

# **Regenerating the Urban Artifact**

Adaptive reuse of the Old Diesel Power Plant in Vero Beach, Florida

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First and foremost I would like to thank my parents, without you none of this would be possible – thank-you for giving me all the love and support possible and encouraging me to always do things the thoughtful way. Love you both.

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A special thanks to Peter Moor... for all of his support, mentoring and invaluable knowledge.

... Thank-you YK - always there when I need you.

## **Abstract**

This thesis proposes an architecture and an urban strategy contrary to what is currently seen in Vero Beach, and suggest higher density housing along with the creation of public squares within the existing urban environment in order to generate a coherent community while stimulating the local economy. This thesis will show that these new, proposed, relatively higher density buildings along with the city's existing historical heritage can be thoughtfully pieced together to generate a city people desire inhabiting. It describes a scalable city, where pedestrians have an equal command with cars, a city where a sense of community engagement *leads* a city, where civic involvement and street life are the direct result of densification and mindful planning. The site's densification would include the addition of new traditional mixed use buildings along with the adaptive re-use of the existing Old Diesel Power Plant, together defining a square. Sorely lacking in street activity and community, Historic Downtown Vero Beach needs to develop urban localities to give people a place to go, and a reason to go there. To linger, engage, communicate, spend and build as is our human necessity.

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## **Introduction**

### **Ideas**

More than simply the artifacts of contemporary society, culture and technology, Architecture is generative; a catalyst for the evolution of culture, society and economy. This thesis intends to demonstrate that successful Architecture, in this case - Urban Artifacts, adapted to contemporary contexts, can recurrently stimulate the growth and development of a locality. The existing urban fabric of Vero Beach is in need of repair. There are many examples of districts, similar to this one, close to the city core that have outlived their original purpose and have gone through a period of decline. The positive aspect of these types of sites is that they remain attractive to development while providing a significant cultural asset. A case study in adaptive re-use, this thesis will explore the re-development of the Old Diesel Power Plant (ODPP) building & its site as a cultural hub complimented by residential density and celebrated public space within Historic Downtown Vero Beach.

This thesis proposes architecture and an urban strategy building appropriately on what is currently seen in Vero Beach, and suggests higher density and diversity of housing along with the creation of public squares within the existing urban environment. The intention is to orient and generate a coherent community basis that stimulates the local economy. The City of Vero Beach reflects the results of a private investment cycle of consumption and waste 'opportunism' rather than those of sustainable rational economic and urban planning. This thesis will show that these new, proposed, incrementally higher density buildings along with the city's existing historical heritage can be thoughtfully pieced together to generate such a sustainable and pleasant city worth

inhabiting. It describes a scalable city, where pedestrians have an equal command with cars<sup>1</sup>, a city where a sense of community engagement in place *leads* a city, where civic involvement and street life are the direct result of densification and mindful planning. Simultaneously in understanding that successful urban communities are not just built, but are nurtured through social structure, economic purpose with clear urban form, and supported by integrated modes of transportation providing accessibility to these places. (Neal 2003, 119)

‘To Linger! If we could but linger again in those places whose beauties never wane; surely we would then be able to endure many difficult hours with a lighter heart, and carry on, thus strengthened, in the eternal struggle of this existence’ (Collins et al. 1986, 157).

### **Ideas into reality**

The Old Diesel Power Plant was chosen in order to propose a new, central focus for Historic Downtown Vero Beach. The site is both a historic landmark showing the city's heritage and is the only large abandoned site in Historic Downtown, needing rehabilitation. The relationship between the ODPP and its Historic Downtown location is one that is inversely related: the existing ODPP needs the rehabilitation of its site as much as the Historic Downtown needs the site as a whole to act as a generator to revitalize downtown life and community.

Redefining the square in Vero Beach as a zone of public interaction rather than a common open<sup>2</sup> space, the thesis proposes that the ODPP site be densified to act as a

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<sup>1</sup> Cars need to be slowed down to a tributary speed compatible with people

<sup>2</sup> Open=vapid ill use due to vacancy

downtown beacon, giving the region identity & orientation. The site's densification<sup>3</sup> would include the addition of new traditional mixed use buildings along with the adaptive re-use of the existing ODPP, together defining a square. Sorely lacking in street activity and community, Historic Downtown Vero Beach needs to develop urban localities to give people a place to go, and a reason to go there. Popular urban pockets<sup>4</sup> close to the downtown cores are living human habitats that need to be loved, nurtured and looked after in order for their full potential to be released and harnessed by the community. (Neal 2003, 290), which is not current reality of the City.

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<sup>3</sup> Densification makes the economics of cities work and is foundation of public spaces becoming effective as the commercial spaces adjoining depend on the traffic of pedestrians lingering and musing.

<sup>4</sup> These pockets need to be connected as a reticulation within the planning - as vital as power, water roads and sewers.

# **1 Chapter: Vero Beach, Where the Tropics Begin...**

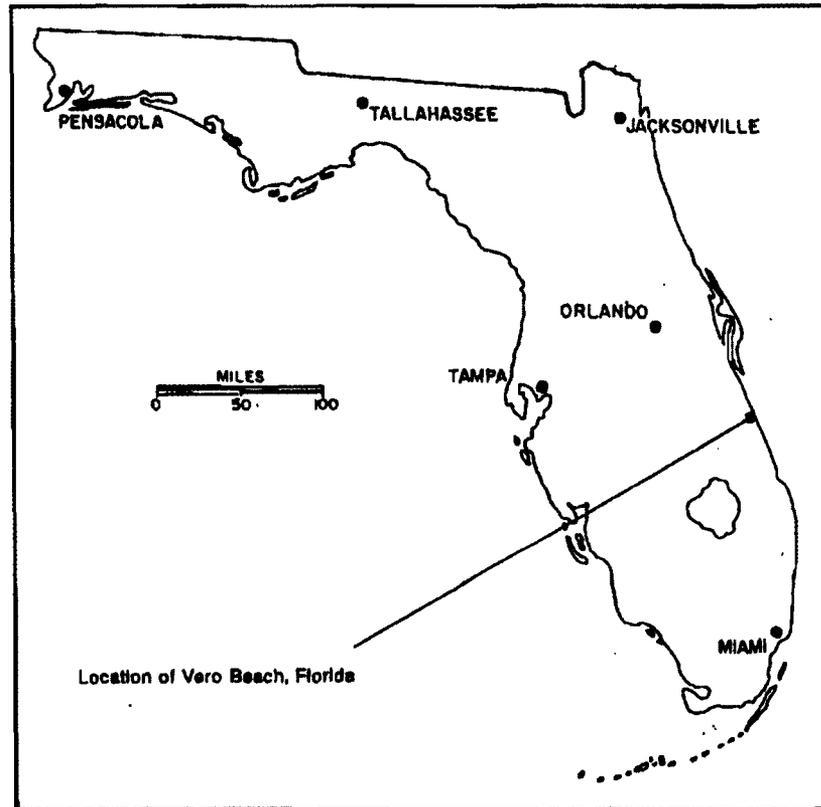
## **1.1 History of Vero Beach**

More than a slogan, Vero Beach is situated at the northern edge of the only North American Tropical region, extending south around the tip of Florida to Naples. Located near the midway point of Florida's east coast (Figure 1), the City of Vero Beach lies in a region where permanent settlement did not occur until the late nineteenth century. The construction of the Florida East Coast railway (FEC) was the primary driver for the initial period of significant settlement beginning in 1893. The Railway extended from the seaport of Jacksonville in northeast Florida, all the way south to Key West bringing thousands of settlers and visitors to the east coast of Florida, including Vero Beach. Agricultural, fishing and citrus farming were the main economic drivers for the populating settlement (Brady 2008, 19). Vero Beach quickly grew into the largest populated town in what was later to become Indian River County. Around 1912, a group of businessmen from Iowa & Illinois decided to invest in an extensive land reclamation project in Indian River County. Vero Beach quickly became the center for the processing and shipping of a vast variety of agricultural products for the county including the relatively new citrus products which became and remain in high demand throughout the country and abroad<sup>5</sup>. The businessmen formed the Indian River Farms Company that began with draining the land to make it more suitable for agricultural development. Although citrus and pineapple were the primary cash crops, the settlers also grew a variety of fruits and vegetables. Due to Florida's unique soils, the company established a

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<sup>5</sup> The FEC allowed for speedy distribution to market for perishables before chilled transportation.

demonstration farm to refine techniques and growing methods particular to Florida (Brady 2008, 20).



**Figure 1 - Location Map for Vero Beach within the state of Florida (Johnston 1990, xii)**

In addition to sprawling acres of farms, the company envisioned the creation of one of the finest towns in Florida. They named the town site 'Vero' and located it just west of the FEC, in present day Original Town (Figure 2). Vero was originally laid out in a traditional grid pattern of streets with large boulevards, narrow city lots, alleyways, and a park adjacent to the railroad. Business and residential areas were designated separately, incorporating some mixed-use in residential areas and a few apartments located above

stores in business districts (Figure 3).

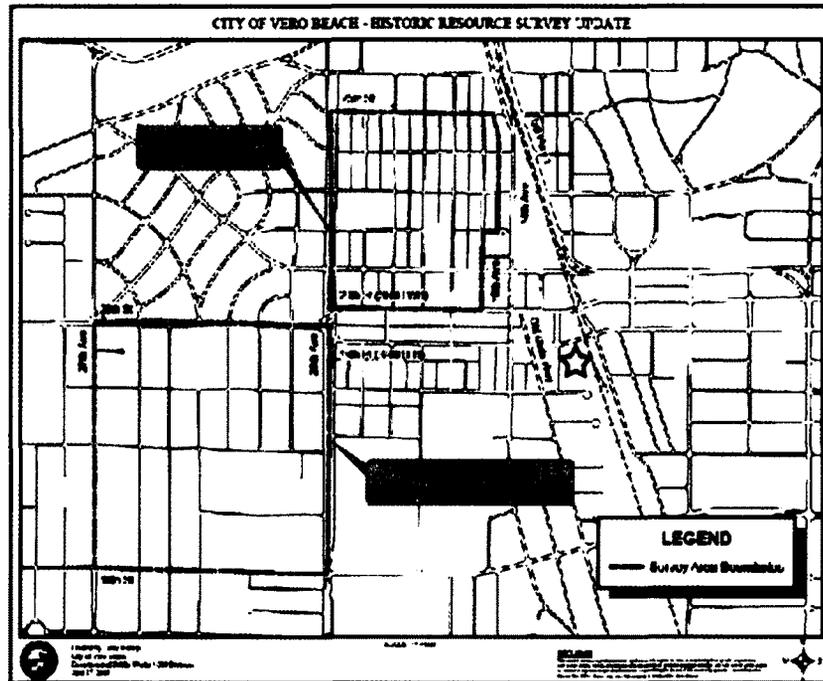


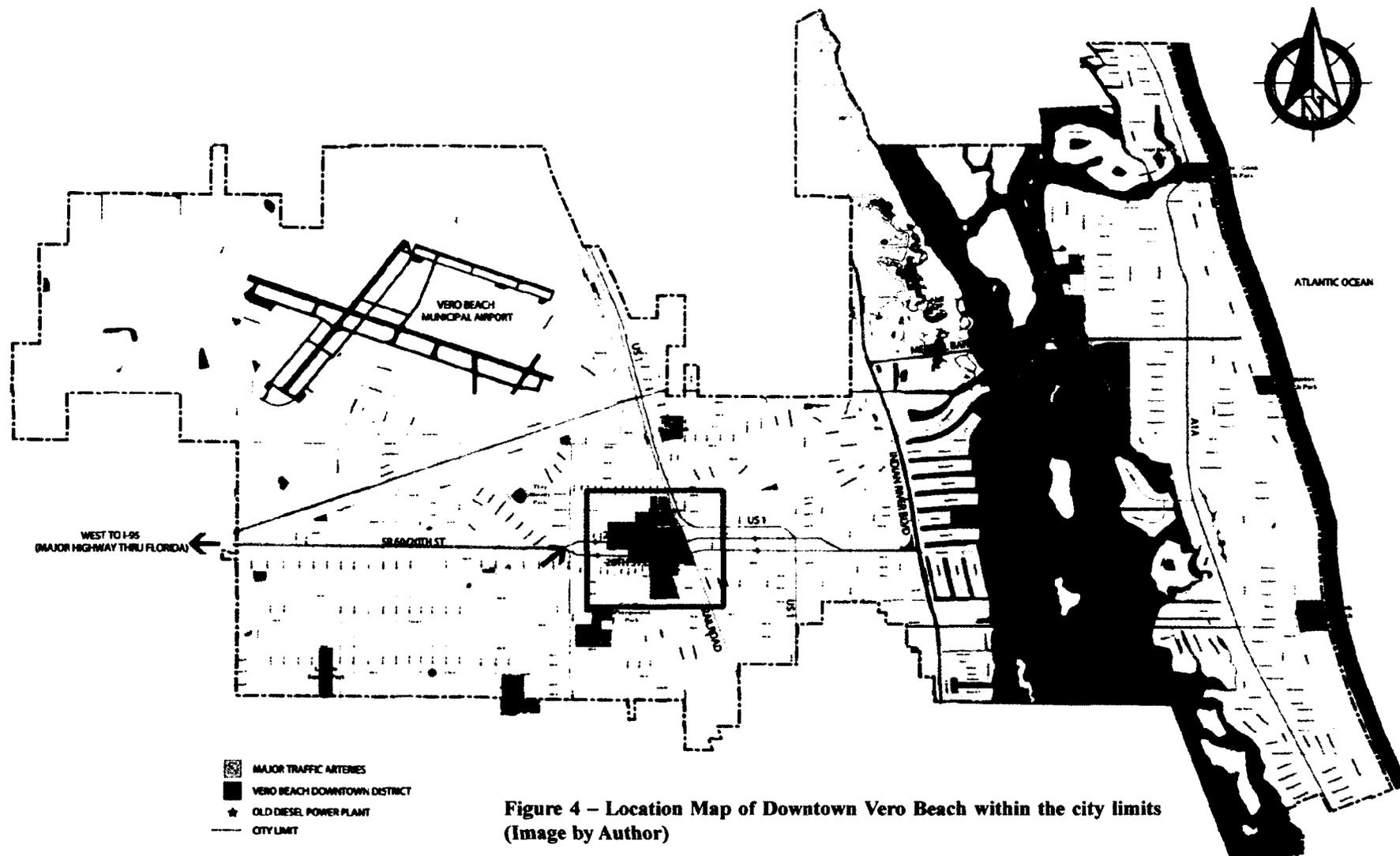
Figure 2 – Original Town Location within the City of Vero Beach showing ODPP site. (Brady 2008, 10)

The 1920's were Florida's golden years, known as the Great Florida Land Boom, which brought prospective land owners and speculators sparking an unprecedented period of growth and development in the state. It was also the most significant period of historic development in Vero Beach, as investors arrived from all over the country to develop the land they purchased in previous years.



**Figure 3 – Historic Photograph of the Osceola Apartments in downtown Vero Beach (TC Palm January 14, 2013)**

Vero Beach is located 7 miles east of Interstate-95 (I-95), the main highway which runs continuously from Miami to Main, on Route 60, also known as 20<sup>th</sup> street. This is the main road that connects downtown Vero Beach to Tampa, via I-95 west, and extends east to the Atlantic Ocean, running right through the Historic Downtown (Figure 4). The Twin Pairs (20<sup>th</sup> Street westbound & 19<sup>th</sup> Place eastbound) has an interesting, if unusual, history. As Interstate 95 was built from Miami to Maine in the 1960's and 70's, the sections from Route 60 at Vero Beach to Okeechobee Road in Martin County were the last to be completed. Southbound traffic had to exit at Vero Beach, travel through downtown Vero on Route 60 to US 1, then south to rejoin I-95 or the Florida Turnpike in Ft. Pierce and further south. Northbound traffic followed the opposite route through Vero Beach. The downtown traffic congestion was tremendous; particularly heavy trucks.



