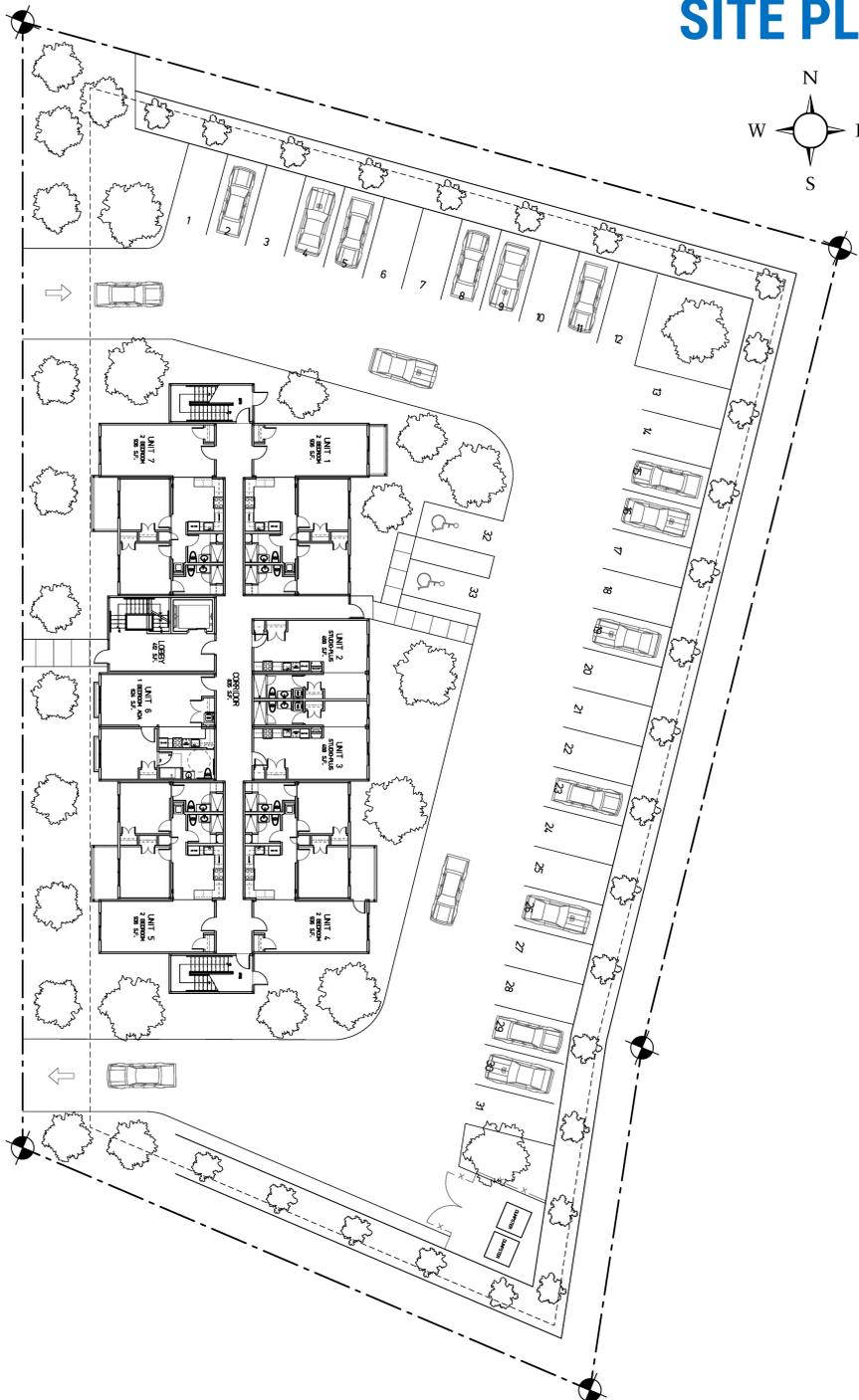


PERSPECTIVE VIEW



405 Grafton Street Proposed 21 Unit Residential Development – Front View

SITE PLAN



Site Data

Property Data:	
MBL	18-004-00012
Address	405 GRAFTON ST
Area	0.8679 Ac / 37806 SqFt
Building(s)	COMMERCIAL DEVELOPABLE VACANT LAND
Use Code	390
Zoning	BL-1.0
Description	LIMITED BUSINESS USE 1-1 MAXIMUM FAR RESIDENT USES
Property Record	Click here
Owner Information:	
Name(s)	405 GRAFTON LLC
Address	284 GRAFTON ST
City, State, Zip	WORCESTER, MA 01604

