

PART III

CONTRACT GENERAL PROVISIONS

SECTION 101 -- BIDDING REQUIREMENTS AND CONDITIONS

101.01 Prequalification of Bidders.

In order that the Director may establish the competency of those who propose to become Bidders, all intended Bidders must submit to the Department, pursuant to the Code of Ordinances of the City of Manchester, Chapter 20-1/2-6, on a form prescribed by the Department, a statement containing a complete report of the organizational structure, past record, current and recent projects, equipment owned, leased and/or available to such Bidder. In the event that any intended Bidder fails to submit a prequalification statement as prescribed above, the Director may refuse to supply such intended Bidder with plans, specifications, and proposals for any projects. Prequalification regulations may be obtained by prospective Bidders on application to the Director.

The Director may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work and the Bidder shall furnish to the Director all such information and data for this purpose as the Director may request. The Director reserves the right to reject any bid if the evidence submitted by or investigation of such Bidder fails to satisfy the Director that such Bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

101.02 Contents of Proposals.

Proposals will state the location and description of the contemplated constructions, will show the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items for which unit bid prices are invited. The proposal will state the contract time, the amount of the bid guaranty and the date, time and place of the opening of bids. The proposal will include a statement regarding anti-trust activities, collusion and restraint of free competitive bidding. The proposal will also include supplemental specifications, special provisions, and other requirements which are not contained in the standard specifications.

All papers bound with or attached to the proposal are considered a part thereof and must not be detached or altered when the bid is submitted, except for changes authorized in writing by the Department.

The plans, specifications and other documents designated in the proposal will be considered a part of the proposal, whether attached or not.

The prospective Bidder will be required to pay the Department the sum stated in the invitation for bids for each set of the plans.

101.03 Issuance of Proposals.

The Director reserves the right to deny a proposal to a prospective Bidder or

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disqualify a bidder for any of the following reasons:

- a) Unsatisfactory progress, or doing unsatisfactory work on projects already under contract at the time of requesting proposals, or contracts completed within the past five (5) years.
- b) Failure to pay all bills for labor and materials and damages to private property on former contracts, or to satisfactorily settle contracts in force at the time of Request for Proposal.
- c) Deceptive or fraudulent statements either on the prequalification form or at any hearing before the Prequalification Committee, or on any Bid Proposal request form.
- d) Failure to satisfy judgement relating to any contract.
- e) Failure to provide a response to any of the information required by the Prequalification Rules and Regulations.
- f) Unsatisfactory evidence that the applicant has the ability and/or capacity and/or skill to perform the contract or provide the service required.
- g) Unsatisfactory evidence, based upon either past performance and/or present capability of the applicant, that the applicant can perform the work or provide the service promptly, or within the time specified, without delay or interference.
- h) Unsatisfactory assurances of the character, integrity, reputation, judgement, experience or efficiency of the Bidder.
- i) Unsatisfactory quality of performance of previous contracts or services.
- j) Previous and/or existing non-compliance by the bidder with laws and ordinances relating to the contract or service.
- k) Unsatisfactory evidence of the sufficiency of the financial resources and ability of the Bidder to perform the work or provide the service.
- l) Unsatisfactory assurances of the quality, availability and adaptability of the supplies or contractual services to the particular use required.
- m) Unsatisfactory assurances of the ability of the Bidder to provide future maintenance and service for the use of the contract.

Prospective Bidders who have not been prequalified may be furnished a proposal marked as "Sample Proposal, Not for Bidding Purposes". Such sample proposals will not be accepted by the Director as a valid bid.

101.04 Interpretation of Quantities in the Bid Schedule.

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the contract. The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased or eliminated as hereinafter provided and no claim for loss of anticipated profits will be allowed due to such increase or decrease. The Director specifically reserves the right to delete any portion of the work if desirable to keep expenditures within available funds.

101.05 Examination of Plans, Specifications, Proposal and Site of Work.

The Bidder is expected to examine carefully the plans, standard specifications, proposal and site of the proposed work before submitting a bid. The submission of a bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposal. It will be assumed that the Bidder has also investigated and is satisfied with the sources of supply for all materials.

Whenever subsurface borings or other subsurface information obtained by the Department is available for a Bidder's inspection, it is understood that it has been obtained with reasonable care and recorded in good faith with reasonable interpretations placed on the data in determining the character of materials and conditions to be expected. The information is made available to the Bidder only in order that the Bidder may have access to the identical information available to the Department and is not intended as a substitute for personal investigations, interpretation and judgement of the Bidders.

The information shown on the plans concerning type and location of underground utilities is not guaranteed to be accurate or all inclusive. The Bidder is responsible for making his own determinations as to the type and location of underground utilities as may be necessary to avoid damage thereto.

It is expressly understood and agreed that the Department assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigation thus made, the records thereof or of the interpretations set forth therein or made by the Department in its use thereof. There is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations or records thereof are representative of those conditions existing throughout such areas or any part thereof or that unlooked for developments may not occur or that materials other than or in proportions different from those indicated, may not be encountered.

The word "rock" or the word "ledge" or the symbol for rock or ledge wherever used on the plans shall be interpreted to mean only that rock may exist at the indicated elevations.

No information derived from an inspection of records of investigations or compilation thereof made by the Department will in any way relieve the Bidder from any risk or from properly fulfilling the terms of the proposal.

No interpretations of the meaning of the plans, specifications or other contract documents will be made to any bidder orally. Every request for such interpretation should be in writing, addressed to the Department of Highways, 227 Maple Street, Manchester, New Hampshire 03103, and to be given consideration must be received at least six (6) days prior to the date fixed for opening bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications

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which, if issued, will be mailed by registered mail with "return receipt requested", or by 'fax', or 'e-mail' with a request for acknowledgment of receipt to all prospective bidders (at the respective addresses furnished for such purposes). Adequate notice shall be given to allow contractor sufficient time to adjust his bid (if necessary) before the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve any bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

101.06 Familiarity with Laws.

The Bidder is assumed to have made himself familiar with all Federal and State laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work and no plea of misunderstanding will be considered on account of ignorance thereof. If the Bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation, he shall forthwith report it to the Engineer in writing.

101.07 Preparation of Bids.

The Bidder shall submit his bid upon the forms furnished by the Department. The Bidder shall specify a unit price, both in words and figures, for each pay item for which a quantity is given and shall also show the products of the respective unit prices and quantities in the column provide for that purpose and the total amount of the bid obtained by adding the amounts of the several items. All the words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the Bidder on the bid schedule is to be altered, it should be crossed out in ink, the new unit price or lump sum bid entered above or below it and initiated by the Bidder, also in ink. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.

Bidders are expected to submit unit prices in dollars and cents. Unit prices extending more than 2 digits after the decimal will be used in computations and shown in the contract as converted to not more than 2 decimal digits, rounded as necessary, with \$0.005 or more shown as the next higher cent.

When an item in the proposal contains a choice to be made by the Bidder, the Bidder shall indicate his choice in accordance with the specifications for that particular item.

The Bidder's bid must be signed in ink by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture, by one or more officers of a corporation or by an agent of the Contractor legally qualified and acceptable to the Department. If the bid is made by an individual, his name and post office address must be shown; by a partnership, the name and post office address of each partnership member must be shown; as a joint venture, the name and post office address of each member or officer of the firms represented by the joint venture must be

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shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated and the names, titles and business address of the president, secretary and treasurer.

101.08 Irregular Bids.

Bids will be considered irregular and shall be rejected for, but not necessarily limited to, any of the following reasons:

a) If the bid is on a form other than that furnished by the Department, or if the form is altered or any part thereof is detached or incomplete.

b) If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the bid incomplete, indefinite or ambiguous as to its meaning.

c) If the Bidder adds any provisions reserving the right to accept or reject an award or to enter into a contract pursuant to an award.

This does not exclude a bid limiting the maximum gross amount of awards acceptable to any one Bidder at one bid letting, provided that any selection of awards will be made by the Department.

d) If the bid does not contain a unit price for each pay item listed except in the case of authorized optional pay items.

e) If the Department determines that any of the unit bid prices are significantly unbalanced to the potential detriment of the Department.

f) If the bid is not properly signed.

g) If the bid is not in ink or typed.

101.09 Bid Guaranty.

No bid will be considered unless accompanied by a bid guaranty in an amount not less than the amount indicated in the proposal made payable to the "City of Manchester, New Hampshire". If a bond is used by the Bidder, it shall be prepared as follows:

a) The bond shall be completed in a form acceptable to the Director, and

b) The bonding company issuing the bond shall be licensed to transact business in the State of New Hampshire.

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c) In the event that any irregularities are contained in the bid guaranty, the Bidder will have seven (7) calendar days from the time the bids are opened to correct the irregularities. If such irregularities are not corrected to the satisfaction of the Director, the bid will be rejected.

101.10 Delivery of Bids.

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, his address and the name of the project for which the bid is submitted. When sent by mail, the sealed envelope containing the proposal must be enclosed in another envelope and addressed to the Department at the address shown on the Invitation for Bids. All bids shall be received prior to the time and at the place specified in the invitation for bids. Bids received after the time for opening of bids will be returned to the Bidder unopened.

101.11 Withdrawal of Bids.

A Bidder will be permitted to withdraw his bid unopened after it has been submitted if such a request is received in writing prior to the time specified for opening bids. No bid may be withdrawn for a period of sixty (60) days following the bid opening.

101.12 Combination of Proposals. If the Departments so elects, proposals may be issued for projects in combination or separately so that bids may be submitted either on the combination or on separate units of the combination. The Director reserves the right to make awards on combination bids or separate bids to the best advantage of the City. No combination bids other than those specifically set up in the proposals by the Department, will be considered separate contracts and will be written for each individual project included in the combination.

101.13 Public Opening of Bids.

Bids will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

101.14 Disqualification of Bidders.

The Bidder shall be disqualified and his bid or bids rejected for, but not necessarily limited to, either of the following reasons:

a) More than one bid for the same work from an individual, firm or corporation under the same or different name.

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b) Collusion among Bidders. Participants in collusion will be disqualified as Bidders for any future work of the Department until any such participant shall have been reinstated as a qualified Bidder.

SECTION 102 -- AWARD AND EXECUTION OF CONTRACT

102.01 Consideration of Bids.

After the bids are opened and read, they will be computed on the basis of summation of the products of the quantities shown in the bid schedule by the unit bid prices. The results of such comparisons will be available to the public. In case of a discrepancy between the prices written in words and those written in figures, the prices written in words shall govern. In case of discrepancy between the total shown in the bid and that obtained by adding the products of the quantities of items and the unit bid prices, the latter shall govern. The right is reserved to reject any or all bids if, in the judgement of the Director, the best interests of the City will be promoted thereby.

102.02 Award of Contract.

Within 60 calendar days after the opening of bids, if a contract is to be awarded, the award will be made to the lowest responsible and qualified Bidder whose bid complies with all the requirements prescribed. The successful Bidder will be notified, by letter mailed to the address shown on his bid, that his bid has been accepted and that he has been awarded the contract.

102.03 Cancellation of Award.

The Director reserves the right to cancel the award of any contract before the execution of such contract without any liability against the Department.

102.04 Return of Bid Guaranty.

All bid guaranties, except those of the three lowest Bidders, will be returned within 15 calendar days of the bid opening.

The retained bid guaranties of the three lowest Bidders will be returned within 10 calendar days following the execution of a contract. A Contractor will not be released from its bidding obligations because of errors in the preparation of the bid without forfeiting the bid guaranty.

102.05 Requirement of Contract Bonds.

At the time of the execution of the contract, the successful Bidder shall furnish a performance bond guaranteeing the execution, faithful performance and completion of the work to be done under the contract, and a payment bond guaranteeing payment in full of all bills and accounts for materials and labor used in the work. Each of the bonds shall be in a sum equal to the full amount of the contract and shall meet the following requirements:

- a) The form of the bonds shall be as prescribed by the Director, and
- b) The bonding company issuing the bonds shall be licensed to transact business in the State of New Hampshire.

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In the event the bonding company fails or becomes financially insolvent, the Contractor shall, within 30 calendar days of such failure, or insolvency, file a new and sufficient bond in the amount designated by the Director.

102.06 Execution and Approval of Contract.

The successful Bidder shall furnish the required contract bonds, insurance certificates and, if a corporation, certificates of acknowledgment along with a resolution of the directors evidencing authority of the officer signing the contract to do so and sign the contract within 10 calendar days after the date of notice that the contract has been awarded. No contract shall be considered as effective until it has been fully executed by all of the parties to the contract.

102.07 Failure to Execute Contract.

Failure on the part of the Contractor to execute the contract and file acceptable bonds within 10 calendar days after the date of notice that the contract has been awarded shall be just cause for the cancellation of the award and the forfeiture of the bid guaranty which shall become the property of the City, not as a penalty, but in liquidation of damages sustained. The Director may then decide to award the contract to the next lowest responsible Bidder or readvertise the work.

SECTION 103 -- SCOPE OF WORK

103.01 Intent of Contract. The intent of the contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the contract.

103.02 Differing Site Conditions, Suspensions of Work and Significant Changes in the Character of Work.

(A) Differing Site Conditions.

(1) During the progress of work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

(2) Upon written notification, the Engineer will investigate the conditions and if he/she determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of his/her determination whether or not an adjustment in the contract is warranted.

(3) No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

(4) No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

(B) Suspensions of Work.

(1) If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

(2) Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers or subcontractors at any

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approved tier and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The Engineer will notify the Contractor of his/her determination whether or not an adjustment of the contract is warranted.

(3) No contract adjustment will be allowed unless the Contractor has submitted a request for adjustment within the time prescribed.

(4) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of the contract.

(5) The City may delay the beginning of the work, or any part thereof, if the necessary lands or rights-of-way for such work shall not have been obtained or if materials or equipment to be furnished by the City are not delivered. The Contractor shall have no claims for damages on account of such delay, but shall be entitled to so much additional time wherein to perform and complete the work as determined by the Engineer in writing.

(6) Should the City be prevented or enjoined from proceeding with work or from authorizing its prosecution either before or after its prosecution, by reason of any litigation, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, but time for completion of the work will be extended to such reasonable time as the City may determine will compensate for time lost by such delay with such determination to be set forth in writing.

(7) Delays in the work due to the absence of the Contractor or his duly authorized superintendent or foreman shall not constitute a reason for extension of time for completion.

(C) Significant Changes in Character of Work.

(1) The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the Surety, and the Contractor agrees to perform the work as altered.

(2) If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

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(3) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(4) The term "significant change" shall be construed to apply only to the following circumstances:

a) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or

b) When a major item of work is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

103.03 Extra Work.

Extra work shall be performed by the Contractor in accordance with the specifications and as directed and will be paid for as provided under 109.04.

