

PROJECT OBJECTIVES

- Provide cost effective solutions in all disciplines
- Design building systems that integrate well with one another
- Improve occupant comfort through satisfaction of lighting, and structural serviceability requirements
- Provide a design that is both constructable and efficient

STRUCTURAL: GRAVITY

Framing

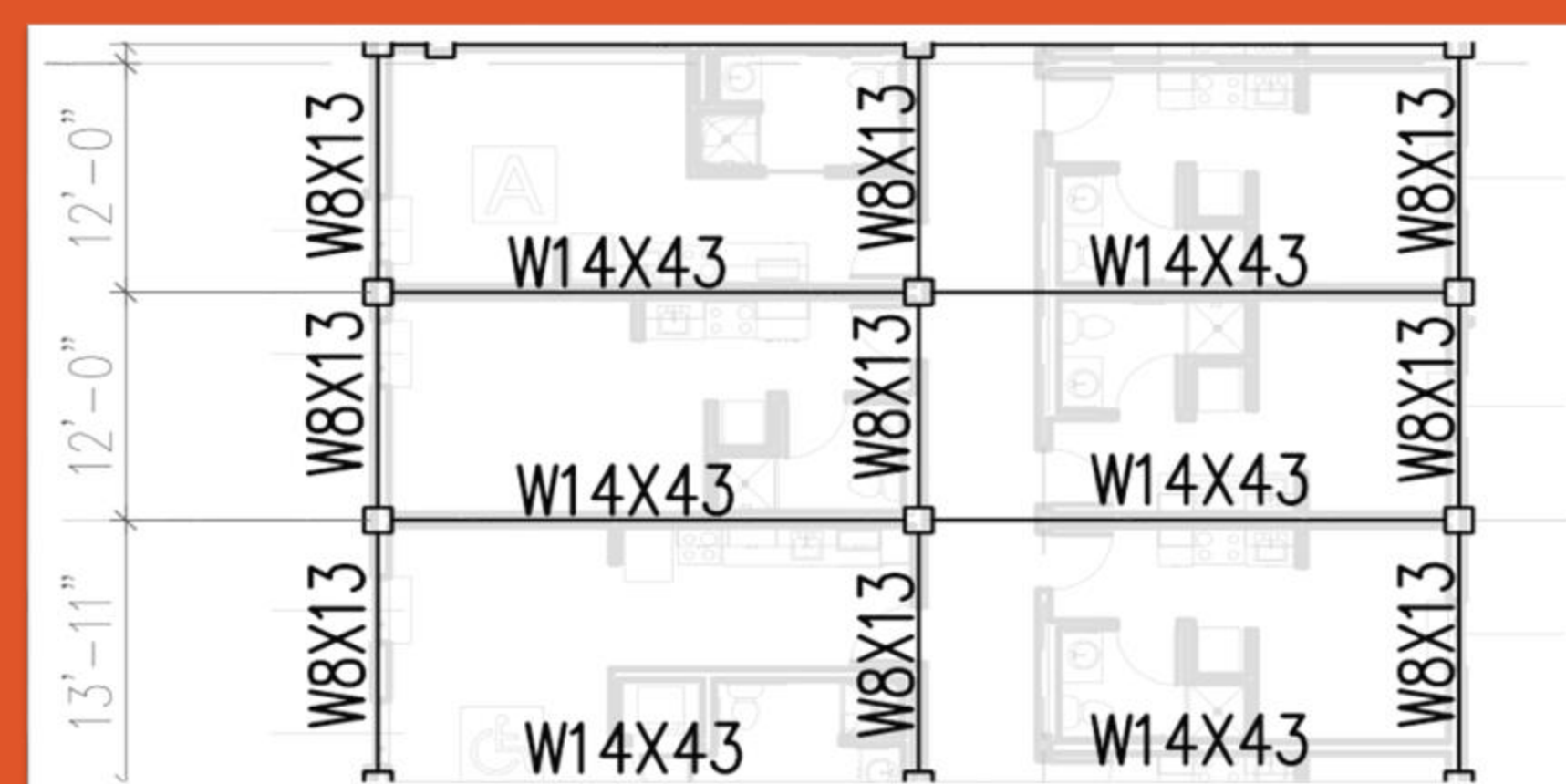
- Steel Gravity Framing System
- Typical bay size 13'x26'

