

397 Millburn Avenue Apartments
Township of Millburn, Essex County, New Jersey
MW Project No. 13-0708-02
Architectural Basis of Design – Schematic Design Issue
12/16/20
01/08/21 Revision 1

PROJECT DESCRIPTION SUMMARY

The Project consists of a new mixed-use building, two stories of rental apartments over ground level structured parking. The parking level will consist of 97 parking spaces and include the Lobby, Leasing Office, 3,000 SF of shell retail space (cold, dark shell), resident storage lockers and building utility spaces. The residential building consists of a total of 53 dwelling units with a mix of one, two, and three bedroom unit layouts and approximately 30 unique unit types. The apartment units generally stack from floor to floor except at the Amenity space on the second level. The Resident Amenities include Clubroom, Fitness, Yoga, Private Event Room and Lounge spaces. There is an exterior landscaped courtyard roof terrace on the second level. The building will have an NFPA 13 fire sprinkler system throughout all areas, including a dry system in the parking garage.

APPLICABLE CONSTRUCTION CODES

The project shall be designed in conformance to the following codes:

<u>Code Type</u>	<u>Code Model</u>
Building/Dwelling Code	2018 International Building Code, NJ ed (IBC w/ NJ edits from 3.14)
Plumbing Code	2018 National Standard Plumbing Code
Mechanical Code	2018 International Mechanical Code
Electrical Code	2017 National Electrical Code
Barrier Free Subcode	IBC 2018 NJ Edition Chapter 11; 2009 ICC A117.1
Energy Code	2018 International Energy Conservation Code
Elevator Code	ASME A17.1

CONSTRUCTION TYPES AND OCCUPANCY/USE GROUPS:

Height and Area:

3-stories, 39'-2" from avg. grade to median roof height, approximately 54,500 GSF garage level, 37,600 GSF 2nd floor residential and 39,500 GSF 3rd floor residential level.

Construction Type: VA

Separated Mixed Uses:

- S-2 Garage & utility rooms
- M Retail areas (First Floor Level)
- A-3 Amenity areas (Second Floor Level)
- R-2 Multifamily residential apartments & common areas

Fire Protection System:

Wet/dry system type varies depending upon location in building

Garage and Community use: NFPA 13

R-2 Multifamily: NFPA 13

Fire Wall:

None

Foundations:

It is anticipated that conventional spread footing foundation and slab-on-grade construction will be possible.

Superstructure/Framing:

Garage: Cast-in-Place concrete columns, garage wall and 2nd floor slab

Retail: Cast-in-place concrete columns and slab with metal stud infill

Residential: Wood stud walls, floor truss, and roof truss framing.

SUSTAINABLE DESIGN

Redevelopment Plan requires that the project obtain a LEED Silver and Energy Star Certification.

PRELIMINARY SITE PREPARATION WORK

A geotechnical or environmental report has not been received by the Design Team as of this issue. Conventional spread footing foundations on compacted soil and structural fill are anticipated, pending the report. Water flow and pressure test results have not been reported to the Architect as of this issue.

DESCRIPTION OF ARCHITECTURAL SYSTEMS

Exterior Wall Design

Typical garage exterior walls shall be detailed as follows:

- 1 hr rated per NJ IBC Table 601.
- Face Brick / Cast Stone veneer
- Cast in place concrete foundation/retaining walls
- Perimeter footing drain provided wherever grade is higher than finished floor slab (civil to design discharge).
- Ornamental aluminum grilles, 3-coat Kynar 500 painted finish.

Typical Common Use exterior walls shall be detailed as follows:

- 1 hr rated per NJ IBC Table 601.
- Face Brick / Cast Stone veneer
- Cast in place concrete foundation walls
- Perimeter footing drain provided wherever grade is higher than finished floor slab (civil to design discharge).
- 3 5/8" metal stud furring wall with batt insulation, vapor barrier, & 5/8" GWB to be provided at interior perimeter of concrete and CMU basement walls where conditioned space exists.

