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**ORIGINAL**

**ORDINANCE NO. 170**

**AN ORDINANCE OF THE CITY OF WOODINVILLE GRANTING METRICOM, INC., A DELAWARE CORPORATION, THE RIGHT, PRIVILEGE, AUTHORITY AND FRANCHISE TO CONSTRUCT, AND MAINTAIN, REPAIR, REPLACE, OPERATE UPON, OVER, UNDER, ALONG, AND ACROSS THE FRANCHISE AREA FOR PURPOSES OF ITS RICOCHET MICROCELLULAR DATA NETWORK BUSINESS.**

The City of Woodinville, State of Washington (hereinafter referred to as the "City"), having determined that the financial, legal, technical ability of METRICOM, Inc. (hereinafter sometimes referred to as "METRICOM") is reasonably sufficient to provide services, facilities, and equipment necessary for a state of the art wireless and wired telecommunication system, does hereby ordain as follows:

Section 1. Definitions.

For the purpose of this Franchise, the following terms, phrases, words, and abbreviations shall have the meanings ascribed to them below. When not inconsistent with the context, words used in the present tense include the future tense, words in the plural include the singular, and words in the singular include the plural number:

(a) "Affiliate" means an entity which owns or controls, is owned or controlled by, or is under common ownership with METRICOM.

(b) "Cable Act" means the Federal Cable Communications Policy Act of 1984, as amended.

"Ricochet Service" shall mean the wireless digital communications services provided by METRICOM, which utilizes a spread spectrum, asynchronous frequency hopping technology to transmit data on randomly selected channels throughout the unlicensed bands of the radio spectrum. This Ricochet Service is more particularly described on Exhibit D, attached hereto and incorporated fully herein by this reference.

(d) "Communication System" shall mean Metricom's system of poletop radio receivers/transmitter, modems, antennas, and any associated converter, equipment or facilities designed and constructed in the City for the purpose of producing, receiving, amplifying or distributing by audio, video or other form of electronic or electric signal to or from subscribers or locations within the City which have been installed in the Franchise Area.

(e) "FCC" means the Federal Communications Commission, or successor governmental entity there to.

(f) "Facilities" shall mean any of Metricom's poletop radio receivers/transmitter, modems, antennas, and any associated converter, equipment or facilities designed and constructed for the purpose of producing, receiving, amplifying or distributing by audio, video or other form of electronic or electric signal to or from subscribers or locations within the City which have been installed in the Franchise Area.

(g) "Franchise" shall mean the initial authorization, or renewal thereof, issued by the City, whether such authorization is designated as franchise, permit, license, resolution, contract, certificate, or otherwise, which authorizes construction and operation of the Communication System for the purpose of offering its Ricochet Service to Subscribers.

(h) "Franchise Area" means the present municipal boundaries of the City, and shall include any additions thereto by annexation or other legal means.

(i) "Franchise Authority" means the City or the lawful successor, transferee, or assignee thereof.

(j) "Grantee" means METRICOM, Inc., a Delaware corporation, or the lawful successor, transferee, or assignee thereof, with the consent as required in this agreement.

(k) "Gross Revenue" shall mean all receipts collected by METRICOM for all Ricochet communications and communication-related operations and services from Subscribers, less the administrative fee mandated by Section 7 of this Franchise and the Franchise Fee mandated by Section 8(A) of this Franchise. By way of example, but without limitation, "Gross Revenue" includes all revenues from the lease of equipment, installation and access charges paid to METRICOM by Subscribers. "Gross Revenues" does not include (a) federal, state or local taxes, fees, or assessments of any kind or description collected by METRICOM from Subscribers, (b) revenues uncollectable from Subscribers (bad debts), and (c) discounts.

(m) "Person" means an individual, partnership, association, joint stock company, trust, corporation, or governmental entity.

(n) "Public Way" shall mean the surface of, and the space above and below, any public street, highway, freeway, bridge, land path, alley, court, boulevard, sidewalk, parkway, lane, public way, drive, circle, or other public right-of-way now or hereafter held or controlled by the City, including, but not limited to, public utility easements, dedicated, utility strips, or rights-of-way dedicated for compatible uses and any temporary or permanent fixtures or improvements located thereon now or hereafter held by the City in the Franchise Area, which shall entitle the City and METRICOM the use thereof for the purpose of installing, operating, repairing, and maintaining the Ricochet Service. Public Way shall also mean any easement now or hereafter held by the City within the Franchise

Area for the purpose of public travel, or for utility or public service use dedicated for compatible uses, and shall include other easements or rights-of-way as shall within their proper use and meaning entitle the City and METRICOM to the use thereof for the purposes of installing, operating, repairing, and maintaining the Ricochet Service over poles, wires, cables, conductors, amplifiers, appliances, attachments, and other property as may be ordinarily necessary and pertinent to the Communication System.

(o) "Subscriber" means a person or user of the Communication System who lawfully receives Ricochet Service with METRICOM's express permission whose billing address is within the Franchise Area.

## Section 2. Grant of Franchise.

The City hereby grants to the Grantee a nonexclusive Franchise which authorizes METRICOM to construct and operate its Communication System and offer Ricochet Services in, alone, among, upon, across, above, over or in any manner connected with Public Ways within the Franchise Area and for that purpose to erect, install, construct, repair, replace, reconstruct, maintain, or retain in, on, over, upon, across, or along any Public Way and all extensions thereof and additions thereto, such poles, wires, cables, conductors, amplifiers, appliances, attachments and other related property or equipment owned by utility companies or other third parties as may be necessary or appurtenant to the Communication System. This Franchise does not provide METRICOM exclusive use of any City poles or property; provided, however that the City agrees to obtain in writing from any future telecommunication provider covenants that subsequent to the installation by METRICOM of its Communication System in accordance with the terms and conditions of this Franchise, (a) such new provider shall not install new equipment if such equipment causes interference with METRICOM's operations and (b) that in the event such interference occurs, such provider shall immediately take all steps necessary to eliminate such interference.

A. Limited Grant. This grant of authority to provide the services described herein shall be limited solely to those services expressly described and no others. In the event of any ambiguity, this agreement shall be strictly construed as to the rights granted herein.

B. Duty to Notify of Change. METRICOM represents that the Communication System will be utilized exclusively for the rendering of Ricochet Services. If the nature of character of Ricochet Services changes in any manner in the future to include the offering of telecommunication or other services not expressly permitted under this Franchise or if there is a material increase in the size or number of any poletop radio transmitter/receiver (or like above-ground apparatus) than was contemplated in the adoption of this Franchise, then METRICOM shall notify the City in writing as soon as possible. Such notice shall be served at least sixty (60) days prior to the effective date of any change in the nature of character of the Ricochet Services or in the poletop radio (or like above-ground apparatus).

C. Compliance with City Requirements. Except as expressly provided otherwise herein, METRICOM shall comply with all applicable City ordinances, resolutions, standards and procedures, as now or hereafter adopted, to the same extent as any other person or entity doing business within the City.

