

CLEARING CONSTRUCTION SITE

SECTION 110 CLEARING AND GRUBBING

110-1 Description.

Clear and grub within the areas of the roadway right-of-way and of borrow pits, sand-clay base material pits, lateral ditches, and any other areas shown in the plans to be cleared and grubbed. Remove and dispose of all trees, stumps, roots and other such protruding objects, and buildings, structures, appurtenances, existing flexible asphalt pavement, and other facilities necessary to prepare the area for the proposed construction, and remove and dispose of all product and debris not required to be salvaged or not required to complete the construction.

Also, perform certain miscellaneous work the Engineer considers necessary for the complete preparation of the overall project site, as follows:

(a) Plug any water wells that are encountered within the right-of-way and that are to be abandoned.

(b) Level the terrain outside the limits of construction for purposes of facilitating maintenance and other post-construction operations.

(c) Trim trees and shrubs within the project right-of-way that are identified in the Contract Documents.

Meet the requirements for such miscellaneous work as specified in 110-10.

110-2 Standard Clearing and Grubbing.

110-2.1 Work Included: Completely remove and dispose of all buildings, timber, brush, stumps, roots, rubbish, debris, and all other obstructions resting on or protruding through the surface of the existing ground and the surface of excavated areas, and all other structures and obstructions necessary to be removed and for which other items of the Contract do not specify the removal thereof, including septic tanks, building foundations, and pipes.

Perform Standard Clearing and Grubbing within the following areas:

(a) All areas where excavation is to be done, including borrow pits, lateral ditches, right-of-way ditches, etc.

(b) All areas where roadway embankments will be constructed.

(c) All areas where structures will be constructed, including pipe culverts and other pipe lines.

110-2.2 Depths of Removal of Roots, Stumps, and Other Debris: In all areas where excavation is to be performed and the excavated material is to be used in the construction of roadway embankment or roadway base or pavement, and in all areas where roadway embankments are to be constructed, remove roots and other debris to a depth of at least 12 inches [300 mm] below the ground surface. Plow the surface to a depth of at least 6 inches [150 mm], and remove all roots thereby exposed to a depth of at least 12 inches [300 mm]. Completely remove and dispose of all stumps within the roadway right-of-way.

Where excavating within the roadway area and for structures, remove all roots, etc., protruding through or appearing on the surface of the completed excavation to a depth of at least 12 inches [300 mm] below the finished excavation surface.

In borrow pits, material pits, and lateral ditches, remove or cut off all stumps, roots, etc., protruding through or appearing on the surface of the completed excavation below the finished excavation surface.

In borrow and material pits, do not perform any clearing or grubbing within 3 feet [1.0 m] inside the right-of-way line.

Within all other areas where Standard Clearing and Grubbing is to be performed, remove roots and other debris projecting through or appearing on the surface of the original ground, to a depth of 12 inches [300 mm] below the surface, but do not plow or harrow these areas.

110-2.3 Trees to Remain: As an exception to the above provisions, where so directed by the Engineer, trim, protect, and leave standing desirable trees within the roadway area. Trim branches of trees extending over the area occupied by the roadway as directed, to give a clear height of 16 feet [5 m] above the roadway.

110-2.4 Boulders: Remove any boulders encountered in the roadway excavation (other than as permitted under the provisions of 120-7.2) or found on the surface of the ground, and place them in neat piles inside the right-of-way and adjacent to the right-of-way line. The Contractor may stockpile boulders encountered in Department-furnished borrow areas, which are not suitable for use in the embankment construction, within the borrow area.

110-3 Selective Clearing and Grubbing.

The Contractor shall remove and dispose of all vegetation, obstructions, etc., as provided above except that, where so elected, the Contractor may cut roots, etc., flush with the ground surface. Completely remove and dispose of stumps. Entirely remove undergrowth except in specific areas designated by the Engineer to remain for aesthetic purposes. Trim, protect, and leave standing desirable trees, with the exception of such trees as the Engineer may designate to be removed in order to facilitate right-of-way maintenance. Remove undesirable or damaged trees as so designated by the Engineer. Perform Selective Clearing and Grubbing only in areas so designated in the plans.

110-4 Protection of Property Remaining in Place.