The Twin Pairs was a federally funded project, designed as two one way avenues to speed the I-95 traffic through Vero Beach between 20<sup>th</sup> Avenue and US-1 (Figures 5 & 6). However the Twin Pairs were not completed until two years after the I-95, which connected Vero Beach south to Miami, was opened. The result is an efficient, unused truck route that speeds traffic through downtown Vero Beach between the Mall, Miracle Mile and the Beachside shopping areas, exactly as designed, to isolate the entire Historic Downtown area from most transient traffic. While the Twin Pairs continues to operate as a downtown by-pass, discussions are underway to modify the design, apply traffic calming devices, reinstall street parking and otherwise make downtown more accessible and welcoming for pedestrians to cross town vehicle traffic.

There are two bridges crossing the Indian River lagoon and connecting the Mainland of Vero Beach to its Barrier Island. The Merrill P Barber Bridge, was built in 1951 as a drawbridge and replaced in 1995 with the current continuous span structure. A second bridge at 17<sup>th</sup> street was built in 1979. The Mainland and the Barrier Island are separated by what is called the Indian River Lagoon, which is a tidal estuary of the Atlantic Ocean and part of the Atlantic Coast Intracoastal Waterway. Both bridges connect to Highway A1A giving access to the neighborhoods located north-south on the Barrier Island.

Historic Downtown Vero Beach is located west of the FEC Railway and is about 5 blocks deep and 5 blocks wide. Historic Downtown is populated primarily by mixed-use developments with limited amount of residential accommodations, a good variety of art and antique galleries, a handful of good restaurants, and mixed businesses scattered throughout. Due to its limited geographical size, Vero Beach is largely a walkable city,

but the lack of sufficient residential development downtown creates a ghost town in the city's center after business hours. In addition, the Twin Pairs severs the downtown, creating a traffic ring-fenced isolated no-mans-land right in the city's center, and has prevented Vero Beach from blossoming into the once envisioned true heart and center of Indian River County.

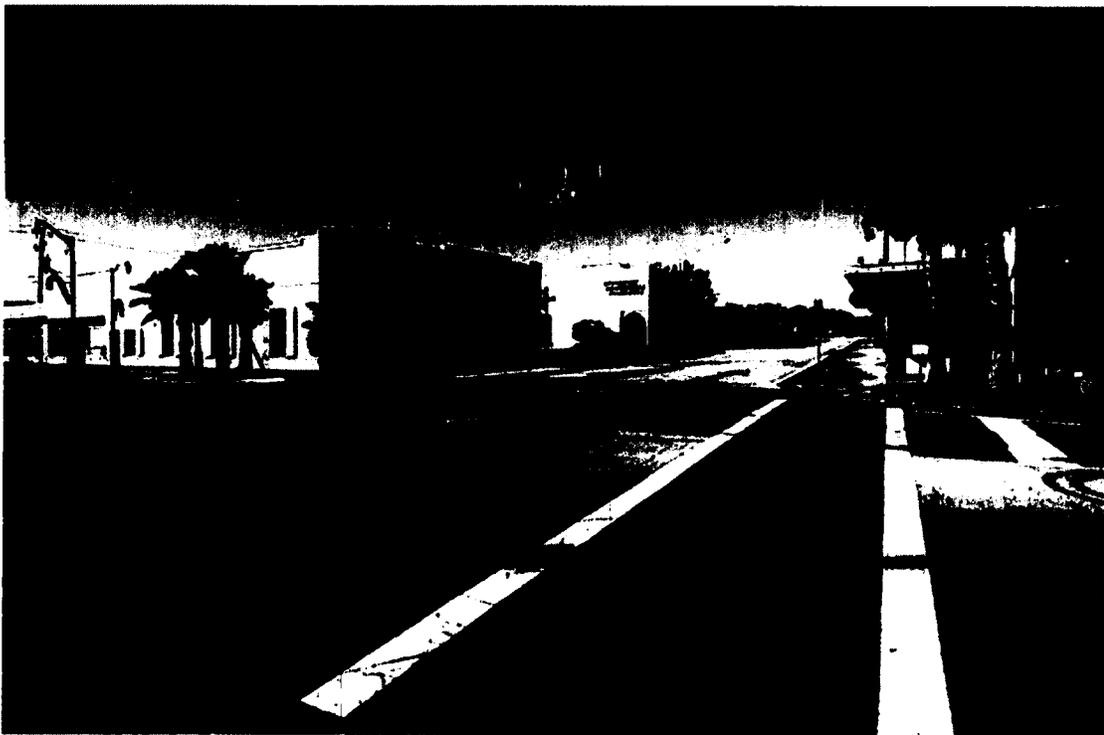


**Figure 5 – Aerial Photograph of Historic Downtown Vero Beach looking west showing the Twin Pairs separated by one block. (Bierschenk 2013 – Photo by Sam Wolfe)**

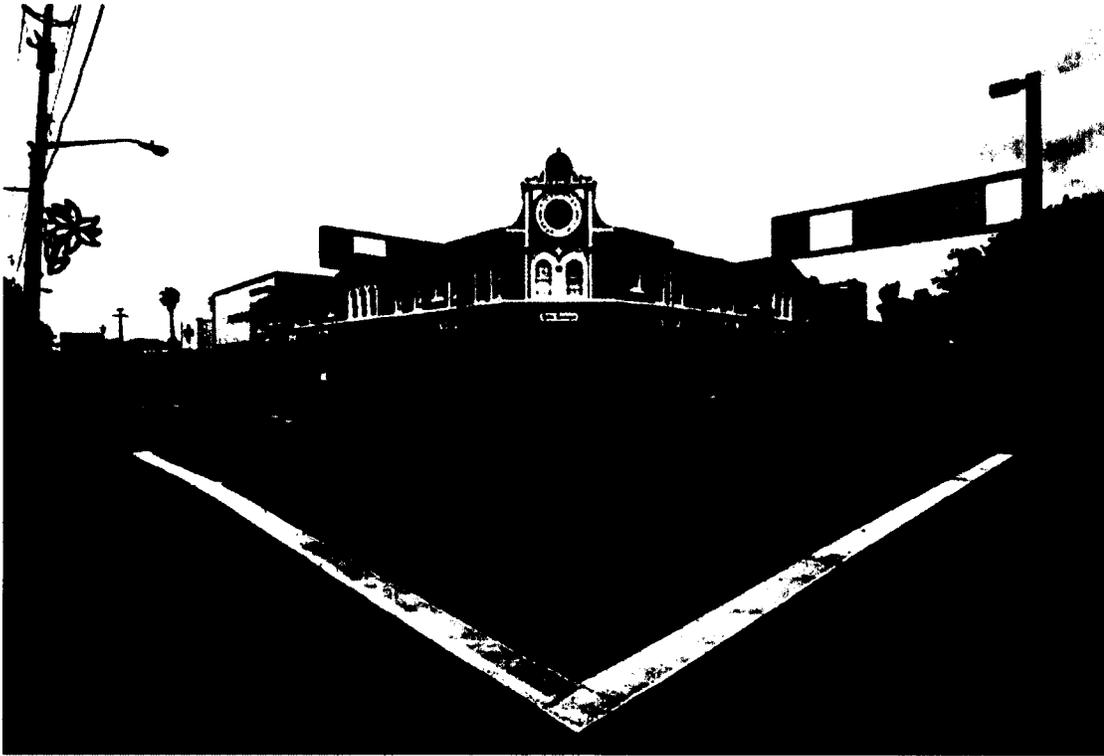


**Figure 6 – Aerial Photograph of Historic Downtown Vero Beach looking east showing SR60 splitting into the ‘Twin Pairs’. (Boerner 2007)**

The old Town Square center of downtown was a square between 14<sup>th</sup> and 15<sup>th</sup> Avenues, and 20<sup>th</sup> and 21<sup>st</sup> Streets. Weekday activity was anchored by the courthouse, post office, banks and retail businesses surrounding the square. Night and Saturday activities centered around the Florida Theater and the Heritage Center in Pocahontas park. The square is now about 5 ½ blocks long and 2 blocks wide, extending from the Civic Center at 23<sup>rd</sup> Street, south on 14<sup>th</sup> Avenue to the ODPP at 19<sup>th</sup> Street. Though still an active and viable area, pedestrian traffic is hindered by the Twin Pairs at both 20<sup>th</sup> Street and 19<sup>th</sup> Place (Figures 7 & 8).



**Figure 7 – Photograph of Historic Downtown Vero Beach at the corner of 14<sup>th</sup> avenue & SR60 eastbound. (Koster 2006)**



**Figure 8 – Photograph of Historic Downtown Vero Beach at the corner of 14<sup>th</sup> avenue & 21<sup>st</sup> street looking at the Pocahontas Apartments. (Main Street Vero Beach 2013)**

The new courthouse still remains the daytime anchor of activity, with supporting law offices, lunch restaurants and very minimal retail. South of the Twin Pairs, activity centers around galleries, antique shops and restaurants, transitioning into mostly apartment residences. Evening activities are now almost exclusively relegated to dining at the dozen restaurants along 14<sup>th</sup> Ave (Main Street), 13<sup>th</sup> Ave and Old Dixie Highway near the ODPP with some are galleries opening Wednesday evenings and weekly dances at the Heritage Centre. The area lacks Theatre and a primary retail draw.

Bringing the ODPP into the downtown activities, events and flows will require specific attention to pedestrian traffic as well as accommodating the existing vehicular traffic.

## 1.2 The Generator Building

The Vero Beach ODPP, built in 1925, is a reflection of the city's heritage and growth – an artifact of the community's development. In 1918 the Vero Utilities Co., a private enterprise, was located in a small building at State Road 60 and Old Dixie highway (the former primary north-south thoroughfare). Vero Utilities had earlier provided service from a 25 horse power engine bolted to a generator, with another similar engine that was installed at a later date.

Vero was located in the northern part of St. Lucie County, and in November of 1919, Vero Utilities announced that it could no longer supply the current for the existing street lights because they were lacking in equipment. The company proposed to sell the operation to the city<sup>6</sup> and by December 16, 1919, the council accepted the proposal dependent on a bond election (Unknown 1926, 823). The electricity service however, remained limited for many years to follow.

In the fall of 1920, the first municipal power plant was built next to the railroad tracks at 19<sup>th</sup> place. It was a wood frame and sheet metal building that housed a new 100 horsepower engine and generator, put in to operation in March 1923. Approximately two months later there was a fire at the plant, extensively damaging the building and equipment to the point that it was unsalvageable.

The economic boom was in full swing and demand for electricity was on the rise (Figure 9). The city's area also had grown and the City of Vero Beach was incorporated, Indian River County was formed with Vero Beach as its seat. By 1926, the new building

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<sup>6</sup> A larger plant was needed to serve strong electrification demands of the burgeoning local economy. Very likely this sell was to finance the expansion and needed to abandon this inhibiting original resource

and generators replaced the old one near the 19<sup>th</sup> place site and almost immediately began expanding as power demands grew even during the Great Depression.

Figure 9 – Advertisement appeared in the “The Vero Press” in 1919. It is from the searchable archives located at the Indian River County Library, Florida History Archives Center (Brady 2008, 25)

The firm of Carter and Damerow designed the new power plant. The building was made of structural steel, reinforced concrete and brick. It was 50 ft by 80 ft inside and had wings on the east and west, housing the switchboard, tool room and pumps for the water plant. Around the year 1958 the city evaluated their growth and came to the conclusion that no more equipment should be installed at the existing diesel plant; instead a new steam power plant would be constructed on city-owned property on the west shore of the Indian River (Short 1994, 34).

From then on the ODPP served only as a backup for the new plant. In the late

1980's the diesel engines were brought back to life to help out when the state suffered a blackout. The diesels were all kept in good running order and the city ultimately sold them to third world countries in 1994, with the exception of one 1932 diesel, left in place to serve as a reminder of the city's heritage.



**Figure 10 – Interior Photograph of the ODPP prior to the exterior renovations (Jordan 2008)**

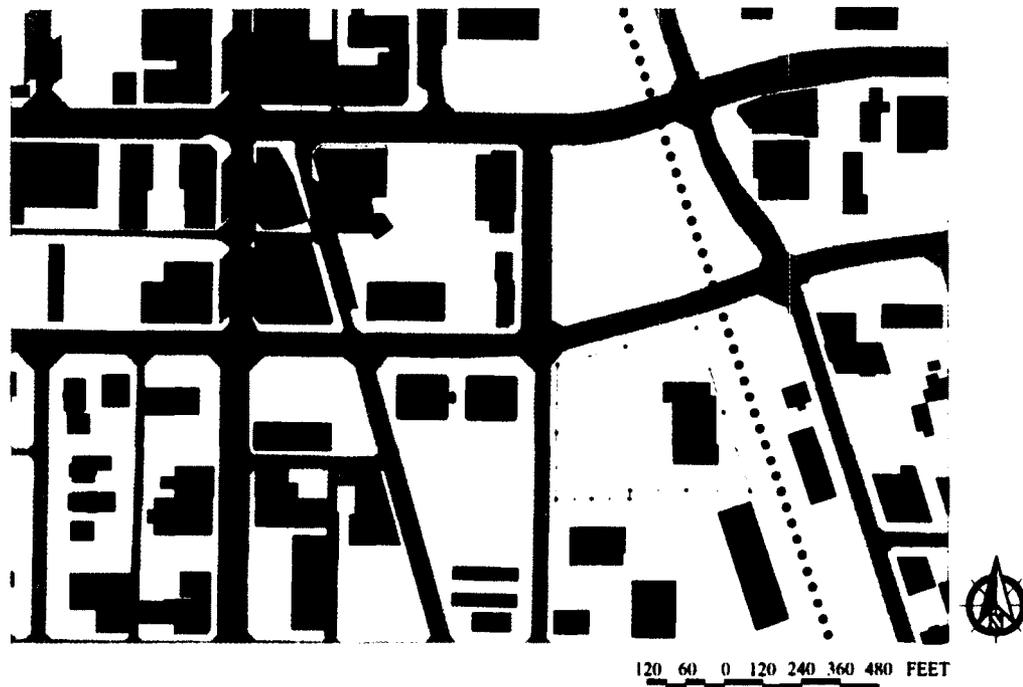
Now in the mid-90's, the city planned to tear down the ODPP which had gradually succumbed to neglect over the years. However, as the community learned of the possible demolition of the historic plant, a movement began to save the plant. A handful of dedicated community members fought to keep the town's oldest municipal building standing, arguing that it was vitally important to retain this history of Vero Beach (Swift 2006, 45). Soon it was realized that policy was needed to permanently protect the ODPP,

and in March 1999, the ODPP was successfully added to the National Register of Historic Places (Swift 2006, 47) thus protecting the building from demolition and requiring that any restoration to the exterior and/or interior of the ODPP had to meet the standards of the Bureau of Historic Preservation.

Two developers teamed up and signed a 45 year lease with the city and began an exterior restoration effort of the building in late 2005 and completed it in early 2009. Interior renovations were not expected to start until a tenant was found.

And so it stands in 2013; the building remains empty, with no immediate promise of use or occupancy in sight.

The property is approximately 1.7 acres and fronts the eastbound leg of State Road 60 (20<sup>th</sup> street) at the eastern edge of Historic Downtown Vero Beach. The lot is flat and is bordered to the north by SR 60, to the east by an active rail line, to the south by a light industrial property, and to the west by 12<sup>th</sup> Court that connects SR 60 with 19<sup>th</sup> Street (Figure 11). The property is occupied by the 12,200 square foot ODPP building and the remaining site surface is undeveloped. The city has removed on-site oil tanks and contaminated soil. The lot is zoned DTW (Downtown District), allowing for a wide variety of commercial, office, and residential uses as described in 62.301 of the City's zoning code (Municode 2002, sect 62.301).



