System Requirements Specification

HPC Portal & Content Management System

T24914

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Executive Summary

The City of Houston has been working for more than a year to define methods to reduce revenue leakage across the city. One of the most significant areas of revenue leakage identified through this effort is attributed to regulatory non-compliance. Simply put, many business owners, contractors, developers and residents are not obtaining the necessary permits to conduct their respective activities. The resulting condition finds many City departments lacking adequate revenues to support their mandated regulatory oversight of those activities.

The City determined that a significant portion of non-compliant permitting results from a lack of user-friendly, intuitive, searchable online information. It has also determined that the disjointed and uncoordinated structure of city departments’ websites is another contributing factor that results in confusion for would-be customers.

Consequently, the Houston Permitting Center has spearheaded the development of a new online portal to dramatically improve the customers’ access to relevant regulatory information through enhanced self service capabilities and enhanced communication links to subject matter experts able to guide them through each process. The portal will also provide customers with expanded capabilities to execute permitting functions online and complete payments efficiently. One of the key pieces of the portal project is the “Permitting Information Wizard”, which will be modeled on industry best designs for intuitive decision engines. Conceptually, the Permitting Information Wizard is a decision engine that leads customers to specific and comprehensive answers based on their answers to a series of cascading questions designed to pinpoint their unique needs and requirements. The Permitting Information Wizard is intended to reduce revenue leakage resulting from non-compliance by making it easier for customers to determine what permits are required for compliance, then leading them to web-based self-service solutions for applying, paying, and renewing permits online.

To achieve these goals, the Houston Permitting Center is seeking a vendor to design and implement the online portal and develop the Permitting Information Wizard for external and internal web services and mobile device access. The solution will be based on a robust Content Management System to facilitate efficient publishing and management of content and integration with other COH line-of-business systems. The timeframe for implementation is 12 calendar months.

The design effort has produced a new site design and information architecture that is focused on delivering intuitive search ability informed by analysis of the common customer-centric use cases. The redesigned HPC Portal will introduce a consistent view of consolidated permitting information from the various departments, thereby yielding a more positive and productive customer experience. Ultimately, the redesigned HPC Portal should replace the disparate department-centric permitting websites.
This document describes the requirements that the system and its developer/provider are expected to fulfill and provides resources to enable prospective Proposers to evaluate the scope of work and ultimately produce solution proposals for the City.

**Description of Work**

The City of Houston Public Works and Engineering Department, Planning and Development division seeks a solution to redesign the Houston Permitting Center (HPC) website and develop a Residential & Commercial Permitting Wizard for external and internal web service and mobile device access, and integration with the department’s Content Management System. The solution is to be based on consolidated permitting information from multiple departments and websites in a single convenient Houston Permitting Center (HPC) Portal that provides information and services to HPC customers, employing industry best practices for web services including E-Commerce, Kiosk, Extranet, Internet, Intranet and Mobile Application services.

**Summary Overview**

1. **Provide professional services for the HPC online portal design and develop a Permitting Information Wizard,** using responsive web design features that dynamically adapt page content, optimizing it for common mobile devices and desktop computer sizes, and integration with our Content Management Systems.

   Professional services include:
   - Configuration
   - Installation
   - Consolidation
   - Integration
   - Implementation
   - Quality Assurance
   - Quality control
   - Development of testing criteria including use case based test cases
   - Execution of unit, system and acceptance testing
   - Development of training materials and delivery of training
   - Development and publishing of online site analytics and system performance reports
   - Security design and configuration
   - System administration
   - Warranty, extended maintenance and support for development, test, and production environments in PWE’s local Data Center located at 4200 Leeland, Houston TX 77023 and remote Disaster Recovery Site located at North Main St, Bryan, TX 77803.

2. **Provide a solution that meets or exceeds system, functional and technical requirements, and criteria for this proposal,** including:
   - Design and implement a system with a 99.99% rate of availability
• Design and implement a scalable, flexible, secure system with emphasis placed on ease of management/maintenance
• Design and implement a website that consolidates all permitting and licensing information into an easy to navigate interface
• Standardize the organization and presentation of permit and license information using a single taxonomy and controlled vocabulary
• Develop clear, concise guidelines and instructions for permit and license applicants
• Reduce permitting and licensing processing time
• Reduce permitting and licensing process errors
• Capture revenue currently lost due to non-compliance with existing permit and license requirements

3. Provide robust and user friendly self-service options for permit and license applicants
4. Implement proposed solution within twelve (12) months of receiving a notice to proceed and purchase order from the City of Houston
5. Propose a solution with options to leverage existing, upgrade and/or provide new software/hardware required for recommended solution

**Statement of Need**

The City of Houston (the “City”) lacks a centralized online resource or tool to guide businesses and residents through the process of determining what permits, licenses or registrations they are required to have, and enable them to apply, pay online, and obtain up-to-date information. Currently, the One-Stop Business Center and the Houston Permitting Center (HPC) are able to provide information to businesses that approach the right staff and locations with the appropriate questions, but the information is not easily accessible online or to those without deep understanding of the City. The current Houston Permitting Center website is only a shell that directs customers to other City websites to find the information they seek.

The City seeks to re-implement the HPC online portal and to consolidate permitting information and services from multiple independent departmental sites into a single cohesive and convenient online location for HPC customers. Concurrent with this effort, the City seeks to deploy a content management system (CMS) to facilitate efficient publishing and management of the website’s content. The re-implemented HPC website and the content management system on which it is built, henceforth referred to as the HPC Portal & Content Management System are the subject of this specification.

**Purpose and Scope of Document**

This specification details the functional and performance requirements the HPC Portal, Permitting Information Wizard and Content Management System is expected to fulfill. It is a guideline from which the System will ultimately be designed and implemented. As such, it is not intended to stand alone as a final detailed specification for implementation. Proposers must verify and validate requirements
throughout their review, clarification, and final proposal process. The final System design will evolve through multiple iterations that will commence only after the acceptance of the contents of this document, or its subsequent revisions, by the project stakeholders.

The scope of this document is limited to requirements that will impact the implementation of the HPC Portal and its underlying Content Management System (CMS). Other requirements, such as those necessary to integrate other line-of-business systems with the HPC Portal & Content Management System, are outside the scope of this document. However, proposers must still consider in their design, data structures, system components, and applications the requirement for integration with other line-of-business systems as part of future development.

**Organization of the Document**

This document is organized in five (5) parts:

**Part I** consists of introductory information about the project. It provides a description of the conventions used throughout the document and an overview of the project. The Conventions section defines domain-specific terminology, rules, and uses that are applied throughout the document. The Project Overview introduces the project and its stakeholders, overall goals, and the business context in which it exists. It describes the purpose of the system and the context and environment in which it will operate. It also describes the system’s intended applications, configurations, and options, key features and project constraints.

**Part II** describes requirements that are related to the system’s behavior and its users. It constitutes the bulk of the document content and takes into account functional, performance, physical, and human factors that may impact the design, operation, or use of the system.

**Part III** addresses requirements that relate to the finished system and its delivery. These include hardware, warranty, installation, acceptance criteria, maintenance and upgrades, documentation, and training, additions/deletions.

**Part IV** addresses requirements for submission of proposal related to company background, client references, cost for product and services, and proposer competence.

**Part V** addresses the City of Houston proposer evaluation and selection process.
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PART I

Conventions

Terminology

The following terms are defined as they are used in the context of this document. Some terms have other meanings, including other meanings in the broader context of the information technology domain. Regardless, reviewers should keep in mind these particular definitions that are the intended meanings of the terms as they are used in this document. On first appearance in each section of this document, these terms are italicized as a reminder to readers that they have particular meanings defined herein.

**Account Profile** – a collection of user-specific identifying and other data such as contact information that is associated with a *user account*.

**Actor** – a formal nomenclature for describing entities that interact with the *system* in *use case* analysis and related system documentation; used in analysis to describe how they will interact with the system. An actor can be a person or a system, such as the system described herein, or external systems that interact with it.

**Agent** – a human *actor* whose role includes the responsibility and authority to interact directly with *Guests* and *Registered Guests*, and to receive and manage *online applications* submitted by them.

**Application** – refers collectively to all of the information that is submitted by a *Registered Guest* to request the issuance or renewal of an *instrument*; consisting of, at minimum, a completed application form and, if applicable, one or more attachments to it. In this specification are references to both “online” and “offline” applications. *Online applications* are those submitted electronically through the *HPC Portal System*. *Offline applications* are those submitted by other means including in-person, postal mail, fax, or email delivery.

**Application Reference Number** – a unique alphanumeric ID used to identify an *online application* after it has been submitted.

**Article** – a single item of content managed by the *content management system*, typically consisting primarily of text, and optionally including images, multi-media content, hyperlinks to other articles or media, etc.

**Bookmark** – a previously saved reference and hyperlink to a specific *instrument* that enables a *Registered User* to shortcut normal navigation and quickly return to an instrument of interest or relevance to their needs.

**CMS Administrator** – a human *actor* whose role includes the responsibility and authority to manage the *content management system*, and whose interactions include *use cases* within the Management Portal boundary of the *HPC Portal System*. 
**Content Management System (CMS)** – a computer program that enables publishing, editing and modifying content as well as maintenance from a central interface. Some, but not all, such systems also provide procedures to manage publishing workflow in a collaborative environment.

**Content Manager** – a human *actor* whose role includes the responsibility and authority to create, publish, and manage the content of the HPC Portal System, and whose interactions include Use Cases within the Management Portal boundary of the *HPC Portal System*.

**Controlled Vocabulary** – a restricted list of words or terms used for labeling, indexing or categorizing information. It is controlled because only terms from the list may be used for the subject area covered by the controlled vocabulary. It is also controlled because, if used by more than one person, there is control over who adds terms to the list, when, and how. The list could grow, but only under defined policies. Controlled vocabularies are sometimes accompanied by a *thesaurus* of cross-references pointing from one or more “non-preferred terms” to the designated “preferred term”. Only if a controlled vocabulary is very small and easily browsed, such as on a single page, might such synonyms be excluded.

**Department System** – a system *actor* representing any line-of-business system supporting the critical activities of an individual department whose *instruments* are published and managed in the *HPC Portal System*.

**E-Signature Processing System** – an identified system *actor* representing the host system of a third-party electronic signature service provider. (see related term *Electronic Signature*).

**Electronic Signature** – an electronic sound, symbol, or process, attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record.

**Guest** – a human *actor* who has not created a Registered Guest *user account*, is therefore anonymous and whose interactions are consequently limited to *use cases* within the Public Portal boundary of the HPC Portal System. (see related term *Registered Guest*)

**HPC Portal System** – a system *actor* representing the *system* that is the subject of this specification; a centralized online resource and tool that will guide businesses and residents to a determination of the *instruments* they need, and enable them to apply and pay online, and obtain up-to-date information about those instruments and related Houston Permitting Center contacts.

**Instrument** – a generic business object stereotype used throughout this specification to refer to any permit, license, registration, or fee that is published and managed in the *HPC Portal System*.

**Line-of-Business System** – one of the set of critical computer systems perceived as vital to the management of the activities of a business unit within the enterprise. (see related term *Department System*)
Modal – a type of user interface dialog box or window that requires a user to interact with it before returning to the normal flow of an operating program, thus preventing continuation of the main program workflow until the sub-flow of the modal object is complete or is cancelled.

Nearline – an intermediate type of data storage that represents a compromise between online storage (supporting frequent, very rapid access to data) and offline storage/archiving (used for backups or long-term storage, with infrequent access to data).

Payment Processing System – a system actor representing the host system of a third-party payment gateway that facilitates the transfer of payment information between a payment portal (such as a website) and the payment processor or acquiring bank.

Payment Processor – a company (often a third party) appointed by a merchant to process the authorization and settlement of credit card transactions for merchant acquiring banks.

Portal – a website that brings information together from diverse sources in a uniform way. It provides a way for enterprises to provide a consistent look and feel with access control and procedures for multiple applications and databases if necessary, which otherwise would have been different entities altogether. The HPC Portal System—the subject of this specification—represents the collective whole of what have been termed in this specification as a Public Portal, a Private Portal, and a Management Portal. Although named separately, these distinctions are primarily intended to define system boundaries for the use case model defined herein.

Registered Guest – a human actor who has created a Registered Guest user account, is therefore not anonymous and whose interactions are consequently expanded to include use cases within both the Public Portal and Private Portal boundaries of the HPC Portal System. (see related term Guest)

Related Document – a generic reference to a supplementary document that is related to a particular instrument and made available for users to print or download for offline use. Hyperlinks to related documents, if any, are presented to users in the Instrument Home View. A related document may be in the form of HTML, PDF, or any other supported file format.

Resource – a generic business object stereotype used throughout this specification to refer to any person, facility, etc. that can be scheduled (as referenced in the “Schedule an Event” use case).

Responsive Web Design – a web design approach aimed at crafting sites to provide an optimal viewing experience—easy reading and navigation with a minimum of resizing, panning, and scrolling—across a wide range of devices (from mobile phones to desktop computer monitors).

Source Document – a generic reference to the source of a printable or downloadable (PDF) version of a related document. The source document may be in the form of HTML or another supported file format.

System – a shortened generic reference to the more formal “HPC Portal System” that is the subject of this specification; includes the whole of all computers, software, services, peripherals, interfaces, and processes that together satisfy the requirements of this specification.
**Taxonomy** – provides a formal structure for information, based on the individual needs of a business. Some systems employ content categorization tools to automate the placement of digital content for future retrieval based on the taxonomy. Other systems rely on users to manually categorize documents according to the classification scheme defined by the taxonomy.

**Thesaurus** – a structured kind of controlled vocabulary that provides information about each term and its relationships to other terms within the same thesaurus. In addition to clearly specifying which terms can be used as synonyms (called “used from”), a thesaurus also indicates which terms are more specific (narrower terms), which are broader, and which are related terms. Such thesauri are employed in the implementation of website search engines.

**U.S. ESIGN Act** – The Electronic Signatures in Global and National Commerce Act is a United States federal law enacted June 30, 2000 by the 106th Congress of the United States to facilitate the use of electronic records and signatures in interstate or foreign commerce by ensuring the validity and legal effect of contracts entered into electronically. The general intent of the ESIGN Act, which is identified in section 101.a, provides that a contract or signature “may not be denied legal effect, validity, or enforceability solely because it is in electronic form”. This simple statement provides that electronic signatures and records are just as good as their paper equivalents, and therefore subject to the same legal scrutiny of authenticity that applies to paper documents.

**Use Case** - a form of software engineering notation used for capturing functional requirements of systems. Each use case provides one or more scenarios that convey how the system should interact with the users called ‘actors’ to achieve a specific goal or function.

**Use Case Model** – a model of how different types of users interact with the system to solve a problem. As such, it describes the goals of the users, the interactions between the users and the system, and the required behavior of the system in satisfying the goals. A use-case model consists of a number of model elements. The most important model elements are: *use cases, actors* and the relationships between them. For the benefit of reviewers of this specification, the use case model concept and related notation are fully explained in the section of this document titled “The Use Case Model”.

**User Account** – an established relationship between a user and a computer, network, or information service that allows a user to authenticate to system services and be granted authorization to access them. User accounts are assigned a unique *User ID* and a password.

**User ID** – a unique alphanumeric identifier used to identify a *user account*.

**Wizard** – a type of user interface that presents a user with a sequence of (usually modal) dialog boxes that lead the user through a series of well-defined steps. Tasks that are complex, infrequently performed, or unfamiliar may be easier to perform using a wizard. In contrast, an *expert system* guides a user through a series of (usually yes/no) questions to solve a problem.

**Wizard Scenario** – the in-process but incomplete data set provided by a user by interacting with the Wizard.
Acronyms

The following are acronyms that are used in the body of this document:

ARAM – Administration & Regulatory Affairs
ARN – Application Reference Number
CMS – Content Management System
COH – City of Houston
CSS – Cascading Style Sheet
HAS – Houston Airport System
HFD – Houston Fire Department
HHS – Health & Human Services
HPC – Houston Permitting Center
HPD – Houston Police Department
HTML – Hyper Text Markup Language
MYR – Mayor’s Office of Special Projects
PD – Planning & Development
PR – Parks & Recreation
PWE – Public Works & Engineering
SWD – Solid Waste Department
SKOS – Simple Knowledge Organization System
UML – Unified Modeling Language
WYSIWYG – What You See Is What You Get

Project Overview

Summary

City of Houston seeks to consolidate permitting information and service from multiple departmental websites into a single cohesive and convenient Houston Permitting Center (HPC) Portal for HPC
customers. The purpose of this project is to implement the portal website and an underlying content management system (CMS) that are both maintainable and robust.

**Overall Project Goals**

- Design and implement a system with a 99.99% rate of availability
- Design and implement a scalable, flexible, secure system with emphasis placed on ease of management/maintenance
- Design and implement a website that consolidates all permitting and licensing information into an easy to navigate interface
- Standardize the organization and presentation of permit and license information using a single taxonomy and controlled vocabulary
- Develop clear, concise guidelines and instructions for permit and license applicants
- Reduce permitting and licensing processing time
- Reduce permitting and licensing process errors
- Capture revenue currently lost due to non-compliance with existing permit and license requirements
- Provide online self-service options for permit and license applicant

**Business Context**

**HPC Website**

The existing HPC website was developed in conjunction with the opening of the HPC. Historically, each city department has maintained its own online presence, including permitting and related regulatory information, permit applications, and permit records. The existing HPC website was assembled as a “gateway”; in other words, it directs customers to the various city departments for details related to different permit categories. The HPC website itself does have a consistent look-and-feel; however, there are no shared standards for vocabulary, navigation concept, and look-and-feel across the departmental websites.

The redesigned site will introduce a consistent view of the consolidated permitting information from the participating departments. The goal is to make the customer experience easier and more intuitive. The permitting portal should allow customers to search and navigate without having to leave the site to find detailed information. Ultimately, this should replace the disparate department-centric permitting web sites. The HPC redesign effort has produced a new site design and information architecture that is focused on delivering intuitive search ability informed by analysis of the common customer-centric use cases.

**Permitting Information Wizard**

The Permitting Information Wizard is a key piece in the HPC’s attempt to provide customers with state of the art self service capabilities. The wizard should present customers with a fully functional, user friendly, robust, intuitive and evolving decision engine that is capable of tailoring responses based upon each customer’s unique needs and requirements.
The goal of the wizard is to make it easy for customers to know what permits are needed for their projects, businesses, or trades, and how to get them. The Permitting Information Wizard concept is an online, intuitive, automated information framework and decision engine. Customers answer a series of questions, and dynamic content is presented as a result of their unique answers. For example, a customer who wants to start a restaurant would answer a series of questions covering land use, sale of alcohol, hours of operation, parking and more. The wizard would present a list of required permits and/or licenses based on the answers provided. Essentially, the wizard should reduce permitting revenue leakage by making it easier for customers to understand requirements and subsequently achieve compliance. Additionally, departments will be able to direct their non-compliant customers to the wizard where they access self-service information and services to quickly and easily resolve their non-compliance.

**Content Management System**

An analysis of content management options was performed during discovery because the proposed improvements to the HPC website are sufficiently complex to require a professional content management system. During the course of discovery, the Performance Management and HPC teams were brought together with the existing PWE Content Management team to discuss existing CMS investments and capabilities. The teams agreed that the existing PWE CMS may be sufficient to meet short-term information architecture and searchability improvements. The PWE content management system is presently Joomla, version 2.5.14, deployed in a Linux server environment using MySQL for the database management system.

