

Date: August 1, 2016

Project: Encore Riverwalk

Re: MEP Design Development
Mechanical, Electrical, and Plumbing Narrative

Element

Requirement

HVAC Systems

Apartments

Vertical 14 SEER split system air handlers with electrical resistance heating located in mechanical closets. Sizes may vary from 1.5 to 3 tons based on apartment square footage and external exposure. The return air will be via return air plenum. Air distribution will be via flexible ductwork within the open web trusses and furred down ceiling cavities. All fire rated assemblies shall be maintained via fire/ceiling radiation dampers. All ductwork shall meet the latest SMACNA standard for flexible ductwork construction and installation. The condensing units are anticipated to be located in flat roof sections in reasonable proximity to their respective apartments.

Natural ventilation shall be used assuming the units meet the criteria set forth in ASHRAE standard 62.1 and the 2105 IMC. Per Vivian Lopez, mechanical plan reviewer, ducting the outside air to the apartments will not be required because we're taller than 3 stories per se. A table will need to be provided with the building plans that shows a minimum of 4% operable area to the outside for compliance. In areas where the minimum is not met; for example, where the windows are fixed due to proximity to the pool, mechanical ductwork for outside air will be required.

Corridors

Corridors are to be tempered. Air handlers will be located within mechanical closets on each floor.

Amenity Areas

Closet mounted or suspended above the ceiling (access provided) 14 SEER split system air handlers with electrical resistance heating and direct expansion condensing units. The sizing of the equipment will be approximately 250 to 300 square feet per ton. Mechanical ventilation will be achieved by ducting outside air to the air handlers. The supply and return air ductwork construction and installation for commercial sections of the building(s) shall meet the latest SMACNA standards for sheet metal ductwork. Flexible ductwork shall be limited to no more than five feet at the termination of the branch ducts. The condensing units are anticipated to be located on flat roof sections in reasonable proximity to their respective air handlers.

Trash Compactor Room(s)

These rooms will be conditioned via ductless split systems.

Trash Drop Room(s)

These rooms shall be exhausted via the trash chute's exhaust fan. Transfer grilles between the rooms and the corridors will be provided for make-up air.

Telecom Distribution Room(s)

The telecommunication distribution room(s) shall be cooled as required based on the needs of the equipment residing in the room via ductless cooling only split systems.

Elevator Machine Rooms

These rooms shall be heated and cooled as required based on the needs of the equipment residing in the rooms via ductless split systems.

Elevator relief

Each elevator shaft (4) four stories and higher shall be provided with a relief vent sized to meet the current building code requirements.

Garage

Our understanding is that the garage meets the minimum required openings to the outside for proper ventilation. No mechanical exhausting of the garage will be required.

Electrical Systems

General

Provide electrical service for the building inclusive of secondary systems with building distributions as noted below. Provide all light fixtures, equipment, and power provisions as required. House, unit, and retail electrical loads will be independently metered by the utility company.

Main Services

The buildings will be provided with 120/208V, 3-phase, and 4-wire electrical services consisting of secondary distribution from utility company transformers.

House Loads

House loads will be directly metered. Examples of house loads include elevators, trash compactors, water pumps, building lights, leasing and amenity area electrical requirements, etc.

Unit Loads

Unit panels shall be fed from electrical meter packs. Unit panels will be 120/208V, 1-phase, main lug only.

Pool Equipment Area (Exterior)

Provide a minimum of 125 Ampere 120/208V, 1-phase house panel for pool equipment and associated electrical loads.

Lighting

Buildings (Interior and Exterior)

Interior lighting shall be primarily compact fluorescent (both recessed and surface mounted fixtures) and LED style fixtures. The exterior of the building will be illuminated with compact fluorescent and/or LED accent lighting and metal halide wall packs with full cut off/Dark Sky compliant options.

Amenity Spaces

Amenity space lighting shall be primarily compact fluorescent (both recessed and surface mounted fixtures) and LED style fixtures. Decorative fixtures will be specified by others based on desired aesthetics.

Units

Unit lighting will be primarily surface mounted compact fluorescent fixtures and LED fixtures with ceiling fans in the bedrooms. Switched outlets are to be provided within the living areas as designated.

Miscellaneous Areas

Miscellaneous areas such as mechanical rooms, pump rooms, electrical rooms, etc. shall be illuminated by fluorescent strip fixtures.

Exterior Amenities

Provide power for landscape accent lighting, pedestrian lighting, tree lighting, and seasonal lighting.

Life, Health, and Safety Systems

General

Provide Life, Health, and Safety Systems (NFPA 101) per applicable codes and the authorities having jurisdiction over this project. Card readers are to be provided at corridor access points for security.

Fire Alarm System

Provide a code compliant, fire alarm system per NFPA requirements, all portions of applicable codes, and the authorities having jurisdiction. The fire alarm system will be audible and visual with no voice notifications. Provide notification and supervisory circuits as required. All actual design, permit submission, and installation shall be performed by a company licensed by the state to provide such services. Each unit's smoke detectors shall be interconnected and dedicated to that particular unit, with no connections to the fire alarm system.

Fire Sprinkler System

The buildings shall be protected with a Full NFPA 13 system throughout. Fire pumps are anticipated to be required due to available water pressure (to be confirmed by fire sprinkler contractor/engineer). Stand pipes will be required in stair wells as dictated by code. All actual design, permit submission, and installation shall be performed by a company licensed by the state to provide such services.

Plumbing Systems

Domestic Water

Domestic pumps are anticipated to be required due to available water pressure. Reduced Pressure Principle type backflow preventers will be shown in the main riser rooms within the buildings. The apartment units will be equipped with provisions for remote-read type domestic water meters.

Domestic Hot Water

Single bedroom apartments shall have 40-gallon 4.5 kW lowboy water heaters. Two bedroom apartments shall have 50-gallon 4.5 kW lowboy water heaters. The heaters shall be located in the mechanical closets and provided with drain pans. T&P as well as condensate drains shall be routed to the hub drains located within the mechanical closets. The amenity spaces shall be supplied with 40 or 50-gallon 4.5 kW water heaters as required to meet the domestic hot water needs.

Sump Pumps

Permanent sump pumps capable of discharging 50 gpm shall be provided in each elevator sump pit and shall discharge indirectly to the sanitary sewer through a filtration system (if hydraulic elevators are used). Sump pumps will also be required in the lower level of the garage for storm discharge. Elevated deck storm discharge will also route to the sump pumps.

Domestic plumbing fixtures

All plumbing fixtures that discharge domestic water shall be low flow water conserving fixtures.

Building Sanitary Sewer

Piping materials shall be a minimum of schedule 40 PVC. Cell core PVC will not be permitted.

Building Storm Sewer

The storm drainage for the flat roof portions of this building are anticipated to be drained via internal roof drains. The primary roof drains will be routed to underground storm lines and the secondary roof drains will daylight. Sloped roof sections shall be provided with gutters and downspouts routed to underground storm lines

Pool Equipment Room

Provide a minimum of a 4" sanitary sewer floor drain and hub drain and a 1-1/2-inch domestic water line to the pool equipment room.

Sustainable/Green Design

The project will need to meet NGBS criteria plus San Antonio's Green Building guidelines. The actual scope associated with these (2) programs will need to be provided to PHA.

End of Narrative