



April 12, 2006

Mr. Marty Derus  
LILBURN CORPORATION  
1905 Business Center Drive  
San Bernardino, CA 92408

**Subject: Liberty Quarry Truck Traffic Miles-Reduced Evaluation**

Dear Mr. Derus:

**EXECUTIVE SUMMARY**

The firm of Urban Crossroads, Inc. is pleased to submit the following Truck Miles Reduced Evaluation for the proposed Liberty Quarry Development. The site is generally located at the northwest corner of Rainbow Valley Boulevard and Interstate 15 Interchange in the County of Riverside. The purpose of this revised Letter Report is to provide an evaluation for potential truck miles reduced along the I-15 Freeway in Riverside County due to the development of the Liberty Quarry. This analysis is based on the results of a previous study prepared by Urban Crossroads, Inc. (Liberty Quarry Traffic Flow Evaluation Supplemental Letter, January 2006), that quantified the number of aggregate trucks that would be reduced on I-15 through Riverside County due to the siting of the Liberty Quarry.

Based on our analysis detailed within, the siting of the Liberty Quarry would reduce the aggregate truck trips on I-15 within Riverside County, if the quarry operated at levels of 5 million tons per year and 3.5 million tons per year, as follows:

5 million tons per year	16.5 million truck miles reduced per year
3.5 million tons per year	11.5 million truck miles reduced per year

## **INTRODUCTION**

Granite Construction Company proposes a hard rock quarry project in Southwestern Riverside County. This quarry will produce aggregate, which consists of sand and gravel-sized aggregate produced by crushing and screening the intact granitic rock on the site. This material is used either directly or indirectly in the production of residential dwellings, commercial buildings, roads, bridges, and other public facilities.

On January 30, 2006, Urban Crossroads, Inc. submitted a letter report evaluating the potential reduction in the number of truck trips along the I-15 Freeway in the Riverside County due to the development of the Liberty Quarry using updated truck count data. That report concluded that the reduction of aggregate truck trips along I-15 in Riverside County would be as follows:

At 5 million tons per year:

Between San Bernardino Quarries and SR-74	1,217 truck trips per day (two way)
Between SR-74 and SR-79 North	1,063 truck trips per day (two-way)
Between SR-79 North and SR-79 South	679 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	449 truck trips per day (two-way)

At 3.5 million tons per year:

Between San Bernardino Quarries and SR-74	854 truck trips per day (two way)
Between SR-74 and SR-79 North	746 truck trips per day (two-way)
Between SR-79 North and SR-79 South	476 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	315 truck trips per day (two-way)

**PROJECT DESCRIPTION**

The Liberty Quarry is proposed to be located within unincorporated Riverside County, north of Rainbow Valley Boulevard and west of Interstate 15. The location of the quarry allows it to conveniently serve the cities of Temecula, Murrieta, Lake Elsinore, Fallbrook, Rainbow, Bonsall, Pala, Vista, and Escondido. The project will take access to Interstate 15 via the Rainbow Valley Boulevard interchange. Exhibit A illustrates the project site location. Based on permit applications, the Liberty Quarry would operate at a maximum annual tonnage of 5 million tons per year and will be operating up to 312 days per year (6 days per week and 52 weeks per year). It is our understanding that one alternative to be considered in the Environmental Impact Report (EIR) consists of a quarry producing 3.5 million tons per year. Therefore, a reduced aggregate production analysis has also been conducted based on 3.5 million tons per year and operating up to 312 days a year.

The Liberty Quarry will generate the following aggregate truck trips taking aggregate and construction materials from the site and returning empty:

**PROJECT TRIP GENERATION SUMMARY**

<b>LAND USE</b>	<b>QUANTITY</b>	<b>UNITS<sup>1</sup></b>	<b>TRUCKS<sup>2</sup></b>	<b>DAILY TRUCK TRIPS</b>
Granite Quarry	3.5	MT/Y	449	898
	5.0	MT/Y	641	1282

<sup>1</sup> MT/Y = Million Tons Per Year

<sup>2</sup> It has been assumed that the quarry will be operating 6 days a week (312 days a year) and each truck will be carrying 25 tons.