Proposed Parking Data

Proposed Parking Count

33 Total Parking Spaces
31 - 9' x 18' Standard Spaces
2 - Handicap Spaces

Total Number of Required Parking

1 Space per Studio Plus = 6 spaces
1 Space per 1 bedroom = 3 spaces
1.5 Spaces per 2 bedroom = 18 spaces
1 Guest Space per 10 DU = 3 spaces

Total Required Parking = 30 spaces

TABLE 4.1 - PERMITTED USES BY ZONING DISTRICTS –RESIDENTIAL USE

	RS 10	RS 7	RI 7	RG 5	BO 1	BO 2	BL 1	BG 2	BG 3	BG 4	BG 6	ML 0.5	ML 1	ML 2	MG 0.5	MG 1	MG 2	IP 0.33	IN S	IN H	A 1	
10. Multi-family dwelling, high rise	N	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	SP	N
11. Multi-family dwelling, low rise	N	N	SP	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	SP	SP	N

PERMITTED DIMENSIONS BY DISTRICT

TABLE 4.2 - Continued

USE	LOT		YARD SETBACKS			HEIGHT		FLOOR TO AREA RATIO (Maximum)
	AREA (Minimum SF)	FRONTAGE (Minimum linear ft.)	FRONT	SIDE ¹	REAR	Maximum in stories ²	Maximum in ft.	
Limited Residential Hospice House	15,000	50	20		10		50	NA
Other residential permitted	5,000	50		10		3+	45	1 to 1
Other non-residential	5,000	50	15		15			1 to 1
Residential ³ Non-residential	5,000 NA	40 per du ⁴ NA	15	10	10	3+	40	2 to 1
Residential ³ Non-residential	5,000 NA	40 per du ⁴ NA	10	10	20	3+	40	1 to 1
Residential ³ Non-residential	5,000 NA	40 per du ⁴ NA	NA	NA	15	NA	50	2 to 1
							100	3 to 1
							150	4 to 1
							NA	6 to 1

¹ to that portion of a semi-detached or attached single-family dwelling, where permitted, that shares a party wall or a double wall on or along a common side lot line with an adjacent lot.

² stories indicate a height in stories plus an attic, as herein defined. The designation 2+ indicates a maximum of 2 habitable stories with a non-habitable attic and garage provided. The story containing the garage is not considered habitable if the garage area occupies 50% or more of the entire story.

³ G - 2 and BG - 3 Districts, for brand new residential uses, at least 10% of the lot area must be set aside for recreational purposes, excluding the required five foot buffer.

