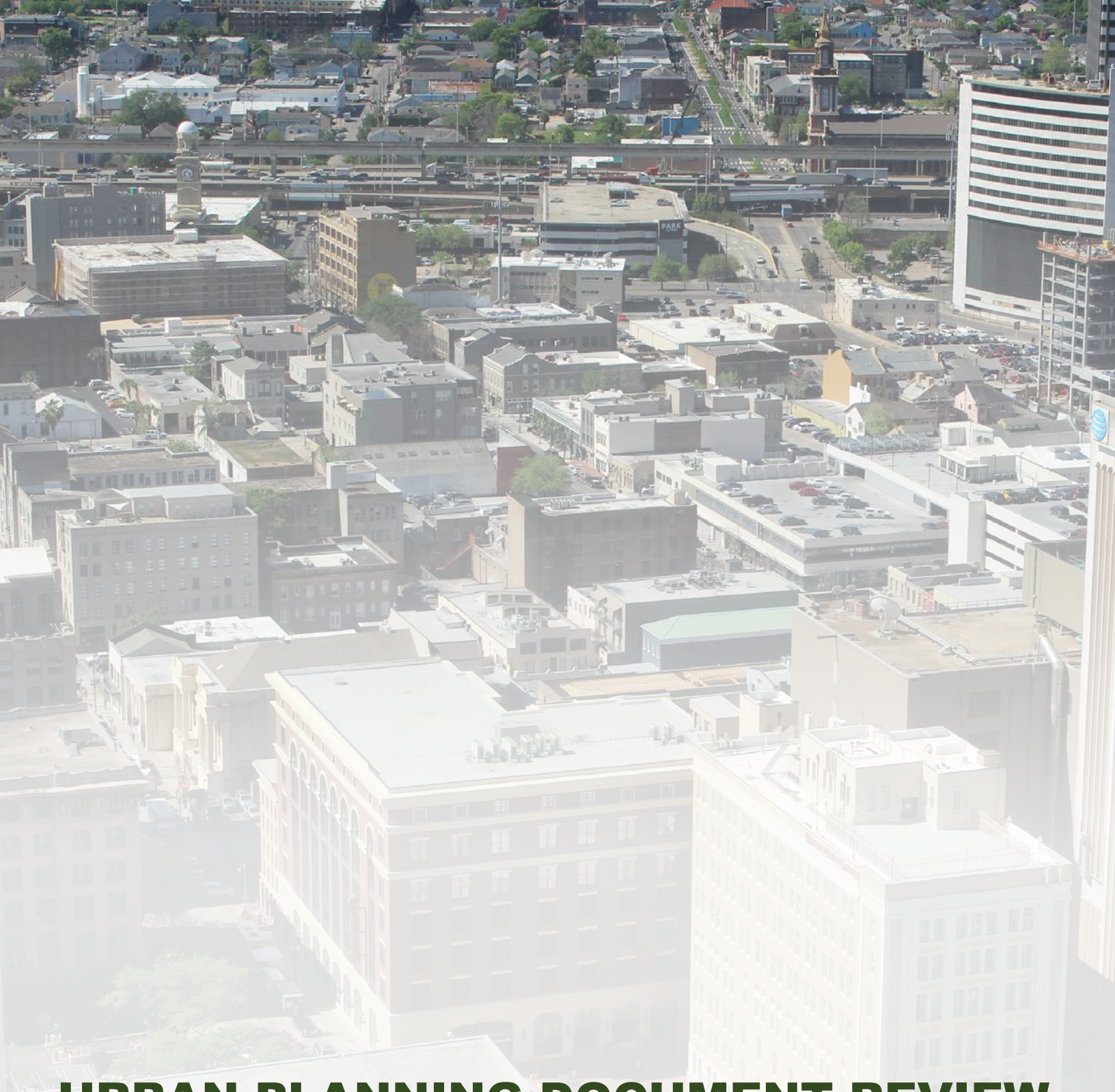

URBAN PLANNING DOCUMENT REVIEW

JULY 24, 2017

Prepared by

H3

for the

DOWNTOWN DEVELOPMENT DISTRICT

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City of New Orleans

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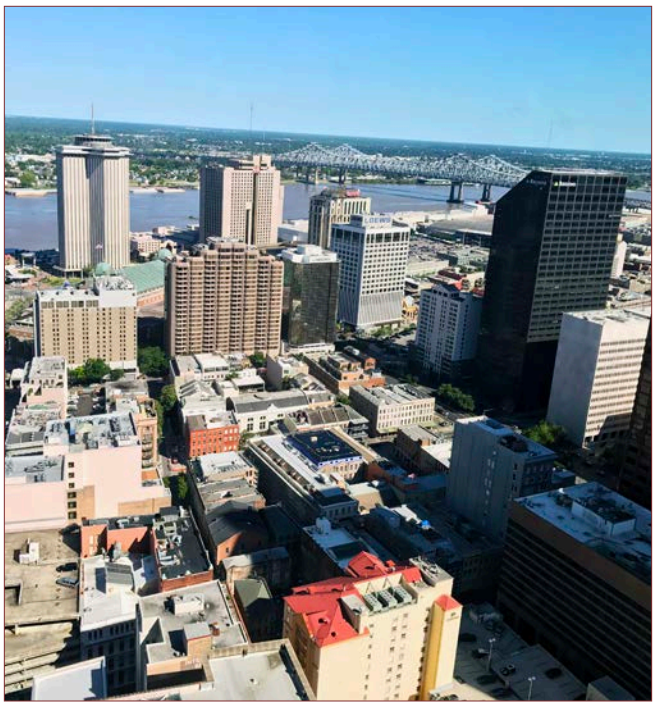
01

INTRODUCTION & PROCESS

Introduction

Downtown New Orleans with its rich cultural, historical, and social significance is unique within the nation. As such, the downtown's long history of preservation of structures and neighborhoods is exemplary. With the post-Katrina years of increasing redevelopment there continues to be both an opportunity for new development and a challenge to and need for the preservation of key historical assets. To date, developers have made good use of various forms and methods of public and private investment to protect existing historical assets. Simultaneously, downtown has seen new infill construction responding to the increase in the demand and marketability of new housing and mixed use developments in the downtown. With these trends there is a resulting challenge to balance growth and preservation such that the unique urban character and amenities, and quality of life in the downtown continues to be enhanced.

During this recent downtown growth phase the City completed an update to the zoning code, known as the Comprehensive Zoning Ordinance (CZO) as approved by the City Council on August 12, 2015. For the downtown much of the CZO was based upon the 2007 Lafayette Square | Upper CBD Height Study as amended in 2009 completed by the Downtown Development District (DDD) with the assistance of a Stakeholder Task Force. The HDLC and various other city authorities have continued oversight of building and infrastructure design and development issues within the downtown. While much redevelopment has occurred within the CZO regulations there have been a number of variance requests and concerns expressed by developers.



As with all zoning codes, there are periodic reviews and updates and the City of New Orleans is completing such a process. As a result it seemed opportune for the City of New Orleans via a request to the DDD to reconvene the original Stakeholder Task Force to consider if there should be any recommended amendments to the CZO for the downtown area. This report records work and recommendations of the Stakeholder Task Force.

Purpose and Study Area

This Urban Planning and Document Review was initiated by members of New Orleans City Council in a request to the Downtown Development District (DDD) to reconvene the 2007 (2009 amended) Height Study Stakeholder Task Force committee to study and review the CZO to ensure it is meeting the objective of simultaneously preserving key historical assets and fostering new development in the downtown area. The Study will serve as a roadmap for identifying key issues and opportunities, and recommendations for amendments to the Comprehensive Zoning Ordinance, and the CBD Historic Landmarks Commission's Guidelines in the downtown area.

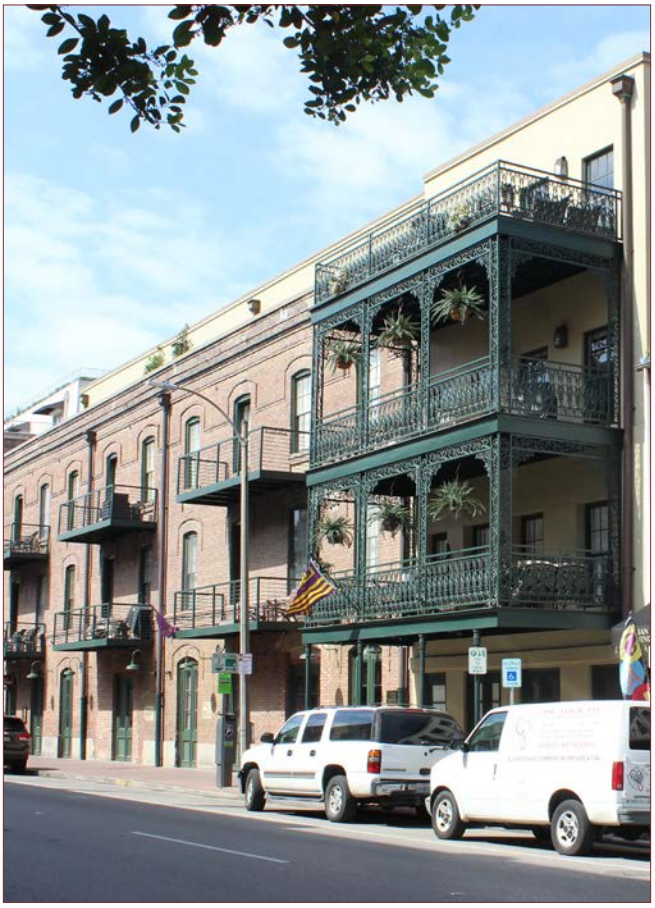
For the purposes of this study the specific geographic area being considered is from the centerline of Canal Street to the Pontchartrain Expressway / Calliope Street, and Convention Center Boulevard to Loyola Avenue. This is an expanded area in comparison to the original 2009 Lafayette Square | Upper CBD Height Study Boundary – which did not incorporate the area from the centerline of Canal Street to Poydras Street, and Convention Center Boulevard to Loyola Avenue.

Study Process

The Consultant, H3 Studio facilitated a planning process on behalf of the DDD that included a great variety of stakeholder engagement; a review of the area designated by the Central Business Districts (CBD) contained within Article 17 of the CZO together with the several referenced articles; including the 1929 Comprehensive Zoning Ordinance, the Interim Zoning District (IZD), the City Building Code, the City Municipal Code, the International Building Code, and the Historic District Landmarks Commission's Guidelines (HDLC); an in-depth analysis of current and past trends, opportunities and challenges in development of the downtown area; the review of recent downtown development proposals; the review of both approved and denied variance requests; the consideration of hypothetical development of one and two story buildings in the area; and an analysis of the current CZO in relationship to the 2007 Lafayette Square | Upper CBD Height Study.

Based upon this investigation a comprehensive set of issues was developed by the consultant and vetted and amended by the Stakeholder Task Force and individual meetings with city and HDLC staff. Based upon the agreed list of issues a precedent study was conducted to identify best practices and a series of recommendations developed. These initial recommendations which included various options which again were vetted and amended by the Stakeholder Task Force and individual meetings with city staff, and a set of final recommendations were developed that are contained herein.

It is fully understood that these recommendations will need a detailed review and discussion by the City Plan Commission, the HDLC Board, and the City of New Orleans. In addition, the City of New Orleans has its designated process for amending the CZO, and as such these recommendations contained herein are subject to change. It us the hope and request of the stakeholder Task Force to be included throughout the CZO amendment process.



Stakeholder Engagement

Throughout the study process H3 Studio met with the reconvened 2007 Height Study Stakeholder Task Force as well as many additional stakeholders, staff and resource providers, city officials, and individual task force members to ensure a great diversity of opinion was solicited and entities interests represented. Thus, the study is the product of thoughtful engagement conducted over the course of seven (7) months. This process effectively utilized the knowledge and expertise of New Orleans citizens, City officials, and stakeholders to create the recommendations contained herein. This study utilized the following engagement activities:

- **City Staff and Elected Officials Meetings:** The consultant H3 Studio conducted individual work sessions with city staff, elected officials, and HDLC. A total of ten (10) meetings were conducted throughout the process. The purpose of these meetings was to collect directed input from the city staff and elected officials on key issues and priorities with the City, and assess the emerging issues regarding the existing Comprehensive Zoning Plan.
- **Neighborhood Associations and Stakeholder Focus Groups:** Similar to the City Staff and Elected Officials meetings described above, the consultant H3 Studio conducted individual focus group meetings with various neighborhood associations, business and property owners, and developers. A total of seven (7) Focus Group meetings were conducted throughout the process.

- **Client Group Work Sessions:** Throughout the process, the consultants met with representatives from the Downtown Development District on nine (9) separate occasions to work through technical planning and strategizing sessions.
- **Task Force and Staff & Resource Providers Sessions:** Throughout the entire process, the consultants concluded each on-site trip with meetings with the Task Force and Staff & Resource Providers. During these nine (9) sessions the consultants took each respective group through the planning process, evolution of Preliminary Issues, and Draft Consensus Issues and Recommendations in order to gain feedback and consensus for the information being discussed.
- **Meetings with Individual Developers, Stakeholders, and Government Officials:** Throughout the process the consultants conducted 35 one-on-one meetings with Developers, Stakeholders, and Government Officials.

How This Study Should Be Utilized

The information contained within this document builds upon the existing 2007 (2009 Amended) Lafayette Square|Upper CBD Height Study and the current Comprehensive Zoning Ordinance and is in no way meant to stand as a replacement of current policy — rather, it is intended to serve as a guide for potential amendments. The City Council, City Planning Commission, Downtown Development District, and Task Force played a critical role in the planning process and developing these recommendations however, they still need to be vetted through the required city planning process.

Thus, this study should be used as a tool to indicate the expressed concerns of those various stakeholders and entities within the district. The study took the approach of analyzing what was in the current CZO and stakeholder concerns in order to propose potential improvements,

additions, and modifications. It presents identified issues, proposes recommendations, and qualifies recommendations through case studies for the City, which are reasonable, feasible, and important to the welfare of the entire district. The value of this study will be measured by the degree of success in responding in a balanced manner to the concerns of developers and the neighborhood through implementation of recommendations.

This study recognizes that there is no easy solution to making the suggested recommendations and that it will need to be a continued collaborative effort amongst government organizations, neighborhood associations, community members, etc. in order to successfully implement. The effectiveness of the study is directly related to the continual recognition of the various ways in which the multiple public entities need to work in seamless partnership in order to allow for consistency across the various public agencies.

In addition during the study process a number of larger economic development and planning issues were expressed as concerns. Within the limitations of a Height Study these issues cannot be addressed but for the overall continued downtown development, the issues should be addressed. The next evolution of the study suggests the creation of a Redevelopment Strategy/Plan to outline how to maximize the potential of the district and market Downtown living (*see section 04*).

Engagement Dates

Task Force Meeting 01 | November 3, 2016

Task Force Meeting 02 | December 8, 2016

Task Force Meeting 03 | January 12, 2017

Task Force Meeting 04 | March 31, 2017

Task Force Meeting 05 | April 26, 2017

Task Force Meeting 06 | May 24, 2017

Staff & Resource Meeting 01 | November 3, 2016

Staff & Resource Meeting 02 | December 7, 2016

Staff & Resource Meeting 03 | March 30, 2017

Staff & Resource Meeting 04 | April 26, 2017

Focus Group Meetings | Nov 30-Dec 1, 2017

Focus Group Meetings | January 18, 2017

Focus Group Meetings | March 29-30, 2017

Focus Group Meetings | April 25-26, 2017

Focus Group Meetings | May 23, 2017

02

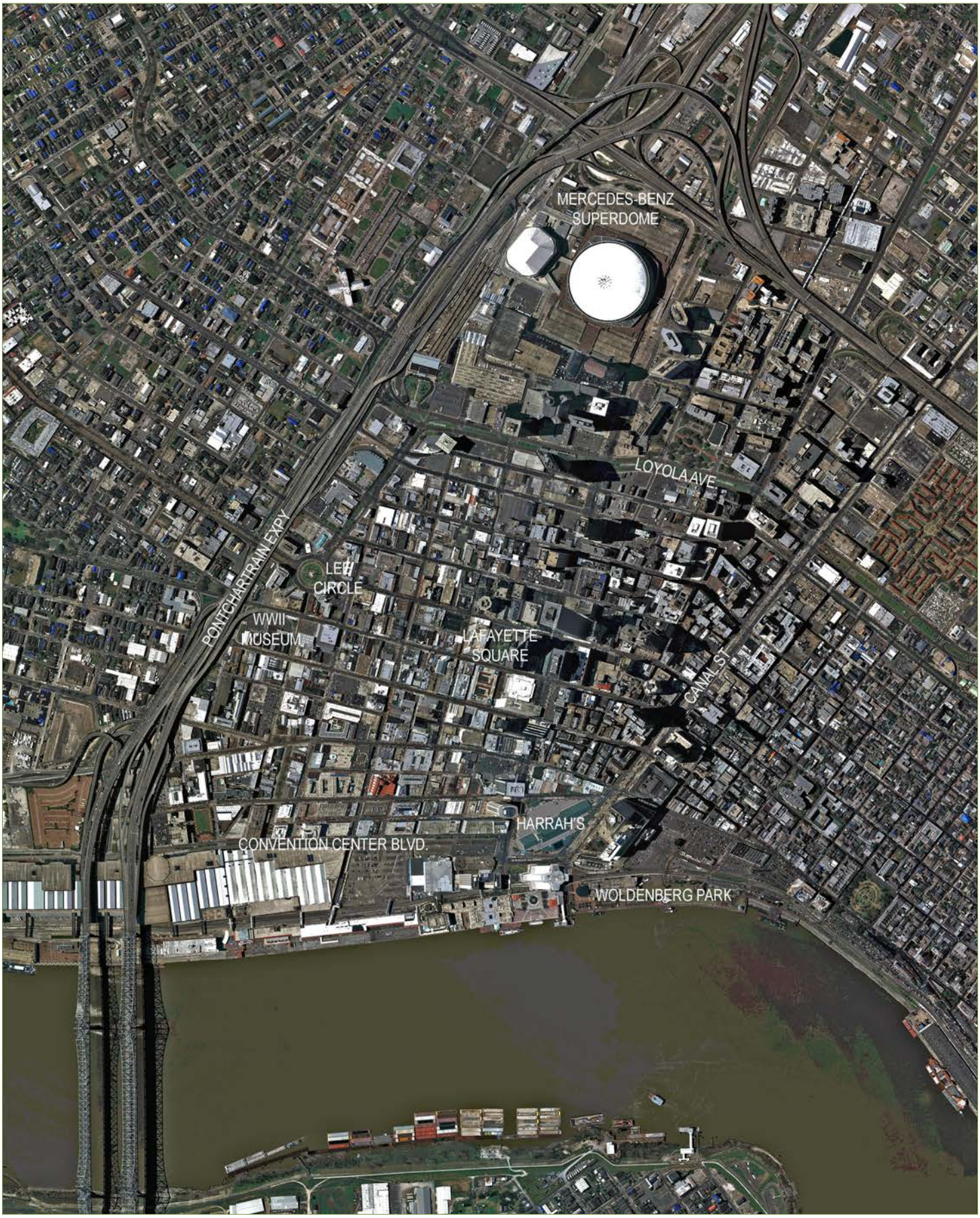
ANALYSIS & REVIEW

Introduction

This section serves as a summary of several documents that underlie and inform decisions being made regarding height in the CBD. During this review process of several documents including, but not limited to the original 2007 Lafayette Square|Upper CBD Height Study, the New Orleans 2015 Comprehensive Zoning Ordinance, the Interim Zoning Code, Historic Landmarks Commission's Guidelines, New Orleans City Municipal Code, New Orleans Building Code, variance proposals, and several other documents and articles had an impact of the various issues and recommendations in Section 03 of this document.

Due to the expanded project boundary from the original 2007 Lafayette Square|Upper CBD Height Study, some specific evaluation and analysis of particular site conditions were performed of the additional study area. Maps created from this investigations are included below.

These maps and collected research was then used to help facilitate discussions with various government officials, stakeholders, developers, Staff and Resource Providers, and the Task Force. This process was repeated and revised over the course of seven (7) months through approximately 35 meetings, the information contained within this document and appendices reflect the information gathered and created over the course of the study.

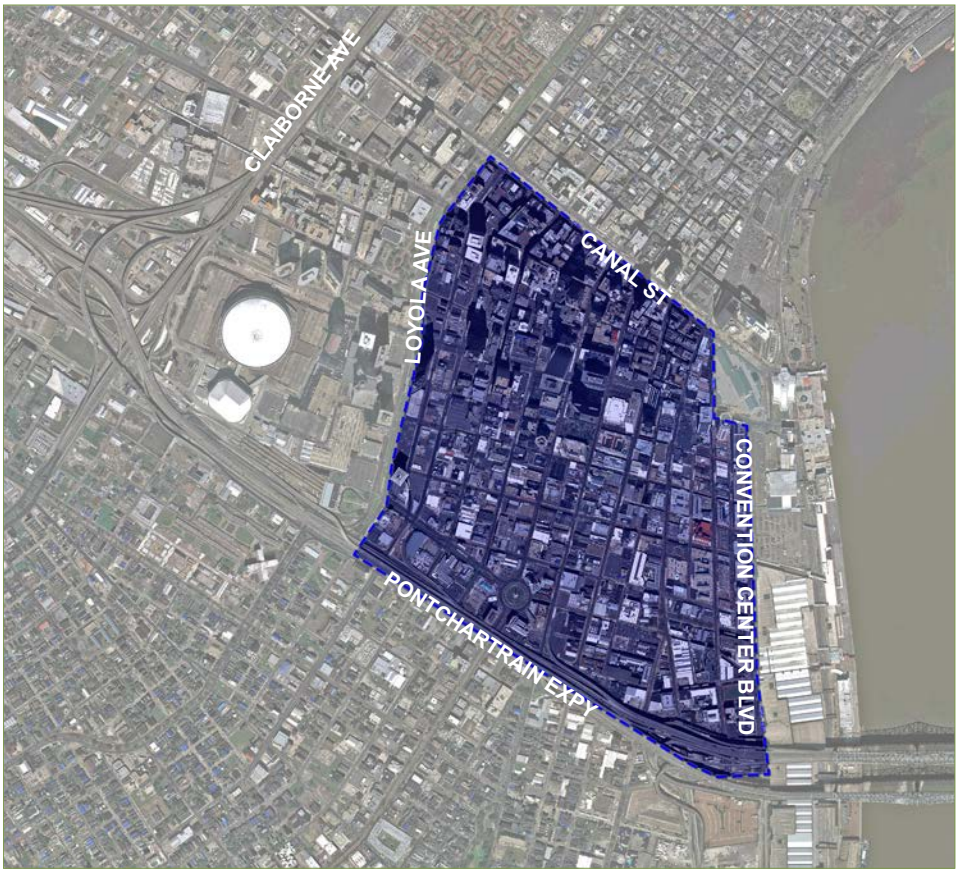

MERCEDES-BENZ
SUPERDOME
LOYOLA AVE
PONTCHARTRAIN EXPY
LEE
CIRCLE
WWII
MUSEUM
LAFAYETTE
SQUARE
CANAL ST
HARRAH'S
CONVENTION CENTER BLVD
WOLDENBERG PARK

Site Analysis | Location & Boundaries

AERIAL

2015 COMPREHENSIVE ZONING ORDINANCE BOUNDARY

Iberville Street (north), Mississippi River (east), the Pontchartrain Expressway (south), and Claiborne Avenue (west)



2016 URBAN PLANNING DOCUMENT REVIEW BOUNDARY

Canal Street (north), Convention Center Boulevard (east), the Pontchartrain Expressway (south), and Loyola Avenue (west)

2007 H3 HEIGHT STUDY BOUNDARY

Poydras Street (north), Convention Center Boulevard (east), Pontchartrain Expressway (south), and Loyola Avenue (west)

Site Images | Contextual

ROOFTOPS CBD


VARIOUS BUILDING HEIGHTS


HEIGHT VARIATION WITHIN THE CBD

STREETSCAPE

MIXED-USE

STREETSCAPE

Site Analysis | 2007 Lafayette Square | Upper CBD Height Study

2007 MAXIMUM BUILDING HEIGHTS

The following section contains section of the 2007 Height Study that should be considered for incorporation into the any future revisions to the CZO and other documents.

- 3 to 5 stories & 65 ft
- 6 stories & 75 ft
- 10 stories | 6 story setback
- 10 stories & 125 ft
- 15 stories & 185 ft
- Unlimited

3.3. Policy Recommendations

The following recommendations should be utilized to amend relevant portions of the City's Comprehensive Zoning Ordinance and the Central Business District's Historic Guidelines relative to the block-by-block recommendations following these policy proposals.

3.3.1. Consensus Plan

The HDLC and CPC should reach consensus on a height, zoning, land-use and historic district plan for the study area in order to minimize appeals to City Council and give greater credibility and clarity to the development process.

Going back to the consultant's initial findings of the research phase, the largest frustration for the development community and city agencies emanate from a fundamental lack of clarity surrounding development rules and procedures for the study area. A single plan, agreed upon by both the CPC and HDLC, would assist greatly in resolving these conditions and negate any potential appeals to City Council.

3.3.2. Variances

Variances should be granted only after extensive public and citizen review, if at all.

The perception that New Orleans is "run on variances" has contributed to the lack of clarity and the confusion for the developer and community alike. Should this report be adopted with these recommendations, variances should be only considered in extraordinary circumstances and, then, the historic value of the neighborhood must be the highest priority.

3.3.3. Single District

A single district that comprises height, zoning, land-use and historic designation should be established for the study area. New boundary lines should be established for the various existing adjacent downtown zoning and historic districts.

As the city embarks on a large-scale master-planning effort it may be an ideal time to simplify the zoning of the Central Business District (fig 37D).

3.3.4. Design Guidelines (fig 37B)

Design guidelines should be authored that oversee massing articulation, lot and block patterns, and quality of construction and materials.

This is a complimentary effort to this study and one that will assure the district that the new development it will receive will be of high quality and respectful to the vibrancy and history of the area. A well-designed building can, generally, be significantly taller while still managing a contextual appearance. Height recommendations made in this proposal assumed well-designed, quality development.

3.3.5. Code Enforcement (figs 37A, 37C)

In order to preserve the historic character and economic value of the study area, the city should increase code enforcement efforts – making "demolition by neglect" rare.

Neglect is a popular strategy on the part of land owners set on redeveloping historically-rated structures. Code enforcement makes this a difficult enterprise while immediately raising the appearance and perceived viability of the neighborhood. Arguably, a short-term solution, the long-term effects of community appearance (and safety) cannot be understated.

3.3.6. Redevelopment Plan

The potential of this district should be maximized through a coordinated redevelopment strategy/ plan and by marketing downtown living as an alternative, sustainable lifestyle.

Downtown urban areas across the nation have experienced a renaissance in recent years. The most successful have authored a detailed redevelopment plan that explicitly addresses design quality and planning strategies that accommodate astute economic analysis and incentives. The appeal of living a more active, sustainable lifestyle has been the impetus for much of this downtown renaissance and New Orleans is poised to capitalize on the trend.

3.3.7. Parking and Transit

A redevelopment plan should be authored that coordinates access, circulation and parking needs with the achievable bulk demonstrated in this study.

It is crucial to have a progressive access, circulation

Site Analysis | 2007 Lafayette Square | Upper CBD Height Study

3. Height Recommendations

and parking plan to deal with an increase in population and the maximization of mass transit and other alternative means of transportation if this area is to become a vibrant, sustainable community.

3.3.8. Incentives

New development on vacant land that adheres to established design and development recommendations should be incentivized and promoted. All incentive programs should be user-friendly.

Historic preservation tax credits have provided the incentive necessary to see an envious amount of restoration and adaptive reuse in the study area. Unfortunately, since these incentives only accompany historic structures undue pressure has been placed on the historic building stock without any development occurring on vacant or underdeveloped land. Further, the process required for many incentive programs presents an arduous and daunting challenge, creating another barrier between the study area and economic progress.

3.4. Design and Development Recommendations

3.4.1. Contextual Approach (fig 38B)

A contextual approach should be taken to new development within the study area to ensure that the maximum value of the historic district is leveraged.

New development relies heavily on the attractiveness and character of the existing community to enhance the residential and commercial markets. Community authenticity is paramount in the projected success of new development and, subsequently, the underwriting of financing for such projects.

3.4.2. Unlimited Height Areas (fig 38A)

Unrestricted height should occur along Poydras Avenue and the Loyola/Rampart Corridor with a stepped height envelope to relate to the proposed building heights along Baronne Street. In these areas, floor area ratio (FAR) should take precedence over allowable height.

The desire for height along these corridors is well documented. What is often overlooked, however, is that the FAR (fig 38D) is inconsistent with the perception of unlimited height and the FAR must take precedence. As was mentioned earlier, these ratios should be comprehensively reviewed and confirmed as appropriate for the kind of development desired in these areas.

3.4.3. Transfer Rights (fig 38C)

Developers not utilizing their building allowance in the study area should be allowed bulk transfer rights (FAR) to areas of unlimited height in the downtown area.

Once a height plan is adopted, land values in the community will be calculable, so to will the value of each floor in a proposed development. Developers willing to forfeit a portion of their allowable height should be rewarded with the ability to transfer unused development potential to areas of unlimited height, provided FAR requirements are satisfied.

3.4.4. Height Transition (fig 38E)

The historic core of the community and corridor legibility should be further protected with a gradual transition of building height from the periphery of the district to its interior.

This is a straightforward approach when analyzing the entirety of the study area, but may lose its coherence if individual buildings in these transitional zones do not complete a full build-out or attain a waiver to disregard the importance of the scalar shift.

3.4.5. Historic Preservation/Restoration

Facilitate the widespread restoration and preservation of existing historic structures that contribute to the district's character.

The development value of the community is also its biggest constraint: the historic fabric. A significant amount of renovation has occurred in the study area, but many rated structures continue to face redevelopment and demolition by neglect. Every effort should be made to preserve those structures which are instrumental to the character of the district (fig 39A).

3.4.6. Building Removal (fig 39E)

An agreed-upon select number of historic buildings should be omitted from the base context, providing land owners with the option to redevelop at an established height, which may differ from the height of the existing building.

This study is not promoting the proactive destruction of these buildings, but instead provides a redevelopment option to the land owner while strengthening the absolute protection of all other historically-designated properties. This recommendation applies to forty-four structures within the study area that can be categorized per the following categories as defined by the HDLC:

0 Buildings of National Importance
0 Buildings of Major Architectural Importance
3 Buildings of Arch. or Historic Importance
20 Altered Buildings of Importance
21 Buildings that Contribute to the Scene

This recommendation is based on the assembly of economically-feasible development parcels that promote coherent development opportunities and allow for the continued evolution of the historic district and the integration of new infill development that retains and builds upon the district's character.

3.4.7. Horizontal Intensification

To achieve horizontal intensification all open space requirements should be removed from the study area – provided that all structures comply with health, safety and welfare requirements.

Much along the same lines of the urban character argument, open space ratios (fig 39B) often cause buildings to have eroded public facades and, at best, superficial "public" spaces often designed only to satisfy code. This recommendation suggests that developers and architects can more astutely address the open space needs of their program while deciding if a public space is necessary.

3.4.8. Urban Buildings (fig 39C)

All new development should be urban in character with zero lot building frontages and no tower buildings in the core of the study area. This ensures a human-scaled, walkable district that leverages and respects the existing historic structures.

