CITY OF KINGSTON

Feasibility Study

Kingston, New York

SUBMISSION 2 SEPTEMBER 18, 2013

DRAFT

This document was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund Act.

MILONE & MACBROOM®

TimHaahs ENGINEERS ARCHITECTS

TABLE OF CONTENTS

Site Locations & Executive Summary.... 01

SITE ANALYSIS SUBMISSION 1 08/21/2013

Dock Street Site.....02

Garraghan Site.....03

Millen's Scrap Site.....04

Courthouse Site.....05

SITE FEASIBILITY SUBMISSION 2 09/18/2013

Dock Street Site

Site Plan, Isometric, & Car Tab.....06

Plans.....07-08

Cost Estimate.....09

Garraghan Site

Site Plan, Isometric, & Car Tab.....10

Plans.....11

Cost Estimate.....12

NORTH

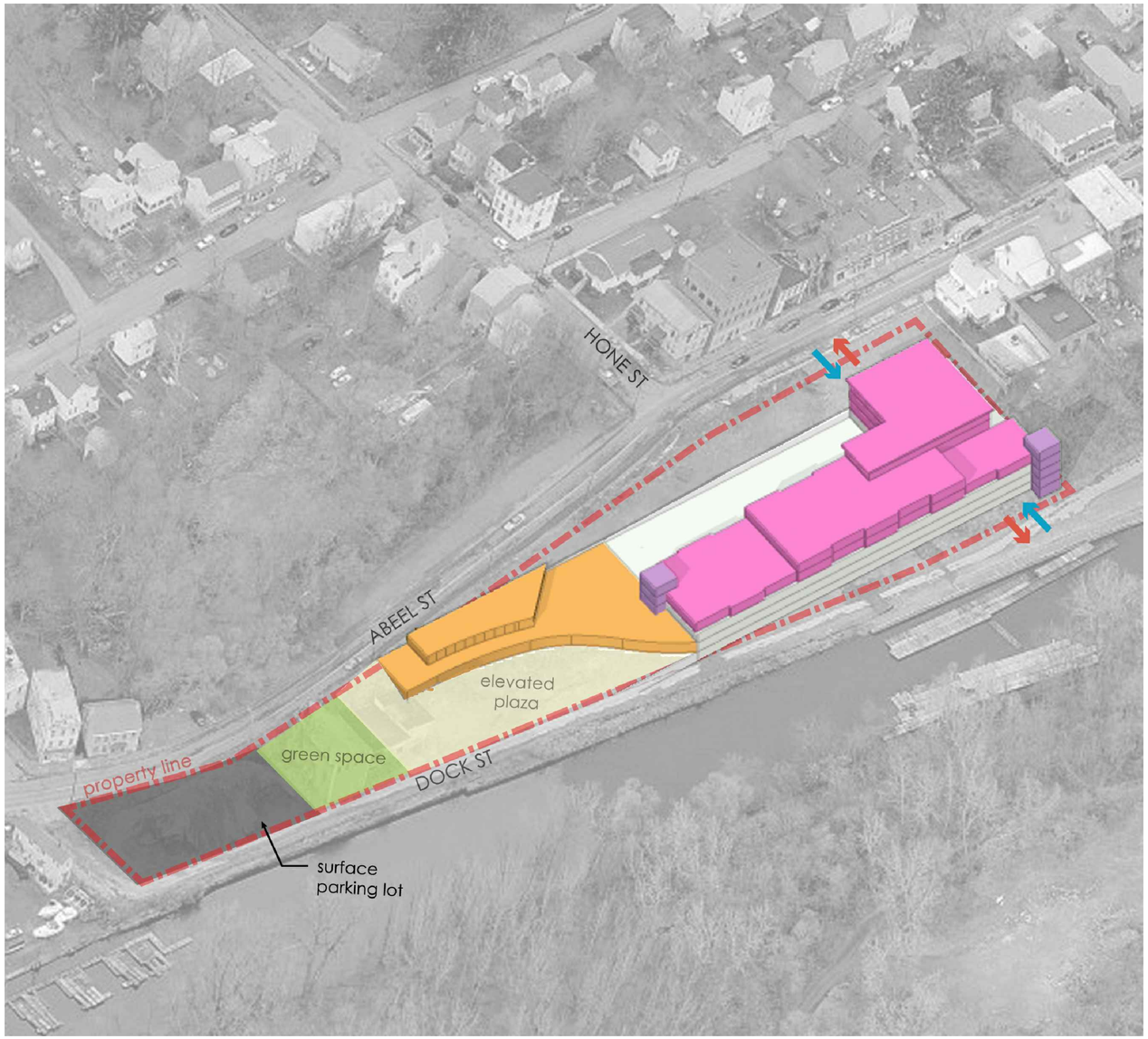
SITE LOCATIONS

N.T.S.

EXECUTIVE SUMMARY

The intent of this study is to review and analyze potential locations for the development of a parking structure intended to serve the public along the Kingston waterfront. Major factors taken into consideration for this study have been: zoning, the efficiency of parking, relative cost, proximity to existing and future destinations, integration of mixed-uses, flood concerns, and the ability for the proposed parking structure to maintain the essence of the context and waterfront redevelopment plan.

Dock Street Site



MASSING DIAGRAM
N.T.S.