When the contract provides for payment of certain work under extra work, no further order from the Engineer will be necessary for such work; otherwise, when the Engineer determines that extra work is to be performed, an extra work order will be issued.

103.04 Maintenance of Traffic.

The scope of this work will be described under 619. The Engineer, however, may direct special maintenance for the benefit of the travelling public. Such special maintenance will be paid for at contract prices or by extra work as determined and ordered by the Engineer.

When the maintenance of traffic is considered by the Department to be of minor significance, certain contracts may not show this work as a pay item. In such cases, the Contractor shall bear all expense of maintaining traffic over the section of street undergoing improvement and of construction and maintaining such approaches, crossings, intersections and other features as may be necessary, without direct compensation.

103.05 Rights In and Use of Materials Found on the Project.

Upon approval, the Contractor may use on the project such stone, gravel, sand or other material as may be found in the limits of excavation and which is not otherwise specifically reserved by the plans or specifications and payment will be made at the

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corresponding contract unit prices, both for the excavation of such materials and for the item for which the excavated material is used. No charge will be made against the Contractor for the materials found in the limits of excavation and so used. However, he shall replace at his own expense with other acceptable material all of that portion of the excavated material so removed and used which was intended for use in embankments, backfills, approaches or the like.

Without written authorization, the Contractor shall not excavate or remove any material from within the project location which is not within the grading limits indicated by the slope and grade lines. Material authorized to be removed outside the grading limits may be subject to compensation from the Contractor at the stipulated price in the contract or at an agreed price at the time of authorization.

It is expressly understood that the Contractor cannot make claim for damages or for anticipated profits on account of the expected use of any materials shown on the plans as existing and later found to be nonexistent or unfit for use.

Unless otherwise provided, the material from any existing old structures scheduled for demolition or removal may be used temporarily by the Contractor in the erection of the new structure. Such material shall not be modified or otherwise damaged without approval.

Unless otherwise specified or permitted, title to all structures found on the project shall remain vested in the City or other owner. All catch basin frames and grates, drop inlet frames and grates and manhole frames and covers, curbing, beam guardrail, guardrail fittings and pipe, unless otherwise specified or directed shall be carefully salvaged and stored within the limits of the project area. Unless specifically provided for in the contract, this work will not be paid for separately but shall be considered subsidiary.

103.06 Final Cleaning Up.

Before acceptance of the work, the Contractor shall remove from within the limits of the project all machinery, equipment, surplus materials, falsework, stumps, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. The Contractor shall clean up all plant and storage sites and all other areas used regardless of the project limits. The work prescribed herein will not be paid for separately but shall be considered as subsidiary.

103.07 Value Engineering Proposals by Contractor.

The intent of this specification is to share with the Contractor any cost savings generated on this contract as a result of a proposal or proposals offered by the Contractor and approved by the Department. The purpose is to encourage the use of the Contractor's ingenuity and experience in arriving at alternative, lower cost construction methods than those reflected in the contract documents by the sharing of savings resulting therefrom.

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The value engineering proposals contemplated are those that could produce a savings to the Department without, in the sole judgement of the Department, impairing essential functions and characteristics of the facility including but not limited to, service life, economy of operation, ease of maintenance, desired appearance and safety.

As a minimum, the following materials and information shall be submitted with each proposal, plus any additional information requested by the Department:

- a) A statement that the proposal is submitted as a Value Engineering Proposal.
- b) A description of the difference between the existing contract requirements and the proposed change and the comparative advantages and disadvantages of each including considerations of service life, economy of operations, ease of maintenance, desired appearance and safety.
- c) A complete set of plans and specifications showing the proposed revisions relative to the original contract features and requirements.
- d) A complete cost analysis indicating the final estimate costs and quantities to be replaced by the proposal, the new costs and quantities generated by the proposal and the cost effects of the proposed changes on operational, maintenance and other considerations.
- e) A statement of the time by which a change order adopting the proposal must be executed so as to obtain the maximum cost reduction during the remainder of the contract. This date must be selected to allow the Department ample time for review and processing a change order without affecting the Contractor's schedule. Should the Department find that insufficient time is available for review and processing, it may reject the proposal solely on such basis. If the Department fails to respond to the proposal by the date specified, the Contractor shall consider the proposal rejected and shall have no claim against the Department as a result thereof.
- f) A statement as to the effect the proposal will have on the time for completion of the contract.
- g) A description of any previous use or testing of the proposal on another Department project or elsewhere and the conditions and results therewith. If the proposal was previously submitted on another Department project, indicate the date, contract number and the action taken by the Department.

Value Engineering Proposals will be considered only when all of the following conditions are met:

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- a) The Contractor is cautioned not to base any bid prices on the anticipated approval of a Value Engineering Proposal and to recognize that such proposal may be rejected. In the event of rejection, the Contractor will be required to complete the contract in accordance with the plans and specifications at the prices bid.
- b) All proposals, approved or not approved by the Department for use in the contract, become the property of the Department and shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department shall have the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the proposal. The Department retains the right to utilize any accepted proposal or part thereof on any other or subsequent projects without any obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.
- c) If the Department already has under consideration certain revisions to the contract or has approved certain changes in specifications or standards for general use which are subsequently incorporated in a Value Engineering Proposal, the Department shall reject the Contractor's proposal and may proceed with such revisions without any obligation to the Contractor.
- d) The Contractor shall have no claim against the Department for any costs or delays due to the Department's rejection of a Value Engineering Proposal, including but not limited to, development costs, anticipated profits or increased material or labor costs resulting from delays in the review of such proposal.
- e) The Department shall be the sole judge as to whether a proposal qualifies for consideration and evaluation. It may reject any proposal that requires excessive time or costs for review, evaluation and/or investigations or which is not consistent with the Department's design policies and basic design criteria for the project.
- f) The Engineer may reject all or any portion of work performed pursuant to an approved Value Engineering Proposal if he determines that unsatisfactory results are being obtained. The Engineer may direct the removal of such rejected work and require the Contractor to proceed in accordance with the original contract requirements without reimbursement for any work performed under the proposal, or for its removal. Where modifications to the Value Engineering Proposal are approved in order to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the contract bid prices as if it were constructed in accordance with the original contract requirements. Such rejection or limitation of reimbursement shall not constitute the basis of any claim against the Department for delay or for any other costs.
- g) The proposal shall not be experimental in nature but shall have been proven to the Department's satisfaction under similar or acceptable conditions on another Department project or at another location acceptable to the Department.

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h) Proposals shall be considered only if equivalent options are not already provided in the contract documents.

i) The savings generated by the proposal must be of sufficient significance, in the sole judgement of the Department, to warrant review and processing.

j) A proposal changing the types and/or thickness of the pavement structure will not be considered.

k) If additional information is needed to evaluate proposals, this information must be provided in a timely manner. Failure to do so will result in rejection of the proposal. Such additional information could include, where design changes are proposed, results of field investigations and surveys, design computations and field change sheets.

If the Value Engineering Proposal is accepted by the Department, the changes and payment thereof will be authorized via a change order. Reimbursement to the Contractor will be made as follows:

a) The changes will be incorporated into the contract via changes in the quantities of unit bid items or by supplementary agreement as appropriate, in accordance with the specifications.

b) The costs of the revised work as determined from the aforementioned changes in quantities and any new items will be paid directly. In addition to such payment, the Department will pay to the Contractor, via a separate item, 50 percent of the savings to the Department as reflected by the difference between the above payment and the cost of the related construction required by the original contract plans and specifications computed at contract bid prices.

c) The Contractor's costs for development, design and implementation of the Value Engineering Proposal are not eligible for reimbursement.

d) The Contractor may submit Value Engineering Proposals for an approved subcontractor, provided that reimbursement is made by the Department to the Contractor. Subcontractors may not submit a proposal except through the Contractor.

SECTION 104 -- CONTROL OF THE WORK

104.01 Authority of Engineer.

All work shall be done under the supervision of the Engineer and to his satisfaction. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions which may arise as to the interpretation of the contract documents; and all questions as to the acceptable fulfillment of the contract on the part of the Contractor

The Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to failure of the Contractor to correct conditions unsafe for the general public; for failure to carry out provisions of the contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work; such as hazardous materials, extremes of wind, temperatures, or precipitation, either existing or forecasted with reasonable certainty to occur and which could be harmful to the scheduled operation; in order to comply with directives of the New Hampshire Department of Environmental Services, Division of Air Resources implementing the emergency episode procedure; or for any other condition or reason deemed to be in the public interest.

104.02 Plans and Working Drawings.

The approved plans on file in the office of the Department will show the location, detail and dimensions of the work.

These plans shall be supplemented by the Contractor with such additional working and detail drawings as may be found necessary to control adequately the work and its prosecution. The Contractor's drawings shall be furnished well in advance of the work to allow the Engineer time to review the drawings and will be prepared by a Professional Engineer if so noted in the contract or on the plans. When requested, the Contractor shall furnish his basic calculations.

Working drawings for steel structures shall consist of shop detail, erection and other working plans showing dimensions, sizes of material, details and other information necessary for the complete fabrication and erection of the metal work. Working drawings for concrete structures shall consist of such detailed plans as may reasonably be required for the successful prosecution of the work, and which are not included in the plans furnished by the Engineer. These may include plans for falsework, bracing, centering and form work; masonry layout diagrams; and diagrams for bent reinforcement. Manufacturer's engineering data for prefabricated material, including that for falsework and forms shall be furnished with each set of drawings.

The Contractor shall submit to the Engineer for approval 3 sets of any required preliminary detailed working drawings. Prior to the approval of the drawings, any work done or materials ordered for the structures involved shall be at the Contractor's risk. One set of the drawings will be returned to the Contractor approved or marked with

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corrections to be made. After approval has been given, the Contractor shall supply the Engineer with 5 sets of the revised detailed working drawings.

The Contractor may propose detours not shown on the plans. Should he desire written approval of major detours, he shall submit plans in triplicate which shall show the proposed location, layout and signing.

The contract price will include the cost of furnishing all working drawings.

The Engineer's approval of the Contractor's working drawings will not relieve the Contractor from responsibility for errors in dimensions or for incorrect fabrication and erection processes, or from responsibility to complete the contract work.

104.03 Conformity with Plans and Specifications.

All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions and material requirements shown on the plans or indicated in the specifications. If tolerances are specified, deviations beyond the specified limits will be unacceptable. When tolerance limits are not specified, and only single dimensions are indicated, such dimensions are to be regarded as nominal dimensions.

In the event the Engineer finds that the materials or the finished product in which the materials are used are not within reasonably close conformity with the plans and specifications but that reasonably acceptable work has been produced, he shall then make a determination if the work shall be accepted and remain in place. In this event, the Engineer will document the basis of acceptance by contract modification which will provide for an appropriate adjustment in the contract price for such work or materials as he deems necessary to conform to his determination based on engineering judgement.

In the event the Engineer finds that the work performed or that the materials or the finished product in which the materials are used are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

104.04 Coordination of Specifications.

The specifications, supplemental specifications, plans, special provisions and other special requirements and documents are essential parts of the contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions, unless obviously incorrect, will govern over scaled dimensions and the parts of the contract will prevail in the following descending order:

Special Contract Requirements *
Special Provisions
Plans
Supplemental Specifications
Standard Specifications

* Includes Prosecution of Work, Traffic
Control Plan and Special Attentions.

The Contractor shall take no advantage of any apparent error or omission in the plans or specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications. Where said correction of errors or omissions, except as provided below, adds to the amount of work to be done by the Contractor, compensation for such additional work shall be made under the provisions for extra work.

The fact that specific mention of a fixture or of any part of the work is omitted in the specifications, whether intentionally or otherwise, when the same is clearly shown or indicated on the plans, or is usually and customarily required to complete fully such work as specified, will not entitle the Contractor to consideration in the matter of any claim for extra compensation, but said fixtures or work or both, shall be installed or done the same as if called for both by the plans and by the specifications.

All work indicated on the plans and not mentioned in the specifications or vice versa, and all work and materials usual and necessary to make the work complete in all its parts, whether or not they are indicated on the plans or mentioned in the specifications, shall be furnished and executed the same as if they were called for by both the plans and specifications.

104.05 Cooperation by Contractor.

The Contractor will be supplied with a minimum of two sets of the contract, including plans and special provisions, one complete set of which the Contractor shall keep available on the work site at all times.

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof, and shall cooperate with the Engineer, his inspectors and other Contractors in every way possible.

Except as permitted, the Contractor shall have on the work his agent, a competent English-speaking Superintendent capable of reading and thoroughly experienced in the type of work being performed. The Superintendent shall have full authority to receive and execute orders or directions of the Engineer without delay and to promptly supply such

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materials, equipment, tools, labor and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet. The Superintendent shall be an owner of, or employee of the Contractor; and shall not be an owner, employee or have any affiliation with any firm which is acting as a subcontractor on the project.

Should the Contractor or any of his duly authorized representatives fail to cooperate to the extent that the integrity of the work is compromised, or the safe prosecution of the work is jeopardized, the Engineer may immediately suspend all work.

Any unsafe conditions will be corrected by the Contractor and the uncooperative person or persons shall be removed from the project before resumption of the work. The inability to rectify the situation may result in the termination of the contract in accordance with the provisions of 107.01.

The Contractor shall not sell and shall neither permit nor suffer the introduction or use of intoxicating liquors or other materials upon or about the work embraced in this contract.

104.06 Cooperation with Utilities.

The Contractor will notify all utility companies, pipe line owners or other parties affected and have all necessary adjustments of the public or private utility fixtures, pipe lines and other appurtenances within or adjacent to the limits of construction made as soon as practicable.

Water lines, gas lines, sewer lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals and all other utility appurtenances within the limits of the proposed construction which are to be relocated or adjusted are to be moved by the owners at their expense, except as otherwise provided for in the special provisions or as noted on the plans.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utility facilities in their present or relocated positions as shown on the plans and as evident on the site, and that no additional compensation will be allowed for any delays, inconvenience or damage sustained due to any interference from such utility facilities or the operation of moving them.

Attention is directed to the possible existence of underground facilities not known to the Department or in a location different from that which is shown on the plans or in the special provisions.

New Hampshire State Law, RSA 374 amended requires that anyone who excavates on public property must notify the Damage Prevention System referred to in RSA 374:49 at least 72 hours prior to starting work.

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The Contractor shall be responsible to notify the DIG- SAFE Call Center (Tel. No. 1-800-DIG-SAFE) at least 72 hours in advance of starting any excavation or erecting permanent construction signing. Saturdays, Sundays and legal holidays are not to be included in the computation of the required 72 hour notice.