D. Term. The Franchise granted pursuant to this Franchise shall be for an initial term of three (3) years from the effective date of the Franchise as set forth in "Acceptance: Effective Date", unless otherwise lawfully terminated in accordance with the terms of this Franchise. This Franchise shall automatically be renewed for one (1) successive (3) three-year term by METRICOM on the same terms and conditions as set forth herein, except as explained in the next sentence, unless METRICOM notifies City of its intention not to renew at least one hundred and twenty (120) days prior to commencement of the succeeding renewal term. Notwithstanding the foregoing, City shall have the prerogative of adjusting the franchise fee mandated by Section 8(A) hereof for such renewal term until the date which is thirty (30) days prior to the commencement of the renewal period. Metricom may terminate this Franchise upon thirty (30) days prior written notice if it finds any such adjustments to the franchise fee to be unacceptable.

E. Acceptance; Effective Date. METRICOM shall accept the Franchise granted pursuant hereto by signing the Statement of Acceptance in substantially the form shown in Exhibit A, and filing same with the City Clerk or other appropriate official or agency designated by the City within thirty (30) days after the passage and final adoption of this Franchise. If not accepted within thirty (30) days, this Franchise shall be null and void and of no effect and no franchise shall exist between METRICOM and the City. Subject to the acceptance by METRICOM, the effective date of this Franchise shall be the date of passage and final adoption of this Franchise by City.

F. Default. If METRICOM shall fail to comply with any provisions of this Franchise, unless otherwise provided for herein, the City may serve upon METRICOM a written order to so comply within thirty (30) days from the date such order is received by METRICOM. If METRICOM is not in compliance with this Franchise after expiration of said thirty (30) day period, the City may act to remedy the violation and may charge the costs and expenses of such action to METRICOM. The City may act without the thirty (30) day notice in case of an emergency. In addition, if the failure to comply with respect to which City notified METRICOM as provided above relates to a breach of a material term of this Franchise, then the City may in addition, by ordinance, declare an immediate forfeiture of this Franchise, provided, however, if any failure to comply with this Franchise by METRICOM cannot be corrected with due diligence within said thirty (30) day period (Metricom's obligation to comply and to proceed with due diligence being subject to unavoidable delays and events beyond its control), then the time within which METRICOM may so comply shall be extended for such time as may be reasonable necessary and so long as METRICOM commences promptly and diligently to effect such compliance.

In addition to other remedies provided herein, if METRICOM is not in compliance with requirements of the Franchise, and if a good faith dispute does not exist concerning such compliance, the City may place a moratorium on issuance of pending METRICOM right-of-way use permits until compliance is achieved.

### Section 3. Regulation of the Use of Public Ways.

A. A City of Woodinville Right-of-Way Permit will be required for each antenna of the Communication System to located in the City's Public Way. A permit application, in substantially the form attached hereto as Exhibit B, shall be submitted to the City a minimum of five (5) days prior to installation of any Facility.

B. Non-interference of Facilities. Metricom's Facilities shall be located, relocated and maintained within the Franchise Area so as not to unreasonable interfere with the free and safe passage of pedestrian and vehicular traffic and ingress or egress to or from the abutting property and in accordance with the laws of the State of Washington. Whenever it is necessary for METRICOM, in the exercise of its rights under this Franchise, to make any excavation in the Franchise Area, METRICOM shall, upon completion of such excavation, restore the surface of the Franchise Area, to the specifications established within the City of Woodinville public Works polices and Standards City of Woodinville Right-of-Way Permit application standards and in accordance with standards of general applicability imposed by the City by ordinance or administrative order. If METRICOM should fail to leave any portion of any Franchise Area so excavated in a condition that meets the City's specifications per the Public Works Policies and Standards City of Woodinville Right-of-Way Permit application standards, the City may after notice of not less than five (5) days to METRICOM, which notice shall not be required in case of an emergency, order any and all work considered necessary to restore to a safe condition that portion of the reasonable cost of such work at City's standard rates: which shall include among other things, the overhead expense of the City in obtaining completion of said work.

C. Any surface or subsurface failure occurring during the term of this Agreement and caused by the excavation by METRICOM shall be repaired to the City's specifications, within thirty (30) days or upon five (5) day written notice to METRICOM. If METRICOM shall fail to make such repairs within such time period, the City may order all work necessary to restore the damaged area to a safe and acceptable condition and METRICOM shall pay the reasonable costs of such work to the City.

### Section 4. Relocation of Facilities.

A. Whenever the City causes the grading or widening of the Franchise Area or undertakes construction of any water, sewer, or storm drainage-line, lighting, signalization, sidewalk improvement, pedestrian amenities, or other public street

improvement (for purposes other than those described in Section 4(B) below) and such project requires the relocation of Metricom's then existing Facilities within the Franchise Area, the City shall:

(a) Require Metricom to locate underground utility components within forty-eight (48) hours of design locate request.

(b) Provide METRICOM, at least ninety (90) days prior to the commencement of such project, written notice that a project is expected to require relocation; and

(c) Provide METRICOM with reasonable plans and specifications for such grading or widening.

After receipt of such notice and such plans and specifications, METRICOM shall relocate such Facilities within the Franchise Area at no charge to the City so as to accommodate such street improvement project. The City shall cooperate with METRICOM to designate a substitute location for its Facilities within the Franchise Area. City will establish a date by which Facilities will be relocated, which date will be not less than sixty (60) days after written notice to METRICOM as to the facility to be relocated. METRICOM must finish relocation of each such Facility by the date so established.

B. Whenever any person or entity, other than the City, requires the relocation of METRICOM's Facilities to accommodate the work of such person or entity within the Franchise Area; or, whenever the City requires the relocation of METRICOM's Facilities within the Franchise Area for the benefit of any person or entity other than the City, then METRICOM shall have the right as a condition of such relocation to require such person or entity to:

(a) make payment to METRICOM, at a time and upon terms acceptable to METRICOM, for any and all costs and expense incurred by METRICOM in the relocation of Metricom's Facilities; and,

(b) indemnify, defend and hold METRICOM, its agents, officers, employees, and assigns harmless from and against any and all claims, demands, liability, loss, cost, damage or expense of any nature whatsoever, including all costs and attorney's fees, made against them on account of injury, sickness, death or damage to persons or property which is caused by or arises out of, in whole or in part, the willful, tortuous or negligent acts, failures and/or omissions of the person or entity requesting the relocation of Metricom's Facilities.

