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CHANGE 12

DATE 3/5/81

ADVISORY CIRCULAR

CHANGE



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Washington, D.C.

Subject: Change 12 to STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS—
Revised to Comply with FAR Part 152

1. PURPOSE. Paragraph 5 of Section 30, Award and Execution of Contract, has been revised in accordance with the new bonding requirements of FAR Part 152. Paragraph 5 of Section 90, Payment for Extra and Force Account Work, has been revised to comply with FAR Part 152 which prohibits the cost-plus-a-percentage-of-cost method of contracting. Minor editorial changes have also been made.

The Change number and the date of changed material are carried at the top of each page. Changed material is indicated by asterisks in the margin.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
15-18	10/24/74	15-18	3/5/81
63-72	10/24/74	63-72	3/5/81

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SECTION 30 AWARD AND EXECUTION OF CONTRACT

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1. CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

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Until the award of a contract is made, the owner reserves the right to reject a bidder's proposal for any of the following reasons:

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(a) If the proposal is irregular as specified in the subsection titled IRREGULAR PROPOSALS of Section 20.

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(b) If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS of Section 20.

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In addition, until the award of a contract is made, the owner reserves the right to reject any or all proposals; waive technicalities, if such waiver is in the best interest of the owner and is in conformance with applicable State and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the owner's best interests.

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2. AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within 30 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

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Award of the contract shall be made by the owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the owner.

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For ADAP contracts, unless otherwise specified in this subsection, no award shall be made until the FAA has concurred in the sponsor's recommendation to make such award and has approved the sponsor's proposed contract to the extent that such concurrence and approval are required by Part 152 of the Federal Aviation Regulations.

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SECTION 30 AWARD AND EXECUTION OF CONTRACT

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3. CANCELLATION OF AWARD. The owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the owner in accordance with the subsection titled APPROVAL OF CONTRACT of this section.

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4. RETURN OF PROPOSAL GUARANTY. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the owner has made a comparison of bids as hereinbefore specified in the subsection titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the owner receives the contract bonds as specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section.

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5. REQUIREMENTS OF CONTRACT BONDS. At the time of the execution of the contract, the successful bidder shall furnish the owner a surety bond or bonds which have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

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 * Federal Aviation Regulations Part 152 provides that sponsors of ADAP contracts awarded in excess of \$100,000 should use local bonding policy and requirements provided that the FAA has made a determination that the Government's interest is adequately protected. If such a determination has not been made, the performance and payment bonds shall be in the full amount of the awarded contract. For ADAP contracts awarded in an amount of \$100,000 or less, the sponsor should specify bonding in accordance with local requirements.

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6. EXECUTION OF CONTRACT. The successful bidder shall sign(execute) the necessary agreements for entering into the contract and return such signed contract to the owner, along with the fully executed surety bond or bonds specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder. If the contract is mailed, special handling is recommended.

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7. APPROVAL OF CONTRACT. Upon receipt of the contract and 108
contract bond or bonds that have been executed by the successful 109
bidder, the owner shall complete the execution of the contract in 110
accordance with local laws or ordinances, and return the fully 112
executed contract to the Contractor. Delivery of the fully 113
executed contract to the Contractor shall constitute the owner's 114
approval to be bound by the successful bidder's proposal and the 115
terms of the contract. 115

8. FAILURE TO EXECUTE CONTRACT. Failure of the successful bidder 117
to execute the contract and furnish an acceptable surety bond or 118
bonds within the 15 calendar day period specified in the 119
subsection titled REQUIREMENTS OF CONTRACT BONDS of this section 120
shall be just cause for cancellation of the award and forfeiture 121
of the proposal guaranty, not as a penalty, but as liquidation of 123
damages to the owner. 123

+ + END OF SECTION 30 + + 124.3

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SECTION 90 MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the Engineer, or his/her authorized representatives, using United States Customary Units of Measurement or the International System of Units. 3
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The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. 8
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Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meter) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer. 14
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Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions. 22
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Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed. 26
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In computing volumes of excavation the average end area method or other acceptable methods will be used. 33
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The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches. 36
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The term "ton" will mean the short ton consisting of 2,000 pounds (907 kilograms) avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designated by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark. 41
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Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of 55
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such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

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When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

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Bituminous materials will be measured by the gallon (liter) or ton (kilogram). When measured by volume, such volumes will be measured at 60 degrees F (15 degrees C) or will be corrected to the volume at 60 degrees F (15 degrees C) using ASTM D1250 for asphalts or ASTM D633 for tars.

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Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

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When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

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Cement will be measured by the ton (kilogram) or hundredweight (kilogram).

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Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

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The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

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When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

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Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement

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authorizing such force account work as provided in the subsection 105
titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section. 106

When standard manufactured items are specified such as fence, 108
wire, plates, rolled shapes, pipe conduit, etc., and these items 114
are identified by gage, unit weight, section dimensions, etc., 117
such identification will be considered to be nominal weights or 118
dimensions. Unless more stringently controlled by tolerances in 119
cited specifications, manufacturing tolerances established by the 120
industries involved will be accepted. 121

Scales for weighing materials which are required to be 123
proportioned or measured and paid for by weight shall be 124
furnished, erected, and maintained by the Contractor, or be 127
certified permanently installed commercial scales. 127

Scales shall be accurate within one-half percent of the correct 129
weight throughout the range of use. The Contractor shall have 131
the scales checked under the observation of the inspector before 132
beginning work and at such other times as requested. The 133
intervals shall be uniform in spacing throughout the graduated or 133
marked length of the beam or dial and shall not exceed one-tenth 134
of 1 percent of the nominal rated capacity of the scale, but not 136
less than 1 pound (454 grams). The use of spring balances will 137
not be permitted. 137