The Contractor shall provide the Engineer's representative on the project with the date, time, numbers assigned and the name of the person answering the call at the DIG-SAFE Center which will be recorded on the project daily report.

Notice of intent to excavate cannot be made more than 30 calendar days prior to actual work. All utility facilities within the proposed work, including advance construction sign locations, should be identified and marked prior to construction. Suspension of the work for more than 30 calendar days at any time will require re-notification of the DIG-SAFE Center to ensure validity of markings and to protect interim utility construction.

The Contractor shall provide the Engineer's representative with sufficient lead time to allow the layout of advance permanent construction signs and excavation areas prior to the start of the 72 hour period required by DIG- SAFE.

The Contractor shall additionally notify municipal and privately owned utilities to identify, locate and mark their facilities separately from those to be located through the DIG-SAFE system.

Once located and marked, the Contractor shall maintain all utility markings and provide access to any and all installations to permit repairs and maintenance of service as needed.

104.07 Cooperation Between Contractors.

The Department reserves the right at any time to contract for and perform other or additional work on or near the work covered by the contract.

When separate contracts are let within the limits of any one project or on adjacent projects, each Contractor shall conduct his work so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors. Contractors working on the same project or adjacent projects shall cooperate with each other in a manner to serve the best interest of the City. In case of any unavoidable interference, the Engineer will determine priorities.

Each Contractor involved shall assume all liability, financial and otherwise, in connection with his contract and shall protect and save harmless the City from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of

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the same project or on adjacent projects. He shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

104.08 Construction Stakes, Lines and Grades.

The Contractor shall furnish stakes and do all survey and engineering required for establishing grades, lines, levels, dimensions and reference points for all trades. All lines and grade work not presently established at the site shall also be laid out by the Contractor in accordance with the plans and specifications, as directed by the Engineer.

The Contractor will be held responsible for the preservation of all stakes and marks, and if any of the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, they shall promptly be replaced by him as directed by the Engineer.

The Contractor shall compare all grades, lines, levels and dimensions as shown on the plans with actual site conditions and shall promptly report to the Engineer, before commencing work, any inconsistencies he may discover.

No separate payment will be made for the work described in this section.

104.09 Authority and Duties of Representatives of the Engineer.

The Engineer may appoint such assistants and representatives as he desires and they shall be granted full access to the work or to mills and plants in which work is being done for use under the contract. They have authority to give directions pertaining to the work or to the safety and convenience of the public, to approve or reject materials, to suspend any work that is being improperly or unsafely performed, to make measurements of quantities, to keep records of costs and otherwise represent the Engineer. The Contractor may, however, appeal their decision to the Engineer himself, but any work done pending settlement is at the Contractor's own risk.

Except as permitted and instructed by the Engineer, the assistants and representatives are not authorized to revoke, alter, enlarge, relax or release any requirements of the contract, nor to issue instructions contrary to the contract. They are not authorized to act as superintendents or foremen for the Contractor or to interfere with the management of the work by the Contractor. Any advice which the assistants or representatives of the Engineer may give the Contractor shall not be construed as binding the Engineer or the Department in any way, nor releasing the Contractor from the fulfillment of the terms of the contract.

All transactions between the Contractor and the representatives of the Engineer which are liable to protest or where payments are involved shall be made in writing.

104.10 Inspection of Work.

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All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

The Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed by the Engineer. After examination, the Contractor shall restore such portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed will be paid for as extra work. Should the work so exposed or examined prove unacceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized Department representative may be ordered removed and replaced at the Contractor's expense unless the Department representative failed to inspect after having been given reasonable notice that the work was to be performed.

When any unit of government or political subdivision, utility or any corporation is to accept or pay a portion of the cost of the work covered by the contract or has an interest in the work for other reasons, its respective representatives shall have the right to inspect the work. Such inspection shall in no sense make any unit of government or political subdivision, utility or any corporation a party to the contract and shall in no way interfere with the rights of either party hereunder.

The inspection of the work shall not constitute acceptance of same and shall not relieve the Contractor of any of his obligations to fulfill his contract.

104.11 Removal of Unacceptable and Unauthorized Work.

All work which does not conform to the requirements of the contract will be considered unacceptable unless otherwise determined acceptable under the provisions in 104.03.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner by and at the Contractor's expense, notwithstanding that such work and materials have been previously overlooked by the Engineer and accepted and estimated for payment.

Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, except as herein specified, or any extra work done without authority will be considered as unauthorized and will not be paid for under the

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provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply forthwith with any order made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the cost from any moneys due or to become due the Contractor.

104.12 Load and Speed Restrictions.

Gross loads shall not exceed the legal gross loads on any highway nor exceed the gross load limits posted on any bridge.

Where damage would be caused, the Contractor shall not operate equipment of such type, weight or so loaded as to cause damage to structures, to the roadway or to any other work. Hauling of materials over a base course or surface course under construction shall be limited as directed. The Contractor shall be responsible for all damage done by his equipment. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.

It is specifically called to the Contractor's attention that streets not on the State system are the property of the City and they are maintained and regulated by the authorities of the City. Since many of these streets are not constructed for the continuous passage of heavy construction loads and equipment, the Contractor shall, prior to subjecting such streets to such loads, secure the consent of the proper municipal authorities. During the use of these streets, he shall maintain them in a condition satisfactory to the Engineer and safer for the travelling public. After hauling operations are completed, he shall repair, to the satisfaction of the Engineer, all damage incurred by his use of these streets.

104.13 Maintenance During Construction.

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces, to the end that the work and the work area are kept in satisfactory condition at all times.

The Contractor shall take every reasonable precaution against spillage of construction materials on existing highways, streets and bridges. The Contractor's attention is called to "Spillage of Material" under 106.01. If spillage does occur, the Contractor shall remove such spillage immediately after its occurrence.

Maintenance shall generally include but not be limited to cleaning and maintenance of erosion control, drainage and sewer structures and limiting the accumulation of debris on the work site.

The Contractor shall provide adequate measures to prevent dust from constituting a nuisance to abutters by wetting disturbed earth surfaces or by use of calcium chloride or other approved palliatives.

All cost of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various pay items and the Contractor will not be paid an additional amount for such work.

104.14 Failure to Maintain the Work.

If the Contractor, at any time, fails to comply with the provisions of 104.13, the Engineer may direct the Contractor to comply with the required maintenance provisions. If the Contractor fails to remedy unsatisfactory maintenance within the time specified in any order, the Engineer may immediately proceed to maintain the project, and the entire cost of this maintenance will be deducted from money due or to become due the Contractor on his contract.

104.15 Acceptance.

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection. If all construction provided for and contemplated by the contract is found completed to his satisfaction, this inspection shall constitute the final inspection and the Engineer will make the final acceptance and notify the Contractor and his surety in writing of this acceptance as of the date of the final inspection. Such final acceptance shall be conditional upon the subsequent remedying of defects which may become manifest within a period of twelve (12) months from date of acceptance.

If the inspection discloses any unsatisfactory work the Engineer will give the Contractor the necessary instructions for correction of such work and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the Engineer will make final acceptance and notify the Contractor and his surety in writing of his acceptance as of the date of final inspection. Such final acceptance shall also be conditional upon the subsequent remedying of defects which may become manifest within a period of twelve (12) months from date of acceptance.

Twelve months after the date of the certification of acceptance or as soon thereafter as practicable, the Engineer shall make a re-inspection of the work or cause the same to be made. If said work shall be found satisfactory and the work not to have deteriorated through defects of workmanship or material, then the Engineer shall certify the release of the guarantee. Such certification shall be a pre-requisite to the release of the surety on the Contract Bond. If, however, the re-inspection discloses defects due to the non-fulfilment of this contract or non-compliance with its requirements, the Engineer shall so notify the

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Contractor in writing. There- upon, the Contractor shall, at his own expense, make good all defects of workmanship and materials which shall be a pre- requisite to the release of the guarantee and to the release of the surety on the Contract Bond. If, however, the Contractor shall, after due notice, refuse or neglect to make good the defects to the satisfaction of the Engineer, the Director may proceed in the manner prescribed in 107.10.

104.16 Claims for Adjustment.

If the Contractor deems that additional compensation is due him for work or material not clearly specified in the contract, or not ordered as extra work, the Contractor shall notify the Engineer, in writing, of his intention to make claim for such additional compensation before he begins the work on which he bases the claim.

If such notification is not given and the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact the Engineer has kept account of the cost as aforesaid, shall not, in any way, be construed as proving or substantiating the validity of the claim. if the claim , after consideration by the Engineer, is found to be just, it will be paid as extra work, as provided herein for force account work. Nothing in this section shall be construed as establishing any claim contrary to the terms of 104.02.

SECTION 105 -- CONTROL OF MATERIAL

105.01 Source of Supply and Quality Requirements.

All materials used shall meet all quality requirements of the contract. In order to expedite the inspection and testing of materials, the Contractor shall notify the Engineer of the proposed sources of materials prior to delivery. At the option of the Engineer, material may be approved at the source of supply before delivery is started. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources. No material which, after approval, has in any way become unfit for use shall be used in the work. All materials shall be new unless otherwise specifically prescribed in the contract documents.

Nothing in the contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the work or the soil but all such materials shall, upon being so attached or affixed, become the property of the City.

105.02 Samples, Tests, Cited Specifications.

All materials and products proposed to be used in the construction shall be inspected, sampled, tested and approved by the Engineer or accepted by a Certificate of Compliance from the Contractor as specified in 105.03. The testing laboratory will be selected by the Engineer. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise specified, all testing of materials shall be paid for by the Contractor who will be reimbursed based on paid invoices. When work already in place is disturbed for the purpose of testing and the tests show materials or workmanship to be defective, all costs for testing and repair of the work shall be borne by the Contractor.

All samples and all testing and laboratory methods shall be in accordance with the methods prescribed by the availability pertinent publications of the AASHTO, ASTM or FSS, unless other standard methods are designated, except that the Engineer reserves the right to make use of any information or method of testing to determine the quality of material. With respect to all the above specifications, whenever specifications and serial numbers are stipulated, unless specified dates are indicated, the references shall be construed to be the standard, interim or tentative specifications and serial numbers of the pertinent body as amended to date of Invitation for Bids. Samples for testing purposes shall be furnished by the Contractor at no cost to the Department.

Testing will only be done when ordered by the Engineer.

All materials being used are subject to inspection, test or rejection at any time.

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Random samples of materials or completed work may be taken as checks on the control sampling and testing to determine reasonable compliance with the specifications at any time prior to final acceptance of the work, either while any phase of the work is in progress or after it has been completed. The extent and locations of such random sampling will be as designated by the Engineer. Copies of all tests will be furnished to the Contractor's representatives when requested.

In all AASHTO or ASTM specifications, the sections entitled "Inspection" shall be amended to provide that test of materials may be made in any Laboratory as defined in 101.01.

All sieves shall conform to the requirements of the AASHTO M 92 and shall be square hole wire cloth sieves.

When sampling and testing of seeds is required, sampling and testing methods shall be as prescribed in the Rules and Regulations established in accordance with RSA 433.

105.03 Certificates of Compliance.

Prior to, or at the time of field delivery, if materials are to be permanently incorporated in the work for which there is no prescribed schedule of testing by the Engineer, the Contractor shall submit three (3) copies of a certificate of compliance for all such manufactured material. The certificate shall show the following:

- a) Date of certification.
- b) Description of material supplied.
- c) Name of the Contractor to whom the material is supplied.
- d) Project name and numbers to which the material is consigned.
- e) Contract item number and contract item name.
- f) Name of Manufacturer and/or Supplier.
- g) The material meets the requirements of the pertinent specification required by the contract.
- h) That records will be maintained for the defined 3 year period.
- i) Signature of a person having legal authority to bind the originator of the certificate.

Certificates of compliance submitted from either the manufacturer, the supplier or the Contractor, in the format as prescribed (see sample that follows), will be accepted. All documentation for said certificates must be maintained by the originator of the certificate for a period of not less than three years from the date of acceptance of the project.

Certificates of compliance covering more than one type of material or item will be acceptable if a listing is made of the item number, name of item, manufacturer and/or supplier for each material covered.

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Materials listed in the above certificates may be subject to random sampling and testing by the Engineer. Certified materials which fail to meet the specification requirement will not be accepted.

The following is a list of materials which require certificates of compliance. This list is not all-inclusive. Certain special materials not commonly used on all projects will also require certificates.

Bearing Pads
Bearing Assemblies
Bridge Elastomeric Expansion Devices
Bridge Railing and Hardware
Bituminous Materials
Castings: Grates, Frames and Covers
Concrete: Curing, Waterproofing, Sealing Agents and Admixtures
Concrete: Blocks, Precast Sections, Light Pole Bases and Bounds
Culverts, Underdrains, Structural Plate Pipe
Delineators
Fence Materials: Posts, Fabric and Hardware
Geotextiles
Guardrail: Beam Rail, Cable, Posts and Fittings
Joint Materials: Cork, etc.
Luminaires and Supports
Matting for Erosion Control
Membrane Waterproofing
Paint
Pavement Markers: Tapes, etc.
Piles: Steel, Timber, Treated Timber and Permanent Steel
Sheeting
Pipe: Water, Sewer, Drainage and Accessories
Shear Connectors
Sign Materials: Posts, Trusses, Fasteners, Sheeting and Panels
Steel: Reinforcing Bars and Mesh, Minor Structural and Structural Steel
Traffic Signals and Equipment
Utility: Conduits and Pull Boxes
Waterstops: Rubber, Polyvinyl Chloride, Copper
Witness Markers

Supplementing the above certificates, upon request, the Engineer shall be furnished with a copy of the manufacturer's certificate of materials showing the physical properties, chemical composition, methods of testing and other relevant data.

105.04 Plant Inspection.

The Engineer may undertake the inspection of materials at the source. Manufacturing plants may be inspected periodically for compliance with specified manufacturing

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methods and materials samples will be obtained for laboratory testing for compliance with materials quality requirements. This may be the basis for acceptance of manufactured lots as to quality.

In the event plant inspection is undertaken, the following conditions shall be met:

- a) The Engineer shall have cooperation and assistance of the Contractor and the producer of the materials.
- b) The Engineer shall have full entry at all times to such parts of the plant as may concern the manufacture or production of the materials being furnished.
- c) If required, the Contractor shall arrange for an approved building for the use of the Engineer; such building to be located conveniently near the plant, independent of any building being used by the material producer, in which to house and use the equipment necessary to carry on the required tests.
- d) Adequate safety measures shall be provided and maintained.