In hyper-urban environments such as New York City, setbacks serve a purpose (bringing light to the street), but even there the "setback" is simply an angled boundary buildings cannot impede and not a prescriptive massing strategy. As was proposed in both UNOP iterations, the value of this area is its urban character and towers setback from a common base erode at that character. The consultant suggests that a lower profile setback-free building, built out to all public lot lines is capable of replacing some of the massing "lost" due to a lower height limit.

3.4.9. Urban Character

Urban character should be enhanced through a diversity and juxtaposition of building types, heights, architectural details and materials.

Vibrant urban places can take any number of tones, moods or formal expressions. The City of New Orleans, possibly more than any other in the country, celebrates and applauds the diversity of its residents and its cultural legacy. This attitude is reflected in the city's built environment as well as it in not uncommon to see buildings of completely different periods, very often with much different massing strategies occupying the same block face. This type of diversity and juxtaposition is somewhat unique to New Orleans and should be promoted. Juxtapositions of 2-3 stories between adjacent buildings are common throughout the study area and, as such, have been retained in the proposed heights.

3.4.10. Signature Streets

Signature pedestrian street experiences should be developed along Julia and Magazine Streets, St. Charles Avenue and others as determined in a subsequent development plan that should be crafted to address the larger study area's primary (pedestrian) and secondary (automobile, service) corridors. Design guidelines that specifically address each corridor should be drafted.

More so than any other collection of streets, it is these corridors that should best define the study area. Julia Street is a local road with distinct history along it that has the potential to seamlessly connect the Warehouse District to the Lafayette Square District. Magazine is

Site Analysis | 2007 Lafayette Square | Upper CBD Height Study

3. Height Recommendations

not only the site of several important cultural facilities, but is also a connective corridor with potential to thread the area to neighboring communities – resulting in a more integrative regional destination. St. Charles, it need not be said, is a street of regional and even national significance mostly due to its important role in the civic festivals.

3.4.11. Typologies

Mixed-use and live/work typologies should be promoted in the study area.

As urban areas continue their bold comeback it has been these typologies that have allowed the brazen entrepreneur or forward-thinking developer to invest in otherwise questionable markets. Also, the stimulation of grass roots commerce as the harbinger of dedicated retail can also activate a residential market otherwise skeptical of the conveniences of living in an urban setting. Figure 40A shows areas of mixed-use.

3.4.12. Affordable Housing Provision

While it goes beyond the scope of this study, it is critical to forecast the possible effects on the local housing market should these recommendations be adopted and development follow accordingly. It will be paramount for the City to craft an approach that will maintain the area's economic diversity as it evolves into a dense, vibrant neighborhood.

3.4.13. Parking Quotas

In order to ease bulk requirements, parking space quotas for new development should be eliminated and be determined by the developer.

In the past, cities have written policies that require as many as two parking spaces per residential unit. This artificially steers the market and promotes reliance on private automobiles.

3.4.14. Ground Level Parking (fig 40B)

There should be no ground level parking within a minimum of thirty feet of a public frontage to encourage vibrant and active streets – an instrumental part of a walkable community.

An inactive or poorly-detailed building frontage can make a five-minute walk an arduous journey. An active and engaging street level inspires the pedestrian to keep exploring; paving the way for retail incubation and street life – both critical facets of neighborhood safety and economic investment.

3.4.15. Streetscape, Public Frontage (fig 40C)

A redevelopment plan should be authored that proposes a corridor hierarchy to clearly delineate differences in streetscape and public frontage approach.

Different streets serve different purposes. Some are key pedestrian corridors, while others aid service access. A detailed vision for each is necessary and should be articulated into the design guidelines and development plan.

3.4.16. Minimum Height

No new structures less than three stories tall (40' approx.) should be allowed within the study area.

Structures of two stories or less are not able to meet the typological needs of a vibrant and active urban neighborhood , nor do they contribute to a more active streetscape. Figure 38-D shows existing structures less than three stories tall.

3.4.17. Floor Heights (fig 38-E)

To promote community legibility and economic flexibility floor heights in the study area should be standardized. Specifically, the ground floor of new developments should have a 14' minimum floor-to-floor height with each additional floor having a 10' minimum (ideally 12') floor-to-floor dimension.

Standardized floor plates are a good way of promoting the urban legibility of facades as well as assuring their value should they at some point be sold, renovated or adaptively reused.

3.4.18. Replacement Height (fig 31A:D)

Existing historic structures retained in the base context that are lost or razed should be replaced with a structure no taller than that which existed previously (with a minimum replacement of three

stories). Revision to standardized floor-to-floor heights may allow for slightly greater heights.
This directly addresses the motivation to demolish by neglect and places even more pressure on city code enforcement and new development oversight by the CPC and HDLC. A different replacement metric such as cubicle volume could also be explored (and its potential impact assessed) in order to arrive at the most reasonable policy.

3.4.19. Deviances from Study (fig 31E)
Projects that are in advanced stages of design and development (as defined by the State of Louisiana) should be allowed to deviate from this study's recommendations. This courtesy should expire after a predetermined period of time, commencing upon the adoption of these recommendations in accordance with established (or to be established) City and State regulating requirements.
Obviously, there are projects in the community with at least some momentum that should not be forced to comply with a planning effort conducted during their design and construction efforts.

3.5. Block-by-Block Index (fig 42A)
The following are a series of illustrations that chronicle each block of the study area. Each is indexed on the study area map and presented in both plan and axonometric views for ease of understanding. In the plan view, all developable sites have been given a height recommendation. These numbers refer to the number of stories a building would be permitted to rise, with an approximate height in parenthesis that assumes a standardized floor height policy. For instance, if the number is 6(75), the building is allowed to rise six stories or approximately seventy-five feet.

Site Images | New Construction & Renovation

NEW CONSTRUCTION | MIXED - USE | 939 GIROD ST

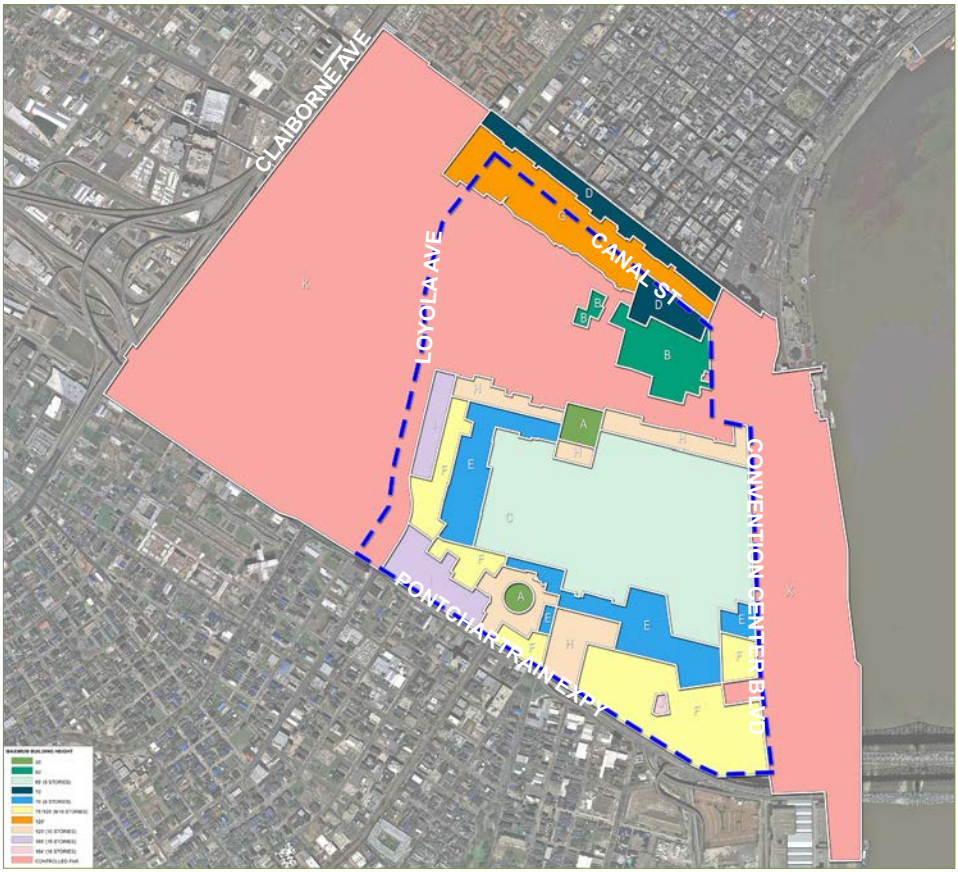
NEW CONSTRUCTION |300 BARONNE ST

NEW CONSTRUCTION IN ZONE 65'& 5-STORIES | 750 CAMP ST

IN ZONE 65'& 5-STORIES | 750 CARONDELET ST

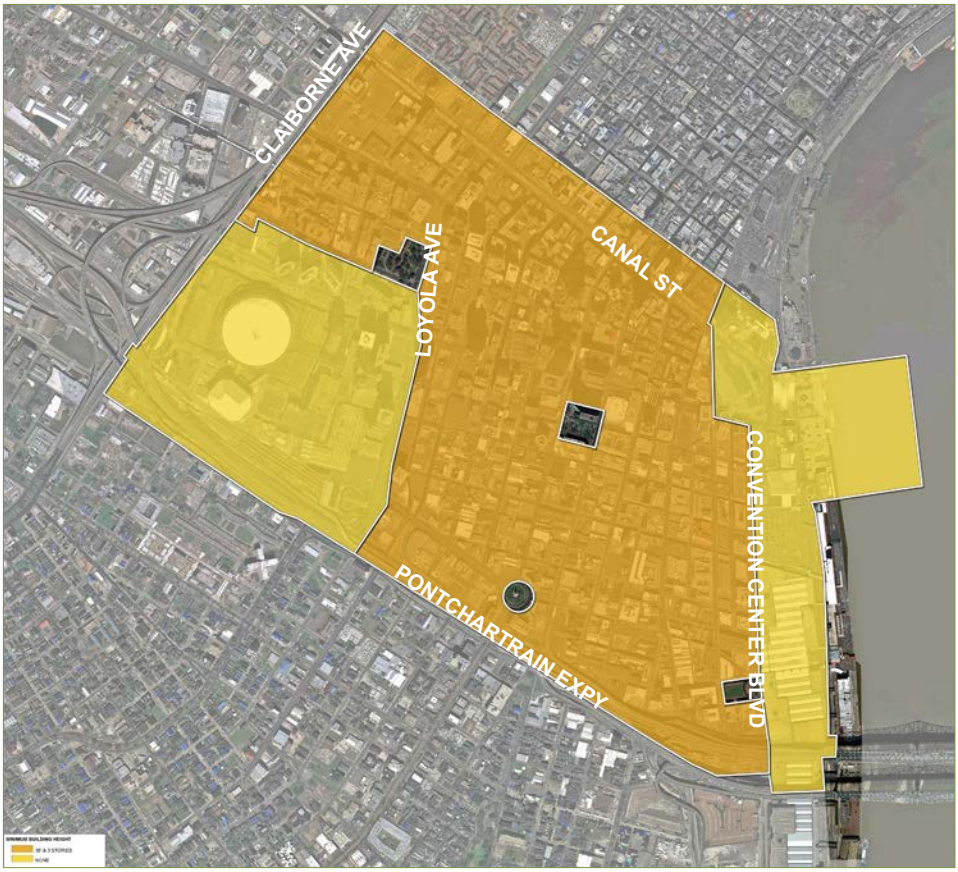
NEW CONSTRUCTION IN ZONE 65'& 5-STORIES | 745-749 BARONNE ST

Site Analysis | 2015 Comprehensive Zoning Ordinance



2015 CZO MAXIMUM BUILDING HEIGHTS

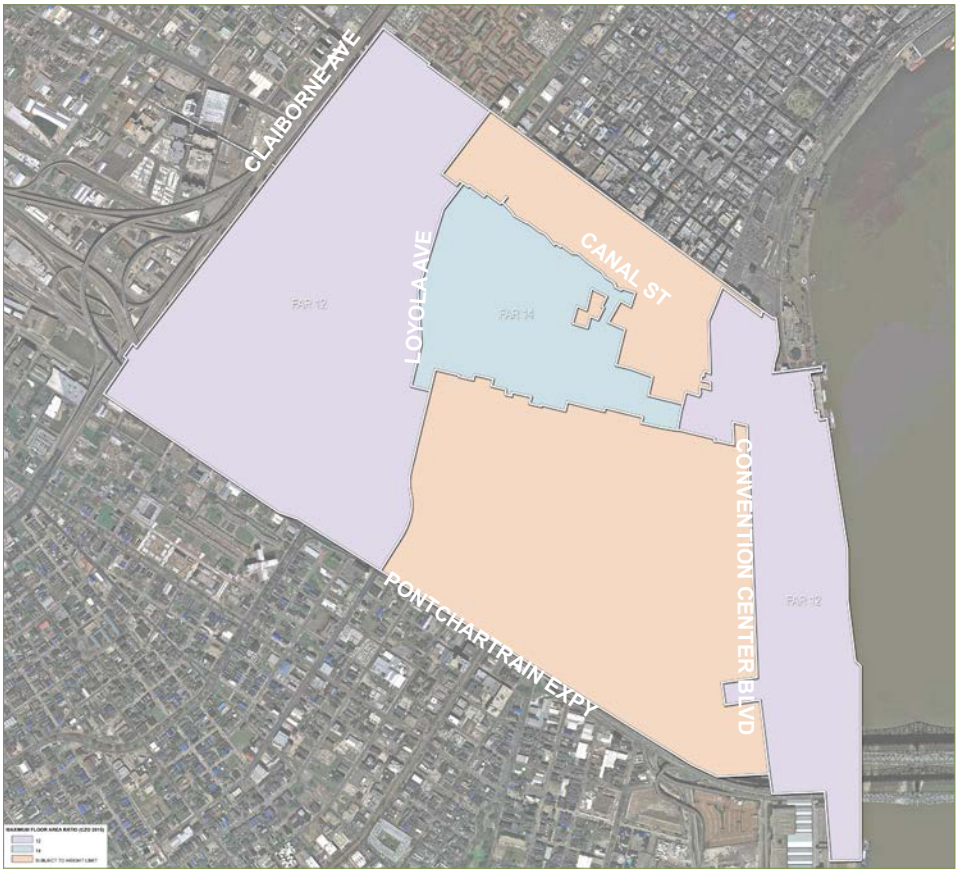
- 35’ (green)
- 50’ (teal)
- 5 stories & 65’ (light green)
- 70’ (dark blue)
- 6 stories & 75’ (blue)
- 10|6 stories & 75’|125” (yellow)
- 120’ (orange)
- 10 stories & 125’ (peach)
- 15 stories & 185’ (purple)
- 16 stories & 184’ (pink)
- Controlled by FAR (pink)



2015 CZO MINIMUM BUILDING HEIGHT

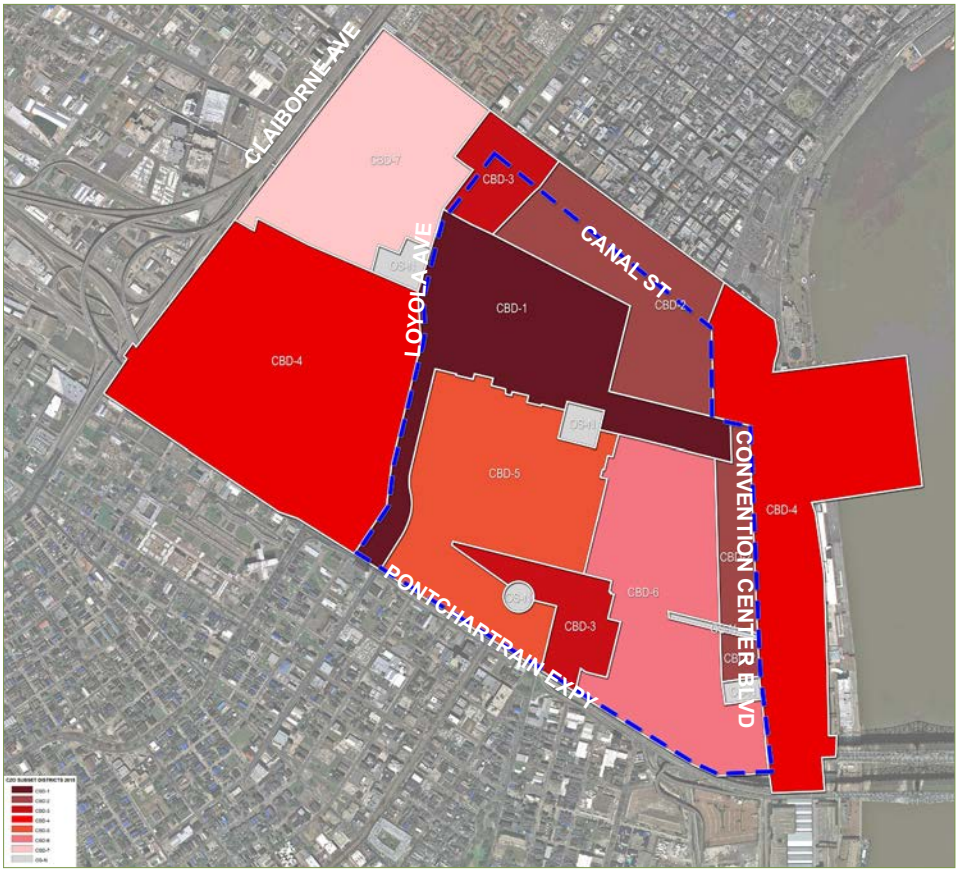
The 2015 CZO mandates a minimum building height of 36’ & 3 stories in the area that encompasses the CBD boundary prior to the 2015 amendments. With the boundary changes, an additional area encompassing the new CBD – 4 does not have a minimum height requirement.

- 36’ & Stories
- None



2015 CZO FAR BOUNDARIES

- 12
- 14
- Subject to Height Limit



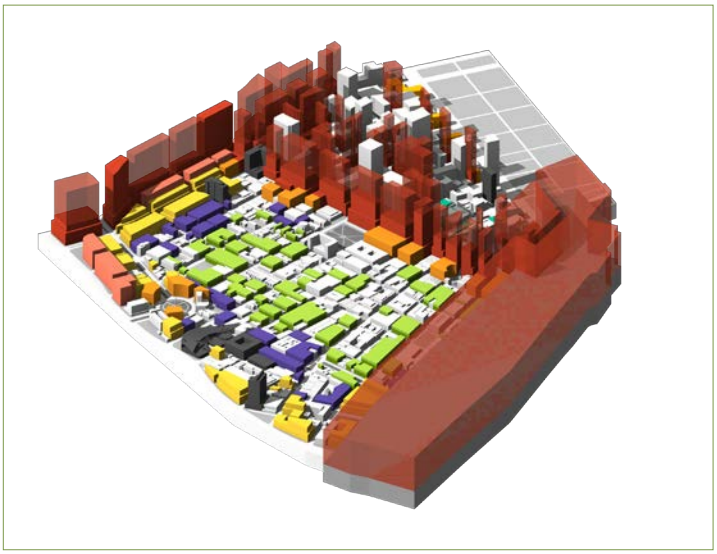
CENTRAL BUSINESS DISTRICTS

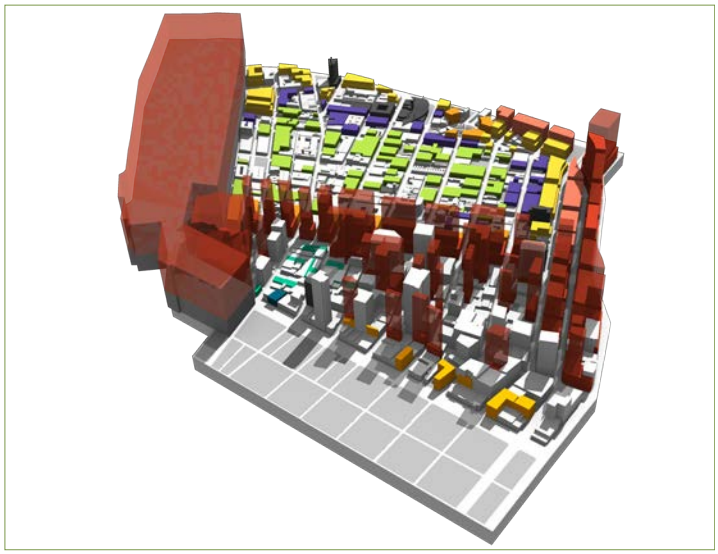
Effective August 12, 2015 a new Comprehensive Zoning Ordinance was implemented

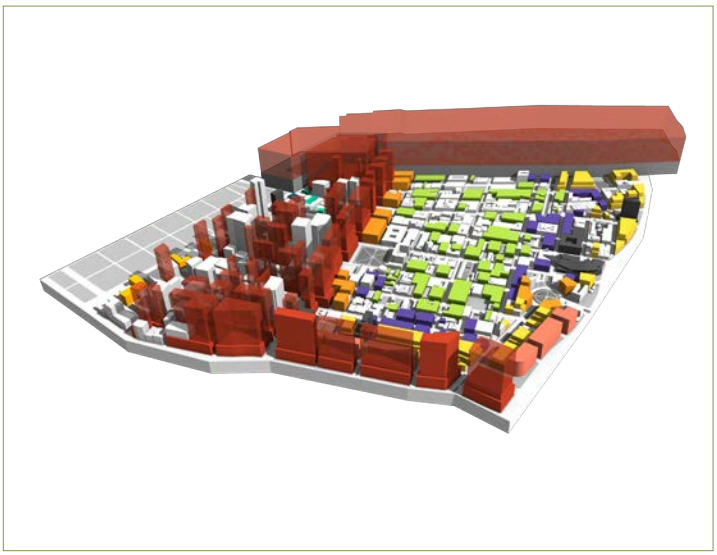
Boundary: Mississippi River, the Pontchartrain Expressway, Claiborne Avenue, and Iberville Street.

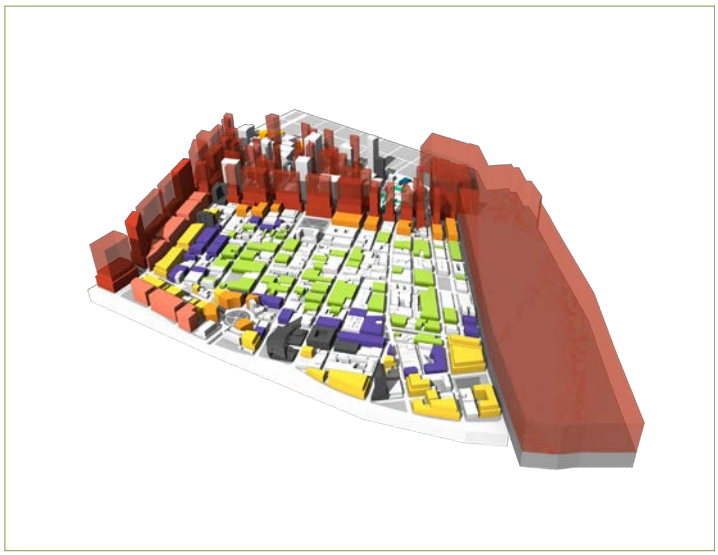
Portions of CBD-1, 2, 3, 4, 5, 6 & 7 are each represented. Though the prescriptive code has many similarities, there are important differences that dramatically alter the potential development envelope of each district.

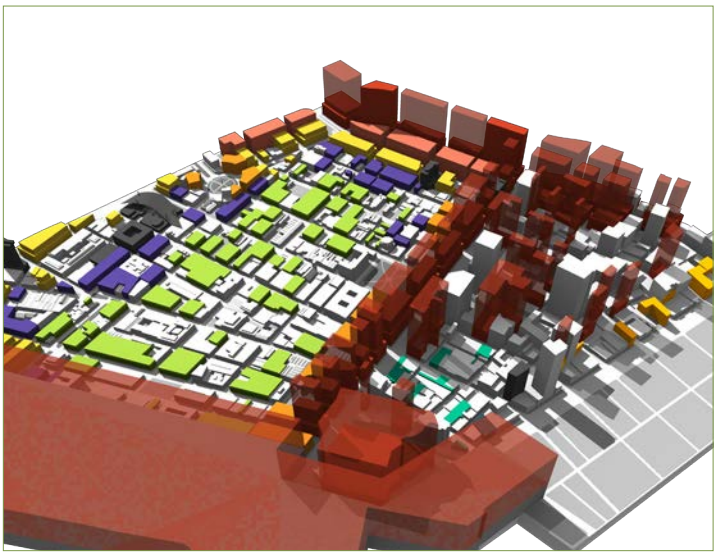
CZO Maximum Zoning Height for Study Area

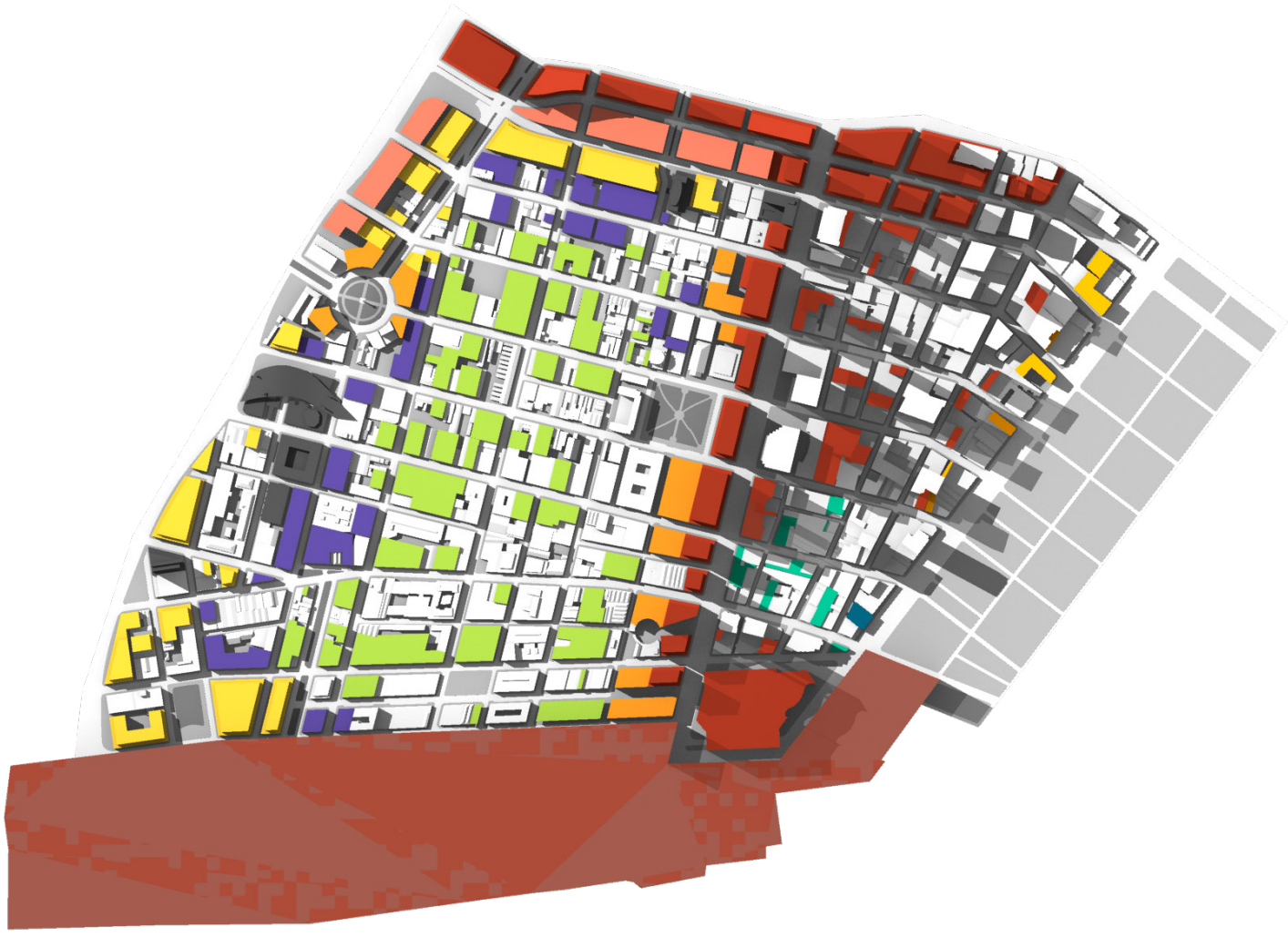






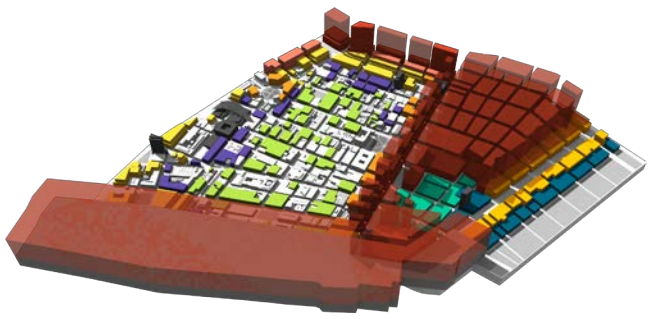






HEIGHT | CURRENT CZO

- 50 ft.
- 65 ft. & 5 Stories
- 70 ft.
- 75 ft. & 6 Stories
- 75/125 ft. & 6/10 Stories
- 125 ft. & 10 Stories
- 185 ft. & 15 Stories
- FAR



CZO MAX HEIGHT MASSING

Site Images | New Construction & Renovation (con't)

NEW CONSTRUCTION | MIXED - USE | 611 O'KEEFE AVE

236 ST. JOSEPH ST

RENOVATION | S. PETERS & ST. JOSEPH

ROOFTOP ADDITION | 867 TCHOUPITOULAS ST

BUILDING RENOVATION | POYDRAS ST

NEW CONSTRUCTION | 632 TCHOUPITOULAS ST

Site Analysis | Historic Designations

LOCAL HISTORIC DISTRICT

The New Orleans City Council designates local historic districts which are administered by local historic district commissions. Local historic districts protect the buildings and neighborhoods of New Orleans by providing regulations for changes to the exterior of all buildings within the local historic districts, reviewing new construction, demolition requests, and citing owners for "demolition by neglect."

