



**Resolution Copper
Draft EIS Dated August 2019
Traffic Item Comment Resolution**

7/2/2020

Item No.	Reviewer	Code	Comment	Response
			Tonto National Forest	
1	Tonto National Forest	D	<p>Highway segment analysis. The Draft EIS focused the quantitative traffic analysis solely on the intersections. Based on public comments received, we request that a number of highway segments between intersections also be analyzed for directional impacts. The following segments should be included:</p> <p>U.S. 60 between the Phoenix/Mesa metropolitan area and Superior State Route 79 between Florence and U.S. 60 U.S. 60 between Superior and Globe State Route 177 between Superior and Winkelman State Route 77 between Winkelman and Globe.</p>	<p>Mainline rural highway segments between far spaced intersections (US-60 between Apache Junction and Superior; US-60 and SR-79 between Superior and Florence; US-60 between Superior and Globe; SR-177 between Superior and Globe; and SR-77 between Winkelman and Globe) rarely breakdown operationally under free flow conditions. Where traffic operations do begin to break down is at intersections, where friction from vehicles entering/exiting the through traffic stream create conflicts that can potentially result in delays. These are the locations that the traffic impact analysis focus on.</p> <p>The trips expected to be generated by the mine expansion are insignificant from a regional and freeway capacity perspective. The greatest number of trips expected to be generated by the mine expansion during peak construction or operations (approximately 1,600 daily trips) are in line with any relatively small 'strip-mall', shopping center or gas station: developments that are routinely analyzed and discussed with no expectation of statewide, regional freeway implications. For context, a 10 pump gas station and convenience store would be expected to generate approximately 2,300 daily trips (43% more than the mine expansion).</p> <p>The <i>City of Surprise 2035 General Plan</i> presents a planning level table based on information provided in the <i>Maricopa County Department of Transportation Roadway Design Manual</i>. This table estimates that a 4-lane freeway would be expected to serve up to approximately 64,000 daily vehicles with an LOS C. Adjacent to the town of Superior, US-60 experiences ADT's around 10,000 vehicles per day.</p>

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2	Tonto National Forest	D	<p>Background traffic volume. As described in the DEIS, we recognize it is necessary to use actual calendar years in the traffic modeling, to account for annual growth in traffic. The years 2022 and 2027 were used, respectively, for construction and operational scenarios. The DEIS (p.246) identifies that the peak construction year represents the greatest impact on traffic, as it would include concurrent construction of the East Plant Site, the West Plant site, the tailings storage facility, and the filter impacts, we need to ensure that the peak construction year modeling uses appropriate background traffic volumes (in order to prevent underestimating impacts). We request updated traffic modeling using revised background traffic volumes, and suggest:</p> <ol style="list-style-type: none"> 1. If possible, rely on the most recent ADOT traffic counts and projections 2. If the ADOT data are not sufficient (in detail or location), suggest using ADOT's road-aggregated annual growth rates to adjust appropriate site-specific data. 3. Given the ongoing regulatory process, we recognize the impossibility of predicting the exact calendar when peak construction might occur; however, we suggest selection of a calendar year for peak construction that better reflects a current understanding of schedule, at least advancing peak construction several years into the future to avoid underestimating impacts. 	<p>With limited planned developments in the TIA study area, and a relatively 'rural' area the results of the analysis are not expected to change with a shift in study years as described below:</p> <ol style="list-style-type: none"> 1. ADOT does not provide turning movement counts at the study intersections. 2. ADOT's road-aggregated annual growth rates are below the 2% annual growth utilized in the report. 2% was chosen as a conservative estimate to account for uncertainty in the development plan (i.e. shifting study years). For example, ADOT data estimates 1.6% growth at US-60/SR-79 and 1.6% growth at US-60/SR-177. 3. The project team also recognized the impossibility of predicting the exact calendar dates when peak construction might occur. To this end, the calculations in the report are extraordinarily conservative. As mentioned in #2 above, a growth factor of 2% was utilized over the 1.6% estimated by ADOT (a 25% increase). This assumption is likely even more conservative now than initially estimated due to COVID-19. The economic impacts of which will likely impact development and growth throughout the state for several years. <p>Moreover, it was assumed in the TIA that ALL of the traffic associated with the mine expansion would occur during the peak hour (another heavily conservative assumption).</p> <p>In addition, the base traffic counts were purposefully taken to ensure peak traffic was captured. Per discussions with ADOT, all traffic counts were taken on Friday (the day of the week with historically highest traffic volumes near the mine). Moreover, the majority of the project roadways experience peak traffic volumes in summer and winter. To ensure that the most conservative case scenario was analyzed, traffic counts were taken in August and a full analysis was completed. Traffic counts were then taken again in November and a full analysis was completed. The most conservative case of these two analyses (November 2016) was used to inform the analysis for the entire year.</p> <p>This very conservative approach was completed in an effort to avoid an update to the analysis to account for likely shifts in construction dates and development schedules (conserving time, manpower and resources for all entities involved in the proposed Mine Plan of Operations review process). The results and recommendations of the TIA were intended to remain appropriate, and are still believed to be appropriate, despite minor shifts in the development schedule or the development plan.</p>

