



**TOWN OF STRATFORD
PURCHASING DEPARTMENT
STRATFORD, CONNECTICUT**

BID No. 2009-057

Issued : July 17, 2009

Subject : Tree Removals

The Town of Stratford through the Office of the Purchasing Agent, will receive SEALED BIDS for furnishing the equipment described in the accompanying specifications, in accordance with the instructions, conditions and reservations that follow:

A. CLOSING DATE:

Bids will be received until 3:00 pm July 31, 2009, at which time they will be publicly opened and read. All bidders are invited to attend this public opening, which will be held immediately following the closing time specified above, in the Office of the Purchasing Agent, Room 202, Town Hall, 2725 Main Street, Stratford, CT 06615.

Any bid may be withdrawn prior to the above-scheduled time for receiving bids or authorized postponement thereof. Any bids received after the date and time specified shall NOT be considered. No bidder may withdraw a bid within 45 days after the actual opening thereof.

B. INSTRUCTIONS:

All proposals must be addressed to the attention of the Purchasing Agent, in a sealed envelope with bid subject and number on the face thereof. Proposals may be mailed or submitted in person. FAXED PROPOSALS ARE NOT ACCEPTED.

C. CONDITIONS:

Bidders must state specifically what equipment they propose to supply, giving manufacturer's name, model number, etc. A detailed description should accompany your bid. Any exceptions to Town Specifications should be listed in your bid response.

Bid Surety:

A Certified Check, Cashier's Check or Bid Bond in the amount of \$ 1,000.00 must accompany each proposal, made payable to the Town of Stratford. No bid will be considered without this surety. Upon award or rejection of the bid, all Certified Checks or Cashier's Checks received in lieu of Bid Bonds will be returned to the bidders.

The following information should also be covered in your bid:

Payment: Final payment will be made upon the acceptance of the completed work by an authorized representative of the Town of Stratford. NO partial payments will be made. Invoices covering the work specified herein should be forwarded to the Purchasing Department upon completion of the project.

Delivery: Please state as accurately as possible how long it will take to complete delivery after receipt of order, if you are the successful bidder.

Warranty: All proposals must state the exact nature and duration of any warranty applicable to the equipment you propose to sell to the Town.

Taxes: The Town of Stratford is exempt from all State and Federal taxes. Do not include these amounts in your quotation.

Repairs, parts: Bidders should indicate where service or parts could be obtained for the equipment being offered to the Town.

Insurance Requirements:

A. General Liability

Occurrence limit \$1,000,000; aggregate limit \$2,000,000. The insurance carried by the proposer shall be on form CG 00 01, or equivalent. The Town of Stratford shall be named as an additional insured on the contractor's General Liability Insurance Policy with form CG 20 10 or CG 20 33, *and* CG 20 37.

B. Automobile Liability

Combined single limit of \$1,000,000. Comprehensive automobile policy to cover all owned, hired or non-owned automobiles or vehicles.

C. Workers Compensation

The proposer must have workers' compensation and employers liability insurance as required by Connecticut and federal law, plus employers liability limits of \$1,000,000 per accident, 1,000,000 disease each employee and \$1,000,000 disease policy limit.

D. Umbrella Liability

The proposer shall have a minimum coverage of \$3,000,000 excess umbrella coverage, naming the Town as additional insured.

The proposer shall procure and pay for the insurance coverage described above and must maintain the indicated insurance for a period of two (2) years after completion of the contract. All policies shall provide for thirty (30) days written notice prior to cancellation, substantial change or nonrenewal. The successful bidder must file the required Performance Bond and an Insurance Certificate within two weeks of the date of notification of award. Failure or neglect to do so may be considered by the Town as proof that the proposer is unable to fulfill the contract. A current insurance certificate and a copy of the endorsement or policy wording adding the Town as Additional Insured must be in the Town's possession at all times. In addition, the selected firm shall require its subcontractors, if any, to meet the same insurance requirements and to furnish the Town with similar evidence of insurance.

