

City of Gustavus

STANDARD SPECIFICATIONS

FOR

LOCAL ROAD MAINTENANCE

Amended

March 10, 2014



PREFACE

The reference book, Gustavus Standard Specifications for Local Road Maintenance 2011, has been amended and updated based on present funding and experience gained by local contractors from maintaining Gustavus's roads over the past 10 years. This amended Gustavus Standard Specifications for Local Road Maintenance 2014 edition provides a compilation of provisions, insurance requirements, and technical specifications for road maintenance and construction contracts.

The Road Maintenance Request for Quotation (RFQ) and Invitation for Bid (IFB) documents are prepared by the Gustavus Road Maintenance Committee, hereinafter Road Committee. Each bid packet contains a cover sheet, a bid schedule, the Gustavus Road Maintenance map, road mileage list and a list of current Committee members. Upon review by the Gustavus City Council, the bid packets may be mailed to contractors, upon request, and provided for the Gustavus mayor. The bid packets will also be available at Gustavus City Hall. Any special conditions or specific requirements will be referenced on the bid schedule, in the scope of work, or as a special condition. Some specifications reference the Alaska Department of Transportation and Public Facilities Standard Specifications for Highway Construction and also the American Association of State Highway and Transportation Officials (AASHTO) standards. It should be noted that the roads in Gustavus were not originally built to these standards nor are the roads always able to be maintained using these standards. Bidders should email the Road Committee, the Mayor and the City Clerk/Treasurer with questions. All questions will be made public and public answers will be provided to each bidder via email.

Bids will be opened on the date and time specified in the RFQ by the Gustavus Road Maintenance Committee, or its designee, and the Gustavus City Clerk/Treasurer. The successful bidder will be notified by the Gustavus City Clerk/Treasurer.

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GENERAL PROVISIONS

INSTRUCTIONS TO BIDDER

- Bidder must submit quotes for all bid schedule items listed.
- Bid Schedule sheets must be manually signed (original signature).
- Erasure or other changes made to the Bid Schedule sheets must be initialed by the person signing the bid. Note: "White Out" or other liquid correction methods must be initialed.
- The quotes must be sealed in an envelope with RFQ number, opening date, and contractor's name written on the outside of the envelope.
- Any response not meeting the requirements of the bidding documents shall be considered non-responsive.
- Offers made in accordance with the bidding documents must be good and firm for a period of ninety days from the date of bid opening unless otherwise noted.
- Bids will be received at the time and place stated in the bidding documents. It is the sole responsibility of the bidder to see that the bid is submitted on time. Any bid received after the scheduled opening time will not be considered, but will be held unopened. No responsibility will be attached to any officer for the premature opening of or failure to open a bid not properly addressed and identified.
- The City of Gustavus, hereinafter "City," may accept or reject any or all bids for good cause shown, to waive minor deviations from the specifications, and to waive any informality in bids received, when such acceptance, rejection, or waiver is in the best interest of the City. Informalities in bids are matters of form rather than substance evident from the bid document, or insignificant mistakes that can be waived or corrected without prejudice to other bidders; that is, the effect on price, quantity, quality, delivery, or contractual conditions is negligible, and waiver of the informality does not grant the bidder a competitive advantage.
- The City may cancel the RFQ if such cancellation is in the best interest of the City.
- In the case of error in the extension of prices in the bid, the unit price will govern.
- It is the responsibility of the bidder to obtain a current copy of all bid documents from the City Clerk/Treasurer.
- If any Addenda are issued pertaining to the bidding documents and subject Addenda are not acknowledged, the bid will be considered non-responsive.

- Faxed transmittals will not be accepted unless specifically noted on the cover sheet and agreed to by the Road Committee Chairman, or Mayor.
- Each bid shall be made on the form provided by the City or copy thereof and shall be signed by the bidder with signature in full.
- After depositing a bid, a bidder may withdraw, modify, or correct his bid, providing the City receives the request for such withdrawal, modification, or correction before the time set for opening bids. The original bid, as modified by such written communication will be considered as the bid. No bidder will be permitted to withdraw his bid after the time set for opening bids.
- The Contractor shall perform the duties specified in this solicitation. The Contractor understands that the City makes no representation that it will look exclusively to the Contractor for the type of goods or services requested. The Contractor will perform the duties under this agreement as an independent contract. The City assumes no responsibility for any interpretation or representations made by any of its officers or agents unless such interpretations or representations are made by Addenda.

METHOD OF AWARD

Award will be made to the low responsive, responsible bidder meeting all the requirements. In determining whether the lowest bidder is “responsible” the City Council shall consider:

- a. The Price;
- b. The experience, capacity, and skill of the bidder to perform the contract within the time and amount desired;
- c. The potential bidder’s reputation, honesty and integrity shown in the commission of previous City contracts;
- d. The previous and existing compliance by the bidder with laws and ordinances relating to the contract and the City;
- e. The sufficiency of the financial resources and ability of the bidder to perform the contract.

When the award is given to other than the lowest bidder, a full and complete written statement of reasons will be delivered to the unsuccessful low bidder or bidders and filed with the other papers relating to the transaction. The minutes of the City Council meeting relating to the matter may be used as the required written statement

The City Council may reject the bid of a bidder who is in arrears on taxes, permits, special assessments and/or any other monies that may be due the City or who failed to perform on a previous contract with the City.

For purposes of determining the lowest bidder, the extended bid amounts (estimated amount × unit cost) will be totaled to give a total bid amount. This contract is on an “as required” basis. Quantities listed are estimations for award purposes only. The City

reserves the right to increase or decrease quantities as necessary to accomplish the actual requirements and make payment at the unit price bid.

PURCHASE ORDER/CONTRACT

It is the intent of the City to use a purchase order and the bidding documents to establish the contractual relationship between the City and the lowest responsive, responsible bidder. The following conditions shall apply:

- a. The unilateral right of the City to order, in writing, temporary stopping of work or delaying performance that does not alter the scope of the contract;
- b. Liquidated damages;
- c. Termination of the contract for default;
- d. Termination of the contract in whole or in part for the convenience of the City.

SUBCONTRACTING

Subcontracting is not permitted unless authorized in writing by the Road Committee. In the event that subcontracting is authorized, the general contractor is responsible to the City to verify insurance on all subcontractors and furnish copies of same to the City. All subcontractors must carry and show proof of the minimum limits of liability insurance.