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Stakeholders

The primary stakeholder is the Houston Permitting Center Executive Director, who is ultimately responsible for the success of the project.

<table>
<thead>
<tr>
<th>Department</th>
<th>Contact(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston Permitting Center Executive Director</td>
<td>Mark McAvoy</td>
</tr>
</tbody>
</table>

Secondary stakeholders are City of Houston departments whose permits, licenses, and fees (collectively referred to herein as “instruments”) will be published and supported by the system, and other departments whose participation is essential to understanding the work. The full list of these stakeholder groups and the specific individuals representing them are:

<table>
<thead>
<tr>
<th>Department</th>
<th>Contact(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works and Engineering (PWE)</td>
<td>Tom Hosey</td>
</tr>
<tr>
<td>- Building Code Enforcement</td>
<td>Tim Lincoln</td>
</tr>
<tr>
<td>- Office of the City Engineer</td>
<td></td>
</tr>
<tr>
<td>Administration &amp; Regulatory Affairs (ARA)</td>
<td>Hank Brown</td>
</tr>
<tr>
<td>- Commercial Permitting &amp; Enforcement</td>
<td>Maria Irshad</td>
</tr>
<tr>
<td>- Parking Management</td>
<td>Greg Damianoff</td>
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<tr>
<td>- BARC</td>
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<tr>
<td>Houston Airport System (HAS)</td>
<td>Steve Weeks</td>
</tr>
<tr>
<td>Houston Fire Department (HFD)</td>
<td>Vickie Morris</td>
</tr>
<tr>
<td>- Parking Management</td>
<td>Richard Galvin</td>
</tr>
<tr>
<td>Health &amp; Human Services (HHS)</td>
<td>Conrad Janus</td>
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<tr>
<td>Houston Police Department (HPD)</td>
<td>Ivory Hamilton</td>
</tr>
<tr>
<td>- Parking Management</td>
<td>Lance Labbe</td>
</tr>
<tr>
<td>Mayor’s Office of Special Projects (MYR)</td>
<td>Ricardo E. Magdaleno</td>
</tr>
<tr>
<td>Planning &amp; Development (PD)</td>
<td>Jennifer Ostlind</td>
</tr>
<tr>
<td>Parks &amp; Recreation (PR)</td>
<td>Marisela Blanco</td>
</tr>
<tr>
<td>- Parking Management</td>
<td>Sonya Ellis</td>
</tr>
</tbody>
</table>
Public Works & Engineering (PWE) | Lisa F. Brown  
Rajiv Arya  
Richard Smith  
Mark Green  
Maricela Orozco
---|---
Solid Waste Department (SWD) | Chastity Ringo  
Wealthia White
---|---
Houston Permitting Center (HPC) | Katrina Hassett  
Eric Vryn  
Soledad Saenz
---|---
Public Works & Engineering, IT  
- Chief Technology Officer  
- Web Development & CMS  
- Application Development  
- Infrastructure Management  
- Special Projects | Ogilvie Gericke  
Robert Primera  
Oscar Bryant  
Dennis Byrd  
Robert Stigers
---|---

**Key Features**

The system shall exhibit the following key features, the details of which are described elsewhere in this specification:

- The system will be implemented using a content management system to facilitate the creation, publishing, and management of content.
- The system will provide a Public Portal where Guests can perform the following activities:
  - Discover and view publicly accessible content using methods including keyword search, browsing content organized in a taxonomic structure, or by using a wizard to discover content
  - Engage in live online chats with Agents
  - Download & print application forms and other related documents
- The system will provide a Private Portal where Registered Guests can perform the following activities:
  - Submit and manage online applications with related attachments and, when applicable, sign applications and pay associated fees online
  - Bookmark instruments of interest for later use
  - Manage online profiles of their business and/or personal contact information and related details
  - Schedule resources such as inspectors, appointments, facilities, etc. online

**Constraints**

- The project must be completed within 12 calendar months following receipt of notice to proceed and purchase order issue by the City.
- The project must be managed in a phase delivery approach intended to accomplish the following goals:
o Phase 1: The HPC portal and consolidated content from HPC departments will be developed and deployed in development, test, and production environments locally, and also in the disaster recovery site environment within 6 calendar months following receipt of notice to proceed and purchase order issue by the City. Content will be discoverable using the keyword search and taxonomical browse methods. Live chat functionality will also be developed and deployed in development, test and production environments locally during this phase.

o Phase 2: The balance of system functionality will be developed and deployed in development, test, and production environments locally, and also in the disaster recovery site environment within the next 6 months calendar months immediately following completion of the deployment of the Phase 1 deliverables defined above. Features completed in Phase 2 will include but are not limited to the Permitting Information Wizard, dynamic online application forms, e-signatures, online application submission, and online payment. Also included may be the integration of the HPC Portal System with one or more department systems, as may be required and determined at the time of scoping the phase.

- With very limited exceptions, the entire project must be completed by external developer resources, relying on City of Houston personnel only as stakeholders, subject matter experts, and reviewers during the implementation, deployment, and testing phases of development. The exceptions are limited to participation that may necessarily be required of City of Houston IT personnel who manage the software, servers and networks on which the resulting system is ultimately deployed.

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PART II

The Use Case Model

Explanation

The use case model included in this specification, documented using standardized notation of the Unified Modeling Language (UML), is a model of how different types of users interact with the system to solve a problem. As such, it describes the goals of the users, the interactions between the users and the system, and the required behavior of the system in satisfying these goals.

A use case model consists of a number of model elements. The most important model elements are: Use Cases, Actors and the relationships between them.

A use case diagram is used to graphically depict the model to simplify communications. Much of the use case model is in fact textual, with the text captured in the use case specifications that are associated with each use case model element. These specifications describe the flow of events of the use case.

The use case model serves as a unifying thread throughout system development. It is used as the primary specification of the functional requirements for the system, as the basis for analysis and design, as an input to iteration planning, as the basis of defining test cases, and as the basis for user documentation.

Basic Model Elements

The use case model presented herein contains the following model elements:

Actor
An actor is a role that a person or external system plays when interacting with the system. Properties include the actor’s name and brief description.

Use Case
A use case describes the interactions between one or more actors and the system in order to provide an observable result of value for the initiating actor. Properties include the use case name and use case specification, which is provided separately from the use case diagram in this specification as it contains more detail than can be presented in the diagram.

Associations
Associations are used to describe the relationships between actors and the use cases they participate in. A relationship is indicated by a solid line between an actor and a use case. The relationship is navigable, and a simple arrow on one end or the other indicates the direction of navigability. No arrow at all indicates a relationship with bi-directional navigation.
**System Boundary**
A system boundary is a model element that represents the boundary of a system of interest. System boundaries are represented as rectangular boxes surrounding associated actors and use cases.

**Generalizations**
A generalization defines a relationship between actors to support the re-use of common properties and allow for simplification of use case diagrams while encouraging consistent representation of actor properties. A generalization relationship is indicated by a solid line connecting two actors. An arrow on one end indicates the direction of the relationship. All properties of the actor to which the arrow points are inherited by the actor from which the arrow originates. (Note: Although the solid line notation style for association and generalization relationships appears to be similar in the model, an association is distinct from a generalization in that an association defines a relationship between an actor and a use case, whereas a generalization defines a relationship between two actors.)

**Dependencies**
A number of dependency types between use cases are defined in UML. The use case model in this specification employs two dependency types in particular. They are the <<extend>> and <<include>> relationships, both indicated by a dotted line connecting two use cases.

- The <<extend>> relationship is used to include **optional** behavior from one use case in another.
- The <<include>> relationship is used to include common behavior from an included use case into a base use case in order to support re-use of common behavior.

The latter is the most widely used dependency and is useful for:

- Factoring out behavior from the base use case that is not necessary for the understanding of the primary purpose of the use case to simplify communications.
- Factoring out behavior that two or more use cases have in common to maximize re-use, simplify maintenance and ensure consistency.

**HPC Portal Actors**
The following actors, including both internal and external actors the system must support, have been identified:

**Agent**
An Agent is a human actor whose role includes the responsibility and authority to interact directly with Guests and Registered Guests, and to receive and manage online applications submitted by them. There will be multiple Agents.

**CMS Administrator**
A CMS Administrator is a human actor whose role includes the responsibility and authority to manage the content management system, and whose interactions include use cases within the Management Portal boundary of the HPC Portal System. There will be at least one CMS Administrator. There can be multiple CMS Administrators.
**Content Manager**

A Content Manager is a human actor whose role includes the responsibility and authority to create, publish, and manage the content of the HPC Portal System, and whose interactions include use cases within the Management Portal boundary of the HPC Portal System. There will be at least one Content Manager. There can be multiple Content Managers.

**Department \ Citywide System**

A Department \ Citywide System is a system actor representing any *line-of-business* system supporting the critical activities of a department whose *instruments* are published and managed in the HPC Portal. The HPC Portal System will exchange data with one or more Department Systems.

**E-Signature Processing System**

An E-Signature Processing System is a system actor representing the host system of a third-party *electronic signature* service provider. There will be one and only one E-Signature Processing System.

**Guest**

A Guest is a human actor who has not created a *Registered Guest user account*, is therefore anonymous, and whose interactions are consequently limited to use cases within the Public Portal boundary of the HPC Portal System. There will be multiple (many) Guests.

**HPC Portal System**

The HPC Portal System is a system actor that represents the *system* that is the subject of this specification, and that provides most of the services to the human actors.

**Payment Processing System**

The Payment Processing System is a system actor representing the host system of a third-party payment gateway that facilitates the transfer of payment information between the HPC Portal System and the *payment processor* or acquiring bank. There will be one and only one Payment Processing System.

**Registered Guest**

A Registered Guest is a human actor who has created a *Registered Guest user account*, is therefore not anonymous, and whose interactions are consequently expanded to include use cases within both the Public Portal and Private Portal boundaries of the HPC Portal System. There will be multiple (many) Registered Guests.
HPC Portal Use Cases

The following use cases that the system must support have been identified. A full specification of each use case can be found in APPENDIX B - HPC Use Case Specifications which is attached to this document, and incorporated herein by reference.

- **UC1** - Bookmark an Instrument
- **UC2** - Browse Content by Taxonomy
- **UC3** - Chat with Agent
- **UC4** - Chat with Guest
- **UC5** - Create & Publish an Article
- **UC6** - Create Registered Guest User Account
- **UC7** - Discover Content w/ Wizard
- **UC8** - Download / Print Related Document
- **UC9** - Exchange Application Data
- **UC10** - Login to Management Portal
- **UC11** - Login to Private Portal
- **UC12** - Logout of Management Portal
- **UC13** - Logout of Private Portal
- **UC14** - Edit Account Profile
- **UC15** - Manage Applications
- **UC16** - Manage Application Attachments
- **UC17** - Manage Bookmarks
- **UC18** - Manage Online Applications Received
- **UC19** - Manage Online Forms
- **UC20** - Manage Taxonomy & Thesaurus
- **UC21** - Manage User Accounts
- **UC22** - Manage User Surveys
- **UC23** - Schedule an Event
- **UC24** - Search Content by Keyword
- **UC25** - Submit an Electronic Signature
- **UC26** - Submit an Online Application
- **UC27** - Submit an Online Payment
- **UC28** - View Instrument Home
- **UC29** - Save Wizard Scenario
- **UC30** - Change Password
- **UC31** – Create / Edit an Application
- **UC32** – Download / Print an Offline Application
- **UC33** - View Related Document
- **UC34** - Manage Wizard Scenarios
- **UC35** - Maintain Wizard
HPC Use Case Diagram
HPC Portal Supplemental Requirements

Consolidation of Existing Sites
System developers must identify, collect, consolidate, and publish reusable content from the existing websites currently in use by City of Houston and HPC Departments today. Existing websites from which content may be collected and re-published include (but are not limited to) the following:

www.houstonpermittingcenter.org
www.houstonparking.org
www.HoustonBARC.com
www.licensepet.com/houston
www.houstontx.gov/health/EMS/index.htm
www.houstontx.gov/health/Food/index.htm
www.houstontx.gov/fire/business/permits.html
www.houstontx.gov/police
www.houstontx.gov/specialevents/
www.houstonplanning.org
activenet011.active.com/houstonparks/
www.houstontx.gov/parks/ourparks/lakehoustonpark.html
www.houstontx.gov/municipalgolf/melrose.html
www.houstontx.gov/municipalgolf/sharpstown.html
www.houstontx.gov/municipalgolf/guswortham.html
www.houstontx.gov/parks/forestry/treeordinance.html
www.houstonpermittingcenter.org/code-enforcement/inspections.html
www.houstonpermittingcenter.org/code-enforcement/sign-administration-and-permits.html
www.houstonpermittingcenter.org/code-enforcement/plan-review.html
www.houstonpermittingcenter.org/code-enforcement/permits-section.html
www.publicworks.houstontx.gov/planning/cityengineer.html
www.publicworks.houstontx.gov/planning/flood_plain_guidelines.html
www.publicworks.houstontx.gov/traffic/team.html
www.houstontx.gov/planning/
www.houstontx.gov/solidwaste/dumpsterpermits.html

Refactoring & Reuse of Existing Content
Reuse of existing content will require the refactoring of it to reflect both the information architecture and visual design requirements described herein. When required, developer shall perform such services as may be necessary to refactor and reuse the existing content

Authoring & Creation of New Content
The information architecture described herein may require content that either does not already exist, or is not currently in a form that is suitable for use in the new design. When required content does not exist, developer shall work with department subject matter experts to author and publish new content.
Information Architecture

Site Map

A graphical site map depicting the high level organization of the HPC Portal website is attached hereto as APPENDIX A – SITE MAP, and is included herein by reference.

Controlled Vocabulary, Taxonomy, and Thesaurus

A proposed controlled vocabulary for the HPC Portal exists in the W3C Simple Knowledge Organization System (SKOS) format. The W3C SKOS standard defines a portable, flexible controlled vocabulary format. The vocabulary consists of data to support both the taxonomy and thesaurus requirements of the project, and is comprised of 1,142 terms.

Once fully vetted by the project’s stakeholders, the ‘preferred terms’ of the proposed vocabulary will be refined based on their feedback and then will formally adopted as the controlled vocabulary for the HPC Portal. Related and ‘non-preferred’ terms, essentially the thesaurus, will continue to evolve as new information emerges that suggests requirements for additional related and non-preferred terms.

The proposed controlled vocabulary of HPC Instruments is published online at: http://pwedev.houstontx.gov/hpcdev/tematres/instruments/thesauruswebpublisher/

Standard Content Types

The HPC Portal information architecture defines the following content items that are employed extensively throughout the site:

Instrument Home

A structure that aggregates other content types so information and actions related to an instrument of interest can be grouped together in a single location. The Instrument Home provides easy access to the following standard content types:

Instrument Overview

Presents an overview of information about a specific instrument, comprised of the following information in an logically organized and easy-to-interpret format:

- Instrument Name
- Summary Description of the Instrument
- Quick Facts Summary, including:
  - Instrument Type
  - Period of Validity
  - Whether Inspection is Required
  - Whether Renewal is Required
  - Summary of Fees, including:
    - Original Cost
    - Administrative Fee
Late Fee
Renewal Cost

- Description of the ‘normal’ application, review, approval, and issuance processes.
- Summary of any variations and/or exceptions from the ‘normal’ processes described above, if any.
- Summary of Inspection Requirements, if any.
- Reference to Statutory Authority

Instrument FAQs
A list of Frequently Asked Questions related to a specific instrument.

Application for New / Renewal Instrument
Includes instructions for how to apply for and renew a specific instrument. May include instructions for in-person, mail, fax, and online application and renewal processes. Which of the preceding are included depends on the specific instrument and what options are supported by HPC. When an instrument is eligible for online application and renewal, the application and/or renewal forms will be presented here also.

Scheduling Options
Includes an explanation of the supported methods of scheduling inspections or other events related to the instrument. If online scheduling is supported for a particular instrument, this page is where that service is made available to the user.

Contact Information
Presents contact information and instructions for communicating with individuals or departments who can assist in matters related to the instrument. Will include all contact methods that are supported by HPC for the instrument, which may include online chat, telephone, in-person, mail, email, and an online contact form. When online chat and/or an online contact form are supported for a particular instrument, this page is where those services are made available to the user.

Related Documents
Presents a list of hyperlinks to related documents such as downloadable/printable forms, affidavits, or other information that may be required as part of the application/renewal process, or which may be otherwise useful to the user. They may include links to other web pages either internal to or external to
the HPC Portal, downloadable documents or forms, video, or any other supported media type as may be necessary.

[Click to view example page.]

**Branding & Visual Design Requirements**

The [HPC Style Guide](#) describes the common web styles prescribed for all City of Houston web sites, plus additional web styles that are unique to the HPC Portal. It describes the onscreen elements such as headers, logos, and more that are required to comply with City of Houston and HPC branding guidelines. The Style Guide prescribes a standard color palette and standard typography for the HPC Portal. It also presents guidelines for page layout and graphic elements. Additionally, the Style Guide provides helpful guidance in matters related to Best Practices and Web Accessibility.

**Compatibility Requirements**

**Responsive Web Design**

The Public Portal and Private Portal (the externally facing websites) shall be implemented using *responsive web design* features that dynamically adapt page content, optimizing it for common mobile, hand-held, and desktop display sizes.

At minimum, the Public Portal and Private Portal pages must be optimized for the following display widths:

- iPhone / Droid – 320px wide
- Small Tablets – 640px wide
- iPad / Tablet – 768px wide
- Desktop Computer – greater than 960px wide

**Browser Support**

The Public Portal and Private Portal (the externally facing websites) shall be implemented in a manner that supports the following browser versions:

<table>
<thead>
<tr>
<th>Internet Explorer</th>
<th>Chrome</th>
<th>Firefox</th>
<th>Safari</th>
<th>Opera</th>
</tr>
</thead>
<tbody>
<tr>
<td>6+</td>
<td>Current</td>
<td>Current</td>
<td>Current</td>
<td>Current</td>
</tr>
<tr>
<td></td>
<td>1 version</td>
<td>1 version</td>
<td>1 version</td>
<td>1 version</td>
</tr>
</tbody>
</table>

“Current - 1 version” denotes that the implementation shall support the current stable version of the browser and the major version that preceded it. For example, if the current version of a browser is 24.x, the implementation must support the 24.x and 23.x versions.
Human Factor Requirements

Accessibility

City of Houston websites are frequented by a diverse group of people from around the globe. Some users have visual or motor skill impairments and utilize assistive technologies such as screen readers and text-only browsers; others view our pages using outmoded technologies and slow connection speeds. It is important that website creators be cognizant of these limitations and strive to make their websites accessible to the greatest number of people. As such, the HPC Portal website shall be implemented in a manner that is compliant with Section 508 of the Rehabilitation Act of 1973.

