

**SECTION 205 -- EXCAVATION AND EMBANKMENT**

**205.01 -- Description**

1. Excavation and embankment work is usually enacted by four different pay items, "Excavation", "Excavation (Established Quantity)", "Excavation Borrow", and "Earthwork Measured in Embankment". The requirements for each pay item are described in Tables 205.01A and B.

**Table 205.01A**

<b>Excavation/Embankment Pay Item Requirements</b>				
<b>Work Description Code</b>	<b>Pay Items<sup>1</sup></b>			
	<b>Measured Quantity</b>		<b>Established Quantity</b>	
	<b>Excavation</b>	<b>Excavation Borrow</b>	<b>Excavation (EQ)</b>	<b>Earthwork Measured in Embankment</b>
A	X	<sup>2</sup>	X	<sup>3</sup>
B	X	X	X	X
C	X	X	X	X
D	X	X	X	X
E	X	X	X	X
F	X	X	X	X
G	X	X	X	X
H	X	X	X	X
I	X	X	X	X
J		X		X
K	X	X		
L			X	X
M	X	X	X	
N				X

<sup>1</sup> The Department may use a combination of the pay items depending on the project requirements. However, "Earthwork-Measured-in-Embankment" will not be used with "Excavation Borrow".

<sup>2</sup> Excavation borrow is only used when part or all of the embankment material must be obtained off-site.

<sup>3</sup> Earthwork-Measured-in-Embankment may be used when the project required off-site borrow; it is also used on projects where all embankment soil is available on-site.

**Table 205.01B**

<b>Work Description Code</b>	<b>Work Description</b>
A	Excavated and compacted soils are within the right-of-way limits.
B	Removing and disposing of excess material.
C	Excavation and embankment for inlet and outlet ditches needed for roadway drainage.
D	Excavation and embankment for changing and completing all channels.
E	Excavation and backfill at retaining walls, bridge abutments, and other structures.
F	Building, shaping, and sloping all embankments, roadbeds, cuts, fills, subgrades, shoulders, slopes, ditches, dikes, intersections, approaches, and private entrances in conformity with the alignment, grades, and typical cross sections shown in the plans.
G	Removal and disposal of unforeseen minor obstructions, (see Subsection 104.06), driveway culverts, foundations, structures, other protruding obstructions, and all materials encountered, including rock, boulders, earth and muck, except the removal of items for which direct payment is otherwise provided.
H	Stripping of all unsuitable materials that may overlie the acceptable materials and all excavating, stockpiling, loading, hauling, placing, compacting, and shaping necessary to construct the roadbed and embankments in reasonable conformity with the lines, grades, and typical cross sections shown in the plans.
I	The excavation or embankment necessary for the relaying and/or installation of driveway culvert pipes.
J	Obtaining soils from off-site borrow pit, hauling soil to the location(s) designated in the plans, placing, compacting, and finish grading the soil to form the roadbed, embankments, and cuts shown in the plans.
K	Pay item is measured in the field for final payment.
L	Pay item is not field measured for final payment.
M	Quantities shown in the plans represent the volume of soil to be excavated. The Department applies a balance factor if embankments are constructed from this excavation. The bid quantities will reflect this increase.
N	The plan quantities represent the volumes of the embankments and excavations as plan drawings. The Contractor must estimate and add to the plan quantities allowance for settlement, shrinkage, consolidation, waste, and other conditions to determine the actual excavation volume.

**205.02 -- Material Requirements**

1. a. The Contractor shall construct the roadbed and embankments of approved suitable material, and they shall not contain any logs, stumps, roots, sod, weeds, or other unsuitable matter except as allowed in Subsection 202.02, see Paragraph 2.b.

b. Thoroughly disced and pulverized light sod may be deposited in the outer slope of embankments.

c. Sod, weeds, or other perishable unsuitable matter which cannot be used in the embankment shall be hauled to a waste site.

2. Stones or rocks larger than 3 inches in diameter may be used in the embankment if:

- a. No stone pockets are formed.
- b. Voids are filled with small stones or earth.
- c. They are below the top 2 feet of the finished embankment surface.

