



Pike Place Market Renovation Project Summary

In September of 2006, the Pike Place Market Preservation and Development Authority engaged a team of architects and engineers to perform a comprehensive study of the buildings it owns and manages. The need for such a study had been growing in urgency for many years. The PDA had commissioned a series of smaller studies focused on understanding the condition of various particular systems in the Market, and these continued to reveal that capital maintenance issues were mounting throughout the Market's infrastructure. A single definitive report was needed to document the status of the buildings, make clear recommendations for the needed repairs, and to set forth a plan to accomplish the work.

Since that time, the design team has worked closely with many stakeholders in the Market community to craft and refine a plan for the renovation of the buildings and their systems. This summary is intended to provide a brief overview of the conclusions of the work to date.

Project Priorities

Early in the process, the team, in partnership with the PDA, developed a list of priorities that would guide the development of all of the design work.

These priorities are as follows, listed in order of importance:

1. Upgrade the electrical systems as needed to serve the all of the Market's needs now and into the foreseeable future.
2. Perform code-required structural upgrades and additional sensible and prudent upgrades to improve the safety of the Market's buildings.
3. Provide sensible and cost-effective upgrades to the mechanical systems in the Market to allow for the efficient environmental control of the interior spaces.
4. Provide new accessible public restrooms of reasonable size and located appropriately.
5. Provide new elevators and other features as required to improve accessibility for disabled people and service to the Market's buildings
6. Remodel under-performing retail spaces in the Market to increase their vitality and profitability.

The project priorities proposed to be funded by this Market Levy proposal are the basic infrastructure elements, upgrades, and repairs described in 1-5. Potential changes or additions to interior and retail spaces will continue to be evaluated by the Market management and funded through other private and/or public sources.

Improvements to Existing Building Systems and Infrastructure

The project engineers have taken a thorough look at the various systems in the Market's buildings and have proposed a series of repairs and improvements. The paragraphs that follow seek to provide a broad overview of the work of these various disciplines.

Electrical Systems

The electrical infrastructure of the Market's core buildings was entirely replaced as a part of the large redevelopment project in the late 1970's and early 1980's. For the most part, the equipment placed at this time remains in service today. Over the years, changes in the use of the buildings and changes in the codes and standards that govern electrical systems have led to a condition where many of the existing systems must be altered and expanded to assure they remain safe and serviceable into the future.

The Study generally recommends replacement of the primary electrical service gear and main electrical distribution in most of the buildings. The proposal is to replace the gear with panels whose circuitry will be connected to a modern digital metering system that will offer the Market the much needed flexibility to adapt to the changing needs of its diverse tenant base.

Due to the extent of the replacement of primary electrical gear and because of current and future demands, it will be necessary to replace several primary utility transformers. Since the vaults which house the existing transformers are not in compliance with Seattle City Light's current safety standards the likely requirement will be for several of the new transformers to be placed in large new vaults located within the Market's buildings rather than in the public street where most are located today. The creation of these transformer vaults represents a substantial portion of the complexity and cost of the overall project.

Mechanical Heating, Ventilation and Air-Conditioning Systems (HVAC)

The design of the mechanical systems for the renovation project has focused on the concept of creating a new central system to serve all of the Market's core buildings with the heating and cooling they need to operate well and to do so in a way that saves both energy and the costs needed to maintain the system.

The Market is currently conditioned by a startling variety of different mechanical systems which serve the buildings and tenants separately with spotty success. The mixture of different systems presents a maintenance headache for the Market and creates a disorderly appearance on the roofs of all of the buildings. More importantly, the proliferation of small, independent mechanical systems uses much more energy than would a central system that would provide heating and cooling to the campus generally.

The proposed design would create a central system to provide heating and cooling to all of the buildings in the core area of the Market using a centralized condenser water loop to

connect the campus. Heating would be added to this water loop as required using steam heat exchangers connected to Seattle Steam's service in Western Avenue. Cooling would be added to the loop with fluid coolers located on the roof of the Fairley building.

The condenser water loop would connect all of the buildings through piping buried in the ground and routed through existing basement and service spaces. Individual buildings and tenants would tie into this loop and use heat pumps to receive heating from the loop or reject heat to it. The use of heating or cooling energy by tenants would be monitored by automated systems so that the PDA could fairly distribute the cost of the energy used by the system to those it serves.

One of the main attractions of using a central condenser water loop system as proposed is that the system can automatically redirect heating from areas of the campus that need cooling to those that need heating with little or no addition of energy at the head end. This will be particularly attractive in the winter months when the heat rejected by the large coolers and freezers that serve many of the large restaurants and food retailers can be redirected to heat interior spaces elsewhere on the campus. Currently, the heat rejected by the coolers is simply vented to the exterior.

