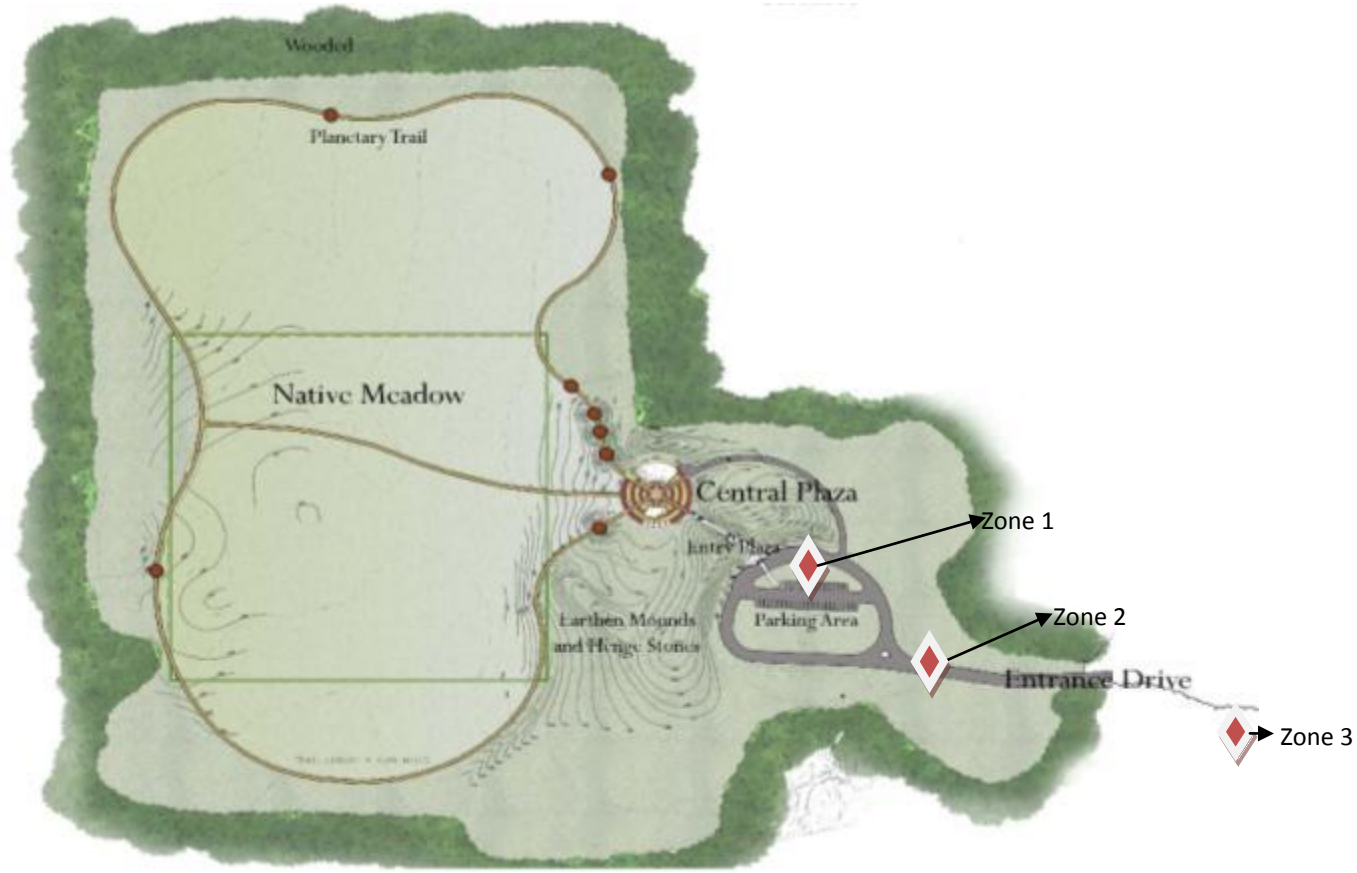
3.1 LIGHTING MANAGEMENT PLAN

All lighting in the park was designed to minimize light pollution and maximize energy savings by matching lighting levels with the intended application.

A photometric study of the park was completed by the Park's electrical engineer in consultation with Terry McGowan of the International Dark Sky Association. The lighting in the park is in accordance with the standards set forth in Section 7.02 of the "Geauga Park District Lighting Management Plan" developed in 2008 (*Appendix, Attachment 1*).

