

**CITY COUNCIL MEETING MINUTES  
COUNCIL CHAMBER, CITY HALL  
701 E. BROADWAY, COLUMBIA, MISSOURI  
JANUARY 19, 2016**

**INTRODUCTORY**

The City Council of the City of Columbia, Missouri met for a regular meeting at 7:00 p.m. on Tuesday, January 19, 2016, in the Council Chamber of the City of Columbia, Missouri. The Pledge of Allegiance was recited, and the roll was taken with the following results: Council Members RUFFIN, TRAPP, SKALA, THOMAS, NAUSER, PETERS and MCDAVID were present. The City Manager, City Counselor, City Clerk, and various Department Heads and staff members were also present.

**APPROVAL OF THE MINUTES**

The minutes of the regular meeting of January 4, 2016 were approved unanimously by voice vote on a motion by Mr. Trapp and a second by Ms. Nauser.

**APPROVAL AND ADJUSTMENT OF AGENDA INCLUDING CONSENT AGENDA**

Mr. Thomas asked that B9-16 be moved from the consent agenda to old business.

The agenda, including the consent agenda with B9-16 being moved to old business, was approved unanimously by voice vote on a motion by Mr. Thomas and a second by Mr. Skala.

**SPECIAL ITEMS**

None.

**APPOINTMENTS TO BOARDS AND COMMISSIONS**

Upon receiving the majority vote of the Council, the following individuals were appointed to the following Boards and Commissions.

**FIREFIIGHTERS RETIREMENT BOARD**

Kenny, Nicholas, 812 Leawood Terrace, Ward 4, Term to expire December 31, 2017

**INTEGRATED WATER RESOURCE PLANNING COMMITTEE**

Merritt, Terry, 308 Bay Pointe Lane, Ward 3

Ross, Benjamin, 205 Paw Paw Way, Ward 2

**TAX INCREMENT FINANCING COMMISSION**

Owen, James, 2628 Ridgefield Road, Ward 4, Term to expire September 1, 2019

**SCHEDULED PUBLIC COMMENT**

**SPC3-16 Berkley Hudson, Chair of the Race Relations Committee of the Faculty Council on University Policy - Importance of finding ways to form effective links with the work of Mizzou and the work of leaders of the City of Columbia and the City Council in regard to race relations.**

Mr. Hudson explained he was the Chair of the Race Relations Committee of the University of Missouri's Faculty Council and had been in that role for about one year. He commented that he grew up white in Mississippi, and that his ancestors had owned slaves and his father's main street service station had three restrooms for gentlemen, ladies, and colored. He noted he had traveled as a journalist prior to arriving in Columbia, Missouri about 13 years ago to teach at the School of Journalism. He stated Mike Middleton, the Interim President of the University of Missouri System, was a descendent of slaves, and had grown up in Mississippi about 120 miles from where he grew up. He, Mr. Middleton, and approximately 10 other people with diverse backgrounds were members of the Race Relations Committee, and they had been trying to find ways to resolve misunderstandings about fear and race. He commented that Mr. Middleton had indicated people never spoke about the legitimacy of the viewpoint of others, as everything involved a harsh soundbite or slogan. People were not listening and talking honestly. He felt everyone needed to slow down and think, and be rational, intelligent human beings. He suggested everyone be truthful and real. He explained these were things the Committee had been doing, and noted the Committee met for about two hours every week. He stated his goal was for them to share their stories and to take the time to listen to the stories of others. He asked the City to help find ways to be partners in a Town-Gown relationship. He wanted to find a way to make Columbia, Missouri a place with the best faculty, students, and scholars, and for the alumni and community to feel proud, safe, respected, and heard.

## **PUBLIC HEARINGS**

### **PH3-16 Reconsider the construction of a 161 kV transmission line to the Perche Creek substation and system transmission improvements.**

PH3-16 was read by the Clerk.

Mr. Johnsen and Mr. Williams provided a staff report.

Mr. Thomas understood a second 161 kV transmission line was needed, and asked where the first one was located. He asked if the line heading west from the Perche Creek substation was a 161 kV line. Mr. Williams replied yes, and displayed a map depicting the City's current transmission system. The black lines represented current 161 kV lines in the Columbia area, and the 161 kV lines to the east supplied electricity to the Grindstone substation, Rebel Hill substation, and the Bolstad substation. To the west, however, only one line supplied the Perche Creek substation. Mr. Thomas asked if it was an overhead line. Mr. Williams replied yes. Mr. Johnsen explained it went across the Missouri River and tied into an Ameren UE substation in the bluffs on the other side of the river.

Mr. Williams continued with the staff report.

Mr. Thomas understood having a second 161 kV line into the Perche Creek substation was one of the three goals of the project, and asked if it had to connect to another 161 kV system. Mr. Williams replied yes, and explained it would have to connect to another 161 kV substation. The Grindstone substation, the McBaine substation, and the Bolstad substation all currently had 161 kV available. The Grindstone and McBaine substations were selected because they were closer in proximity to the Perche Creek substation.

Mr. Williams continued with the staff report.

