UNREINFORCED MASONRY BUILDINGS AND NEIGHBORHOOD PRESERVATION

HOW CITY POLICIES IMPACT THE CHINATOWN ID AND PIONEER SQUARE

A report by SCIDpda
on the local impacts of the proposed seismic retrofit ordinance and the Rental Registration and Inspection Ordinance (RRIO)

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EXECUTIVE SUMMARY

Among Seattle’s many distinctive neighborhoods, Pioneer Square and the Chinatown International District are indisputably unique. Both have rich cultures, complex social networks, and deep histories beginning in the early days of Seattle, with historic designation at the local and national levels that protects their singular, largely brick buildings. And both are home to a high population of low-income households—primarily renters—and a high concentration of small businesses that help define the neighborhoods.

Today, the Chinatown ID and Pioneer Square are climbing the boom cycle that has already affected much of Seattle. Amidst a growing appreciation for neighborhood character and proximity to jobs, other central neighborhoods, and public transportation options, rents are rising and new residents and businesses are moving in. A Growth and Equity Analysis completed with the comprehensive plan, Seattle 2035, rated both neighborhoods as having both high access to opportunity and high displacement risk.

CITY POLICIES COULD HAVE BIG IMPACTS

- A proposed seismic retrofit policy would impact 120 unreinforced masonry (URM) buildings in the Chinatown ID and Pioneer Square—10 percent of all URMs in Seattle—and the hundreds of affordable rental housing units and small businesses. Yet retrofitting is important: a major earthquake could cause URM buildings to collapse, injuring thousands of residents, employees, and vulnerable community members.
- The Rental Registration and Inspection Ordinance (RRIO) aims to ensure that all rental housing meets basic standards and affects about 4,000 residential units in both neighborhoods.

Because the Chinatown ID and Pioneer Square are locally designated historic districts, URM building owners will have two options to respond to the proposed retrofit policy: retrofit or sell. Local designation effectively prevents demolition, and the City will likely require all buildings to be retrofitted regardless of occupancy.

This pilot project was developed to determine and respond to the impacts of both policies on these neighborhoods, particularly the seismic retrofit policy. The project included community workshops, studying seven buildings to assess what work would be required and how much it would cost, and evaluating property owners’ financial options to pay for the work.

SEISMIC RETROFITS ARE EXPENSIVE

The costs of seismic retrofits alone in Pioneer Square and the CID range from $6/sf to $130/sf. This means that total costs to retrofit a building range from $120,000 to more than $4 million.

A Benefit Cost Analysis estimated a public-private return of only $7.60 for every $100 spent on URM retrofits, with property owners receiving only $3.30 in economic benefit for every $100 spent.

FEW INCENTIVES EXIST FOR RETROFITS

Some grants, low-interest loans, tax credits, and tax exemptions exist—but not many. Half of available incentives are linked to affordable housing and economic development and are awarded on a very competitive basis.

TRADITIONAL FINANCING WILL DISPLACE RESIDENTS AND SMALL BUSINESSES

Especially in the Chinatown ID, most property owners do not have the cash to complete a retrofit. Private loans from banks to pay for retrofit work will require charging higher rents to cover payments, displacing low-income residential tenants and small businesses. This is a serious matter of equity in Seattle’s currently strapped housing situation.
NEIGHBORHOOD CULTURE IS AT RISK
Other property owners lack equity to even take out a loan. In this situation, they will be forced to sell—probably to market-rate developers who have more access to capital. This puts the historic residential and commercial affordability, rich culture, and dense social network of both neighborhoods at high risk.

As the City considers how to handle the proposed seismic retrofit policy, social equity, residential and commercial affordability, and cultural preservation must be central to the process and results. The longtime residents and small businesses that make these neighborhoods culturally rich and socially dense will be deeply impacted, as well as future residents and entrepreneurs seeking affordable housing and commercial space.

BUT SEISMIC RETROITS SAVE LIVES AND HELP SMALL BUSINESSES RECOVER FASTER
The Seattle Chinatown International District Preservation and Development Authority (SCIDpda) supports the proposed seismic retrofit policy, which will save the lives of residents, employees, and members of the public if deployed and implemented before a major seismic event; and help neighborhoods to “get back on their feet” more quickly after such an event. The policy could also help preserve historic buildings, though the Bolts Plus standard is primarily aimed at life safety.

ADDITIONAL RESOURCES ARE CRITICAL
New financing mechanisms should be accessible to property owners with limited resources and support affordable residential and commercial space in URM buildings.

Some options include:
• Interest rate buy-down from local banks that leverages public funds to create cheaper loans for private borrowers
• State funding for additional study and pilot
• State property tax exemption for URM rehabilitation, similar to proposed affordable housing tax exemption

SUMMARY
Passing the proposed seismic retrofit policy will save lives. At the same time, new financing mechanisms and technical assistance around retrofitting must be offered to help URM property owners who provide affordable residential and commercial space.

URM retrofits are an issue of social equity, housing affordability, small business success, and public safety. They must be a priority for our communities to continue to thrive.
INTRODUCTION

Pioneer Square and the Chinatown ID are special places. Two of the oldest neighborhoods in Seattle, they are home to a unique mix of people, cultures, and history. Pioneer Square was established as Seattle’s original downtown in 1852 and grew into a prosperous mixed-use area following the Great Fire of 1889. The neighborhood saw its fortunes fall in subsequent years, but is currently on an upswing, with new businesses and residents adding fresh energy to the historic environment. The Chinatown ID (CID) developed in the early decades of the 20th century as a home for immigrants from Japan and China, expanding later to include Filipino immigrant workers, African Americans, Vietnamese immigrants, and people from other countries and cultures.

Today, both neighborhoods are among Seattle’s most distinctive, and also most challenged. The CID is the only pan-Asian neighborhood in the continental United States and a regional hub for cultural activities and specialized commerce, with more than 400 family-run small businesses. Its unique building stock—largely single-room occupancy hotels from the early 1900s, many now studios and one-bedrooms—speaks to the immigrant-driven history of the neighborhood. At the same time, the CID faces significant challenges linked to those same historic buildings, as well as its historically underserved population (see box).