- Canal Street Historic District
- Lafayette Sqaure Historic District
- Picayune Place Historic District
- Warehouse District Historic District

NATIONAL REGISTER OF HISTORIC PLACES

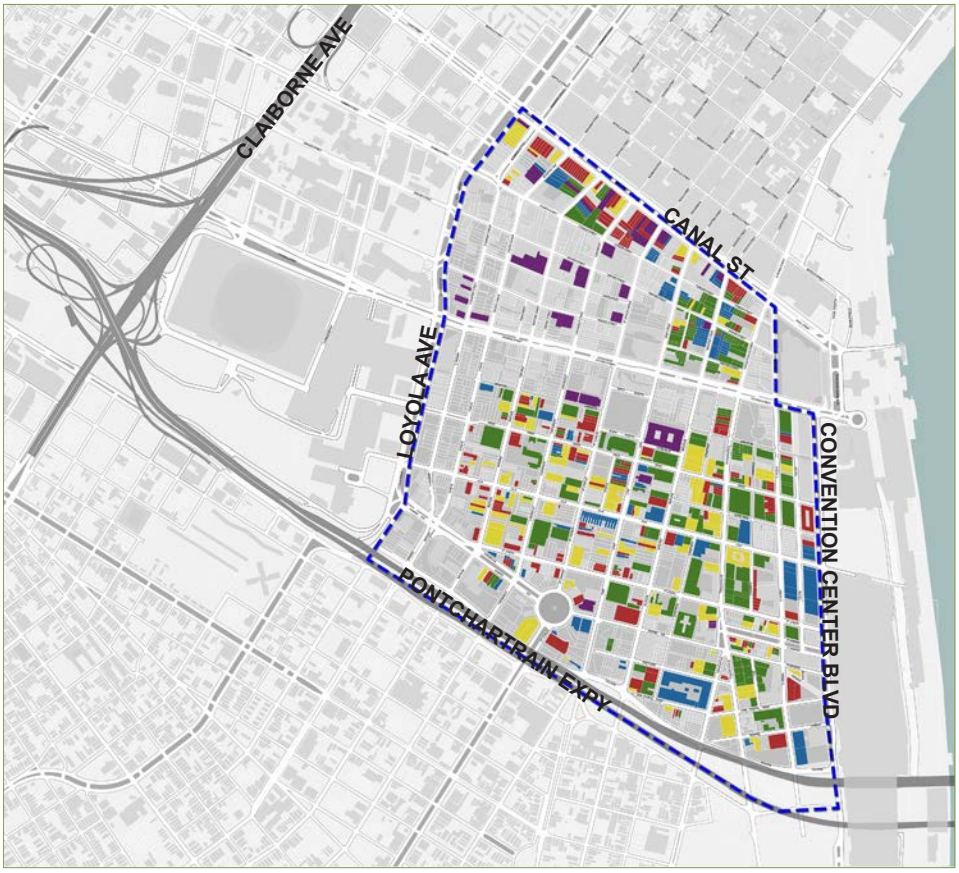
Property owners within the National Register Districts may avail themselves of financial savings in the form of federal tax credits if the property is used for an income producing purpose. However, the only protection provided by the National Register designation is limited control over federally funded projects. Restoration tax credits and environmental review processes for National Register Districts are administered by the State Historic Preservation Office, in Baton Rouge, LA.

- Lower CBD
- Upper CBD

NEIGHBORHOOD CONSERVATION DISTRICTS

The current project area falls within this district.

The Neighborhood Conservation District Advisory Committee (NCDAC) of the City of New Orleans is a committee developed to review demolition applications within the district. Since demolition is an irreversible step, there is a need for careful review to ensure that demolitions are not performed unnecessarily.



PROTECTED STRUCTURES

Structures at least fifty-years old were assessed by the HDLC for historic relevance.

If designated as historic, the buildings are said to be “rated” and were placed into one of six categories. All rated structures, regardless of category, are afforded a similar level of protection and public scrutiny regarding alterations, renovations, additions or demolition. *Note: the designation categories have been modified and condensed.*

- National Importance
- Major Architectural Importance
- Architectural or Historic Importance
- Buildings of Importance (Altered)
- Buildings that Contribute to the Scene

Site Images | Historic Districts


700-730 CAMP ST


700-730 CAMP ST

826 LAFAYETTE ST

208-210 ST.JOSEPH ST

Site Analysis | Developer Proposals

TOTAL PERMITS ISSUED 2013-2016	
Total Permits	98
Total Variances	11
%	11%

TOTAL PERMITS ISSUED 2013-2016	
New Construction Permits	11
New Construction Variances	7
%	64%

	Former Comprehensive Zoning Ordinance	Central Business District Height and Floor Area Ratio Interim Zoning District	Current Comprehensive Zoning Ordinance
Total Projects	**49**	**11**	**38**
Renovation (Structural)	43	9	35
New Construction	6	2	3

Per the One Stop App on the City's website, between the years of 2013-2016, there were 127 total permits issued in the CBD and 98 total permits are located within the Project Area. Of these permits, there were 11 total variance requests in the project area.

	PRIMARY ISSUE	SECONDARY ISSUE
833 Howard Avenue	Addition	Height
611-615 Commerce Street	Addition	Partial demolition of Historic Building
749-751 St. Charles Avenue	Floor to Floor/ Stories	
1035 Tchoupitoulas Street	Massing	Overhang
550 Baronne Street	Height	
400 Canal Street	Height	Demolition of Historic Building
744 St. Charles Street	Height	Demolition of Historic Building
632 Tchoupitoulas Street	Floor to Floor/ Stories	
317-321 Magazine Street	Rooftop Development	
1148 South Peters Street	Transfer of Development Rights	Massing + Height

TOTAL PERMITS ISSUED 2013-2016	
New Construction Permits	11
New Construction Variances	7
%	64%

NEW CONSTRUCTION VARIANCES		
		% New Construction Permits
Height	3	27%
Design	2	18%
Massing	2	18%

Site Analysis | Developer Proposals

ward southeast corner

1035 TCHOUPITOULAS ST

400 CANAL ST

611-615 COMMERCE ST

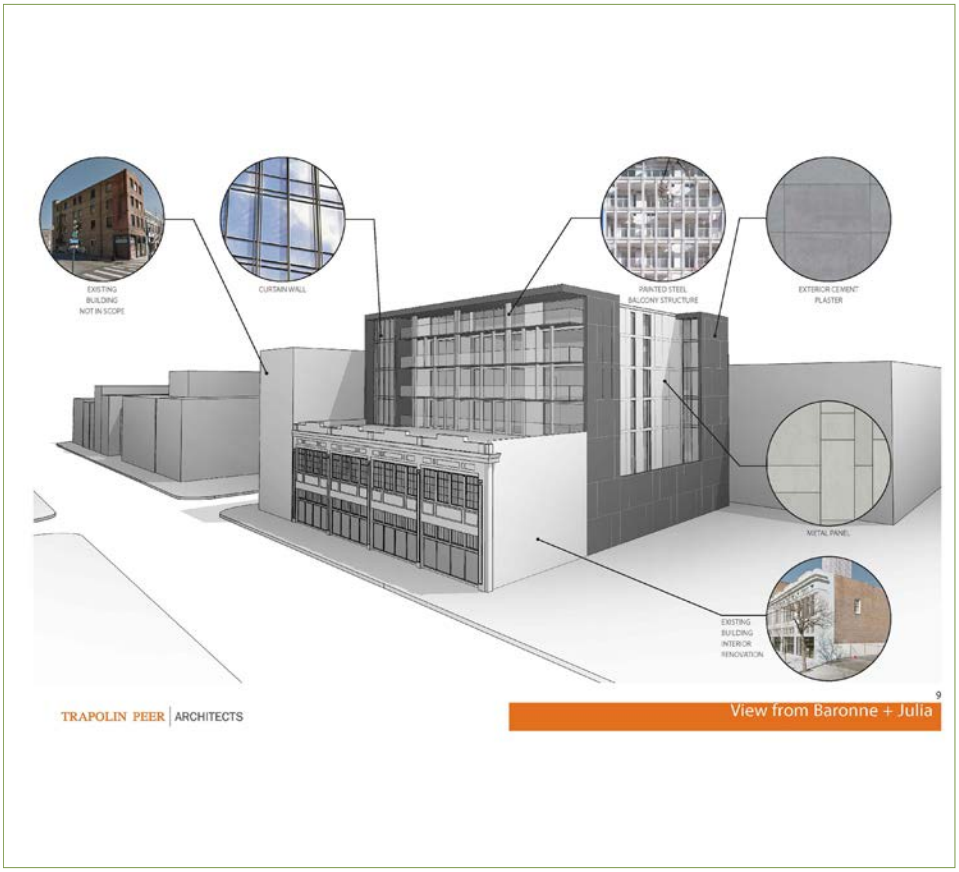
1148 S PETERS ST

Site Analysis | Developer Proposals (con't)

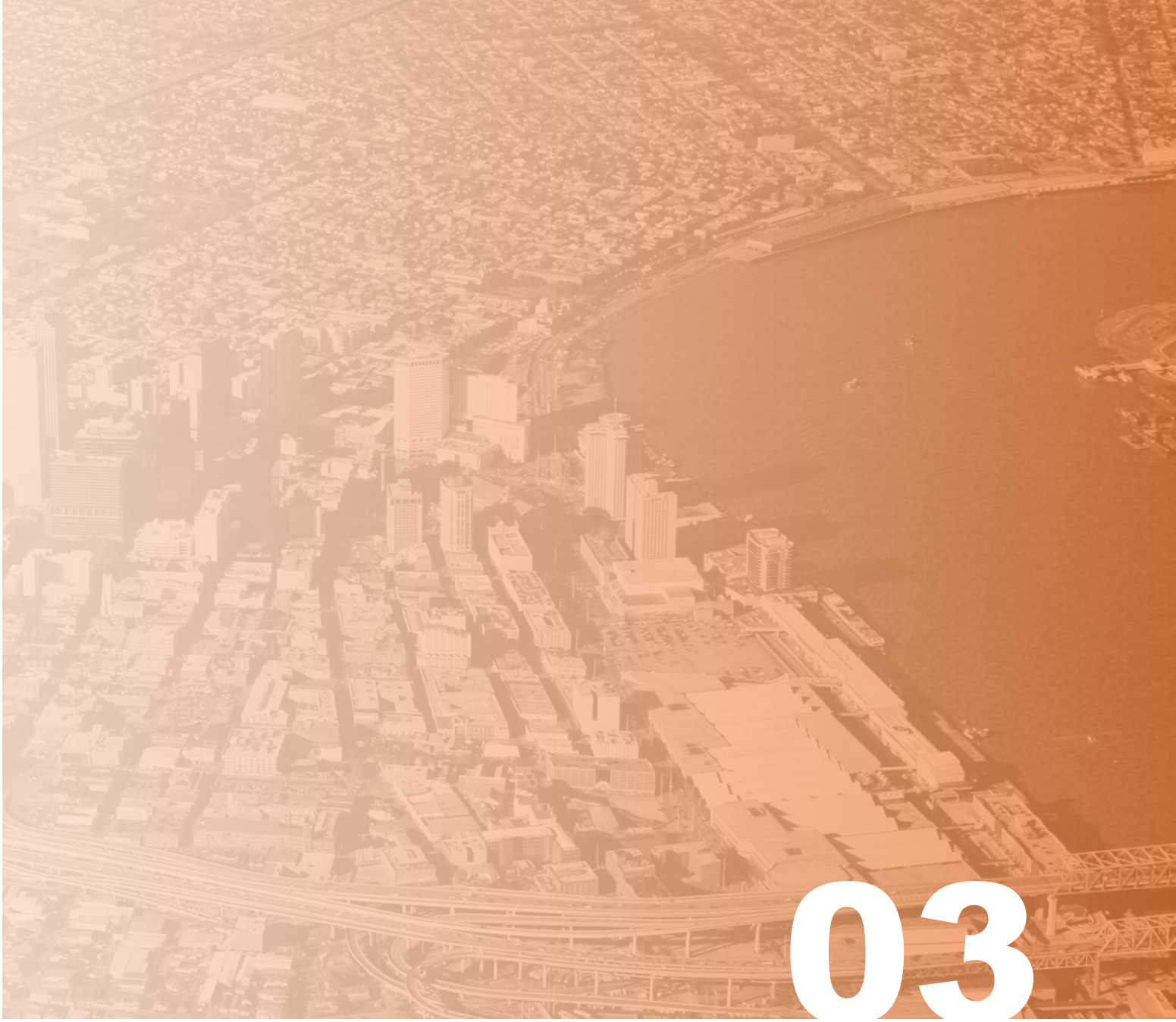
632 TCHOUPITOULAS ST

317-321 MAGAZINE ST

744 ST. CHARLES ST



710 BARONNE ST



03

CONSENSUS ISSUES & RECOMMENDATIONS

Introduction

These issues and recommendations are reflective of thirteen (13) key challenges noted by the various stakeholders in the CBD with regard to redevelopment in the CBD and the CZO. The recommendations will assist in achieving the neighborhood's goals and expectations for the CBD and be responsive to the developers concerns. The recommendations include policy changes and/or updates; definition clarification; ensuring consistency of application; removal of small scale development impediments; development strategy/plan creation, and implementation.

Issues & Recommendations

01 | Three Different Systems for Height & Floors Determination

02 | O'Keefe Avenue/Howard Avenue Zoning Heights & Height Transition

03 | Canal Street Historic District: Heights & Height Transition

04 | Point of Measurement of Building Height at the Roof Level

05 | Point of Measurement of Building Height at the Ground Level for Commercial Buildings

06 | Point of Measurement of Building Height at the Ground Level for Residential Buildings

07 | Floor Height Determination

08 | Accessory Rooftop Features

09 | Rooftop Additions for Designated Historic Buildings or Buildings in Historic Districts

10 | Additions to Existing Buildings in Historic Districts

11 | Definition of Demolition

12 | Administrative/Executive Discretion

13 | Neighborhood Plan/Redevelopment Framework Plan with Design Guidelines

Key Themes

Based on the information developed in this study process, the following key findings stand as overarching themes:

1. **The study area was increased in size and the new and old areas needed to be integrated into a larger cohesive district with a consistent approach.**

2. **The discussion to date suggests that the Comprehensive Zoning Ordinance (CZO) does not need to be extensively changed.**

3. **This is not a broad and consistent call for increased height throughout the entire study area. Requests and suggestions have been extremely specific, which if implemented would improve the opportunity for developers and the quality of the final project.**

4. **Some but not all of the 2009 Height Study policy and design recommendations were incorporated into the Comprehensive Zoning Ordinance and the remaining should be considered for inclusion.**

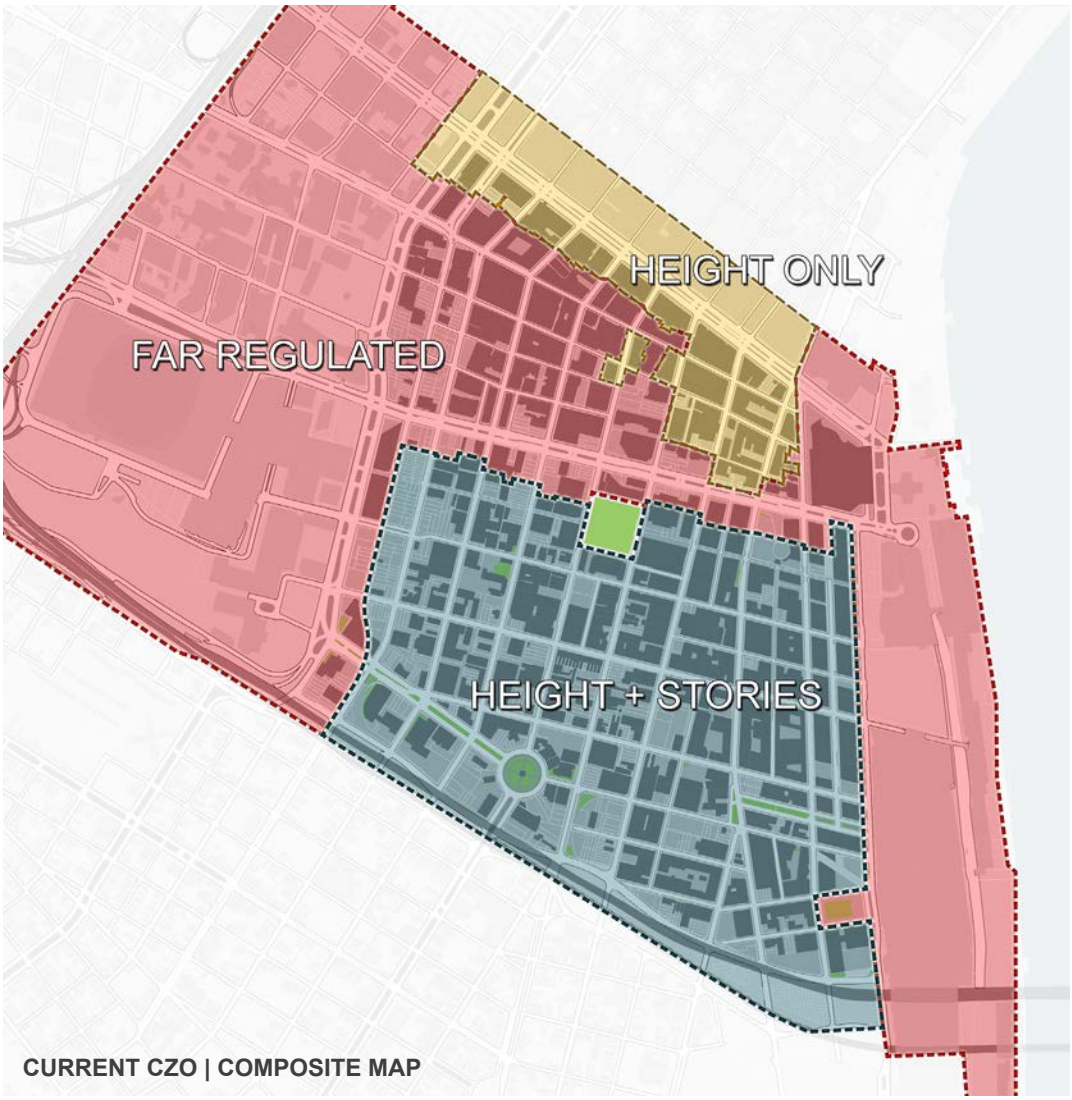
5. **To support the CZO there is a need to create a Redevelopment Framework Plan (economic development strategy, public financial incentives, parking, transit, infrastructure, etc.) and a more consistent set of design guidelines for the district.**


CLAIBORNE AVE
LOYOLA AVE
BERVILLE ST
CANAL ST
CONVENTION CENTER BLVD
PONTCHARTRAIN EXPY
PROJECT BOUNDARIES
Original Study Boundary
New Study Boundary
CZO Boundary

ISSUE 01 | *Three Different Systems for Height & Floors Determination*

Per the CZO, in the study area, there are three different height and story systems, these being: **(A)** The overall height of the building together with the permitted numbers of floors within said height; **(B)** The overall height of the buildings only. In these areas, to determine the number of floors the applicant must rely on the floor heights outlined in the City Municipal Code of Ordinances; and **(C)** The overall height of the building being determined by a massing plan using the Floor Area Ratio of the site. In these areas, to determine the number of floors, the applicant must rely on the floor heights outlined in the City Municipal Code of Ordinances.

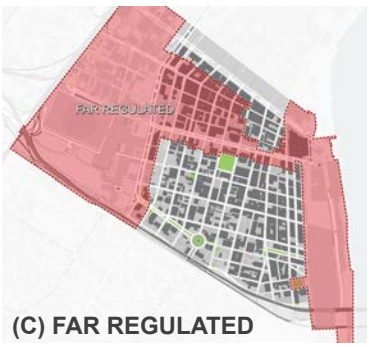
When this change takes place the Mississippi River Heritage Park height and zoning needs to be resolved. It currently is in district OS-N which is zoned at 35ft with a CZO overlay FAR height zone. The district boundary should be adjusted to include Heritage Park in the CBD and be height zoned appropriately.



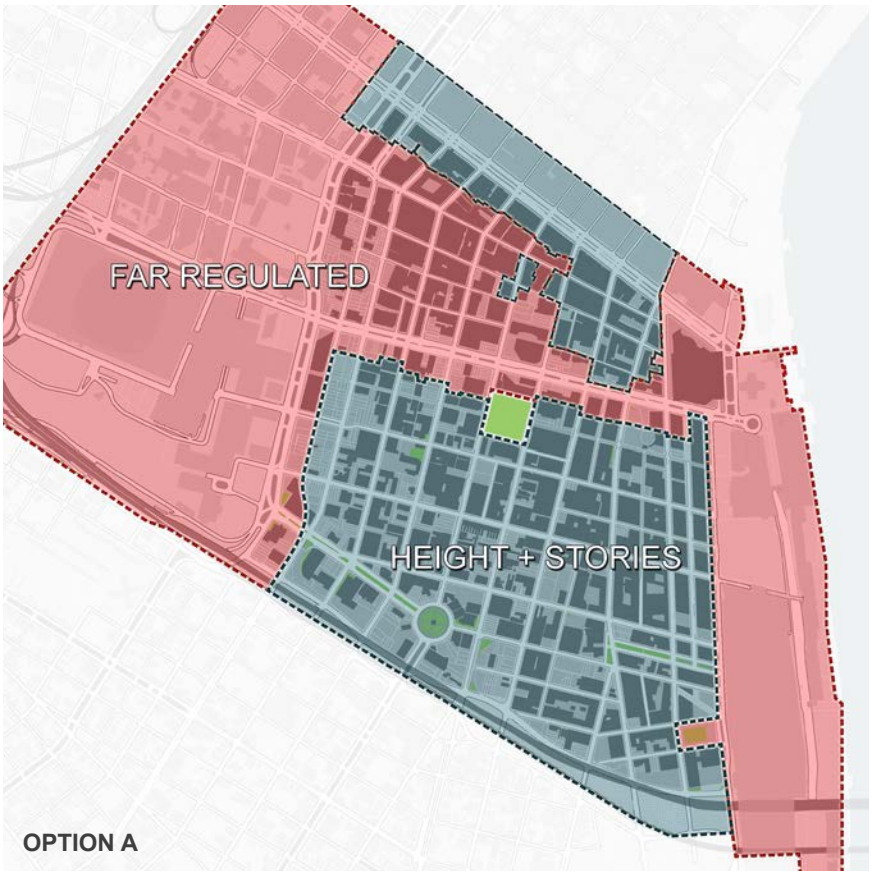
CURRENT CZO | COMPOSITE MAP

(A) HEIGHT + STORIES

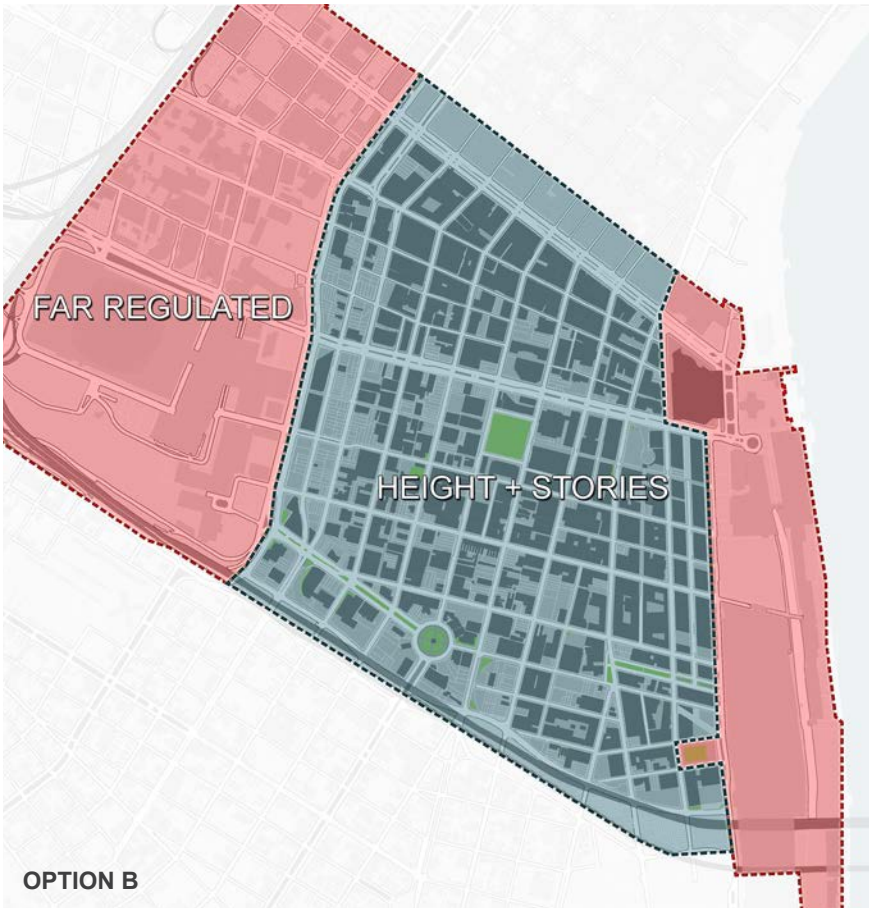
(B) HEIGHT ONLY



(C) FAR REGULATED



OPTION A



OPTION B

CONSULTANT RECOMMENDED OPTIONS

OPTION A: Consolidate the "Height and Stories" and "Height Only" systems into one system following the "Height and Story" model in order to ensure a consistent, appropriate, and cohesive form and character relationship with adjacent buildings within the core historical districts. The FAR district remains as designated.

OPTION B: Consolidate all three systems into the "Height and Stories" model in order to ensure a consistent, appropriate, and cohesive urban block form and character relationship with adjacent buildings within the core downtown district. In the conversion of the FAR district into "Height and Stories" system ensure that no building sites are down-zoned and there can be the necessary flexibility for open space and formal expression within the building envelope. The FAR district can remain as designated outside of core boundaries.

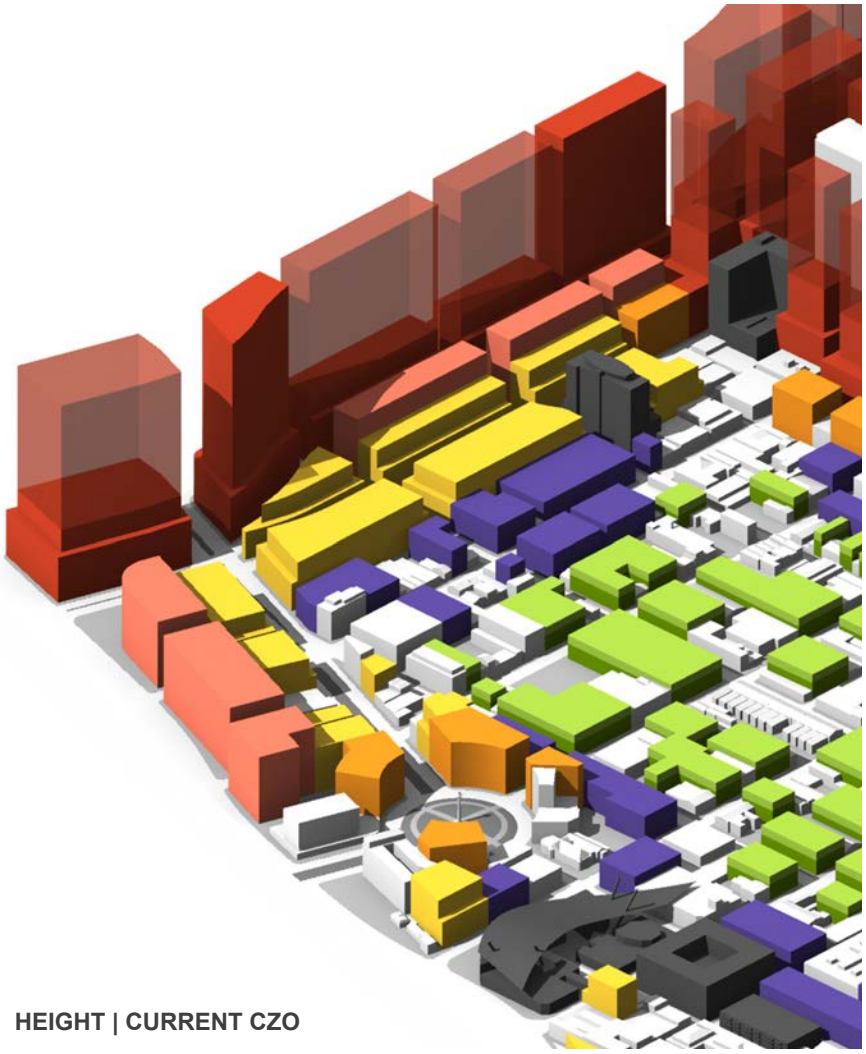
T.F. RECOMMENDATION

Unanimous agreement for Option B

ISSUE 02 | *O'Keefe Avenue/Howard Avenue Zoning Heights & Height Transition*

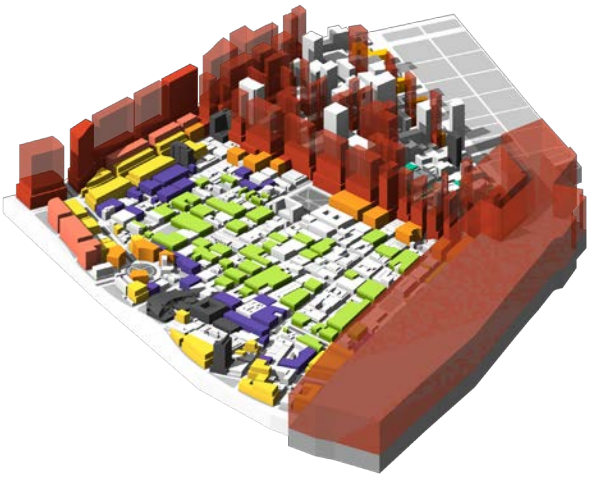
The CZO incorporated the suggested heights in 2009 Height Study with minor modifications. The key change was along O'Keefe Avenue in that the change of heights occurred along the center line of O'Keefe Avenue instead mid-block. New development has already been approved and constructed in this zone based upon the CZO.

Based upon feedback of stakeholders the O'Keefe height transition should be addressed to ensure a constant streetscape, as well as investigate the potential to increase height along Howard Avenue from Lee Circle towards South Rampart Street to maximize the deep lots adjacent to the interstate. The remainder of the requests have been site specific and not related to overall district planning.