ZONING INFORMATION			
LOT AREA	95,325 SF		
PROPOSED HOTEL TOTAL AREA	65,199 SF		
DISTRICT	C-2		
	ALLOWABLE	**PROPOSED**	
SIDE SETBACK	6'-0"	6'-0"	●
REAR SETBACK	6'-0"	6'-0"	●
FRONT SETBACK	10'-0" FROM STREET	10'-0"	●
HEIGHT	NO LIMIT	+/- 74'-0" (WITH HOTEL)	●
LOT COVERAGE	40%	+/- 40%	●
BUILDING LENGTH	NO LIMIT	+/- 312'-0"	●
F.A.R.	2.8	+/- 2.3	●
BUILDING AREA (GARAGE)	266,910 SF	+/- 38,324 SF @ 4 TIERS = 153,296 SF	●

CONSIDERATIONS		
	ADVANTAGES	**CHALLENGES**
1.	+ OPPORTUNITY FOR MIXED USE	- SITE PRIVATELY OWNED
2.	+ ALL ZONING REQUIREMENTS CAN BE MET	- EXCAVATION COSTS
3.	+ CLOSE PROXIMITY TO CURRENT WATERFRONT AMENITIES	- OPENNESS A CONCERN; GARAGE LIKELY TO NEED MECHANICAL VENTILATION AND SPRINKLER SYSTEM
4.	+ CURRENT INTEREST IN DEVELOPING SITE; COSTS MAY BE MITIGATED IN FINANCIAL PARTNERING	- ADDITIONAL GARAGE PARKING BEYOND HOTEL REQUIREMENT (180) IS ONLY 140
5.	+ PROPERTY OWNER HAS DESIRE TO MOVE FORWARD WITH DEVELOPMENT OF PROPERTY NEAR END OF 2013	- EARTH RETENTION
6.	-	- FLOODING
7.	-	- STRUCTURAL COORDINATION WITH ABOVE USE
8.	-	- CURRENT LITIGATION MAY IMPEDE FINANCIAL OR CONSTRUCTION PROGRESS
APPROXIMATE CAR COUNT		**320 (3 TIERS)**

LEGEND

- PARKING
- COMMERCIAL
- HOTEL
- STAIR/ELEVATOR TOWER
- ENTRY
- EXIT
- VEHICULAR CIRCULATION
- REQUIREMENT MET

SITE RECOMMENDATION

The dock street site is a suitable location for a parking structure in terms of proximity to the waterfront and zoning. Since there are currently plans to develop this site for a hotel, the two would pair well together if the parking structure is located at grade along dock street to elevate the hotel above flood levels. The downside to this site is that of the four in this study it will also most likely be the most costly to build on. Major cost additives to consider are excavation of rock, earth retention, structural coordination with above hotel, and potential for a mechanically ventilated and sprinklered garage.

Garraghan Site

MASSING DIAGRAM
N.T.S.

ZONING INFORMATION			
LOT AREA	165,418 SF		
DISTRICT	C-2		
	ALLOWABLE	**PROPOSED**	
SIDE SETBACK	6'-0"	6'-0"	●
REAR SETBACK	6'-0"	6'-0"	●
FRONT SETBACK	10'-0"	10'-0"	●
HEIGHT	NO LIMIT	+/- 65'-1"	●
LOT COVERAGE	40%	+/- 24%	●
BUILDING LENGTH	NO LIMIT	+/- 324'-0"	●
F.A.R.	2.8	+/- 1.4	●
BUILDING AREA (GARAGE)	463,170 SF	+/- 39,800 SF @ 6 TIERS = 238,800 SF	●

CONSIDERATIONS		
	ADVANTAGES	**CHALLENGES**
1.	+ EFFICIENT PARKING	- SITE PRIVATELY OWNED
2.	+ MIXED USE AND PUBLIC SPACES CAN BE WELL ACCOMMODATED	- HIGH VISUAL IMPACT FOR MOTORISTS TRAVELING ON HIGHWAY 9W
3.	+ INTEREST IN DEVELOPING SITE FOR PUBLIC USE (IE. AMPHITHEATER)	- EXISTING REAR PARKING FOR RESIDENTS WILL LIKELY NEED RELOCATION
4.	+ LOCATED AT CENTER OF REDEVELOPMENT DISTRICT	- GARAGE LOCATION UPHILL MAY MAKE WALK BACK TO GARAGE FROM THE WATERFRONT LESS DESIRABLE
5.	+ INCREASE IN FOOT TRAFFIC THROUGH BROADWAY RETAIL CORRIDOR	-
	APPROXIMATE CAR COUNT	**660 (110 PER 6 TIERS)**