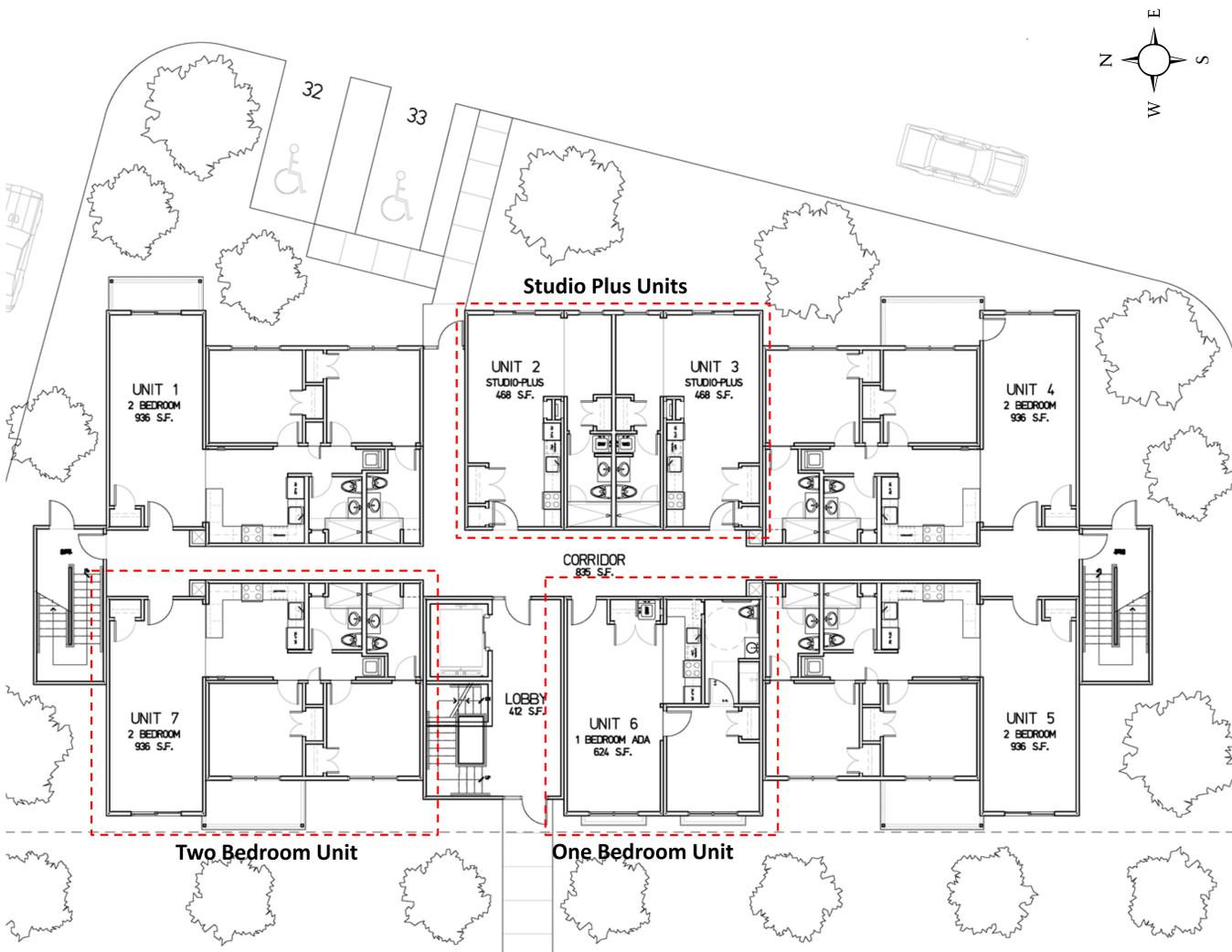
⁴ more than two hundred (200) feet.

PERSPECTIVE VIEW



405 Grafton Street Proposed 21 Unit Residential Development - Rear View

FIRST - THIRD FLOOR PLANS



Proposed Building Data

Three Story Building - 34'

Studio Plus Units	= 6
One Bedroom ADA Units	= 3
Two Bedroom Units	= 12
Total	= 21 Units

Basement Floor - 6,850 GSF

- Elevator Lobby	400 GSF
- Stairs - 2 @ 165 GSF	330 GSF
- Mechanical	
- Building Services	
- Unit Storage	
- Bicycle Storage	

Ground Floor - 6,850 GSF

- Entry Lobby	400 GSF
- Stairs - 2 @ 165 GSF	330 GSF
- 2 - Studio - Plus Apartment	468 GSF each
- 1 - One Bedroom ADA Apartment	624 GSF each
- 4 - 2 Bedroom Apartments	936 GSF each
- Mechanical Shafts - 6 @ 4 GSF	24 GSF
- Bicycle Storage	250 GSF
- 33 Total at Grade Parking Spaces	

Second Floor - 6,850 GSF

- Elevator Lobby	400 GSF
- Stairs - 2 @ 165 GSF	330 GSF
- 2 - Studio - Plus Apartment	468 GSF each
- 1 - One Bedroom ADA Apartment	624 GSF each
- 4 - 2 Bedroom Apartments	936 GSF each
- Mechanical Shafts - 6 @ 4 GSF	24 GSF