Based on the January 30, 2006 report submitted by Urban Crossroads, Inc. the break down of the reduction of aggregate truck trips along I-15 in Riverside County would be as follows:

At 5 million tons per year:

Reduction

Between San Bernardino Quarries and SR-74	1,217 truck trips per day (two way)
Between SR-74 and SR-79 North	1,140 truck trips per day (two-way)
Between SR-79 North and SR-79 South	948 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	833 truck trips per day (two-way)

Addition

Between San Bernardino Quarries and SR-74	0 truck trips per day (two way)
Between SR-74 and SR-79 North	77 truck trips per day (two-way)
Between SR-79 North and SR-79 South	269 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	384 truck trips per day (two-way)

At 3.5 million tons per year:

Reduction

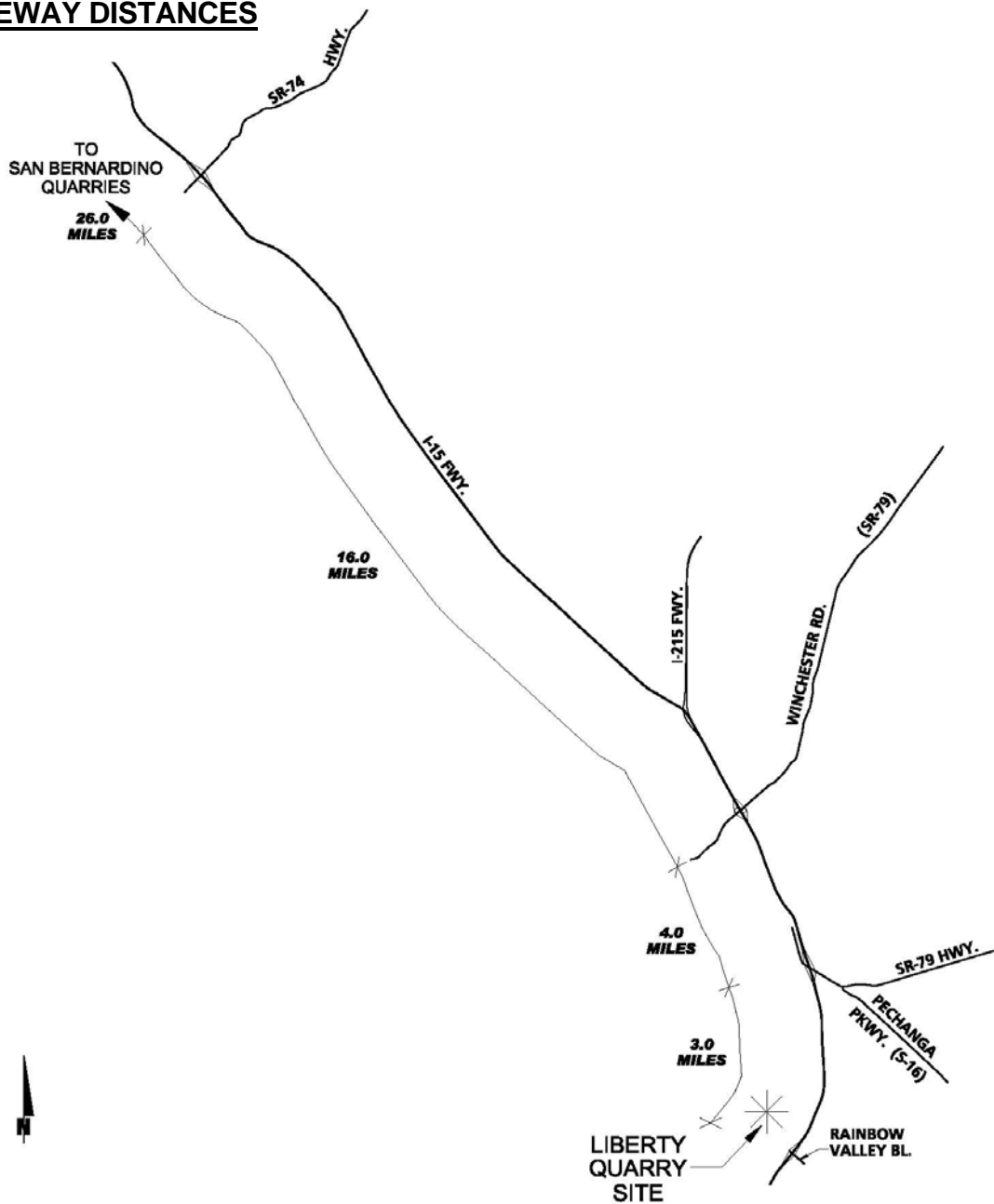
Between San Bernardino Quarries and SR-74	854 truck trips per day (two way)
Between SR-74 and SR-79 North	800 truck trips per day (two-way)
Between SR-79 North and SR-79 South	665 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	584 truck trips per day (two-way)