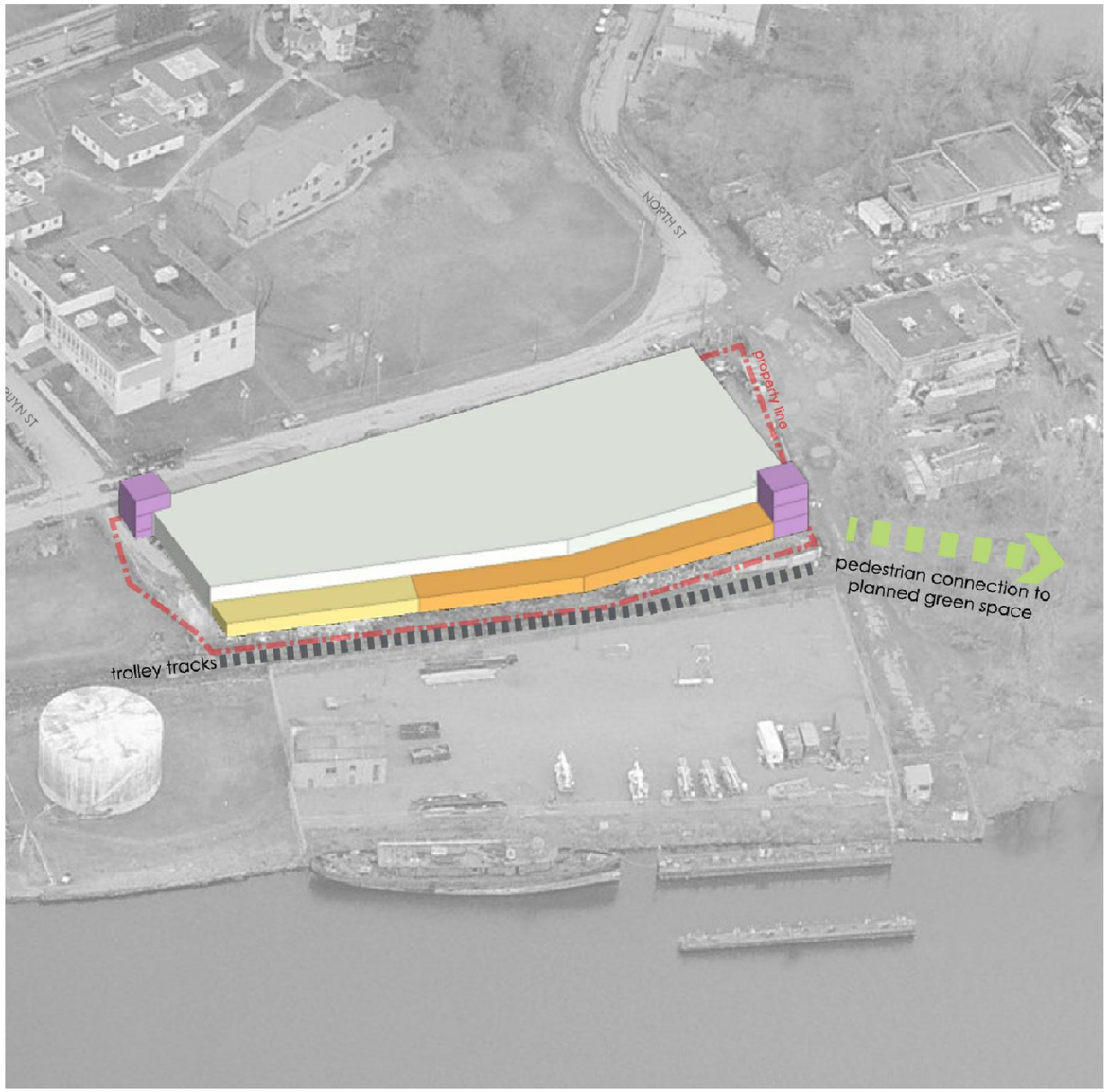
LEGEND

- PARKING
- COMMERCIAL
- RESIDENTIAL
- AMENITIES
- STAIR/ELEVATOR TOWER
- ENTRY
- EXIT
- VEHICULAR CIRCULATION
- REQUIREMENT MET

SITE RECOMMENDATION

The Garraghan site provides the most flexibility for optimizing parking as well as the potential for integrating a mixture of residential and retail with the parking structure - complimenting the surrounding context. The largest design challenge for the site is the connection between the existing residential buildings and the garage.

Millen's Scrap Site



MASSING DIAGRAM
N.T.S.

ZONING INFORMATION			
LOT AREA	65,634 SF		
DISTRICT	RF-R		
	ALLOWABLE	**PROPOSED**	
SIDE SETBACK	12'-0"	12'-0"	●
REAR SETBACK	30'-0" FROM SHORE	30'-0" FROM SHORE	●
FRONT SETBACK	25'-0" FROM STREET	25'-0" FROM STREET	●
HEIGHT	35'-0"	+/- 35'-8"	●
LOT COVERAGE	60%	+/- 52%	●
BUILDING LENGTH	100'-0"	+/- 324'-0"	●
F.A.R.	1.2	+/- 1.6	●
BUILDING AREA	78,760 SF	+/- 34,086 SF @ 3 TIERS = +/- 102,258 SF	●

CONSIDERATIONS		
	ADVANTAGES	**CHALLENGES**
1.	+ ANCHOR AT END OF WATERFRONT REDEVELOPMENT MAY SPUR MORE GROWTH	- SITE SUSCEPTIBLE TO MAJOR FLOODING
2.	+ POTENTIAL TO TIE INTO TROLLEY BY CREATING A WAITING PLATFORM	- ZONING RESTRICTIVE / NOT CONDUCIVE FOR PARKING STRUCTURE; VARIANCES / REZONING REQUIRED
3.	+ UTILIZATION OF A RECLAIMED SITE	- SITE SHAPE CREATES A LONG CHAMFERED CORNER FOR THE GARAGE WHICH AFFECTS EFFICIENCY
4.	+ POTENTIAL FOR MIXED USE	- REMOTE SITE LOCATION CREATES UNATTRACTIVE LOCATION FOR CURRENT DOWNTOWN WATERFRONT PARKING NEEDS
5.	-	- SITE PRIVATELY OWNED (OFFERED TO CITY, ACCEPTANCE PENDING BORING RESULTS)
6.	-	- SUPERFUND COAL PROPERTY TO SOUTH
	APPROXIMATE CAR COUNT	**450 (150 PER 3 TIERS)**

LEGEND

- PARKING
- COMMERCIAL
- TROLLEY PLATFORM
- STAIR/ELEVATOR TOWER
- ENTRY
- EXIT
- VEHICULAR CIRCULATION
- REQUIREMENT MET
- VARIANCE REQUIRED

SITE RECOMMENDATION

Pending the boring results, this particular site may be an attractive alternative for a future mixed use project where parking is supplemental to the primary use. A two level parking structure at grade supporting mixed uses above would be recommended in order to lift the primary use above flood levels. Because this site is at the edge of the waterfront redevelopment plan, it serves as an anchor point. A trolley waiting platform at this location would help unify this site with the rest of the waterfront amenities.

Courthouse Site

MASSING DIAGRAM

NORTH

N.T.S.

ZONING INFORMATION			
LOT AREA	135,036 SF		
EXISTING BUILT AREA FOOTPRINT	+/- 11,378 SF		
DISTRICT	R-6		
	ALLOWABLE	**PROPOSED**	
SIDE SETBACK	12'-0"	12'-0"	●
REAR SETBACK	30'-0"	30'-0"	●
FRONT SETBACK	25'-0"	25'-0"	●
HEIGHT	NO LIMIT	+/- 65'-1"	●
LOT COVERAGE	40%	+/- 38%	●
BUILDING LENGTH	160'-0"	+/- 324'-0"	●
F.A.R.	1.8	+/- 1.9	●
BUILDING AREA (GARAGE)	231,686 SF	+/- 39,800 SF @ 6 TIERS = 238,800 SF	●