105.05 Acceptance of Manufactured Materials.

It is understood that the Department reserves the right to retest all materials that have been tested and approved at the source of supply prior to incorporation into the work and to reject all materials which, when retested, do not meet the requirements of these specifications or those established for the specific project.

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Sample Certificate of Compliance

ORGANIZATION LETTERHEAD

Date _____

WE HEREBY CERTIFY
THAT

Description, Kind of material or Trade Name

Furnished to _____

Contractor (Prime or Subcontractor)

For Use on _____

Project Name

Project Number

Used for Item
Number*

Name of Item

Manufactured
by

Supplied by

MEETS THE REQUIREMENTS OF THE PERTINENT PROJECT PLANS,
SPECIAL PROVISIONS, AND SPECIFICATIONS OF THE MANCHESTER, NH
DEPARTMENT OF HIGHWAYS IN ALL RESPECTS. PROCESSING,
PRODUCT TESTING AND INSPECTION CONTROL OF RAW MATERIALS
ARE IN CONFORMANCE WITH ALL APPLICABLE SPECIFICATION,
DRAWINGS AND/OR STANDARDS OF ALL ARTICLES FURNISHED.

All records and documents pertinent to this certificate and not submitted
herewith will be maintained available by the undersigned for a period of not less
than three years from the date of acceptance of the project.

(Manufactured, Supplier or Contractor)

Signed by _____

(Officer of Organization)

Title _____

* For more than one item, list each Item Number, name of Item, Manufacture
and/or Supplier.

105.06 Storage of Materials.

Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Approved portions of the project area may be used for storage purposes and for the placing of the Contractor's plant and equipment but any additional space required therefore must be provided by the Contractor at his expense. Private property shall not be used for storage purposes without written permission of the owner or lessee and if requested, copies of such written permission shall be furnished to the Engineer. All storage sites shall be restored to their original condition by the Contractor at his expense.

105.07 Handling Materials.

All materials shall be handled in such manner as to preserve their quality and fitness for the work.

105.08 Unacceptable Materials.

All materials not conforming to the requirements of the specifications shall be considered as unacceptable and all such materials will be rejected and shall be removed immediately from the site of the work unless otherwise instructed by the Engineer. Rejected material shall not be used until the defects have been corrected and the material is approved by the Engineer. Should the Contractor fail to remove defective materials within the time indicated in writing, the Engineer shall have authority to cause the materials to be removed at the Contractor's expense.

105.09 Alternates, Substitutions and Contractor's Options.

Whenever the Plans and Specifications, any item of equipment or material is designated by reference to a particular brand, manufacturer or trade name, it is understood that an approved equal product, acceptable to the Engineer may be substituted by the Bidder or Contractor. In the event of acceptance of any alternate or substitution, it shall be the responsibility of the Contractor to coordinate such alternate or substitute items with all other items to be furnished to assure the proper fitting together of all items. Any additional cost incident to the coordination and/or fitting together of alternate or substitute items shall be borne by the Contractor at no extra cost to the Owner. Similar responsibility applies to items which are left to the Contractor's option.

105.10 Disposal of Surplus Waste Materials.

When practicable and whenever directed, surplus and waste material shall be disposed of by flattening slopes or for other grading with the project. When specified on the plans or

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ordered, surplus material shall be hauled off the project. Such material shall be placed in accordance with the appropriate specification. In case it is impossible to dispose of all the surplus and waste material in the manner described above and when the contract does not contain the item of embankment-in-place, the remainder shall be disposed of as directed or as approved. It shall be the Contractor's responsibility to secure disposal areas for surplus and waste materials. Disposal Agreements, as provided by the Department, for such areas must be submitted to the Engineer for approval. The following form shall be completed and submitted for each disposal area.

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DISPOSAL AGREEMENT

(This does not apply to disposal areas
operated by a public agency)

Project Name _____ Number _____

Owner of Property _____ Location _____

As specified in 203.3.9.6, this agreement is required to be completed and submitted for approval when the Contractor obtains permission from the landowner to dispose of waste materials on his property.

This form sets forth the conditions under which the Department will approve the Contractor to dispose of waste material on the property of the above landowner.

The Owner and the Contractor, by signing below, acknowledge and agree to the following specifications:

- 1) Other than under the conditions of this instrument, the Department is not a party to any agreement or contract between the Owner and Contractor.
- 2) All wood less than 5 inches in diameter and not salvaged for firewood shall be chipped. Burying of brush shall not be permitted. Stumps, roots and rotten wood may be buried at approved sites on or off the project. Approved sites shall be a minimum of 4 feet above the seasonal high groundwater table; and have a minimum of 18 inches of clean fill cover material graded and shaped to present a pleasing appearance. Approval of the proposed disposal area will be contingent upon agreement by the Contractor and the property owner to leave the area in such shape that it will blend with the surrounding terrain and that erosion will be kept to the minimum. Without special permission, slopes shall not be left steeper than 3:1. No disposal area shall be left in such condition that erosion after completion of the work might result in water pollution by silt or other deleterious substances. Areas shall be left in such shape and condition that material will not wash to block or obstruct drainage ways. If holes caused by settlement appear, they shall be filled as directed.

Unless otherwise ordered, disposal areas shall be covered with 6 inches of material capable of supporting vegetation and either fertilized and seeded with grass seed or planted with seedlings. Grass seed used shall be slope seed as specified in 644. Seedlings shall be set out in accordance with accepted horticultural practices as directed.

Unless permission is given to preserve access roads to disposal areas adjacent to

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highways, such roads shall be obliterated.

3) The contract requirements as to disposal of unwanted material from the roadway excavation are similar to those in section (2) above except that the minimum depth of cover and the height above seasonal high water is not specified and slopes shall not be left steeper than 2:1.

4) Approval by the Engineer to open and operate a disposal area will terminate at the completion of the project.

It is hereby agreed among the Owner, the Contractor and the Engineer that this disposal area will be finished in accordance with the above specifications as well as any pertinent local, State or Federal regulations. Indicated after the box checked below is the landscaping treatment to be performed in order for the area to be acceptable to the Department:

☐ The entire area is to be fertilized and seeded.

☐ The entire area is to be planted and seeded.

☐ Part of the area is to be seeded and the remainder planted with seedlings as agreed below.

Seedlings shall be _____
(Age or size, species, variety)

planted 8 feet c-c or _____
(Spacing)

Any additional landscaping work to be done and any other pertinent information which is desired to be a part of the official records may be shown here:

The Contractor's attention is directed to RSA 483-A, the requirements of which must be fulfilled if this disposal area involves filling of wetlands. Furthermore, the Contractor's attention is directed to RSA 149:8-a, the provisions of which must be fulfilled if this

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operation involves filling on the border of the surface waters of the state or will significantly alter the characteristics of natural runoff or create an unnatural runoff; and RSA 149-M if the Contractor intends to dispose of solid waste including stumps. The Contractor's attention is also directed to Sections 9 and 10 of the River and Harbor Act of 1899, and Section 404 of the Clean Water Act. Compliance may require a permit for work in or over "navigable waters of the U.S.", or material placed in "waters of the U.S." including wetlands.

_____ Signature of owner Date		_____ Name(s) or Signature(s) of Joint Owner(s)
_____ Street		_____ Street
_____ Town		_____ Town
_____ Contractor		Approved as to Landscaping Provisions:
_____ By (Signature) Date		_____ Project Engineer Date

If joint owners are involved, the Owner signing should give all other names and addresses. Separate forms should be filed in connection with adjacent owners.

SECTION 106 -- LEGAL RELATIONS & RESPONSIBILITY TO PUBLIC

106.01 Laws to be Observed.

The Contractor shall keep fully informed of all Federal and State laws, all local laws, ordinances and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the work. The contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor, the subcontractors, suppliers of materials or services, or others engaged by the Contractor, or the employees of any of them. If any discrepancy or inconsistency is discovered between the contract documents and any law, ordinance, regulation, order or decree, the Contractor shall immediately report the same to the Engineer in writing.

Each and every provision of law and clause required by law to be inserted in the contract shall be deemed to be inserted and the contract shall be read and enforced as though it were included and if through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon the application of either party, the contract shall forthwith be physically amended to make such insertion.

The Contractor shall take out and maintain during the life of the contract Workmen's Compensation Insurance for all of his employees employed at the site of the project and in case any work is sublet the Contractor shall require the subcontractor, similarly, to provide Workman's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case of any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Workman's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate insurance for the protection of his employees not otherwise protected.

The Contractor shall be and remain an independent contractor with respect to all services performed and shall accept full and exclusive liability for the payment of any and all contributions or taxes for social security, unemployment insurance or old-age retirement benefits, annuities now or hereafter imposed, or other remuneration paid to persons employed by the Contractor on work performed under the terms of the contract and shall obey all lawful rules and regulations and meet all lawful requirements which are now or hereafter may be issued or promulgated under said respective laws by any duly authorized State or Federal Officials. The Contractor shall also indemnify and save harmless the City of Manchester from such contributions or taxes or liability therefore.

Except for work done under items in the contract, work prescribed herein will not be paid for separately but will be considered subsidiary.

The Contractor's attention is further called to RSA 281-A: 18 which reads in part:

281-A:18 Contractor's Liability for Subcontractors. A contractor who subcontracts all or any part of a contract shall bear the liability of the subcontractor of that contract for the payment of compensation under this chapter to the employees of the subcontractor, unless the subcontractor has secured the payment of compensation as provided for in this chapter. Any contractor who shall become liable for compensation under this section may recover the amount of the compensation paid and necessary expenses from the subcontractor. ..."

The Contractor's attention is further called to RSA 266:72 which reads in part:

266:72 Spillage of Material.

- I. No vehicle shall be driven or moved on any way unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, sifting, leaking or otherwise escaping therefrom, except that sand may be dropped for the purpose of securing traction, or water or other substance may be sprinkled on a way in cleaning or maintaining such way.
- II. No person shall operate on any way any vehicle with any load unless said load and any covering thereon is securely fastened so as to prevent said covering or load from becoming loose, detached or in any manner a hazard to other users of the way. Without limiting the foregoing provision, no person shall drive on any way any open vehicle loaded with earth, sand, asphalt, stone, gravel or other particulate substance unless said vehicle is equipped with and said load is covered and secured by a close-fitting tarpaulin or similar covering which. prevents the escape of any substance from said load onto the way.
- III. Any person who violates the provision of this section shall be guilty of a violation if a natural person, or guilty of a misdemeanor if any other person. Any person shall be liable to the state or town for any damage done to the way by spillage. IV. The provisions of paragraphs I, II, II-a, and III of this section shall not apply to a local farmer transporting his own farm products or materials incidental to his farming operations where such transporting requires incidental use of a way provided that such farmer shall not thereby be relieved of his duty to exercise reasonable care in . carrying on such operations. V. The provisions of paragraph II and II-a shall not apply to :
 - (a) The operation of highway building equipment as defined in RSA 259:42 .and motor vehicles used in the construction of highways provided that such equipment or motor vehicle is used within a highway construction zone as prescribed by .the commissioner, public works and highways, provided that the driver of any such vehicle shall not thereby be relieved of his duty to exercise reasonable care;
 - (b) The operation of municipal and state highway maintenance equipment;
 - (c) The driving of any vehicle on a way at speeds of less than 30 miles per hour." (50 km/h)

Projects in the State are within watersheds under the jurisdiction of the New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division .

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Applicable regulations of said Division require the Contractor to take extraordinary and sufficient precautions to prevent the runoff of fuels, oils, bitumens, calcium chloride or other polluting materials harmful to humans, fish or other life, into the water supplies and surface waters of the State.

Unless otherwise permitted by the New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division, control measures, in the absence of other locally established limitations, must be adequate to assure that turbidity in the receiving water due to the runoff of silt and clay will not be increased to more than ten (10) nephelometric turbidity units (n.t.u.) in waters used for public water supply or used for spawning and nursery of trout, salmon or other game or forage fish. Unless permitted by the Division, in surface waters used for other purposes, turbidity must not exceed 25 n.t.u. or the normal for the conditions prevailing, if the conditions prevailing exceed 25 n.t.u.

Proper planning and scheduling of construction operations are major factors in controlling erosion. Construction of drainage facilities and performance of other contract work which will contribute to the control of erosion and sedimentation shall be carried out concurrently with earthwork operations or as soon thereafter as practicable. Where there is a high potential for erosion and subsequent water pollution, the duration of the exposure of the uncompleted construction to the elements shall be kept to a minimum. Fine material placed or exposed during the work shall be so handled and treated as to minimize the possibility of its reaching any stream or water supply. Diversion channels, dikes, sediment traps and any other effective measures may be used. Where applicable and unless otherwise permitted where an alternate procedure would be mutually acceptable, before water shall be allowed to run into any ditch or channel, the waterway shall be prepared with permanent erosion control measures so that the waterway will be safe against erosion. Prior to beginning the work, the Contractor shall submit a schedule of operations indicating the special precautions which are proposed to control erosion.

Special precautions shall be taken in the use of construction equipment to minimize erosion. Wheel tracks shall not be left where erosion might begin. Wherever crossing of live streams is necessary, temporary culverts or bridges shall be constructed to allow equipment to cross. Fording of streams shall not be permitted unless approved by the Engineer. Disturbance of lands and waters that are outside the limits of the construction as staked will be prohibited except as may be found necessary and ordered.

All waterways shall be cleared as soon as practicable of falsework, piling, debris or other obstructions placed during construction operations and not a part of the finished work.

Prior to suspension of construction operations for appreciable lengths of time, the Contractor shall shape the earthwork in a manner that will permit storm runoff with a minimum of erosion. Temporary erosion and sediment control measures such as berms, dikes, slope drains or sedimentation basins shall be provided and maintained until permanent drainage facilities and erosion control features have been completed and are operative.

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The Contractor's attention is called to RSA 149:8-a Dredging, which states:

In order to prevent the dissemination of destructive insects which may be harbored by materials such as plants, soils and construction equipment, it is required that such articles will be moved in compliance with all Federal and State regulations which govern the movement of regulated articles from those areas under quarantine.

Complete information may be secured from State and Federal Plant Pest Control Officials.

The Contractor shall also protect the atmosphere from particulate and gaseous pollutants in conformance with regulations promulgated by the New Hampshire Department of Environmental Services, Division of Air Resources.

The Contractor's attention is called to New Hampshire Code of Administrative Rules: CHAPTER Air 1000 Prevention, Abatement and Control of Open Source Air Pollution; Part Air 1001, Open Burning which reads in part;

”1001.03 Agency Authorization for Certain Open Burning.

