

**ADDENDUM NO. 1
TO SPECIFICATIONS AND PLANS
BEVERLY PARK PATHWAY IMPROVEMENTS PROJECT
VILLAGE OF BEVERLY HILLS, MICHIGAN**

ISSUED: March 29, 2022

HRC Job No. 20210175

This Addendum is issued prior to receipt of proposals to provide for certain changes and clarifications to the Specifications and/or the Drawings, as herein specified, and is hereby made a part of the Contract Documents and shall be taken into consideration in preparing the Proposal. All other conditions remain the same. **The Proposer shall acknowledge the receipt of this Addendum by signing below, including this with their proposals, and completing the Addenda section on page 3 of the Proposal Form (Section 00300).** Failure to sign the Addenda Section of the Proposal Form in the submission of the proposal may be justification for the proposal being rejected as non-responsive.

The following lists the extent of this Addendum. Descriptions of the changes or clarifications are given within each heading.

SPECIFICATIONS

02220 – Soil Erosion and Sediment Control

- Section has been added to the specifications.

Received and Acknowledged By:

Company: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Delhi Township
2101 Aurelius Rd.
Suite 2A
Holt, MI 48842
517-694-7760

Detroit
535 Griswold St.
Buhl Building, Ste 1650
Detroit, MI 48226
313-965-3330

Grand Rapids
1925 Breton Road SE
Suite 100
Grand Rapids, MI 49506
616-454-4286

Howell
105 W. Grand River
Howell, MI 48843
517-552-9199

Jackson
401 S. Mechanic St.
Suite B
Jackson, MI 49201
517-292-1295

Kalamazoo
834 King Highway
Suite 107
Kalamazoo, MI 49001
269-665-2005

Lansing
215 S. Washington SQ
Suite D
Lansing, MI 48933
517-292-1488

SECTION 02220

SOIL EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

The purpose of this specification is to provide requirements, techniques, and measures to minimize erosion from construction activities and any potential associated impacts to lakes, streams, or other surface waters.

1.02 GENERAL

- A. All temporary stabilization work shall be coordinated with related specification sections so that this work is integrated with construction sequencing.
- B. Construction activities shall be phased and conducted in such a manner as to minimize the duration of exposed soil to the shortest practicable period of time. Any sediment from work on this site shall be contained on the site and not allowed to migrate to or collect on any offsite areas or in waterways. Waterways include both natural and manmade ditches, storm drains, streams, wetlands, lakes and ponds. Particular care should be taken when working around site perimeters and waterways.
- C. Temporary seeding and mulching provides protection for no more than one year, after which time permanent stabilization measures should be initiated. The Contractor shall remove temporary sediment control measures as soon as permanent stabilization of disturbed areas has been completed unless otherwise directed on the Contract Drawings or by the Engineer.
- D. Per Part 91 of P.A. 451, all disturbed areas shall be stabilized within 5 calendars days following the completion of final grading. The Contractor is responsible for providing final grading and permanent stabilization of all disturbed areas as soon as practicable. Temporary soil erosion and sediment control measures shall be maintained until permanent stabilization is achieved.

1.03 PERMITS

The Contractor's activities shall adhere to the provisions of Part 91 of P.A. 451 and all other applicable state and local regulations. If a Soil Erosion and Sediment Control Permit is not required, the Contractor is still responsible for containing sediment and any other pollutants on site during any earth disturbance. Where these specifications are more stringent than Part 91 of P.A. 451, these specifications shall govern. The Contractor shall hold the Owner harmless from any violations, civil action, or penalties arising from the Contractor's actions.

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1.04 BASIS OF PAYMENT

All temporary erosion and sediment control measures shall be included in the unit prices bid. All temporary erosion control applications shall be paid on a per unit basis following the next pay request. The Contractor shall be paid according to the following pay schedule for all temporary sediment control measures (i.e. silt fencing, catch basin inserts, etc.): 25% of total cost upon installation, 25% of cost upon removal and the remaining fifty percent (50%) will be paid incrementally with each subsequent pay estimate. The Contractor shall not remove any temporary sediment control measures prior to approval by the Engineer.