C. Any condition or requirement imposed by the City upon any person or entity (including, without limitation, any condition or requirement imposed pursuant to any contract or in conjunction with approvals or permits for zoning, land use, construction or development) which necessitates the relocation of Metricom's Facilities within the Franchise Area shall be subject to the provisions of subsection 4(B). However, in the event the City reasonably determines (and promptly notifies METRICOM in writing of such determination) that the primary purpose of imposing such condition or requirement

upon such person or entity which necessitates such relocation is to cause the construction of an improvement on the City's behalf and in a manner consistent with City-approved improvement plans (as described in 4(A) above) within a segment of the Franchise Area then:

METRICOM shall require only those costs and expenses incurred by METRICOM in integrating and connecting such relocated Facilities with Metricom's other Facilities to be paid to METRICOM by such person or entity, and METRICOM shall otherwise relocate its Facilities within such segment of the Franchise Area in accordance with the provisions of subsection 4(A) above.

D. This Section 4 shall govern all relocation of Metricom's Facilities required in accordance with this Franchise. Nothing in this Section 4 shall require METRICOM to bear any cost or expense in connection with the location or relocation of any Facilities existing under benefit of easement or other rights not arising under this Franchise.

#### Section 5. Moving Buildings within the Franchise Area.

Before granting permission to any person or entity other than the City to use the Franchise Area for the moving or the removal of any building or other object, the City shall require such person or entity to make any necessary arrangements with METRICOM for the temporary adjustment of METRICOM's Facilities to accommodate the moving or removal of such building or other object. Such necessary arrangements with METRICOM shall be made to METRICOM's satisfaction, not less than fourteen (14) days prior to the moving or removal of said building or other object. In such event, METRICOM shall, at the expense of the person or entity desiring to move or remove such building or other object, adjust any of its Facilities which may obstruct the moving or removal of such building or other object, provided that:

(a) The moving or removal of such building or other object which necessitates the adjustment of Facilities shall be done at a reasonable time and in a reasonable manner so as not to unreasonably interfere with METRICOM's business;

(b) Where more than one route is available for the moving or removal of such building or other object, such building or other object shall be moved or removed along the route which will minimize the interruption or utility service, public safety, as determined by the City.

(c) The person or entity other than the City obtaining such permission from the City to move or remove such building or other object shall be required to indemnify and save METRICOM and its agents, officers, employees, and assigns harmless from any and all claims, demands, liabilities, losses, costs, damages, or expenses made against it or them on account of injury or damage to the person or property of another arising out of or in conjunction with the moving or removal of such building or other object, to the extent such injury or damage is caused by, arises out of, in whole or in part, the willful, tortuous, or negligent acts, failures and/or omissions of the person or entity moving or

removing such building or other object or the willful, tortuous, or negligent acts, failures and/or omissions of the agents, servants or employees of the person or entity moving such building or other object.

#### Section 6. Approval of Plans and Specifications.

A. METRICOM shall provide complete plans and specifications for all construction within streets to the designated City official for their review at least thirty (30) days prior to the start of any construction during the term of this Franchise. In the event of rejection, METRICOM shall submit revised plans and specifications for approval. This provision shall apply to each construction sequence if the construction is accomplished in phases. All such construction shall comply with all applicable ordinance(s), including ordinances which may be adopted after the date of this Franchise. All applicable ordinances shall include, but are not limited to, building and fire codes and zoning regulations. Such construction and this Franchise shall be expressly subject to all deeds, easements, dedications, conditions, covenants, restrictions and encumbrances which may affect the Public Ways.

B. With respect to excavations by METRICOM and the City within the Franchise Area, METRICOM and the City shall each comply with its respective obligations pursuant to Chapter 19.122 RCW (Underground Utilities) and any other applicable state law.

C. Upon written request of the City, METRICOM shall provide the City with the most recent update available of any plan of potential improvements to its Facilities within the Franchise Area; provided, however, any such plan so submitted shall be for information purposes within the Franchise Area, nor shall such plan be construed as a proposal to undertake any specific improvements within the Franchise area. METRICOM shall submit such map (and updates thereof) to the City in "GIS" format., unless such map (or updates thereof) cannot readily and inexpensively be made available to the City in such format.

#### Section 7. Reimbursement of Administrative Costs.

An administrative fee is assessed METRICOM as consideration for reasonable administrative processing costs incurred in the initial adoption of this Franchise, and for the continued monitoring and enforcement of same. METRICOM agrees to pay the City as such administrative fee a sum not to exceed Two Thousand Dollars (\$2,000). The City will invoice METRICOM detailing the costs for which it is seeking reimbursement. Nothing herein shall preclude the City from recovering any reasonable administrative costs incurred by the City at its standard rates in the approval of permits or in the supervision, inspection or examination of all work by METRICOM in the Franchise Area as prescribed in accordance with applicable ordinances or laws. City shall notify METRICOM in writing of the estimated administrative cost for any such approval,

supervision, inspection or examination of any work to be done by METRICOM as soon as reasonable practical prior to incurring such cost and afford METRICOM an opportunity to propose alternative mechanisms intended to reduce the cost thereof.

#### Section 8. Franchise Fee and late Payment Charge.

A. The City finds that the public streets, alleys and rights-of-way to be used by METRICOM in the operation of its Communication System within the boundaries of the City are valuable public properties, acquired and maintained by the City at great expense to its taxpayers, and that the grant to METRICOM of the use of said public street, alleys and rights-of-way is a valuable property right, without which METRICOM would be required to invest substantial capital in right-of-way costs and acquisitions, therefore, METRICOM agrees to pay to the City as general compensation a Franchise Fee of five percent (5%) of Gross Revenue per year (the "Franchise Fee"). City understands that Metricom will collect the Franchise Fee from Subscribers and will indicate on its bill to Subscribers the amount of such bill which is represented by the Franchise Fee.

B. METRICOM shall forward by check or wire transfer an amount equal to this quarterly payment by the fifteenth (15th) day of the second calendar month immediately following the close of the calendar quarter for which the payment is calculated. Any necessary prorations shall be made in the first and last year of each term of the Franchise.

C. In the event any quarterly payment has not been received by noon on the date which is ten (10) days after the date due, METRICOM shall pay a late payment penalty of the greater of: (a) One Hundred Dollars (\$100) or (b) simple interest at a ten percent (10%) annual percentage rate on the total amount past due.

#### Section 9. Quarterly Report.

In order to properly determine the Gross Revenues received by METRICOM, METRICOM agrees that on the same date that each quarterly payment is made, it will file with the City Clerk's Office a sworn copy of a report, in a form acceptable to the City and Metricom, in sufficient detail to itemize revenues from each of the revenue categories. The City may, if it sees fit and at its own expense, have the books and records of METRICOM examined by a representative of City to ascertain the correctness of the reports agreed to be filed herein. Acceptance of any payment or any subsequent review shall not be deemed an agreement by the City that the correct payment was paid, absent a fully authorized release by the City on any such payments or on such reports.

#### Section 10. Recalculations.

If at any time METRICOM shall determine that additional amounts are due the City by METRICOM, said amounts shall be paid within fifteen (15) days of the date of such determination. If amounts are found to be due METRICOM by the City, said amounts shall be credited by the fifteenth (15th) day of February during which such amounts were originally due. Any necessary prorations shall be made.

