



COMMUNITY PLANNING ASSISTANCE TEAMS

Yarborough Revitalization Initiative

Yarborough, Belize City, Belize
Final Report | April 2017



American Planning Association

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Belize City Council (BCC), through the funding support of the Inter-American Development Bank's (IDB) Emerging and Sustainable Cities (ESC) program, submitted a proposal to the American Planning Association's (APA) Community Planning Assistance Teams (CPAT) program to supplement work already completed as a part of their 2012 master plan that included a focus on the waterfront areas that are critical to the city's overall land-use, sustainability, and economic development planning. The CPAT program provided pro bono planning assistance and worked with the BCC and IDB to frame a focused scope of work and manageable study area for the team's intensive work in Belize City. Through discussions with the stakeholders and APA, the historic Yarborough waterfront area on the city's south side was selected as the focus for the community planning initiative. While the north side of the city has seen new investment and generally has better-quality public assets and quality of life, the south side community stands to benefit from improved planning and urban design in order to help the city strategically make new investments for deserving Yarborough area residents and businesses, and for the benefit and improvement of one of the most known and valued areas in Belize City and for Belizeans.

Team leader Justin Garrett Moore, AICP; APA programs manager Ryan Scherzinger; APA consultant Jennifer Graeff, AICP; and IDB representative Irayda Ruiz Bode, AICP, conducted an advance site visit from February 9 to 12, 2016, to tour the neighborhood and discuss issues and ideas with area stakeholders. Following the visit, Moore and Scherzinger recruited an interdisciplinary team of volunteer planners, designers, and engineers from across the United States. The full team prepared in coordination with BCC and IDB staff, then traveled to Belize City and executed the project from June 13 to 18, 2016, including multiple meetings and workshops in the community. This report presents the team's findings, observations, conceptual designs, and recommendations for the Belize City Council and the residents and stakeholders of the Yarborough community.

This report outlines the four planning priorities the team developed through the stakeholder and public consultations during their work in Belize City. This process included several workshops and two large public meetings where residents were able to give their ideas and priorities and lay out issues that affected their neighborhood. The interdisciplinary team shared their findings and also best practices and examples from other cities that could be used or adapted for the Yarborough area based on the input from local stakeholders. The four planning priorities identified are: (1) linking assets and a reorientation of the community to the water; (2) supporting community-led initiatives and activities; (3) implementing green infrastructure and resilience strategies; and (4) ongoing project development and management using metrics and "strategic doing."

With these planning priorities in mind, and based on site analysis and input from the community, the team developed some site-specific urban planning and design recommendations, as well as recommendations for how to accomplish the multiple projects and initiatives that are outlined in a strategy and implementation matrix. The matrix breaks down the recommendations into parts and is intended as a working tool for the BCC and stakeholders to implement the project components. Implementation strategies range from the near term to the long term and from low-cost projects to those that require significant capital investments.

Finally, the report outlines three relatively simple and low-cost projects that can be used to begin making positive changes in the Yarborough community as a part of this initiative. The Belize City Council and the assembled stakeholders have already begun the process of change through this early planning work. But continued community participation and engagement is critical for implementing the recommendations. Rather than this planning effort resulting in just another report with unrealistic or misaligned priorities, the interest is to provide a framework for incremental progress and capacity building through real projects. From planting new trees or painting street murals for beautification, to setting up temporary market spaces to align with existing events, these small actions can help build greater interest, stewardship, and both social and economic capital to help drive the revitalization of this historic waterfront community toward larger and longer-term projects.

Through this work of developing a larger vision and grounding it with projects that can be done by people in the community, there is an opportunity for greater alignment with the larger land-use planning and economic development and branding for the neighborhood and city. It is also a strategy for developing leadership and stewardship in multiple communities in Belize City. By providing a framework and example for neighborhood-specific planning and urban design, there is an opportunity to revitalize not only the Yarborough and Belize City Waterfront, but an approach to civic participation and a true connection of the people, including young people and those with lower incomes, to the future sustainability, identity, and economy of their city.

PROJECT REPORT

ACKNOWLEDGMENTS

The Yarborough Revitalization Initiative CPAT project was a collaborative project in every regard. APA and the volunteer members of the Yarborough CPAT team wish to thank and acknowledge the many individuals and organizations that assisted the project team in various ways throughout the process.

The BCC went above and beyond in welcoming the team. They were gracious and responsive hosts many months ahead of the first visit. The BCC Director of Finance Marilyn Ordonez, City Planner Carla Patnett, City Planning Intern Tristan Lanza, local Economic Development Coordinator Barbara Elrington, local Economic Development Officer Jasmin Swan, City Valuation Manager Troy Smith, Director of Administration Sharlene Rudon, City Administrator Candice Miller, Public Relations Officer Michelle Smith, Councilor Michael Theus, Parks Manager Louis Thompson, the information technology staff, and BCC staff that prepared the office space and venues for the project all served as local liaisons in organizing and carrying out the CPAT project. Many thanks go to the BCC constables, particularly Jacinto Mano, for the first-class treatment they showed the team during their visits.

The IDB, through their ESC program, made the project financially possible by providing travel and other project expenses. They also connected the team to key stakeholders and provided valuable information toward preparing for the project. IDB representatives Sandra Bartels (team leader); Sarah Ruth Benton (consultant); Jose Manuel Ruiz (Belize chief of operations); Venetia Inderah Eck-Salazar (Belize operations analyst); Cassandra T. Rogers (Belize country representative); and Irayda Ruiz Bode (urban planning consultant) all contributed to the work and connections needed to conduct the project.

Finally, and most importantly, the residents, business owners, institutional leaders—such as Bishop Wright of the Anglican Church—youth and students from Yarborough and around the city, particularly those from Wesley College and the staff there, and many other stakeholders participated in public workshops, interviews, and ad hoc conversations with the team. Yarborough residents, stakeholders, and the entire Belize City community provided invaluable insights and ideas that were integral to the team's understanding and the resulting observations, analyses, and recommendations contained in this report.



THE PURPOSE OF THE CPAT PROGRAM

The purpose of the Community Planning Assistance Teams program is to serve communities facing limited resources by helping them address planning issues such as social equity and affordability, economic development, sustainability, consensus building, and urban design, among others. By pairing expert urban planning professionals from around the country with residents and other stakeholders from local communities, the program seeks to foster education, engagement, and empowerment. As part of each team's goals, a community develops a vision that promotes a safe, ecologically sustainable, economically vibrant, and healthy environment.

APA staff works with the community, key stakeholders, and the host organization(s) to assemble a team of planners with the specific expertise needed for the project. The team meets on-site for three to five days, during which time a series of site visits, focused discussions, and analyses are performed. On the final day, the team reports their results back to the community. A more detailed report is issued to the community at a later date.

Guiding Values

APA's professional institute, the American Institute of Certified Planners (AICP), is responsible for the CPAT program. Addressing issues of social equity in planning and development is a priority of APA and AICP. The CPAT program is part of a broader APA Community Assistance Program, which was created to express the value of social equity through service to communities in need across the United States.

Community assistance is built into the professional role of a planner. One principle of the AICP Code of Ethics and Professional Conduct states that certified planners shall aspire to "seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration." Another principle is that certified planners should aspire to "contribute time and effort to groups lacking in adequate planning resources and to voluntary professional activities."

Program Background

In recognition of the key role urban and regional planners play in shaping vibrant, sustainable, and equitable communities, the APA Board of Directors established the Community Planning Team initiative in 1995. This initiative resulted in a pro bono effort to assist an economically struggling African American community in Greensboro, North Carolina. APA has continued to develop a pro bono planning program that provides assistance to communities in need.

In 2005, program efforts were increased after Hurricane Katrina in the Gulf Coast region to include a number of initiatives, including planning assistance team projects in the affected cities of Henderson Point, Mississippi, and Mandeville, Slidell, and New Orleans in Louisiana. Another Gulf Coast recovery project included the Dutch Dialogues, which brought American planners together with Dutch experts to transform the way that Louisiana relates to and manages its water resources.

AICP broadened the scope of the CPAT program with its 2009 project in Buzzard Point, a neighborhood in Southwest Washington, D.C. Completed projects since the program's official relaunch in 2011, including Matthews, North Carolina; Story County, Iowa; Unalaska, Alaska; La Feria, Texas; Lyons, Colorado; Germantown, Philadelphia; and others are all important landmarks in the development of the CPAT program as a continued effort. That list now includes the Yarborough neighborhood of Belize City, Belize, which marks the first international project for the CPAT program. CPAT is an integrated part of APA's service, outreach, and professional development activities.

More information about the CPAT program, including community proposal forms, an online volunteer form, and full downloadable reports from past projects, is available at: planning.org/cpat

INTRODUCTION

Belize City was selected to participate in the ESC program of the IDB. The ESC program is a technical assistance program that provides direct support to local governments in creating and executing sustainable development plans. The program specifically targets intermediate-sized (or emerging) cities in Latin America and the Caribbean that now experience the highest rates of growth in the region. The resulting patterns of haphazard urbanization create an expanding scope of new challenges for local governments with limited fiscal capacities and limited resources for planning.

The ESC program develops “action plans” for cities that include prioritized interventions and a strategy for their execution. Following the release of an IDB-funded master plan for Belize City in 2012 and while developing the action plan for Belize City—including a comprehensive plan update and creation of the city’s first-ever zoning ordinance—ESC program representatives learned about APA’s CPAT program. Joint conversations between APA, IDB, and the BCC led to a CPAT project proposal that ultimately focused on the waterfront neighborhood of Yarborough. Yarborough is a critical area for the city’s overall planning and revitalization efforts. Furthermore, the scale of the study area suited the CPAT model of assistance, which relies on the limited pro bono time of multidisciplinary professionals to carry out projects. CPAT projects are focused, intensive efforts that aim to find and develop a shared community vision and create short- to medium-term strategies that build toward the longer-term goals of that vision.

The scope of work for the CPAT project, called the Yarborough Revitalization Initiative, was conceived as a specific area plan intended for inclusion as a strategic investment area within the ESC action plan for Belize City. The Yarborough Revitalization Initiative, beyond the specific recommendations found in this final report, was also intended to share best practices in planning and design, to educate and empower residents and encourage them to participate in the efforts toward realizing their shared vision of the neighborhood of Yarborough, or “Yabra,” as many call it, and invoke investment confidence in the BCC and potential partners.

PROJECT OVERVIEW

Following initial talks between the APA, BCC, and IDB, work on the project began. APA asked Justin Moore, AICP, to volunteer and serve as the team leader for the project. Moore, APA Programs Manager Ryan Scherzinger, and APA contractor Jennifer Graeff, AICP, conducted an initial site visit along with IDB representative Irayda Ruiz Bode, AICP, in Belize City from February 9 to 12, 2016. During the visit, the Belize City Mayor Darrell Bradley led the site visit team on a tour, including a walking tour of Yarborough. They also toured by boat to get a perspective of Yarborough, the port, and other parts of the city from the Caribbean Sea and from Haulover Creek, which bisects Belize City.



Belize City juts out into the Caribbean Sea from the rest of the country. The Haulover Creek bisects the north and south sides of the city and the mouth empties into the sea. The Yarborough neighborhood lies between the port and downtown. Source: Google Earth, modified by Ryan Scherzinger



During the team's initial visit in February 2016, around 200 people showed up throughout the day to participate, including many area youth. Source: Ryan Scherzinger

On Thursday, February 11, around 200 people participated in a full-day workshop at the Anglican Diocesan Center in Yarborough. The workshop included six scheduled topics of discussion open to the public: (1) climate/resilience/water/ecology; (2) arts/culture and tourism; (3) people and programming; (4) jobs and economic development; (5) housing and neighborhood development; and (6) infrastructure/transportation/energy/information and communications technology. Workshop participants offered their insights and local knowledge about Yarborough and the city. They shared what's most important to them, how they use or don't use spaces, things they want to see and don't want to see, stories of Yarborough and the city, difficulties faced in the past, from floods and specific public safety incidents to why public trash cans in the neighborhood didn't work out before. Speaking to finding the right balance between attracting tourism and maintaining Yabra as home, one resident said she didn't want Yabra to "lose its soul," but rather "enhance it."

Following the February site visit, Moore and Scherzinger finalized the scope of work with approval by BCC, and then recruited four more volunteer team members with a mix of skills and experience in planning, design, and engineering: Antoine Bryant; Veronica O. Davis; Adam Perkins; and Shannon Van Zandt (see Appendix E for more information on each team member). The team met via conference calls, discussed the project, and prepared a schedule for the full team's visit from June 13 to 18, 2016, in coordination with BCC and IDB (see Appendix B for the project schedule). The full team visit included tours of the city and Yabra, additional workshops with the public, a youth roundtable, and stakeholder group meetings. The

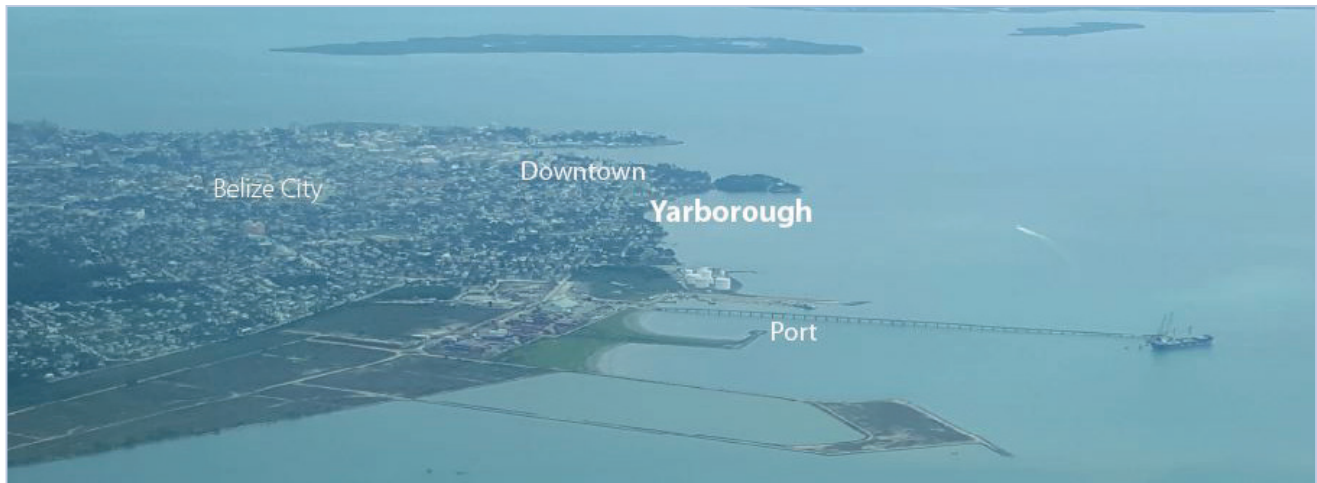
<p>360,000+ Belize population</p>	<p>English <i>(official)</i></p> <p>Spanish Kriol <i>(Belizean Creole)</i></p> <p>Most widely spoken languages</p>	<p>70,000+ Belize City population</p>	<p>79 inches <i>(2,009 mm)</i></p> <p>Average annual precipitation</p>	<p>85/78 F <i>(29/22 C)</i></p> <p>Average max/min temperature</p>
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team scheduled independent working sessions throughout the week to discuss their observations and analyze all data and information collected. On Friday, June 17, the team made two public presentations on the results of their work and preliminary recommendations. The team departed June 18 and communicated remotely as they worked on the final report, which upon completion was sent to BCC and IDB officials and posted on the APA website.

YARBOROUGH COMMUNITY CONTEXT

Located on the southeastern coast of Belize City, Yarborough is one of the most strategically important neighborhoods in the city. Yarborough serves as the vital link between the historic downtown area and an emerging business hub while also serving as the main corridor between the port and downtown Belize City. There are numerous assets in this area, including a large open space for recreation, access points to the Caribbean Sea, emblematic historic structures, and a well-known and respected school. Unfortunately, Belize City has not been able to leverage these assets and development challenges remain. Infrastructure for water management is inadequate. Much of the neighborhood housing stock is in poor condition and vulnerable to flooding. Vacant and abandoned properties leave areas vulnerable to illegal activity, a deterrent for city residents and visitors alike. The environment adds to the continued loss of economic opportunities, many of which literally pass by the city and Yabra. Most of the country’s tourists arrive in Belize City by cruise ship or plane, but almost all of them are quickly diverted away to other parts of the country.

Instead of a destination, Yarborough acts as a thoroughfare. The physical deterioration and negative perceptions of the area by the tourism industry and others combine to prevent community-based economic growth and neighborhood uplift. Despite the physical and social obstacles, however, there are many opportunities to showcase the distinctive Caribbean charm and historic beauty of Yarborough. Yabra is a special place known to all Belizeans, with historical landmarks connected to its colonial past as British Honduras before the country gained its independence on September 21, 1981. The historic Yarborough Cemetery in the heart of the neighborhood dates back to 1787—the oldest in the country. St. John’s Cathedral, the first church built in the colony, was built in 1812. The Government House, also built in 1812, served as the residence of the Governor General who served as the Queen’s country representative. It is no longer the capitol, but still the largest city in the country. The national government relocated the capitol inland to the city of Belmopan after severe damage to Belize



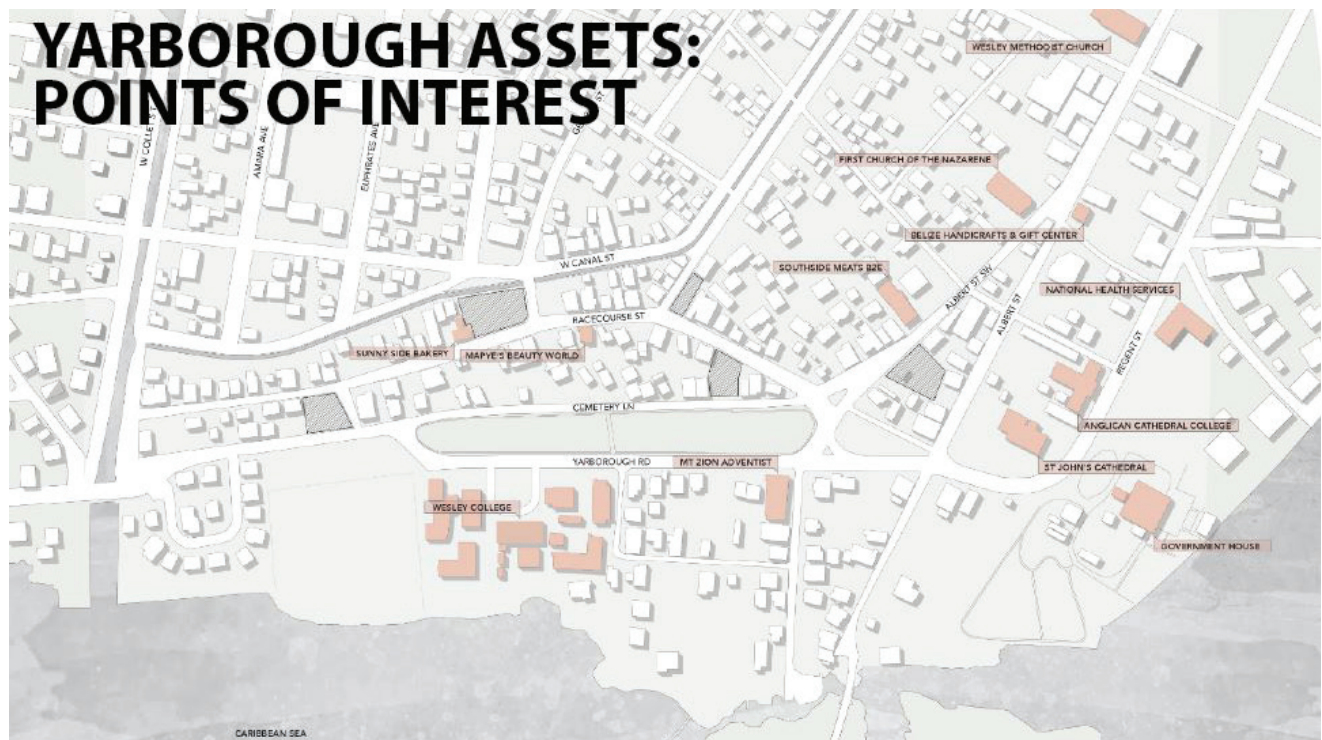
Yarborough is a waterfront neighborhood that lies between the port and downtown. Source: Justin Moore, modified by Ryan Scherzinger

City from Hurricane Hattie in 1961. The Government House, which recently underwent restorations, still serves the community as a unique venue overlooking the Caribbean Sea for social events and a guest house for visiting VIPs. Wesley College (a private high school) in Yarborough, the oldest in the country, was established in 1882 and continues to provide quality education and support to the youth of Belize City.

