

November 2, 2015

ADDENDUM NO.2
to the
Iowa Department of Transportation
Proposal No. 15291
For: The 50/50 mix buildings for Hanlontown, New Hampton, and Mason City
Letting Date: November 10, 2015

Notice To Bidders:

This Addendum is issued to incorporate the following additions, deletions, corrections, and/or clarifications to the terms or specifications and shall hereby be considered a part of the final contract documents. This Addendum shall supersede, modify and/or change all statements to the contrary in the bid proposal and shall take precedence over previous terms or specifications.

Drawings:

CHANGE: The Hanlontown Roof Framing drawing (sheet A-1) does show 2x6's at the purlins, however they are to be 2x4's as per the section. The Mason City & New Hampton drawings show the 2x4 notation correctly at that location.

CHANGE: New Hampton - delete drawings dated 09.28.15 and insert attached drawings dated 10.29.15

Specifications for Hanlontown, New Hampton, and Mason City:

Revise spec. sections 07 4113 and 07 4213 from Max-Rib to Max-Rib **Ultra**; (24 gauge) Galvalume substrate with Kynar coatings

Revise spec. section 07 4113: Delete paragraph 2.05 Accessories and Miscellaneous Items "*D. Thermal Insulation: ... blocks.*"

Revise spec. section 07 4213 to Max-Rib **Ultra**; Metal Panels type: Single skin; ribbed; lapped seams with roll tape sealant, and exposed fasteners.

ADDITIONS:

Add the following spec. sections (attached) for New Hampton only:

31 2323 – Fill; 32 1123 – Aggregate & Aggregate Base Course; 32 1216 – Asphalt;
33 4213 – Culverts

Change: Table of Contents, page 2: has been revised to include the above 4 sections (attached) for New Hampton only.

All Bidders must sign and return this Addendum for the bid opportunity referenced above. Failure to do so may subject the Bidder to disqualification. If a bid response has already been submitted, this Addendum shall be signed and emailed or faxed to the Purchasing Section prior to the scheduled Letting Date.

Company Name (*please print*)

Date

Signature

Sincerely,

Jody McNaughton, Purchasing Agent III
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END OF SECTION

**SECTION 33 4213
PIPE CULVERTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe culvert, joints and accessories.
- B. Bedding and slope protection at pipe end.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Concrete grout fill to adjacent construction.
- B. Section 31 2316 - Excavation: Excavating of trenches.
- C. Section 31 2316.13 - Trenching: Excavating, bedding, and backfilling.
- D. Section 31 2323 - Fill: Bedding and backfilling.
- E. Section 31 3213.16 - Cement Soil Stabilization.

1.03 REFERENCE STANDARDS

- A. Iowa Department of Transportation: Standard Specifications for Highway and Bridge Construction - Series 2012 for materials only. Payment procedures per Section 4: Contract Terms and Conditions.
- B. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T99 - Standard Specification for the Moisture-Density Relations of Soils Using a 2.5 kg (5.5 lb) Rammer and a 305 mm (12 in.) Drop.
 - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10 lb) Rammer and a 457 mm (18 in.) Drop.
- C. ASTM A929/A929M - Standard Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe; 2001 (Reapproved 2013).
- D. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe; 2014.
- E. ASTM C76M - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (Metric); 2014.
- F. ASTM C443 - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets; 2012.
- G. ASTM C443M - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets (Metric); 2011.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week prior to commencing work of this section.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pipe, fittings and accessories.
- C. Manufacturer's Installation Instructions: Indicate special procedures required to install Products specified.
- D. Accurately record actual locations of pipe runs, connections, and invert elevations.
- E. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

PART 2 PRODUCTS

2.01 CONCRETE CULVERT PIPE

- A. Manufacturers:
 - 1. Hanson Pipe & Precast; ____: www.hansonpipeandprecast.com.

2. Concrete Pipe & Precast: www.concretepandp.com.
 3. Substitutions: See Section 01 6000 - Product Requirements.
- B. Concrete Pipe: Reinforced, ASTM C76 (ASTM C76M), Class I with Wall Type A; mesh reinforcement; bell and spigot end joints:
1. Shape: Circular with a nominal diameter as indicated on the drawings.
- C. Reinforced Concrete Pipe Joint Device: ASTM C443 (ASTM C443M) rubber compression gasket joint.

2.02 BEDDING AND COVER MATERIALS

- A. Bedding: As specified in Section 31 2323.
- B. Cover: As specified in Section 31 2323.