Mr. Trapp asked if Options B and B-2 did not add 161 kV capacity because those options would not connect to a new 161 kV substation. Mr. Williams replied the capacity that would be added would be on the distribution system. Option B attached the new substation at the 69 kV level so it would consume capacity the City already had invested into and it would not create additional capacity. The Mill Creek substation for Option B was proposed to be inserted in between the Hinkson Creek substation and the Grindstone substation at the 69 kV level. He noted the Grindstone substation had both transmission levels available as it had both 161 kV and 69 kV available, and inserting the Mill Creek substation meant it would share the capacity that was currently available between the Grindstone substation, the Hinkson Creek substation, and the Perche Creek substation at the 69 kV level. They would not add capacity to the outside world. Option A would provide a direct connection to the bulk electric system whereas Option B would utilize the subtransmission system before reaching out to the bulk electric system.

Mr. Thomas understood a hybrid was an option whereby there could be a 161 kV connection between the Mill Creek substation and the Grindstone substation instead of a 69 kV connection. Mr. Williams pointed out that would leave Mill Creek with only one line, and if that one line went out of service, the entire load on that substation would go dark. Mr. Thomas understood there were two lines in the scenario shown by staff because one line went to the Hinkson Creek substation. Mr. Williams explained one went to the Hinkson Creek substation and one went to the Grindstone substation. He pointed out the Hinkson Creek substation did not allow for 161 kV lines as it was an all 69 kV substation. Mr. Johnsen commented that two feeds were needed into the substation so it was reliable.

Ms. Nauser understood there were three legs to Option A, but only the red and green lines would be completed as the blue line would be completed at another time. Mr. Johnsen stated that was correct. He explained the red and green lines needed to be funded now, and they did not want to fund the blue line until it was more needed for the system. Ms. Nauser thought they had been told Option A was the 10-20 year solution. Mr. Johnsen stated the expectation of staff was for the blue line to be constructed. It was not needed now, and staff did not want to spend money on it if it was not yet needed. He thought the funding for the blue line would be included in the next funding project for the electric utility. Ms. Nauser asked how much that line was anticipated to cost and if it would be a part of another bond. Mr. Johnsen replied it would be part of another bond, and noted he thought the cost would be about half of cost of the red and green lines.

Ms. Nauser understood Option A and Option B would likely provide the same amount of capacity for the next ten years, and the blue line would be constructed later for the extra capacity. Mr. Johnsen explained the blue line would be added when needed, and staff would not ask for funding if it was not needed. He reiterated they did not want to construct the blue line if it was not needed, but pointed out they expected it would be needed at some point in the future. Ms. Nauser understood Option A and Option B would provide the same amount of capacity until the connection was constructed. Mr. Johnsen stated Option A and Option B were providing the same redundancy from a North American Electric Reliability Corporation (NERC) perspective, but Option A would add interconnection to the transmission lines since the substation was powered at 161 kV. Option B would not provide interconnection to the

transmission lines as it was a subtransmission connection. Ms. Nauser asked how much the extra leg from the Mill Creek substation to the McBaine substation would eventually cost. She assumed the \$13 million included the red and green lines of Option A. Mr. Johnsen replied they had some cost numbers later in the presentation that would provide that information. Ms. Nauser understood the \$13 million would fund the Grindstone substation to the Mill Creek Substation and the green line. Mr. Johnsen stated the red and green lines were funded with the last bond issue. Ms. Nauser understood that cost was \$13 million. Mr. Thomas asked if that was correct. Mr. Johnsen replied they had some numbers later in the report.

Mr. Williams continued with the staff report.

Mr. Thomas understood Option B did not add capacity. Mr. Williams stated it utilized capacity that was already in the 69 kV system, and did not provide additional capacity. He explained the load attached to the new substation would utilize capacity that already existed in the 69 kV system. He noted Option A, which involved new 161 kV connections to the external bulk electric system, would create additional capacity. Mr. Thomas understood that was the advantage to a 161 kV line to the Mill Creek substation.

Mr. Williams continued with the staff report.

Mr. Johnsen introduced Kevin Keim of Sega, Inc., the firm hired to conduct the engineering for this project, who explained the matrix process.

Mr. Thomas stated he was interested in why streets were preferred over backyards and cross country sites. He understood 161 kV transmission lines and other high voltage transmission lines did not usually travel down developed streets and usually went across the country. Mr. Keim explained it was dependent upon when it was installed and what was around when it was built. It was difficult to go through backyards in residential areas, and developed areas tended to have existing easements minimizing costs.

Mr. Thomas asked if the criteria had been developed by Sega, Inc. and City staff. Mr. Keim replied they were developed by the team. Mr. Thomas asked if it was normal for streets to be preferred over cross country areas when designing high voltage transmission line routes. Mr. Keim replied yes. Mr. Johnsen explained the City had lines that ran down transmission corridors and lines that ran through people's backyards. It was more convenient to maintain the lines down transmission corridors than people's backyards. Mr. Thomas asked about cross country sites in terms of convenience, maintenance, etc. Mr. Johnsen replied that although some ground might be considered cross country, as a municipal utility, Columbia Water and Light did not have a lot of cross country to go across within the service territory. Mr. Thomas thought Options B and B-2 involved some cross country areas. Mr. Johnsen stated that was correct.

Ms. Nauser asked for clarification as to why a wooded forest and crossing a stream within 200 feet scored the same importance factor as a school within 100 feet at a -10. Mr. Keim replied the -10 was the most negative factor, so they might match in terms of the importance factor, but buildings and other facilities were weighted more in terms of the weight factor. Once the weight factor was included, it scored the proximately to residences and schools higher.

Mr. Keim of Sega, Inc. continued with the staff report.