INSURANCE

The contractor must meet and have in place the insurance requirements listed below at all times during the period set out above.

INDEMNIFY AND HOLD HARMLESS

The bidder shall defend and indemnify the City, its officers, agents, and employees, against any claims, loss, or damages arising from injury to person(s), damage to property, or economic loss, arising out of, in whole or in part, the bidder's performance or non-performance of its duties under this agreement and any defects in the goods and services provided by the bidder. This duty to defend and indemnify shall include responsibility for all damages, costs, and attorney fees. This obligation shall be continuing in nature and extend beyond the term of this agreement.

END OF GENERAL PROVISIONS

GUSTAVUS ROAD MAINTENANCE SUPPLEMENTAL CONDITIONS

1. Some of the elements of the bid schedule may be subject to the provisions of Alaska Statutes Title 36. AS 36 provides for the payment of prevailing rates of pay on public construction or public works as published in the current *State of Alaska Department of Labor Wage and Hour Administration Pamphlet No. 600*, and requires weekly submission of certified payrolls.

Public construction or public works means the on-site field surveying, erection, rehabilitation, alteration, extensions or repair, including painting or redecorating of buildings, highways or other improvements to real property under contract for the state, a political subdivision of the state, or a regional school board.

It is the bidder's responsibility to study the elements of bid schedule and determine the applicability of provisions of AS Title 36. If you have questions regarding the applicability of Alaska Statute to the work to be performed, please contact the Department of Labor, Wage and Hour Administration, 1111 W 8th St, Juneau, AK, or call (907) 465-4842.

2. Bidders are encouraged to visit the premises to ascertain pertinent conditions, such as the area, location, accessibility, and general character of the premises. Bidders assume the risk that actual site conditions differ from the proposed contract documents or from those ordinarily encountered.

3. The City reserves the right to inspect the Contractor's equipment prior to award and to reject any bid if the equipment is not in reliable operating condition or if the equipment is not able to produce the specified work according to the specifications.

4. The Contractor shall supply knowledgeable and competent operators with each piece of equipment, who are capable of doing the required work.

5. The City reserves the right to increase or decrease quantities to the limits of the available funding. Payment for work done shall be at the Unit Price Bid or fractional unit for each bid item completed.

6. All work required under the Contract shall be completed in a timely manner. Failure to complete work in a timely manner shall be grounds for termination of this Contract. In case of default by the contractor, for any reason whatsoever, the City may procure the goods or services from another source and hold the contractor responsible for any resulting increase in cost or other remedies under law or equity.

7. Debarment or Suspension: The Gustavus City Council may debar (for a period of not more than three years) or suspend (for a period of not more than three months) a person for cause from consideration for award of contracts. The causes for debarment include but are not limited to:

a. Deliberate failure without good cause to perform in accordance with the specifications or within the time limit provided in the contract, or

b. A recent record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts; provided that failure to perform or unsatisfactory performance caused by acts beyond the control of the Contractor shall not be considered to be a basis for debarment.

8. Contractor shall make all necessary efforts to protect existing privately or publicly owned facilities, equipment, improvements and landscaping; the destruction,

removal or relocation of which is not contemplated under this contract. In the event that protection of any existing facilities is not possible due to construction requirements, the Contractor shall advise the Road Committee of the problem and shall cooperate with the Road Committee in seeking a reasonable solution to the problem. The Contractor shall not proceed with work resulting in damage to or destruction of such existing facilities until the Road Committee has given approval to proceed in writing.

9. Contractor shall be responsible for any damage sustained by any and all parties affected by utility outages caused by the Contractor unless it is determined said utilities do not meet PUC Standard installations i.e. bury depth, or setback requirements. The Contractor shall make all necessary efforts to prevent damage, i.e. the location of electrical or telephone wire, and shall make all necessary efforts to promptly repair and restore facilities or equipment damaged as a result of such outages.

10. The Road Committee will provide the necessary rights-of-way or easements for the work. Contractor shall confine his operations to the designated areas and observe all restrictions contained in any easements. The Road Committee will contact utility companies requesting that all transformers and phone pedestals in or adjacent to right-of-ways be identified with suitable markers, before winter, to prevent damage to said utility company's equipment.

11. The Road Committee does not anticipate that the work required herein will involve moving or excavating through utility lines or poles, sewer or water lines, culverts, mailboxes, fences, etc. However, if in the course of Contractor's work, existing privately or publicly owned facilities, equipment, improvements and landscaping, etc. suffer damage due to Contractor's operations, intentional or unintentional, Contractor shall be responsible to have such facility, equipment, improvement and landscaping restored to its previous condition, or better, and at no additional cost to the City.

12. The Contractor shall take road service direction only from the Road Committee or its designee, the Mayor or the City Clerk on behalf of both an absent mayor and Road Committee designee. Should the Contractor, while performing city work, be approached by a resident with a complaint, suggestion, or request, the Contractor shall politely explain that he/she is being directed by the Road Committee and ask the resident to please direct any questions, concerns, or requests to a member of the Road Committee or submitted to the City Council in writing.

13. All Contractors submitting a bid for this contract shall have and keep in effect an Alaska Business License, a City of Gustavus Business Permit, and an Alaska Contractors License. The Contractor shall be responsible for any additional licenses and/or permits required in the locality of the work. The City is responsible for all special permits such as ADF&G and Army Corp of Engineers permitting. The Contractor shall further be responsible for current licenses for all subcontractors and suppliers, if allowed, as required by law, during the term of the Contract and provide proof thereof upon request. If proof of required licensure is not submitted to the City Clerk/Treasurer within 10 days of bid closure, then bidder shall be determined to be non-responsive.

14. The name or names of Committee members who have authority to call for work under this contract will be provided to the Contractor. The Contractor shall be notified in writing (including email) of any changes to the membership of the Committee during the term of the contract. The Committee will inform the Contractor regarding which member of the Committee is the point of contact for directing the Contractor at any time during the Contract.

15. Other Goods and Services:

a. In addition to specifications listed in the bid schedule, other work may be required to fulfill the scope of the agreement, and may be requested by the Road Committee.

b. At the Road Committee's discretion, the Contractor may be requested to provide a written quotation prior to the work and in such case shall proceed only upon written (or e-mailed) notice by the Committee. The Committee shall have the right to reject any such quotation and to independently contract with another party to perform the requested work.

c. After completion of the work, the Contractor shall provide to the Road Committee all material invoices and receipts and a log of equipment and/or labor time for payment.