2.03 ACCESSORIES

- A. Filter Fabric: Non-biodegradable, woven. Provide Geotextile Fabric manufactured by Alkzo Nobel Geosynthetic Co, Huesker, Inc., TC Mirafi, Tenax Corp, Tensar Earth Technologies, Inc..
- B. Fill at Pipe Ends: Rock to nominal size of 6 inch.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Section 01300 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on layout drawings.

3.02 EXCAVATING

- A. See Section 31 2323 - for additional requirements.
- B. Excavate culvert trench to 12 inches below pipe invert. Hand trim excavation for accurate placement of pipe to elevations indicated.
- C. Place filter fabric over compacted backfill.

3.03 INSTALLATION - PIPE

- A. Verify that excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on layout drawings.
- B. Install pipe and accessories in accordance with manufacturer's instructions
- C. Lift or roll pipe into position. Do not drop or drag pipe over prepared bedding.
- D. Shore pipe to required position; retain in place until after compaction of adjacent fills. Ensure pipe remains in correct position and to required slope.
- E. Repair surface damage to pipe protective coating with two coats of compatible bituminous paint coating.
- F. Install culvert end gratings.

3.04 PIPE ENDS

- A. Place fill at pipe ends, as indicated.
- B. Installed thickness: 12 inch average.

3.05 TOLERANCES

- A. Lay pipe to alignment and slope gradients noted on layout drawings; with maximum variation from true slope of 1/8 inch in 10 feet.
- B. Maximum Variation From Intended Elevation of Culvert Invert: 1/2 inch.
- C. Maximum Offset of Pipe From True Alignment: 1 inch.
- D. Maximum Variation in Profile of Structure From Intended Position: 1 percent.

3.06 PROTECTION

- A. Protect pipe and bedding from damage or displacement until backfilling operation is in progress.

END OF SECTION

**SECTION 32 1216
ASPHALT PAVING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aggregate base course.
- B. Double course bituminous concrete paving.
- C. Surface sealer.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 - Grading: Preparation of site for paving and base.
- B. Section 31 2323 - Fill: Compacted subgrade for paving.

1.03 REFERENCE STANDARDS

- A. Iowa Department of Transportation: Standard Specifications for Highway and Bridge Construction - Series 2012 for materials and testing only. Payment procedures per Section 4: Contract Terms and Conditions.
- B. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types; The Asphalt Institute; 1997.
- C. AI MS-19 - A Basic Asphalt Emulsion Manual; The Asphalt Institute; Fourth Edition.
- D. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction; 2009a.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with Iowa DOT SSHBC - Series 2012.
- B. Mixing Plant: Conform to Iowa DOT SSHBC - Series 2012.
- C. Obtain materials from same source throughout.

1.05 FIELD CONDITIONS

- A. Section 01 6000 - Product Requirements: Environmental conditions affecting products on site.
- B. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.
- C. Place bitumen mixture when temperature is not more than 15 F degrees below bitumen supplier's bill of lading and not more than maximum specified temperature.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aggregate for Base Course: In accordance with Iowa DOT SSHBC - Series 2012, Section 4127, Type A for materials only.
- B. Aggregate for Binder Course: In accordance with Iowa DOT SSHBC - Series 2012, Section 4127, Type A for materials only.
- C. Fine Aggregate: In accordance with Iowa DOT SSHBC - Series 2012, Section 4127, Type A for materials only.
- D. Mineral Filler: Finely ground particles of limestone, hydrated lime or other mineral dust, free of foreign matter. In accordance with Iowa DOT SSHBC - Series 2001, Section 4127.
- E. Tack Coat: In accordance with Iowa DOT SSHBC - Series 2001, Section 4127.
- F. Reclaimed Asphalt Pavement (RAP): Processed material obtained by milling or full depth removal of existing asphalt concrete pavements. In accordance with Iowa DOT SSHBC - Series 2012, Section 2303.

2.02 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Use dry material to avoid foaming. Mix uniformly.

- B. Base Course: 6 percent of asphalt cement by weight in mixture in accordance with AI MS-2.
- C. Binder Course: 5.5 percent of asphalt cement by weight in mixture in accordance with AI MS-2.
- D. Wearing Course: 6 percent of asphalt cement by weight in mixture in accordance with AI MS-2.
- E. Mix Temperature: range from 260 to 330 degrees F.

