

Kino to DMP Transmission Line Project

CWG Questions and Responses		
No.	Question	Response
104	<p>I wasn't sure of the best way to provide feedback so I thought I would just send you a note. I thought last night's CWG meeting worked very well. For that type of meeting, doing it as a Zoom Webinar was as effective for me as being in a large room all together and it had the added benefit of not having to take the time to drive to and from the event.</p> <p>I thought the format of stopping to vote on and answer questions was effective and helped keep the meeting on schedule. All three of you were articulate, knowledgeable, and professional.</p> <p>In the future, even after large group meeting restrictions are lifted, I would still support this format.</p> <p>I did have one question that I neglected to ask (and can post it elsewhere if you prefer). You seemed to have 3 different ways of representing the scoring data.</p> <ul style="list-style-type: none"> - Pages 20-22 show a color coded scoring based on comments (page 21) and a composite of that with constructability (page 22). - Page 24 shows a color coded constructability score. - Pages 69 thru 79 show a color coded composite scoring for each of the 10 route options. <p>Are all three of those different ways of showing scores intended to be slightly different ways of conveying the same information?</p> <p>When I look at the charts on pages 69 thru 78 and compare colors to the composite chart of all routes on page 22, they don't seem to be consistent so I was wondering if some different factors were considered in the creation of each.</p>	<p>Thank you for the positive feedback. In answer to your question, yes the geospatial analysis builds from Phase 1, to Phase 2, and eventually to Phase 3 as different factors are added in along the way. In the last slides, we actually removed the positive influence of existing roads and transmission lines so that only the influence of residential use, historic properties, and sensitive receptors was shown. I think when you get a chance to read the Siting Study it will be clearer, but please reach out if you would like to have a conversation.</p>
105	<p>Looks like you're moving right along. I'm still curious and concerned about the helicopter flights into and out of Banner. When you get to the point where poles are sized and located, I'd like to talk to you and Banner officials about the flight patterns. About when would this be?</p>	<p>If you have trouble seeing the maps – comment in the Q&A and we can zoom in on them more. Yes, we will show the suggested routes and discuss. You can have the Q&A box open on your screen and read the questions and to up vote you click on the like button next to the question. We will show this at the beginning of the call. We will pause a few minutes at each break to give folks an opportunity to vote.</p>
106	<p>To sign up for the upcoming public meeting, we have directed residents to the TEP website, as does the post card that was sent out by TEP early last week. When do expect to have the link to the livestream posted?</p>	<p>I think they are shooting for Wednesday, but it's not something you copy and paste. It will be embedded in the webpage, so you have to go to the webpage on the date and time of the meeting regardless.</p>

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107	<p>A few questions and comments for you and your team regarding last night, and the upcoming public meeting.</p> <p>1) We are in the process of communicating with our neighborhood about the upcoming meeting on August 13. As yet, we do not see a link to the livestream on the website. When will that be available?</p> <p>2) If corridor D is chosen, how will that construction interface with the Grant Road Construction project which will leave remnant parcels on the North side. i.e. will the poles be on north side of Grant and then cross at Mountain to join the large poles on the remnants already on the south side?</p> <p>3) It seems imperative that the stakeholders Banner and UA make known their corridor preferences just as the individual citizens do. i.e. If in fact one of their choices is to veto a certain route (for whatever reason) the neighbors should not "waste" a vote/comment on that option.</p> <p>4) The numbers on the chart on page 79 are exceptionally confusing. How does one (Jody?) come up with the ranking for Historic neighborhoods? Is it the number of adjacent homes which are part of the historic district OR the number of adjacent homes which are contributing properties to that Historic district. There is a difference. Or perhaps the entire number of homes in the whole district adjacent or not? There is a floating asterisk bottom left. To what does that refer?