Pioneer Square is equally special. The neighborhood’s leafy streets and squares and elaborate brick buildings have attracted a growing group of small businesses, prominent entrepreneurs, and residents seeking to become a part of Seattle’s first neighborhood. The residential balance is mixed, with an increasing number of market-rate households—roughly 1/3 of residential units—in addition to the neighborhood’s longstanding supply of shelters and low-income housing (700 shelter beds, 40 percent of units below 30% AMI, and 20 percent workforce housing units below 80% AMI). Amidst growing hype, the neighborhood still grapples with providing housing, services, and a sense of ownership to stakeholders with diverse incomes and backgrounds, and supporting the 850 small businesses that call it home.

The historic brick buildings in both neighborhoods are essential parts of their past. Buildings help to tell these places’ stories by showing how growth has occurred over time and in what form. They help create the public realm that, in large part, defines the feel of each place. The importance of the built environment in both Pioneer Square and the CID has been recognized with designation of local and National Register historic districts.

But the neighborhood buildings serve the community far beyond their characteristic architecture. They provide affordable housing for seniors, families with children, and recent immigrants in several ways:

- Formal agreements with the City of Seattle
- Long-term ownership with no or very low mortgage payments (especially in the CID)
- Building owners’ informal commitment to serve community members with few resources
- Smaller unit sizes—typically studios or one-bedroom units.

Historic buildings facilitate the continuing story of both neighborhoods by providing housing for a range of income levels.

URM buildings also offer affordable commercial space for hundreds of family-owned small businesses and new entrepreneurs. These businesses drive the hyperlocal economy in both Pioneer Square and the CID, drawing people to the neighborhood to eat and shop, providing jobs for local and nearby residents, contributing to the City coffers, and shaping a unique pedestrian experience.

POLICY OVERVIEW

These buildings—and the unique character of both neighborhoods—are being or will be impacted by two new and proposed policies from the City of Seattle that aim to ensure quality and safety in rental units and unreinforced masonry (URM) buildings across the city. The Rental Registration and Inspection Ordinance (RRIO) creates basic standards for rental housing quality and requires regular inspection of rental units. RRIO went into effect for buildings with ten or more units in September 2014 and expanded to include smaller properties in 2015-16.

The Unreinforced Masonry Building Retrofit Program is an ordinance currently under consideration in the Seattle Department of Construction and Inspections (SDCI). It will require all URM buildings to be retrofitted in 7 to 13
years, with most property owners required to conduct assessments within 2 to 3 years and apply for building permits 2 years after that. SDCI produced a validated list of URM buildings and report to the URM Policy Committee in April 2016. The ordinance may be finalized and presented to City Council for adoption as soon as 2016 or 2017.

Meanwhile, the Housing Affordability and Livability Agenda (HALA) was released by a mayoral advisory committee in July 2015 with the goal of increasing the affordability and availability of housing amidst rapid expansion and rising housing costs. HALA includes 65 recommendations aimed at generating a net increase of 50,000 units of housing over ten years. Many HALA recommendations are directly relevant to the buildings in this report, particularly around the themes of preserving existing affordable housing and minimizing displacement of marginalized populations.

POLICY IMPACTS
RRIO and the proposed URM retrofit ordinance affect buildings across the city, but Pioneer Square and the CID will be particularly impacted because of their building stock and type. Together, the neighborhoods contain 122 URM buildings. Some single-room occupancy buildings (SROs) in the CID have been subject to the City’s Housing and Building Maintenance Code but rarely or not inspected, as the code is complaint-based. Both are home to vulnerable populations: the CID alone contains more than 1,100 affordable housing units (many unregulated) for low-income individuals and families with children, seniors, and recent immigrants, as well affordable commercial space for 425 small businesses. In both neighborhoods, much of the historic building stock will require work to comply with at least one of the new policies, and many buildings will be subject to both. More than 600 occupied affordable units are located in URM buildings in the CID, as well as 300 additional long-term vacant units that could potentially be rehabilitated to add much-needed housing in the neighborhood.

Pioneer Square and the CID also face particular challenges in complying with RRIO and the URM retrofit requirements. The affordability of rental property equals very low income for property owners, and means that few owners have capital reserves or cash flow to finance a significant rehabilitation. In the CID, the URM buildings are very large—many occupying a quarter-block—which increases retrofit costs. Not all property owners are fluent in English. Additionally, a number of the affected buildings in the CID are held by Chinese family associations, tongs, or investment companies: unique multi-party ownership structures that may include hundreds of owners. CID property ownership is additionally characterized by properties passed down from generation to generation, with little or no professional management or development expertise, and a historical and cultural aversion to debt.

Finally, the 122 URM buildings in the CID and Pioneer Square comprise more than 10 percent of the 1,164 validated URM buildings in Seattle. These dense clusters of URMs will be required to be retrofitted rather than demolished: large areas of both neighborhoods are designated local historic districts, where demolition is not an option. The vast majority of URM property owners across the city will be able to make a decision based on the cost of seismic retrofits, opportunities for new replacement development, and potential sales prices. In local historic districts, however, demolition of historic buildings is not an option. CID and Pioneer Square property owners are restricted to two options: retrofit or sell.

Roughly half of the buildings used as case studies for this project are residential rental buildings that must comply with both RRIO and the proposed seismic retrofit ordinance. Some buildings—mostly in the Chinatown ID—will require a major renovation to meet one or both of these standards.

WORST-CASE OUTCOMES
Without a clear understanding of the policies and accessible funding sources to upgrade noncompliant buildings, many property owners could default to the simplest solution: shutting down the building entirely. This could result in removal of affordable housing and
commercial units, weakening the neighborhoods’ strong local cultures and historic affordability. Additionally, it may not be sufficient. A seismic retrofit ordinance will require even vacant URM buildings to comply. Potential impacts include:

- Displacement of hundreds of low-income residents and small business owners;
- Removal of unregulated affordable housing units from the city’s overall housing supply;
- Building purchases by market-rate developers, likely accelerating displacement in communities already affected by historic disinvestment and threatened by gentrification; and
- Negative impacts on psycho-social and economic health as residents and business owners, many of whom have lived or worked in the same location for decades, are pushed into lower-cost communities, losing community support, culturally sensitive resources, and access to jobs and transit.

The substantial concentration of URM buildings in both neighborhoods could magnify the impacts many times over.

URM-RRIO PILOT PROJECT

The URM-RRIO Pilot Project has provided a practical way for property owners and City agencies to understand the new policies, anticipate the work required to comply with the new policies, estimate associated costs, and consider a sustainable, targeted financing mechanism for improvements. The project has also informed the City as it develops outreach and education plans around RRIO and URM issues.