Columns

- W12x50 interior columns
- W10x39 exterior columns

Flooring System

- Concrete on corrugated metal decking
- 3" type VLI corrugated metal decking with 2" concrete cover for floors
- 3" type N corrugated metal roof decking



Typ. Bay framing

# OSU HMSC HOUSING COMPLEX

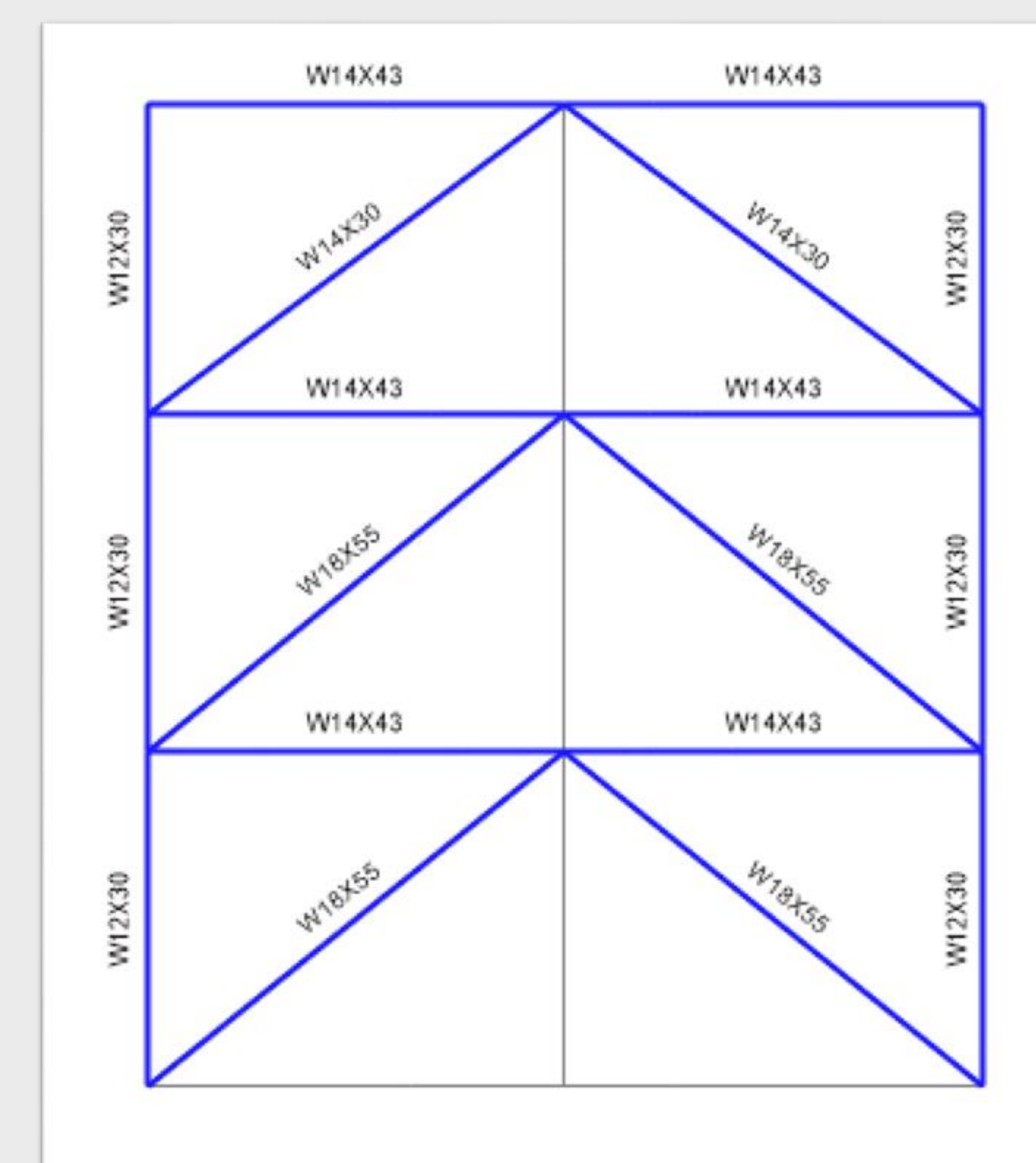
136,000 sq. ft housing complex that will serve the students and faculty at Oregon State's Hatfield Marine Science Center in Newport, OR.



