

## Comments on Conceptual Solution

Project: **Hotel**  
Location: **Nevada**  
Company:

Date:  
Engineer: **Steel Solutions Center**  
Contact:

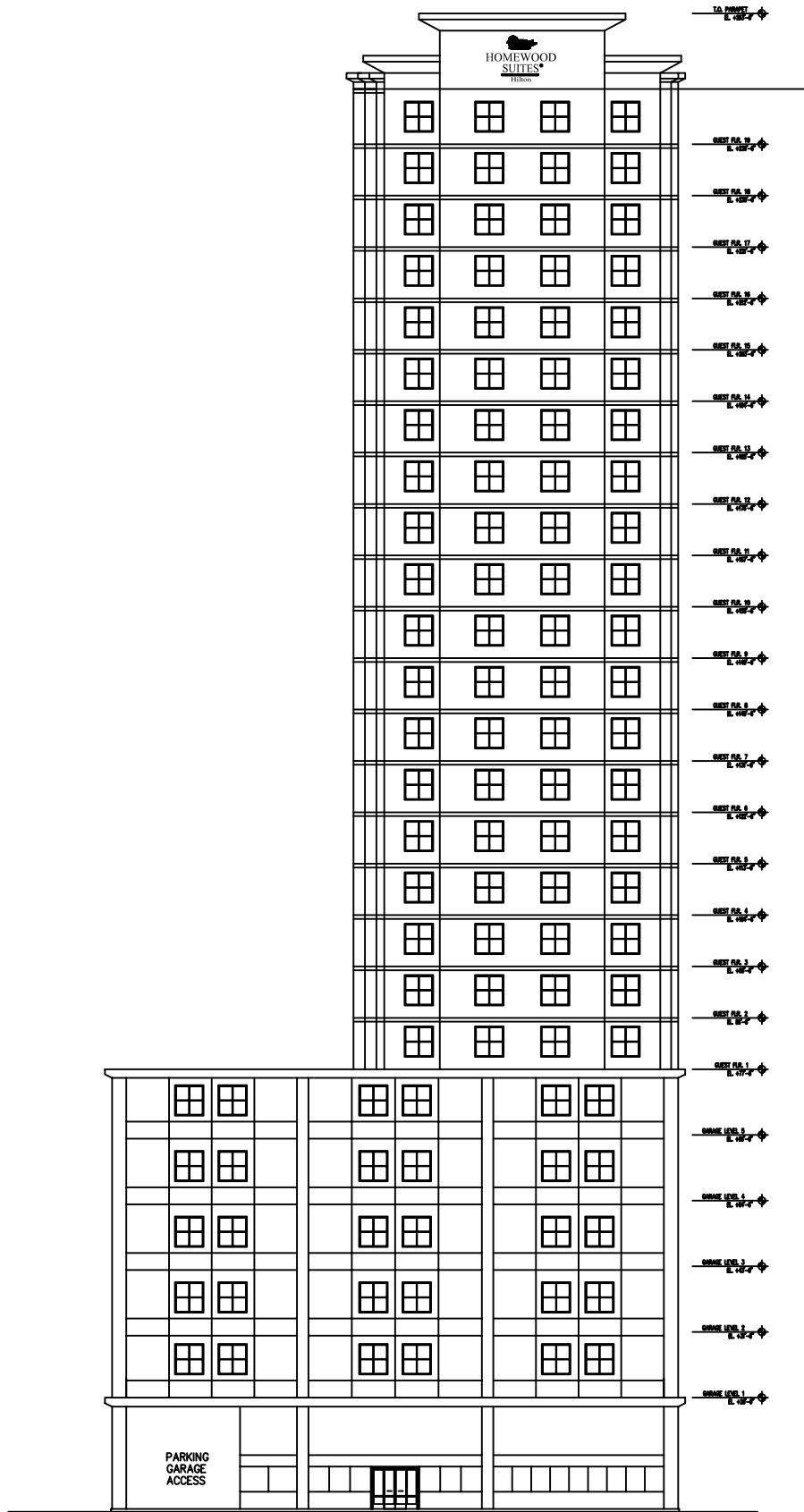
The structural system for the Homewood Suites located, in Las Vegas, Nevada, is composed of the steel super-structure whose quantities and geometry are defined through the preliminary framing plans and elevations, plus tonnage and piece takeoffs.

This project was based upon parameters defined through architectural drawings, which were received in 2004.