More information on web accessibility and Section 508 compliance is available at:

- W3C Accessibility Checkpoints: http://www.w3.org/TR/WAI-WEBCONTENT/full-checklist.html
- Web Content Accessibility Guidelines: http://www.w3.org/TR/WCAG20/
- A List Apart: Accessibility Topics: http://www.alistapart.com/topics/topic/accessibility/
- Web Standards Project: http://www.webstandards.org/

User Interface & Content Language Support

Both the application user interfaces and the content pages of the Public Portal and Private Portal must be implemented in the following three (3) required languages:

- United States English (IETF en-US)
- Latin American Spanish (IETF es-419)
- Vietnamese (IETF vi)

Online Help Resources

The HPC Portal customer service applications shall offer the following online help resources:

- Context Sensitive Help Pages – Written online help resources that are unique to each page of the website. The content shall:
  - Explain the purpose and overall goal of each page
  - Describe the standard features of the page in detail
  - Provide links to related help resources, if any.
- “Using the HPC Portal” Video Tutorials – A collection of tutorial videos that visually introduce the Key Features of the Public and Private Portals and demonstrate how to use them.
- Online frequent asked questions (FAQ)
Content Management System Supplemental Requirements

CMS Platform
Based on prior experience with the platform, PWE IT resources have a slight preference for employing the Joomla Content Management System, provided that it will support the requirements presented herein. It should be noted, however, that this is merely a preference and is not a requirement. All solutions will be considered, and alternate solutions are encouraged.

Taxonomy & Thesaurus Management
Whether the capability is integral to the chosen CMS, or provided by external tools, the overall system must provide support for maintenance and management of the Taxonomy & Thesaurus. Although changes to the controlled vocabulary will be strictly managed, the ability for an authorized Content Manager to make those changes and have them take effect in the HPC Portal is key to the ongoing success of the System.

Media Types & File Formats
The following media types and file formats are expected to form the bulk of the content that will be managed in the HPC Portal Content Management System.

**HTML5 – HyperText Markup Language**
- **Internet media type:** text/html
- **Filename Extension:** .html

**XHTML5 – Extensible HyperText Markup Language**
- **Internet Media Type:** application/xml, application/xhtml+xml
- **Filename Extension:** .xhtml, .html

**CSS – Cascading Style Sheets**
- **Internet Media Type:** text/css
- **Filename Extension:** .css

**PDF – Portable Document Format**
- **Internet Media Type:** application/pdf
- **Filename Extension:** .pdf

**GIF – Graphics Interchange Format**
- **Internet Media Type:** image/gif
- **Filename Extension:** .gif

**JPEG – Joint Photographic Experts Group**
- **Internet Media Type:** image/jpeg
- **Filename Extension:** .jpg, .jpeg
PNG – Portable Network Graphic
*Internet Media Type:* image/png
*Filename Extension:* .png

TIFF – Tagged Image File Format
*Internet Media Type:* image/tiff
*Filename Extension:* .tif, .tiff

Embedded Video
Embedded video content of various formats, hosted by third parties such as YouTube, Vimeo, and possibly others.

**E-Commerce Requirements**

1. System must generate an invoice transaction for every instrument that requires payment upon initial application or renewal.
   1.1. System must calculate total invoice amount, including original cost, and administrative or other fees if any.
   1.2. System must facilitate online payment of invoices through integration with one or more third-party payment processors.
   1.3. System must the encoding of profit center data in transactions to ensure that payments received are properly directed upon settlement of payment transactions.
   1.4. System must provide reports to Registered Guest users of past invoice/payment transactions made.

2. System shall generate renewal notices upon the approach of expiration of a renewable instrument.
   2.1. The number of days in advance of instrument expiration that renewal notice is sent shall be configurable by CMS Administrator.
   2.2. Renewal notice shall be sent as email to Registered Guest’s email address on file.
   2.3. Renewal notice shall contain hyperlink to the renewal process on the Private Portal.

**Performance Requirements**

*Availability*

Public Works & Engineering IT standards prescribe the following requirements for system and application availability:

- System availability shall be no less than 99.99% on a monthly basis.
- Application availability shall be no less than 99.75% on a monthly basis.

*Reliability*

- Up time is critical, the goal is 24 hours per day every day. The minimum requirement per server is 200 days continuous operation of the hardware, OS and loaded applications.
All servers which are running either enterprise or department critical services are to be setup with fail-over ability.

**Performance**

Performance is a critical aspect of web services. Therefore the Provider will establish benchmarks and include tools to monitor the following areas of system performance:

- Transacting Monitoring – How are my online transactions performing?
- Website Performance – How is my WEB sites performing?
- Server Availability – Are the WEB servers up?
- Systems and Server Monitoring – How are the internal systems (CPU load, disk utilization, processes, etc.) performing?
- SLA Performance Monitoring – Are the agreed upon service levels being met?
- WEB Load Testing – How does the WEB sites respond under various loads. Where is the limit?

**Scalability**

The proposed solution must be scalable allowing growth up to 50% before additional hardware is needed.

**Users, Traffic & Transactions**

Analytics data from the existing HPC Website provides a glimpse into what can be expected in terms of website traffic, user activity, and peak loads. However, the design changes described in this specification will yield many new features and services that are intended to increase usage of the HPC Portal, and which are likely to drive changes in the usage patterns of website visitors. For this reason, the historical data offered herein is provided only for informational purposes to facilitate system sizing. Developers should anticipate a substantial increase of at least 200-300% in individual page views, pages per visit, and average visit duration as website visitors find content more easily and stay on the website longer.

In the last 90 days, the HPC Website has experienced:

- Regular peaks of up to 240 visitors in a single hour.
- Regular peaks of up to 580 page requests per hour.
- Occasional peaks estimated to be up to 30 concurrent website visitors.

In the month of January 2014, the HPC Website experienced:

- 46,442 visits
- 106,842 individual page views
- Average 2.3 pages requested per visit
- Average Visit Duration of 2 minutes 45 seconds

In the most recent fiscal year, a total of 780,764 instruments were issued through the Houston Permitting Center.
**System Management Tools**

The proposed solution must include system management tools and solutions that address the following areas:

- Tools to manage all web servers/sites from a central location or a group of web sites from a sub (department) location.
- Tools to manage the server operating system(s), web server(s) application(s), database management system(s), and user login accounts.
- All aspects of the web services solution is required to be managed remotely.
- Tools to measure performance, bandwidth and usage shall be provided.
- Website administration software for posting and managing web content.

**Output Requirements**

**E-mail Output**

System email communications such as email confirmations, notices, etc. shall be sent as multi-part mime email messages containing both plain-text and HTML versions of the message content.

**Reporting requirements**

1. System shall provide summary activity reports as follows:
   1.1. Only CMS Administrator shall have access to reports.
   1.2. Reporting period shall be definable by CMS Administrator at runtime.
   1.3. System shall produce the following reports upon request:
      1.3.1. User Activity Report
          1.3.1.1. Number of Wizard Scenarios Submitted
          1.3.1.2. Number ofIncomplete Applications
          1.3.1.3. Value ofIncomplete Applications
          1.3.1.4. Number of New Instrument Applications Received
          1.3.1.5. Value of New Instrument Applications Received
          1.3.1.6. Number of Renewal Applications Received
          1.3.1.7. Value of Renewal Applications Received
          1.3.1.8. Total Value of All Applications Received
      1.3.2. Search Activity Report
          1.3.2.1. Search Terms Submitted
          1.3.2.2. Frequency of Occurrence

**Integration Requirements**

**Taxonomy**

The taxonomy management tool and taxonomy database must be integrated with the Content Management System such that the taxonomy drives the taxonomical browse feature of the HPC Portal
directly and without requiring additional maintenance to modify the browse feature of the website following changes to the taxonomy.

**Standard Vocabulary & Thesaurus**

The standard vocabulary and thesaurus (related and non-preferred terms) must be integrated with the HPC Portal keyword search feature such that updates to them are reflected in the behavior of the keyword search feature and in its results without requiring additional maintenance beyond that required to maintain the standard vocabulary & thesaurus.

**Department \ Citywide Systems**

The HPC Portal CMS will eventually be integrated with Department Systems to facilitate the exchange of data between them. At the time of this writing, the exact systems with which the HPC Portal CMS would be integrated are unknown. Consequently, it is impossible to define any specific integration points or the nature of their interfaces. However, the following list identifies potential candidate systems for future integration, and it is anticipated that some of the means of integration may include web services in a Service Oriented Architecture, XML data exchanges in batches or in real-time, direct updates to shared SQL databases, or the scheduled exchange of structured data files via FTP.

Developers should carefully consider the list of candidate systems for potential integration, and understand from its scope the importance of an open and flexible system architecture that supports a variety of possible integration means. Candidate systems for potential future integration include, but are not limited to the following:

- Work Order
- Point of Sale
- Customer Queuing
- Billing
- Land Management
- Device Tracking
- Document Management
- GIS
- Info Hansen
  - Enterprise
  - Asset Management
  - Data Marts
  - Permitting
  - CRD
  - EAM
  - CRM
  - Call Center
  - Motion, ION & Mingle
E-Signature Processing

The HPC Portal must be integrated with a third-party e-signature processing host to fulfill the e-signature requirements defined herein. At present, City of Houston has no known relationships with third-party e-signature processors. Developer must a suitable based on these and anticipated future requirements.

Online Payment Processing

Online payment processing services for the HPC Portal will be provided by Chase Paymentech. The HPC Portal System must be integrated with their Orbital Payment Gateway product. The Chase Paymentech Orbital Payment Gateway offers multiple integration options to best fit a particular technical environment. Developer shall evaluate available options, and propose the option best suited to meet the requirements herein based on the CMS architecture and solution ultimately proposed.

Compatibility Requirements

Browser Compatibility

The Management Portal (the internally-facing website) shall be implemented in a manner that supports Internet Explorer versions 9 and later.

Display Compatibility

The Management Portal (the internally-facing website) shall be implemented in a manner such that presentation is optimized for desktop computer displays having a resolution of 768 x 1024 or greater. Responsive web design is not a requirement for the Management Portal.

Physical Requirements

Content Items

The estimated numbers of content items to be managed during the first year of production are:

- 1,200 Electronic Forms
- 4,000 Pages HTML
- 6,000 Frequently Asked Questions w/ Answers
- 3,600 Related Documents (as PDF or HTML)
- An indefinite number of end-user attachments uploaded along with applications

Database

The estimated minimum database size required for the first year of production is 3 terabytes. This is a very rough estimate based largely on an average estimated requirement of 3 megabytes data storage for each instrument application received, including its attachments.

Data Archiving

1. System shall maintain a minimum of 2 years of transaction data online.
2. Transaction data aged more than 2 years shall be moved to a nearline archive system.
3. Nearline archive data will be maintained for a minimum of 7 years.
4. Some data must be maintain permanently in offline archives.
5. Proposer must provide viewer capabilities to view nearline and offline archive data for the duration of its lifecycle.

**Backup & Disaster Recovery**

1. System shall be configured for high availability, data replication or mirroring and to automatically maintain the following backup schedule:
   1.1. A monthly full backup shall be maintained.
   1.2. A weekly incremental backup shall be maintained.
   1.3. A daily incremental backup shall be maintained.
2. All backups shall be maintained in two (2) locations, as follows:
   2.1. One copy of each backup shall be maintained at the production hosting facility located at 4200 Leeland, Houston, Texas 77023.
   2.2. One copy of every backup shall be transferred within 24 hours following its creation to the disaster recovery hosting facility co-located at the Fibertown data center in Bryan, Texas.

**Human Factor Requirements**

*User Interface Language Support*

The Management Portal user interface shall be implemented in United States English language only.

*Content Publishing Language Support*

1. The Content Management System must support the creation, management, and publishing of individual versions of all content in the following languages:
   1.1. United States English (IETF en-US)
   1.2. Latin American Spanish (IETF es-419)
   1.3. Vietnamese (IETF vi)

*Help System*

1. The Management Portal shall provide context sensitive online help pages that:
   1.1. Explain the purpose and overall goal of each feature of the Management Portal.
   1.2. Describe the controls of each feature and their behaviors in detail.
   1.3. Provide links to related help resources, if any.
PART III

Hardware

1. The City intends to leverage our existing infrastructure and virtual server environments as resources for this project.
2. Proposer will review existing infrastructure environment and provide a feasibility analysis and cost for leveraging, enhancing, or replacing the existing infrastructure environments.
3. Proposer will include infrastructure plans for local data center at 4200 Leeland, Houston TX, 77023 and the disaster recovery site at Fiber Town in Bryan, TX.
4. Existing Systems & Applications are identified in the following 3 tables presented on the next pages:

   TABLE 1 - Web / Content Management
   TABLE 2 - Virtual Environment
   TABLE 3 - Future Integration

(This space is intentionally blank.)
### TABLE 1 - WEB / Content Management

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
<th>Software</th>
<th>Version</th>
<th>Cloud=©</th>
<th>Server Farm=(S)</th>
<th>Virtual=(V)</th>
<th>Physical=(P)</th>
<th>OS</th>
<th>CPU's</th>
<th>MEM</th>
<th>DBMS</th>
<th>Storage</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPC Web Portal</td>
<td>pwehpc</td>
<td>Joomla</td>
<td>3.0</td>
<td>©</td>
<td>S</td>
<td>V</td>
<td>P</td>
<td>Linux</td>
<td>4</td>
<td>4g</td>
<td>MYSQL</td>
<td>325g</td>
<td>Amazon Cloud</td>
</tr>
<tr>
<td>Content Management PROD</td>
<td>cmsweb</td>
<td>Joomla</td>
<td>3.0</td>
<td>S</td>
<td>S</td>
<td>V</td>
<td>P</td>
<td>Linux</td>
<td>4</td>
<td>4g</td>
<td>MYSQL</td>
<td>900g</td>
<td>Data Center</td>
</tr>
<tr>
<td>Content Management DEV</td>
<td>cmswebd</td>
<td>Joomla</td>
<td>3.0</td>
<td>S</td>
<td>S</td>
<td>V</td>
<td>P</td>
<td>Linux</td>
<td>1</td>
<td>2g</td>
<td>MYSQL</td>
<td>140g</td>
<td>Data Center</td>
</tr>
<tr>
<td>Calendar Appoint Scheduler</td>
<td>Qflow</td>
<td>Vendor Hosted</td>
<td></td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SQL</td>
<td></td>
<td>ACF Technology</td>
</tr>
</tbody>
</table>

### TABLE 2 - Virtual Environment

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
<th>Software</th>
<th>Version</th>
<th>Cloud=©</th>
<th>Server Farm=(S)</th>
<th>No of Hosts</th>
<th>OS</th>
<th>CPU's</th>
<th>MEM Per Host</th>
<th>DB</th>
<th>Storage</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>Cluster 1</td>
<td>Vsphere, Vcenter</td>
<td>5.1</td>
<td>S</td>
<td>12</td>
<td>ESX</td>
<td>2 proc 10 cor</td>
<td>172 g</td>
<td>SQL</td>
<td>43 TB</td>
<td>Data Center</td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>Cluster 2</td>
<td>Vsphere, Vcenter</td>
<td>5.1</td>
<td>D</td>
<td>3</td>
<td>2 proc 10 cor</td>
<td>172 g</td>
<td>SQL</td>
<td></td>
<td>Data Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Cluster</td>
<td>Cluster 3</td>
<td>VCloud</td>
<td>5.1</td>
<td>F</td>
<td>5</td>
<td>2 proc 10 cor</td>
<td>172 g</td>
<td>SQL</td>
<td></td>
<td>Data Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disaster Recovery</td>
<td>DR Cluster</td>
<td>Vsphere, Vcenter</td>
<td>5.1</td>
<td>F</td>
<td>5</td>
<td>2 proc 10 cor</td>
<td>172 g</td>
<td>SQL</td>
<td>79 T</td>
<td>DR Site</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3 - Future System Integration

<table>
<thead>
<tr>
<th>Application \ System</th>
<th>Description</th>
<th>Vendor</th>
<th>Implement Date</th>
<th>Software Version</th>
<th>Integrated w/ which systems</th>
<th>OS</th>
<th>Prog. Lang.</th>
<th>DBMS</th>
<th># of Servers</th>
<th>Server Type Phys. or Virt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILMS</td>
<td>Code Enforcement Permitting System</td>
<td>Gartek</td>
<td>1987</td>
<td>4.82</td>
<td>TeleWorks, SOA, OMPlus</td>
<td>Unix / Windows</td>
<td>VB, Cobol</td>
<td>Oracle 11g</td>
<td>6</td>
<td>Both</td>
</tr>
<tr>
<td>iPermit</td>
<td>iPermit Contractor &amp; Customer Portal</td>
<td>Gartek &amp; J.P.Morgan Chase</td>
<td>2011</td>
<td>Same as ILMS</td>
<td>ILMS online exposed to the public.</td>
<td>Same as ILMS</td>
<td>Same as ILMS</td>
<td>Same as ILMS</td>
<td>Same as ILMS</td>
<td>Same as ILMS</td>
</tr>
<tr>
<td>ePlus</td>
<td>ePlus document management solutions.</td>
<td>ePlus</td>
<td>2001</td>
<td>ILMS</td>
<td>Linux</td>
<td>****</td>
<td>Oracle</td>
<td>2</td>
<td>Virtual</td>
<td></td>
</tr>
<tr>
<td>SOA</td>
<td>Oracle Fusion - Service Oriented Architecture</td>
<td>Oracle</td>
<td>Dec-10</td>
<td>11.13</td>
<td>ILMS, WCIS, iNovah</td>
<td>Linux</td>
<td>Oracle</td>
<td>8</td>
<td>Both</td>
<td></td>
</tr>
<tr>
<td>PWE GIMS</td>
<td>PWE Graphical display of COH infrastructure</td>
<td>In-House</td>
<td>1.1</td>
<td>None</td>
<td>Linux</td>
<td>Oracle</td>
<td>4</td>
<td>Both</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qflow</td>
<td>Customer Queue and Ticketing Syste</td>
<td>AFC Technology</td>
<td>Jun, 2011</td>
<td>5.4</td>
<td>None</td>
<td>Windows</td>
<td>SQL</td>
<td>3</td>
<td>Virtual</td>
<td></td>
</tr>
<tr>
<td>FAMS</td>
<td>False Alarm Management System - ARA</td>
<td>PMAM</td>
<td>Jun-05</td>
<td>iNovah, OMPlus</td>
<td>Windows</td>
<td>SQL</td>
<td>Hosted by Vendor</td>
<td>Hosted by Vendor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDP</td>
<td>Commercial and Transportation System - ARA</td>
<td>Gov Partners</td>
<td>30-Jun-08</td>
<td>Web V11.1</td>
<td>iNovah, OMPlus</td>
<td>Windows</td>
<td>SQL</td>
<td>Hosted by Vendor</td>
<td>Hosted by Vendor</td>
<td></td>
</tr>
<tr>
<td>Enterprise Asset Management, Data Marts and Permitting, CRD, EAM, CRM, Call Center, Motion, ION &amp; Mingle</td>
<td>Enterprise</td>
<td>Infor Hansen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Warranty

1. Proposer shall warranty all services provided, software and installation components for one (1) year.
2. Proposer will replace any malfunctioning item during the warranty period and provide services corrections at no cost to the city.
3. Proposer shall provide a written exhibit detailing any warranties and guaranties that come with their proposed solution.

Maintenance and Support

1. Proposer will provide an itemize cost list for extended maintenance and support services for 3-years with two (2) optional one (1) year renewals periods. Proposer shall provide maintenance and support on a five (5) day a week, 24 hours per day.
2. Major maintenance shall be performed on site.

