



# Illinois Department of Transportation

Office of Intermodal Project Implementation / Division of Aeronautics  
1 Langhorne Bond Drive / Springfield, Illinois 62707-8415

June 10, 2022

SUBJECT: Abraham Lincoln Capital Airport  
Springfield, Illinois  
Sangamon County  
Illinois Project Number: SPI-4943  
AIP Project Number: 3-17-0096-TBD  
Contract No. CA023  
Item No. 04A, June 17, 2022 Letting  
Addendum A

## NOTICE TO PROSPECTIVE BIDDERS

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

### Reason for Addendum:

Clarifications to Bidding Documents

### To All Plan Holders:

The following changes to the bid documents dated 4/22/2022 are included in Addendum A:

1. Clarify borrow areas. Refer to the attached Borrow Area Exhibit for the location and typical section of the borrow area.
2. Add general note to storm sewer plans.
3. Revise Specification Section P-152.

### Plan Changes:

- Sheets 38 & 39 – Storm Sewer
  - ADD: The following note:
    1. Contractor shall field verify depths of existing storm sewer pipes and structures at points of connection prior to precasting structures or installing pipe.

### Specification Changes:

- Item P-152, Excavation, Subgrade and Environment
  - 152-1.2a
    - DELETE: this paragraph.
    - ADD: 152-1.2a Embankment in Place. Embankment in place shall consist of backfilling removed pavements and constructing embankments for new pavements.
  - 152-1.2d Borrow Excavation
    - DELETE: the last sentence.
  - 152-2.3 Borrow excavation
    - DELETE: this paragraph

- ADD: 152-2.3 Borrow Excavation. Borrow material shall be obtained from the locations shown in the plans.
- 152-2.17 Stockpiled Materials
  - DELETE: this paragraph
  - ADD: 152-2.17 Stockpiled Materials. See unclassified disposal pay item.
- 152-3.2
  - REVISE: the first sentence as follows: "...shall be measured by a pre-removal **stockpile** survey..."
- Basis of Payment
  - REVISE: pay items AW152419 and AX152419 by adding "- per cubic yard"

Schedule of Prices Changes:

None

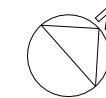
Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Questions on this addendum may be directed to Wes loerger of CMT at 217-787-8050.

Attachments

- Borrow Area Exhibit
- Revised Plan Sheets 38-39
- Revised Specification P-152





THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

BID SUBMITTAL  
APRIL 22, 2022

**RUNWAY 18/36 REMOVAL AND ASSOCIATED IMPROVEMENTS, PHASE 3**

OWNER



SPRINGFIELD AIRPORT AUTHORITY  
ABRAHAM LINCOLN CAPITAL AIRPORT  
SPRINGFIELD, IL

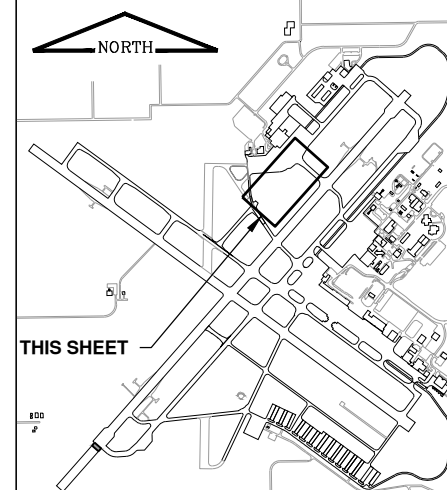
**NOTES**

1. CONTRACTOR SHALL FIELD VERIFY DEPTHS OF EXISTING STORM SEWER PIPES AND STRUCTURES AT POINTS OF CONNECTION PRIOR TO PRECASTING STRUCTURES OR INSTALLING PIPE.

**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
— ST —	P-XX	STORM SEWER
— UD —	UD-XX	UNDERDRAIN
■	IN - #	INLET & NUMBER
○	MH - #	MANHOLE & NUMBER
○	● CO	UNDERDRAIN CLEANOUT & NUMBER
○	● CS	UNDERDRAIN COLLECTION STRUCTURE
	● DC	UNDERDRAIN DIRECT CONNECTION
	○	UNDERDRAIN NODE
	////	PIPE REMOVAL

**KEYMAP**



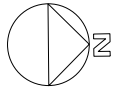
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Date: Thursday, June 9, 2022 4:59:21 PM

MARK	DATE	DESCRIPTION
A	6/10/22	ADDENDUM A

AIP PROJ. NO: 3-17-0096-XX	CA022
IL PROJ. NO: SPI-4943	
CMT PROJECT NO: 180035-05	
CAD DWG FILE: 18003505-PH3-CU100.DWG	
DESIGNED BY: HWI	
DRAWN BY: DPA	
CHECKED BY: CHK	
APPROVED BY: APR	
COPYRIGHT:	