#### Section 11. Rights of the City.

Payment of money under this Franchise shall not in any way limit or inhibit any of the privileges or rights of the City, whether under this Franchise or otherwise, except insofar as City's privileges or rights are expressly limited or inhibited by the terms of this Franchise.

#### Section 12. Circumventing Payments.

Any transactions which have the effect of circumventing payment of the required franchise fees and/or evasion of payments of franchise fees or any payments due the City under this franchise by non-collection or non-reporting of Gross Revenues, bartering, or any other means which evade the actual collection of revenues for business pursued by METRICOM are prohibited.

#### Section 13. Transfer of Franchise.

METRICOM's right, title, or interest in the Franchise shall not be sold, transferred, assigned, or otherwise encumbered without the prior consent of the City, such consent not be unreasonable withheld. No such consent shall be required, however, for a transfer in trust, by mortgage, by other hypothecation, or by assignment of any rights, title, or interest of METRICOM in the Franchise or Communication System in order to secure indebtedness. Furthermore, the transfer or the rights and obligations of METRICOM to a parent, subsidiary, or other affiliate of METRICOM, or to any successor-in-interest or entity acquiring fifty-one percent (51%) or more of Metricom's stock or assets shall not be deemed an assignment. METRICOM shall give to the City thirty (30) days' prior written notice of any such transfer.

#### Section 14. Grantee's Marketing Efforts.

The City agrees that METRICOM may refer to the City's possession and use of the Ricochet modems and the City's use of the Ricochet Service, if applicable, in oral negotiation with other parties, only if and so long as, and METRICOM hereby agrees

that, these references by METRICOM are and will be, to the best of Metricom's knowledge, fully correct and accurate in all material respects and in no way false or misleading at the time the reference is made. Notwithstanding the foregoing, METRICOM shall obtain the prior approval of the City for any published, written, printed, broadcast, or otherwise transmitted sales or marketing materials of METRICOM when the materials reference the City or the City's use of METRICOM's Ricochet Services.

#### Section 15. Best Rates.

As further compensation to the City for the grant of the Franchise, City shall be entitled to obtain subscriptions to the Ricochet Service at Metricom's lowest rate applicable to any government body, municipality, or agency in the State of Washington. In addition, City shall be entitled to Metricom's lowest available rate for purchase and/or lease of modems applicable to government bodies, municipalities, private companies or agencies in the State of Washington for purposes of accessing the Ricochet Service.

#### Section 16. Insurance Requirements.

METRICOM shall maintain in full force and effect, at its own cost and expense, during the term of the Franchise, Comprehensive General Liability Insurance in the amount of Two Million Dollars (\$2,000,000) combined single limit for bodily injury, and property damage. Said insurance shall designate the City as an additional insured. Such insurance shall be noncancellable or reduced in amount except upon thirty (60) days prior written notice to the City.

#### Section 17. Indemnification.

General Indemnification. No permit or franchise shall be deemed to be granted under this Chapter unless it includes an indemnity clause substantially conforming to the following:

The permittee or franchisee hereby releases, covenants not to bring suit and agrees to indemnify, defend and hold harmless the City, its officers, employees, agents and representatives from any and all claims, costs, judgments, awards or liability to any person, including claims by the permittee or franchisee's own employees to which the permittee or franchisee might otherwise be immune under Title 51 RCW, arising from injury or death of any person or damage to property of which the negligent acts or omissions of the permittee or franchisee, its agents, servants, officers or employees in performing under this permit or franchise are a proximate cause. The permittee or franchisee further releases, covenants not to bring suit and agrees to indemnify, defend and hold harmless the City, its officers and employees from any and all claims, costs, judgments, awards or liability to any person including claims by the permittee or

franchisee's own employees, including those claims to which the permittee or franchisee might otherwise have immunity under Title 51 RCW, arising against the City solely by virtue of the City's ownership or control of the rights-of-way or other public properties, by virtue of the permittee or franchisee's exercise of the rights granted herein, or by virtue of the City's permitting the permittee or franchisee's use of the City's rights-of-way or other public property, based upon the City's inspection or lack of inspection of work performed by the permittee or franchisee, its agents and servants, officers or employees in connection with work authorized on the City's property or property over which the City has control, pursuant to this permit or franchise or pursuant to any other permit or approval issued in connection with this permit or franchise. This covenant of indemnification shall include, but not be limited by this reference, claims against the City arising as a result of the negligent acts or omissions of the permittee or franchisee, its agents, servants, officers or employees in barricading, instituting trench safety systems or providing other adequate warnings of any excavation, construction, or work in any public right-of-way or other public place in performance of work or services permitted under this permit or franchise. Inspection or acceptance by the City of any work performed by the permittee or franchisee at the time of completion of construction shall not be grounds for avoidance of any of these covenants of indemnification. Said indemnification obligations shall extend to claims which are not reduced to a suit and any claims which may be compromised prior to the culmination of any litigation or the institution of any litigation. In the event that the permittee or franchisee refuses the tender of defense in any suit or any claim, said tender having been made pursuant to the indemnification clauses contained herein, and said refusal is subsequently determined by a court having jurisdiction (or such other tribunal that the parties shall agree to decide the matter), to have been a wrongful refusal on the part of the permittee or franchisee, then the permittee or franchisee shall pay all of the City's costs for defense of the action, including all reasonable expert witness fees and reasonable attorneys' fees and the reasonable costs of the City, including reasonable attorneys' fees of recovering under this indemnification clause.

In the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the permittee or franchisee and the City, its officers, employees and agents, the permittee or franchisee's liability hereunder shall be only to the extent of the permittee or franchisee's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the permittee or franchisee's waiver of immunity under Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties.

The provisions of this Section shall survive the expiration or termination of this franchise agreement. Notwithstanding any other provisions of this Section, the permittee or franchisee assumes the risk of damage to its facilities located in the City's public ways, rights-of-way, and easements from activities conducted by the City, its officers, agents, employees and contractors. The permittee or franchisee releases and waives any and all claims against the City, its officers, agents, employees or contractors for damage to or

destruction of the permittee or franchisee's facilities caused by or arising out of activities conducted by the City, its officers, agents, employees and contractors, in the public ways, rights-of-way, and easements subject to this permit or franchise, except to the extent any such damage or destruction is caused by or arises from the sole negligence or any wilful or malicious action on the part of the City, its officers, agents, employees or contractors. The permittee or franchisee further agrees to indemnify, hold harmless and defend the City against any claims for damages, including, but not limited to, business interruption damages and lost profits, brought by or under users of the permittee or franchisee's facilities as the result of any interruption of service due to damage or destruction of the User's facilities caused by or arising out of activities conducted by the City, its officers, agents, employees or contractors, except to the extent any such damage or destruction is caused by or arises from the sole negligence or any wilful or malicious actions on the part of the City, its officers, agents, employees or contractors.