Typical exterior walls above garage level shall be detailed as follows:

- 1 hr rated from interior side per UL- U356
- 5/8" GWB interior face
- 2x6 wood framing
- R-21 batt insulation with integral vapor barrier
- 7/16" OSB panel sheathing
- Face brick veneer, ornamental brick detailing, see elevations for locations and extent
- Cast stone veneer
- Face Brick accent banding in cast stone field, see elevations for locations and extent
- Cast stone window heads and sills at or adjacent to brick finish
- Fiber cement panel (Hardie-Panel or equal), see elevations for locations and extent
- Composite metal panel, see elevations for locations and extent
- Pre-fabricated canopies, see elevations for locations and extent (Mapes or equal)

Residential Interior Wall Design

Dwelling Unit Separation Walls shall be detailed as follows:

- 1 hr rated per UL- U341
- STC-63
- (2) 2x6 wood stud (staggered @ 16" o.c.) walls separated by 1" airspace (stud spacing varies due to bearing conditions)
- (2) 5/8" gwb on dwelling unit sides for fire rating and acoustics
- structural panels substituted on inner layer(s) at shear wall locations
- unfaced batt insulation in each studwall for acoustics
- non-hardening sealant at top and bottom of gwb for acoustics
- Fireblocking as required for concealed vertical spaces

Corridor Walls shall be detailed as follows:

- 1 hr rated per UL- U311
- STC-53
- 2x6 wood stud wall
- unfaced batt insulation for acoustics
- (2) layers 5/8" gwb on dwelling side
- Structural panels substituted on inner layer, unit side, at shear wall locations
- 1/2" Clark Dietrich RC Deluxe resilient channel w/ 5/8" gwb on corridor side

Stair Tower and Elevator Shaft Walls shall be detailed as follows:

- 1 hr rated per UL- U905 (8" CMU)
- STC-60
- 2x wood stud furring/bearing wall w/ 1/2" airspace and 5/8" gwb on outside face

Mechanical Shaft Walls shall be detailed as follows:

- 1 hr rated per UL- U336
- (2) 1" gwb shaft wall liner panel assembly, clipped/braced to parallel adjacent wood stud walls on both sides.

Floor/Ceiling Design

Typical Garage and Common Use Floor shall be detailed as follows:

- Concrete slabs to receive sealed finish in garage and utility areas.
- Sheet vapor barrier below slab (not waterproofing).
- Fluid applied waterproofing at elevator pit.
- Tiled floors at finished lobbies.

Typical First Residential Floor shall be detailed as follows:

- 1 hr cast in place concrete transfer-type floor deck throughout.
- 5/8" gwb ceiling on suspension system in lobbies and Common Use areas.
- **ACT** ceiling on suspension system in garage areas below residential units and shall be heated with electric unit heaters.
- Spray foam insulation on underside of deck and heat tracing and insulation on plumbing in garage areas located below courtyard plaza deck. At this time design intent is that insulation and utilities will be exposed to view in the garage.

Typical Upper Residential Dwelling Floor/Ceiling Assembly shall be detailed as follows:

- 1 hr rated at wood framed floors per UL- L521
- 1 1/4" concrete underlayment
- 1/4" Maxxon Acousti-mat II (or equal)
- 3/4" plywood subfloor
- 18" deep 2x wood floor trusses (shop engineered)
- 3 1/2" unfaced batt insulation attached to underside of floor sheathing
- ClarkDietrich RC Deluxe 1/2" resilient channel
- (2) 5/8" gwb ceiling
- Draft stopping to be located throughout floor ceiling assembly as calculated per code requirements

Typical Residential Corridor Floor/Ceiling Assembly shall be detailed as follows:

- 1 hr rated at wood framed floors per **GA file #FC 5406, FM-FC-172**
- 1 1/4" concrete underlayment
- 1/4" Maxxon Acousti-mat II (or equal)
- 3/4" plywood subfloor
- **2x10 wood joist framing**
- (2) 5/8" gwb ceiling

Roof/Ceiling Design

Plaza Deck Roof/Ceiling Assembly (at 2nd Floor Courtyard):

- 1-hr rated assembly
- Paver system and garden roof system on fluid applied membrane system (American Hydrotech BOD assembly)
- 12" Concrete slab

Roof/Ceiling Assembly shall be detailed as follows:

- 1-hr rated wood framed roof per UL- P522
- 60 mil fully adhered EPDM rubber membrane roofing & component assembly (Carlisle or equal) at flat roof areas and turned up mansard parapet walls, terminated beneath copings.
- Tapered rigid insulation shall be used to create slopes to roof drains
- 5/8" Plywood roof sheathing

- Open web 2x wood roof trusses (shop engineered by truss manufacturer)
- Conventional stick framing where necessary for special conditions
- Vapor barrier membrane
- R-49 batt insulation
- Clark Dietrich RC Deluxe ½" resilient channel
- 5/8" gwb ceiling