Protect and do not displace property obstructions which are to remain in place, such as buildings, sewers, drains, water or gas pipes, conduits, poles, walls, posts, bridges, etc.

110-5 Removal of Buildings.

110-5.1 Parts to be Removed: Completely remove all parts of the buildings, including utilities, plumbing, foundations, floors, basements, steps, connecting concrete sidewalks or other pavement, septic tanks, and any other appurtenances, by any practical manner which is not detrimental to other property and improvements. Remove utilities to the point of connection to the utility authority's cut-in. After removing the sewer connections to the point of cut-in, construct a concrete plug at the cut-in point, as directed by the Engineer, except where the utility owners may elect to perform their own plugging. Contact the appropriate utility companies prior to removal of any part of the building to ensure disconnection of services.

110-5.2 Removal by Others: Where buildings within the area to be cleared and grubbed are so specified to be removed by others, remove and dispose of any foundations, curtain walls, concrete floors, basements or other foundation parts which might be left in place after such removal of buildings by others.

110-6 Removal of Existing Structures.

110-6.1 Structures to be Removed: Remove and dispose of the materials from existing structures. Remove the following: (1) those structures, or portions of structures, shown in the plans to be removed; (2) those structures, or portions of structures, found within the limits of the area to be cleared and grubbed, and directed by the Engineer to be removed; (3) those structures, or portion of structures, which are necessary to remove in order to construct new structures; and (4) other appurtenances or obstructions which may be designated in the Contract Documents as to be included in an item of payment for the work under this Article.

110-6.2 Method of Removal: Remove the structures in such a way as to leave no obstructions to any proposed new structures or to any waterways. Pull, cut off, or break off pilings to the requirements of

the permit or other Contract Documents, whichever requires the deepest removal, but not less than 2 feet [0.6 m] below the finish ground line. In the event that the plans indicate channel excavation to be done by others, consider the finish ground line as the limits of such excavation. For materials which are to remain the property of the Department or are to be salvaged for use in temporary structures, avoid damage to such materials, and entirely remove all bolts, nails, etc., from timbers to be so salvaged. Mark structural steel members for identification as directed.

Remove existing steel members painted with a paint identified by the Resource Conservation Recovery Act (RECRA), as a hazardous material. The Contractor removing any material or waste identified as hazardous, must submit proof of QP2, Category "A" certification with the Society of Protective Coatings (SSPC) prior to removal activities. Paint identified as hazardous, that is disturbed or removed from the steel members, is considered hazardous waste.

110-6.3 Partial Removal of Bridges: On concrete bridges to be partially removed and widened, remove concrete by manually or mechanically operated pavement breakers, by concrete saws, or by chipping hammers. Do not use explosives. Where concrete is to be removed to neat lines, use concrete saws capable of providing a reasonably uniform cleavage face. If the equipment used will not provide a uniform cut without surface spalling, first score the outlines of the work with small trenches or grooves.

110-6.4 Authority of U.S. Coast Guard: For structures in navigable waters, when constructing the project under authority of a U.S. Coast Guard permit, the U.S. Coast Guard may inspect and approve the work to remove any existing structures involved therein, prior to acceptance by the Department.

110-7 Removal of Existing Pavement.

Remove and dispose of existing rigid portland cement concrete pavement, sidewalk, slope pavement, ditch pavement, curb, and curb and gutter, where shown in the plans or ordered by the Engineer to be removed or where required because of the construction operations. Retaining walls, drainage structures and flexible asphalt pavement are not included in the work under this Article.

110-8 Ownership of Materials.

Except as may be otherwise specified in the Contract Documents, take ownership of all buildings, structures, appurtenances, and other materials removed by your forces and dispose of them in accordance with 110-9.

110-9 Disposal of Materials.

110-9.1 General Disposal: Provide disposal areas approved by the Engineer. Either stack any material designated to remain the property of the Department in neat piles within the right-of-way or load it onto the Department's vehicles.

Dispose of timber, stumps, brush, roots, rubbish, and other objectionable material resulting from clearing and grubbing in areas and by methods approved by the Engineer. Do not block waterways by the disposal of debris.

110-9.2 Burning Debris: Where burning of such materials is permitted, perform all such burning in accordance with the applicable laws, ordinances, and regulations. Perform all burning at locations where trees and shrubs adjacent to the cleared area will not be harmed.