Addition

Between San Bernardino Quarries and SR-74	0 truck trips per day (two way)
Between SR-74 and SR-79 North	54 truck trips per day (two-way)
Between SR-79 North and SR-79 South	189 truck trips per day (two-way)
Between SR-79 South and San Diego/ Riverside County Line (Liberty Quarry)	269 truck trips per day (two-way)

Although a significant amount of truck trips could be reduced on I-15, the additional truck trips due to the Liberty Quarry trucks on I-15 also needs to be considered. Since Liberty Quarry will be serving a portion of Southwestern Riverside County area, primarily the Temecula and Murrieta areas, the trucks will also be using Interstate 15 to reach their destination sites north of Rainbow Valley Boulevard. The net effect of adding and subtracting the truck trips on each segment is previously stated in the introduction.

### FREEWAY DISTANCES



The freeway distances are determined using the length of each segment analyzed. The above diagram illustrates the freeway distances along the I-15 from the San Bernardino Quarries to the San Diego / Riverside County Line.

The following table summarizes the distance for each segment along I-15 from the San Bernardino Quarries to the San Diego/Riverside county line (Liberty Quarry):

**Segment Distances (Miles)**

<b>Segment Locations</b>	<b>Distance</b>
<b>Between San Bernardino Quarries and SR-74</b>	26
<b>Between SR 74 and SR 79 North</b>	16
<b>Between SR 79 North and SR 79 South</b>	4
<b>Between SR 79 South and SD/Riv County Line (Liberty Quarry)</b>	3

**CALCULATED TRAFFIC FLOW REDUCTION ON INTERSTATE 15**

The methodology to determine the number of truck miles reduced per day on I-15 in Riverside County is calculated from the reduced number of truck trips each day multiplied by the number of miles traveled on a daily basis. This daily amount is converted to a yearly amount of reduced truck miles by multiplying the number of days per year that the quarries are in operation. For the purpose of this evaluation, it has been assumed that Liberty Quarry will operate for 312 days per year. The following formula presents the numerical calculation to determine the number of truck miles saved per day:

$$\text{Truck Miles Saved Per Day} = \text{Reduced Number of Truck Trips} \times \text{Distance (miles)}$$

To obtain the net reduced mileage per day on Interstate 15 in Riverside County, the additional mileage from Liberty Quarry is subtracted from the daily mileage reduced. The yearly reduction in truck miles is based on the number of daily truck miles reduced multiplied by the assumed number of working days for Liberty Quarry (312 days per year). The following tables summarize the expected number of displaced trucks, the reduced

daily mileage and the additional mileage due to Liberty Quarry for both 5 million tons per year and 3.5 million tons per year.

**5 Million Tons Per Year**

Destination of shipping	Truck Trips Displaced	Daily Mileage Reduced	Additional Truck Trips	Additional Mileage from Liberty Quarry	Net Mileage = Daily Reduced - Additional Mileage
Between SR 79 South and SD/Riv County Line (Liberty Quarry)	833	2,499	384	1,152	1,347
Between SR 79 North and SR 79 South	948	3,792	269	1,076	2,716
Between SR 74 and SR 79 North	1,140	18,240	77	1,232	17,008
Between San Bernardino Quarries and SR-74	1,217	31,642	0	0	31,642
<b>Total</b>		<b>56,173</b>		<b>3,460</b>	<b>52,713</b>
<b>Net Mileage Reduced Per Day =</b>		<b>52,713</b>			
<b>Net Mileage Reduced Per Year =</b>		<b>16,446,456</b>			

**3.5 Million Tons Per Year**

Destination of shipping	Truck Trips Displaced	Daily Mileage Reduced	Additional Truck Trips	Additional Mileage from Liberty Quarry	Net Mileage = Daily Reduced - Additional Mileage
Between SR 79 South and SD/Riv County Line (Liberty Quarry)	584	1,752	269	807	945
Between SR 79 North and SR 79 South	665	2,660	189	756	1,904
Between SR 74 and SR 79 North	800	12,800	54	864	11,936
Between San Bernardino Quarries and SR-74	854	22,204	0	0	22,204
<b>Total</b>		<b>39,416</b>		<b>2,427</b>	<b>36,989</b>
<b>Net Mileage Reduced Per Day =</b>		<b>36,989</b>			
<b>Net Mileage Reduced Per Year =</b>		<b>11,540,568</b>			

The results of this analysis presented above indicate that approximately 52,713 truck miles can be reduced per day, which translates into a reduction of 16.5 million miles per year based on 312 days of truck activity for a production level of 5.0 million tons per year. For the reduced production tonnage of 3.5 million tons per year approximately 36,989 truck miles can be reduced per day, which translates into a reduction of 11.5 million miles per year based on 312 days of truck activity.

