

Section 230

1 Clearing and grubbing work that is directed to be performed on areas outside the limits
2 originally staked or beyond the limits of the right of way or easements shown on the original
3 plans will be measured and paid at the contract unit price per acre for *Supplementary Clearing*
4 *and Grubbing*. All measurements will be made horizontally. Where the contract does not
5 include this item, a unit price per acre will be established by supplemental agreement.

6 *Undercut Excavation* will be measured and paid at the contract unit price per cubic yard. No
7 separate payment will be made for materials used in backfilling the undercut areas, shoulders
8 and slope areas as payment at the contract unit price per cubic yard for *Undercut Excavation*
9 will be full compensation for furnishing such material. Where the contract does not include
10 a pay item for *Undercut Excavation*, payment for such excavation will be made in accordance
11 with Article 104-7.

12 Payment will be made under:

Pay Item	Pay Unit
Grading	Lump Sum
Supplementary Clearing and Grubbing	Acre
Undercut Excavation	Cubic Yard

13 **SECTION 230**
14 **BORROW EXCAVATION**

15 **230-1 DESCRIPTION**

16 Excavate approved material from borrow sources. Haul and use such material as required in
17 the plans or as directed. Do not use borrow excavation until all available suitable unclassified
18 excavation has been incorporated into the embankments, subgrades and shoulders except by
19 execution of a supplemental agreement documenting the conditions prescribed below.

20 (A) All suitable unclassified excavation wasted as a result of the early use of borrow material
21 will be deducted from the total volume of borrow excavation paid under the contract.

22 (B) Reimburse the Department for all additional costs, including additional engineering cost,
23 associated with the wasting of suitable unclassified excavation.

24 (C) Any claim for contract time extensions related to the early use of borrow is waived
25 should the Contractor use borrow material before all suitable unclassified excavation
26 being incorporated into the project pursuant to a supplemental agreement.

27 (D) The Contractor specifically waives rights to request additional compensation with regard
28 to the early use of borrow under the compensation requirements of Section 104 except
29 when unclassified excavation is a major contract item and that unclassified excavation
30 overruns by more than 25%.

31 Where the work required to complete the project is so phased by the plans to preclude using
32 suitable unclassified excavation, the Contractor will be permitted to construct the required
33 embankments, subgrades or shoulders so controlled by the phasing from approved borrow
34 materials without having to execute the above required supplemental agreement.

35 **230-2 COORDINATION WITH SEEDING OPERATIONS**

36 Coordinate the work in this section with the construction of embankments in accordance with
37 Article 225-2.

38 **230-3 MATERIALS**

39 Refer to Division 10.

Item	Section
Borrow Material	1018
Shoulder and Slope Material	1019

230-4 CONSTRUCTION METHODS**(A) General**

Thoroughly clear and grub and clean the surface of the borrow area of all unsuitable material before beginning the excavation and, where applicable, before cross sections are taken. Dispose of material resulting from clearing and grubbing in accordance with Article 200-6. Remove and dispose of overburden in accordance with Section 802.

Do not accumulate exposed, erodible slope area in each borrow operation in excess of 1 acre at any one time without beginning permanent seeding and mulching of the borrow source or installing other erosion control measures as may be approved.

Remove and stockpile topsoil at locations that will not interfere with the borrow operations and that meet the approval of the Engineer. Install temporary erosion control measures as needed to prevent the erosion of the stockpile material. Once all borrow has been removed from the source or portion thereof, uniformly spread the stockpiled topsoil over the area and permanently seed and mulch the area.

Where payment is made by cross section, notify the Engineer sufficiently before beginning excavation of the borrow material so that the area may be staked and cross sectioned. Excavate the material to the lines and slopes as staked in an orderly manner to facilitate measurement at any time.

Where payment is to be made by truck measurement, furnish trucks with bodies suitable for accurate measurement. Load trucks uniformly and load to prevent spillage.

When necessary to haul borrow material over existing roads or streets, comply with Article 105-15. Use all necessary precautions to prevent damage to the existing structures or pavement. Conduct hauling operations so as to not interfere with the normal flow of traffic and keep the traffic lanes free from spillage at all times.

Furnish borrow sources except where otherwise indicated in the contract.