Rendering provided by Mackenzie Architects

STRUCTURAL: LATERAL

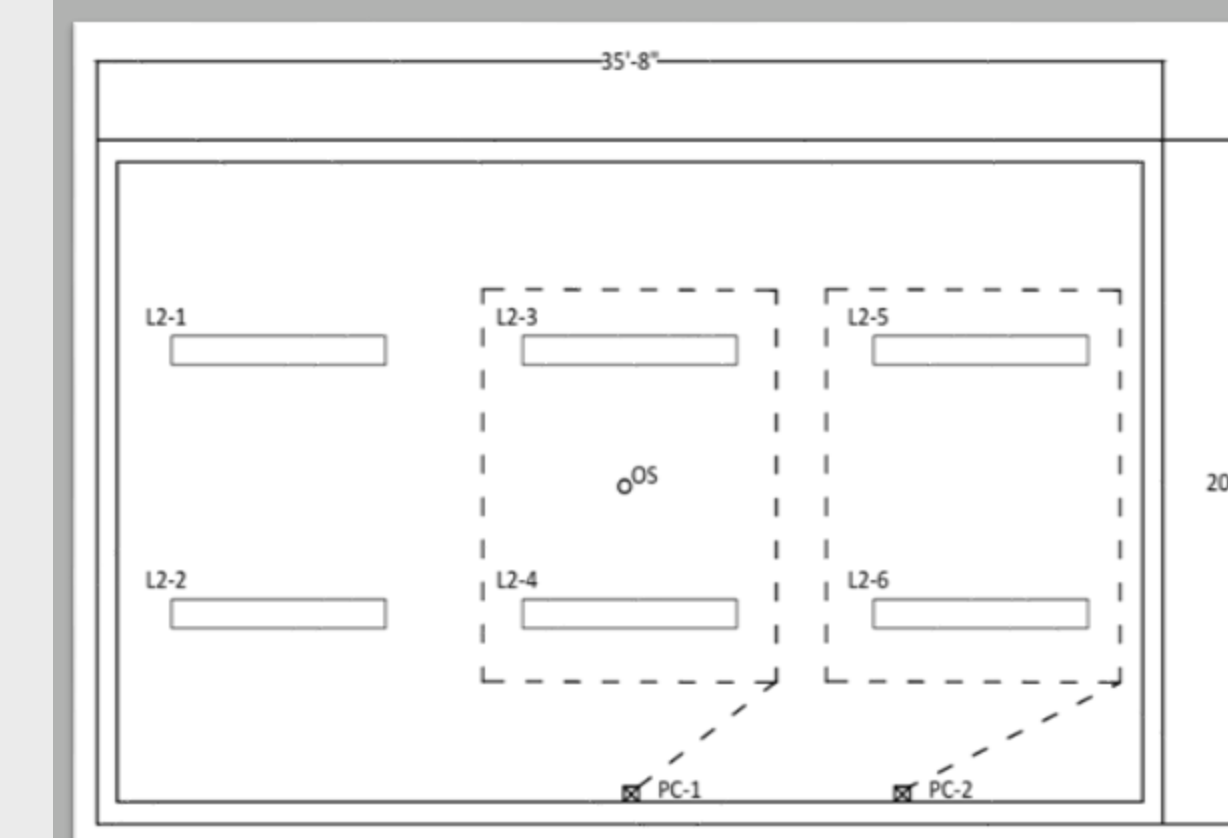
- A992 steel chevron brace frame with wide-flanged shapes
- Lateral braced frames run in both North - South and East-West directions.
- High seismic and lateral loads due to coastal environment
- Gusset plate connections at midspan and ends
- 26-foot span for frames