One of Yabra's biggest assets is its location. Finding ways to better link Yabra to adjacent areas, including connections and safe access points to the Caribbean Sea, is a ripe opportunity. Several large open spaces present new opportunities in Yabra. Yarborough Field, next to Wesley College, fronts the water and serves as flexible recreation space for schoolchildren and residents. Yarborough Cemetery is a memorial space with opportunities for beautification and improvement. The waterfront park next to the Government House also carries great potential as a reimagined public space.

The energy and drive for change was ever-present throughout the CPAT team's work in Yarborough. Many opportunities exist through the vibrant arts and culture scene in the city, within ideas for entrepreneur training and support, in beautification, and finding alternative community uses for abandoned vacant properties. These opportunities can make the history of Yarborough come alive for both tourists and residents and make Yabra a better place for those who call it home.

**PRIORITIES
RECOMMENDATIONS
IMPLEMENTATION**



Yarborough contains a good number of important community assets and points of interest. Source: Francisco Jung

PLANNING PRIORITIES

During the course of the Yarborough Revitalization Initiative CPAT project, the team collected as much available data and information on Yabra as possible. The team engaged with residents and stakeholders through multiple workshops, interviews, roundtable discussions, and ad hoc conversations to gather the community's input. The team also toured the area extensively and observed existing conditions and neighborhood activities. Through an analysis of that information and integration of successful planning principles and practices applied in other places, the team identified four planning priorities: (1) linking assets and a reorientation of the community to the water; (2) supporting community-led initiatives and activities; (3) implementing green infrastructure and resilience strategies; and (4) ongoing project development and management using metrics and "strategic doing." Further discussion of each priority is included below.

Priority 1: Linking Assets and a Reorientation of the Community to the Water

The Yarborough neighborhood has major assets that are disconnected physically and visually. Many are underutilized and under-celebrated. In addition, the neighborhood has turned its back to the water. People are unable to walk along the water's edge or engage with the water actively or passively. The map above highlights the major assets of the community.

Recognizing and Linking Assets

The team walked around the Yarborough neighborhood extensively to scan existing conditions and assets. After an analysis of those conditions and assets, coupled with insights gleaned from the community's input, the team developed the four following goals:

- **Reorient the community toward the water.** The Yarborough neighborhood has turned its back on the Caribbean Sea. All of the buildings have their backyards facing the water. Opportunities to walk along the waterfront are very limited in Yarborough and the south side of Belize City, in general.
- **Identify and amplify unique features.** The area has natural and physical features that can be amplified through design.
- **Increase biking, walking, and other sustainable forms of transportation.** The narrow streets of Belize City do not allow for increased vehicles without creating congestion. The flat nature of the streets makes it ideal for biking and walking.
- **Draw people to the neighborhood.** As people walk down Albert Street, no visual cues signify that there is more to see south of the intersection of Albert Street and Albert Street West. Increasing visual cues with art and wayfinding signage can draw people to the neighborhood.

Traffic and Transportation

The Yarborough neighborhood has five main streets: Albert Street/Albert Street West, Yarborough Road, Racecourse Street, Regent Street, and Cemetery Lane. While these streets connect the assets physically, the travel patterns make navigating the neighborhood by biking, walking, and driving difficult.

The Yarborough neighborhood has a shared street-like environment. The concept of a shared street or shared zone is to have no traffic signals at intersections and no defined areas for each mode. A typical shared street has no sidewalks or lane markings. Because of the narrow sidewalks in the Yarborough neighborhood, many people bike and walk in the streets and there are no traffic signals at intersections. While chaotic in appearance, there is a rhythm and flow to how people move through the neighborhood. While other cities are desperately trying to convert to shared streets, Yarborough has them unintentionally.



Left: Many people ride bicycles in Belize City, including Yarborough, which already has a shared street-like environment that could be improved with modest design improvements. Source: Veronica O. Davis

Below: The existing street network and travel patterns in Yarborough include a confusing intersection just to the east of the cemetery. Source: Veronica O. Davis and Christine E. Mayeur





Belize City has a tour train that takes tourists to St. John's Cathedral and the Government House/House of Culture. Source: Shannon Van Zandt

Since Yarborough is relatively flat, it has the ideal conditions for walking and biking. During a public meeting, residents mentioned that the sidewalks are too narrow for even one person walking down the street. Ideally, a sidewalk should be at least five feet across to accommodate people in wheelchairs or two people walking side by side. Walking and biking is viewed positively by many residents. However, given the warm climate, residents expressed a need for more shade and places to sit and rest.

The team noted many people biking, including women with children. The team did not observe any bike infrastructure such as bike lanes or racks, nor were people wearing helmets. Based on observation, adding bike lanes appears unnecessary. In addition, culture changes to encourage helmet use take a significant amount of time, effort, and financial investment. A growing body of evidence suggests that more people biking actually makes it safer to bike than does requiring helmets. Creating a bike- and pedestrian-friendly neighborhood through elemental design choices and social encouragement is likely a better use of BCC's resources.

Street Network

The Yarborough neighborhood has two streets that are continuous north to south. Traffic travels south on Albert Street West and Albert Street and north on Regents Street. The main east-west streets are Yarborough Road, Cemetery Lane, and Racecourse Street. All of these streets converge to the east of the Yarborough Cemetery. From above, it looks like a roundabout; however, it does not function like a roundabout.

Many residents find the intersection confusing to navigate. The traffic pattern is not intuitive. Roads that confuse drivers create unsafe conditions for people biking and walking. In addition, the team observed vehicles speeding down Albert Street West to Racecourse Street, which appears to be mostly through traffic traveling to destinations outside of Yarborough.

Public Transportation

The public bus travels south on Albert Street West and continues west on Yarborough Road. Although there are no bus signs, there is a stop on the southeast corner of the Yarborough Cemetery. This stop blocks traffic and adds to the confusion of the intersection.

Taxis and Private For-Hire Vehicles

Few taxis or for-hire vehicles appear to frequent Yarborough. Downtown, near the tourist village, *bajajs* circulate tourists around the city. In addition, a tour train travels south on Albert Street, turns east onto Yarborough Road, then north on Regent Street. The train does not go to Yarborough Cemetery because there is not enough turning radius to make the U-turn from Cemetery Lane to Yarborough Road. The train needs a 27-foot radius.

Large Vehicles

According to area residents, large trucks travel on Albert and Albert Street West to get to the port via Yarborough Road. Nothing currently prohibits them from coming through the area. Residents expressed safety concerns about the frequency of large trucks on neighborhood roads.

Priority 2: Supporting Community-led Initiatives and Activities

During the day, Belize City is alive with workers in the downtown area and tourists from cruise ships. After 6 p.m., the area becomes empty as the downtown workers go home and the tourists go back to their cruise ships. In Yarborough, the team did not observe a “third place,” a term planners use to describe a place where people hang out and interact that is not their home or place of employment.

During the team’s interactions with area residents, many expressed the desire to have a third place in Yarborough similar, for example, to BTL Park in the northern part of Belize City. BTL Park has places for local vendors and regular programming such as yoga, outdoor movie nights, and other community events. Residents stated there are opportunities to create a BTL Park atmosphere in Yarborough with existing programs and community groups.

Example of Community Involvement and Leading: The Project Row Houses in Houston

Project Row Houses (PRH) is a community-led arts and cultural entity based in Houston. The mission of PRH is “to be the catalyst for transforming community through the celebration of art and African-American history and culture.” The project began as the germination of an idea of seven African American artists and students from Texas Southern University, the historically black university down the street from the current location. The artists passed the shotgun houses daily while attending classes. At the time, the houses were dilapidated, uninhabitable, and used as locations for drug use and other illicit activity. The group of idealistic artists saw something else, however. They saw traditional African American vernacular architecture and the strength and simple beauty of its community form. They saw the opportunity to engage and involve the community in its own rebirth.

PRH represents a groundbreaking experiment in community-led historic preservation, inspired by the work of African American artist Dr. John Biggers and German artist Josef Beuys. To this day, PRH remains an internationally recognized example of the intimate relationship between art, architecture, affordable housing, historic preservation, community development, neighborhood revitalization, and human empowerment.

PRH could serve as inspiration to the Yarborough community. The PRH example translates a successful model of meaningful resident involvement and ownership in the process of neighborhood revitalization. Step one for PRH was to secure ownership of the actual shotgun houses, all 22 of them. They then restored them to a semblance of their former glory. As struggling art students faced with limited resources, they then turned their efforts to building effective collaborations with for-profit entities for needed resources. The entire community contributed. In-kind donations from numerous organiza-



The recently revitalized BTL Park on the north side of Belize City is four acres in size with 28 vendor stalls, a stage, seating, open space, and provides a quality public space overlooking the Caribbean Sea. Source: Justin G. Moore and Adam Perkins



Left: Project Row Houses is a successful community-led project in Houston that has continued to grow and sprout many new community initiatives. Visit their website for more information: projectrowhouses.org. Source: Antoine Bryant

Below: A group of young people meet with the team to share and discuss their ideas, issues, concerns, and hopes for Yarborough and Belize City. Source: Ryan Scherzinger



tions and volunteers from many of the local corporations helped rebuild each unit. Sweat equity played a major role, as many residents spent long hours working shoulder to shoulder with corporate volunteers from outside the community. As a result, the restored homes now provide a historic example of vernacular African American architecture. Beyond that, the project empowered local people. Local residents gained knowledge of and pride in a history that now breathes new life in their community. Visitors also gain an appreciation of the history, the art and culture, and the story of the initiative itself.

Today, PRH has grown from an artist enclave to a community-wide initiative. There are activities on the campus or initiated from the grounds there that have far-reaching connectivity throughout the neighborhood and beyond. The initial idea of the art houses remains today through a biannual event called Artist Rounds, whereby artists from across the world transform seven of the row houses into an art exhibit. The advent of new artists every six months is heralded by a festival with live music, art, food, and games for the entire family. Tours of the homes are available, with donations accepted, five days a week.

There are thriving after-school and summer art programs for children in the community. The program creates a safe space for them to express themselves, learn, and play. It unlocks access to art and history for children coming from schools with little to no art and cultural amenities available to them. This program is ably led by grant-funded staff, and often utilizes local art students as mentors and teachers.

Sustainability and Stewardship, Youth Engagement

The CPAT team had an opportunity to talk with young people between the ages of 16 and 24. They expressed their passion and pride for Belize, as well as their frustrations with the amenities in Yarborough. Many of them feel like residents do not have pride in their neighborhood; littering is common, playground equipment is broken, and they are concerned with safety.

However, residents and business owners alike shared information on existing youth programs and initiatives in Belize City that could be relocated or expanded to the Yarborough neighborhood. One successful project in Memorial Park is “Drums, Not Guns.” Youth are taught drumming as a way to keep them off the streets and, most importantly, out of trouble.

Safety and Activity

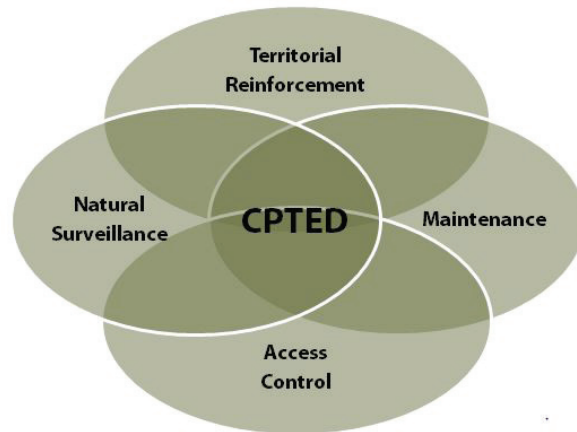
Crime Prevention through Environmental Design (CPTED) is a set of philosophies and strategies that can be used to reduce crime and the perception of crime through changes in the environment. These may be design, activity, or support changes, all of which can make spaces more useful, attractive, and safe to use.

This comprehensive set of defined moves allows for a new approach to crime prevention. Much more far-reaching than deadbolts on doors and locks on windows, CPTED principles can be applied easily and inexpensively when building or remodeling, and have been implemented in communities across the world. The results have been impressive; in some CPTED communities, criminal activity has decreased by as much as 40 percent.

Many of these approaches could prove useful in the community of Yarborough. They can be easily implemented, often at little or no cost, and have far-reaching effects. These careful design initiatives often help in reducing or eliminating criminal behavior, and at the same time encourage residents to keep an eye out for each other. These are just a few of the ingredients that go into creating an effective CPTED environment, which is conducive to a safer and more livable community.

CPTED consists of four widely accepted concepts that should overlap and complement each other:

- **Natural Surveillance** relates to the placement of physical features, activities, and people in a way that maximizes visibility. This concept is akin to having “eyes on the street,” which means people watching out for each other and the removal of any obstacles that would prevent people from being able to see throughout the property or environment in question.
- **Access Control** looks at the physical guidance of people coming to or going from a space through the strategic placement of entrances and exits, fencing, landscaping, and lighting. Access control is aimed at providing the space for the specific, intended user and by keeping out those who do not belong. Examples of access control are fencing and automatic gates in apartment complexes.
- **Territorial Reinforcement** is the use of attributes such as fences, pavement treatments, art, signs, and lighting that express ownership and pride on a property. The lack of ownership in apartments or other rental properties can provide a challenge to establishing a sense of ownership; however, there are other aspects of environmental design that can assist with developing that sense of ownership and empowerment.
- **Maintenance** allows for the continued use of a space for its intended purpose and also serves as another expression of ownership. Appropriate and timely maintenance prevents the reduction of visibility from overgrown landscaping and obstructed or inoperable lighting. Often, once maintenance declines and deterioration sets in, crime rises.



CPTED concepts must work together to achieve an effective public safety strategy. Source: Antoine Bryant

Priority 3: Green Infrastructure and Resilience

Belize City and the Yarborough neighborhood are located directly along the coast of Caribbean Sea, and are vulnerable to coastal storms, including hurricanes and flooding rains. Yabra is low and flat, so when flooding occurs, water can cover large areas of the neighborhood and cause damage to structures and infrastructure such as roads, sidewalks, and other systems. The frequency with which flooding occurs is inconvenient to residents, and may affect their ability to get out and around, patronize neighborhood businesses, or even prevent children from attending school.

The Yabra neighborhood and Belize City itself have very little infrastructure to handle stormwater. Roadside ditches are in place to retain the water and move it somewhat, but they are poorly maintained and are often overgrown or blocked, rendering them useless. In some cases, poorly maintained stormwater management may even exacerbate flooding.



Left to right: Poorly maintained roadside ditches in Yarborough don't handle stormwater effectively; Much of the existing infrastructure along Yarborough's coastline is damaged, as seen here at the park next to the Government House. Source: Shannon Van Zandt

During severe storms like hurricanes, severe flooding may last for days or weeks. Storm surge from coastal storms may cause wave action which may result in damage to structures and infrastructure. Further, wind may cause damage to roofs, signs, windows, and other features, which can penetrate structures, allow wind and water to enter the structure, and cause additional damage.

In short, Yabra's structures, infrastructure, and open spaces must become more resilient to protect both life and property from coastal flooding and storms. Resilience implies that systems are able to absorb, resist, and bounce back from impacts. It does not prevent hazards, but rather deals with them more effectively, with less impact and quicker recovery.

Green infrastructure is a recognized way of increasing resilience and avoiding damage. Green infrastructure uses existing natural, built features, or landscapes engineered to better deal with unwanted water. Not only is green infrastructure more beautiful, but it functions better, and is often less expensive than hardened infrastructure (like culverts or storm pipes). Green infrastructure may be particularly well-suited for the Yarborough neighborhood, given its existing ditches, abandoned lots, and open spaces.

Green infrastructure can also address comfort and walkability issues in Yabra. Belize has a hot and humid climate, which can make spending time outdoors uncomfortable, and in some cases, unsafe. Green infrastructure can help address these issues by providing more shade, which can provide comfortable microclimates that make the neighborhood more appealing for visitors and residents alike.

Using landscape elements to address the neighborhood's functional limitations is a cost-effective and low-impact method of improving the built environment. The sections that follow provide additional details on specific efforts that Belize City may wish to undertake.

Urban Tree Canopy

The Yarborough neighborhood has street and public space with few trees. It is hard to walk in the street and take a rest in public open space in the hot, sunny weather. Residents need more shade and places to take a rest. Urban tree canopy provides comfortable conditions for walking, biking, and other outdoor activities by acting as an air conditioner. Introducing tree canopy is an effective way to reduce temperatures; trees reduce urban heat island effects by shading building surfaces, deflecting radiation from the sun, and releasing water vapor into the atmosphere through their leaves. Moreover, the tree canopy provides a safer walking environment. It reduces traffic speeds, enabling drivers to distinguish their area and pedestrian areas by forming visual walls and providing distinct edges of the sidewalks. Places with trees also add significantly to aesthetics and placemaking.

Flamboyant trees are popular as ornamental shade trees in many tropical regions. They provide not only shade, but also beautiful floral landscapes with blossoms from April until September. Moreover, the trees grow well even in drought, and are very hardy and pest-resistant. Planting flamboyant trees along sidewalks and other public spaces can be one of the easiest methods of placemaking in Yarborough.



Left to right: There is very little tree canopy in Yarborough. Source: Shannon Van Zandt; Flamboyant trees are beautiful decorative shade trees with vibrant-colored blooms, like this one growing in front of St. John's Cathedral in Yarborough. Source: Justin Moore

Stormwater Management

As noted above, the management of water from rain and coastal storms is a major issue for Belize City generally, and for Yarborough specifically. Flooding causes damage and can interfere with normal functioning of a city. Further, it can lead to health issues related to standing water.

Green infrastructure and Low-impact Development

Green infrastructure is a resilient approach to urban stormwater management by using vegetation, soils, and natural processes in micro scale. With a conventional piped, concrete drainage system (gray stormwater infrastructure), green infrastructure enhances community resilience by increasing water supply, improving water quality, reducing flooding, and reducing the urban heat island effect. Gray infrastructure approaches may complement green infrastructure approaches in helping communities to develop climate resilience. The maintenance of existing infrastructure is essential to ensure proper stormwater runoff. In addition, the city's existing gray infrastructure is outdated and needs special management.

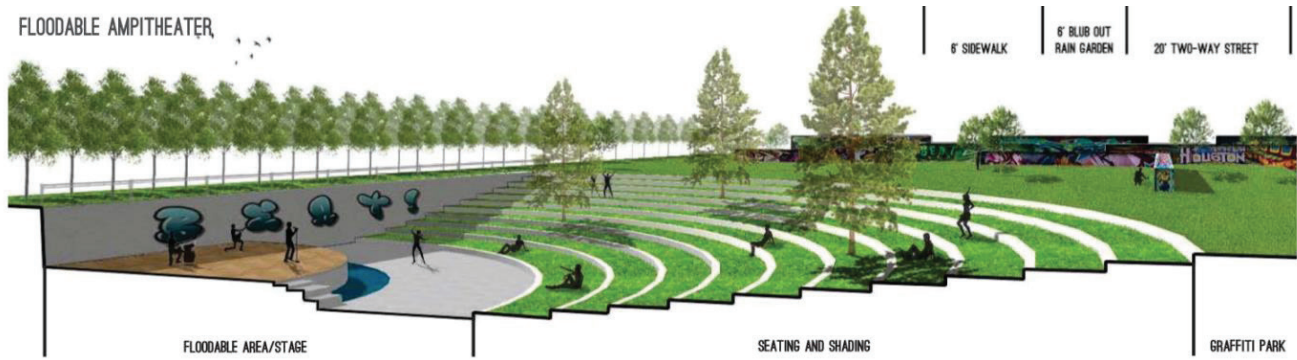
Like all infrastructure, the implementation of green infrastructure will require effort on the part of the city to put into place a plan that addresses not only the addition of green infrastructure, but also the maintenance and upkeep of the infrastructure. Infrastructure requires regular upkeep to ensure that it is in good condition, as well as scheduled upgrades and replacement to ensure that it continues to do its job. It is not enough to construct it; it must also be maintained properly.