In addition, the proposer shall, at all times, save, indemnify and hold harmless the Town of Stratford, its officers, agents, employees and servants from liability of any nature or kind, including costs and expenses for or on account of, any patented or copyrighted equipment, materials, articles, or processes used in the performance of this contract, or on account of any and all claims, damages, losses, litigation expense and counsel fees arising out of loss or injuries (including death) sustained by or alleged to have been sustained by the public or any persons affected by the proposer's work, or by the proposer or any subcontractor, or anyone directly or indirectly employed by them while engaged in the performance of their duties in connect

D. RESERVATIONS:

The Town of Stratford may consider informal any proposal not prepared and submitted to the Town in accordance with the provisions herein stated. The Town of Stratford reserves the right to reject any or all proposals or parts of proposals; to waive defects in same proposals; or to accept any proposal or part thereof deemed to be in the best interests of the Town of Stratford.

Michael Bonnar, Purchasing Agent

For additional information, contact Phil Handy, Parks Superintendent at 203-385-4080.

SPECIFICATIONS: See next page.

**SPECIFICATIONS
FOR
CONTRACTING TREE TRIMMING AND REMOVALS**

July 17, 2009

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GENERAL SPECIFICATIONS

PART I.

1. SCOPE OF SERVICES

To provide all supervision, labor, tools, equipment and services required for performing tree maintenance work in the Town of Stratford as specified herein.

2. QUALIFICATIONS OF BIDDERS

- A. Bidding on this contract shall be limited to individuals, partnerships and corporations actively engaged in the field of arboriculture. Bidders shall derive a majority of income from arboriculture work. Bidders shall demonstrate competence, experience, and financial capability to carry out the terms of this contract. The Town may require proof of these qualifications.
- B. The successful bidder must possess a valid arborist license in the State of Connecticut, a copy of which will be required on signing the contract.
- C. References must be submitted to establish experience of bidder.

3. SAFETY STANDARDS

- A. All equipment to be used and all work to be performed must be in full compliance with the most current revision of American National Standards Institute Standard Z-133.1 (Safety Requirements for Pruning, Trimming, Repairing, Maintaining, Remove Trees and for Cutting Brush). These standards are made part of this contract by this reference.
- B. The Contractor shall be solely responsible for pedestrian and vehicular safety and control within the work site and shall provide the necessary warning devices, barricades, and ground personnel needed to give safety, protection, and warning to persons and vehicular traffic within the area.
- C. Blocking of public streets shall not be permitted unless prior arrangements have been made with the city and is coordinated with appropriate departments. **Traffic control and any additional costs incurred on the contractors behalf to conform with local ordinances and codes is the responsibility of the Contractor and shall be accomplished in conference with State, County and Local highway construction codes.**

4. LIABILITY FOR DAMAGE TO PROPERTY AND/OR PLANT MATERIAL

- A. Tree Damage: Climbing irons, spurs or spikes are not used on trees to be pruned. Any tree damage caused by the Contractor should be repaired immediately at no additional expense to the satisfaction of the Town. Trees damaged beyond repair, as

judged by a qualified arborist acceptable to the Town and the Contractor whose expenses shall be jointly covered by both parties, are to be removed at no expense to the Town, and replaced by a tree of size and species designated at no additional expense to Town; or the dollar value of such damaged trees, as determined by a qualified arborist acceptable to the Town and the Contractor whose expenses shall be jointly covered by both parties, is deducted from the moneys owed the Contractor.

5. DISCONTINUANCE OF WORK

- A. Any practice obviously hazardous as determined by a representative of the Town shall be immediately discontinued by the Contractor upon receipt of either written or oral notice to discontinue such practice.

6. OBSERVANCE OF LAWS, ORDINANCES AND REGULATIONS

- A. The Contractor at all times during the term of this contract shall observe and abide by all Federal, State, and Local laws which in any way affect the conduct of the work and shall comply with all decrees and orders of courts of competent jurisdiction.
The Contractor shall comply fully and completely with any and all applicable State and Federal Statutes, rules and regulations as they relate to hiring, wages, and any other applicable conditions of employment.

B. OSHA

The bidder must certify all equipment must comply to all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder must further certify that all items furnished under this project will conform to and comply with Federal and State of Connecticut OSHA standards. Successful bidder must agree to indemnify and hold harmless the City of Bridgeport for any and all damages that maybe assessed against the City.

7. WORKING IN PROXIMITY TO ELECTRICAL HAZARDS

(This section is taken from American National Standard Institute Z-133.1 1982)

- A. An inspection shall be made by the tree worker and by the supervisor to determine whether an electrical conductor passes through the tree or passes within reaching distance of the tree worker before climbing, entering, or working around any tree.
- B. Only a qualified line-clearance tree trimmer or qualified line clearance tree trimmer trainee shall be assigned to the work if it is found that an electrical hazard exists. A trainee shall be under the direct supervision of qualified personnel. (A qualified line-clearance tree trimmer is a tree worker who through related training and on-the-job experience is familiar with the special techniques and hazards involved in line clearance.