#### Section 18. Bonds and Other Surety.

Except as expressly provided herein, METRICOM shall not be required to obtain or maintain bonds or other surety as a condition of being awarded the Franchise or continuing its existence. In order to minimize such costs, the City agrees to require bonds and other surety only in such amounts and during such times as there is a reasonably demonstrated need therefor. The City agrees that in no event, however, shall it require a bond or other related surety in an aggregate amount greater than Two Thousand Dollars (\$2,000), conditioned upon the substantial performance of the material terms, covenants, and conditions of the Franchise. Initially, no bond or other surety will be required. In the event that one is required in the future, the City agrees to give METRICOM at least thirty (30) days prior written notice thereof stating the exact reason for the requirement and such bond shall be in substantially the form attached hereto as Exhibit C. Such reason must demonstrate a change in Metricom's legal, financial, or technical qualifications which would materially prohibit or impair its ability to comply with the terms of the Franchise or afford compliance therewith.

#### Section 19. Notice of Violation.

In the event that the City believes that METRICOM has not complied with the terms of the Franchise, it shall notify METRICOM in writing of the exact nature of the alleged noncompliance.

A. Rights to Cure or Respond. METRICOM shall have thirty (30) days from receipt of the notice described in Notice of Violation : (1) to respond to the City contesting the assertion of noncompliance, (2) to cure such default, or (3) in the event that, by the nature of default, such default cannot be cured within the thirty (30) day period, initiate reasonable steps to remedy such default and notify the City of the steps being taken and the projected date that they will be completed.

B. Public Hearing. In the event that METRICOM fails to respond to the notice described in Notice of Violation, pursuant to the procedures set forth in Grantee's Rights to Cure or Respond, or in the event that the alleged default is not remedied within thirty-one (31) days after METRICOM is notified of the alleged default pursuant to Notice of Violation, the City shall schedule a public meeting to investigate the default. The City shall notify METRICOM of the time and place of such meeting and provide METRICOM with an opportunity to be heard.

#### Section 20. Enforcement.

Subject to applicable federal and state law, in the event the City, after such meeting, determines that METRICOM is in default of any provision of the Franchise, the City may:

A. Foreclose on all or any part of any security provided under this Franchise, if any, including without limitation, any bonds or other surety; provided, however, the foreclosure shall only be in such a manner and in such amount as the City reasonably determines is necessary to remedy the default;

B. Commence an action at law for monetary damages or seek other equitable relief;

C. In the case of a material breach of the Franchise, declare the Franchise to be revoked;  
or

D. Seek specific performance of any provision, which reasonably leads itself to such remedy, as an alternative to damages.

METRICOM shall not be relieved of any of its obligations to comply promptly with any provision of the Franchise by reason of any failure of the City to enforce prompt compliance.

#### Section 21. Acts of God.

METRICOM shall not be held in default or noncompliance with the provisions of the Franchise, not suffer any enforcement or penalty relating thereto, where such noncompliance or alleged defaults are caused by strikes, acts of God, power outages, or other events reasonably beyond its ability to control.

#### Section 22. Notice.

Unless expressly otherwise agreed between the parties, every notice or response to be served upon the City or METRICOM shall be in writing, and shall be deemed to have

been duly given to the required party five (5) business days after having been posted in a properly sealed and correctly addressed envelope by certified or registered mail, postage prepaid, at a Post Office or branch thereof regularly maintained by the U.S. Postal Service.

The notices or responses to the City shall be addressed as follows:

City Manager  
City of Woodinville  
13203 NE 175 Street  
Woodinville, WA 98072

With a copy to:

Ogden Murphy Wallace  
Mr. Wayne Tanaka  
City of Woodinville, Attorney  
2100 Westlake Center Tower  
1601 Fifth Avenue  
Seattle, WA 98101-1686

The notices or responses to METRICOM shall be addressed as follows:

METRICOM, Inc.  
Attention: Property Manager  
980 University Avenue  
Los Gatos, CA 95030

City and METRICOM may designate such other address or addresses from time to time by giving notice to the other.

#### Section 23. Descriptive Headings.

The captions to sections contained herein are intended solely to facilitate the reading thereof. Such captions shall not affect the meaning or interpretation of the text herein.

#### Section 24. Severability.

If any section, sentence, paragraph, term, or provision hereof is determined to be illegal, invalid, or unconstitutional, by any court of competent jurisdiction or by any state or federal regulatory authority having jurisdiction thereof, such determination shall have no effect on the validity of any other section, sentence, paragraph, term, or provision hereof,

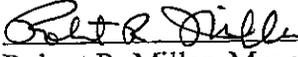
all of which will remain in full force and effect for the term of the Franchise, or any renewal or renewals thereof.

Section 25. Action by the FCC.

In the event the FCC promulgates more stringent notice requirements, technical standards, consumer protection or consumer services requirements which would otherwise be applicable to METRICOM than are contained in this Franchise, those more stringent requirements shall prevail. The City shall give reasonable notice when in their determination that has occurred. METRICOM shall retain and not waive any or all rights and privileges as afforded either under this contract or pursuant to Federal Law or FCC regulations to complain and/or appeal such a determination.

PASSED BY THE CITY COUNCIL OF THE CITY OF WOODINVILLE,  
WASHINGTON, AT ITS REGULAR MEETING ON THE 27TH DAY OF JANUARY,  
1997.

APPROVED:

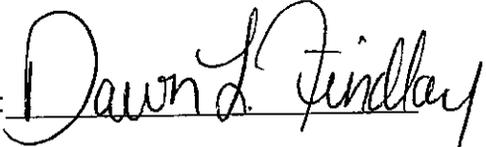
  
Robert R. Miller, Mayor

ATTEST/AUTHENTICATED:

  
James Katica, City Clerk

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY:

By: 

FILED WITH THE CITY CLERK: January 27, 1997  
PASSED BY THE COUNCIL: January 27, 1997  
PUBLISHED: February 3, 1997  
EFFECTIVE DATE: February 8, 1997  
ORDINANCE NO. 170

Statement of Acceptance of Franchise

In accordance with and as required by Section 2(E) of City of Woodinville Ordinance No. 170, passed by the City Council and approved by the Mayor on January 27, 1997 (the "Ordinance"), Metricom, Inc. hereby accepts the terms, conditions and obligations to be complied with or performed by it under the Ordinance.

METRICOM, INC.