- 1) The lateral system uses braced frames, which are labeled on the framing plans with member sizes shown on the lateral elevations.
- 2) The 7th level (first level guest rooms/pool area) was designed for a typical load of 60 psf over the guest room area and 150 psf over the roof/pool area. These areas were designed for different loads to account for the roof/pool being used as a staging area during the construction process.
- 3) An 6-1/2" thick, slab system is used on the parking and first level guest rooms/pool area. This system is composed of a 3" thick, metal deck and 3-1/2" of concrete, and slab span is perpendicular to the in-fill beams and marked on the framing plans. All remaining guest levels use 8" thick, concrete plank, which is topped.
- 4) 18,000 Nelson studs are also used, since all gravity beams on the parking and first level guest room/pool area were designed for composite action. In addition, a majority of long-span beams in these areas use camber, which is labeled on the drawings.
- 5) There are multiple transfer beams, which are located on the first level guest rooms/pool area. These beams range from W36 to W40, but they could be substituted with plate girders or similar.
- 6) Floor-to-Floor Height is presumed to be 20'-0" for the 1st level, 11'-6" for the 2nd through the 6th levels, 9'-0" for the 7th through the 24th levels, and 9'-8" for the 25th level.
- 7) Typical floor plate area is 25,000 SF for the 2nd through 7th levels and 10,100 SF for all remaining levels resulting in a total area of 341,900 SF.
- 8) All wide flange shapes are A992, Gr. 50.
- 9) Results for the building are 2,523 tons at 14.8 PSF for the 341,900 SF structure with 3,308 pieces of steel.**



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CONCEPTUAL ELEVATION  
ALONG PARADISE ROAD

# TONNAGE & PIECE TAKEOFF SHEET

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**The following quantity estimate is based on a building area of 341,900 ft<sup>2</sup>:**

Columns (gravity)	325 tons	1.90 psf	313 pieces
W Beams (gravity)	811 tons	4.74 psf	1266 pieces
DB Beams (gravity)	112 tons	0.66 psf	418 pieces
Columns (lateral)	713 tons	4.17 psf	286 pieces
Beams (lateral)	236 tons	1.38 psf	400 pieces
Braces (lateral)	326 tons	1.91 psf	625 pieces
<b>TOTAL</b>	<b>2,523 tons</b>	<b>14.8 psf</b>	<b>3308 pieces</b>

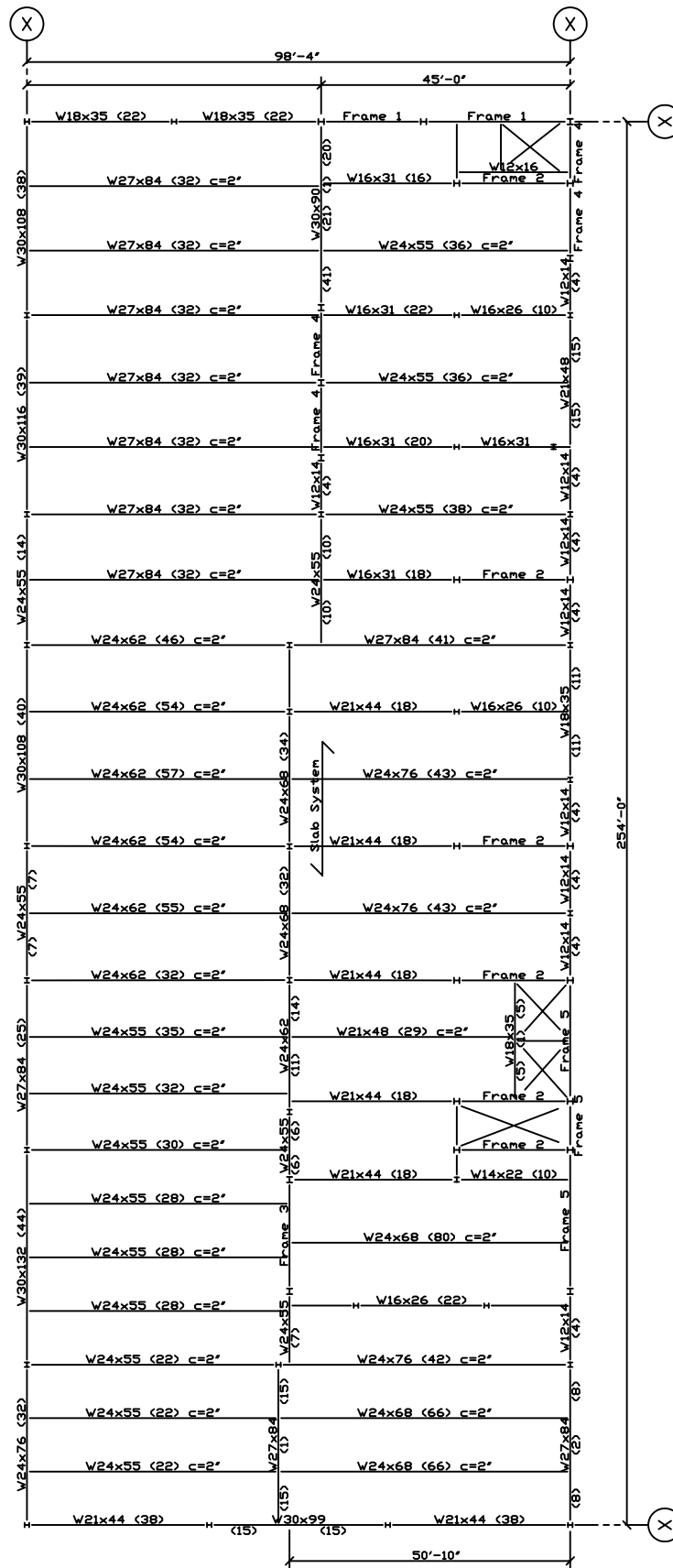
Total quantity of Nelson Studs = 18,000 Studs