The calculation sheets for the truck miles reduced per day are included in Appendix "A".

## **FINDINGS AND CONCLUSIONS**

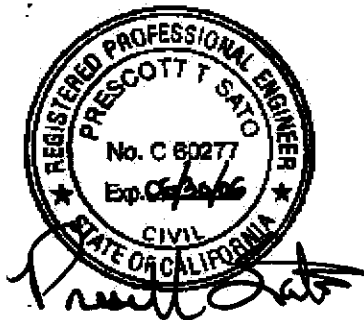
Liberty Quarry is proposed to be located north of Rainbow Valley Boulevard and west of the Interstate 15 Interchange in the County of Riverside. This quarry is anticipated to serve the existing and future aggregate demands of communities within Temecula, Murrieta, Fallbrook, and Escondido. These areas are currently served by quarries located to the north in the Cities of Corona and Lake Elsinore and even San Bernardino County. It is anticipated that the proposed quarry would reduce the number of truck miles to serve Southern Riverside and Northern San Diego counties by providing a facility closer to the areas that demand this product. The data and calculations indicated in this letter report indicate that approximately 16.5 or 11.5 million miles of truck traffic could be reduced per year based on the development of the proposed quarry at the Rainbow Valley Boulevard location for 5.0 and 3.5 million tons per year, respectively. The calculated reduction of truck miles included in this evaluation was based on aggregate truck trips along the I-15 corridor only. The consideration of potential reduction of truck traffic along I-215 and further reduction due to concrete truck traffic could result in additional mileage reductions compared to the values included in this study. If Liberty Quarry is developed it would translate into less truck vehicle miles traveled, less fuel consumption and less transportation emissions of criteria pollutants (e.g., CO, NO<sub>x</sub>, ROC) in Riverside County.

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If you have any questions regarding this assessment letter, please do not hesitate to give me a call at (949) 660-1994.

Respectfully submitted,

URBAN CROSSROADS, INC.



Scott Sato, P.E.

Associate Principal

SS:RL:js

JN:01029-18

xc: Mr. Gary W. Johnson, GRANITE CONSTRUCTION COMPANY

Attachments

**APPENDIX A**

TRUCK MILES REDUCED CALCULATION WORKSHEETS

**CALCULATION OF TRUCK MILES SAVED DUE TO LIBERTY QUARRY WITH 5.0 MTPY**

**Assumptions**

1. Based upon the 24-hr counts there are 2625 aggregate trucks moving material on I-15 at Hwy 74 each work day.
  2. Based upon the 24-hr counts there are 1618 aggregate trucks moving material on I-15 at Hwy 79N each work day.
  3. Based upon the 24-hr counts there are 1216 aggregate trucks moving materials south on I-15 at the County line each work day
- \* Note that new counts were taken at the County line on July 2005. Approximately 2,431 aggregate trucks per day were counted on this one day moving between Riverside and San Diego Counties. For the purpose of this analysis we have assumed that this count represents a peak condition. In addition, in order to ensure a conservative estimate of potential truck reduction to Liberty Quarry, the total trips assumed in the analysis have been reduced by half to 1,216 truck trips per day. The other count locations such as at Hwy 74 and Hwy 79N were adjusted upwards to incorporate the change in truck activity.
4. Each truck carries 25 tons of aggregate.
  5. Liberty Quarry operating up to 312 days a year (6 days per week and 52 weeks per year)
  6. 30% of trucks leaving Liberty Quarry will be taking materials to the Temecula and Murrieta area and 70% of trucks leaving Liberty Quarry will be taking materials to the areas adjacent to the site and to Northern San Diego County area.
  7. A previous letter submitted by Urban Crossroads, Inc, Liberty Quarry Traffic Flow Supplemental Letter dated January 2006 evaluated the potential reduction in the number of truck trips along the I-15 Freeway in Riverside County. The results of the study are as follows based on a maximum tonnage of 5.0 MTPY:

Reduction of truck traffic due to Liberty Quarry

South of SR 79 S =	833	truck trips per day (two-way)
North of SR-79 S =	948	truck trips per day (two-way)
North of SR-79 N =	1140	truck trips per day (two-way)
North of SR-74 =	1217	truck trips per day (two-way)