2.03 SOURCE QUALITY CONTROL

- A. Section 01 4000 - Quality Requirements: Testing, inspection and analysis requirements.
- B. Submit proposed mix design of each class of mix for review prior to beginning of Work.
- C. Test mix design and samples in accordance with Iowa DOT SSHBC - Series 2012, Section 23 0304 for testing only.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Section 01 3000 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.02 BASE COURSE

- A. Place and compact base course.

3.03 SUBBASE COURSE

- A. Place and compact base course.

3.04 PREPARATION - PRIMER

- A. Apply primer in accordance with manufacturer's instructions.
- B. Apply primer on aggregate base or subbase at uniform rate of 1/3 gal/sq yd.
- C. Use clean sand to blot excess primer.

3.05 PREPARATION - TACK COAT

- A. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 0.02 to 0.05 gal/sq yd, undiluted. Conform to low DOT SSHBC - Series 2012, Section 2303.03 for materials only.

3.06 PLACING ASPHALT PAVEMENT - DOUBLE COURSE

- A. Place asphalt binder course within 24 hours of applying primer or tack coat.
- B. Place binder course to 3 inch compacted thickness.
- C. Place wearing course within 24 hours of placing and compacting binder course. When binder course is placed more than 24 hours before placing wearing course, clean surface and apply tack coat before placing wearing course.
- D. Place wearing course to 3 inch compacted thickness.
- E. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- F. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.07 SEAL COAT

- A. Apply seal coat to surface course in accordance with AI MS-19.

3.08 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Compacted Thickness: Within 1/4 inch of specified or indicated thickness.
- C. Variation from True Elevation: Within 1/2 inch.

3.09 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for quality control.
- B. Provide field inspection and testing. Take samples and perform tests in accordance with Iowa DOT SSHBC - Series 2012, Section 23 0304 for testing only.

3.10 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 72 hours or until surface temperature is less than 140 degrees F.

END OF SECTION

SECTION 32 1123
AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aggregate base course.
- B. Paving aggregates.

1.02 RELATED REQUIREMENTS

- A. Document 9A10: Geotechnical Report; bore-hole locations and findings of subsurface materials.
- B. Section 31 2200 - Grading: Preparation of site for base course.
- C. Section 31 2323 - Fill: Topsoil fill at areas adjacent to aggregate base course.
- D. Section 31 2323 - Fill: Compacted fill under base course.
- E. Section 32 1216 - Asphalt Paving: finish asphalt courses.

1.03 REFERENCE STANDARDS

- A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; American Association of State Highway and Transportation Officials; 1965 (2004).
- B. 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
- C. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2006.
- D. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012.
- E. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.
- F. 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.
- G. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
- H. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2010.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Materials Sources: Submit name of imported materials source.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Furnish each aggregate material from a single source throughout the Work.
- B. Perform Work in accordance with Iowa DOT SSHBC Series 2012.
- C. Maintain one copy of document on site.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. Aggregate Storage, General:
 - 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 COURSE AGGREGATE MATERIALS

- A. Coarse Aggregate Type A1: Coarse aggregate, Class A crushed stone conforming to State of Iowa DOT SSHBC - Series 2012, Section 41 2004 Highway Department.
- B. Coarse Aggregate Type A2: (Gravel) Crushed stone base, 13 gradation, macadam ; conforming to Iowa DOT SSHBC - Series 2012, Section 4122.02.
- C. Coarse Aggregate Type [A3]: [(Gravel) Choke stone conforming to Iowa DOT SSHBC - Series 2012, Section 4122.02.

2.02 FINE AGGREGATE MATERIALS

- A. Fine Aggregate Type A5: Porous Backfill; conforming to State of Iowa DOT SSHBC - Series 2012, Section 4123.
- B. Fine Aggregate Type A6: (Sand); Granular Backfill, conforming to Iowa DOT SSHBC - Series 2012, Section 4133.

2.03 SOURCE QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of aggregate materials.
- B. Where aggregate materials are specified using ASTM D2487 classification, testing of samples for compliance will be provided before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the work are as indicated.
- B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.

3.03 AGGREGATE PLACEMENT

- A. Spread aggregate over prepared substrate to a total compacted thickness of 6 inches.
- B. Level and contour surfaces to elevations and gradients indicated.
- C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 INSTALLATION

- A. Place aggregate in maximum 4 inch layers and roller compact to specified density.
- B. Level and contour surfaces to elevations and gradients indicated.
- C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- D. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.05 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch.