16. Minimum Call-Out Amounts:

When the Road Committee requests an individual item of work, the amount of work requested for that item shall not be less than the amount listed below. In the event that a lesser amount is requested, the Road Committee and contractor may negotiate the unit price.

Item	Description	Minimum Amount
207	Machine Brushing	2 Hours
208	Blading Roadbed	1 Hour
208A	Spot Blading	1 Hour
208B	Grader Ditching	1 Hour
209A	Reconditioning Ditches w/cut material removal	500 feet
209B	Reconditioning Ditches w/o cut material removal	2500 feet
213	Spot Hand clearing	1 Hour
215	Snow Plowing	
216	Sanding of Roadways and Parking Areas	
219A	Pit Run Aggregate	10 C.Y.

603	Culvert Installation or Replacement	30 Feet

17. Billing and Payment:

The contractor will submit billing at the end of the month. The approved billing shall be paid within 30 days.

18. Notification and Acceptance of Work:

The contractor will submit a complete spread sheet to the Road Committee Chairman and the City Clerk/Treasurer at the end of each month via email, stating what type of service was provided and where.

19. Convenience Termination:

This contract may be terminated by: (A) mutual consent of the parties, (B) for the convenience of the City, provided that the City notifies the Contractor in writing of its intent to terminate under this paragraph at least 10 days prior to the effective date of the termination. (C) For cause, by either party where the other party fails in any material way to perform its obligations under this contract; provided, however, that as a condition of the exercise of its right of termination under this paragraph the terminating party shall notify the other party of its intent to terminate this contract and state with reasonable specificity the grounds therefore, and the defaulting party shall have filed within 30 days of receiving the notice to cure the default. (D) Termination pursuant to this section shall not affect the parties' continuing obligations under this contract and all other portions shall continue to be in full force and effect. The City shall pay the Contractor for all satisfactory work performed before notice of termination.

END OF GUSTAVUS ROAD MAINTENANCE SUPPLEMENTAL CONDITIONS

INSURANCE REQUIREMENTS

During the term of the contract, the Contractor shall obtain and maintain in force the insurance coverage specified in this section with an insurance company rated “Excellent” or “Superior” by A. M. Best Company or as specifically approved by the City Council.

Limits: The Contractor shall obtain insurance for not less than the following limits:

- Commercial general liability: coverage written on an occurrence basis with limits of not less than \$1,000,000 per occurrence;
- Comprehensive automobile liability: \$1,000,000 combined single limit;
- Workers’ compensation: \$100,000 each accident, \$500,000 disease--policy limit, and \$100,000 disease--each employee.

Automobile Liability Insurance: All autos, or all owned, non-owned, and hired automobiles must be insured when the Contractor is using them to do work under this Agreement. If the Contractor submits insurance covering only scheduled autos, then the Contractor must assure that any additional vehicles are insured before using them in the work under this contract.

Workers’ Compensation: Any employee of the Contractor must be covered by workers’ compensation insurance during the term of the Agreement. This policy must be endorsed with a waiver of subrogation in favor of the City. The Contractor is not required to provide a certificate of workers’ compensation insurance if the Contractor certifies in a manner acceptable to the City that the Contractor has no employees subject to the Act. The Contractor is not required to provide a certificate of workers’ compensation covering certain employees under the following circumstances: *Corporations* - If the executive officer claims an exemption, then the Contractor must provide a certificate of waiver for that officer from the Alaska Department of Labor; *Sole Proprietors* – The Contractor must sign a workers’ compensation release on a form provided by the City; *Partnerships* - Every partner must sign a workers’ compensation release on a form provided by the City.

Alternate Coverage: A combination of primary and excess/umbrella policies may be used to fulfill the insurance requirements of this section.

Additional Insured: During the contract term, the Contractor shall add and maintain the City as an additional insured in the Contractor’s commercial general liability policy. This policy will provide primary coverage for the City, and it will provide that the policy treats each additional insured as though the insurer had issued separate policies.

Certificate of Insurance: Prior to commencing any work under this Agreement, the Contractor will provide a certificate of insurance in a form acceptable to the City showing that the Contractor has the required insurance coverage.

Cancellation: The Contractor must assure that the City receives notice if the Contractor's insurance is going to be canceled, not renewed, or changed. The certificate of insurance must say that the insurer will notify the City at least 30 days before the insurer cancels, refuses to renew, or materially changes the coverage.

Increased Coverage: If during the Agreement term the City requires higher limits of insurance than those listed in this section, and if the insurer increases the premium as a result of the higher limits of insurance, then the City will pay the Contractor the difference between the new and old premiums.

Subcontracting: The Contractor is responsible to the City to verify insurance on all subcontractors and furnish copies of it to the City upon request. All subcontractors must carry and show proof of the minimum limits of liability indicated above.

END OF INSURANCE REQUIREMENTS

TECHNICAL SPECIFICATIONS

SECTION 201 CLEARING AND GRUBBING

201-1.01 DESCRIPTION:

This work shall consist of clearing, grubbing, removing and disposing of all vegetation and debris within the designated areas of the project as shown in the plans, described in the scope of work or as directed by the Road Committee.

CONSTRUCTION REQUIREMENTS

201-2.01 CLEARING:

Clearing shall consist of cutting and disposing of all trees, down timber, stubs, brush, bushes and debris from all areas designated.

In order to minimize damage to the trees that are to be left standing, trees shall be felled toward the center of the area to be cleared. Trees unavoidably falling outside the specified limits shall be removed and disposed of. The trees and brush in areas designated for clearing only shall be cut to a height of not more than 6 inches above surrounding ground unless otherwise specified.

201-2.02 GRUBBING:

Grubbing shall consist of removing and disposing of all stumps, roots, moss, grass, turf, debris or other objectionable material within excavation limits, and within fill limits where the embankments are to be made to a depth less than 4 feet below subgrade. It shall also include any other areas designated on the plans or in the Special Conditions. The grubbing shall progress in such a manner that erosion will be kept to a minimum.

Except in areas to be excavated, stump holes and other holes from which obstructions are removed shall be backfilled with suitable materials and compacted in accordance with the specifications.

201-2.03 DISPOSAL:

All vegetation and debris removed by clearing and grubbing shall be disposed of at locations out of the right-of-way and off the project site with the written permission of the property owner on whose property the material and debris are to be placed. The Contractor shall make all necessary arrangements with such property owners for obtaining suitable disposal location and the cost involved shall be included in the unit price bid.