(1) Commercial burning of brush, slash, tree cuttings, not over five inches in diameter where no other suitable method such as chipping can be utilized. This includes, but is not limited to, land clearing for developments, rights-of- ways, roads, etc.;

(2) Burning of combustible construction material resulting from the demolition of buildings, originating from within the state, providing such burning is done in a specified area approved by the agency and state and local fire officials;

The Division of Air Resources may order unauthorized burning to cease and may order authorized burning creating a nuisance to cease. The order may be issued directly to the Contractor or to the Contractor through the Engineer.”

106.02 Permits, Licenses and Taxes.

The Contractor shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of the work.

The attention of the Bidder is called to RSA 293A, Business Corporations, which, among other provisions, requires the payment of a fee for the record of organization and an annual renewal fee; to RSA 305-A, Registration of Foreign Partnerships, which, among other provisions, requires that every foreign partnership desiring to do business in this State shall pay a registration fee and an annual maintenance fee; and to RSA 349, Trade Names, which, among other provisions, requires, with certain exceptions, that every sole proprietor doing business in this State shall register the trade name of such business and

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that every person, proprietorship, partnership or association as defined above, engaged in the conduct of any business, enterprise, venture or activity within the State under a trade name, firm or style shall, subject to limitations, file in the office of the Secretary of State a certificate signed and sworn to by such person or proprietorship or by members of such partnership or association stating the name under which the business is to be conducted, the principal place of said business, and a brief description of the kind of business to be carried on, with the names and addresses of the principal parties engaged therein. Said registration shall further state the date of organization of said business and any limitation of time after which said business shall be no longer conducted. A recording fee, good for 10 years, is required for the above registration and issuance of a certificate.

The above fees are payable to the Secretary of State, who upon request, will supply further information and the required forms.

Bidders with the word "Engineer" or any form of such word in the name of their business should review RSA 319- A:20.

The Contractor's attention is further called to RSA 80:7, RSA 80:7a, RSA 80:7b and RSA 80:7c which read:

"80:7 Contractors' Taxes. Whenever any person, firm or corporation enters into a contract or agreement with the state or any political subdivision thereof, it shall be a term or condition of such contract that the state or such political subdivision shall withhold or retain from the contract price provided for in such contract such sum or sums as will secure the payment of the taxes levied and assessed against the property of such contractor or against the property for which such contractor may be liable for the payment of taxes thereon, until such taxes are paid by such contractor, or are authorized paid by him from the sums so withheld, provided the collector of taxes or other person responsible for the collection of such taxes notifies the treasurer as aforesaid until the expiration of a period of ten days after the collector or other person responsible for the collection of the taxes has presented or set by first class mail, postage prepaid, addressed to the last known address of such contractor a tax bill, or a duplicate or copy of the tax bill presented or sent to a subcontractor or lessee for the payment of whose taxes said contractor is liable together with a notation to said contractor stating therein a date certain when said collector or other person responsible for the collection of such taxes will notify the treasurer as aforesaid. If the taxes so assessed are not paid by the person, firm or corporation liable therefore by December first of the year of assessment, the treasurer, upon notice from the collector of taxes that the taxes remain unpaid, shall pay over the amounts withheld to the collector and take his receipt therefore which shall be full and complete discharge of the treasurer from any further liability for the sum so withheld. If, on December first, the firm or corporation is not entitled to sufficient sums under the contract from which the treasurer can withhold the amount of taxes due, the treasurer as

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soon thereafter as sufficient sums are available for the purpose shall immediately pay over to the collector the sums so withheld. If the person, firm or corporation shall pay to the collector the taxes for which he or it is liable after notice to withhold by the collector to the treasurer, the collector shall immediately notify the treasurer so withholding, and the sum so withheld shall be paid to the person, firm or corporation, if otherwise due.

"80:7-a Subcontractors' Taxes. Whenever a person, firm or corporation enters into a contract or agreement with the state or any political subdivision thereof and such contractor employs a subcontractor to perform any of the work contemplated by such contract or agreement, it shall be a stated term or condition of such contract, that said contractor will be liable for the payment of any taxes assessed in the name of and upon the property of the subcontractor, used by said subcontractor in the performance of said sub-contract if assessed while said contract is being performed, to the extent of any sum or sums that may be due from the contractor has been notified by the collector of taxes in writing that payment of said taxes has been demanded of said subcontractor but said subcontractor has failed, neglected or refused to pay the same. Said contractor may retain from the contract price the amount for which he is liable hereunder. The amount of the taxes for which the said contractor may be liable hereunder may be withheld or retained from the contract price under the provisions of RSA 80:7.

"80:7-b User's Taxes. Whenever a person, firm or corporation enters into a contract agreement with the state or any political subdivision thereof and such contractor has in his possession and uses any taxable property owned by another upon the job to be performed under the contract or agreement, it shall be a stated term or condition of such contract that the contractor having such property in his possession shall be liable for the amount of taxes assessed against such property in the name of the owner of such property while the same is in the possession of such contractor to the extent of the amount of any sum or sums of money that may be due from said contractor to the owner of such property for rental or hire thereof at the time or after the collector of taxes has notified said contractor in writing that he has made demand upon the owner of such property for payment of the taxes assessed upon said property but that the owner of such property has failed, neglected or refused to pay said taxes. Said contractor may retain from the sums to be paid for the use of such property the amount for which he is liable hereunder. The amount of the taxes for which the said contractor may be liable hereunder may be withheld or retained from the contract price under the provisions of RSA 80:7.

"80:7-c Exemption from Attachment. The sums so withheld by the treasurer of the state or any political subdivision thereof upon notice from a collector of taxes under the provisions of RSA 80:7 and the sums so withheld and to be withheld by any contractor under the provisions of 80:7-a and 80:7-b shall be exempt from attachment, garnishment and trustee process by any person except in an action or suit brought by the collector of taxes to collect such taxes."

106.03 Patented Devices, Materials and Processes.

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If the Contractor employs any design, device, material or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the Surety shall indemnify and save harmless the City or any affected third party, from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright and shall indemnify the City for any costs, expenses and damages which it may be obligated to pay by reason of any infringement, at any time during the prosecution or after the completion of work.

106.04 Federal Participation.

When the United States government participates in the cost of the work covered by the contract, the work shall be under the supervision of the Department but subject to the inspection and approval of the proper officials of the United States government and the work shall be performed in accordance with the applicable Federal statutes, rules and regulations. Such participation shall in no sense make the Federal government a party to the contract and will in no way interfere with the rights of either party hereunder.

106.05 Sanitary, Health and Safety Provisions.

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees and Department representatives as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction. Except as provided under 698, this work will be subsidiary.

Attention is directed to Federal, State and local laws, rules and regulations concerning safety and health standards. The Contractor's attention is directed to the following safety and health standards which apply to all contracts:

It is a condition of this contract, and shall be made a condition of each subcontract entered into pursuant to this contract, that the Contractor and any subcontractor shall not require any laborers or mechanics employed in performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to their health or safety as determined by the Occupational Safety and Health Administration, United States Department of Labor, which standards include by reference the established Federal safety and health regulations for construction.

The standards and regulations comprise Part 1910 and Part 1926 respectively of Title 29 of the Code of Federal Regulations and are set forth in the Federal Register. Subsequent to the date of this specification, in case any revisions in the Code of Federal Regulations are published, such revisions will be deemed to supersede the appropriate Part 1910 and Part 1926, and be effective as of the date set forth in the revised regulation.

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The Contractor's attention is directed to the rock drilling regulations adopted by the New Hampshire State Department of Health and Human Services, Division of Public Health Services under authority of the provisions of RSA 147:2 (Supp.).

The Contractor shall also be aware of laws and regulations relating to hazardous materials which may be encountered during construction operations, either within project limits or at material sites off the project. The health and safety of employees, the general public and the potential of damage to the overall environment is possible if hazardous materials are not recognized, reported and the appropriate action taken to dispose of, remove from the site or otherwise contain the possible contaminants.

State laws such as Chapters 141-E, Asbestos Management and Control, 147-A, Hazardous Waste Management, and 149-M, Solid Waste Management identify the major areas of concern. Regulations developed by the Department of Environmental Services, He-P-1905 and He-P-1901, identify and list the various contaminants related to hazardous waste and solid waste respectively.

In protecting employees from hazardous or toxic exposure, Chapter 277-A, Toxic Substances In The Workplace, states that the substances in the workplace and 277-A:5, in part, states that the employers shall inform employees as to possible contact with toxic materials and conduct education and training programs.

Exposure to hazardous materials may result from contact with, but not necessarily limited to, such items as drums, barrels, other containers, waste such as cars, batteries and building construction debris. Containers leaking unknown chemicals or liquids, abandoned cars leaking petroleum products, batteries leaking acid, construction debris which may include asbestos or any other source of suspected hazardous material found within excavation areas or stockpiled on land within construction limits shall be referred to the Department of Environmental Services so that a proper identification of the materials may be made and disposal procedures initiated as required.

The Contractor alone shall be responsible for the safety, efficiency and adequacy of his plant, appliances and methods and for any damage which may result from their failure or their improper construction, maintenance or operation.

The Contractor shall designate a Safety Officer whose duty shall be to monitor the project on a daily basis in order to insure that all safety measures alluded to in the contract are strictly adhered to. Special attention shall be paid to maintaining existing guide, regulatory and warning signs affecting the movement of traffic.

106.06 Public Convenience and Safety.

The Contractor shall at all times so conduct his work as to assure the least possible interference with private businesses and public travel. He shall, at his own expense, wherever necessary or required, maintain fences, furnish watchmen, maintain lights and

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take such other precautions as may be necessary to protect life and property. The safety and convenience of the general public and the residents in and around the project shall be provided for by the Contractor as specified under 103.04 and 619. The Contractor shall be responsible for proper and timely notification to residents prior to any interruptions of their access or services.

Fire hydrants on or adjacent to the project shall be kept accessible to the fire apparatus at all times and no obstructions shall be placed within 10 feet of any such facility. No sidewalks, gutters, drainage inlets or portions of streets adjoining the project under construction shall be obstructed more than is necessary. The existing street surface shall be maintained satisfactorily with suitable patching material when ordered.

In the event that all or part of any street is officially closed to traffic during construction, the Contractor shall provide and maintain safe and adequate traffic accommodations for residences and businesses along and adjacent to the street so closed.

The Contractor shall provide all safeguards, safety devices and protective equipment and take any other actions necessary to insure the protection of the life and health of the public.

Except for work done under items in the contract, work prescribed herein will not be paid for separately but will be considered as subsidiary.

106.07 Railway-Highway Provisions.

All work to be performed by the Contractor on the railroad right-of-way shall be performed at such times and in such manner as not to unnecessarily interfere with the movement of trains or traffic upon the track of the railway company. The Contractor shall use all care and precaution in order to avoid accidents, damage or unnecessary delay or interference with the railway company's trains or other property.

The Contractor shall secure from the railroad flagging service for the protection of railroad traffic during the progress of work by the Contractor on, over, under or adjacent to the tracks of the railroad. The Contractor shall reimburse the railroad for the expense of such service.

If the railroad grants the Contractor's request for any temporary crossing, the Contractor shall assume the cost of installing, maintaining, removing and protecting such temporary crossing. The type and method of protection of the crossing and the insurance required shall be as determined by the railroad.

106.08 Construction Over or Adjacent to Navigable Waters.

All work over, on or adjacent to navigable waters shall be so conducted that free navigation of the waterways will not be interfered with and that the existing navigable

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depths will not be impaired except as allowed by a permit issued by the U.S. Coast Guard and/or the U.S. Army Corps of Engineers, as applicable.

106.09 Barricades and Warning Signs.

The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices and shall take all necessary precautions for the protection of the work and safety of the public. Streets closed to traffic shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner.

The Contractor shall erect warning signs in advance of any place on the project where his operation may interfere with the use of a street by traffic and at all intermediate points where the new work crosses or coincides with an existing street. Warning signs shall be placed and maintained in accordance with the plans and/or the Manual on Traffic Control Devices

The Contractor will be held responsible for all damage to the work from traffic, pedestrians, animals or any other cause due to lack of adequate signs or barricades.

All barricades, warning signs, lights, temporary signals and other protective devices shall conform with the Traffic Manual as defined in 101.01.

Except for work done under 619, the work prescribed herein will not be paid for separately but will be considered as subsidiary.

106.10 Use of Explosives.

The storage, handling, transportation and use of explosives shall conform with all Federal, State and local laws and regulations, including the rules and regulations of the Director of State Police and the provisions below.

The Contractor's attention is called to RSA 158:9-a (Supp.), which in part provides that licenses must be obtained from the Director of State Police in order (1) to use, purchase or transport explosives or (2) to store explosives.

When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger the life or property, including new work. The Contractor will be responsible for all damage resulting from the use of explosives.

The Contractor shall notify each property owner and public utility company having structures in proximity to the site of the work of his intention to use explosives. Such

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notice shall be given sufficiently in advance to enable the parties to take such steps as they may deem necessary to protect their property from injury.

Explosives shall be used only during daylight hours, shall be handled only by competent workmen and particular care shall be taken to insure that no unexploded charges remain in the work.

All persons within the danger zone of blasting operations shall be warned and no blasting shall be done until the zone has been cleared. Sufficient flaggers shall be stationed outside the danger zone to stop all approaching traffic during blasting operations.

106.11 Protection and Restoration of Property and Landscape.

The Contractor shall use every precaution to prevent injury or damage to wires, poles or other property of public utilities; trees, shrubbery, crops and fences along and adjacent to the right-of-way; all underground structures such as pipes and conduits, within or without the right-of-way; all pavement markings which may be placed upon the new pavement; all signs authorized or erected by the Traffic Department; and to protect and carefully preserve all property markers until an authorized agent has witnessed or otherwise referenced their location.

The Contractor shall be responsible for all damage or injury to property of any nature during the prosecution of the work resulting from any act, omission, neglect or misconduct in the manner or method of executing the work or at any time due to defective work or materials and said responsibility will not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work or in consequence of the nonexecution thereof, the Contractor shall restore, without compensation, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or otherwise restoring as may be directed or shall make good such damage or injury in an acceptable manner.

If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Engineer, after 48 hours notice, may proceed to do so and the cost thereof will be deducted from any money due or which may become due the Contractor under the contract.

When the Contractor's operations encounter remains of prehistoric people's dwelling sites or artifacts of historical or archaeological significance, operations shall be discontinued until a proper investigation can be made. When directed, the Contractor shall excavate the site in such a manner as to preserve the objects encountered and shall remove them for delivery to the custody of the proper State authorities. Such excavation will be considered and paid for as extra work.