Third Floor - 6,850 GSF

- Elevator Lobby	400 GSF
- Stairs - 2 @ 165 GSF	330 GSF
- 2 - Studio - Plus Apartment	468 GSF each
- 1 - One Bedroom ADA Apartment	624 GSF each
- 4 - 2 Bedroom Apartments	936 GSF each
- Mechanical Shafts - 6 @ 4 GSF	24 GSF

Total Building GSF (Livable) = 20,550 GSF

BENEFITS OF MODULAR CONSTRUCTION

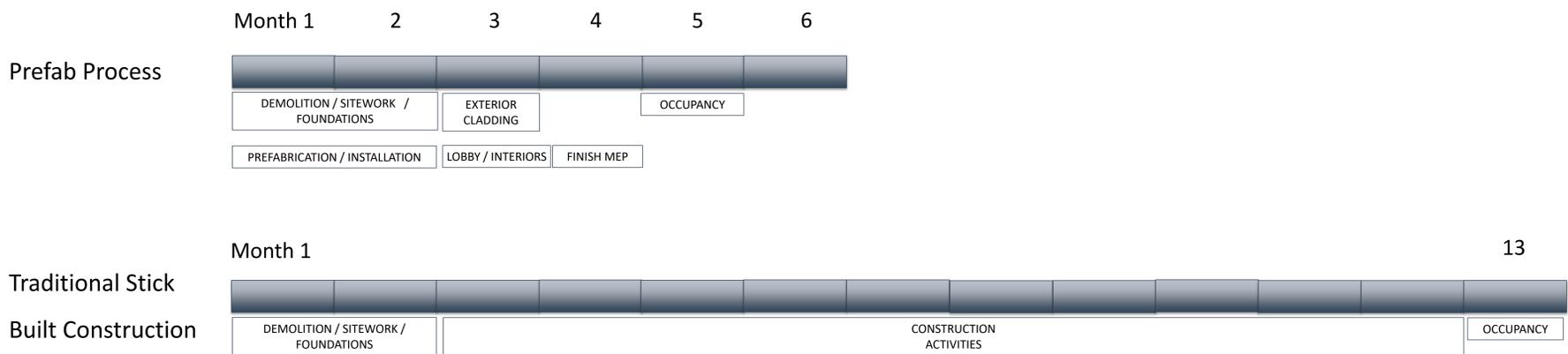
Financial Benefits:

- Speed to market – significant reduction in construction schedule eliminates costly budget adjustments due to escalation and delay costs
- Significant cost savings per square foot allows more units to be constructed with the same amount of funding
- Energy efficient construction maximizes utility savings, reducing burden on tenants
- Earlier occupancy allows for cash inflow by month 5, reducing financing interest costs
- Construction loan duration significantly less than traditional stick-built construction
- Utilization of available grant monies combined with lower square foot costs allows for greater number of residents to achieve home ownership

Community Benefits:

- Limited neighborhood disruption – Modular units in place in days rather than months. Site construction disruption limited to 2-3 months
- 12' wide x 26' long modules allows for transport by heavy duty pickup trucks in lieu of tractor trailers allowing access to tighter neighborhoods
- New construction acts as catalyst for enhancing neighborhoods and increasing community real estate values, attracting 'sweat equity' enhancements
- Psychological impact of seeing a project come to fruition quickly compared to the normal disruptions which typically come with long term construction projects
- Modular construction flexibility allows for variety of building types such as senior and veteran's housing mixed use, garden apartments, townhouses and condominiums

PRELIMINARY CONSTRUCTION SCHEDULE



TYPICAL WALL SECTION – MIXED USE BUILDING

Roof Assembly R Values

• Rubber membrane roofing	0.17
• 4" Polyisocyanurate rigid insulation	30.00
• Sheet waterproofing membrane	
• ¾" plywood subfloor	1.20
• 7 1/4" closed cell insulation	48.00
• 2" x 8" ceiling assembly	1.00
• ½" drywall	0.45
• Air film	0.61
	R Value = 84.00