201-3.01 METHOD OF MEASUREMENT:

The work to be paid for will be the number of acres and fractions thereof, acceptably cleared and grubbed within the designated limits.

201-4.01 BASIS OF PAYMENT:

The accepted quantities of clearing and grubbing will be paid for at the contract unit price per acre or portion thereof.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
201	Clearing and Grubbing	Acres

END OF SECTION

SECTION 203 EXCAVATION

203-1.01 Description:

This work shall consist of the excavation and disposal of all material that is encountered within the limits of the work necessary for the construction of the project in accordance with the specifications and in reasonably close conformity with the lines, grades and typical cross sections shown on the plans or as established by the Road Committee. All excavation will be unclassified excavation as hereinafter described.

203-2.01 Unclassified Excavation:

Unclassified excavation shall involve all materials of whatever character encountered in the work.

203-3.01 Construction Requirements:

The excavation shall be finished to reasonably smooth and uniform surfaces. Excavation areas shall be kept free draining at all times as the work progresses. Excavation operations shall be conducted so that material outside the limits of slopes will not be disturbed.

Disposal areas for excavated material may be at locations of the Contractor's choice outside the right of way, with written consent of the property owner or as otherwise directed by the Committee designee.

203-4.01 Method of Measurement:

Payment is specified on a cubic yard basis. The quantities of excavation for which payment will be made will be those shown in the contract for the various items, provided the project is constructed essentially to the lines and grades shown on the plans or as established by the Road Committee.

Payment will not be made for excavation not actually performed or for unauthorized excavation below plan grade.

The hauling of material will not be measured for payment.

203-5.01 Basis of Payment:

The accepted quantities of excavation will be paid for at the contract price, per unit of measurement, for unclassified excavation listed below and included in the bid schedule.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
203	Unclassified Excavation	Cubic Yard

END OF SECTION

SECTION 204 DITCH LINING

204-1.01 Description:

This work shall consist of furnishing and placing ditch lining material and performing required excavation in accordance with these specifications at the locations and in reasonably close conformance with the plans or as directed by the Road Committee.

204-201 Materials:

All stones shall be sound and durable and have a maximum size of 8 inches in greatest dimension. No more than 50% by weight of material shall pass a 3-inch sieve as determined by Alaska T-7.

204-3.01 Construction Requirements:

Sufficient excavation shall be performed as shown on the plans and as directed by the Road Committee. Sub-base shall be installed prior to placing the ditch lining. Ditch lining materials shall be placed and spread so that the finished surface shall be reasonably uniform and in conformance with the lines and slope shown on the plans, or as directed by the Road Committee.

204-4.01 Method of Measurement:

The quantity to be paid for shall be the number of cubic yards of ditch lining placed and accepted by the Road Committee. Excavation required below normal ditch grade will be considered subsidiary to this item.

204-5.01 Basis of Payment:

The quantity, determined as provided above, will be paid for at the contract price per unit of measurement that is shown on the bid schedule. Price and payment shall be full compensation for furnishing and placing all materials including all labor, equipment, tools, and incidentals necessary to complete the work described in this section.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
204	Ditch Lining	Cubic Yard

END OF SECTION

SECTION 205 DITCH CONSTRUCTION

205-1.01 Description:

This work shall consist of the excavation and disposal of all material that is encountered within the limits of the work necessary for the construction of ditches in accordance with the specifications and in reasonably close conformity with the lines, grades and typical cross sections shown on the plans or as otherwise established by the Road Committee. All excavation for ditches will be unclassified excavation as hereinafter described.

205-2.01 Unclassified Excavation:

Unclassified excavation shall involve all materials of whatever character encountered in the work.

205-3.01 Construction Requirements:

The ditch construction shall be finished to reasonably smooth and uniform surfaces. Excavation areas shall be kept free draining at all times as the work progresses. Excavation operations shall be conducted so that material outside the limits of slopes will not be disturbed.

Disposal areas for excavated material may be at locations of the Contractor's choice outside the right of way, with written consent of the property owner.

205-4.01 Method of Measurement:

The quantity to be paid for shall be the number of stations of ditch construction, provided the project is constructed essentially to the lines and grades described or shown on the plans.

Station = 100 lineal feet measured along ditch bottom.

Payment will not be made for ditch construction not actually performed or unauthorized.

The hauling of material will not be measured for payment but will be considered incidental to ditch construction.

205-5.01 Basis of Payment:

The accepted quantities of ditch construction will be paid for at the contract price, per station provided above, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
205	Ditch Construction	Station

END OF SECTION

**SECTION 206
SHOULDER REPAIR
(Reserved)**

END OF SECTION

SECTION 207
MACHINE BRUSHING WITH CITY-OWNED BRUSH MOWER

207-1.01 Description:

This work shall consist of machine cutting of brush from designated roadsides within City rights-of-way, using the City-owned brush mower, as directed by the Road Committee.

207-2.01 Construction Requirements:

The Road Committee or its designee will determine the limits of work and denote any trees, shrubs, plants, and other objects to remain. The Contractor shall leave undisturbed all things thus designated to remain.

Brushing under this specification shall be accomplished with the City-owned brush mowing tractor. Stumps shall be cut off not more than 6" above the ground. Cut stems shall be chopped to short lengths by the machine where feasible until they lie flat on the ground, i.e. not protruding over a foot above the ground.

The Contractor shall provide a safe operation. Contractor shall watch out for pedestrians, pets, and residential property that may be injured or damaged by the machine or flying debris, and shall stop operations or bypass areas where pedestrians, pets, or residential property is at risk until such time as the risks can be removed.

All debris that falls within the roadway shoulders or on private property during the clearing operation shall be cleared to other areas within the right-of-way as directed by the Road Committee designee.

207-3.01 Method of Measurement:

Machine clearing will be paid for by the hour. Unit costs shall include all labor necessary to fuel, relocate the machine, safety precautions, clean up, and minor maintenance or repairs approved by the Committee as needed to complete the work. Contractor shall maintain a log of time spent doing these activities and of locations brushed each day of operation. Data from the log shall be submitted with the billing for the time.

207.4.01 Basis of Payment:

The Contractor's time machine brushing will be paid for at the contract hourly rate for brushing completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
207	Machine Brushing With City-Owned Mower	Hour

END OF SECTION

SECTION 208 BLADING ROADBED

208-1.01 Description:

This work shall consist of blading the surface of an existing road to remove potholes and wash-boarding, and re-establishing an adequate crown and super-elevation as directed by the Road Committee.