Installation Requirements

1. Proposer must provide a timeline to implement and install a fully operational system. Proposer shall supply a statement that this time line will allow for complete installation and testing of a system components and interfaces.
2. Developer must fully deploy the System, including installation, configuration, and testing of it in separate instances in a staged deployment environment consisting of three (3) instances:
   2.1. Development Instance
   2.2. Testing Instance
   2.3. Production Instance
   2.4. All three (3) instances described above (Development, Testing, and Production) shall be installed at the PWE IT data center located at 4200 Leeland Street, Houston, Texas 77023 and at PWE Disaster Recovery Center at Fiber Town in Bryan, College Station, Texas.

Documentation

Application and system documentation will be provided by proposer at no additional charges. Document must be clearly written, user-oriented and must include the following:

1. System Design
2. System Flow
3. File descriptions
4. Data Structures
5. Data Dictionary
6. Program functions and logic descriptions
7. Program code listings
8. Description of all system controls
9. Operating procedures
10. Screen Layout
11. Report procedures

Security
1. System must provide security controls to protect the system and its information by controlling access to critical or sensitive functions. Access control must support access permissions that are configurable for each each menu item based on user role. Security levels and permission for access shall be maintained on the system and verified against required access level for each menu item.
2. Proposer shall provide for the duration of the agreement and keep current:
   2.1. Security patches
   2.2. Operating System
   2.3. Applications coding and programs
   2.4. Software releases and version control

Training
1. After successful installation and testing, Proposer shall plan and provide a thorough program of instructional services (including all appropriate documents and visual aids) sufficient to instruct applicable city personnel.
2. Proposer shall provide training in reference to deployment, management, maintaining, and administration of the solution for a minimum of twenty (20) city employees for user operation and five (5) city employees for system management and administration.
3. In addition, proposer shall provide training to facilitate the transfer of operational knowledge related to the development of database structure and application coding required for the city to fully maintain applications, develop future enhancements, and system support.
4. Proposer should include recommendation for education, to include course descriptions, length of course, location of course, cost of course, prerequisites and intended audience, in the following areas:
   • Code and program development
   • System Configuration
   • Software Maintenance
   • Hardware installation and maintenance
Acceptance Criteria

1. Proposer shall perform a test demonstrating their application and a system reliability test prior to the initiation of installation of the system proposed.
2. Proposer shall demonstrate the capability of their proposed system to automate recovery of data and to deliver that data to a specified location within the City of Houston.
3. If Proposer’s application, system or equipment fail to meet the requirements at the time during the test the city will direct that the test be stopped. The proposer will be granted fifteen (15) days in which to make necessary modification/changes/repairs to their system. At the conclusion of the fifteen (15) days period, or sooner if the proposer states that their system is again ready for testing, the test will be reinitiated in its entirety for the next thirty (3) calendar days. The test cycle may be repeated for two attempts after failure of the initial test. If the system passes the test on the third attempt, and additional fifteen (15) day test using the same parameters will be conducted to verify system reliability. If the system fails to perform satisfactorily after the (3) consecutive attempts, or after one (1) successful fifteen (day test after successfully passing the test on the third attempt, the City will treat the matter with aforementioned Proposer to be concluded and there will be no further consideration of this Proposer.
4. Developer shall test the completed System, and COH stakeholder designees shall witness tests, to demonstrate that the system substantially complies with the requirements prescribed herein for each of the following categories:
   4.1. System substantially satisfies the Functional Requirements and Use Cases described herein.
   4.2. System substantially satisfies the Browser Compatibility requirements for:
      4.2.1. Public Portal and Private Portal
      4.2.2. Management Portal
   4.3. System substantially satisfies the Physical and Performance requirements prescribed herein.
   4.4. System substantially satisfies the Human Factors requirements prescribed herein for each of the following:
      4.4.1. Language Support
      4.4.2. Accessibility
      4.4.3. Online Help Resources
   4.5. Developer shall demonstrate the backup and disaster recovery procedures developed to satisfy these requirements.
   4.6. Developer shall present and review with stakeholders completed documentation that substantially satisfies the Documentation requirements prescribed herein.

Additions & Deletions

The Purchasing Agent or Director, by means of a written authorization to Contractor may add other facilities to this Contract and any item or services provided by Contractor that are reasonably related to the scope of this Contract. The Purchasing Agent or Director may also delete facilities, items or services by written notice. Written notification of deletion facilities, items, or services shall take effect upon the Contractor’s receipt of such notice or on such other days as specified therein.
PART IV – See Website for document titled “Part IV - Working Copy”

Background / References / Costs

Background

Provider will provide to The City a written statement detailing your company background / history. Provide a statement of finances and annual sales. If the company is publicly traded provide the name of the stock exchange and symbol.

References

Provider will provide three (3) to five (5) references of projects completed that are similar to this scope of work. Include the company name, address, contract person, telephone number, email, summary of actual services that your organization have implemented, client’s project leader name telephones number and email address

Costs

1. Proposer will provide as detailed list with descriptions of all products and services with their associated cost.
2. Proposer shall breakdown the cost between:
   a. Software
   b. Hardware
   c. Professional Services
   d. Hardware Maintenance
   e. Software Maintenance
   f. Training
   g. Technical Support.
3. Provide details of the cost, if any, of providing, operating, installing, removing and/or reinstallation of required equipment at deployment/installation locations.
4. Provide details of separate costs, if any, of acceptance testing and personnel necessary to conduct the tests.
5. Provide a detailed hardware maintenance price list including make, model and description of each component for twenty (24) hours by seven (7) days a week ½ hour response time by telephone and 12 hour on site time maintenance agreement, including remote diagnostics, repairs, spare part customer notification.
6. Provide a detailed software maintenance price list for each software component including product description information and version for twenty (24) hours by seven (7) days a week maintenance agreement and version updates.
7. Provide a detail software support price list for call-in, web-access technical software support.

8. Describe in detail any offers of potential discounts.

9. Provide summary annual cost for each year in the following format

<table>
<thead>
<tr>
<th>Description</th>
<th>Year 1 Price</th>
<th>Year 2 Price</th>
<th>Year 3 Price</th>
<th>Year 4 Price *</th>
<th>Year 5 Price *</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discount</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Option years

10. The contract will have provision for adding and deleting components. Are there any penalties for deleting components? If yes, what are the penalties, terms and conditions?

____________________________________________________________________________

____________________________________________________________________________

11. The City reserves the right to cancel this contract at any time with a thirty (30) day written notice to vendor should equipment be upgraded and/or replaced with new equipment. Are there any cancellation penalties that will be charged to the City for early termination? If yes, what are the penalties, terms and conditions?

____________________________________________________________________________
12. Provide rate for the following:

   a. Annual increase percentage

   b. Cost for adding and removing components

   c. Contractual Price per hour excluding parts cost

   d. Non-contract Price per hour excluding parts cost

   e. After hours non-contract Price per hour

      i. Second shift

      ii. Third shift

Proposer Competence

General Experience

Maintenance / Technical Support Personnel

1. What is the geographic area of responsibility of your company's maintenance work force?

2. What are the primary geographic area(s) of concentration of this work force both locally, and statewide (Texas)? What is the number of maintenance and software support personnel in each of these concentrations?
3. In the Houston/Harris County area, where are your company's maintenance and software support personnel work location during normal working hours? How close (miles) are these maintenance & software support personnel to 4200 Leeland, Houston, TX 77023?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

4. How is maintenance and software support personnel assigned to a specific account or service call?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

5. Please list the credential of each of the to be assigned maintenance and software support and backup personnel.

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

6. Do you require original manufacturer's maintenance and software support education courses as a prerequisite to maintain customer account equipment?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________
7. What are your company's normal problem escalation guidelines?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

8. What are your company's critical problem escalation guidelines?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

9. Does your local organization have remote support as part of your company's overall support structure?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

If yes:

9a. Where is it located?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

9b. How and when is it implemented?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
9c. What skill levels and resources are available at this location, which are different than the local site?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

9d. What are the hours of operation?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

9e. Who is responsible for dispatching the maintenance and software support personnel?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

10. How are response time records monitored?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Parts

11. Is a full complement of spare maintenance parts located in Houston? In Texas?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________
12. What is your company’s procedure and how long will it take to procure parts that are not stocked or are out of stock locally?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

13. What is your company's inventory replenishment procedure?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

14. What methods and procedures will be used to dispatch parts in emergency situations?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

15. What is the quality of the spare parts?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

16. Define the circumstances where used or refurbished parts are used for customer support.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Quality of Proposal

Engineering Changes

17. What manufacturer’s engineering changes are made available and how are they made available?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

18. What are your company's tracking procedures to ensure all essential engineering changes are installed on a timely basis?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

19. How do you track machine engineering change levels?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Maintenace Practices and Diagnostics to Predict or Reduce Failures

20. What are your company's preventative and predictive maintenance procedures and how do you implement them in your accounts?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
21. How are intermittent failures tracked?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

22. What methods and procedures are implemented by your company to minimize customer impact of intermittent trouble?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

23. What management support is provided during off-shift hours and holidays?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

(This space is intentionally blank.)
PART V

Evaluation & Selection Process

Summary
The award of this contract(s) will be made to the respondent(s) offering the response which best meets the needs of the City. The City may make investigations, as it deems necessary, to determine the capabilities of the Proposer to deliver the required maintenance and services. The Proposer shall furnish to the City such data as the City may request for this purpose. The City reserves the right to reject any offer if the evidence submitted by or the investigation of the Proposer fails to satisfy the City that the Proposer is properly qualified to provide the services contemplated. Each respondent will be evaluated on the basis of the evaluation and Selection process as described in the following:

1. Contractor Competence.
   a. Demonstrated knowledge, competence and experience in working in the complex environment of governments, public and private agencies including relevant analytical, personnel, policies and procedures and business needs skills.
   b. Demonstrated competence and experience in dealing with clients such as the City of Houston.
   c. Experience on similar projects.
   d. Back-up resources and staff having the required competence available to replace or support local personnel, if necessary.
   e. Quality of technical implementation / migration responses

2. Quality of Proposal.
   a. The approach to the RFP description of work and a demonstrated understanding of the goals and needs of the City
   b. Ability to provide maintenance technical support and training service to the City on software\hardware specified.

3. MWDBE Participation.
   The City has set a goal of 11% of the contract award value for MWDBE participation.

   See pricing template (page 45)
APPENDIX A – Site Map

Primary Global Navigation

Secondary Global Navigation

Browse

INSTRUMENT RESULTS PAGE
- Overview
- FAQs
- Apply/Renew
- Schedule Inspection
- Contact
Wizard
Schedule

DEPARTMENT CHOICES:
- HPD Identification Division
- Administration & Regulatory Affairs (ARA)
- Permit Office
- Information Desk
- Fire Permit Office
- Occupancy Inspections
- Office of the City Engineer Plan Review
- Parks & Recreation
- Imaging/Open Records
- Traffic/Right of Way Plan Review
- Flood Management
- Plan Review
- Health Plan Review
- Planning & Development
- Fire Marshall
- Houston Airport (HAS)
- Utility Analysis/Taps & Meters
- Inspections
- Sign Administration

Notes: See Reference.xlsx for entire list of Services & Keywords

Online Reservation (Schedule/Reschedule/Cancel an Appointment)
Help
About Us
News & Events

CONTENT RESIDES ALL ON ONE PAGE
Sign In / Create New Account
**APPENDIX B - HPC Use Case Specifications**

**Use Case Rationale**

The use cases documented herein are intended to be as generic in nature as reasonably possible while expressing key features and system behavior that City of Houston requires, without over-specifying the details of their implementation. This approach is intended to allow for flexibility in product choice and implementation without sacrificing the spirit or essence of the requirement.

**Understanding a Use Case Specification**

For the benefit of reviewers who are unfamiliar with Use Case Specifications, the individual parts of the specification are identified and explained in detail below.

**Use Case Number & Name**

These identifiers are unique to a single use case and are used to reference the use case throughout this specification and supporting project documents.

**Goal**

A one or two line summary of what the use case achieves for its actors.

**Actors**

Identifies the actors involved in the use case, and any context regarding their involvement.

Note: This is not a description of the actor. That is provided elsewhere in this document.

**Pre-conditions**

A statement of any simplifying assumptions we can make at the start of the use case.

**Basic Flow**

A linear sequence of steps that describe the behavior of the use case in a “normal” scenario. Where a use case has a number of scenarios that could be normal, one is arbitrarily selected.

**Alternate Flows**

A series of linear sequences describing each of the alternative behaviors to the basic flow, if any exist.

**Post-conditions**

A statement of any assumptions we can make at the end of the use case. These are most useful when the use case is one of a series of subsidiary use cases that are included in a main use case, where they form the pre-conditions of the next use case to be included.

**Requirements**

Describes related requirements; included inline or cross-referenced to requirements documented elsewhere in this specification.

**Related GUI Elements**

A list of related Graphical User Interface elements that are rendered as wireframes or visual design mockups and provided elsewhere in this specification.
**UC1: Bookmark an Instrument**

**Goal**
Enable a Registered Guest to create and save a reference and hyperlink to a specific instrument that is used to shortcut normal navigation so they can quickly return to an instrument of interest or relevance to their needs at a later time.

**Actors**
Registered Guest

**Pre-conditions**
User is authenticated as a Registered Guest

**Basic Flow**
1. While viewing the Instrument Home View, a Registered Guest clicks the Bookmark Button.
2. The HPC Portal System saves a reference to the instrument as a bookmark.
3. The HPC Portal System notifies the user of successful completion of the operation.

**Alternate Flows**
A1 – Bookmark Already Exists

A1.1 – Registered Guest clicks the Bookmark Button.
A1.2 – System does not save reference to the instrument as a bookmark.
A1.3 – System notifies user the bookmark already exists.

**Post-conditions**
A bookmark referencing the instrument is saved.

**Requirements**
1. System must implement a feature that provides the capability for a Registered Guest to bookmark an instrument.
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must allow for creation of at least 50 bookmarks by user.
   1.3. The bookmark must contain a reference to the specific instrument marked by the user.
      1.3.1. Clicking the bookmark label shall navigate to the Instrument Home View for the referenced instrument.
   1.4. The name or label of the bookmark must be the instrument name.

**Related GUI Elements**
Bookmark Button
Instrument Home View
UC2: Browse Content by Taxonomy

Goal
Enable a Guest user to navigate a hierarchically organized listing of instrument categories and instruments to locate content.

Actors
Guest

Pre-conditions
None

Basic Flow
2. System presents the Browse Content by Taxonomy View containing a listing of the content taxonomy, along with options to browse all instruments, filter for residential or commercial instruments only, and filter by HPC department.
3. User selects filter options.
4. System refreshes the listing of the content taxonomy that is now filtered to exclude categories and instruments not chosen by user.
5. User clicks a category of interest from the remaining categories.
6. User continues to drill down into categories of interest until reaching the lowest level.
7. At lowest level, user selects a specific Instrument by clicking its name.
8. System presents the Instrument Home View for the selected instrument.

Alternate Flows
None

Post-conditions
None

Requirements
1. System must implement a feature that provides the capability for a Guest user to navigate a hierarchically organized listing of content categories to locate content.
   1.1. System must enable user to filter the listing of content categories and instruments based on their categorization as either commercial or residential categories and instruments. Filter choices must include:
      1.1.1. All categories and instruments
      1.1.2. Only residential categories and instruments
      1.1.3. Only commercial categories and instruments
1.2. System must enable user to filter the listing of content categories and instruments by selecting the departments to include categories and instruments for. Filter choices must include all of the following:

1.2.1. All categories and instruments
1.2.2. Administration & Regulatory Affairs (ARA)
1.2.3. Houston Airport System (HAS)
1.2.4. Houston Fire Department (HFD)
1.2.5. Health & Human Services (HHS)
1.2.6. Houston Police Department (HPD)
1.2.7. Mayor's Office (MYR)
1.2.8. Planning & Development (PD)
1.2.9. Parks & Recreation (PR)
1.2.10. Public Works & Engineering (PWE)
1.2.11. Solid Waste Management (SWD)

*Related GUI Elements*

- HPC Main Navigation Menu
- Browse Content by Taxonomy View
- Instrument Home View
UC3: Chat with Agent

Goal
Enables a Guest to engage in a real-time interactive chat with an Agent.

Actors
Guest

Pre-conditions
An Agent is logged in to the Online Chat component of the System.

Basic Flow
1. A Guest clicks the Online Chat Icon.
2. The HPC Portal System presents the Guest Online Chat Form.
3. The Guest enters their name and submits the content of their first message.
4. The HPC System initiates the Chat with Guest use case.

Alternate Flows
A1 – No Agent is logged in to the Online Chat component of the System

A1.1 – The HPC Portal System hides the “Online Chat” icon, thereby preventing Guests from initiating the use case.

Post-conditions
None

Requirements
1. The System must provide a feature that enables a Guest to engage in a real-time interactive chat with an Agent.
   1.1. System must provide a clickable Online Chat Icon that advertises the availability of the chat feature.
      1.1.1. When Guest clicks the Online Chat Icon, the System must initiate a chat session with an available Agent.
      1.1.2. If no Agent is available, the Online Chat Icon must be made invisible on the HPC Portal site.
   1.2. All messages exchanged using the chat feature must be encrypted using 128-bit (or greater) SSL encryption.
   1.3. It is not a requirement to maintain a persistent record of either the occurrence or the content of any chat sessions.
   1.4. System must provide a means by which a CMS Administrator can enable or disable the Chat with an Agent feature in its entirety by merely activating or deactivating a “switch” in the Management Portal.
Related GUI Elements

Guest Online Chat Form
Online Chat Icon
**UC4: Chat with Guest**

*Goal*

Enables an *Agent* to engage in a real-time interactive chat with a *Guest*.

*Actors*

Agent

*Pre-conditions*

An Agent is logged in to the Online Chat component of the System. A Guest has initiated the Chat with Agent use case.

*Basic Flow*

1. HPC Portal System presents the Online Chat Agent User Interface.
2. Agent engages in an interactive online chat with Guest.

*Alternate Flows*

A1 – No Agent is logged in to the Online Chat component of the System

   A1.1 – The HPC Portal System hides the “Online Chat” icon, thereby preventing Guests from initiating the use case.

*Post-conditions*

None

*Requirements*

Documented in UC3 – Chat with Agent

*Related GUI Elements*

Online Chat Agent User Interface
UC5: Create & Publish an Article

Goal
Enable a Content Manager user to create and publish a content article to either the Public Portal or Private Portal.

Actors
Content Manager

Pre-conditions
User is authenticated as a Content Manager.

Basic Flow
1. Content Manager initiates the use case by accessing the Add New Article View from the Content Manager Dashboard View.
2. Content Manager provides a title for the new article.
3. Content Manager selects a category for the new article from categories defined in the content taxonomy.
4. Content Manager enters the body of the article, including images if desired, using an embedded HTML editor in the Add New Article View.
5. Content Manager sets the access level for the new article based on whether the content is to be published in the Public Portal or Private Portal.
6. Content Manager sets the language of the content.
7. Content Manager sets the status of the new article to “Published”.
8. Content Manager saves the new article.

Alternate Flows
None

Post-conditions
Article is saved in CMS.
Article is published and visible on the HPC Portal.