Vegetation and soil limit flooding risks during heavy rainstorms because it reduces stormwater runoff, and helps protect against high winds, erosion, and flooding. Rainfall is intercepted by leaves and bark of vegetation, which means that the vegetation slows the runoff. Some rainfall evaporates, some is stored in vegetation, and some is released into the soil. Fallen leaves help soil to retain moisture, and help to create habitats. These habitats allow water to be absorbed into the soil. The roots also absorb water.

Green infrastructure depends on flow control, retention, detention, filtration, infiltration, and evaporation/transpiration of rainfall. Flow control slows down water movement; fast-moving water can increase erosion and cause greater damage. Water retention provides a place for excess water to be stored throughout the year, while water detention allows water to safely be stored prior to it being absorbed, evaporated, or redirected. Detention often takes the form of ponds, green roofs, or rain gardens. They may look more or less natural, but can also be done more creatively.

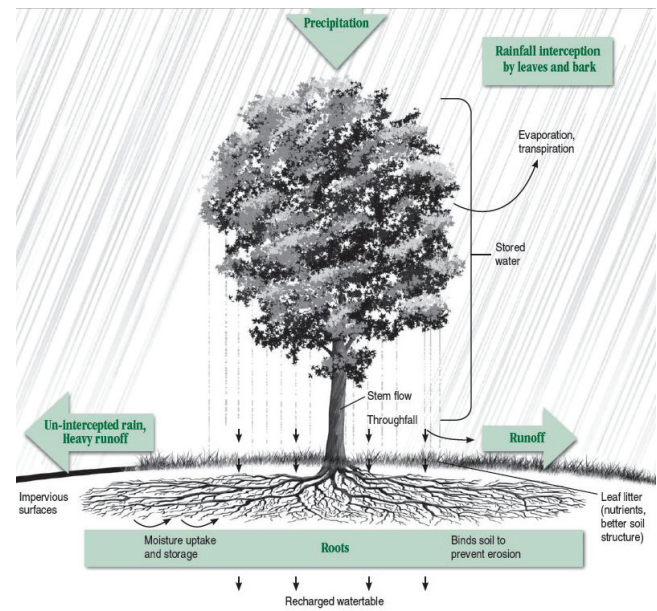
For example, the team suggested the creation of an amphitheater, most likely located at the waterfront park adjacent to the Government House. The amphitheater could be a functional amenity during dry weather, but could temporarily turn into a detention pond during flood events. By offering a holding area for flooding, water can be redirected from inhabited areas into the passive recreation facility, which can hold the water as it drains into the sea without causing damage to neighborhood structures.

By slowing and detaining water, less capacity is needed in piped gray infrastructure, and more is returned to the supply. Further, water is filtered, cleaning it as it infiltrates, and is returned to the water supply.



Top: A floodable amphitheater serves as a passive recreation space, but provides protection to nearby areas from excess stormwater. Source: Dr. Galen Newman studio class, Texas A&M

Right: Trees and other types of green infrastructure reduce stormwater runoff and provide other benefits. Source: Karina Helm, Tree City USA bulletin, Arbor Day Foundation



Some common techniques of green infrastructure include green roofs, rain gardens, bioswales, detention/retention ponds, infiltration planters, and permeable pavement. Green roofs are vegetated roof covers based on infiltration and evaporation/transpiration of stored rainfall. Rain gardens are vegetated areas which use plants to reduce and delay stormwater runoff by collecting, slowing, filtering, and absorbing rainfall. Bioswales with a slope allow water to drain slowly, and delay the filtration and infiltration. Detention and retention ponds have an aquifer, which allows water to collect and infiltration. Infiltration planter with soil and plant is based on retention, detention, filtration, infiltration, and evaporation/transpiration of rainfall. With permeable pavement, rainwater can be absorbed to the soil.

Restoration of Mangroves


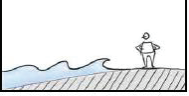
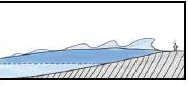
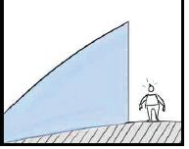

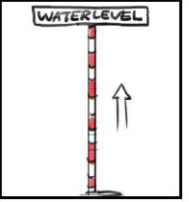
The Yarborough neighborhood, as a coastal area, frequently suffers from various coastal hazards, including swell waves, storm surge, tsunami, erosion, and sea-level rise.

Originally, Belize's coastline, like many across the globe, was protected by mangroves. Mangroves provide remarkably durable protection, not only from the winds coming off the sea, but also from the action of the waves. The root systems of the mangroves essentially offer a web or net to retain soil and prevent erosion. Mangroves protect coastal areas from hazards by reducing the intensity of hazards and decreasing exposure. First, mangroves reduce height and energy of wind and waves, which cause damage to infrastructures and housing in inland. Second, they decrease storm surge water depths and debris movement. Third, they reduce the tsunami height and speed. Fourth, they slow water flows, reducing erosion and enhancing sedimentation. Fifth, they cause high rates of sediment input. Wide, tall, dense, and complicated aerial root systems of the mangroves are effective in coastline management. But over time, the mangroves have been removed to offer better visual or actual access to the sea.

Examples of Green Infrastructure and Low-Impact Development Techniques

<p>Green Roof</p>	<p>Green roofs use vegetated roof covers, with growing media and plants covering or taking the place of shingles or tiles.</p>	
<p>Rain Garden</p>	<p>Rain gardens are shallow landscape areas that can collect, slow, filter, and absorb large volumes of water, evaporating water through plant transpiration and delaying discharge into the wastewater system.</p>	
<p>Bioswales/ Bioretention Cells/ Vegetated Swale</p>	<p>To filter contaminants from stormwater runoff, many communities choose to install bioswales, sloped drainage areas that contain vegetation. Most bioswales continue for several miles, often running next to roads or walking paths. The slope of the bioswale allows the water to drain slowly, thus increasing its filtering time. The native vegetation in the bioswale removes pollutants as the water drains. Soil preparation and soil type are key to infiltrate water effectively.</p>	
<p>Detention/Retention Ponds</p>	<p>Detention and retention ponds create a location for this rainwater to collect and infiltrate into the aquifer. It prevents flooding by creating a storage space for the large amounts of water provided from hard, sudden rainfall. During times of no rainfall the detention pond stays dry, while a retention pond contains a constant amount of water.</p>	
<p>Infiltration Planter</p>	<p>Infiltration planters are narrow landscaped areas framed within hardscape. They are flat bottomed with vertical walls to allow for more retention capacity in less space. Infiltration planters allow water to infiltrate, while flow-through planters are preferable in areas of high groundwater or where soil is impermeable or contaminated. Flow-through planters have an underdrain system beneath an imported soil bed to provide detention and filtration before discharging offsite.</p>	
<p>Permeable Pavement/ Porous Pavements</p>	<p>Pervious paving allows rainwater to pass through the surface and soak into the ground. It may be arranged with open space so that water can drain and grass can grow.</p>	

Sources, top to bottom: Arlington County, Texas; Elvert Barnes; Aaron Volkening; APA-NNE; Lairich Rig]

Hazards	Swell waves	Storm surge	Tsunami	Erosion	Sea-level rise
					
Causes of hazards	Wind	Tropical storms, cyclones, hurricanes, or typhoons with high wind and low pressure	Earthquakes and landslides disturbing large masses of water	Large waves, storm surges, or tsunami	Melting ice sheets and glaciers, and expansion of the oceans due to climate change
Damage due to hazards	Reaching further inland during flooding	Large waves, raised sea levels, strong wind and rainfall, and widespread flooding	Increase in height when approaching land	Lowering of the surface, more frequent flooding by waves and tides	Loss of land, increased erosion further inland, and more impactful wave action and storm surges
Role of mangroves	Reduce height and energy of wind and waves	Decrease storm surge water depths and debris movement	Reduce the tsunami height and speed	Reduce erosion and enhancing sedimentation, slowing water flows	Increase soil volume, high rates of sediment input

Source: Mark Spalding et al., 2014

Furthermore, continual development of the coastline has altered the natural environment, undermining its ability to protect the coast. Piers, boardwalks, and other manipulations of the coast, while perhaps necessary to enable the development of retail and commercial areas, have diminished the root systems of the mangroves, and have allowed additional erosion to take place.

In addition to increasing development along the coastline and up the river, dredging the river to provide better shipping access has increased flow velocity of the river and led to a great deal of silt coming down the river and into the bay. This silt makes the river and bay less navigable, and makes the water less clear.

We recommend that Belize City take steps to preserve the existing coastline and restore mangroves where appropriate to help prevent further erosion and return the natural environment to its original state where possible and practical. Both preservation and restoration shall continue to be undertaken by collaboration between the BCC and nongovernmental organizations advocating for conservation.

It is important to understand why the mangrove forests are gone and who owns the mangrove areas before attempting to restore them. After bringing them back, maintenance is crucial. Specifically, maintaining wide mangrove belts is important to maintain sediment flows and reduce sediment losses and erosion.

Mark Spalding et al. (2014) provides guidance for protecting the mangroves for coastal managers.

- Maintain wide mangrove belts. Wider mangrove belts are better able to maintain sediment flows, reducing sediment losses and erosion. Conversion of even parts of the mangrove belt can lead to reductions in sediment flows, deposits, and erosion.



Left to right: Mangroves, found naturally all over Belize, are natural barriers to many coastal hazards and serve many functions in protecting the local and regional ecosystem. Source: Justin Moore. The Belize coastal zone management plan, approved in 2016, is projected to improve coastal protection from storms and increase revenue from fisheries and tourism. Source: Natural Capital Project

- Ensure healthy mangrove growth. In most places healthy, natural mangroves are likely to be relatively stable habitats with little erosion: Complex root systems help slow water flows, allowing sediment to settle and causing sediment to accrete rather than erode, while productive root growth and leaf litter supply are critical to build and bind soils.
- Maintain or restore sediment supply and avoid sediment starvation caused by certain coastal and inland engineering works that block the flow of sediments from rivers or along the coast.
- Processes that lead to subsidence, such as oxidation caused by drainage and deforestation or extraction of deep groundwater and oil, should be prevented.

Access to recreational use of the community's waterfront is limited, so restoration of the mangroves may not be appropriate in all situations. In these cases, hardened structures such as seawalls may be appropriate. Seawalls can offer protection from surge and coastline erosion while also offering access to the water. Retrofitting existing seawalls as recreational seawalls adjacent to open spaces along the waterfront will also act as a hard barrier to protect the coastline from storm surges and rising tides. The seawall may also have areas of access for aquatic recreational activities for the community. Integration of the natural barriers (mangroves) with the seawall can also be incorporated to soften to hardscape of the coastline.

Building Rehabilitation and Preservation

One of the more pressing problems in Yarborough is the quality of its structures. While some structures are quite new and appear well constructed, the majority of the construction in the area is substandard. The distribution of low-quality structures in the area exhibits its social vulnerability. Social vulnerability refers to the ways in which the social characteristics of an area contribute to its exposure and vulnerability to natural (or man-made) hazards. In Belize City's case, it suggests that the Yarborough neighborhood is not only physically vulnerable (meaning that the neighborhood is exposed to coastal hazards as well as being of poor quality), but also somewhat diminished in its capacity to respond and recover from coastal disasters. In other words, the degree of poverty in the neighborhood means that residents are neither well positioned to resist coastal threats nor to rebuild if their homes are damaged.

Coastal conditions are hard on structures. The constant breeze, humid air, and exposure to salt water mean that materials deteriorate more rapidly. They need special attention to the quality of construction, and even more so, need regular upkeep and maintenance to perform at the expected standard.

For these reasons, we recommend that Belize City explore the adoption and implementation of moderately strict building codes. Building codes will establish a standard of construction that will result in a better performance of structures in the face of harsh coastal conditions. Perhaps even more importantly, the city should make it a priority to increase the number of code enforcement officers to ensure that deviations from established standards are addressed.

Building codes are a prescribed set of rules created to establish standards for constructed buildings, for the specific purpose of protecting the health, safety, and welfare of that municipality's population. The codes become law when officially adopted and enacted by appropriate jurisdictional or governmental authority.

International Residential Code | Section 322: Flood-Resistant Construction

Chapter	Category	Contents (code)
R322.1.2	Structural System	Require connecting and anchoring to resist flotation, collapse, or permanent lateral movement due to structural loads and stress from flooding
R322.1.3	Flood-resistant construction	Building and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage
R322.1.4	Establishing the design flood elevation	Determination of design flood elevations Determination of impacts
R322.1.5	Lowest floor	The lowest floor shall be the lowest floor of the lowest enclosed area
R322.1.6	Protection of mechanical, plumbing, and electrical systems	Electrical systems, equipment and components; heating, ventilating, and air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the elevation required
R322.1.7	Protection of water supply and sanitary sewage systems	Water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system
R322.1.8	Flood-resistant materials	Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation requirement shall be flood damage-resistant materials
R322.2 and R322.3		Elevation requirements, foundation design, and construction of buildings in flood hazard area and coastal high-hazard area

Building codes are generally used initially by architects, designers, general contractors, and engineers, but also are often utilized by municipal safety inspectors, real estate developers, environmental scientists, insurance companies, and property managers. When properly used, they can ensure the safety of all individuals inhabiting a particular space, as well as effectively protect them from hurt, harm, or danger.

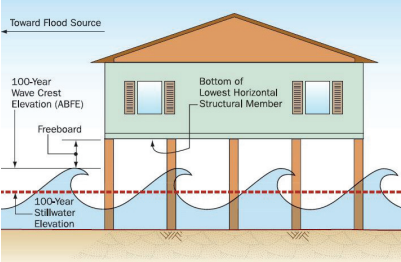
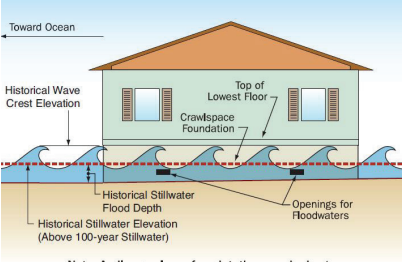
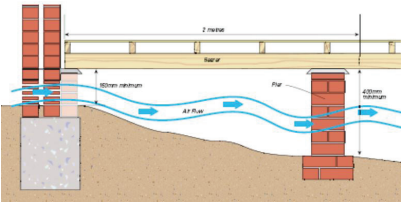
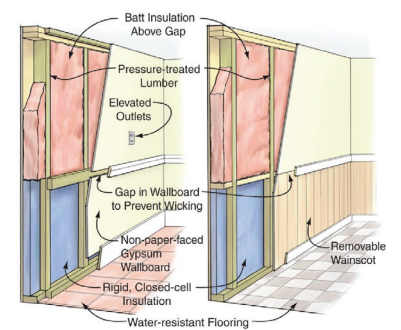
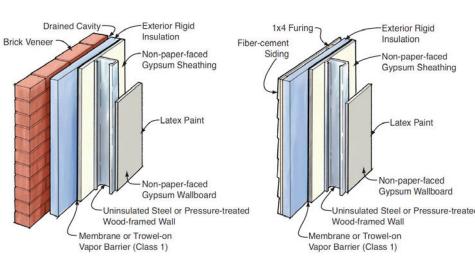
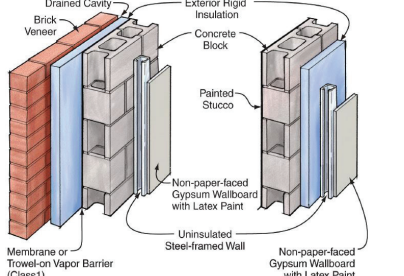
While most building codes address the quality and maintenance of structures under normal conditions, the U.S. Federal Emergency Management Agency (FEMA) has its own building codes system to lessen flood damage of individual buildings for buildings in floodplains or along coasts. The code for building and residential building includes detailed rules regarding design flood elevation, interior environment, flood resistant exterior, structural design requirement, soils and foundations, electrical system, elevators, and conveying systems. The residential building code also includes protection of water supply and sanitary sewage systems, and flood-resistant materials for not only the exterior, but also flooring and the interior. The table above, from the International Building Code (IBC), identifies the different systems of a structure and how they are susceptible to coastal hazards.

IBC, which is developed by the International Code Council, has been used as a base building code in most counties in the United States. IBCs and International Residential Codes include detailed rules regarding flood elevation, interior environment, flood-resistant exterior, structural design requirements, soils and foundations, electrical systems, and elevators and conveying systems, to lessen flood damage of individual buildings. In addition, International Residential Codes also include standards to protect water supply and sanitary sewage systems, and flood-resistant materials for interiors as well as exteriors.

Rehabilitation Program

Improving the quality of new construction is strongly desirable, but upgrading the quality of existing structures is perhaps even more important. Rehabilitating existing structures is a slow and imperfect process, but it is definitely worthwhile. Rehabilitation can be undertaken in several ways. First is the enforcement of existing codes. Consistent and ongoing code enforcement is necessary to ensure that buildings are maintained. However, maintenance of structures is costly for building owners,

Building Codes for Coastal Construction

Elements	Example of Building Codes	
Design Flood Elevation	<p>Recommended construction in Coastal A Zone and V Zone</p> 	<p>Recommended construction in Zone B, Zone C, and Zone X</p> 
Minimum Under-Floor Clearance for Ventilation		
Design Interior Wall for Flood-Proofing		
Design Exterior Wall with Flood-Resistant Material	<p>Flood-resistant exterior cavity wall</p> 	<p>Flood-resistant exterior mass wall</p> 

Source: FEMA/National Association of Home Builders Research Center; and The Australian Timber Database

so code enforcement can often impose financial burdens on occupants and owners. This will likely be particularly true in Yarborough, given the relatively low incomes. To ease this burden, the BCC and/or neighborhood organizations should offer programs that help owners and occupants to maintain and upgrade their properties. Many cities offer rehabilitation programs that provide financial assistance, materials, and labor to help owners maintain their properties. These may be particularly effective for households of single mothers or elderly people who have both limited resources and limited capacity to undertake the work themselves. Low-interest loans for rehabilitation are also helpful for more major projects.

Neighborhood organizations, school groups, and nonprofits can also become involved in helping residents to upgrade their properties. Volunteer work days offer free labor to building owners in need of clearing, cleaning, repainting, or other low-skill jobs. Donations of paint and other materials from local lumber or hardware stores can make material costs more manageable. Tool lending libraries allow residents or owners to check out equipment (mowers, trimmers, saws, tools, etc.) to help them perform maintenance projects.

For commercial properties, the BCC or neighborhood organizations may offer incentives for owners to upgrade their exteriors or facades to improve the look of the neighborhood. Reductions on fees or taxes are the most effective way to motivate property owners. Often these programs can be offered with little financial expense, and can have a big impact on the quality of the built environment.

The National Flood Insurance Program, which is administered by FEMA and offers flood insurance in the United States, has requirements for new floodplain development. The requirements include the standards of location of building, elevation, enclosure, flood proofing, basements, anchoring, flood-resistant material, and accessory structure at different zones. They also consider various types of housing, including manufactured homes and recreational vehicles. In addition, requirements of water and sewer systems and watercourse alteration are suggested.

FEMA also suggests recommendations for design and construction practice to minimize flood damage when flood levels exceed the Base Flood Elevation. With regards to elevation, it recommends adding freeboard to the design and to construct with a pile or column foundation. With regards to flood proofing, it suggests wet flood-proofing techniques for interior wall construction. It also recommends applying flood-resistant exterior wall construction, including flood-resistant exterior cavity wall and flood-resistant exterior mass wall. BCC should consider how it can adopt codes and regulations that will help keep residents safe and minimize property damage. However, those considerations must include the economic limitations of many residents. Therefore, outreach and education on best practices and low-cost solutions in protecting one's property may be the first step.