Mr. Thomas understood homes within 100 feet were scored at -10 and homes within 200 feet were scored at -8, and asked how structures outside of 200 feet were treated. Mr. Keim replied there were additional criteria for schools, but not necessarily for the other areas.

Mr. Keim of Sega Inc. continued with the staff report.

Mr. Thomas asked for the transmission line characteristics. Mr. Keim replied line length, right-of-way length, etc. It involved the overall line and not individual structures. Mr. Thomas understood they then somehow scored the transmission characteristics for each route and gave it a five percent weighting. Mr. Keim explained the matrix process further. Mr. Thomas understood lineal distances were used along the possible routes that were multiplied by the weighting and importance factors. Mr. Keim stated that was correct. Mr. Thomas asked about the number of residences. Mr. Keim replied a normalizing factor had been utilized for Options B and B-2, so a count was used instead of the linear measurement. It provided a more balanced score to the value.

Mr. Keim of Sega, Inc. continued with the staff report.

Mr. Thomas understood they would receive the same answer if they counted the number of homes within 100 feet of the two different lines. Mr. Keim stated that was correct. If the normalizing factor had not been used, three homes would have a greater effect on the route decision than ten homes.

Mr. Keim of Sega, Inc. continued with the staff report.

Mr. Thomas understood the matrix was a fair an accurate way to compare multiple subroutes within the Route A solution or multiple subroutes within the Route B solution, but it was not designed to compare any particular Route A solution with any particular Route B solution because those solutions were not really solving the same problem. Mr. Johnsen stated that was correct.

Mr. Johnsen continued with the staff report.

Mr. Skala understood the matrix was a within route comparison, and the engineering solutions provided were a between route comparison due to the necessity for redundancy and capacity. He asked to what degree one influenced the other. He understood it was not exclusively an engineering solution to compare Route A to Route B or Route B-2 and asked if the matrix influenced the decision-making process of the engineering solution for the various route options. Mr. Johnsen replied he thought there might be some influence, but they had married it with the survey results to provide a comparison tool as opposed to a route selection tool. The survey and route selection results had been merged to provide a comparison between the two routes. Mr. Skala understood there was some consideration of some of the material, but it was not directly between the matrix indications and the engineering solutions, as those were two different things. Mr. Johnsen stated that was correct. He explained it was mostly a community impact decision when going from point A to point B on a particular route, and they tried to take the path of least resistance. When comparing the options, they had to consider the value to the community so they took the impact and married it with the benefits to the community to try to come up with a way to measure both at once.

Ms. Nauser asked if Options B and B-2 were adequate engineering options for the problem. Mr. Johnsen replied they would solve the problem today, but they would not provide the same benefits.

Mr. Thomas understood they met the NERC requirement to connect the Perche Creek substation to another part of the 161 kV system, but they only solved the load distribution problem from the Mill Creek substation for a lesser amount of time assuming certain data regarding anticipated growth and anticipated per home usage of electricity, which he thought was decreasing in Columbia. Mr. Johnsen replied more customers had been added to the system, and explained there was a difference between usage and demand. He noted usage could go down even when demand increased if people used more during shorter periods of time, and demand was what they had to design the system to accommodate. He commented that usage was how much was sold, and it was unfortunate that they billed on usage to cover demand. He stated there was a 1-2 percent customer growth per year, and weather had a big impact on demand and usage. As a result, usage patterns needed to be normalized based on weather. He agreed there were likely more efficient devices being used, but felt the number of devices in homes was also increasing. He commented that he was not willing to say they would use less electricity in the future than they were now, especially when electric automobiles were looming for the future, as that impact could be significant.

Mr. Thomas understood linking the Mill Creek substation into the 69 kV network would only provide enough peak capacity for a lesser amount of time than if it was on a 161 kV network. Mr. Johnsen pointed out they would still be limited by the import capacity of the 69 kV network in the area, and would only be tapping into what was left there. It would not add anything new.

Mr. Thomas asked if staff had considered building the entire three-legged piece on the east, Grindstone to Mill Creek to Hinkson, with 161 kV lines so there would be two connections into each of them. He understood that might not be any more acceptable to the public. Mr. Johnsen asked if Mr. Thomas was asking about taking the existing 69 kV system and building it as a 161 kV system. Mr. Thomas replied yes. Mr. Johnsen stated staff had considered it. He explained the 69 kV system went through a lot of very residential neighborhoods. The lines were not necessarily along the streets either as they were in backyards in many instances. He thought it would be more disruptive to replace that line than it would be to go down a transportation corridor. He noted the part between the Hinkson substation and the Perche Creek substation was the most troublesome for that approach. Mr. Thomas stated he did not realize that portion would need to be changed to make it work as he thought it could just be linked back to Grindstone.

Mr. Thomas stated he did not believe the matrix should have any bearing in their decision-making between Option A and Option B or Option B-2 because it had not been designed for that purpose. He noted he took issue with the fact that all of the points for reliability and longevity were awarded to the solution that was most reliable and would last the longest as the points were allocated for all of the factors depending on the extent they impacted those factors.

Mr. Johnsen and Ms. Kacprowicz continued with the staff report.

Mr. Thomas asked if the recommendation of staff of Option A as the most reliable and long lasting option had been included in the survey. Ms. Kacprowicz replied no. Mr. Thomas understood only the parameters of Option A, Option B, and Option B-2 had been described. Ms. Kacprowicz stated that was correct. She explained they had only asked which option

was preferred to be implemented, how close they were to one of the suggested routes, and to rank importance factors. The most important was reliable electric service, and it was followed by the longest term solution. After those two top factors, other factors included the least cost to build, the one with the minimized rate impact, and the one furthest away from residential homes.