208-2.01 Construction Requirements:

Equipment. The contractor's equipment must be a motor grader of adequate size and quality and properly maintained to perform the requirements of this specification. Worn cutting edges and uneven tire pressure are not acceptable. Contractors are encouraged to use a cab-mounted slope meter to establish required crowns.

Response time. 72 hours from call-out by the Road Committee designee unless otherwise directed.

General. Blade and shape the existing travel-way and shoulders, including turnouts, to produce a surface which is uniform, consistent to grade, and crowned or cross-sloped as indicated by the character of the existing surface, to at least three percent (3%), to provide drainage away from the traveled-way. Thoroughly loosen surfacing materials to the depth of pot holes, or corrugations. Retain the surface materials on the roadbed, and provide a thorough mixing of materials within the completed surface width. Shape existing drainage dips to divert runoff to the existing outlet. Where ditches are not present, do not undercut roadway back slopes.

Existing Structures. Do not place materials resulting from this work on structures such as bridges or drainage dips or in culverts.

208-3.01 Method of Measurement:

Bladed roadbed will be measured by the designated road unit and shall include as many passes as are necessary to provide a smooth, properly shaped road surface. The Committee may also approve spot grading using Specification 208A Spot Grading Roadbed with its pay unit and hourly rate. Spot grading may also include grader ditching.

208-4.01 Basis of Payment:

The accepted quantities of blading roadbed will be paid for at the contract unit price per designated road unit, or fraction thereof, completed and accepted by the Road Committee.

Payment will be made under:

Pay Item No.
208

Pay Item
Blading Roadbed

Pay Unit
designated road unit

END OF SECTION

SECTION 208A and 208B
SPOT BLADING ROADBED and GRADER DITCHING

208A-1.01 Description:

This work shall consist of spot blading the surface of limited sections of an existing road to remove potholes and wash boarding, and re-establish an adequate crown as directed by the Road Committee. This specification may be applied at the discretion of the Road Committee or Contractor for cases where blading of long sections of road is not needed but where relatively localized sections of roads need spot repairs. This work may also include grader ditching as directed.

208A-2.01 Construction Requirements:

Equipment. The contractor's equipment must be a motor grader of adequate size and quality and properly maintained to perform the requirements of this specification. Worn cutting edges and uneven tire pressure are not acceptable. Contractors are encouraged to use a cab-mounted slope meter to establish required crowns.

Response time. 72 hours from call-out by the Committee designee unless otherwise directed.

General. Blade and shape the existing travel-way and shoulders, including turnouts, to produce a surface which is uniform, consistent to grade, and crowned or cross-sloped as indicated by the character of the existing surface, to at least 3 percent, to provide drainage away from the traveled-way. Thoroughly loosen surfacing materials to the depth of pot holes, or corrugations. Retain the surface materials on the roadbed, and provide a thorough mixing of materials within the completed surface width. Shape existing drainage dips to divert runoff to the existing outlet. Where ditches are not present, do not undercut roadway back slopes.

Existing Structures. Do not place materials resulting from this work on structures such as bridges, drainage dips or in culverts.

208A-3.01 Method of Measurement:

Spot blading roadbed will be measured by the equipment hour, portal to portal.
Grader ditching will be measured by the equipment hour, portal to portal.

208A-4.01 Basis of Payment:

The accepted quantities of spot blading roadbed, or grader ditching, will be paid for at the contract unit price per equipment hour or fraction thereof, portal to portal, completed and accepted by the Road Committee. Contractor shall provide the invoice with a log of equipment operating time and locations graded.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
208A	Spot Blading Roadbed	Hour
208B	Grader Ditching	Hour

END OF SECTION

SECTION 209 RECONDITIONING DITCHES

209-1.01 Description:

This work will consist of cleaning and reconditioning roadside ditches to provide drainage.

209-2.01 Construction Requirements:

Ditches designated by the Road Committee shall be cleaned of all organics, sloughing, and other material that prevents flow. The ditch is defined as the flow channel below a level line extended from the shoulder of the road to the opposite (back) slope of the ditch. Waste material shall not be stockpiled on the road surface or bladed against the back slope of the ditch. Competent material generated during reconditioning may be used in the road surface as agreed upon by the contractor and the Road Committee designee. Unsuitable material shall become the property of the Contractor and shall be disposed of at the Contractor's expense.

Reconditioning will be paid for by the quarter mile. (NOTE: This is ditch length and not road length). Unit costs per mile shall include all necessary excavation and hauling of waste material to accomplish reconditioning.

209-4.01 Basis of Payment:

The accepted quantities of reconditioning ditches will be paid for at the contract unit price per mile, or portion thereof, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No</u>	<u>Pay Item</u>	<u>Pay Unit</u>
209A	Reconditioning Ditches w/removal of cut material	¼ Mile
209B	Reconditioning Ditches w/o removal cut material	¼ mile

END OF SECTION

SECTION 210 RECONDITIONING ROADBED

210-1.01 Description:

This work shall consist of reconditioning the surface of an existing road and shaping the road shoulders.

210-2.01 Construction Requirements:

The existing roadbed shall be scarified to minimum depth of 3 inches. The loose material shall then be shaped to provide a three percent (3%) crown with super-elevations on curves (see specification 208 for shaping requirements) as determined by the Road Committee, and compacted across the entire driving surface to a firm condition suitable for normal traffic. Contractor may compact the driving surface with a heavy truck, or a compacting roller. A smooth three percent (3%) crown and drivable surface that will not trap water must remain following the compaction, whatever the means used.

210-3.01 Method of Measurement:

Reconditioning roadbed will be measured by the mile designated road unit and shall include all reconditioning of shoulders if required, the scarification of the existing roadbed, the shaping of the road surface, and the compaction of the roadbed.

Water required for compaction shall not be measured for payment but shall be considered incidental to the reconditioning work.