110-9.3 Disposal in Areas Adjacent to Project: The Contractor may dispose of materials on private property, provided the Contractor furnishes the Engineer with a written Statement from the owner of the property giving permission for the disposal of the materials on his property. The Contractor shall locate all disposal areas for materials resulting from clearing and grubbing, both on private property and on property owned by him, (1) in areas out of sight of the project and (2) at least 300 feet [90 m] from the nearest roadway right-of-way line of the project. If burying materials, the Contractor may disregard requirement (2).

110-9.4 Timber and Crops: The Contractor may sell any merchantable timber, fruit trees, and crops that are cleared under the operations of clearing and grubbing for his own benefit, subject to the

provisions of 7-1.2, which may require that the timber, fruit trees, or crops be burned at or near the site of their removal, as directed by the Engineer. The Contractor is liable for any claims which may arise pursuant to the provisions of this Subarticle.

110-9.5 Hazardous Materials/Waste: Ensure that all hazardous materials and waste are handled and disposed of in accordance with all Local, State and Federal requirements.

Use one of the following methods for the disposal of all hazardous materials and waste:

(a) Deliver the steel members and other hazardous waste to a licensed recycling center capable of processing steel members coated with paint identified by RECRA as hazardous.

(b) Remove all hazardous materials from the steel members and dispose of the hazardous waste, as required by EPA and other governing authorities.

(c) Deliver the steel members to an approved agency for use as an offshore artificial reef. Deliver any other hazardous materials or waste to a licensed hazardous materials/waste recycling center.

Submit the name, address and qualifications of the transporter, treatment facility, proposed treatment and disposal methods for the Engineers approval, prior to transport, treatment or disposal of any hazardous materials or waste.

Transport all hazardous waste and/or materials in accordance with applicable 40 CFR 263 Standards. Provide all hazardous materials or waste manifests, certificates of disposal, chain of custody forms and other applicable documents within 21 days of each shipment.

All compensation for the cost of removal and disposal of hazardous materials or waste will be included in the Cost of Removal of Existing Structures.

110-10 Miscellaneous Operations.

110-10.1 Plugging Abandoned Water Wells:

110-10.1.1 Water Wells Required to be Plugged: Fill or plug all water wells within the right-of-way, including areas of borrow pits and lateral ditches, that are not to remain in service, as specified herein.

Cut off the casing of cased wells at least 12 inches [300 mm] below the ground line or 12 inches [300 mm] below the elevation of the finished excavation surface, whichever is lower. Water wells, as referred to herein, are defined either as artesian or non-artesian, as follows:

(a) An artesian well is an artificial hole in the ground from which water supplies may be obtained and which penetrates any water-bearing rock, the water in which is raised to the surface by natural flow or which rises to an elevation above the top of the water-bearing bed. Artesian wells are further defined to include all holes drilled as a source of water that penetrate any water-bearing beds that are a part of the artesian water system of Florida, as determined by representatives of the Division of Interior Resources of the State of Florida Department of Environmental Protection.

(b) A non-artesian (water-table) well is a well in which the source of water is an unconfined aquifer. The water in a non-artesian well does not rise above the source bed.

If the plans do not indicate whether a non-flowing well is artesian or non-artesian, the Engineer will contact the Florida Department of Environmental Protection to determine the type of the particular well and will furnish the information to the Contractor.

110-10.1.2 Plugging Artesian Wells: For plugging artesian wells, obtain advice from the Florida Bureau of Geology, and employ a competent well-driller.

Plug artesian wells, flowing or non-flowing, from bottom to surface with neat portland cement mortar (cement and water only). Substantially stop the well's flow before the introduction of the cement mixture by introducing "drilling mud", or by other methods approved by the Bureau of Geology.

Introduce the cement mixture into the well bore at the point at which it is to remain, by means of a dump-bailer or by a drop-pipe through which the mixture is pumped into place. Do not allow the cement mixture to fall freely through the water in the well.

For wells intercepting cavities or caverns, fill the cavernous sections with heavy mud, crushed limerock, or clean sand or gravel, in such manner as to form a base to hold the application of the cement mixture. Use other methods to fill wells which involve special or difficult problems, subject to approval by the Bureau of Geology.