The five-phase pilot project explored the work required to rehabilitate seven case study buildings in Pioneer Square and the CID for compliance, including needs assessments and cost estimates by professional consultants, and examined potential funding mechanisms to fund that work. Community engagement and capacity building were conducted throughout the process via eight property owner workshops that covered the new and proposed policies and a variety of related topics. Community engagement work continues beyond this report.

See Project Description for more information on the structure and methodology of the pilot project.

ABOUT SCIDPDA

This report was prepared by the Seattle Chinatown International District Preservation and Development Authority (SCIDpda). SCIDpda is a nonprofit organization chartered by the City with the mission to preserve, promote, and develop the Chinatown International District as a vibrant community and unique ethnic neighborhood. For almost 40 years, we have worked to improve the neighborhood in partnership with many CID leaders (including property owners, business owners, residents, and other CID-based community, social, and health service agencies). We develop real estate and manage properties that serve the community, with many of our buildings providing housing for seniors and families and commercial spaces for small immigrant businesses. SCIDpda additionally provides senior services, including a meal program, adult day health activities, and assisted living. We are also known for our work through IDEA Space, a resource center that provides technical assistance to property owners, local businesses, and community members in their efforts to build a stronger neighborhood.

The URM-RRIO Pilot Project is one way that SCIDpda is bringing its real estate and historic preservation knowledge and experience to the community to ensure that local property owners can successfully upgrade and maintain their buildings for generations to come.
POLICY BACKGROUND

RENTAL REGISTRATION AND INSPECTION ORDINANCE (RRIO)

The Rental Registration and Inspection Ordinance replaces a complaint-based system for rental housing inspection. It establishes basic standards in line with the housing code, requires all owners of residential rental units to register those units, and sets a schedule for regular inspections of all rental properties. For most rental properties in Seattle, RRIO simply provides a system for evenly enforcing the current housing code. However, as discussed above, the CID holds SRO buildings that were previously not subject to housing code requirements. Thus, some buildings will require extensive upgrades to meet the basic standards set by RRIO.

The RRIO Checklist looks at:
• Building exterior (roof; chimney; foundation; exterior stairs and decks; exterior doors, windows, and walls)
• Building interior (ventilation; walls, floors, and ceilings; stairs and landings)
• Emergency escape windows and doors
• Room size and condition
• Heating, electrical, and plumbing systems
• Kitchens and bathrooms
• General cleanliness (rodents and insects, door locks, smoke detectors)

See Appendix A for the full RRIO Checklist.

SEISMIC RETROFIT ORDINANCE

The proposed seismic retrofit ordinance requires buildings to undergo a full seismic upgrade if they were constructed prior to May 7, 1977 and have one or more bearing walls comprised of plain clay brick or clay tile masonry. The masonry must also provide the primary support for the floors and roofs. However, a full seismic upgrade can be very cost-prohibitive.

For buildings that meet a given set of criteria (Appendix B), a limited URM Retrofit Standard—the Bolts Plus upgrade—will be allowed. The URM Retrofit Standard helps stabilize the building by adding key retrofit elements to anchor the building together. These include parapet braces, structural connections of floors and roofs to URM walls, framing that connects floors and roofs, and measures to strengthen weak interior and exterior load-bearing walls.

The goal of the URM Retrofit Standard is to reduce the chances of collapse in case of a seismic event—ideally to allow building occupants to exit safely—not building preservation. With this reduced, prescriptive approach, the Seattle Department of Construction and Inspections (SDCI) hopes to strike a balance between requiring meaningful retrofit upgrades that help stabilize a larger quantity of the buildings and being more cost-effective for the building owners.

The Bolts Plus upgrade includes:
• Floor to wall or roof to wall ties for wall anchorage (tension) = 4’oc [on center]

When roofs and floors are not adequately anchored to the floor systems, movements during a seismic event can result in the catastrophic loss of structural support for the framing.

• Diaphragm shear transfer (shear bolts) spaced < 6’oc

In order to provide a complete load path for the lateral forces acting on the building, shear connectors need to occur often enough to deliver those forces to the existing floor and roof diaphragms.

• Out of plane wall bracing

When the proportions of URM walls exceed the appropriate height to thickness ratios (too tall and too skinny), bracing needs to be introduced to stabilize the wall.

• Parapets and appendage bracing h/th = 2.5 min

When URM walls aren’t adequately anchored to the floor and roof systems, the movement during an earthquake can cause unbraced elements such as parapets, chimneys, and cornices to become dislodged (Fig. 2). This creates an unsafe condition for the occupants who are trying to safely exit the building.

Addressing these limited areas helps to stabilize buildings that may otherwise be sold or demolished due to prohibitive retrofit costs.

Some buildings were built with multiple construction types and materials. These buildings may require only partial rather than full upgrades. For example, a building may be primarily reinforced concrete but have an unreinforced masonry addition. In this case, the addition would need to be seismically retrofitted, while the rest of the building would not require an upgrade.
SUBSTANTIAL ALTERATIONS

The City of Seattle requires buildings that undergo substantial alterations or repairs to comply with selected portions of the current code. Substantial alterations are defined as changes that “extend the useful physical and/or economic life of the building,” allow reoccupancy of a building that has been largely vacant for more than two years, and structural repairs, among others. Major renovations could trigger the substantial alteration provision.

The URM Policy Committee report from December 2012 recommends that seismic retrofits be decoupled from other necessary code upgrades, suggesting that work associated with the proposed ordinance might not trigger the substantial alteration provision. However, this recommendation remains to be finalized, and may not be allowable under State building codes or ADA requirements.
PROJECT DESCRIPTION

The URM-RRIO Pilot Project engaged and educated property owners, evaluated case study buildings, identified policy challenges, and explored financial options for making required or potentially required improvements. It was conducted in five phases between 2013 and 2016, with outreach and property owner support continuing at the time of this report.

PHASE 1: NEIGHBORHOOD NEEDS ASSESSMENT

This phase included extensive information-gathering around (1) the new policies and (2) which buildings were subject to RRIO and the proposed URM ordinance. The information collected was used to create an informational brochure and to inform outreach and case study selection. Additional Phase 1 work overlaps with Phase 5 and is discussed in that section below.

