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“Night Lighting Management Plan”

Jackson Valley Quarry Project

Prepared for

George Reed, Inc

August 2, 2021

SECTION 1 INTRODUCTION

This Night Lighting Management Plan (Plan) for GRI's Jackson Valley Quarry Project (Project) outlines lighting types and methods that will be used to provide a safe working environment for all approved nighttime operations. This plan has been developed to identify the location of existing and proposed lighting fixtures that will illuminate operational areas during the extended hours of operation while minimizing off-site effects.

1.1 Project Overview

As permitted, Jackson Valley Quarry operates until 6 PM at night, which is past sunset during the winter months. As a result, the lighting proposed in this plan already exist under the Conditional Use Permit UP-06; 9-2 with Condition 23 shown below.

***Condition 23:** Artificial illumination of any area within the Quarry site shall be of a non-glare nature and shall be shielded to the extent feasible to prevent glare from affecting neighboring parcels of land with a direct line of sight of the Quarry.*

This Plan addresses illumination where night work occurs on the Project. Lighting is required to create a safe working environment at the mining face, material processing plant, material load-out and crew parking areas. This plan is applicable to all segments of the Project (Figure 1).

There may be minimal changes to the existing lighting due to the extended hours. Example lighting used in the project area are shown in Figure 1. Mobile lighting is primarily used in the mining areas but may occasionally be used in other areas to supplement existing lighting for safety purposes. Artificial illumination in any area within the Site shall be of a non-glare nature and shall be shielded to the extent feasible to prevent glare from affecting neighboring parcels of land within a direct line of sight of the quarry.

SECTION 2 METHODS

2.1 Night Lighting Requirements

As needed, night work will be performed in accordance with the following guidelines:

- Permanent, unshielded uplighting will be prohibited.
- Exterior light fixtures will be hooded, with lights directed downward or toward the area to be illuminated so that backscatter to the nighttime sky is minimized.
- Luminescence or light sources will be shielded to prevent light trespass outside of the Project boundary.
- Lighting will be the minimum necessary brightness consistent with ensuring worker safety.
- Lights will be adjusted to illuminate only the areas necessary for night work tasks in specific work locations.

Portable lights with reflector housings that can be directionally shielded will be used for illumination. Low-mast lighting systems will be used as much as possible. The reflectors will be directed downward and toward the specific work area as appropriate to minimize stray light spillover.

FIGURES

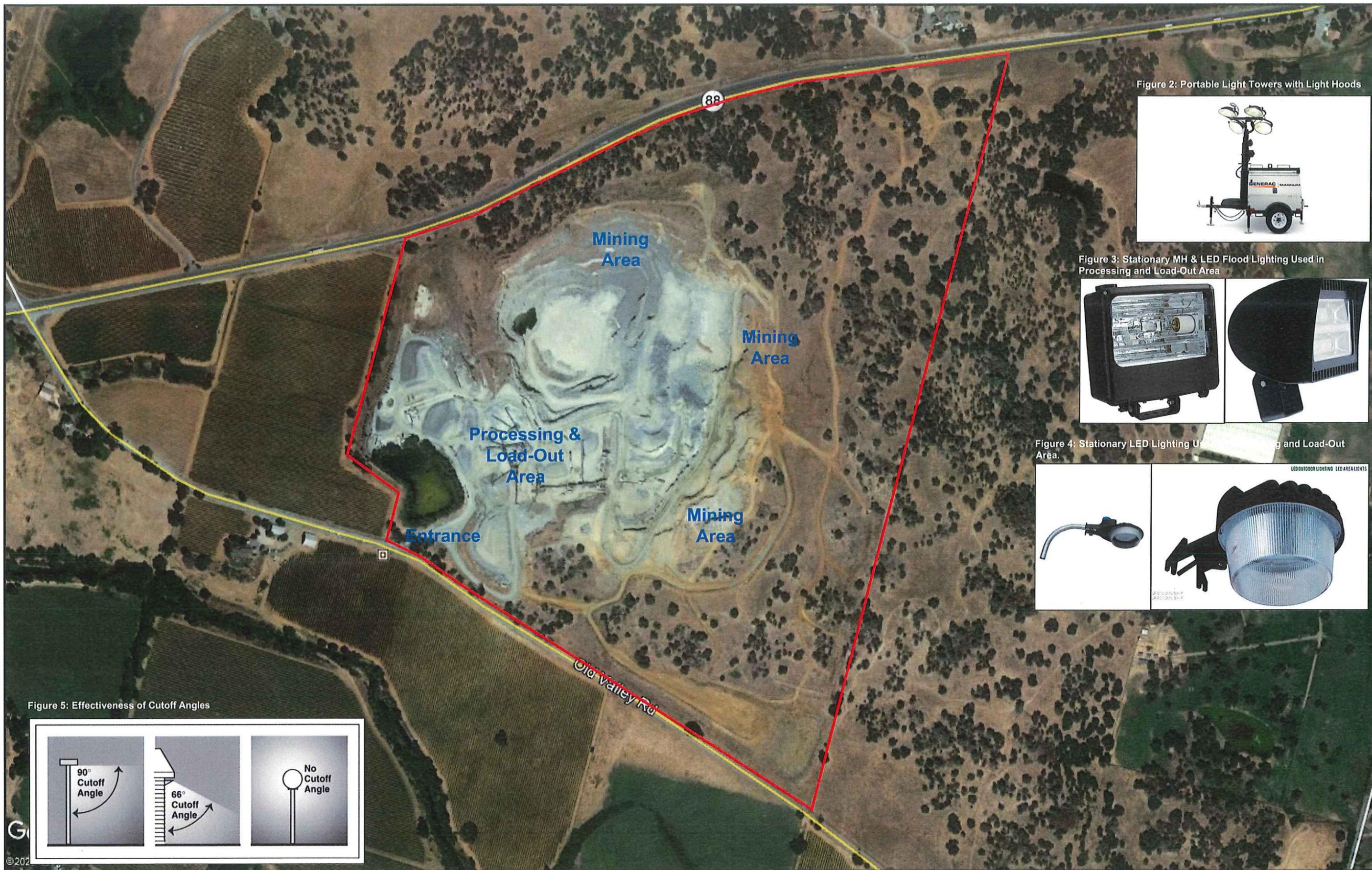


Figure 2: Portable Light Towers with Light Hoods



Figure 3: Stationary MH & LED Flood Lighting Used in Processing and Load-Out Area



Figure 4: Stationary LED Lighting Used in Processing and Load-Out Area.



Figure 5: Effectiveness of Cutoff Angles

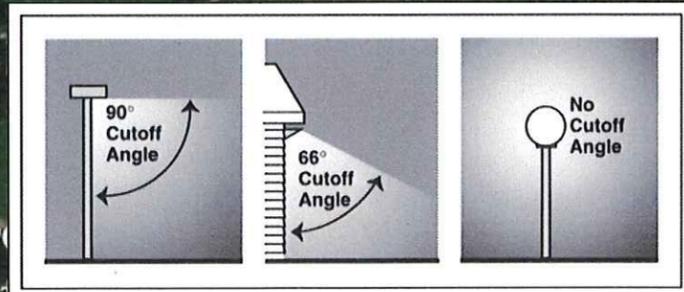


FIGURE 1: Project Overview Map



Jackson Valley Quarry
 Lighting Plan
 Prepared By: SRW
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