PRP
PACIFIC RESOURCE PARTNERSHIP

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PACIFIC RESOURCE PARTNERSHIP

INSIGHTS

INFRASTRUCTURE

INSIDE:

WHAT WE NEED TO BUILD
BEFORE WE CAN BUILD

LAYING THE GROUNDWORK
FOR SUSTAINABLE GROWTH

Hawaii is growing, and housing and infrastructure have not kept pace with demand. According to a January 2018 UHERO briefing to the Hawaii Senate Ways & Means and House Finance Committees, our state needs more than 80,000 housing units to be built by 2025. Every one of them will require water, wastewater, utilities, roads and other infrastructure before they can be built.

114,540
PROJECTED POPULATION INCREASE BY 2025

A Decade of Growth, 2015-2025

It's not a question of if we're going to grow, but how we want to grow. On Oahu, city planners want to increase housing density in the urban core by building integrated communities. Leveraging investments in transit and relying on efficiencies of scale, infill redevelopment can decrease the overall costs of growth, mitigate its environmental impacts and avoid ever more sprawl. It's the most sustainable way for us to grow.

HOUSING AND INFRASTRUCTURE GO HAND-IN-HAND TO ACCOMMODATE FUTURE GROWTH.

	41,600 UNITS	PROJECTED HOUSING DEFICIT BY 2025
+	38,400 UNITS	ADDITIONAL HOUSING SUPPLY NEEDED BY 2025
	80,000 UNITS	PROJECTED HOUSING SHORTAGE BY 2025
-	46,900 UNITS	PROJECTED NEW HOUSING INVENTORY BY 2025
=	33,100 UNITS	PROJECTED HOUSING DEFICIT BY 2025

(SOURCES: US Census Bureau; DBEDT, *State of Hawaii Data Book*, 2016; UHERO *Hawaii's long expansion gets global lift*, 2018)

MAJOR INFRASTRUCTURE UPGRADES

The December 2017 *Transit-Oriented Development Infrastructure Projects* report from the city's Department of Planning and Permitting estimated that more than $1.48 billion in major infrastructure upgrades are necessary to accommodate the next several decades of growth around rail stations.

WATER
$374M
– includes $154 million for projects to increase system capacity in areas surrounding the planned rail route within the next six years and $220 million for projects planned through 2042.

RECREATIONAL & CULTURAL FACILITIES
$108M-$122M
– includes dredging and bank stabilization for Kapalama Canal, a linear park and promenade on both banks between Dillingham Boulevard and North King Street, improvements to Kohou and Kokea Streets and new pedestrian bridges at Kalani and Kaumualii Streets.

WASTEWATER
$830M
– includes $320 million in funded sewer projects (pump stations, force mains and large pipes) from Waipahu to Ala Moana over the next five years and $510 million in additional sewer projects identified, with construction cost funding programmed.

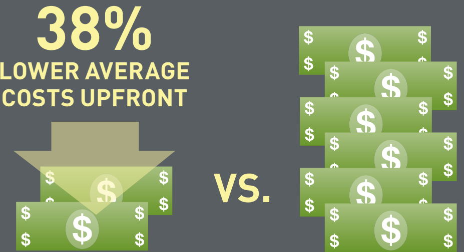
STORMWATER DRAINAGE
$22M
– the estimated cost to update an existing plan to eliminate the federal floodway designation in Old Waipahu Town.

STATION ACCESS & COMPLETE STREETS
$140M
– includes $30-50 million for complete streets initiatives in all aspects of roadway planning, design and construction, as well as $80-90 million for more than 60 pedestrian, bicycle and bus access improvements ranging from wider crosswalks to footbridges and bus transit centers, necessary to help riders reach the rail stations, since only four of the 21 stations will have parking facilities.