Requirements
1. The System must provide a feature that enables a Content Manager user to create and publish a content article to either the Public Portal or Private Portal.
   a. The Create and Publish an Article feature must be accessible only by users having the Content Manager or a higher authority role in the HPC Management Portal.
   b. System must support the assignment of articles to one and only one category from the content categories defined in the content taxonomy.
c. System must provide a WYSIWYG HTML editor for entering and editing the content of the article body.
   i. The HTML editor must support the inclusion of images in the bodies of articles.
   ii. The HTML editor must support the formatting of text by selecting from the standard text styles defined in the Style Guide included in this specification.

d. System must support the ability to specify an access level for an article based on whether the article should be published in the Public Portal or Private Portal.

e. System must support the creation and publishing of multiple versions of a single article so that an article can be published in each of the supported HPC Portal languages.

f. System must support the ability to set and change the publishing status of articles, with support for the following statuses (at minimum):
   i. Published
   ii. Unpublished

Related GUI Elements

Add New Article View
Content Manager Dashboard View
UC6: Create Registered Guest User Account

Goal
Enable a Guest user to create a Registered Guest user account to gain access to additional features and services that are available only in the Private Portal.

Actors
Guest

Pre-conditions
None

Basic Flow
1. A Guest user initiates the use case by clicking the “Sign Up” link in the Sign In / Sign Up Pane of the Home Page
2. System presents the Create New Account Form.
3. User enters their full name and a valid email address.
4. User enters a password, and enters it a second time for verification.
5. User submits form.
6. System verifies account doesn’t already exist and password meets minimum password strength requirements.
7. System confirms successful creation of account and informs user that an account activation email will be sent.
8. System sends account activation email to the email address provided by user.
9. User receives account activation email and clicks activation link in email.
10. System informs user that their account has been activated, and that they may now log in to the HPC Portal.

Alternate Flows
None

Post-conditions
A user account exists for the new Registered Guest.
An account profile exists for the new Registered Guest, but is empty until updated.
Guest is elevated to the role of Registered Guest and access permissions are increased accordingly.

Requirements
1. The System must provide a feature that enables a Guest user to create a Registered Guest User Account to gain access to additional features and services that are available only in the Private Portal.
1.1. To create a Registered Guest account, a user must provide the following minimum information:
   1.1.1. First Name
   1.1.2. Last Name
   1.1.3. Valid Email Address
1.2. The user’s email address shall be used as their User ID.
1.3. System must verify that the desired User ID is not already in use.
1.4. System must validate the email address entered as well-formed according to correct standards for an internet email address.
1.5. System must validate the password entered as follows:
   1.5.1. Both instances of the password entry must match.
   1.5.2. Password must meet the following criteria:
      1.5.2.1. Minimum length of 8 characters
      1.5.2.2. Must contain mix of uppercase and lowercase characters
      1.5.2.3. Must contain at least 1 number
      1.5.2.4. Must not contain any portion of the User ID
1.6. System must send an activation email to the user.
   1.6.1. Activation email shall be sent to the email address provided upon user account creation.
   1.6.2. Activation email shall contain a link that when clicked will activate the user account.
   1.6.3. System must delete all accounts that are not verified within 36 hours of creation.

Related GUI Elements

Home Page
Sign-In / Sign-Up Pane
Create New Account Form
UC7: Discover Content w/ Wizard

Goal
Enable a Guest user to discover content by interacting with a wizard and providing answers to a series of questions that enable the HPC Portal System to present a filtered collection of relevant instruments to the user.

Actors
Guest

Pre-conditions
None

Basic Flow
1. Guest user initiates the use case by clicking the “Wizard” menu item in HPC Main Navigation Menu.
2. System presents the Wizard Scenario View containing a series of questions in five (5) top-level categories to which the user must select all responses that apply. The categories are: Sector, Structure, Place, People, and Product.
3. User provides a descriptive name that uniquely identifies the scenario, and by providing answers to questions in all five categories, the user defines a wizard scenario that describes the nature of their business.
4. The user submits the wizard scenario to obtain results from the HPC Portal System.
5. If the user has not answered any questions in one or more categories, the HPC Portal System presents a system message identifying the categories where no answers were provided, and prompts user to complete the scenario to obtain more accurate results.
6. HPC Portal System responds by saving the completed wizard scenario, and presents the Wizard Results View containing a collection of relevant instruments organized in categories based on the standardized HPC instrument taxonomy.
7. User selects a specific instrument of interest by clicking its name.
8. HPC Portal System presents the Instrument Home View for the selected instrument.

Alternate Flows
None

Post-conditions
None

Requirements
1. System must implement a feature that enables Guest users to discover content by interacting with a wizard to provide answers to a series of questions that enable the HPC Portal System to present a filtered collection of relevant instruments to the user.
1.1. System shall present questions on a series of pages, with each page addressing one of the following top-level categories:
   1.1.1. Sector
   1.1.2. Structure
   1.1.3. Place
   1.1.4. People
   1.1.5. Product
   1.1.6. Within each top-level category, individual questions shall be organized into sub-categories that are defined by the CMS Administrator in the wizard’s configuration.

1.2. Questions shall be primarily, though not exclusively, of the following two (2) types:
   1.2.1. Questions that are answered with a simple Yes or No response.
   1.2.2. Questions that allow multiple responses in the form of checkboxes where user is expected to select all that apply.

1.3. Upon submission of responses, System shall prompt Registered Guest users to optionally provide a unique descriptive name to identify the scenario.

1.4. Upon submission of responses, if user has provided a descriptive name for the scenario, System shall save the completed scenario, making it available for Registered Guest users to recall later (see also Manage Wizard Scenarios use case).

1.5. Upon submission of responses, System shall validate that user has answered at least one question in one top-level category. No more than a single response in a single top-level category shall be required to generate wizard results.

1.6. Upon submission of responses, System shall present the Wizard Results View.
   1.6.1. The Wizard Results View shall present a list of all related instruments that are considered relevant to the scenario based on the wizard configuration.
      1.6.1.1. Related instruments shall be organized according to the wizard top-level and sub-categories defined in the wizard configuration.
      1.6.1.2. Related instruments shall be presented as hyperlinks to the Instrument Home View of the instrument they reference.

**Related GUI Elements**

- HPC Main Navigation Menu
- Wizard Scenario View
- Wizard Results View
- Instrument Home View
UC8: Download / Print Related Document

Goal
Enable a Guest user to download or print a related document for offline use.

Actors
Guest

Pre-conditions
A “printable” version of the related document has been published as a PDF.

Basic Flow
F1 – Download a Document

2. System presents the document in PDF format in the View as PDF Screen in a new window.
3. User clicks the Acrobat Reader Save Icon.
4. Adobe Acrobat Reader presents the Save As Dialog Box.
5. User selects desired options for saving file, and clicks “Save”.
6. PDF file is saved to user’s local hard drive.

Alternate Flows
A1 – Print a Document

2. System presents the document in PDF format in the View as PDF Screen in a new window.
3. User clicks the Acrobat Reader Print Icon.
4. Adobe Acrobat Reader presents the Print Dialog Box.
5. User selects desired print options, and clicks “Print”.
6. PDF file is printed on user’s local printer.

Post-conditions
None

Requirements
1.0 System must provide a feature that enables a Guest user to download or print a related document, for offline use.

1.1 System must provide a means of publishing PDF versions of related documents as alternate representations of their source documents which may be in another form (i.e. - HTML)
1.2 System must provide a means by which a user can print the PDF file.
1.3 System must provide a means by which a user can save a copy of the PDF file to their local hard drive.

Related GUI Elements
- Related Document View
- View in Printable/Downloadable Format Link
- View as PDF Screen
- Adobe Acrobat Reader Print Icon
- Adobe Acrobat Reader Save Icon
- Print Dialog Box
- Save As Dialog Box

External Dependencies
- Requires Adobe Acrobat Reader installed on user’s computer.
UC9: Exchange Application Data

Goal
Synchronize records between the HPC Portal System and a target Department System by transferring online application data submitted by a Registered Guest user from the HPC Portal System to a target Department System for processing.

Actors
HPC Portal System
Department System

Pre-conditions
Records exist in the HPC Portal System database that have not been synchronized with the target Department System.

Basic Flow
TBD

NOTE: This specification of this use case is intentionally incomplete and will remain so pending availability of details from appropriate stakeholders in COH. This detail, including the identification and specification of specific system interfaces will be provided at design time.

Alternate Flows
None

Post-conditions
Records are synchronized between the HPC Portal database and the target Department System.

Requirements
1. The System must provide a means to synchronize records between the HPC Portal System and one or more target Department Systems by transferring online application data submitted by a Registered User from the HPC Portal System to a target Department System for processing.

Related GUI Elements
None
**UC10: Login to Management Portal**

**Goal**
Provide access control for the Management Portal by authenticating a user as a valid *Agent* before granting access to the content and features of the Management Portal.

**Actors**
Agent

**Pre-conditions**
None

**Basic Flow**
1. User enters user name and password into the Management Portal Login Form and submits the form.
2. HPC Portal System authenticates user as a valid Agent and presents the Agent Dashboard View to user.

**Alternate Flows**
A1 – *User is a Content Manager.*
   1. User enters user name and password into the Management Portal Login Form and submits the form.
   2. HPC Portal System authenticates user as a valid Content Manager and presents the Content Manager Dashboard View to user.

A2 – *User is a CMS Administrator.*
   1. User enters user name and password into the Management Portal Login Form and submits the form.
   2. HPC Portal System authenticates user as a valid CMS Administrator and presents the CMS Administrator Dashboard View to user.

**Post-conditions**
User is authenticated as an Agent.

**Requirements**
1. System must provide access control for the Management Portal by authenticating users before granting access to the content and features of the Management Portal.
   1.1. System shall support three (3) user roles in in the Management Portal: Agent, Content Manager, CMS Administrator
   1.1.1. Agent users shall have access to the following Management Portal features:
      1.1.1.1. Chat with Guest
1.1.1.2. Manage Online Applications Received

1.1.2. Content Manager users shall have access to the following Management Portal Features:
   1.1.2.1. Create & Publish an Article
   1.1.2.2. Manage Taxonomy
   1.1.2.3. Manage Thesaurus

1.1.3. CMS Administrator users shall have access to the following Management Portal Features:
   1.1.3.1. Manage User Surveys
   1.1.3.2. Manage Online Forms
   1.1.3.3. Manage User Account
   1.1.3.4. Maintain Wizard

1.2. System must support assignment of multiple roles to a user.

Related GUI Elements

- Management Portal Login Form
- Agent Dashboard View
- Content Manager Dashboard View
- CMS Manager Dashboard View
UC11: Login to Private Portal

Goal
Provide access control for the Private Portal by authenticating a user as a valid Registered Guest before granting access to the content and features of the Private Portal.

Actors
Registered Guest

Pre-conditions
None

Basic Flow
1. User enters user name and password into the Private Portal Login Form and submits the form.
2. HPC Portal System authenticates user as a valid Registered Guest and allows access to the content and features of the HPC Private Portal.

Alternate Flows
A1 – Incomplete Profile
1. User enters user name and password into the Private Portal Login Form and submits the form.
2. HPC Portal System prompts user to complete their Account Profile.

A2 – User forgot password
1. User clicks the Forgot Password Link.
2. HPC Portal System sends an email message to user with instructions explaining how to reset their password.

A3 – User attempts to access Private Portal feature without first logging on to Private Portal
1. HPC Portal System informs user they must first login as a Registered Guest to gain access to the feature, and presents user with the Private Portal Login Form.
2. User enters user name and password into the Private Portal Login Form and submits the form.
3. HPC Portal System authenticates user as a Registered Guest and allows access to the content and features of the HPC Private Portal.

Post-conditions
User is authenticated as a Registered Guest.
Requirements

1. The System must provide access control for the Private Portal by authenticating users before granting access to the content and features of the Private Portal.
   1.1. System shall support only one (1) user role in the Private Portal: Registered Guest
      1.1.1. Registered Guest users shall have access to the following Private Portal features:
         1.1.1.1. Edit Account Profile
         1.1.1.2. Change Password
         1.1.1.3. Bookmark an Instrument
         1.1.1.4. Manage Bookmarks
         1.1.1.5. Save a Wizard Scenario
         1.1.1.6. Schedule an Event
         1.1.1.7. Create/Edit an Application
         1.1.1.8. Manage Application Attachments
         1.1.1.9. Submit an Online Application
         1.1.1.10. Manage Applications
         1.1.1.11. Download/Print an Offline Application

Related GUI Elements

Private Portal Login Form
**UC12: Logout of Management Portal**

*Goal*

Provide a secure exit from the Management Portal by invalidating an authenticated Agent user’s session and any related authentication tokens.

*Actors*

Agent  
Content Manager  
CMS Administrator

*Pre-conditions*

User is authenticated as an Agent, Content Manager, or CMS Administrator

*Basic Flow*

1. User clicks the Logout Link.  
2. HPC Portal System invalidates user’s session and returns user to the Management Portal Login Form.

*Alternate Flows*

None

*Post-conditions*

User is not authenticated as an Agent.

*Requirements*

1. System must provide a secure exit from the Management Portal by invalidating an authenticated Agent User’s session and any related authentication tokens.
   1.1. In the event an authenticated user does not actively logout, then System shall invalidate the user’s session after no more than 15 minutes of inactivity.

*Related GUI Elements*

Logout Link  
Management Portal Login Form
UC13: Logout of Private Portal

Goal
Provide a secure exit from the Private Portal by invalidating an authenticated Registered Guest user’s session and any related authentication tokens.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
1. User clicks the Logout Link.
2. HPC Portal System invalidates user’s session and returns user to the Home Page.

Alternate Flows
None

Post-conditions
User is not authenticated as a Registered Guest.

Requirements
1. System must provide a secure exit from the Private Portal by invalidating an authenticated Registered Guest user’s session and any related authentication tokens.
   1.1. In the event an authenticated user does not actively logout, then System shall invalidate the user’s session after no more than 15 minutes of inactivity.

Related GUI Elements
Home Page
UC14: Edit Account Profile

Goal
Enable a Registered Guest to edit and save the data in their own Account Profile.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
1. User clicks the “Edit My Profile” menu item in the My Account Menu.
2. HPC Portal System presents the Edit Profile View showing the user’s account profile data in an editable form presentation.
3. User edits their account profile by changing the values of existing data, or by entering additional data in fields that are blank or unanswered.
4. User clicks “Save” button.
5. HPC Portal System saves the edited data in the user’s account profile.
6. HPC Portal System presents a system message informing the user that their account profile changes have been saved.

Alternate Flows
A1 – User cancels the Edit My Profile action

   4. User clicks “Cancel” button.
   5. HPC Portal System does not save the edited data.
   6. HPC Portal System presents a system message informing the user that their account profile changes were cancelled.

Post-conditions
The user’s edited account profile data is saved in the HPC Portal System database.

Requirements
1. System must maintain account profile data for each Registered Guest user.
   1.1. The account profile shall contain the following data that is provided upon creation of a Registered Guest user account, and is NOT editable:
       1.1.1. First Name
       1.1.2. Last Name
       1.1.3. Email Address
1.2. The user may also optionally provide the following editable information which is not required and may be edited at any time:
   1.2.1. Company Name
   1.2.2. Address Line 1
   1.2.3. Address Line 2
   1.2.4. City
   1.2.5. State
   1.2.6. Zip Code
   1.2.7. Telephone Number

2. System must provide a means by which a Registered Guest can edit and save the editable data in their own Account Profile.
   2.1. System must allow user to cancel the Edit Account Profile action so that any changes made are not saved.

Related GUI Elements

My Account Menu
Edit Profile View
UC15: Manage Applications

Goal
Enable a Registered Guest to access previously saved incomplete applications for continued editing, determine the status of existing online applications that have been submitted, and delete previously saved incomplete applications that are no longer needed.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
Edit an Incomplete Application

1. User clicks the “My Applications” menu item in the My Account Menu.
2. System presents the Manage Applications View containing a list of previously saved incomplete or submitted applications, along with their statuses.
3. User clicks the “Continue Editing” button next to an incomplete application.
4. System responds by initiating the Create/Edit an Application use case.

Alternate Flows

A1 – Determine the Status of an Application

1. User clicks the “My Applications” menu item in the My Account Menu.
2. System presents the Manage Applications View containing a list of previously saved incomplete or submitted applications, along with their statuses.
3. User observes the status of an application.

A2 – Delete an Incomplete Application

1. User clicks the “My Applications” menu item in the My Account Menu.
2. System presents the Manage Applications View containing a list of previously saved incomplete or submitted applications, along with their statuses.
3. User clicks the “Delete” button next to an incomplete application.
4. System prompts user to confirm their intention to delete the application.
5. System deletes the application then presents a refreshed Manage Applications View. The deleted application no longer appears in the list of applications.

Post-conditions
None
Requirements

1. System must implement a Manage Applications View containing a list of the user’s previously saved incomplete applications and submitted online applications, along with their statuses.
   1.1. System shall present the following information for each application:
      1.1.1. Application Description containing the instrument name
      1.1.2. Date Last Modified
      1.1.3. Application Status
   1.2. System shall support the following statuses: Incomplete, Pending, Approved, Declined.
      1.2.1. “Incomplete” status is defined as an application that has not been submitted electronically.
      1.2.2. “Pending” status is defined as an application that has been submitted electronically, and is has not been approved or declined.
      1.2.3. “Approved” status is defined as an application that has been marked as approved by an Agent via the HPC Management Portal.
      1.2.4. “Declined” status is defined as an application that has been marked as declined by an Agent via the HPC Management Portal.

2. System must implement a feature that enables a Registered Guest to edit a previously saved incomplete application.
   2.1. System shall enforce that only applications having a status of “Incomplete” may be edited.

3. System must implement a feature that enables a Registered Guest to delete previously saved incomplete applications that are no longer needed.
   3.1. System shall enforce that only applications having a status of “Incomplete” may be deleted.
   3.2. System shall prompt user to confirm their intention to delete an application before it is deleted.

Related GUI Elements

My Account Menu
Manage Applications View
Edit Application View
UC16: Manage Application Attachments

Goal
Enable a Registered Guest to attach files to an application, view files attached to an application, download and delete files previously attached to an application.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
Attach a File to an Application

1. User clicks the “Attachments” button while viewing an application in the Edit Application View.
2. System presents the Manage Attachments View, having a list of existing attachments, if any, along with links to “Download” and “Delete” individual attachments and an “Add Attachment” button that enables the user to select a file to attach from their local hard drive.
3. User clicks “Add Attachment” button.
4. System presents the Attach File Dialog.
5. User navigates to and selects the desired file on their local hard drive and clicks “OK”
6. System presents the Manage Attachments View, refreshed to show the file in the list of attachments.

Alternate Flows
A1 – View Attachments

1. User clicks the “Attachments” button while viewing an application in the Edit Application View.
2. System presents the Manage Attachments View, having a list of existing attachments, if any, along with links to “Download” and “Delete” individual attachments and an “Add Attachment” button.

A2 – Download an Attachment

1. User clicks the “Attachments” button while viewing an application in the Edit Application View.
2. System presents the Manage Attachments View, having a list of existing attachments, if any, along with links to “Download Attachment” and “Delete Attachment” and an “Add Attachment” button.
3. User clicks the “Download Attachment” link.
4. System presents the Save As Dialog Box.
5. User provides and file name and selects a destination on their local hard drive and clicks “OK”.
6. File is downloaded and saved to user’s local hard drive.