Code Required R Value = 60.00

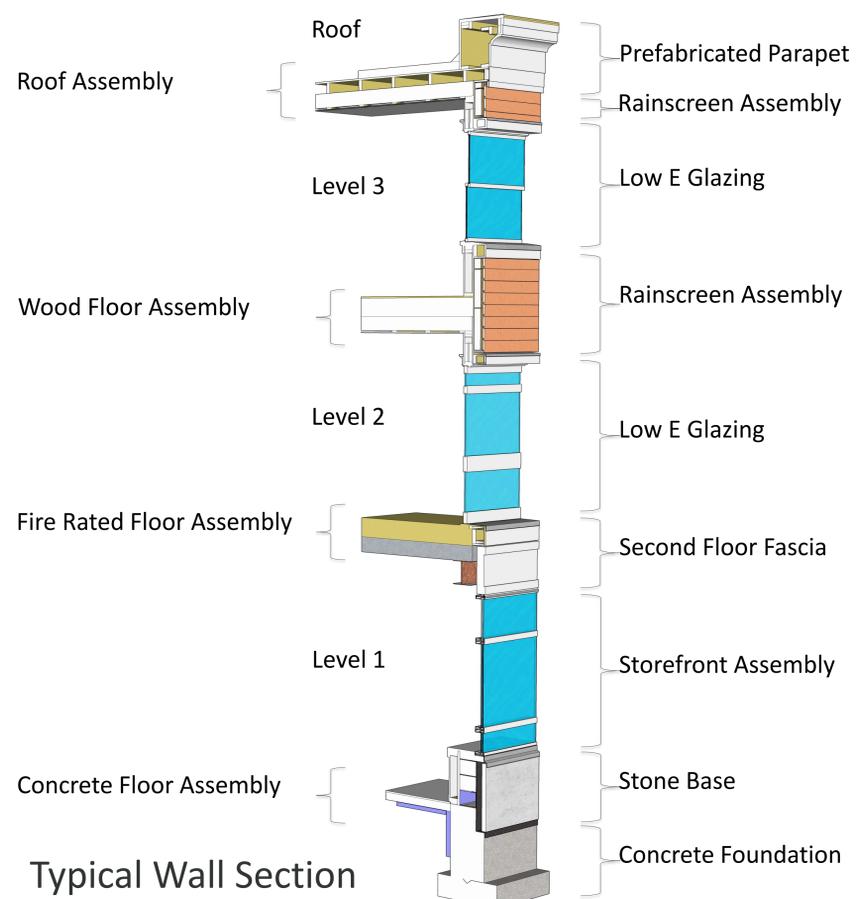
*Assembly 40% above code minimum

Wall Assembly R Values

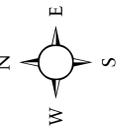
• Exterior rainscreen panel	0.17
• Airspace	0.87
• 3" Rockwool exterior insulation	12.80
• Air barrier	0.06
• ½" Plywood sheathing	0.62
• 5 ½" open cell insulation	19.50
• 2" x 8" ceiling assembly	1.00
• ½" drywall	0.45
• Air film	0.61
	R Value = 36.08

Code Required R Value = 23.00

*Assembly 57% above code minimum



MODULAR INSTALLATION SEQUENCING



Site Preparation
Week 1 – Week 4



Foundation
Week 4



Module Placement
Week 5



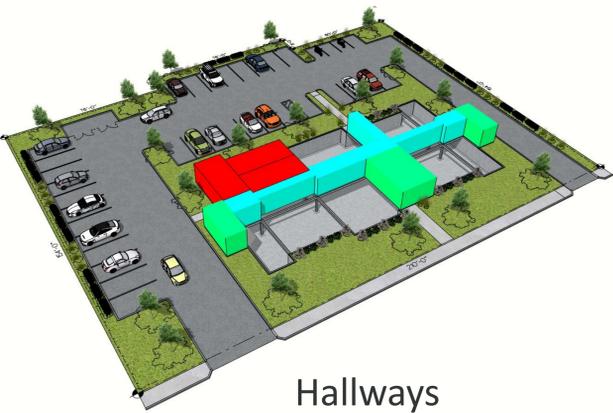
Module Placement
Week 5



Module Placement
Week 5



Lobby / Stairs
Week 5



Hallways
Week 6-8



First Floor Complete
Week 6



Second Floor Complete
Week 6



Third Floor
Module Complete
Week 6



Exterior Siding / Interior Work Complete
Week 16



Occupancy
Week 20

STUDIO UNIT PLAN

Studio Unit

The 312 square foot efficiency unit provides economical living for recent graduates and workforce housing.