Addition of truck traffic due to Liberty Quarry Traffic

South of SR 79 S =	384	truck trips per day (two-way)
North of SR-79 S =	269	truck trips per day (two-way)
North of SR-79 N =	77	truck trips per day (two-way)
North of SR-74 =	0	truck trips per day (two-way)

**Segment Distances (Miles)**

<b>Between San Bernardino Quarries and SR-74</b>	26
<b>Between SR 74 and SR 79 North</b>	16
<b>Between SR 79 North and SR 79 South</b>	4
<b>Between SR 79 South and SD/Riv County Line (Liberty Quarry)</b>	3

<b>Destination of shipping</b>	<b>Truck Trips Displaced</b>	<b>Daily Mileage Reduced</b>	<b>Additional Truck Trips</b>	<b>Additional Mileage from Liberty Quarry</b>
Between SR 79 South and SD/Riv County Line (Liberty Quarry)	833	2,499	384	1,152
Between SR 79 North and SR 79 South	948	3,792	269	1,076
Between SR 74 and SR 79 North	1,140	18,240	77	1,232
Between San Bernardino Quarries and SR-74	1,217	31,642	0	0
<b>Total</b>		<b>56,173</b>		<b>3,460</b>

<b>Net Mileage Reduced Per Day =</b>	<b>52,713</b>
<b>Net Mileage Reduced Per Year =</b>	<b>16,446,456</b>

**CALCULATION OF TRUCK MILES SAVED DUE TO LIBERTY QUARRY WITH 3.5 MTPY**

**Assumptions**

1. Based upon the 24-hr counts there are 2625 aggregate trucks moving material on I-15 at Hwy 74 each work day.
  2. Based upon the 24-hr counts there are 1618 aggregate trucks moving material on I-15 at Hwy 79N each work day.
  3. Based upon the 24-hr counts there are 1216 aggregate trucks moving materials south on I-15 at the County line each work day
- \* Note that new counts were taken at the County line on July 2005. Approximately 2,431 aggregate trucks per day were counted on this one day moving between Riverside and San Diego Counties. For the purpose of this analysis we have assumed that this count represents a peak condition. In addition, in order to ensure a conservative estimate of potential truck reduction to Liberty Quarry, the total trips assumed in the analysis have been reduced by half to 1,216 truck trips per day. The other count locations such as at Hwy 74 and Hwy 79N were adjusted upwards to incorporate the change in truck activity.
4. Each truck carries 25 tons of aggregate.
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  6. 30% of trucks leaving Liberty Quarry will be taking materials to the Temecula and Murrieta area and 70% of trucks leaving Liberty Quarry will be taking materials to the areas adjacent to the site and to Northern San Diego County area.
  7. A previous letter submitted by Urban Crossroads, Inc, Liberty Quarry Traffic Flow Supplemental Letter dated January 2006 evaluated the potential reduction in the number of truck trips along the I-15 Freeway in Riverside County. The results of the study are as follows based on a maximum tonnage of 3.5 MTPY:

Reduction of truck traffic due to Liberty Quarry

South of SR 79 S =	584	truck trips per day (two-way)
North of SR-79 S =	665	truck trips per day (two-way)
North of SR-79 N =	800	truck trips per day (two-way)
North of SR-74 =	854	truck trips per day (two-way)

Addition of truck traffic due to Liberty Quarry Traffic

South of SR 79 S =	269	truck trips per day (two-way)
North of SR-79 S =	189	truck trips per day (two-way)
North of SR-79 N =	54	truck trips per day (two-way)
North of SR-74 =	0	truck trips per day (two-way)

**Distances**

<b>Between San Bernardino Quarries and SR-74</b>	26
<b>Between SR 74 and SR 79 North</b>	16
<b>Between SR 79 North and SR 79 South</b>	4
<b>Between SR 79 South and SD/Riv County Line (Liberty Quarry)</b>	3

<b>Destination of shipping</b>	<b>Truck Trips Displaced</b>	<b>Daily Mileage Reduced</b>	<b>Additional Truck Trips</b>	<b>Additional Mileage from Liberty Quarry</b>
Between SR 79 South and SD/Riv County Line (Liberty Quarry)	584	1,752	269	807
Between SR 79 North and SR 79 South	665	2,660	189	756
Between SR 74 and SR 79 North	800	12,800	54	864
Between San Bernardino Quarries and SR-74	854	22,204	0	0
<b>Total</b>		<b>39,416</b>		<b>2,427</b>

<b>Net Mileage Reduced Per Day =</b>	<b>36,989</b>
<b>Net Mileage Reduced Per Year =</b>	<b>11,540,568</b>