Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JIM BOXOLD
SECRETARY

M E M O R A N D U M

DATE: April 11, 2016

TO: Specification Review Distribution List

FROM: Dan Hurtado, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **1100000 Clearing and Grubbing.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change is proposed by Ashley Binder of the State Production Management Office to update the spec to meet the Department's Highway Beautification Policy. An increased level of expertise is being required for Selective Clearing and Grubbing and tree trimming. Changes are also proposed by Chris Lewis of the State Construction Office clarify that all existing items will be removed under Section 110.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx . Comments received after May 9, **2016,** may not be considered. Your input is encouraged.

DH/ft
Attachment

CLEARING AND GRUBBING.
(REV ~~10-28-15~~*~~12-7-15~~*~~2-25-16~~*~~3-7-16~~*3-15-16)

SECTION 110 is deleted and the following substituted:

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, buildings, structures, appurtenances, existing flexible asphalt pavement, and other facilities necessary to prepare the area for the proposed construction. Remove and dispose of all product and debris not required to be salvaged or not required to complete the construction.

~~Also, perform~~*Perform* ~~certain~~ *any* miscellaneous work ~~the Engineer considers~~ necessary for the complete preparation of the overall project site *as specified in* ~~*this Section*~~*110-10.*~~., as follows:~~

~~1. Plug any water wells that are encountered within the right-of-way and that are to be abandoned.~~

~~2. Level the terrain outside the limits of construction for purposes of facilitating maintenance and other post-construction operations in accordance with 110-10.3.~~

~~3. 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, *trees,* stumps, roots, rubbish, debris, *existing flexible pavement and base, drainage structures, culverts, pipes,* ~~*pull and junction boxes, sign, signal and lighting structures (including foundations)*~~ 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:

1. All areas where excavation is to be done, including borrow pits, lateral ditches, right-of-way ditches, etc.
2. All areas where roadway embankments will be constructed.
3. All areas where structures will be constructed, including pipe culverts and other pipe lines.

~~*4. Areas, When not included under Section 520, 522, and 524, areas where curb, sidewalk, slope pavement, or ditch pavement isare to be removed.Sidewalk, Curb, etc., not included under 520, 522.*~~

~~*5. Any other areaAreas designated in the Pplans*~~.

110-2.2 Depths of Removal ~~-~~of Roots, Stumps, and Other Debris: In all areas where excavation is to be performed, or roadway embankments are to be constructed, remove roots and

other debris to a depth of 12 inches below the ground surface. Remove roots and other debris from all excavated material to be used in the construction of roadway embankment or roadway base. Plow the surface to a depth of at least 6 inches, and remove all roots thereby exposed to a depth of at least 12 inches. Completely remove and dispose of all stumps within the roadway right-of-way.

Remove all roots, etc., protruding through or appearing on the surface of the completed excavation within the roadway area and for structures, to a depth of at least 12 inches below the finished excavation surface.

Remove or cut off all stumps, roots, etc., below the surface of the completed excavation in borrow pits, material pits, and lateral ditches.

In borrow and material pits, do not perform any clearing or grubbing within 3 feet 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 below the surface, but do not plow or harrow these areas.

~~*Root systems of existing trees to remain, both within right-of-way and adjacent to the right-of-way, are not to be impacted by standard clearing and grubbing activity. If any impacts to roots or branches is to occur, Section 110-3 Selective Clearing and Grubbing should apply.*~~

~~*Is it necessary to state that root systems of existing trees, both within right-of-way and adjacent to the right-of-way, are not to be impacted by clearing and grubbing activity. If any impacts to roots or branches is to occur, it is to be covered under 110-3 Selective Clearing and Grubbing?*~~

~~**110-2.3 Trees to Remain:** As an exception to the above provisions, where *shown in the contract pPlans and* 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 above the roadway*trees in accordance with 110-3.34.. All trimming of trees to remain shall be performed in accordance with ANSI A300, Part 1 Pruning and shall be supervised on site by an International Society of Arboriculture (ISA) Certified Arborist.*~~