Seven case study buildings were selected following a workshop where CID property owners were informed about the selection criteria and invited to express interest. Several factors were considered in the selection:

• Similarity to other buildings in the neighborhood,
• The property owner’s willingness to share information,
• Minimal seismic upgrades in the last 20 years,
• Height more than one story,
• Contributing buildings within a local historic district, and
• A building footprint larger than 6,000 square feet.

In the interest of having a representative sample of buildings, targeted outreach to individual property owners in Pioneer Square and the CID was conducted; the Alliance for Pioneer Square and some key Pioneer Square stakeholders were also consulted. All the case study buildings were built in the early 20th century prior to 1935.

SCIDpda staff developed a building assessment form that incorporated information on each case study building’s physical form and history of relevant work for use in the case study building assessments (Phase 2).

PHASE 2: CASE STUDY ASSESSMENTS

Seven case study buildings served as examples for how the new policies will impact properties in Pioneer Square and the CID. The buildings represent a variety of sizes, uses, conditions, and ownership models. All case study buildings are contributing buildings to the local and National Register historic districts in the neighborhoods. All are unreinforced masonry buildings affected by the URM ordinance, and some are subject to RRIO.

An architect, structural engineer, and cost estimator conducted a walkthrough of each case study building with the property owner or a representative. Each case study building was assessed for the following:

• Compliance with the RRIO standards (if applicable), and
• Compliance with the Bolts Plus standard for URM buildings.

Property owners were requested to share information on work completed on the building in the last twenty years and architectural drawings if possible, and to complete a financial questionnaire to inform the pro forma (Phase 4). Additional building permit research was completed at SDCI’s Public Resource Center.

The architect and structural engineer developed a scope of work required to comply with the new and proposed standards, which were then assigned approximate costs by the cost estimator. SCIDpda staff aggregated these components into a draft report for each case study building and provided that report to each property owner. Staff and consultants met with case study property owners individually to go over the results, answer any questions, and discuss which funding options would be most appropriate to finance the work. The outcomes of these conversations were integrated into the final case study reports, along with the pro forma for each building.

The case study buildings are confidential; aggregated results are presented here. Every attempt has been made to avoid identifying specific buildings in this report.

PHASE 3: FUNDING; IDENTIFICATION OF POLICY CHALLENGES

This phase had two goals tied to the larger impacts of RRIO and the proposed URM ordinance on the CID and Pioneer Square. It sought to build a more nuanced understanding of the options for financing large and small rehabilitation projects—especially given unusual multi-party ownership structures in the CID—and to provide the City of Seattle with timely, meaningful feedback on challenges within the policies and in policy implementation.

To meet the first goal, SCIDpda convened a finance team: a team of diverse finance, planning, and preservation professionals working at the community, municipal, and state levels. During two meetings, the team produced a list of financing mechanisms and incentives that could potentially be used to support rehabilitation projects. SCIDpda staff presented that list to CID property owners during a property owner workshop, explained key terms and concepts, and requested feedback. A third meeting was held in early 2016 to update team members and prioritize financial incentives moving forward. See Financial Options section for more details.

Identifying policy challenges has been an ongoing process. It has included:

• Communication with SDCI staff following the case study walkthroughs to note where the RRIO checklist was unclear or not applicable;
• Multiple meetings with SDCI staff to discuss challenges around buildings that need major work to comply with RRIO standards; and
• Proactively working with property owners and SDCI staff to ensure that buildings are brought into compliance in a way that works for tenants, property owners, and the City.
PHASE 4: PRO FORMA
Using the cost estimates from Phase 2, the financing list from phase 2, and property owner feedback, a basic pro forma was developed for each case study building. Several buildings have the option of either a full or partial remodel; pro formas were developed for both options. These were included in the final case study reports.

PHASE 5: FINAL REPORT; OUTREACH
This report will be distributed to the City and all funders and made publicly available to property owners and other interested parties. A draft of the report was reviewed by staff from SDCI, Historic South Downtown, Historic Seattle, and the Yesler Community Collaborative in May 2016. Presentations were held in Pioneer Square and the CID to present results in June 2016, accompanied by an update from SDCI staff on the proposed URM ordinance.

Community outreach has been ongoing since the pilot project began. One of the first tasks was to produce a brochure that provided concise descriptions of RRIO and the proposed URM ordinance, along with useful, easily understandable background as to why they were necessary and information about the timing of the policies. These brochures were printed in English and Chinese and have been available at property owner workshops and the IDEA Space office.

Eight workshops have been conducted for property owners in the CID, with a total attendance of 94 people representing 30 buildings. Community meetings are planned in conjunction with the release of this report, and we intend to tackle topics of continuing concern, interest, and relevance in additional future workshops. Past workshop topics and dates:

- Introduction to URM ordinance; 4Culture funding opportunities (April 2013)
- Pilot project overview and case study selection (July 2013)
- Introduction to RRIO (September 2013)
- Energy efficiency (January 2014)
- 4Culture funding opportunities (April 2014, February 2015)
- Funding: How to pay for needed improvements (May 2014)
- RRIO requirements and registration (September 2014)

In addition to these formal workshops, SCIDpda staff met with eleven property owners about the new policies, most for multiple meetings. Some meetings have been interpreted in Chinese to allow full comprehension and participation from all attendees. We also worked with SDCI staff to assist two property owners with RRIO registration and inspections.

Following the release of this report, we will conduct follow-up outreach to property owners in the CID and Pioneer Square in partnership with SDCI and the Alliance for Pioneer Square. Outreach will take place via email, online information, and individual in-person meetings. These efforts will help ensure that property owners understand both policies and their requirements and are better equipped to plan for compliance.

PROJECT TEAM
The Seattle Chinatown International District Preservation and Development Authority (SCIDpda) served as project coordinator.

Bob Hale with Kovalenko Hale Architects evaluated case study buildings for compliance with the Rental Registration and Inspection Ordinance. Bob specializes in the restoration and preservation of historic structures, working with local, state, and National Park Service standards for rehabilitation. His firm has led preservation plan and rehabilitation work on many National Register-listed historic properties in Seattle and around the region, including a number of properties in the Chinatown International District: the Atlas Hotel, the Eastern Hotel, the Gee How Oak Tin Building, and the Northern Pacific Hotel. Kovalenko Hale has been honored with numerous awards, including the Washington Trust for Historic Preservation Award of Merit, the State Historic Preservation Officer's Annual Award, and the AIA Seattle Housing the Northwest Award. Bob Hale is now a principal at Rolluda Architects.