**Figure 11 – ODPP site showing immediate properties, roads & railway. (Image by Author)**

The building as it stands today has a minimally improved shell structure (from the 2009 restoration efforts), containing industrial-type fit-outs and non-functioning lighting, ventilation and temperature control systems. Few walls segment the interior, except for a small area on the north-west. The building floorspace totals roughly 12,200 square feet. Ceiling heights range from 16 to 35 feet. The main section of the building contains approximately 7,000 square feet of column free space with a 35-foot tall wall height (Figure 12). The roof is constructed with concrete panels over steel joists (Figure 13). Large openings on the southern wall are filled with metal panels which could be opened for the installation or removal of power generating equipment (Figure 14). The historic preservation society would not allow the restoration contractor to fill the original openings with brick, citing the need to 'keep the historic integrity of the building' and 'the

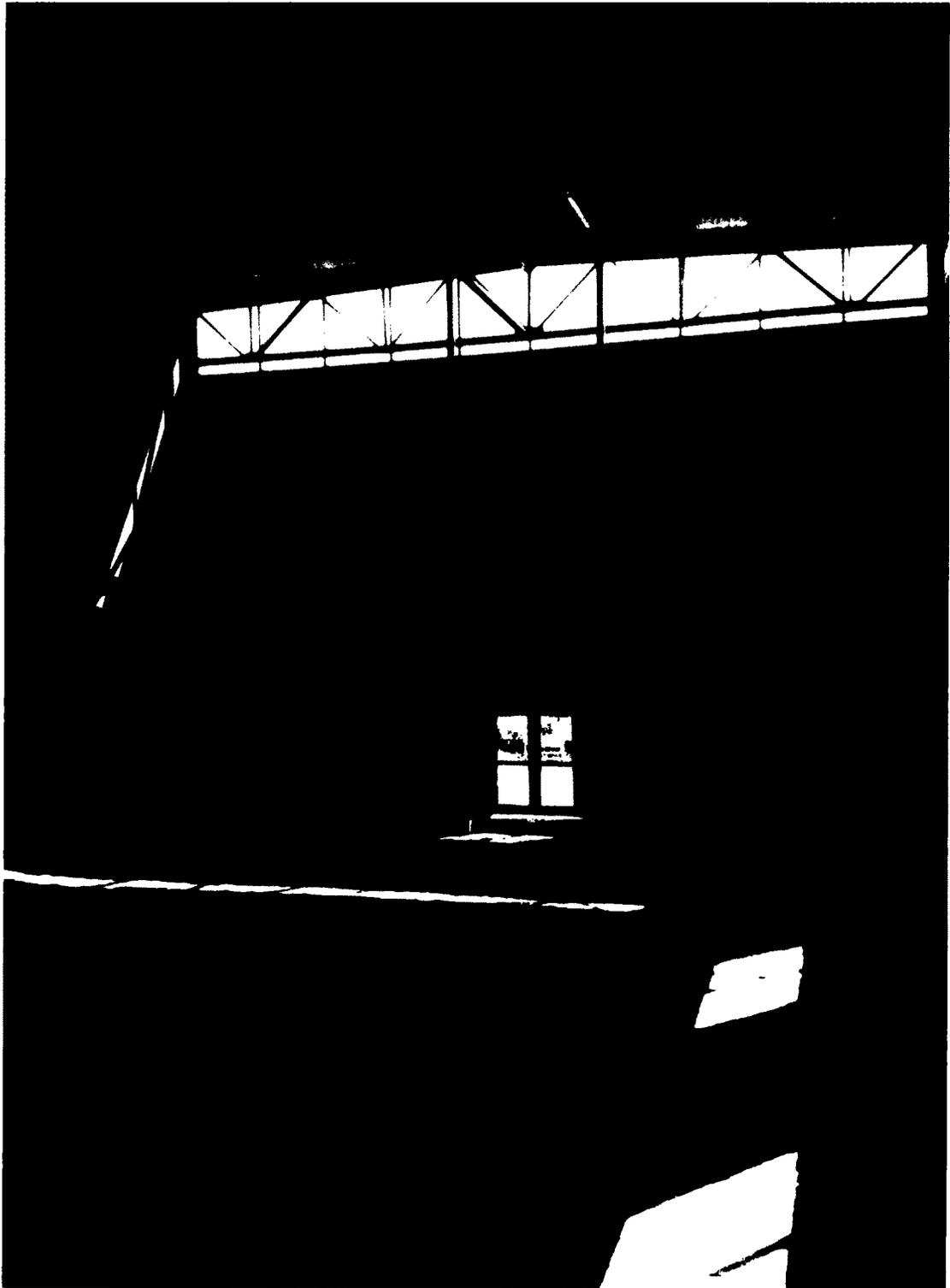
southern wall had to be constructed of something other than brick' to keep its original character (Historic Property Associates 2006). The floor is reinforced load-bearing concrete with one depression where the remaining diesel engine generator resides. The generator serves as a unique element that provides a historical reference to the buildings original use.



**Figure 12 – Interior Photograph of the ODPP showing lower wall height on east side of building underneath clearstory windows (Photographed by Author)**



**Figure 13 – Interior Photograph of the ODPP showing roof truss construction (Photographed by Author)**



**Figure 14 – Interior Photograph of the ODPP the south façade after exterior renovations. Metal panels were use in lieu of bricks to be a statement of the original design (Photographed by Author)**



**Figure 15 – Exterior Front Façade of the ODPP. Taken standing at SR 60 looking south.  
(Photographed by Author)**



**Figure 16 – Exterior Side Façade of the ODPP. Taken standing at SR 60 looking south-east.  
(Photographed by Author)**



**Figure 17 – Exterior Rear Façade of the ODPP. Taken standing on south-east corner of site looking north-west.. (Photographed by Author)**

From a marketing, development, and use perspective, the ODPP has many significant assets, making it a property with substantial potential. Its primary qualities include availability, unique presentation, large size, internal & external expansion capabilities, sturdy industrial construction, high visibility, ease of access and plenty of nearby parking. It stands alone, a white elephant in scale and style within Historic Downtown of Vero Beach. The rehabilitation of the ODPP, together with a dense new mixed-use development is a promising potential investment.

The ODPP's assets include:

- it is one of the largest vacant buildings and vacant properties in the area
- the building is distinctive on a regional basis in terms of its architecture, character, history, and relatively large size
- there are few structural constraints allowing for considerable leeway in the building's redevelopment
- the property is highly visible and is located adjacent to the heavily traveled SR 60, and accessible from Old Dixie Highway, US Route 1, and Indian River Boulevard
- access to the property from eastbound SR 60 is excellent
- the lack of commercial and/or residential neighbors in the area provides for more tolerance in terms of activities that can be presently accommodated at the property
- due to its previous use, it is probable that water, sewer, power connections, and capacities are adequate to support virtually any type of development
- the large site invites new development with mixed-use potential
- the possibility of AMTRAK locating a train stop at the property could enhance its marketability

The ODPP's limitations are:

- a significant initial investment will be required to improve the property – generating an adequate return on investment will be a challenge
- the majority of population and business growth is occurring outside of the downtown core, drawing the attention of developers and potential tenants away from the target area
- there is virtually no pedestrian traffic

In addition to the technical logistics of improving the property, redevelopment of the ODPP must consider the establishment of key elements that will ensure its success. The use of the proposed facility & proposed land development must be based on a market-driven project that can produce an adequate return on investment and cover any necessary operating expenses, including any outstanding taxes and fees owed to the City of Vero Beach. Incorporating residential units, offices and retail tenants will draw a substantial income. For the ODPP itself, successful development is contingent upon securing an anchor tenant that will occupy the majority of the space, maintaining competitive lease rates with other local retail districts within the surrounding area.

In response to the requirement of the City of Vero Beach, the historic character of the ODPP building exterior must be retained and improvements must meet the standards of the National Register of Historic Places. The ODPP sites' overall development must be consistent with the Vero Beach Downtown Redevelopment Plan and the Downtown District zoning requirements. Keeping in mind that the proposed project is to open up a completely new dialogue for the city as the site functions as an anchor in the eastern part of downtown, consideration should be given to a use that will strengthen the viability of the surrounding area in future planning for a more sustainable downtown.

### **1.3 The Community**

The city of Vero Beach is a tight-knit community. Having a population of only 15,220 as of July 2010 (Gardener 2011) and covering less than 11.44 of sq. mi and the historic downtown comprising of only approximately 0.1 sq. mi – Vero Beach is more accurately described as a community than a metropolis. In 2004, with the city of Vero Beach addressing significant issues regarding its growth, development, and overall city character, the city council decided to put in effect a “visioning process”. In 2005, the city of Vero Beach launched a Vision Plan, which broadly engaged the public and sought out a community consensus for the future direction of Vero Beach.

The Vision Plan consisted of an introduction to Vero Beach as a city and community, describing its regional context, local history, physical characteristics and outlining the demographics as well as the economics of the city. The body of the Vision Plan is an outlined concept describing commercial districts, neighborhoods, industry & employment, roadways, infrastructure and planning and development regulations. Each of these categories describes a goal, key issues and recommendations, and concludes with a list of proposed strategies that the city would execute in order to accomplish its stated goals. The final chapter of the Vision Plan describes an 'Implementation Matrix' that sections off each zoning area (commercial district, neighborhoods) while indicating the city's timeline to execute the consultations and implementations (City of Vero Beach 2013).

The Vero Beach Vision Plan was drafted and put into effect in February 2005. After seven years, the Vision Plan remains on the shelf. Opinions explaining the delay range from economic to political. Vague and circumstantial in its mandate, the Vision

Plan fails to provide a strict critique of the existing make-up of Historic Downtown and other failing areas. For example, under each 'goal' the statement starts with 'Reinforce... ', 'Enhance...', 'Complete...' , or 'Maintain...' which are all admirable actions which seem to follow the ineffectual status quo of the city government. A strict critique of the existing make-up of the Historic Downtown and other problematic areas is required. Acknowledging past development failures, the City must adopt a more sustainable and communal perspective on future development.

The Vision Plan dissects the city into an abstract collection of commercial districts, zones and neighborhoods. The City needs to identify issues as they relate to the community and devise a concept aimed at creating a more livable city. Despite investment in the Visioning program, signage changes, streetscape improvements and several building refurbishments (ie. Florida Theater Arcade), there are no evening or recreational attractions to downtown except dining, and occasional events like the quarterly Downtown Friday, Hibiscus Festival and a small Friday farmers market. In short, Downtown has seen aesthetic improvements, but there is little reason to go there.<sup>7</sup>

There is no one typology to fill this role in Vero offers a complete community vision where if and when, the car becomes increasingly obsolete, humans would have the possibility of sustaining themselves from resources that are available within walking distance of their homes. Walkable, coherent communities must exist. Surprisingly, there

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<sup>7</sup> An economic critical mass needs to be developed from which other businesses spring-board and diversity develops. Those Iowa and Illinois investors of the pre-war years in Florida were built-up from crops export to processing and packaging and developed a whole infrastructure of machining and tooling. Diversity is the keystone. What do you make from fish, pineapple and citrus? That is the question.

is not a single grocery store in Vero's Downtown District.<sup>8</sup> Taking the ODPP's large site and incorporating some of the most fundamental service ingredients to promoting a more walkable city (such as urban blocks that include residential, commercial & office space, public squares) while using the ODPP as the city historic monument as well as introducing a downtown beacon to give the observer some orientation to the relatively low scale downtown, would spark a new 'typology'. This could be a point of departure for Vero Beach to become more sustainable for future habitation.

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<sup>8</sup> In fact, the closest grocery store to the downtown core is about 1.5 miles east of downtown. The average person walking speed is about 4 miles per hour, it takes someone 22.5 minutes to get to a grocery store if they lived in downtown Vero and did not own a car, and that is not taking into account that the quickest way (the 22.5 minutes) would be spent alongside a 4 wide lane traffic route, one-way street, with no pleasant shortcuts available as detours.

## **2 Chapter: Regenerating the Monument**

### **2.1 Proposed Program for the Old Diesel Power Plant**

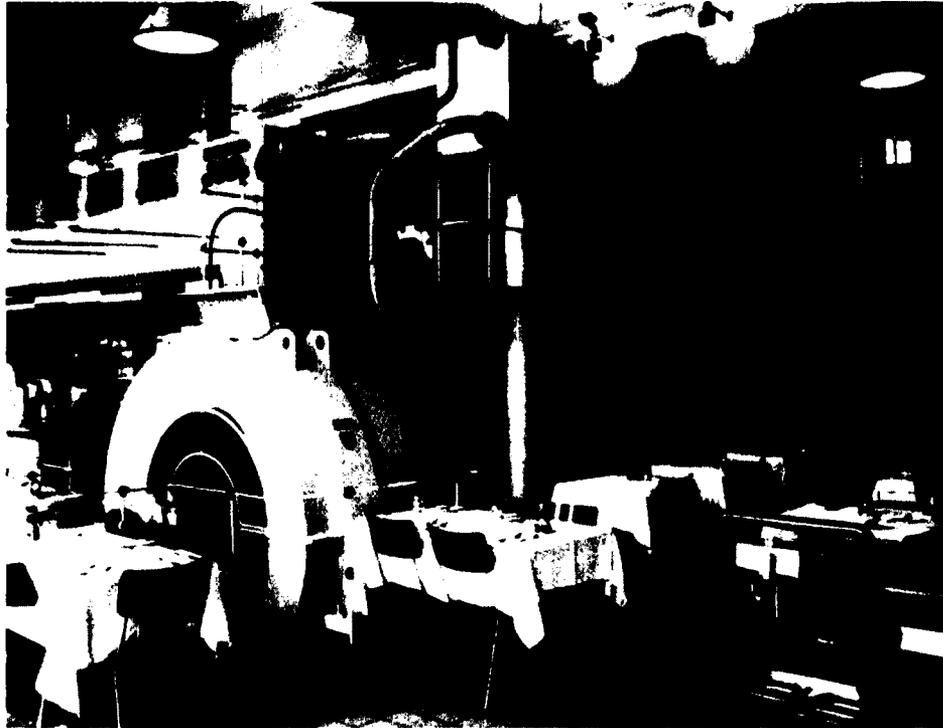
The ODPP with its historic site designation establishes an important and permanent historical presence in the downtown core. It is a constant reminder of how the city withstood the tests of time, enduring hurricanes, investor's threats of destruction and impromptu shelter for homeless people. Now, and for its remaining years, the ODPP is being proposed to propel the process of urbanization at the human scale in the core of the City of Vero Beach. In this urban artifact, certain original values and functions will remain; others will be totally altered, giving hints to what is certain in the structure and hiding what is of less importance or secondary.

A similar adaptive reuse project exists in Amsterdam, Netherlands; *Cafe Restaurant* is located in an area just north-west of downtown Amsterdam called Staatsliedenbuurt. The Cafe is a short drive, bike ride or walk from the downtown core and is located just east of the Central Market, making it a great location for a quick bite to eat on the way in and out of town or while at the market. The *Cafe Restaurant* was an old pumping station built in 1897, which provided the people of Amsterdam with fresh drinking water from the dunes at Vogelenzang (Café Restaurant Amsterdam 2013). The engine room was spectacular and attracted people from all over that were eager to see it. In 1941, a technical magazine spoke of "a well filled, symmetrical engine room that made a grand impression on the visitor and could be considered to be a jewel for the city of Amsterdam" (Café Restaurant Amsterdam 2013). The pumping station remained operational until 1996.

Westpark city council decided to restore the old pumping station, as a central feature of a new car-free eco-area, built in the former water company grounds. The Cafe itself is located in the old engine room with the remaining spaces converted into offices and a gym (Figure 18 & 19). The one diesel engine was kept intact to be admired by those who come and visit. Vero's ODPP offers similar interior opportunities - high ceilings, good structure, diesel engine still in-tact, second level potential etc.



**Figure 18 – Interior Photograph of the Cafe Restaurant after renovations showing restaurant area (Cafe Restaurant Amsterdam. Restaurant Webpage 2013)**



**Figure 19 – Interior Photograph of the Cafe Restaurant after renovations showing restored Diesel Engine (Cafe Restaurant Amsterdam. Restaurant Webpage 2013)**

The current developers for the ODPP site are waiting for a tenant before they do any interior renovations. Unfortunately delays and inaction are the current reality in these unpredictable economic times. The building has been standing empty for over three years since the exterior renovations have been completed. Prospective tenants do not want to commit to a long term lease due to the building's special character and the developers do not want to take the risk of making any interior improvements without assured lease based financial return.