~~*At the driplines of areas designated as trees to remain, construct a tree protection barrier in accordance with Design Standards, Index No. 544.*~~

~~*When shown in the Plans, root pruning work is to be supervised on site by an International Society of Arboriculture (ISA) Certified Arborist in accordance with ANSI A300.*~~

~~*Pruning cuts to existing trees to remain are to be made only under the direction and supervision of an ISA Certified Arborist. Keep trees, branches and roots from damage caused by construction machinery.*~~

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. When approved by the Engineer place boulders in neat piles inside the right of way. 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.

110-3.1 General: *R*emove and dispose of ~~all~~ vegetation, obstructions, etc., as ~~provided~~ *shown in the Plans. Provide acceptable fill material, and grade and compact holes or voids*

created by the removal of the stumps. Perform all selective clearing and grubbing in accordance with ANSI A300.

No staging, storing or dumping will be allowed in selective clearing and grubbing areas. Use only rubber tire equipment in these areas. Protect trees to remain from trunk, branch and root damage.~~.~~

110-3.2 Trees to Remain: ~~*As an exception to the above provisions, w*~~*Protect trees as shown in the Plans or directed by the Engineer*~~*Where shown in the Plans and so directed by the Engineer, protect, and leave standing desirable trees within the roadway area. .*~~*.*

At the driplines of areas designated as trees to remain, construct a tree protection barrier in accordance with Design Standards, Index No. 544. ~~*Keep trees, branches and roots from damage caused by construction machinery.*~~

When shown in the Plans, pruning cuts to existing trees and root pruning work is to be supervised on site by an International Society of Arboriculture (ISA) Certified Arborist performed in accordance with ANSI A300.

~~*Pruning cuts to existing trees to remain are to be made only under the direction and supervision of an ISA Certified Arborist. Keep trees, branches and roots from damage caused by construction machinery.*~~

110-3.3 Protection of ~~***Natural***~~***Plant Preservation Areas****: Areas to remain natural may be designated in the Plans. Protect these areas with a tree preservation barrier in accordance with Design Standards Index No. 544. No clearing and grubbing, staging, storage, or dumping* ~~-~~*is allowed in these areas. Do not bring equipment into these areas.* ~~*No staging, storage, or dumping is allowed in these areas.*~~~~above except that, where so elected, the Contractor may cut roots, etc.~~*and other debris*~~, flush with the ground surface. Completely remove and dispose of stumps. Entirely remove undergrowth except in specific areas~~ *as shown in the contract pPlans or as* ~~designated by the Engineer to remain for aesthetic~~ *or other* ~~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.~~ *All trimming of trees to remain shall be performed in accordance with ANSI A300, Part 1 Pruning and shall be supervised on site by an International Society of Arboriculture (ISA) Certified Arborist.* ~~Remove undesirable or damaged trees as so designated by the Engineer.. Perform Selective Clearing and Grubbing only in areas so designated in the Plans.~~

~~***110-3.2 Landscape Areas:*** *When certain areas are shown in the Plans to be landscaped, either under the construction Contract or at a later time , remove and dispose of undesirable trees, stumps, undergrowth, and vegetation, as directed, and preserve and trim natural growth and trees. as shown in the contract pPlans and as directed by the Engineer.*~~

~~*Remove stumps, including protruding roots and debris, to a depth of 12 inches below the surface of the original ground. Provide acceptable fill material, grade and compact holes or voids created by the removal of the stumps. Remove all roots and other debris, protruding through or appearing on the surface of the landscape areas, to a depth of at least 12 inches below the finished surface.Remove all roots, etc., protruding through or appearing on the surface of the landscape areas, to a depth of at least 12 inches below the finished surface.*~~

~~***110-43.3 Tree Trimming.:***~~

~~*All trimming of trees to remain shall be performed Perform all trimming of trees to remain in accordance with ANSI A300, Part 1 Pruning and provide shall be supervised on site by an arborist certified by the International Society of Arboriculture (ISA) Certified Arborist. Maintain the natural shape and structure of the tree.*~~