Priority 4: Metrics and 'Doing'

Key to the success of the recommendations outlined in this plan will be the engagement of the community in developing the design as well as the programming of the spaces throughout the Yarborough neighborhood. Engagement opportunities work best when they are in real-world settings by building temporary demonstration projects that create a venue for residents and guests to try them out. Building temporary demonstration elements and piloting programmatic concepts gives the community a chance to actually see what the proposed changes might entail. By building portions of the proposed projects using temporary and moveable materials, visitors to the space will be able to become active participants in the ultimate design. They can see and feel ideas in a real-world setting and test how slight modifications work differently in real time.

Engaging the community by "doing" turns the traditional planning process on its head. Traditionally, the planning process has engaged communities by talking to the community, showing maps and presentations and asking what the community thinks. This traditional planning process, while very well intentioned, can be difficult to engage in for many people due to the typically lengthy process as well as the often confusing language to describe different infrastructure elements. In addition, this planning by "talking" approach does not produce any real data on what works or not. Conversely, planning by testing temporary or demonstration projects brings the planning process to life and allows the community to engage in the process during their everyday lives. These temporary projects can be tested to see what interventions best make the improvements the community is looking for. For example, you can measure what intervention gets the most people to bike safely, or lowers automobile accidents, or best increases the perception of safety.

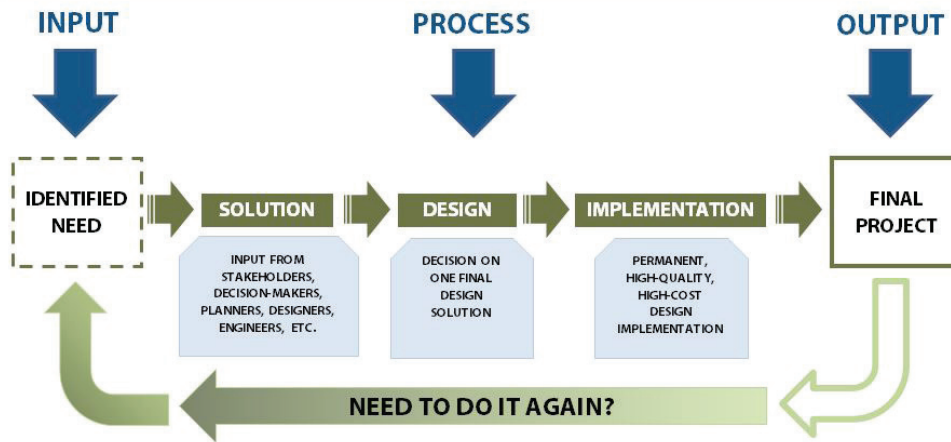
Iterative Planning Process

The traditional planning process is a linear process in which a need is identified, then a solution is selected, designed, and implemented. The process may take years as solutions are developed and designed and funding secured. Any changes or modification to the implemented plan require restarting the process from the beginning and going through the lengthy and expensive linear planning process again. In addition to being expensive and lengthy, it is difficult to involve the community in a meaningful way. There are few decision makers and little room for change and alterations along the way. Regardless of the efficacy of the ultimate solution, reception of the design is often lacking as the process does little in the way of engaging the ultimate users.

TRADITIONAL PLANNING PROCESS

- Linear process
- Few decision makers
- High-cost implementation
- Little room for change and alterations

The traditional linear planning process is lengthy and expensive.



The iterative planning process uses evidence and data to put people first. Source: Gehl Studio, modified by Ryan Scherzinger

ITERATIVE PLANNING PROCESS



A PEOPLE-FIRST APPROACH

- Evidence-based
- Experience-focused
- Iterative
- Inclusive
- Multidisciplinary

As an alternative to the traditional lengthy process, it is possible to make small incremental changes toward a larger goal. Planning the future of Yarborough can be done in a series of steps where each step along the way is tested by the community. Users of the space can inform the process and offer suggestions to improve the interventions. Slight modifications can then be tested again. In this way, major changes happen over time with true involvement from the community.

Prototype, Measure, Refine

Some of the recommendations outlined in this plan call for some major changes to the way public space is used, others call for more simple activation strategies. In both cases, an action-oriented, test-and-refine approach can be utilized. By focusing on a small area of the city, the BCC and the Yarborough neighborhood can follow a more iterative planning process that is action oriented. An action-oriented process "shows" rather than "tells" what could be possible within the public right-of-way. A traditional planning process generally only engages a few people, usually off-site, versus an action-oriented process that reaches out to all users on-site.

An action-oriented approach builds on the measure-test-refine approach developed by Gehl Studio, which emphasizes the importance of incremental improvements to avoid major changes that later prove to be unsuccessful and create additional costs. For this reason, it is extremely important that the design be informed by what works with the community. Testing concepts on multiple areas over one- to two-month periods will inform the concurrent detailed design process of what is successful in the space and design elements that the community will use to increase their active recreation and transportation.

Data should be collected to measure the effectiveness of each intervention before, after, and while any temporary changes are implemented. A full list of recommended metrics can be found in Appendix C. The evaluation measures should cover the following topic areas:

- Safety
- Mobility
- Economic Vitality
- Quality of Life
- Active Living/Recreation
- Community Engagement

Clear metrics are imperative to the iterative planning process to determine what is working and what is not. Baseline data should be collected prior to any interventions in order to learn how the space is operating before any changes are implemented. Data should again be collected after any ideas are put into place. If the interventions are a part of a temporary demonstration project, data should be collected both during the event and after to see if there are any residual effects after the temporary changes are removed. Collecting this data will give policy makers the tools they need to make sound changes that are shown to work toward their intended goals.

Pilot Project Examples

The Downtown Denver Partnership provides a good example of how a “Festival of Ideas” can bring together the community and provide an opportunity to test out ideas generated from local residents and businesses. The Downtown Denver Prototyping Festival solicited applications from many sectors of the community, including artists, designers, and others that share a passion for Downtown Denver.

The prototyping festival asks the community to engage in the city building process and explores ways of how participatory design, art, and technology can build more connections between people and a greater sense of place and ownership of public spaces. This festival of ideas is a way to experiment with new concepts for public spaces. Local designers, artists, and makers who are passionate about downtown Denver have engaged in the city-building process, providing prototypes that showcase their exciting ideas for improving public spaces and how they are used to make the city more beautiful and inviting.



Left to right: Local artists and designers work together to improve downtown Denver's public spaces during the Prototyping Festival. Source: Adam Perkins, Downtown Denver Partnership; the Downtown Denver Partnership's prototyping class of 2016 designed, built, and tested their public space ideas. Source: Adam Perkins, Downtown Denver Partnership



More from the Prototyping Festival, from left to right in each row: Pseudopod, a user-configurable bench by Inworks Studio, was inspired by the trumpet fungus and brings a joyful oddity to the urban landscape; Rainbow Street Seating, created by Nick Fish, Yong Huang, and Tony Yue, is layered and abstract-shaped seating and functions as a street playground, a concert stage, a place to meet, and more; Peak1six—Bring the Mountains to Downtown Denver, created by Shears Adkins Rockmore, gives users an unexpected way to exercise in the street; Wheels Go Round, created by Kate Davis, uses recycled bicycle parts to encourage people's interaction with unexpected sounds as users spun the wheels; Treeflexion! by Dig Studio offers a semicircle of mirrored seats and gives patrons a chance to relax in the shade and enjoy the essence of urban trees; the backside of the Treeflexion! prototype calls on passers-by to reimagine public space. Source: Adam Perkins, Downtown Denver Partnership

The Downtown Denver Partnership set out a call for designers and artists to come up with their best ideas for improving public space in downtown Denver. They received a total of 34 applications for projects including weekend-long events, flash mobs, and permanent artistic, functional installations. Nine teams of artists and designers were selected and given \$2,500 each to bring their vision to reality.

On July 23, 2016, these local designers unveiled their nine prototypes designed to transform public spaces and showcase how participatory design, art, and technology can create connections and greater ownership of public spaces and how they are used. Data was collected on how many people visited and used each prototype to see what worked best. The Wheels Go Round prototype by Denver local Kate Davis consistently brought the most children and families to the 16th Street Mall in Denver. The Downtown Denver Partnership is currently working with Davis to improve her design to be more durable and helping it to become a permanent installation.

RECOMMENDATIONS

The recommendations in this report focus on targeted approaches to building sustainable planning and community development strategies for Belize City and articulating specific interventions that can help nurture the revitalization of the Yarborough community specifically. The work of the Yarborough Revitalization Initiative was set in motion with the robust public and stakeholder consultation and engagement process in February and June 2016. Local participation, including the active engagement and involvement of young people, is critical and should remain an integral component to the continued development and implementation of these recommendations by the government and other partners. The four identified priority areas, discussed above, are based on public feedback that informed the team's recommendations below. The recommendations are also based on urban site and systems analysis, an assessment of local assets and embedded capacities, and the consideration of potential constraints and limits.

The recommendations are organized and discussed in detail under the following headings: (1) Improve Yarborough's waterfront and public spaces; (2) Promote new activities, business, and investment; (3) Build capacity for ongoing revitalization and resilience; (4) Transportation improvements; (5) House of culture and the culture/waterfront park; (6) Yarborough Field and Collet Canal; and (7) Initiatives and interventions.

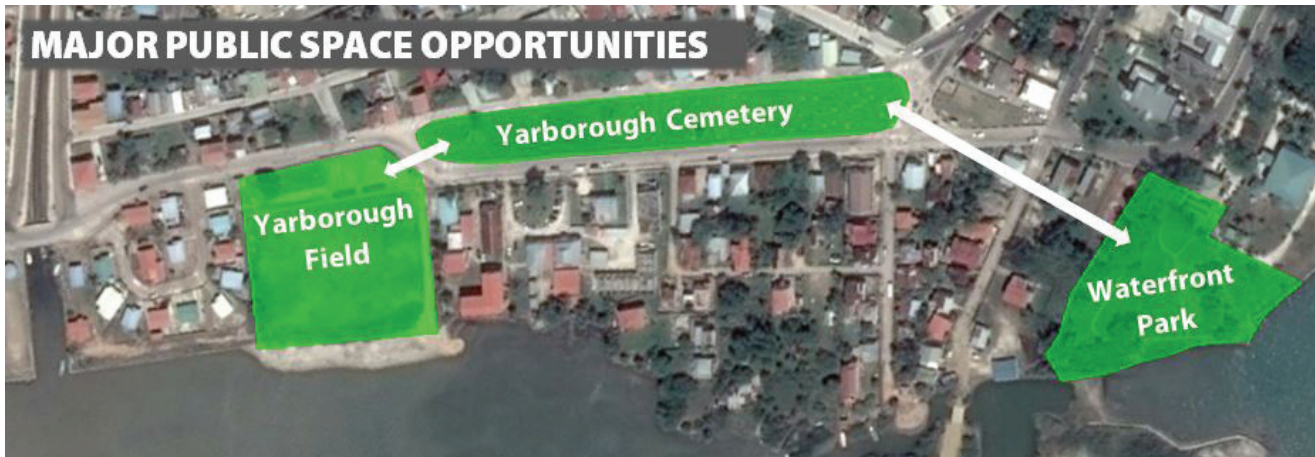
Overview and Guiding Themes

The Yarborough Revitalization Initiative is intentionally not a master plan or a fixed program. It is a set of actions that can be understood, developed, and implemented by agents and partners in Belize City and the Yarborough community, from the BCC or the IDB to local schools, churches, businesses, and residents. The goal of the initiative is to align various government, nongovernmental, and private or individual actions to focus on shared priorities and places within the community. The recommendations are organized by location and strategy, but the guiding themes for the overall initiative are the following:

- **Connectivity:** Develop projects on public land and public streets to improve the public realm and infrastructure for the Yarborough community, the area's connectivity to downtown and the city's economic forces, and the community's access and connection to its waterfront and natural assets.
- **Local Culture:** Leverage investments and improvements to the public realm to promote new development and private investment in the area, and provide a framework for local culture and economic development to connect to and leverage the physical improvements of the neighborhood.
- **Small Steps to Big Change:** Provide a framework for current and future development and action by identifying incremental steps, low-cost interventions, and support mechanisms to build community support, capacity for local businesses and stewards of public spaces and programs, and design these efforts to establishing long-term sustainability and resiliency for the community's social, economic, and environmental future.

Recommendation #1: Improve Yarborough's Waterfront and Public Spaces

Stakeholder and resident meetings identified quality designed and maintained public spaces and regular public activities as key priorities for the revitalization of the Yarborough area. The need for improved and safe public spaces is underlined by the limited amount of public space on Belize City's south side. Greater equity in the amount and quality of public spaces and infrastructure is critical to the success of the Yarborough Revitalization Initiative. It signals value and investment, which are foundations for public, private, and citizen stewardship and investment in a place. The BTL Park on the city's north side is often cited as an example of a successful public space because it has the level of investment and stewardship needed for the space. A public asset of equal value would help improve not only Yarborough, but the city's south side, by directly and visibly demonstrating greater equitability for the city's public realm and its neighborhoods across different income levels.



Yarborough Field, the cemetery, and the waterfront park represent three major opportunities to create unique anchor spaces and bring significant improvements to the public realm of the neighborhood. Source: Google Earth, modified by Ryan Scherzinger

Three large public spaces in strategic locations offer invaluable assets to the area: the Yarborough Field, Yarborough Cemetery, and the waterfront park adjacent to the Government House. These anchor spaces have different characteristics and are suited to different uses. As undervalued public spaces, all three carry great potential to form a tightly knit network—a nexus of public spaces that can serve a wide range of users while also accommodating practical functions. In addition to those three spaces, the public streets are another incredibly untapped asset for public space that can better connect and collect activities and users in the community. Streets can easily be reconfigured to recapture underutilized space to improve the neighborhood’s public realm, safety, and pedestrian activity.

The most apparent asset and liability in the Yarborough area is its proximity to the sea. Sweeping views and direct access to the water and nature is a proven magnet for urban activity and investment. At the same time, the frequent occurrences of flood and storm events require a comprehensive look at the shoreline and flood-prone areas in relation to the upland area urban fabric and programmatic patterns. The development of Yabra’s public open spaces, access points, and corridors to the water’s edge as a cohesive and legible network for both environmental performance and human experience can build a physical and programmatic resilience over time that can help become an essential asset to the historic city’s social and economic vitality.

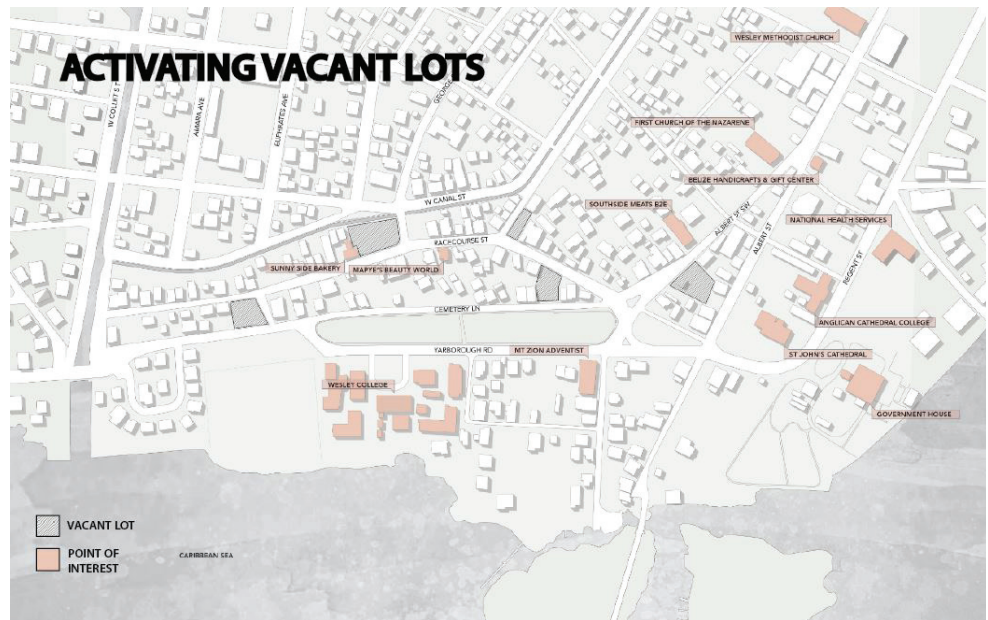
Recommendation #2: Promote New Activities, Business, and Investment

In addition to the large amount of publicly owned open space in Yarborough, there are numerous vacant lots. The inactivity on that amount of neighborhood land lowers the perception of safety in the area. At the same time, however, the underutilized land affords the area tremendous opportunity. Creative activation of these spaces will improve the perception of the area and can work in a way that promotes local businesses.

The Yarborough neighborhood, in many ways, is the heart of Belize City. It houses Belize City’s first cemetery, which was designated and protected as an archaeological reserve by the national government in 2009. Many festivities and parades in Belize City have a close connection to Yarborough, including the annual Belize Carnival. Yarborough is home to one of the best access points to the sea due to the protection provided by Bird’s Isle. It is also home to many cultural assets, including the Government House, Wesley College, and St. John’s Cathedral. The neighborhood, however, is still empty most of the day as commuters and other travelers pass through on Yarborough Road either to or from downtown Belize. Strategic activation that takes advantage of these assets and the area’s prime location will attract and encourage residents and tourists to linger longer and enjoy the space.

Activating key spaces with local businesses is another way to create a more inviting environment and build a greater sense of community. The team recommends the creation of a strategic marketplace location where food carts and other vendors can fill designated stalls in close proximity of each other to create an intimate and comfortable gathering space. The space should provide plenty of shaded areas, tables, and seating. A space no larger than about 2,000 square feet is a good starting point to make sure the space can remain consistently activated. As an example, one location to consider is the Racecourse Alley between Albert Street and Albert Street West. Residents could stop there after work to grab a bite to eat or a drink, or meet

Vacant lots and underutilized spaces are dispersed among major points of interest. Source: Francisco Jung

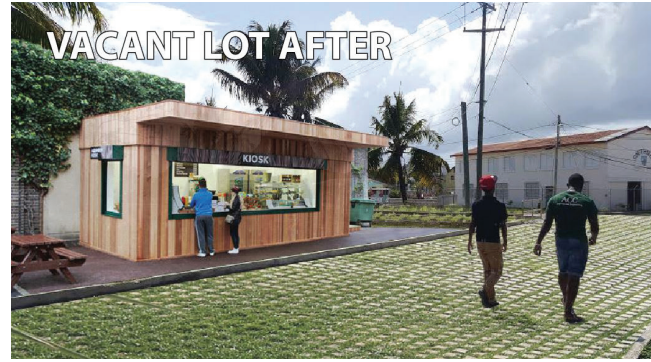


with friends and other community members. With a renewed waterfront park, some might choose to swim or play sports on nearby Yarborough Field. Locations could be tested following the “prototype-measure-refine” planning model outlined above to see what spots and configurations work best. Key to the success of this recommendation is allowing the community to direct this process and try out their own ideas on how to best configure the space with appropriate seating and shading.

A program should be set up by either the BCC or a local business group to allow cart vendors to sign up for specific stalls to gain experience and name recognition. As they become more successful, the program should assist the vendors in siting a location in Yarborough to continue the growth of the activation of the area. This program should serve as the beginning of a Yarborough small business association that can incubate, support, and grow local businesses.



This pop-up garden on South Street in Philadelphia is an example of an inexpensive creative space that invites users to linger and enjoy themselves. Source: Visit Philly



Successful vendors could be given semipermanent kiosks in underutilized spaces to increase activation of the area. Source: Francisco Jung

Getting traction in the development of newly activated spaces can take time. It's helpful to hold an event to kick-start excitement in the community—one that generates creative new ideas and allows local people an opportunity to actively reimagine the space. A "Festival of Ideas" can test out shading structures, interactive art installations and other area activation ideas, and vending possibilities for the space. The team recommends creating a temporary event where local artists, designers, businesses, and other interested community members can apply to test out different ideas. Promotion is important for both the idea generators and idea testers. Ideas for the specific space and for Yarborough more broadly can reach a wider audience through an organized event like a festival. Organizers can learn both what the community wants and what they're ready and able to support.

