PART E

SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1.   GENERAL

E1.1   These Specifications shall apply to the Work.

E2.   GENERAL SYSTEM REQUIREMENTS

E2.1   The major components of the Work are as follows:

(a)   Parking "tickets" (distinct from pay station cash tickets, and hereafter referred to as Citations);

(b)   Permits;

(c)   Point of Sale; and

(d)   Handheld Computers or Ticket Writers.

E2.2   Notwithstanding E2.1 , any alternative solution offered, in accordance with B6 or B7.2, must deliver an equivalent service in accordance with Part E Specifications in general and specifically E4, where the City will solely determine equivalency.

E2.3   Our goal is to find, purchase, and implement a system that will do the following:

(a)   Incorporate our existing and future citation, vehicle, customer and parking permit data

(b)   Streamline and increase our permit sales, citation issuance and collections

(c)   Streamline and optimize our use of staff and other office resources.

(d)   Identify frequent offender, traffic offender, immediate tow opportunities and special needs customers at the curb side in real time to our field officers

(e)   Issue residential permits, special needs permits, commercial permits, event permits in real time to our customers.

(f)   Better manage our written communications with customers

(g)   Interface for customer service and gate card control purposes with our Federal APD SCAN Net access control equipment for our garages.

(h)   Improve, enhance, and expand our permit issuance capabilities.

(i)   Reduce office traffic by allowing customers to access wait lists, search for, apply for, and purchase, parking permits, and other products via the Internet

(j)   Reduce office traffic by allowing customers to access account information and pay citations via the Internet

(k)   Reduce office traffic by allowing customers to appeal citations via the Internet

(l)   Reduce confusion with Provincial authorities by providing magistrates with on line and on demand details of parking citation histories.

(m)   Improve our adjudication process by providing a systematic pre court review for quality control, and a process for allowing adjudicators to remotely review customer files (Court Offices).

(n)   Help us obtain useful reports for system analysis, problem resolution, overall efficiency, etc.

(o)   Improve our profile and professionalism in managing customers and clients

(p) Improve the planning and management of special events, the allocation of departmental resources, and financial transactions and invoices associated with special events

(q) Save time by incorporating a relational database that contains permits, citations, vehicles, and customers (i.e. permit holders, persons responsible for citations, etc.)

(r) Provide a better system for tracking: vehicles that have been towed or have been approved for tow, the status/location of towed vehicles, as well as the fine accrual while in impound.

E2.4 All bids must include a single system solution, or package of solutions, that comprise the database-focused software application (hereafter referred to as "software"; requirements explicitly defined in E4.2); appropriate hardware devices including handheld ticket writers (requirements explicitly defined in E22.2), electronic cash drawers, barcode readers, and receipt printers; onsite installation of all components; onsite training for all components; offer optional web-based training for all components; technical support and future software/upgrades; as well as appropriate deployment assistance to ensure the system is properly implemented.

E3. TECHNOLOGY SPECIFICATIONS

E3.1 Infrastructure Technical Environment

(a) To assess the degree to which the technology of the proposed application fits the City's technical environment. Environment requirements typically include the client, server and network. Server requirements focus on hardware and operating systems compatibility. The choice of a database management system is included in the server requirements. Network requirements should focus on compatibility with particular emphasis on network protocols and bandwidth requirements for local and remote users. Client requirements should focus on desktop hardware, operating systems and graphical environments. Client requirements assess whether implementation of a single product can cover multiple desktop environments. Both qualitative and objective metrics are used to establish performance ratings.

(b) Servers (Production, Test, Development, Others)

   (i) The City prefers HP/Intel Windows 2003 Server platforms based on existing staff skill sets, and will consider others based on their overall merits with regards to their capability to best meet the City's needs as recommended by the Bidder. The system will eventually be used by as many as 150 named users, with as many as 50 Logged on users and as many as 50 concurrent (active) users processing transaction volumes of 4000 (includes general admissions) on an average day with substantially higher volumes in peak periods.

   (ii) In addition to configuring the servers to meet application user demands, please consider the impact on the server workload and storage space of the installation of your recommended systems management software in Specification E8.4

   (iii) Recommend appropriate server hardware configurations including operating system software to satisfy the City production, test, development and other appropriate (such as training and/or research) processing demands, providing reliability, availability and performance commensurate with a mission critical application.

   (iv) The Bidder should agree to remedy any of the specified hardware or systems software configurations at the Bidder's cost, if sub-second response time is not achieved for typical online transactions and availability requirements in excess of 99.0% for prime time scheduled availability are not met during the acceptance test period.

   (v) Describe the methodology used to configure the recommended server configurations and what methodology the City should use to perform future capacity planning as the growth of the application systems evolves.

(vi)   Describe warranty terms and maintenance provisions and services related to the recommended server hardware and software configurations. Please include all license, maintenance, warranty and support agreements.

(vii)   Provide a list of appropriate technical courses related to the proposed hardware and operating system configurations including formal courses, online tutorials, computer based training, prices and locations

(viii)   Describe online help/documentation and hardcopy documentation for the proposed hardware and system software configurations to be delivered with the project implementation.

(c)   Storage

(i)   Recommend an appropriate storage configuration to satisfy the City's production, test, development and other appropriate (such as training and/or research) live production and historical data storage demands, providing reliability, availability and performance

(d)   Database

(i)   The City prefers Oracle 9i Standard Edition based on existing staff skill sets, and will consider others based on their overall merits with regards to their capability to best meet the City's needs as recommended by the Bidder. Recommend a fully functional Relational Database Management System (RDBMS) software solution that will fulfill all application system functional requirements, provide full online back-up, recovery and reorganization facilities including database transaction logging and up-to-the- minute forward recovery, plus timely automated reporting of actual or potential errors or problems.

(ii)   The City is currently licensed for a range of Oracle database assets and so the Bidder should make the inclusion of any Oracle system software licenses and maintenance an optional portion of the bid (to be exercised at the discretion of the City).

(iii)   Describe the methods employed for performance and tuning

(iv)   Describe warranty terms and maintenance provisions and services related to the recommended server hardware and software configurations. Please include all license, maintenance, warranty and support agreements

(v)   Provide a list of appropriate technical courses related to the installation and technical support of the RDBMS including formal courses, online tutorials, computer based training, prices and locations

(vi)   Describe online help/documentation and hardcopy documentation delivered with the project implementation for the proposed database software

(e)   Network

(i)   Confirm that the application software supports TCP/IP as a communication protocol and Ethernet for LAN connectivity

(ii)   Describe the network requirements for server to client (and server to server) communications. These should specify the minimum recommended network bandwidth and latency requirements for average transactions and for any normal system management functions.

(iii)   Describe any options to minimize network bandwidth requirements for server to client (and server to server) communications over low speed network connections (less than 1 Mbps).

(f)   Client Platform

(i)   Describe the certified hardware and operating system platforms for the client tier with both minimum and recommended configurations

E3.2   Systems Management

(a) Application management tool requirements inspect how configuration application changes and performance are managed consistently across application elements. With client/server a significant portion of computing moves from a centralized environment to the multiple desktops of the organization. The software Contractor's method of managing and distributing versions, debugging, problem management, change management, and optimization tools will be assessed. The degree of fit with current and future commercial management tools for client/server should also be assessed. Bidders should describe any functions, architectures or solutions that provide ease of application administration. Both GUI and command line, local and remote administration should be provided.