SMART CHOICES, LOWER COSTS

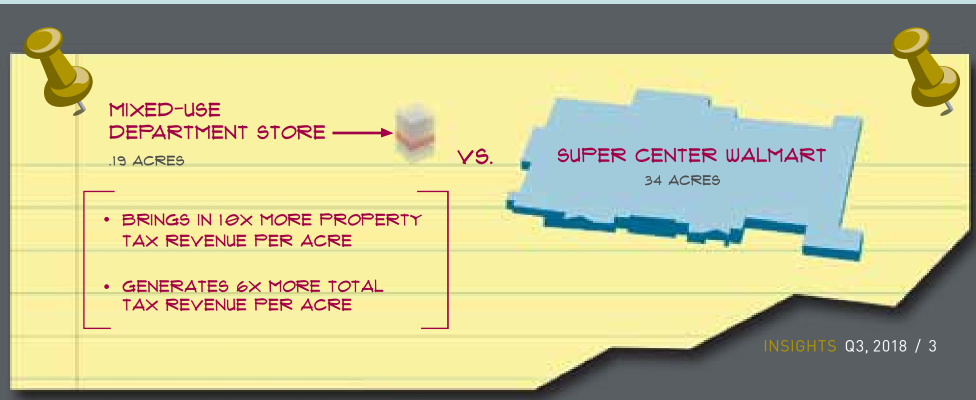
A smart way to finance infrastructure is to lower the price tag. A 2013 study by Smart Growth America found that dense mixed-use development patterns had reduced up-front costs that were 38 percent lower, on average, compared with suburban development patterns. Increased economic activity and rising property values in a mixed-use urban core also generate more tax revenue, making it easier to pay for maintenance.

38%
LOWER AVERAGE COSTS UPFRONT



URBAN CORE, DENSE MIXED-USE DEVELOPMENT — VS. — SUBURBAN DEVELOPMENT

Nationally recognized urban planner Joe Minicozzi, AICP, cites a downtown Asheville, North Carolina department store that brings in 10 times the property tax revenue per acre compared to a Super Walmart that sits on 34 acres a few miles from downtown. When you count total tax revenue – which includes both property and sales tax – the mixed-use department store generates six times as much as the Walmart.



Expert Q&A

WALTER THOEMMES

MANAGING DIRECTOR OF COMMERCIAL REAL ESTATE.

KAMEHAMEHA SCHOOLS

In his more than two decades at Kamehameha Schools, Walter Thoemmes has held various positions, including Manager of Facilities Design and Management, Director of Facilities Development and Support Division, and Chief of Staff. A KS alumnus and architect by training, he developed Kamehameha Schools' two neighbor island campuses on Maui and Hawaii Island.

In his current role, Thoemmes provides strategy and direction for KS' 1,500-acre commercial real estate portfolio, which includes shopping centers, hotels and resorts, and office and industrial properties. Stewardship of these assets, including the educational trust's Kakaako holdings, enhances asset value and provides operational revenue to educate more than 48,000 Native Hawaiian learners each year.

Two decades have passed since Kamehameha Schools submitted its master plan to redevelop approximately 29 acres of land comprising nine city blocks in the heart of Kakaako. KS worked with stakeholders, developers and contractors on infrastructure improvements, housing, and commercial and community spaces to transform the light industrial area into a people-centric, walkable, mixed-use urban neighborhood known today as Our Kakaako. The vibrant community honors the area's history and reflects the collective vision of those involved in its creation.

Q: HOW DID KAMEHAMEHA SCHOOLS' VISION AND THE VISION OF OTHER KAKAAKO STAKEHOLDERS ALIGN, AND HOW DID YOU COORDINATE REDEVELOPMENT AND INFRASTRUCTURE PLANNING?

WT: As we began the redevelopment of our nine-block area in Kakaako, we worked collaboratively with stakeholders and did extensive community outreach. The resulting Kaiaulu o Kakaako Master Plan is the best example of vision, alignment and working with state agencies. It successfully guided both KS and the Hawaii Community Development Authority (HCDA) through the complex development proces.

Once the vision was established, KS based its proposals on HCDA's Kakaako Community Development District Mauka Rules (referred to as "Vested Rules"), and on existing infrastructure and streets. It's both more cost effective and planful to work together with others who are moving forward in a similar timeframe. However, real estate development is very sensitive to market factors, and therefore stakeholders' respective plans do not always align time-wise.

Q: HOW DID YOU INCORPORATE THE RAIL PROJECT AND TRANSIT-ORIENTED DEVELOPMENT INTO YOUR INFRASTRUCTURE PLANS FOR KAKAAKO?

WT: In order to optimize urban planning best practices and avoid the risk of delay, we proactively worked with the Honolulu Authority for Rapid Transportation and the developers of the block on which a rail station was designated, to integrate the designs of each. Gathering places were added at both ends of the station to better integrate the uses on the block. We provided the rail site with an allocation of floor area under the Vested Rules in order to facilitate the future installation of ridership-focused services and perhaps even a future senior housing program above the station.