**STORM SEWER & UNDERDRAIN PLAN  
TXY G WEST**

CU101  
SHEET 38 OF 91



THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

BID SUBMITTAL  
APRIL 22, 2022

RUNWAY 18/36 REMOVAL AND  
ASSOCIATED IMPROVEMENTS,  
PHASE 3

OWNER



SPRINGFIELD AIRPORT  
AUTHORITY  
ABRAHAM LINCOLN CAPITAL  
AIRPORT  
SPRINGFIELD, IL

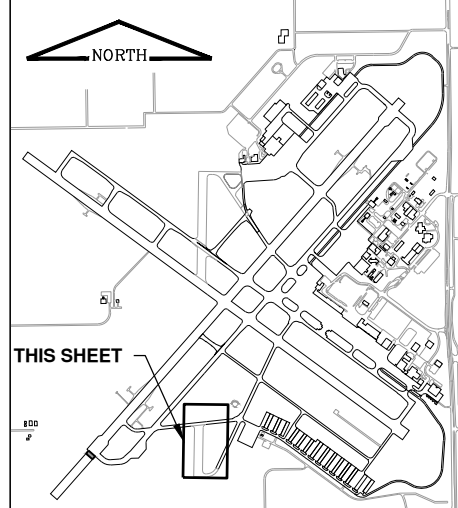
NOTES

1. CONTRACTOR SHALL FIELD VERIFY DEPTHS OF EXISTING STORM SEWER PIPES AND STRUCTURES AT POINTS OF CONNECTION PRIOR TO PRECASTING STRUCTURES OR INSTALLING PIPE.

LEGEND

EXISTING	PROPOSED	
— ST —	P-XX	STORM SEWER
— UD —	UD-XX	UNDERDRAIN
⊠	⊠	INLET & NUMBER
⊙	⊙	MANHOLE & NUMBER
○	● CO	UNDERDRAIN CLEANOUT & NUMBER
○	● CS	UNDERDRAIN COLLECTION STRUCTURE
	● DC	UNDERDRAIN DIRECT CONNECTION
	○	UNDERDRAIN NODE
////		PIPE REMOVAL

KEYMAP



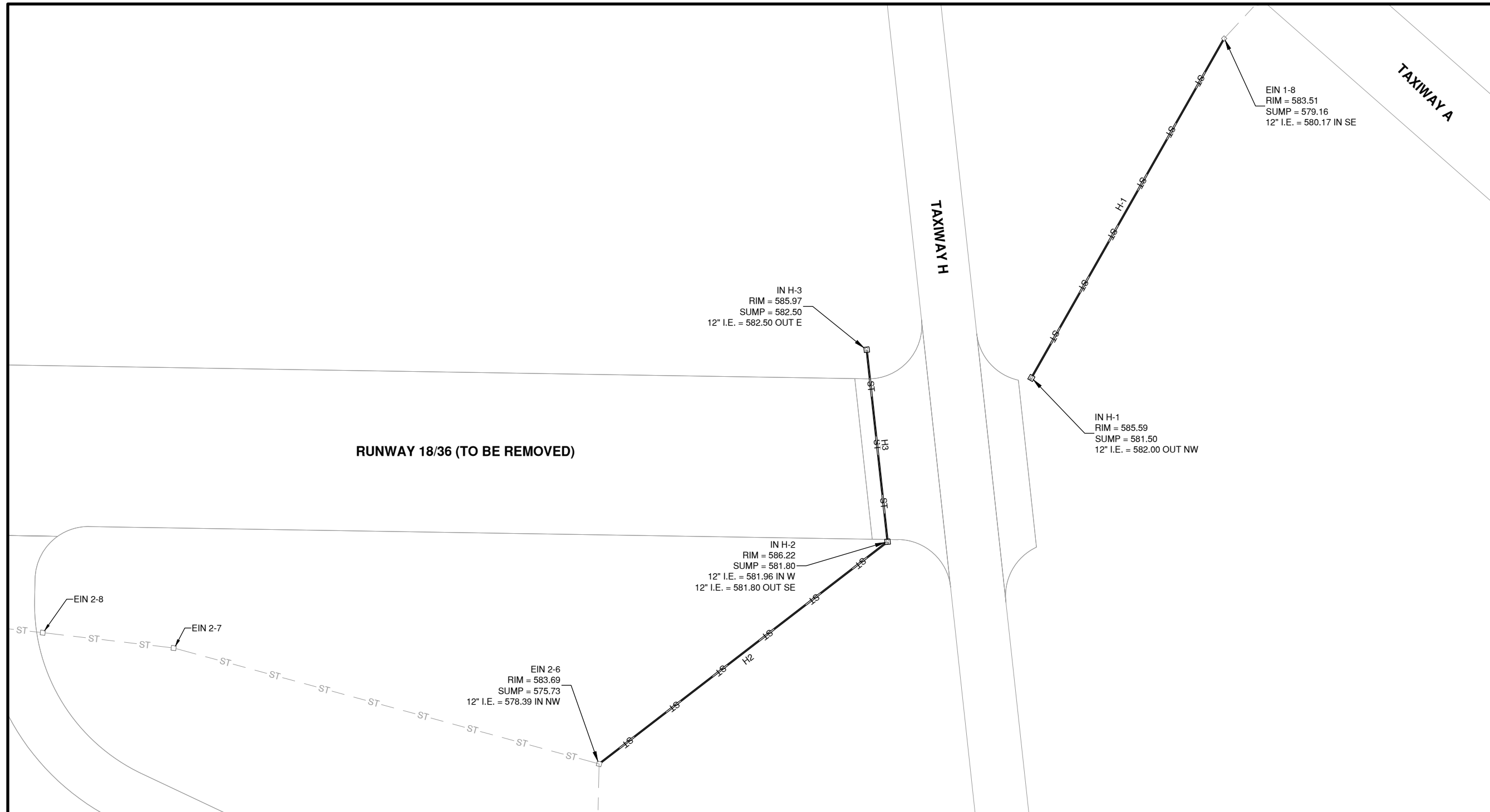
MARK	DATE	DESCRIPTION
A	6/10/22	ADDENDUM A