Ms. Peters asked how many surveys were returned. Ms. Kacprowicz replied 1,500 surveys had been returned.

Ms. Nauser understood only 187 surveys returned were from people that lived within 150 feet of the proposed lines of any of the three options, so the vast majority of respondents were not associated with any of these lines. Ms. Kacprowicz stated that was correct, but pointed out they might have been impacted by one of the previously proposed routes. She explained they had started out with 18 routes. Ms. Nauser understood, and stated she did not feel it was fair to bring that into the equation because at this time they were specifically discussing only Option A, Option B, and Option B-2. Ms. Kacprowicz commented that they found that less people had showed up during the process as certain routes were considered to be off of the table.

Mr. Thomas asked if information regarding the estimated years before more improvements, miles of line, construction cost per mile overhead and underground, etc. had been included with the survey. Ms. Kacprowicz replied that information was in the letter explaining the project. Mr. Thomas did not feel people would not know what to base a vote on with regard to Option A, Option B, or Option B-2 without looking at the map and the letter when they had received the survey. Ms. Kacprowicz agreed the letter sent to all Columbia Water and Light customers had a short description of Option A, Option B, and Option B-2 as well as the chart they had shown throughout the meetings. It also showed the route options.

Ms. Nauser understood the route options showed the three legs for Option A with the 20 year solution, and not just the two legs, which was not as long of a solution. Ms. Kacprowicz stated that was correct and noted staff would show the load information next. She explained it was not until they had gone through bond funding process in terms of prioritization that the McBaine leg was delayed. They felt it was most important for the substations to be off-loaded first, and knew they could not get it all physically done within the five year funding period.

Mr. Johnsen and Mr. Williams continued the staff report.

Mr. Thomas understood there had been a lack of compliance with the NERC requirement to serve all customers without impacting other system transmission users due to the loss of any element because the 161 kV terminated at the Perche Creek substation. Mr. Williams explained they would begin having problems complying with that particular federal requirement when the load reached near the 300 megawatt range. Mr. Thomas asked why that particular measurement. Mr. Williams replied if they were to lose the Perche Creek line with the load being around 300 megawatts, they would begin to overload several other sections of the transmission system. They had to be able to withstand the loss of that system element without shedding load or impacting neighboring systems.

Mr. Skala understood they were trying to avoid a cascade effect. Mr. Williams stated that was correct.

Mr. Thomas understood shedding load meant there was a power outage for some people. Mr. Williams stated that was correct, and explained it was termed in several parts of the country as a rolling blackout. They would not be able to supply all customers, but they would be able to determine which subset of customers they were able to feed, and they would try to feed as many as possible. The blackout would be rolled day to day depending on how long the transmission issues lasted. He pointed out the question for the community was how the system should be designed. Currently, the system was designed to minimize as many second contingencies as possible so they did not have to accept rolling blackouts as a way to deal with the requirement.

Mr. Thomas asked how frequently two elements went out at the same time. He understood they would likely be from unrelated events. Mr. Williams pointed out they could also be from a related event, such as a large storm like they had in 2014. For that event, they had several issues occurring at the same time. He explained they could also have two elements out if one element was taken out of service for maintenance and an accident occurred in another area of town.

Mr. Williams continued with the staff report.

Mr. Skala stated he thought the economic downturn that had occurred in 2007 and a bit afterwards had slowed the growth rate, which was the reason they were only at 277 megawatts and not 300 megawatts now. He felt they would have been in a worse predicament if that had not occurred. Mr. Williams stated that was correct.

Mr. Williams continued with the staff report.

Mr. Thomas understood the City of Fulton and the University of Missouri were attached to the 69 kV system. Mr. Williams explained the City of Fulton was not impacted by this project because they were attached to the Bolstad substation, but the University of Missouri was attached to the Hinkson Creek substation at the 69 kV level, and would be impacted at some level by this project. The City currently had agreements with the University of Missouri to supply up to 40 megawatts of non-firm capacity. As a result, the City had the ability to shed their load with non-firm capacity. He noted the University had made a request for 60 megawatts or more of firm capacity for the near future.

Mr. Williams continued with the staff report.

Mr. Thomas asked if the NERC problem would be solved by connecting the Perche Creek substation to the Bolstad substation to the north. He asked if that would go through any built-up areas as he thought it could go outside of the City limits. Mr. Skala replied he was not sure that was true. Mr. Williams explained it was a slightly farther transmission line route. The assumption, however, was correct in that it was an option that could be considered. Mr. Thomas understood they would still have the load problem in the south. Mr. Williams stated that was correct.

Mr. Thomas understood there were two parallel sections of the 161 kV line coming in from the Grindstone substation or into Grindstone substation, and asked if those could be extended along Grindstone Parkway to the Mill Creek substation to create the two 161 kV connections to the Mill Creek substation. Mr. Williams replied the Grindstone substation was designed for three 161 kV connections, and it was already utilizing two connections. It was not really designed to have four connections. Three was the maximum for its current design,

and it had some space constraints. Mr. Johnsen reiterated the problems with that suggestion, and noted it would take some significant changes in the Grindstone substation to allow extra 161 kV connections. Running parallel 161 kV connections was not their favorite practice either because the damage to one pole could take both lines out. In addition, if that was the only solution, it would not do anything for the Perche Creek substation issue. Mr. Thomas explained he was thinking about this with the Perche Creek substation being connected to the Bolstad substation.