    (i) Bidder should recommend any native/optional end-to-end application performance monitoring, tuning and diagnostic tools (this should also include vertical management – like server hardware, operating system, storage, RDBMS, printer, network elements). Bidder should describe how these may integrate to BMC's Patrol and MS MOM.

(b) Capacity Management

    (i) Bidder should recommend any native/optional end-to-end application capacity planning tools (this should also include vertical management – like server hardware, operating systems, storage, RDBMS, printer, network elements). Bidder should describe how these may integrate to BMC's Patrol and MS MOM.

(c) Problem Management

    (i) Bidder should recommend any native/optional end-to-end application problem management tools (this should also include vertical management – like server hardware, operating system, storage, RDBMS, printer, network elements). Bidder should describe how these may integrate to Remedy's ARS.

(d) Change Management

    (i) Bidder should recommend any native/optional end-to-end application change management tools (this should also include vertical management – like server hardware, operating system, storage, RDBMS, printer, network elements). Bidder should describe how these may integrate to Remedy's ARS.

(e) Backup/Recovery Management

    (i) Bidder should recommend any native/optional end-to-end and incremental application backup/recovery management tools (this should also include vertical management – like server hardware, operating system, storage, RDBMS, printer, network elements). Bidder should describe how these may integrate to IBM's TSM.

(f) Job Scheduling Management

    (i) Bidder should recommend any native/optional end-to-end application job scheduling tools (this should also include vertical management – like server hardware, operating system, storage, RDBMS, printer, network elements).

(g) Security Management

    (i) Describe how external users can securely access the application.

    (ii) Describe how City Staff can securely access the application to utilize all application management functionality.

    (iii) Describe how the application secures data, transactions, and the application configuration tool/process by userid, date and time stamps, TCP/IP port number or other mechanisms.

    (iv) Describe how the application enables the assignment of userids/passwords, setting of password expiration, criteria, resetting of passwords, facilitates single sign-on to all modules, handles unsuccessful logon lockout and provides summarized/detailed reports on usage.

(v)   Describe how Microsoft Active Directory can be used to facilitate application authentication and authorization. Describe how the application system impacts Microsoft Active Directory (schema, special rights, etc).

E4.   MINIMUM REQUIREMENTS

E4.1   The following general specifications are the minimum requirements for this project:

(a)   The parking management system must include all software solutions as well as any parking management software related hardware/software peripherals required for proper functioning of existing networked PC(s) linked to an existing database server.

(b)   A fully integrated Windows™-based parking management information software package, or association of different Manufacturer's packages that comprise the same, meeting these minimum requirements.

(c)   The system will incorporate a relational database using client server or ASP/ thin client technology across a multi-user local area network.

(d)   The software system will allow for tracking of customers, citations, permits, lot maintenance, hearings/appeals, event management, towing/liens, and vehicle registrations. The database used for tracking the aforementioned items shall be, in our opinion, easy to use and relational for searches, information updates, queries, and provide advanced reporting capabilities.

(e)   The software will be modular in nature and include modules for tracking the following: customers, citations, hearings/appeals, permits, vehicle registrations, towed/ lien applied vehicles, cash register or point of sale, and special events.

(f)   The system will be "customer-centric" allowing multiple vehicles, permits, citations, addresses, etc. to be linked to a single customer. The user interface must make it simple for novice computer users to access all of the aforementioned information.

(g)   The system will be configurable to meet our business requirements (e.g. single sign on compliant, fine accumulations/escalations, late fees, permit values - sale and return with options for prorating over time, lot definition -by name, space type, # of spaces, etc.) as defined by our governing bodies. The system should help to enforce our policies and procedures.

(h)   The system must incorporate our existing data, converted from our existing database.

(i)   The Contractor must supply and support point of sale electronic cash management or workstations including any parking management software related peripherals, cash drawer hardware, bar code reading devices and receipt printers which are to be fully integrated with the PC based parking management software system.

(j)   The Contractor must provide handheld computers and ticket writers and the necessary software to communicate bi-directionally via cellular wireless interface with the database. The system must include a Windows-based (not DOS) user interface that will allow staff to download ticket information from the handheld ticket writers and upload database information from the database.

(k)   Citations must print in French/English style language format.

(l)   The Contractor must provide the following on-site services: requirements analysis, system set up assistance, system installation, on site user training, and follow-up. The Contractor will send qualified personnel to our site to help, consult, train, install, and oversee the system deployment process.

(m)   The Contractor must provide a suitable "hands on" on site training program to train personnel on software for initial use, and ongoing education programs (for current and new staff).

(i)   For the purpose of evaluation assume training to mean:

      (i)   Daily rate for one business day;

     (ii)   Two (2) contiguous business days minimum;

    (iii)   Small group format of up to six people;

    (iv)   City provided facility and computer equipment.

(n) The Contractor must provide annual maintenance and software program support agreements including all software upgrades and maintenance for hand held computers.

(o) The Contractor must provide the electronic cash drawers and receipt printers.

(p) The parking management software system is to be installed, either on an existing server running Windows NT, Windows 2000 or Windows XP, connected with a network of Intel-based (or equivalent) personal computers via common protocols such as TCP/IP, or in an appropriate, or through a proven ASP or thin client configuration, providing full functionality and equivalency of subscription or transaction based fees.

(q) The City supports Oracle as its primary database. The Contractor may be required to provide technical database support.

(r) The new parking management software must be Windows based to ensure full compatibility with existing software and operator training. The software must run natively under Windows 95/98, Windows ME, Windows NT 4.0, Windows 2000 or Windows XP (Professional), not in a DOS window or similar emulation window.

E4.2   Software Requirements

(a) The new parking management software system must:

    (i)   Be a multi-user client server or ASP based network software application;

   (ii)   Support all current Windows operating systems (2000, XP Professional);

  (iii)   Employ a fully relational database that allows data to be manipulated, linked, and queried

E4.3   The system bid must include, but not necessarily be limited to, the following primary software modules/capacities:

(a) User Access Control and Security

    (i)   The software must allow for a wide range of user access control and security that can vary by module, function and security level from read-only access to complete insert/edit/delete capability anywhere in the software system. The system must allow the creation of a profile for each individual user. This profile must specifically detail the access rights and security privileges as defined by the system administrator. All critical functional areas must be grouped so that a user can be granted or denied access and there should be up to 7 different levels of access where appropriate. The system must also provide an audit trail of modifications and/or transactions executed by a particular user.

(b) In addition, the system should be able to:

    (i)   Log off Users who have logged off improperly;

   (ii)   List all Users logged on to the system at any time;

  (iii)   Ability to revoke a User's access;

  (iv)   Allow administrative user profiles to be cloned and applied to other users; and

   (v)   Ability to accept user sign on from the City's master workstation password. (User signs on to the City network and has access to the parking system)

E5.   PARKING CITATION MODULE/CAPABILITIES

E5.1   Must allow the user to enter (via keyboard entry and/or automatic wireless upload via handheld citation issuance devices), view, and print, by means of either an ad-hoc query or batch basis, parking citations. All information options normally associated with a specific citation such as: Ticket #, License #/Yr./Province (and/or State), Plate Type, Meter #, Date Issued, Time Issued, Officer Code, Location Code, Violation Code, Vehicle ID Info. (Make, Model, Color), VIN # and miscellaneous officer or office notes.