A trainee is a worker regularly assigned to a line-clearance tree-trimming, has demonstrated his ability to perform his duties safely at his level of training. OSHA Standard 29CFR 1910)

- C. There shall be a second qualified line-clearance tree trimmer or line-clearance tree trimmer trainee within normal voice communication during line-clearance operations aloft when the line-clearance tree trimmer or line-clearance trainee must approach more closely than 10 feet (3m) to any conductor or electrical apparatus energized in excess of 750 volts: or (1) When branches or limbs being removed cannot first be cut (with a pole pruner/pole saw) sufficiently clear of the primary conductors and apparatus so as to avoid contact, or, (2) When roping is required to remove branches or limbs from such conductors or apparatus.
- D. Tree trimmer trainees shall maintain the clearances from energized conductors.

**MINIMUM WORKING DISTANCES FROM
ENERGIZED CONDUCTORS FOR
LINE-CLEARANCE TREE TRIMMERS
AND LINE-CLEARANCE TREE TRIMMER TRAINEES**

Voltage Range (phase to phase) (kV)	Minimum Working
2.1 to 15.0	2 ft 0 in (0.6m)
15.1 to 35.0	2 ft 4 in (0.7m)
35.1 to 46.0	2 ft 6 in (0.75m)
46.1 to 72.5	3 ft 0 in (0.9m)
72.1 to 121.0	3 ft 4 in (1.0m)
138.0 to 145.0	3 ft 6 in (1.05m)
161.0 to 169.0	3 ft 8 in (1.1m)
230.0 to 242.0	5 ft 0 in (1.5m)
345.0 to 362.0	7 ft 0 in (2.1m)
500.0 to 552.0	11 ft 0 in (3.35m)
700.0 to 765.0	15 ft 0 in (4.55m)

- E. All other workers shall maintain a minimum clearance of 10 feet (3m) from energized conductors rated 50kV phase-to-phase or less; for conductors rated over 50kV phase-to phase the minimum clearance shall be 10 feet plus 4/10 (3m plus 10mm) for each kilovolt over 50kV.
- F. Ladders, platforms, and aerial devices, including insulated aerial devices, shall not be brought in contact with an electrical conductor.
- G. When an aerial lift device contacts an electrical conductor, the truck supporting the aerial lift shall be considered as energized, and contact with the truck shall be avoided except where emergency rescue procedures are being carried out. Emergency rescue should only be attempted by properly trained persons familiar with electrical hazards.

8. PROTECTION OF OVERHEAD UTILITIES

- A. Tree trimming and removal operations may be conducted in areas where overhead electric, telephone, and cable television facilities exist. The Contractor shall protect all utilities from damage, shall immediately contact the appropriate utility if damage should occur, and shall be responsible for all claims for damage due to his operations. The Contractor shall make arrangements with the utility for removal of all necessary limbs and branches which may conflict with or create a personal injury hazard in conducting the operations of this contract.

9. THE PROTECTION OF UNDERGROUND UTILITIES

- A. The Contractor shall be responsible for contacting the appropriate utility for location of any underground electric services which are in the work area and which could be damaged by the Contractor's operation.

10. LOCATION AND SCHEDULE OF WORK

- A. The City reserves the right to change, add, or delete areas or quantities to be trimmed as it deems to be in its best interest. Tree trimming and removal operations shall commence no later than 10 days after contract has been awarded and continued until completion. Unless otherwise authorized by the Town, failure of the Contractor to comply with the approved trimming schedule shall be sufficient cause to give notice that the Contractor is in default of the contract.

11. CLEANUP

All debris from tree trimming, tree removal, and stumping operations shall be cleaned up each day before the work crew leaves the site, unless permission is given by the Tree Warden or his Assistant Tree Warden to do otherwise. All lawn areas shall be raked, all streets and sidewalks shall be swept, and all brush, branches and logs shall be removed from the site. Areas are to be left in a condition equal to that which existed prior to the commencement of forestry operations.