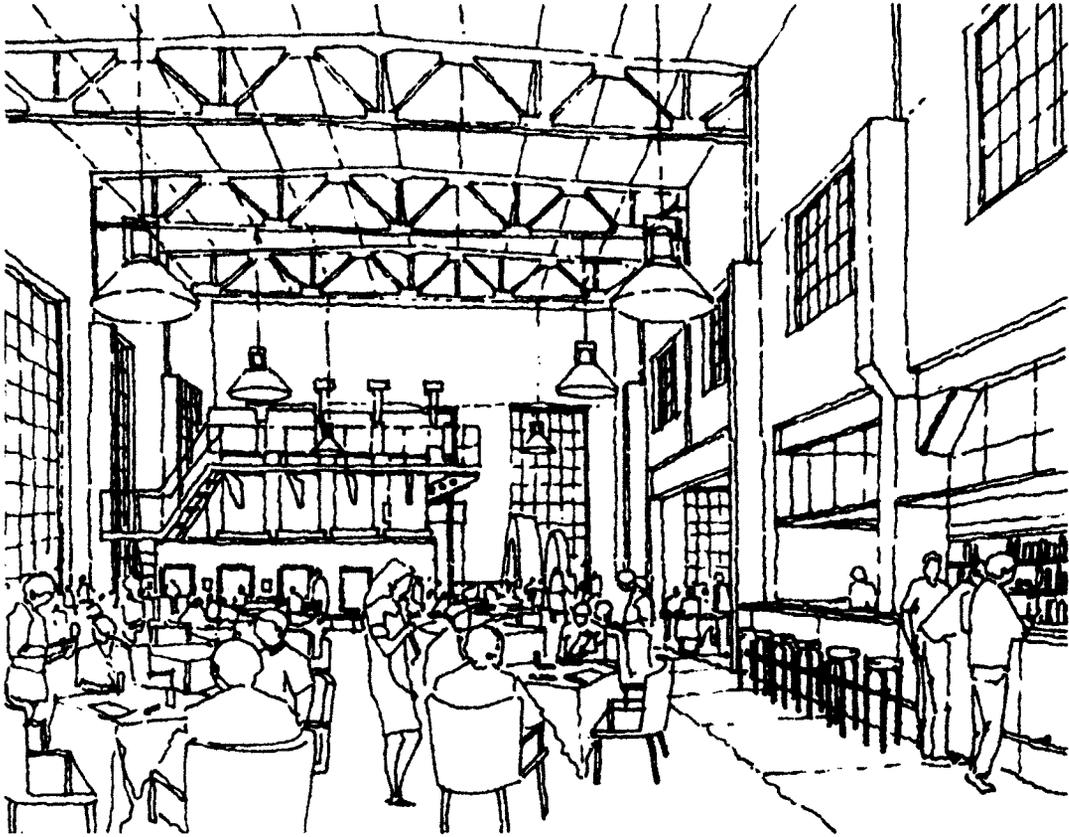
The main space is quite grand and open and could be considered a tough sell to the average tenant who may be concerned with costs, but when you look closer the possibilities of the space are quite endless. The thesis project's proposed program for the ODPP is a restaurant and bar at the main level with a new second mezzanine to be built

on the south end of the building providing space for a fresh market grocery store and retail space for products from local farmers, planters and food providers (Figure 20). The new second floor mezzanine could be connected to the new second story of the proposed adjacent mixed-use properties by an exterior covered walkway and would be accessible to the residence of the property as well as the public.

The main space for the restaurant would be located in the taller space of the building around the Old Diesel Engine centerpiece. The space totals 5078 square feet and consists of five of the six bays that stretch east-west on five pilasters that are integrated in the brick walls running north-south. Each bay is 20 feet wide, center to center and approximately 49.5 feet long. The space is well lit by large windows located on the north and west exterior walls, with an additional gallery of windows that line the top of the east exterior wall. The east wing, where ceiling height is limited, would house the kitchen and back of the house while on the exterior on the east side of the ODPP a delivery dock would receive all the supplies for the restaurant and grocery store. The proposed back of the house totals 1187 square feet and only has one existing window on its north side. A new loading dock would be located on the south-east corner, which would require a dock and an overhead door accessing the interior space.

The restaurant scene in Vero Beach, including the downtown, is active and popular. Mid and up-scale establishments, as well as the few franchise eateries generate heavy traffic. Three of downtown's finer restaurants are attracting a significant portion of their clientele from the Barrier Island and other locations beyond downtown. With the limited number of such restaurants in the downtown, the addition of a distinctive dining location would further strengthen the downtown as a destination for quality eating establishments.

Additional restaurant-related assets of the property include the availability of parking, both on the lot across State Road 60 and on the west lot, accessibility, visual prominence, uniqueness, a location within a short distance of other similar restaurants, and an affiliation with the anticipated renaissance of downtown.



**Figure 20 – Interior perspective of proposed program for the ODPP looking north.  
(Image by Author)**

Within the scope of this thesis, the ODPP will be left as an 'open' container, highly flexible and adaptable in nature. With a strong anchor tenant, the ODPP has great potential. The multiple positive components of the ODPP create an opportunity to develop a viable and attractive facility occupied by a quality tenant. The 'focus' of the thesis project will be the complimentary elements that have been added to the

undeveloped site beyond the ODPP in order to densify and bring a sense of community to the interior of the site replacing the current proposed sea of parking. Key elements of the development include a downtown beacon, a mixed-use urban village and a public square. All of these elements are proposed as key factors for the success of a redeveloped ODPP.

## **2.2 The Downtown Beacon**

There seems to be a natural tendency for those more familiar with a city, to rely (increasingly) on a system of landmarks as guides and identifiers to their orientation. Landmarks, as described by Kevin Lynch, are simple physical elements which may vary widely in scale and to the observer, are the point references considered to be external (Lynch 1960, 78). When an element in the urban environment is intended to be used as a landmark, it singles itself out from the surrounding environment. Lynch further describes these as having key physical characteristics contributing to their singularity, whereby some aspect stand-out as unique or memorable within its context (Lynch 1960, 78). Lynch also describes a number of characteristics that can be applied to new landmarks in order to make them more easily identifiable: clear form, contrast with their background and some prominence of spatial location, each more likely to give the landmark more significance. The John Hancock Building in Boston established itself as a landmark by being visible from many locations, making its top the significant part in the city's general skyline.

Another significant example of distant landmarks that is visible from near and far is the Duomo of Florence, paired with its campanile in such a way that the direction of view can be gauged from a distance. The Duomo is unmistakable; visible at any time of the day or night, and, its most significant characteristic is its intimate relation to the city's traditions. This particular type of beacon is unforgettable and memorable (Figure 21); not only does it remind the observer of the physical aspects of the city but it suggests a memory of city culture, tradition and religion. That level of landmark comes with time and, where the ODPP does have some history, a more intermediate landmark would

suffice for this site. A landmark would be ideal for the ODPP for two reasons; it would provide a unique urban moment and give the Downtown District a beacon – an intentionally conspicuous architectural element within the site that would be tailored to attracting attention towards downtown.



**Figure 21 – Duomo, in Floreence, Italy seen at night from Michelangelo's Piazza (Obal 2008)**

Downtown Vero Beach can be missed with a blink of an eye when entering by vehicular traffic from the east and/or west along four lanes of one way traffic, coming directly in or out of downtown. The city's plan is to calm traffic on state route 60, by adding parking, reducing lanes, and adding wider, better landscaped, pedestrian walkways. All of these are forward thinking modifications towards a more attractive city center. There would still be the question of the downtown attraction and memorability which is currently absent.

### 2.3 The Urban Village

Functional urban environments rarely happen accidentally or by chance; they have been created by choice, created through conscious design and by efficient organization. In the late 1890s, the concept of the urban village was developed to help further the creation of successful and long lasting neighborhoods; neighborhoods that provide vitality and proximity to many of the amenities necessary for everyday life – that is also the goal for this thesis and the redesign of the ODPP. The term *urban village* has particularly focused on the need for more mixed use developments, for a more efficient use of land and, particularly in this case, the need for the imaginative regeneration of the area of urban derelict. The ODPP's urban village model will be used as a model for the sensitive and sustainable extension of one of the many major historic element in downtown Vero Beach where, as it stands, development pressure are not being met. This site will be used in a fashion that will demonstrate the design of places that can stand proudly alongside some of the finest historic artifacts; places that will not become a burden on either our landscape or townscape, where shops, boutiques and restaurants can happily co-exist with apartments for rent and sale, along streets that are shared by pedestrians and vehicles; keeping in mind the primary priority, in regards to design, to favor the pedestrian. Urban villages not only promote a sense of community, but help prevent sprawl, inviting people back into the city's urban environments as well as help regenerate neglected city centers.

In the attempt to re-establish our neglected towns and cities as thriving and attractive urban districts, we have to put the central focus on the idea of community in the process, 'for urban communities are the primary social and physical foundation upon

which our towns and cities will flourish' (Neal 2003, 2). Not only must the solution for the ODPP site be efficient in terms of land use and economics, but the potential of job creation, retail services, leisure and the incorporation of social and cultural events, are key – and it is essential for them to be socially, economically and environmentally sustainable in the long term. Above all, as we further develop and plan our cities, our challenge is to create urban villages that will be popular, productive and beautiful places to live, now and for many generations to come.

A fine example of an urban village similar in scale, is the Granada Buildings in Franklin Harper, Los Angeles built in 1925. The Granada Buildings are located across from the extension of LaFayette Park and are less than one block from bustling Wilshire Boulevard.



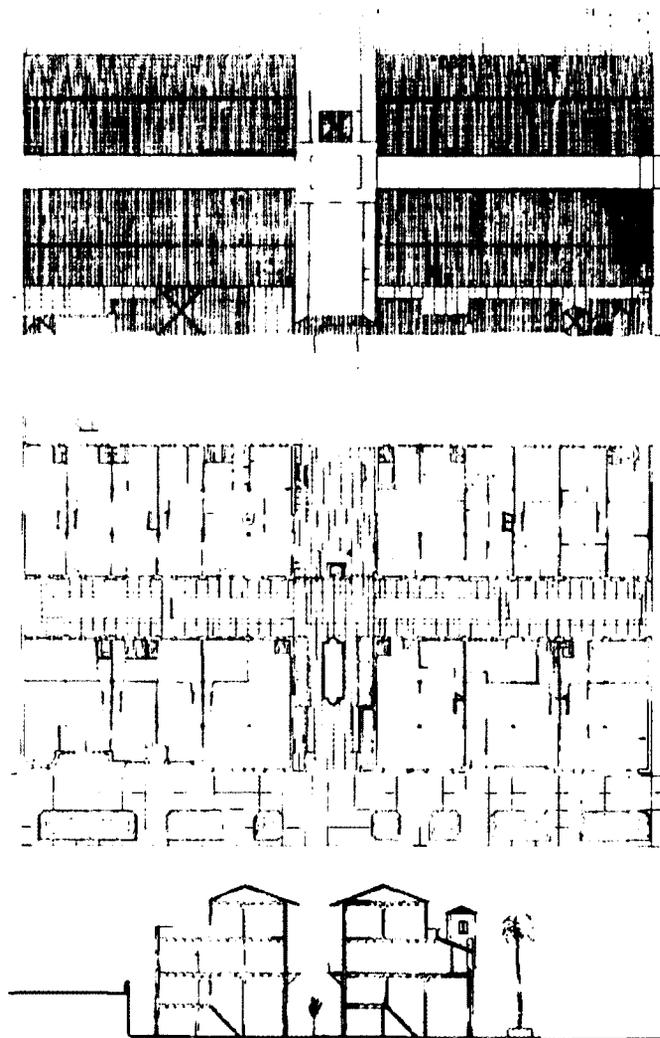
Figure 22 – Perspective sketch of the Granada Buildings showing front facade (Vieira 2013)<sup>9</sup>

The mixed-use urban village consists of four buildings arranged along a north-south axis creating three layers of open space: the street, the central court, and the service

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<sup>9</sup> This is a highly articulated pattern within a loose frame like scoring in music the facades pop in and out up and down in a variation on themes. Lots or bay demising lines are broken by halves and thirds in rhythms. The two fragments are interrupted by as caesura at the Granada sign band.

court. Visible on the Granada Building plan, all public spaces in the building open up directly to the central court, which also could be described as an outdoor room. The first level is designated for retail stores, with adjacent mezzanines designed as storekeepers' efficiency apartments and the upper maisonettes intended as apartments/studios. The intriguing thing about this mini urban village is its architectural relationship to this region's diverse way of life through its picturesque exterior treatment. There is something to be said about when architecture is a direct reflection of its lived environment.



**Figure 23 – Granada Buildings Plans & Section (Polyzoides et al. 1992, 174)**

## **2.4 The Public Square**

Public squares are an integral part of our urban environment; they help immortalize our buildings and cities. Bringing people in, engaging humanity with the built environment is critical in the sustainability of our built environment. Public squares have been around for centuries, becoming key public spaces within their cities, inviting cultural and social dynamics that the community can share, instead of immediate consumption, as we find in excess in our seas of suburban sprawl. The western world adopted the idea of the 'piazza' from Italian culture and coined the term, as we are more familiar with as the, public square. A piazza ranging in size, shape and proportion, is usually surrounded by building on all sides. In this proposal, the square is intended to be the central focus of the ODPP site taking up most of the site, new building to the North, South, and West side with the existing ODPP to the east and a new covered walkway connecting the new block on the west end to the plant, framing, an almost square, public square. There have been significant studies done on the benefits of public squares and place-making that have proven that both are catalysts for building healthy, sustainable and economically viable cities for the future.

The Project for Public Spaces (PPS) is a nonprofit planning, design and educational organization dedicated to helping people create and sustain public spaces that build stronger communities. Their pioneering place-making approach helps citizens transform their public spaces into vital places that highlight local assets, spur rejuvenation and serve common needs. The PPS has made squares their core focus for nearly 30 years. They have analyzed and observed hundreds of squares and based on their studies, have honed ten principles that, lead to a successful square. Here are the ten

principles outlined in more detail as they pertain to the proposed redevelopment of the ODPP site. (The following ten principles cited from online source – Project for Public Space <http://www.pps.org/> 2013)

### *1. Image & Identity*

Historically, squares were the center of communities, and they traditionally helped shape the identity of entire cities. Many times the square was given a fountain to create a strong image: e.g. the majestic Trevi Fountain in Rome. The image of many squares was closely tied to the great civic building in its proximity, such as cathedrals, city halls, or libraries. In this case the ODPP stands as the modern day civic building framing the square to the east side. The pedestrian is able to see glimpses of the architectural anchor through the central courts that are arranged slightly off-axis and are not truly regular which guide pedestrian flow to the center of the square.

### *2. Attractions and Destinations*

Any great square has within it, a variety of smaller 'places'<sup>10</sup> to appeal to various functions and experiences. PPS describes these places as outdoor cafes, fountains, sculptures, or a bandshell for performances. Numerous small attractions combined with the big picture often are the most successful at drawing people in throughout the day. The ODPP site will have various retail at the ground level, that would spill its daily activities into the square, office space on the second floor, and residential units on the third, fourth

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<sup>10</sup> They vary in scale and are offset to main flows that they border and nurture street traffic and pedestrian excitement.

and fifth floors. The ODPP building itself is envisioned as a restaurant/bar on the main level with a mezzanine level on the south end that would accommodate a proposed fresh market, selling locally grown vegetables, fruits, local meat, poultry, fresh seafood etc. The (possible) covered walkway on the south end would be ideal for local vendors to set up shop with their merchandise, providing shade and partially enclosed space adequate for pedestrian flow in addition to the vendors stands.

### *3. Amenities*

Squares are places that are intended for people to go and spend time. To make them attractive, they require feature amenities that make it comfortable for people to use over extended periods of time and a variety of experiences. Benches, waste receptacles, adequate lighting, art, public restrooms – are all basic amenities that people look for in public squares in order to spend more time in. The proposed ODPP development will include the basic amenities and will include some unique amenities specific to the site.

### *4-5. Flexible Design & Seasonal Strategy*

Permanent structures limit the square's uses. The use of squares should be flexible, using seasons as a guide in changing programs; skating rinks, outdoor cafes, beach volleyball, horticulture displays each help adapt the use of space from one season to the next. Of course the semi-constant season in Florida limits the changing program by different seasons, but the 'in-season', 'off-season' is a definite guide for many businesses, events and activities in the area. During the off-season, beginning May running through to end of October, basically when the weather is at its warmest, businesses are in start-up

mode. They re-convene, evaluate the year, start to think about inventory for the upcoming season, prepare their store promotions, training and continue having their business work, with minimal focus on sales. Therefore one way of looking at the 'uses' of the square with respect to the fluctuating population is that half the year is primarily used by the locals and the other half is used by non-locals but permanent residents to the city. A great deal of Vero Beach retail and cultural business comes from well to do part time winter residents who prefer Vero's very casual ambiance over overly densified and more hectic environments like Palm Beach, Hilton Head, Naples, etc. Vero's high season is mid-December through late April. Many businesses (restaurants, boutique stores, Riverside Theater, festivals) generate the majority of their revenues during season and dramatically scale back hours and staffing, or close completely, for all or part of the summer. Off season relies on middle class permanent residents, including a 16 to 20% population of retirees. Businesses occupying the ODPP must plan carefully for these dramatic shifts in customer demographics.