106.12 Responsibility for Damage Claims.

The Contractor shall assume the defense of all claims whatsoever character against the Contractor or the City and shall indemnify and save harmless the City and all of its officers, agents and employees from all suits, actions or claims of any character, name and description brought for , or on account of any injuries or damages received or sustained by any person, persons or property by or from the said Contractor or any subcontractors used on the project or by or in consequence of any neglect in safeguarding the work, or through the use of unacceptable materials in constructing the project or by or on account of any act or omission, neglect or misconduct of the said Contractor or any subcontractors, or by or on account of any claims or amounts recovered for any infringement of patent, trademark or copyright, or from any claims or amount arising or recovered under the "Workmen's Compensation Law," or any other law, the said Contractor under any by virtue of this contract, as shall be considered necessary by the Commissioner, may be retained for the use of the City, or in case no money is due, his Surety shall be held until such suit or suits, action or actions, of claim or claims for injuries or damages, as aforesaid, shall have been settled and suitable evidence to that effect furnished to the Director except that money due the Contractor will not be withheld when the Contractor produces evidence satisfactory to the Director that the Contractor and all subcontractors are protected by and will maintain adequate public liability and property damage insurance or bond for the payment of any judgement in such suits, actions or claims.

106.13 Indemnification and Insurance Requirements.

In consideration of the utilization of the Contractor's services by the City of Manchester and other valuable consideration, the receipt of which is hereby acknowledged, the Contractor agrees that all persons furnished by the Contractor shall be considered the Contractor's employees or agents and that the Contractor shall be responsible for payment of all unemployment, social security and other payroll taxes including contributions from them when required by law.

A. The Contractor hereby agrees to protect, defend, indemnify and hold the City of Manchester and its employees, agents, officers and servants free and harmless from any and all losses, claims, liens, demands and causes of action of every kind and character including but no limited to, the amounts of judgements, penalties, interests, court costs, legal fees and all other expenses incurred by the City arising in favor of any party including claims, liens, debts, personal injuries including injuries sustained by employees of the City, death or damages to property (including property of the City) and without limitation by enumeration, all other claims or demands of every character occurring or in any way incident to, in connection with or arising directly or indirectly out of this Contractor Agreement. The Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suits at the sole expense of the

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Contractor. The Contractor also agrees to bear all other costs and expenses related thereto, even if the claim or claims alleged are groundless, false or fraudulent. This provision is not intended to create any cause of action in favor of any third party against Contractor or the City or to enlarge in any way the Contractor's liability but is intended solely to provide for indemnification of the City from liability for damages or injuries to third persons or property arising from Contractor's performance hereunder.

B. The Contractor agrees to maintain in full force and effect:

1. Comprehensive General Liability insurance written on occurrence form, including completed operations coverage, personal injury liability coverage, broad form property damage liability coverage, "xcu" coverage and contractual liability coverage insuring the agreements contained herein. The minimum limits of liability carried on such insurance shall be \$1,000,000 each occurrence and where applicable in the aggregate combined single limit for bodily injury and property damage liability; \$1,000,000 annual aggregate personal injury liability.

When explosives are to be used in the prosecution of the work, the insurance required shall also contain provisions for protection against damage claims due to such use of explosives and the certificate shall attest to this fact.

2. Automobile liability insurance for owned, non-owned and hired vehicles. The minimum limit of liability carried on such insurance shall be \$1,000,000 each accident, combined single limit for bodily injury and property damage.

3. Worker's Compensation insurance whether or not required by the NH Revised Statutes Annotated, 1955, as amended, with statutory coverage and including employer's liability insurance with limits of liability of at least \$100,000 for each accidental injury and with respect to bodily injury by disease, \$100,000 each employee and \$500,000 per policy year.

C. Any and all deductibles on the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of the Contractor.

D. Insurance companies utilized must be admitted to do business in N.H. or be on the Insurance Commissioner's list of approved non-admitted companies and shall have a rating of (A) or better in the current edition of Best's Key Rating Guide.

E. The Contractor agrees to furnish certificate(s) of the above mentioned insurance to the City of Manchester within fourteen (14) days from the date of this agreement and, with respect to the renewals of the current insurance policies, at least thirty (30) days in advance of each renewal date. Such certificates with respect to comprehensive general liability and auto liability insurance, name the CITY OF MANCHESTER AND THE DEPARTMENT OF HIGHWAYS as an additional insured and with respect to all policies shall state that in the event of cancellation or material change, written notice

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shall be given to the City of Manchester, Office of Risk Management, One City Hall Plaza, Manchester, New Hampshire 03101 at least thirty (30) days in advance of such cancellation or change.

F. The purchase of the insurance required or the furnishing of the aforesaid certificate shall not be a satisfaction of the contractor's liability hereunder or in any way modify the Contractor's indemnification responsibilities to the City of Manchester and the Department of Highways.

G. It shall be the responsibility of the Contractor to ensure that all subcontractors comply with the same insurance requirements that he is required to meet.

H. Railroad Protective Insurance (as necessary and subject to Special Provisions). The Contractor shall take out insurance coverage known as "Railroad Protective Insurance", in the name of the Railroad(s) in amounts and in a form as required and approved by the Railroad(s) involved. The original policies of such insurance, shall be furnished to the Railroad(s) involved and certificates furnished to the City.

106.14 Use and Occupancy Prior to Acceptance by City.

The Contractor agrees to the use and occupancy of a portion of the project before formal acceptance by the City, provided the City:

A. Secures written consent of the Contractor except in the event, in the opinion of the Engineer, the Contractor is chargeable with unwarranted delay in completing the contract requirements;

B. Secures consent of the Surety; and

C. Secures endorsement from the insurance carrier(s) permitting use of the project during the remaining period of construction.

106.15 Contractor's Responsibility for Work.

Until final written acceptance of the project by the Engineer, the Contractor shall have the charge and care thereof and shall take every precaution against the injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore and make good all losses, injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except loss, injury or damage to the work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to natural disasters such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature. The repair of such excepted damage shall be done by

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the Contractor and paid for at the contract prices or by extra work as determined and ordered by the Engineer.

In case of suspension of the work, except as provided in 619, the Contractor shall be responsible for the work under the contract and shall take such precautions as may be necessary to prevent damage to the project, provide for normal drainage and shall erect any necessary temporary structures, signs or other facilities at his expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings and soddings furnished under the contract and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

The Contractor shall not be relieved of his responsibility by any right of the Engineer to give permission relating to any part of the work or by any such permission given or by failure of the Engineer to give such permission.

106.16 Contractor's Responsibility for Utility Property and Services.

It shall be the Contractor's responsibility to ascertain the existence of any underground improvements or facilities which may be subject to damage by reason of his operations. The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of his responsibility under this Section.

At points where the Contractor's operations are adjacent to properties of railway, telegraph, telephone and power companies, or are adjacent to other property, damage to which might result in considerable expense, loss or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

Prior to doing work that might damage underground facilities or interfere with their service, the Contractor shall take steps to have the owners verify the locations shown on the plans and identify such facilities in the field. He shall cooperate with the owners to arrange that stakes or other markings set by the owners will be set so that maintenance of such points may be possible as long as necessary. The Contractor shall maintain such references and will be responsible for damage to any underground facility if the owner has properly located it. The Contractor shall maintain access to the installations in order to permit maintenance of services or permit repairs in case of interruptions of service. See 104.06.

The Contractor shall cooperate with the owners of any underground or overhead utility in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum and that services rendered by those parties will not be unnecessarily interrupted.

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In the event of interruption to utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate with the said authority in the restoration of service until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in protecting or repairing property as specified above and in 104.06, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

Should the Contractor desire to have any rearrangement made in any utility facility, or other improvement, for his convenience in order to facilitate his construction operations, which rearrangement is in addition to, or different from, the rearrangements indicated on the plans or in the special provisions, he shall make whatever arrangements are necessary with the owners of such utility or other non-highway facility for such rearrangement and bear all expenses in connection therewith.

106.17 Personal Liability of Public Officials.

In carrying out any of the provisions of these specifications, or in exercising any power of authority granted to them by or within the scope of the contract, there shall be no liability upon the Director, Engineer or authorized representatives, either personally or as officials of the City, it is being understood that in all such matters they act solely as agents and representatives of the Department.

106.18 No Waiver of Legal Rights.

Upon completion of the work, the Department will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Department from correcting any measurement, estimate or certificate made before or after completion of the work, nor shall the Department be precluded or stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on part of the Department of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor without prejudice to the terms of the contract, shall be liable to the Department for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Department's rights under any warranty or guaranty.

106.19 Environmental Protection.

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The Contractor shall comply with all Federal, State and local laws and regulations controlling pollution of the environment. He shall take necessary precautions to prevent pollution of streams, lakes, ponds and reservoirs with fuels, oils, bitumens, chemicals or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter. Detail requirements implementing this policy appear elsewhere in these specifications or on plan documents of the contract.

106.20 No Third Party Beneficiary.

It is specifically agreed between the parties executing this contract that it is not intended by any of the provisions of any part of the contract to create the public or any member thereof a third party beneficiary hereunder, or to authorize anyone not a party to this contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this contract. The duties, obligations and responsibilities of the parties to this contract with respect to third parties shall remain as imposed by law.

106.21 Civil Rights.

The Contractor's attention is directed to Federal, State and local laws, rules and regulations which set forth unlawful employment practices including that of discrimination because of race, religion, color, sex or national origin and which define actions required for Affirmative Action and Minority Business programs.

The Contractor shall take affirmative action to insure that residents of the City of Manchester are given maximum opportunity for employment and that business concerns located in, or owned in substantial part by, residents of the City of Manchester are to the greatest extent feasible, awarded contracts.

The City may request, in which case the Contractor shall provide, such information as the City shall determine is necessary to ascertain the Contractor's conformance with the provisions of this section.

106.22 Assignment Provision.

The Contractor hereby agrees that it will assign to the City all causes of action that it may acquire under the antitrust laws of New Hampshire and the United States as the result of conspiracies, combinations or contracts in restraint of trade which affect the price of goods or services obtained by the City under this contract if so requested by the City.

SECTION 107 -- PROSECUTION AND PROGRESS

107.01 Subletting of Contract.

The Contractor shall give his personal attention constantly to the faithful prosecution of the work, shall keep the same under his personal control and shall not assign by power of attorney or otherwise, nor sublet the work, or any part thereof, without written consent of the City and shall not either legally or equitably assign any of the monies payable under this agreement, or his claim thereto, unless by and with the like consent of the City and surety on the Bond.

No subcontracts or transfer of contract shall relieve the Contractor, bonding company or surety of liability under the contract and bonds.

The Contractor shall agree that all contracts with subcontractors and/or lower tier subcontractors will be in writing.

If, during the course of the work, a subcontractor fails to complete or perform satisfactory work, the Contractor shall be required to complete the work with or without another approved subcontractor. The Contractor shall not substitute another subcontractor for an approved subcontractor except for reasons acceptable to the Department nor shall an approved subcontractor be allowed to perform work not prescribed in the executed agreement on file without prior consent by the Department.

All work which is performed by subcontract shall, nevertheless, remain the responsibility of the Contractor and shall be included in the Unit Bid Prices.

The Contractor shall, before commencing work, provide the Engineer with a list of subcontractor's names along with copies of the subcontract agreements outlining the limits of their work.

No correspondence will be accepted by the Engineer or City from any subcontractor. The Contractor will retain sole responsibility for management and discharge of the contract.

Shop drawings, samples and all similar submittals originating with a subcontractor shall be reviewed by the Contractor before submission to the Engineer and shall bear his stamp of approval.

The Contractor will make no covenants with his subcontractors which, in any way, alter the requirements of the contract.

Should the Engineer discover a subcontractor to be incompetent or in any way in violation with the terms of the contract, he will so notify the Contractor in writing and the Contractor shall take immediate steps to rectify the problem, even to the extent of terminating this subcontract.

107.02 Notice to Proceed.

The Notice to Proceed will stipulate the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged.

Commencement of work by the Contractor, prior to the Notice to Proceed, shall constitute the beginning of construction and the date from which contract time will be charged.

107.03 Prosecution and Progress.

The Contractor shall provide sufficient materials, equipment and labor to guarantee completion of the project in accordance with the plans and specifications within the time set forth in the contract. Prior to the pre-construction conference and at least 3 working days prior to initiating operations on the project, the Contractor shall furnish the Engineer a progress schedule, a written erosion control schedule and a traffic control plan for approval.

The progress schedule will be used to indicate the proposed sequence of major construction operations and to check the actual progress of work. The progress schedule shall provide sufficient detail to assure the completion of the project in accordance with the plans and specifications within the time set forth in the contract. If the Contractor falls significantly behind the approved schedule, the Contractor shall submit for approval a revised schedule for completion of the work within the contract time and modify the operations to provide such additional materials, equipment and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 48 hours in advance of resuming operations.

The erosion control schedule shall detail the methods planned for accomplishment of temporary and permanent erosion control work for operations including, but not limited to, clearing, grubbing, grading, drainage and bridge operations, especially in or adjacent to existing waters, water courses or wetlands. The erosion control schedule shall include proposed methods of erosion control on haul roads, borrow pits and disposal areas.

The traffic control plan shall include in detail the Contractor's plan for controlling traffic through the project and shall be in conformance with the Traffic Manual and other applicable standards. This plan shall include specific design details on lane closures, detours and temporary bridges. The plans shall also include the layout of signing, barricades and other warning devices, as well as the placement of flaggers and uniformed officers. If the Contractor does not submit a Traffic Control Plan for approval, it will be presumed that the Contractor plans to adhere to the Traffic Control Plan contained in the contract. Changes to the approved traffic control plan shall be submitted to the Engineer for review and approval at least 10 calendar days in advance of implementation of the change.

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Prior to commencement of any major work on the project, a pre-construction conference shall be held to outline the proposed schedule and coordinate the work of the Contractor, various utilities and subcontractors. The Contractor shall be prepared to discuss in detail the proposed schedule, the erosion control plan and the traffic control plan particularly as these relate to coordination with schedules of the utilities and subcontractors. In addition, the Contractor shall be prepared to provide details on the sources and delivery of critical materials.

107.04 Limitation of Operations.

The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with traffic. He shall have due regard to the location of detours and to provisions for handling traffic. The Engineer may require the Contractor to finish a section on which work in progress before work is started on any additional sections if the opening of such section is essential to public convenience.