~~*Trim trees to the height and width described in the Plans. Trim branches of trees extending over the area occupied by the roadway as directed, to give a clear height of 1614.5 feet above the roadway. Remove all dead, dying, diseased, decaying, interfering, suckering, obstructing or weak branches.*~~

~~*Crown reduction cuts must be made to strong laterals or to the parent limb.*~~

~~*When shown in the Plans, use mobile, mechanical equipment capable of vertical, horizontal and angle cuts to shear vegetation to the prescribed height and width. Do not power shear branches or limbs greater than 2 inches in diameter.*~~

~~*Limits of Trees to Remain may also need to be root pruned. The necessity of root pruning shall be determined by an ISA Certified Arborist or Qualified Landscape Professional. The ISA Certified Arborist or Qualified Landscape Professional shall provide a report to the Engineer with regard to the limits of root pruning for Trees to Remain.*~~

~~***110-53.4 Tree and Shrub Removal.:***~~

~~***110-5.13.4.1 General:*** *Cut and remove trees and shrubs. Cut the main trunk at or below the ground surface. Treat stumps with an herbicide labeled for stump use in accordance with Section 7. Use of soil sterilant or residual type materials is not permitted.*~~

~~***110-5.23.4.2 Tree and Shrub Removal from Fence LinesAccess Corridors:*** *For fence corridors, cut and remove trees and shrubs within the right-of-way and adjacent to the fence, as shown in the Plans. The corridor must be a minimum of 10 feet wide and 15 feet high.*~~

~~*For access corridors, cut and remove trees and shrubs as shown in the Plans. The corridor must be a minimum of 10 feet wide and 14.5 feet high. diagonally from the roadway to the right-of-way fence at intervals along the roadway of no more than 2000 feet and as required by outfall ditches, natural drains, or other intersecting roadways, railroads, etc.; or as shown in the Plansfrom the roadway to the corridor adjacent to the fence at the locations determined by the Engineer. The corridor must be a minimum of 10 feet wide and 15 feet high.*~~

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.~~*Bridges*.

110-6.1 ~~Structures to be Removed~~*Parts to be Removed*General: ~~W~~*The work under this ~~a~~Article includes bridges, as defined in Article 1-3.*

Remove and dispose of the materials from existing ~~structures~~*bridges*. Remove ~~the following:~~

1. those ~~structures~~*bridges*, or portions of ~~structures~~*bridges*, shown in the Plans to be removed,

2. those ~~structures~~*bridges*, or portions of *bridges*~~structures~~, found within the limits of the area to be cleared and grubbed, and directed by the Engineer to be removed,

3. those *bridges*~~structures~~, or portion of *bridges*~~structures~~, which are necessary to be removed in order to ~~construct new structures~~*complete the work*, 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.

~~Provide~~ *Submit* detailed schedule information to the Engineer 15 working days prior to the commencement of any demolition or renovation of any structures, even if asbestos is not found on the project, for the Engineer's use in notifying the Department of Environmental Protection (DEP) on DEP Form 62-257.900(1) "Notice of Asbestos Renovation or Demolition".

110-6.2 Method of Removal:

110-6.2.1 General: Remove the structures in such a way so as to leave no obstructions to any proposed new ~~structures~~ *bridge* or to any waterways. Pull, cut off, or break off pilings to the requirements of the permit or other Contract Documents, or if not specified, not less than 2 feet 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~~*bridges*, 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.

110-6.2.2 Removal of Steel Members With Hazardous Coatings: ~~Provide~~ *Submit* to the Engineer for approval~~, a copy of~~ the "Contractor's Lead in Construction Compliance Program" from the firm actually removing and disposing of these steel members before any members are disturbed.

Vacuum power tool clean any coated steel member to bare metal as defined by SSPC-SP11 a minimum of 4 inches either side of any area to be heated (torch cutting, sawing, grinding, etc.) in accordance with 29 CFR 1926.354. Abrasive blasting is prohibited.