A3 – Delete an Attachment

1. User clicks the “Attachments” button while viewing an application in the Edit Application View.
2. System presents the Manage Attachments View, having a list of existing attachments, if any, along with links to “Download” and “Delete” individual attachments and an “Add Attachment” button.
3. User clicks the “Delete Attachment” link.
4. System prompts user to confirm their intention to delete the attachment.
5. User confirms their intention to delete the attachment.
6. System deletes the attachment then presents the Manage Attachments View, refreshed to show the updated list of attachments that does not include the deleted attachment.

Post-conditions
None

Requirements

1. System must implement a feature that enables Registered Guest users to manage attachments to applications as follows:
   1.1. System must enable user to attach one or more files to an application by selecting and uploading files from their local hard drive.
   1.1.1. System must allow user to enter an optional comment that describes the purpose of the uploaded file.
   1.1.2. System must enforce file type restrictions; only the following file formats shall be allowed:
      1.1.2.1. GIF
      1.1.2.2. JPEG
      1.1.2.3. TIF
      1.1.2.4. PNG
      1.1.2.5. PDF
   1.1.3. System must enforce a maximum allowable file size for upload.
      1.1.3.1. The maximum allowable file size shall be 10 MB.
   1.1.4. System must scan uploaded files to test for the presence of malicious executable code.
      1.1.4.1. System must disallow uploading of any attachments in which malicious executable code is detected.
   1.1.5. System must enforce a maximum allowable attachments limit.
      1.1.5.1. The maximum allowable attachments limit for any single application shall be 15 attachments.
   1.2. System must enable user to view a list of the files that are attached to an application.
   1.3. System must enable user to download individual attachments to their local hard drive.
   1.4. System must enable user to delete individual files that are attached to an application.
1.4.1. Before deleting any attached file, System shall prompt user to confirm their intention to delete the file.

**Related GUI Elements**

- Edit Application View
- Manage Attachments View
- Attach File Dialog
UC17: Manage Bookmarks

Goal
Enable a Registered Guest to view bookmarks, delete bookmarks, and recall instruments referenced by bookmarks.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
Recall a Bookmarked Instrument

1. User clicks the “My Bookmarks” menu item in the My Account Menu.
2. System presents the Manage Bookmarks View containing a list of all existing bookmarks that are identified by the name of the instrument they reference.
3. User clicks on the name of a bookmark.
4. System presents the Instrument Home View for the instrument referenced by the bookmark.

Alternate Flows
A1 – View All Bookmarks

1. User clicks the “My Bookmarks” menu item in the My Account Menu.
2. System presents the Manage Bookmarks View containing a list of all existing bookmarks that are identified by the name of the instrument they reference.

A2 – Delete a Bookmark

1. User clicks the “My Bookmarks” menu item in the My Account Menu.
2. System presents the Manage Bookmarks View containing a list of all existing bookmarks that are identified by the name of the instrument they reference.
3. User clicks the “Delete” link next to the bookmark they wish to delete.
4. System prompts user to confirm their intention to delete the bookmark.
5. User confirms their intention.
6. System deletes the bookmark.

Post-conditions
None
**Requirements**

1. System must implement a feature that enables a Registered Guest to manage bookmarks as follows:
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must implement a Manage Bookmarks View that presents a list of all bookmarks created by the user.
      1.2.1. Bookmarks shall be identified by the name of the instruments they reference.
      1.2.2. Bookmarks shall be listed in ascending alphabetical order.
   1.3. System must provide a means by which the user can delete individual bookmarks.
      1.3.1. System must prompt user to confirm their intention to delete a bookmark before deleting it.
   1.4. System must provide a means by which the user can recall a bookmarked instrument by clicking on a listed bookmark in the Manage Bookmarks View.
      1.4.1. Clicking a bookmark shall navigate to the Instrument Home View for the instrument referenced by the bookmark.

**Related GUI Elements**

Manage Bookmarks View
Instrument Home View
UC18: Manage Online Applications Received

Goal
Enable an Agent to view, print, and update the status of online applications that have been received.

Actors
Agent

Pre-conditions
User is authenticated as an Agent.

Basic Flow
View an Application

1. Agent clicks the Manage Applications Icon in the Agent Dashboard View.
2. System presents the Find Application View showing a list of online applications received. Each application is identified by an Application Reference Number (ARN), the submitting user’s name and the name of the instrument that is being applied for, and includes the date it was received, and its status. There is an option to filter applications based on their status, a search form to search for applications using all or part of the ARN, submitting user’s name or email address.
3. Agent finds the desired application by browsing the list, filtering the list, or by entering all or part of a searchable value in the search form.
4. Agent clicks the ARN of an application.
5. System presents the Manage Single Application View which displays the application data submitted by the submitting user in read-only form on a single screen, along with a simple form for setting application status, and a list of attachments, if any, as links to the attachments.

Alternate Flows
A1 – Print an Application

1. While viewing an application in the Manage Single Application View, user clicks the “View in Printable Format” link.
2. System generates a PDF file containing the application data.
3. System presents the PDF file in the View as PDF Screen in a new window.
4. User clicks the Acrobat Reader Print Icon.
5. Adobe Acrobat Reader presents the Print Dialog Box.
6. User selects desired print options, and clicks “Print”.
7. Application PDF file is printed on user’s local printer.

A2 – View an Attachment
1. While viewing an application in the Manage Single Application View, user clicks on the name of an attachment.
2. System generates a PDF version of the attachment.
3. System presents the PDF file in the View as PDF Screen in a new window.

A3 – Print an Attachment

1. While viewing an attachment in the View as PDF Screen, user clicks the Acrobat Reader Print Icon.
2. Adobe Acrobat Reader presents the Print Dialog Box.
3. User selects desired print options, and clicks “Print”.
4. Attachment PDF file is printed on user’s local printer.

A4 – Download an Attachment

1. While viewing an attachment in the View as PDF Screen, user clicks the Acrobat Reader Save Icon.
2. System presents the Save As Dialog Box.
3. User provides and file name and selects a destination on their local hard drive and clicks “OK”.
4. File is downloaded and saved to user’s local hard drive.

A5 – Update Status of an Application

1. While viewing an application in the Manage Single Application View, user sets the status by selecting a value from the Status Form, and clicks “Save”.
2. System presents a message to notify user the status has been successfully updated.

Post-conditions

None

Requirements

1.0 System must implement a feature that enables an Agent to manage online applications that have been received:
   1.1 System must verify that user is authenticated as an Agent.
   1.2 System shall provide a list of online applications that have been received.
      1.2.1 The list shall be filtered by department to include only applications for instruments that Agent has review authority over.
      1.2.2 The list shall be presented as a table that includes the following columns:
         1.2.2.1 Application Reference Number (ARN)
         1.2.2.2 Submitting user’s name
         1.2.2.3 Name of the instrument being applied for
         1.2.2.4 Date the application was received
         1.2.2.5 Status of application
      1.2.3 Each column of the table shall be sortable.
1.2.4 System must enable Agent to filter the list by Status

1.3 System must implement a feature that enables Agent to quickly find a specific application by entering all or part of any of the following values in a search form:
   1.3.1 ARN
   1.3.2 Submitting user’s name
   1.3.3 Submitting user’s email address

1.4 System must implement a feature that enables an Agent to view individual online applications.
   1.4.1 The feature must enable the Agent to select and view a single application.
   1.4.2 The application data shall be presented in a single screen.
   1.4.3 The application data shall be presented in a read-only manner to prevent accidental editing of the data.

1.5 System must provide a means by which Agent can print an individual application.

1.6 System must provide a means by which Agent can view a list of attachments to an application, if any.

1.7 System must provide a means by which Agent can view individual attachments.

1.8 System must provide a means by which Agent can print individual attachments.

1.9 System must provide a means by which Agent can update the status of an application.

Related GUI Elements

Agent Dashboard View
Manage Applications Icon
Find Application View
Manage Single Application View
View in Printable/Downloadable Format Link
View as PDF Screen
Adobe Acrobat Reader Print Icon
Adobe Acrobat Reader Save Icon
Print Dialog Box
Save As Dialog Box
**UC19: Manage Online Forms**

**Goal**
Enable a *CMS Administrator* to create and publish online forms, edit existing online forms, and delete previously created online forms that are no longer required.

**Actors**
CMS Administrator

**Pre-conditions**
User is authenticated as a CMS Administrator

**Basic Flow**
Create and Publish an Online Form

1. CMS Administrator launches Form Manager View.
2. CMS Administrator creates a new form by launching the Form Editor View.
3. CMS Administrator provides a name for the form, then selects form controls from a palette of available controls.
4. CMS Administrator defines the nature, limits, and values for any field level data validation that is required.
5. CMS Administrator edits and configures end-user messages for on-screen and email confirmations, if any.
6. CMS Administrator edits and configures internal email notifications, if any.
7. CMS Administrator maps form fields to database(s) as required.
8. CMS Administrator publishes the form to make it live on the HPC Portal Site.

**Alternate Flows**

A1 – Edit Existing Online Form

1. CMS Administrator launches Form Manager View.
2. CMS launches the Form Editor View to modify an existing form.
3. CMS Administrator edits the existing form modifying form controls, field level data validation rules, end-user messages for on-screen and email confirmations, internal email notifications, and/or database mappings, as required.
4. CMS Administrator publishes the changes to make them live on the HPC Portal Site.

A2 – Delete an Online Form

1. CMS Administrator launches Form Manager View.
2. CMS Administrator clicks a “Delete” button next to the name of the form they wish to delete.
3. System prompts CMS Administrator to confirm their intention to delete the form.
4. CMS Administrator confirms.
5. System deletes the form.

Post-conditions
None

Requirements
1.0 System must implement a Manage Online Forms feature as follows:
   1.1 System must verify that user is authenticated as a CMS Administrator
   1.2 System must implement a Form Manager View in which CMS Administrator can view a list of all existing online forms.
   1.3 System must provide a Form Editor that enables CMS Administrator to create and publish online forms.
      1.3.1 System must enable CMS Administrator to select form controls from a palette of available controls.
      1.3.2 System must enable CMS Administrator to define the type, limits, and values of any field-level data validation that is required.
      1.3.3 System must enable CMS Administrator to edit and configure end-user messages for both on-screen and email confirmations.
      1.3.4 System must enable CMS Administrator to edit and configure internal email notifications.
      1.3.5 System must enable CMS Administrator to map form fields to fields in the CMS database, or other databases.
      1.3.6 System must enable CMS Administrator to publish or unpublish forms to add or remove them from the HPC Portal Site when needed.
      1.3.7 System must enable CMS Administrator to edit existing online forms.
      1.3.8 System must enable CMS Administrator to delete online forms that are no longer needed.

Related GUI Elements
Form Manager View
Form Editor View
UC20: Manage Taxonomy & Thesaurus

Goal
Enable a Content Manager to create and edit a controlled vocabulary of terms that organizes instruments and their related content into categories and to edit metadata about terms in the taxonomy to include, as necessary, alternative terms and pointers to related terms. The resulting taxonomy is employed in the implementation of a browseable index of content to support the Browse Content by Taxonomy use case. The resulting thesaurus is employed in the implementation of a search engine index of content to support the Search Content by Keyword use case.

Actors
Content Manager

Pre-conditions
User is authenticated as a Content Manager.

Basic Flow
1. Content Manager launches the Manage Taxonomy/Thesaurus View from the Content Manager Dashboard.
2. System presents a list of existing terms, if any.
3. Content Manager navigates to the level of the taxonomy where they wish to add a new term.
4. Content Manager adds a new term, then adds narrower terms (NT) if desired.
5. Content Manager adds related terms (RT) and non-preferred terms (NPT), if any.

Alternate Flows
None

Post-conditions
None

Requirements
1. System must implement a feature that enables a Content Manager to create and edit a controlled vocabulary of terms (the taxonomy) that organizes instruments and their related content into categories, and to edit metadata about terms in the taxonomy to include, as necessary, alternative terms and pointers to related terms.
   1.1. System must provide support for the management of the following five principal relations or functions between thesaurus terms, as defined by standard ISO 2788:
      1.1.1. USE = use
      1.1.2. UF = use for
      1.1.3. BT = broader term
      1.1.4. NT = narrower term
1.1.5. RT = related term

**Related GUI Elements**

- Manage Taxonomy/Thesaurus View
- Content Manager Dashboard
**UC21: Manage User Accounts**

**Goal**
Enable a *CMS Administrator* to create, enable, disable, and delete *user accounts*.

**Actors**
CMS Administrator

**Pre-conditions**
User is authenticated as a CMS Administrator

**Basic Flow**
Create a New User Account

1. CMS Administrator launches the User Manager View from the CMS Administrator Dashboard.
2. CMS Administrator creates a new user account by providing a user name, initial password, and email address.
3. CMS Administrator assigns user roles to the new user by selecting from one or more groups predefined groups/roles (Guest, Registered Guest, Agent, Content Manager, CMS Administrator).
4. CMS Administrator saves the new user account.

**Alternate Flows**

**A1 – Enable/Disable a User Account**

1. CMS Administrator launches the User Manager View from the CMS Administrator Dashboard.
2. CMS Administrator selects a user account from a list of existing accounts.
3. CMS Administrator sets an enabled account to disabled state (or alternately sets a disabled account to enabled state).

**A2 – Delete a User Account**

1. CMS Administrator launches the User Manager View from the CMS Administrator Dashboard.
2. CMS Administrator selects a user account from a list of existing accounts.
3. CMS Administrator clicks “Delete Account”.
4. System prompts user to confirm their intention to delete the account.
5. CMS Administrator affirms their intention to delete the account.
6. System deletes the user account.

**Post-conditions**
None
Requirements

1. System must implement a User Manager feature that enables a CMS Administrator to manage user accounts.
   1.1. System must verify that user is authenticated as a CMS Administrator before allowing access to the User Manager feature.
   1.2. System must provide a means by which CMS Administrator can create new user accounts.
      1.2.1. User accounts shall employ a user’s email address as their user name.
      1.2.2. User accounts must include the following data:
         1.2.2.1. User’s first name
         1.2.2.2. User’s last name
         1.2.2.3. User’s email address
         1.2.2.4. User’s password
   1.3. System must provide a means by which CMS Administrator can disable user accounts.
      1.3.1. System must provide a means by which CMS Administrator can re-enable user accounts that have been disabled.
   1.4. System must provide a means by which CMS Administrator can delete user accounts.
   1.5. System must support the specification of user groups/roles for access control purposes.
      1.5.1. System must implement the following user groups/roles:
         1.5.1.1. Guest
         1.5.1.2. Registered Guest
         1.5.1.3. Agent
         1.5.1.4. Content Manager
         1.5.1.5. CMS Administrator
         1.5.1.6. An undetermined number of additional groups that associate an Agent or Content Manager with one or more departments for whom they have application review or content management authority.
   1.6. System must enforce minimum password strength rules definable by CMS Administrator.
   1.7. System must implement a self-service lost password recovery feature that provides a means by which a user can recover a lost password without the intervention of a CMS Administrator.

Related GUI Elements

CMS Administrator Dashboard
User Manager View
UC22: Manage User Surveys

Goal
Enable a CMS Administrator to create, publish, edit, and delete simple user surveys, and view a summary report of the results of surveys published.

Actors
CMS Administrator

Pre-conditions
User is authenticated as a CMS Administrator.

Basic Flow
Create & Publish a User Survey
1. CMS Administrator launches the Survey Manager View from the CMS Administrator Dashboard.
2. CMS Administrator creates a new user survey.
3. System presents the Survey Editor View.
4. CMS Administrator provides a name for the new user survey.
5. CMS Administrator adds questions to the user survey by selecting and configuring desired question/control types from a palette of available controls.
6. CMS Administrator saves the new user survey.

Alternate Flows
A1 – Edit Existing User Survey
1. CMS Administrator launches the Survey Manager View from the CMS Administrator Dashboard.
2. System presents a list of existing user surveys.
3. CMS Administrator selects an existing user survey to edit.
4. System presents the selected user survey in the Survey Editor View.

A2 – Delete a User Survey
1. CMS Administrator launches the Survey Manager View from the CMS Administrator Dashboard.
2. System presents a list of existing user surveys.
3. CMS Administrator selects an existing user survey and clicks “Delete”.
4. System prompts CMS Administrator to confirm their intention to delete the user survey.
5. CMS Administrator confirms intention to delete the user survey.
6. System deletes the user survey and refreshes the list of existing user surveys that now does not contain the deleted user survey.

A3 – View Results of a Survey
1. CMS Administrator launches the Survey Manager View from the CMS Administrator Dashboard.
2. System presents a list of existing user surveys.
3. CMS Administrator selects an existing user survey and clicks “View Results”.
4. System presents the Survey Results View for the selected user survey.

Post-conditions
None

Requirements
1. System must implement a Survey Manager feature as follows:
   1.1. System must verify that user is authenticated as a CMS Administrator before allowing access to the Survey Manager feature.
   1.2. System must provide a means by which CMS Administrator can create new users surveys using an editor by choosing question types from a palette of pre-defined types.
   1.3. System must provide a means by which CMS Administrator can edit and existing user survey
   1.4. System must provide a means by which CMS Administrator can publish or unpublish existing user surveys to add or remove them from the HPC Portal website.
   1.5. System must provide a means by which CMS Administrator can delete existing user surveys.
   1.6. System must provide a means by which CMS Administrator can view a summary report of the results of a user survey.

Related GUI Elements
CMS Administrator Dashboard
Survey Manager View
Survey Editor View
Survey Results View
**UC23: Schedule an Event**

**Goal**
Enable a *Registered Guest* to schedule an event of a pre-defined type involving a pre-defined schedulable *resource*.

**Actors**
Registered Guest  
HPC Scheduler System

**Pre-conditions**
User is authenticated as a Registered Guest

**Basic Flow**
1. Registered Guest initiates the use case by clicking “Schedule” in the HPC Main Navigation Menu.
2. System redirects user to the “Home” page of the HPC Scheduler System, a separate system that is external to the HPC Portal System.
3. The use case ends.

**Alternate Flows**
None

**Post-conditions**
None

**Requirements**
1. System must provide a link to the HPC Scheduler System to enable Registered Guest users to schedule events involving schedulable resources.  
   1.1. The link shall be a simple link from the “Schedule” item in the HPC Main Navigation Menu to the URL of the HPC Scheduler System “Home” page.

**Related GUI Elements**
HPC Main Navigation Menu  
Schedule Event View
UC24: Search Content by Keyword

Goal
Enable a Guest user to quickly locate and navigate to content of interest by submitting keywords to a search engine.

Actors
Guest

Pre-conditions
None

Basic Flow
1. A Guest user initiates the use case by entering one or more keywords into the Keyword Search Form and clicking the accompanying search button.
2. System responds by presenting the Search Results View that contains a list of results. Among the results are not just those that matched the submitted keyword(s) exactly, but also those that are related to the submitted terms as defined by Related Terms (RTs) and Non-Preferred Terms (NPTs) in the thesaurus. Results are presented as a page title that is a hyperlink to the page it references.
3. Guest browses the results and ultimately selects one by clicking on its title.
4. System responds by navigating to the content that is referenced by the link in the search results.

