...PROJECT_02

TASK: ANALYZE THE EXISTING LIGHTING OF A SPACE IN LAS VEGAS, NV AND PROPOSE AN ALTERNATIVE DESIGN FOR ITS ELEMENTS THAT HAVE BEEN EVALUATED AS UNSUCCESSFUL.

SELECTED PROJECT: PECCOLE RANCH GREEN BELT, LOCATED IN SUMMERLIN, NV. MAJOR CROSS STREETS ARE WEST CHARLESTON BLVD AND HUALAPAI WAY.

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ABS 443 / FALL 2007 / LIGHTING DESIGN
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* The current design consists of approx. 15'-0" high light poles w/ metal halide lamps. The light fixtures are spaced at about 65'-0" away from each other.
* The width of the green belt is approx. 85'-0" wide and it slices through most of Pelcoole Ranch communities. Its borders are formed by the adjacent houses. Some neighbors have iron fencing and their back yard face the green belt and are exposed to all of its activities.
* Currently the area is heavily used by the residents for sport and recreation.
* The green belt adopts the function of drainage channel in case of flooding or heavy rains.
* During the later hours of the day the green belt becomes practically unusable. This is a problem that presents itself especially in the summer months because many people try to use it during the cooler times of the day.

* The main issues are:
  - General safety of the space - criminals can come into the park without being seen.
  - Pedestrian safety - stairs and sloped surfaces become invisible in the dark and therefore dangerous.
  - The overall appearance of the space is lost due to the lack of light. The plants, grass areas and trees have no illumination.
  - Pools of light are created with absolutely no ambient light. It is hard for the eye to adapt from high light levels to low light levels.
DAY VIEWS
...NIGHT VIEWS
...NIGHT VIEWS
...CHALLENGES & CONSIDERATIONS

* THE NEW DESIGN MUST CONSIDER THE FACT THAT THE NEIGHBORS BORDERING THE GREEN BELT MUST HAVE NO LIGHTS SHINING ONTO THEIR PROPERTY.

* BUDGET

* ENERGY SAVINGS; GREEN DESIGN:

* THE FACT THAT THIS IS A DRAINAGE CHANNEL IN CASES OF FLOOD OR HEAVY RAINS MAY PRESENT DIFFICULTIES.

* MAINTENANCE.
Up to 8-12 hours illumination at night.
4 mini bollard light fixtures and one solar panel are supplied in this set.
3 super bright, high output LED bulbs are fitted inside each bollard light fixture.
White colored light output.
High quality solar panel with adjustable tilt.
3 integral AA size Ni-Mh rechargeable batteries (replaceable).
The rechargeable batteries are housed within the solar panel.
On/off switch (located on solar panel).
Built-in photocell for automatic dusk-to-dawn operation.
...PROPOSED DESIGN

WALL MOUNTED
SOLAR POWERED
LIGHT FIXTURE

ENTRY DOOR

LIGHTING THE WALLS
Up to 8-10 hours illumination at night.
Fairly traditional style design.
51 super bright, high output LED bulbs inside the lampshade.
Light output is white through the clear polycarbonate lampshade.
High quality, discrete, integral, 9 Watt solar panel, fixed flush into the top of the fixture.
Includes a 12 Volt 9 Amp/Hr rechargeable battery (replaceable) inside the top of the lampshade.
Built-in photocell for automatic dusk-to-dawn operation.
Discrete on/off switch for manual over-ride.
For option use, a DC power input jack (14.8V / 800mA).
All aluminum construction.
Black colored finish.
PROPOSED DESIGN

ADJUSTABLE SOLAR POWERED OUTDOOR LIGHT.

LIGHTING THE TREES

CITE REMIX
PROPOSED DESIGN

Up to 8-10 hours illumination at night.
Four spots light fixtures and one solar panel are supplied in this set.
3 Super bright, high output LED bulbs are fitted inside each spot light.
White colored light output.
High quality solar panel with adjustable tilt.
Integral AA size Ni-MH rechargeable batteries (replaceable).
The rechargeable batteries are housed within the solar panel.
On/off switch (located on solar panel).
Built-in photocell for automatic dusk-to-dawn operation.

LIGHTING THE TREES
PROPOSED DESIGN

LIGHTING THE PARK

SOLAR POWERED LIGHT POLE
...PROPOSED DESIGN

Up to 8-10 hours illumination at night.
Fairly traditional style design.
51 super bright, high output LED bulbs inside the lampshade.
Light output is white through a clear polycarbonate lampshade.
High quality, discrete, integral, solar cell panel fixed flush into the top of the fixture.
Includes a 12 Volt 9 Amp/Hr rechargeable battery (replaceable) inside the top of the lampshade.
Built-in photocell for automatic dusk-to-dawn operation.
Discrete on/off switch for manual over-ride.
All aluminum construction.
Black colored finish.

LIGHTING THE PARK
...CONCLUSIONS

* The proposed design significantly increases the quality of the recreation space.
* It adds a feeling of general safety as well as pedestrian safety to the park.
* The wall mounted lights positioned at the entry points aid the way-finding and illuminate the stairs and ramps located there.
* The light poles increase the general light levels of the space.
* The adjustable lights mounted at the bases of trees add to the aesthetic appearance of the space.
* The light fixtures located along the pathways help to avoid pedestrian hazards.
* The fact that all light are solar powered responds to the original intent to consider the environment and energy consumption.