In conjunction with all the ideas—before, after, and during temporary changes are implemented—data should be collected to measure the effectiveness of the interventions. See the full list of recommended metrics in Appendix C. The evaluation measures cover the following topic areas:

- Safety
- Mobility
- Economic Vitality
- Quality of Life
- Active Living/Recreation
- Community Engagement

Clear metrics are imperative to the iterative planning process to know what is working and what is not. Baseline data should be collected prior to any interventions in order to learn how the space is operating before any changes are implemented. Data should again be collected after any ideas are put into place. If interventions are a part of a temporary demonstration project, data should be collected both during the event and after to see if there are any residual effects after the temporary changes are removed. Collecting the data will give policy makers the tools they need to make sound changes that have shown to work toward their intended goals.

Recommendation #3: Build Capacity for Ongoing Revitalization and Resilience

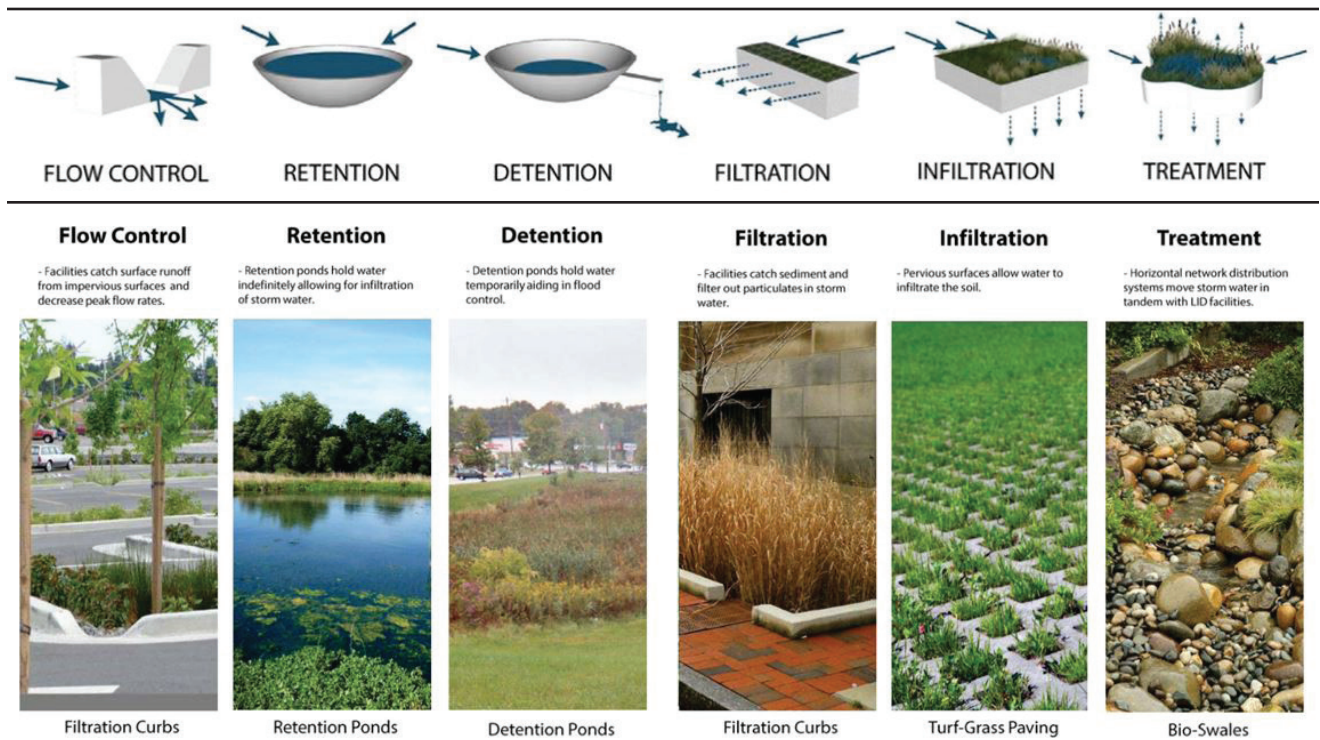
Capacity Building

Revitalization and resilience are dynamic processes—they are ongoing, and require continued attention and engagement by city employees, elected officials, and community members. One of the most effective steps that Belize City should consider is increasing its capacity to both create and implement action plans. In particular, attention should be given to building their capacity to enforce building codes through adding additional personnel.

Capacity can also be increased through active and ongoing participatory processes. Engaging community residents in developing plans and carrying them out will build commitment to and responsibility for seeing that the plans are carried out. A year-round calendar of events in the neighborhood, with events that include neighborhood clean-ups and property maintenance, will go a long way towards building a culture that values and protects the built environment.

Safety and Activity

Building codes and regular maintenance of both structures and infrastructures are critical to maintain safety and promote active use of the neighborhood. Currently, the quality of structures and infrastructure poses some threat to health and



There are numerous examples of green infrastructure and low-impact development techniques to control rainwater. Source: Texas A&M

safety. Pests, poor air quality, mold, and litter all a result of the current lack of codes and code enforcement. These introduce their own hazards on a regular basis; these problems are compounded and exacerbated during coastal storms such as hurricanes, tsunamis, and flooding. Enhancing codes and stepping up enforcement will have a large long-term impact on the health and safety of the built environment.

Natural Systems

Engineered “hard” infrastructure was traditionally seen as the best way to protect life and property from natural hazards. More recently, however, focus has shifted to green infrastructure as a low-cost, attractive method of providing “environmental services”—actions that the environment does naturally that are valuable financially and aesthetically. In particular, the use of rain gardens, bioswales, retention ponds, and floodable amphitheaters can be an effective, low-cost way of enhancing the ability of the natural (and built) environment to provide protection against coastal hazards.

The recommendations here should build on those already established in the *Belize Integrated Coastal Zone Management Plan*.

Recommendation #4: Transportation Improvements

To help the BCC meet its goal of encouraging more biking and walking, the team developed a series of alternatives to improve the physical environment for these activities. The team initially considered installing bicycle lanes and widening the sidewalks; however, after further thought, the team believes that a better alternative is to take the unintentional shared streets that Yarborough already has and make them more intentional. The overall objective of the recommendations is to reconnect existing assets and connect Yarborough more effectively to downtown.

Albert Street and Yarborough Cemetery Alternatives

Celebrate the historic Yarborough Cemetery as the heart of Yarborough. Yarborough Cemetery becomes the center of energy where it pulls people from Albert Street West and then sends them to other assets such as St. John’s Cathedral and Yarborough Field.

Intersection of Albert Street and Albert Street West: A Gateway to Yabra

Define the intersection of Albert Street and Albert Street West by creating a triangle plaza. This is an opportunity to incorporate art, shade, and a sitting area. As people come down Albert Street from downtown, this becomes the gateway that draws people into the Yarborough neighborhood. It gives residents and tourists a visual clue that there is more to see and explore.

Albert Street West: Albert Street to Racecourse

When traveling south, people have the option to travel down Albert Street or Albert Street West. As mentioned in the “Planning Priorities” section above, the team observed that Albert Street West functions as a cut-through for drivers. During community meetings, residents expressed a desire to encourage biking and walking. This can be achieved by designating Albert Street West as a street that prioritizes people biking and walking as well as smaller vehicles like *bajajs* and the tourist train. To achieve this, the bus route on Albert Street West would need to be relocated to Albert Street. In addition, all trucks, except those serving the meat factory, would be prohibited on Albert Street West.

Creating a street that prioritizes people, biking, and walking can be achieved in two ways: one that has low impact on motor vehicle traffic, and one that would completely change the function of Albert Street West.

Low Impact: Priority Street for People, Biking, and Walking

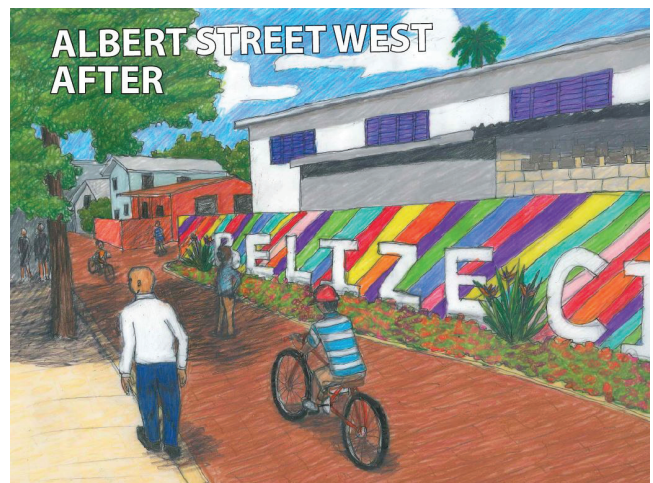
To have a low impact on motor vehicles, the team recommends converting Albert Street West into a shared street. A shared street is one that has no defined shape for each mode. To achieve a shared street, the team recommends slowing the speed on Albert Street West to 16 kilometers per hour or less through roadway design. The goal would be to discourage large motor vehicles like cars and trucks from choosing to drive on Albert Street West unless they have a specific destination on that street. Smaller vehicles such as *bajajs* and small tourist vehicles, on the other hand, would be encouraged to use Albert Street West.

High Impact: Restrict All Motor Vehicles

After testing out the low impact recommendation and conducting public meetings to solicit feedback from the community, the BCC may consider converting Albert Street West into a street that is exclusive for people biking and walking, *bajajs*,



The intersection of Albert and Albert Street West could be transformed as a welcoming gateway to Yarrowborough. Source: Justin Moore and Christine Mayeur



Albert Street West could be enhanced with a variety of more visually pleasing, people-friendly features. Source: Christine Mayeur



There are many potential ideas to enhance Albert Street West, such as this example of using umbrellas as art to provide shade on the street. Source: Juan Carlos Comeselle

and small tourist vehicles. Since the vehicles will be smaller than trucks and automobiles, the street could be converted into a green street by removing the concrete and installing a green infrastructure system to collect and filter stormwater (see Priority 3 section above for examples).

Other Considerations for Albert Street West

On the west side of Albert Street West, there is an uninviting wall. There is an opportunity to convert this into an art wall to create a more people-friendly environment. Additional features such as shade trees or decorative structures would make it a pleasant environment for walking and biking.

Albert Street West: Racecourse to Yarborough Road

A range of possibilities offering various impacts on motor vehicles could be considered for improving Albert Street West from Racecourse to Yarborough Road. BCC could determine what works best through a series of tests using the iterative planning process.

Low impact: Small plaza around the Morter monument.

An intervention with a low impact on motor vehicle traffic would be adding a small plaza around the Isaiah Emmanuel Morter monument. In this scenario, motor vehicles would be allowed access from Yarborough Road to Racecourse Street and Cemetery Lane. This would help define the intersection to the east of Yarborough Cemetery, but the travel patterns may remain confusing.

Medium impact: Limited partial movement. After testing the low-impact recommendation, BCC could test higher-intensity options. As a medium-impact testing option, motor vehicles would not be able to make any turns from Yarborough Road. People driving could travel between Racecourse Street and Cemetery Lane, but not from Albert Street West. A large plaza would connect the Isaiah Emmanuel Morter statue, a small playground park, a pocket park, and the Yarborough Cemetery.

High impact: Limit all movement. The high-impact recommendation would reclaim the entire intersection for people walking, biking, and riding in smaller vehicles like *bajajs* or the tour train. People driving motor vehicles would not be able to make any turns from Yarborough Road. Racecourse Street and Cemetery Lane would be converted into dead-end streets, which would require a change in traffic patterns on Cemetery Lane and Racecourse Street.

Recommendation #5: Adopt a New Site Plan for the House of Culture and the Waterfront Park

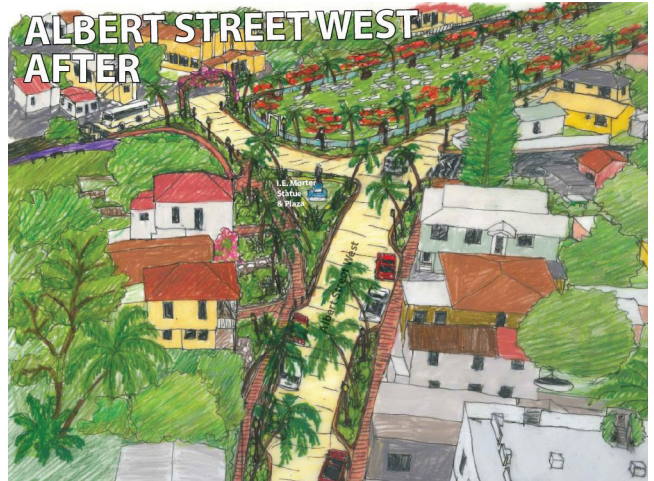
One of the most critical recommendations for the Yarborough Revitalization Initiative is the careful consideration of the site planning, programming, and design of the open spaces on and adjacent to the House of Culture site. The Government House is an important landmark and the park's



Top to bottom: New travel patterns could have a low impact on motor vehicle traffic; further street restrictions would have a medium impact to motor vehicles; reclaiming the entire intersection would have a high impact on motor vehicles, but would offer a major reward for pedestrians and other transportation modes. Source: Christine Mayeur

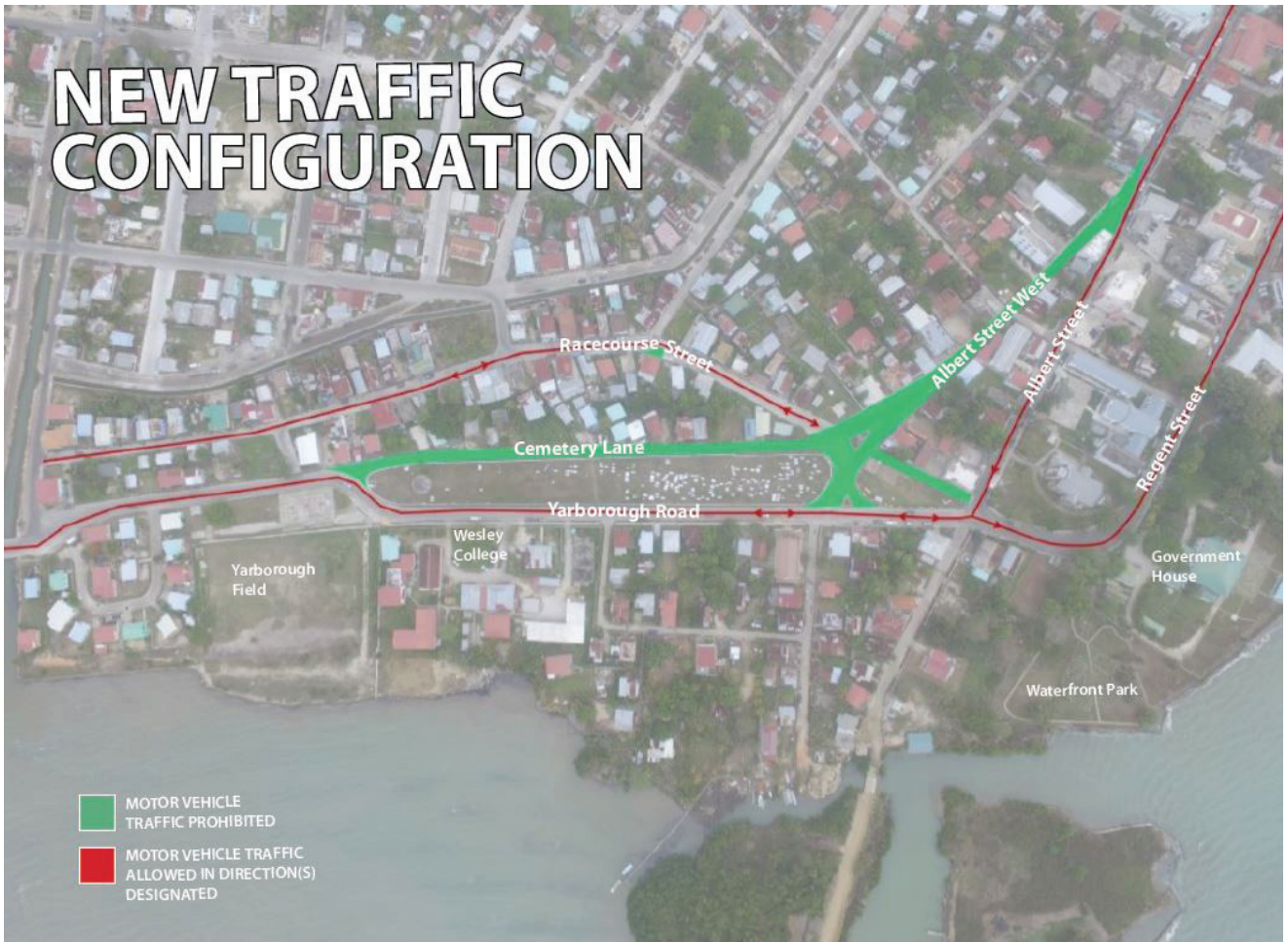


ALBERT STREET WEST BEFORE



ALBERT STREET WEST AFTER

Adding a small plaza with the existing monument on Albert Street West would have a low impact on motor vehicle traffic. Source: Christine Mayeur



NEW TRAFFIC CONFIGURATION

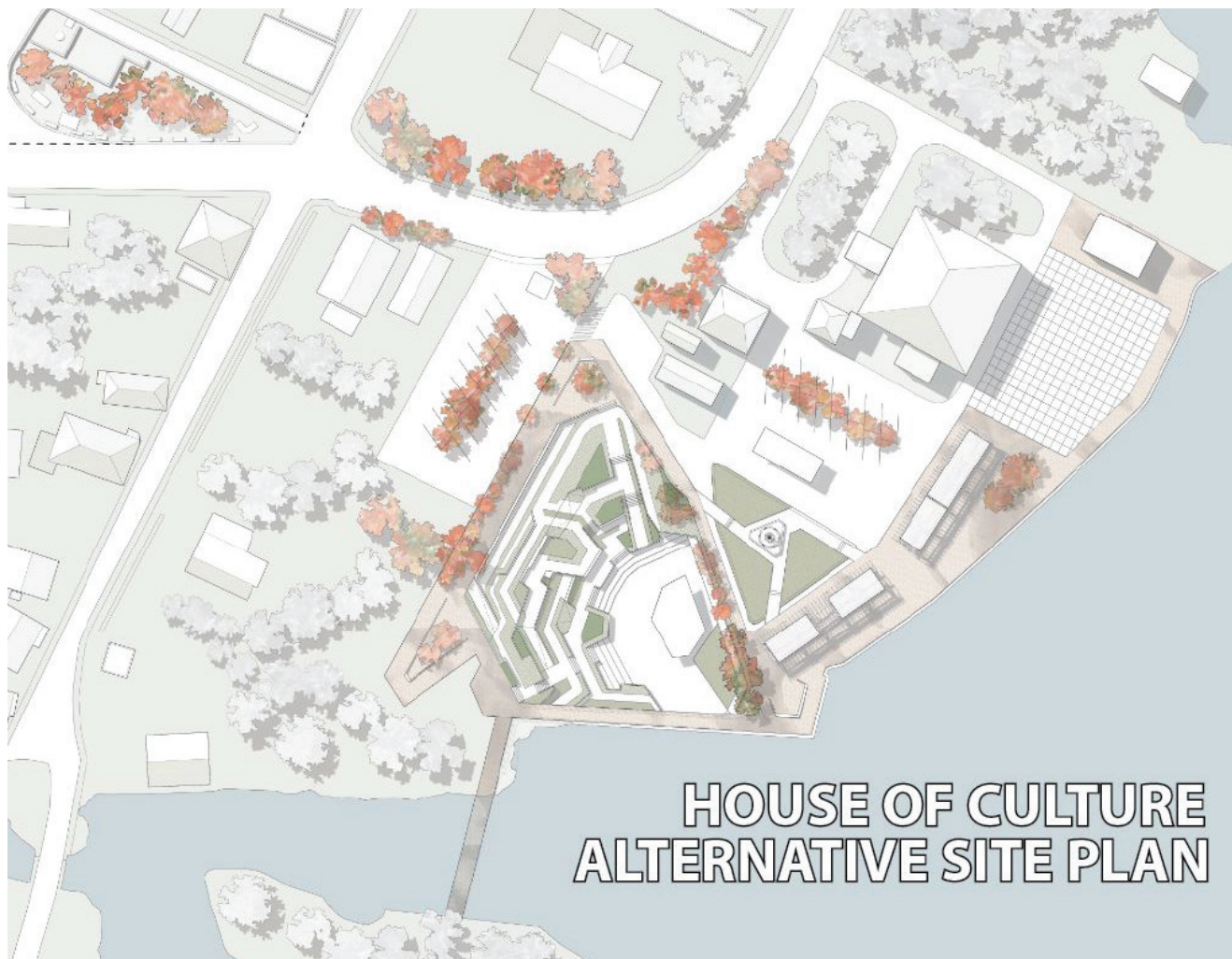
The new configuration would require some getting used to for vehicles, but help transform the area into a safer and more active zone for residents. Source: Christine Mayeur

location is a critical juncture between the downtown Albert and Regent Street corridors to the Yarborough neighborhood. The site can benefit from new investment and be redesigned to provide improved visual and direct access from the neighborhood to the waterfront. A redesigned park should serve as a unique and multipurpose public space to the enjoyment of local residents, Belizeans, and tourists alike.