E5.2   In addition, the following information must be displayed from the same screen or printed by overlaying windows which are invoked only when necessary:

(a)   Detailed violation information including fine structure (base amount, escalations, accumulations, late fees, etc.);

(b)   Extensive scrollable comments/history field;

(c)   Display customer account number, ID Number and customer group on the citation if there is a customer assignment;

(d)   Detailed status information regarding balance due, addition of late fees and fine increments, administrative fees, suspensions and adjustments;

(e)   Listing of all prior citations and ability to display any previous citation

(f)   Enter "Skeletal" citations (citations paid "off the windshield" before actual loading into the system, where immediate wireless insertion is not available);

(g)   Ability to change the status of a citation including an auditable "one-step" void function;

(h)   Ability to track changes and adjustments made to a citation to a specific individual, date and time;

(i)   Complete history of transactions associated with the citation, including monetary, internet, telephone and walk-in contacts;

(j)   Adjusting the monetary amount of a citation ;

(k)   List other citations assigned to the vehicle, permit or customer;

(l)   Support the attachment of scanned documentation, digital images or other electronic items to the citation;

(m) Ability to display the number of letters a citation has received without leaving the citation;

(n)   Secure ability for a customer to search for outstanding permit or citation charges related to his/her account and pay via the internet;

(o)   A visual indicator displayed on records with attachments;

(p)   Ability to directly access hearing information from the citation record; and

(q)   A visual indicator displays on citations with a contact history.

E5.3   The Parking Citation capabilities must also allow for the processing of citation status codes including the following: Awaiting Payment, Awaiting Payment - Partial Payment Received, Paid in Full, Pending Transfer to Bursar, Appeal Pending, Transferred to Payroll, Administrative Hold, NSF Cheque Hold, DMV Hold Added to Registration for Non-Payment, Transferred to Collections and Un-collectable status.

E5.4   This module must also:

(a)   Accommodate a ten digit alphanumeric format;

(b)   Provide a mechanism for rapid and convenient entry of hand-written citations utilizing defaults from the previously entered citation such as date, officer number, location, etc.;

(c)   Be able to restrict full data edit and delete capabilities to authorized individuals ;

(d)   Be able to reassign citations to a different customer individually or in batch (ex. from vehicle leasing company to vehicle lessor);

(e)   Have the ability to track and define scofflaws and download scofflaw information to handheld citation units;

(f)   Accommodate direct access via the Department of Motor Vehicles (DOT/DM) to customer and vehicle registration information;

(g)   Print notification letters in MS Word formats while maintaining an audit trail within the application;

(h)   E-mail notification letters while maintaining an audit trail within the application;

(i)   Ability to define up to two violations or charges per citation;

(j)   Ability to transfer citation balance due items to organization-wide account/billings receivable system

(k)   Ability to project customer or citation records to the Provincial court system for the purpose of adjudication and resolution;

(l)   Ability to support accumulated violations with handheld ticket writers;

(m)   Ability to manage citation processing via citation bar codes; and

(n)   Include a detailed list of the history of customer association with a citation. The information should include, but not be limited to, the user who created, removed or changed the customer association.

E6.   CITATION SEARCH AND RETRIEVAL CAPABILITIES

E6.1   The software must quickly and conveniently find and access citations from virtually anywhere in the program including the cash register or point of sale module, and the internet. It must also be able to find a citation with as little information as: the customer's name, customer account number, customer ID#, a license plate, the issuance date of the citation, the citation number, permit number, citation payment or appeal status, customer group, or violation.

E6.2   The citation search tool must be accessible for creating scofflaw information for the handheld ticket writers. Additional conditions include total dollar amounts or more per license plate, and total citations per license plate.

E6.3   Citation Correspondence Module

(a)   The software must provide the ability to record and manage any communication a customer might have regarding specific citations. The information recorded represents discussions and other interactions. The history of all of the interactions is available and there is an organized process for follow-up. Customer correspondence must be available in French/English style format.

E6.4   Citation Adjudication and Hearings Capabilities

(a)   The software must track the citation adjudication and hearing process. When a citation is disputed or appealed, the information relating to a citation must be automatically copied into the dispute record as the citation number is entered.

E6.5   The adjudication and hearings module must also have the ability to:

(a)   Assign an appeal to a specific hearing officer, court or appeal authority;

(b)   Enter an appeal status code to indicate appeal decision ;

(c)   Provide extensive, scrollable comment field;

(d)   Attach digital pictures, files or documents to the appeal record;

(e)   Allow for the adjustment of the citation's final amount due by an authorized person and keep track of all adjustments made to the record;

(f)   Relationally link and simultaneously update citation files;

(g)   Set revised due dates;

(h)   Put citations on hold (no further accumulation of late days, fees or notices) while appeal is in process;

(i)   Offer multiple user-defined appeal note codes;

(j)   Allow and insert user-defined resolution fees;

(k)   Provide built-in court hearing schedule report;

(l)   Insert user-defined tables for court location;

(m)   Ability to define a hearing day and time;

(n)   Allow direct access to the citation and customer records;

(o)   Generate/print and/or email appeal decisions and/or letters on demand for a single hearing or in batch for multiple hearings. This feature must allow the user to call up one of several standard customer-defined appeal response letters in the database file and have information about the citation, customer and vehicle information automatically entered on the standard letter;

(p)   Contain a user-defined template that allows users to read why an appeal was upheld/denied as well as the ability to print this information on letters generated within the software;

(q)   Allow the customer to enter an appeal or search records for an appeal result via the internet;

(r)   Include a judgment decision note field, which can be exported to MSWord for judgment notification;

(s)   Display a message if a record has already been appealed;

(t)   Offer a choice for each appeal of either an "Oral" or "Written";

(u)   Offer a choice of plea Guilty, Guilty with and Explanation, or Not Guilty;

(v)   Appeal multiple citations on a single hearing record and utilize bar codes;

(w)   Provide a process for assigning vehicles to be towed or have a lien applied;

(x)   Generate/print and/or email hearing notification letters on demand for a single hearing or in a batch; and

(y)   A visual indicator displays on records with attachments.

E7.   VEHICLE REGISTRATION

E7.1   The capabilities of this software module must provide for the complete control of the vehicle registration process including:

(a)   Simple display summarizing citations, tows and permits;

(b)   Link multiple customers to a vehicle;

(c)   Associate vehicles with municipal addresses;

(d)   Assign VIP, immediate tow, and other status' to flag individual vehicles for enforcement officers;

(e)   Define vehicle assignment categories, such as registered owner, driver, rental car, etc.;

(f)   Simple access to customer, citation, permit, and tow records;

(g) Assign a unique registration number;

(h) Maintain Vehicle Ownership and Plate Type information;

(i) Establish current liability for the vehicle;

(j) Ability to identify potential duplicate vehicle registration records with option to merge the duplicate records into one; and

(k) Provide access to a motor vehicle registration database for Manitoba, Canada, and United States.