- B. It shall be the responsibility of the Contractor to remove and dispose in a proper and acceptable manner all logs, brush, and debris resulting from the tree maintenance operations at the Contractor's expense unless otherwise directed by the Tree Warden or Assistant Tree Warden.**

12. WORKING HOURS

- A. The Contractor will schedule work between the hours of 7:30 a.m. and 4:00 p.m. Monday through Friday unless authorized by the Town or its representative to do otherwise.

13. LICENSES AND PERMITS

- A. The Contractor shall, at his expense, procure all necessary licenses and permits needed to conduct the work required under the terms of this contract. It shall be the responsibility of the Contractor to obtain all necessary permits, lane closure permits and other needed authorization to conduct tree maintenance operations on all rights-of-way. The Contractor shall give any and all necessary formal notices required in conjunction with the lawful prosecution of the work of this contract.

14. SUBCONTRACTS

- A. The Contractor will not be allowed to subcontract work under this contract unless written approval is granted by the Town. The Subcontractor, as approved, shall be bound by the conditions of the contract between the Town and the Contractor. The authorization of a Subcontractor is to perform in accordance with all terms of the contract and specifications. All required notices, work orders, directives, and requests for emergency services will be directed to the Contractor. All directions given to the Subcontractor in the field shall bind the Contractor as if the notice had been given directly to the Contractor.

15. EXECUTION OF CONTRACT

- A. The successful Bidder shall, within 15 calendar days of the mailing of written notice of selection as the successful bidder, enter into contract with the Town on forms as included within the bidding documents for the appropriate bonds, indemnities and insurances required hereunder.
- B. The contract, when executed, shall be deemed to include the entire agreement between the parties; the Contractor shall not base any claim for modification of the contract upon any prior representation or promise made by representatives of the Town, or other persons.

16. SUPERVISION

- A. This contract will be under the direct supervision of the Town or its authorized representatives. Any alterations or modifications of the work performed under this contract shall be made only by written agreement between the Contractor and the Town authorized representatives and shall be made prior to commencement of the altered or modified work. No claims for extra work or materials shall be allowed unless covered by written agreement.

17. WORK CREW SUPERVISION

- A. The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be authorized by the Contractor to accept and act upon all directives issued by the Town. Failure for the supervisor to

act on said directives shall be sufficient cause to give notice that the Contractor is in default of the contract unless such directives would create potential personal injury or safety hazards. In addition the contractor will provide two way radio/cellular phone for communications between the Tree Warden and each crew and notify him each day the locations in which he will be working.

18. PAYMENTS

- A. Partial billings are acceptable on a weekly basis. Payment is made according to The percent of work completed determined by the tree warden. A 5% retainage will be held by the city until all work is completed.

19. BIDDING SPECIFICATIONS AND CONTRACTUAL TERMS

- A. Tree work done under the direction of this contract shall be bid as follows:
 - 1. Tree work performed lump sum
 - 2. Tree work on a hourly basis
 - 3. Emergency tree work on a hourly basis

PART II TREE PRUNING

1. PRUNING

- A. Pruning will be done according to the latest revision of standards of the National Arborist Association for shade trees and made a part of these specifications attached. The pruning class requirements will be decided by the Town and will be indicated in the specific bidding proposal.
- B. Generally, pruning shall consist of conforming to Class III, medium pruning, and lifting the lower bottom branches of trees for under-clearance as directed by the Town. Additional pruning may be required by the Town for street intersection, house clearing and street lighting as required by the Society of Illuminating Engineers specifications. (Branches should be pruned back a minimum of 10' from the roof or side of house).
- C. Under-clearance pruning to provide for pedestrian and vehicular clearance shall be done to provide clearance as directed by the Town. Clearance heights shall be determined at a point over the sidewalk and at the lowest point of branch overhang over the street generally 8 feet and 15 feet respectively.

2. CUTTING BACK, TOPPING & NATURAL TRIMMING (DROP CROTCHING)

- A. Cutting back, topping and natural trimming (Class IV Pruning) shall consist of the severe pruning of tops, sides, under branches, or individual limbs on the trees being trimmed. To provide sufficient clearance for electric, telephone and/or cable television aerial facilities, it shall be the responsibility of the Town to make special

arrangements as needed with the utility companies to provide clearance around the aerial facilities. All pruning shall be done in a manner so as not to endanger the aerial facilities or persons working on this project. Cutting back, topping and natural trimming shall be done as directed by the Town. All work shall be accomplished in accordance with the following requirements:

- a. Natural trimming shall be accomplished without cutting back to small suckers. The smaller limbs and twigs are to be removed in such a manner as to leave the foliage pattern evenly distributed.
- b. Attention is to be given, to the extent possible, to present a symmetrical appearance after the tree is cut back and topped. Trees should be shaped to remain in an appearance which is shapely and typical of their species. Sides shall be reduced in order to maintain a tree-like form.
- c. Care should be taken in pruning this bark trees. The minimum amount of limbs shall be removed to obtain the effect desired without admitting excessive sunlight to the trunk of the tree or the top of the large branches.
- d. Trees shall not be reduced by more than 1/3 of the total area existing prior to trimming, unless authorized by the Town.