\* The quantities are based on centerline dimensions

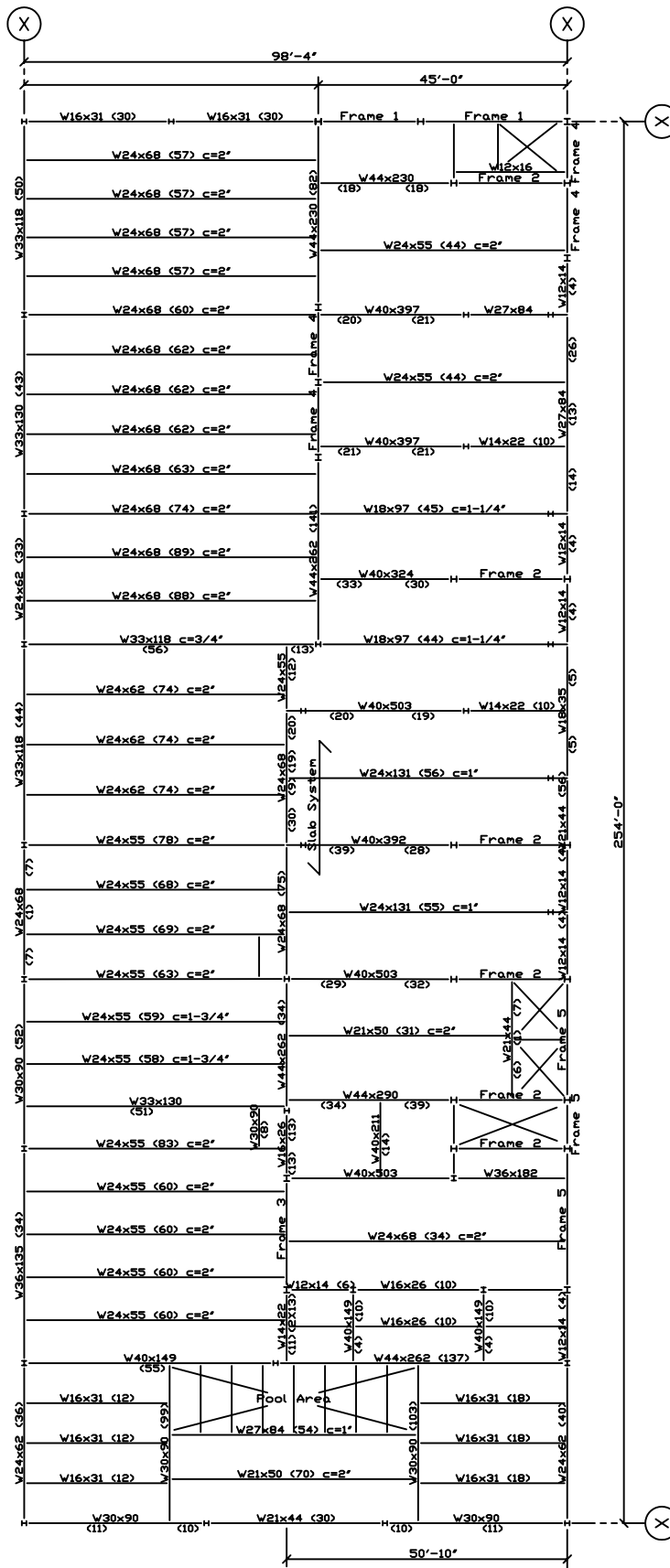
\*\*Miscellaneous steel is not included in the above-mentioned total tonnage. Miscellaneous steel includes such items as: framing for openings, connection material, slab edge material, screen walls, base plates, and architectural elements (i.e. façade attachments, stairs, lintels, etc.).