Due to weather conditions, changes in grading or construction sequencing, additional controls not listed on the Contract Drawings may be required. The Contractor shall be prepared to submit price quotes and shop drawings for additional materials, as required by the City's Representative in the field. All costs associated with additional controls not listed as specific bid items that are required to maintain compliance with all applicable permits shall be paid as individual line items and must be pre-approved.

PART 2 - MATERIALS

2.01 GENERAL

The Contractor shall install all materials required on the Contract Drawings unless otherwise directed by the Engineer. Any substitutions of specified materials must be pre-approved by the Engineer.

2.02 TEMPORARY SEEDING AND MULCHING

Table I lists the approved materials for temporary seeding and seasons for use. Table II lists the approved materials for temporary erosion control materials. The Contractor may select any of the approved materials (or combination of seed) necessary to prevent erosion based on the site conditions and soils unless specific materials are identified on the Contract Drawings or Specifications.

Temporary or permanent stabilization of all disturbed areas with slopes steeper than 3:1 (H:V), detention basins, ditches, or waterways shall be completed with approved erosion control blankets or other measures as specified.

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TABLE I
 MATERIALS FOR TEMPORARY SEEDING OF DISTURBED
 CONSTRUCTION AREAS

<u>Material</u>	<u>Large Site Amount (lbs/acre)</u>	<u>Small Site Amount (lbs/1,000 ft²)</u>	<u>Season</u>
Oats or Barley	95	2	Apr. 1 to Sept. 15
Annual Ryegrass	120	3	Apr. 1 to Oct. 15
Buckwheat	75	2	June 1 to July 15
Winter Wheat	120	3	Sept. 20 to Oct. 15
Perennial Ryegrass (dormant seeding)	75	2	Oct. 16 to Freeze up

Seed in a moist firm seed bed. Place seed from ¼ to not over ½ inch in depth.

TABLE II
 MATERIALS FOR TEMPORARY EROSION CONTROL OF DISTURBED
 CONSTRUCTION AREAS

<u>Material</u>	<u>Amount</u>	<u>Season</u>
Weed free, small grain straw	2 tons/acre (two 45 lb bales/1,000 ft ²)	All Year
Wood chips or shredded bark	10 ton (50 yd ³)/acre	All Year
Compost	2" cover	All Year
Polyacrylamide (PAM) solution	0.025-0.5% solution based on the results of field testing	All Year

2.03 MULCH ANCHORING

A. Coir Fiber Netting

Straw mulching for temporary stabilization of disturbed areas with slopes steeper than 3:1 (H:V), detention basins, ditches, or waterways may be permissible if used in conjunction with an approved erosion control netting.

The coir fiber netting shall be a 100% organic natural bristle coir (coconut) fiber twine woven into an open weave textile for temporary shear protection. The weighting of coir netting shall be medium if not otherwise specified on the Contract Drawings.

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The following products meet the specifications for medium weight coir fiber netting lines:

1. Belton Industries Inc. (1-800-225-4099), DeKoWe 700,
2. RoLanka International Inc.(1-800-760-3215), BioD-Mat 70,
3. BonTerra America (1-800-882-9489), CF7,
4. Approved equal.

Material Properties –

	<u>Light</u>	<u>Medium</u>	<u>Heavy</u>	<u>Units</u>
Weight (ASTM D3776)	11.8	20.6	26.6	oz/sq yd
Thickness (ASTM D1777)	--	0.3	--	in
Max. Open Area	65	50	39	%
Wet Tensile Strength (ASTM D4595)	38/24	86/41	122/39	lbs/in

Material Composition – Open weave, 100% biodegradable natural coir fiber.

B. Securing Devices

All temporary mulch netting shall be secured with hardwood or biodegradable pegs that are a minimum 6 inches in length. The Contractor shall insure that all netting is installed using manufacturer’s recommended securing pattern and peg density.