#### *6. Access*

To be successful, a square needs to be easy to access. The most successful portal admits pedestrians. In regards to the ODPP site, SR 60 would be cut down to 2 lanes of one-way traffic in lieu of the existing four lanes. Parking on both north and south sides would be added for traffic calming and further accessibility. Ideally, in the future, transit stops would be located along both SR 60, north side of the property, and 12<sup>th</sup> court, along the west side of the property. What makes this location so attractive is the fact that it is located close to Historic Downtown, on one of the major access paths that leads to the beaches, as well as its proximity to the existing restaurants and bars, making it easily

accessible, and in the path of vehicular traffic, pedestrian traffic as well as the evening dining and nightlife crowd.

Pedestrian movement around the square or around downtown generally must consider two important items: a) A significant number of customers are elderly and/or disabled with impaired walking ability, often equipped with scooters, powered wheel chairs or walking assist devices (during off season). b) Summer days and evenings can be brutally hot and humid, especially in the downtown landscape away from the normal sea breeze of the ocean front. Comfortable access is critical for pedestrian traffic and supplementary equipment and transportation should be considered to avail customers of the entire square - a crossing guard or traffic calming device at the Twin Pairs crossings adjacent to the ODPP site, could be as simple as a parked police car with lights flashing; a free trolley to transport people around the square and surrounding area, could be a couple high capacity golf carts, Go-Line bus; sidewalk awnings, pergolas or trees would help a great deal in making walking pleasant during summer days; enticing shoppers to linger.

#### *7. The Inner Square & the Outer Square*

Ground retail rings the edge of the square, reaching out to pedestrian passing traffic. The edge of the square is pushed and held tight to the site's property line giving the pedestrian a more intimate, scalable relationship with the proposed new buildings. The buildings stand inviting the pedestrian to part-take in the activities offered within. The inner square is a row of carefully landscaped walkways that create a semi-private lane for residences and businesses located on site above. Inviting the pedestrian and eliminating any view of vehicular traffic.

### 8. *Reaching out like an octopus*

A great square reaches out into the surrounding neighborhood. Just as the edge of the square is important, so are the streets, pathways, sidewalks and ground floors of adjacent buildings leading into it. Vehicles slow down, walking becomes more enjoyable, and pedestrian traffic increases. Elements within the square are visible from the outside from a distance, enticing pedestrians to gravitate towards the inner square. There are existing axes but are not yet defined. Using the proposed key elements and their orientations, the existing axes that connect the site to existing significant spaces becomes key in opening up the site as well as for the necessary sites integration with the existing downtown environment.



**Figure 24 – Location Map showing the significant contextual relationships between the ODPP site & existing downtown (Image by Author)**

### *9. The central role of management*

Good management plan that understands and promotes ways of keeping the square clean, safe, enjoyable and eventful will create a square worth returning to. The use of the square at different times of day, days of the week and months will vary substantially and is worth taking note of in order to cater to the users at appropriate times with the correct activities and events. The evidence of a well maintained square is also something that the public admires and respects, gives the assurance that someone is in charge and there is a sense of immediate care involved.

### *10. Diverse Funding Source*

Generally, well-managed squares are beyond the scope of the average city parks or public works department. Most of the best squares in the United States have established partnerships to operate them, seeking to supplement what the city can provide with funding from diverse sources. In the proposed development for the ODPP site the funding would come from, rent from cafes, possible markets in the square, possible small commercial uses on site, film shoots, outdoor theater productions and benefit fundraisers – a few among many sources of funds.

Events in Vero Beach have helped the city become a more dynamic and livable place, the events help achieve a wide range of cultural, economic and social objectives. There is no longer a full time retail environment in Vero's downtown. There are no grocery, clothing, electronics, pharmacy, banking or other retail stores in downtown.

There is not even an ATM. Most retail enterprises migrated to areas constructed for vehicle access (shopping centers), specific pedestrian oriented locations (Malls & Beachside), or lower priced real estate on the outer reaches of the city.

In the '70's, most retail moved to the Miracle Mile shopping centers which now do very well as the in town retail hub of the area. Some moved to the commercial strip mall environment along US 1. Others were attracted to the new Indian River Mall 5 miles west of downtown, which also attracted many Big Box stores in the area. It is important to note that most of the big stores are company-owned, built largely on speculation that the huge housing boom of the early 2000's would eventually produce adequate retail traffic. The boom stalled in 2008 but the big companies have the wherewithal to build and wait for the boom to return.<sup>11</sup> The Mall, while initially successful, has lately had serious troubles keeping tenants unable to weather the current bust.

Many boutique retailers located to the Beachside retail area which is an eminently walkable area, catering to Beach themed seasonal winter visitors. The downtown area, particularly south of the Twin Pairs, has become an art gallery and antique shop enterprise zone with related clientele and operating hours.

If the ODPP is to be the centerpiece of a full time town square, then adequate core retail is required to make travel to, or residing in, the area worthwhile. Examples: A pharmacy, bank branch, general grocery, hardware, clothing, and shoes. Such businesses may be subsidiaries of larger stores in the area, but adequate (and profitable) retail is

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<sup>11</sup> Actually the big boxes are looking at boutique stores back on main street as their next step. One size and one playlist does not fit all. Niche markets are going to have to be developed. The model of the consumer is finally shifting. The next step economically is that people will have to be more creative in what they do in order to earn higher incomes. They will have fewer tastes in common as consumers. They will have to be more entrepreneurial because all the well paid jobs of a lower middle class are exported. Middle tier jobs are the next wave being exported.

required. However, if downtown is to be more event oriented, then much smaller retail operations are warranted, with operating hours and overhead expenses corresponding to the event. A successful example is the Saturday Farmers market where retail stalls are opened for only 5 hours during the event. Another might be the Wednesday Gallery nights. An example of event oriented retail: In Costa Mesa, CA the Orange County Swap Meet is held every Saturday and Sunday at the fairgrounds. About 50% of the hundreds of vendors have stores or studios in the area and attend the Swap Meet to sell their more popular products (Pictures, Plants, specific types of clothes, and toys) and to drum up business for their brick and mortar stores. Many claim that 60 to 85% of all their retail business occurs during the weekly Swap Meet.

### **3 Chapter: Adaptive Reuse Design Proposal**

#### **3.1 Site Elements**

The ODPP site, with its prime downtown historic monument and vast site in need of development, already has a strong but eerie presents in the historic downtown of Vero Beach. The site is located on the south edge of the downtown district, occupying a large site that fronts route 60 at an interesting moment – the only visible bend, placing the site at an advantageous focal point. The existing ODPP is pushed back toward the south-east corner leaving the remaining site undeveloped. The downtown district extends north and west of the ODPP site. The design for the town of Vero Beach does not recognize that every context is a self-regulating, living system; that the basic elements of urbanism are the urban block, the street and the square; and that they should use well-tried constructional techniques and materials – this proposed thesis will attempt to refocus Vero’s design intent for the city.

We continue to build parking lots, wide roads, making the automobile the main focus on how we design our downtown districts and main streets. We continue to make codes and increase the need for parking in order to facilitate access only to find that the most important aspect – the user – gets compromised by the amount of space the automobile consumes. In it we recognize both absence of the human and comfortable, scalable urban blocks. As we follow the endless concrete jungle of pavement we lose the measure of the landscape and buildings through the effort of our bodies. The landscape offers to urbanism its prototypes. The proposed development for the ODPP site has given great attention to not setting the automobile as the main character in guiding the design,

creating narrow pedestrian walkways, a main square, placing the new urban block buildings right on the property line, and narrowing state route 60 to slow down passing traffic to make it less intimidating for the pedestrian. When a city spends money in building public open spaces, it invests wisely.<sup>12</sup>



**Figure 25 – Site Plan showing the proposed ODPP massing of the new buildings in relation to the existing plant (Image by Author)**

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<sup>12</sup> The arcades of Bologna were built by each adjacent land owner as required to support the university as the arcades connected the studios of the instructors and masters, while in turn that supported books printers and binders and artisans of all kinds.

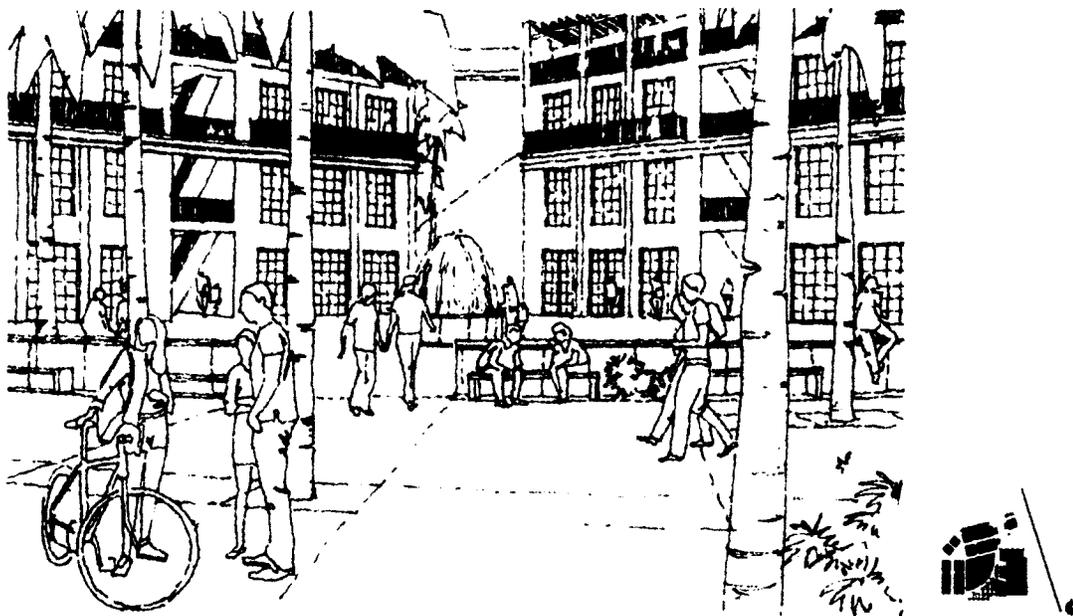
The Beacon will be located in the north-east corner of the site – at the apex of the visible bend in SR 60. The proposed beacon will measure 30' by 30' at its base, tapering as it rises to its 120' height, hovering over all of the new, proposed site elements (Figure 26). This is to be the project's landmark. Located on the most visible corner of the site and towering well over all other structures in Historic Downtown Vero Beach. It can be singled-out from the surrounding environment in order to act as an identifier for public orientation. The beacon/tower design proposes a vertical gallery and archive program that would support and display the work of artists, performances, festivals etc. as well as a display gallery showing celebrated artifacts collected from the community square (posters, photographs, paintings, movies). As an archive it will store important items and memorabilia from the community's past public events, festivals and celebrations. The top of the beacon provides a watchtower and belvedere – with unobstructed views of the city, Mainland, Barrier Island and the ocean beyond.



**Figure 26 – West site elevation of north-east corner showing the proposed Beacon with proposed Urban Block beyond (Image by Author)**

The existing ODPP is to be left as an urban artifact, a modern day civic building, five new buildings are proposed on the north, north-west corner and west side of the ODPP site. The existing plant and the proposed buildings are to frame a public square in the center of the site; the south side of the site is to be landscaped with palms and/or a covered walkway, giving the square some relief from the hot southern sun exposure. The square, 120' by 120' (approx.), is intended to be as flexible as possible to allow for any

proposed event, providing lots of space. The sitting wall is to be interrupted with passageways to allow easy flow from the palm grove (covered walkway) to the center of the square. The square is to be all hardscape with a fountain on axis with the two passageways between the 4 proposed buildings. A low sitting wall is to frame the main hardscape area of the square, running from the north-east corner down to the south-west corner. Behind the site wall will be a palm plantation with places to sit and enjoy the shade (see Figures 25, 27 & 28). The ODPP has tall fenestration on its west side (see Figure 16), the palm grove will provide shade that will help regulate the amount of sunlight and heat the existing plant will get, keeping it much cooler. Pedestrian access to the square from street level is visible and clear. Retail lines the perimeter of the site alongside 12<sup>th</sup> court and route 60.



**Figure 27 – Perspective showing central square looking at the north-west corner where proposed office building is to be beyond. (Image by Author)**

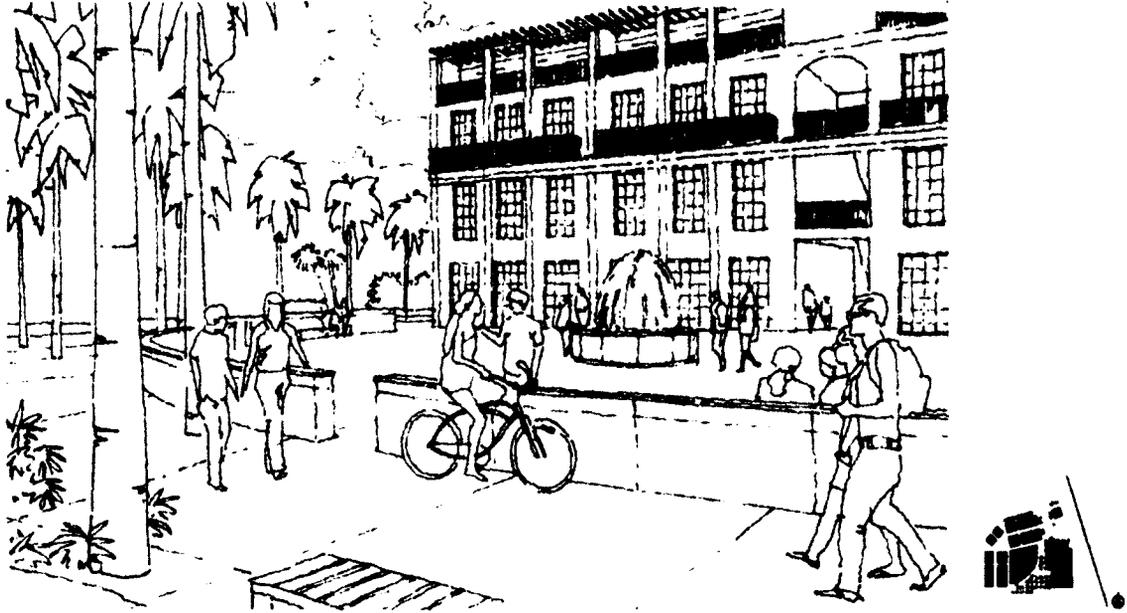


Figure 28 – Perspective showing central square looking at the south-west corner. (Image by Author)

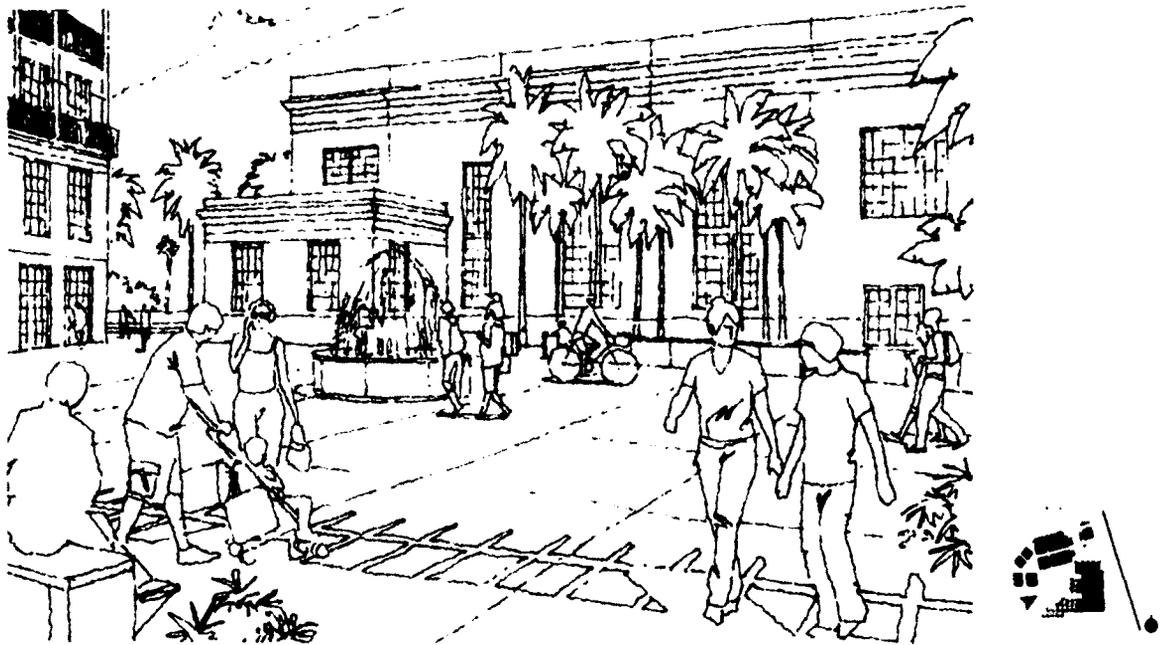


Figure 29 – Perspective showing central square looking east at existing ODPP. (Image by Author)

