
EXECUTIVE SUMMARY

The lighting depth covers the redesign of four spaces within the main casino building: The Outdoor Plaza, Pre-function space, Poker Room, and Player's Lounge. Each space has its own description in the lighting depth for recommended illuminance recommendations, code requirements, lighting equipment schedule, lighting plan, AGi.32 calculations and a summary. The illuminance recommendations are referenced from the IES Lighting Handbook, 10th Edition. ASHRAE 90.1 is used for the code requirements.

The final lighting design for the Outdoor Plaza guides casino guests towards the entrance while creating a safe environment through the use of overhead string lights. The Pre-Function space, adjacent to the multi-purpose room, uses cove lighting in the recessed ceilings areas to create a psychological impression of spaciousness. In the poker room an environment similar to a workspace has been designed through a combination of recessed down lights and large pendants. Finally, in the Player's Lounge an intimate social setting is the result of custom pendant luminaires and unique indirect linear luminaires.

In the electrical depth, four panels were modified to contain the new loads that resulted from the lighting redesign. While most loads fit on one branch circuit, a couple of them were spread across all three phases. Each new load was added so that the current fuses could remain on the panel. The lighting loads were not large enough to change any of the feeder sizes for the panels. Also in the electrical depth is an analysis of a proposed solar array for the roof of the casino. The analysis includes monthly data for the electrical production of the array based on TMY weather data.

With the new solar array comes a new load on the roof of the casino. A structural breadth evaluates the roof decking, roof joists, joist girders, and columns of the casino's third level. The calculations show that the members of the third level are adequate for the new load, except the roof joists. The roof joists had to be increased in size from 39LH09 to 39LH11. The written calculations are included in Appendix C.

A construction breadth is included in the report that details the labor and material costs of installing the new solar array. A 10 day schedule was achieved with the RS Means 2014 release values. The installation is not expected to significantly impact the 18 month construction schedule of the casino.