3. The maximum size of rocks allowed in embankments is shown in Table 205.02.

**Table 205.02**

<b>Maximum Rock Diameters in Embankments Below the Top 2 Feet (By Class)</b>				
	<b>Class I</b>		<b>Class II</b>	<b>Class III</b>
	<b>General</b>	<b>Near (10 Feet) Structures</b>	<b>All Areas</b>	<b>All Areas</b>
Diameter of Rock	12 Inches	6 Inches	8 Inches	8 Inches

4. Shales and other materials that break down during compaction shall be wasted.

5. Frozen lumps of soil, snow, or ice shall not be placed in the embankment.

6. A frozen soil layer may remain in the embankment provided the proper density and moisture content exist in the layer before additional embankment is placed on the layer.

7. Borrow Site Approval:

a. When borrow is obtained from pits or waste excavation is placed at sites which are not shown in the plans, the Contractor shall submit details of his/her sites, including photocopies of either a USDA, Natural Resources Conservation Services (NRCS) aerial photograph or topographical map of the area, to the NDR Construction Division for approval.

b. It is anticipated that it may require 60 calendar days or more for the Department to obtain the necessary Nebraska State Historical Society approval.

c. (1) The Contractor shall be responsible for obtaining Army Corps of Engineers' approval for proposed borrow and waste sites which are within the Army Corps of Engineers' areas of jurisdiction. If the site is not in the Corps' jurisdiction, the Contractor must obtain a letter from the Corps stating the site is not in their jurisdiction.

(2) Photocopies of an ASCS aerial photo or a topographical map showing the precise location of the proposed borrow and waste sites shall be submitted to the Army Corps of Engineers at the time their approval is requested.

(3) The Contractor shall mail or FAX the request for borrow and/or waste site approval to one of the following locations:

(i) Main Office (will forward to either Kearney or Wehrspan as appropriate):

U.S. Army Corps of Engineers  
Regulatory Branch  
P.O. Box 5  
Omaha, NE 68101-0005  
FAX: (402) 221-4939  
Phone: (402) 221-4211

(ii) For work in Lancaster County and all counties along the Missouri River:

U.S. Army Corps of Engineers  
Wehrspan Regulatory Office  
8901 South 154th Street  
Omaha, NE 68138  
FAX: (402) 896-0997  
Phone: (402) 896-0723

(iii) All other counties:

U.S. Army Corps of Engineers  
Regulatory Office  
1430 Central Ave.  
Suite 4  
Kearney, NE 68847  
FAX: (308) 234-3342  
Phone: (308) 234-1403

d. (1) Material shall not be removed from borrow pits until preliminary cross sections and representative soil samples have been taken by the Engineer. The Contractor shall notify the Engineer a sufficient time in advance of the opening of any borrow pit so that cross sections may be taken.

(2) Material shall be removed in a manner that will allow accurate final cross sections to be taken for determining the quantity of excavation. The surfaces of the borrow pits shall be bladed and shaped to drain as shown in the plans or as directed by the Engineer.