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3	Tonto National Forest	D	<p>Analysis documentation. Public comments noted a number of deficiencies in documentation. While this information is available in the traffic reports, and in some cases was discussed by specialists during technical meetings, the documentation is not clear in how it was incorporated. Please provide additional clarification on how the following aspects were documented and then used in the modeling: Peak hour factor, Seasonal variation adjustment factors, % heavy vehicle, AM/PM peaking concerns, and use of carpooling.</p>	<p>Peak hour factors were obtained with the traffic counts and incorporated into all of the capacity analyses completed in the report.</p> <p>The existing % heavy vehicles was obtained with the traffic counts and is documented in the report. The vast majority of mine-related traffic is expected to be passenger vehicle. Heavy trucks will be limited to intermittent deliveries of equipment and supplies.</p> <p>As described in comment #2, traffic counts were taken during peak seasonal times. As a result, no seasonal adjustments were made, resulting in a conservative approach.</p> <p>As described in comment #2, all of the mine expansion traffic was assumed to occur in the single peak hour. This results in a very conservative analysis: in reality this traffic will be spread throughout the day, with a majority occurring in two separate peak hours (AM/PM).</p> <p>Carpooling assumptions were obtained from the Resolution Copper General Plan of Operations. These assumptions are listed under the trip generation tables in the traffic impact analysis. Personnel trips were based on the anticipated number of workers with a 1.7 divisor to account for carpooling.</p> <p>While construction equipment is expected to be moved to/from the site as needed, overweight/oversize vehicles delivering supplies are required by Arizona law to obtain permits from the Arizona Department of Transportation (ADOT). These permits outline specific criteria for the use of such transports and include engineering analysis. Typical trucks are allowed to travel on ADOT highways without these permits.</p>

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4	Tonto National Forest	D	Lane and shoulder widths. We recommend that lane and shoulder widths be documented and incorporated into the analysis if not already.	Shoulder widths do not impact the calculations required for intersection analyses. Per ADOT procedures and their typical lane width design/construction, 12 foot lanes are used in capacity calculations (including the TIA) unless more narrow lanes are noted during the field review. The field review did not note such lanes.
5	Tonto National Forest	D	Baseline monitoring and seasonal variation. Public comments raise concerns about the specific monitoring time periods used, and whether these account for seasonal variation. The NEPA team finds that baseline monitoring is acceptable (August 2015, November 2016, March 2018), provided it has been properly adjusted for seasonal variation. Please clarify how seasonal adjustments were made to the baseline data, and how seasonal variation were incorporated into the modeling.	Further explanation of the traffic counts can be found in the TIA (Existing Operations Section) and in comment response #2. ADOT seasonal adjustment factors are only reported for wide regions, making 'seasonal adjustment' for a specific area is tenuous at best. ADOT daily traffic volumes in the study area were reviewed prior to the taking of new traffic counts. With concurrence from ADOT, it was decided to take traffic counts on a Friday to obtain the 'peak' traffic day for the analysis. As described in comment response #2 above, winter and summer traffic counts were obtained to cover seasonal baseline data in both August and November. However, for the analysis, the peak traffic representing the highest traffic volumes from the summer and winter seasons was used (November traffic counts) and applied to the full year, representing an extremely conservative case. The TIA presents a very conservative scenario with traffic levels in its analysis.
6	Tonto National Forest	D	Peak hour modeling. Public comments note specific differences in morning and evening traffic. The current traffic analysis only uses a single daily peak hour. The NEPA team recommends both AM and PM peak hours be evaluated.	See response to comment #2. The Original TIA took an extremely conservative approach for the analysis, using the highest single peak hour of the day and it was assumed that all traffic from the mine would occur within this peak hour. While this will not be the case, it does provide an extremely conservative scenario for the TIA analysis. Furthermore, breaking out AM and PM peak hours and splitting the peak traffic over two peak hours is expected to decrease the traffic impact to the study intersections.
7	Tonto National Forest	D	Oversize loads. Public comments note concerns about oversize loads. The NEPA team recommends any need for oversize loads during construction be documented and pertinent bridge clearance heights, turning templates, etc. be checked for adequacy of load delivery.	At this time the exact size of 'oversize' loads are not known. However, overweight/oversize vehicles on Arizona highways are required by Arizona law to obtain permits from the Arizona Department of Transportation (ADOT). These permits outline specific criteria for the use of such transports and include engineering analysis.