TREE REMOVAL

PART III.

1. TREE REMOVAL

- A. Trees shall be removed in accordance with accepted industry standards and procedures and in accordance with the following minimum requirements:
 1. Extreme care shall be taken so as to prevent limbs, branches and trunks from falling and creating damage to adjacent homes, driveways, sidewalks, streets and other property, both public and private.
 2. Limbs and branches larger than four (4) inches in diameter shall be lowered to the ground through the use of ropes or other mechanical devices.
 3. Stumps shall not be left higher than three (3) inches above ground level.
 4. Debris and logs shall not be left on the public right of way overnight. It shall be the responsibility of the Contractor to remove and dispose in a proper and acceptable manner all logs, brush and debris resulting from the tree removal operation unless otherwise directed by the Town.

STUMP REMOVAL

PART IV.

1. GENERAL SPECIFICATIONS

- A. The Contractor is responsible for grinding stumps and bracing roots at least six inches below grade. Chips and residue can be returned to the hole. At least a two inch thick layer of topsoil shall be placed over any chips and residue. The area shall be crowned at least two inches above surrounding grade to allow for settling and shall be raked smooth. The contractor shall restore any damaged turf areas and grades due to vehicular or mechanical operations. At the direction of the Town, Contractor will re-seed the area with approved grass seed.

2. BIDDING SPECIFICATIONS

Stump grinding shall be bid lump sum

EMERGENCY AND/OR TIME AND MATERIAL WORK

PART V.

1. EMERGENCY WORK

- A. Need Response - Throughout the term of the contract it may become necessary for the Contractor to assist the Town in providing emergency tree services. The Contractor shall provide telephone numbers at which he can be reached a 24 hour emergency basis. When severe winds, ice storms, or other conditions require emergency assistance, the Contractor shall respond and commence work as soon as possible after receiving the emergency request notification. The Contractor shall provide emergency assistance in the manner as set forth by the Town and/or by the Contractor storm plan. In emergency situation, the Contractor shall commence work within 1 hour of notification to proceed.
- B. Emergency and Time and Material Work shall be bid on an hourly basis. Contractor shall be able to furnish crew, fully equipped with aerial equipment, trucks, chipping equipment and power and hand tools as specified by the Town. Crew personnel shall include, but not be limited to the following:
 - 1. Grounds person/Driver who has skills necessary in ground operations such as operating and loading trucks, cutting limbs on the ground, operating chipper, raking and cleaning up the area.
 - 2. Foreman/Climber who has skills necessary for working in trees from an aerial

lift/tower or by the use of ropes, saddles and other hand climbing equipment and having proficiency in operating all other related mechanical equipment such as loaders, etc. as well as provide supervision of the emergency work force and shall have responsibility for giving directions, making decisions, and assuming responsibility for all work completed by the contractor.

CONTRACT TERMINATION

PART VI.

The Town shall have the right to terminate a contract or a part before thereof the work is completed in the event:

1. Previous unknown circumstances arise making it desirable in the public interest to void the contract.
2. The contractor is not adequately complying with the specifications.
3. Proper arboricultural techniques are not being followed after warning notification given by the Town or its authorized representatives.
4. The contractor refuses, neglects, or fails to supply properly trained or skilled supervisory personal and/or workers or proper equipment of the specified quality and quantity.
5. The contractor in the judgment of the Town is unnecessarily or willfully delaying the performance and completion of the work.
6. The contractor refuses to proceed with work when and as directed by the Town.
7. The contractor abandons the work.

INDEMNIFICATION

PART VII.

I, the Contractor, agree to indemnify, hold harmless, and defend the Town from and against any and all loss, damage, or expense which the Town may suffer or for which the Town may be held liable by reason of any injury (including death) or damage to any property arising out of negligence on the part of the Contractor in the execution of the work to be performed hereunder.