CONSIDERATIONS		
	ADVANTAGES	**CHALLENGES**
1.	+ SITE OWNED BY CITY	- SITE LOCATION BEHIND COURTHOUSE IS DISCONNECTED FROM STREET AND WILL NEED TO BE CLEARLY SIGNED TO POINT OUT THE GARAGE AND DEFINE IT'S USE FOR THE PUBLIC
2.	+ NESTING GARAGE INTO SITE ALLOWS FLOOR LEVELS TO BE MAXIMIZED WHILE STILL MAINTAINING THE SCALE OF THE NEIGHBORHOOD	- RESTRICTIVE ZONING; VARIANCES / REZONING REQUIRED
3.	+ SITE NOT PERCEIVED AS A HIGH RISK FOR FLOODING	- COST OF EXCAVATION
4.	–	- INCREASED PEDESTRIAN FOOT- TRAFFIC AT THE INTERSECTION OF BROADWAY AND GARRAGHAN DR A SAFETY CONCERN
5.	–	- SITE NOT OPTIMAL FOR MIXED USE
6.	–	- GARAGE VISUAL IMPACT FOR RESIDENTS TO NORTH A CONCERN
APPROXIMATE CAR COUNT		**660 (110 PER 6 TIERS)**

SITE RECOMMENDATION

The two most attractive components of the courthouse site are that it is owned by the city and can accommodate an efficient parking structure. It's siting behind the courthouse minimizes its visual impact which is positive for maintaining the scale of the existing context but negative in identifying a place to park. A parking structure in this location would fulfill the parking needs but would lack the character for creating useable public and mixed use spaces. In order for the project to maintain the essence of the waterfront redevelopment plan, these spaces should be integral.

LEGEND

- PARKING
- STAIR/ELEVATOR TOWER
- ENTRY
- EXIT
- VEHICULAR CIRCULATION
- REQUIREMENT MET
- VARIANCE REQUIRED

SITE PLAN

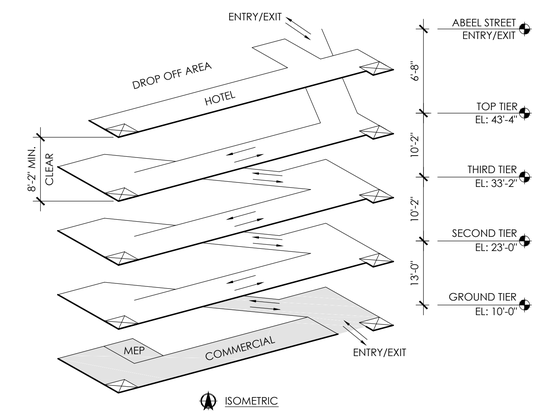
CAR TABULATION				
TIER	**STANDARD**	**ACCESSIBLE**	**VAN ACCESSIBLE**	**TOTAL**
TOP	85	2	0	87
3RD	115	2	0	117
2ND	115	2	0	117
GROUND	22	0	2	24
TOTAL	337	6	2	345

TYPICAL STALL: 8'-6" x 18'-0" @ 90 DEGREES

312 SF PER SPACE

40 ADDITIONAL SPACES PROVIDED ON SURFACE LOT TO S.W.

15 ADDITIONAL SPACES PROVIDED IN FRONT OF HOTEL LOBBY

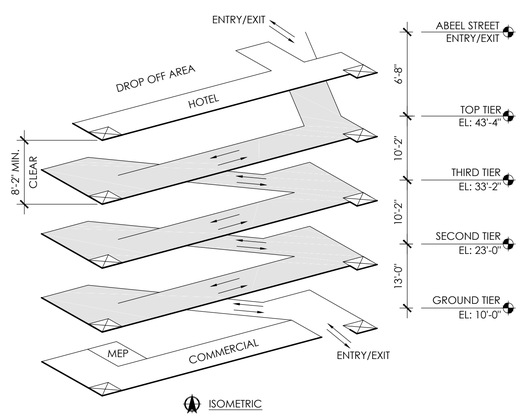


BUILDING AREA TAB			
TIER	**PARKING**	**COMMERCIAL**	**TOTAL**
TOP	29,900 SF	0 SF	29,900 SF
3RD	35,800 SF	0 SF	35,800 SF
2ND	35,800 SF	0 SF	35,800 SF
GROUND	12,000 SF	18,000 SF	30,000 SF
TOTAL	113,500 SF	18,000 SF	131,500 SF

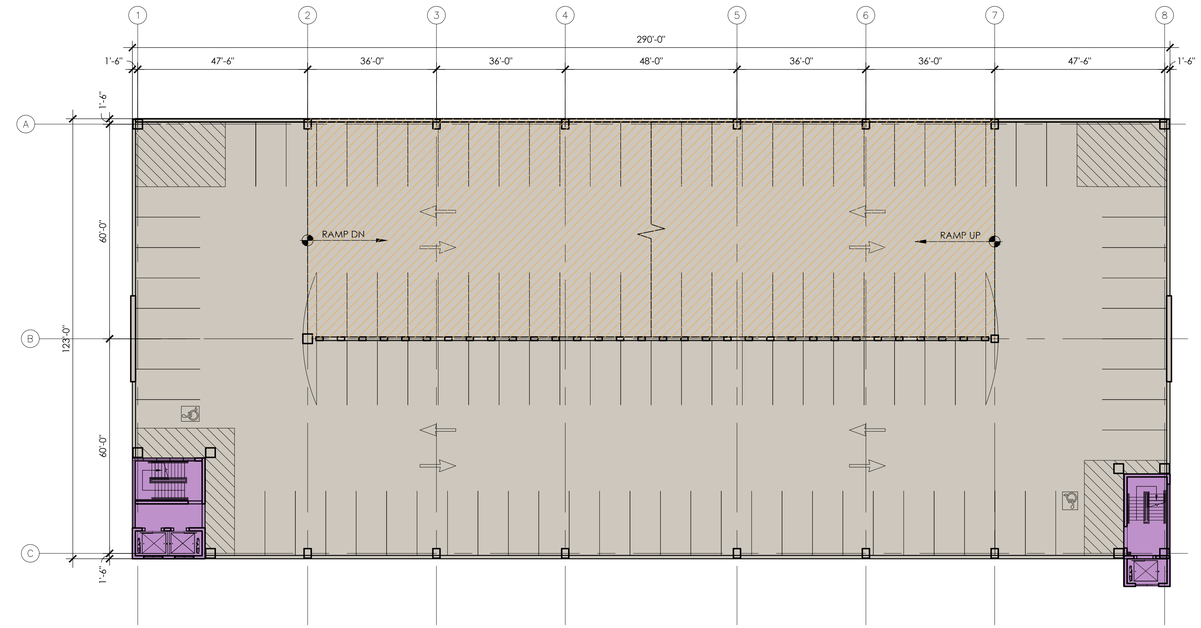
COMMERCIAL:

SF IN TABULATION REFERS TO AREA ON THE GROUND TIER UNDER THE GARAGE

SF OUTSIDE OF GARAGE TOTALS +/- 8,300 SF

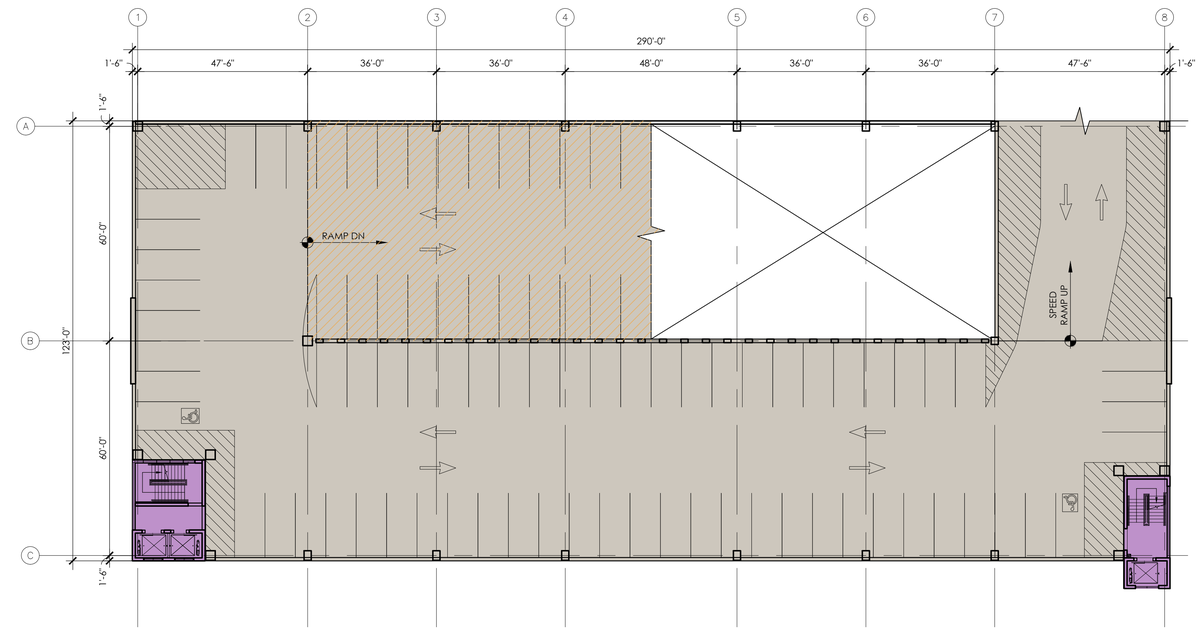


ISOMETRIC



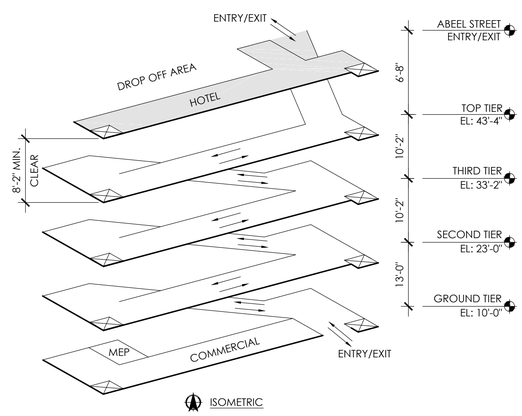
2ND TIER PLAN

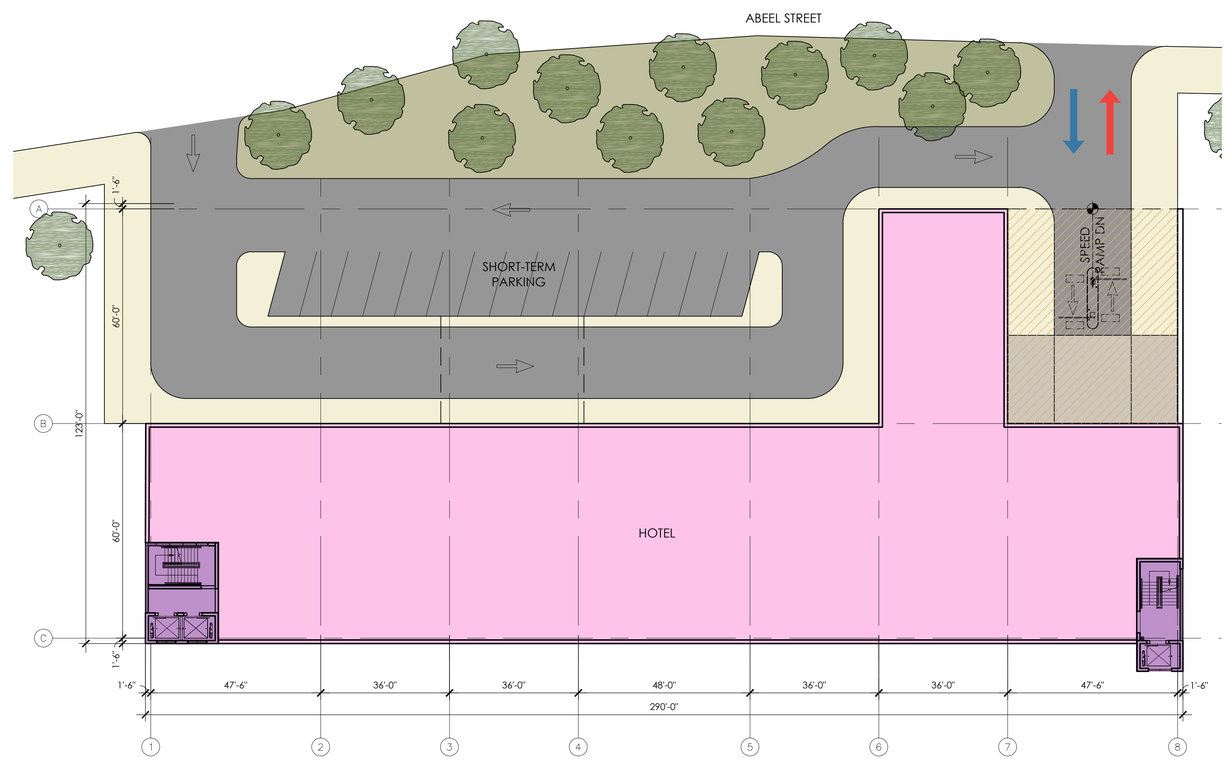
NORTH 0' 10' 20' 40' 80'