E8. CUSTOMER TRACKING

E8.1 The software must be customer oriented for customer service purposes. The software must track customer activity and the following features must be present:

(a) One unique account number issued to a customer;

(b) Display of balance due with convenient access to account details;

(c) Tracking of and direct access to all departments and buildings associated with the customer;

(d) Assignment of customer group (e.g. Contractor, City staff, Public, etc.);

(e) Ability to decline individual modes of payment (ie Cheques) from selected customers;

(f) Search and recover detail on all vehicles registered to the customer;

(g) Complete list of invoices related to the customer and the ability to go directly to one of those listed record;

(h) Unlimited number of addresses per individual;

(i) Two field address line (one field for the street number, the other for street name);

(j) User-defined address types (home, work, school, etc.);

(k) Ability to prioritize multiple addresses;

(l) Ability to import and update customer addresses via registered owner information via the internet;

(m) Assign multiple user-definable phone number fields (work, home, mobile, etc.) and ability to list four phone numbers per individual;

(n) Capability for user to define a number of fields for tracking of specialized or future customer details;

(o) Capacity to apply credits or other held funds to a customer account with complete audit trail;

(p) Ability to define E-mail address types (work, home, etc.);

(q) Current and other recorded E-mail addresses for each customer;

(r) Record Driver's license number in one field;

(s) Ability to send user-defined customer statements in a variety of formats to inform customer of all outstanding invoices on account (citations, permits, tow/lien, etc.);

(t) Scrollable notes field;

(u) Ability to record and flag old customer addresses;

(v) Ability to search, compile and manage multiple City Staff wait lists for employee lots in the office or via the internet linking this information with permit inventories at point of sale;

(w) Ability to identify potential duplicate customer records through plate and address similarities, with option to merge the duplicate records into one;

(x) Provide an "at a glance" capability for all information and invoices associated with a customer (e.g. citations, permits, vehicles, appeals, tow records, etc.) to facilitate rapid communication with the customer;

(y) Support the attachment of scanned documentation, digital images or other electronic items to the record; and

(z) Ability to generate a custom email message directly from the customer's record.

E9. PARKING PERMIT CAPABILITIES

E9.1   The system must provide the capability to set up, issue, track and manage On and Off Street parking permits. Permits are designed to grant permission, or authorization, on a prepayment basis in return for specified privileges. A permit may be a card, sticker or hang tag and it may be issued to one person or a group of persons such as a car pool. Whenever a permit is issued, a relationship should be established between a customer, a vehicle and the permit.

E9.2   The capabilities of this software module must provide for the complete control of the parking permit issuance process including:

(a) Ability to inventory and track uniquely numbered On Street (residential, meter prepayment, parking structure card access, special event, special needs) and Off Street (civic employee, meter prepayment, parking structure card access, special needs, special event) permits as they are being issued;

(b) Ability for the customer to search availability or permit groups and purchase a permit over the internet;

(c) Record a permit's effective, issuance and expiration dates;

(d) Ability to track prior permits, gate cards, and space assignments;

(e) Ability to scan a permit's bar code at point of sale;

(f) Ability to track access gate cards through interaction with the Federal APD SCAN Net access system;

(g) Ability to register one or more vehicles to a permit (carpooling);

(h) Ability to manage multiple wait lists for over 100 parking lots ;

(i) Ability to accommodate user-defined vehicle assignments;

(j) Ability to accommodate payroll deduction plan option for staff with supporting documentation for Accounting and export to Peoplesoft accounting and payroll system;

(k) Ability to transfer permit balance due items to organization-wide Peoplesoft account/billings receivable system;

(l) Ability to sell a permit to a customer and charge the transaction to a 3rd party;

(m) Ability to display permit account balance;

(n) Permit possession status indicators including: active, lost, stolen and returned;

(o) Ability to download permit records to handheld ticket writers by possession status (lost, stolen, returned, etc.), permit type and location, and review through citation issuance (so as to signal when to write a citation);

(p) Complete tracking and simplified issuance of temporary permits;

(q) Ability to associate multiple customers to a permit;

(r) Ability to make monetary adjustments;

(s) Detailed monetary transaction history for each permit;

(t) Ability to establish formal permit inventories and link to point of sale;

(u) Ability to prorate and reset permit sales/returns and automatically calculate value based on user-defined rules (i.e. weekly, monthly, daily, etc.);

(v) Restrict the number of permits a customer can purchase;

(w) Ability to list all citations related to the customers/vehicles assigned to a permit;

(x) Attach digital pictures or documents to the permit record;

(y) Search for all permits that are associated with a particular address or license plate;

(z) User definable notes for permit records ;

(aa) Provide the ability to print permits at the time of a sale from a networked or receipt printer (includes barcodes and graphics);

(bb) Ability to define lot and/or department allocations;

(cc) Ability to directly access bulk permit information from any permit record associated with a bulk permit purchase;

(dd) Ability to process permit sales by status (ie. Awaiting Payment, Awaiting Payment - Partial Payment Received, Paid in Full, etc.).

E10. BATCH PERMIT ISSUANCE AND INVOICING

E10.1 The software must have a module that enables the user to issue a batch of permits to an individual, agency or department and bill for the amount due. Additional features must include:

(a) System must be able to update permits to reflect bulk sale and list the invoice number on the permits after the batch has been sold;

(b) Direct access to the customer, permit type, department and the first permit number sold in the batch;

(c) Display bulk permit balance with payment information;

(d) Include a detailed financial history of the bulk permit record;

(e) Assign a unique number to each bulk permit record;

(f) Offer an unlimited comments field with each bulk permit record;

(g) Provide the ability to print permits from a networked or receipt printer (includes barcodes and graphics); and

(h) Support the attachment of scanned documentation, digital images or other electronic items to the record

E11. PAYMENT AND CASH MANAGEMENT CAPABILITIES

E11.1 The cash management software module must allow a bar code reader, receipt printer and electronic cash drawer to be attached to a standard PC workstation creating a fully functional cash management capability. The software must allow for direct posting to the proper account(s) and complete convenient access to virtually any information in the system without leaving the cash management module.

E11.2 Specifically the cash management module must include:

(a) Ability to track all transactions by cashier or distributed point of sale regardless of cash drawer or point of sale used;

(b) Access to citation record searches (single ticket or customer/vehicle's complete listing of citations and total balance due) without leaving the cash management function. It must also be possible to find a citation with as little information as] the customer name, license plate, the issuance date of the citation or the citation number;

(c)   Ability to output the results of a citation search to the screen, printer, or a file, and to easily access the cash register screen for payment processing;

(d)   Posting of payments for citations, permit invoices, NSF penalty fees, administrative fees, as well as miscellaneous merchandise such as bus tickets, smart cash cards and other merchandise;

(e)   Ability to accept and processes payments in full and partial payments, as well as apply credits from an existing customer credit balance;

(f)   Ability to write-off full or partial citation values at point of sale with authorization during acceptance of payment;

(g)   Ability to calculate and apply two (2) user-definable tax rates to selected products (GST and PST);

(h)   Ability to enter payments before citation information has been imported from handheld ticket writers or manually entered, and have the information automatically updated when the citation is later entered;

(i)   Notify the cashier to decline a mode of payment (ie cheques) from a specific customer

(j)   Print a receipt on command that clearly identifies individual transactions and/or items purchased, including citations paid, permit receipts, bus tickets, GST/PST amounts, GST number, for all merchandise purchased

(k)   The system should have the ability to print each receipt to a variety of printers in a variety of formats, including point of sale receipt printers

(l)   User-defined payment methods (i.e. cash, check, payroll deduction, credit card, interdepartmental check)

(m)   Tracking available for cheque numbers, credit card numbers or authorization numbers and expiration date

(n)   Processing available for quick and easy batch application of citation mail-in payments

(o)   Capability to mark NSF cheque receipts, add associated fees, send customer defined standard NSF cheque notifications and have the ability to flag customers for cheque denial.