Mr. Williams and Mr. Johnsen continued the staff report.

Mr. Thomas asked if additional wires would be needed on the existing 69 kV poles if that option was chosen. Mr. Williams replied they would likely have to re-conductor the 69 kV system from the Perche Creek substation to the Grindstone substation through the Hinkson Creek substation. Mr. Thomas asked what was meant by re-conductor. Mr. Williams replied bigger wires. Mr. Thomas asked if the same poles would be utilized. Mr. Williams replied it might require taller or heavier duty poles depending on the wires and the conductors. Mr. Johnsen stated the solution was either more or bigger in terms of poles. They would have to review the route to determine the best options for conductor, pole design, easement, access, the impact to those on the route, etc.

Ms. Nauser asked if the Hinkson Creek line ran along the trail. Mr. Johnsen replied the piece from the Hinkson Creek substation to the Perche Creek substation went through a lot of residential areas and through many backyards. Mr. Thomas asked if those were on 50 foot tall wooden poles. Mr. Johnsen replied it was a wooden pole construction. Ms. Nauser asked if those poles would have to be increased in height, etc. Mr. Johnsen replied something would likely need to be done, but he could not be specific without going through the design process.

Mr. Williams continued with the staff report.

Ms. Nauser understood Option A would work until the year 2045. Mr. Williams replied the load with Option A would be satisfied well beyond the 2045 time frame. The 2045 time frame was where they began to bump into the single contingency issues with the load growth of the entire system, and not what was just at the new Mill Creek substation. Mr. Thomas understood that included the third leg of Option A, which would go from the Mill Creek substation to the McBaine substation. Mr. Williams stated Option A was modeled as being complete with all three pieces.

Mr. Skala understood the first contingency only involved load growth or capacity and the second contingency involved failures. Mr. Williams stated the first contingency was the outage of any one element at any one time, and only the outage of one element. They had to be able to serve all of the load with that one element out, and Option A would satisfy this until 2045. In terms of a load growth perspective in the southern portion of the electric service territory, they could grow beyond 2045 at a 1.25 growth rate with Option A since the substation would be connected at 161 kV level. Since Option B would be connected to the existing 69 kV system, it would utilize the capacity already there, which would result in a problem almost immediately. Mr. Skala understood both contingency scenarios were failures and the load issue in terms of growth involved the southern piece. Mr. Williams stated that was correct.

Mr. Williams and Mr. Johnsen continued with the staff report.

Ms. Nauser understood some of the equipment ordered would not be delivered until late next year so there could be potential change orders. Mr. Johnsen stated the reason for the delay in delivery was due to how long it took to make them, and they were being made now. He explained the ability to change the order to build something else would be contingent upon where they were in the process, and he did not know where they currently were in the process. It would be helpful if they had not yet begun and were willing to change the order to a different specification, but typically the lead time was lengthy because it took a while to build them. Ms. Nauser thought the contracts included a clause indicating the City reserved the right at any time to make changes in specifications, drawings, and other data incorporated in the order, methods of shipment, packing, etc. Mr. Johnsen stated he did not believe that meant the change was not at any cost to the City.

Mr. Johnsen continued with the staff report.

Ms. Nauser asked what had changed from the November 16 report to now as the amount the City would lose had changed from about \$5 million to about \$3 million. Mr. Johnsen replied he thought staff had been able to review everything in more detail since then in terms of what invoices they had, which pieces of equipment could be reused or could not be reused, etc.

Mr. Johnsen continued with the staff report.

Mr. Thomas asked if the residential numbers for Option B included projected residential into the future and not only constructed residential. Mr. Johnsen replied it included residentially zoned properties. Mr. Thomas stated it would likely be more useful to see the linear feet of actual constructed residential areas, constructed commercial areas, and undeveloped areas. Mr. Johnsen commented that he understood, and pointed out that as a municipality, most of their lines ended up in developed areas.

Ms. Peters asked if these numbers were linear feet or the actual number of homes. Mr. Johnsen replied these were linear feet estimates.

Mr. Johnsen continued with the staff report.

Mayor McDavid asked if there was any reason to believe the EMF inside Mill Creek Elementary or the Boone Hospital Clinic was different than two milligauss, which was typical for a home. Mr. Johnsen replied he assumed the numbers he had were home exposures and thought those types of facilities would have a higher level of background exposure than a home due to the magnitude of electricity consumption devices. Mayor McDavid understood this suggested a 0.1 milligauss at the entrance of Mill Creek Elementary. Mr. Johnsen stated that was correct.

Mr. Trapp understood magnetic fields moved through the earth. Mr. Johnsen stated that was correct. Mr. Trapp understood undergrounding the lines would not provide any protection and only move them closer. Mr. Johnsen explained the line would be closer by undergrounding because they were not buried as deep as the height of the pole. It was a matter of distance.

Mr. Johnsen continued with the staff report.

Mr. Thomas commented that he had wanted examples of lines that had gone down previously developed residential and commercial corridors, and did not believe either

example shown met that scenario. It appeared as if the route of the transmission lines was known before the area was platted and the buildings were erected in Chesterfield. He noted the lines were not placed along a road corridor and traveled cross country with houses backing up to them. He felt going over a road was different than running the line for several miles down a road corridor. Ms. Nauser agreed. Mr. Johnsen stated he thought it would be difficult to run that down a street corridor because it was so large.