C. Tackifiers

Guar based tackifiers may be used for straw tacking at rates recommended by the manufacturer.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Contractor shall install and maintain the temporary soil erosion and sediment control measures in the manner and sequence outlined in the approved Contract Drawings unless otherwise directed by the Engineer or superceded by supplemental specifications.
- B. In general, temporary soil erosion control measures shall be installed as a primary line of defense and temporary sediment controls shall be applied as a secondary perimeter defense against sediment leaving the site.
- C. Temporary seeding and mulching shall be applied to all topsoil stockpiles, as a 20 ft. wide buffer around the site, on disturbed areas on which no further work is anticipated for 30 days or more, or as required on the Contract Drawings. Between October 20 and April 1, the Contractor shall provide grading of disturbed areas to provide positive drainage and dormant seeding practices shall be used (Table I).
- D. All de-watering operations shall discharge to a temporary settling basin or through an approved geotextile filter bag on a surface stabilized with aggregate or sod unless otherwise directed by the Engineer.

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- E. Control measures shall be constructed to limit conveyance of runoff water from the site to non-erosive velocities.
- F. Daily inspection shall be made by the Contractor to determine the effectiveness of erosion and

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sediment control measures and any necessary repairs shall be performed without delay. All mud/dirt tracked onto existing roads from the site due to construction shall be removed at the end of each work day by the Contractor.

- G. Due to unforeseen weather conditions, discrepancies in as-built grades, and altered drainage, additional controls may be required by the Owner's Representative in the field or the Project Engineer.

3.02 APPLICATION OF TEMPORARY STABILIZATION

- A. Structural practices such as scarification, diversions, sediment traps, and sediment basins shall be constructed, seeded, and stabilized with mulch or approved erosion control blankets prior to any other grading at the construction site.
- B. The seedbed shall not be rain-compacted or so firm as to prevent the seed from securing adequate germination or root penetration. No topsoil is required for temporary stabilization. Based on the results of site soil testing, soil amendments may be required to ensure adequate vegetative stabilization.
- C. Where erosion control blankets are not specified, mulch shall be applied during or immediately after seeding. Mulch shall be immediately anchored to minimize losses by wind or water using one of the following methods:
 - 1. Mechanical – a disk, crimper, or similar tool shall be set straight to punch or anchor the mulch material into the soil. Mechanically anchored straw shall not be finely chopped.
 - 2. Mulch Nettings – Nettings shall be install per the manufacturer's recommendations. Medium coir fiber netting shall be used per Subsection 2.03A unless otherwise specified on the Contract Drawings.
 - 3. Tackifiers – Guar or approved synthetic tackifiers may be used at rates recommended by the manufacturer.
- D. The Contractor shall apply water to the new seedings daily or as necessary in order to insure that the seed bed is moist enough to allow adequate germination and growth.
- E. Several applications of temporary seeding and/or mulching are typically necessary during the life of the project. Additional applications shall be promptly installed by the Contractor as required by the regulatory agency or the Owner's Representative in the field at no additional cost to the Owner.

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3.03 EROSION PROTECTION – OPEN CUT CONSTRUCTION

- A. In order to limit the length of time that the exposed area is subject to the elements and subsequent conditions causing erosion, the Contractor shall adhere to the following requirements.
1. Geotextile Filter Fabric (or equivalent) shall be placed between the frame and cover of all manholes, catch basins, and gate wells in the construction area. The filter fabric shall be periodically replaced if silt buildup causes the trap to function improperly.
 2. Underground piping and conduit construction, including installation of pipe, backfilling, surface restoration and removal of excess excavation shall be accomplished in one continuous operation. Backfilling, removal of excess excavated material and final or temporary stabilization (according to seasonal limitation) shall follow pipe laying and conduit construction by no more than 100 feet.
 3. Excess excavated materials shall be removed from the job site. Excess excavated material shall be disposed of in accordance with Section 02200-Earthwork. A soil erosion plan must be prepared by the Contractor for each fill area and it shall be approved by a proper authorized agency and implemented before starting filling operations.

3.04 ENFORCEMENT

Should the above requirements be violated, the Owner shall require the contractor to immediately correct all sources of violations. This may involve temporarily ceasing construction operations until these requirements are met.

Per Part 91, if the required control measures or maintenance of existing controls are not properly completed by the Contractor within five (5) working days of written Notification and the installed costs are not more than \$10,000.00, the Owner may hire a sub-contractor to complete the required work and deduct the costs from the Contractor's Performance Bond. If the installed costs are more than \$10,000.00, the Owner may hire a sub-contractor to complete the required work if not completed by the Contractor within ten (10) working days of Notification.

END OF SECTION