Provide air supplied respirators in accordance with 29 CFR 1926.62 and 29 CFR 1910.134.

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, by chipping hammers, or by hydro-demolition methods. Do not use explosives. Where concrete is to be removed to neat lines, use concrete saws or hydro-demolition methods 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. For all demolition methods, submit for review and approval of the Engineer, a demolition plan that describes the method of removal, equipment to be used, types of rebar splices or couplers, and method of straightening or cutting rebar~~s~~. In addition, for hydro-

demolition, describe the method for control of water or slurry runoff and measures for safe containment of concrete fragments that are thrown out by the hydro-demolition machine.

110-6.4 Authority of U.S. Coast Guard: For ~~structures~~ *bridges* 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~~ *bridges* involved therein, prior to acceptance by the Department.

110-6.5 Asbestos Containing Materials (ACM) Not Identified Prior to the Work: When encountering or exposing any condition indicating the presence of asbestos, cease operations immediately in the vicinity and notify the Engineer.

Make every effort to minimize the disturbance of the ACM. Immediately provide for the health and safety of all workers at the job site and make provisions necessary for the health and safety of the public that may be exposed to any potentially hazardous conditions. Provisions shall meet all applicable laws, rules or regulations covering hazardous conditions and will be in a manner commensurate with the gravity of the conditions.

The Engineer will notify the District Contamination Assessment Coordinator who will coordinate selecting and tasking the Department's Asbestos Contractor or Contamination Assessment/Remediation Contractor (CAR). Provide access to the potential contamination area. Preliminary investigation by the Asbestos/CAR Contractor will determine the course of action necessary for site security and the steps necessary to resolve the contamination issue.

The Asbestos/CAR Contractor will delineate the contamination areas, any staging or holding area required. Coordinate with the Asbestos/CAR Contractor and the Engineer to develop a work plan that will provide the Asbestos/CAR Contractor's operations schedule with projected completion dates for the final resolution of the contamination issue.

The Asbestos/CAR Contractor will maintain jurisdiction over activities inside any outlined contaminated areas and any associated staging holding areas. The Asbestos/CAR Contractor will be responsible for the health and safety of workers within the delineated areas. Provide continuous access to these areas for the Asbestos/CAR Contractor and representatives of regulatory or enforcement agencies having jurisdiction.

Both Contractors will use the schedule as a basis for planning the completion of both work efforts. The Engineer may grant the Contract Time extensions according to the provisions of 8-7.3.2.

Cooperate with the Asbestos/CAR Contractor to expedite integration of the Asbestos/CAR Contractor's operations into the construction project. The Prime Contractor is not expected to engage in routine construction activities involving asbestos containing materials. Adjustments to quantities or to Contract unit prices will be made according to work additions or reductions on the part of the Prime Contractor in accordance with 4-3.

The Engineer will direct the Prime Contractor when operations may resume in the affected area.

110-7 Removal of Existing ~~*Rigid*~~ *Concrete* ~~Pavement~~.

Remove and dispose of existing rigid portland cement concrete pavement, sidewalk, slope pavement, ditch pavement, curb, ~~and~~ curb and gutter*, gravity walls, noise walls, sound walls, retaining walls, MSE walls, perimeter walls, and roadway barrier wall*~~, etc.,~~ where shown in the Plans or ~~ordered~~ *as directed* by the Engineer. ~~to be removed or where required because of the construction operations.~~ *All ancillary elements of these concrete features being removed*~~,~~ *including, but not limited to,*~~*such as*~~ *leveling pads, copings, reinforcing steel or straps,*

footings, etc, are incidental and included in the cost of the removal. ~~Retaining walls, drainage structures and flexible asphalt pavement are not included in the work under this Article.~~

~~***110-8 Removal of Walls.***~~

~~*Remove and dispose of existing walls, including mechanically stabilized earth (MSE) walls, retaining walls, and noise walls, where shown in the plans to be removed. Remove straps, leveling pad, footings, and all incidentals to completely remove the wall.*~~

110-8 Ownership of Materials.