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8	Tonto National Forest	D	<p>Surface condition analysis. Public comments note concerns about road surface condition and degradation. We recognize that this is not typical of traffic studies; however, in order to respond to public comments, we request:</p> <ol style="list-style-type: none"> 1. An evaluation of pavement distress data gathered by ADOT or local agencies, if available. 2. An assessment of whether mine-related traffic represents a substantial change in stress to the roadways. 3. The NEPA team suggests documentation of equivalent single axle loading (ESAL) increase from mine traffic, and assessment of surface damage. 	<p>1. This information is not available.</p> <p>2. The majority of traffic from the project will be regular passenger vehicles. The primary roads used by the project (US60, SR177, SR79) to access facilities are already constructed and maintained by ADOT to handle passenger cars and trucks. It is worth noting that the majority of mine related travel that will occur outside of ADOT roadways will be on a small section of road from US60 along Main Street to the Lone Tree/Smelter Town Gate. The TIA Addendum was completed in response to DEIS comments to remove mine expansion traffic from Magma Heights. As described in the response to socioeconomic data request for the USFS, Resolution Copper will cover the costs associated with road maintenance/repair due to Resolution Copper traffic on this small section of roadway.</p> <p>3. ADOT designs and maintains their roadways to specific standards (including ESAL requirements) to carry both passenger cars and trucks; standards that are designed to handle intermittent heavy/oversize loads. When necessary, overweight/oversize vehicles on Arizona highways are required by Arizona law to obtain permits from the Arizona Department of Transportation (ADOT). As part of this permit, evaluations of pavement distress are not required due to the temporary nature of such activities. These permits do outline specific criteria for the use of such transports and include engineering analysis. Typical trucks are allowed to travel on ADOT highways without these permits.</p>
9	Tonto National Forest	D	<p>Safety concerns. Public comments note concerns about safety, including crashes, fatalities, school buses, and bicyclists. In response to public comments, we request:</p> <p>An evaluation of the most recent three years of data on crashes.</p> <p>An assessment of whether mine-related traffic will create conflicts with pedestrians, cyclists, and other vehicles (including school buses) that substantially change the likelihood of crashes and fatalities occurring.</p>	<p>Crash data on US 60, at Silver King Mine Road and Main Street, was obtained from ADOT's Traffic Records Section and reviewed as a part of a TIA Addendum to determine if any trends can be observed. Records for the most recent five-year period were reviewed (2014 to 2018).</p> <p>No crashes have been reported at the intersection of Silver King Mine Road/US 60 in the last five years for which data is available (2014-2018). One crash was reported at Main Street/US 60 in 2014 and one was reported in 2015. No crashes were reported at this intersection in 2016, 2017 or 2018. The available crash data does not reveal any crash patterns or trends at the study intersections in the TIA Addendum.</p> <p>The mine expansion is expected to increase traffic at the study intersections during peak construction and during normal operations. Any traffic increase has the potential to increase crashes; however, the mine expansion is not expected to significantly influence crash patterns at the study intersections or elsewhere in the Town of Superior. The number of trips expected to be generated by the mine expansion are in line with any relatively small 'strip-mall' or shopping center developments that are routinely analyzed and discussed with no expectations of town-wide, regional safety implications. US 60 is operating well below capacity and it is expected that this traffic can be accommodated within the existing roadway system.</p>