I.L Gross Structural Engineers conducted structural assessments of the buildings according to the Bolts Plus standard. The firm has experience with historic building renovations, including many historic properties in Seattle, and prioritizes imaginative, cost-effective structural solutions to challenging problems.

Marpac Construction LLC provided cost estimating services. Marpac is a general contractor with 20 years of experience in pre-construction services, construction services, and post-construction services. Its in-house team includes project managers, project engineers, superintendents, administrative staff and a diverse range of craftsman workers.

The Office of Housing’s HomeWise program conducted an energy analysis of selected case study buildings, and Seattle Public Utilities staff participated in case study walkthroughs. Other experts from the City of Seattle and partner agencies and organizations presented at property owner workshops.
Finance team members included:

David Clifton, Washington State Housing Finance Commission
Charles Davis, Washington Federal
Susan Duren, Washington Community Reinvestment Association
Rocky Fong, US Bank
Paul Mar, SCIDpda
Steve Moddemeyer, Collins Woerman
Kathy Nyland, Mayor’s Office/Office of Policy and Innovation (at the time of participation)
Mike Omura, SCIDpda
Ken Takahashi, City of Seattle Office of Economic Development
Sue Taoka, Craft3
Maiko Winkler-Chin, SCIDpda
Eugenia Woo, Historic Seattle
This section focuses on the impacts of RRIO and the proposed seismic retrofit ordinance on seven case study buildings in Pioneer Square and the Chinatown International District. Some buildings require improvements to meet RRIO requirements and URM standards; others require only seismic work due to non-residential use or excellent building condition. Total cost per building ranges from $0 (no work required) to nearly $4 million, with the bulk of the cost going to seismic upgrades in the majority of buildings.

A few case study buildings require substantial work to comply with RRIO. In these, RRIO-required improvements make up roughly 60 percent of the total project cost, while URM retrofits make up approximately 40 percent. RRIO-required improvements are discussed at the end of the section.

### SEISMIC RETROFIT WORK

The scope of work and cost required to comply with the proposed seismic retrofit ordinance varies between case study buildings. Retrofit hard cost per square foot ranges from $6 to $136. The estimated cost of Bolts Plus retrofits ranges from $6 to $42 per square foot; two buildings do not qualify for Bolts Plus and would require costlier full structural upgrades. The Bolts Plus figures are in line with the Benefit Cost Analysis completed in April 2014 for the City of Seattle, which showed that Bolts Plus retrofit costs could range from $20 to $60 per square foot and concluded on a representative value of $40 per square foot.

Three significant factors were identified that affect scope of work and associated costs for seismic retrofits of URM buildings: building size, especially height; past retrofit work; and building condition.

#### 1. Retrofitting larger, taller buildings is typically more complicated—and more expensive.

In general, smaller buildings require less complicated retrofit solutions than larger buildings. This factor strongly impacts Pioneer Square, where narrower parcels mean that buildings have a relatively small “footprint,” or area on the ground. Parcels in the Chinatown ID tend to be larger, with many occupying a quarter of a block, and buildings have correspondingly larger footprints. These larger buildings also have more square feet, multiplying the per-square-foot cost by a larger area. Additionally, the likelihood of a building having other vertical or horizontal irregularities increases with building size and height. Addressing these irregularities adds to the complexity of the renovation efforts.

Building height also affects seismic retrofit costs. Buildings of six stories or more would require a higher level of analysis at the seismic study level. Costs are relatively similar for mid-rise buildings; that is, there is not much difference between the systems required to retrofit a 4-story building and a 6-story building.

Case study buildings in this project ranged in size from 6,000 square feet to 30,000 square feet, with heights of two to five stories. Four of the case study buildings had not been retrofitted at all, or had been retrofitted prior to the 1992 introduction of the FEMA 178 standard with $Aa/Av=0.3$. The evaluation used an upgraded $Aa/Av=0.3$ as required by the City of Seattle. For these buildings, the estimated per-square-foot retrofit costs rose dramatically when building height exceeded two stories.
2. Retrofit costs are lower for buildings that have been retrofitted before.

Another factor that significantly impacted costs in the case study buildings was whether the building had been seismically retrofitted before, either as part of a larger rehabilitation or a targeted improvement. Costs for previously retrofitted buildings were all below $50 per square foot; a few were below $10 per square foot. The cost to retrofit more complicated, irregular buildings with no prior seismic work ranged from $75 to $140 per square foot. As discussed above, lower-rise buildings had lower retrofit costs of approximately $15 per square foot.

3. Buildings in good condition cost less to retrofit.

Not surprisingly, buildings in good condition cost less to retrofit and renovate than buildings in poor condition. Case study buildings in good condition cost between $5 and $50 per square foot for URM retrofits, while buildings in poor condition cost between $75 and $140 for the same type of work.
RRIO IMPROVEMENTS

Buildings with residential units that do not meet RRIO standards must make improvements to comply with the ordinance. A few case study buildings are in poor condition and require RRIO upgrades in addition to anticipated seismic retrofit work. For these buildings, RRIO-required improvements comprise the majority of the total project cost, roughly 60 percent.

Building condition is the primary factor affecting the amount of work required for residential and mixed-use buildings to comply with RRIO. Buildings in good condition need very little or no work to meet RRIO standards. However, buildings in poor condition require $100 to $200 of work per square foot to meet RRIO requirements, in addition to URM retrofit costs.
This part of the project sought to 1) identify existing financial tools that could fund improvements required by RRIO and the proposed seismic retrofit ordinance, and 2) suggest additional tools to expand property owners’ options in funding necessary work. As discussed in Project Description, the finance team generated a list of existing and potential financing mechanisms and incentives that was presented to CID property owners. The list and property owner feedback are both included in this section.

A range of existing financial tools can help finance rehabilitation projects. Tools include several loan programs, one grant, multiple types of federal tax credits, local tax exemptions, and other incentives. Most of these come from public agencies at the local, state, and national levels. Typically, public funds come with wage requirements that can increase project costs by 10 to 25 percent. For example, construction workers on residential construction projects that receive support from the City of Seattle, Washington State, or the federal government must be paid the Washington State Prevailing Wage at minimum.

Roughly half of the tools are available to all types of properties, with about half designated for housing (primarily affordable). One tool—the New Markets Tax Credit—is only available to properties where revenues generated by non-residential uses exceed 20 percent of the total revenue.