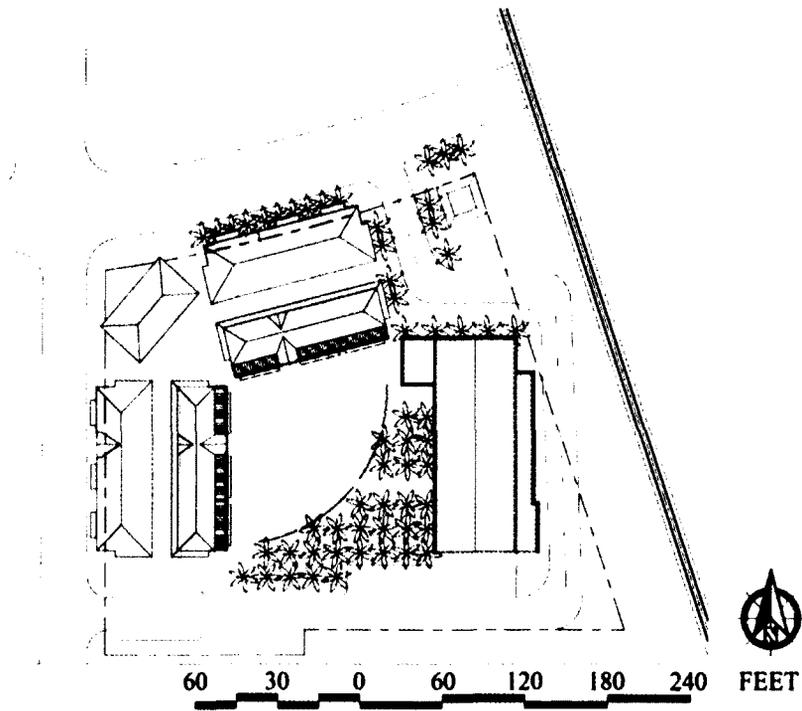
The ODPP urban village consists of five buildings: four traditional mixed use buildings and one, smaller in scale, office building – all four stories tall. Separated by a fifteen foot exterior corridor, one set of blocks fronts the street (19<sup>th</sup> Place & 12<sup>th</sup> Court)

and the other set fronts the main square. Each block of buildings is divided by a ten foot passageway to the interior larger courtyard, which is framed by the new buildings from the north and west, by the existing ODPP to the east and by the new palm grove to the south.

### **3.2 Streets, Central Spaces, & Squares**

The ODPP site is located two blocks east of Main Street (14<sup>th</sup> street) making it easily accessible for existing main street pedestrian traffic. The end of Old Dixie highway has a handful of popular bars and restaurant as well that are located a block west from the site. There is a green space that could potentially be connected to the ODPP site through an axis path, creating more ties to the existing downtown fabric. The integration of the ODPP site is not a concern and would not be very difficult given its central location and existing neighboring assets. The careful planning and design of the elements on the site is important in achieving what is intended to be a central urban village for Vero Beach.

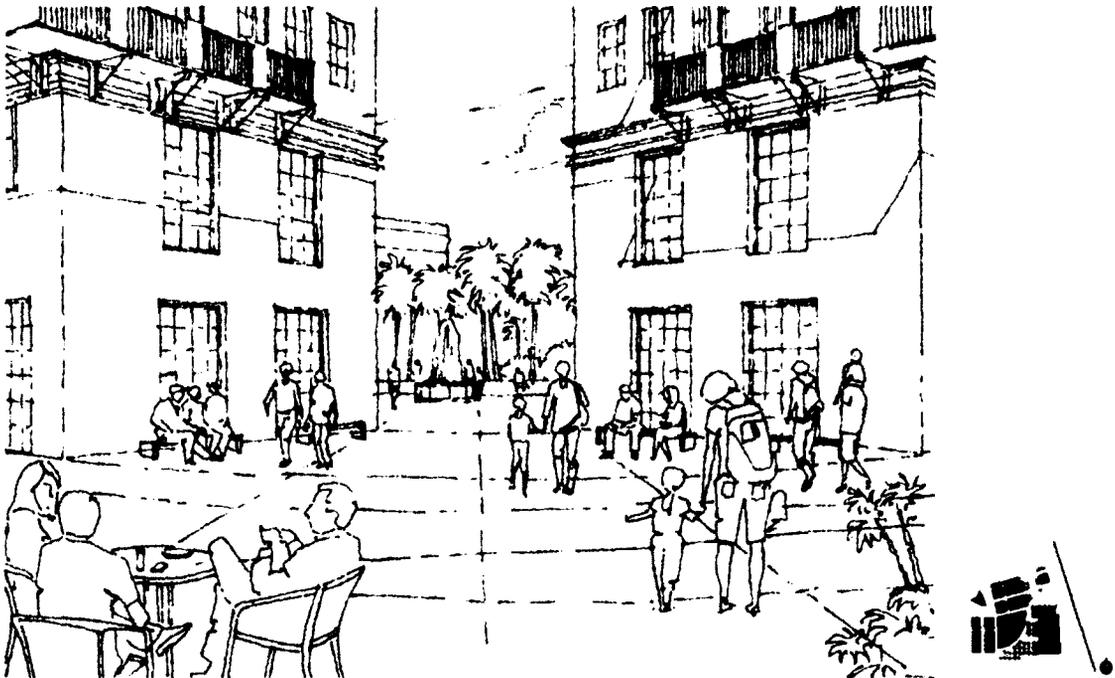
To address the streets that the ODPP site fronts, the proposed blocks are to be sit directly on the property line, if the buildings are set too far apart from the road and each other the initial desired intent for the ‘space disappears into an unpopulated non-place’ (Neal 2003, 127). The central space between the blocks will be semi-private, with overlooking balconies and well landscaped main path (Figure 31). The main square at the center will perform a necessary role in the citys’ and communities social life, carefully enclosed by buildings that bring activity and a sense of place within the square (Figure 29).



**Figure 30 – Site Plan showing roof plan – concentration on one of the two proposed urban blocks. Third ‘block’ stands on north-west corner as the office building with the remaining (2) blocks on either side creating a smaller (mini) square. The north-west corner block does not ‘hold’ the street line but steps back and is diagonal to open the private lot to the public zone. The fountain is in the offset center of the minor ‘square within the whole square. (Image by Author)**



**Figure 31 – Perspective looking down central space between urban blocks. (Image by Author)**

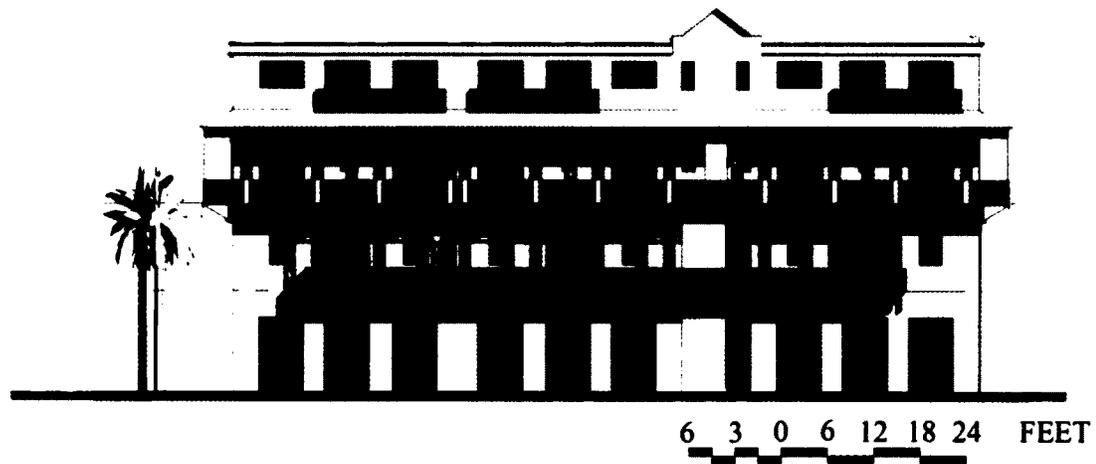


**Figure 32 – Perspective looking at small square (with central square beyond) standing directly behind proposed office building on north-west corner. (Image by Author)**

### **3.3 Urban Village in Detail**

As seen in Figures 25 & 30, the new proposed traditional mixed-use four storey buildings sit right on the property line with an overhang towards 19<sup>th</sup> Place, giving the street shade. The space between the two building sets is approximately 21' making for a pleasantly intimate central walkway that can be enjoyed by the public. This walkway is split in vertical tiers – ground level open to all public to enjoy; second level – offices with a more professional use, although still accessible to all public; third & fourth levels are residential which are accessed privately with the inner block (placed closest to the inner square) having a loft.

Each block has central vertical circulation, giving access to each level, with all horizontal circulation being exterior, under cover, happening on the interior within the central space of the blocks (Figure 33). All public spaces in the building open directly into these central spaces – therefore, this central court acquires all the attributes of the traditional narrow commercial street (Figure 31).



**Figure 33 – Central space elevation illustrating the vertical and horizontal elements from the exterior. The private side facing onto the square (opposite side) is less engaging than the street side or central space side, less dancing across the wall line and engaging with the square. (Image by Author)**

Two first levels (main level and second level), are large wide open spaces with high ceiling heights (10'-0" to 12'-0" finished floor to finished ceiling) intended for stores on the main level and offices on the second level encouraging future tenants to use the space freely (Figures 34 & 35). Heading up to levels 3 & 4 the spaces become more intimate – ceiling heights are not as daunting, spaces include more partitions for private bedroom, creating unique urban apartments (Figures 36 & 37). Each upper units located on the most inner band of blocks is made up (for the most part) of a two-storey space with a small mezzanine opposite the entry side of the level below (Figure 37).

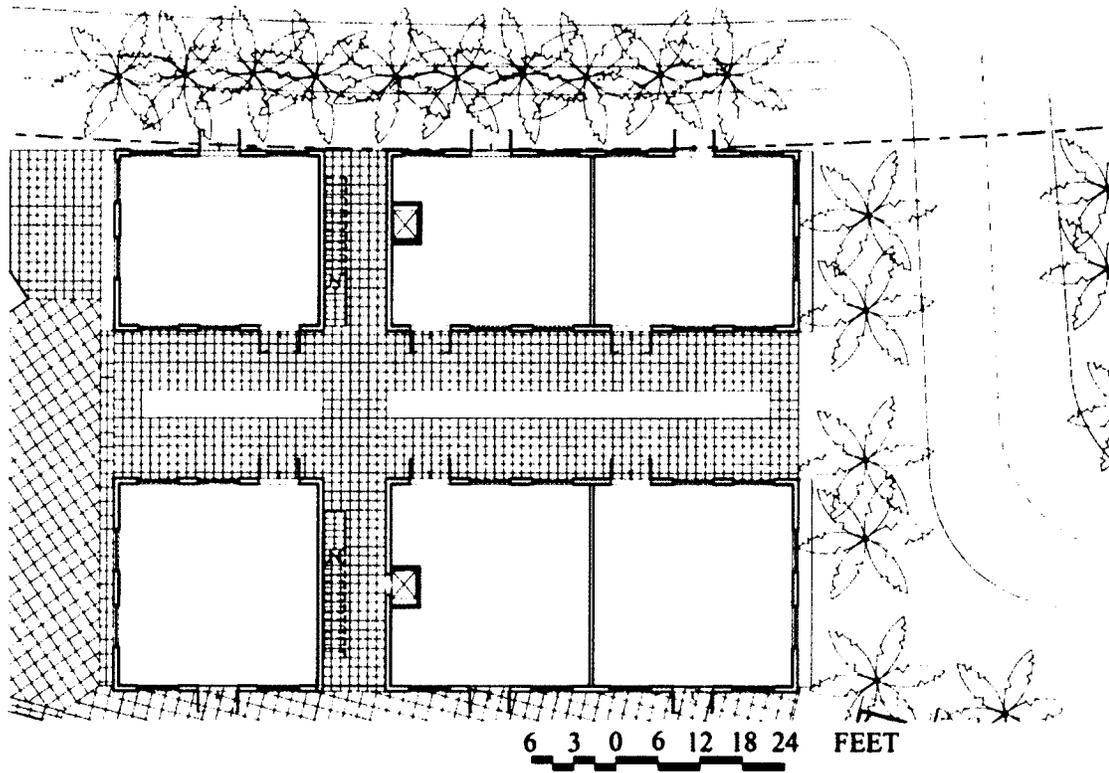


Figure 34 – Main Level Plan – Retail Stores (Image by Author)

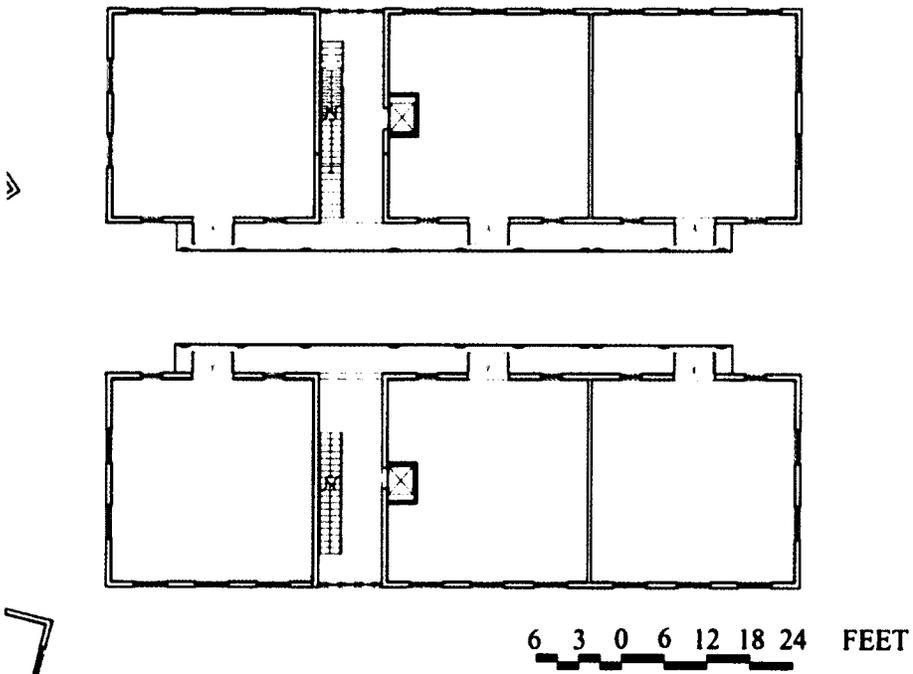


Figure 35 – Second Level Plan – Offices & Businesses (Image by Author)