</p> <p>5) Park Ave has a very large ElderCare home...was it included as a sensitive spot for corridor B? We mentioned it in our letters to TEP.</p>	<p>1) The live presentation will be embedded in the TEP website on Thursday (the 13th) shortly before the 6 p.m. meeting begins, so you won't need to copy and paste anything. A YouTube also will be available.</p> <p>2) If Corridor D were constructed TEP would have to acquire parcels in advance of the Grant Road Widening project and build the transmission line outside of the future Grant Road ROW. When the City comes through to build the road, they would need to acquire their necessary ROW from TEP. In areas where we have existing 46 kV poles on the south side of Grant Road, we would build the new transmission line on the north side of Grant Road and then remove the 46 kV line from the south side of Grant Road. Where there is no 46 kV line in Corridor D, we do not know which side of Grant Road the line would be on at this point, but in the event this is a route that is selected, it would be determined prior to filing the CEC application.</p> <p>3) TEP agrees that Banner and UA should weigh in and we will be reaching out over the next few weeks to ask them to please provide their input. All stakeholders are treated equally in this process and no one stakeholder can "veto" a route. The term "vote," used during the CWG presentation, was poorly chosen. Stakeholders cannot cast votes because there is no voting process. TEP evaluates stakeholder comments qualitatively, not quantitatively. TEP was attempting to show the tally of comments that had indicated link preferences and should not have shown them in a quantitative way. TEP does not want the public to vote, nor would voting be used in determining a route. There are far too many factors to consider in determining a preferred route. A vote, or voting, could not make that determination alone.</p> <p style="text-align: center;">☒</p>
107 Cont.	<p>6) Two blocks east of Vine is a school...was that considered as a sensitive spot for corridor A?</p> <p>7) FYI, per our August 6 Zoom understanding, we are informing our neighbors that our Ass'n letter just counted as one comment and are giving them the information that on this next phase, they must advocate individually.</p> <p>8) Final comment - Much to our surprise the Zoom meeting was clearer and felt more efficient than the in-person meetings, as the questions were written, which restricted rambling and irrelevant comment. The ranking system made the comments disappear and appear above based on 📌 which was good as soon as one caught on to the system.</p>	<p>4) Jody Brown, the COT HPO, is not responsible for ranking the historic neighborhoods. The ranking for the historic properties is based on what percentage of the historic property buffer (300 feet around a listed building footprint) is in the same location as the route buffer (500 feet). For route 1, as an example, 36.9% of the route contains portions of the historic property buffer. TEP developed a ranking criteria consistent with the analysis variables. For the Historic properties variable this is how the routes were ranked:</p> <ul style="list-style-type: none"> • Within the 500 foot corridor if less than 25%, the route received a score of 3, • Percentages between 25-50%, the route received a score of 2, • Greater than 50%, the route received a score of 1. <p>The * indicates that at this stage of the analysis all factors – historic properties, residential use, sensitive receptors, and constructability were weighted equally in the analysis.</p> <p>5) No, this facility was overlooked. We are adding it to the Sensitive Receptor layer and will update the study and maps accordingly.</p>

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107 Cont.		<p>6) Two blocks east of Vine is a school...was that considered as a sensitive spot for corridor A? No, it does not influence Vine, as it is outside the 300 foot buffer. It does however influence Route D, on Campbell as can be shown in the figure below.</p> <p>7) The association letter was regarded as one comment on Vine and Park, but please see #3 above. We reiterate that there is no voting in this process. Jefferson Park residents have most definitely been advocating individually and we welcome additional comments.</p> <p>8) Thank you for the feedback.</p>