Should leakage around the outside of the casing appear after plugging the well, neatly grout the casing with cement mortar to eliminate the leakage.

110-10.1.3 Plugging Non-Artesian Wells: Fill non-artesian wells with cement mortar, concrete, clay, or other material which prevents the flow of surface waters down the well. Perform the work in such a manner that it will not contaminate an underground water supply.

110-10.2 Landscape Areas: When certain areas of the right-of-way, outside of the limits of construction, are shown in the plans or designated by the Engineer to be landscaped, either under the construction Contract or at a later time, remove undesirable trees, stumps, undergrowth, and vegetation, as directed, and preserve and trim natural growth and trees as directed by the Engineer.

110-10.3 Leveling Terrain: Within the areas between the limits of construction and the outer limits of clearing and grubbing, fill all holes and other depressions, and cut down all mounds and ridges. Make the area of a sufficient uniform contour so that the Department's subsequent mowing and cutting operations are not hindered by irregularity of terrain. Perform this work regardless of whether the irregularities were the result of construction operations or existed originally.

110-10.4 Mailboxes: When the Contract Documents require furnishing and installing mailboxes, permit each owner to remove the existing mailbox. Work with the Local Postmaster to develop a method of temporary mail service for the period between removal and installation of the new mailboxes. Install the mailboxes in accordance with the AASHTO publication, "A Guide for Erecting Mailboxes on Highways".

110-11 Method of Measurement.

110-11.1 Clearing and Grubbing:

110-11.1.1 Lump Sum Payment: When direct payment is provided in the Contract, the quantity to be paid for will be either the lump sum quantity or the number of acres [hectares], cleared and grubbed.

110-11.1.2 Areas Paid for Separately (by the acre [hectare]): For borrow pits and other areas of clearing and grubbing which are designated to be paid for separately by the acre [hectare], the quantity to be paid for will be determined by measurement of the areas authorized by the Engineer to be cleared and grubbed, and acceptably completed.

Payment by the acre [hectare] for the clearing and grubbing of borrow pits will be subject to the following provisions:

(a) When the Contractor exercises an option to furnish substitute borrow areas to be used in lieu of pits furnished by the Department, the quantity to be paid for in the substitute borrow areas will be either the area actually cleared and grubbed or the area shown on the plans for the corresponding borrow areas furnished by the Department, whichever is smaller.

(b) When the Contractor is required to furnish the borrow areas, no separate payment for clearing and grubbing of those areas will be made.

(c) Clearing and grubbing performed on haul roads, provided either by the Department or by the Contractor, will not be included in the areas to be paid for under Clearing and Grubbing. The costs of any clearing and grubbing work necessary to open haul roads for the Contractor's use will be included in the particular item (or items) of the Contract to which such work is pertinent.

(d) Areas where Selective Clearing and Grubbing is performed will be included in the measurement under the item of Clearing and Grubbing.

110-11.2 Removal of Existing Structures: When direct payment is provided in the Contract, the quantity to be paid for will be the lump sum quantity or quantities for the specific structures removed, as designated.

110-11.3 Removal of Existing Pavement: Payment for removal of flexible asphalt pavement is included in the Lump Sum price for Clearing and Grubbing. When a separate item for Removal of Existing Pavement is provided, the quantity to be paid for will be the number of square yards [square meters] of existing pavement of the types listed in 110-7, acceptably removed and disposed of, as specified. The quantity will be determined by actual measurement along the surface of the pavement before its removal. Measurements for appurtenances which have irregular surface configurations, such as curb and gutter, steps, and ditch pavement, will be the area as projected to an approximate horizontal plane. Where the removal of pavement areas is necessary only for the construction of box culverts, pipe culverts, storm sewers, inlets, manholes, etc., these areas will not be included in the measurements.

110-11.4 Plugging Water Wells: When direct payment is provided in the Contract, the quantity to be paid for will be the number of water wells plugged, for each type of well (artesian or non-artesian).

110-11.5 Mailboxes: When direct payment is provided in the Contract, the quantity to be paid for will be the number of mailboxes acceptably furnished and installed.

110-11.6 Delivery of Salvageable Material to the Department: When direct payment is provided in the Contract, the quantity to be paid for will be the Lump Sum quantity for delivery of salvageable materials to the Department as indicated in the plans.