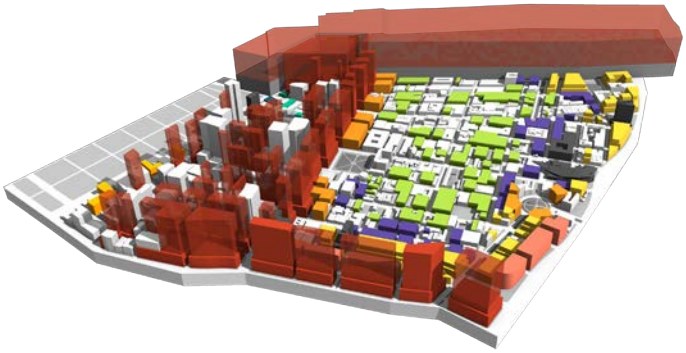


HEIGHT | CURRENT CZO

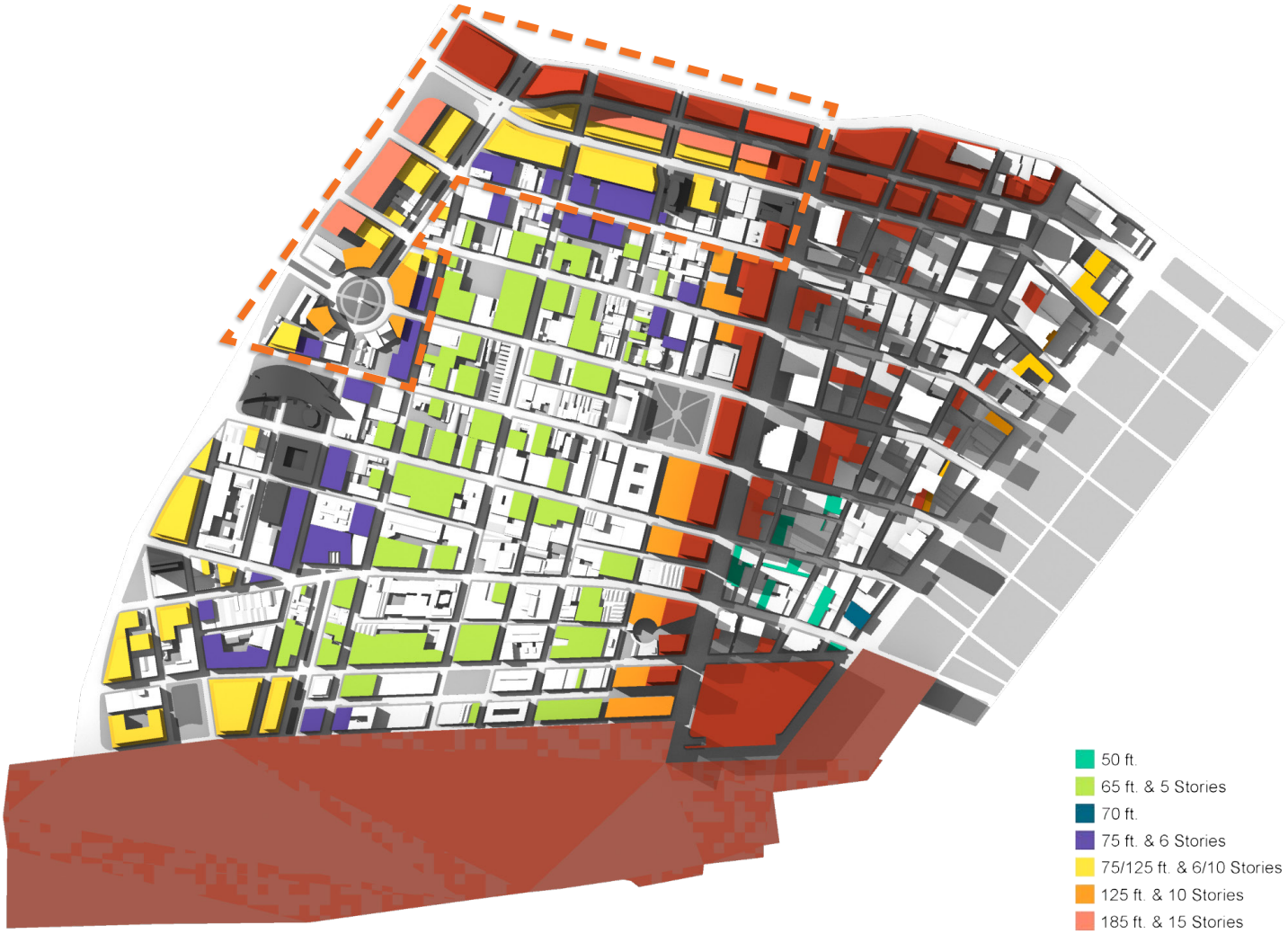
PONTCHARTRAIN EXPRESSWAY



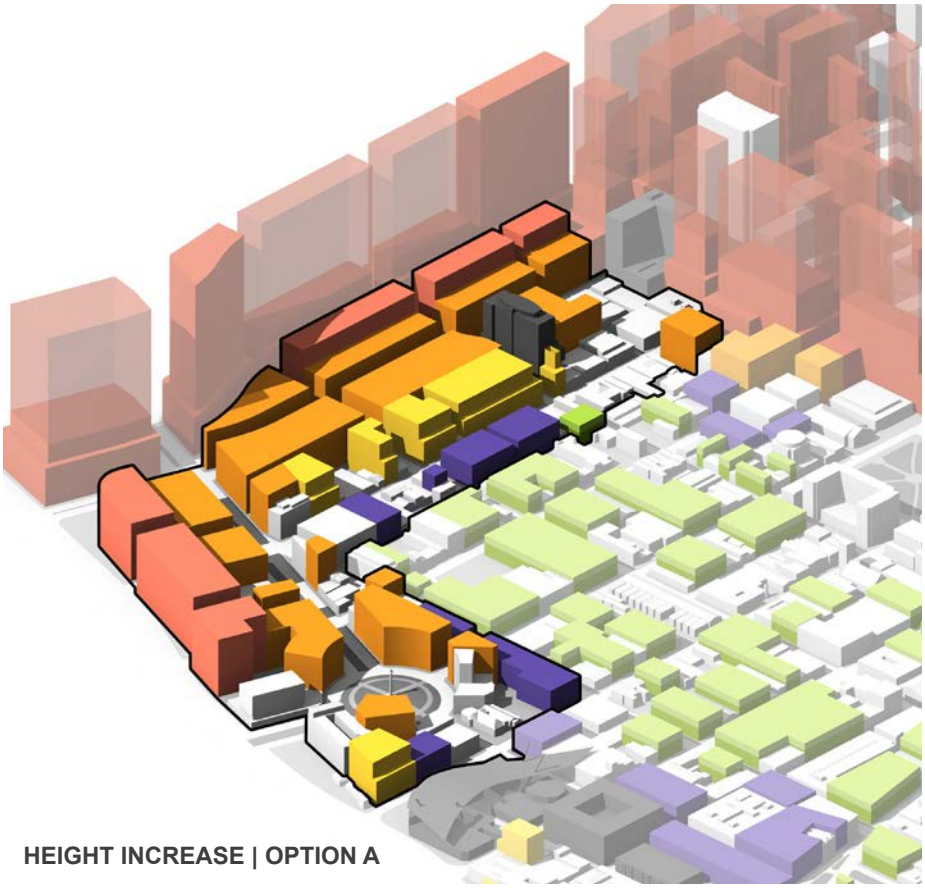
HEIGHT | CURRENT CZO



HEIGHT | CURRENT CZO



HEIGHT | CURRENT CZO



HEIGHT INCREASE | OPTION A

CONSULTANT RECOMMENDED OPTION A

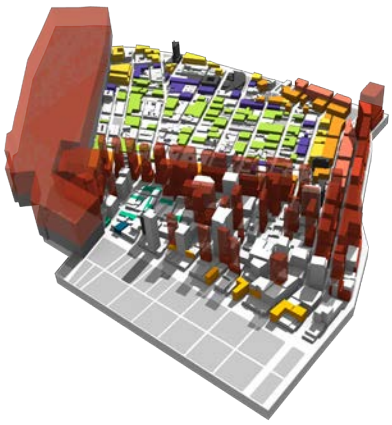
O'Keefe Avenue Corridor

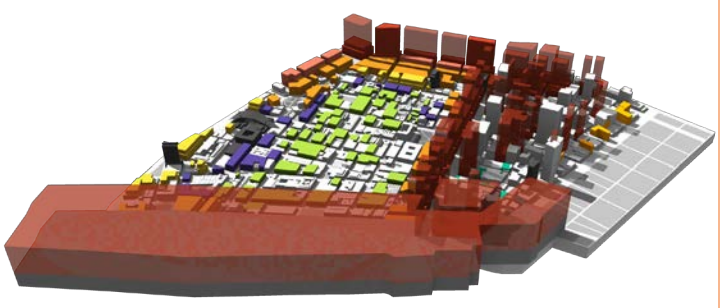
Leave O'Keefe Avenue Corridor per the CZO with minor modification of 10(6) becoming 10 stories.

Howard Avenue Corridor

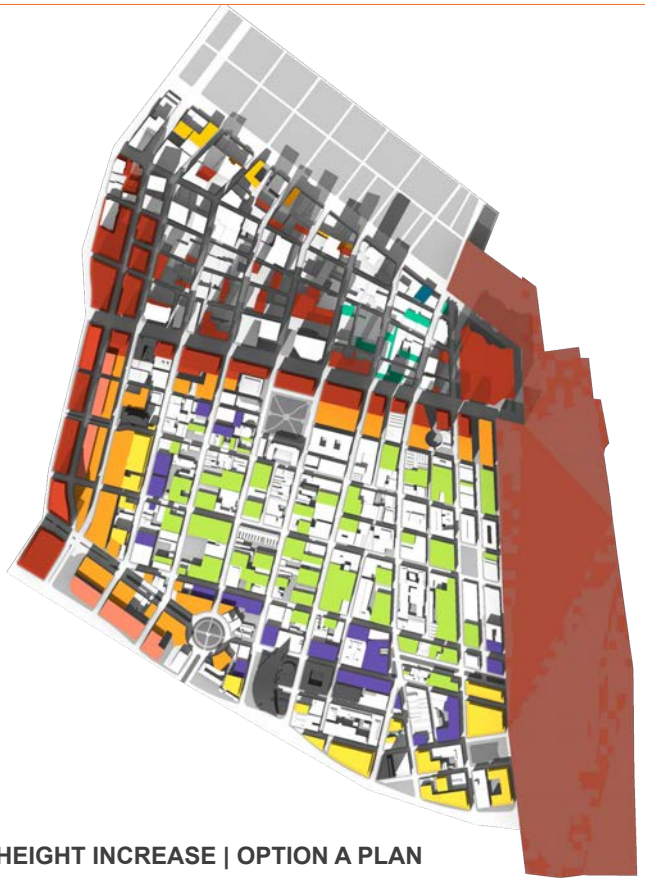
Change the 10(6) to 10 stories up to Lee Circle and leave 15 stories adjacent to interstate.

- 50 ft.
- 65 ft. & 5 Stories
- 70 ft.
- 75 ft. & 6 Stories
- 75/125 ft. & 6/10 Stories
- 125 ft. & 10 Stories
- 185 ft. & 15 Stories
- FAR





HEIGHT INCREASE | OPTION A

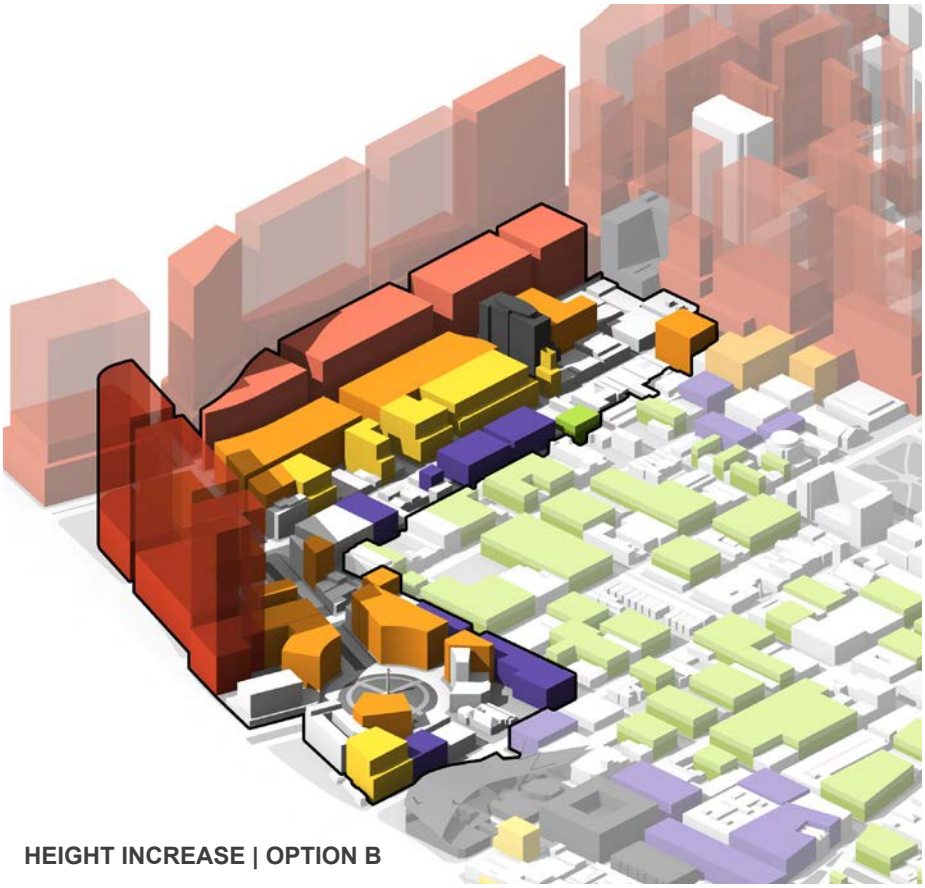


HEIGHT INCREASE | OPTION A PLAN

BARONNE ST

HOWARD AVE


HOWARD AVE



HEIGHT INCREASE | OPTION B

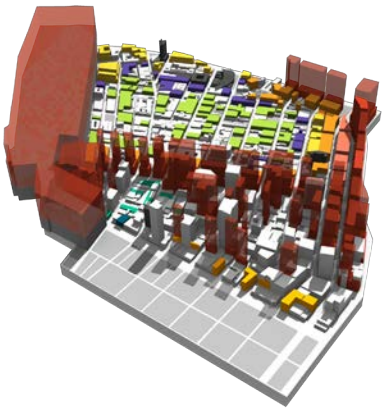
CONSULTANT RECOMMENDED OPTION B

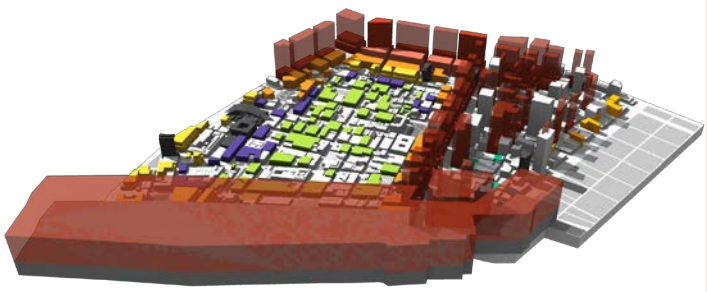
O'Keefe Avenue Corridor

Adjust the O'Keefe Avenue Corridor by increasing the height zones in order to achieve the "step down" to the 5-story core. The 10(6) becomes 15 stories on one side and 10 stories on the other, and the 6 stories becomes 10(6).

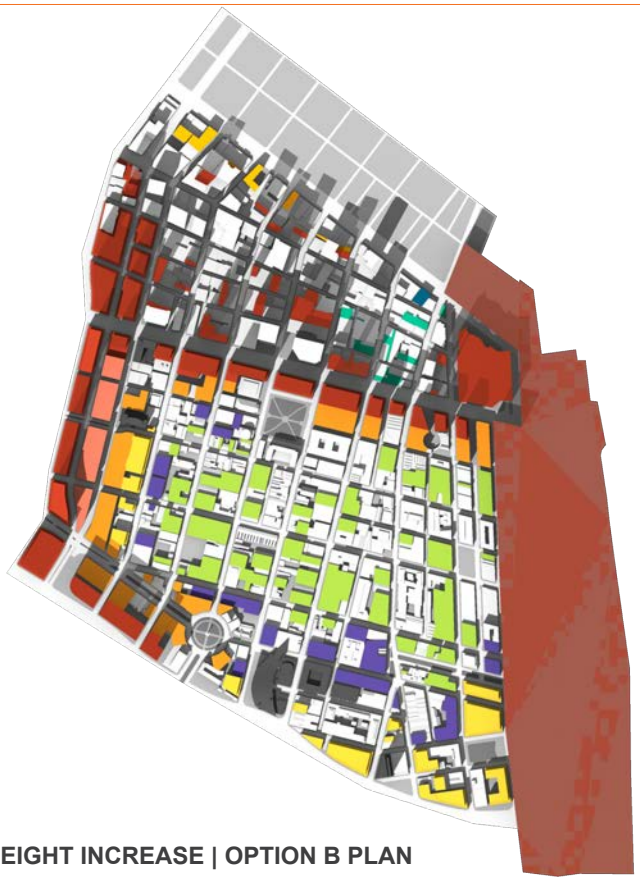
Howard Avenue Corridor

Adjust the Howard Avenue Corridor by increasing the height zones in order to achieve the "step down" to the 5-story core. The 15 becomes FAR and the 10(6) becomes 10 stories.





HEIGHT INCREASE | OPTION B



HEIGHT INCREASE | OPTION B PLAN

S RAMPART ST

ST CHARLES ST

T.F. RECOMMENDATION

Unanimous agreement for Option B

ISSUE 03 | *Canal Street Historic District: Heights & Height Transition*

Designated in 1984 and historically considered the retail merchandising heart of the city, the Canal Street Historic District extends from S. Saratoga/Crozat Street on the lake side, down the center of Iberville Street to N. Peters/ Tchoupitoulas Street on the river side, and includes all lots fronting on the downriver and uptown sides of Canal Street except for the uptown lots between Camp and Magazine Streets.

There have been some development proposals for blocks facing Canal Street that have been denied. The Sheraton Hotel retains the opportunity to develop another tower. In principle, Canal Street zoning permits a 120ft height building on the lots facing onto Canal Street and thereafter, for the CBD, FAR governs the height and bulk of the buildings.

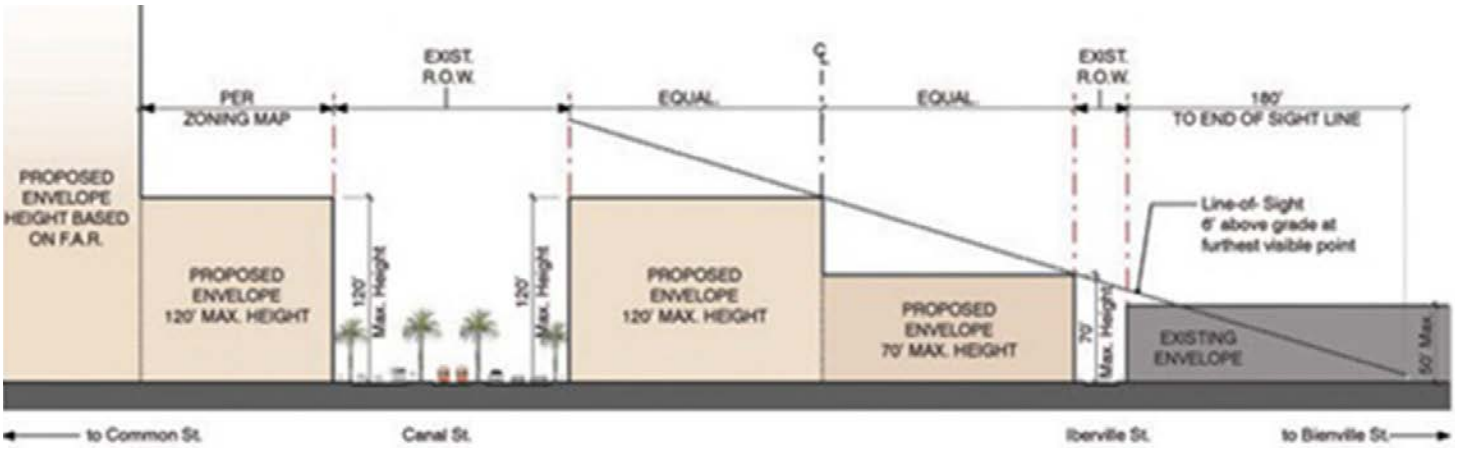
CANAL STREET

CANAL STREET | HEIGHT

Though the perception of Canal Street is of tall buildings there is a great deal of integrity to the historical height of the street. The majority of the buildings lining this portion of the study boundary are varying height three (3) story buildings, with a few outlying towers from grandfathered projects on the Mississippi River end.

CANAL STREET

CANAL STREET



CZO HEIGHT DIAGRAM | CANAL STREET

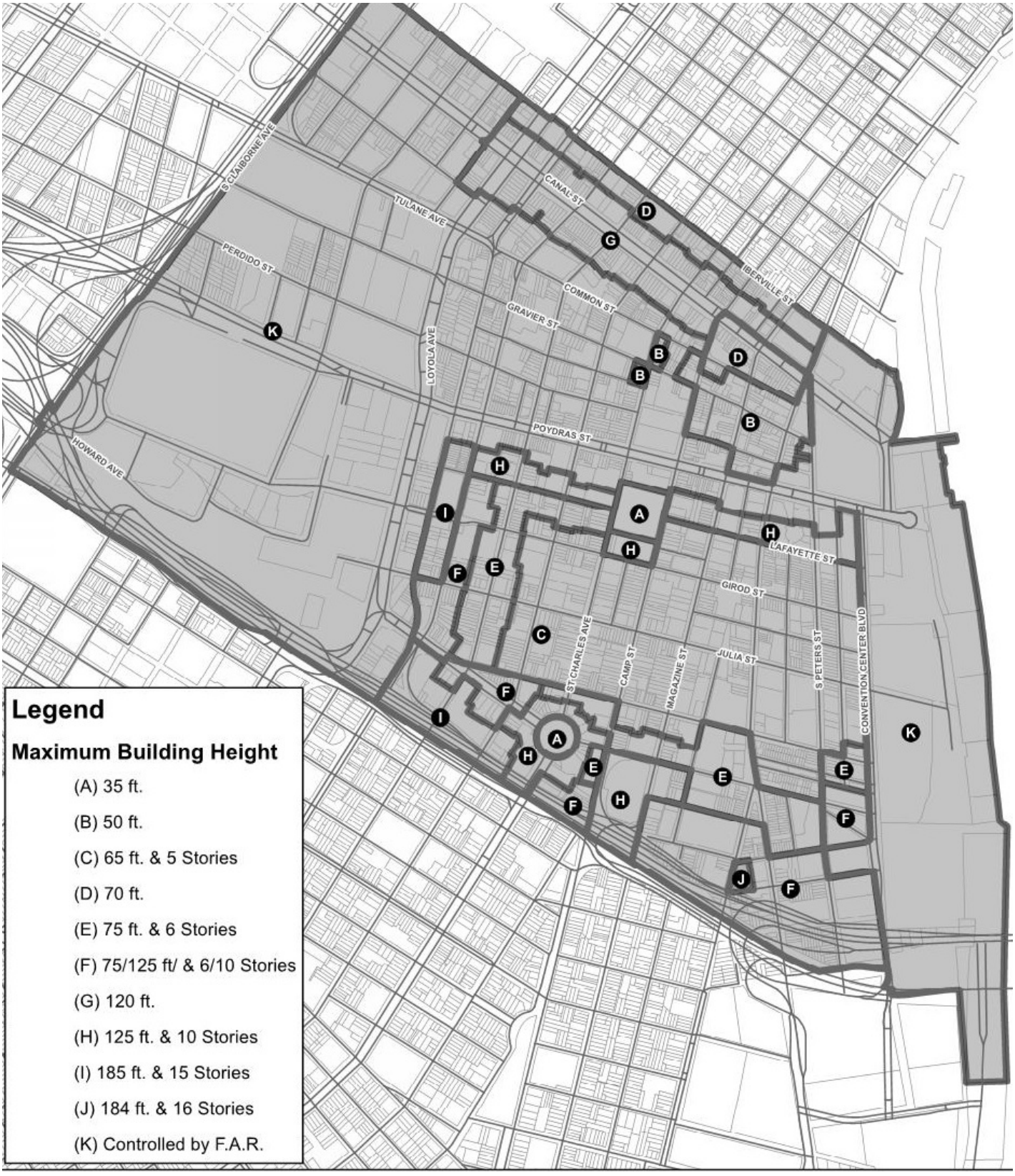
CONSULTANT RECOMMENDATION

In order to provide consistency throughout the district *(See Issue 01)* and to retain the character and consistency of the Canal Street Historic District in this study area it is recommended that (B) 50ft change to (C) 65ft & 5 stories and (D) 70ft. change to (H) 125ft & 10 stories and (G) 120ft. change to (H)125ft & 10 stories.