Alternate Flows
None

Post-conditions
None

Requirements
1. System must implement a Search Content by Keyword feature as follows:
   1.1. System must implement a search engine that indexes all indexable content in the HPC Portal website.
   1.2. Search engine must suggest search results based on both exact match results and related terms as follows:
      1.2.1. Search engine must suggest search results in which an exact match for the submitted search term(s) is found.
      1.2.2. Search engine must employ the thesaurus to suggest search results based on Related Terms (RTs) and Non-Preferred Terms (NPTs) that may be different but still related to the keywords entered by the user.
Related GUI Elements

Keyword Search Form
Search Results View
UC25: Submit an Electronic Signature

Goal
Enable a Registered User to provide an electronic signature as part of an online application.

Actors
Registered Guest
E-Signature Processing System

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
1. The use case is initiated by HPC Portal System upon submission of an online application by a Registered Guest in the Submit an Online Application use case.
2. The HPC Portal System redirects the Registered Guest to the E-Signature Processing System, an external system that is hosted by a third-party E-Signature Processor.
3. The E-Signature Processing System responds by presenting signature instructions to Registered Guest, and facilitating the online signature process according to their practice, then on completion of the signature process, redirects Registered Guest back to the HPC Portal System to complete the Submit an Online Application use case.

Alternate Flows
None

Post-conditions
None

Requirements
1. System shall be integrated with an as-yet unidentified third party E-Signature Processing System.
2. System shall initiate that system’s electronic signature process upon submission by a Registered Guest of any application requiring a signature.
3. To ensure legal validity of electronic signatures, implementation of the electronic signature process shall be compliant with relevant provisions of the U.S Electronic Signatures in Global and National Commerce Act (ESIGN) and the Uniform Electronic Transactions Act (UETA).

Related GUI Elements
None
**UC26: Submit an Online Application**

*Goal*
Enable a *Registered Guest* to submit an *application* electronically.

*Actors*
Registered Guest

*Pre-conditions*
1. User is authenticated as a Registered Guest
2. *Instrument* application is eligible for online submission.

*Basic Flow*
1. The use case is initiated when a Registered Guest clicks the “Submit Now” button from the Edit Application View in the Create/Edit an Application use case.
2. HPC Portal System validates the data submitted by Registered Guest and if any of the information submitted fails validation tests, then HPC Portal System notifies the Registered Guest and requires them to resubmit with corrected information.
3. If an electronic signature is required, HPC Portal System initiates the Submit an Electronic Signature use case.
4. Upon completion of the Submit an Electronic Signature use case, and successful submission of the completed online application form with valid data, HPC Portal System responds by presenting a system message to the Registered Guest informing them of successful submission of their online application.

*Alternate Flows*
None

*Post-conditions*
None

*Requirements*
1. System must implement a Submit Online Application feature as follows:
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System shall maintain information about whether each instrument is or is not eligible for online application.
   1.3. System must verify that instrument application is eligible for online submission, as not all instrument applications are.
   1.4. For every instrument that is eligible for online application, System shall maintain a unique online form.
1.4.1. System shall enable a Registered Guest to submit an eligible application electronically by completing and submitting the online form containing the information required for the application process.

1.4.2. System must support multi-page forms.

1.4.3. System must support the use of all of the following field types in an online form:

   - 1.4.3.1. Simple Text
   - 1.4.3.2. Large Text Area
   - 1.4.3.3. Radio Button
   - 1.4.3.4. Checkbox

1.4.4. System must incorporate the use of a CAPTCHA-style challenge mechanism to prevent SPAM by ensuring that forms are submitted by human users.

1.4.5. System must enforce the following types of field-level validation rules:

   - 1.4.5.1. Required fields
   - 1.4.5.2. Correctly formatted email addresses
   - 1.4.5.3. Correctly formatted telephone numbers
   - 1.4.5.4. Numeric only values
   - 1.4.5.5. Alphanumeric only values
   - 1.4.5.6. Character masks

1.4.6. When validation fails, System shall indicate why and provide a message that guides the user to correct resolution.

1.5. When online signature is required with an application, System must initiate the Submit an Electronic Signature use case.

**Related GUI Elements**

Instrument Home View
Online Application Form View
UC27: Submit an Online Payment

Goal

Enable a Registered Guest to submit a payment online, when required, to accompany an online application.

Actors

Registered Guest

Pre-conditions

User is authenticated as a Registered Guest
Instrument requires payment

Basic Flow

1. The use case is initiated by HPC Portal System when payment is required upon submission of an online application by a Registered Guest in the Submit an Online Application use case.
2. The HPC Portal System redirects the Registered Guest to the Payment Processing System, an external system that is hosted by a third-party Online Payment Processor.
3. The Payment Processing System responds by presenting payment instructions to Registered Guest, and facilitating the online payment process according to their practice. On successful completion of the payment process, the Payment Processing System redirects Registered Guest back to the HPC Portal System to complete the Submit an Online Application use case.

Alternate Flows

None

Post-conditions

None

Requirements

1. System must implement a feature that enables a Registered Guest to submit a payment online, when required, to accompany an online application as follows:
   1.1. System must maintain for each instrument, an indicator of whether the instrument requires payment.
   1.2. System must integrate with the third-party payment processing service of Chase Bank and their Merchant Service API.
   1.3. Upon successful submission of an online application for an instrument that requires payment, System shall redirect Registered Guest to the third-part payment process to complete the payment transaction.
2. System implementation must meet requirements of Payment Card Industry (PCI) Data Security Standard and must be certifiable following audit by a Payment Application Qualified Security Assessor (PA-QSA) as PCI compliant.

*Related GUI Elements*

None
UC28: View Instrument Home

Goal

Enable a Guest to view all content related to a specific instrument and to perform key actions associated with the instrument in a single place.

Actors

Guest

Pre-conditions

None

Basic Flow

1. A Guest initiates the use case by clicking a hyperlink to a particular instrument in the Wizard Results View, the Search Results View, or the Browse Content by Taxonomy View.
2. HPC Portal System responds by presenting the Instrument Home View that is a one-place hub for information and actions related to the instrument of interest. The Instrument Home View provides easy access to an overview of information about the instrument, FAQs related to the instrument, tools to apply and renew online, tools to schedule inspections or other events related to the instrument, and contact information for individuals or departments who can assist with matters related to the instrument.

Alternate Flows

None

Post-conditions

None

Requirements

1. System must implement a View Instrument Home feature that enables a Guest to view all content related to a specific instrument and to perform key actions associated with the instrument in a single place as follows:
   1.1. For each instrument, System shall implement an Overview page containing the following standard information:
      1.1.1. Instrument Name
      1.1.2. Instrument Description
      1.1.3. Quick Facts Summary, including:
         1.1.3.1. Instrument Type
         1.1.3.2. Period of instrument’s validity
         1.1.3.3. Whether inspection is required
         1.1.3.4. Whether renewal is required
1.1.3.5. Summary of Fees, including:
   1.1.3.5.1. Original Cost
   1.1.3.5.2. Administrative Fee
   1.1.3.5.3. Late Fee
   1.1.3.5.4. Renewal Cost

1.1.4. A detailed explanation of the application and/or renewal process.

1.1.5. A detailed explanation of any variations or exceptions in the instrument requirements or in the application and/or renewal processes.

1.1.6. A detailed explanation of inspection requirements, if any.

1.1.7. A reference to the statutory authority for the instrument
   1.1.7.1. If the statute that authorizes the instrument is available online, the statutory authority reference shall be linked to the actual statute.

1.2. For each instrument, System shall present a collection of Frequently Asked Questions that are related to the instrument.
   1.2.1. System shall maintain collections of FAQs for each instrument.
   1.2.2. System shall present FAQs in a categorized presentation when there are many FAQs related to an instrument.

1.3. For each instrument, System shall present an “Apply/Renew” page that explains in detail the application and/or renewal processes.
   1.3.1. If instrument is eligible for online application, then System shall provide a link to the online application form.
   1.3.2. System shall present links to downloadable application forms for offline application.
   1.3.3. System shall present links to related downloadable document, if any.

1.4. For each instrument, System shall present a “Schedule” page that explains in detail how to schedule inspections or other events related to the instrument.
   1.4.1. If event can be scheduled online, System shall provide a link to the HPC Scheduler System.
      1.4.1.1. When link is provided to the HPC Scheduler System, link shall be a deep link that navigates directly to the page where user can schedule the inspection or event without requiring additional navigation.

1.5. For each instrument, System shall present a “Contact” page that includes all relevant contact information related to the instrument.

Related GUI Elements
- Wizard Results View
- Search Results View
- Browse Content by Taxonomy
- Instrument Home View
UC29: Save Wizard Scenario

Goal
Enable a Registered Guest to save the in-process but incomplete data set provided by them through their interaction with the wizard so they can resume and ultimately complete the interaction at a later time.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
1. Registered Guest initiates the use case by clicking the Save Scenario Button at the bottom of any page in Wizard Scenario View.
2. The HPC Portal System presents the Save Wizard Scenario View, prompting Registered Guest to enter a descriptive name for the scenario.
3. Registered Guest enters a descriptive name for the scenario and clicks “Save”.
4. The HPC Portal System saves the collection of scenario data already entered by the user and notifies the user of successful completion of the operation.

Alternate Flows
A1 – Scenario Name Is Not Unique
1. Registered Guest enters a descriptive name for the scenario that has already been used, and clicks “Save”.
2. HPC Portal System does not save the scenario.
3. HPC System notifies the user that a scenario of that name already exists and prompts the user to enter a unique name.

Post-conditions
Wizard Scenario is saved in database and associated with the user’s account.

Requirements
1. The System must implement a feature that provides the capability for a Registered Guest User to save a Wizard Scenario as follows:
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must allow for saving up to 20 unique scenarios.
   1.3. System must validate scenario name and enforce that only unique scenario names are allowed.
1.4. The feature must save the in-process but incomplete data set provided by the user through their interaction with the wizard so they can resume and ultimately complete the interaction at a later time.

**Related GUI Elements**

Wizard Scenario View
Save Scenario Button
Save Wizard Scenario View
UC30: Change Password

Goal
Enable a Registered Guest user to change their existing password.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
1. A Registered Guest user initiates the use case by clicking the “Change Password” menu item in the My Account Menu.
2. The HPC Portal System presents the Edit Password View having a field for entry of the current password, and two fields for entry and verification of a new password.
3. Registered Guest enters their current password, and enters a new password twice then clicks “Save”.
4. The HPC Portal System verifies that the current password is correct, and that the new password matches in both fields. If all validates correctly, the System saves the new password and presents a system message informing the user that their password was successfully updated.

Alternate Flows
A1 – Incorrect Current Password
1. If the current password entered by the user doesn’t match the user’s current password, the HPC Portal System does not save the new password, and instead presents a system message that informs the user that the current password entered was incorrect, then prompts the user to try again.

A2 – New Passwords Don’t Match
1. If the new passwords entered by the user don’t match, the HPC Portal System does not save the new password, and instead presents a system message that informs the user that the new passwords entered did not match, then prompts the user to try again.

Post-conditions
None
Requirements

1. System must implement a feature that enables a Registered Guest user to change their existing password.
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must require user to enter the correct existing password before allowing them to change their password.
   1.3. System must require double entry of the desired new password.
   1.4. System must validate the password entered as follows:
      1.4.1. Both instances of the password entry must match.
      1.4.2. Password must meet the following criteria:
         1.4.2.1. Minimum length of 8 characters
         1.4.2.2. Must contain mix of uppercase and lowercase characters
         1.4.2.3. Must contain at least 1 number
         1.4.2.4. Must not contain any portion of the User ID

Related GUI Elements

My Account Menu
Edit Password View
UC31: Create/Edit an Application

Goal
Enable a Registered Guest to create a new application and edit existing applications that have not been submitted.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
Create & Submit a New Application

1. A Registered Guest initiates the use case by clicking the “Apply Now” button on the Apply/Renew page of the Instrument Home View for a particular instrument of interest.
2. HPC Portal System responds by presenting the Edit Application View (an online form) for the instrument application.
3. Registered Guest enters data in the provided fields and submits the completed form by clicking the “Submit Now” button, thereby initiating the Submit an Online Application use case.

Alternate Flows
A1 – Create & Save a New Application

1. A Registered Guest initiates the use case by clicking the “Apply Now” button on the Apply/Renew page of the Instrument Home View for a particular instrument of interest.
2. HPC Portal System responds by presenting the Edit Application View (an online form) for the instrument.
3. Registered Guest enters data in the provided fields and saves the form that may or may not be complete by clicking the “Save & Finish Later” button.
4. HPC Portal System responds by validating and then saving the data submitted by the user, and presents the Manage Applications View containing a list of previously saved incomplete or submitted applications, along with their statuses. The list now contains an entry for the newly saved application, and a system message confirms success of the operation.

A2 – Edit & Submit an Existing Application

1. A Registered Guest initiates the use case by clicking the “Continue Editing” button next to an existing application in the Manage Applications View.
2. HPC Portal System responds by presenting the Edit Application View (an online form), pre-populated with data previously entered by the user.
3. Registered Guest enters data in the provided fields and submits the completed form by clicking the “Submit Now” button, thereby initiating the Submit an Online Application use case.

A3 – Edit & Save an Existing Application

1. A Registered Guest initiates the use case by clicking the “Continue Editing” button next to an existing application in the Manage Applications View.
2. HPC Portal System responds by presenting the Edit Application View (an online form), pre-populated with data previously entered by the user.
3. Registered Guest enters data in the provided fields and saves the form that may or may not be complete by clicking the “Save & Finish Later” button.
4. HPC Portal System responds by presenting the Manage Applications View containing a list of previously saved incomplete or submitted applications, along with their statuses. The list now contains an entry for the newly saved application, and a system message confirms success of the operation.

Post-conditions

None

Requirements

1. System must implement a feature that enables a Registered Guest to create and edit applications online.
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must implement instrument applications as editable online forms.
   1.3. System must enable the creation of new applications.
   1.4. System must support the ability to save an incomplete application for continued editing at a later time.
      1.4.1. System shall use the name of the instrument and type of application (new, renewal) to identify incomplete applications.
   1.5. System must support the ability to recall an existing incomplete application that was previously saved for continued editing.
   1.6. Upon saving or submitting any form, System shall validate data entry according to rules specified by CMS Administrator at the time of each form’s authoring.

Related GUI Elements

Instrument Home View
Edit Application View
Manage Applications View
UC32: Download / Print an Offline Application

**Goal**

Enable a *Registered Guest* to download or print an *application* and its attachments, if any, for offline use, including for submission as an *offline application*.

**Actors**

Registered Guest

**Pre-conditions**

User is authenticated as a Registered Guest

**Basic Flow**

Download an Offline Application

1. While viewing an application in the Edit Application View, user clicks the View in Printable/Downloadable Format Link.
2. System generates a PDF file containing the application form that is pre-filled with the data that has been entered or otherwise provided by the user, and any attachments that have been uploaded by the user.
3. System presents the PDF file in the View as PDF Screen in a new window.
4. User clicks the Acrobat Reader Save Icon.
5. Adobe Acrobat Reader presents the Save As Dialog Box.
6. User selects desired options for saving file, and clicks “Save”.
7. Offline application PDF file is saved to user’s local hard drive.

**Alternate Flows**

A1 – Print an Offline Application

4. User clicks the Acrobat Reader Print Icon.
5. Adobe Acrobat Reader presents the Print Dialog Box.
6. User selects desired print options, and clicks “Print”.
7. Offline application PDF file is printed on user’s local printer.

**Post-conditions**

None

**Requirements**

1. System must provide a feature that enables a Registered Guest to download or print an application and its attachments, if any, for offline use, including for submission as an offline application.
   1.1. System must verify that user is authenticated as a Registered Guest.
1.2. System must generate a PDF file that containing the application form that is pre-filled with the data that has been entered or otherwise provided by the user, and any attachments that have been uploaded by the user.

1.3. System must provide a means by which a user can print the PDF file that is generated.

1.4. System must provide a means by which a user can save a copy of the PDF file to their local hard drive.

**Related GUI Elements**

- Edit Application View
- View in Printable/Downloadable Format Link
- View as PDF Screen
- Adobe Acrobat Reader Print Icon
- Adobe Acrobat Reader Save Icon
- Print Dialog Box
- Save As Dialog Box

**External Dependencies**

Requires Adobe Acrobat Reader installed on user’s computer.
UC33: View Related Document

Goal
Enable a Guest to view a related document that is related to a particular instrument of interest.

Actors
Guest

Pre-conditions
None

Basic Flow
2. HPC Portal System presents the Related Document View in a new window.
3. The use case ends.

Alternate Flows
None

Post-conditions
None

Requirements
1. System must implement a feature that enables Guest users to view supplementary documents that are related to a particular instrument of interest to them.
   1.1. System must present a list of related documents in the Instrument Home View.
   1.2. When user clicks the title of a related document in the Instrument Home View, system shall present the Related Document View in a new browser window.
   1.3. System must enable Content Managers to manage related documents in the Management Portal.
       1.3.1. System must authenticate user as a valid Content Manager before allowing access to the Manage Related Documents feature of the Management Portal.
       1.3.2. System must enable Content Manager to associated related documents with a particular instrument by selecting documents from a collection of all available documents.

Related GUI Elements
Related Document View

External Dependencies
Requires Adobe Acrobat Reader installed on user’s computer.
UC34: Manage Wizard Scenarios

Goal
Enable a Registered Guest to access previously saved wizard scenarios for continued editing, rename an existing wizard scenario, or delete wizard scenarios that are no longer needed.

Actors
Registered Guest

Pre-conditions
User is authenticated as a Registered Guest

Basic Flow
Recall a Wizard Scenario
1. A Registered Guest user initiates the use case by clicking the “My Scenarios” menu item in the My Account Menu.
2. System presents the Manage Wizard Scenarios View containing a list of all existing scenarios.
3. User clicks on the name of a scenario.
4. System presents the Wizard Scenario View for the scenario the user selected.

Alternate Flows
A1 – View All Scenarios
1. User clicks the “My Scenarios” menu item in the My Account Menu.
2. System presents the Manage Wizard Scenarios View containing a list of all existing scenarios.
3. The use case ends.

A2 – Delete a Scenario
1. User clicks the “My Scenarios” menu item in the My Account Menu.
2. System presents the Manage Wizard Scenarios View containing a list of all existing scenarios.
3. User clicks the “Delete” link next to the scenario they wish to delete.
4. System prompts user to confirm their intention to delete the scenario.
5. User confirms their intention.
6. System deletes the scenario.
7. The use case ends.

Post-conditions
None
Requirements

1. System must implement a feature that enables a Registered Guest to manage wizard scenarios as follows:
   1.1. System must verify that user is authenticated as a Registered Guest.
   1.2. System must implement a Manage Wizards Scenario View that presents a list of all scenarios saved by the user.
      1.2.1. Scenarios shall be identified by a descriptive label provided by the user.
      1.2.2. Scenarios shall be listed in ascending alphabetical order.
   1.3. System must provide a means by which the user can delete individual scenarios.
      1.3.1. System must prompt user to confirm their intention to delete a scenario before deleting it.
   1.4. System must provide a means by which the user can recall a scenario by clicking on a listed scenario label in the Manage Scenarios View.
      1.4.1. Clicking a scenario label shall navigate to the Wizard Scenario View which is pre-populated with data for the scenario selected by the user.