**NATIONAL ARBORIST ASSOCIATION
PRUNING STANDARDS FOR SHADE TREE
(REVISED 1979)**

PART VIII.

These standards are provided by the National Arborist Association to assist you in Writing contract specifications that best satisfy your budget and other needs. It is recognized that regional practices may dictate variations in this standard.

W.P.LANPHEAR, Chairman
Standard Practices Committee
National Arborist Association
174 Route 101
Bedford Station Box 238
Bedford, NH 03102

INTRODUCTION

Pruning is to be performed by tree workers who, through related training and on-the-job experience, are familiar with the techniques and hazards of this work including trimming, maintenance, repairing or removal, and equipment used in such operations. The use of climbing spurs or irons is not approved in pruning operations on live trees. This type of work is a potentially hazardous occupation and is to be undertaken only by trained personnel, all of whom are covered with workers compensation, property damage, public liability, and completed operations insurance.

**THERE ARE FOUR CLASSES OF PRUNING:
CLASS I FINE PRUNING**

Fine pruning shall consist of the removal of dead, dying, diseased, interfering, objectional obstructing, and weak branches, as well as selective thinning to lessen wind resistance. The removal of such described branches is to include those on the main area. An occasional branch, up to 1/2" diameter, as described above, may remain within the Main leaf area to its full length when it is not practical to remove it.

THE FOLLOWING SPECIFICATIONS SHALL APPLY:

- A. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. (See diagram A) Clean cuts shall be made at all times.
- B. It is necessary to precut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary to prevent tree or property damage, branches shall be lowered to the ground by proper ropes and equipment.

- C. Remove the weaker or least desirable of crossed or rubbing branches. Such removal should not leave large holes in the general outline of the tree.
 - D. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of dressing.
- D. On trees known to be diseased, tools are to be disinfected with methyl alcohol at 70% (denatured wood alcohol diluted appropriately with water) or Chlorox solution after each cut and between trees where there is known to be a danger of transmitting the disease on tools.
- F. Old injuries are to be inspected. Those not closing properly, and where the callus growth is not already completely established, should be traced where appropriate, if desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.
 - G. Where practical, all visible girdling roots shall be treated as follows:
 1. Cut root at either end.
 2. Notch root in center with a chisel.
 3. Remove entire root without injuring the bark or parent stem.
 - H. The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches, should be reported in writing to a supervisor and/or the owner, and corrective measures recommended.

CLASS II MEDIUM PRUNING

Medium pruning shall consist of the removal of dead, dying, diseased, interfering, objectionable weak branches on the main trunks as well as those within the leaf area. An occasional branch up to one inch in diameter may remain within the main leaf area where it is not practical to remove it.

THE FOLLOWING SPECIFICATIONS SHALL APPLY:

- A. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. (See diagram A) Clean cuts shall be made at all times.
- B. It is necessary to pre-cut branches too heavy to handle too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.

- C. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a coat of dressing.
- D. On trees known to be diseased, tools are to be disinfected with methyl alcohol at 70% (denatured wood alcohol diluted appropriately with water) or Clorox solution after each cut between trees where there is known to be a danger of transmitting the disease on tools.
- E. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be traced where appropriate. If desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.
- F. All girdling roots visible to the eye are to be reported to a supervisor and/or the owner.
- G. The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches should be reported in writing to a supervisor and/or the owner, and corrective measures recommended.

CLASS III COARSE PRUNING

Coarse pruning shall consist of the removal of dead, dying, diseased or obviously weak branches, two inches in diameter or greater.

THE FOLLOWING SPECIFICATIONS SHALL APPLY:

- A. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. (See diagram A) Clean cuts shall be made at all times.
- B. It is necessary to pre-cut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.
- C. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of dressing.
- D. On trees known to be diseased, tools are to be disinfected with methyl alcohol at

70% (denatured wood alcohol diluted appropriately with water) or Chlorox solution after each cut between trees where there is known to be a danger of transmitting the disease on tools.

- E. The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches should be reported in writing to a supervisor and/or the owner, and corrective measures recommended.

CLASS IV CUTTING BACK OR DROP CROTCH PRUNING

Cutting back or drop crotch pruning shall consist of the reduction of tops, sides, underbranches or individual limbs. This practice is to be undertaken only in cases of utility line interference, or where certain portions of the roots or root systems have been severed or severely damaged, or when there is unusual and rapid tree growth, where it is necessary to reduce the top sides or under branches, or for specific topiary training or dwarfing.