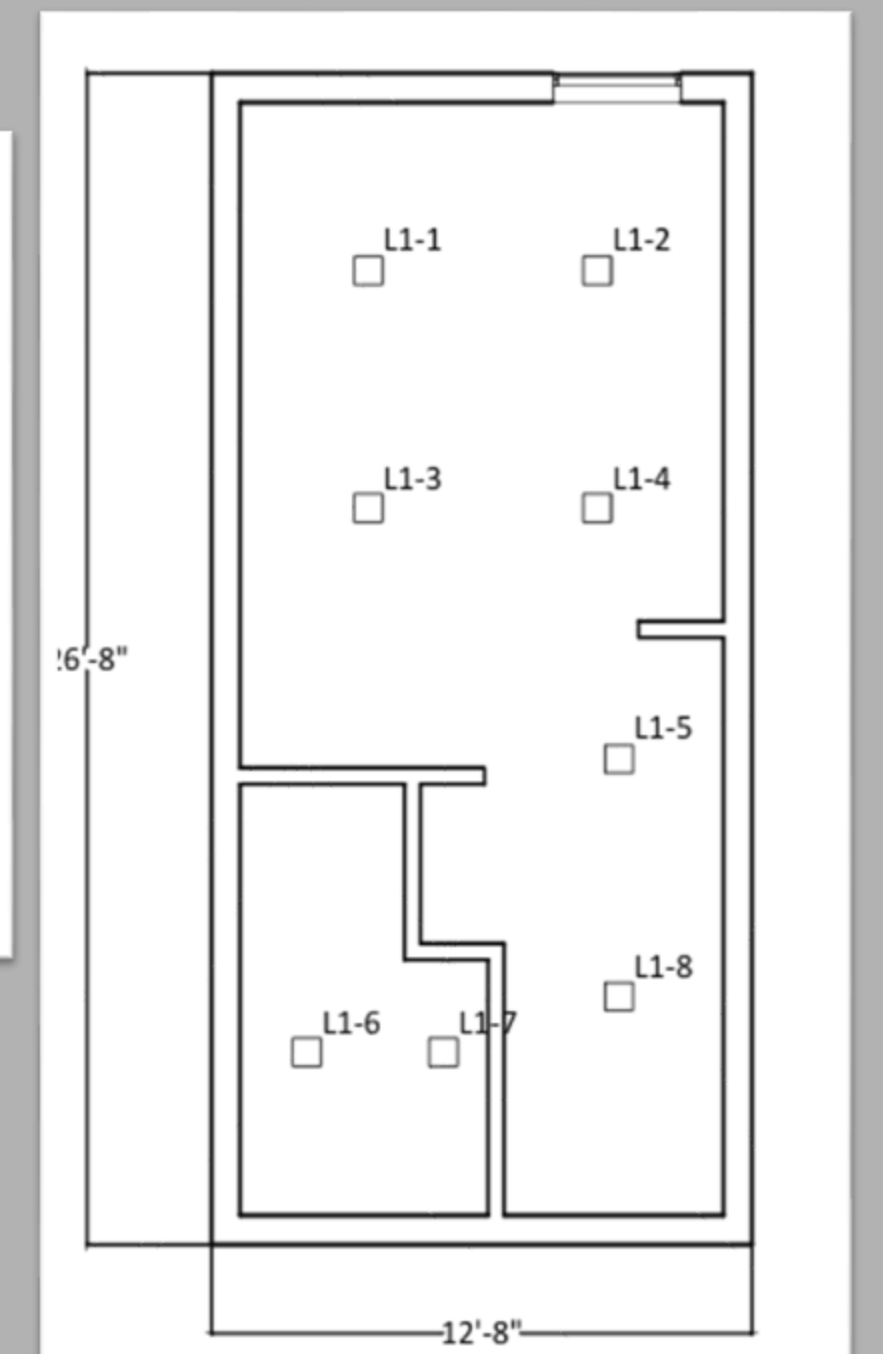
Typ. Brace frame configuration

LIGHTING

- Uniform lighting for the Deluxe Studio and Community room, with the incorporation of daylight.
- Utilizes recessed LED luminaires with dimming capabilities, occupancy sensors, and daylight sensors. All systems are integrated and work cohesively.
- Follows IES suggested illuminance levels (15-30 fc) and ASHRAE Standard 90.1 (0.72 w/sf).



