



COUNTY ADMINISTRATOR'S OFFICE

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C.H. HUCKELBERRY
County Administrator

August 11, 2011

Mr. Mike Letcher, City Manager
City of Tucson
P.O. Box 27210
Tucson, Arizona 85726-7210

Re: Proposed Rosemont Mine and Heavy Truck Traffic on Kolb Road and Interstate 10

Dear Mr. Letcher:

I would like to bring to your attention a specific matter of concern regarding the proposed Rosemont Mine. As a cooperating agency, Pima County recently reviewed the US Forest Service's Administrative Draft Environmental Impact Statement (ADEIS) for the proposed project. The ADEIS provides estimates of heavy truck traffic to and from the mine site for both the construction period and the period of operation. Construction of the mine during an 18-month period is estimated to involve 1,000 truck shipments of equipment and materials to the site and 1,000 empty trucks leaving the site. During the mine's 20 years of operations, it is estimated heavy truck traffic will total 88 round trips daily (176 one-way trips).

According to Mr. Benjamin Goff, the County's Deputy Director for Transportation Systems and Operations, this heavy truck traffic, both in weight and volume, will impact several primary routes, including approximately 2.5 miles of Kolb Road between Interstate 10 and Valencia Road, and 13 miles of Interstate 10 between State Route 83 and Kolb Road, for the purposes of delivering and receiving shipments from the Port of Tucson. At a minimum, this heavy truck traffic will accelerate pavement distress. Mr. Goff and his staff also quantified the cost of addressing these impacts, both on these transportation corridors and State Route 83 and Sahuarita Road. Mr. Goff's memorandum is attached for your information.

Pima County formally commented to the US Forest Service on the lack of sufficient data to support the findings and conclusions in the ADEIS with respect to transportation, as well as a lack of quantification of the costs to federal, state and local transportation routes. I assume

Mr. Mike Letcher

Re: **Proposed Rosemont Mine and Heavy Truck Traffic on Kolb Road and Interstate 10**

August 11, 2011

Page 2

you, too, would be concerned about the impacts on City residents traveling these roads within and adjacent to the City of Tucson, as well as the impacts to City taxpayers.

Sincerely,



C.H. Huckelberry
County Administrator

Attachment

CHH/dr

c: John Bernal, Deputy County Administrator for Public Works
Priscilla Cornelio, Director, Transportation Department
Ben Goff, Deputy Director, Transportation Department



MEMORANDUM

Department of Transportation



DATE: 29 July 2011

TO: C. H. Huckelberry, County Administrator

FROM: Benjamin H. Goff, P.E., Deputy Director
Transportation Systems and Operations

SUBJECT: Mitigation of Heavy Truck Traffic Generated by Rosemont Mine

DOT staff have reviewed the jurisdiction review DEIS for Rosemont Mine and have previously submitted comments concerning the impacts of additional heavy vehicles on roadway safety and level of service. These comments dealt primarily with the insufficient information or lack of clarity within the document upon which to fully ascertain the extent of impacts, particularly on the county-maintained roadway system. However, there is sufficient information at a gross level to support findings and conclusions regarding the immediate impacts on the identified primary routes serving the proposed mine. These primary access roads are:

Sonoita Highway - State Route 83 from I-10 south to Sonoita, S.R. 82. The most impact will be from I-10 south to the primary access road, to be located about 0.5 miles south of Hidden Springs Road; impacted length 13 miles.

I-10 from S.R. 83 to Kolb Road; impacted length 13 miles

Kolb Road from I-10 north to Valencia Road (Port of Tucson Rail / Truck intermodal facilities located on the west side of Kolb south of Valencia); impacted length 2.5 miles.

Sahuarita Road from S.R. 83 to I-19; impacted length 15.2 miles.

The heavy truck traffic induced by the mine construction and operations will accelerate pavement distress on these primary access routes. A structural overlay of these affected routes will be required at or shortly after the commencement of operations. The total estimated cost of the structural overlay is \$14.6 million. This includes the asphalt concrete pavement in place, design, contractor mobilization, construction traffic control, and adjustment of adjacent shoulder grades. Note that I-10 and Kolb Road will require milling of the existing surface prior to placing the structural layer to maintain existing roadway drainage facilities and cross slope. This estimate does not include any consideration of the accelerated wear of the bridge structures over I-10 or the UPRR that are located along these primary access routes.

Heavy truck traffic on the steeper sections of Sonoita Highway – S.R. 83 will also require consideration of truck climbing / passing lanes for safety and level of service. The American Association of State Highway and Transportation Officials (AASHTO) have published recommended design policies that address truck operations for uphill grades on two-lane highways.

The AASHTO guidelines are based on several operating and safety factors, but the key one is speed differential. The crash rate for heavy trucks with four or more axles increases at a significantly greater

rate when the speed differential approaches ten mph. While incidents increase with any speed reduction, the rate of change is much greater for speed differentials above ten miles per hour than below ten. AASHTO recommends the ten mph reduction criterion for determining critical lengths of grades (Figure III-30 on pg 237, *A Policy on Geometric Design of Highways and Streets*, 1990 ed., American Association of State Highway and Transportation Officials, Washington, D.C.). The AASHTO critical length for design based on the ten mph criterion is 1,000 feet for a 4% upgrade, assuming an initial speed of 55 mph entering the grade (Figure III-31, pg 238, *op. cit.*).

There are four identified segments of Sonoita Highway – S.R.83 between mileposts 47.5 and 53.3 which meet the threshold AASHTO criterion for the construction of supplemental lanes. This portion of the highway is to the north of the planned primary access road intersection with Sonoita Highway. The preliminary estimate of the cost of the truck lanes is \$13 million. This estimate includes earthwork, rough and finish grade to drain, base, paving and new guardrails. This also includes the typical construction related costs for design, contractor mobilization, construction traffic control, adjustment of adjacent shoulder grades, and installation and maintenance of the storm water pollution prevention plan (SWPPP) required until all newly constructed roadside slopes are sufficiently stable from erosion.

The total preliminary estimate of costs for these mitigation elements is \$27.6 million, at today's cost of construction.

Staff can provide additional information on units of work, unit costs etc. if desired. These costs are of course preliminary and are not derived from a design analysis. Please let me know if you have any further questions.

BHG/bhg

C: Nicole Fyffe, Executive Assistant to the County Administrator
Priscilla S. Cornelio, P.E., Director, Department of Transportation
David Cummings, P.E., Manager, Maintenance Operations Division