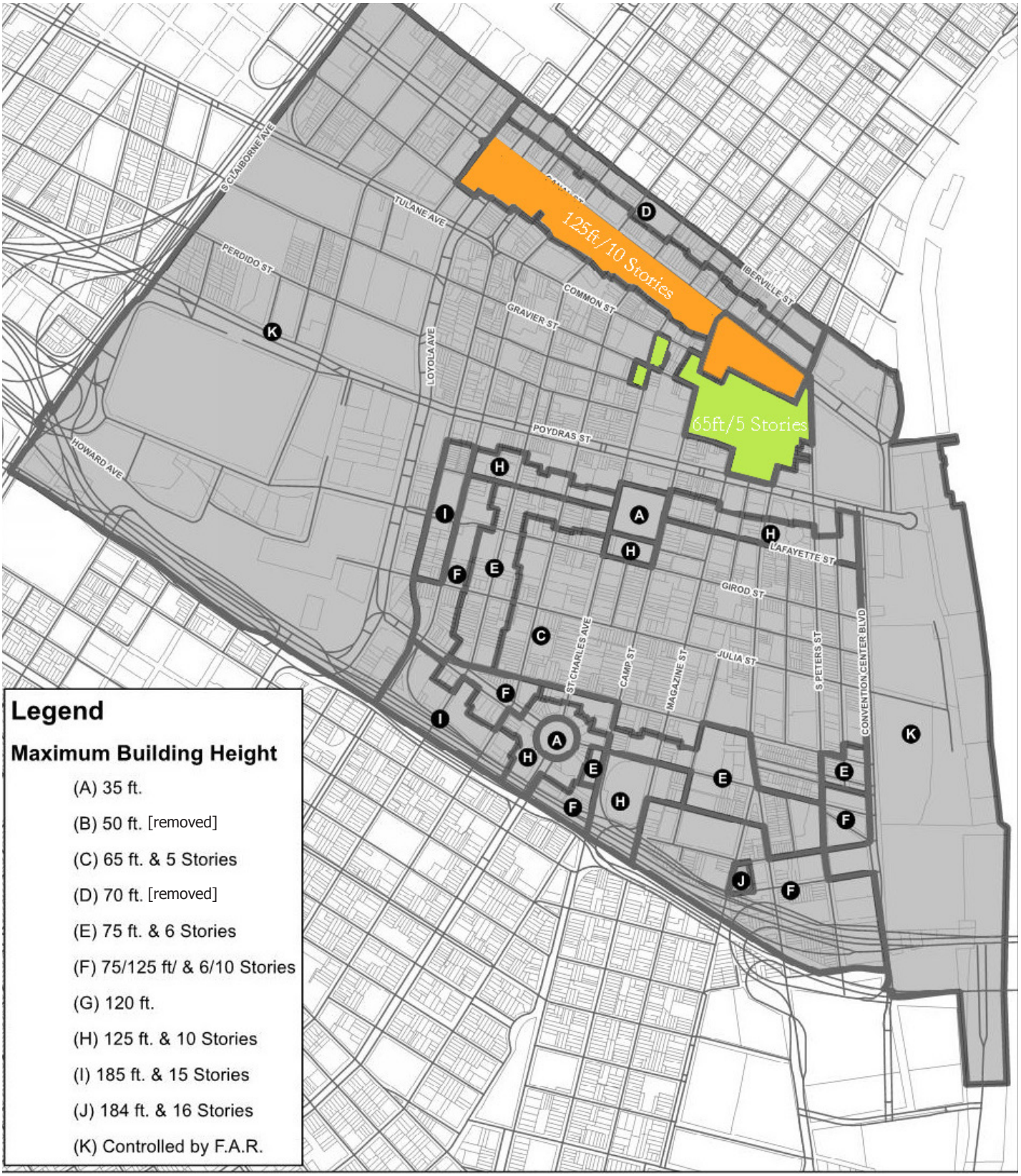
T.F. RECOMMENDATION

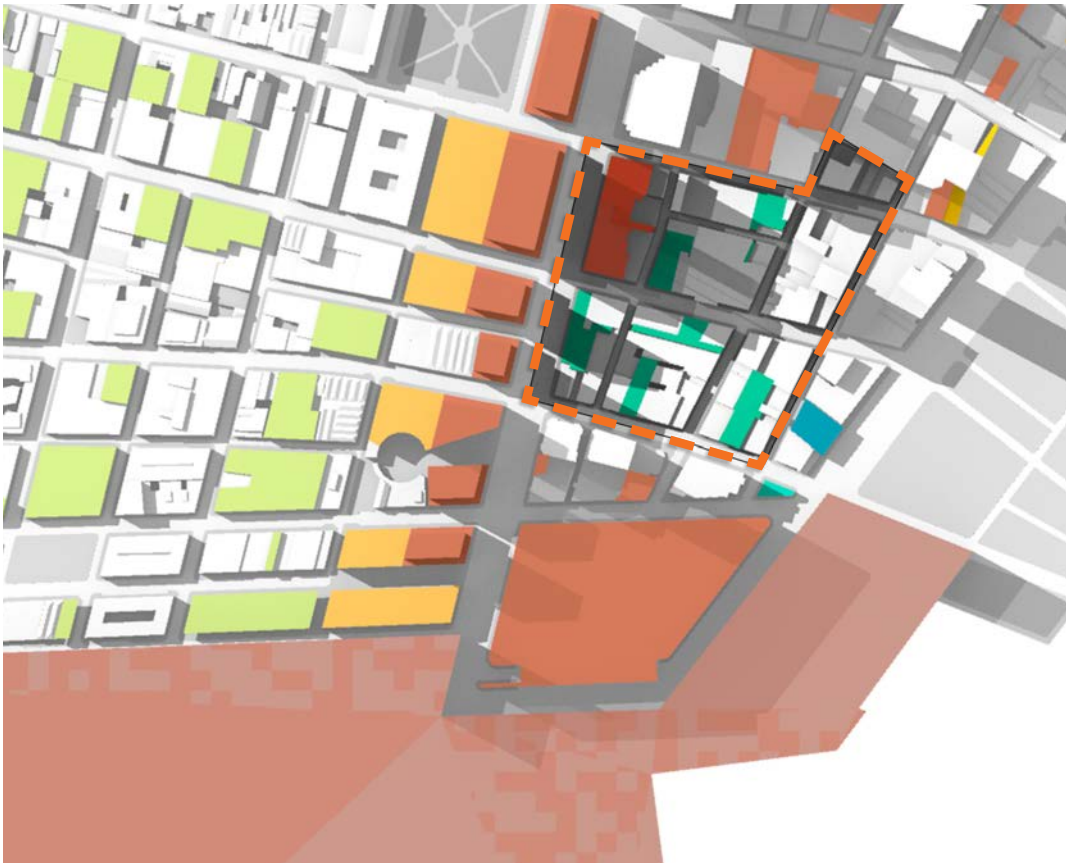
Unanimous agreement

CURRENT CZO DESIGNATED HEIGHT ZONES

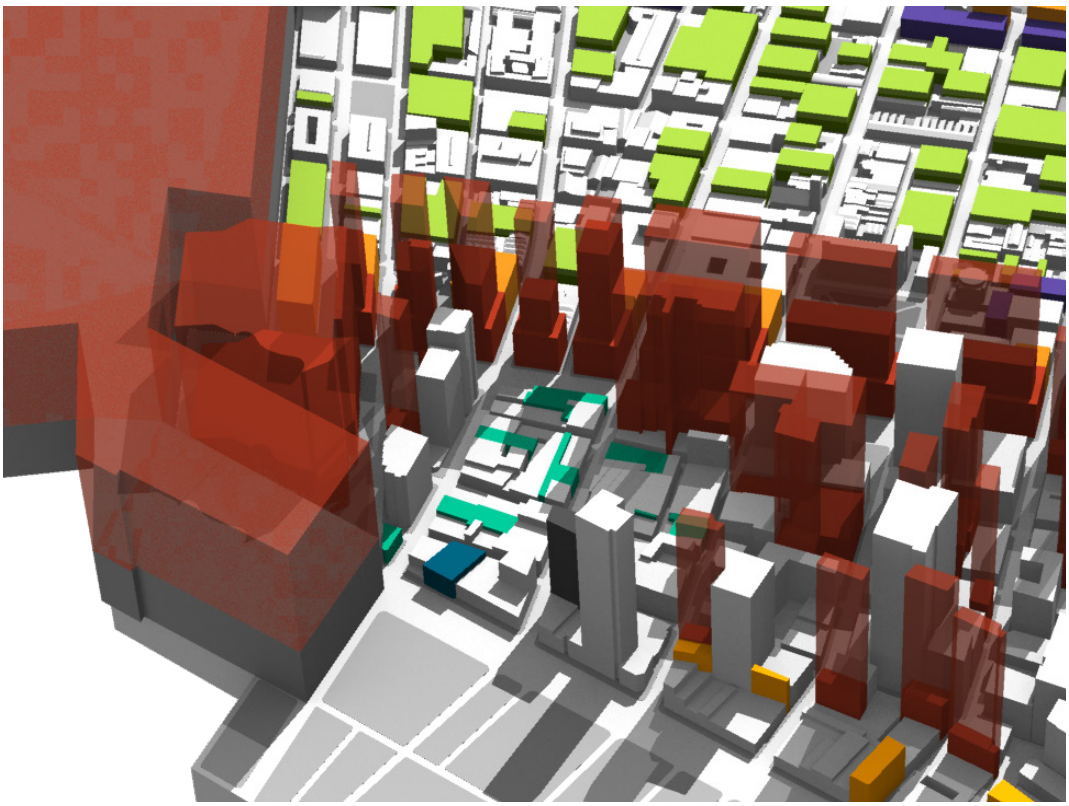


RECOMMENDATION | HEIGHT ZONE CHANGES





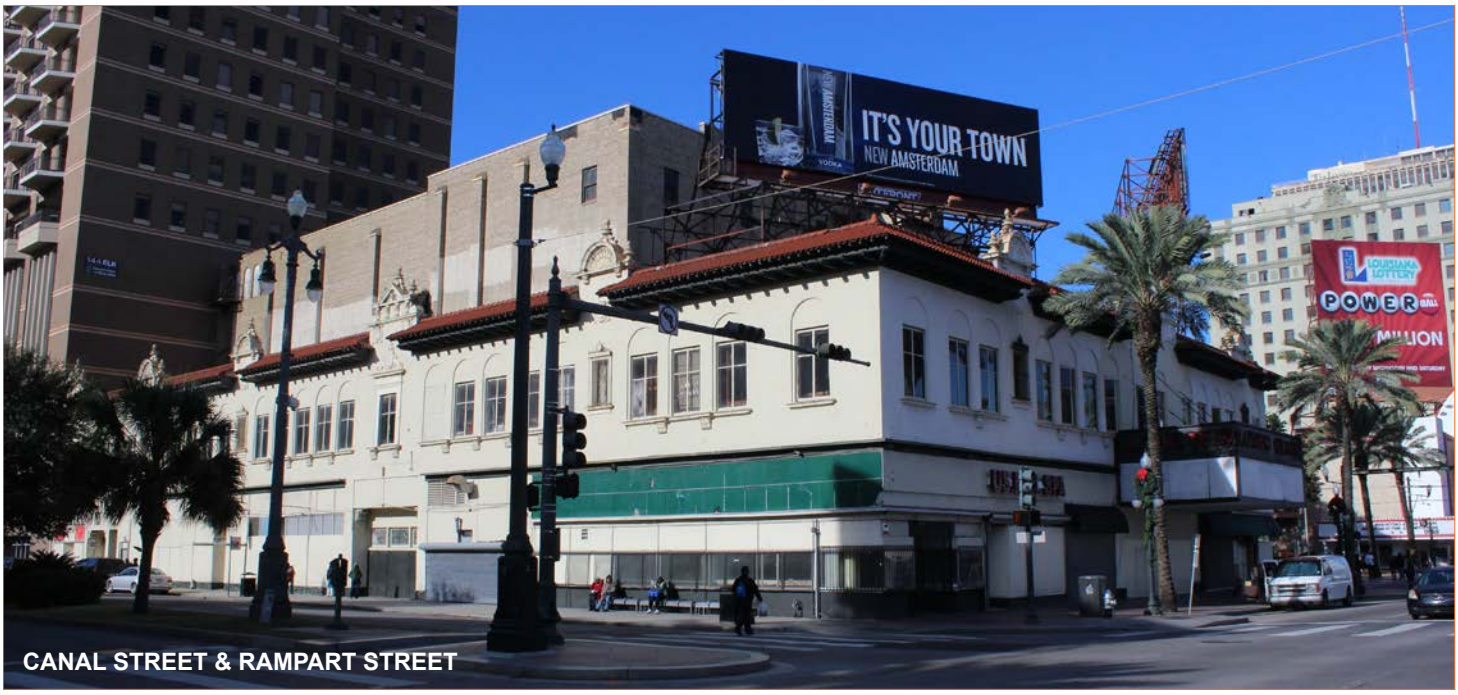
HEIGHT | CURRENT CZO



HEIGHT | CURRENT CZO

CANAL STREET & TCHOUPITOULAS STREET


CANAL STREET & ROOSEVELT WAY



CANAL STREET & RAMPART STREET

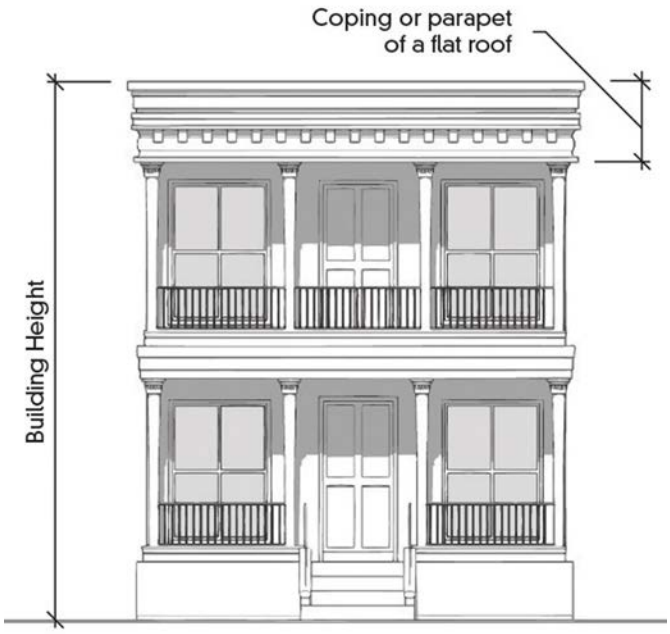
CANAL STREET & TCHOUPITOULAS STREET


CANAL STREET & BARONNE STREET

ISSUE 04 | *Point of Measurement of Building Height at the Roof Level*

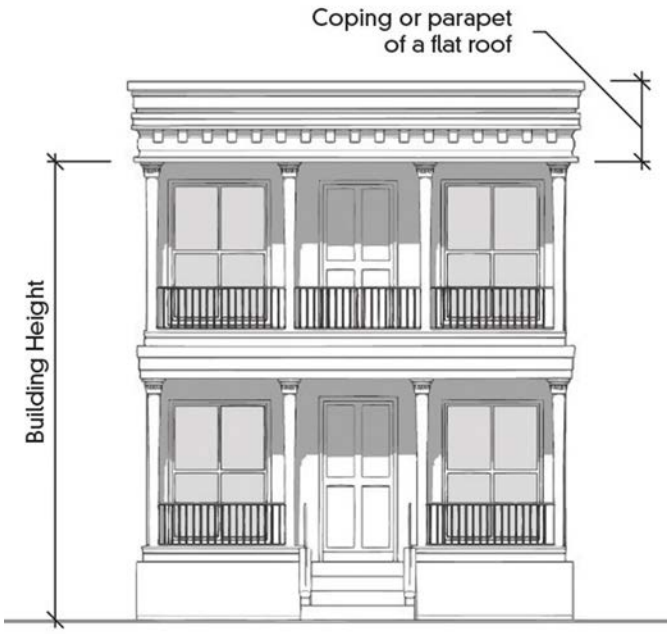
The CZO establishes the point of measurement at the roof level of the building as follows: “The highest point of the coping of a flat roof; the highest point of a mansard roof; the mean height level between eaves and ridge for gable, hip, shed and gambrel roofs; or when the highest wall of a structure with a shed roof is within thirty (30) feet of the public right-of-way, the height of the structure is measured to the highest point of coping or parapet.”*(Comprehensive Zoning Ordinance | Article 26 Definition)* This definition of the point of measurement is a historical condition traced back to the first adopted zoning code and it is integrated into many aspects of city ordinances and building codes; It applies city wide.

Typically, many codes have the point of measurement of building height separated from the design and height of the roof and/or parapet; This allows the measurement of building height to define the amount of habitable space within the parameters of the building envelope. Furthermore, this encourages the roofs and parapets to serve purely as architectural design features and potentially screens rooftop accessories from street view. Roof structures and parapet walls may exceed the maximum height limit provided there is no habitable space gained. There should be specific guidelines and heights designated for roofs and parapets.

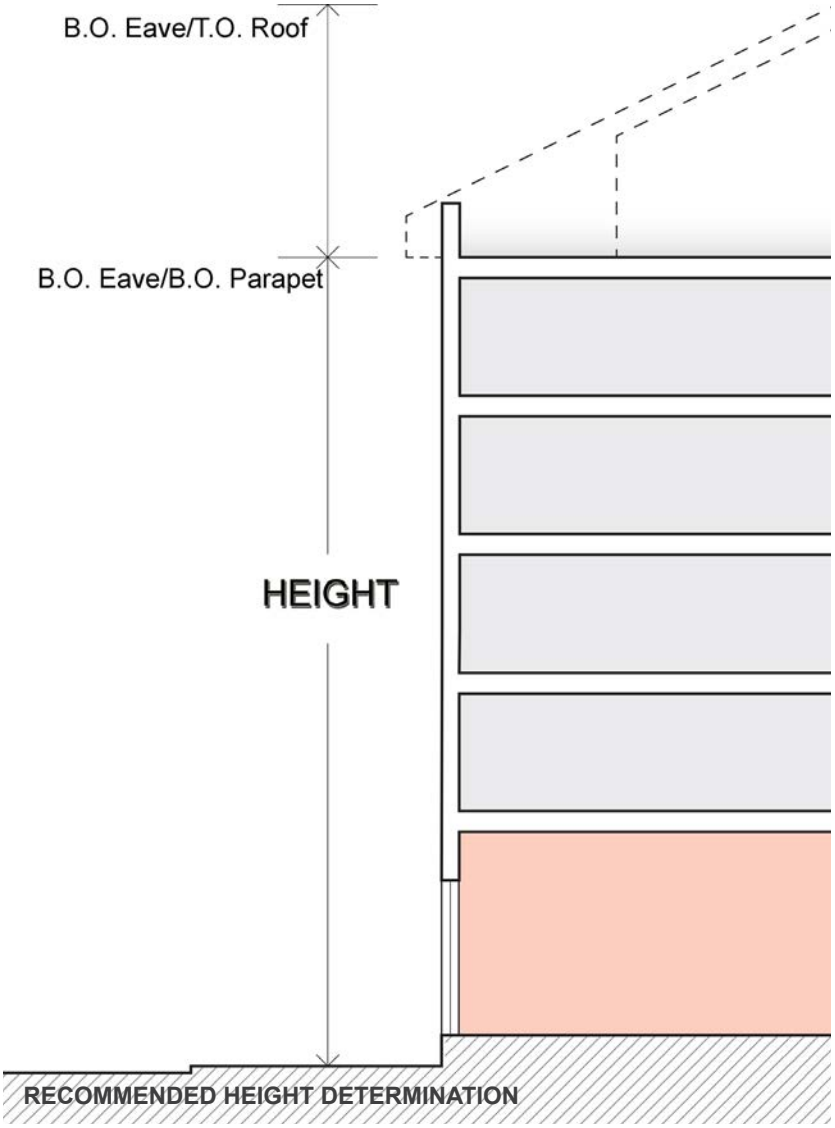


CZO HEIGHT DETERMINATION

VS



RECOMMENDED HEIGHT DETERMINATION



CONSULTANT RECOMMENDATION

Specify the point of measurement for building height at the roof level to be “Base of Eave” or “Base of Parapet”. This will imply new standards need to be developed for the maximum height from “Base of Eave” or “Base of Parapet” to “Top of Parapet or Roof”, and overall buildings heights in the district will need to be calibrated. Height for architectural features and building utilities such as masts, belfries, clock towers, chimney flues, water tanks, elevator bulkheads, and similar structures will need to be developed.

Given the history and geography of the current definition of point of measurement at the roof level this recommendation should be implemented at the CBD scale only.

The expanded area now occupied between B.O Eave/B.O. parapet and B.O. Eave/ T.O. roof needs to have new specific guidelines written to regulate this height zone.

T.F. RECOMMENDATION

Unanimous agreement

VARIOUS PARAPET DESIGNS

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 26 DEFINITION

Building Height is the vertical distance as measured from grade to:

1. The highest point of the coping of a flat roof.
2. The highest point of a mansard roof.
3. The mean height level between eaves and ridge for gable, hip, shed and gambrel roofs. When the highest wall of a structure with a shed roof is within thirty (30) feet of the public right-of-way, the height of the structure is measured to the highest point of coping or parapet.
4. Where maximum building height standards include both the maximum height measured in feet, as well as the maximum number of stories allowed (Ex: 65 ft. and 5 stories), the maximum number of stories allowed shall only apply to the primary façade(s), and shall allow for an additional floor behind a vestibule for parking, mechanical and service uses.

Floor Height. Floor height shall be measured from floor to floor (not floor to ceiling) and allow for mechanical equipment above the ceiling.

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 17.6.D BUILDING DESIGN

The first floor of structures shall be designed with a minimum ceiling height of fourteen (14) feet. The façade that faces the corridor shall maintain a minimum transparency of fifty percent (50%). The bottom of any window used to satisfy this requirement may not be more than four and one-half (4.5) feet above the adjacent sidewalk. Windows shall be constructed of clear or lightly tinted glass. Tinting above twenty percent (20%) or reflective glass is prohibited.

CITY OF NEW ORLEANS CODE OF ORDINANCES | SECTION 26-196 MINIMUM CEILING HEIGHT (AMENDED PER IBC ADOPTION)

Habitable spaces, hallways, corridors, laundry areas, bathrooms and toilet rooms shall have a minimum ceiling height of seven feet. The required height is measured from the finished floor to the lowest projection from the ceiling.

REFERENCES AND CASE STUDIES

CASE STUDY | CENTRAL WEST END FORM-BASED DISTRICT CODE

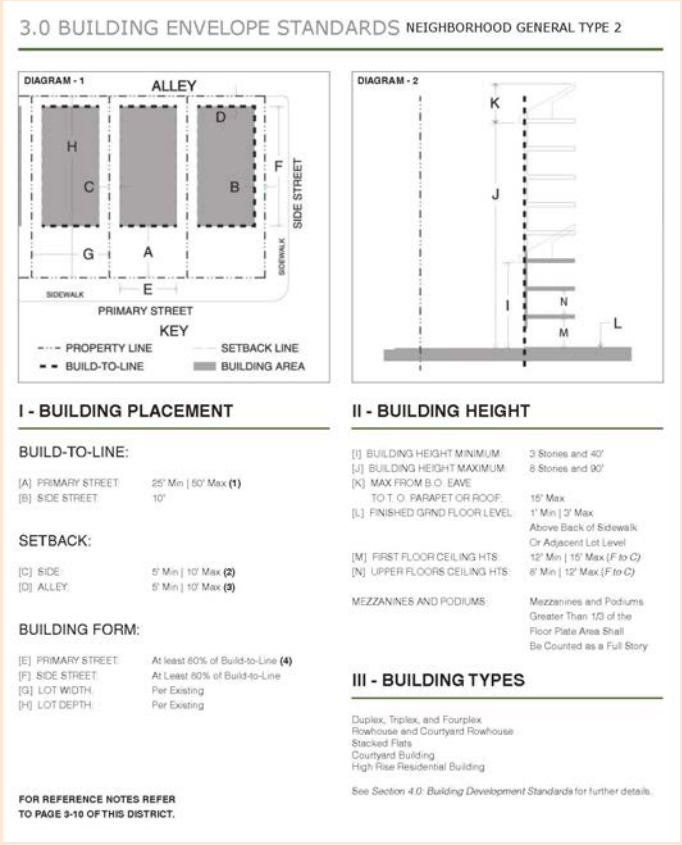
The Central West End Form-Based District is an overlay form-based district for new construction and additions within a specified portion of the Central West End neighborhood. This District was designed to harmonize new development with the existing local and National Register historic districts and the ex¬isting City of Saint Louis zoning code; while also re¬inforcing the sustainable, urban, walkable qualities, and character of the existing area. Below are two (2) examples of the way in which the various aspects that makeup height are specifically regulated and applied.

Residential minimum 3 stories and 40ft building:

- 15’ maximum from B.O. eave to T.O. parapet or roof
- First floor ceiling heights: 12’ minimum, 15’ maximum
- Upper floor ceiling heights: 8’ minimum, 12’ maximum

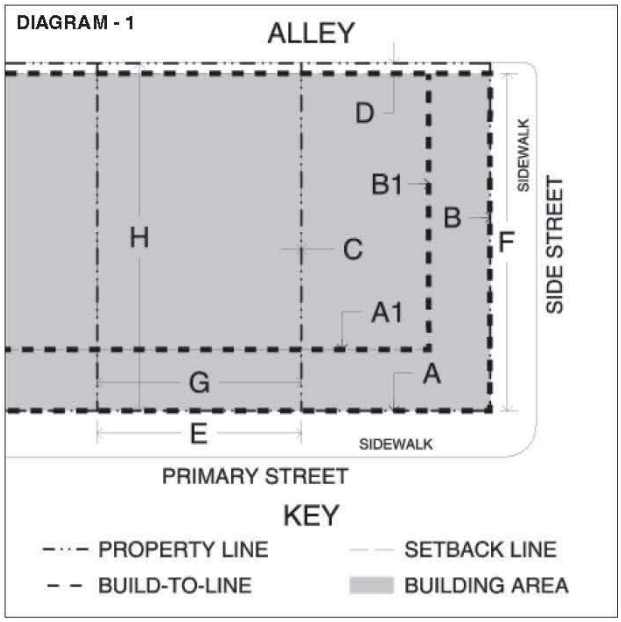
Neighborhood Core maximum 12 stories and 130ft building:

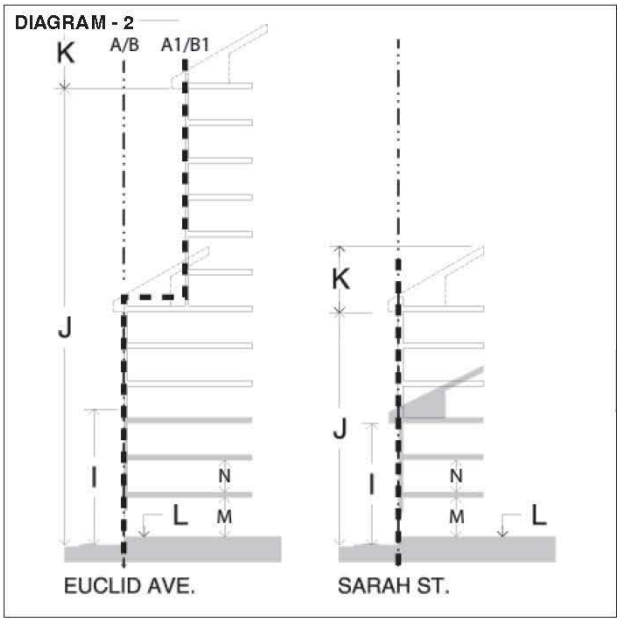
- 15’ maximum from B.O. eave to T.O. parapet or roof
- First floor ceiling heights: 12’ minimum, 25’ maximum
- Upper floor ceiling heights: 8’ minimum, 15’ maximum
- Mezzanines and podiums greater than 1/3 of the floor plate area shall be counted as a full story



REFERENCES AND CASE STUDIES (CON'T)

3.0 BUILDING ENVELOPE STANDARDS NEIGHBORHOOD CENTER TYPE 1





I - BUILDING PLACEMENT

BUILD-TO-LINE:

[A] PRIMARY STREET (For First 6 Stories):	0' **(1)**
[A1] PRIMARY STREET (For 7 to 12 Stories):	30'
[B] SIDE STREET (For First 6 Stories):	0' **(1)**
[B1] SIDE STREET(For 7 to 12 Stories):	30'

SETBACK:

[C] SIDE:	0' Min | 10' Max **(2)**
[D] ALLEY:	5' Min | 10' Max **(3)**

BUILDING FORM:

[E] PRIMARY STREET:	At Least 85% of Build-to-Line
[F] SIDE STREET:	At Least 85% of Build-to-Line
[G] LOT WIDTH:	Per Existing
[H] LOT DEPTH:	Per Existing

FOR REFERENCE NOTES REFER TO PAGE 3-18 OF THIS DISTRICT.

II - BUILDING HEIGHT

[I] BUILDING HEIGHT MINIMUM:	3 Stories and 40'
[J] BUILDING HEIGHT MAXIMUM:	12 Stories and 130' **(4)**
[K] MAX FROM B.O. EAVE TO T. O. PARAPET OR ROOF:	15' Max
[L] FINISHED GRND FLOOR LEVEL:	6" Max Above Back of Sidewalk Or Adjacent Lot Level
[M] FIRST FLOOR CEILING HTS:	12' Min | 25' Max (*F to C*)
[N] UPPER FLOORS CEILING HTS:	8' Min | 15' Max (*F to C*)
[N1] MEZZANINES AND PODIUMS:	Mezzanines and Podiums Greater Than 1/3 of the Floor Plate Area Shall Be Counted as a Full Story

III - BUILDING TYPES

Podium Building
Commercial Block Building
Flex Building
Live / Work Units
Liner Building

See *Section 4.0: Building Development Standards* for further details.

ISSUE 05 | *Point of Measurement of Building Height at the Ground Level for Commercial Buildings*

The CZO establishes the point of measurement at the ground level of the building as “grade”. This is common practice for commercial building since the objective is to have the commercial space and sidewalk at approximately the same level.

The CZO does not consider the impact of the FEMA established Base Flood Elevations on the designation of building heights. Most of the study area in the CBD in an “X Zone” meaning no flooding should occur with a 100-year storm. There are small localized areas of “A Zone” which are flood zone areas. This implies that the BFE is established site-by-site. According to *City Ordinance 120.3* a BFE can be established based upon the average lower floor elevation within the city block. All this implies a highly localized BFE established in partnership with the City. The BFE can potential raise the ground floor of individual buildings above the sidewalk level or the property owner will need to flood proof the first floor. This causes multiple accessibility design impacts for sidewalks and/or lobbies that are currently being solved at the individual building level. From a building height perspective the BFE is being absorbed with the designated height.

The decision and implementation of measuring height from grade will need to be a collaborative effort across multiple departments due to it being a building code issue rather than a zoning code issue. It would need to be determined if this potential definitional adjustment would be modified on a Citywide scale or just the CBD. The impact of this decision will not only affect how height is measured but flood insurance and certification.

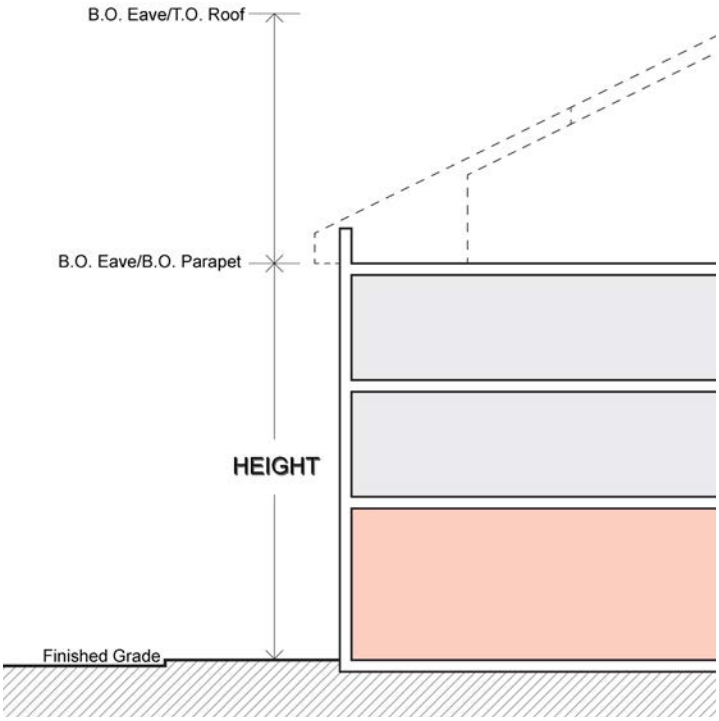
EXTERIOR TREATMENT | STAIR & RAMP

EXTERIOR TREATMENT | STAIR & RAMP

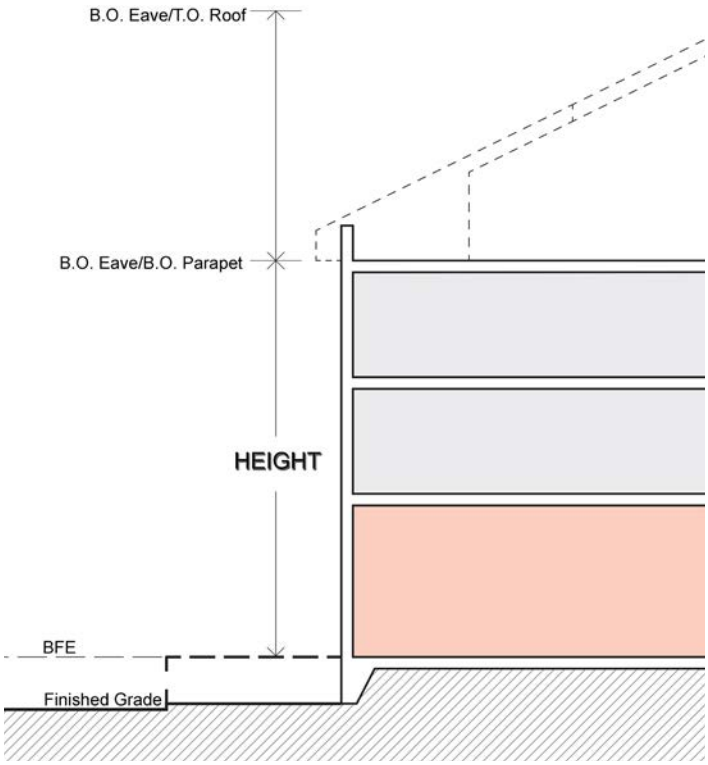
UTILITIES & STORMWATER REQUIREMENTS

Per the CZO, there are three (3) scales that sustainable stormwater strategies can occur: 1) the region or large watershed area, 2) the community or neighborhood, and 3) the site or block.

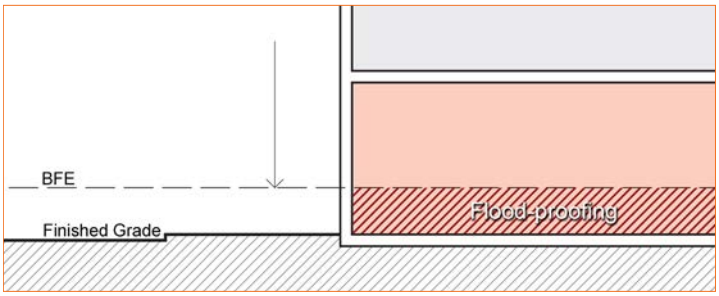
There needs to be regulations put into place explicitly outlining where and how water retention will be handled for the CBD area. Considerations should be given to what type of system, including a tank on the roof and/or below grade, or the ability to pay a fee into a citywide downtown retention service. In addition, there should be no requirement for open space.



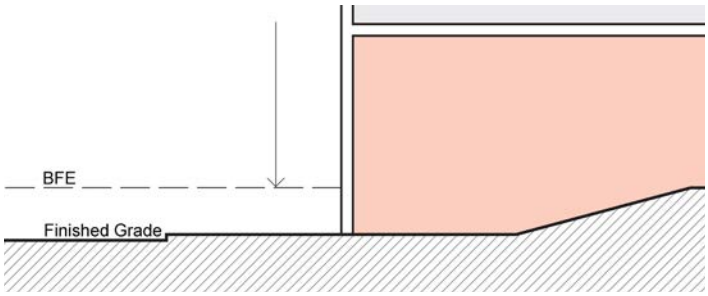
EXISTING: FINISHED GRADE TO B.O. EAVE



BFE TO B.O. EAVE [EXTERNAL SOLUTION]



FLOOD-PROOFING



BFE TO B.O. EAVE [INTERNAL SOLUTION]

CONSULTANT RECOMMENDATION

The point of measurement for building height at the ground level for commercial buildings should be the BFE. For new and existing non-residential buildings flood-proofing should be the preferable development strategy. In the case in which the developer of new non-residential buildings wishes to elevate the ground floor above the BFE all ramps and stairs should occur within the building envelope and the ground floor height and building height will be correspondingly increased by the flood BFE height. Safety and design guidelines shall be put into place for allowable ground floor uses that can flooding and such items as utilities that need to be located above the BFE.

From a broader district planning perspective there should be a study to fully understand the impact of these locally established BFE on the design of the streets and blocks as well as the pedestrian walkability and user experience within downtown.

T.F. RECOMMENDATION

Unanimous agreement

INTERIOR VERSUS EXTERIOR TREATMENT

EXTERNAL SOLUTION

EXTERNAL SOLUTION

FLOOD-PROOFING


EXTERNAL SOLUTION

EXTERNAL SOLUTION

ELEVATED GROUND FLOOR

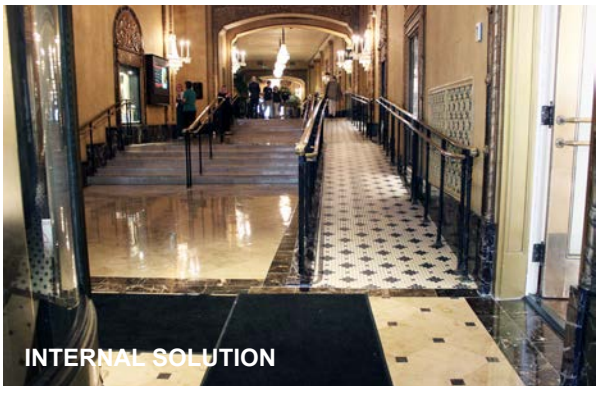

EXTERNAL SOLUTION


INTERNAL SOLUTION


EXTERNAL SOLUTION


ELEVATED GROUND FLOOR


INTERNAL SOLUTION


INTERNAL SOLUTION

REFERENCES AND CASE STUDIES

CASE STUDY | NEW YORK CITY BUILDING RESILIENCY

In the aftermath of hurricane Sandy New York City did a major overall of the building requirements in order to take an active and deliberate stance to incorporate resiliency standards into their building regulations. One takeaway from the Resiliency Initiative that occurred is that the City proposed an amendment to the Zoning Resolution to allow newly constructed and substantially improved buildings to be elevated without being penalized by zoning height limitations. These proposed measures allowed for flexibility in resilient design, including the elevation of mechanical equipment.