Community Room Floor Plan



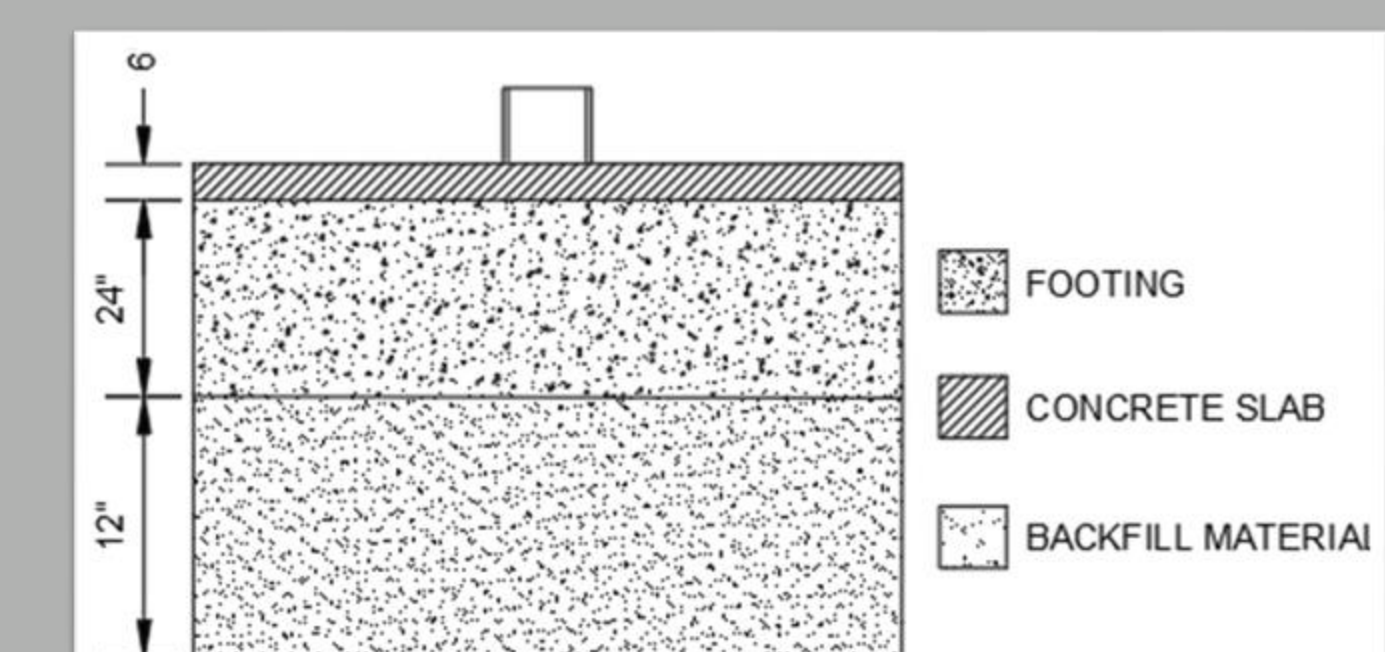
Deluxe Studio Floor Plan

STORMWATER DRAINAGE

- The system was designed to handle a 100-year storm rainfall intensity.
- Stormwater inlets will be placed around sight to transport stormwater to bioswales.
- Bioswales will be placed on the back of sight to be able to infiltrate the average rainfall during the year.
- Catch basins will be installed at the ends of bioswales to handle overflow during high intensity rainfall.

GEOTECHNICAL

- 6" Concrete slab supported by 24" Reinforced mat foundation on 3/4" NMSA backfill.
- Differential settlement risk due to expansive soils.
- W 12x50 steel connections to slab.



Typ. Footing w/ column connection