(B) Contractor Furnished Sources

Before the approval of any borrow sources developed for use on any project, obtain certification from the State Historic Preservation Officer of the State Department of Cultural Resources certifying that the removal of the borrow material from the borrow sources will have no effect on any known district, site building, structure or object, architectural and/or archaeological that is included or eligible for inclusion in the National Register of Historic Places. Furnish a copy of this certification to the Engineer before performing any work on the proposed borrow source.

Borrow sources will not be allowed in any area under the Corps of Engineers regulatory jurisdiction until the Contractor has obtained a permit for such borrow sources from the Corps District Engineer having jurisdiction and has furnished a copy of this permit to the Engineer. Requests for additional contract time, additional compensation or for work stoppage due to permit violations will not be considered.

The approval of borrow sources furnished by the Contractor is subject to the following conditions:

(1) Proof of Rights

Provide written proof of the right to take the material and any rights of access that may be necessary, for locating and developing the source and any clearing and grubbing and drainage ditches necessary. The proof shall include an agreement with the owner that the borrow source be dressed, shaped, seeded, mulched and drained as required by these Specifications after all borrow has been removed.

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1 (2) Sampling and Testing

2 Sampling and testing of contractor furnished borrow material will be in accordance
3 with procedures set forth in the *Borrow Pit Sampling Manual* in effect on the date of
4 advertisement for the project. Copies of this document are available from the
5 Materials and Tests Unit. The criteria for acceptance of the proposed contractor
6 furnished borrow material is shown in Section 1018.

7 (3) Reclamation Plan

8 Except where borrow is to be obtained from a commercial source, jointly submit
9 with the property owner a borrow source development, use and reclamation plan to
10 the Engineer for his approval before engaging in any land disturbing activity on the
11 proposed source other than material sampling that may be necessary. The
12 Department's borrow and waste site reclamation procedures for contracted projects
13 is available on the website and shall be used for all borrow and waste sites on this
14 project. Address the following in the plan:

15 (a) Topography

16 Detail the existing topography and locations of the proposed access and egress
17 haul roads. Detail the proposed final topography of the waste or disposal area
18 showing any proposed drainage systems. Excavate the source according to the
19 plan and dress and shape it in a continuous manner to contours that are
20 comparable to and blend in with the adjacent topography. Grade the source to
21 drain such that no water will collect or stand. Provide a functioning drainage
22 system for the source. If drainage is not practical and the source is to serve as
23 a pond, the minimum depth shall be a least 4 feet as determined from the water
24 table at the time the reclamation plan is executed. The slope of the soil below
25 the water shall be between 5:1 and 2:1. The slope of the sides above the water
26 line shall be 2:1 or flatter.

27 (b) Erosion Control

28 Detail the temporary and permanent erosion control measures, along with design
29 calculations, that are intended during use of the site and as part of the
30 reclamation. Unless considered impractical due to special circumstances,
31 provide in the plan for the use of staged permanent seeding and mulching and
32 appropriate fertilizer topdressing continually during site use and the immediate
33 total reclamation of the site when the site is no longer needed. Define the seed
34 mixture proposed for establishing temporary and permanent vegetation.
35 Establish permanent stand of vegetation before acceptance of the project.

36 (c) Buffer Zones

37 Allocate sufficient area between the nearest property line and the tie-in of the
38 slope to natural ground to allow for the operation of excavation, hauling and
39 seeding equipment and for the installation of any and all erosion control devices
40 required. Leave additional undisturbed area between the source and any water
41 course or body to prevent siltation of the water course or body and the
42 movement of the shore line either into the water course or body or into the waste
43 areas. Determine if the adjoining property owners or other government agencies
44 require any additional buffer zones and comply with those requirements.
45 Suggested minimum distances are 10 feet from property lines and 50 feet from
46 water bodies or water courses. Where it is necessary to drain the borrow source,
47 perform work in accordance with Section 240.

(d) Evaluation for Potential Wetlands and Endangered Species

Hire an experienced environmental consultant from the approved list to perform an assessment of the borrow site for potential conflicts with wetlands, Areas of Environmental Concern designated by the Coastal Area Management Act and federally protected species. This evaluation will not be required for permitted commercial sites.