108	<p>I see from the signs that the power poles issue is still going on. I had some ideas about that, based on my 50+ years of professional technical experience (electrical engineering, geophysics, reliability engineering / physics of failure, project management.)</p> <p>The gas company ran the high pressure gas line down Lester in front of my house to Vine, where it made a right angle turn to go south toward the university power station. The power company is proposing, it appears, to bring their 138 Kv power poles east to Vine and then south and/or north. In 1887, Tucson was damaged by an earthquake caused at the Pitaycachi fault zone south of Douglas. Eventually, we will have another, perhaps from the Santa Rita fault zone south of Green Valley, much closer to Tucson. Estimates from the University (Arizona Geological Survey) indicate that such a quake could be as high a magnitude of 7.0. KVOA had a news video on this in 2015.</p> <p>It is likely that the maximum stress the high pressure gas line on Lester would experience during the earthquake will occur where the pipeline makes that right angle turn to go south at Vine. So, it is possible to have a high pressure gas leak at that point, during an earthquake. There are likely some automated safety features used by the gas company to control gas leak damage, that may or may not work correctly during an earthquake. If an earthquake caused mechanical failure with the insulators on the 138Kv power pole lines adjacent to Lester & Vine, there would be the possibility of an electric arc occurring in the same vicinity of the earthquake caused high pressure gas leak below it. The result would be catastrophic.</p> <p>☒</p>	<p>Thank you for your response and insight, this is a very interesting topic. We appreciate and recognize your concerns. TEP would like to point you to a study conducted by FEMA (FEMA-202 / September 1990) which states "Records from past earthquakes indicate that electrical transmission lines are not very vulnerable to earthquake damage".</p> <p>Should the gas line experience a failure, the gas will remain low to the ground and has a higher chance of being ignited by either a pilot light within a home or by a spark from falling debris that would occur during an earthquake.</p> <p>The 2011 Christchurch earthquake that occurred in New Zealand caused damage to approximately 220 miles of underground transmission lines while overhead transmission lines remained relatively intact with the exception of a few miles where liquefaction of the soil occurred.</p> <p>Regarding the requested study, both the electric and gas utilities are under the oversight of the Arizona Corporation Commission (ACC) and TEP would rely upon the ACC to determine and issue the need for such a study to be conducted. ☒</p>
108 Cont.	<p>Federal records show that between 2010 and 2016, gas companies reported there were 35 explosions and 31 ignitions on their high pressure transmission pipelines, that resulted in 17 deaths and 86 injuries.</p> <p>Note, there have been many past engineering disasters which have had far more complicated scenarios than this one. It would be reasonable for the neighborhood to request an estimate of risk be performed by the U. of Arizona Geology department and paid for by the power company and gas company and city (and Banner, who caused the gas pipeline to be routed on Lester, instead of Ring Road). Zero risk would be acceptable, low risk would not. Since the city of Tucson already has an earthquake web site (tucsonaz.gov/emt/earthquake), they should support this request.</p>	

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109	<p>At the CWG meeting Tucson historic preservation officer Jodi Brown made the statement that they prefer that routes go around the perimeter of historic districts, not through them. Will this preference be reflected in the geospatial analysis?</p> <p>One of my neighbors spoke to a consultant from Sacramento who told him that they are evaluating a route in the alley between Adams and Drachman Street. Is this for the 138Kv transmission line? Please explain.</p>	<p>TEP is conducting a Built Environment Study which will identify potential visual, individual listed historic property, and historic district impacts. These results will be quantitatively used in the Phase 3 geospatial analysis.</p> <p>Preliminary routes 3, 5, and B all run along the existing 46kV line in this area. The location is in the alley between Lee St. and Adams St, from Vine Ave. to Park Ave. If any of these three routes were approved, the existing 46kV line would be replaced with the new 138kV line in this area. There is no link or route in the alley between Adams St and Drachman St. I assume that the consultant was conducting site visits in preparation of the Built Environment Study.</p>