Q: WHAT ARE THE LESSONS LEARNED FROM YOUR EXPERIENCE IN KAKAAKO, AND HOW MIGHT THEY APPLY TO OTHER PROJECTS?

WT: All developers gain valuable insights as they proceed through a community-building program, and KS is no exception. We make every effort to effectively deploy those "lessons learned" in each subsequent development program, whether being executed by KS or jointly with a development partner, or by one of the builders it sold property to for for-sale residential development.

One top lesson learned that can be deployed elsewhere is to find more ways to work with aligned collaborators to achieve synergy. This allows each to succeed at higher levels than they could achieve alone.

Q: OVERALL, HOW SATISFIED IS KS WITH ITS DEVELOPMENT OF ITS KAKAAKO PARCELS?

WT: KS collaborated with the community and cultural stakeholders in the planning and execution of the master plan, and believe that all can be very pleased with how Our Kakaako contributes to Honolulu's vibrant urban landscape.

Integrated Communities

A NEIGHBORHOOD 42 YEARS IN THE MAKING

Visit Kakaako today and you'll find a truly integrated community with dozens of new retailers and restaurants, a mix of affordable and market rate housing, local events and pop-up shops, pedestrian friendly walkways, murals reflecting a thriving street art scene, attractive landscaping, Biki bike docks – and several construction sites. Redevelopment has transformed this former light industrial district into a vibrant urban neighborhood combining modern amenities with a nod to its historic past. But arriving to this point was not easy; it's the result of preparation and orchestration.

Planning began in 1976 when jurisdiction of the district was transferred from the city to the Hawaii Community Development Authority (HCDA), an agency created to bring together private enterprise and government to guide community planning. The goal was to develop an economically and socially viable community where residents could work, live and play. As Kakaako evolves into one of the most desirable and trendiest neighborhoods in town, it's evident that HCDA and its partners achieved their vision.

It's important to consider lessons learned and emulate successes, as we face tremendous growth pressure and the need for more redevelopment. Because attractive neighborhoods don't appear overnight. Underdeveloped sections of our urban core don't simply acquire thriving businesses, diverse residences, desirable public spaces and plentiful transit options. That requires foresight, grand partnerships, big investments and perseverance.

The state's infrastructure investments in Kakaako have been estimated at $200-$400 million, depending on how far back you look and what inflation measures you use. Securing and deploying that investment involved a vast number of stakeholders, political will in the face of opposition, constant public input, financing through several economic cycles and four decades of staggeringly complex planning that's still coming to fruition – with many more projects to come. And, after a flirtation gone awry a generation ago, rail transit is again on the horizon, promising Kakaako and points west not just commuter options and relief from clogged roadways, but revitalized neighborhoods, improved quality of life and a lighter impact on the environment. But first will come more planning and more infrastructure, including undergrounding utilities, concrete guide ways, rail stations and complete streets improvements. It's not simple, fast or cheap. But in the end, it's not only necessary, it's worth it.

Kakaako is an excellent case study in understanding what it takes to create integrated communities with sound infrastructure. As we look to develop the next Kakaako, we must remember all that came between the light industrial district of yesteryear and the hip, happening enclave now rising. And we must have patience.

St. Louis High School and University of Hawaii at Manoa graduate Leonard Leong joined Royal Contracting Company in 1970, right out of college, because it gave the young engineer a chance to do everything. From a couple dozen employees and $2.5 million per year in revenue back then to a crew of 180 and a record $100 million in revenue last year, the company has earned a reputation for handling the toughest infrastructure challenges and accommodating the most complicated schedules to get the job done. Leonard looked back on some of those challenges and the insights he's gleaned from nearly a half century in the business.

COMPANY:
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GENERAL CONTRACTOR:
Civil Infrastructure, Building, Transportation, Housing, Site Development

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Contractor Profile

LEONARD LEONG

ROYAL CONTRACTING

When Leonard was a youngster he often stayed at his grandmother's house on University Avenue, before it was made a through street connecting with King Street. Walking around the neighborhood, he encountered a sight that would influence the course of his life.

"One day they decided to connect the road, and they were putting in a box culvert," he recalls. "I don't know why, but it caused me to admire construction. It was fascinating to watch them work."

Later in his youth Leonard would spend summers working with relatives who were builders, carrying tile, mixing mortar, doing "grunt" work. " I enjoyed it," he said. "You didn't need skills, but you need muscles."