3RD TIER PLAN

NORTH 0' 10' 20' 40' 80'





ABEEL STREET LEVEL

Order of Magnitude Estimate of Project Costs

			$	$/SF	Notes
2	Sitework	$	1,380,750	$10.50	Excavation, utilities, subgrade preparation, foundations
3	Cast in Place Concrete	$	1,808,125	$13.75	Walls, grade beams, slab on grade, washes
3	Precast Concrete	$	2,630,000	$20.00	Fabrication, transportation and erection
4	Masonry	$	50,000		CMU for mechanical, electrical, utility and elevator machine rooms
5	Structural & Misc. Metals	$	394,500	$3.00	Stair railings, pipe guards, hoist beam, etc.
6	Carpentry	$	65,750	$0.50	Miscellaneous
7	Waterproofing	$	197,250	$1.50	Silane sealer, tee/tee caulking, exp. joints, waterproofing, damproofing membrane
8	Storefront, doors, hardware	$	197,250	$1.50	Stairtowers; Ground Floor [retail] frontage
9	Painting	$	65,750	$0.50	Painting, stall striping
10	Specialties	$	65,750	$0.50	Signage, fire extinguishers
11	Equipment & Furnishings (PARCS)	$	150,000		Arm gates at entry/exits, Pay-On-Foot machines in lobbies
13	Fire Protection	$	460,250	$3.50	Dry standpipe system, with automatic sprinkler system
14	Elevators	$	300,000		Two (2) at SW stair/elevator tower and one (1) at SE stair/elevator tower
15	Mechanical/Plumbing	$	361,625	$2.75	HVAC, floor drains, storm, sanitary, hose bibs, with mechanical ventilation
16	Electrical	$	657,500	$5.00	Power supply, lights, exit signs
Subtotal		**$**	**8,784,500**		
General Conditions		$	878,450	10.00%	Permits, bonds, insurance, prime contractors' supervision, submittals, etc.
Construction Contingency		$	614,915	7.00%	
[Hard] Construction Cost Subtotal		$	10,277,865		
Soft Costs		$	878,450	10.00%	A/E fees, geotechnical, survey/site/civil, testing agent, attorney fees, etc.
Total Construction Cost		**$**	**11,156,315**		
		$	**2,231,263**	20.00%	Premium addition for provisions of a hotel overbuild on proposed parking structure
					**Note that the above premium is for the garage only and does not include costs for the design and construction of a hotel

Parking Parameters				
No. of Spaces (Garage)		**345**		
Cost per Space (Garage)	**$**	**29,791**		Based on [Hard] Construction Cost
Gross Parking Area (typical level)		35,800	SF	
Parking Efficiency		311	SF/space	(35,800 SF/tier) / (115 spaces/tier [typical])
Total Gross Square Footage		131,500	SF	
Cost/SF		67	$/SF	Based on [Hard] Construction Cost

Commercial [Retail] Area				
Commercial Area		18,000	SF	South Bay, Ground Floor only
Retail Cost per Square Foot		100	$/SF	
Commercial [Retail] Subtotal	**$**	**1,800,000**		Core and Shell Space - provide "grey box" level of finish
General Conditions	$	180,000	10.00%	
Construction Contingency	$	126,000	7.00%	
Soft Costs	$	270,000	15.00%	
Commercial [Retail] Total Construction Costs	**$**	**2,376,000**		

**** Retail at ground tier eliminates (+/- 55) spaces from parking capacity**
****SF in cost estimate does not account for the additional 8,300 SF of commercial located on the west outside of the garage**
****Estimate does not include costs for demolition of existing 5,300 SF building on site, or any other work to west of garage**
****Estimate excludes costs for land acquisition, environmental work, and hotel**

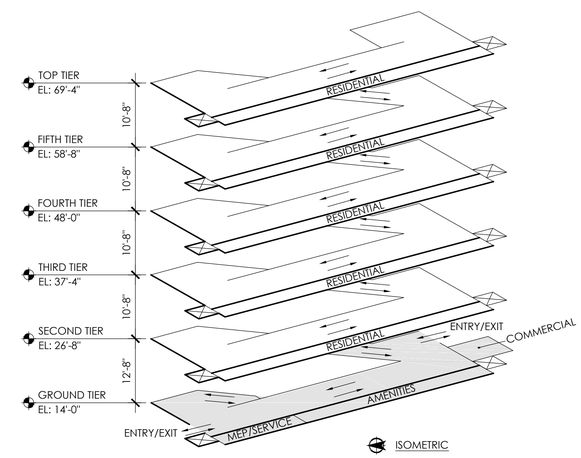
SITE PLAN

CAR TABULATION				
TIER	STANDARD	ACCESSIBLE	VAN ACCESSIBLE	TOTAL
TOP	112	2	0	114
5TH	131	2	0	133
4TH	131	2	0	133
3RD	131	2	0	133
2ND	131	2	0	133
GROUND	95	2	3	100
TOTAL	731	12	3	746