110-11.7 General: In each case, except as provided below, where no item of separate payment for such work is included in the proposal, all costs of such work will be included in the various scheduled items in the Contract, or under specific items as specified herein below or elsewhere in the Contract.

110-12 Basis of Payment.

110-12.1 Clearing and Grubbing:

110-12.1.1 Lump Sum Payment: Price and payment will be full compensation for all clearing and grubbing required for the roadway right-of-way and for lateral ditches, channel changes, or other outfall areas, and any other clearing and grubbing indicated, or required for the construction of the entire project, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.

Where construction easements are specified in the plans and the limits of clearing and grubbing for such easements are dependent upon the final construction requirements, no adjustment will be made in the lump sum price and payment, either over or under, for variations from the limits of the easement defined on the plans.

110-12.1.2 General: Price and payment, either lump sum or by the acre [hectare], will be full compensation for all the work specified in this Section (other than as specified below, when separate payment is provided for removal of existing structures, removal of existing pavement, and plugging water wells), including all necessary hauling, furnishing equipment, equipment operation, furnishing any areas required for disposal of debris, leveling of terrain and the landscaping work of trimming, etc., as specified herein.

110-12.1.3 When No Direct Payment is Provided: When no item for clearing and grubbing is included in the proposal, the Contractor shall include the cost of any work of clearing and grubbing which is necessary for the proper construction of the project in the Contract price for the structure or other item of work for which such clearing and grubbing is required.

The Contractor shall include the cost of all clearing and grubbing which might be necessary in pits or areas from which base material is obtained in the Contract price for the base in which such material is used. The clearing and grubbing of areas for obtaining stabilizing materials, where required only for the purpose of obtaining materials for stabilizing, will not be paid for separately.

110-12.2 Removal of Existing Structures: Price and payment will be full compensation for all work of removal and disposal of the designated structures.

When direct payment for the removal of existing structures is not provided in the proposal, the Contractor shall include the cost of removing all structures in the Contract price for Clearing

and Grubbing or, if no item of Clearing and Grubbing is included, in the compensation for the other items covering the new structure being constructed.

110-12.3 Removal of Existing Pavement: Price and payment will be full compensation for performing and completing all the work of removal and satisfactory disposal.

When no separate item for this work is provided and no applicable item of excavation or embankment covering such work (as provided in 120-13.1) is included, the Contractor shall include the costs of this work in the Contract price for the item of Clearing and Grubbing or for the pipe or other structure for which the pavement removal is required.

110-12.4 Plugging Water Wells: Price and payment will be full compensation for each type of well acceptably plugged.

If a water well requiring plugging is encountered and the Contract contains no price for plugging wells of that specific type, the plugging of such well will be paid for as unforeseeable work.

110-12.5 Mailboxes: Price and payment will be full compensation for all work and materials required, including supports and numbers.

110-12.6 Delivery of Salvageable Material to the Department: Price and payment will be full compensation for all work required for delivery of the materials to the Department.

110-12.7 Payment Items: Payment will be made under:

Item No. 110-	1-	Clearing and Grubbing - lump sum.
Item No. 2110-	1-	Clearing and Grubbing - lump sum.
Item No. 110-	2-	Clearing and Grubbing - per acre.
Item No. 2110-	2-	Clearing and Grubbing - per hectare.
Item No. 110-	3-	Removal of Existing Structures - lump sum.
Item No. 2110-	3-	Removal of Existing Structures - lump sum.
Item No. 110-	4-	Removal of Existing Pavement - per square yard.
Item No. 2110-	4-	Removal of Existing Pavement - per square meter.
Item No. 110-	5-	Plugging Water Wells (Artesian) - each.
Item No. 2110-	5-	Plugging Water Wells (Artesian) - each.
Item No. 110-	6-	Plugging Water Wells (Non-Artesian) - each.
Item No. 2110-	6-	Plugging Water Wells (Non-Artesian) - each.
Item No. 110-	7-	Mailbox (Furnish and Install) - each.
Item No. 2110-	7-	Mailbox (Furnish and Install) - each.
Item No. 110-	86-	Delivery of Salvageable Material to FDOT - lump sum.
Item No. 2110-	86-	Delivery of Salvageable Material to FDOT - lump sum.