By: Kirk Wampler  
Kirk Wampler  
Director of Right of Way

Dated: 2/4/97

**CITY OF WOODINVILLE  
RIGHT OF WAY CONSTRUCTION PERMIT**

APPLICANT/UTILITY: _____ Contact: _____ Phone: _____ Emergency Contact: _____ Emergency Phone: _____	Franchise No: _____ ULID No: _____ Bond Amount: _____	PERMIT NO: _____ JOB NO: _____ APPLIED: _____ ISSUED: _____ EXPIRES: _____
SITE ADDRESS: _____	DESCRIPTION OF WORK: _____  <p align="right">LF IN ROW _____</p>	

THIS PERMIT IS FOR THE CITY OF WOODINVILLE RIGHT-OF-WAY ONLY.  
 PROVIDE DISTANCES OF WORK IN ROW ; INCLUDING LOCATION OF UTILITY LINES IN PROXIMITY TO CENTERLINE, PAVED TRAVE LANE, AND SHOULDER.  
 ALL WATER MAIN EXTENSIONS MUST HAVE APPROVAL FROM THE FIRE MARSHALL  
 ALL UNDERGROUND UTILITY LINES MUST HAVE A MINIMUM OF 36" COVER.  
 ALL WORK TO BE DONE SUBJECT TO APPROVAL OF THE PUBLIC SERVICES ADMINISTRATOR OR DESIGNEE.

The following Attachments are part of this permit:

- City of Woodinville "General Conditions of ROW/URW permit".
- City of Woodinville "Traffic Control Plan Requirements".
- \* Woodinville "Roadway Section Typical Open Cut" standard detail.

\_\_\_\_\_ assigned agrees to comply with provisions, conditions and requirements contained in the "Standards of Good Practice for County Road Departments" published by County Road Commission Board.

All work to be done in conformity with conditions and requirements of Woodinville Code and the petitioner agrees to prosecute with all diligence and speed with due regard for the rights, interests and convenience of the public. If at the end of 6 months after issuance of permit the grantee shall not have in operation said utilities, then the rights herein conferred shall cease and terminate, unless specific written provisions are made for a renewal or extension.

The undersigned, its successors and assigns, agrees if granted the above permit, to comply with the provisions, conditions, requirements, regulations and recommendations herein contained and as may apply to any utility franchise granted the applicant and under whose provisions same is issued. It will respect and protect all property contracts, persons and rights that might be affected by it.

**INDEMNITY AND HOLD HARMLESS:** The Permittee agrees to indemnify and hold harmless the City of Woodinville as provided herein to the maximum extent possible under law. Accordingly, the Permittee agrees for itself, its successors, and assigns, to defend, indemnify, and hold harmless the City of Woodinville its appointed and elected officials and employees from and against liability for all claims, demands, suits, and judgments, including cost of defense thereof, for injury to persons, death, or property damage which is caused by, arises out of, or is incidental to Permittee's exercise of rights and privileges granted by this permit. The Permittee's obligations under this permit shall include: (a) Indemnification for such claims whether or not they arise from the sole negligence of either the City of Woodinville or the Permittee, the concurrent negligence of both parties, or the negligence of one or more third parties; (b) The duty to promptly accept tender of defense and provide defense to the City of Woodinville at the Permittee's own expense; (c) Indemnification of claims made by the Permittee's own employees or agents; and (d) Waiver of the Permittee's immunity under industrial insurance provisions of Title 51 RCW, which waiver has been mutually negotiated by the parties. In the event it is necessary for the City of Woodinville to incur attorney's fees, legal expenses, or other costs to enforce the provisions of this section, all such fees, expenses, and costs shall be recoverable from the Permittee. In the event it is determined that RCW 4.24.115 applies to this permit, the Permittee agrees to defend, hold harmless, and indemnify the City of Woodinville to the maximum extent permitted thereunder, and specifically for its negligence concurrent with that of the City of Woodinville to the full extent of Permittee's negligence. Permittee agrees to defend, indemnify, and hold harmless the City of Woodinville for claims by Permittee's employees and agrees to waiver of its immunity under Title 51 RCW, which waiver has been mutually negotiated by the parties.

\_\_\_\_\_  
 Signature of Applicant \_\_\_\_\_  
 Date

Application Received:	Entered On:	Permit Fee:
Permit Issue Date:	Approval Signature:	Date:

GENERAL CONDITIONS OF ROW/URW PERMIT

This application is granted subject to the requirements and conditions thereof as listed below.

1. A City of Woodinville inspector will be assigned to the project for inspection of road restoration. Cost of inspection applicable to the project will be reimbursed to the City monthly by the applicant. Permittee is required to notify the City Public Services Department at 489-2754 between 24 and 72 hours before starting work. Failure to give notice will result in the assessment of a one hour inspection time charges against the permittee. The assessment is in addition to any other remedy available under law or equity which the City may wish to pursue and shall not be construed as an election of remedies by the City.
2. All hard surfaced roads to be jacked or bored. Exceptions will be on a case-by-case basis with the express permission of the City of Woodinville Public Services Department.
3. One-way traffic at all times. Signs and traffic control will be in accordance with the manual on uniform traffic control devices for street and highways.
4. Open cut trench restoration shall be in accordance with the City of Woodinville's standards.
5. It is the responsibility of the grantee to notify all utility districts and private property owners when such property is liable to injury or damage through the performance of the above work. Call 1-800-424-5555 48 hours in advance for underground utility location. This instruction does not relieve the grantee from required notification of city inspectors as specified in paragraph 1, above.

DIRECTIONS REGARDING PERMITS

NOTE: Right of way shall mean any Street, Avenue, Alley, Road or Lane  
 Public Place shall mean Bridge, Trestle, or Wharf  
 City shall mean the City of Woodinville, its designee, representative, or agent.

Applicants for permits to occupy City of Woodinville property with utilities or holders of granted franchise rights, who are planning construction work upon, along, over, under or across any City right of way or public place in Woodinville must file an application with the City of Woodinville Building Department, 13203 NE 175th St, Woodinville, WA 98072.

The application shall be accompanied by drawings (in triplicate) drawn to working scale, commonly 50 to 100 feet per inch. It shall describe the nature of the work, and show the location of same on a map, giving names, or numbers, and width of roads and streets. It must also show location of work with reference to platted subdivisions, and section, township and range. The plan must also show the location of work relative to existing utility facilities, street centerline, paved road edge/shoulder and ROW.

Applicants shall specify the type of construction in detail by submitting plans which show the class of material and equipment to be used. All such material and equipment shall be of the highest quality. The manner of excavation, filling, construction, installation, erection of temporary structures, traffic turn outs, road obstruction and barricades, shall conform with City standards and shall be approved by the City in advance of work.

Signs and barricades and traffic control in the vicinity of any work shall conform with provisions of "Part VI Manual of Uniform Traffic Control Devices for Streets and Highways."

Before the work is accepted by the City, all of the direct costs and expenses involved in administering and said permit must be paid to the City by the applicant. These include labor charges for examination, inspection and supervision of work in progress by field personnel.

Any deviation from the proposed plan, resulting in what is commonly known as the "As Built" location must be approved in advance by the City. Change notice must show "As Built" position relative to grade line and centerline of right of way and any other installations in the right of way.