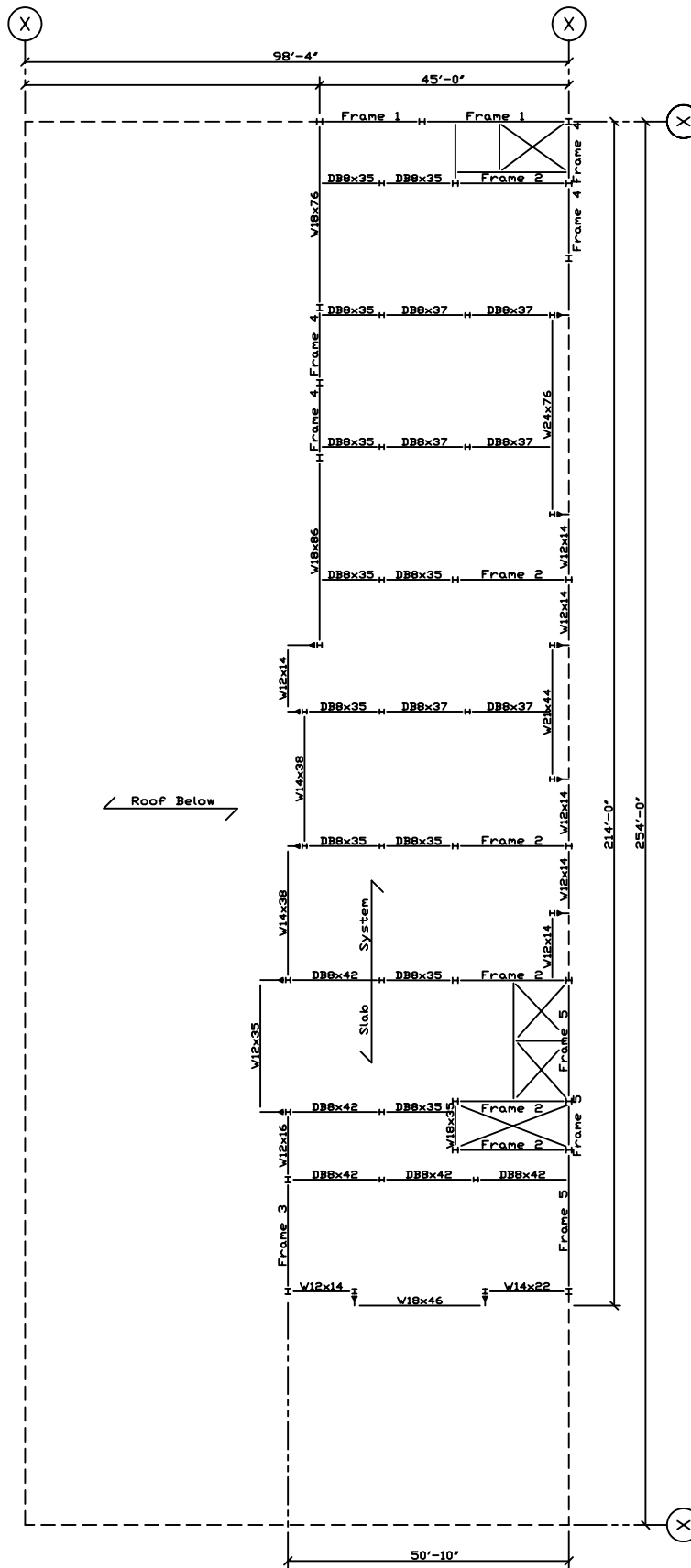
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Typical Parking Framing Plan  
 All beams are W12x14 U.N.D.