- C. Variation From Design Elevation: Within 1/2 inch.

3.06 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

3.07 CLEANING

- A. Leave unused materials in a neat, compact stockpile.

3.08 STOCKPILING

- A. Stockpile materials on site at locations designated by Architect/Engineer.
- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate different aggregate materials with dividers or stockpile individually to prevent mixing.
- D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- E. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.09 STOCKPILE CLEANUP

- A. Leave unused materials in neat, compact stockpile.
- B. When borrow area is indicated, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

3.10 SCHEDULES

- A. Under Asphalt Pavement:
 - 1. Compact placed aggregate materials uniformly to achieve minimum 95 percent of maximum density.

END OF SECTION

SECTION 31 2323

FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Filling, backfilling, and compacting for building volume below grade, slabs-on-grade, paving, site structures, and subgrade elevation and over-excavation.
- B. Backfilling and compacting for utilities outside the building to utility main connections.
- C. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 - Grading: Removal and handling of soil to be re-used.
- B. Section 31 2200 - Grading: Site grading.

1.03 DEFINITIONS

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

1.04 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 D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012.
- C. 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.
- D. Iowa Department of Transportation: Standard Specifications for Highway and Bridge Construction - Series 2012 for materials only. Payment procedures per Section 4: Contract Terms and Conditions.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Materials Sources: Submit name of imported materials source.
- C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.

1.06 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. General Fill: Conforming to State of Iowa Highway Department standard.
- B. Structural Fill: Conforming to State of Iowa Highway Department standard.
- C. Granular Fill: Coarse aggregate, conforming to State of Iowa Highway Department standard.
- D. Topsoil: See Section 31 2200.

2.02 SOURCE QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the Work are as indicated.
- B. Identify required lines, levels, contours, and datum locations.
- C. See Section 31 2200 for additional requirements.
- D. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- E. Verify structural ability of unsupported walls to support imposed loads by the fill.

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 general fill.
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Slope grade away from building minimum 6 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- G. Correct areas that are over-excavated.
 - 1. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.
- H. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under paving, slabs-on-grade, and similar construction: 97 percent of maximum dry density.
- I. Reshape and re-compact fills subjected to vehicular traffic.

3.04 FILL AT SPECIFIC LOCATIONS

- A. Use general fill unless otherwise specified or indicated.
- B. Under Interior Slabs-On-Grade:
 - 1. Use granular fill.
 - 2. Depth: 6 inches deep.
 - 3. Compact to 95 percent of maximum dry density.
- C. At Foundation Walls and Footings:
 - 1. Use general fill.
 - 2. Compact each lift to 90 percent of maximum dry density.
 - 3. Do not backfill against unsupported foundation walls.
 - 4. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
- D. Over Buried Utility Piping, Conduits, and Duct Bank in Trenches :
 - 1. Bedding: Use general fill.
 - 2. Cover with general fill.
 - 3. Fill up to subgrade elevation.
 - 4. Compact in maximum 8 inch lifts to 95 percent of maximum dry density.

- E. At Lawn Areas:
 - 1. Use general fill.
 - 2. Fill up to 6 inches below finish grade elevations.
 - 3. Fill up to subgrade elevations.
 - 4. Compact to 95 percent of maximum dry density.
 - 5. See Section 31 2200 for topsoil placement.
- F. At Planting Areas Other Than Lawns :
 - 1. Use general fill.
 - 2. Fill up to 12 inches below finish grade elevations.
 - 3. Fill up to subgrade elevations.
 - 4. Compact to 95 percent of maximum dry density.
 - 5. See Section 31 2200 for topsoil placement.
- G. At asphalt and Concrete Paving:
 - 1. Use general fill.
 - 2. Fill up to 12 inches below finish grade.
 - 3. Compact to 95 percent of maximum dry density.

3.05 TOLERANCES

- A. Top Surface of General Filling: Plus or minus 1 inch from required elevations.
- B. Top Surface of Backfilling Within Building Areas: Plus or minus 1 inch from required elevations.
- C. 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. Perform compaction density testing on compacted fill in accordance with ASTM D2922 and moisture testing with Iowa DOT SSHBC - Article DS-01031 and DS-01014.
- C. 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.
- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Proof roll compacted fill at surfaces that will be under slabs-on-grade and paving.

3.07 CLEANING

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

END OF SECTION