### 205.03 -- Construction Methods

1. a. The Contractor shall excavate, build, and shape the roadbed, embankments, and cuts as shown in the plans.
  - b. Embankments shall be constructed so they are stable at all times.
2. Prewatering. When the moisture content of the embankment material is too low and the Contractor elects to add water to the material before it is excavated, this work shall be performed in accordance with the following requirements:
  - a. The Contractor shall make sufficient borings, at no additional cost to the Department, in the excavation areas for the purpose of sampling the material for moisture determinations to be made by the Engineer. Estimates of the quantities of water necessary to provide the optimum moisture content in the soil layers to be excavated shall be made using these moisture determinations.
  - b. The Contractor may apply water by sprinkler irrigation or ponding methods. The natural vegetation growth on the excavation area shall be preserved until all water has been applied. The Contractor may be required to rip the excavation areas in the same direction as the ground contours to facilitate penetration of the water and to minimize run-off. Excavation areas shall be stripped of vegetation as soon as practicable after watering of the areas has been completed.
  - c.
    - (1) The watering operation shall be controlled and adjusted to avoid the application of more water than is required and to avoid any run-off or wasting of water.
    - (2) The Contractor shall make sufficient additional borings as required to check and control the penetration of the water to the full depth of the excavation or to the depth of excavation to be pre-watered.
    - (3) Removal of material from pre-watered excavation areas should not be started until the water has penetrated to the desired depth and the material has a uniform moisture content.
    - (4) Prewatered soils that are unsuitably wet shall not be excavated for final incorporation in the project.
3. The Contractor shall place all materials removed from the roadway, borrow pits, or channels, including inlet, outlet, and intercepting ditches, in embankment, subgrade, shoulders, and other locations as shown in the plans.
4. a. During construction of the roadway, the Contractor shall maintain the roadbed in such condition that:
  - (1) It will be adequately drained at all times.
  - (2) Side ditches emptying from cuts to embankments shall be constructed so as to avoid damage to embankments by erosion.

b. All slopes shall be trimmed accurately to the slope as staked.

c. The Contractor shall avoid loosening material below or outside of the required slopes. If slopes are damaged in any way, a uniformly compacted face shall be left, regardless of whether or not the excavation is carried beyond the specified side slopes. All breakage and slides shall be removed by the Contractor.

d. The Contractor shall excavate side ditches as shown in the plans. The finished roadway shall be a continuous surface that matches the lines, grades, and cross sections shown in the plans.

5. a. The Contractor shall accomplish all channel excavation before any bridge or culvert work unless specified otherwise. The channel excavation shall be accomplished as indicated in the plans.

b. Upon written authority of the Engineer, channel excavation work may be temporarily suspended after the area to be occupied by a bridge or a culvert has been excavated to the typical cross sections shown in the plans, provided that a temporary ditch is constructed for drainage.

c. The Contractor shall maintain completed channels free from debris and protected from erosion until all work is accepted.

6. Borrow and Excavation Borrow:

a. Material shall not be obtained from any borrow pit that is not shown in the plans unless approved by the Engineer.

b. Borrow obtained from pits shown in the plans shall be excavated to the cross sections and grades shown in the plans.

c. The Contractor shall remove the available topsoil at State-furnished borrow pits to a minimum depth of 6 inches and stockpile this material in approved areas.

d. (1) If slope protection is not provided in the contract and the Contractor elects to furnish granular materials (less than 35 percent passing through a No. 200 sieve) as borrow, the Contractor shall, at no additional cost to the Department, either provide cohesive material (35 percent or more passing through a No. 200 sieve) that is able to support vegetation for the upper 6 inches of the foreslopes and earth shoulders or apply slope protection at the rate of 2 lb/SY according to the requirements of Section 810. In addition, subgrade stabilization will be accomplished at no additional cost to the Department when it is required to stabilize Contractor-furnished granular material to support any subsequent construction.

(2) The cohesive material may be obtained from the right-of-way, if available, by stripping the area that will be covered by the embankment or, at the Contractor's option, obtained from sources other than State right-of-way.

(3) If there is not enough cohesive material available within the right-of-way, the Contractor will be required to furnish the cohesive material from other sources.

e. Borrow and waste areas will be restored as prescribed in Section 208.

7. a. When the embankment is to be constructed on sidehill slopes steeper than 1 vertical to 4 horizontal, the area of the original slope on which embankment is to be placed shall be continuously stepped (benched). Each step's vertical depth shall be 1 foot in order to integrate the placed embankment with the slope.

b. The Contractor shall bench the slope as the embankment is placed and compacted.

c. Each bench shall be cut horizontally into the existing slope a sufficient width for construction operations and equipment. The next bench will begin at the intersection of original ground with the previous bench. An existing embankment less than 4 feet in height may require only one bench.

d. Except for unsuitable materials, all material excavated for the benches will be used in the embankment construction.