Mr. Keim of Segal, Inc. continued with the staff report.

Ms. Nauser asked about the height of the poles. Mr. Keim replied he did not have a set value on the poles shown, but thought it would be in the 90 foot range. He explained it was a purely conceptual design at this time.

Mr. Thomas understood a single circuit had three live wires with one on the top, and a double circuit had three lines plus another three lines and one on top. Mr. Keim stated that was correct.

Mr. Keim of Segal, Inc. continued with the staff report.

Mr. Skala asked how far the bottom conductor was from the ground. Mr. Keim replied it varied with weather and the span length of the poles. It was difficult to provide a specific number. Mr. Skala asked if there was a range. Mr. Keim replied the minimum was about 26 feet, and the height had to be adjusted for any building or other obstacle. Mr. Thomas understood the bare minimum was 27 feet. Mr. Keim stated the minimum would be in the range of 25-30 feet depending on where it was and what it would go over.

Mr. Thomas asked if the poles would look like what was shown if Option A was approved. Mr. Keim replied he would show some renderings soon.

Mr. Keim of Segal, Inc. continued with the staff report.

Mr. Skala understood what was shown was a comparison of what was projected at 161 kV, but the 69 kV had not been depicted. Mr. Keim explained there was not a 69 kV at Nifong Boulevard and Sinclair Road.

Mr. Thomas asked for the height of the poles. Mr. Keim replied the poles would be within a 115-120 foot range in this area. Mr. Thomas asked why it needed to be so high if the bottom wire only needed to be at 30 feet. Mr. Keim replied increasing the height allowed for a longer span and fewer poles. It also allowed them to reduce the impact of what was under the line. Mr. Thomas asked for the diameter of the base for a pole that was 115 feet tall. Mr. Keim replied the one shown would likely be 5-6 feet for a diameter foundation.

Ms. Nauser asked if the \$13 million projected for the cost of Option A included the cost of these larger poles. Mr. Johnsen replied these poles had been a part of the plan.

Mr. Keim of Segal, Inc. continued with the staff report.

Mr. Skala asked if there was a reason the existing lines tended to be on the north side of Nifong Boulevard while the Option A proposal tended to have the bulk of them on the south side of Nifong Boulevard. Mr. Keim replied they had conducted a survey of what was underground currently in terms of utilities, etc. to determine if poles could be placed in various locations. They had also reviewed right-of-way locations and had visited with City staff with regard to roads and other systems to accommodate future plans.

Mr. Ruffin asked if the placement of the poles had been finalized for the Option A route. Mr. Johnsen replied they had not, and noted they were about 30 percent of the way

through the process. He explained the meeting held at the school recently was to provide preliminary information with regard to where they were thinking the poles might be located and to obtain feedback. He stated there was some flexibility, but it would be tough if they were put in the position of people asking it to be moved from their property to their neighbor's property.

Ms. Nauser understood the Segal, Inc. progress report provided in November had indicated the City was requesting a 70 foot clearance, which would require taller structures and larger foundations and would increase the project costs significantly, and asked for clarification. It has also indicated Boone Electric Cooperative was requiring a separate seven foot trench away from the City trench and was not considering a joint trench, and asked if that would add substantially to the cost of the project. Mr. Johnsen replied he did not believe they were prepared to answer questions regarding cost impacts from easements, alignments, neighboring utility coordination activities, etc. He stated he was not aware of any significant overruns at this time on the project, but thought that might be a reference to some coordination issues with Boone Electric Cooperative that had not yet been resolved.

Mr. Keim of Segal, Inc. continued with the staff report.

Mr. Skala understood a number of transitional structures would be needed if they incorporated undergrounding. Mr. Keim stated that was correct. He explained dead end structures would be needed to transition to underground and to transition back to overhead.

Mr. Keim of Segal, Inc. continued with the staff report.

Mr. Skala asked if there were age issues with respect to wooden power poles. Mr. Johnsen replied there would be more exposure, and noted they had to inspect poles regularly for woodpecker damage. He pointed out all poles would need to be inspected, but wood poles would need to be inspected and replaced more often because they would not last as long.

Mr. Skala asked if the 161 kV line in Option A changed any of the power distribution of the 69 kV line that was in conjunction with this. He wondered if they would be married on to the same poles or if that system would be left alone. Mr. Johnsen replied there would be a double circuited line along Grindstone Parkway so it would have both 161 kV and 69 kV lines on it. Mr. Skala asked if that would take the 69 kV line from another route to this route. Mr. Johnsen replied it would be on the same route, but would be on different poles with different spacing. Mr. Skala asked if this replaced any of the 69 kV line. Mr. Johnsen replied the 69 kV that was along Grindstone Parkway where the 161 kV would be placed would be transitioned to new poles.

Ms. Peters understood the poles were on one side of the street now, and asked if they would be changing to the other side of the street. She wondered whether the same easements would be used. Ms. Nauser thought they transitioned twice. Mr. Keim stated it transitioned due to undergrounded utilities.

Ms. Peters understood Nifong Boulevard would be widened at some point, and asked whether the placement of the poles would accommodate it. Mr. Johnsen replied they had coordinated with the Street Division for the preliminary pole placements, and would continue to work with them. He noted this would be discussed in earnest when they came forward

with the easement acquisition ordinance as it would address how the road, infrastructure, and pole placements lined up.