In consultations with community residents and stakeholders, the park was identified as a key location for access to the water and nature, passive recreation and swimming, and cultural activities. More importantly, the park has a strong identity and positive association as a public and waterfront space on Belize City's south side and this reference cuts across different demographics and age groups. As it now stands, however, the park is underutilized due to the lack of investment..

The proposed site plan by the Ministry of Tourism and Culture (MTC) and National Institute of Culture and History (NICH) was conceived and designed without taking full advantage of the broader community context, connections, and assets, but instead operates as an independent campus (See Appendix D). New buildings are oriented to block desire lines from Albert and Regent Streets to the water. The development of the site with this configuration will be a missed opportunity to best leverage public land toward greater long-term public and economic benefits. The invaluable asset of the existing large area of public open space that can serve multiple functions is proposed to be divided up among new buildings, parking lots, and open spaces with significantly more limited potential uses that larger park space can provide.

With the larger effort around the revitalization of Yarborough, including the proposed improvements to the street network, more legible connections to the historic assets of St. John's Cathedral and Yarborough Cemetery, and proximity to the businesses on Racecourse Street, the redevelopment at the House of Culture site should be configured to better connect



The team's recommended alternative site plan for the proposed House of Culture development prioritizes public waterfront access and open space programming while still providing for new uses and parking on the site. Source: Justin Moore, Francisco Jung, and CPAT team members

and relate to the larger neighborhood, and provide for a unique and well-connected waterfront public space. Here, the team proposes a new plan for the redevelopment of the site that includes new uses and buildings, parking, and improved open space. The alternative plan provides for a more urban and efficient site plan for new buildings on the House of Culture campus, including new waterfront boardwalk-fronting food and beverage and retail spaces, an improved waterfront park with enhanced pedestrian and visual connections to Regent Street, and a new shoreline and overall landscape design that allows for a mix of activities and improves flood and storm resilience for the overall site.

The House of Culture site offers a prime opportunity, particularly since the investment and momentum to develop the project already exists. Funds are available for implementation and a robust consultation to get input on the project and programming was already conducted. In other words, it is possible to have a real anchor of investment and activity for the overall neighborhood. The team's alternative plan, however, offers several new ideas to the MTC/NICH plan.

First, the House of Culture section of the site can be improved with a boardwalk edge condition with new low-scale buildings and open spaces that front directly onto the sea. The design will provide for activity, vitality, and improved stewardship and safety for the site and the public spaces across seasons and daily schedules. Business owners who rent the spaces and House of Culture staff can directly monitor and maintain the new public spaces. Instead of a large parking lot cutting across the majority of the open space of the site, new parking required for the redevelopment can be divided into multiple smaller lots, including use of a nearby, largely vacant lot controlled by the water company.

Second, there is an incredible opportunity to create a signature waterfront open space at the site. The site is currently configured with a cove; the land mass of Bird's Isle forms a natural edge with conditions that provide for visual interest and varied experience for both on land and in the water. Instead of a landfill or seawall edge treatment defining the waterfront space, this park can have a more dynamic water's edge. With minimal changes to the existing site conditions, the public space can feature naturalized shoreline conditions, promontory points, and varied landforms that can help make a truly unique Belize City and Yarborough waterfront identity—a sharable social media destination. Improved landscape design at the site can include a safe



A representational rendering of the team's alternative site plan shows a reconfigured waterfront park that serves multiple functions and users. Cultural events and performances can occur in a new outdoor landscape amphitheater. During flood or storm events the lower sections of the amphitheater terraces can be flooded without significant damage. Source: Justin Moore, Francisco Jung, and CPAT Members

water area, where the conditions and the quality of the water can be monitored to allow for a broader range of users (families with young children, etc.) to have a water park- or urban beach-type experience in Yarborough.

Finally, public open space provides an opportunity to use a more forward-thinking landscape design approach that addresses flood and climate resilience. Rather than developing expensive seawalls and boardwalks that are already proven to be too expensive to build and maintain over time, the team's alternative proposal utilizes a landscape design that allows for the occasional flooding of some features while strategically elevating other features above the flood level. A simplified boardwalk platform is built over an engineered sloped and naturalized edge treatment would provide a more passive and informal feel. This connects and serves as a transition to the more formal bulkhead and boardwalk configuration at the House of Culture portion of the site. Instead of laying out plaza or field-type public spaces, the park uses topography to create different conditions. The primary feature of the park will be a floodable amphitheater. This can be used for different types of events throughout the year, but also as a passive space for everyday use by the public with its great waterfront views, ample seating, and much-needed shade or lighting. While landscape flood resilience measures taken on this one site alone are not adequate to protect upland Yarborough areas during storm events, the design can be developed in a way to provide for a civic and social space for the community to reconnect after storm events to recoup and revive the vitality of their waterfront neighborhood and city. The design would allow for it to bounce back more quickly after a flood with some cleaning and low-cost maintenance by local partners.

Recommendation #6: Reconfigure Yarborough Field

Yarborough Field currently serves as the primary open space for the Yarborough community and is one of the most important and known public spaces on Belize City's south side. The field is programmed with basketball courts, viewing bleachers, a large open field, and limited areas for passive use. A portion of the site has an abandoned guard booth and old markers from what was once within the original boundaries of the Yarborough Cemetery. The site is heavily utilized by youth and the adjacent Wesley College. It also hosts multiple citywide events, including the starting point for the city's carnival parade. However, as a waterfront park, the field has limited utility and desirability given the simple shoreline conditions and lack of other public space amenities.

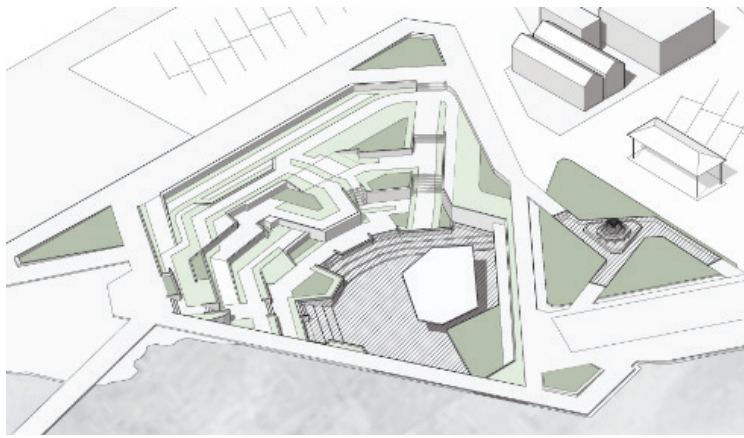
Current programming and the open configuration of the field should be kept, but adjustments should be made to the layout to provide for better connectivity to the waterfront and new public uses on the site. An important concern at the site is the safety and visibility of the many young people who use the site during the day and in the evening. The current configuration located the basketball court closest to Yarborough Road and limits sight lines. This creates issues with safety for young people playing near the street, but also potentially safety and perception of safety related to criminal activity, particularly at night. By improving the physical conditions and design of the park, Yarborough Field can better function as a public asset and help to foster a safe and positive environment for the community.

Maintaining the multiuse active recreation priority for the programming of the park is important. Basketball, football, and other field sports and pick-up games provide healthy activities, enjoyment, and shared experiences, and serve many different users. By reorienting the football field, and relocating the basketball courts and bleachers, the park can have better access and sight lines to water and Yarborough Road. Demolishing the abandoned kiosk and improving conditions along the Yarborough Road frontage with a new bus shelter, tree planting for shade, and new seating will help make the gateway into the park more welcoming and instill a sense of pride for the community's largest public space.

At the shoreline of Yarborough Field, there is an opportunity to bring the community to the water through programs to help clean up the site and adjacent areas at Wesley College. Temporary events and activities can better utilize the waterfront zone of the park to test which kinds of spaces and

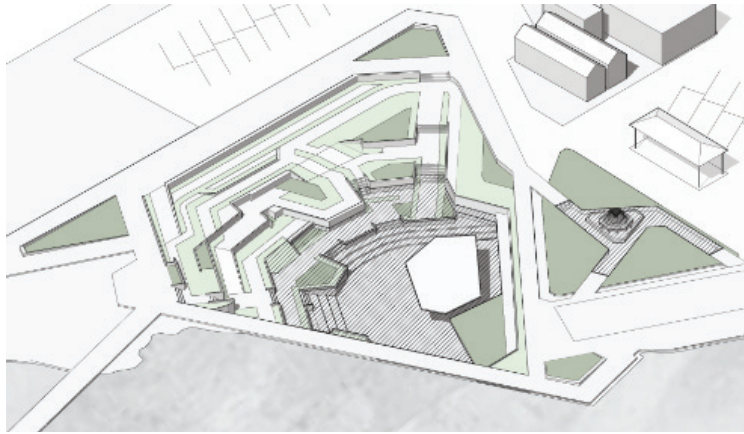


Reconfiguring the field to improve sight lines is important for safety and improved functionality for existing and future community uses. Source: Francisco Jung

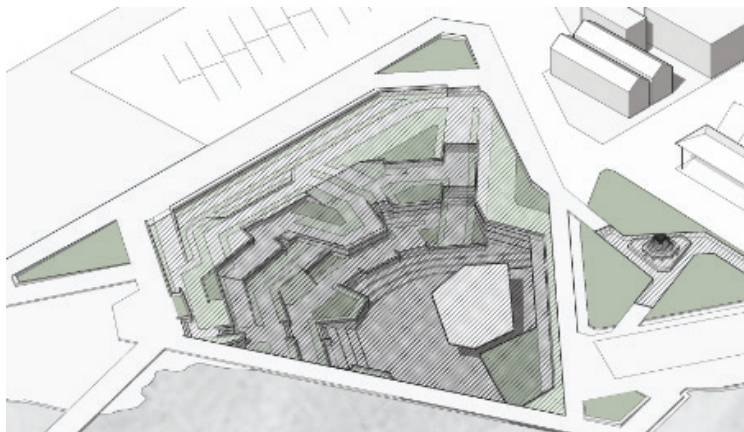
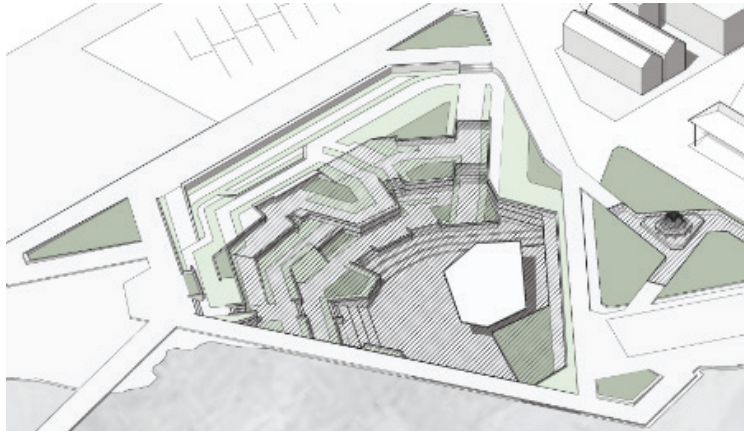


Floodable Amphitheater Under Various Flood Conditions

-  Porous Landscape
-  Semi-Porous Pavement
-  Flooding Level



The floodable amphitheater could contain water during a wide range of flood events. Source: Adaptation by Ryan Scherzinger.



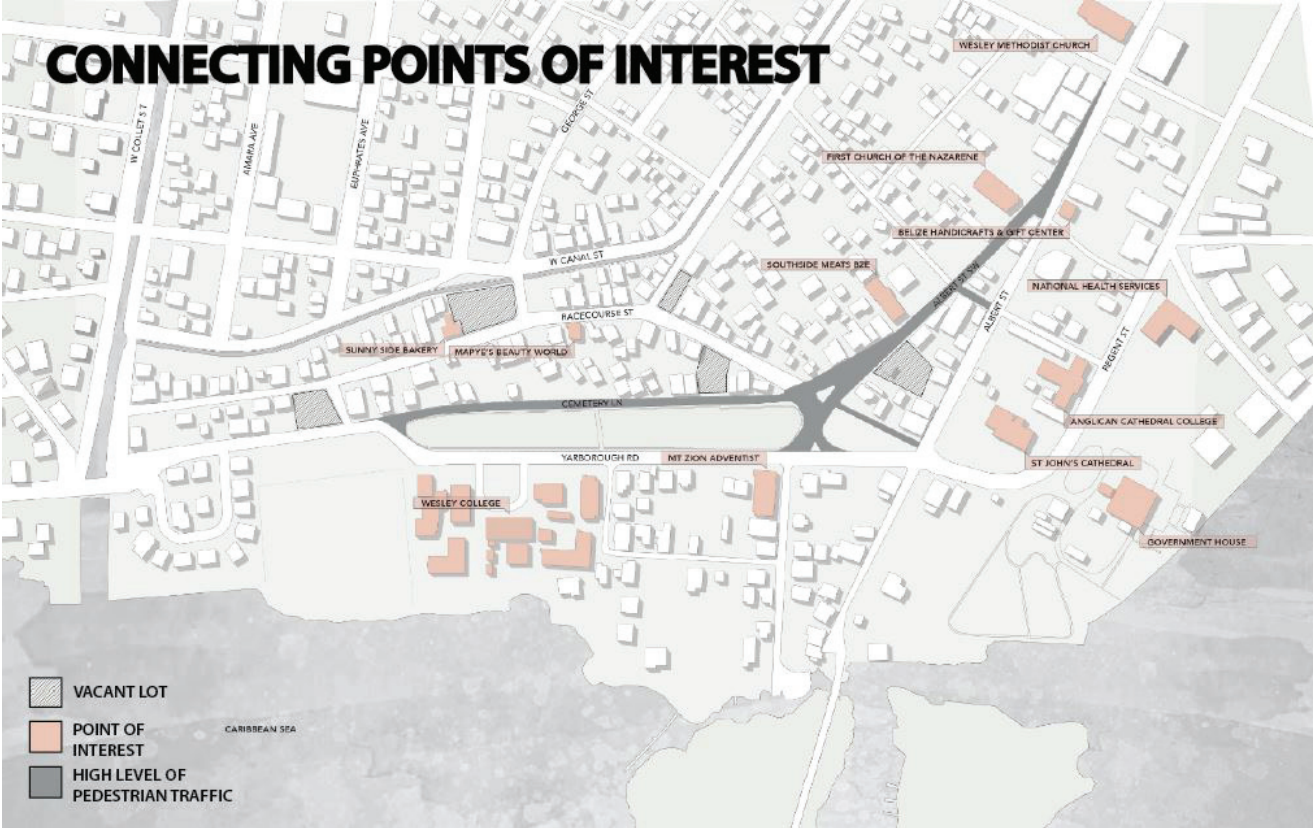


Modified photos help provide a reimagined vision of Yarborough Field, with improved sight lines all the way to the water. Additional improvements to the bus shelter, new tree plantings and landscaping, and seating would also help transform the space. Source: Francisco Jung

activities are needed and can be successful on a more permanent basis while not conflicting with the active programming of the majority of the park.

Recommendation #7: Initiatives and Interventions

Yarborough is a large area with many significant features and many different paths people use to pass through the neighborhood or to arrive at destinations within the neighborhood. Key features and established destinations such as the waterfront, Yarborough Field, Collet Canal, the cemetery, Wesley College, St. John’s Cathedral, the House of Culture, Bird’s Isle, and the Sunny Side Bakery offer opportunities to create additional key points of interest around them. Interventions and initiatives should strive to capitalize on existing features and destinations to create synergetic effects. They should be discrete interventions that transform strategic spaces by taking advantage of people’s pathways through the neighborhood. For



The spatial network of interest points is an important consideration when developing a strategy for any new initiatives and interventions. Source: Francisco Jung



City Collaborative in Louisville, Kentucky, created the Resurfaced initiative, which explores creative ways to “pre-vitalize” vacant and underutilized spaces through low-cost investments and community partnerships that activate the spaces in the near term. Source: Ryan Scherzinger and City Collaborative

example, a beer garden-type intervention on Racecourse Street between Albert Street West and Albert Street can serve as a gateway into the neighborhood from downtown and a gathering place for the community.

The many vacant lots throughout the neighborhood should be used to connect the dots between the key features and destinations to bring more life to the neighborhood. Successful examples of this type of intervention can be seen in the following examples:

- Indianapolis: Indy Redbud project (indyredbud.org)
- New York City: MGB Pops Night (nycedc.com/program/mgb-pops)
- Louisville, Kentucky: Resurfaced on Main (citycollaborative.org)

Other key interventions may include a permanent kiosk for successful vendors that come out of the vending incubatory program discussed in Recommendation #2. This kiosk could be a part of the beer garden.

These interventions should be combined with concurrent testing of the transportation changes. For example, temporarily closing Albert Street West to vehicular traffic could be combined with the Festival of ideas outlined in Recommendation #3 and the vending programming outlined in Recommendation #2. Scheduling should capitalize on popular existing events such as the Belize carnival to attract the most attention.

Implementation: Connectivity, Local Culture, and Small Steps to Big Change

To revitalize Yarborough as a vibrant, fun, safe, economically healthy, and vital neighborhood in Belize City, all agents involved must work together and be committed to a sustained effort in each of the guiding themes: Connectivity, Local Culture, and Small Steps to Big Change. Listed in the matrix below are focused and targeted approaches that will nurture the revitalization of the Yarborough community. The strategies are discrete action items that can be implemented singularly, but are best carried out through a comprehensive approach. These set of actions can be understood, developed,

and implemented by agents and partners in Belize City and the Yarborough community, from the BCC or IDB to the local schools, churches, businesses, and residents. This list of specific strategies and initiatives should be used to align various government agencies, nongovernmental organizations, and private or individual actions to focus on shared priorities and places within the community. It should be noted that the team did not conduct any cost estimate analyses, so they are presented here in general terms.