8. a. When the excavated material is predominantly rock fragments larger than 1 foot in diameter, such material may be placed in those embankments where the lift thickness is allowed to be greater than the thickness of the approximate average size of the larger rocks. Backfill materials shall be placed around the rock fragments to eliminate air voids that are larger than those in the predominate backfill material.

b. Each layer shall be leveled and smoothed with suitable leveling equipment and by distribution of spalls and finer fragments or earth.

c. These layers shall not be constructed in the top 2 feet of the finished grade or embankment.

d. The balance of the embankment shall be composed of suitable material smoothed and placed in layers not exceeding 8 inches in loose thickness and compacted as specified for embankments.

9. a. When less than 40 inches of embankment is to be constructed on any part of the existing bituminous surfacing, bituminous base, or aggregate base and no other provisions have been made, the surfacing and bases shall be removed before placing the embankment.

b. Removed bituminous surfacing and base courses may be placed in the outer slopes of the embankment 1 foot below the finished shoulders and foreslopes.

10. When less than 40 inches of embankment is to be constructed on any part of the existing concrete pavement or concrete base course, the existing surfacing shall be removed and paid for in accordance with Section 203.

11. a. When the depth of the embankment is greater than 40 inches, the Contractor shall break the concrete pavement or base course into pieces with surface areas of approximately 4 square feet and leave them in place.

b. The Contractor may use jackhammers, drop hammers, or any other suitable means to break the pavement.

12. Where concrete slope protection is to be placed, the Contractor shall overfill and properly compact the embankment to a depth sufficient to insure that the slope can be trimmed to the proper finished grade elevation. The Contractor shall then remove the excess embankment. The work of overfilling, compacting, and removing this embankment will not be measured and paid for directly, but will be considered subsidiary to other items of work for which direct payment is made.

13. a. The Contractor shall compact the upper 6 inches of the roadbed in excavation areas to conform with the compaction requirements for embankments shown in the plans.

b. (1) The work to obtain the specified compaction in the upper 6 inches shall be performed at no additional cost to the Department if the soils do not require any work below 1 foot.

(2) Any compaction work required at depths greater than 1 foot will be performed on an "extra work" basis unless such conditions are caused by the Contractor's operations.

(3) If the Engineer determines the subgrade material to be unsuitable, it will be treated as a differing site condition in accordance with Subsection 104.02 or Paragraph 17. of this Subsection.

14. Compaction of Embankments:

a. Embankments are classified into three compaction classes (I, II, and III). Each class has different compaction and moisture requirements. The compaction classification for each embankment is shown in the plans.

b. Embankment Classifications:

(1) **Class I:**

(i) Class I embankments will not be rolled, unless specified.

(ii) The embankment, except adjacent to structures, shall be placed in successive horizontal layers not exceeding 12 inches in depth (uncompacted). The layers shall be of uniform thickness and full width and shall be compacted as evenly and densely as possible by varying the haul route over the entire area.

(iii) The embankment adjacent to all structures, other than driveway culverts, shall be placed in uniform layers not exceeding 6 inches in depth



(uncompacted) for the full width of the embankment and compacted by one pass over the entire area of each layer with the treads of a crawler tractor unit weighing at least 10 tons or by two passes over the entire area of each layer with equipment conforming to the requirements of Paragraph 14.c. of this Subsection.

(2) **Class II:**

(i) The material shall be placed in successive horizontal layers not to exceed 200 mm in depth (uncompacted) before rolling, each of which shall extend the full width of the embankment. Each layer shall be leveled before compaction. Each layer shall be rolled at least twice with compacting equipment which conforms to the requirements of Paragraph 14.c. of this Subsection. In all cases, the hauling shall be distributed over the entire area to assist in compacting the material.

(ii) When embankments are to be constructed through lakes or swampy areas, the material may be placed without rolling to an elevation above water level which will allow the use of a roller. The embankment above this elevation shall be placed in 8 inch layers (uncompacted) and rolled as specified.

(iii) When the moisture content of earth or soil used in constructing embankments is too high to allow rolling or to obtain satisfactory compaction, each layer shall be disced, harrowed, or otherwise manipulated to facilitate drying until its moisture content is reduced to the point where satisfactory compaction can be obtained.