Working in concert with some modest proposed improvements to the performance of selected building facades the central plant system promises to deliver substantial savings in energy in support of the Market's goals as an environmentally sustainable institution. The designs fundamentally build on the success of the traditionally naturally ventilated buildings without visually imposing new technologies in the historic fabric.

Plumbing and Fire Protection

The design team's studies have indicated that the most significant problems with the plumbing systems in the Market concern persistent issues with clogged drains and degraded sanitary drain pipes. These issues are addressed in the design by replacing the existing degraded piping with new, more durable materials and by installing devices to help prevent the introduction of grease and other materials into the drains that could clog the piping.

The balance of the design for the plumbing systems in the Market generally proposes targeted repairs and maintenance on certain existing systems, as well as, the introduction of new protective devices to bring the systems in line with good current practices.

Structural Systems

As a part of the pre-design work on this project, an evaluation of the structural systems of the existing buildings was provided. This analysis indicated that many of the Market buildings did not meet current standards for seismic stability. Of these, three buildings were identified as being significantly deficient including the Triangle Market, the Sanitary Market, and the Corner Market buildings. All three of these buildings have un-

reinforced masonry exterior bearing walls and none of them have been supplied with internal framing systems to resist lateral loading during earthquakes.

All three of the buildings mentioned above were renovated in the late 1970's or early 1980's and work was done on their structures at the time to help strengthen their resistance to seismic events. However, this work was performed before building codes and standards for seismic retrofitting of existing structures had been established. The work that was put in place took the first essential steps to stabilize the buildings, however, in the time since the work on the buildings was completed much more has been learned about the effects of earthquakes on this kind of structure and current codes have rightly incorporated more stringent standards for lateral structures in un-reinforced masonry buildings.

Though the extent of the proposed renovations to the buildings will likely not legally require them to meet current code standards for seismic stability the project has proposed that these structures be improved to meet the current code's "life safety" level of performance to the extent that this can be accomplished without compromising the historic integrity of the buildings.

The lateral improvements to the buildings have generally included the placement of steel braced frames, steel moment frames, and concrete shear walls strategically placed to resolve the structural concerns while maintaining the appearance and function of the spaces. In some cases, these structural elements will be visible from the exterior and from public spaces inside the buildings. The design team has worked closely with the Renovation Committee to select the locations for new elements and the nature of those elements to minimize the impact to the function and appearance of the buildings.

Architectural Projects

As indicated above, the renovation project is focused on repairing and upgrading the systems throughout the Market's buildings and to improving the accessibility of the buildings to people with disabilities. Changes to the architecture of the campus have been made only to incorporate these priority features in a manner that respects the history and character of the Market.

Two new large sets of public restrooms have been proposed. These are intended to respond to the current dearth of public restroom facilities and to the fact that neither of the two existing set of public restrooms are reasonably accessible to the disabled. Both of the proposed new banks of public restrooms have been located at the Arcade level of the Market which draws the largest crowds.

Three new public elevators have been proposed. New elevators are proposed for the Corner Market and Economy Market buildings because each of those buildings contain significant public retail spaces that are not currently accessible to disabled people. A large new public elevator is also proposed in the Hillclimb area. This elevator will provide an accessible route to all levels of the "Down Under" retail areas and help to

reinforce the Hillclimb entry on Western as an important and vital connection to the Waterfront. Built in concert with large new rooms to house substantial mechanical and electrical infrastructure the Hillclimb project will be the most visible change to the Market.

The project also includes miscellaneous repairs to various degraded architectural features in the buildings throughout the Market including rusted awnings, failing roofs, and the like. The most significant proposed item of repair is the replacement of the windows on the west façade of the Leland and Fairley Buildings which form the large façade of the Market facing Western Avenue. These windows are badly degraded and their poor thermal performance makes it impossible to maintain comfortable temperatures in the spaces behind them. The proposal would replace the windows with new high-performance windows built to match the character of the historic façade.

Proposed Phasing of the Construction Projects

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The proposed renovation project for the Market represents a significant set of complex construction projects, in a number of different buildings. In order to manage the impact of the construction on the continuing operations of the Market, the desire will be to organize the work into distinct phases of construction, to be pursued in an orderly sequence. The plan will be to complete all of the work in each area as quickly as possible before proceeding on to the next area. For budgeting purposes, the initial proposed phasing of the project at this time is as follows:

Phase	Buildings	Construction Start	Completion
Phase 1	Hillclimb/ Central Plant Leland Building Fairley Building	Spring, 2009	Fall, 2010
Phase 2	Triangle Market Sanitary Market Corner Market First and Pine Building	Fall, 2010	Fall, 2011
Phase 3	Economy Market	Fall, 2011	Fall, 2012
Phase 4	Soames/Dunn Building Stewart House North Arcade	Fall, 2012	Fall, 2013