AIP PROJ. NO: 3-17-0096-XX CA022  
 IL PROJ. NO: SPI-4943  
 CMT PROJECT NO: 180035-05  
 CAD DWG FILE: 18003505-PH3-CU100.DWG  
 DESIGNED BY: HWI  
 DRAWN BY: DPA  
 CHECKED BY: CHK  
 APPROVED BY: APR  
 COPYRIGHT:

SHEET TITLE  
**STORM SEWER &  
UNDERDRAIN PLAN  
RWY 1836 S**

CU102  
SHEET 39 OF 91

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## Item P-152 Excavation, Subgrade, and Embankment

### DESCRIPTION

**152-1.1** This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

**152-1.2 Classification.** All material excavated shall be classified as defined below:

**a. Embankment in Place.** ~~Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature.~~ Embankment in place shall consist of backfilling removed pavements and constructing embankments for new pavements.

**b. Unclassified Disposal Offsite.** Unclassified disposal offsite shall consist of the removal and legal disposal of stockpiled pavement materials from the Airport property. This item also includes the restoration of stockpile areas to their pre-construction condition.

**c. Exploratory excavation.** Exploratory excavation shall consist of exposing existing fiber optic cables at the locations indicated in the plans. Depths and locations of the exposed cables shall be provided to the Engineer.

**d. Borrow excavation.** Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. ~~Borrow material shall be obtained from areas outside the airport boundaries.~~

**152-1.3 Unsuitable excavation.** Unsuitable material shall be disposed in designated waste areas as shown on the plans or as directed by the RPR / Airport. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

**152-1.4 Exploratory excavation.** Exploratory excavation shall consist of the excavation necessary for the purpose of locating and confirming the position, features, and elevations of existing utilities and drainage components in order to identify potential conflicts or inaccurate record information. This item shall also include the coordination and location of existing utilities in the area of the Exploratory Excavation as required by Section 70, and the associated topographic surveying of the utility points of interest.

### CONSTRUCTION METHODS

**152-2.1 General.** Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans or as directed by the RPR / Airport. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70,

paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches, to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches in their greatest dimension will not be permitted in the top 6 inches of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

**a. Blasting.** Blasting shall not be allowed.

**152-2.2 Excavation.** No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

**a. Selective grading.** When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

**b. Undercutting.** Not Used

**c. Over-break.** Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

**d. Removal of utilities.** The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.



**152-2.3 Borrow excavation.** ~~Borrow areas are not required.~~ Borrow material shall be obtained from the locations shown in the plans.

**152-2.4 Drainage excavation.** Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

**152-2.5 Preparation of cut areas or areas where existing pavement has been removed.** In those areas on which a subbase or base course is to be placed, the top 12 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

**152-2.6 Preparation of embankment area.** All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

**152-2.7 Control Strip.** The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

**152-2.8 Formation of embankments.** The material shall be constructed in lifts as established in the control strip, but not less than 6 inches nor more than 12 inches of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed



in the embankment, nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within  $\pm 2\%$  of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The Contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D1557. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the Contractor's Laboratory in the presence of the RPR for every 3,000 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for non-cohesive soils, and 90% of maximum density for cohesive soils as determined by ASTM D1557. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches which shall be prepared for a seedbed in accordance with Item T-901.