No work shall be performed on Sundays or legal holidays except in cases of emergency or upon permission of the Engineer. Whenever a holiday is observed on a Friday or a Monday, the Contractor may be required to suspend work for 3 calendar days. Prior to the close of work, the project shall be placed in the best condition possible for the comfort and safety of the traveling public, and definite arrangements shall be made for responsible personnel to maintain the project in the above condition throughout the period of suspension. No work will be permitted at night unless sufficient lighting is provided to insure the same degree of accuracy of workmanship and the same conditions regarding safety as would be obtained by daylight. Moreover, no work shall be done at night contrary to local ordinances.

107.05 Character of Employees.

The Contractor shall, at all times, employ sufficient labor, supervision and equipment for prosecuting the several classes of work to full completion in the manner and time required by the terms of the Contract. All of the Contractor's personnel shall have sufficient skill and experience to perform properly the work assigned to them. Employees engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who, in the opinion of the Engineer, does not perform the work in a proper and skillful manner or is disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval.

Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

107.06 Methods and Equipment.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the Street, adjacent property, or other Streets, will result from its use.

If any equipment is not maintained in full working order or, as used by the Contractor, proves inadequate to obtain results prescribed, the Engineer may order said equipment to be improved or other equipment substituted or added.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the contract work in conformity with the requirements of the contract.

Where practicable, spray applications of materials containing fertilizer, asphalt and other injurious substances which cause pitting or which impair the reflective and brightness values of metal shall precede the installation of susceptible roadside structures such as signs, sign supports and guardrail; otherwise, coverings shall be used to protect such structures installed prior to the spray applications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized. If the Contractor desires to use a method or type of equipment other than that specified in the contract, the Contractor may request the authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. the Contractor shall remove the deficient work and replace it with work of specified quality or take such corrective action as directed. No change will be made in basis of payment for the construction items involved nor in contract time as a result of authorizing a change in methods or equipment under these provisions.

Failure on the part of the Contractor to observe the necessary precautions to prevent damage to property or injury to public shall be sufficient grounds for suspension of the work.

107.07 Determination and Extension of Contract Time.

It is an essential part of the contract that the Contractor perform fully, entirely, and in an acceptable manner, the work under contract within the time stated in the contract.

It is likewise essential that those parts, phases or stages, as stipulated in the contract, for the purpose of benefiting the traveling public or for the coordination of work performed by others, shall be completed on the date indicated.

All computations of days for the purpose of adjusting the contract time shall begin on the date the Contractor starts construction operations but not later than the date set in the Notice to Proceed.

No allowances will be made for delays or suspensions of the work due to the fault of the Contractor.

Time stated in the contract will be one of the following: (a) calendar date or (b) working days.

(a) When the contract sets forth a calendar date as the date on or before which the work is to be completed, due consideration will have been given to the Saturdays, Sundays, legal holidays and the period between December 1 and April 1 inclusive in the anticipated period of construction. No extension of the contract completion date will be allowed due to such days. Consideration will be given for unfavorable weather and ground conditions on days other than the above days as follows: From the latest date for starting operations until the completion date as extended, for each day on which weather or ground conditions prevent the Contractor from effective prosecution of the operations which at that time control the progress of the work, an extension of a working day will be allowed after the time for completion. Working days will also be added when the final contract estimate is greater than the original contract estimate, computed as follows: The number of allowable working days will be in the same ratio to the number of days between the date of beginning of work and the contract completion date as revised above (not counting the period December 1 through April 1), as the final contract estimate is greater than the original contract estimate.

b) When the contract is on the basis of working days as defined in 101.01, the Contractor will be charged for the number of working days used. An increase of quantities will increase the number of allowable working days by the ratio of the final contract estimate to the original contract estimate.

Whether the contract time is (a) or (b) above, other considerations may be grounds for extension of time as follows: If the Contractor finds it impossible for reasons beyond his control to complete the work within the contract time as specified or as extended in accordance with the provisions herein, he may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time, setting forth therein the reasons which he believes will justify the granting of his

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request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, including but not limited to natural disasters, delays or suspensions made necessary by an emergency episode procedure carried out under the direction of the New Hampshire Department of Environmental Services, Division of Air Resources, utility relocations, strikes, delays in the delivery of critical materials, right-of-way problems, work of added complexity, work ordered done at a late or unfavorable stage of construction and work requiring the use of specialists for whose starting time a reasonable latitude must be allowed, the Engineer may extend the time for completion in such amount as the conditions justify. "Unfavorable ground conditions" under (a) above may refer to surfaces too wet for normal travel, material encountered outside of workable moisture conditions, ground too wet or too cold to apply surface treatment or pavement and the like.

When an extension of the contract time is requested due to delays in the delivery of critical materials, sufficient documentary evidence must be furnished the Department at the time the delay occurs showing that such delay results from the materials being unavailable by reason of an unusual market condition such as an industrywide strike, natural disaster, or areawide shortage which arises after bids are taken and which prevents the procurement of materials within the allowable time of limitations. Delays due to slow delivery from a source of supply when the required material is available elsewhere will not be considered as justification for an extension of time.

The contract time may be increased due to an increase in quantities as specified in (a) or (b) above, if it can be definitely established that any required additional work is of such character or occurs so near the contract time of completion that more time is required to complete the work than is indicated by the proportionate money value.

In the event that the Engineer extends the contract time of completion into a period of the year during which the working conditions are less favorable, consideration will be given to further extension of time as influenced by the nature of the work involved.

When the contract stipulates a completion date that falls on a Saturday, Sunday or legal holiday, and when the time as extended by the Engineer falls on a date which is a Saturday, Sunday or legal holiday, the date will be extended to the next working day.

When the Engineer determines that the contract time should be extended, such extended time for completion shall then be in full force and effect the same as though it were the original time for completion.

When final acceptance has been duly made by the Engineer as prescribed in 105.15, the daily time charge will cease.

107.08 Failure to Complete on Time.

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For each day, as specified, that any work shall remain uncompleted after the contract time specified for the completion of parts, phases, stages or the complete work, the sum of two hundred dollars (\$200.00) per day for each calendar day (Sundays and Holidays excluded) of delay will be deducted from any money due the Contractor, not as a penalty, but as liquidated damages for each day of such delay, to be paid in full and subject to no deduction. If the payments due the Contractor are less than the amount of such liquidated damages, said damages shall be deducted from any other monies due or to become due the Contractor and in case such damages shall exceed the amount of all moneys due or to become due the Contractor, then the Contractor or his surety shall pay the balance to the City.

In the case of a date in the contract being given for the completion of parts, phases or stages, the liquidated damages will be deducted during the period in which the particular work specified is uncompleted.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion may have been extended, will in no way operate as a waiver on the part of the Department of any of its rights under the contract.

The Engineer may waive such portions of the liquidated damages as may accrue after the work is in condition for safe and convenient use by the traveling public.

If the contract is not completed within the time specified and no extension of time is authorized by the Department, the Contractor shall indemnify the City for costs to the City of inspection of the work during any such extension period.

107.09 Default of Contract.

If the Contractor:

- (a) Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- (b) Fails to perform the work with sufficient workers and equipment or with sufficient materials to assure the prompt completion of said work, or
- (c) Fails to perform the work in accordance with the contract requirements or refuses to remove and replace rejected materials or unacceptable work, or
- (d) Discontinues the prosecution of the work, or
- (e) Fails to resume work which has been discontinued, within a reasonable time after notice to do so, or

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- (f) Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- (g) Makes an assignment for the benefit of creditor, or
- (h) Fails to comply with contract requirements regarding minimum wage payments or EEO requirements, or
- (i) Is a party to fraud, the Engineer will give notice in writing to the Contractor and his Surety of such delay, neglect or default.

If the Contractor or Surety, within 10 calendar days after such notice, does not proceed in accordance with the notice, then the Director will, upon written notification from the Engineer of the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the prosecution of the work out of the hands of the Contractor. The Department may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as will be required for the completion of said contract in an acceptable manner.

All extra costs and charges incurred by the Department as a result of such delay, neglect or default, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due said Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the Surety shall be liable and shall pay to the Department the amount of excess.

107.10 Termination of Contractor's Responsibility.

Whenever the improvement provided for by the contract shall have been completely performed on the part of the Contractor and all parts of the work have been approved and accepted, the Contractor shall then be released from further obligations except as set forth in his bond and as provided in 107.19.

107.11 Guaranty.

The Contractor guarantees that the work to be done under this contract, and the materials to be furnished by him for use in the construction of the same, will be free from defects or flaws. This guaranty shall be for a period of one year from and after the date of acceptance.

It is hereby, however, specially agreed and understood that this guaranty shall not include any repairs made necessary by any cause or causes other than defective work or materials furnished by the Contractor. The Contractor shall at all times within said period of guaranty keep the surface of the ground over this work, or adjacent thereto, in the position and condition required by this contract, and refill any settlement or erosion in the

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backfilling or any surface graded by him, due to any cause whatsoever, when so directed by the Engineer. Should he fail to do so, the Owner may have said work done as described in 105.15

107.12 Understanding of Parties Regarding Department's Performance.

It is understood and agreed by the parties to the contract that all obligations of the Department hereunder, including the continuance of payments, are contingent upon the appropriation and continued availability of funds, and in no event shall the Department be liable for any payments

hereunder in excess of such appropriation and available funds. In the event the Board of Mayor and Aldermen orders the reduction of expenditures of funds and the Board of Mayor and Aldermen fails to encumber funds or reduces or terminates the expenditure of anticipated funds or appropriations relative to the contract, the Director may, by written notice to the Contractor, immediately terminate the contract in whole or in part in accordance with the applicable provisions of 107.11.

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SECTION 108 -- MEASUREMENT AND PAYMENT

108.01 Measurement of Quantities.

All work completed under the contract will be measured according to United States Standard measure.

A station when used as a definition or term of measurement will be 100 linear feet measured horizontally.

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.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing.

Structures will be measured according to neat lines shown on the plans or as ordered to fit field conditions.

All items which are measured by the linear foot, such as pipe culverts, guardrail, underdrains and the like, will be measured parallel to the base or foundation upon which such structures are placed.

In computing major volumes of excavation, embankment and borrow, the average end area method will be used. Where it is impracticable to measure material by the cross-section method due to irregular, isolated deposits, acceptable methods involving three-dimensional measurement may be used. When measurement of materials in vehicles is permitted, the quantity will be determined as 80 percent of the loose volume.

In computing volumes of concrete and masonry, the prismoidal method will be used.

The space occupied by pipe will not be included in the volume of headwalls. In the case of pipe having a wall thickness of 2 inches or more, the area of the pipe will be based on the manufacturer's nominal dimensions, outside to outside, or the shell of the pipe. In the case of pipe having a wall thickness of less than 2 inches, the area of the pipe will be based on the nominal inside diameter of the pipe.

The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. Except as specified below, all materials which are measured or proportioned by weight shall be weighed on scales which the Contractor has had sealed by the New Hampshire Department of Agriculture or by a company approved by that department. All weighing shall be performed in a manner prescribed under the Rules and Regulations of the Bureau of Weights and Measures of the New Hampshire Department of Agriculture.

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Weighing of materials on scales located outside New Hampshire will be permitted for materials produced or stored outside the state, when requested by the Contractor. Out of state weighing, in order to be approved, must be performed on scales sealed by the governmental authority concerned.

Each truck used to haul material being paid for by weight shall bear a plainly legible identification mark and, if required, shall be weighed empty daily at such times as directed.

When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers or distributors, shall show the following information: the date, the project name and number; slip number; the material or commodity; the dealer or vendor; the Contractor or subcontractor; the location of the scales; the time of loading; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's signature or his signed initials.

The right is reserved to weigh any truck, trailer or distributor, at locations designated, before and after making deliveries to the project.

Bituminous materials will be measured by the gallon or ton. When necessary, volumes will be converted to weights, or weights will be converted to gallons, corrected to 60 degrees F, using ASTM D 1250 asphalts.

To assist in computing the number of tons of material required when the rate of application is specified in gallons per square yard, the following approximations may be used:

Bitumen	Gallons per Ton at 60 degrees F	Pounds per Gallon at 60 degrees F
RC-MC 70	248	8.05
RC-MC 250	247	8.11
RC-MC 800	244	8.18
RC-MC 3000	240	8.33
AC-10	235	8.51
AC-20	233	8.58
Emulsion	238	8.38

Each vehicle used in transporting liquid bituminous material shall be weighed before and after loading and the difference in the weights used as the basis for computing pay quantities. A copy of the original weight slip shall be delivered with each truck shipment. In addition to the information required above, the following shall be shown on the slip: the plant and tank number from which the material was obtained, the grade of the material and the percent of additive, if any.

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When a slip shows a "Part Load On" or indicates a "high tare", the delivery slip shall be accompanied by a copy of the delivery or weight slip from the previous load indicating the grade of material therein together with substantiation of the tare weight of the vehicle. If the Engineer has already been furnished the slip with the previous load, reference by slip number will satisfy the latter part of this requirement.

Liquid bituminous material delivered but not used in the work shall be weighed and credit given by the vendor. A copy of the weight slip showing such credit shall be returned to the Engineer within 3 calendar days.

When material is specified to be measured by the cubic yard but measurement by weight is approved, such material may be weighed and the weight converted to cubic yards for payment purposes. Necessary conversion factors will be determined by the Engineer.

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

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

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

Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.

The thickness of plates and galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fractions of inches.

When standard manufactured items such as fence, wire, plates, rolled shapes, pipe and conduit are identified by gauge, unit weight, section dimensions and the like, such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Material wasted without authority will not be included in the final estimate.

108.02 Scope of Payment.

The Contractor shall receive and accept compensation provided for in the contract as full payment for everything furnished and done by the Contractor under the contract

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including all work required, but not specifically mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the work and for all risks of every description connected with the work and for all expenses incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and for well and faithfully completing the work and the whole thereof.

The Contractor shall be liable to the City for failure to repair, correct, renew or replace at his own cost and expense, all damage due or attributable to defects or imperfections in the construction, which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work. See also 107.19.

No moneys, payable under the contract or any part thereof, except the estimate for the first month or period, shall become due and payable, if the Director so elects, until the Contractor shall satisfy the Director that he has fully settled or paid for all labor performed or furnished, for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power, tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Director, if he so elects, may pay any and all such bills, in whole or in part, and deduct the amount so paid from any monthly or final estimate, excepting the first estimate.

108.03 Compensation for Altered Quantities.

Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefor from any other cause.

108.04 Extra Work.

Extra work performed in accordance with the provisions of 104.03 will be paid for at the contract item bid prices or at agreed prices stipulated in the supplementary agreement authorizing the work or the Department may require the Contractor to do such extra work and be compensated in the following manner:

(a) Labor. For all labor, including equipment operators, and foremen in direct charge of the specific operation, the Contractor shall receive the rate of wage agreed upon in writing for each and every hour that said labor is actually engaged in such work. When the Contractor is ordered to return to the project solely to perform extra work, labor will

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be considered as being actually engaged in the work during the hours paid for while travelling.