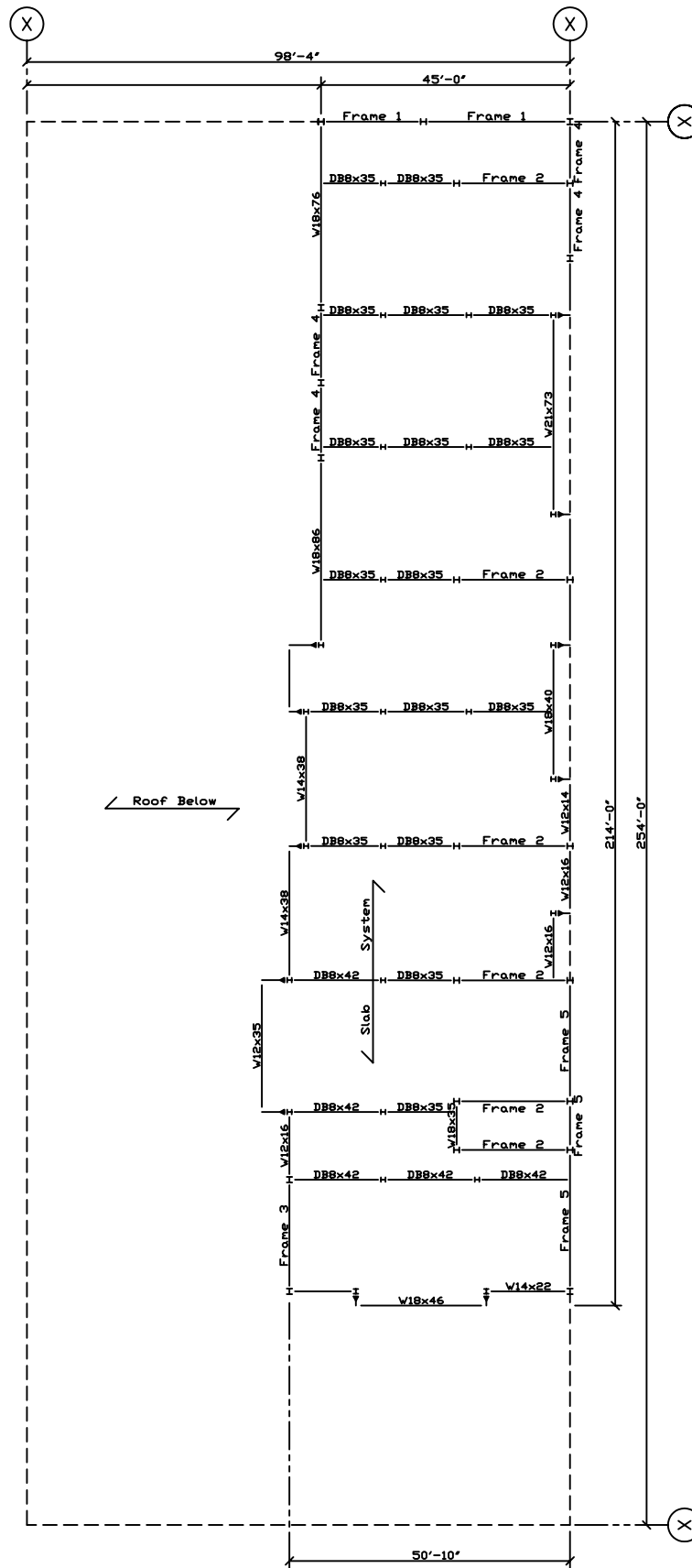


First Guest Floor Framing Plan  
 All beams are W12x14 U.N.D.



**Typical Guest Floor Framing Plan**

-All beams are V12x14 U.N.D.  
 -All cantilever beams around perimeter are V16x26 with moment connections (12 locations).