THE FOLLOWING SPECIFICATIONS SHALL APPLY:

- A. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. (See diagram A) Clean cuts shall be made at all times.
- B. It is necessary to pre-cut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.
- C. Remove the weaker or least desirable or crossed rubbing branches. Such removal should not leave large holes in the general outline of the tree.
- D. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of dressing.
- E. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be traced where appropriate. If desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.
- F. Generally, in reducing size (cutting back), not more than One-third of the total area should be reduced at a single operation. When cutting back trees, only crotch as much as necessary. Where practical, avoid cutting back to small suckers. All effort should be made to cut back to a lateral, one-third of the diameter of the cut being made.

- G. In reducing overall size, attention is to be given to the symmetrical appearance. Top is to be higher and sides reduced in order to maintain a tree-like form.
- H. When cutting back trees, one should have in mind to make them shapely and typical of their species.
- I. On thin bark trees, just enough limbs shall be removed to get the effect wanted without admitting too much sunlight to the trunk of the tree or the top of large branches. Care should be taken with the following species: Lindens, maples, beeches, apple, oak, and other trees susceptible to sunscald growing in different geographical areas. The above damage may be minimized by doing work on susceptible species during the dormant season.
- J. In lifting the lower bottom branches of trees for under clearance, care should be given to symmetrical appearance, and cuts should not be made so large that they will prevent normal sap flow.
- K. Periodical drop crotching or cutting back of silver maples, poplars, and other trees with brittle and soft wood is an established practice and has proven beneficial in maintaining the safety of these trees over long periods of growth. Other areas may be specifically names when it is common practice to control the growth by cut-back.
- L. An alternate method in some situations for maintaining the safety of these trees could be cabling and bracing as described under that standard.

TERMINOLOGY

PART IX.

BRANCH COLLAR - Wood tissue that forms around the base of a branch between the main stem and the branch. Usually, as a branch begins to die, the branch collar begins to increase in size.

CALLUS - New growth made by the cambium layer around all of a wound.

CAMBIUM LAYER - Growing point between the bark and sapwood.

CLOSURE - Refers to the roll of the callus growth around the wooded area.

THE CUT - The exposed wood area that remains after the branch has been removed.

CUT BACK - Specified reduction of the overall size of the tree or individual branches, but may include the overall reduction of the sides as well as the top of the tree.

DORMANT - A condition of non-active growth. Deciduous trees are considered to be dormant from the time the leaves fall until new foliage begins to appear.

GIRDLING ROOTS - Located above or below ground level, whose circular growth around the base of the trunk or over the individual roots applies pressure to the bark area, thereby choking or restricting the flow of sap.

LIFTING - The removal of lower branches for under clearance

PARENT STEM - The main trunk system of the tree.

PRECUT OR PRECUTTING - The removal of the branch at least 6" beyond the finished cut to prevent splitting into parent stem or branch.

PRUNING - The removal of dead, dying diseased, or live interfering, objectionable and weak branches in a scientific manner.

SAP FLOW - The definite course assumed by sap in its movement through a tree.

SCARS OR INJURIES - Natural or man-made lesions of the bark in which wood is exposed.

SUCKERS - Abnormal growth of small branches usually not following the general pattern of the tree.

THINNING OUT - The removal of live branches to reduce wind resistance and to create more space.

TOPPING - Means the same as Cut Back.

TRACING - Careful cutting of the bark along the lines of sap flow to encourage closure and to be the outline of the wound area.

TRIMMING- The same as pruning.

TOWN OF STRATFORD
BID #2009-057
TREE REMOVALS
BID SHEET

1. Lump sum price for removal street trees including stump (See attached list)
Page 21.

Price per lump sum for removal of trees and stumps per attached list
_____dollars and
cents_____.

2. Price per Lump sum for trimming street trees on attached list
_____dollars and
_____cents.

3. Two man crew including bucket truck with 15 cy chip box (or greater) and
16" chipper Price per hour_____dollars and
_____cents.

Price per additional groundman/driver per hour _____dollars
and _____cents.

4. Price for stump removals per inch of diameter _____
Dollars and _____cents.

5. (EMERGENCY WORK)

Hourly charge for emergency work
Express in dollars per-hour.