IMPLEMENTATION MATRIX				
Recommendation/Intervention		Time Line	Cost Estimate	Example
1. Improve Yarborough’s Public Spaces and Waterfront				
1.1 Provide a variety of experiences in a network of public spaces all within a close proximity.				
1.1.1	Invest in three strategic locations: Yarborough Field, Yarborough Cemetery, and the waterfront park adjacent to the Government House.	Continuous	Medium	
1.1.2	This network of spaces should serve a wide range of users while also accommodating practical functions.	Continuous	Medium	
1.1.3	Configure the network of public spaces to connect and collect activities and users in the community.	Continuous	Medium	
1.1.4	Reconfigure streets to recapture wasted space to improve the neighborhood’s public realm, safety, and pedestrian activity.	Medium	High	
1.1.5	Add a shade structure over middle of cemetery.	Near	Low	
1.1.6	Add a shade structure over Racecourse Road (i.e., the dirt road section by playground park).	Near	Low	
1.1.7	Add bus stop, turnaround, and vendors at the George Street and Yarborough Road intersection.	Near	High	
1.2 Strategically capitalize on the waterfront asset by improving the direct access to water while mitigating the impact of flood and storm events.				
1.2.1	Take a comprehensive look at the shoreline and flood-prone areas in relation to the upland area urban fabric and programmatic patterns.	Near Term	Low	
1.2.2	Develop Yabra’s public open spaces, access points, and corridors to the water’s edge as a cohesive and legible network for both environmental performance and human experience to build a physical and programmatic resilience over time that can help become an essential asset to the historic city’s social and economic vitality.	Medium	Medium	
1.2.3	Explore and program new water activities.	Near Term	Medium	
2. Promote New Activities, Businesses, and Investment				
2.1 Activate unused open space and vacant lots.				
2.1.1	Capitalize various events connected with the Yarborough neighborhood through the creation of annual events calendar.	Near	Low	
2.1.2	Provide a small marketplace, such as beer garden, no larger than 2,000 square feet to create space for the community to connect.	Near	Medium	
2.1.3	Encourage the community to test different shading and seating configurations.	Near	Low	

IMPLEMENTATION MATRIX

Recommendation/Intervention		Time Line	Cost Estimate	Example
2.1.4	Pilot the beer garden/marketplace concept along the Race-course Alley in between Albert Street and Albert Street West.	Medium	Medium	Denver Skyline Beer Garden
2.1.5	Add shade structures to create visual interest and comfortable spaces.	Medium	Medium	
2.2 Engage and incubate small businesses to encourage them to locate in the Yarborough neighborhood.				
2.2.1	Create a vending pilot program set up by either the Belize City Council or local business group allowing cart vendors to sign up for specific stalls to grow their experience and name recognition.	Near	Low	
2.2.2	Use the vending program to assist the successful vendors in siting permanent locations in Yarborough to continue the growth of the activation of the area. This program should be the beginning of a Develop and support a Yarborough small business association that can incubate, support, and grow local businesses.	Medium	Medium	The Dorrance H. Hamilton Center for Culinary Enterprises, Philadelphia; The Commissary on Town Street, Columbus, Ohio; Business Incubator—Center Kitchen, Grand Junction, Colorado
2.3 Create a “Festival of Ideas” as a part of a programming action plan.				
2.3.1	Develop clear list of metrics on elements you want to see improvement. Example list is given in Appendix D.	Near	Low	Denver Prototyping Festival
2.3.2	Celebrate proposed changes with a party that brings the community together and gives them the opportunity to test out proposed changes and offer input.	Near	Medium	Denver Meet in the Streets
3. Build Capacity for Ongoing Revitalization and Resilience				
3.1 Capacity Building				
3.1.1	Create a culture of community-led initiatives by involving the community early on in transformation process.	Near	Low	
3.1.2	Create a list of stakeholders and groups, and keep them informed with regular updates.	Near	Low	
3.1.3	Create a task force of interested stakeholders to guide the next steps.	Near	Low	
3.1.4	Use design competitions to encourage the community to build their own concepts to showcase during a “Festival of Ideas.”	Near	Medium	
3.2 Safety and Activity				
3.2.1	Hold information session on CPTED principles.	Near	Low	
3.2.2	Improve gateways.	Medium	Medium	
3.2.3	Install lighting improvements.	Near	Medium	
3.3 Natural Systems				
3.3.1	Organize a flamboyant tree planting.	Near	Low	
3.3.2	Conduct a silt remediation process.	Medium	High	
3.3.3	Add mangroves, a trail, and an outdoor classroom behind Wesley College	Medium	High	

IMPLEMENTATION MATRIX

Recommendation/Intervention		Time Line	Cost Estimate	Example
3.3.4	Conduct a mangrove restoration process.	Medium	High	
4. Add Clarity to Transportation Network and Reclaim Underutilized Space				
4.1 Albert Street/Albert Street West				
4.1.1	Install a temporary public plaza at Albert Street and Albert Street West using planters and public art.	Near	Low	NYC Plaza Program
4.1.2	Create a permanent public plaza at Albert Street and Albert Street West using green materials, public art, and trees.	Medium	Medium	NYC Plaza Program
4.1.3	Reroute buses from Albert Street West to Albert Street.	Near	Low	
4.1.4	Create restriction for large trucks on Albert Street West.	Near	Low	
4.1.5	Convert Albert Street West to a bicycle and pedestrian priority street, including restricting heavy truck traffic (Phase 1).	Near	Low	
4.1.6	Convert Albert Street West into a green street, which includes removing concrete and installing a green infrastructure system (Phase 2).	Medium	High	
4.1.7	Create art wall on Albert Street West.	Near	Low	
4.1.8	Install shade on Albert Street West by adding shade trees and/or art structures.	Near	Low/ Medium	
4.2 Albert Street West between Racecourse and Yarborough Road				
4.2.1	Create small plaza on Albert Street West around the millionaire monument (Phase 1).	Near	Low	
4.2.2	Create a medium plaza on Albert Street West Plaza to connect the Isaiah Emmanuel Morter statue, small playground park, pocket park, and the Yarborough Cemetery (Phase 2).	Medium	High	
4.2.3	Create a large plaza on Albert Street West Plaza to connect the Isaiah Emmanuel Morter statue, small playground park, pocket park, and the Yarborough Cemetery. The plaza would eliminate all vehicle movement (Phase 3).	Long	High	
5. Connect The House of Culture to the Urban Fabric of Yarborough				
5.1 Configure the House of Culture site to better connect and relate to the larger neighborhood, and provide for a unique and well-connected waterfront public space.				
5.1.1	Provide interim food and beverage to support local small businesses at special events and other activities during site redevelopment.	Near	Low	
5.1.2	Develop a waterfront boardwalk.	Medium	High	
5.1.3	Develop a waterfront park.	Medium	High	BTL Park, modifications to proposed House of Culture plans
5.1.4	Build a seawall and boardwalk along the waterfront.	Medium	High	
5.1.5	Build a boardwalk along Bird's Isle.	Medium	Medium	Seashore Drive (North Belize)
5.2 Enhance Pedestrian and Visual Connection to Regent Street				
5.2.1	Create a perimeter fence and signage or artwork.	Near	Low	
5.2.2	Establish new and reconfigured park pathways.	Medium	Medium	

IMPLEMENTATION MATRIX

Recommendation/Intervention		Time Line	Cost Estimate	Example
5.2.3	Provide park and pathway seating and lighting.	Medium	Medium	
5.3 Flood Resilience				
5.3.1	Plant park with flood-resilient planting.	Medium	Medium	
5.3.2	Add floodable amphitheater and landscape topography for improved flood resilience and recovery.	Long	High	
5.3.3	Build new buildings with higher flood elevations, designed with transition steps and ramps to boardwalk level as a design feature.	Long	High	
6. Yarborough Field and Collet Canal				
6.1 Improve conditions and access along Yarborough Road				
6.1.1	Provide improvements to the bus stop location.	Near	Medium	
6.1.2	Demolish abandoned kiosk.	Near	Low	
6.1.3	Plant trees for shade and beautification.	Near	Low	Indy Redbud Project
6.1.4	Create a new park sign or art wall.	Near	Low	
6.2 Reorient playing fields for better multipurpose use				
6.2.1	Reorient playing field to help open up the site and provide a better connection to the waterfront.	Medium	Medium	
6.2.2	Relocate basketball court and seating.	Medium	Medium	
6.2.3	Provide park and field lighting.	Long	High	
6.3 Improve shoreline conditions and activities				
6.3.1	Organize regular cleanups for the waterfront areas.	Near	Low	
6.3.2	Create regular science class classroom visits to the water.	Near	Low	
6.3.3	Promote temporary/interim waterfront uses with pop-up shops during events.	Near	Low	
6.3.4	Improve waterfront rip-rap shoreline and landscaping.	Medium	High	
6.3.5	Extend boardwalk, and install new lighting for BELIZE sign.	Long	High	
6.3.6	Improve stewardship and cleanup of Collet Canal.	Near	Low	
6.3.7	Improve and activate the park pavilion along the Collet Canal.	Near	Low	
7. Initiatives and Interventions				
7.1 Points of Interest				
7.1.1	Focus interventions on key points of interest with the neighborhood.	Continuous	Low	
7.1.2	Place interventions along key paths of travel in order to catch the attention of people passing through the neighborhood.	Continuous	Low	
7.1.3	Create and activate key nodes in the neighborhood that bring new energy and transform the space.	Near	Medium	
7.1.4	Create an art and mural program to bring visual interest to key locations and paths of travel.	Near	Low	Denver Public Art Urban Arts Fund
7.1.5	Create shade wherever possible.	Near	Medium	
7.1.6	Create visible gateways into the neighborhood.	Near	Medium	

IMPLEMENTATION MATRIX

Recommendation/Intervention		Time Line	Cost Estimate	Example
7.2 Vacant Lot Activations				
7.2.1	Use “lighter, quicker, cheaper” model of adding energy to vacant lots.	Near	Low	Resurfaced pop-up on Main, Louisville, Kentucky
7.2.2	Bring the community together through volunteer clean-up project days.	Near	Low	
7.2.3	Plant trees in vacant lots as well as in Yarborough Field and Cemetery	Near	Medium	Indy Redbud Project
7.3 Temporary Demonstration Projects				
7.3.1	Utilize “lighter, quicker, cheaper” model of testing changes to the transportation network.	Near	Low	The Better Block Foundation
7.3.2	Combine temporary changes with festival or events showcasing other ideas.	Near	Low	Celebrate Yonge, Toronto, Canada
7.4 Capitalize on Existing Programming				
7.4.1	Create calendar of existing events in the neighborhood.	Near	Low	
7.4.2	Create events in combination with other events to capitalize on people being there.	Near	Low	Belize carnival
7.4.3	Think about evening commuters passing through and providing for their needs.	Near	Low	Yarborough, Albert, and Regent Streets

POSSIBLE ONE-YEAR PROJECTS

This report contains both large and small recommendations. Some will take a relatively large amount of time and money, while others have little or no cost. The underlying focus, in many cases, is on capacity building. Identifying obstacles and working to find strategies to overcome them, developing institutions through public participatory models, linking resources and building effective partnerships between the public and private sectors, and managing implementation processes with careful metrics will all be important to increasing the community’s ability to tackle many of the recommendations. Building capacity will allow the city to accomplish more in the transformation and recognition of the Yarborough neighborhood. With this in mind, the team recommends that the BCC, in close collaboration with the community, focus efforts over the next year on the following four one-year projects.

Linking Assets: Temporary Street Design Change

Many of the transportation recommendations require an investment in infrastructure, which can be medium- and long-term solutions. However, using the proposed configurations discussed above, the BCC can use temporary treatments such as large planters or traffic cones to test the street design recommendations. The temporary street designs can be independent or they can be implemented in conjunction with some of the recommended activations and community events discussed in this report. For example, the BCC could combine testing the closing of Albert Street West to all motor vehicle traffic with a mural painting event for the blank wall along Albert Street West or a block party that draws people to the neighborhood.

For any temporary street design changes that are tested independently (i.e., not in conjunction with any event), there are a few recommended methods for testing. The BCC could test on weekends by putting up temporary blockages Friday through Sunday or they could test every day. Regardless of which days the BCC wants to test, the team recommends testing for more than 30 days. It will take at least that much time for people adjust to the new traffic pattern. The testing should be a combination of collecting traffic data to see what impacts it has on other streets and acquiring significant public feedback through surveys and community meetings.



Clockwise from top left: This example shows how planters were used to temporarily close Willcocks Street in Toronto. Source: Kevin Zolkiewicz via Flickr; La Quinta Avenida in Playa del Carmen, Mexico, is a successful example of a pedestrian-only street. Source: Oscar Lucero via Flickr; A sign in Antigua, Guatemala, is displayed where the street is converted to a pedestrian-only street Friday through Sunday. Source: Veronica O. Davis; Planting flamboyant trees in the Yarborough area can help improve environmental and pedestrian conditions while beautifying the community and giving Yabra an urban-scale signature identity within the city. Source: Francisco Jung

Green Infrastructure: Flamboyant Tree Planting

Urban green infrastructure is a difficult project to plan, design and build at low cost and within one year. Stormwater systems, permeable surface modifications, and other strategies can involve significant time and cost to implement. So while these are important strategies that need to be developed and implemented in Belize City going forward, and this remains one of the recommendations in this report, the Yarborough Revitalization Initiative's proposed one-year green infrastructure project is a smaller, more manageable effort that can be done as a pilot project and then scaled up to a wider, urban infrastructure level of application and impact. The proposal is for the BCC, working with civic, business, church, and school groups in the area, to begin a coordinated tree-planting campaign throughout the entire Yarborough community. Improved urban tree canopy conditions have other environmental benefits related to mitigating large areas of built and hard surface and dark areas that contribute to urban heat island effects. The Yarborough area lacks street and public space tree canopy. By simply planting trees, a given area's urban tree canopy improves over time and helps create a more desirable environment both in terms of comfort with the shade and cleaner air, but also the delight of added beauty that trees contribute to the built environment.

Based on input from community stakeholders, the team recommends that the tree planting efforts begin with flamboyant trees at the playground at the intersection of Albert Street West and Yarborough Road, and within the grounds of Yarborough Cemetery. Flamboyant trees are already present in the area, but this campaign proposes to plant them throughout the community in an arrangement along with other shade street trees that serves to provide for improved and more continued shade cover for pedestrians, and for the visual interest and identity that the trees can



Flamboyant trees (Delonix regia), like the one pictured here in full bloom in the Florida Keys, are native to Madagascar and has been widely cultivated and naturalized in many tropic and subtropic regions since the 19th century. They are ornamental trees largely used in streets and parks. They grow fast (about 1.5 m per year), reaching heights up to 30 meters with a large umbrella canopy providing good shade. They have shallow, wide-spreading roots that can disrupt sidewalks or other hardscapes, so tree siting should be considered carefully. Photo source: Marc Averette

provide for the neighborhood. Just as some cities are well known for their springtime spectacles of cherry, magnolia, or redbud blossoms, Belize City and Yarborough can be known for its flamboyant blossoms. The tree planting can be done with a relatively modest budget, as few as 100 trees, and stewards such as a garden club or neighboring school, church, or business, can commit to care for the trees until they are established. The tree planting should be coordinated with other efforts around street and public space redesign. The tree-planting can be coordinated around other events, such as a “flamboyant festival,” to provide opportunities for public awareness and pride, and to boost local economic efforts through the initiative and the overall revitalization of the community. As the project scales up each year, and as the trees mature, there is an opportunity to create tourist attention and increase attraction to the community around seeing the blossoms—and the food, events, culture, and other activities that the natural spectacle can help generate.

Community-Led Murals and Art Activity

Humans are primarily visual creatures. In fact, more of the neurons in the brain are devoted to vision than the other four senses combined. Colors invoke specific emotions. We remember things and places visually. Art inspires people. For those reasons and more, art is powerful. Edgar Degas said, “Art is not what you see, but what you make others see.” Art can change perceptions.

Art is a powerful tool to engage people in the process of community building and placemaking. Engaging residents directly in beautifying public spaces in Yarborough can help connect them to those spaces they see and use for everyday activities. Direct involvement through creative programs helps ground the spirit of ownership and maintenance of spaces within the community. The tangibility of an art project shows results and generates a stronger sense of place. Public art made collab-

As an example, the Indy Redbud Project by Urban Patch in Indianapolis has planted over 300 redbud trees as a way to improve the urban tree canopy and beautify an inner city low-income neighborhood. Funds for the project were raised through grants and online crowdfunding; another planting of 100 new trees is already planned. For more information, see indyredbud.org. Source: Urban Patch, Justin Moore

oratively by the hands of local people can be a quick win in Yarborough—as a physical, visual improvement to the neighborhood and as a momentum-building instrument of individual and community empowerment.

There are many potential spaces in Yarborough for community-led art projects. Some are mentioned in this report, such as the wall along Albert Street West. The wall around the playground just east of the cemetery is another possibility. Others may arise amid revitalization efforts at Yarborough Field, the cemetery, the waterfront park, or on vacant lots. With the help and guidance of skilled artists (preferably experienced in public art installations), community members can get involved and gain hands-on experience with creating the project. Young people can gain project management experience by helping to seek funding and partnerships, securing permits and other permissions, finding the needed materials and volunteers, and developing other organizational skills.

The decision-making process should seek substantial neighborhood input. What type of art do they want to see? How should it represent Yarborough? Perhaps it is rooted in the history of Yarborough. Maybe some feel a specific Belizean artistic style should be used. Whatever is decided, projects should be of high artistic quality. Artworks should connect with people in the neighborhood. They should be inclusive and created collaboratively.

BCC should consider approaching the local artist community and perhaps helping to sponsor an initial project with the goal of creating a nonprofit organization to lead the initiative. Over time and through the work of committed volunteers and finding local partners and sponsors, ideas and funding for other projects will come. Opportunities to expand programming for area youth should be explored. Wesley College is an obvious resource.

There are many examples to lend inspiration. The Precita Eyes Muralists Association (precitaeyes.org) in the Mission District of San Francisco was established in 1977 by Susan and Luis Cervantes. They developed an inclusive process for community-directed mural making. As a glimpse into their process, Susan Cervantes remarked: “Mural is a bridge to the community. The artists communicate with the people; meetings are held to discuss the issues. The result is a reflection, a mirror of that community.” Urban Artworks (urbanartworks.org) in Seattle is a nonprofit organization that provides opportunities for underserved youth working with contemporary artists to create public works of art. The Chicago Public Art Group and Green Star Movement (greenstarmovement.org) are two other great nonprofit examples of community-led initiatives that have created hundreds of public works of art to help revitalize some of Chicago’s neighborhoods and have a positive impact on young people. The Philadelphia Mural Arts Program (muralarts.org) is a highly successful program that works closely with different communities to transform public spaces and has now created over 600 murals around the city.

Pop-Up Market and Demonstration Party

Infrastructure changes can be difficult to design and build at low cost and in a short amount of time. It is often difficult to keep the community engaged with large development projects. Growing a prosperous business community takes time and needs infrastructure improvements to provide stability and a customer base to be successful. Understanding the time



Left: Precita Eyes in San Francisco created this mural, “Día del Orgullo Indígena.” It is one of many in the Mission District that conveys ideas and stories from the community. Source: Franco Folini via Flickr; right: Youth in Chicago work with artists to create a mural on a wall in a Chicago neighborhood with the Green Star Movement. Source: Efrin Adkins



and financial constraints to implementing infrastructure improvements and growing vibrant small businesses, the team proposes that the BCC work with existing local businesses and residents to create a one-time pop-up market and demonstration party to showcase and test out infrastructure improvements while also giving greater exposure to local small businesses.

The demonstration project idea is a great avenue for local residents to engage in the planning process and help shape the future of their community. Through the process, people should be encouraged to bring their own ideas and flair to the project. A great example of this sort of initiative is the Mother Gaston Boulevard POPS (MGB POPS) effort to transform a city-owned vacant lot into a unique local pop-up market in Brownsville, Brooklyn. The site now supports numerous small businesses and local entrepreneurs by offering affordable rental space, business support services, and community event space.