Beams, dials, platforms, and other scale equipment shall be so 142
arranged that the operator and the inspector can safely and 143
conveniently view them. 143

Scale installations shall have available ten standard 50-pound 146
(2.3 kilogram) weights for testing the weighing equipment or 147
suitable weights and devices for other approved equipment. 147

Scales must be tested for accuracy and serviced before use at a 149
new site. Platform scales shall be installed and maintained with 150
the platform level and rigid bulkheads at each end. 151

Scales "overweighing" (indicating more than correct weight) will 153
not be permitted to operate, and all materials received 154
subsequent to the last previous correct weighing-accuracy test 155
will be reduced by the percentage of error in excess of one-half 156
of 1 percent. 156

In the event inspection reveals the scales have been 158
"underweighing" (indicating less than correct weight), they shall 159
be adjusted, and no additional payment to the Contractor will be 160
allowed for materials previously weighed and recorded. 161

All costs in connection with furnishing, installing, certifying, 165
testing, and maintaining scales; for furnishing check weights and 168

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scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

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When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

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2. SCOPE OF PAYMENT. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

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3. COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his/her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

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4. PAYMENT FOR OMITTED ITEMS. As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the owner. 221
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Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or nonperform such contract item. 228
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Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the owner. 234
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In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature and amount of such costs. 239
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5. PAYMENT FOR EXTRA FORCE ACCOUNT WORK. Extra work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit. 248
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(a) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided. 258
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(b) Comparison of Record. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives. 263
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(c) Statement. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows: 269
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(1) Name, classification, date, daily hours, total
hours, rate and extension for each laborer and foreman. 277
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(2) Designation, dates, daily hours, total hours,
rental rate, and extension for each unit of machinery and 283
equipment. 285
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(3) Quantities of materials, prices, and extensions. 289

(4) Transportation of materials. 291

(5) Cost of property damage, liability and workmen's 293
compensation insurance premiums, unemployment insurance 294
contributions, and social security tax. 295

Statements shall be accompanied and supported by a receipted 297
invoice for all materials used and transportation charges. 298
However, if materials used on the force account work are not 300
specifically purchased for such work but are taken from the 301
Contractor's stock, then in lieu of the invoices the Contractor 302
shall furnish an affidavit certifying that such materials were 302
taken from his/her stock, that the quantity claimed was actually 304
used, and that the price and transportation claimed represent the 305
actual cost to the Contractor. 306

6. PARTIAL PAYMENTS. Partial payments will be made at least once 308
each month as the work progresses. Said payments will be based 310
upon estimates prepared by the Engineer of the value of the work 311
performed and materials complete in place in accordance with the 312
contract, plans, and specifications. Such partial payments may 315
also include the delivered actual cost of those materials 316
stockpiled and stored in accordance with the subsection titled 316
PAYMENT FOR MATERIALS ON HAND of this section. 317

No partial payment will be made when the amount due the 319
Contractor since the last estimate amounts to less than five 320
hundred dollars. 320

From the total of the amount determined to be payable on a 322
partial payment, 10 percent of such total amount will be deducted 323
and retained by the owner until the final payment is made, except 325
as may be provided (at the Contractor's option) in the subsection 325
titled PAYMENT OF WITHHELD FUNDS of this section. The balance 327
(90 percent) of the amount payable, less all previous payments, 328
shall be certified for payment. Should the Contractor exercise 330
his/her option, as provided in the subsection titled PAYMENT OF 331
WITHHELD FUNDS of this section, no such 10 percent retainage 333
shall be deducted. 333

SECTION 90 MEASUREMENT AND PAYMENT

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When not less than 95 percent of the work has been completed the Engineer may, at his/her discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

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It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

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No partial payment shall bind the owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

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7. PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

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(a) The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

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(b) The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

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(c) The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

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(d) The Contractor has furnished the owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

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(e) The Contractor has furnished the owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at anytime prior to use in the work.

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It is understood and agreed that the transfer of title and the owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

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In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

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No partial payment will be made for stored or stockpiled living or perishable plant materials.

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The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

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8. PAYMENT OF WITHHELD FUNDS. At the Contractor's option, he/she may request that the owner accept (in lieu of the 10 percent retainage on partial payments described in the subsection titled PARTIAL PAYMENTS of this section) the Contractor's deposits in escrow under the following conditions:

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(a) The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the owner.

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(b) The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the owner and having a value not less than the 10 percent retainage that would otherwise be withheld from partial payment.

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(c) The Contractor shall enter into an escrow agreement satisfactory to the owner.

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(d) The Contractor shall obtain the written consent of the surety to such agreement.

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9. ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the

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Engineer shall resolve all disputes (if any) in the measurement 430
and computation of final quantities to be paid within 30 calendar 431
days of the Contractor's receipt of the Engineer's final 432
estimate. If, after such 30-day period, a dispute still exists, 435
the Contractor may approve the Engineer's estimate under protest 436
of the quantities in dispute, and such disputed quantities shall 437
be considered by the owner as a claim in accordance with the 438
subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 439
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After the Contractor has approved, or approved under protest, the 443
Engineer's final estimate, final payment will be processed based 444
on the entire sum, or the undisputed sum in case of approval 445
under protest, determined to be due the Contractor less all 446
previous payments and all amounts to be deducted under the 447
provisions of the contract. All prior partial estimates and 448
payments shall be subject to correction in the final estimate and 449
payment. 449

If the Contractor has filed a claim for additional compensation 451
under the provisions of the subsection titled CLAIMS FOR 452
ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of 453
this subsection, such claims will be considered by the owner in 454
accordance with local laws or ordinances. Upon final 456
adjudication of such claims, any additional payment determined to 457
be due the Contractor will be paid pursuant to a supplemental 458
final estimate. 458

+ + END OF SECTION 90 + + 459.3

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