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

110-9 Disposal of Materials.

110-9.1 General: Either stack materials designated to remain the property of the Department in neat piles within the right-of-way, ~~or~~ load onto the Department's vehicles*, or deliver to location designated in the plans*.

Dispose of timber, stumps, brush, roots, rubbish, and other objectionable material resulting from clearing and grubbing in areas and by methods meeting the applicable requirements of all Local, State and Federal regulations. Do not block waterways by the disposal of debris.

With the approval of the Engineer, wood chips may be evenly distributed to a depth of no more than one inch in designated areas in the Department's right-of-way.

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 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.

110-9.4 Disposal of Treated Wood: Treated wood~~, including that which comes from bridge channel fender systems,~~ must be handled and disposed of properly during removal. Treated wood should not be cut or otherwise mechanically altered in a manner that would generate dust or particles without proper respiratory and dermal protection. The treated wood must be disposed of in at least a lined solid waste facility or through recycling/reuse. Treated wood shall not be disposed by burning or placement in a construction and demolition (C&D) debris landfill. ~~All compensation for the cost of removal and disposal of treated wood will be included in the Cost of Removal of Existing Structures*Bridges.*~~

110-9.5 Hazardous Materials/Waste: Handle, transport and dispose of hazardous materials in accordance with all Local, State and Federal requirements including the following:

1. SSPC Guide 7
2. Federal Water Pollution Control Act, and
3. Resource Conservation and Recover Act (RCRA).

Accept responsibility for the collection, sampling, classification, packaging, labeling, accumulation time, storage, manifesting, transportation, treatment and disposal of hazardous waste, both solid and liquid. Separate all solid and liquid waste and collect all liquids

used at hygiene stations and handle as hazardous materials/waste. Obtain written approval from the Engineer for all hazardous materials/waste stabilization methods before implementation.

Obtain an EPA/FDEP Hazardous Waste Identification Number (EPA/FDEP ID Number) before transporting and/or disposal of any hazardous materials/waste.

List the Department as the generator of all hazardous materials/waste.

Submit the following for the Engineers' approval before transporting, treatment or disposal of any hazardous materials/waste:

1. Name, address and qualifications of the transporter,
2. Name, address and qualifications of the treatment facility,
3. Proposed treatment and/or disposal of all Hazardous Materials/Waste.

Transport all hazardous materials/waste in accordance with applicable 40 CFR 263 Standards. ~~Provide~~ *Submit* ~~a copy of~~ all completed Hazardous Materials/Waste manifest/bills of lading to the Engineer within 21 days of each shipment.

110-9.5.1 Steel Members With Hazardous Coating: Dispose of steel members with hazardous coating in one of the following manners:

1. Deliver the steel members and other hazardous waste to a licensed recycling or treatment facility capable of processing steel members with hazardous coating.
2. Deliver the steel members with hazardous coating to a site designated by the Engineer for use as an offshore artificial reef. Deliver any other hazardous materials/waste to a licensed hazardous materials/waste recycling treatment facility.

Dismantle and/or cut steel members to meet the required dimensions of the recycling facility, treatment facility or offshore artificial reef agency.

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

110-9.5.2 Certification of Compliance: ~~Furnish two copies of~~*Submit* certification of Compliance from the firm actually removing and disposing of the hazardous materials/waste stipulating, the hazardous materials/waste has been handled, transported and disposed of in accordance with this Specification. The Certification of Compliance shall be attested to by a person having legal authority to bind the company.

Maintain all records required by this Specification and ensure these records are available to the Department upon request.

110-10 Miscellaneous Operations.

110-10.1 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, in accordance with applicable Water Management District rules or the Department of Environmental Protection regulations.

Cut off the casing of cased wells at least 12 inches below the ground line or 12 inches 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:

1. 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 applicable Water Management District.

2. 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.