Features

- Passive design principles
- Energy efficient construction
- Granite countertops
- High end energy efficient appliances
- Energy efficient hot water on demand
- Heat pump heating and air conditioning
- Stackable washer and dryer



Bathroom View



Entry View



Studio – 312 sq ft.



Living Area View

STUDIO PLUS UNIT PLAN

Studio Unit

The 468 square foot efficiency unit provides economical living for veterans, seniors, recent graduates and workforce housing. Separate sleeping and living space provide the feeling of a larger unit while utilizing an economical footprint

Features

- Passive design principles
- Energy efficient construction
- Granite countertops
- High end energy efficient appliances
- Energy efficient hot water on demand
- Heat pump heating and air conditioning
- Stackable washer and dryer

* Studio-Plus Unit is also compliant as Group 1 Bathroom per 521 CMR



Bathroom View



Studio Plus Floor Plan – 468 sq ft.



Living Area View



Entry View

ONE BEDROOM UNIT PLAN

One Bedroom Unit

The 624 square foot one-bedroom unit provides economical living for young professionals, veterans and retirement living.

Features

- Passive design principles
- Energy efficient construction
- Granite countertops
- High end energy efficient appliances
- Energy efficient hot water on demand
- Heat pump heating and air conditioning
- Stackable washer and dryer

* One Bedroom module is also compliant as Group 1 Bathroom per 521 CMR



One Bedroom – 624 sq ft.



Dining / Kitchen View



Livingroom View



Bedroom View



Bathroom View

ONE BEDROOM ADA UNIT PLAN

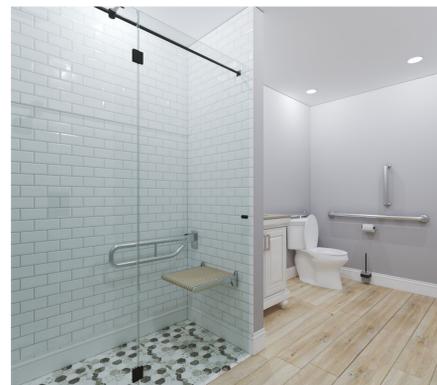
One Bedroom Unit

The 624 square foot one-bedroom handicap accessible unit provides economical living for young professionals, veterans and retirement living.

Features

- Passive design principles
- Energy efficient construction
- Granite countertops
- High end energy efficient appliances
- Energy efficient hot water on demand
- Heat pump heating and air conditioning
- Stackable washer and dryer

* One Bedroom module is also compliant as an ADA Accessible Unit Group 2 Bathroom per 521 CMR



ADA Bathroom View



One Bedroom – 624 sq ft.



Dining / Kitchen View



Bedroom View

TWO BEDROOM UNIT PLAN

One Bedroom Unit

The 936 square foot two-bedroom unit provides economical living for young professionals, veterans and retirement living.

Features

- Passive design principles
- Energy efficient construction
- Granite countertops
- High end energy efficient appliances
- Energy efficient hot water on demand
- Heat pump heating and air conditioning
- Stackable washer and dryer

* Two Bedroom Unit is also compliant as Group 1 Bathroom per 521 CMR



Dining / Kitchen View



Livingroom View



Bedroom View



Bathroom View

TWO BEDROOM UNIT MODULE PHOTOGRAPHS



STUDIO UNIT PROGRESS PHOTOGRAPHS



STUDIO-PLUS MODULE PROGRESS PHOTOGRAPHS



ONE BEDROOM MODULE PROGRESS PHOTOGRAPHS



STUDIO UNIT PROGRESS PHOTOGRAPHS



STUDIO-PLUS MODULE PROGRESS PHOTOGRAPHS



ONE BEDROOM MODULE PROGRESS PHOTOGRAPHS