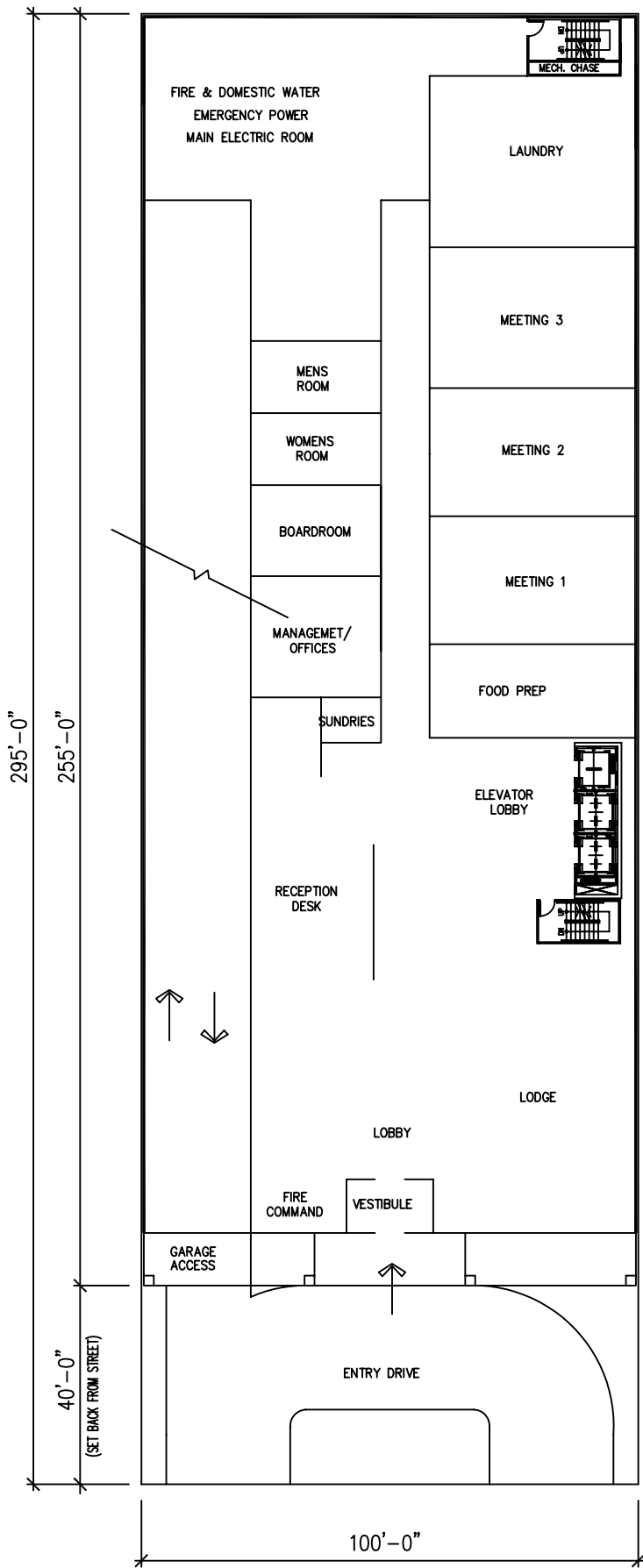


**Roof Framing Plan**

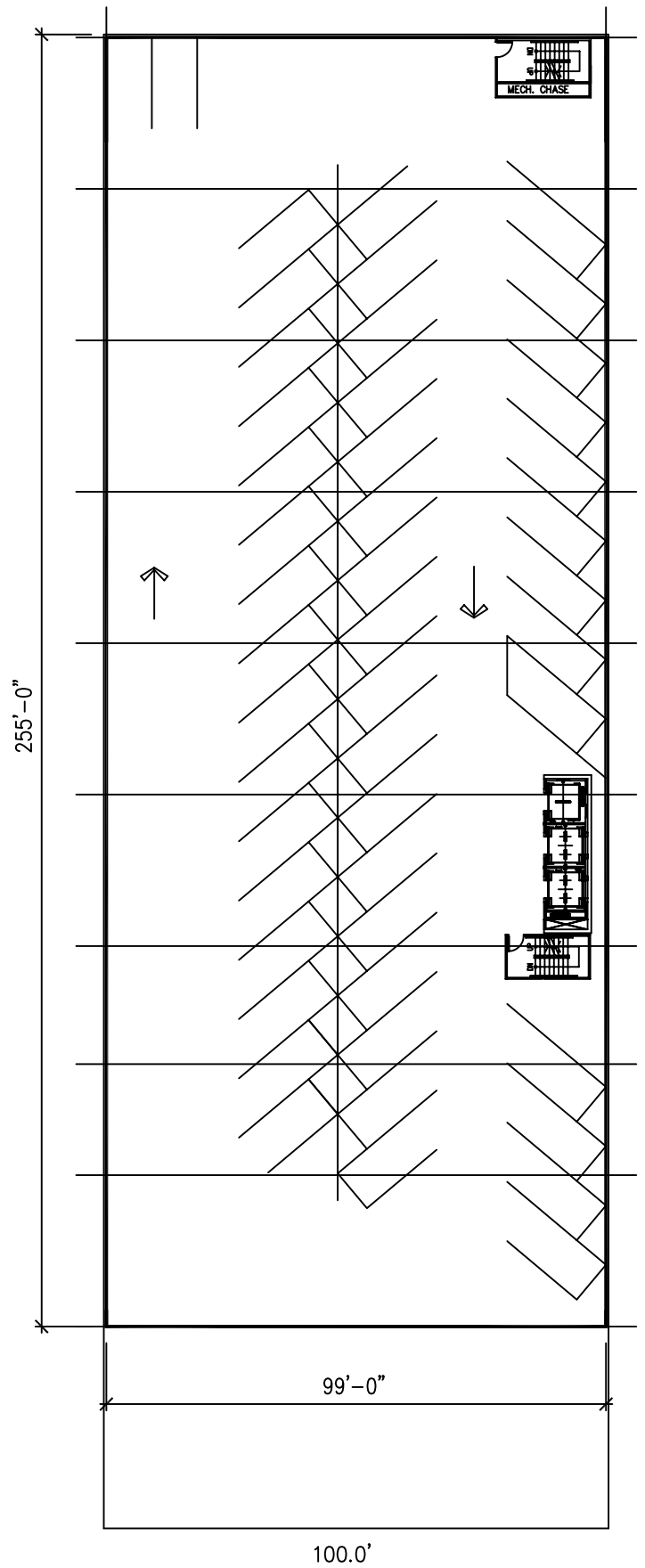
-All beams are V12x14 U.N.D.  
 -All cantilever beams around perimeter are V16x26 with moment connections (12 locations).