2010, New York State adopted an even higher elevation standard than was required under the NFIP, mandating that new and substantially improved buildings in the 100-year floodplain must include "freeboard"—an incremental elevation above the BFE to which a building must be flood-protected. Freeboard is one way to compensate for uncertainties relating to flood modeling and to future sea level rise. Pursuant to this State requirement, 1- and 2-family homes were required to add 2 feet of freeboard to the BFE, while most non-residential buildings were required to add one foot of freeboard. The applicable elevation, BFE plus freeboard, is referred to as the Design Flood Elevation (DFE). New York City adopted the State's standard as part of an Emergency Rule issued by DOB in January 2013. *(See graphic: Flood Protection Terms)*

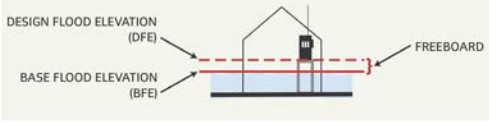
In New York City, these Federal, State, and local standards are incorporated into Appendix G of the Building Code, which outlines the flood-resistant construction techniques that are required for new and substantially improved buildings in the 100-year floodplain. Appendix G is therefore a critical tool for protecting vulnerable buildings. *(See chart: Overview of Appendix G: Flood-Resistant Construction)*

Pursuant to Appendix G and consistent with the standards above, in residential buildings anywhere in the 100-year floodplain, living areas are not permitted below the DFE. Only parking, building access, and storage are permitted below such elevations. For residential buildings in A Zones, any area below the DFE must be "wet flood-proofed," a technique designed to allow floodwaters to enter and leave a structure through flood openings or vents. This approach allows hydrostatic forces—the pressure exerted by the sheer weight of water—to equalize on both sides of building walls and thus prevents structures from collapsing. Residential buildings in A Zones also may comply with Appendix G by elevating their lowest floor above the DFE. *(See graphic: Wet Flood-Proofing Method)*

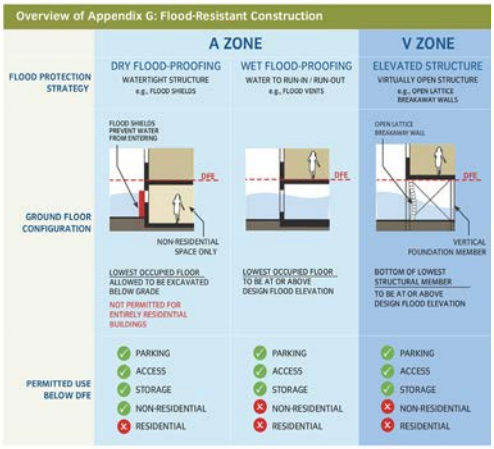
For a residential building in a V Zone, the entire structure must be elevated on piles to prevent the lateral force of waves from damaging the structure. In addition, areas below the DFE are required to be open or built with "breakaway" walls, such as non-supporting open-lattice walls, that can give way under water pressure without causing the building to collapse.

Requirements for commercial buildings differ from those of residential buildings. In A Zones, commercial buildings must have their lowest floor elevated above the DFE or be "dry flood-proofed" (made watertight) below the DFE. Dry flood-proofing techniques are designed to prevent water from entering a structure (using,

Flood Protection Terms

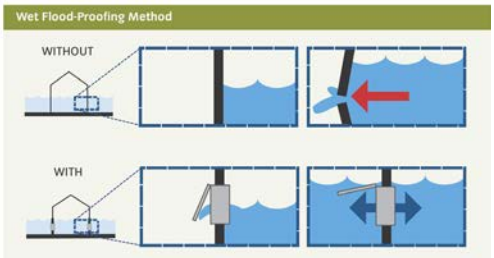


Overview of Appendix G: Flood-Resistant Construction



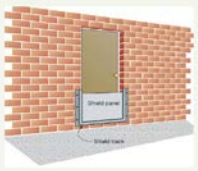
Source: DCP

Wet Flood-Proofing Method



Without wet flood-proofing, pressure from floodwaters builds up on one side of a building's walls, often causing structural damage. With wet flood-proofing, openings or vents permit floodwaters to enter an enclosed area, allowing this pressure to equalize on both sides of the building's walls thereby preventing the structural damage.

Dry Flood-Proofing Method Using Temporary Flood Shields



One method of dry flood-proofing is a temporary flood shield that can help prevent low-level flooding from entering through an opening such as a door or window.

Source: FEMA

for example, sealants, flood shields, or aquarium glass) and to strengthen structural components to resist hydrostatic forces from floodwaters. In V Zones, such dry flood-proofing of commercial uses is not permitted. Instead, as with residential buildings, the lowest occupied floor must be elevated above the DFE. *(See graphic: Dry Flood-Proofing Method Using Temporary Flood Shields)*

For all new and substantially improved buildings, Appendix G further requires that, regardless of intended use, flood damage-resistant materials must be used below the DFE. Such materials must be capable of withstanding direct and prolonged contact with floodwaters, without sustaining any damage that requires more than cosmetic repair. In addition, pursuant to Appendix G, mechanical equipment (electrical, heating, ventilation, plumbing, and air conditioning systems) either must be located above the DFE or, if located below the DFE, must be protected so as to prevent it from being inundated with water.

Under Mayor Bloomberg, the City has been even more aggressive about building resiliency, focusing not just on surge and flood but also on other climate risks. For example, in 2008, the Mayor and the City Council Speaker convened the Green Codes Task Force—an expert panel of architects, engineers, regulators, and other stakeholders—to recommend changes to the City's codes and regulations to make buildings more sustainable. The group's 111 recommendations included proposals to augment building standards in the 100-year floodplain to account for rising sea levels and to ensure "passive survivability"—providing residents with safe living conditions in the event of citywide utility failures. To date, 39 of the group's recommendations have been adopted by City agencies and the City Council. Meanwhile, in 2011, DCP released *Vision 2020: New York City Comprehensive Waterfront Plan*, a 10-year plan for the city's 520-mile waterfront that explicitly included increasing climate resiliency as one of eight overarching goals, addressing in detail the need to consider climate risks as a part of waterfront development.

In the immediate aftermath of Sandy, the City reexamined its existing flood-resistant construction rules so that rebuilding and new construction would reflect the best available data on coastal flood risk. As a result, on January 13, 2013, in collaboration with the City Council, Mayor Bloomberg issued Executive Order 230, "An Emergency Order to Suspend Zoning Provisions to Facilitate Reconstruction in Accordance with Enhanced Flood Resistant Construction Standards." This emergency order suspended height and other zoning restrictions so that buildings could meet new advisory flood elevation standards published by FEMA in February, without being penalized under the Zoning Resolution (for example, if elevation put a structure into conflict with zoning height limitations). This measure was designed as a temporary tool so that buildings being built or retrofitted post-Sandy would be constructed safely, according to the then-best available information.

In an effort to further promote resiliency, the Mayor and the City Council Speaker convened the Building Resiliency Task Force (BRTF), an expert panel of engineers, architects, developers, and property owners, along with representatives of City government. The BRTF, which worked closely with those involved in developing this report, was charged with undertaking a comprehensive review of current code standards and proposing changes with the goal of ensuring that, going forward, buildings would be constructed to the most modern standards of resiliency. Managed by the Urban Green Council, the local chapter of the US Green Building Council, the BRTF is developing proposals that will be released in 2013. These proposals will expand upon and complement the recommendations outlined in this chapter.

Credit: DOB/Dan Eschanasy

The effects of flooding and storm surge resulted in severe structural damage to many buildings during Sandy.

INITIATIVES FOR INCREASING RESILIENCY IN BUILDINGS

Strategy: Retrofit as many buildings as possible so that they will be significantly more resilient than they are today

Initiative 7

Encourage existing buildings in the 100-year floodplain to adopt flood resiliency measures through an incentive program and targeted requirements

The City will propose a program that will encourage and, in some limited cases, require property owners to adopt targeted flood protection measures that are tailored to New York's dense urban environment and that will offer meaningfully greater protection than the status quo.

This program consists of two elements:

- an incentive program, which will fund a portion of eligible flood-protection costs for existing building stock, subject to available funding; and
- a requirement for large buildings—those with 7 or more stories that are more than 300,000 square feet in size—to undertake flood-protection measures by 2030.

Incentive Program

With the goal of ensuring that the vast majority of the built square footage currently in the 100-year floodplain is significantly better protected from flood risk going forward than prior to Sandy, the City will create, subject to available funds, a $1.2 billion program that will offer grants or, where appropriate, loans to building owners to help fund a percentage of the eligible costs of completing all or some of the Core Flood Resiliency Measures (as defined below).

The actual percentage of costs covered by this program will be based on a sliding scale, taking into account the uses of the applicable building (as defined by Department of Finance [DOF] tax class), the applicable building's size, and building value (using assessed value as a proxy). Prior to implementation of this program, the City will publish for public comment a proposed methodology for calculating the aforementioned sliding scale. Subject to the discretion of the City in cases of great need, the City will cap awards at $2 million per building.

Core Flood Resiliency Measures: As Sandy demonstrated, during an inundation event, damage to systems and equipment is the most common type of damage experienced by buildings. In addition to imposing costly repairs, damage to systems and equipment also delays recovery, preventing people from reoccupying their homes and getting their businesses up and running quickly after a storm.

The Core Flood Resiliency Measures will therefore include elevation or other flood protection of the following critical building equipment and utilities: fire protection equipment (including alarms and pumps); electrical equipment (including panels, switch gear, and transformers); heating, ventilation, and air conditioning (HVAC) equipment (including boilers, furnaces, and burners); plumbing equipment (including domestic water equipment and sump pump power feeds); telecommunications equipment; elevator equipment; and emergency generators and associated fuel tanks and pumps (subject to the approval of the Code amendments described above). *(See graphic: Flood Protection of Building Systems)*

Elevation or flood-proofing of this equipment will be required to meet the standard of the higher of the BFE, as set forth in the PWMs, or the FIRMs in effect as of the writing of this report, in each case, plus 1 to 2 feet of freeboard (as applicable). Upon adoption of the new FIRMs, elevation will be required to meet the standard of the BFE, as set forth in the new FIRMs, plus 1 to 2 feet of freeboard (as applicable).

For owners of 1- to 2-story buildings of a combustible type—those buildings most at risk of severe structural damage during a flood—Core Flood Resiliency Measures also will include structural reinforcement to prevent collapse in the event of inundation, including:

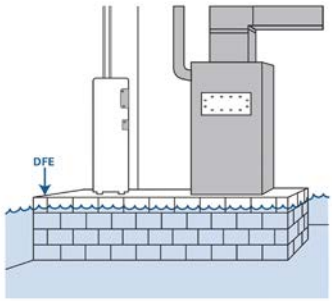
- upgrades to the foundation;
- reinforcement of exterior walls; and
- wet flood-proofing (see above).

These measures do not suggest that inhabitants should remain in their buildings during a flood or storm surge event. Regardless of the interventions completed, all residents and businesses should, of course, comply with any City evacuation orders to promote their safety. However, the goal is for the retrofits proposed above to allow residents and businesses to recover more quickly after a storm, once reentry is deemed to be safe.

Disbursement of Funds: For the first one to two years of the program, funds will be allocated to specific categories of uses to enable an equitable distribution of such funds across building types and geographies. Categories for which funds will be set aside during this one to two year period will be the following:

- $100 million reserved for 1- to 3-family homes (DOF tax class 1);

Flood Protection of Building Systems



Example of a building hot water heater and furnace elevated above the minimum flood protection level via a platform.

A Stronger, More Resilient New York. (2013, June). New York, New York, USA. Retrieved April 2017, from http://www.nyc.gov/html/sirr/downloads/pdf/final_report/Ch4_Buildings_FINAL_singles.pdf

Designing for Flood Risk: Urban Design Principles

FEMA and Building Code standards for flood-resistant construction require new or substantially improved buildings in flood zones to be flood-proofed or elevated above projected flood levels. However, elevating buildings more than a few feet above the sidewalk can have negative effects on streetscape, building access, public safety, ground floor activity, architectural quality, and neighborhood character. DCP has worked with representatives of the local design community to develop a set of urban design principles to guide the design of flood-resilient buildings.

VISUAL CONNECTIVITY

Having the windows and front door of a building face the public street can create a sense of security and comfort for pedestrians. These architectural elements also provide visual interest, which in turn promotes a walkable neighborhood. Elevating the first floor of a building can limit this visual connectivity. In residential neighborhoods, porches, stoops, and generous access elements can be designed in order to help to mitigate this disconnection. On commercial streets, this visual connectivity is important to the viability of local retail. A common best practice would be to dry flood-proof the commercial space so that it can be closer to sidewalk level and therefore maximize visual and physical connectivity.

FACADE ARTICULATION

Buildings often contribute to the character of a place by offering human-scale architectural elements, particularly on first floors. Elevated buildings with crawl spaces, parking, or storage can create blank walls at grade. Setting a building back from the property line slightly and using landscaping and/or other creative design solutions could help to buffer these voids in an active streetscape. If ground-level parking is the only feasible option, then garage doors and curb cuts should be designed to minimize their impact on the pedestrian realm.

INVITING ACCESS

Elevated buildings pose challenges for accessibility. Ramps can be difficult to accommodate, particularly on smaller lots. Even smaller buildings that are not required to meet Americans with Disabilities Act (ADA) standards have the challenge of integrating longer runs of stairs into building or landscape design. Introducing a 90-degree turn or landing, and paying careful attention to overall stair design could make a long run of stairs easier to climb and appear more inviting for pedestrians.

NEIGHBORHOOD CHARACTER

Some neighborhoods exhibit a relative uniformity of building form. Elevating buildings will necessarily produce variations in building height and, in some cases, placement on the lot. Designers should respect a neighborhood's character by taking cues from existing context in building massing, fenestration, rooflines, and other architectural elements.

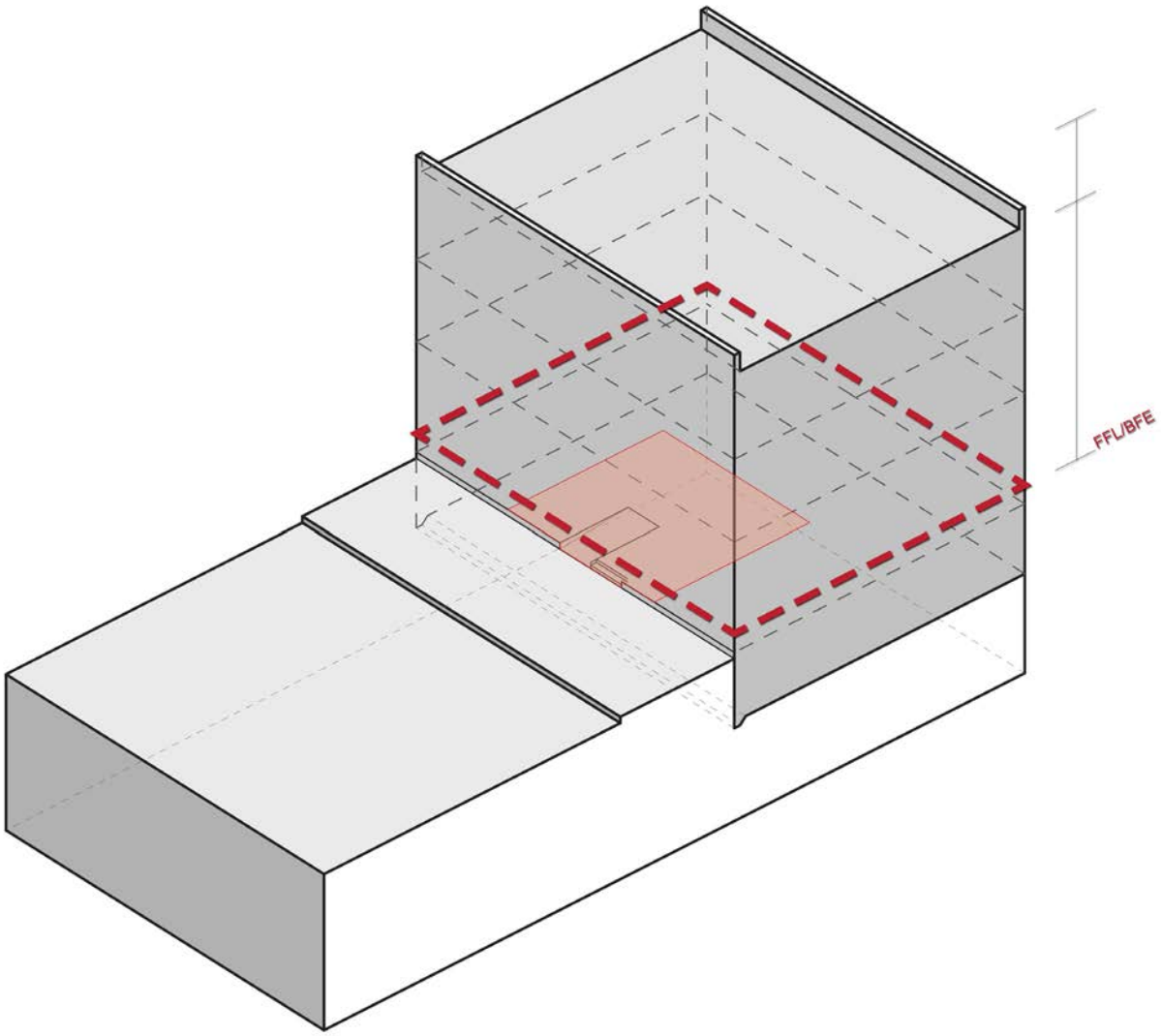
Adapting to higher standards of flood resistance is both a challenge and an opportunity for architects to achieve higher standards of design. The opportunity exists to innovate and produce buildings that contribute to the public realm and have a positive long-term effect on those neighborhoods recovering from Sandy.

A Stronger, More Resilient New York. (2013, June). New York, New York, USA. Retrieved April 2017, from http://www.nyc.gov/html/sirr/downloads/pdf/final_report/Ch4_Buildings_FINAL_singles.pdf

ISSUE 06 | *Point of Measurement of Building Height at the Ground Level for Residential Buildings*

The CZO does not consider the impact of the FEMA established Base Flood Elevations (BFE) on the designation of residential building heights.

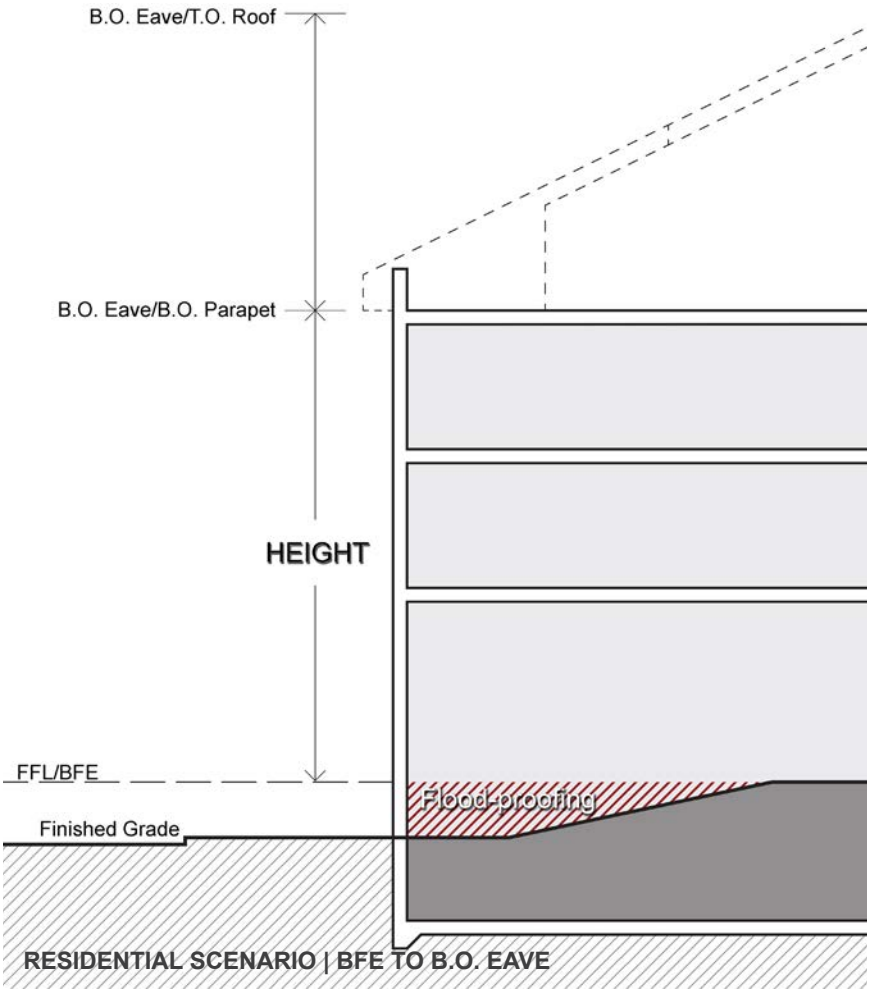
The CZO establishes the point of measurement for building height at the ground level of the building as grade. The CZO does not specify any different ground floor point of measurement for residential buildings within the CBD. For residential buildings, the common practice is that the overall building height at the ground level is measured from the first floor finished floor level with the allowance that the first floor be a pre-determined maximum height above grade for privacy, ventilation and/or a basement level. Due to the high water table and flooding in New Orleans, the traditional below grade basement is rare within residential areas.



RESIDENTIAL SCENARIO | BFE TO B.O. EAVE

INTERIOR TREATMENT

EXTERIOR TREATMENT | STAIRS



RESIDENTIAL SCENARIO | BFE TO B.O. EAVE

CONSULTANT RECOMMENDATION

Develop new codes for point of measurement at the ground floor for residential buildings that outline a maximum height from grade to first floor finished floor level and take into account the location of residential uses relative to commercial areas and street types. In addition, for new residential buildings the Point of Measurement of Building Height at the Ground Level should at a minimum match the BFE or equivalent criteria outlined in the Municipal Code of Ordinances. Typical residential FFL should be 18 inches or higher above Finished Grade which should become the minimum height requirement for residential uses.

T.F. RECOMMENDATION

Unanimous agreement

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ART. 26 SEC. 26.6 DEFINITIONS

Grade: A plane constituting the average of the finished ground level adjoining a building at its exterior walls. Where the finished ground level slopes away from one or more of the exterior walls of a building, the grade shall be established by the lowest points within the area between the building walls and the nearest lot lines. Where one or more lot line is more than six (6) feet from the building, the grade shall be established using the lowest point between the building wall and a point six (6) feet away from and perpendicular to the building wall.

CITY OF NEW ORLEANS CODE OF ORDINANCES | CH. 78 ART .2 DIV. 5 SEC. 78-80 & 81

Minimum elevation required: All building permits issued for new construction or substantial improvement must have imprinted upon them the required mean sea level elevation of the lowest floor (including basement).The lowest floor elevation of new residential and non-residential construction and substantial improvements must, at a minimum, be ***elevated*** to one foot above the BFE as determined by the FIRM adopted by this article, or three feet above the highest adjacent curb (in the absence of curbing, three feet above the crown of the highest adjacent roadway), whichever is higher. In cases where ***flood-proofing*** is utilized for non-residential new construction or substantial improvements, proper certificates from a registered professional engineer or licensed architect shall be obtained and maintained by the director. Such structures utilizing flood-proofing measures must be flood-proofed to a minimum of one foot above the requirement established above.

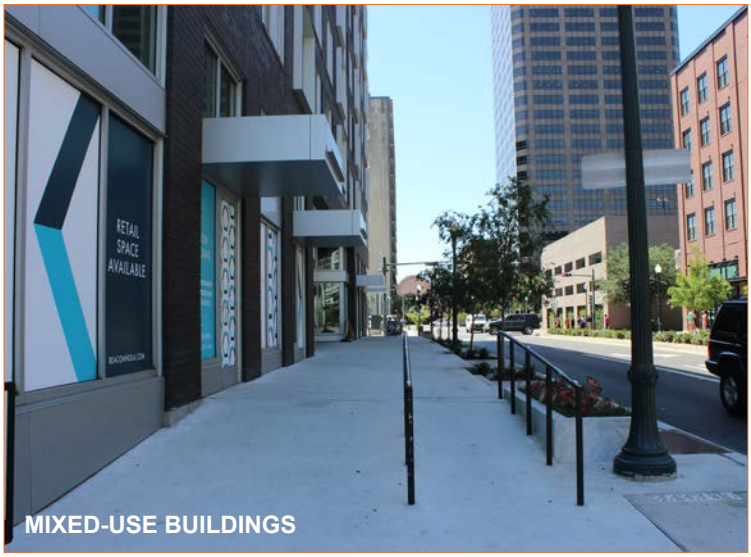
CITY OF NEW ORLEANS CODE OF ORDINANCES | CH. 78 ART. II DIV. 1 SEC. 78-55 DEFINITIONS

Flood-proofing means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitation facilities, or structures with their contents.

CASE STUDY | DAUFUSKIE ISLAND, SOUTH CAROLINA FORM-BASED CODE SECTION 3.7.2

“All specified Building Heights may be increased by the difference between the actual lot elevation and the base elevations required by applicable FEMA standards, provided that any first story space shall be designed for use as: parking or storage space set into the structure a minimum of 10 feet behind the front face of the principle building, and concealed from view of all streets; an open market or open-air area for recreation, relaxation, or gathering; enclosed Commercial or Retail space, to the extent permitted by applicable FEMA requirements, or other use permitted by the Planning Department.”

SITE EXAMPLES



MIXED-USE BUILDINGS


MIXED-USE BUILDINGS

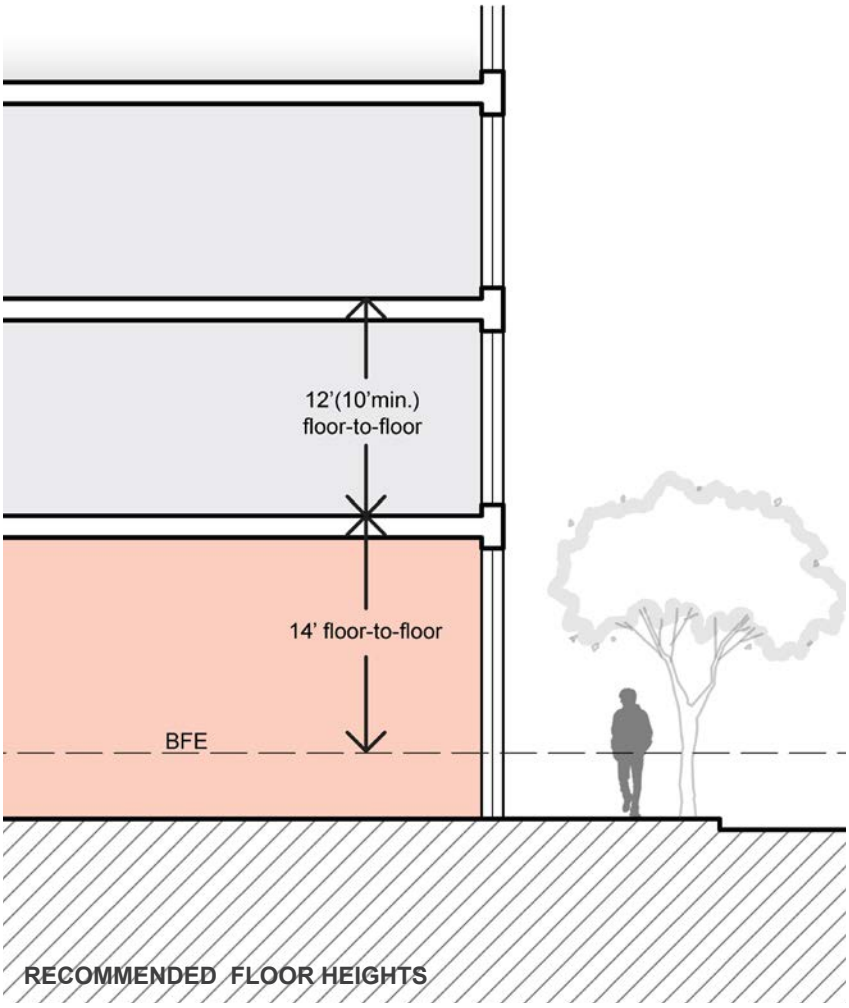
MIXED-USE BUILDINGS

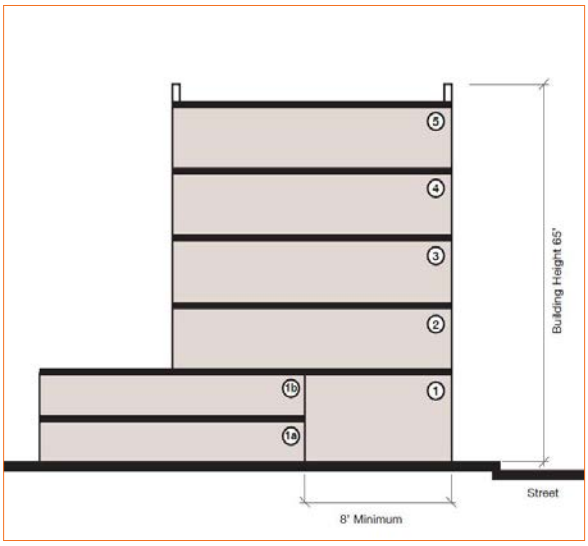

MIXED-USE BUILDINGS

ISSUE 07 | *Floor Height Determination*

A story should be defined as a “habitable level within a building”, from furnished floor to finished floor. In the event that the base flood elevation (BFE), as established by FEMA, is higher than the sidewalk or grade elevations, the height of the first story but not the height fences and walls shall be measured from the base flood elevation. In addition, there is a contradiction in the CZO on the height specifications for the ground floor of buildings. In one article, the CZO specifies that ground floor of a structure shall be designed with a minimum ceiling height of 14 feet (Comprehensive Zoning Ordinance | Art. 17 Sec. 17.6.D Building Design) and in another article the CZO specifies that floor heights shall be measured from floor-to-floor (not floor to ceiling) and allow for mechanical equipment above the ceiling (Comprehensive Zoning Ordinance | Art. 26 Sec. 26.6 Definitions). There is a further contradiction between the Municipal Code of Ordinance and the adopted IBC for all other floor heights. The Municipal Code of Ordinance requires a 7ft 6inches floor to ceiling and the IBC requires 7ft floor to ceiling. No maximum floors heights have been determined.

The 2009 Height Study suggested a ground floor minimum floor-to-floor height of 14 feet with each additional floor ideally having a 12 ft minimum floor-to-floor dimension.





CONSULTANT RECOMMENDATION

The floor height shall be measured from floor-to-floor with required minimum and maximums set for the first floor and subsequent floors. Ground floor first floors shall measure a minimum of 14 feet from the BFE with a maximum to be designated in commercial areas in order to keep a consistency of storefronts. All additional stories shall measure ideally 12 feet floor-to-floor with a minimum of 10 feet floor-to-floor with a maximum in order to exclude mezzanines. Mezzanines and podiums greater than 1/3 of the floor area shall should be considered as a full story. In addition, minimum floor to ceiling heights need to consistent with the City Municipal Code of Ordinances.

T.F. RECOMMENDATION

Task Force in agreement pending final definition of habitable space.

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 17.6.D BUILDING DESIGN

The first floor of structures shall be designed with a minimum ceiling height of fourteen (14) feet. The façade that faces the corridor shall maintain a minimum transparency of fifty percent (50%). The bottom of any window used to satisfy this requirement may not be more than four and one-half (4.5) feet above the adjacent sidewalk. Windows shall be constructed of clear or lightly tinted glass. Tinting above twenty percent (20%) or reflective glass is prohibited.

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | 26.6 DEFINITIONS

Floor Height. Floor height shall be measured from floor to floor (not floor to ceiling) and allow for mechanical equipment above the ceiling.

CITY OF NEW ORLEANS CODE OF ORDINANCES

Section 26-196 Minimum Ceiling Height: Habitable spaces, hallways, corridors, laundry areas, bathrooms and toilet rooms shall have a minimum ceiling height of seven feet. The required height is measured from the finished floor to the lowest projection from the ceiling.

Sec. 26-511. First or ground floor means the first floor or floor level of any building or structure above or on the same plane as the surface of the sidewalk. There shall be excluded from this definition basements or cellars the floors of which are below the plane of the surface of the sidewalk.