Delineate the boundaries of any wetlands, jurisdictional surface waters and streams encountered. Follow the standard practice for documenting the wetland delineation including completion of the Army Corps of Engineers' Approved Jurisdictional Determination Form. Document information including data regarding soil, vegetation and hydrology. Maintain a minimum 25 foot buffer adjacent to all sides of the wetland boundary and a minimum 50 foot buffer adjacent to any stream. Depict the limits of the delineated wetland and surrounding buffer on the Reclamation Plan. Do not remove borrow material in any area under the Corps of Engineers' or any other environmental agencies' regulatory jurisdiction unless and until the Department permit has been modified to allow such disposal activity in the jurisdictional area.

Perform a site assessment for federally listed threatened or endangered species to include habitats that may support these species. Provide a detailed technical report on the assessment findings. If federally listed threatened or endangered species or habitat that may support such species exist on the proposed borrow site, notify the Engineer before continued pursuit of such site.

(4) Approval

Obtain written approval from the Engineer before excavating any material within the proposed borrow source area.

Submit a revised or additional reclamation plan if the non-permitted waste or disposal area is expanded by more than one acre or is significantly changed from the previously approved submittal.

If the Contractor proposes a borrow source, the environmental assessment shall include wetland and stream delineation extending 400 feet beyond the proposed borrow source limits.

(a) If wetlands or streams are present within 400 feet of the borrow source, submit a hydrologic analysis (Skaggs Method) or equivalent to determine if lateral effects will permanently impact or cause degradation to wetlands or streams. Perform analysis with an environmental or hydraulics engineer with expertise in this discipline and include:

- (i) Hydric soil type,
- (ii) Average profile depth to restrictive soil layer,
- (iii) Effective hydraulic conductivity or permeability,
- (iv) Average drainable porosity or available water capacity and
- (v) Required buffer width, including safety factor.

(b) If wetlands or streams are present within 400 feet and the Contractor does not propose to excavate below the seasonal high water table or the water level in the adjacent stream, no documentation will be required.

(c) If wetlands or streams are not present within 400 feet, no additional documentation will be required.

During Department review of the proposed borrow area, the hydrologic analysis will be submitted to the U.S. Army Corps of Engineers for evaluation. Obtain copy of *Skaggs Method for Determining Lateral Effects of a Borrow Pit on Adjacent Wetlands* from the Department's website.

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(C) Maintenance

During construction and until final acceptance, use any methods approved by the Engineer that are necessary to maintain the work covered by this section so that the work will not contribute to excessive soil erosion.

230-5 MEASUREMENT AND PAYMENT

Borrow Excavation will be measured and paid in cubic yards. Borrow excavation will be measured in place in its original position except that truck measurement will be made where called for in the contract.

If the quantity of borrow excavation used is excessive as evidenced by the presence of surplus suitable material from the roadway excavation, the measured quantity of borrow excavation will be reduced by the quantity of such surplus suitable material.

(A) In-Place Measurement

Borrow Excavation to be paid will be the actual number of cubic yards of approved material, measured in its original position by cross sectioning and computed by the average end area method, that has been excavated from the borrow source and incorporated into the completed and accepted work. No measurement will be made of any overburden, unsuitable material removed from the source or any material excavated before cross sections are taken.

(B) Truck Measurement

Borrow Excavation to be paid will be the actual number of cubic yards of approved material, measured in trucks excavated from the borrow source and incorporated into the completed and accepted work. Each truck will be measured and shall have a legible identification mark indicating its capacity. Load each truck to at least its measured capacity at the time it arrives at the point of delivery. The recorded capacity will be adjusted by making a 25% deduction to allow for shrinkage and the adjusted capacity will be the quantity to be paid.

Topsoil that is stockpiled and placed back on the source as part of the reclamation effort will be measured in the stockpile by cross sectioning and computed by the average end area method and paid per cubic yard for *Borrow Excavation*. No in-place measurement will be made of the topsoil.

Seeding, mulching and establishment of temporary erosion control for all borrow sources will be paid at the contract unit prices for the items established in the contract as payment for *Seeding and Mulching* in Section 1660.

Payment includes, but is not limited to, furnishing the source of the borrow; providing and implementing a development, use and reclamation plan, evaluation of potential wetlands and endangered species, building, maintaining and obliterating haul roads, clearing and grubbing or draining the borrow source; removing, stockpiling and replacing topsoil, removing and disposing of overburden and other unsuitable material, excavation, hauling, formation of roadway embankments, subgrades and shoulders, restoration of the source and haul roads to an acceptable condition, obtaining permits and certifications and maintaining the work.

Payment will be made under:

Pay Item

Borrow Excavation

Pay Unit

Cubic Yard