110	<p>Can you please point us to the "flyover" tours of the 6 corridors? I don't see them on the project web site under CWG #4.</p> <p>As expressed in the oral question at the end of the meeting, can you please explain how the public comments will be weighted in this phase? Will the positive (1 point/vote) and negative (1 point/vote) be rolled into the existing weights on each of the corridors? Or are the calculations and weights different this time?</p>	<p>The corridor tours are located on the project webpage under the</p> <p>The term "vote," used during the CWG presentation, was poorly chosen. Stakeholders cannot cast votes because there is no voting process. TEP evaluates stakeholder comments qualitatively, not quantitatively. TEP was attempting to show the tally of comments that had indicated link preferences and should not have shown them in a quantitative way. TEP does not want the public to vote, nor would voting be used in determining a route. There are far too many factors to consider in determining a preferred route. A vote, or voting, could not make that determination alone. The public, stakeholders and CWG members should still make their preferences known as these comments are considered in the selection of a preferred route and also provided to the Arizona Corporation Commission in the application for a Certificate of Environmental Compatibility.</p>
111	<p>We see that the virtual open house starts at 6 pm this thursday. How long is it expected to last?</p> <p>Where the routes between UA North and Kino cross the railroad tracks and cross 22nd, they appear to be to the west of the existing bridges. How far to the west or what street will they be going down at those locations? Folks are curious how close the lines will be to the bridges.</p> <p>Will the siting study be posted on line in advance of the virtual open house?</p>	<p>The meeting is expected to last until 8 pm, but depends on how many questions we get.</p> <p>The videos are up on the website now under the Live Stream Open House Materials tab, so you can get a really good look of that are. It is the Cherry Ve right-of-way after you cross 22nd. The centerline of Cherry is about 456 feet east of the bridge.</p>
112	<p>Regarding previous question #6: We were not sure if your map includes the Campbell frontage Rd, so a map is attached, and frontage road marked. If you use the scale on the lower right, then the school should be slightly over the 300'?</p> <p>6) Two blocks east of Vine is a school...was that considered as a sensitive spot for corridor A? ☐</p>	<p>For all roads, the main road centerline of the road was used to create a 500 foot buffer (250 feet each side of the centerline). If the frontage road is within the 250 ft buffer on that side of the road then it is included. The sensitive receptor has a 300 ft buffer around the parcel it is on. So wherever those two buffers overlap is where the receptor is influencing the link or route and you are seeing the color change.</p>

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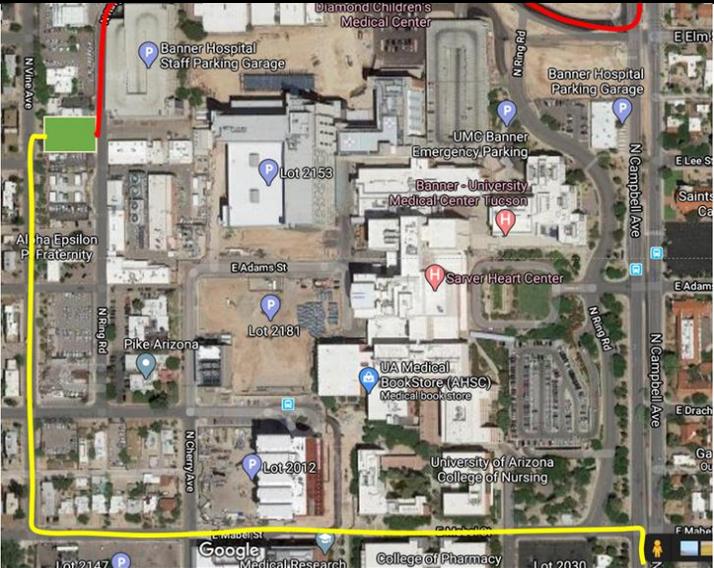
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113	<p>I thought I recalled that a study was provided to us about home values, but I can't locate it on the web page -- can you please point me to it?</p> <p>If it only was discussed on a slide, can you please point me to the presentation with the info?</p> <p>I'm responding to questions from a neighbor.</p>	<p>Here is the slide language and a link to a recent study we were part of with our sister company in Kingman.</p> <p>Residential Use and Property Values:</p> <ul style="list-style-type: none"> • Routes will be compared and contrasted by percent of adjacency to residential use. • Recent property value analysis by BLM for a 230kV project concluded: <ul style="list-style-type: none"> o Conclusions from the research are mixed and findings range from no effects to negative effects. o Research stresses that there is no way to predict whether or how a particular transmission line would impact property values, and conclusions have only been drawn after construction. • Complete study can be accessed here: <ul style="list-style-type: none"> o https://eplanning.blm.gov/eplanning-ui/project/97103/510
114	<p>One more question I am getting is "why can we not have more than one 136 kV line on a given route?"</p> <p>for example, why are D and route 1 combined not viable? Or B and 3? Or C and 4?</p> <p>It appears that pole designs allow for multiple transmission lines, so not sure what the answer is.</p>	<p>The reason TEP cannot place the Kino to UA North and the UA North to DMP circuits on the same poles is because it would not meet the purpose and need of the project to provide a looped project that is redundant and resilient. In the event there were a catastrophic event to poles that had both circuits on them, we would lose power in both directions, while this is highly unlikely it still needs to be accounted for. The reason for showing a double circuit pole configuration in the exhibit is to show that another circuit could be placed on the pole, such as a 46kV circuit or another 138kV circuit that is not serving Kino, UA North, or DMP.</p>