210-4.01 Basis of Payment:

The accepted quantities of reconditioning roadbed will be paid for at the contract unit price per mile, or portion thereof, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
210	Reconditioning Roadbed	designated road unit

END OF SECTION

**SECTION 211
BASALTIC AGGREGATE
(Reserved)**

END OF SECTION

**SECTION 212
ASPHALT PATCHING
(Reserved)**

END OF SECTION

**SECTION 212A
ASPHALT CRACK SEALING
(Reserved)**

END OF SECTION

**SECTION 212B
ASPHALT SKIN PATCHING
(Reserved)**

END OF SECTION

**SECTION 212C
ASPHALT CRACK SEALING (MODIFIED)
(Reserved)**

END OF SECTION

SECTION 213 SPOT HAND CLEARING

213-1.01 Description:

This work shall consist of cutting trees and brush and, if requested, clearing cut material to disposal sites.

213-2.01 Construction Requirements:

The Road Committee will designate the limits of work and denote trees, shrubs, plants, and other objects to remain. No equipment on wheels or tracks shall be used unless approved by the Road Committee. Stumps shall be cut flush with the ground.

Selected trees, as designated by the Road Committee, shall be cut, bucked into 4 foot lengths and stacked neatly beyond the ditch and fully outside the road embankment, or, if requested, removed and disposed of in an acceptable manner. Selective tree removal may include leaning or dangerous trees and snags.

Intersection and road sight distance shall not be compromised during or after the hand clearing operation.

213-3.01 Method of Measurement:

Hand clearing will be paid for by the man-hour on site and working. Unit costs shall include all transportation to and from the site, equipment, labor, fuel, travel, etc. to complete the requested hand clearing on a man-hour on site and working basis.

213-4.01 Basis of Payment:

The accepted quantities of hand clearing will be paid for at the contract unit price per man-hour or portion thereof, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
213	Hand clearing	Each Man-Hour

END OF SECTION

**SECTION 212C
BORROW
(Reserved)**

END OF SECTION

SECTION 215 SNOW PLOWING

215-1.01 Description

This work consists of plowing snow from specified City roadway surfaces and from special areas of City property such as driveways, parking areas, and the boat harbor uplands. The Road Committee shall designate one person to be responsible for ordering snow plowing. The Contractor shall be notified if another Road Committee member substitutes in that designee's place, or if the order will come from the Mayor or the City Clerk/Treasurer, in the absence of the Mayor. All snow plowing shall commence within 12 hours from the time the Contractor is called out by the Road Committee designee unless otherwise arranged with the Road Committee.

215-2.01 Plowing Requirements

The roadway surface shall be cleared of snow from roadway shoulder to roadway shoulder each time it is plowed, with the exception of those designated by the Road Committee as impractical to do because of obstructions or width. Contractor shall plow snow evenly to both sides of the road such that berms along both sides are approximately equal throughout the winter—unless otherwise agreed by the Road Committee.

Roads that have not been cleared to a width of at least sixty feet (60') may or may not be cleared after snowfall has reached a depth of eighty inches (80"). Snowfall amounts will be determined for Gustavus by NOAA, or the National Weather Service.

Snow berms shall be winged back at road intersection radii to a maximum height of 30 inches measured from the roadway centerline. This shall apply to city roads and intersections only.

Gravel shall not be plowed off the road surface. It is acceptable to leave up to two inches of snow or hard pack on the road surface over the gravel.

The Contractor shall be responsible for all damages he causes to the roadway surface and damages to any facilities, public or private, located in or along the roadway.

Traffic surfaces of special areas such as city driveways and parking lots and the boat harbor uplands shall be cleared of snow and the snow shall be piled at locations designated by the Road Committee designee.

215-3.01 Method of Measurement

Snowplowing of city roads will be measured by miles of road plowed. City road lengths have been determined by the Road Committee and are provided to the

Contractor at the time of bidding. The Road Committee shall specify to the Contractor which roads are to be plowed. The Road Committee designee will call out the Contractor to plow snow on specified roads before 12 inches of fresh snow has accumulated. Fresh snow is defined as snow no more than three (3) days old.

Special areas such as City driveways, parking areas, and the boat harbor will each have unit prices per complete plowing as determined in the bid.

215-4.01 Basis of Payment

Snow plowing will be paid for at the contract bid unit price per mile for specified roads, and per contract bid unit price for plowing for specified special areas, completed and accepted by the Road Committee. The Road Committee designee may order plowing of snow under special conditions, or in locations not addressed in the bid documents, and make payment according to the contractor's hourly billing rate for the equipment used.

END OF SECTION

SECTION 216
SANDING OF ROADWAYS and PARKING AREAS

216-1.01 Description:

This work shall consist of sanding roadways and road intersections. The Road Committee shall designate one person to be responsible for ordering the sanding of roadways or parking areas. The Contractor shall be notified if another Road Committee member substitutes in that designee's place, or if the order will come from the Mayor or the City Clerk/Treasure, in the absence of the Mayor.

216-2.01 Materials:

The sanding material available for use will be the pit-run aggregate from the Gustavus gravel pit screened to 3/8" minus.

216-3.01 Sanding Requirements:

A mechanical spreader shall be used to spread the sanding materials. Sanding materials shall be spread in a uniform layer that covers the entire width of the roadway, shoulder to shoulder, and the entire area of an intersection unless otherwise directed by the Road Committee. All sanding shall commence within 2 hours of the Contractor being called out by the Road Committee.

216-4.01 Method of Measurement:

Sanding will be measured by the cubic yard. Sanding material, hauling, spreading, and labor shall be considered incidental to this pay item. When requested in writing by the Contractor, the Road Committee designee may approve alternate methods of determining tonnage.

216-5.01 Basis of Payment:

The accepted quantities of sanding materials spread on the roadway or parking area will be paid for at the contract unit price per yard, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
216	Sanding of Roadways	Cubic yard
216a	Parking Areas	Per Parking Area

END OF SECTION

SECTION 217 BERM DISPLACEMENT

217-1.01 Description:

This work consists of displacing hard pack snow berms from roadway surfaces. The Road Committee shall designate one person to be responsible for ordering hard pack removal. The Contractor shall be notified if another Road Committee member substitutes in that designee's place, or if the order will come from the Mayor or the City Clerk/Treasure, in the absence of the Mayor. Work shall begin within 48 hours of order.

217-2.01 Requirements:

The roadway surface shall require the displacement of snow berms from roadway shoulders, to roadway shoulder. The Contractor shall be responsible for all damages caused by the Contractor to the roadway surface and damages to any facilities located in or along the roadway. If the Contractor has to push snow berms back during winter to maintain roadway width, this work shall not be paid for. Where roadways are on sloping terrain and one side of the roadway has a cut bank, all hard-pack shall be plowed to the downhill side of the roadway.