(iv) Multiple-wheel, pneumatic-tired rollers which conform to the requirements of Paragraphs 14.c.(2) and 14.c.(3) of this Subsection may be used in rolling the last layer to be placed on the surface of all embankments.

(v) When less than 40 inches of embankment is to be constructed on any part of an existing stone or gravel surfaced roadbed, the existing roadbed shall be scarified to a depth not less than 6 inches, manipulated, and rolled as specified.

(vi) When embankments are to be constructed over cultivated or fallowed land, the entire area upon which the embankment is to be constructed shall be smoothed and rolled at least twice with a roller which conforms to the requirements of Paragraphs 14.c.(1) or 14.c.(3) of this Subsection before the placement of any embankment material.

(3) **Class III:**

(i) Class III embankments shall be compacted to the density and moisture content shown in the plans. The maximum density and optimum moisture shall be determined in accordance with NDR T 99.

(ii) [1] The material shall be placed in successive horizontal layers not to exceed 8 inches in depth (uncompacted), each of which shall extend the full width of the embankment.

[2] Each layer shall be leveled before compaction.

[3] In all cases, the hauling shall be distributed over the entire area to assist in compacting the material.

[4] When embankments are to be constructed through lakes or swampy areas, the material may be placed without rolling to an elevation above water level which will allow the use of a roller. The embankment above this elevation shall be placed in successive horizontal 8 inch layers (uncompacted depth) and compacted as specified.

(iii) Moisture and Density Requirements. Each successive horizontal layer of soil shall be compacted to the density requirements shown in the plans. The moisture content of the soil in each layer shall be adjusted, if necessary, so that it will conform to the moisture requirements shown in the plans.

(iv) Compacting equipment and methods which will consistently produce the compaction specified in the plans throughout the depth of the compacted lifts shall be used.

(v) When less than 40 inches of embankment is to be constructed on any part of an existing stone or gravel surfaced roadbed, the existing roadbed shall be scarified to a depth of 6 inches and recompacted to the requirements for the type of compaction shown in the plans.

(vi) When embankments are to be constructed over cultivated or fallowed land, the entire area upon which the embankment is to be constructed shall be smoothed and rolled at least twice with a roller which conforms to the requirements of Paragraphs 14.c.(1) or 14.c.(3) of this Subsection prior to the placement of any embankment material.

c. Compacting Equipment:

(1) (i) Tamping (sheepsfoot) roller. This roller shall be designed for use in the compaction of earth fills and consist of a cylindrical metal roller, drum, or shell studded with tamping feet projecting from its surface. The weight of the roller and spacing and length of the tamping feet shall be adequate to perform the compaction required. Cleaning teeth shall be attached to the rolling unit to prevent accumulation of earth between tamping feet.

(ii) More than one tamping rolling unit as described above may be used. When more than one rolling unit is used, the rolling units must be pivoted to the main frame in a manner which will allow the rolling units to adapt themselves to uneven ground surfaces and to rotate independently.

(2) Multiple-wheel, pneumatic-tired roller. The tires on the front and back of this roller shall be staggered so that they will cover the entire area over which the roller travels. The weight, number of tires, weight per inch of tire width, and tire pressure shall be adequate to achieve the required compaction. The roller shall be designed for use in the compaction of earth fills.

(3) Alternate equipment which will produce as good or better compaction than the equipment specified above may be used with the Engineer's approval.

15. Selective placement materials shall be excavated, hauled, and placed as specified. The embankment surface upon which the material is to be placed shall be shaped to approximately the required crown of the roadbed and compacted to the density specified in the plans.

16. All embankments and excavated areas shall be shaped and finished to produce the specified smooth surfaces and slopes. All old backslopes shall be trimmed and shaped to conform to the typical cross sections. When the moisture content is too low to shape and consolidate the surface satisfactorily, water shall be applied during finishing operations.