No part of the salary or expenses of anyone connected with the Contractor's forces above the grade of foreman and having general supervision of the work will be included in the labor item as specified above, except under the following conditions: (1) The work ordered is of an emergency nature or is ordered too late to be done before all work shown on the plans or provided for in the proposal has been substantially accomplished, (2) the Contractor's organization is entirely occupied with extra work, and (3) the nature of the work is such that the services of superintendents and timekeepers may be included in the classification of labor. Trimming of trees will not be considered as requiring a superintendent or timekeeper. In order to determine the allowable rate of pay of eligible superintendents, foremen and timekeepers, a notarized statement shall be furnished to the Engineer. In case no documentary evidence of the actual rate of pay is furnished for such superintendents, foremen and timekeepers, no reimbursement will be allowed. Transportation for a superintendent will be paid for as equipment in the manner specified in (c) below.

When such benefits are required by collective bargaining or other employment contract generally applicable to the classes of labor employed on the work, the Contractor will receive the actual costs paid to, or in behalf of workmen by reason of health and welfare benefits, pension fund benefits, or other benefits. In case the Contractor is required to pay overtime pay or holiday pay to labor engaged in the work, such rate will be the rate reimbursed.

An amount equal to 45 percent of the sum of the above items will also be paid the Contractor, which added amount shall constitute payment for such items, among others, as property damage, liability, and workmen's compensation insurance premiums, unemployment insurance contributions, and social security taxes on the extra work.

Subsistence and travel expenses paid by the Contractor will be reimbursed only when the Engineer orders extra work and in order to perform such work it is necessary to move workmen to the project particularly for that operation. Such subsistence and travel expenses allowed shall be carried on the daily report form under the classification of "Material", without, however, being subject to the added percentage for materials. If other work than such extra work is performed by the individuals during or in connection with that operation, no subsistence or travel expenses will be allowed.

(b) Materials and Specialized Work. When the Engineer directs special work requiring skills, tools and equipment unlike those used by the Contractor or his authorized subcontractors, payment may be made for such work performed by a specialist. For such specialist services, and for materials incorporated in the work, whether furnished by a specialist or by the Contractor, the Contractor will receive the cost, including transportation charges paid by him, to which cost will be added 15 percent of the sum thereof. Invoices for specialist services on the basis of the current market price thereof may be accepted without complete itemization of labor, material and equipment rental

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costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.

In those instances wherein a Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the job site, the charges for that portion of such work performed in such facility may, by agreement, be accepted as a specialist billing.

The cost of materials will be the cost to the purchaser, whether Contractor, subcontractor or other, from the supplier thereof, except as the following are applicable:

(1) If materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials will be deemed to be the price paid to the actual supplier as determined by the Engineer. No markup except for actual costs incurred in the handling of such materials will be permitted.

(2) If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment therefor will not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or the current wholesale price for such materials delivered to the job site, whichever price is lower.

(3) If, in the opinion of the Engineer, the cost of such materials is excessive, then the cost of such material will be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the job site.

(4) If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost will then be determined in accordance with paragraph (3).

(c) Equipment. For any machinery or special equipment (other than small tools) the use of which has been authorized, the Contractor will receive the rental charge agreed upon for the time that such equipment is doing actual work and used exclusively for the extra work. This rental charge shall include the cost of all fuel, oil, lubrication, supplies, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, small tools and all incidentals. The rental charge shall not exceed the rate published by Dataquest, Incorporated, for such equipment in the edition of the "Rental Rate Blue Book for Construction Equipment" current at the beginning of the calendar year in which the extra work is being performed. Revised sections published during the year will not be incorporated in the "Blue Book" until the beginning of the next calendar year. The area adjustment percentage will be reviewed and revised as necessary subsequent to the revision of the "Blue Book" sections. If it is deemed necessary by the Engineer to use equipment not listed in the above publication, a suitable rental rate for such equipment will be established by the Engineer. The Contractor may furnish any cost data which might assist the Engineer in the establishment of such rental rate.

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The Contractor shall provide the Engineer with the following: the manufacturer's name, equipment type, year of manufacture, model number, type of fuel used, horsepower rating, attachments required, together with their size or capacity, and any further information necessary to ascertain the proper rate. The Contractor shall have available for the Engineer's use a revised copy of the "Blue Book" as referenced in (c) above.

Equipment used by the Contractor shall be in good working condition and shall be of suitable size and suitable capacity required for the work to be performed. The rate of the basic equipment with the appropriate attachments shall include only the rate for the combined equipment necessary to perform the extra work. In case the Contractor elects to use equipment of a higher rental value than that suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment to be paid for will be recorded as a part of the record for extra work. The Engineer will determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator will likewise be that for the suitable equipment.

Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Rental time will not be allowed while equipment is inoperative due to breakdowns.

The maximum rental period to be paid for per day shall not exceed 8 hours unless the equipment is in operation for a longer time with the approval of the Engineer.

The hourly equipment rental rate (R) will be determined as follows:

$$R = (A \times B \times C) + D$$

Where A = Blue Book monthly rate divided by 176

B = Blue Book regional adjustment factor for New Hampshire plus 100%.

C = Factor from Rate Adjustment Table for the year of equipment manufacture.

D = Blue Book Estimated operating costs per hour.

When no work but extra work is performed by equipment which must be moved to the work and used, payment for loading, transporting and unloading equipment will be made under the following conditions:

- (1) The original location of the equipment to be hauled to the location of the work shall be agreed to in advance.

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(2) Should the Contractor desire the return of the equipment to a location other than its original location, the Department will pay the cost of transportation, provided such payment shall not exceed the cost of moving the equipment to the work.

The rental time to be paid for equipment already on the work shall be the time the equipment is in operation on the extra work being performed and, in addition, shall include the time required to move the equipment to the location of such work and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used during the move on work other than extra work. Loading and transporting cost will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used during the move on work other than extra work.

(d) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or for other costs for which no specific allowance is herein provided.

(e) Compensation. The compensation herein provided shall be accepted by the Contractor as payment in full for extra work, including superintendence (except as provided in (a) above), subcontracting, taxes, bond, overhead, profit and other costs in connection therewith which are not provided for herein. An amount equal to 5 percent of the sum of the labor, material and equipment performed or used by a subcontractor will be allowed when such work is performed on an extra work basis, except that no percentage will be allowed for equipment rented from the Contractor.

(f) Statements. The Contractor's representative and the Engineer each day shall compare records of work done as ordered on forms provided by the Engineer and shall thereafter be considered to be the basis for payment of the work performed, but shall not preclude subsequent adjustment based on a later audit by the Department.

Such records shall show the following:

- (1) Name of subcontractor, if appropriate.
- (2) Name, classification, date, daily hours, total hours, rate and extension for each laborer, operator and foreman.
- (3) Quantities of materials, prices and extensions.
- (4) Charges for transportation of materials.
- (5) Specialists' charges.
- (6) Designation, dates, daily hours, rental rate and extension for each unit of machinery and equipment.

The Contractor shall certify that the labor, materials and equipment listed were actually used on the extra work described, that the labor and equipment were used for the hours

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indicated and that the rates for labor do not exceed those for comparable labor currently employed on the project.

Statements shall be accompanied or followed by certified copies of the appropriate payrolls. Statements shall be supported by receipted bills or acceptable invoices for the cost of all materials used and for transportation and specialists' charges. However, in the case of materials, if materials used on the extra work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock, that the quantity claimed was actually used and that the price and transportation claimed represent the actual cost to the Contractor.

During the life of the contract and for a period of not less than 3 years after the date of acceptance thereof, the Contractor's cost records pertaining to work paid for on an extra work basis shall be open to inspection or audit by representatives of the Department, and the Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor shall make every reasonable effort to insure that the cost records of such other forces will be open to inspection and audit by representatives of the Department on the same terms and conditions as the cost records of the Contractor.

108.05 Eliminated Items.

Should any items contained in the contract be found unnecessary for the proper completion of the work, the Engineer may eliminate such items from the contract and such action shall in no way invalidate the contract. When notified of the elimination of items, the Contractor will be reimbursed for actual work done and all costs incurred, including mobilization of materials prior to said notification.

108.06 Partial Payments.

The Engineer shall, by the twenty-fifth day of each month, make an approximate estimate, such as he shall believe to be just and fair, of the amount and value of the work done and the materials incorporated into the work during the calendar month. Payment may at any time be withheld if the work is not proceeding in accordance with the contract. Upon such estimate being made and certified by the Engineer, the City will pay to the Contractor ninety (90) percent of the amount stated in such estimate or certificate by the 20th of the following month, but the City may, at all times, reserve and retain, out of any or all partial payments, all such sums as it is authorized to reserve or retain. The making of any such estimates or payment therein shall not be taken or construed as an approval or acceptance by the City of any work so estimated. All such payments shall be considered tentative only, subject to correction in the final estimate and need not be based upon an accurate measurement.

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The Contractor shall be responsible for any loss or damage to any such material or equipment until the same has been completely installed, tested and accepted.

The Contractor shall pay for all transportation and utility services not later than the twentieth day of the calendar month following that in which such services are rendered.

The Contractor shall pay for all materials, tools and other expendable equipment to the extent of ninety percent of the cost thereof, not later than the twentieth day of the calendar month following that in which such materials, tools and equipment are delivered to the site of the project and the balance of the cost thereof not later than the thirtieth day following the completion of that part of the work in or on which such materials, tools and equipment are incorporated or used.

The Contractor shall from time to time, as required by the Engineer, furnish the Engineer with affidavits and satisfactory evidence that all persons who have done work or furnished materials under the contract, or have suffered damage on account of the Contractor's operations, have been fully paid or secured; and in case such evidence be not furnished as aforesaid, such amount as the Engineer may consider necessary to meet the lawful claims of the persons aforesaid will be retained from the monies otherwise due the Contractor, until the liabilities aforesaid have been fully satisfied. It is understood and agreed, however, that the City hereby assumes no obligation toward such claimants, nor in any way undertakes to pay such claims out of any funds due or that may become due the Contractor, or out of its own funds.

If the Contractor claims compensation for any damages sustained by breach of contract or otherwise, be the same based on claims that are due and full credit has not been given the Contractor for work performed or material furnished in accordance with the terms of the contract or for any other cause, he shall promptly, after sustaining any such damage, make a written statement of the nature of the damage sustained, to the Engineer, and shall on or before the fifteenth day of the month following that in which the damage shall have been sustained, file with the Engineer an itemized statement of the details and amount of such damage, and unless such statement is made as thus required, his claim for compensation shall be forfeited and invalidated, and he shall not be entitled to payment on account of any such damage.

The City may keep any monies which would otherwise be payable at any time hereunder and apply the same, or so much as may be necessary therefore, to the payment of any expenses, losses or damages, incurred by the City and determined as herein provided, and may retain, until all claims are settled, so much of such money as the City shall be of the opinion will be required to settle all claims filed with the City, its officers and agents, relating to the contract.

108.07 Payment for Material on Hand.

Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided the materials meet the requirements of the plans and

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specifications when delivered in the vicinity of the project. In any event, partial payment for materials on hand shall not exceed 90 percent of the bid price.

Payment for materials on hand will not constitute acceptance and any faulty material will be rejected even though previous payment may have been made. The Contractor shall be solely responsible for furnishing and incorporating acceptable materials into the work and for any material on which partial payment has been made.

108.08 Payment For Material Not on Hand.

Payment will be based on the actual cost to the Contractor as indicated on invoices furnished to the Engineer. Notarized copies of paid invoices for all involved material payments allowed on the estimate must be submitted to the Engineer within 30 calendar days of the date of the estimate on which material allowance was made or such material allowance will be deducted from subsequent estimates until such notices have been furnished or until the materials are on hand. Payment shall not exceed 90 percent of the bid price. No payment will be made on materials for any item in the contract whose total dollar value is less than \$5,000. Such payment will not constitute acceptance and any faulty material will be rejected even though previous payment may have been made. The Contractor shall be solely responsible for furnishing and incorporating acceptable materials into the work for any material on which partial payment has been made and for any loss of or damage to such materials regardless of the cause.

108.09 Semi-final and Final Payments.

Within 65 days after the work has been completed to the satisfaction of the Engineer, he will make a final estimate of the amount of work done by the Contractor and of the value thereof. Such final estimate shall include the value of all work performed under the contract and all retained percentage, after deducting therefrom the total of all previous periodic or partial payments and all amounts to be retained to satisfy any and all outstanding claims or liens that have been duly filed against the Contractor. All prior estimates shall be subject to correction by this final estimate. After preparation, a copy of the final estimate shall be submitted to the Contractor for his approval and agreement.

If, after final inspection has been made, there are any payment or extra work items that are in dispute, either as to the quantity or value of the work performed hereunder, such items or claims may be excluded from the final estimate and payment for such disputed items may be deferred until such time as an agreement has been reached between the Contractor and the City or until such time as the claim has been adjudicated. In such cases, a semi-final estimate should be prepared within the said period of 65 days after completion, covering the value of all work performed and all retained percentage on all items of the contract that are not in dispute but subject to the same deductions and retainage as set forth above and with all disputed items or claims excluded.

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In the event that the work has been substantially completed and the project has been opened to public use by order of the OWNER or its duly authorized agents, but final acceptance of the work is subject to delay because of minor uncompleted items which do not impair the usefulness of the project, a semi-final estimate shall be prepared within a like period of 65 days after such contract has been substantially completed and placed in public use. Such semi-final estimate shall include an estimate of value of all work performed in accordance with the terms of the contract, including the amount of retained percentage withheld from previous partial payments but excluding the same deductions and retainage as set forth above; an estimate of the value of the work remaining to be performed and any items of work that may be in dispute. Payment for such excluded items or portions thereof may be deferred until such time as the remaining work has been satisfactorily completed, or in the case of disputed items or claims, until such time as an agreement has been reached.

If the Engineer delays or fails to prepare any final or semi-final estimate within the period of time specified herein, interest on the amount due the Contractor on any such final or semifinal estimate shall be computed and paid by the City at the rate of fifteen percent (15%) per annum, beginning 66 days after the contract has been satisfactorily completed and opened to public use, as the case may be, and running until the date such estimate has been prepared and submitted to the Contractor for acceptance. The amount of such interest shall be included in the estimate when prepared.

Such final or semi-final estimates, however, shall not serve as a release of the Contractor or of his sureties from the required guarantee against defects of materials, workmanship and/or over contract performance for a period of one (1) year from the date of acceptance.