The entrance to city-maintained side roads may be cleared of hard pack berms if there is room for the proper disposal of hard pack on either side of the entrance to the road. Clearing will be based on a case-by-case basis after discussion by the Road Committee designee and Contractor. Hard-pack in driveways shall be tapered back from the road shoulder to provide a smooth transition.

217-3.01 Method of Measurement:

Berms will be displaced on an "as-needed" basis, as directed by the Road Committee designee.

The Contractor and Committee shall negotiate hard-pack removal at the hourly rate and follow the procedures described in the Other Goods and Services Section.

217-4.01 Basis of Payment:

Berm displacement shall be paid for at a per hour rate, or portion thereof, as directed by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
217	Berm Displacement	per hour

END OF SECTION

**SECTION 218A
SUB-BASE, GRADING "B"
(RESERVED)**

**SECTION 218B
SUB-BASE
(RESERVED)**

**SECTION 219
AGGREGATE
(RESERVED)**

SECTION 219 A
GUSTAVUS PIT RUN AGGREGATE

219A-1.01 Description:

This work shall consist of furnishing and placing a smooth, uniform surface with no cross berms, with one or more courses of aggregate on a prepared surface as directed by the Road Committee.

219A-2.01 Aggregate:

The aggregate shall be pit run aggregate from the City of Gustavus gravel pit at the intersection of Wilson Road and Rink Creek Road.

219A-2.02 Hauling:

Contractor is responsible for assuring that trucks hauling aggregate do not exceed weight limits for State Roads on which they travel. The Contractor is encouraged to check with State of Alaska Department of Transportation and Public Facilities for information on load limits for State Roads.

CONSTRUCTION REQUIREMENTS

219A-3.01 Placing:

The Contractor shall lay a uniform lift of a three to four inch course of pit run aggregate on the road surface suitable for application.

219A-3.02 Mixing:

None required.

219A-3.03 Shaping and Compaction:

No compaction will be required of the Contractor. Compaction will be achieved by subsequent vehicle traffic.

219A-4.01 Method of Measurement:

Aggregate will be measured by the cubic yard based on truck count as logged by the contractor. When requested in writing by the Contractor, the Road Committee designee may approve alternative methods of determining cubic yardage.

219A-5.01 Basis of Payment:

The accepted quantity of aggregate will be paid for at the contract price per cubic yard, complete, in-place and accepted by the Road Committee. The Contractor shall provide with the invoice a log of materials placed by location and date.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
219A	Pit Run Aggregate	Cubic Yard

END OF SECTION

SECTION 220 SIGNS

220-1.01 Description:

This work consists of furnishing and installing signs and posts. The sign location and type will be as shown on the plans or as designated by the Road Committee.

220-2.01 Materials:

1. All signs shall be constructed from aluminum sheets, with reflective materials and having appropriate symbols. These shall meet the standards as set forth in the current Alaska Department of Transportation and Public Facilities manual, *Standard Specifications for Highway Construction*.
2. All new posts installed shall be 2 inches by 2 inches perforated steel tube posts, which conform to ADOT&PF manual; *Standard Specifications for Highway Construction*.

220-3.01 Construction Requirements:

All sign locations shall conform to ADOT&PF, Standard Drawings, "Sign Locations Post Mounted, sheet S-05.00" or as directed by the Road Committee. Post embedment shall conform to Standard Drawings, "Light Sign Structure Post Embedment, sheet S-30.01".

220-4.01 Method of Measurement:

Signs shall be paid for by the square foot and/or fraction thereof, installed. The face dimensions of the sign shall be measured to determine square footage. Posts shall be paid for by the linear foot of post, installed. Sleeves and miscellaneous hardware shall be considered incidental to 220 (2) Posts.

220-5.01 Basis of Payment:

The accepted quantities of signs and posts will be paid for at the contract unit price per square foot for signs and per linear foot for posts, completed and accepted by the Road Committee.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Items</u>	<u>Pay Unit</u>
220 (1)	Signs	Square Foot
220 (2)	Posts	Linear Foot

END OF SECTION

SECTION 308
CRUSHED RECYCLED ASPHALT PAVEMENT
(Reserved)

END OF SECTION

SECTION 603
CULVERT INSTALLATION OR REPLACEMENT

603-1.01 Description:

This item shall consist of installing new culvert(s) or replacing damaged culvert, including all necessary excavation and backfill material.

603-2.01 Materials:

Culvert and coupling bands shall be furnished by the City.

When the existing excavated material is not suitable for backfill, as determined by the Road Maintenance designee and the Contractor, material from the city gravel pit may be used.

603-3.01 Excavation and Backfill:

Corrugated pipe shall be installed so that the top of the pipe is a minimum of 12 inches below the road surface or as indicated on the plans. All culverts shall be installed so that the outlet of the culvert is lower than the inlet of the culvert, at a consistent, gradual decline. Culvert bedding shall consist of a minimum of 6 inches of suitable material. The culvert outlet shall be constructed to prevent erosion of the embankment.

Backfill material shall be placed in uniform layers of not more than 6 inches in depth and compacted to a density of not less than 95% of the maximum density as determined by AASHTO T-180, Method D, or Alaska T-12. In-place field densities will be determined by Alaska T-3 or T-11. An independent testing laboratory may be chosen and hired by the Road Committee. Ponding or jetting of material shall not be permitted.

603-3.02 Removal of Damaged Culvert:

Damaged culvert sections scheduled for repair may be removed by either sawing or torch cutting. All slag shall be removed and the end section ground reasonably smooth after torch cutting. Krylon Industrial Quality Cold Galvanized Spray, or an approved equivalent, shall be sprayed on galvanized culvert after cutting, following ~~per~~ manufacturer's instructions. Care shall be taken during the cutting operation to leave the remaining end square so that the joint will be reasonably flush and even.

603-3.03 Joining Culvert:

Culvert shall be firmly joined by coupling bands. Unless specified otherwise, the Contractor shall use coupling bands furnished by the City.

a. Corrugated bands furnished and installed such that band corrugations match those of the culvert. Such bands shall be not less than manufacturers recommended width and installed such that the gap between adjoining sections of culvert does not exceed three (3) inches.

b. Deformed steel sheet bands (dimple bands) furnished and installed such that the projections fit within the culvert corrugations. Such bands shall be not less than manufacturers recommended width and installed such that the gap between adjoining sections of culvert does not exceed three (3) inches.

c. If helically corrugated culvert with at least two annular corrugations rolled into each end is furnished, a band specifically designed to couple this culvert may be used. This band width shall be as recommended by the manufacturer, shall have a continuous annular corrugation on each side that matches the second corrugation of the culvert installed and shall be drawn together by at least two 1/2 inch bolts through the use of a bar and strap suitably welded to the band. These bands shall be furnished with two threaded steel tightening rods with a suitable connecting fitting. The tightening rods shall circumscribe the culvert in the band grooves and be securely tightened to furnish greater joint integrity.

d. Any other band that provides equal structural integrity and has been approved in writing by the Road Committee designee.