When the Plans do not indicate whether a non-flowing well is artesian or non-artesian, obtain this information from the Engineer.

~~**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 *shown in the contract plans and as* directed by the Engineer. *Remove all roots, etc., protruding through or appearing on the surface of the landscape areas, to a depth of at least _12___ inches below the finished surface.*~~

110-10.~~3~~ *2* 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~~ *3* 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 Design Standards.

110-11 Method of Measurement.

110-11.1 Clearing and Grubbing: ~~When direct payment is provided in the Contract, t~~*T*he quantity to be paid for will be the lump sum quantity.

~~*No separate payment will be made for removal of curb, sidewalk, slope pavement, or ditch pavement that is removed and replaced, as specified in Sections 520-11, 522-9, and 524-10.*~~

110-11.2 Selective Clearing and Grubbing: *The quantity to be paid will be the plan quantity area in acres designated for Selective Clearing and Grubbing.*

110-11.~~2~~ *3* Removal of Existing ~~Structures~~*Bridges*: ~~When direct payment is provided in the Contract, t~~*T*he quantity to be paid for will be the lump sum quantity or quantities for the specific structures*, or portions of structures to be* removed~~, as designated~~.

110-11.~~3~~ *4* Removal of Existing ~~*Rigid*~~ *Concrete* ~~Pavement~~: ~~Payment for removal of flexible asphalt pavement is included in the Lump Sum price for Clearing and Grubbing.~~

~~No separate payment will be made for removal of curb, sidewalk, slope pavement, or ditch pavement that is removed and replaced, as specified in 520-11, 522-9, and 524-10.~~

The quantity to be paid for will be the number of square yards of existing ~~*rigid*~~ *concrete* ~~pavement~~ *elements*~~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~~ *element* 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. *Area measurements for the walls included in Article will be based on exposed vertical face measurements times the horizontal length of the wall.*

Payment for removal of flexible asphalt pavement is included in the Lump Sum price for Clearing and Grubbing.

~~***110-11.5 Removal of Walls:*** *The quantity to be paid for will be the lump sum quantity.*~~

110-11.4 Plugging Water Wells: ~~When direct payment is provided in the Contract, t~~*T*he 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, t~~*T*he 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, t~~*T*he 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, 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, 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 in the Plans.

110-12.1.2 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 Selective Clearing and Grubbing: *Price and payment will be full compensation for all Selective Clearing Grubbing, including all necessary hauling, furnishing equipment, Certified Arborist, equipment operation, furnishing any areas required for disposal of debris, leveling of terrain*, ~~*he landscaping work of*~~ *root pruning and tree protection.*

110-12.~~2~~ *3* Removal of Existing ~~Structures~~*Bridges*: Price and payment will be full compensation for all work of removal and disposal of the designated ~~structures~~*bridges*.

When direct payment for the removal of existing ~~structures~~ *bridges* is not provided in the proposal, the Contractor shall include the cost of removing all ~~structures~~ *bridges* 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~~ *bridge* being constructed.

~~***110-12.5 Removal of Walls:*** *Price and payment will be full compensation for completing all work, including all necessary hauling, furnishing equipment, equipment operation, furnishing any areas required for disposal of debris.*~~

110-12.3 Removal of Existing ~~*Rigid*~~ *Concrete* ~~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. 110- 2-	*Selective Clearing and Grubbing - acre.*
Item No. 110- 3-	Removal of Existing ~~Structures~~ *Bridges* - lump sum.
Item No. 110- 4-	Removal of Existing ~~*Rigid*~~ *Concrete* ~~Pavement~~ - per square yard.
Item No. 110- 5-	Plugging Water Wells (Artesian) - each.
Item No. 110- 6-	Plugging Water Wells (Non-Artesian) - each.
Item No. 110- 7-	Mailbox (Furnish and Install) - each.
~~*Item No. 110- 20-*~~	~~*Removal of Existing Wall - lump sum*~~
Item No. 110- 86-	Delivery of Salvageable Material to FDOT - lump sum.