TYPICAL STALL: 8'-6" x 18'-0" @ 90 DEGREES

RELOCATED SURFACE PARKING: +/- 80 SPACES

304 SF PER SPACE



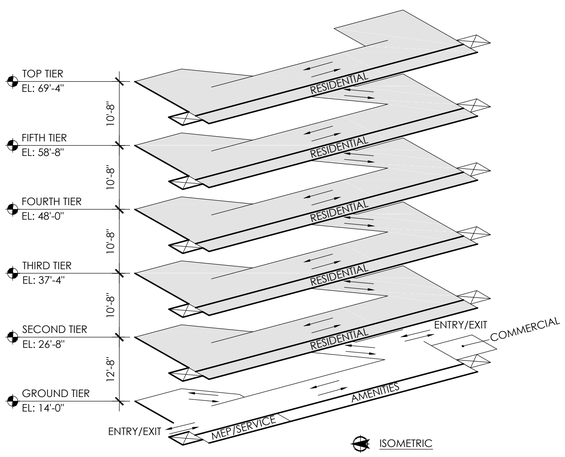
BUILDING AREA TAB					
TIER	PARKING	RESIDENTIAL	COMMERCIAL	AMENITIES	TOTAL
TOP	35,500 SF	11,500 SF	0 SF	0 SF	47,000 SF
5TH	39,800 SF	11,500 SF	0 SF	0 SF	51,300 SF
4TH	39,800 SF	11,500 SF	0 SF	0 SF	51,300 SF
3RD	39,800 SF	11,500 SF	0 SF	0 SF	51,300 SF
2ND	39,800 SF	11,500 SF	0 SF	0 SF	51,300 SF
GROUND	36,100 SF	0 SF	3,200 SF	11,500 SF	50,800 SF
TOTAL	230,800 SF	57,500 SF	3,200 SF	11,500 SF	303,000 SF

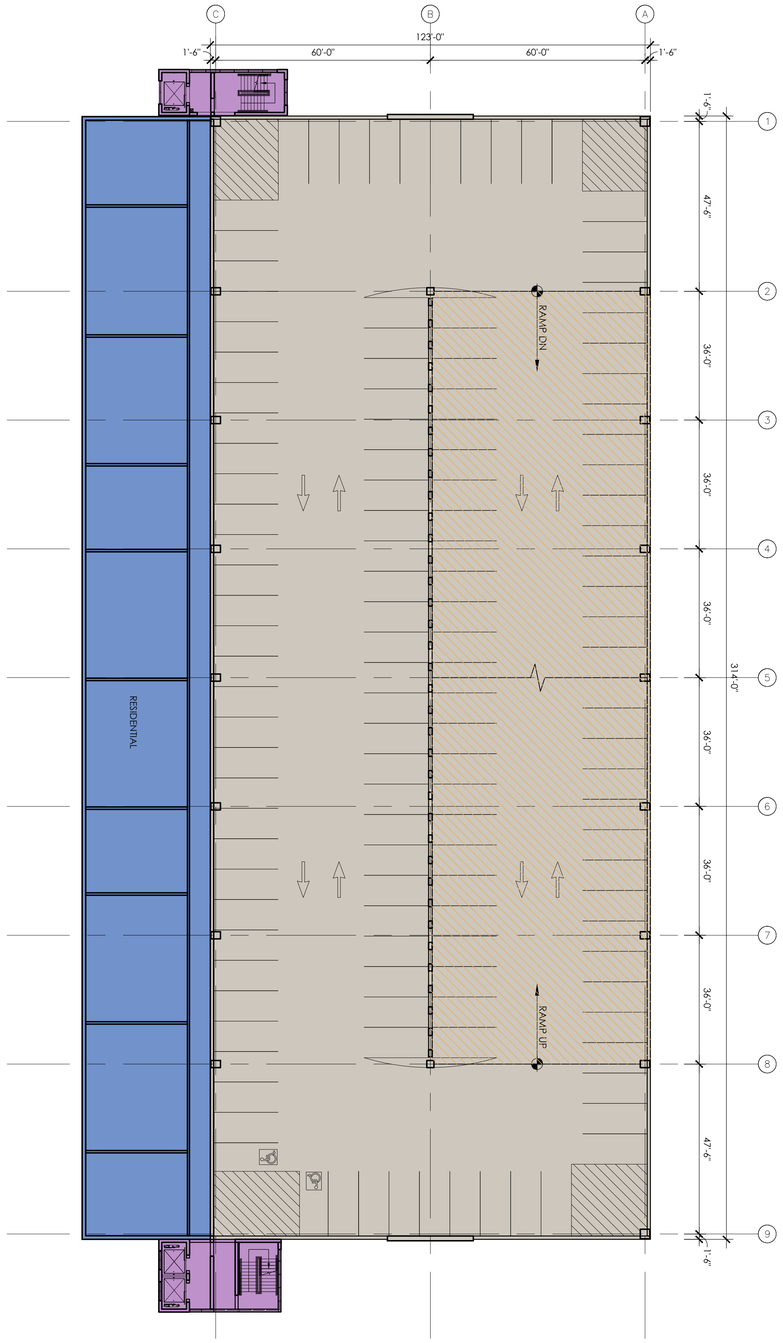
RESIDENTIAL:

(4) 1-BED UNITS (24'-0" X 30'-0") PER LEVEL; (20) UNITS

(6) 2-BED UNITS (36'-0" x 30'-0") PER LEVEL; (30) UNITS

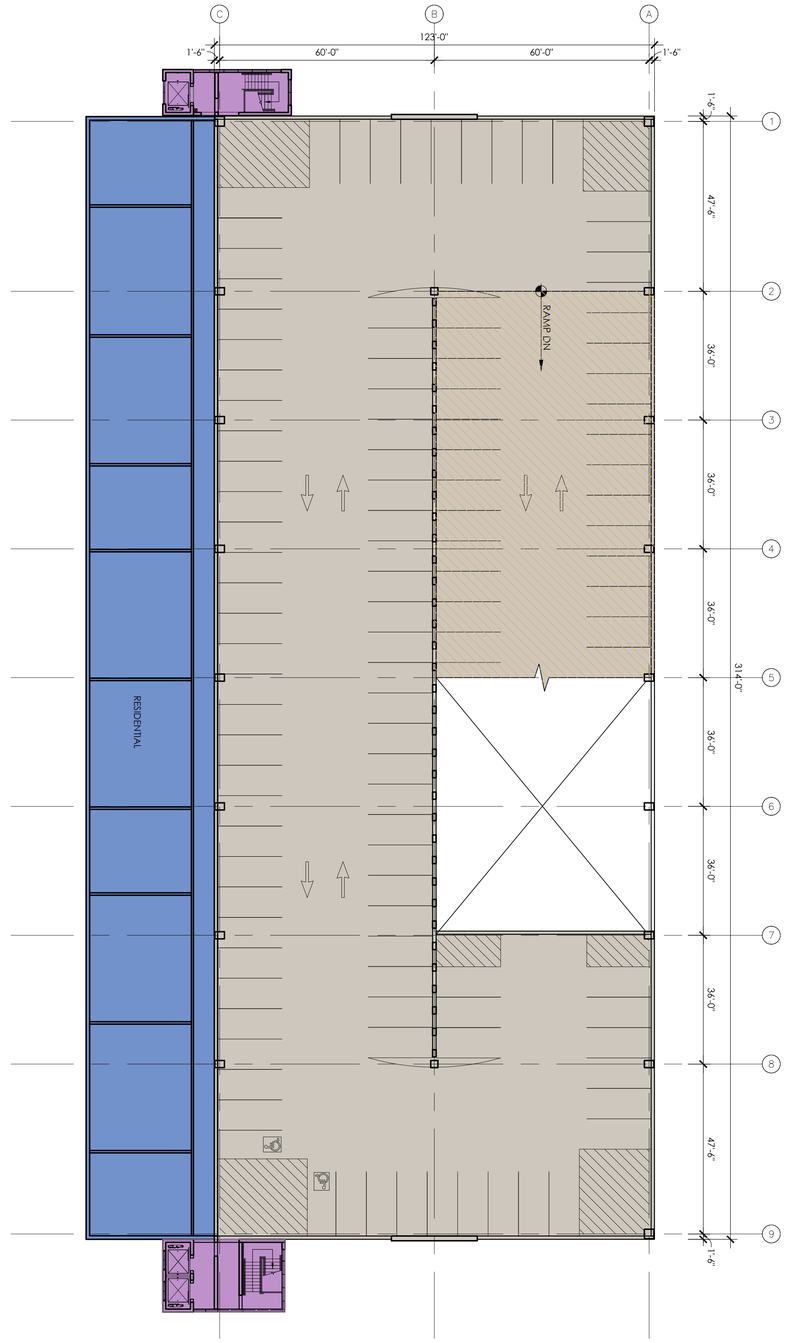
(50) UNITS





TYPICAL TIER PLAN

NORTH 0' 10' 20' 40' 80'



TOP TIER PLAN

NORTH 0' 10' 20' 40' 80'

Order of Magnitude Estimate of Project Costs

		$	$/SF	Notes
2	Sitework	$ 2,077,200	$9.00	Excavation, utilities, subgrade preparation, foundations
3	Cast in Place Concrete	$ 1,846,400	$8.00	Walls, grade beams, slab on grade, washes
3	Precast Concrete	$ 4,616,000	$20.00	Fabrication, transportation and erection
4	Masonry	$ 50,000		CMU for mechanical, electrical, utility and elevator machine rooms
5	Structural & Misc. Metals	$ 692,400	$3.00	Stair railings, pipe guards, hoist beam, etc.
6	Carpentry	$ 115,400	$0.50	Miscellaneous
7	Waterproofing	$ 346,200	$1.50	Silane sealer, tee/tee caulking, exp. joints, waterproofing, damproofing membrane
8	Storefront, doors, hardware	$ 346,200	$1.50	Stairtowers; Ground Floor [retail] frontage
9	Painting	$ 115,400	$0.50	Painting, stall striping
10	Specialties	$ 115,400	$0.50	Signage, fire extinguishers
11	Equipment & Furnishings (PARCS)	$ 150,000		Arm gates at entry/exits, Pay-On-Foot machines in lobbies
13	Fire Protection	$ 115,400	$0.50	Dry standpipe system, no automatic sprinkler system
14	Elevators	$ 300,000		Two (2) at SW stair/elevator tower and one (1) at NW stair/elevator tower
15	Mechanical/Plumbing	$ 461,600	$2.00	HVAC, floor drains, storm, sanitary, hose bibs, no mechanical ventilation
16	Electrical	$ 1,154,000	$5.00	Power supply, lights, exit signs
Subtotal		**$ 12,501,600**		
General Conditions		$ 1,250,160	10.00%	Permits, bonds, insurance, prime contractors' supervision, submittals, etc.
Construction Contingency		$ 875,112	7.00%	
[Hard] Construction Cost Subtotal		$ 14,626,872		
Soft Costs		$ 1,250,160	10.00%	A/E fees, geotechnical, survey/site/civil, testing agent, attorney fees, etc.
Total Construction Cost		**$ 15,877,032**		

Parking Parameters			
No. of Spaces (Garage)	**746**		
Cost per Space (Garage)	**$ 19,607**		Based on [Hard] Construction Cost
Gross Parking Area (typical level)	39,800	SF	
Parking Efficiency	304	SF/space	(39,800 SF/tier) / (131 spaces/tier [typical])
Total Gross Square Footage	230,800	SF	
Cost/SF	54	$/SF	Based on [Hard] Construction Cost

Commercial [Retail + Amenity] Area				
Commercial Area	11,500	SF		West and South, Ground Floor only
Retail Cost per Square Foot	100	$/SF		
Commercial [Retail] Subtotal	**$ 1,150,000**			Core and Shell Space - provide "grey box" level of finish
General Conditions	$ 115,000		10.00%	
Construction Contingency	$ 80,500		7.00%	
Soft Costs	$ 172,500		15.00%	
Commercial [Retail] Total Construction Costs	**$ 1,518,000**			

Residential Area				
Residential/Office Area	57,500	SF		Lining the West, Floors 2-6
Residential Cost per Square Foot	150	$/SF		
Residential Subtotal	**$ 8,625,000**			[(6) 2-Bed, and (4) 1-Bed Unit / Floor] x 5 Floors = 50 Units Total
General Conditions	$ 862,500		10.00%	
Construction Contingency	$ 603,750		7.00%	
Soft Costs	$ 1,293,750		15.00%	
Residential Total Construction Costs	**$ 11,385,000**			

****Excludes costs for acquisition of land, environmental work, and work for plaza and park space**