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10	Tonto National Forest	D	<p>Rail traffic. Public comments note concerns about rail traffic impact on at-grade crossings. We request additional analysis, including:</p> <ul style="list-style-type: none"> • For Alternatives 2, 3, 5, and 6, rail traffic would only occur between the Filter Plant/Loadout Facility and the railhead. Please identify the at-grade crossings along this route, any potential improvements (suggest following FHWA's predictive method for Diagnostic Review for Rail-Highway crossings), and the anticipated impact to surface traffic (we recognize this data has been previously provided). • For Alternative 4, at this time we intend to continue to assess relocating the Filter Plant/Loadout Facility to the West Plant Site, although we recognize there are ongoing concerns with the logistical feasibility of this change. Please: <ul style="list-style-type: none"> ◦ Identify any at-grade crossings along this route, any potential improvements (same suggested method as above), and the anticipated impact to surface traffic. ◦ With respect to Highways 60 and 79, we recognize that specific mitigations for crossing have not been developed. Identify the most likely type of crossing and the anticipated impact to surface traffic. Clarify the amount and timing of trail traffic. 	<p>Rail traffic is discussed on pages 163-164 of the General Plant Operations.</p> <p>The MARRCO rail line crosses US 60 east of the SR 79/US 60 interchange. It also crosses SR 79 (south of the SR 79/US 60 interchange) and Attaway Road (at the Attaway/Judd Road intersection). All three locations are at grade crossings and are not expected to change with the project. Crossing gates with associated warning beacons are also located at each crossing. For the preferred alternative, the Attaway/Judd Rd intersection would be the only at-grade crossing along the route.</p> <p>The general plan of operations (GPO) proposed and the Draft EIS evaluated (as the proposed action) a filter plant and load-out facility located near Magma Junction near San Tan Valley, Arizona. The copper concentrate pipeline to the filter plant would be located along an existing, previously disturbed right-of-way known as the MARRCO corridor. The MARRCO corridor would also host other mine infrastructure (Draft EIS, page 9).</p> <p>In response to comments on Alternative 4, and per Resolution's response to Action Item EIS-262, comments during scoping and the DEIS suggested alternative locations, or use of the rail line for tourists along the MARRCO corridor. These comments raise significant safety and logistical concerns. Specifically, the location for the plant near the Magma Junction together with buried pipelines along the MARRCO corridor, was proposed to minimize interference with local traffic and recreationists. The buried pipeline would avoid any possible rail to vehicle interaction or rail to person interaction as the proposed pipeline crosses multiple recreational and Forest roads, the Arizona Trail, US60, and SR79. The corridor also passes in close proximity to residences at Hewitt Station Road. Safety and logistical concerns make the proposed buried pipeline safer and more practical than co-location of tourist and commercial uses on the MARRCO corridor suggested by some comments.</p>
11	Tonto National Forest	D	<p>Road use plan. Resolution Copper has previously identified that a comprehensive road use plan would be updated from that provided in Appendix K of the GPO. We reiterate the request for this plan.</p>	<p>An updated road use plan per Appendix K of the GPO is in process and will be submitted separately.</p>
12	Tonto National Forest	D	<p>Coordination with ADOT and other jurisdictions. Public comments note concerns about what components of Resolution Copper project would require ADOT approval and review. We request information on:</p> <ul style="list-style-type: none"> • Coordination, approval, or permitting with ADOT or their jurisdictions that has already occurred. • Anticipated coordination, approval, or permitting with ADOT or other jurisdictions. 	<p>Prior to the TIA moving forward, phone meetings with ADOT were held to determine the scope of the TIA and when traffic counts should be taken. This is standard operating procedure. In addition, ADOT requires TIA's for 'encroachment' purposes. Key examples of such encroachments include a development asking for a new access point onto the ADOT system, an existing access tied specifically to a development whose land use changes, or contractors working within the ADOT right of way.</p> <p>None of these are the case for this project. Existing intersections are being used as access to the site, mitigation measures are not necessary for peak construction at the study intersections as noted in the TIA, and no work is being done within ADOT right of way. Anticipated coordination, approval, or permitting with ADOT could include requirements for vendors to obtain applicable commercial vehicle permits (e.g., oversize/overweight permits).</p>

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Victoria Boyne

From: ResolutionProjectRecord
Subject: FW: Response to Traffic Action Items - TR1 through TR10 and TR12
Attachments: TRAFFIC COMMENT RESPONSES - SWTE 200702.pdf; rc ta SEALED 200702.pdf

From: Peacey, Victoria (RC) <Victoria.Peacey@riotinto.com>
Sent: Thursday, July 2, 2020 5:23 PM
To: Rasmussen, Mary C -FS <mary.rasmussen@usda.gov>
Cc: Donna Morey <dmorey@swca.com>; Chris Garrett <cgarrett@swca.com>
Subject: Response to Traffic Action Items - TR1 through TR10 and TR12

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Hello Mary,

For your review and consideration, I have attached two documents in response to traffic action items listed below:

- TR-1 – Highway segment analysis
- TR-2 – Background traffic volume
- TR-3 – Analysis documentation
- TR-4 – Lane and shoulder widths
- TR-5 – Baseline monitoring and seasonal variation
- TR-6 – Peak hour modeling
- TR-7 – Oversize loads
- TR-8 – Surface condition analysis
- TR-9 – Safety concerns
- TR-10 – Rail traffic
- TR-12 – Coordination with ADOT and other jurisdictions

Attachments:

- Comment Responses from Southwest Traffic Engineers
- Traffic Impact Analysis Addendum #1 providing additional back-up information for the comment responses

Response to TR-11 will be provided separately.

Thanks,

Vicky Peacey
Senior Manager Permitting and Approvals

RESOLUTION
COPPER

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