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resort spa casino henderson, las vegas

project information

size 390 room tower, 35 suites, 92,000 sq. ft. of casino area, a 60,000-sq. ft. conference room, a 23,000 sq.-ft. health spa and salon, restaurants, bars, and a 100,000-sq.-ft. pool area.

floors 14

project cost \$1 billion

construction time spring 2007 - march 2009

delivey method design build



mechanical

The campus is served by a central utility plant(CUP). This includes 3900 tons of cooling and 46,800 mbh of heating. The low rise portion will be served by roof top air handling units and the guest suites will be served by vertical fan coil units.

architecture

This building is comprised of 14 stories, wrapped in a non-reflective glass blanket, that rise above the las vegas strip, creating a campus including casino, spa, restaurant retail, suites, along with many other luxurious amenities. The roof is comprised of a 4" heavy weight concrete post tensioned slab with 6" of insulation.



project team

owner marnell corrao associates
architecture marnell architecture
management marnell corrao associates
mechanical southland industries
plumbing jba consultanting engineers
electrical jba consultanting engineers
lighting cd+m

structural

This building is classified as a type 1a structure. The first floor of the low rise is cast in place concrete. the second floor uses structural steel and spray on fire proofing. The tower is also cast in place concrete with post tensioned floor slabs. Columns are set upon large spread footings throughout the building.

electrical

12470v service is brought in to a substation where it goes through a redundant switch and is then fed to the various electrical rooms. (2) 2000kW/2500kVA electrical emergency generators , 480/277V 3Ø. Lighting fixtures are varied, but florescent is typical.

tom chirdon
mechanical option

<http://www.engr.psu.edu/ae/thesis/portfolios/2009/Amc5003/>