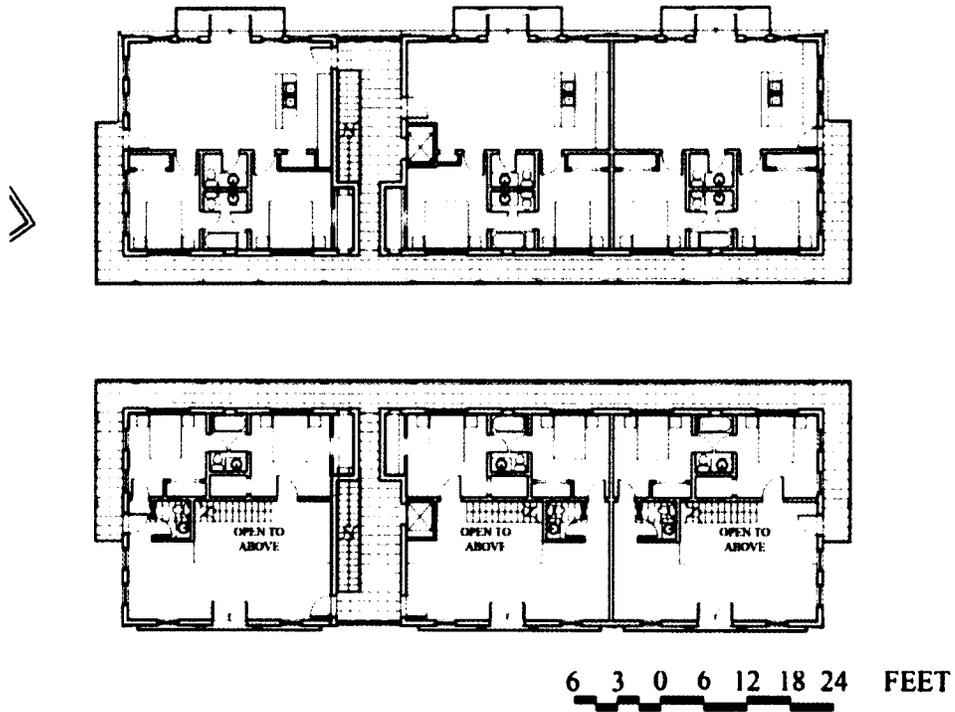


Figure 36 – Third Level Plan – Single Storey Residences (Image by Author)

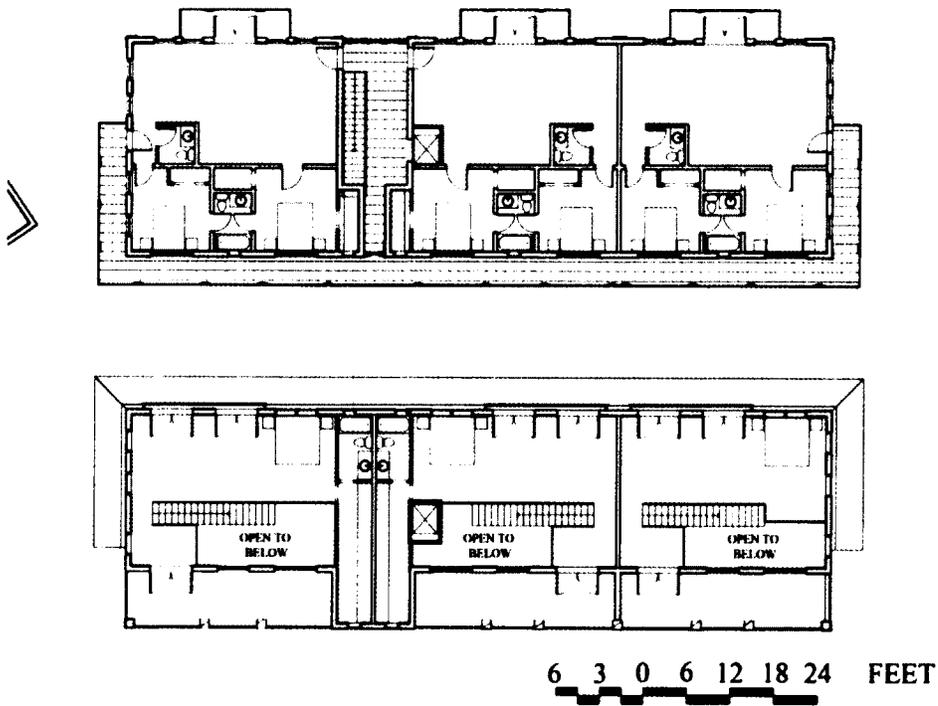


Figure 37 – Fourth Level Plan – Single Storey Residences fronting street, with double storey residences fronting the main square (Image by Author)

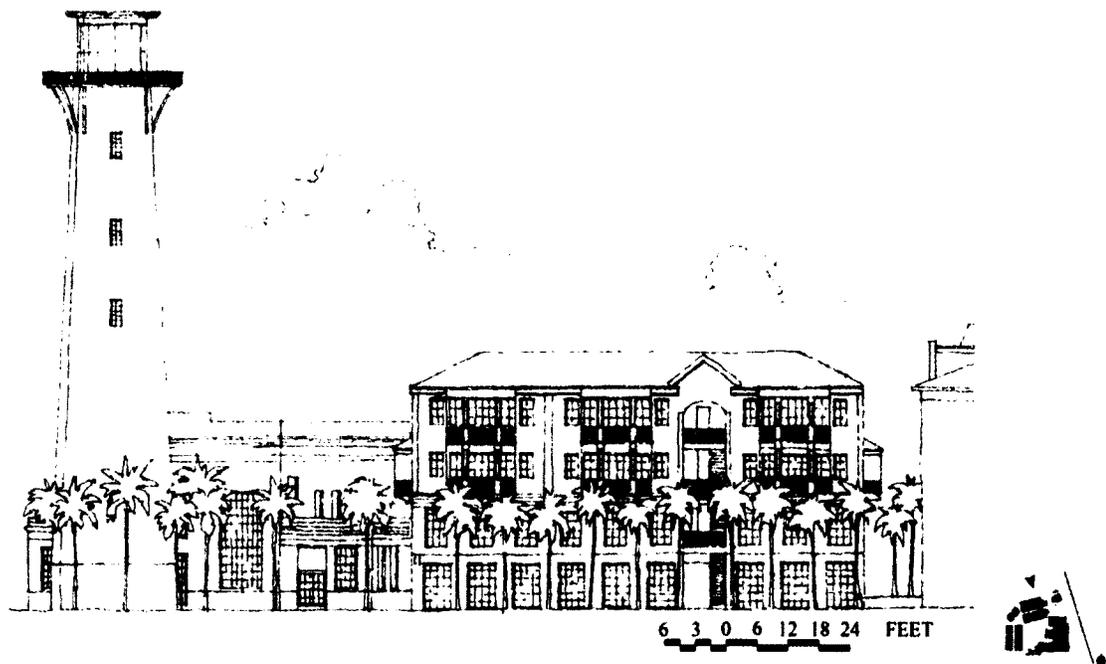
The structure consists of exterior brick load bearing walls in addition to interior masonry walls structurally adequate to carry internal loads. The exterior surfaces of the ODPP's urban block reinforce the idea of the city's history, borrows elements from the existing urban artifact located on site, addresses the city's need of a more urban facade, and last but not least, is a reflection of a distinct but yet casual community.

The borrowed elements list as follows: use of brick for the exterior finish as well as part of the interior, the window dimensions are proportionate in scale, the divided lites were kept proportionate, the use of brick not only as finished material but as a detail element and last but not least the, the Historic Preservation Association was adamant during the exterior renovations of the ODPP, that any damaged windows be replaced with metal windows, having similar sash and muntin profiles – the new urban village blocks will take that metal element and use it in the balconies.



**Figure 38 – Main Street perspective from Route 60 looking east (Image by Author)**

A more urban façade is generated through the use of clear equal dimensioning along the exterior elevations. Brick columns divide the façade into their true units within the interior. Brick cornices and balconies delineate each level. Facades are the interface between buildings and streets – they make up the face of the buildings, exposing the most expressive qualities of a city block (Grobinski November 10, 2012). A facade's main function is to communicate – depicting the design organization, uses and intent of the interior.



**Figure 39 – Front elevation illustrating the vertical and horizontal elements from the exterior (Image by Author)**

The elevation pattern suggests the (proposed, if not already striving towards...) city fabric, where one deals not with many attached buildings and disorganization but a shift towards clear form and direction. Building surfaces at the front elevation are in contrast with the building surface (façade) on the central space. The single attached

balconies at the front get replaced with full length balconies connecting the buildings entirely at the central space.

The basic idea behind the section of the building is to create a dialogue between the street, the block, the central space, and the main square. An inviting and urban dialogue is created at the front street, carving out the main level 5'-0", providing shelter from sun and other elements and extending the private levels out by extending 4'-0" deep balconies into the street. The central space is intended to be semi-private but heavily used. The main mass leaves a 21'-0" space with 4'-0" deep balconies encroaching and tightening the gap above leaving a 13'-0" clear space above between balconies on levels 3 and 4. The main square façade is intended to push activity out into the square as much as possible, hence the vertical façade and the conscious decision to not recede the main level as done on the front façade (Figures 40 & 41). This allows for retailers and restaurants to set up any exterior activities (patios, clothing racks etc.) expanding into the square and utilizing the space as intended.

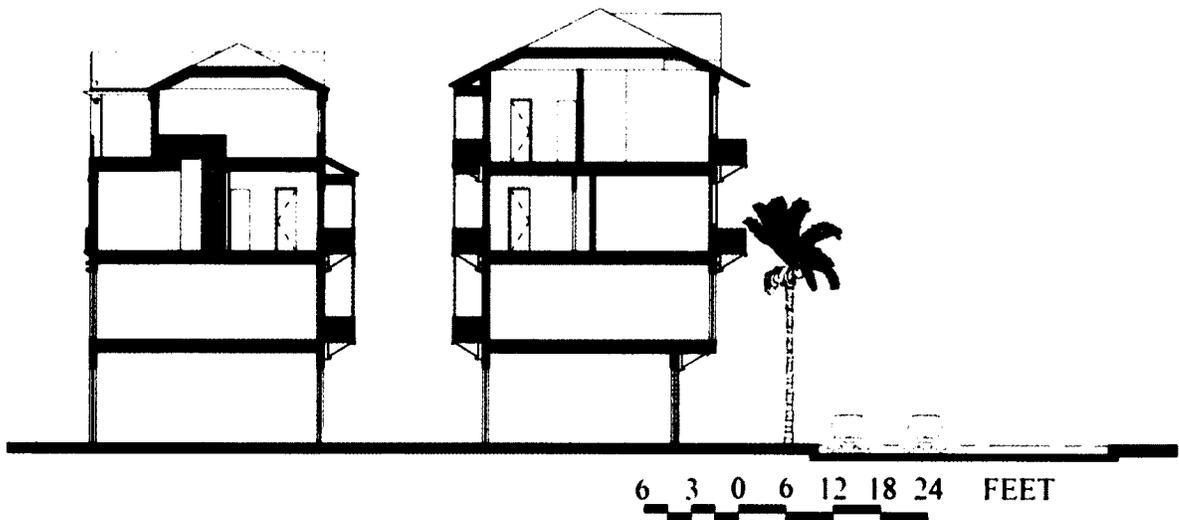


Figure 40 – Urban Block of study section looking west (Image by Author)

This can be viewed as the proposed urban village design function controlled by three interrelated scales. The first scale relates the block to the scale of the city. The second scale explains the inner structure of the urban village. The third scale relates to the proposed created community. These three scales are balanced, informing one another and non-coherent when viewed individually. Finally, the side elevations are bold outlines of their space structure in section.

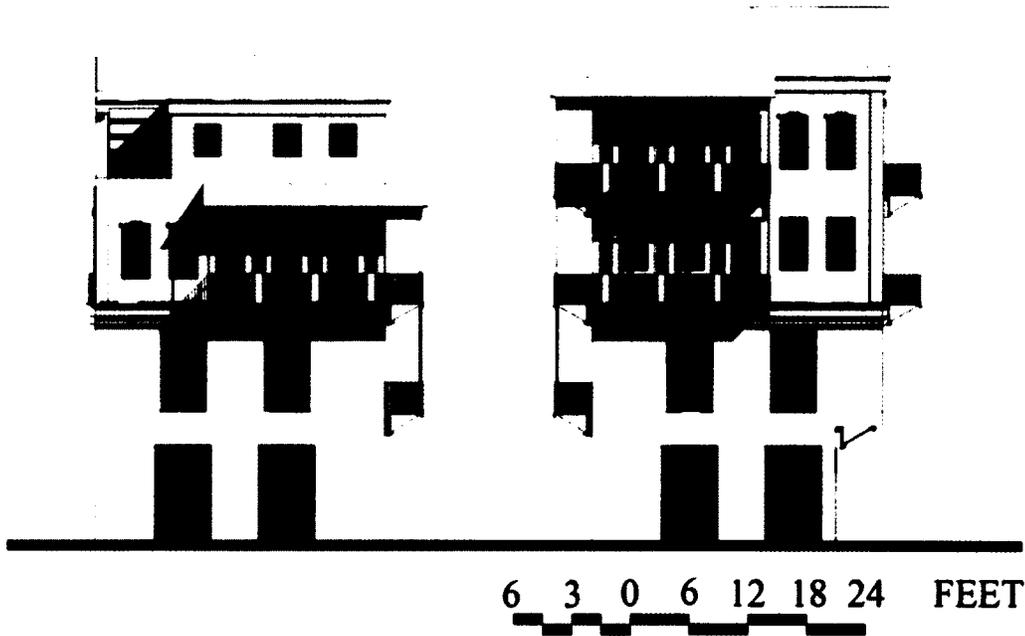
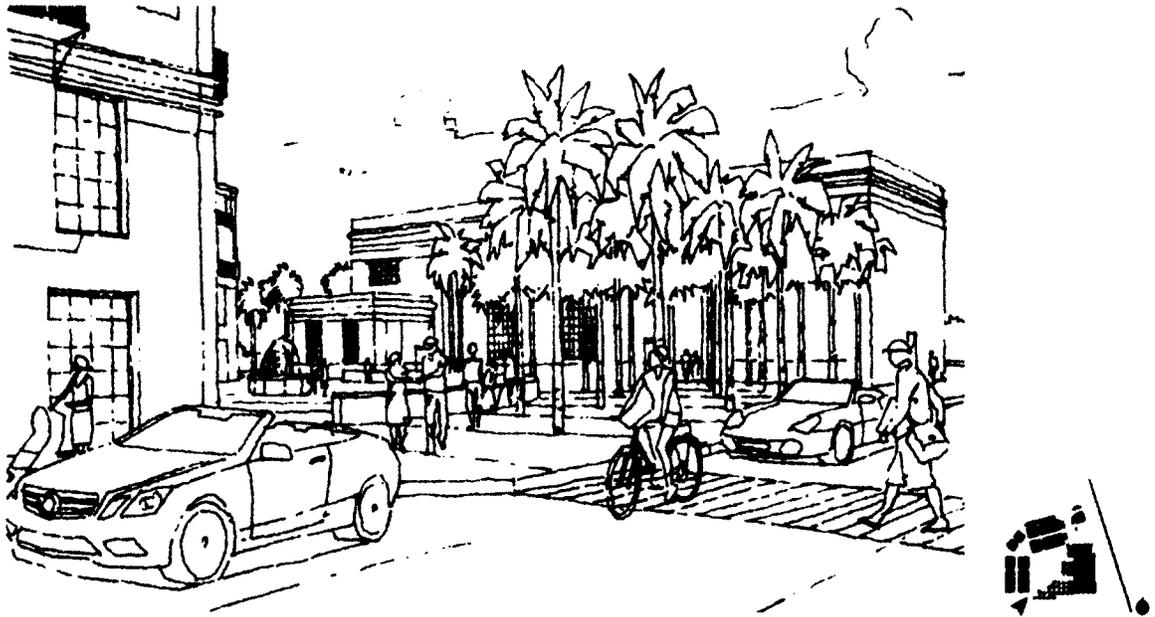


Figure 41 – Side elevation of studied Urban Block (Image by Author)

The ultimate goal of the ODPP design proposal is to attain a certain urban quality that the existing urban artifact hints at but has not yet been applied through architectural elements. The completed square, with all its elements, should be one of the (new) monuments of central-eastern Florida architecture. Along with the urban village that intends to cultivate seeds of an urban existence whose promise was never fulfilled.