PERMIT - TERMS AND CONDITIONS:

1. The grantee, its successors and assigns, is given and granted the right and authority to enter upon the right of way or public place for the purpose of performing the work described in this permit and approved by the City or its agent.
2. Before any work commences the site must be inspected and approved by the City with respect to:
  - a. Location
  - b. Type of construction
  - c. Materials and equipment to be installed
  - d. Manner of erection or construction
  - e. Mode of operation of the installed facility
  - f. Manner of maintenance of installed facility
  - g. Method of safeguarding public traffic both during working hours and during non-working hours while the project is under construction
3. After the installation, operation, maintenance, or removal of a utility or facility the grantee shall restore all rights of way and public places to the condition which is equivalent in all respects to the condition they were in before starting work. All work to meet the approval of the City.
4. In the event that any damage of any kind is caused by the grantee in the course of performing work authorized by this permit, the grantee will repair said damage at its sole cost and expense. Repair work shall begin without delay and continue without interruption until completed. If damage is extensive, the time allowed for repair will be prescribed by the City.
5. The City may at any time, do, order, or have done any and all work considered necessary to restore to a safe condition any area left by the grantee in a condition dangerous to life or property and upon demand the grantee shall pay to the City all costs of such work, materials, etc.

CITY OF WOODINVILLE -  
GENERAL CONDITIONS OF ROW/URW PERMIT

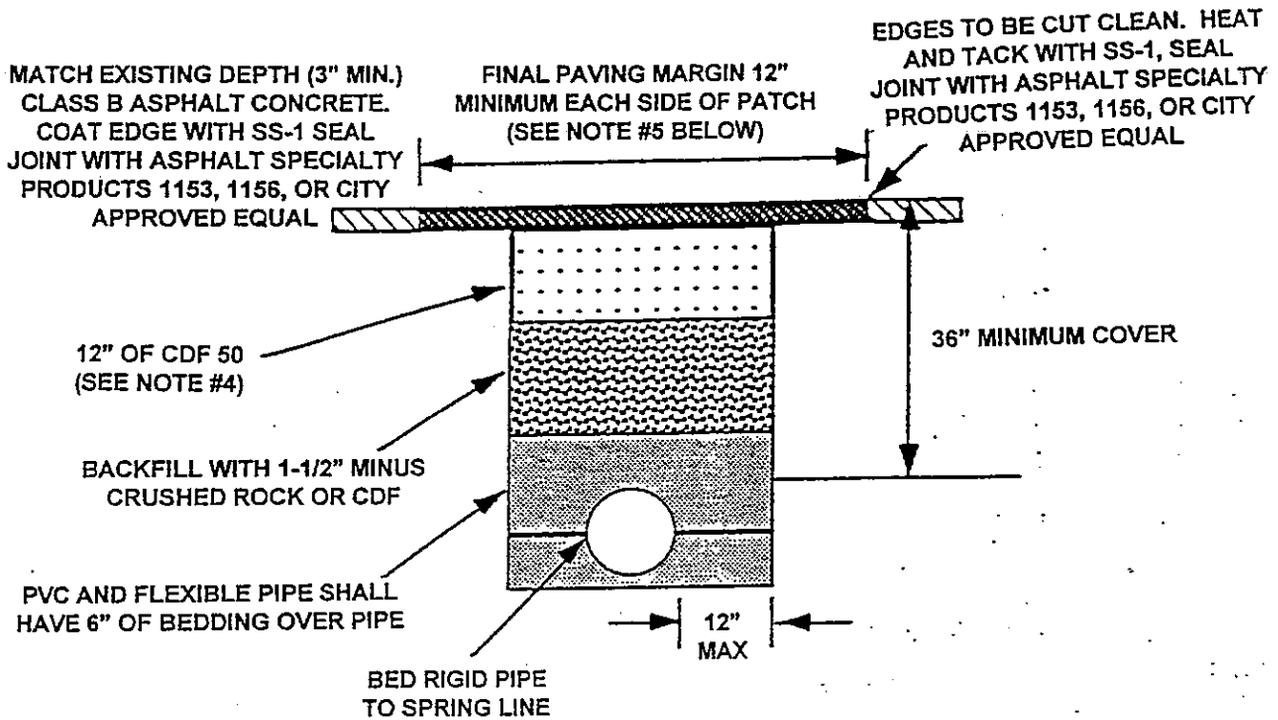
6. When the City deems it advisable to change the alignment or grade of any right of way or public place or structure by widening, grading, regarding, paving, improving, altering or repairing same, the grantee upon written notice by the City's representatives or agents will at its own sole cost and expense, raise, lower, move, change or reconstruct such installations to conform with the plans of work contemplated or ordered by the City according to a time schedule contained in the written notice.
  7. Penalties up to One Thousand (\$1,000) dollars per day may be imposed by the City, if the grantee delays relocation of facilities beyond the time limits prescribed by the City. The City reserves the right to order its own agents or representatives to accomplish the desired change, and all costs of relocation or removal shall be borne by the grantee.
  8. All such changes, reconstruction or relocation by the grantee shall be done in such manner as will cause the least interference with any of the City's work. The grantee shall have seventy-two (72) hours written notice by the City's representatives or agents of any blasting contiguous to the grantee's permit rights in order that it may protect its interests.
  9. This grant or privilege shall not be deemed or construed to be an exclusive franchise. It does not prohibit the City from granting other permits or franchise rights of like nature to other public or private utilities, nor shall it prevent the City from using any of its roads, streets, public places for any and all public use, or affect its jurisdiction over all or any part of them.
  10. All the provisions, conditions, requirements and regulations herein contained shall be binding upon the successors and assigns of the grantee and all privileges of the grantee shall be given to such successors and assigns as if they were specifically mentioned.
  11. The City may unilaterally revoke, annul, or terminate, revise or amend this permit without cause and for any reason including, but not limited to:
    - a. Grantee's failure to comply with any provision, requirement, or regulation herein set forth;
    - b. Grantee's willful neglect of, or failure to heed or comply with, notices given it;
    - c. Grantee's facilities are not installed, operated, or maintained in conformity with conditions herein set forth;
    - d. Grantee's failure to conform to any applicable law or regulation as currently exists or may hereafter be enacted, adopted or amended.
  12. Grantee by accepting this permit agrees to obtain information from all utility departments regarding location and current status of their installations before starting work. Private property owners adjoining, or in proximity to the right of way shall be notified when such property is exposed to the possibility of injury or damage through performance of this project. The grantee shall make all advance arrangements necessary to protect such property and/or utility from injury or damage.
  13. The issuance of this permit to the grantee does not in any way relieve the grantee of any other applicable law in performing the work subject to this permit.
  14. In all hiring or employment made possible resulting from the granting of this permit, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, religion, national origin, marital status or the presence of any sensory, mental or physical handicap, unless based upon a bona fide occupational qualification, and this requirement shall apply to but not be limited to the following: employment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from the granting of this permit on the ground of sex, sexual orientation, race, color, religion, national origin, age (except minimum age and retirement provisions), marital status or the presence of any sensory, mental or physical handicap.