(p)   Provide a detailed cashier report for each cash drawer or point of sale including a subtotal and total summary report of all transactions for all cashiers over a customer-defined time period, a write-off or over/under report, and an item summary for balancing cash

(q)   Ability to process a numbered permit from inventory with automatic calculation of the full or prorated purchase price

(r)   Ability to scan a bar code printed on sale items (i.e. citations, permits) into various fields to facilitate rapid data entry and lookup at point of sale

(s)   Separate password protection for all cash register functions and supervisory override

(t)   Tracking at point of sale to indicate why there are discrepancies between the expected balance and the actual balance

(u)   Simple process for ensuring that all transactions are complete prior to closing out drawer or point of sale.

(v)   Ability to easily add customers and vehicles when selling a permit without leaving the point of sale module

(w)   User defined cash accounts (citations, permits, bus passes, etc.)

(x)   Ability to facilitate third party sales (i.e. an individual purchases a permit but the bill for the permit is directed to a third party)

(y)   Complete customer invoice history including wait list assignments available from point of sale

(z)   Ability to pay an invoice with multiple payment types

(aa) Displays customer/vehicle balance from the receipt and the ability to add outstanding invoices to a receipt

(bb) Ability to restrict a permit or services sale until all citations are paid

(cc) Ability to print receipts and reprint receipts on demand

(dd) Ability to display and account a credit to the customer where applicable.

E12.   AUTOMATED PROCEDURES

E12.1   The software must:

(a)   Accept a single sign on set up as determined by the centralized City wide password and network access management system.

(b)   Provide for user-defined fine escalation or reduction of selected citations or penalties associated with time.

(c)   Automatically add late payment and suspension fees as they are due, annotating records to show this for audit purposes

(d)   Print and/or e-mail letters in a variety of formats (including MS Word) based on pre-defined criteria that can be modified based on changing needs without the involvement of the software provider

(e)   Ability to provide an auto-expire permit function. This procedure will identify all expired permits and then flag them as invalid or expired. This procedure will also update Lot/Location or Department Allocation totals if necessary.

E13.   AUTOMATED NOTICE AND LETTER GENERATION

E13.1   The software must provide a module to allow for the issuance of notification of fine escalation, notification of judgment, notification of court dates, notification of accounts payable (includes citations, permits, events, etc.), permit renewals, hearing results and waitlist, and other predetermined or pre scheduled routine correspondence. Each letter must be printed and/or emailed based on customer-defined criteria such as but not limited to "days past citation issuance" or "number of unpaid citations" for a given license number. Notices and letters must be capable of being generated for either a single invoice or in batch mode for multiple individuals/invoices.

E13.2   The following letter types must be available in the software module:

(a)   Customer Statement

(i)   Ability to export the data to MS Word for custom letter creation

(ii)   Ability to send letters for outstanding invoices such as citations, permits, events, bulk permits, tow and third party charges

(iii)   Ability to identify charges as default judgment and fine escalation

(iv)   Ability to identify administrative charges

(v)   Ability to print balance related to held funds

(vi)   Ability to send letters to a particular customer group

(vii)   Ability to print both credits and debits on the same letter

(viii) Ability to define payment status' as part of the letter criteria

(b)   Citation Overdue Notice

(i)   Each time a citation letter is generated, a record must be automatically added to the history of the citation file

    (ii)   Ability to specify billing fee, fine escalation, tow, status change and Ministry of Transportation Options

    (iii)   Ability to export the data to MS Word for custom letter creation

    (iv)   Ability to send letters to customers who belong to a particular customer and/ or vehicle assignment group

    (v)   Ability to define payment statuses to be included as part of the letter criteria

(c)   Hearing Notification/Results Notices

    (i)   Ability to generate a hearing notification letter. Letter can include date, time and location of the appeal hearing

    (ii)   Ability to generate hearing results letters and automatically assign a new due date for the citation payment

    (iii)   Ability to export the data to MS Word for custom letter creation

(d)   Permit Renewal Letter

    (i)   Ability to print permit renewal letter based on the following criteria: dates, permit or lot type, possession status and customer grouping

    (ii)   Ability to export the data to MS Word for custom letter creation

    (iii)   Ability to export unpaid citations and all vehicle information when using the MS Word feature

    (iv)   Ability to list the price of the permit on the letter and current permit number

(e)   Wait List Notification

    (i)   The software must include the following functions:

    (ii)   Ability to generate a notification letter to inform a customer that a permit is available for purchase in person, by telephone, by mail, or via the internet

    (iii)   Send notices and letters by e-mail

    (iv)   Allow the user to prioritize address types (home, business, etc.)

    (v)   Allow the user to define/create different types of standard letters, including letters specifically for Appeals, Permit Renewals, Account Statements, Citation Billing, Multiple Overdue Notices, etc., for storage in the database file

    (vi)   Allow the user to copy letter text and modify wording and data field placements without the need for future Contractor involvement or special programming

    (vii)   Print letters individually or in batch applicable to vehicle, citation, or customer criteria when user-defined conditions are met. Allow the user to exclude certain criteria from batch run.

    (viii)   Allow the user to identify the specific combination of conditions that must exist in order to trigger the printing of each standard letter type for a particular citation, vehicle or registered owner. Definable conditions should include: number of days citation has been outstanding (unpaid), number of unpaid citations, letters for a specific state license plate only. Users should be able to combine these conditions using logical operators to form more complex situations

    (ix)   Allow defined fields in each standard letter type to be automatically filled in by accessing data in the database file at the time of printing (i.e. customer name and address, etc.). Such defined blank fields for automatic data entry should include an individual listing of each unpaid citation, total dollar amount due, specific details for each outstanding citation, vehicle description information, registered owner information and customer authority name and address information

    (x)   Allow letters to be printed on a standard printer that can be accessed via Windows

    (xi)   Ability to "roll back" or extirpate letters within the system, if they were issued in error

      (xii)   Allow an unlimited number of user-defined letter headings to be selected by letter type. The user-defined letter headings should contain name, department, address, city, province, postal code, and phone number.

      (xiii)   Allow for the customer unique ID number to be suppressed on letters/emails.

E14.　EXAMPLES

E14.1　The following are examples of different standard letter types that should be possible, and which illustrate how and when letters should be generated.

Example 1.

  (a)   The software must allow the user to create his own standard "Tow or Lien Warning" letter that will exist in the database file. When initiated by operator command, the system must automatically search all unique vehicle ID record files for those vehicles exhibiting the required criteria. This could be:

      (i)   Three or more unpaid citations (automatic)

      (ii)   An authorization from the municipal police services (on command)

      (iii)   A customer name and address in the data file

  (b)   The System must then:

      (i)   Automatically print the standard "Tow or Lien Warning" letter for each such vehicle

      (ii)   Automatically fill in name, address, citation information, amount due, etc. in list format for each letter

      (iii)   Automatically record the date the letter was printed/sent in the citation record

      (iv)   Prevent further Tow or Lien Warning letters from being printed if one such letter has been sent as required by the selection criteria

Example 2.

  (c)   The software must allow the user to create a personalized standard "Partial Payment" letter that will exist in the database file. When initiated by the operator, the system must automatically search all unique vehicle ID record files for those vehicles that have all of the following:

      (i)   One or more citations that have been credited with a partial payment amount

      (ii)   Continue to have a balance due

      (iii)   A customer name and address in the data file

  (d)   The system must then automatically do the following:

      (i)   Print the standard partial payment letter for each such vehicle

      (ii)   Fill in name, address, citation information, amount due, etc. in each letter

      (iii)   Record the date the letter was printed/sent in the citation history

      (iv)   Prevent further partial payment letters from being printed for the same citation after one letter has been sent for a specific vehicle/citation

Example 3.

