

**DEPARTMENT OF TRANSPORTATION**

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*Making Conservation  
a California Way of Life.*

April 29, 2019

Mr. Chuck Beatty  
Planning Director  
Amador Planning Department  
810 Court Street  
Jackson, CA 95642-2132

**AMA-16-PM 1.0  
Pilgrim Rock Quarry  
Updated Traffic Impact  
Analysis**

Dear Mr. Beatty:

The California Department of Transportation (Caltrans) District 10 appreciates the opportunity to review and comment on the updated Traffic Impact Analysis (TIA). The project is located on State Route (SR) 16 near the end of Moriah Heights Road and one-half mile east of the Sacramento County line under Assessor Parcel Number(s) 001-130-008 and 001-140-041. The project will be an open-pit rock quarry to produce aggregate materials in an "R1A" Single Family Residential and Agricultural District on approximately 369 acres, with operations occurring on approximately 120 acres, and an anticipated production level of 1.65 million tons per year, to be extracted over approximately 40 years. Mining operations would include blasting, quarrying and crushing bedrock for construction aggregate resources. Aggregate would be transported from the processing area along a paved haul road within the project site to SR-16.

The provided updated Traffic Impact Analysis (TIA) forecasts traffic conditions associated with proposed Pilgrim Rock Quarry project located in Amador County. The proposed project is forecasted to generate approximately 522 vehicle trips per day, with approximately 66 AM peak hour trips and approximately 66 PM peak hour trips. Approximately 95% of project trips are anticipated to travel westbound into Sacramento County.

Caltrans has the following comments based on the updated Traffic Impact Analysis report dated March 13, 2020:

1). As previously commented, Caltrans does not support the proposed driveway location which is approximately 850 feet to the west of the existing intersection Mariah Heights Road and SR 16. District 10 Freeway and Highway Operations

recommends that Pilgrim Rock Quarry use existing driveway/roadway at (Mariah Heights Road) to enter and exit their proposed facility. However, Michael Baker International (March 2020) responded, "we are proposing to abandon the existing private driveway known as Moriah Heights Road and direct the current Moriah Height Road traffic to the proposed entrance location creating only one point of access. The Amador County Public Works Director, Jared Reinking is in agreement with only one point of access. The proposed entrance location along with abandoning the current Moriah Heights Road entrance will better service the proposed quarry and existing properties." Caltrans concurs with one point of access to provide service to both the quarry and existing properties. The current Mariah Heights Road will be abandoned.

2). The proposed project's resultant increase in truck traffic volumes will result in increased impacts to both eastbound and westbound SR 16 thru traffic, due to the quarry's truck traffic decelerating and accelerating on eastbound and westbound SR 16 thru lanes to enter and exit the facility. The TIA needs to consider the impact of substantial truck traffic generated by the proposed project will have on the mainline SR 16 with regards to potential safety issues instead of relying only on an operational Level of Service (LOS) which is based on vehicle delay of the project generated traffic exiting their proposed access.

3). In order to accommodate the potential safety impacts of the project generated truck traffic entering and exiting SR 16 at the proposed access, the project needs to construct a westbound SR 16 dedicated left-turn lane entering the quarry, westbound SR 16 acceleration lane, exiting the quarry. Eastbound SR 16 dedicated right-turn lane, entering the quarry and acceleration lane, exiting the quarry. It should be noted the TIA conceptual drawings, Sight Distance Exhibit, shows the following:

a). Eastbound right-turn lane = 220 ft. and approach taper = 360 ft.

**Caltrans recommends:** Eastbound right-turn lane shall be = 575 ft. (post speed limit 65 mph standard deceleration lane length + 0 ft storage) and approach taper shall be =  $WV = 12 \text{ ft.} \times 65 \text{ mph} = 780 \text{ ft.}$

b). No eastbound acceleration lane was proposed.

**Caltrans recommends:** Eastbound acceleration lane shall be 500 ft. and lane drop transition  $L = WV = 12 \text{ ft.} \times 65 \text{ mph} = 780 \text{ ft.}$

c). Westbound left-turn lane = 580 ft and approach taper = 360 ft.

**Caltrans recommends:** Westbound left-turn lane shall be = 675 ft. (575 ft. based on the post speed limit 65 mph standard deceleration lane length) + 100 ft. (storage length for 1 truck length + 1 passenger car length).

d). Westbound acceleration lane = 220 ft. and transition lane drop lane transition = 360 ft.

**Caltrans recommends:** Westbound acceleration lane shall be = 500 ft. and lane drop transition  $L = WV = 12 \text{ ft.} \times 65 \text{ mph} = 780 \text{ ft.}$

e). Eastbound and westbound corner line of sight = 838 ft.

**Caltrans recommends:** Corner sight distance should be based on AASHTO Intersection Sight Distance Case B1 left turn from Minor Road.

U.S. Customary	
$ISD = 1.47 V_{\text{major}} t_g$	
where:	
$ISD$	= intersection sight distance (length of the leg of sight triangle along the major road) (ft)
$V_{\text{major}}$	= design speed of major road (mph)
$t_g$	= time gap for minor road vehicle to enter the major road (s)

**Table 9-5. Time Gap for Case B1, Left Turn from Stop**

Design Vehicle	Time Gap ( $t_g$ )(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck	11.5

Note: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with grades of 3 percent or less. The table values should be adjusted as follows:

*For multilane highways*—For left turns onto two-way highways with more than two lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.

*For minor road approach grades*—If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade for left turns.

**$ISD = 1.47(65 \text{ mph}) (11.5 \text{ s} + 0.7 \text{ s}) = 1,165 \text{ ft.}$**

**Stopping Sight Distance (SSD) shall be based on 65 mph = 660 ft.**

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f). Intersection radius = 70 ft.

**Caltrans recommends:** Perform STAA Design Vehicle 67 ft. Radius off-tracking analysis for all movements at the project proposed access point.

g). New pave access road alignment

**Caltrans recommends:** paving all access roads and the access road alignment shall be set back at minimum 300 ft. from the SR 16 edge of pavement.

h). **Caltrans recommends:** Providing a standard 12 ft. travel lane and 8 ft. shoulder.

i). It is agreed with the proposed Project entrance location the current Moriah Heights Road shall be abandoning. The proposed single point access at the Project entrance will provide service the proposed quarry and existing properties.

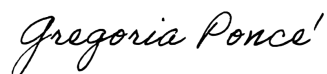
j). Proposed access modification will require California Transportation Commission (CTC) approval.

k). Where an Encroachment Permit will be required for any work done within Caltrans right-of-way (ROW) now, or in future proposed developments, or any construction activities that will encroach into Caltrans ROW, appropriate environmental studies must be submitted with this application. Please include California Environmental Quality Act (CEQA) documentation with supporting technical studies when submitting the Encroachment Permit. For more information please visit Caltrans website:

<https://dot.ca.gov/programs/traffic-operations/ep/applications>

If you have any question or would like to discuss these comments, please contact Michael Casas at (209) 948-7475 ([michael.casas@dot.ca.gov](mailto:michael.casas@dot.ca.gov)) or me at (209) 948-7325 ([gregoria\\_ponce@dot.ca.gov](mailto:gregoria_ponce@dot.ca.gov)).

Sincerely,



Gregoria Ponce, Chief  
Office of Rural Planning

Cc: Jered Reinking, Amador County Department of Public Works  
John Gedney, Amador County Transportation Commission