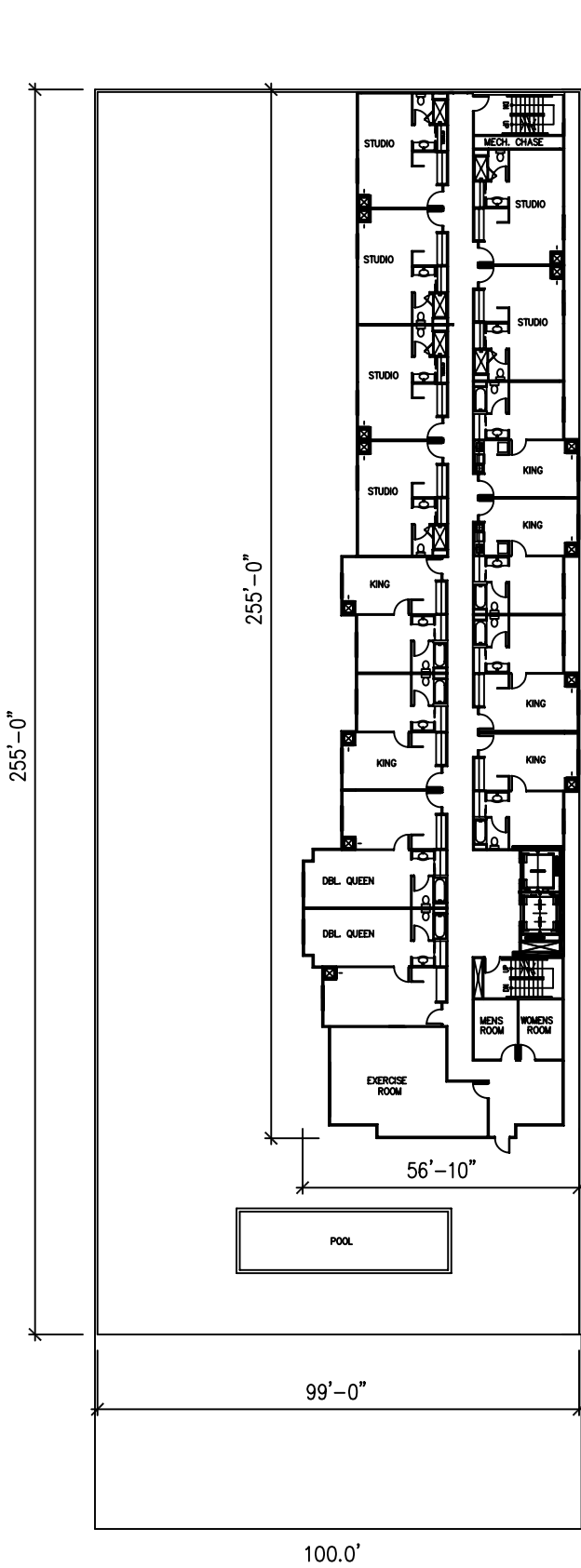




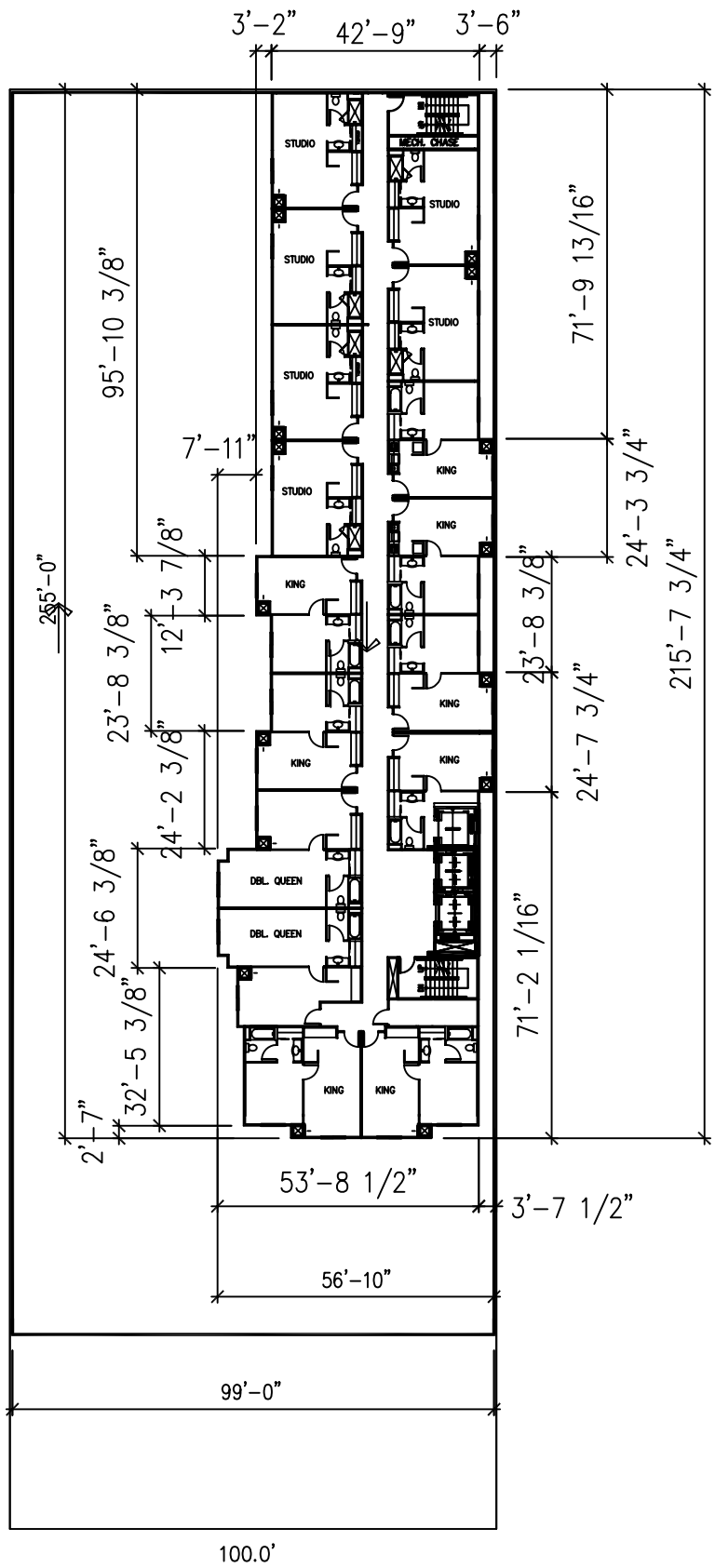
SITE PLAN/  
GROUND FLOOR PLAN



TYPICAL GARAGE PLAN  
48 PARKING SPACES PER LEVEL



1st GUEST FLOOR PLAN  
(SHOWING EXERCISE ROOM  
& POOL AT GARGE ROOF)  
14 ROOMS



TYPICAL UPPER FLOOR PLAN  
16 ROOMS PER FLOOR