  (e)   The software must allow the user to create a standard series of "Collection" letters that will exist in the database file. When initiated by the operator, the system must automatically search all unique vehicle ID record files for all vehicles with any unpaid citation more than "x" days past the original citation issue date that also have a customer name and address

  (f)   The System must then automatically do the following:

      (i)   Print the letters in the order the letters have been defined.

      (ii)   Insert name, address, citation information, amount due, etc. into the letter

      (iii)   Record the date the letter was printed/sent in the citation history

(g)   This same process must automatically occur for a second and a third vehicle defined letter in the collection series after "x" + "y" days and "x" + "y" + "z" days respectively past the original citation issue date. This course of action must take place for each and every unpaid citation added to the vehicle record file.

E15.   EXTENSIVE REPORTS GENERATION

E15.1   The software must produce pre-defined reports concerning citation activity, permit sales activity and parking citation appeals activity with a variety of sorting options such as: Date Range(s); Citation # Range(s); Outstanding Citations; Citations Issued by Officer ID; Citations Issued by Location; Citations Issued by Violation; Citations Issued by Time Periods.

E15.2   The software must also produce accounts receivable and write-off reports that indicate, by user-defined receivable type, the following: total dollars collected, total citations outstanding (unpaid or partially paid), and total citations disposed by disposition type over a user-defined period (e.g. monthly, annually, etc.).

E15.3   The system must provide ad hoc and user defined reports that may be run by any authorized user. The process must allow data to be sent to a printer, file, or screen. The system must also allow posting options such that citation fees, status changes, and account adjustments may be made in bulk as data is exported from the system.

E15.4   The following are samples of the types of reports that the software must be capable of producing:

(a)   A chronological listing of citations written by violation type, parking facility location and date range

(b)   A listing of all vehicle license plates and VIN #s with "X" or more unpaid citations

(c)   Number and percent of citations issued by violation type during a date range

(d)   Number and percent of citations disposed by disposition type code during a date range

(e)   Number, percent, and total dollars collected on all citation listed by each disposition code and compared to total citations issued (total number and dollar amount) during a date range

(f)   Missing citation report by ticket number and/or officer to which it was assigned

(g)   Monthly accounts receivable report of citations unpaid during specified date range

(h)   A chronological listing, by citation number, of each ticket and the amount posted/paid during a specific time period

(i)   An officer specific report containing citations written by location, time of day and violation type during a specific time period

(j)   A listing by customer and citation # of all unpaid citations that have been referred for suspension

(k)   A listing of un-collectible citations by license plate # with ticket #(s) and total dollar amount due but no name or address on file over a date range

(l)   A listing of citations by name, address and dollar amount due that have aged beyond a user-defined period that can be written off and placed in history files

(m)   A listing of individuals/citation #'s that have overpaid the amount due and merit a refund by date range (i.e. a report showing all citation accounts with a positive balance).

(n)   A detailed report of all activity for a given cash drawer on a given day by transaction type (bus tickets, parking tickets, permits, etc.). The report must show activity for each revenue-producing transaction category.

(o) A report that will provide aging status for unpaid invoices. The report can be broken down by past due statuses – such as: Current, 30 days, 60 days, 90 days, and 180 days

(p) The ad-hoc report writer and query tool must provide the ability to create and export fixed field length ASCII files

E15.5 Data Import/Export

(a) The software must be capable of creating file formats (e.g. ASCII files) that readily facilitate and accommodate data import/export between all aspects of the parking management system and external agencies or departments.

(b) The software import/export module must also have the ability to:

   (i) Import and export delimited ASCII files

   (ii) Import customer information from central payroll system, accounts system, and external governmental agencies

   (iii) Export citation billing or other information in the form of a delimited ASCII file

E15.6 Internet Accessibility

(a) The software must offer customer access via an Application Programming Interface (API) or may be provided through an Application Service Provider interface (ASP) or thin client system to allow external programs access to features within the application, or to allow individual customers to utilize the database interactively. This API/ASP should, at a minimum, specifically interface with permit sales, citation payments, and the ability to access account information. The system should create a web-based interface allowing secure online transactions.

(b) The Bidder must offer consulting services to assist in the web implementation process.

(c) The interface must provide a group of stored procedures and views that can be called from an outside system that is logged into an Oracle parking database

(d) The interface must fully address permit sales. This includes searching/purchasing/updating customer information and inserting/updating vehicle information

(e) The interface must allow a customer to search, find and pay all citations for which they are responsible

(f) The interface must allow a customer to find personal account information. This includes citation and permit information.

(g) The interface must allow a customer to edit current biographical information

(h) The interface must allow a customer to appeal citations.

(i) The interface must allow for more than one citation to be appealed on the same appeal record

(j) The interface must accurate manage financial and payment data

(k) The interface must check apply any business rules defined in the Oracle parking database. This includes, but is not limited to, waitlist restrictions and permit restrictions

(l) The interface must produce a detailed cashier report including but not limited to: a summary report of all transactions and item summary report

(m) The interface must offer real-time interaction with the parking database.

E16. WEB SOLUTIONS

E16.1 The Bidder must offer web development solutions for an e-commerce/e-government customer inquiry website. The Bidder must offer packaged solutions and custom development option. Contractor should be able to develop a scope document outlining the work to be performed and

offer a firm price. The e-commerce website must integrate with the parking database.   The following solutions should be made available:

(a)   Customer Account Inquiry and update

(b)   Citation Search and Payments

(c)   Permit and Wait List Search and Sales

(d)   Citation Search and Payments, Adjudication, hearings and Collections

(e)   Search and payment for tows and liens

E17.   PERMIT FULFILLMENT SERVICE (**OPTION**)

E17.1   Although not REQUIRED, the software may offer a permit fulfillment service that provides real time updates to the database.

E18.   SPECIAL PARKING EVENTS TRACKING (**OPTION**)

E18.1   Although not REQUIRED, we would find it attractive if the software could provide a format for the tracking of scheduled events that impact parking requirements for specific parking facilities.

E18.2   If provided, the software must have the ability to perform the following:

(a)   User-defined event types, resource types, resources, employees, and equipment

(b)   flexible reporting by day, week, and date range as well as the ability to create invoices and track financial issues associated with parking requirements for the event.

(c)   Direct access to the event type, customer, lot number, building and payment method

(d)   Detailed history of when the event was created as well as any changes and payments made

(e)   Schedule employees and resources for events and define the pricing structure (each or hourly) for each employee or event

(f)   Display a warning if an employee or resource is assigned to an event and is already working during that time period

(g)   A details section that allows for the assignment of resources (i.e. equipment, employees, permits, parking spaces, etc.)

(h)   Provide separate note sections for general and user-defined header and footer comments

(i)   Ability to copy event header information

(j)   Ability to attach scanned documentation or pictures to the record

(k)   Invoice directly from the event screen

(l)   Invoice date recorded and shown on the event screen

(m)   Generate a list of scheduled events

(n)   Print reports by date range. Report must include notes section, event name, type, date, and start/end time

(o)   A visual indicator displays on records with attachments

E19.   PROPERTY MAINTENANCE (**OPTION**)

E19.1   Although not REQUIRED we would find it attractive if the software could provide a format for the user to manage the repair and maintenance of parking related equipment and facilities, including:

(a) User definable property items, property types, maintenance actions, maintenance agencies and satisfaction ratings.