Any violation of this provision shall be considered a violation of this permit and shall be grounds for cancellation, termination or suspension in whole or in part of the permit by the City and may result in ineligibility for further City permits.

The permittee shall make the best efforts to make opportunities for employment and/or contracting services available to women and minority persons. The permittee recognizes that the City has a policy of promoting affirmative action, equal opportunity and has resources available to assist permittee in these efforts.
  15. This permit and any underlying franchise does not authorize the cutting of trees with a trunk diameter greater than four (4) inches unless such authorization is specifically granted in writing by the City.
  16. If the permittee fails to perform its obligations herein, vacate the premises, remove its facilities, restore the property as required, or comply with any condition or applicable regulation or law, the City shall have, at their option, the right to pursue and remedy or remedies available at law or equity including, but not limited to, the right to proceed under the provisions of Title 59 of the Revised Code of Washington.
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**NOTES:**

1. Fill will be compacted in 12" lifts as directed by the City Engineer.
2. Temporary and final patching will be rolled flush with existing paving as specified in Section 5-04, Standard Specifications.
3. All work to be warranted for a period of two years.
4. 12" of Controlled Density Fill (CDF 50) is to be placed directly beneath the asphalt patch with these requirements: Mix Design -  
 50 lbs Portland Cement type I or I-II  
 300 lbs minimum Flyash-Class F  
 275 lbs water (3" - 4" slump)  
 3,365 lbs Class I or II sand per 9-03.1(2)B or coarse and with no more than 20% passing 3/8" sieve.  
 -CDF may be air-entrained to improve pumping ability.  
 -The contractor may, as an option, place CDF in a "dry" consistency (0" - 1/2" slump) to be compacted in lifts not to exceed 18", which may be capped by an asphalt wearing course and immediately opened to traffic with the written approval of the City.
5. For a continuous trench along the roadway greater than 50 lineal feet, the entire travel direction impacted by the trench shall receive a 0.10 foot overlay of Class G asphalt concrete.

PUBLIC SERVICES ADMINISTRATOR

CITY OF WOODINVILLE  
PUBLIC SERVICES DEPT .

ROADWAY SECTION  
TYPICAL OPEN CUT  
STANDARD DETAIL

Exhibit C

Surety Bond

KNOW ALL MEN BY THESE PRESENTS:

That METRICOM, INC. as Principal, and \_\_\_\_\_, incorporated under the laws of the State of \_\_\_\_\_, and authorized to execute bonds and undertakings as sole surety, are held and firmly bound unto \_\_\_\_\_, as Obligee, in the sum of \_\_\_\_\_ (\$ \_\_\_\_\_); for the payment thereof, well truly to be made, said Principal and Surety bind themselves, their administrators, successors and assigns, jointly and severally, firmly by these present.

The condition of the foregoing obligation is such that:

WHEREAS, the above bounded Principal is about to enter into a certain agreement with the Obligee for the following:

\_\_\_\_\_

the award of which said agreement was made to the Principal by the Obligee, on \_\_\_\_\_.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and provisions of said agreement during the original term thereof, and any extensions thereof which may be granted by the Obligee, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such agreement, and shall fully indemnify and save harmless the Obligee from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Obligee all outlay and expenses which the Obligee may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications.

PROVIDED, HOWEVER, this bond issued subject to the following express conditions:

1. This bond shall be deemed continuous in form and shall remain in full force and effect until canceled under Section \_\_\_\_\_, after which all liability ceases except as to any liability incurred or accrued prior to the date of such cancellation.
2. The aggregate liability of the Surety hereunder on all claims whatsoever shall not exceed the penal sum of this bond in any event.
3. The surety reserves the right to withdraw as surety from this bond except as to any liability incurred or accrued, and may do so upon giving the Obligee sixty (60) days written notice.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

PRINCIPAL

SURETY

\_\_\_\_\_

\_\_\_\_\_  
(Type Company Name)

By: \_\_\_\_\_  
Title: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_

By: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

(Affix Corporate Seals)

(Attach Acknowledgments of both Principal and Surety signatures)

## Exhibit D

### RICOCHET NETWORK DESCRIPTION

Ricochet is an innovative network that enables high speed, low cost, wide area access to on-line services, the Internet, LAN applications, and peer devices. Ricochet networks employ frequency-hopping, spread spectrum, packet radios, installed geographically in a mesh topology. Through a unique combination of Ricochet's wireless cloud and its wired backbone, digital information travels through the network at high speeds within a community, across a city, and from city-to-city. Ricochet wirelessly enables high speed, low cost access to peer-to-peer communications, on-line services, LAN's, and telephone modems.

Ricochet packet radio repeaters [poletops] are shoe-box size and require low power levels; they can be simply deployed on street lights, utility pole-tops or roof-tops. These poletop radios support 100 kilobits per second (kbps) raw speed, typically provide between 10 to 45 (kbps) of continuous user throughput (depending upon software, hardware, and applications run), and are capable of burst user speeds to 70 kbps.

Poletop radios are typically deployed in a cluster from one-half mile to two miles apart in a mesh topology. This mesh topology makes Ricochet extremely flexible and expandable. Each poletop radio constantly knows the identity of, location of (longitude and latitude), and its ability to communicate with other poletop radios within its range. In addition, each serves as an entrance or an exit to the network, so information packets can enter and exit the network at any poletop radio location. Once in the network, packets can "hop" around busy or non-functioning radios. Expanding coverage, increasing capacity, or achieving communications in dead spots is simply a matter of installing one or more additional poletop radios.

Clusters of poletop radios are interconnected with a high-speed digital network running on a frame relay or a similar wired service. Information packets move from poletop radios to this high speed wired network through a Wired Access Point [WAP] that is located in the center of each cluster of poletop radios. A WAP consists primarily of radios to handle traffic to and from the cluster; a packet switch conversion computer to convert and route packets to and from wireline services; and a leased-line with high speed access to wireline packet switch services. The network is designed so that an information packet should require no more than two to three hops before reaching a WAP. Packets can move from a WAP in one city to a WAP in another City through Network Interconnection Facilities [NIFs], which control the movement of packets across Ricochet's wide-area-network. Information from an application will hop from a subscriber device to the nearest poletop radio, and then will hop from poletop radio-to-poletop radio, to WAP, to NIF until reaching its destination. Destinations may include another subscriber device, a public packet switched network (e.g., Internet on-ramp), on-line service, or LAN.



Ricochet's subscriber device provides the final piece of a seamless wireless communications solution. Ricochet's subscriber device uses the Hayes (AT command set and is compatible with most popular applications. The current generation of subscriber devices is a portable radio modem that connects with a cable to the serial port of a computer or PDA. Because the modem is functionally equivalent to a poletop radio, portable modems can talk directly to each other without access to our mesh network. Future generations of subscriber devices will include a PCMCIA card, combined wireline-wireless modems, and outdoor telemetry units.

PAGE

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December 18, 1996

TM