Other potentially helpful tools do not yet exist or would need to be adapted to support rehabilitations. These include special loan pools, targeted loans, or creative approaches to loan guarantees; additional grants; a local tax waiver; and other incentives.

Traditional bank loans may also be an option for property owners with adequate income or collateral needed to qualify for a loan. However, these conditions are not a given for all property owners, particularly those providing informal affordable housing for low-income households and affordable commercial space for small businesses. And in the community-oriented long view, bank loans may not be the best option for retaining short-term or long-term affordability, as property owners would need to hike residential and commercial rents steeply to make market-rate mortgage payments.

OVERVIEW
The list of available tools and incentives is relatively short. Two can be used by the owner of any designated historic building by right: federal historic rehabilitation tax credits (HTCs), which provide roughly 20 percent tax credits or equity for qualifying project costs; and special valuation, a local property tax freeze. Both incentives bring standards and values to the project—for instance, both require that projects meet preservation principles—but they are not contingent on market factors or competitive allocation.

Two additional tools and incentives can be used by property owners of both historic and non-historic buildings, with notable conditions. Transferable Development Rights (TDRs) depend on the market: whether a buyer exists and how much he or she is willing to pay for the “air rights” above a historic building, which are transferred to another development site. The market for TDRs in Seattle is currently very low, making this a less realistic option. And to receive the Multifamily Property Tax Exemption, buildings that are being rehabilitated must have been vacant for at least 12 months, add more than 4 new housing units, and meet affordability requirements.

Most existing incentives are competitively allocated and targeted at affordable housing. Loans from the City of
Seattle Housing Levy, the Washington Housing Trust Fund, and the Washington Community Reinvestment Association loan pool all require applications and a commitment to long-term affordability (25 to 50 years), as do grant dollars from federal HOME funds and Low Income Housing Tax Credits (LIHTC).

The Benefit Cost Analysis commissioned by the City of Seattle from Collins Woerman concluded that the average URM property owner may only realize an economic benefit of $3.30 for every $100 that is spent on seismically retrofitting his or her building. This is based on a per-square-foot retrofit cost of $40. The total benefit is $7.60 per $100 spent, and includes monetized values of casualty reductions—that is, avoidance of death or injury caused by building collapse.

Financial incentives can acknowledge the significant non-economic benefits of URM retrofits—increased public safety, preservation of neighborhood character and historic buildings, preservation of affordable housing, minimized displacement of vulnerable populations, and preservation of affordable commercial space—by helping to lower the cost for property owners. The analysis considered a range of potential financial incentives and concluded that only a few would be available to URM owners; some additional attractive options would require a change in state law.

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**The Benefit Cost Analysis added up economic and safety benefits, existing incentives, and a property tax exemption up to 12 years for URM retrofits.**

<table>
<thead>
<tr>
<th>% of retrofit cost (approx.)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic benefits</td>
<td>3.3</td>
</tr>
<tr>
<td>Safety benefits</td>
<td>4.3</td>
</tr>
<tr>
<td>Benefits do not accrue directly to property owner</td>
<td></td>
</tr>
<tr>
<td>Historic tax credits</td>
<td>20</td>
</tr>
<tr>
<td>Special valuation</td>
<td>10</td>
</tr>
<tr>
<td>Property tax exemption</td>
<td>&lt;50</td>
</tr>
<tr>
<td>Would require change in state law</td>
<td></td>
</tr>
<tr>
<td>FAR +1 Bonus</td>
<td>----</td>
</tr>
<tr>
<td>Not calculated; also less relevant to historic districts</td>
<td></td>
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</tbody>
</table>

**Total existing benefits**  37.6%
**Total potential benefits**  87.6% (up to)

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**APPLICABILITY**

Property owners at the financial incentives workshop indicated that they would be willing to consider all of the tools and incentives that were presented (see Appendix C). However, the most relevant existing incentives—historic tax credits and special valuation, with LIHTC as an additional option for buildings providing long-term affordable housing—are only applicable to larger-budget projects. Historic tax credits also have an effective floor on project size due to transaction costs, and projects must exceed 25 percent of a building's assessed value to be eligible for the City of Seattle's special valuation incentive.

Of the case study examples, four buildings with project hard costs below $1 million do not appear to be eligible for any existing incentives. Two buildings with multi-million-dollar projects are eligible for existing incentives that cover between 15 and 61 percent of project costs. Of these, LIHTC make up the majority of covered project costs—roughly 42 percent of the total project cost. However, as noted earlier, LIHTC are allocated competitively, often over multiple application rounds, and property owners may not want to encumber their property with compliance restrictions. Meanwhile, tax credit investors may be hesitant to increase their risk by investing in atypical projects where property owners do not have prior experience with tax credits.

Though tax credits are the most sizeable incentives currently available, multi-party ownership common in the CID presents a potential barrier to use. The dozens or hundreds of shareholders who own the building must be willing to legally transfer the vast majority of ownership to for-profit investor/partners in exchange for the tax credits. This is a complex and challenging idea in a culture that highly values property ownership, even if the transfer is time-limited (5 years for historic tax credits; 15 years for Low Income Housing Tax Credits). In addition, the required paperwork to set up the legal structure for the tax credit deal will likely be more complex due to the ownership structure.

**PRIORITY OPTIONS**

The finance team identified five incentives and financing mechanisms that could help meet the needs of URM property owners while supporting continuing affordable residential and commercial space. These priority options include measures at the local, state, and federal levels; private and public partners; and incentives at multiple stages of development.

- Funding for more extensive study and pilot project. State funds could be used to further explore incentives and financing mechanisms, quantify the impact of proposed
incentives, and fund a pilot project for a model building or buildings. The pilot project would play an important role in demonstrating how seismic retrofits can meet a triple-bottom-line goal: social equity through affordable housing and cultural/historic preservation, economic development through affordable commercial space and demonstrating viable economic incentives for retrofitting, and environmental sustainability through preserving an existing building (embodied energy) and adding energy-saving measures.

- Community Development Block Grant-Disaster Relief (CDBG-DR) funds from HUD. Along with FEMA, HUD offers post-disaster mitigation funds for rebuilding communities. Preparing for a disaster—e.g., a major seismic event—offers substantial benefits in life safety and cost-effectiveness over standalone disaster response. Retrofitted buildings are less likely to collapse on inhabitants, customers, and passersby; less expensive to repair following a disaster; and more likely to return to service as housing and places of business—and in a shorter timeframe. It would be worth exploring with HUD leadership the possibility of using CDBG-DR funds to retrofit buildings prior to a disaster—perhaps to fund predevelopment/seismic studies and cost estimates for the work. This could be offered to all URM property owners or be used as an incentive for early action on retrofits.

