certified applicator for approval by the Engineer. Herbicide used shall effectively control both broadleaf and grassy weeds including crabgrass and clover.