Related GUI Elements

Manage Wizard Scenarios View
Wizard Scenario View
UC35: Maintain Wizard

**Goal**
Enable a *CMS Administrator* to configure and maintain the content and behavior of the *wizard*.

**Actors**
CMS Administrator

**Pre-conditions**
User is authenticated as a CMS Administrator

**Basic Flow**
Configure Wizard Questions

1. CMS Administrator initiates the use case by invoking the Maintain Wizard View from the CMS Administrator Dashboard.
2. HPC Portal System presents the Maintain Wizard View. The view contains a list of all wizard questions presented in table format. Each question is identified by a system assigned unique numerical key, and the full text of the question. Next to each question are columns indicating both the top-level and sub-categories the question is associated with. There is also a column that indicates the sequence number (or order in which the question appears) along with arrow controls to move a question up or down in sequence relative to other questions in the same sub-category. There is a button to toggle each question from active (published) to inactive (unpublished) status.
3. CMS Administrator clicks the “New Question” button to add a new question.
4. System presents the Edit Wizard Question View.
5. CMS Administrator selects the top-level category and the sub-category in which the question should appear, sets its sequence value by selecting from a list the question currently in the position it should occupy upon creation, sets its status (active or inactive). Then, using a WYSIWYG HTML editor, CMS Administrator enters the full text of the question as it should be presented to the user. CMS Administrator adds possible responses to the question, and for each response, selects one or more instruments that would be related based on the response. CMS Administrator saves the new question.
6. System responds by presenting the Maintain Wizard View that is now refreshed to include the new question.

**Alternate Flows**
A1 – Edit Existing Question

1. CMS Administrator selects a question to edit from the Maintain Wizard View.
2. HPC Portal System responds by presenting the Edit Wizard Question View showing the selected question.
3. CMS Administrator edits the question and its associated meta-data and/or possible responses and the collection of instruments related to them, then saves the changes.

A2 – Delete a Question

1. CMS Administrator selects a question to delete from the Maintain Wizard View, then clicks the Trash button.
2. System responds by moving the selected question to the Trash.

A3 – Edit Categories

1. CMS Administrator invokes the Edit Categories View from the CMS Administrator Dashboard.
2. System responds by presenting the Edit Categories View that contains a list of existing question categories along with the number of questions currently in each. Also is an option to enable (publish) or disable (unpublish) each category.
3. CMS Administrator adds, renames, reorders, or deletes categories.

Post-conditions
None

Requirements
1. System must implement a feature that enables a CMS Administrator to maintain the wizard as follows:
   1.1. System must verify that user is authenticated as a CMS Administrator.
   1.2. System must implement a Manage Wizard View that presents a list of all wizard questions.
      1.2.1. Questions shall be identified by a system generated unique numerical identifier.
      1.2.2. System shall provide a means by which CMS Administrator can perform the following actions on existing questions:
         1.2.2.1. Enable or disable questions without deleting them,
         1.2.2.2. Edit the content of questions, including
            1.2.2.2.1. The full-text of the question
            1.2.2.2.2. Possible responses
            1.2.2.2.3. Instruments related to each possible response
      1.2.3. System shall provide a means by which CMS Administrator can create new questions, providing the following information:
         1.2.3.1. The top-level and sub-category in which the question should appear.
         1.2.3.2. The full-text of the question as it should be presented to users.
         1.2.3.3. A collection of possible responses
         1.2.3.4. A collection of related instruments based on each of the possible responses
   1.3. System must provide a means by which the user can delete existing questions.
      1.3.1. System must prompt user to confirm their intention to delete a question before deleting it,
         OR move it instead to a Trash collection from which it can be recovered if necessary.
   1.4. System shall provide a WYSIWYG editor for entry of question text.
1.5. System shall provide a means by which CMS Administrator can manage wizard question categories with support for the following operations:
   1.5.1. Create new categories
   1.5.2. Rename existing categories
   1.5.3. Delete existing categories
   1.5.4. Publish and unpublish categories
   1.5.5. Reorder existing categories

**Related GUI Elements**

CMS Administrator Dashboard
Maintain Wizard View
Edit Wizard Question View
Edit Categories View
APPENDIX C - Graphical User Interface Elements

The following Graphical User Interface Elements are presented herein to facilitate interpretation of the Use Case Specifications they support. They are intended to express the spirit or essence of expected behavior, however are not meant to be reproduced literally in every case. A best effort has been made to allow for alternate interpretations and implementations provided that they substantially support the required functional behaviors described herein. Note that key elements are included herein while others, are not. Details of the elements not included herein are to be determined at design time.

Add New Article View

Adobe Acrobat Reader Print Icon

The icon image shown below is from Adobe Acrobat Reader’s own user interface. It is shown here only for reference to facilitate interpretation of the Use Case Specifications it supports.

Adobe Acrobat Reader Save Icon

The icon image shown below is from Adobe Acrobat Reader’s own user interface. It is shown here only for reference to facilitate interpretation of the Use Case Specifications it supports.
Agent Dashboard View
TBD

Attach File Dialog
Browse Content by Taxonomy View

**Home > Browse > Houston Police Department (HPD)**

- **HOUSTON POLICE DEPARTMENT (HPD)**
  - Automotive (37)
    - Body Shops (3)
    - Parking Facility (3)
    - Recyclers or Rebuilders, Parts (6)
    - Repair (2)
    - Sales (14)
      - Motor and Motorcycle Dealer New, Initial
      - Motor Vehicle and Motorcycle Dealer New, Renewal
      - Business Change of Address
      - Retail Supply Dealer, Initial
      - Retail Supply Dealer, Renewal
      - Salesman License, Initial
      - Salesman License, Renewal
      - Salesman License, Transfer
      - Wholesale Auto Jobber and Supply Dealer, Initial
      - Wholesale Auto Jobber and Supply Dealer, Renewal
      - Wholesale Jobber and Retail Supply Dealer, Initial
      - Wholesale Jobber and Retail Supply Dealer, Renewal
  - Storage (3)
  - Towing/Booting (7)
  - Identity Verification (22)
  - Clearance Letters (11)
  - ID/Background Check (11)

**Browse Instructions**

For more details about a specific permit, license, or inspection or more information about opening or operating a business, call Houston 311.

For assistance using the Houston Permitting Center Portal, visit our Help section, email us, or call 311.

You will need Adobe Acrobat Reader to view some documents. If you do not have Acrobat, you can download it using the link below.

Download Acrobat Reader
CMS Manager Dashboard View

Content Manager Dashboard View
TBD
Create New Account Form

Download Application Button

TBD
**Edit Application View**

View shown here is only representative because the view will vary based on the requirements of individual instrument application forms.

### EDIT APPLICATION

You may edit any portion of this application. Fields in **red** are incomplete and required.

### CITY OF HOUSTON

Application for License to Deal in Motor Vehicles, Trailers, Motor Vehicle Parts and Accessories

Application is hereby made to you for an **Motor Vehicle Dealer (MV)** license, and, in this behalf the following is made:

See explanations of each License here.

<table>
<thead>
<tr>
<th>Business Name:</th>
<th>Smith's Family Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attach copy of Assumed Name Certificate</strong></td>
<td></td>
</tr>
<tr>
<td>Physical Address:</td>
<td>12345 Any Street</td>
</tr>
<tr>
<td>Houston</td>
<td>Texas</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>12345 Any Street</td>
</tr>
<tr>
<td>Houston</td>
<td>Texas</td>
</tr>
<tr>
<td>Date business began at this location:</td>
<td>month/day/year</td>
</tr>
<tr>
<td>Email Address:</td>
<td><a href="mailto:joesmith@smithfamilyauto.com">joesmith@smithfamilyauto.com</a></td>
</tr>
<tr>
<td>Phone Number:</td>
<td>enter phone number...</td>
</tr>
<tr>
<td>Applicant is</td>
<td>owner of lease holder</td>
</tr>
<tr>
<td>of property? If lease holder, give names and address of person for whom you are leasing:</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Suite, Apartment Number etc...</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>State</td>
</tr>
</tbody>
</table>

- Attach copy of the lease agreement or property deed, an engineered survey, and legal description of the property.

- I understand that this application is an official government record. I understand that knowingly making a false entry, or omitting required information in one or more of the above fields could result in criminal charges and the denial/revocation of my license.

Submit
Edit Profile View
TBD

Find Application View
TBD

Guest Online Chat Form
TBD
HPC Main Navigation Menu

- BROWSE
- WIZARD
- SCHEDULE
- HELP
### Instrument Home View (Overview)

#### Motor Vehicle Dealer License

**Overview**

Required for any person who, publicly engages in, conducts, or carries on the business of buying, selling, offering for sale to the public, consigning to be sold to the public, trading or otherwise dealing in motor vehicles or motor vehicle trailers, or both, with and to the public.

<table>
<thead>
<tr>
<th>Type</th>
<th>Paper License</th>
<th>Fee(s)</th>
<th>Original Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Period</td>
<td>365 Days</td>
<td></td>
<td>$330.00</td>
</tr>
<tr>
<td>InsPECTION Required</td>
<td>No</td>
<td>Admin Fee:</td>
<td>No</td>
</tr>
<tr>
<td>RENEWAL REQUIRED</td>
<td>Yes</td>
<td>Late Fee:</td>
<td>No</td>
</tr>
<tr>
<td>Renewal Cost</td>
<td>$330.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PROCESS

1. **Apply for License** - Apply online or present a fully completed application form.
   - Attach copy of Dealer Restriction Compliance Affidavit.
   - Attach copy of Certificate of Occupancy or Life Safety Inspection for your building.
   - If applicant is a corporation:
     - Attach copy of Articles of Incorporation
     - Attach copy of letter of good standing from the Secretary of State
     - Attach copy of Assumed Name Certificate if applicable.

2. **Criminal Background Check** - A criminal background check is conducted on all officers, partners, owners (licensees) and others who have a financial interest in the business.

3. **Automotive Board Review** - The City of Houston Automotive Board reviews the application for each new business including consideration of the findings of a criminal background check.

4. **Notice of an Automotive Board public hearing** on the business application is published.

5. **Approval or Denial** is decided by the Board at the hearing.

#### Variations & Exceptions

None.

#### Inspections

None required.

#### Statutory Authority

06-58(a)(1)
Instrument Home View (FAQs)

Motor Vehicle Dealer License

**FREQUENTLY ASKED QUESTIONS:**

**How long will it take to process my application?**

Assuming your application is complete and submitted with all required attachments, the usual time for processing a request for a Motor Vehicle Dealer License is less than 15 days.

**Will a misdemeanor conviction on the record of an officer, owner, or partner jeopardize approval of our application?**

All applications and criminal background checks are evaluated by the review board on a case-by-case basis. Generally, however, misdemeanor convictions alone will not jeopardize approval of your application.

**Will I receive notification of when the Automotive Board public hearing is held?**

Yes. You will be notified by US Mail when the Automotive Board public hearing is scheduled.

**Is the Motor Vehicle Dealer License transferable?**

No. The Motor Vehicle Dealer License is only valid for the individual or business named on the license, and may not be transferred to any other entity.
Instrument Home View (Apply/Renew)

Motor Vehicle Dealer License

Apply/Renew

You can either apply online for this permit or download the application and submit it through the mail or in person at the Houston Permitting Center.

To apply online:

Use the link below to go to the online form. You will need to have the following documents in electronic format ready to be attached to the form:

- Assumed Name Certificate
- Lease Agreement or Property Deed
- Engineered Survey
- Legal Description of the property
- Corporate or Partnership Agreement
- City Occupancy Permit
- Deed Restriction and Law Compliance Affidavit

Apply Online

To apply by mail or in person:

Use the link below to go to download the application. You will need to have copies of the following documents ready to be included with the form:

- Assumed Name Certificate
- Lease Agreement or Property Deed
- Engineered Survey
- Legal Description of the property
- Corporate or Partnership Agreement
- City Occupancy Permit
- Deed Restriction and Law Compliance Affidavit

Download Application

Deed Restriction and Law Compliance Affidavit

Whether you apply online, through the mail, or in person, you will need to have the following form signed and Notarized. Use the link to download the form. See the Contact tab above to see our mailing address or location address.

Download Affidavit
Instrument Home (Schedule)

Motor Vehicle Dealer License

Schedule Inspection
An inspection is not required for this permit.

Instrument Home (Contact)

Motor Vehicle Dealer License

Contact

Live Chat
Click Here to chat with a representative

By Phone
Lance Labbe
632-594-4614

By Mail
Houston Permitting Center
HPD Auto Dealers Dept. P.O. Box 3408
Houston, TX 77253-3408

In Person

Houston Permitting Center
1002 Washington Avenue
Houston, Texas 77002

Google Map & Directions

Online

Please use the following form to contact this department online. Items with an asterisk (*) are required. A representative will contact you.

*Name:
Organization:
*Telephone:
*Email:
*Subject: General Inquiry

Additional Information:

enter text...

Submit CAPTCHA
Keyword Search Form
Included in HPC Home Page

Logout Link
TBD

Manage Attachments View

Manage Bookmarks View

My Account

Manage Bookmarks

Bookmarks

- Fire Escape Permit
- Motor Vehicle Dealer New, Initial
- Salesman License, Initial

Delete
Delete
Delete
## My Account

### Manage Applications

<table>
<thead>
<tr>
<th>Submitted Applications Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Inspection</td>
<td>PENDING</td>
</tr>
<tr>
<td>Auto Sales, Identity</td>
<td>APPROVED</td>
</tr>
</tbody>
</table>

### Application Drafts

<table>
<thead>
<tr>
<th>Application Drafts</th>
<th>Last Modified</th>
<th>Status</th>
<th>Continue Editing</th>
<th>Delete Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Vehicle Dealer New, Initial</td>
<td>July 16, 2013</td>
<td>INCOMPLETE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salesman License, Initial</td>
<td>July 16, 2013</td>
<td>INCOMPLETE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Escape Permit</td>
<td>June 24, 2013</td>
<td>INCOMPLETE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Manage Wizard Scenarios View

My Account

Saved Wizard Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Last Modified</th>
<th>Status</th>
<th>Continue Editing</th>
<th>Rename</th>
<th>Delete Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Shop</td>
<td>June 5, 2013</td>
<td>INCOMPLETE</td>
<td>Continue Editing</td>
<td>Rename</td>
<td>Delete Scenario</td>
</tr>
<tr>
<td>Car Dealership</td>
<td>July 30, 2013</td>
<td>COMPLETE</td>
<td>View Results</td>
<td>Rename</td>
<td>Delete Scenario</td>
</tr>
<tr>
<td>Rental Car Company</td>
<td>July 26, 2013</td>
<td>INCOMPLETE</td>
<td>Continue Editing</td>
<td>Rename</td>
<td>Delete Scenario</td>
</tr>
</tbody>
</table>

Management Portal Login Form

My Account Menu

TBD
Online Chat Icon
TBD

Online Chat Agent User Interface
TBD

Print Dialog Box
Private Portal Login Form

example@gmail.com

******

Sign In  Forgot Password?
## Related Document View

### Motor Vehicle Dealer License

#### Related Documents

**Motor Vehicle & Retail Supply Dealer**
**Description**
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliqua erat voluptat.

**Business Change of Address**
**Description**
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliqua erat voluptat.

**Salesman License**
**Description**
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**Wholesale Auto Jobber & Supply Dealer**
**Description**
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**Storage Lot Operator**
**Description**
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**Auto Sales/Identity**
**Description**
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**Wrecker Driver/Identity**
**Description**
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Save Wizard Scenario View

Save Wizard Scenario
Save this scenario to your account so that you may come back at a later time and continue editing it.

Enter Name of Scenario

SAVE

Save As Dialog Box
Schedule a Resource View

SCHEDULE
You Selected: HPD Identification Division > Fingerprints/Clearance Letter

HPD IDENTIFICATION DIVISION

Service
Fingerprints/Clearance Letter

Kiosk Option
Other Services ---> HPD ---> Fingerprints/I.D.

Business Hours
8:00 AM to 3:30 PM

Contact Number
832.394.4874 or 832.394.4873

Applications
See HPD I.D. for application

Keywords
immigration, adoption, overseas travel, citizenship, passport, political asylum, hunting, missionary, school, sex offenders, school bus drivers, volunteers, police cadets, background check
Search Results View

Search Results

You Searched On: Car Dealership License

Motor Vehicle & Retail Supply Dealer
Description
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Motor Vehicle Dealer New
Description
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Salesman License
Description
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Wholesale Auto Jobber & Supply Dealer
Description
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Page 1 2 3 4... 12 Next>
Sign In / Sign Up Pane

example@gmail.com

or

Sign Up
If you don't have an account yet

Sign In
Forgot Password

Sign Up
Wizard Results View

RESULTS > Administrative and Support
Selected Structure: Legal Services

Information on how to save permits to your account. Lorem ipsum dolor sit amet, conser adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

- **ALARMS**

- **AUTOMOTIVE**
  - Motor Vehicle Dealer New
  - Automotive Retail Supply Dealer

- **COIN-OPERATED MACHINES**

- **FIRE ESCAPE**
  - Fire Escape Permit

- **FIRE INSPECTION**

- **IDENTITY VERIFICATION**

- **PARKING**

- **PHOTOGRAPHY AND FILMING**
  - Filming Permit

- **SIGNS**

- **WASTE DISPOSAL**

---

SAVE SCENARIO
Wizard Scenario View

**WIZARD**

1. Please select from the following sectors those which best describe your business type:

- Accommodations
- Administrative and Support Services
- Arts, Entertainment and Recreation
- Construction
- Educational Services
- Finance and Insurance
- Food and Beverage Services
- Health Care
- Information
- Management of Companies and Enterprises
- Manufacturing
- Non Profit
- Real Estate
- Rental and Leasing
- Retail
- Services
- Social Assistance
- Transportation
- Warehousing and Storage
- Waste Management and Remediation
- Wholesale Trade

[CONTINUE]
APPENDIX D – Additional Resources

The following resources have been produced to support this specification and the development work that will be necessary to implement the System. They are available online, either as downloadable files or as databases and HTML pages published for online review.

Instrument Index

The Instrument Index is an essential inventory of the collection of instruments that have been identified for publishing and management in the HPC Portal & Content Management System. The Instrument Index is available for download as a ZIP archive from:

Workflow Index

The Workflow Index is an essential reference for creation of content related to an instrument, and particularly the Overview page of the Instrument Home. The Instrument Index is available for download as a ZIP archive from:

Taxonomy & Thesaurus

The proposed controlled vocabulary for the HPC Portal is published online for review at:
http://pwedev.houstontx.gov/hpcdev/tematres/instruments/thesauruswebpublisher/

Home Page & Key Sub-Page Designs

Fully-rendered design concepts for the Home page and key sub-pages of the HPC Portal are available for review online at:
http://pwedev.houstontx.gov/hpcdev/concepts/

Style Guide

The HPC Style Guide describes the common web styles prescribed for all City of Houston web sites, plus additional web styles that are unique to the HPC Portal. It describes the onscreen elements such as headers, logos, and more that are required to comply with City of Houston and HPC branding guidelines. The Style Guide prescribes a standard color palette and standard typography for the HPC Portal. It also presents guidelines for page layout and graphic elements. Additionally, the Style Guide provides helpful guidance in matters related to Best Practices and Web Accessibility. The HPC Style Guide is available for review online at:
http://pwedev.houstontx.gov/hpcdev/styleguide

Wireframe Representation of User Interface

A set of navigable wireframes has been published online and is available for review at:
http://share.axure.com/QPGAWS/

[END]