**Figure 42 – Site Perspective standing at south-west corner looking at palm grove and existing ODPP beyond. (Image by Author)**

## **Postscript**

'Culture' is arguably one of the richest and most complex concepts in any language. (Monclus et al 2006, 22). There are many definitions and the term is expressed in infinite possibilities. When it comes to architecture, culture is material and symbolic. Places themselves, the architecture, their townscapes as well as their street life, have all become sources of inspiration in the creative architectural process. Some refer to it as magic, the multiple social purposes of urban villages, is what is missing which entitles; bringing people together, building community, causes reaction and interaction between people, to achieve together as a village what humans might not alone. As such, these urban pockets should encourage socialization and participation of people in the community. Understanding what the most critical factors are, and knowing what has been tried and has worked or failed in a variety of situations is most likely the best tool we have to learn from when it comes to urban environments. Vero Beach's Old Diesel Power Plant site is in desperate need of attention; its potential to be the downtown's anchor is apparent, but yet the city and community struggles to find anyone that is willing to jump start its engine.

The new ODPP urban village is connected to many existing downtown routes, spaces, happening spots and flow. The sites integration is virtually seamless and effortless given the existing key site location. The placement of new buildings on the site connects the interior courtyard to the exterior. The site itself is a great success; the placement of the new proposed buildings would give the street character inviting pedestrians into the site. Being an already established anchor for historic downtown, densifying the site with

housing and a market square to make it a 'go to' place and further more creating a central feature out of the existing ODPP using its unique character and history as the initial attraction.

Giving Vero Beach the central cultural hub it needs for daily activities, businesses, yearly events, festival and proposed residences as well as a place for pedestrian to feel comfortable to linger and spend some time enjoying the outdoor environment that is sometimes taken for granted in Florida, would transform historic downtown into a happening place. The best new urban villages need not to be the same as the old, but use the old as models as they have much to teach, and in turn, new delightful urban spaces will surely follow. By following the already thought out design challenges of squares, urban villages and adaptive re-use projects – the ODPP site could be the next prime example of an adaptive-reuse project that helps revitalize cities such as Vero Beach in hard economic times as these.

The obvious challenges that this proposal faces is the initial substantial investment that would have to be made. The existing ODPP building itself is intimidating as it stands alone, empty, isolated and not obviously inhabitable to the casual observer. The architectural suggestion in this proposal for the ODPP site are a leap of faith for any investor to take on, but in reality are necessary for the site and for the habitation of historic downtown Vero Beach. This new urban typology for the city is very much different to what is existing in and around downtown, it is a unique proposal with architectural elements that complement the existing ODPP but not the remaining downtown. Getting to the proposed program of the existing ODPP being a restaurant could be a struggle.

Operating a single entity like a restaurant in the ODPP would entail very expensive overheads (air conditioning, rent, power, staffing, etc.) and, even if very successful, would take a long period to become profitable.<sup>13</sup> Further, maintaining adequate traffic during non-season periods would require a great deal of marketing and promotion as well as long operating hours to capture traffic as it occurs.

Perhaps the ODPP could be operated more as an event venue – mini-convention center. It could be designed so tables, seating, kitchen operations, etc. are all available to be used for an event catering. Receptions, dinners, celebrations, etc. It could also be the center or an adjunct to other events such as gallery nights (Wednesdays during season) Downtown Friday festivals, art and car shows. This greatly reduces operating costs of staying open and staffed when there is precious little traffic. A similar suggestion is Sunday Brunch at the Power Plant, catered by different local restaurants/caterers each week. Establishing and maintaining a regular Sunday Brunch service can be tremendously expensive and risky for most restaurants. However, if a restaurant schedules to prepare their signature dishes for a couple hundred patrons once every two months or so, and the ODPP provides venue, wait staff, bar, marketing, so on and so forth. Brunch at the DOPP can become a weekly tradition, but different every week.

Spending some time in the neighborhood around the ODPP, the number of businesses that have opened in the area recently is quite healthy. So, it IS a much better environment for setting up a town square with the ODPP as a central feature; especially in an event based occurrence like Downtown Friday, Gallery Night, Brunch etc. The

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<sup>13</sup> Promotional lead campaigns means restaurants open to near full or overflowing. The community that usually wants to be the first to have an opinion and be able to share it as part of their cache ensures this. Trendy restaurants sell the art off their walls functioning as art gallery for dealers often for test marketing.

annual Soup Bowl charity event would be ideal in the ODPP.

The proposed new urban typology shall cooperate, and not compete with the already established downtown activities and established environment. There are plenty of events in Vero such as Sunset Saturday, Downtown Friday, Under The Oaks, Sidewalk Sales, Farmer's Markets, and Hibiscus Festival, to name a few. For whatever reasons, these things seem to become politically competitive for the attention (and money) of the population. The ODPP can NOT become involved in the politics, and should be an exemplary neighbor, actively advertising EVERY event, and participating when possible. Transportation to and from the ODPP during events can be very successful, with the site being located where it is.

The proposal for the site institutes a completely new typology for the city of Vero Beach, moving it towards a more sustainable city. Vero Beach is a low density city with buildings no more than four stories tall. Of note, the Osceola Apartments are comprised of three relatively tall storeys and provides an early typological precedent of apartments above street-related retail. These are aligned with a taller and denser downtown typical of 'taxpayer strip retail' development of the 1930's downtown core. Now most of the land developed in and around downtown, is in a car-dependent low-rise pattern that not conducive to a sustainable future. The only real option for the city's growth, while promoting a more populated urban core, is to build upward. Sprawling out into infinity as in past practices, is not a sustainable option for building cities or communities.

In the proposed design, the urban core is enhanced by a mixed-use strategy whereby commercial and residential units accommodate transient 'square-oriented retail' during the high season and more permanent – leasable space for year-round occupancy or

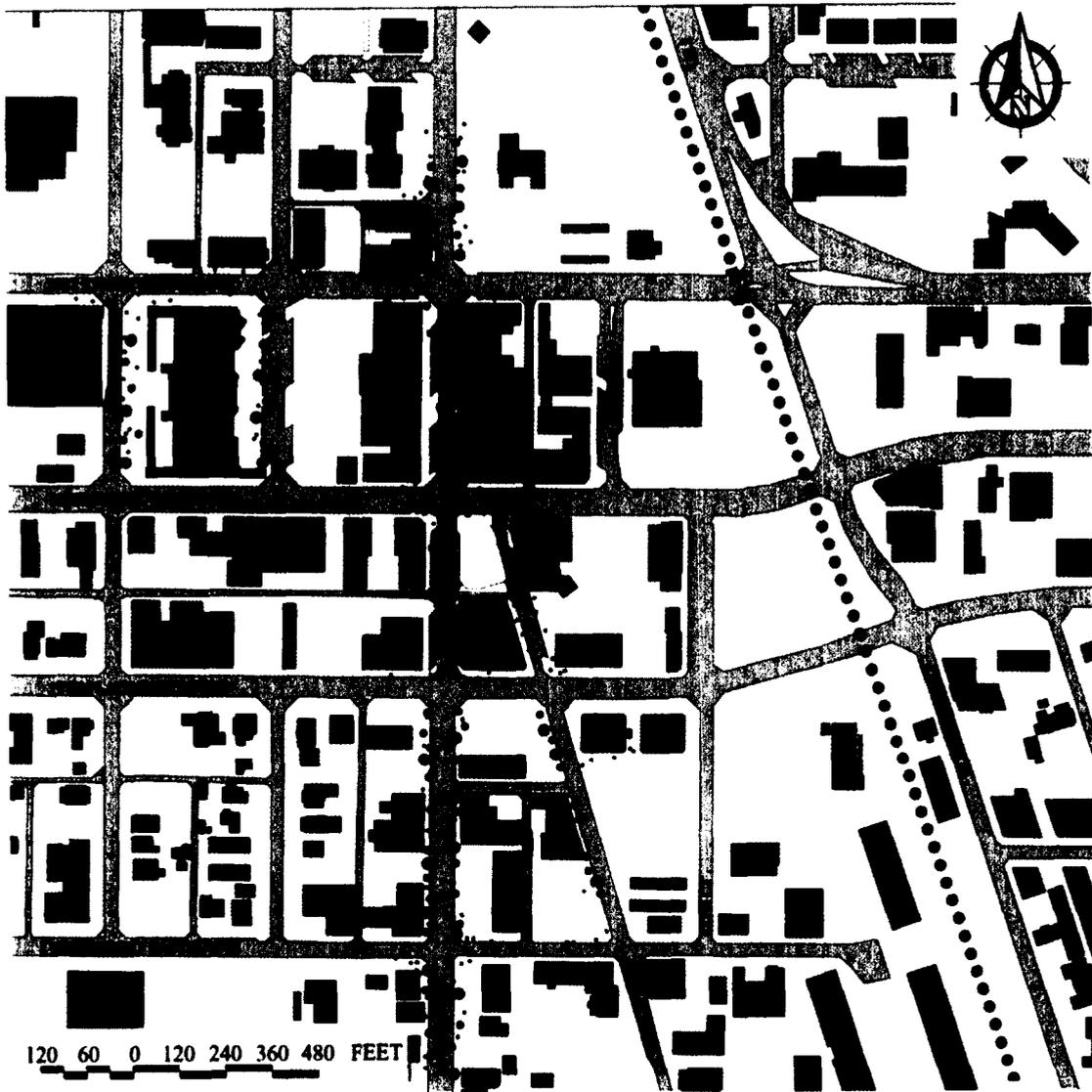
for the off season. Both are then transient; on-season 'transient' displacing the other off-season 'more permanent'. The units' designs allow for this type of flexible inhabitation with 2nd floor offices related to retail spaces below made available to local professionals and merchants. The upper units would allow for an intensively inhabited upper unit during off-season while working on retail preparations. On-season the lower spaces will accommodate increased traffic as merchants are able to derive more business through due to the increased activities in the square

During the on-season when festivals, performances, exhibitions etc are underway, the individuals and parties responsible for putting on the shows and/or exhibiting their work will have to be accommodated. Canopies for square exhibit booths can be pre-arranged with tent pole sockets configured in the square, allowing for quick erection of booths each with necessary power-pedestals serviced under paving blocks.

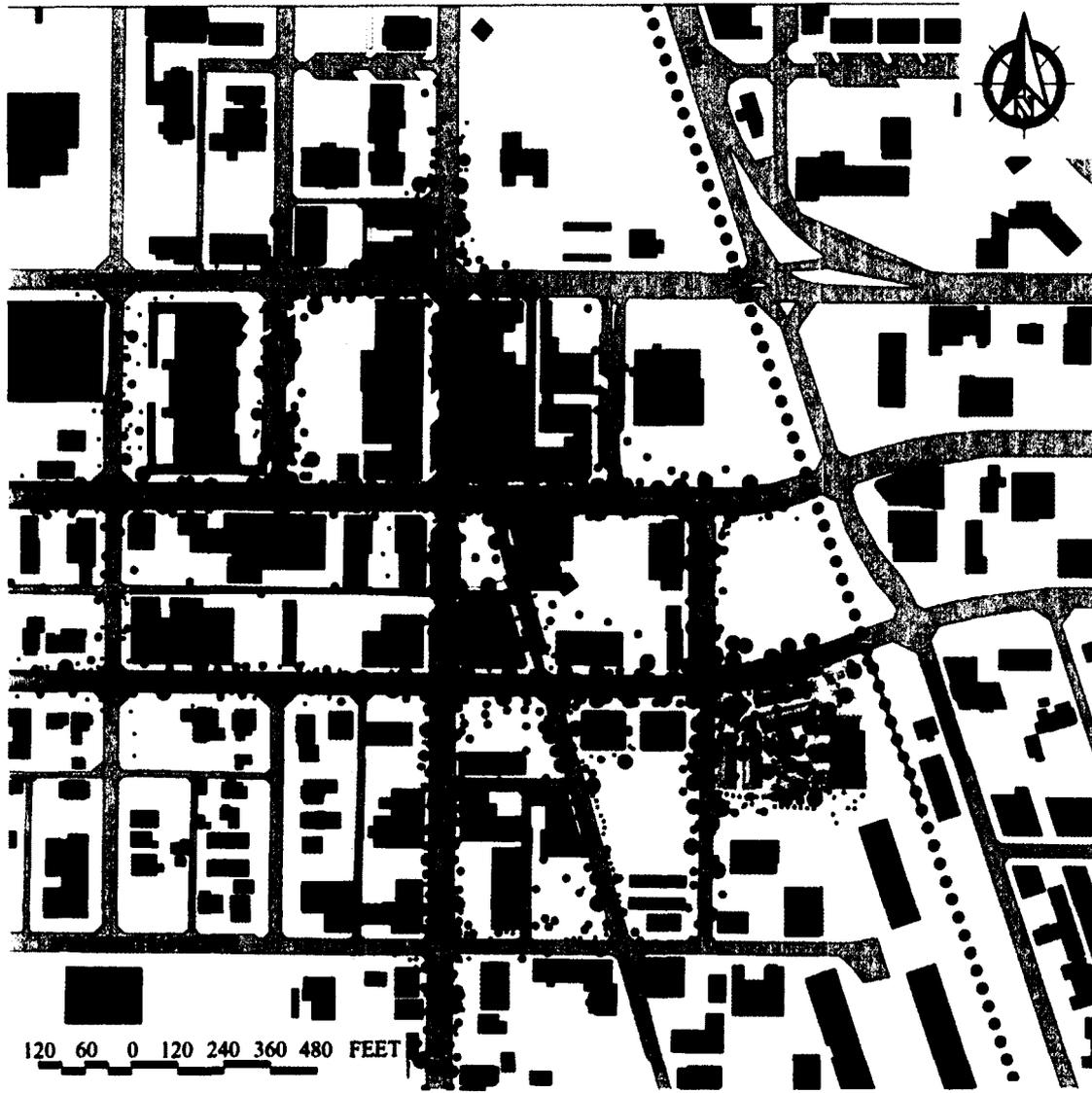
Living arrangements are provided for festival itinerant exhibitors by designated parking stalls with trailer service-hook-ups in the parking garage. This will allow them to make use of these as living-space while they work the festivals in the square. This accommodation is supported by a health club with boutique entrance at grade and exercise rooms and change facilities within the parking level. All festival exhibitors with pop-up trailers would be granted temporary club access for showers and other services. Integrating the health club within the design aims to serve downtown residents and reinforce amenities for users of the future commuter railway that AMTRAK is proposing.

The current pattern of movement in Downtown Vero Beach is car-centric. Traffic calming of the Twin Pairs along with the new urban community being proposed at the

ODPP site – would reinforce the potential to change current movement patterns from car-centric to pedestrian friendly . Figure 43 outlines the current pedestrian traffic as seen mainly on Main Street. The Twin Pairs hinder pedestrian travel. Figure 44 extrapolates from changes through traffic calming of the Twin Pairs by reducing them to two lanes (each way) and allowing for wider sidewalks in front of existing retail spaces, more landscaping, addition (return) of on-street parking, incorporation of public transit and the possibility for non-daunting crosswalks. This would restore the traditional pattern of ‘taxpayer strip retail’ incentives; encouraging the re-development of the ‘Osceola Apartments’ type of 3-storey and higher typology for the traditional core; and allowing for the ODPP urban square proposal to act within a network along with the neighboring streets and sidewalks promoting a walkable, dynamic re-visioned and revitalized old town.



**Figure 43 – Existing Pedestrian traffic movement in Downtown Vero Beach. (Image by Author)**



**Figure 44 – New Pedestrian traffic movement in Downtown Vero Beach with Twin Pairs down to (2) lane traffic providing wider sidewalks allowing for a direct connection (via 19<sup>th</sup> Pl) to the existing Main Street pedestrian traffic. (Image by Author)**

This thesis outlines a proposal for the Old Diesel Plant site that is feasible. The city, having already gathered abundant documentation of its urban core's functions and disfunctions, should be excited and eager to see something come of the Old Diesel Power Plant site. The ODPP site, having the existing Old Diesel Plant, is capable of producing and creating an architecture for the remainder of the site to generate a sense of community and stimulate the, somewhat stagnant, downtown economy of Vero Beach. Densifying the site by introducing a new typology will redefine a cultural hub in downtown Vero Beach, which is just the change and direction that the city is in need of in order to renew and keep its downtown alive. The ODPP is still there but is not informing the other use introduced to the site by this proposal and building a spring-board. The intervention being proposed initiates a new context for a reuse of the ODPP that can work to sustain the ODPP. Cultural hubs are what brings life to cities and sustains them on a deeper level, bringing the community together and building the local economy up. Art, markets and restaurants are the very core of our social life in cities synonymous with squares and their purpose. Culture is what cities are built from.

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