Doors & Windows

Doors

- Lobby exterior and interior doors and sidelites shall be aluminum storefront system.
- Apartment entry doors- 20 min rated painted 1-3/4"x 8'-0" steel 1-panel flat top insulated doors (Therma-Tru or equal)
- Apartment interior doors- painted 1-3/4" x 8'-0" solid core molded MDF raised 1-panel flat top (Masonite or equal). Louvers as required by equipment.
- Apartment mechanical closet doors (hvac, water heater)- insulated steel 2-panel flat top for acoustic purposes. Non-louvered.
- Utility room/closet doors in residential common areas - match apartment entry doors **(8' tall doors not required and height will be determined as drawings progress)**.
- Garage doors shall be overhead coiling ventilated steel slat type with secure credential entry operation and loop sensor exit operation (Rytec Spiral or equal)

Windows

- Windows shall be aluminum-clad wood units; Low-E, Argon-filled glazing; Single-hung operation; white interior, color exterior. (Pella or equal)

Door Hardware

- Ingersoll Rand (Schlage, LCN, Von Duprin, etc...)
- All Dwelling Unit Entry doors shall receive commercial quality neoprene sweep door bottom and acoustic seals at jambs and head
- Centralized electronic access control (see below)

Interior Finishes

See Interior Design Basis of Design

Appliances

- Kitchen and Laundry appliances shall be as selected by Owner per list below:
 - Dishwasher-
 - OTR Microwave/hood- with exhaust vent to roof
 - Gas Range/Gas Oven-
 - Refrigerator- with ice maker water supply
 - Washing Machine-
 - Gas Dryer – vented to roof
 - Waste Disposal-

PRELIMINARY MEP

See MEP Basis of Design

Fire Stairs

- Metal pan concrete filled fire stairs and landings
- Field painted steel guardrails and handrails, design for code minimum

Elevators

- Otis Gen2 Machine room-less traction elevator, Front & Rear Opening, 4-stop 3500lb cab at residential lobby w/ size for ambulance stretcher.
- Otis Gen2 Machine room-less traction elevator, Front Opening, 3-stop 3500lb cab at leasing lobby w/ size for ambulance stretcher.
- Finishes: custom design by Interior Designer
- Battery backup for car return to designated floor during alarm

Refuse Collection Rooms

Refuse and recyclables will be deposited by residents in trash chute access rooms on upper floors. Refuse waste and recyclables will be transported via single chute and held in termination rooms on the lowest level of building. Refuse chute termination room located near residential lobby (along Essex St) shall contain (1) Tower Recycling Tower-Pak 2000 / TRC-2 waste compactor system with diverter and storage containers. Refuse chute termination room located near retail spaces/leasing lobby (along Millburn Avenue) shall contain (1) Tower Recycling Tower-Pak 2000 with diverter and storage containers. Cardboard bailer will be provided in refuse termination room located near residential lobby (along Essex St). **Ventilation, Floor drains and hose bibbs will be provided in refuse termination rooms.**

Janitors' Closets

A Janitors' closet shall be located on the ground floor. Closet will include a floor mop sink with hot and cold water supply and space for storage of janitorial maintenance supplies.

Postal/Mail Areas

- Building to include a bank of mailboxes/parcel boxes (Florence or equal), community information monitor, and millwork shelf within first floor lobby (inboard of secure doors at entrance vestibule).
- Automated package storage systems and package storage rooms will be included as part of first floor leasing/lobby area.
- A package storage room will be included for oversized package holding.

Building Access System

- Intent is to have a central, wireless RFID computer controlled and monitored building access system (SAFLOK or equal). Secure building lobby doors and garage exterior man doors (magnetic lock) being operated via keyfob credential. Elevators and stair tower interior doors shall not have security locking prohibiting internal floor to floor access. Ground floor exterior stair discharge doors shall not include latch hardware on exterior side and shall be used for exit discharge only. Design for system shall be by others and coordinated into door hardware specifications by contractor.

- Building entry vestibule to include telephone operated intercom system (Door King or equal), with integrated phone line dial-up connections to assigned number for each dwelling unit. This system will provide for residents' remote control of visitor access.
- A Knox Box shall be located at exterior door vestibule locations as approved by Owner and local fire official.

Security System

Security System Design and Engineering to be provided by Owner's consultant.

Building Telecom Systems

Building WI-FI systems, intercom systems, camera/security systems to be engineered and installed by delegated design/build vendor. Power for these items should be identified so that electrical engineer can coordinate and provide as needed.

Signage

Code required signage to identify fire rated construction assemblies within the building shall be outlined in the architectural specifications to be provided by the Contractor. Interior and exterior wayfinding and monument signage design and engineering to be provided by Owner's consultant.

END