CITY OF NEW ORLEANS CODE OF ORDINANCES | SECTION 26-196 MINIMUM CEILING HEIGHT (AMENDED PER IBC ADOPTION)

Habitable spaces, hallways, corridors, laundry areas, bathrooms and toilet rooms shall have a minimum ceiling height of seven feet. The required height is measured from the finished floor to the lowest projection from the ceiling.

CASE STUDY | MIAMI 21 FORM-BASED CODE ARTICLE 3.5.1

"In the event that the base flood elevation, as established by FEMA, is higher than the sidewalk or grade elevations, the height of the first story…shall be measured from the base flood elevation."

MIAMI 21 **ARTICLE 3. GENERAL TO ZONES**

AS ADOPTED - MAY 2016

3.5 MEASUREMENT OF HEIGHT

3.5.1 Unless otherwise specified herein, the Height of Buildings shall be measured in Stories. The height of Fences and walls shall be measured in feet. The Height of Buildings, Fences and walls shall be measured from the Average Sidewalk Elevation or, where no sidewalk exists, the average of the record profile grade elevation of the street Abutting the Principal Frontage of the Building, as determined by the Public Works Department. In the event that the base flood elevation, as established by FEMA, is higher than the sidewalk or grade elevations, the Height of the first Story but not the height of Fences and walls shall be measured from the base flood elevation.

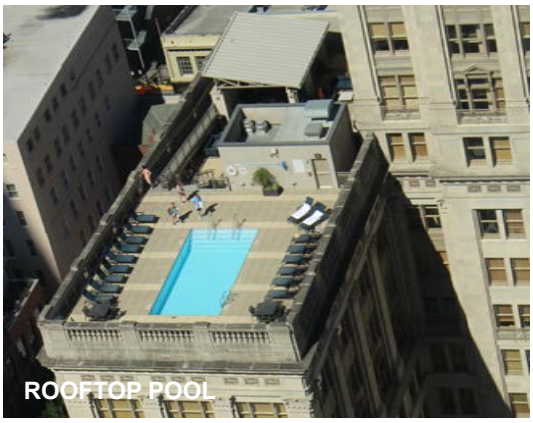
3.5.2 A Story is a Habitable level within a Building of a maximum fourteen (14) feet in Height from finished floor to finished floor. Basements are not considered Stories for the purposes of determining Building Height. A ground level retail Story may exceed this limit up to a total height of twenty-five (25) feet. A single floor level exceeding fourteen (14) feet, or twenty-five (25) feet at ground level retail, shall be counted as two (2) Stories; except for T6-36, T6-48, T6-60, T6-80, and D1, where a single floor level exceeding fourteen (14) feet may count as one (1) story if the building height does not exceed the maximum height, including all applicable bonuses, allowed by the transect at fourteen (14) feet per floor. Where the first two stories are retail, their total combined Height shall not exceed thirty-nine (39) feet and the first floor shall be a minimum of fourteen (14) feet in Height. Mezzanines may not exceed thirty-three percent (33%) of the Habitable Space Floor Area, except for D1, where mezzanines may not exceed fifty percent (50%) of the Habitable Space Floor Area. Mezzanines extending beyond thirty-three percent (33%) of the Floor Area, or fifty percent (50%) of the Floor Area in D1, shall be counted as an additional floor. The Height of a Parking Structure concealed by a Liner may be equal to the Height of the Liner; this may result in a Liner Story concealing more than one level of Parking.

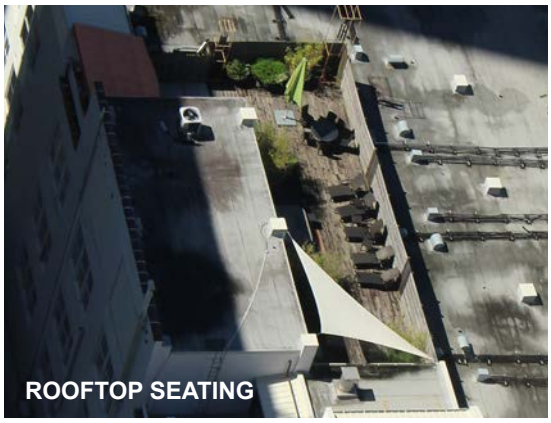
ISSUE 08 | *Accessory Rooftop Features*

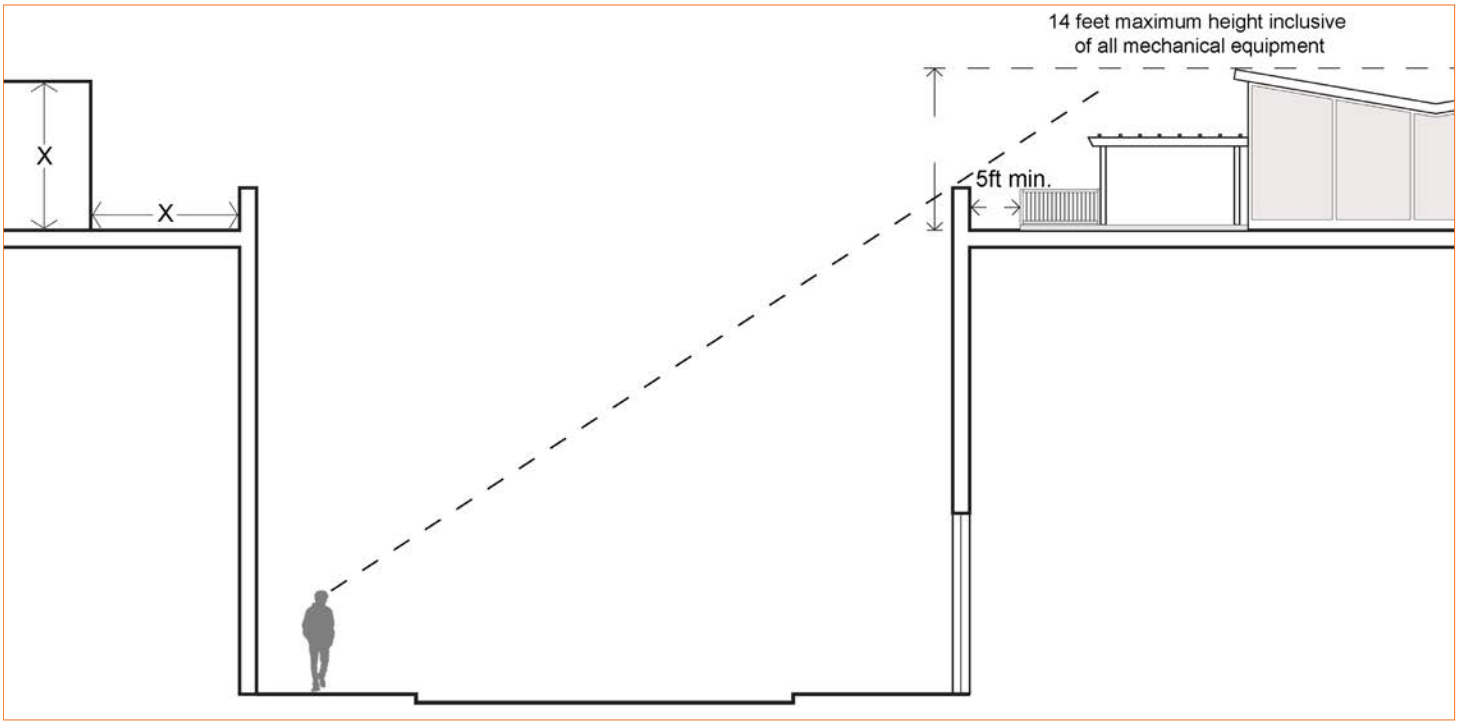
There is an increased demand both nationally and locally for rooftop living, entertainment, and recreational. The CZO has limited the allowable features to a select number of uses that are setback from the primary facades of the building *(see CZO article 26.6.0)*. A key element of rooftop features are that they are excluded from the height and gross floor area calculations. According to CZO, if any of the following are located on a rooftop they are considered an additional story and count towards the buildings overall height: enclosed habitable space, awnings, pergolas, trellises, and shade structures. Thus, the current regulations for accessory rooftop features lack a way to capitalize on the unused rooftop space for the purposes of livability and vitality with the downtown without it being counted towards the height of the building.

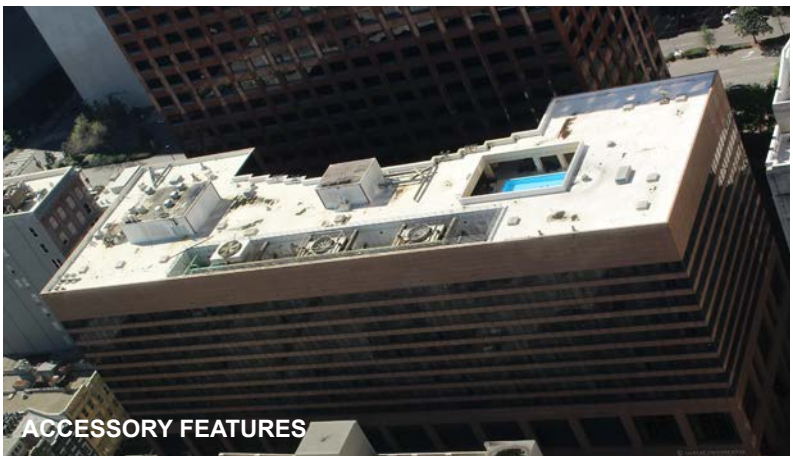

ACCESSORY SPACE


ACCESSORY SPACE


ROOFTOP POOL


ROOFTOP SEATING




ACCESSORY FEATURES

CONSULTANT RECOMMENDATION

With the current demand and the changing nature of rooftop space and its ability to activate another facet of livability within the downtown, the CZO should be amended to increase the allowable uses inclusive of: enclosed habitable non-residential spaces such as gyms, pool rooms, community rooms and restaurants up to a total of 50% of the roof area, and a 14 feet maximum height inclusive of all mechanical equipment. Buildable area must not infringe on required setbacks. This area would not count against building height and/or gross floor area on the assumption that proper design and safety guidelines are developed. It is assumed for restaurants and any other uses requiring food and beverage services that the approval process will require neighborhood notifications and a conditional use permit. In addition, CBD-5 they need to follow reference 17.3.B.4.

T.F. RECOMMENDATION

Task Force in agreement pending a rigorous focus on enforcement, management, and operations.

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 26.6.0

1. Accessory rooftop features of a flat roof, such as green roofs, rooftop decks, rooftop pools, rooftop gardens, and stormwater detention systems are permitted below the parapet of any flat roof building or flat roof portion of a building, and are excluded from the calculation of height and gross floor area, provided that the following standards are met:
2. Documentation shall be submitted demonstrating that the roof can support the additional load of plants, soil, and retained water, and that an adequate soil depth will be provided for plants to survive. All planting materials and soils shall be of good quality and meet the American Standard for Nursery Stock (ASNS), latest edition, or equivalent for minimum acceptable form, quality and size for species selected. Vegetation shall be maintained in good condition, present a healthy, neat and orderly appearance, and be kept free of weeds, refuse and debris for the life of the building. Irrigation systems, when provided, shall be maintained in good operating condition to promote the health of the plant material and the conservation of water.
3. The roof contains sufficient space for future installations, such as mechanical equipment, that will prevent adverse impacts.
4. Rooftop decks or patios shall be set back five (5) feet from all building edges.
5. Guardrails shall be set back at least five (5) feet from the building edge.

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 26 DEFINITIONS

Penthouse: An enclosed structure above the roof of a building, other than a roof structure or bulkhead. A penthouse may be used only for the shelter of mechanical equipment or vertical shaft openings in the roof. For the purposes of this Ordinance, a penthouse does not include residential dwelling units.

CASE STUDIES | CHARLESTON MUNICIPAL CODE

Allowances for additional height above fifty-six (56) feet but not to exceed seventy (70) feet may be permitted for architectural features such as parapets, towers, pergolas, or other roof elements, and mechanical rooms, elevator penthouses and stair towers. Mechanical rooms, elevator penthouses and stair towers must be designed as integrated architectural elements. The design of such features is further limited as follows: they shall not contain enclosed habitable spaces (unless such habitable spaces are permitted as a result of the previous clause); the total rooftop occupation (including allowed enclosed habitable spaces and uninhabitable architectural features) shall not exceed 50 percent of the total rooftop area; the existence and design of any such features is subject to review and approval of the Board of Architectural Review.

SITE EXAMPLES

ACCESSORY FEATURES

ACCESSORY SPACE

ACCESSORY FEATURES

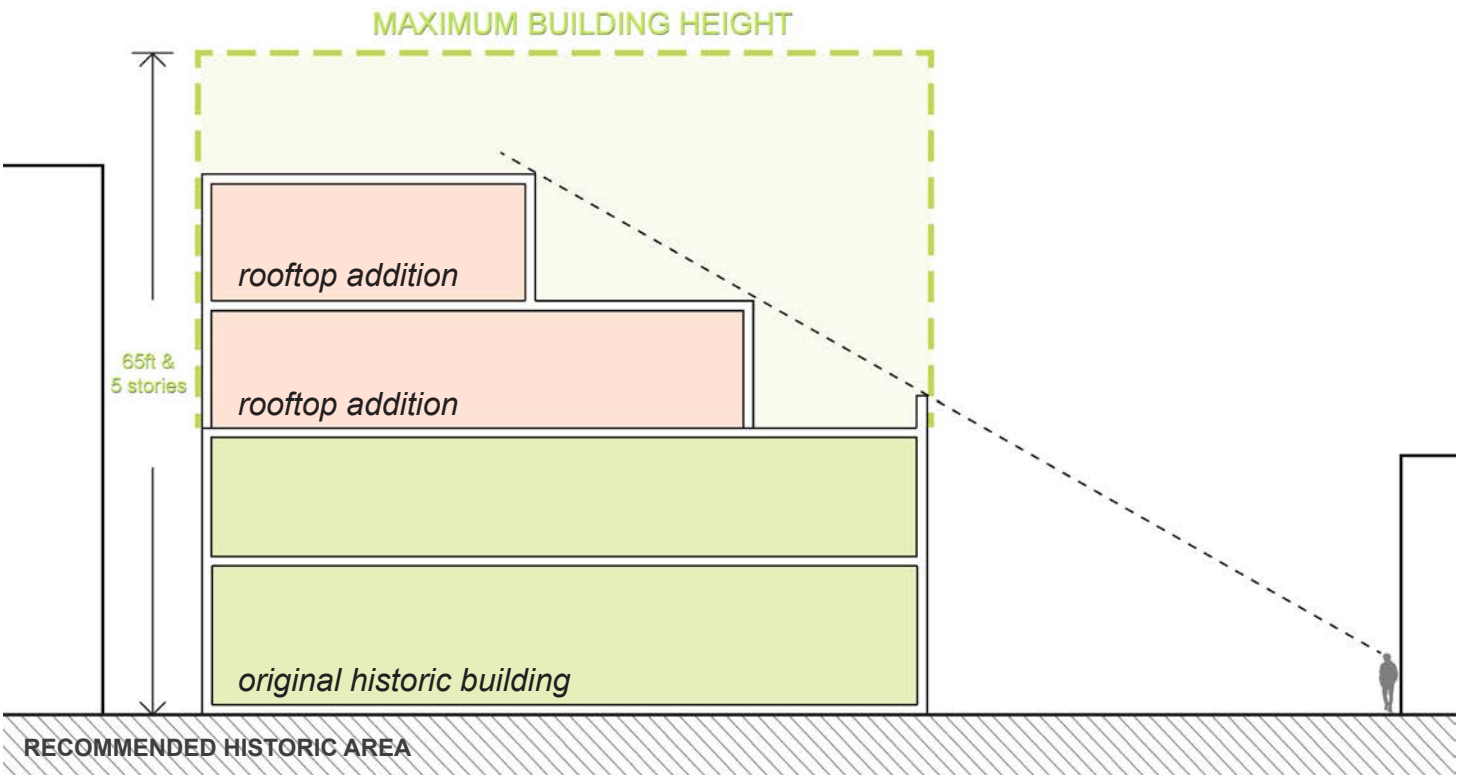
ISSUE 09 | *Rooftop Additions for Designated Historic Buildings or Buildings in Historic Districts*

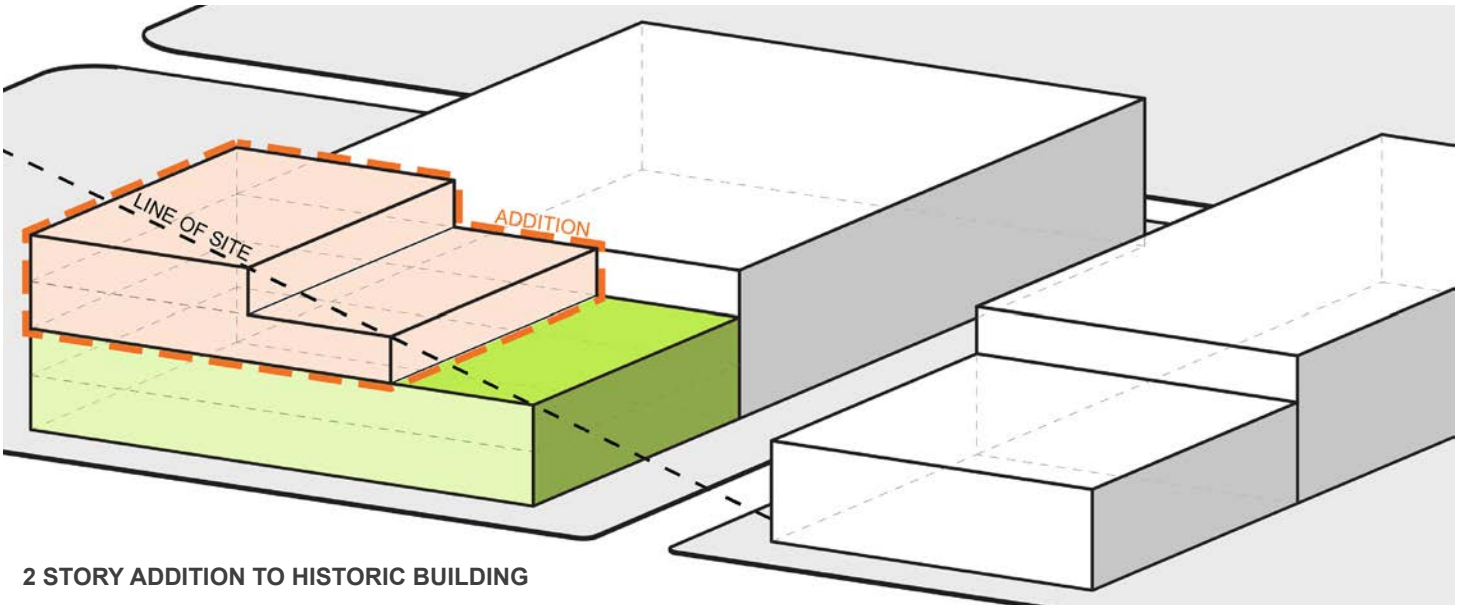
There is an increased demand both nationally and locally for rooftop living, entertainment and recreational. In the case of existing buildings designated as contributing historic buildings and non-contributing, buildings in historic districts, rooftop additions are permitted when the existing building is lower in height than the allowable height in the area. Currently, a rooftop addition is included in the total building height and/or allowable floor area, and the uses are inclusive of residential and commercial habitable area, and service and utility elements of the building. A rooftop addition is discouraged on contributing buildings and prohibited on significant buildings.

Within the historic districts of the study area, a vast majority of the rooftop additions have been handled through the National Parks Service due to the use of tax credits for historic buildings. The National Parks Service design standards have treated these additions as background set-back, non-descript buildings, which has led to a several large plain boxes sitting on top of existing historic buildings.

HDLC discourages rooftop additions on contributing buildings and buildings less than three floors. HDLC prohibits rooftop additions on residential buildings and significant buildings, and restricts roof additions to one story (max. 12 ft.). In areas where rooftop additions are permitted in historic districts for designated structures, they must meet HDLC's guidelines as follows: *"rooftop additions must be set back from the street walls of the existing building by a minimum of the proposed height of the addition (i.e. 12'- 0' high rooftop addition must be set back from the street wall a minimum of 12'- 0'.) Approved rooftop additions shall be done on a conditional use permit"*. *(City of New Orleans HDLC – Guidelines for New Construction, Additions and Demolition P.13)*

In areas where rooftop additions are permitted outside of historic districts and there is no demolition the addition would be approved through the typical building permit process.





2 STORY ADDITION TO HISTORIC BUILDING

CONSULTANT RECOMMENDATION

Within the 65ft & 5 stories zone, permit by right two-story rooftop additions on contributing buildings and non-contributing buildings three floors and lower. In this case do not permit rooftop accessory on top of rooftop additions. Require rooftop additions to be setback per the standard requirements for rooftop accessory features. For buildings higher than three floors within the entire study area retain the current single story addition.

T.F. RECOMMENDATION

Unanimous agreement

SITE EXAMPLES


ADDITION WITH SETBACKS


ROOFTOP ADDITION


ROOFTOP ADDITION

ONE-STORY ADDITION

SITE EXAMPLES

TWO-STORY ADDITION

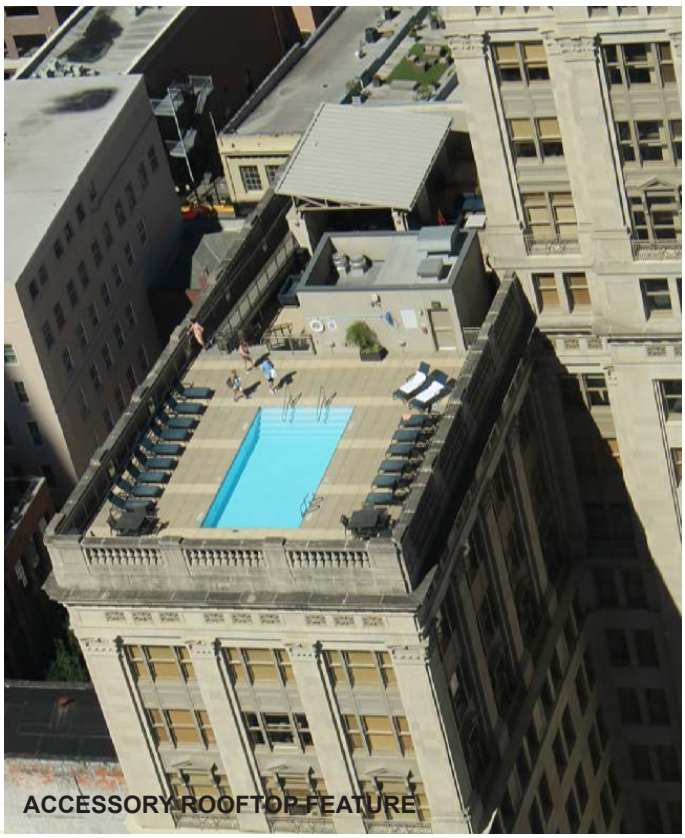

ONE-STORY ADDITION


ROOFTOP ADDITION

ADDITION | DEMOLITION | DEMOLITION + ADDITION | FACADE RETENTION + DEMOLITION + ADDITION

ROOFTOP ADDITION

ROOFTOP ADDITION



ACCESSORY ROOFTOP FEATURE

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS HDLC | GUIDELINES FOR NEW CONSTRUCTION, ADDITIONS, AND DEMOLITION

Rooftop Addition: A rooftop addition is defined as any new construction on top of an existing rooftop for occupied or unoccupied space, and includes full-floor additions In addition to the submission requirements identified in the New Construction and Addition Review, the following information is required for all applications for Rooftop Additions:

1. Dimensioned elevations and plans showing the proposed rooftop addition on the existing building;
2. Sight-line studies, either photographs or drawings, illustrating the massing of the proposed addition and visibility from 1,000 feet on public rights-of-way in all directions, and showing not only the impact on the subject building, but also on the adjacent buildings and local Historic District as a whole;
3. A scaled massing model of the addition on the existing building that includes adjacent buildings; and
4. A section through the building to the boundary of the property on the other side of the street.

CASE STUDIES | NEW YORK MUNICIPAL CODE

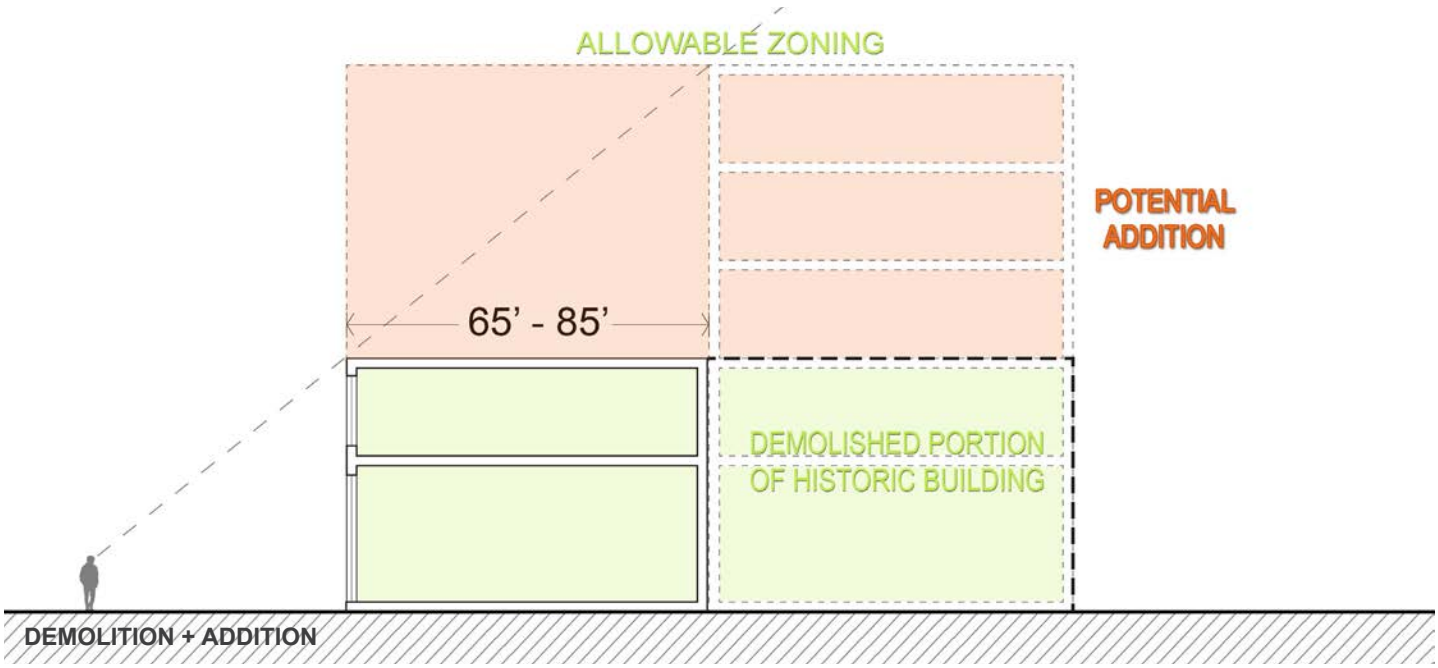
Rooftop additions in landmark districts, for example, must be set far enough back that they cannot be seen from the street.

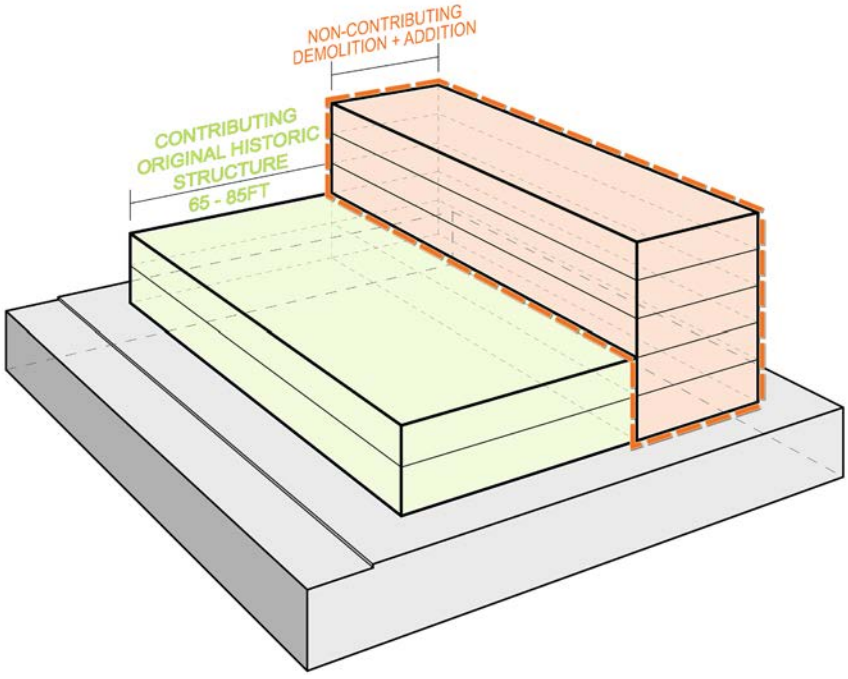
ISSUE 10 | *Additions to Existing Buildings in Historic Districts*

In the study area there are a number of low-rise historic or contributing warehouse buildings that offer the opportunity for additions to the building other than purely rooftop additions in order to maximize the building height opportunity in the zoning code.

However, there is a lack of clarity for this type of redevelopment within the CZO and HDLC, and as a result each project is negotiated separately and individually. Given this lack of definition and guidelines, a number of key issues arise including: what amount (%) of the historic warehouse building can be demolished before it is deemed a demolished building and when it should be classified as new construction; does the remaining portion of the historic building qualify as a rehabilitation of a historic structure; does the remaining portion of the historic building contribute to the historic district; is the remaining portion of the historic building functional and does it contribute the street and the overall district character and functionality; and finally what are the design guidelines for the new addition.

EXAMPLE OF FACADE RETENTION + DEMOLITION + ADDITION





CONSULTANT RECOMMENDATION

The City and HDLC needs to develop a set of policies with an explicit definition of "addition" including a set of key dimensions/ policies to determine the building addition envelope. Implement and enhance design guidelines through creating an easily accessible "guidelines book" for the design of additions.

Guidelines for building additions should consider the following: that a sufficient "functional and integrated component" of the historic building is retained in order to keep its historical designation; a minimum depth of 65 feet to 85 feet of the historical building should be retained; that the building addition is no greater than 50 percent of the market value of the existing building; and the addition is not visible from the street or contextual to the existing building per historic guidelines.

T.F. RECOMMENDATION

Unanimous agreement

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS COMPREHENSIVE ZONING ORDINANCE | ARTICLE 26 DEFINITIONS

Addition or Enlargement: Any construction that increases the size of a structure in terms of site coverage, building height, depth or width, floor area, or cubical content.
Alteration: Any change in the size or design of a structure.
Demolition: The removal of a structure from its site or the removal, stripping, concealing, or destruction of the facade or any significant exterior architectural features that are integral to the historic character of the resource, for whatever purpose, including new construction or reconstruction.

CITY OF NEW ORLEANS HDLC | DEFINITIONS

Addition or Enlargement: Any construction that increases the size of a structure in terms of site coverage, height, building depth or width or floor area.
Alteration: Any change because of construction, repair, maintenance, or otherwise to buildings located within a historic district or designated as a landmark.
Demolition: The complete or constructive removal by an applicant of a building on any site.
Camelback: Traditionally designed additions on wood frame shotgun or double shotgun buildings. Traditionally designed camelbacks at wood framed shotgun buildings are not subject to the review requirements for rooftop additions, however, they must be compatible with the existing building.