Two man crew including bucket truck with 15 cy chip box (or greater) and
16" chipper

Price per hour_____dollars and
_____cents.

Price per additional groundman/driver per hour _____dollars
and _____cents.

- Unit prices to include all chain saws, gasoline, oil, pruning equipment, and disposal of wood and wood chips, etc. to properly equip the crew in either the removal or trimming of trees. Equipment shall meet or exceed safety standards as set forth in appropriate Federal, State, and Local government requirements.

All bids must give a least three (3) references with contact name and phone number.

References : _____

Bidder's Name : _____

Address : _____

Phone : _____ Date : _____

Authorized Signature : _____

Printed Name : _____

Title : _____

Tree Removal - Locations

Remove Tree 75 High Park Avenue 11/05/2008
Remove Tree Airway Dr., 65 06/19/2009
Remove Tree Albert Ave., 325 06/16/2009
Remove Tree Audi La., 55 06/16/2009
Remove Tree Bunnyview Drive, 485 05/13/2009
Remove Tree Cameo Rd., 35 and Silver Lane 06/23/2009
Remove Tree Cardinal Place, 41 06/16/2009
Remove Tree Claudia Drive, 100 10/23/2008
Remove Tree Clover St., 126 06/23/2009
Remove Tree Clover St., 75 06/23/2009
Remove Tree Cutspring Road, 135 12/12/2008 - 2 trees
Remove Tree Delwood Road, 35 05/21/2009
Remove Tree Eaton Street, 90 12/12/2008
Remove Tree Elm St., 1260 07/02/2009
Remove Tree Elmhurst Ave, 56 09/03/2008
Remove Tree Eveyln Street, 50 10/17/2008
Remove Tree Glenn Dr., 175 06/23/2009
Remove Tree Glenn Drive, 110 05/13/2009
Remove Tree Graham Street, 350 03/12/2009
Remove Tree Harvard Ave., 459 06/23/2009
Remove Tree Hillside Ave., 1055 06/16/2009
Remove Tree Huntington Road, 3150 (one large tree) 10/07/2008
Remove Tree Hurd Avenue, 320 04/17/2009
Remove Tree Hyde Terrace, 40 and Glenridge Road 04/17/2009
Remove Tree James Farm Road, 875 04/20/2009
Remove Tree Judson Place, 743 10/07/2008
Remove Tree Judson Place, 778 - same as 768 Judson place 09/30/2008
Remove Tree Knowlton St., 241 06/16/2009
Remove Tree Legion Avenue, 170 06/11/2009
Remove Tree Light Street, 424 06/22/2009
Remove Tree Lobdell Drive, 240 05/13/2009
Remove Tree Lobell Drive, 59 05/13/2009
Remove Tree Main Street Putney, 4783 09/30/2008
Remove Tree Main Street, 4064 and Newtown Avenue 04/17/2009
Remove Tree Marina Dr., 330 07/02/2009
Remove Tree Mary Ave., 85 06/22/2009
Remove Tree Meadowbrook Road, 33505/13/2009
Remove Tree Mill River Drive, 74 05/13/2009 - 2 trees
Remove Tree Nichols Ave., 763 and Kenwood Ave. 07/02/2009
Remove Tree North Abram Street, 378 06/12/2009
Remove Tree North Ave., 1580 06/16/2009
Remove Tree North Avenue, 1685 11/06/2008
Remove Tree Olympia St., 25 10/01/2008
Remove Tree Park Street, 308 10/23/2008
Remove Tree Placid Ave., 145 06/17/2009
Remove Tree Raymond St., 45 07/02/2000
Remove Tree Reed St., 167 06/12/2009
Remove Tree Reed Street, 51 09/30/2008
Remove Tree Reitter St., 472 06/23/2009
Remove Tree Ridgefield Drive, 20 10/19/2008
Remove Tree Roger Dr., 223 06/16/2009
Remove Tree Temple St., 44 10/17/2008
Remove Tree Valley View Road, 40 10/01/2008
Remove Tree Victory St., 112 06/16/2009
Remove Tree Vielie Street, 56 at Marcroft Street 10/07/2008
Remove Tree Warner Hill Road, 885 09/03/2008
Remove Tree Wells Place, 1127 09/10/2008
Remove Tree Wilbrook Rd., 299 06/17/2009
Remove Tree Wilbrook Road, 120 10/21/2008 7/8/2009