- Interest rate buy-down. Public funds could be used to buy down interest rates, leveraging a relatively small sum of public dollars to create cheaper loans for private borrowers. Working with a loan pool of banks, such as that offered by the Washington Community Reinvestment Association (WCRA), reduces risk on the part of individual banks and makes them more willing to loan to borrowers with less credit, capital, or collateral. At the time of this report, a buy-down would cost 1 percent of the loan amount to reduce the interest rate 25 to 30 basis points. It may be possible to negotiate this rate down with more details on loan amounts and the current interest rate market.

- More federal pressure around Community Reinvestment Act (CRA). The CRA requires banks to make loans in communities where they have depositors. This requirement is particularly intended to benefit low- and moderate-income communities. At a very large scale, the federal government could help ensure robust lending options by leaning on banks to offer credit in all communities that they serve, in accordance with the CRA. This measure could help make more loans available for retrofit work.

- State property tax exemption for URM retrofits. As discussed, a property tax exemption at the state level would have significant financial benefits for property owners. The benefits would extend over the length of the exemption, and would also expand loan options for the project itself by effectively increasing income post-retrofit.
FINANCIAL TOOLS AND INCENTIVES

Loans

- Private loans: Banks and other private financial institutions lend money to property owners who meet certain credit requirements. These loans are offered with interest rates according to the market.

- Housing Levy: Seattle voters approved a Housing Levy to support the production, retention, and rehabilitation of affordable housing through below-market interest rates. Any residential property owner who wishes to provide affordable housing can apply for Housing Levy funding. It is possible that, if the City recognized URM affordable housing as being particularly threatened, URM buildings could be given priority for Housing Levy dollars. This funding requires that contractors be paid Washington State Prevailing Wage and that housing remain affordable for at least 50 years. More information at http://www.seattle.gov/housing/levy.

- Washington Housing Trust Fund: The Housing Trust fund provides support to build and maintain affordable housing units across the state. It is open to local governments, housing authorities, and nonprofits through a competitive application process, and requires that housing remain affordable for at least 25 years. More information at http://www.commerce.wa.gov/Programs/housing/TrustFund.

- Washington Community Reinvestment Association (WCRA) loan pool: The WCRA operates several loan pools and bond programs for private and nonprofit property owners and joint public-private ventures that are acquiring, rehabilitating, or developing properties that serve low-income populations or are located in low- to moderate-income census tracts. Housing loans are for up to $7.5 million; commercial and other facility loans are for up to $2.5 million. Housing must remain affordable for the life of the loan (typically 30 years). More information at http://www.wcra.net.
  - Special loan pool: A special loan pool could be formed to support the rehabilitation of URM or residential rental buildings in the Chinatown International District and Pioneer Square. In this situation, multiple financial institutions would pool money to lower the risk for each institution, enabling more flexible credit requirements and/or a lower interest rate. Identified as a priority option by the project finance team, in combination with using public funds to buy down the interest rate.
  - City credit to guarantee private loans: The City of Seattle could guarantee a portion of private loans designated for seismic or RRIO-required improvements. This guarantee would make banks more willing to lend money, perhaps at a lower interest rate, but the City would need to approve it.
  - Loans for historic preservation: State legislators are considering developing a loan program to support the rehabilitation of historic buildings. The loan term would likely be 7 years, and contractors would need to be paid Washington State Prevailing Wage.
  - Bonds by public entities: Public entities like the City or SCIDpda could issue bonds and use the money to provide loans to property owners for rehabilitation. These would likely have a higher interest rate than private loans.

Grants

- HOME funds: Seattle receives HOME funds from the federal government to create affordable housing for low-income households. The City allocates the bulk of this funding to affordable housing developers to produce and rehabilitate rental housing, as well as a portion to assist low-income homebuyers.
  - Community Development Block Grants (CDBG): CDBG grants are federal funds that the City allocates to various programs targeted at low- and moderate-income individuals, families, and communities. Funds are currently focused on homelessness, economic and community development, and the preservation and development of affordable housing. To focus funding on URM buildings, the City would need to reallocate money from these other priorities. More information at www.seattle.gov/humanservices/community_development. CDBG-Disaster Relief funds were identified as a priority option by the project finance team.
  - Grants for historic preservation: 4Culture already provides small grants to historic buildings for rehabilitation: up to $10,000 for planning projects and $30,000 for capital projects. This grant program could be expanded and potentially joined by a State grant program for historic and/or URM buildings. Projects supported by State funding would likely need to pay contractors Washington State Prevailing Wage.
  - Foundation funding: Foundations may be interested in helping to fund rehabilitation of URM buildings if they can be convinced that there is significant community need and potential community benefit. Foundation grants would likely need to be channeled through a nonprofit organization for tax purposes.
  - Other federal funding: Federal agencies such as the U.S. Department of Housing and Urban Development (HUD), the Economic Development Agency, the Small Business Administration, and the Federal Emergency Management Agency all have a stake in preserving affordable housing and commercial space in communities at high risk of disasters such as seismic events. However, existing funds from these agencies may not meet property owner needs as-is. Additionally, federal funds can be complicated to administer and might need to be channeled through the City or a quasi-public organization like SCIDpda.
**Tax Credits**

- **Low Income Housing Tax Credits (LIHTC):** These federal tax credits help finance the development and rehabilitation of residential rental buildings with a given percentage of affordable units. Developers can claim the tax credit and reduce their tax bills, but most sell the tax credits to raise equity capital and reduce the amount they would otherwise have to borrow. Both private and nonprofit developers are eligible for LIHTC, which are competitively allocated by the Washington State Housing Finance Commission. Maximum credits under LIHTC equal roughly 70 percent of the project cost. Projects must remain affordable for 30 years.

- **Historic Rehabilitation Tax Credits:** These federal tax credits help finance the rehabilitation of income-producing historic buildings. They are offered at two levels: 10% of eligible project cost for non-historic buildings constructed before 1936 and 20% of eligible project cost for designated historic buildings. Since Pioneer Square and the historic core of the Chinatown International District are both designated National Register historic districts, contributing buildings within each neighborhood can take advantage of the 20% tax credit. This requires working with the Washington State Historic Preservation Officer and the National Park Service to ensure that rehabilitation work maintains the original building character. As with LIHTC, most developers sell historic tax credits to raise equity capital for their project. Identified as one of the primary incentive options by the Benefit Cost Analysis.