(b) Review, schedule and update maintenance records

(c) Extensive section for comments

(d) Data fields for recording maintenance action, date scheduled, date completed, and cost

(e) Field to identify Contractor/performance for historical reference

(f) Compare budgeted versus actual costs for variance reporting

(g) Standard maintenance reports

(h) Report maintenance items on the handheld

(i) Review open maintenance items on the handheld

(j) Associate meter numbers with locations on the handheld

(k) Notify an officer when issuing a meter violation via the handheld of an open maintenance item

(l) Support the attachment of scanned documentation, digital images or other electronic items to the record

(m) A visual indicator displays on records with attachments

E20.   TOWING AND LIENS

E20.1   The software must have a function that allows the user to track the tow/lien process. This includes identifying a vehicle for tow/lien, physically towing or applying a lien and seizure to the vehicle, and releasing the vehicle to its owner or new owner as required by public auction.

E20.2   The software must provide the following:

(a) User-defined impound and release codes that can also be used in standard reporting

(b) Separate date, time, and officer entries for each step in the boot/tow/lien process: tow /lien record entry, tow/lien authorization, vehicle identified, vehicle towed, vehicle impounded, vehicle released, vehicle lien applied, vehicle seized, and vehicle disposed of.

(c) Ability to enter all towing agencies and impound garages with associated agency fees that are automatically applied as necessary

(d) Fields for entry of tow ID#, location, and extensive, scrollable comments/history

(e) Support the attachment of scanned documentation, digital images or other electronic items to the record

(f) A visual indicator displays on records with attachments

(g) Ability to automate creation of tow/lien records and approval, based on repeat offender lists.

E21.   HANDWRITTEN CITATION BOOK TRACKING

E21.1   The software must have a template that tracks manual/handwritten citation books from issuance to return, including:

(a) The date a manual/handwritten citation book was issued

(b) The beginning citation # from a specific manual/handwritten citation book

(c) The ending citation # from a specific manual/handwritten citation book

(d) To whom the manual/handwritten citation book was issued

    (e)   Who issued the manual/handwritten citation book

    (f)   The date a manual/handwritten citation book was recalled

    (g)   Who received the manual/handwritten citation book upon return

    (h)   A missing citation report to account for citations issued to an officer but not accounted for in the citation tracking module

    (i)   Provide an easy method for tracking handwritten citation book defined within the system without regard to whether it has been issued, recalled, received, etc.

E22. DATA ARCHIVING

E22.1   The software must have the ability to remove data from the "live" database and place in a "read-only" database for historical purposes. This module should provide the following:

    (a)   Ability to archive customer, vehicle, citation, permits, 3rd party charges and tow/lien records

    (b)   Copy information to the archived database associated with the archived record (such information could include customer information associated with a citation)

    (c)   Provide easy access to archived data

E22.2   Handheld Ticket writers

    (a)   The Contractor must provide communication with a variety of wireless handheld ticket writer configurations, including single units with integrated field printers, and single units with optional detached wireless portable printers, and all items and software necessary to operate in the field between temperature extremes +40 C and –40 C, and to interface to the host system via cellular or other technology suitable for real time connectivity over a wide area (10 miles beyond City limits). The handheld computer must utilize software that seamlessly integrates with host parking management system on the network. Contractor must also supply all required ticket stock, envelopes, and other miscellaneous supplies that are necessary for system operation.

E22.3   Modularity

    (a)   The system must allow for the addition of new handheld ticket writers, users, locations, and modules at a later time.

E22.4   Host and Peripheral Hardware

E22.5   Host hardware and software shall refer to the proposed parking management system with which the handheld ticket writers will interface. Contractor must provide a recommendation for appropriate configuration. Additionally, Contractor will supply any necessary cables or other peripheral equipment to interface to the host system or handheld devices such as printers, magnetic stripe and bar code readers.

E22.6   System Delivery

    (a)   The Contractor will deliver, install, and integrate the necessary handheld hardware and software components with the proposed parking management system to achieve a fully functional, automated parking citation management system within the environmental extremes noted above. The Contractor must also offer total system support for the handheld ticket writer hardware and software under a single comprehensive maintenance and support program. During the term of the maintenance and support program, the Contractor must provide scheduled new releases of the handheld and communications software.

E23.   HANDHELD SOFTWARE

E23.1   User Interface - Handheld software must provide a user-friendly interface for ease of use and durability.

E23.2   User Configuration - The handheld software must be completely configurable so that the supervisor may select data entry fields and make them a required entry, an optional entry, or an unused field.

E23.3   Password/Security - The software must require a valid logon ID and possess two levels of security with separate passwords. One is to be used for system administration/configuration and the other for field personnel.

E23.4   Master Files - The system must support entry of information such as vehicle make, model, colour, style, plate type, violation, void, location, and standard comment codes. The system must also support full registered owner, scofflaw, VIP, and tow request files. At no time during citation entry must the user be required to memorize codes for data entry; all entries must be selectable from a screen. This screen must employ a simple scrolling and paging function for location of data. If the user enters the initial letter(s) of a code, the system must take them to the closest entry in the file without additional keying. Also, the system must allow the user to browse these files at any time without being in citation entry mode.

E23.5   Citation Display and Edit – The system must easily allow the user to display all citation data entered to that point and to edit or modify any field without disruption of the citation entry process.

E23.6   Citation Browsing, Voiding, and Reprinting - The system must allow the user to view and void (optionally) any and all citations written by the user since the last upload of data to the host. A valid void code must be entered for the voiding of any completed citation and this code and the officer ID must be noted on exception report at the host. The system must also support reprinting of an issued citation.

E23.7   Auto Tag/Permit Search - When the license plate and permit number (if applicable) are entered during citation entry, the system must automatically search the customer, vehicle, VIP, scofflaw, permits, and tow request files for a match. If a match is found, the customer and vehicle information must be automatically entered into the proper data fields without additional keying by the officer. If a match is found in any of the VIP, scofflaw, or tow request files, the system must supply feedback to the user. If a match is found in the scofflaw file, the system must display the number of unpaid citations, and outstanding balance.

E23.8   Chalking - The system must support monitoring of vehicles in fixed time zone parking areas. The system must maintain a file of tag numbers in fixed time parking and, at any time, display the elapsed time and previous location of the vehicle for any user (meaning the initial chalk time is resident on the wireless server rather than the hand held unit). The software must allow the user to enter the Citation Entry module directly from the Chalking module with one keystroke.

E23.9   Time Stamping - All transactions must be time stamped by the system's internal clock.

E23.10   Warnings - The system must support the issuance and tracking of warnings as well as actual citation issuance.

E23.11   Location - The system must support standard location codes and descriptions, location comments, block numbers, and meter numbers, for all locations Citywide (advise capabilities).

E23.12   Comments - The system must support both standard comment codes and free-form comments. Software must allow the user to select whether the comments are printed on the citation or "hidden" and uploaded to the database.

E23.13   Fines/Violations - The system must be configurable by authorized personnel to allow field personnel to modify the standard violation fine. The system must support the entry of at least two violations per citation.