115	<p>There is one other consideration we think might be made by Banner. i.e. the foundation for the 137Kv poles. Could you please tell us the depth of the excavation for the poles? Random searches on the internet say the excavation (hole) must be 1/6 of the height of the pole and another says 1/10 + 2 ft. No way we can tell if that is accurate or timely etc.</p>	<p>Unfortunately, we won't know the depth of the poles or foundations until we have selected a route and completed the design. The design parameters are determined by:</p> <ol style="list-style-type: none"> 1. Geotechnical investigation to determine soil characteristics in location of pole placement; 2. Arrangement of conductors on the pole; will the conductor change direction on the pole (turning structure) or will it continue in a straight line; 3. Height of the pole. <p>As a general rule of thumb, the 10% of pole height + 2-ft is an acceptable assumption.</p>

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116	<p>We found the following information regarding the link on Vine from Speedway to Helen (originally called Segment 34 and now called Map ID 41):</p> <p>Table A.1. Phase 1 Geospatial Analysis Variable Values, page A.3. Segment 34 (new ID 41) Vine from Speedway to Helen: Eliminated</p> <p>Table B.1. E/C Assessment Results, Page B3. ID 41: Vine from Speedway to Helen "under consideration" but "EP Engineering Conflicts/ Constraints/ Opportunities" score is zero.</p> <p>Then Table B.2a. E/C Conflicts and Constraints, Page B7. ID 41: Vine from Speedway to Helen "Due to the existing utilities and clearance conflicts, this link is no longer viable"</p> <p>Same comment is on Page B29, Table B.2b. E/C Conflicts and Constraints (continued).</p> <p>Then that link shows RED in the Phase 2 composite pictures for Routes 4, 6, and C</p> <p>We were looking to see if there was a route that could satisfy the COT HPO (Jodie Brown's) desire to have the routes go on the periphery of neighborhoods rather than through them. From what we interpret, Routes 4, 6, and C are coming out of the Phase 2 analysis as no longer viable.</p> <p>We are trying to understand if that is an accurate interpretation and, if so, what is the nature of the conflicts? Looking just at Google Maps satellite view, it isn't obvious.</p> <p>If those routes are off the table, we were looking for alternative ways to get from UA North to Campbell so that the transmission line didn't have to go through Jefferson Park, Feldman's, West University, and Pie Allen. Routes 1 and 2 (especially if on the west side) go along the periphery of Blenman Elm, Sam Hughes, and Arroyo Chico but not directly though and the west side doesn't interfere with the residential areas at all.</p>	<p>Sorry for the confusion. All of the above statements are correct to some extent. In the Phase 1 Analysis, that segment (south of Helen) was eliminated because of the proximity of the building on the east side, underground utilities in road ROW, and large trees on the west. However, during the E/C Assessment (Appendix B), TEP left it as under consideration because (at the time) it was the only N-S route we had off of Speedway, except for Campbell and we were still reaching out to U of A to see if it would be possible to remove trees, and site slightly west of the link on UA property. Unfortunately, we did not have an answer to this, and so TEP vkept the links/routes in the analysis under the assumption it was better to keep them in rather than try to add back in later.</p> <p>On this Thursday's Zoom meeting you will hear that Vine, south of Mable is no longer feasible due to additional UA Plans for the Andrew Weil Center for Integrative Medicine that TEP was not aware of when developing the routes.</p> <p>I appreciate the word choice "desire", this is not a requirement, as the City does not have any jurisdiction over the transmission line project. However, the ACC regulations require that the route "is in the public interest because the project's contribution to meeting the need for an adequate. economical and reliable supply of electric power outweighs the minimized impact of the Project on the environment and ecology of the State". The Built Environment Study, once complete will inform TEP as to whether routes along the periphery of an historic neighborhood better meet this need statement. I do not want to make any assumptions at this point.</p> <p>The main conflicts on Vine are south of Mabel, where the parking garage, trees, and underground utilities in road right-of-way would prevent the line from being built in road ROW.</p>