The MGB Pops effort in Brownsville, Brooklyn, has grown to allow semi-permanent, affordable retail and community event spaces in vacant, underutilized lots. Source: NYC Economic Development Corporation

APA briefing paper:

“How Arts and Cultural Strategies Enhance Community Engagement and Participation”

planning.org/research/arts/briefingpapers/engagement

APPENDICES

APPENDIX A: PICTURE GALLERY



Haulover Creek bisects Belize City into what most refer to as the north and south sides. Buildings line the creek through the city. As in Yarborough, most buildings have their backs turned to the water and have little obvious relationship to it. Further to the west, the waterway begins to open up to beautiful mangrove cathedrals. There are troubling traces, however, of human disruption to the ecosystem, such as trash dumping and informal settlements that show up along the banks. As Belize City grows, an increasing number of people settle in the mangrove forests where infrastructure and services don't exist. Source: Justin G. Moore



The mahogany tree is the national tree of Belize and played a key role in how the city developed during the colonial days, when it was known as British Honduras. Mahogany logs cut down further inland within the area's rain forests were floated along Belize River into Haulover Creek east through Belize City, all the way to the coast where logs were loaded and shipped elsewhere. Source: Belize City Council



The team observed a group of children swimming at the waterfront park next to the House of Culture. There are few designated places to swim safely in Yarborough. Source: Ryan Scherzinger



Schoolchildren help build up a barrier with wood and other materials to reduce the coastal erosion occurring behind Wesley College in Yarborough. Mangroves used to provide more protection along the coast, but have died in recent decades for a variety of reasons. A great deal of trash washes up to the coast and disrupts the natural beauty of the shoreline. Source: Ryan Scherzinger



During the initial site visit, team members visited Old Belize Adventures on the outskirts of Belize City. Old Belize has a museum, marina, beach, and restaurant. During the tour of Old Belize, the founder/owner discussed his efforts to restore mangroves. Seen here are the beginnings of mangroves along the coast of the site. Mangroves grow quickly and provide erosion control and other protections from the sea that Yarborough's coastline would benefit from. Source: Ryan Scherzinger



The CPAT team presented their preliminary observations and recommendations publicly during their visit in June 2016. From left: Adam Perkins, Justin G. Moore, and Veronica O. Davis. Source: Ryan Scherzinger



The big multicolored Belize sign located on the north side of Belize City has become a major tourist destination. It offers people a chance to take creative pictures with the beautiful Caribbean Sea in the background. It allows tourists to create their own personalized photo souvenir. People often post them to social media outlets which is a great way to promote the city. A similar iconic landmark(s) should be considered for Yarborough. Here, during their tour of Belize City, the CPAT volunteer members pose for their own photo souvenir. From left: Shannon Van Zandt, Veronica O. Davis, Justin G. Moore, Adam Perkins, and Antoine Bryant. Source: Ryan Scherzinger



Following the team's final presentation at the Anglican Diocesan Center, they posed for a picture alongside members of the BCC staff. From left: APA programs manager Ryan Scherzinger, CPAT member Antoine Bryant, CPAT member Veronica O. Davis, BCC city planner Carla Patnett, Mayor Darrell Bradley, CPAT team leader Justin G. Moore, CPAT member Adam Perkins, CPAT member Shannon Van Zandt, APA contractor Jennifer Graeff, BCC director of finance Marilyn Ordenez, and BCC local economic development officer Jasmin Swan.

APPENDIX B: PROJECT SCHEDULE

CPAT PROJECT SCHEDULE: YARBOROUGH REVITALIZATION INITIATIVE (JUNE 13–18, 2016)			
DAY	TIMES	ACTIVITY	LOCATION
Monday, June 13 • Arrivals	Afternoon	Team members arrive	Airport/Hotel
	6:30 p.m.	Team dinner meeting	Restaurant
Tuesday, June 14 • Tour • Youth Roundtable • Initial Project Discussions	9:00 a.m.	Tour of city and study area	Yarborough; City
	11:00 am	Youth roundtable discussion	BCC
	Noon	Lunch	TBD
	1:00 p.m.	Water Tour	River, Sea
	3:00 p.m.	Team debrief and discussion	Studio space
	Evening	Team dinner meeting	Restaurant
Wednesday, June 15 • Team Working Session • Stakeholder Meetings • Public Workshop	9:00 a.m.	Team working session	Studio space
	Noon	Lunch	Restaurant
	1:00 p.m.	Team working session / Stakeholder meetings	Studio space
	6:30 p.m.	Public workshop	Anglican Diocesan Center
	8:30 p.m.	Dinner	Restaurant
Thursday, June 16 • Working Session	9:00 a.m.	Team working session	Studio space
	Noon	Lunch	Restaurant
	1:00 p.m.	Team working session; prepare public presentation	Studio space
	Evening	Team dinner meeting	Restaurant
Friday, June 17 • Working Session • Public Presentations	9:00 a.m.	Meeting with IDB and BCC	IDB
	10:00 a.m.	Team working session	Studio space
	Noon	Lunch	Restaurant
	1:00 p.m.	Team working session Press meeting	Studio space BCC
	2:30 p.m.	Public presentation #1 (for stakeholders)	BCC
	c. 3:30 p.m.	Team working session; begin final report	Studio space
	6:30 p.m.	Public presentation #2 (for public)	Anglican Diocesan Center
	c. 8:00 p.m.	Team dinner	Restaurant

**CPAT PROJECT SCHEDULE: YARBOROUGH REVITALIZATION INITIATIVE
(JUNE 13–18, 2016)**

DAY	TIMES	ACTIVITY	LOCATION
Saturday, June 18	9:00 a.m.	Team working session; work on final report; team member assignments	Studio space
	Noon	Lunch	Restaurant
	1:00 p.m.	Team members depart	Airport

APPENDIX C: METRICS FOR ITERATIVE PLANNING PROCESS

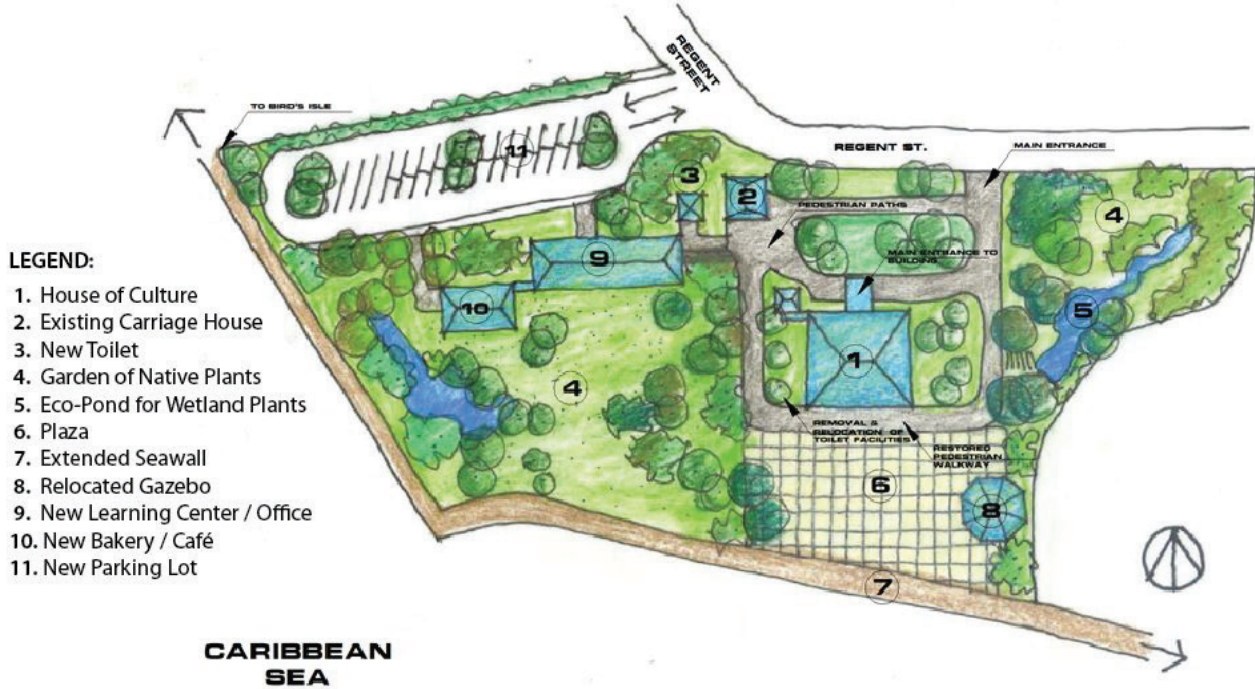
BEFORE/AFTER INTERVENTION EVALUATION MEASURES		
*Include a “before intervention” data set to contrast changes over time		
SAFETY PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Data Collection Sources
Crashes by type, mode, severity	Yearly for a five-year period	Police or hospital reports
Crime activity/police calls	Yearly for a two-year period	Police reports
Public perception of safety	Yearly for a two- to four-year period	Intercept surveys, e-survey, social media, mail out survey, email, media publications, letters to editor
Compliance with ordinances/laws	Yearly	Violation database
MOBILITY PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Small Data Collection Methods
Vehicle travel speeds	Yearly for a five-year period	Field data collection
Vehicle travel times	Yearly for a five-year period	Field data collection
Vehicle traffic volumes	Yearly for a five-year period	Field data collection
Parking space utilization	Monthly data sample for three- to five-year period	Field data collection
Walk/bike trips to shopping/restaurants	Quarterly data sample for three- to five-year period	Intercept surveys, e-survey, social media, mail out survey, bike/pedestrian counter
<i>Bajaj</i> trips	Quarterly data sample for three- to five-year period	Intercept surveys, e-survey, social media, mailed survey
Bus trips	Quarterly data sample for three- to five-year period	Intercept surveys, e-survey, social media, mail-out survey
ECONOMIC VITALITY PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Small Data Collection Methods
Retail sales	Yearly for a five-year period	Tax assessor records and/or surveys from business owners
Business retention	Yearly for a five-year period	Tax assessor records
New businesses	Yearly for a five-year period	Tax assessor records
QUALITY OF LIFE PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Small Data Collection Methods
Number of trees added	Yearly measurement	Field data collection
Appeal to different groups (residents and guests)	Yearly measurement	E-survey, social media, mail out survey
“Stickiness” factor (number of people hanging out)	Yearly for a five-year period	Field data collection, intercept surveys, e-survey, social media, mailed survey
Reducing gang activity	Yearly for an unknown period	Police violation database, e-survey, social media, mailed survey

BEFORE/AFTER INTERVENTION EVALUATION MEASURES
***Include a “before intervention” data set to contrast changes over time**

ACTIVE LIVING/RECREATION PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Small Data Collection Methods
Total people/pets participating	Per demonstration	Field data collection
Total calories expended	Per demonstration	Survey and field data collection
Total recreation person hours	Per demonstration	Survey and field data collection
Total events hosted and attendance	Per demonstration	Field data collection
Water quality	Yearly for a five-year period	Field data collection
COMMUNITY ENGAGEMENT PERFORMANCE MEASURES		
Performance Measure	Data Collection Interval*	Small Data Collection Methods
Total website hits, Twitter impressions, Instagram, etc.	Weekly for an unknown period	Online analytics
Total emails to city staff/councilors	Weekly for a six-month period	Email documentation
Total visitors to demonstration	During peak and off-peak times	Field data collection
Total comment cards filled out	During peak and off-peak times	Field data collection

APPENDIX D: MINISTRY OF TOURISM AND CULTURE / NATIONAL INSTITUTE OF CULTURE AND HISTORY SITE PLAN FOR HOUSE OF CULTURE

PROPOSED SITE PLAN FOR HOUSE OF CULTURE BY MINISTRY OF CULTURE / NATIONAL INSTITUTE OF CULTURE AND HISTORY



The MTC/NICH site plan for the House of Culture was included as part of a larger project proposal entitled "Belize City House of Culture and Downtown Rejuvenation Project" released in January 2013. It was prepared by MTC and NICH in conjunction with the National Taiwan University Building and Planning Research Foundation, and through collaboration with the Taiwan International Cooperation and Development Fund. The CPAT team proposes an alternative site plan (see Recommendation #5) that integrates the broader community context, connections, and assets. The team's alternative site plan provides an overall landscape design that allows for a mix of activities and improves flood and storm resilience for the overall site.

APPENDIX E: MEET THE TEAM



Justin G. Moore, AICP | Team Leader

Justin Garrett Moore is an urban designer and the executive director of the New York City Public Design Commission. He has extensive experience in urban design and city planning—from large-scale urban systems, policies, and projects to grassroots and community-focused planning, design, and arts initiatives. At the Public Design Commission his work is focused on prioritizing the quality and excellence of the public realm, and fostering accessibility, diversity, and inclusion in the city's public buildings, spaces, and art. He is a former senior urban designer for the NYC Department of City Planning where, for over a decade, he was responsible for conducting complex urban design plans and studies of the physical design and utilization of sites including infrastructure, public spaces, land-use patterns, and neighborhood character. His projects included the Greenpoint and Williamsburg Waterfront, Hunter's Point South, the

Coney Island Plan and the Brooklyn Cultural District. Moore received degrees in both architecture and urban design from Columbia University's Graduate School of Architecture, Planning, and Preservation where he is now an adjunct associate professor of architecture in the urban design and urban planning programs. He is the cofounder of Urban Patch, a social enterprise based in Indianapolis that focuses on community revitalization and design in American inner cities. His professional affiliations include the American Institute of Certified Planners, the Urban Design Forum, and *Next City's* Vanguard. He also serves as a board member for ioby.org, Mary Miss—City as Living Laboratory, and Made in Brownsville.



Antoine Bryant, Assoc. PE

Antoine Bryant is a design and development professional with nearly 20 years of experience in the design, development, engagement and empowerment of underserved communities across the United States. Working in the public, non-profit, and private arenas, Bryant is well versed in the demanding language of government regulations and standards. As executive director of Row House Community Development Corporation, he managed and directed the construction of the award-winning Row House Duplexes. As principal of The Bryant Design Group, he has focused his efforts on effective and inclusive processes of design, development, and advocacy. Bryant plays a role in the growth of the city as a member of the City of Houston Planning Commission. He has been a featured speaker at Structures for Inclusion; at the National Organization of Minority Architects International Exposition; the Urban Land Institute's

Urban Marketplace; and with the Planning and the Black Community Division of APA. He earned a bachelor's of science degree in Urban and Regional Planning from Cornell University, and had architectural training at the University of Texas at Austin Graduate School of Architecture.



Veronica O. Davis, PE

Veronica O. Davis is a transportation nerd who uses her knowledge to spark progressive social change in the community. In July 2012, the White House recognized her as a Champion of Change and Transportation Innovator for her professional accomplishments and community advocacy in the District of Columbia. She is the partner and principal planning manager at Nspiregreen LLC, which she co-owns with Chanceé Lundy. She is responsible for managing the Urban Planning business unit, which includes surface transportation planning, policy development, and long-range planning. Some of Nspiregreen's Washington, D.C., projects include *moveDC*, the District of Columbia's long-range transportation plan, North-South Corridor Planning Study under the D.C. Streetcar program, Vision Zero, and the 16th Street Transit Priority Study. Davis is one of the cofounders of Black Women Bike, an organization and movement

that encourages African American women to use biking for health and wellness as well as an alternative form of transportation for commuting. In less than two years the organization has grown to more 1,600 African American women ranging in age from their late 20s to their early 70s. Davis earned her dual masters degrees (Engineering Management and Regional Planning) from Cornell University. She has a bachelor's of science degree in civil engineering from the University of Maryland. She is a registered professional engineer in the District of Columbia, Maryland, Virginia, North Carolina, and Georgia.



Adam Perkins, AICP

Adam Perkins is the urban planning manager for the Downtown Denver Partnership, where his focus is on place-based economic development through improving the public realm. He manages all planning efforts for the Downtown Denver Business Improvement District involving the 16th Street Pedestrian Mall, the public realm and outdoor spaces, transportation corridors, core neighborhoods, and the downtown area. He coordinates the partnership's and BID's efforts in developing policy guidance and recommendations to improve the downtown environment. He also leads the development review process of streetscape and public realm improvements within downtown Denver ensuring consistent and high quality design of the downtown built environment. Prior to working for the Downtown Denver Partnership, Perkins worked for Denver Public Works, where he coordinated private and public infrastructure and design projects in the public right-of-way. He

is also the founder of Local Innovations, a community development firm that provides services to struggling communities in Colorado to help them overcome imminent challenges. He also currently serves as the chair of APA's Housing and Community Development Division.



Shannon Van Zandt, PHD, AICP

Shannon Van Zandt is currently professor and interim head of the Department of Landscape Architecture & Urban Planning at Texas A&M University, where she oversees six degree programs and 34 faculty members. Prior to this role, Van Zandt served for many years as coordinator of the professional program in urban planning, as director of the Center for Housing and Urban Development, and as a faculty fellow in the Hazard Reduction and Recovery Center. Her areas of expertise include affordable housing, housing for minority populations, social vulnerability to disasters, and housing recovery after disasters. She maintains an active research agenda, having been PI or Co-PI on external grants totaling nearly \$3 million (highly significant in the social sciences) from funders including the National Science Foundation, the U.S. Army Corps of Engineers, and the U.S. Department of Housing and Urban Development. She also currently holds the Nicole & Kevin Youngblood Professorship in Residential

Land Development. She is coauthor of the 2014 book, *Planning for Community Resilience*, and more than 45 journal articles, book chapters, professional papers, and technical reports. Her work has been cited more than 700 times and is included in essential texts within her discipline. Van Zandt is also active within her discipline and within the community, advocating for issues that are important to her. She serves on the board of the Texas Low-Income Housing Information Service, as well as the advisory committee of Texas Sea Grant, and has testified before the Texas State Legislature three times over the past two years on issues related to disaster recovery. Within her academic discipline, she currently serves as track-chair for the Housing and Community Development track of the Association of Collegiate Schools of Planning (ACSP) National Conference, and joined the board of the ACSP as Region 3 Representative in 2016. She serves as chair of the University Programs Committee of the Hazard Mitigation and Disaster Recovery Division of APA and is also a member of the American Institute for Certified Planners.



Ryan Scherzinger | APA Project Manager

Ryan Scherzinger is programs manager for APA's professional practice department and based in Chicago. He has worked extensively on APA's Community Assistance Program, providing direct technical assistance to communities around the country and abroad with multidisciplinary teams of experts. He has managed myriad programs and special projects for APA for over nine years, including the AICP College of Fellows, the Community Planning Workshop during the annual APA National Planning Conference, case studies, federal grants, symposia and lecture series, study tours, international conferences and events, allied outreach and coalitions, and interactive public exhibits. He holds a Master of Arts in public anthropology from American University.



Jennifer Graeff, AICP | APA Contractor

Jennifer Graeff is the public engagement coordinator at the New York City Department of Parks and Recreation. She works on developing engagement strategies and outreach opportunities for the department and communities throughout New York City. Previously, Graeff was the associate director of international partnership at the American Planning Association, where she managed many of APA's international programs, including APA's Energy and Climate Partnership of the Americas program, which helped build planning capacity throughout Latin America, and APA's Dutch partnership, which provided educational opportunities to learn about Dutch water management. Graeff holds a Master of Science in Urban Planning from the Graduate School of Architecture, Planning and Preservation and a Master of International Affairs from the School of International and Public Affairs, both at Columbia University. She is a member of the American Institute of Certified Planners.

Support Team Members



Francisco Jung | Junior Urban Designer

Francisco Jung is a recent graduate of the urban design program at Columbia University's Graduate School of Architecture, Planning, and Preservation. During his studies at Columbia, he collaborated to develop urban design proposals for sites in New York City, the Hudson Valley, and internationally. He also served as a graduate teaching assistant for the Digital Architecture Design Lab at Columbia's Barnard College, where he managed the digital output shop and led software tutorials for undergraduate students. He is a graduate of Syracuse University, where he received a bachelor of architecture with a minor in landscape architecture, and he worked as a fabrication manager for the university's digital lab, CNC, 3-D printing, MakerBot, and ZCorp facilities. He currently works in his family's retail, real estate, and development businesses.



Christine E. Mayeur | Urban Planner

Christine E. Mayeur has a unique skill set that blends urban planning and design, technical knowledge, and community engagement expertise. As a planner with Nspiregreen LLC, she uses her range of skills and talents to bridge the gap between community vision, needs, and desires with the transportation and environmental planning process. Throughout her career she has worked on a variety of planning projects, including livability studies; transit, bicycle, and pedestrian planning; and creating master, small area, and site plans that focus on creative and inclusive neighborhood revitalization.