Mr. Skala asked if this design was contingent upon the road improvements or if the road improvements were contingent upon this design. Mr. Johnsen replied he considered them to be interrelated, but pointed out they tended to try to keep poles out of the proposed roadways and roadway plans. Mr. Skala understood they were assuming Nifong Boulevard would be a four lane improved road. Mr. Johnsen stated that was correct.

Ms. Peters asked for the time frame for finishing the project if they stayed with Option A. Mr. Johnsen replied they hoped to have the substation and lines in service by 2018.

Mr. Johnsen continued with the staff report.

Mr. Thomas asked if the load serving capacity could be increased with Option B by having another project that increased the 69 kV lines along the existing 69 kV route. Mr. Johnsen replied yes. He pointed out that cost had not been included in this project so they would have to fund future 69 kV improvement projects to make it happen.

Mr. Thomas asked about the \$13 million cost estimate that had been provided in 2013. Mr. Williams replied \$13 million was the initial estimate that had been put together in the 2010 time frame. It had since been updated, and was included in the bonding issue as \$15 million. Mr. Thomas asked if the \$13 million estimate had intended to include the Mill Creek substation to the McBaine substation or if the cost of Option A had gone from \$13 million in 2013 to \$24 million now. Mr. Williams replied the \$13 million estimate was from the 2010 time frame, and it was initially intended to cover both Phase 1 and Phase 2 of Option A. Those costs were now estimated at \$15 million and \$8 million respectively, or \$23 million. Mr. Thomas stated the \$13 million was what Council had based its decision on in 2013. Mr. Johnsen commented that all of the costs were fairly representative, and pointed out they had always represented Option A to be a more costly option. Mr. Thomas understood the cost for Option A had gone from \$13 million to \$24 million, the cost of Option B had gone from \$10 million to \$16 million, and the cost of Option B-2 had gone from \$12 million to \$20 million. It was a much smaller increase for Options B and B-2 than for Option A. Mr. Johnsen agreed Option A was a more costly option today, but from a planning perspective, staff felt they would get more for the cost with Option A.

Ms. Nauser asked if the project would be paid for with bond funds and reserve funds regardless of the option chosen. Mr. Johnsen replied the bonds would fund a portion of it. It was usually a ratio of 80-20 or 70-30 between bond funds and enterprise funds to pay for the project. Ms. Nauser asked for the amount shown when the bond issue went before the voters. Mr. Johnsen stated they would provide that information in a moment.

Mr. Johnsen continued with the staff report.

Mr. Thomas asked for the votes of the Water and Light Advisory Board in 2013 and more recently. Mr. Johnsen replied it was 3-2 vote recently, and noted he did not recall what it was in 2013. Mr. Trapp thought it had been unanimous with one member being absent from meeting in 2013. Mr. Thomas asked for the reasons the two board members had voted against supporting Option A recently. Mr. Johnsen replied he would hate to guess as he did not want to put words in their mouths.

Mayor McDavid understood there would be expense in building out the existing 69 kV system for Option B, and asked if that expense had been incorporated into the cost. Mr. Johnsen replied no.

Mr. Johnsen stated the bond included \$36.1 million for the transmission and substation project.

Mayor McDavid understood the comparison of the costs of Option A and Option B did not include the required build out of the 69 kV line. Mr. Johnsen stated that was correct.

Mr. Thomas asked if the estimates for Option B included the extra connections at the 69 kV level. Mr. Johnsen replied yes. Mr. Thomas understood it included those, but did not include the connection across to the Perche Creek substation. Mr. Johnsen stated Option B included the cost to connect into the 69 kV system. It did not upgrade the 69 kV system for future needs. Mr. Thomas understood that would require adding wires across to the Perche Creek substation. Mr. Johnsen explained it would involve adding wires or bigger wires, and noted an engineering analysis would need to be done.

Ms. Nauser understood the bond included \$36 million for Option A, and Option B would only cost \$16 million. Mr. Johnsen explained they had estimated \$18 million for the bond election for the Mill Creek, Grindstone, and Perche Creek interconnection, \$5 million for the substation, and \$1 million for the substation interconnection upgrades for the Grindstone substation and the Perche Creek substation. Ms. Nauser understood these numbers did not include the cost for building the new substation. Mr. Johnsen replied that was not included in the table presented. Ms. Nauser asked how much that would cost. Mr. Johnsen replied staff had projected it to be about \$5 million, and that was the amount put in the bond election material for it.

Mr. Thomas understood the \$2.425 under Options B and B-2 was part of the 69 kV network between the Grindstone substation, the Mill Creek substation, and the Hinkson substation. Mr. Johnsen stated that was correct.