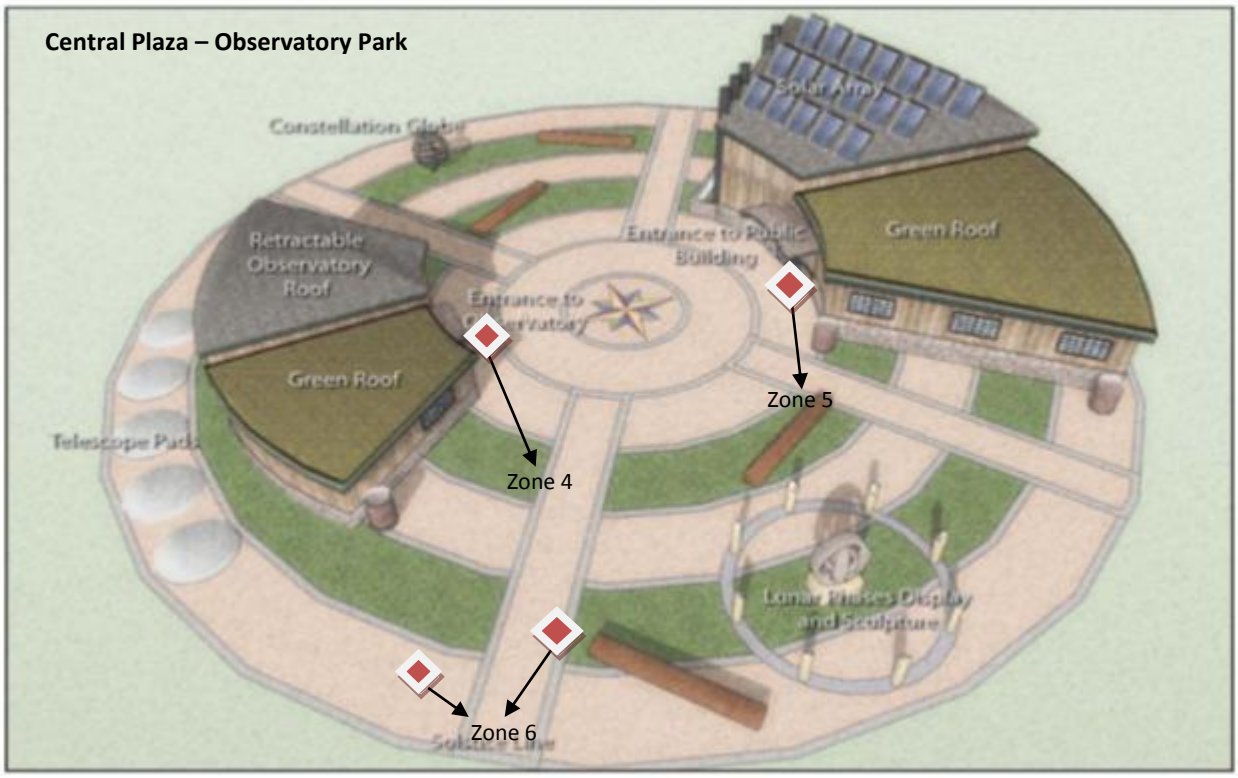
3.12 LIGHTING: ENTRANCE AND PARKING AREA



Lighting Zone	Type of Fixture	Quantity
Zone 1 – Parking Area	BETA 4-bar LED	9
Zone 2 – Entrance Drive, 2000'	None	0
Zone 3 – Entrance Sign	LED Shielded Floodlight, RAB HBLED1078	2

The parking lot lights are equipped with light sensors and adjust lighting levels automatically based on the amount of natural light detected (i.e., during a full moon, the lights will dim automatically). This creates optimum conditions for nighttime star-gazing while reducing energy usage.

3.13 LIGHTING: CENTRAL PLAZA



Lighting Zone	Type of Fixture	Quantity
Zone 4 – Central Plaza, Oberle Observatory	ECOS 1000 lumen LED	4
Zone 5 – Central Plaza, Public Event Center	ECOS 1000 lumen LED	3
Zone 6 – Central Plaza, Walkway and Perimeter	Bollards, 10w LED	23

Because red lighting is the preferred light source for astronomical sites, custom-designed red film covers the lenses of the bollard lights lining the walkway and perimeter of the Central Plaza (Zone 6).

The lights above the doors of the Oberle Observatory (Zone 4) and the Public Event Center (Zone 5) are custom-designed with red lenses. Lighting levels are controlled by photo sensors mounted on the buildings. The sensors are regulated by the amount of light, not by the time of day. The lights are also on timers which can be manually adjusted for special events.

Because the cost of LED lighting is significantly more than "traditional" lighting, the lighting for the park was presented to prospective donors as a "naming right." This provided donors the opportunity to become intimately involved in the Park's commitment to dark-sky preservation.

A generous donation was received from The Kelvin and Eleanor Smith Foundation of Solon, Ohio to cover the cost of the lighting. When making the donation, the Foundation noted "…*realizing the importance of the Dark-Sky designation to the Park District and Observatory Park, it was imperative to have outdoor lighting that would not – in any way - be intrusive on the overall environment or surroundings."*

3.2 ADDITIONAL FEATURES: DARK SKY PROTECTION

Additional site features were incorporated to protect the night sky.

The perimeter of the parking lot was mounded and lined with twenty-six, 6' pine trees to provide a natural barrier which reduces glare from incoming headlights.