E23.14   Handheld Security - The handheld must have a security option so unauthorized users cannot access the system.

E23.15   French/English – The handheld must produce a citation readable in both official languages (at present, citation ticket stock is printed with French/English headings).

E23.16   Signature – The handheld must read and print a digitized electronic signature specific to the signing officer

E23.17   Bar Codes - The software must support the capability to print a laser-quality bar code on the citation, reflecting the citation number, so that payment can later be easily and accurately applied to the correct citation during batch payment entry. The system shall support both "2 of 5" and "Code-39" (aka 3 of 9) bar code types. The system should be able to put any information (up to at least 20 characters) contained within a citation into the barcode, e.g. Citation Number, Date, Fine Amount, Impound #, License #, State, Plate Type, etc.

E23.18   User Defined Citation Print Formats - The software must allow authorized users to design an unlimited number of custom citation print formats. This includes a selection of variable fields as well as the ability to print warnings.

E23.19   Required License Plate Double Entry - The software must allow authorized personnel an option to select whether the license plate must be entered twice for confirmation by the field officer.

E23.20   Multiple Citation Alarm - The software must allow authorized personnel to select whether they wish to check for multiple citations to the same vehicle in the same day and notify the officer of the previous citation.

E23.21   Lot Utilization - The handheld software must support lot utilization counts that can be delivered to the host PC as part of the standard communications process.

E23.22   Field Permit Checks - The handheld software must provide the ability to interface with a bar code laser scanner to perform validity checks on bar coded decals and hang tags.

E23.23   Double Entry – Optional feature requiring mandatory double permit entry to reduce data entry errors.

E23.24   Property Maintenance Entry/Lookups – The handheld software must provide the ability for the user to lookup or enter new property maintenance items. The officer must also be notified when issuing a meter violation via the handheld of an open maintenance item. New maintenance items entered on the handheld must be downloaded into the database during a communication session.

E24.   COMMUNICATIONS

E24.1   Host Communications Software - The system must offer an integrated software module for host communications that has a graphical user interface (GUI) with support for Windows 2000 in native fashion (i.e. DOS window support is not acceptable).

E24.2   Automated Communications - The system must offer the capability of direct host communication with multiple handheld units (via a cellular wireless mode) that allows for simultaneous data transfer between the host and multiple handheld ticket writers in an automated fashion Citywide. The system will provide the user the capability of placing the target workstation into communications mode allowing the handheld ticket writers to communicate at any time without user intervention.

E24.3   Cradles/Cables - The system must also be capable of communicating with the host computer via a communication cradle with battery charger or through a standard RS-232C PC cable or equivalent.

E25.   HANDHELD COMPUTER HARDWARE

E25.1   Display - The display screen must be custom backlit, high contrast, anti-reflective 160 x 160 LCD display.

E25.2   CPU - System processor must be a Motorola Dragon Ball or similar.

E25.3   Memory - The handheld computer must support 4mb ROM 16 MB RAM or better

E25.4   Durability – The handheld computer must meet environmental sealing rating of IP54 for protection against rain and dust. The handheld must be capable of withstanding repeated drops from a height of 4 feet. The case must be constructed of high strength, solvent-resistant plastic.

E25.5   External Interfaces - Handheld must support communications speeds of up to 38,400 bps through a built-in infrared serial connection (IrDA Standard) and an RS232 serial port for expeditious data transfer, or better.

E25.6   Scan Engine – The built in scanner must be SE 900HS or better.

E25.7   Size - Handheld computer must be light and easy to carry, belt or pocket mounted and ergonomically designed for long carrying periods.

E25.8   Batteries - The main handheld batteries must be rechargeable lithium-ion suitable for an 8 hour shift with no change outs.

E25.9   Environment - The unit must be capable of being stored without damage within the temperature range of -20 to +50 degrees C (-4 to 122 degrees F).

E25.10   Operating System - System must support Windows CE or Pocket PC to allow MS Office products to be used alongside the proposed application.

E25.11   Warranty - The handheld computers must have a minimum one-year standard warranty.

E26.   TECHNICAL SPECIFICATIONS; INTEGRATED OR SEPARATE PRINTER

E26.1   Print Technology – The printer must have direct thermal technology.

E26.2   Case – The case of the handheld must provide increased shock absorption, weather resistance and protection from harsh environments.

E26.3   Size – Printer must not weigh more than 3.0 lbs and must be integrated or easily portable and carried by belt clip or shoulder strap

E26.4   Credit card – Separate printers must have the ability to read and communicate a credit card number

E26.5   Infrared – The separate printer must be bluetooth complaint offering wireless data communication.

E26.6   Batteries - The printer battery must be a removable and rechargeable NiMH Battery with a charge life duration of 8 hours.

E26.7   Speed – The printer must have a maximum speed of 3 IPS (76.2mm).

E26.8   Print Resolution – The printer resolution must be a minimum of 203 DPI (8 dots/mm).

E26.9   Print Width – The printer must have a maximum print width of 2.83" (71.9mm).

E26.10   Media Loading – The print must have a "clamshell" design.

E26.11   Stock Width Control – The printer must provide an adjustable stock width control for variable roll sizes.

E26.12   Environment - The printer must be capable of being stored without damage within the temperature range of -15 to +50 degrees C (5 to 122 degrees F).

E26.13   Warranty - The printer must have at least a one-year standard warranty.

E27.   HARDWARE AND SOFTWARE MAINTENANCE AND SUPPORT

E27.1   The Bidder must offer annual maintenance agreement that will cover all parking management system handheld hardware and software support.

E27.2   At a minimum, the Bidder must offer a maintenance plan which will focus on resolving problems after they occur. Telephone assistance is provided for installing the software on new or replacement PCs. The City of Winnipeg will accept responsibility for preventive maintenance. At a minimum, maintenance should provide a toll-free phone line with a 2-hour target call turnaround, Monday thru Friday between the hours of 8:00AM and 8:00PM Central time. Software upgrades should also be included.

E27.3   The City of Winnipeg may consider a preventative maintenance package, which should include at a minimum, troubleshooting, installing upgrades, free training, and performing hot back-ups and routine checks to achieve maximum performance

E27.4   Pricing should be provided for both options, if available.

E28.   IMPLEMENTATION REQUIREMENTS

E28.1   The Bidder must meet the following implementation requirements:

(a)   Have dedicated consulting staff who consult with purchaser on operational practices and the best way to utilize the system to achieve organizational objectives, as well as manage system set-up and implementation.

(b)   Offer a structured, documented implementation process

(c)   Utilize an integrated implementation approach incorporating on-line tools, on-site consultation and training, technical services via the Web and teleconferences.

(d)   Offer the ability to develop custom interfaces to other systems

(e)   Capability to create written procedures for the purchasers' operation, including daily/weekly/monthly processes, special letters and queries

(f)   Provide an appropriate amount of on-site training for employees at time of implementation.

(g)   Offer onsite follow-up training and operational/system consulting 10-12 weeks after software installation.

E29.   USER CONFERENCES AND ADDITIONAL TRAINING OPTIONS

E29.1   The Bidder must detail and provide pricing for any ongoing or additional consolidation and refresher user training opportunities that are available with the software. The following training opportunities may be considered:

      (a)   On-line public training courses

      (b)   On-line private training courses

      (c)   In-class public hands-on training or user conferences available at the Contractor's facilities

      (d)   In-class regional public training or user conferences that could be hosted by the City

      (e)   On-site private training