In addition to the submission requirements identified in the New Construction and Addition Review, the following information is required for all applications for **Rooftop Additions:** Dimensioned elevations and plans showing the proposed rooftop addition on the existing building; sight-line studies, either photographs or drawings, illustrating the massing of the proposed addition and visibility from 1,000 feet on public rights-of-way in all directions, and showing not only the impact on the subject building, but also on the adjacent buildings and local Historic District as a whole; a scaled massing model of the addition on the existing building that includes adjacent buildings; and a section through the building to the boundary of the property on the other side of the street.

NATIONAL PARK SERVICE | DEFINITIONS

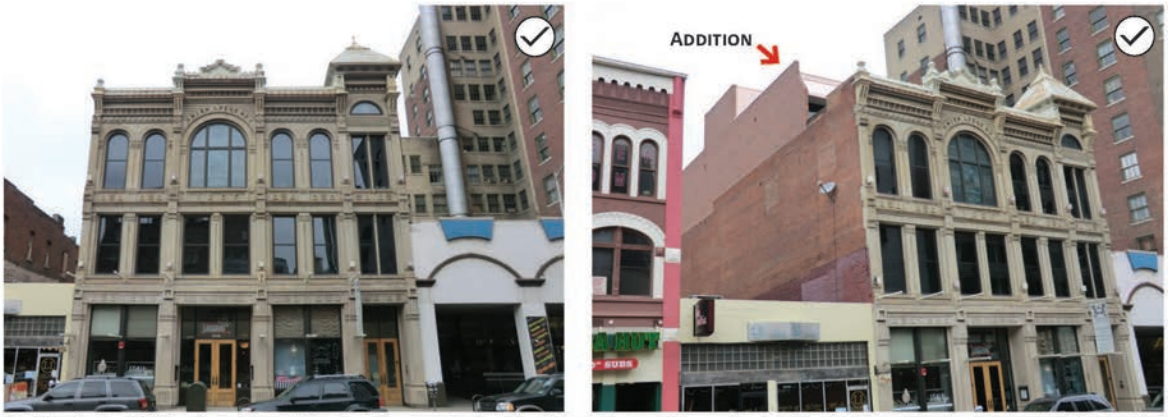
Major Renovation: An alteration (usually to a building) with a net construction cost at least equal to 50% of the current replacement value of the asset.

SITE EXAMPLES

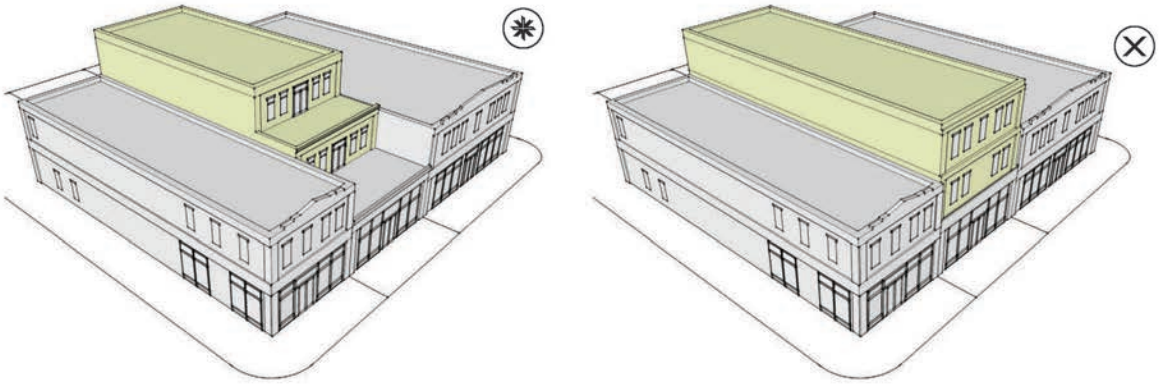
REFERENCES AND CASE STUDIES

DENVER – JUSTIFICATION OF ADDITION ON HISTORIC STRUCTURE

New Commercial Additions



74. Minimize the visibility of a rooftop addition from the street. The building illustrated above has a rooftop addition (right) that is set back and not visible when the building is viewed from the front (left).



75. Set an upper-floor addition back from the primary, character-defining façade, to preserve the perception of the historic scale and character of the structure.

INTENT STATEMENTS

3g To preserve the historic streetscape and the appearance of a historic commercial structure by minimizing the visibility of a new addition from the street, sidewalk and surrounding properties

3h To maintain patterns found in the surrounding historic context when designing and locating a commercial addition

GUIDELINES FOR NEW COMMERCIAL ADDITIONS

3.11 Locate an addition to a historic commercial structure to be subordinate to the primary structure.

a. Set an upper-floor addition back, typically at least 15 feet, from the primary façades, to preserve the perception of the historic scale of the structure. Small exceptions to a side street setback may be appropriate for buildings less than 75 feet wide as long as the addition is not readily visible from public vantage points.

b. Minimize the height of a rooftop addition to ensure the historic structure remains visually prominent.

c. Do not locate an addition in front of, or flush with the primary façade.

3.12 Design an addition to a historic commercial structure to be clearly differentiated from the original structure.

a. Design the addition to be modest in character, and either a simplified version of the original structure's style or a compatible, contemporary style, so it will not detract from the historic structure.

b. Differentiate an addition from the original structure with a change in material, color and/or wall plane.

Design Guidelines for Additions to Historic Buildings | Design Guidelines for Landmark Structures & Districts. (2015). Retrieved from Denver Community Planning and Development:: https://www.denvergov.org/content/dam/denvergov/Portals/646/documents/landmark/design_guidelines/Denver_Landmark_Guidelines-Additions.pdf

REFERENCES AND CASE STUDIES (CON'T)

INTRODUCTION

An addition may be an appropriate improvement to a historic structure. It can enhance the continued use of a property, and express its changing functions.

This chapter provides guidelines for additions to historic structures, including individually-designated Denver landmarks and contributing structures in historic districts.

The guidelines seek to minimize the visual and physical impacts of an addition on the historic structure and its surrounding context. However, an addition does not have to be completely hidden from view.

OTHER GUIDELINES FOR ADDITIONS

Chapter 4 "Guidelines for New Buildings & Non-Contributing Buildings" on page <?> provides new construction guidelines that also apply to an addition within a historic district. These include guidelines for overall massing, roof decks and patios, and other features of new construction.

Approaches for an Addition

For many properties, an addition to the rear of the historic structure is the best approach. This is particularly the case for single-family residences. In other situations, a rooftop addition may be an approach, more often in commercial structures. When considering the appropriateness of a proposed addition, the impacts of the work on the property and a number of specific design variables will be evaluated as described below.

IMPACT CONSIDERATIONS FOR AN ADDITION

Impact considerations address the visual and physical impacts of the addition on the integrity of the property, and one's ability to perceive its historic character, as well as that of its context.

Some impact-related factors to consider include:

- *The impact on the historic structure*
  - *a. Is the addition visible?*
  - *b. Does the addition remain visually subordinate to the historic structure?*
  - *c. Is one's ability to interpret the historic character retained? (Especially in terms of perceiving the original mass, scale and prominence of the property)*
  - *d. Are alterations to key character-defining features avoided or at least minimized?*
  - *e. Is the structural integrity of the property retained, or even improved?*
- *The impact on the abutting contributing properties*
  - *a. Is one's ability to interpret the historic character of the abutting properties retained? (Especially in terms of perceiving their original mass, scale and relative prominence on the street or from other public vantage points?)*
- *The impact on the block as a whole*
  - *a. Are the rhythm and alignment of structures and their key features typical of the block retained?*
  - *b. Is the perception of the scale of structures along the block retained, as experienced at the street level?*
  - *c. If the character of an alley wall is also a key feature, is its scale also retained?*

DESIGN VARIABLES FOR AN ADDITION

Design variables include basic scale and proportion considerations that relate to the compatibility of the addition with the primary structure and surrounding historic context.

Design variables to consider include:

- *The height of the addition.*
  Keeping floor heights in the range of those on the historic structure, or even lower, may help keep an addition visually subordinate to the historic structure.
- *The degree of setback.*
  Does the original primary façade (front) remain visually prominent? An addition should be set back from the façade and other key walls that contribute to the character of the property. The setback should be a sufficient distance such that the historic structure remains prominent.
- *Simplicity of design.*
  Is the design of the addition subordinate in character? The design should be relatively simple in architectural character and detailing, such that it does not call undue attention to itself. The historic structure should remain the prominent feature.

See "Designing in Context" on page <?> for additional information on design variables.

EXAMPLES OF COMPATIBLE RESIDENTIAL AND COMMERCIAL ADDITIONS

64. Appropriate side-gabled dormer addition that has

65. An appropriate side shed dormer addition, located behind the chimney. See "Dormer Location"

66. An appropriate rooftop addition to a commercial storefront

General Principles for Additions

67. Locate an addition to be subordinate to the original structure.

INTENT STATEMENTS

3a To maintain the general appearance of a historic structure, especially from key public vantage points, when building an addition

3b To minimize damage to the original structure and preserve character-defining features when building an addition

3c To avoid adversely affecting the character-defining features of a historic district when building an addition

3d To ensure that an addition relates to the fundamental characteristics of the block while also appearing as current construction

CHARACTER-DEFINING FEATURES OF A HISTORIC DISTRICT

When planning a new addition in a historic district, it is important to carefully review the district's character-defining features. See "Appendix A: The Character-defining Features of Denver's Historic Districts" for more information.

GUIDELINES FOR ALL ADDITIONS TO HISTORIC STRUCTURES

3.1 Locate an addition to be subordinate to the original structure.

a. Place an addition to the rear of the original structure whenever possible.

b. See Guideline 3.8 for additions to residential structures and Guideline 3.11 for additions to commercial structures.

3.2 Design an addition to a historic structure to respect the character-defining features of the historic district, the surrounding historic context, and the original primary structure.

a. Design an addition to be compatible with the scale, massing and rhythm of the historic structure and context.

b. Align porch eaves, roof lines and other features with adjacent structures, when possible.

c. Retain the appearance and orientation of the historic primary entrance

d. Use materials that are of a similar color, texture, and scale to those in the historic structure and surrounding historic context. See Guideline 4.6 on page 76 for more information.

e. Design windows and doors to be compatible with the primary structure and surrounding historic context, particularly when visible from public vantage points. See Guideline 4.8 on page 77 for more information.

General Principles for Additions (continued)

68. Design an addition to be recognized as current construction.

69. Differentiate an addition from the original structure with an offset of at least four inches and/or with a change in material or size.

GUIDELINES FOR ALL ADDITIONS TO HISTORIC STRUCTURES (Continued)

3.3 Design an addition to be recognized as current construction.

a. Differentiate an addition from the original structure with an offset of at least four inches.

b. Differentiate an addition from the original structure with a change in material or size. In more vernacular building styles, this may be a relatively subtle change or distinction. If distinctions from old and new are subtle, a date plaque for new construction is also recommended.

c. Use simplified versions of building components and details found in the surrounding historic context. These may include:
   - A cornice or other definition of the roof line
   - A distinctive storefront or main door surround
   - Window, moldings or other features
   - Porches

d. Do not design an addition to be an exact copy of the existing style or imply an earlier period or more ornate style than that of the original structure.

e. Do not design an addition to contrast starkly with the original structure. At a minimum, an acceptable design should be neutral and not detract from the district's or structure's historic character.

3.4 Locate an addition to retain open space patterns.

a. Retain original open space at the sides and rear of the structure.

b. Avoid removing existing open space with a large addition.

ISSUE 11 | *Definition of Demolition*

Currently, there is no clear HDLC definition as to what classifies as a demolition for the purposes of historic preservation. This lack of clarity creates case by case decisions on how much of a historic building needs to be retained before it is considered demolished. Without such as definition it remains unclear if the remaining portion of a historic building would retain its historical significance. In addition, if a significant number of buildings in a historic district were considered demolished it would place the historic districts designations in jeopardy.

This area is included in a Conservation District whose purposes are: 1) to attempt to preserve buildings of historic or architectural value as defined by the HDLC or that contribute to overall neighborhood character; 2) to preserve and stabilize neighborhoods; 3) to promote redevelopment that contributes to historic character; 4) to discourage underutilization of property; 5) to advise the City Council as needed on issues related to the conservation of neighborhoods within the NCD. The NCD Committee (NCDC) is located within the Department of Safety and Permits and is made up of five community representatives from each City Council district and one representative each from the Office of Code Enforcement, the HDLC, the CPC and the Department of Health. The primary role of the NCDC is to review demolition applications for properties within the NCD using as criteria: current condition; architectural significance; historic significance; urban design significance; neighborhood context; overall effect on the block face; proposed length of time a vacant site would remain undeveloped if demolition were granted; proposed plan for redevelopment; and public comment from neighbors, neighborhood associations or interested organizations. If a demolition permit is denied, the property owner cannot apply for another on the same building for a year, but can appeal to the City Council. Exemptions from review include: single story accessory structures not visible from the public way; demolition of less than 50 percent of the floor area and not including the front façade; structures within the jurisdiction of the HDLC or otherwise subject of demolition review; structures deemed to be in imminent danger of collapse. Since the historic districts in the area are within the jurisdiction of the HDLC, it is up to HDLC to determine the definition of demolition.

REFERENCES AND CASE STUDIES

CITY OF NEW ORLEANS CITY MUNICIPAL CODE OF ORDINANCES | SECTION 111 - CERTIFICATE OF OCCUPANCY

111.1 Use and Occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the Director has issued a certificate of occupancy. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the city.

111.2 Change in use. Changes in the character or use of an existing structure shall not be made except as specified in Chapter 34 of this Code.

111.2.1 Alterations. Any building or structure which is enlarged, altered, raised, repaired, or built upon to an extent exceeding an expenditure of 50% of the replacement value after alterations, shall be made to comply in its entirety with the requirements for a new building or structure. Where the expenditures are less than 50% of the said replacement value, only portions added, altered, or replaced need be made to conform. Replacement value shall be determined by the Director, as provided in 108.4 of this Code.

COLORADO SPRINGS, CO | PIKES PEAK REGIONAL BUILDING CODE 2011

SUBSTANTIAL IMPROVEMENT. Any rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure, before the improvement is started. The term does not, however, include either: Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to ensure safe living conditions; or any alteration of a structure listed on the National Register of Historic Places or the state Inventory of Historic Places provided that the alteration will not preclude the structure's continued designation as an "historic structure"


HOTEL


NATIONAL


CYPRESS
THE LANDIS
THE MARQUIS
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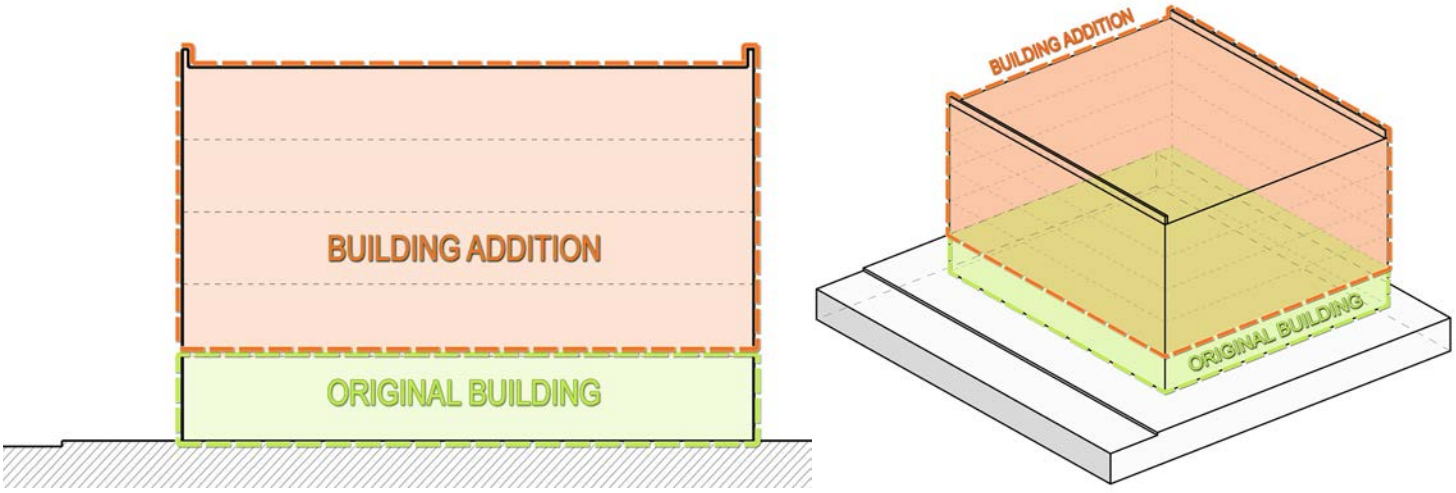
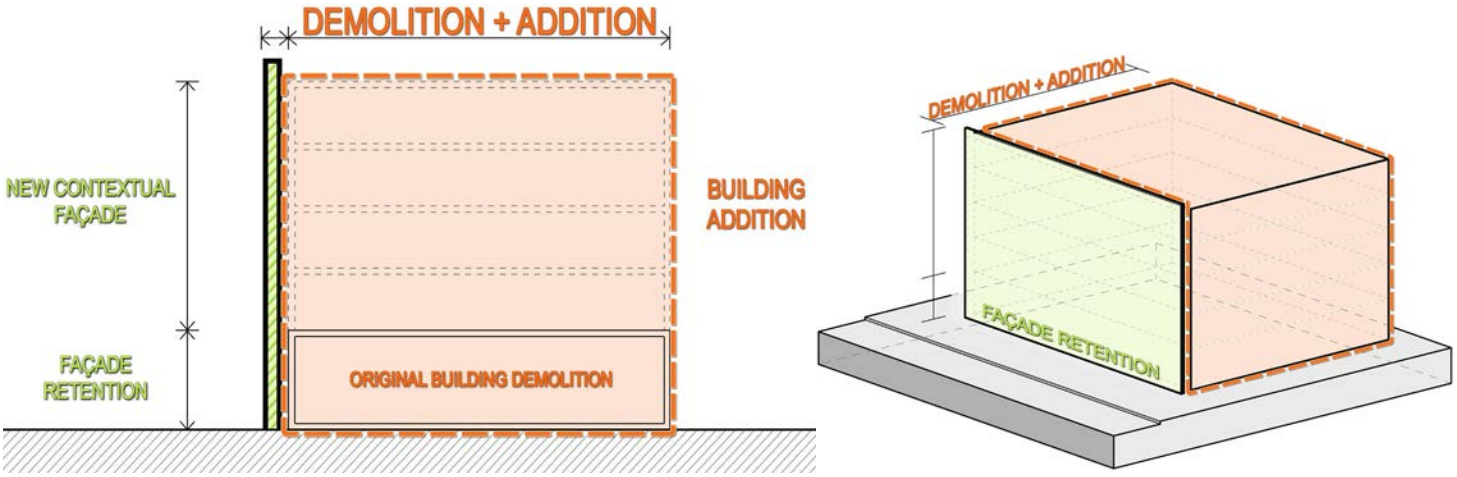


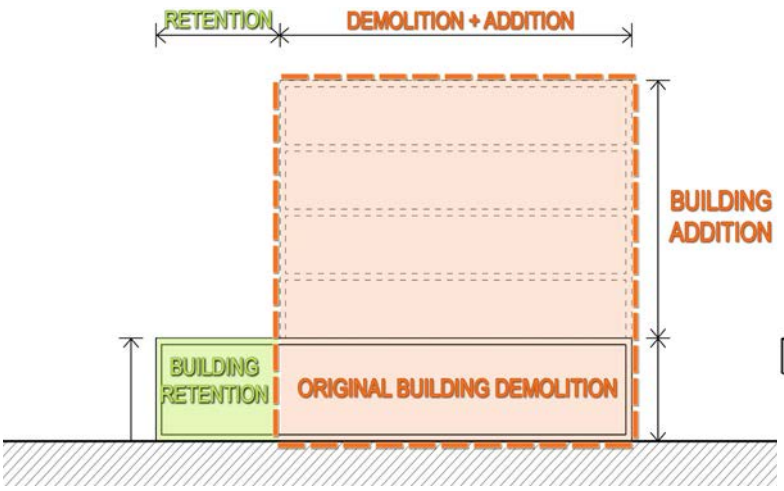
NEW BUILDING PERMIT: HISTORIC BUILDING RETENTION

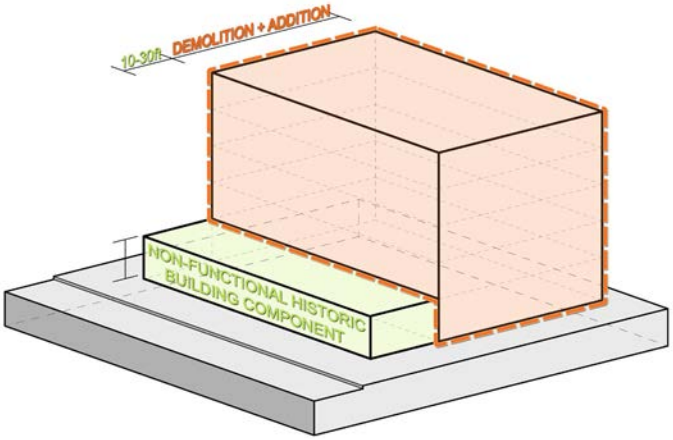
Any improvement or changes to a historic building that exceeds more than 50 percent of the value of the original structure should be considered a demolition and new construction.



NEW BUILDING PERMIT: HISTORIC FAÇADE RETENTION

In cases where a significant portion of the contributing structure is demolished, a historic façade is retained, and a contextually appropriate façade addition is built the process shall be treated and classified as a full demolition. The designations and subsequent approval of each process—full demolition, partial demolition, and addition—is significant in cases involving historically designated structures and neighborhoods because the over demolition or modification of a historically designated neighborhood could potentially cause it to lose its designation.





NEW BUILDING PERMIT: PARTIAL HISTORIC BUILDING RETENTION

In areas or circumstances where demolition and/or addition to a structure is allowed—regardless of designation as a historic or non-historic structure—there is a lack of clarity for what constitutes a full demolition, a partial demolition, and an addition. These designations and subsequent approval of each process is significant in cases involving historically designated structures and neighborhoods because the over demolition or modification of a historically designated neighborhood could potentially cause it to lose its designation.

CONSULTANT RECOMMENDATION

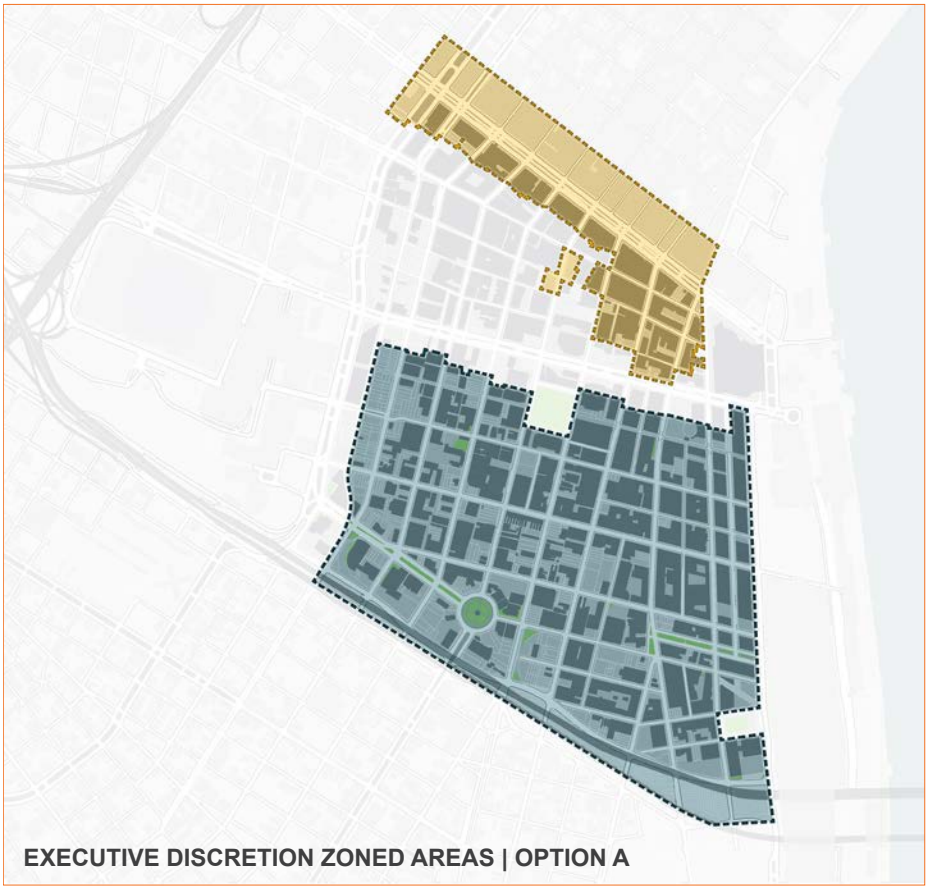
HDLC to define what is considered a demolition per the federal guidelines for historic preservation in order to ensure that the various historically designated neighborhoods are not being put in danger of no longer being recognized and where possible historic buildings retain their significance.

T.F. RECOMMENDATION

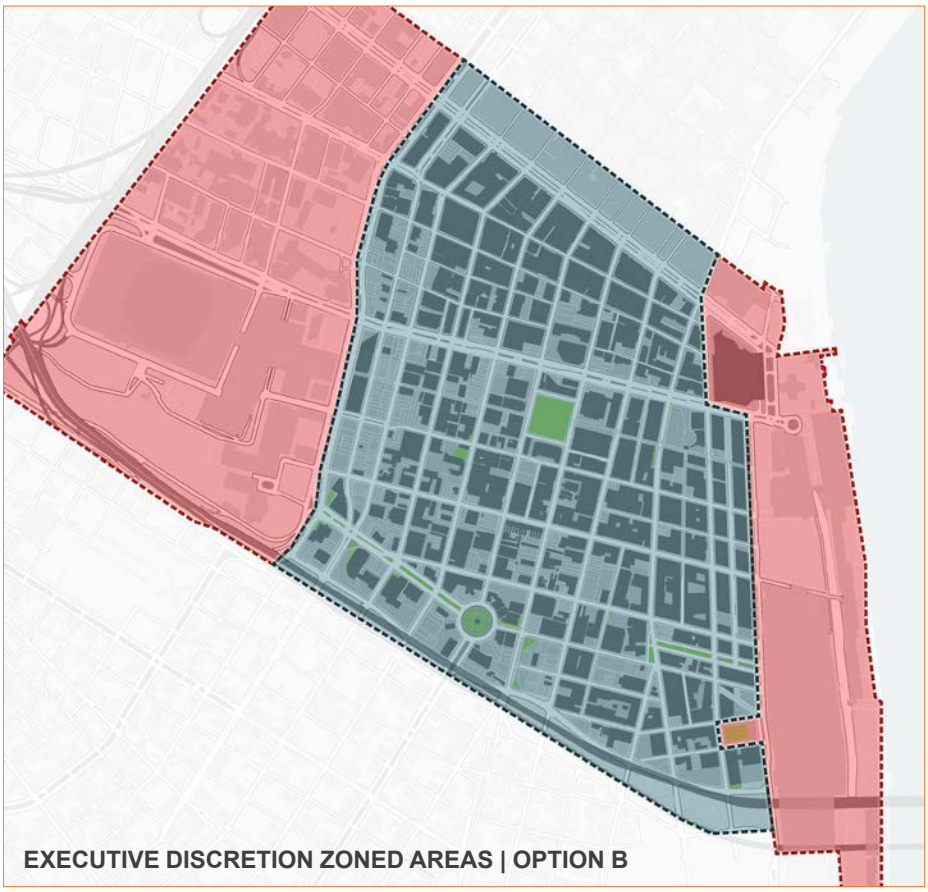
Unanimous agreement

ISSUE 12 | *Administrative/Executive Discretion*

At this time the CZO does not permit Executive Discretion. This is an oversight since in many cases where a project would be better served with minor height adjustments outside of the realm of what is permitted in the zoning without going through a variance process.



EXECUTIVE DISCRETION ZONED AREAS | OPTION A



EXECUTIVE DISCRETION ZONED AREAS | OPTION B

CONSULTANT RECOMMENDED OPTIONS

In the areas within the “Height + Stories & Stories Only” Administrative/Executive Discretion should be permitted. Detailed guidelines for Executive/Administrative Direction need to be developed.

T.F. RECOMMENDATION

Unanimous agreement

ISSUE 13 | *Neighborhood Plan/Redevelopment Framework Plan with Design Guidelines*

The potential of this district should be maximized through a coordinated redevelopment strategy/ plan and by marketing downtown living as an alternative, sustainable lifestyle. Downtown urban areas across the nation have experience a renaissance in recent years. The most successful cities have authored a detained redevelopment plan that explicitly addresses design quality and planning strategies that accommodate astute economic analysis and incentives. The appeal of living a more active, sustainable lifestyle has been the impetus for much of this downtown renaissance and New Orleans is poised to capitalize on the trend.

CONSULTANT RECOMMENDATION

DDD in partnership with the City, to facilitate the creation of a Redevelopment Framework Plan.

T.F. RECOMMENDATION

Unanimous agreement

04

NEXT STEPS

Next Steps

1. Implementation Amendments using the CZO process

For Issues and Recommendations #1 through #7 and #13 create the necessary amendments using the CZO process.

2. HDLC to implement the necessary amendments using Design Guidelines.

For Issues and Recommendations #8, #9, #10, and #11; HDLC should develop the appropriate Design Principles + Guidelines for approval.

3. City to conduct analysis of parking and in particular surface parking lots

City to conduct a financial analysis of surface parking lots to determine whether the current taxing and assessment system works for or against the redevelopment of said parking lots.

4. DDD should partner with the City to conduct a detailed Feasibility Study on remaining vacant sites in the district.

The CZO permits specialized overlay zoning for multiple consistent conditions. The 65/5 district should be analyzed to establish a typology of developable vacant land and for each type a detailed redevelopment feasibility study should be conducted to understand the implications of current zoning. The typology of developable vacant land should be based upon size, location within the block, and service access. Based upon said feasibility study further amendments to the code should be determined.

5. DDD in partnership with the City, to facilitate the creation of a Redevelopment Framework Plan.

The potential of this district should be maximized through a coordinated Redevelopment Framework Plan and by marketing downtown living as an alternative, sustainable lifestyle. Downtown urban areas across the nation have experienced a renaissance in recent years. The most successful cities have authored a redevelopment plan that explicitly addresses design quality and planning strategies supported with integrated public infrastructure upgrades, affordable housing, parking, access and circulation, mobility, landscape, civic amenities and economic development incentives. The appeal of living a more active, sustainable lifestyle has been the impetus for much of this downtown renaissance and New Orleans is poised to capitalize on the trend.


CLAIBORNE AVE
LOYOLA AVE
BERVILLE ST
CANAL ST
CONVENTION CENTER BLVD
PONTCHARTRAIN EXPY
PROJECT BOUNDARIES
Original Study Boundary
New Study Boundary
CZO Boundary

A-B

APPENDIX A | MEETING DOCUMENTATION

APPENDIX B | ADDITIONAL REVIEWED DOCUMENTS

*see Appendix Documents for full length text.

Prepared by

H3

for the

DOWNTOWN DEVELOPMENT DISTRICT