17. a. Unsuitably wet material which cannot be dried by discing in place shall be removed to the length, width, and depth directed by the Engineer and replaced with approved material.

b. Unsuitably wet soil in low areas where drainage is expected to be a problem shall be removed and replaced with "Granular Backfill" meeting the requirements in Tables 1033.02, 1033.03, 1033.05, 1033.06, 1033.07, 1033.08, or 1033.09.

c. Approved drainage pipe (slotted/perforated 4 inch minimum diameter pipe) shall be placed as directed by the Engineer.

18. At "0-0" Sections (points where cuts transition to fills), the existing ground shall be excavated a maximum of 40 inches below finished grade level when directed by the Engineer and the area backfilled as a Class III embankment.

19. When the borrow soil for the project is dissimilar (Plastic Index difference of 10 units or more or if delamination is evident) from the soil on site, then the Contractor shall disc all embankment lifts in the top 40 inches of the embankment so that the dissimilar soil types are thoroughly and uniformly mixed. The disc shall be able to penetrate through 2 entire uncompacted lifts.

20. Engineer Directed Discing:

a. The plans shall indicate those areas where the Engineer may require embankment lifts to be disced because different types of soil are expected. The Engineer may also direct the Contractor to disc other areas.

b. The disc shall be able to penetrate through 2 entire uncompacted lifts.

c. Only the top 40 inches of an embankment is required to be disced.

#### **205.04 -- Method of Measurement**

1. a. The "Excavation" volume in cubic yards is calculated using the average end area method based on field measurement or photogrammetry. This volume includes

authorized excavation and also overbreakage or slides not caused by Contractor error. Stockpiled materials will be measured in the stockpile.

b. "Excavation (Established Quantity)" is the plan quantity in cubic yards. "Excavation (Established Quantity)" is not field measured.

2. The "Excavation Borrow" volume in cubic yards is calculated using the average-end-area method based on field measurement or photogrammetry. This volume includes authorized excavation and also overbreakage or slides not caused by Contractor error. Stockpiled materials will be measured in the stockpile.

3. a. "Earthwork Measured in Embankment" is a plan quantity in cubic yards computed by the method of average-end-areas from the cross sections shown in the plans.

b. No additional compensation will be made for additional material required to obtain compaction, material placed by the Contractor outside the limits of the typical cross section, or material placed to correct for settlement of the embankment.

c. "Earthwork Measured in Embankment" is not field measured.

4. a. Water is measured by the volume applied. The volume unit is 1,000 gallons (MGAL).

b. Each time a meter is used, the Contractor shall furnish the Engineer with a certified copy of the meter calibration. The meter calibration shall have been performed during the last 12 months.

c. The Engineer shall deduct water that is wasted, lost, or applied in excess of soil requirements.

5. "Discing," when directed by the Engineer in the top 40 inches of a roadbed made from dissimilar on-site soils, shall be measured by the hour for each disc in service. Only time spent discing will be measured.

## 205.05 -- Basis of Payment

1.	<u>Pay Item</u>	<u>Pay Unit</u>
	Excavation	Cubic Yard (CY)
	Excavation (Established Quantity)	Cubic Yard (CY)
	Excavation Borrow	Cubic Yard (CY)
	Earthwork Measured In Embankment	Cubic Yard (CY)
	Water	1,000 Gallons (MGAL)
	Discing	Hour (h)
	Removal of Unsuitably Wet Soil	Cubic Yard (CY)

2. When borrow and waste sites are obtained by the Department and shown in the plans and the Contractor elects to use other sites, the Contractor shall be charged with all

costs that are incidental to obtaining the sites shown in the plans. These charges shall be deducted from Department money due the Contractor.

3. Clearing and grubbing of borrow and waste sites shown in the plans shall be measured and paid for in accordance with Section 202. When borrow is obtained from sites which are not shown in the plans, no payment will be made for clearing and grubbing.

4. Topsoil quantities shall not be deducted from the excavation quantities.

5. Direct payment will not be made for any additional hauling of materials required for the selective placement specified in the plans.

6. Removing and disposing of the bituminous surfacing and base courses that overlay excavated areas will not be paid for directly, but shall be subsidiary to the relevant excavation pay item.