All bolted connections on coupling bands shall be furnished with cut-washers placed between the nut and the angle bracket, or nuts with integral washers.

603-4.01 Method of Measurement:

Driveway and road crossing culverts shall be a minimum of 18" in diameter.

Culvert will be measured by the linear foot. Coupling bands will be measured by the number of units installed. Imported backfill material required for backfill shall not be measured for payment but shall be considered incidental to culvert installation and repairs.

603-5.01 Basis of Payment:

All equipment, labor and imported backfill required for culvert installation and repair shall be included in the unit price for culvert.

The quantities shall be paid for at the contract price per unit of measurement, completed and accepted by the Road Committee, for each of the particular pay items listed below:

Numerical suffixes shall be the culvert diameter in inches.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
603(1-12)	12 Inch Culvert	Linear Foot
603(2-12)	12 Inch Coupling Band	Each

603(1-18)	18 Inch Culvert	Linear Foot
603(2-18)	18 Inch Coupling Band	Each
603(1-24)	24 Inch Culvert	Linear Foot
603(2-24)	24 Inch Coupling Band	Each
603(1-30)	30 Inch Culvert	Linear Foot
603(2-30)	30 Inch Coupling Band	Each
603(1-36)	36 Inch Culvert	Linear Foot
603(2-36)	36 Inch Coupling Band	Each
603(1-48)	48 Inch Culvert	Linear Foot
603(2-48)	48 Inch Coupling Band	Each

END OF SECTION

SECTION 613 CULVERT MARKERS

613-1.01 Description:

This work consists of furnishing and installing culvert markers as directed by the Road Committee.

613-2.01 Materials:

Reinforcing steel shall conform to AASHTO M31 Grade 60. Size shall be $\frac{3}{4}$ inch diameter (#6 bar).

Safety caps shall be mushroom shape plastic, highly visible (orange preferred), and shall conform to the requirements of pertinent OSHA requirements.

Paint for culvert marker posts (the top 12 inches shall be painted) shall be exterior grade semi-gloss enamel, as approved by the Road Committee designee.

613-3.01 Construction Requirements:

For culvert markers located adjacent culverts, the markers shall extend five (5) feet above top of culvert.

Minimum driven bury depth shall be 2 feet. Offset culvert markers shall extend 5 feet above ground level and shall be driven 2 feet below ground or as directed by the Road Committee. Where culvert ends are close to the road shoulder offset culvert markers are advisable to minimize conflict with snow removal and brush cutting operations.

613-4.01 Method of Measurement:

The quantities to be paid for shall be the actual number of culvert markers furnished, placed and accepted by the Road Committee.

613-5.01 Basis of Payment:

Culvert markers will be paid for at the contract price, per unit of measurement, for the pay item shown in the bid schedule.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
613	Culvert Markers	Each

END OF SECTION

SECTION 630 GEOTEXTILE

630-1.01 Description.

Prepare surfaces, furnish and place geotextile for embankment reinforcement as directed by the Road Committee.

630-2.01 Materials.

Geotextile material shall conform to the following requirements:

<u>Property</u>	<u>Test method</u>	<u>Required value</u>
Grab Tensile Strength	ASTM D 4632	200 lbs.
Grab Tensile Elongation	ASTM D 4632	15%
Mullen Burst	ASTM D 3786	400 p.s.i.
Trapezoid Tear	ASTM D 4533	75 lbs.
Puncture Strength	ASTM D 4833	90 lbs
Water Permeability	ASTM D 4491	.05 sec ⁻¹

Approved geotextile materials are “Contech C200 Woven Geotextile” and “Amoco 2002 Woven Geotextile” or any equal approved by the Road Committee.

630-3.01 Construction:

1. Surface Preparation. Before placing the fabric (geotextile), the surface on which fabric is to be placed shall be prepared by removal of all stumps, boulders and other sharp objects. All holes and large ruts shall be filled with material as approved by the Road Committee. Material used to fill ruts and holes shall be paid for at the unit price for the type material used as approved by the Committee.

2. Geotextile Placement. Fabric shall be unrolled directly onto the prepared surface. Do not expose geotextile to the elements for longer than 5 days after removal of the protective covering. Fabric shall be joined with adjacent pieces of fabric by sewing or overlapping. If fabric is sewn, the fabric shall have all seams sewn by butterfly or J-seams and shall develop a minimum of 85% of the specified strength. Seams shall be sewn with a double-thread chain-lock stitch. High-strength polyester, polypropylene or Kevlar thread shall be used. The seam shall be 1-1/2" (+ or - 1/4") from the outside edge of the geotextile.

Should overlapping of adjacent sections of fabric be used, the sections shall be overlapped a minimum of 3 feet or as shown on the plans.

3. Material Placing and Spreading. Following placement of the fabric on the prepared surface, road embankment material shall be end dumped on the previously spread fabric or ground adjacent to the fabric by a dozer or other machinery. A minimum depth of 1 foot shall be maintained at all times between the fabric and the wheels or tracks of the construction equipment. At no time shall equipment operate on the unprotected fabric. The material shall be spread in the direction of the fabric overlap. Special care shall be given to maintain a proper overlap and fabric continuity.

4. Fabric Repair. If the fabric should be torn for any reason, the aggregate material shall be cleared from the fabric. The torn area shall be overlain with fabric with a minimum three-foot overlap around the edges of the torn area. Care should be taken that the patch remains in place when material is placed over the affected area.

630-4.01 Method of Measurement:

The amount of geotextile to be paid for shall be the number of square yards of ground surface covered by fabric as approved by the Road Committee. Overlapping of fabric will be considered as subsidiary.

630-5.01 Basis of Payment

Payment will be made at the contract unit price per square yard. This price shall be full compensation for furnishing all materials, preparation, delivering and laying the fabric and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
630	Geotextile	Square Yard

END OF SECTION