The in-place field density shall be determined in accordance with ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches in their greatest dimensions will not be allowed in the top 12 inches of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

**152-2.9 Proof rolling.** The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. Before start of embankment, and after compaction is completed, the subgrade area shall be proof rolled with a 20 ton Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 80/100/150 in the presence of the RPR. Apply a minimum of 1 coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch or show permanent deformation greater than 1 inch shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

**152-2.10 Compaction requirements.** The subgrade under areas to be paved shall be compacted to a depth of 12 inches and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D1557. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within  $\pm 2\%$  of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the  $\frac{3}{4}$  inch sieve, follow the methods in ASTM D1557 for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 3000 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

**152-2.11 Finishing and protection of subgrade.** Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-

compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

**152-2.12 Haul.** All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

**152-2.13 Surface Tolerances.** In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches, reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch when tested with a 12-foot straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot straightedge for the full length of each line on a 50-foot grid.
- b. **Grade.** The grade and crown shall be measured on a 50-foot grid and shall be within +/-0.05 feet of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

**152-2.14 Topsoil.** When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the RPR, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.

**152-2.15 Exploratory excavation.** The purpose of this item is to identify potential conflicts between existing utilities and the proposed improvements and to confirm record information on existing utility structures to allow proposed revisions where necessary.

The Exploratory Excavation shall be performed at the locations shown on the Plans or as directed by the RPR.

The Exploratory Excavation shall be performed prior to the manufacture or acquisition of the proposed utility or drainage structures and materials.

The Exploratory Excavation shall not be less than 60 in. in depth measured from the existing ground elevation. The size of the excavation shall be sufficient to allow proper investigation of the area being excavated including topographic surveying.

After the excavation has been inspected by the RPR, the excavated material shall be used to backfill the trench in accordance with item P-152.

**152-2.16 Subgrade Repair.** All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

**152-2.17 Stockpiled Materials.** ~~Materials to be stockpiled for future phases shall be placed in the locations identified on the plans. Stockpiles shall have a maximum side slope of 2H: 1V and a maximum stockpile height of 10 feet. Silt fence shall be installed around the perimeter of all stockpiles. See unclassified disposal offsite pay item.~~

#### METHOD OF MEASUREMENT

**152-3.1** The quantity of embankment in place shall be the number of cubic yards measured in its final position.

Excavation, stockpiling, and placement of topsoil shall not be measured for payment in the cross sections as a part of this item.

**152-3.2** The quantity of unclassified disposal offsite to be paid for shall be measured by a pre-removal stockpile survey performed by the Engineer. Stockpile area restoration shall not be measured for payment but will be considered incidental to the unclassified disposal offsite pay item.

**152-3.3** The quantity of exploratory excavation to be paid for shall be the number of completed exploration locations measured and accepted by the RPR. Measurement shall not include the quantity of topsoil stripping or unclassified excavation required to perform the exploratory excavation; those items are considered incidental to the exploratory excavation.

#### BASIS OF PAYMENT

**152-4.1** For embankment in place, payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

**152-4.2** Payment for unclassified disposal offsite shall be made at the contract unit price per cubic yard for materials removed from Airport property.

**152-4.3** Exploratory excavation payment shall be made at the contract unit price per each completed to the RPR's satisfaction. This price shall be full compensation for furnishing all materials and for all utility coordination, site preparation, excavation, potholing, surveying and backfilling necessary to complete this item; and for all labor, equipment, tools and incidentals necessary to complete the item.

**152-4.4** Borrow excavation shall not be measured for payment. Borrow excavation will be considered incidental to embankment in place.

Payment will be made under:

Item AW152419	Unclassified Disposal Offsite – <u>per cubic yard</u>
Item AW152455	Embankment in Place – per cubic yard
Item AW800308	Exploratory Excavation – per each
Item AX152419	Unclassified Disposal Offsite – <u>per cubic yard</u>
Item AX152455	Embankment in Place – per cubic yard

### REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
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ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft <sup>3</sup> (600 kN-m/m <sup>3</sup> ))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft <sup>3</sup> (2700 kN-m/m <sup>3</sup> ))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software
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Software

FAARFIELD	– FAA Rigid and Flexible Iterative Elastic Layered Design
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U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils
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**END OF ITEM P-152**