7. "Earthwork Measured in Embankment" shall be the quantity shown in the plans unless authorized changes are made to the grade line or length of the embankment.

8. The work of constructing an "embankment" is not a pay item but is subsidiary to the relevant earthwork pay item.

9. a. The Engineer may direct the Contractor to stockpile excavated material for use as embankment or backfill. When the Contractor is required to re-excavate and place the same material as embankment or backfill, payment will be made for the quantity of material re-excavated at one-half the contract unit price per cubic yard for "Excavation".

b. Payment will not be made for the re-excavation of any materials which:

(1) The Contractor is required to stockpile in the performance of selective materials placement.

(2) Are required for other work in the plans.

(3) Are stockpiled to drain and dry before placement in the embankment.

10. a. When unsuitably wet soil is removed and replaced, the volume of wet soil removed shall be paid for at 2 times the bid price for the relevant pay item when the relevant pay item for that particular section is "Excavation", "Excavation Borrow", or "Earthwork Measured in Embankment". When the relevant earthwork excavation pay item is "Excavation (Established Quantity)", then the volume removed shall be paid for at 3 times the bid price for "Excavation (Established Quantity)".

b. (1) When "Granular Backfill" is the required backfill material to replace unsuitably wet material approved by the Engineer for removal, then the unit price for the replacement granular backfill shall be the per-unit bid price for "Granular Backfill" minus the per-unit bid price for the relevant earthwork pay item ("Excavation", "Excavation (Established Quantity)", "Earthwork Measured in Embankment", or "Excavation Borrow"). If "Granular Backfill" is not a bid item, then the per-unit bid price for "Granular Backfill" shall be replaced

with the NDR average unit price for "Granular Backfill" in the above calculation of the cost for replacement granular backfill.

(2) If the bid price for "Granular Backfill" is less than the relevant excavation pay item, the "Granular Backfill" is subsidiary to the relevant excavation pay item.

c. Drainage pipe shall be paid for at the bid price for similar pipe; or, if the drainage pipe is not a bid item, the pipe will be paid for as extra work.

d. Replacement soil materials, except "Granular Backfill", are subsidiary to the relevant excavation pay item.

e. Each day, the Engineer and the Contractor shall compare their records of unsuitably wet material removed and reconcile any differences.

11. a. The volume of material identified by the Engineer for removal at a "0-0" correction area shall be paid for at the bid price for the relevant earthwork excavation pay item that is being expensed for the construction of the section of the road where the "0-0" correction is encountered.

b. The volume of material for the correction shall be in addition to the quantities shown in the bid proposal Schedule of Items.

12. The volume of unsuitably wet material or the "0-0" correction volume as described in Paragraphs 10. and 11. of this Subsection shall not be deducted from the final payment measurements.

13. a. When discing is required for Contractor furnished borrow and when it is done as an optional procedure, it is subsidiary to the relevant excavation and embankment pay item, except as noted in Paragraph b. below.

b. (1) Discing is only authorized for payment as a separate pay item, "Discing", when the plans indicate an area to be disced or the Engineer directs that an area be disced and "Discing" is a bid item in the bid proposal Schedule of Items.

(2) Only the discing of the material in the top 40 inches of the roadbed is eligible for payment as "Discing."

c. Discing done at the Contractor's option to dry soil, to help obtain specified compaction, or any other purpose except as prescribed in Subsection 205.03, Paragraph 20, shall be subsidiary to the relevant earthwork pay item ("Excavation", "Excavation (Established Quantity)", "Excavation Borrow", and/or "Earthwork Measured in Embankment").

d. If the contract does not contain the bid item "Discing" and the Engineer directs in writing that the Contractor shall disc a designated area to blend dissimilar soil types, then the discing shall be paid for as extra work.

14. Removal and disposal of excess soil is subsidiary to the relevant excavation and embankment pay item, except when the haul distance is greater than the project's free haul

distance and the plans do not indicate any waste or excess material. When these conditions exist, the removal and disposal shall be paid for as extra work.

15. Payment is full compensation for all work prescribed in this Section.