Leonard has seen a lot of changes in the industry over the years, but one thing that hasn't changed is the need to be prepared for – and adaptable to – the particular challenges of the jobsite you're working on, especially for infrastructure projects. That's been one of Royal Contracting's strengths over the years.

Sometimes the challenge is mundane – like agreeing to start work at 8am instead of 7am and cut out at 3pm to avoid inconveniencing commuters on Kalaeloa Boulevard. The project for James Campbell Company, completed in June, realigned and widened a 1.2 mile stretch of the main thoroughfare, with improved drainage and new intersections to connect to Kapolei Business Park on both sides.

"We knew about the time constraints going in, so it wasn't that bad – it's just part of your planning and budget, working Saturdays, paying overtime," says Leonard. "But people don't realize how many trucks go through there. And truckers tend to be rushing, because they have deadlines to meet. When we're on the side of the road, you can feel the air on your back when they pass by. We were fortunate that there were no accidents. The traffic control was good."

Other times the challenges are seismic. A 5.0 earthquake hit the Big Island in 2009, triggering rockfalls and landslides in the Waipio Valley canyons. The irrigation tunnel servicing Honokaa-Paauilo Irrigation System was blocked and the Alakahi Intake structure was damaged. When water stopped flowing to farmers, the state put mandatory water conservation orders into effect and the situation was dire. Because there was no roadway access, there were no takers for the state's emergency repair contract – except for Royal Contracting.

"Luckily I had a superintendant who grew up in the area," recalls Leonard. "He spent a week just walking back and forth and said 'let's take a backhoe in.' But then a backhoe requires fuel."

Every day they'd have the workers carry five-gallon gas tanks on their hour to 90-minute hike to the job site. After 10 days of work, they had cleared the Koiawe Intake of blockage, repaired the drain structures and realigned the stream. Their heroic efforts earned Royal the 2010 Project of the Year Award for Disaster or Emergency Construction Repair, $5 million-$25 million, from the American Public Works Association.

"First time we ever had a contract where the state said we could cancel it at any time because of danger," says Leonard with a laugh.

As an engineer with the title of vice president, Leonard emphasizes what's helped him in his roles as operations manager and mentor to his team. "It's easier for me to understand the difficulties that other project engineers have, or a superintendent has, because I've kind of walked the walk. To me, that's invaluable. You know when to get a little excited, when to stay calm, when to criticize, when to help."

Times may change, but there will always be the potential for unforeseen challenges on an infrastructure project. And it will always be experience and communication that get them solved.

Our View

PRP STAFF

It used to be so much easier. Developing a new neighborhood in the master plan era was a relatively simple process of acquiring, clearing and building on available land. Because the developer knew what and where everything was going to be – with a revenue stream from eventual sales – it was relatively straightforward to project, site, finance and implement the infrastructure required for that planned community. But those days are coming to an end.

Large tracts of land are in limited supply on Oahu, and there is considerable interest in preserving our open spaces. That means we need to build nearer to the urban core, where instead of large swaths, development is almost entirely infill, redeveloping existing properties and building up instead of out.

Rather than a single developer, there are several stakeholders, not all of whom may have the same vision of redevelopment. Instead of a single master plan, there may be a thicket of divergent goals, motivations and financing options to consider. That creates the groundwork for a new approach, because infrastructure decisions must be agreed upon and implemented first. How can you determine – and acquire and allocate funding for – the water, sewer, utility, transit, street and other infrastructure upgrades necessary when you have no idea what will be there in a generation?

The answer is with intricate planning. We are now in the communication era, when successful development will demand unprecedented levels of coordination. Sometimes-competing developers will need to share information – traditionally seen as confidential and proprietary – to ensure the mutual success of their endeavors. Above all, open lines of communication within and between public and private sectors will be paramount. Partnership will take precedence over competition.

The good news is that Hawaii is well-positioned to make it work in today's environment. Living and doing business on an island places a premium on relationships, and our local construction industry has often led the way in coming together to make progress happen. The very existence of PRP is a testament to the willingness of labor and management, traditionally at odds in other markets, to work together for the prosperity of all. The tools of partnership – integrity, honesty, trust, good faith and communication – will be put to good use as our industry enters a new era in Hawaii's construction history. We look forward to partnering with you to build a better future together.

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