117	<p>Here are new questions from our neighborhoods:</p> <ul style="list-style-type: none"> - The constructability for Vine between Speedway and Mabel shows as red on page 22 of the CWG meeting #4. Can you please provide an expanded explanation for this? What blocks construction there? - Since alternative segments continue to be added, we'd like to know about modifying routes 1 and 2 as illustrated in the attached image. The existing Route D appears in red. Please evaluate changing Route 1 or 2 to exit the west side of the substation onto Vine, run south to Mabel, and then run east to Campbell. ☒ 	<p>TEP assessed this proposed route and found that Mabel St. does not go all the way through. There is a portion that becomes a walk way between the UA buildings. There is a sewer line that runs through the middle, a water line, a gas line and 3 of TEP's distribution underground circuits. There are also several large trees that would need to be removed and clearances to the buildings would be an issue with the limited amount of space to place structures. For these reasons we do not find the proposed route to be feasible.</p>



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	 <p>The image is a satellite map of a medical campus. A yellow line highlights a path starting from the bottom left, moving north along N Cherry Ave, then east along E Adams St, and finally north along N Campbell Ave. A red line highlights a path starting from the top left, moving east along N Ring Rd, then south along N Campbell Ave, and finally east along E Elm St. Various buildings and parking areas are labeled, including Banner Hospital, Banner University Medical Center, and University of Arizona College of Nursing.</p>	

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118 Follow up to question 110.	<p>I see what you're saying about avoiding the term "vote". It didn't correspond to the summation methodology. I'm still not clear how TEP has summed nonquantitative opposing and supporting comments and reflected them in a quantitative analysis, I guess we'll learn more at the special meeting for the Interim Siting Study.</p> <p>The bottom line is that we really need to understand how to submit comments so we understand how they are analyzed so that we can constructively participate. Can you please provide that in a reply, so we know how to engage our neighborhoods to submit comments in a way that will be considered in the analysis? I'd rather not wait until after Aug 20, given the Sept. 13 deadline for comments.</p>	<p>Thanks again for your patience and participation. We appreciate everyone's input and work very hard to incorporate all of the different perspectives of stakeholders. To start, I'll offer a few simple guidelines that might help CWG members and neighbors to comment throughout the rest of the process.</p> <p>The submission of comments is an open-ended process by design. We're happy to take comments from anyone who wants to offer them. So, if a neighborhood association wants to state a preference on the location of an alternative route, let us know. If association members want to share a personal opinion about route preferences, they should do so. Tell us about which alternatives you support, or the alternatives to which you are opposed. Or if you're less concerned about the route and more concerned about proximity to historic structures or pole color or traffic impacts, feel free to share that instead.</p> <p>After receiving hundreds of comments, we tried to organize comment data into useful information that revealed trends and described common public concerns, preferences, and opinions. This provides insight that helps us to weight the dozen criteria described in the siting study.</p> <p>Unsurprisingly, many comments dealt with route location but not all of them did. Tallying comments was just one way of looking at the data. The results were not used to favor or eliminate any particular route link.</p> <p>Moving forward, is the public more concerned about historic properties or sensitive receptors? Should the proximity of a line to residences carry more weight than constructability? Regardless of the topic or stated preference, we're asking the public share why they hold their views. And as we've stated before, all comments will be provided to the Line Siting Committee.</p>