- **New Markets Tax Credits:** These tax credits help finance commercial real estate projects, or the commercial portions of mixed-use buildings, in low-income communities. New Markets Tax Credits are typically only used for very large projects ($5 million+) because of the extensive legal work that they require, and are allocated competitively by certified Community Development Entities such as the City of Seattle, the Seattle Investment Fund (a limited liability company created by the City), and Craft3.

**Tax Exemptions**

- **Multifamily Property Tax Exemption:** The Multifamily Property Tax Exemption (MFTE) reduces the amount of property tax paid on residential improvements by maintaining the property value at pre-improvement levels (and pre-improvement taxes) for up to 12 years. It includes new developments and rehabilitation projects, though rehabilitation projects must 1) be in a building where the residential portion has been vacant for at least 12 months and 2) include the addition of at least 4 new units. The MFTE is available to property owners who meet affordability requirements in 39 Residential Targeted Areas across the city.

- **Special valuation:** Like the Multifamily Property Tax Exemption, special valuation maintains property taxes at pre-improvement levels for up to 10 years. It can be used by property owners who make improvements to buildings located in local or National Register historic districts. Identified as one of the primary incentive options by the Benefit Cost Analysis.

  - **State tax exemptions:** The State of Washington offers tax exemptions for affordable housing, and could be expanded to URM buildings with a new state law. Identified as one of the primary incentive options by the Benefit Cost Analysis and a priority option by the project finance team.

**Other**

- **EB-5 foreign investment:** The EB-5 program offers low-interest loans for projects that create a substantial number of jobs (construction and long-term) in target areas. EB-5 funds are funneled through intermediaries. This may not be a consistent funding source due to its reliance on Congress for reauthorization.

- **Transferable Development Rights (TDRs):** TDRs allow owners of historic properties to “sell” the air rights over their buildings, up to the height limit allowed by zoning. The air rights are purchased by developers who want to build higher buildings in another part of the city. Though the City regulates these transfers, the price is determined by market demand.

- **On-Site +1 Bonus:** Owners are given a +1 FAR (Floor to Area Ratio) bonus after completing a seismic retrofit, enabling new development above a URM building or adjacent to it. Identified as one of the primary incentive options by the Benefit Cost Analysis.

- **Energy/water conservation incentives:** Utility companies offer incentives for conserving water and energy, which could be combined with a substantial rehabilitation to offset costs or provide more value for money spent. Coordination would be required with each utility company.

  - **Tax Increment Financing (TIF):** Tax Increment Financing is based on the idea that when improvements in an area are completed, they result in increases in the value of surrounding properties (“tax increments”). TIF borrows against the money from future tax increments and puts it toward supporting catalytic improvements. This is not currently legal in Washington.

  - **Local Improvement District (LID):** A Local Improvement District is formed by property owners in an area who agree that they want to help pay for improvements (usually infrastructure) that will benefit all of them. A LID finances improvements by borrowing at a low interest rate. The property owners in the LID jointly pay the loan back according to the benefits their property receives.
CONCLUSION AND NEXT STEPS

The issue of unreinforced masonry buildings in the Chinatown International District and Pioneer Square is fundamentally one of social equity, of culture, and of community. Retrofitting URM buildings will save lives in the certain case of a major seismic event. The dense concentration of lower-income households and mom-and-pop small businesses that call these neighborhoods home deserve to live, work, and play in safety. The historic URM buildings that play a large role in defining neighborhood character will also benefit from retrofits. Offering real, substantial incentives for these retrofits is necessary to ensure that housing and commercial spaces remain affordable and that the distinctive culture and community of each neighborhood is preserved.

Yet too few options exist for incentivizing URM retrofit projects. This is true across the board, though particularly important in historic districts like Pioneer Square and the CID where property owners do not have the option of demolishing their buildings. Incentives are particularly lacking for market-rate housing, informal affordable housing, and commercial-only buildings, as well as buildings that require relatively little work (projects under $1 million) where tax credits may not be feasible. At the same time, more expensive projects with access to tax credits will also face large gaps in project financing. This report focuses on two historic districts, but property owners of URM buildings that are not designated historic properties will be further challenged without the use of historic tax credits.

Incentives are key to passing and implementing a seismic retrofit ordinance in Seattle, but simultaneous efforts must be made to ensure that property owners understand their options in response to the ordinance. In this project, workshops for property owners focused on topics such as the benefits of incorporating energy efficiency into major rehabs and the basics of various financing mechanisms and tools. This was just the beginning: much more extensive capacity building is needed to help property owners understand and navigate the complex processes of redevelopment and project financing.

NEXT STEPS

City of Seattle

• The City should keep property owners apprised of progress on the proposed retrofit ordinance. SCIDpda and the Alliance for Pioneer Square can assist with this, using their relationships with local property owners.
• The City should quantify the proposed “priority options” for financing projects, particularly the interest rate buy-down.
• The City should continue to explore the feasibility of project financing mechanisms and other incentives.
• The City should form a coalition of local stakeholders, municipalities across Washington State, and other interested parties (e.g., preservation organizations) to advocate for a state property tax exemption for URM retrofits.

Other stakeholders

• Property owners and community organizations (SCIDpda and others) should advocate that City Councilmembers and the Mayor ensure that the URM retrofit ordinance is passed in a timely manner and that substantial incentives are developed and offered to URM property owners at the local and state levels.
• Stakeholders should approach HUD about creative use of CDBG-DR funds for disaster preparation.
• Stakeholders should actively explore using bond funds authorized through Washington State HB 1223 for an interest rate buy-down in close cooperation with Historic South Downtown, which will administer the funds, and the Washington Community Reinvestment Association (WCRA). (HB 1223 authorized King County to float bonds, primarily for affordable housing.)
• SCIDpda should develop or adapt a workshop series or other means to educate property owners about the redevelopment process and financing.
APPENDIX A—RRIO CHECKLIST

See following pages.
APPENDIX B—BOLTS PLUS STANDARD

See following pages.
APPENDIX C—FINANCIAL TOOLS AND INCENTIVES

The handouts on the following pages were distributed to property owners at a workshop in May 2014.