Gregg Coffin stated he was the Director of Energy Management at the University of Missouri, and explained they managed all of the energy systems for the main contiguous campus and all off-campus properties. He commented that reliable electricity was extremely important for all of the campus facilities, whether on or off the contiguous campus. Most of the electrical energy for the contiguous campus was provided from the University's own combined heat and power plant. They purchased a portion of electricity on an economic basis through the MISO system, but they relied on the interconnection capacity to back up their power plant, so they had the ability to keep their main contiguous campus energized if there was a loss of generation. He commented that their electric demand had risen despite aggressive energy conservation, and they were at a point now where the electric demand for campus had outpaced the interconnection capacity they had through the City to the MISO system. Currently the electric demand for campus was approximately 50 megawatts, but their tie capacity was 40 megawatts. He explained they had commissioned a study to explore options to increase their tie capacity, and would like to continue their tie capacity with the City. Prior to MISO, the University had paid the City for transmission, and when the MISO system came into operation, they paid MISO who in turn paid the City for transmission in terms of access and the energy moved across the system. He noted their study had

indicated they would need additional capacity within the next few years, roughly 2020 or 2021. He commented that reliability was important and they wanted to ensure they built capacity to serve the campus for the long term. Based on their knowledge of the City's transmission system and these particular options, they believed Option A provided the community the best long term choice for electrical energy to serve the community. He noted it also supported the necessary capacity to allow the University to increase its capacity. If that option was not considered, the University would have to explore other options, such as the expansion of the City's 69 kV system to help serve its 69 kV connection or an outside connection to an outside utility.

Todd Culley explained he was the CEO of Boone Electric Cooperative, which was an electric distribution organization, so they dealt with the voltage after it came out of the substation. He stated he was present to offer support in favor of the additional transmission capacity, which he believed was overdue, and also wanted to politely express his surprise that 69 kV was being considered as a viable alternative. He introduced Chris Turner, who was the CEO of Central Electric Power Cooperative, the transmission supplier for Boone Electric Cooperative, and noted Boone Electric Cooperative was a part owner of Central Electric Power Cooperative. He explained Mr. Turner also sat on the Board of Associated Electric Power, which owned the generation assets that served Central Electric Power Cooperative, which in turn served Boone Electric Cooperative, and noted Mr. Turner had extensive electric utility experience throughout the nation. Mr. Culley stated Mr. Turner had most recently served as the Administrator of the Southwest Power Administration, where his boss reported directly to the President of the United States.

Mr. Thomas asked Mr. Culley why he was surprised 69 kV was even being considered. Mr. Culley replied the City served a high number of consumers per mile of line. Cooperatives were rural in nature and Boone Electric Cooperative had a fairly high density relatively speaking at ten consumers per mile, and they had not dealt with 69 kV lines in decades. They had moved to 161 kV lines because it was a more robust system. A 69 kV system might be less money, but that was for a shorter amount of time. It was more affordable to build a more robust system over a longer period of time.

Ms. Nauser understood Boone Electric Cooperative was using 161 kV lines when installing lines. Mr. Culley replied he would defer that question to their transmission provider, but noted that would be their standard. He explained he had come from a background that had not dealt with anything less than 238 kV. He felt 69 kV was for very rural areas where no other alternative was available.

Chris Turner stated he was the CEO of Central Electric Power Cooperative and noted he lived in Columbia. He explained he had extensive experience across multiple utilities across the United States, and would try to provide some standard utility practice background to this discussion. The bulk electric system was an interconnected bulk system, and there were systems connected to systems connected to systems. As a result, the reliability of one system affected the reliability of other systems. He pointed out Central Electric Power Cooperative was interconnected pretty strongly with the City, and there were contingencies on the City's system, which would impact customers of Central Electric Power Cooperative, so they were keenly interested in reliability and capacity improvements on the City's system.

He stated Central Electric Power Cooperative had over 1,600 miles of transmission line, mostly 69 kV and 161 kV, and their coverage area was from St. Louis to Sedalia and from Thomas Hill to the Lake of the Ozarks. It was a fairly old system, but it stretched across very rural areas. Many of their members had member ratios of 3-4 people per mile. They currently viewed 69 kV as old voltage utilized in the 1940s-1960s when towns were small and there were not many computers, but those days were gone. Central Electric Power Cooperative had in the last several years replaced a lot of their 69 kV lines in the St. Louis area with 161 kV lines. He noted they had a lot of old 69 kV line, and the vast majority of was being replaced with 161 kV line because it had more capacity. He explained they received about 2.5 times the capacity with 161 kV over 69 kV by paying only about 25 percent more. He pointed out it was a little different in city areas because cities did not gain as much capacity for the cost. He commented that national code dictated the bottom conductor of the line to be a certain height from the ground to give clearance for safety, and the higher the voltage, the higher the clearance. Since 161 kV lines would be higher than 69 kV lines, it would provide more reliability. In addition, it was safer and provided more operational flexibility. The additional capacity would help when maintenance work on the system was needed because it would not overload other elements. He reiterated that today very few utilities used anything other than 100 kV or above solutions to problems. In the world he grew up in, 230 kV and 500 kV were common, and they only saw a little of 115 kV. He noted Option A would be their preferred option from a reliability perspective.

Ms. Nauser asked where in the St. Louis area they had replaced their lines. Mr. Turner replied they served the northwest to southwest corridor around St. Louis through the Quiver River Electric Cooperative. Ms. Nauser asked if they covered any large cities like Columbia. Mr. Turner replied they served Boone Electric Cooperative, which served the surrounding the Columbia area.

Ms. Nauser asked if the City had received a letter from the Columbia Public Schools. Mr. Matthes replied the City had received a letter written by Dr. Stiepleman on behalf of the Board expressing that they had received concerns from parents and wanted to make the City aware of those concerns. They had also offered their assistance.

Mr. Skala asked if there had ever been consideration for an entire 161 kV loop in the south, and why it had not been advanced if it had been considered. Mr. Johnsen replied there was currently a 69 kV ring around the City, and it had been in place for a long time. In terms of forecasting, he believed someday with continued growth, specifically in the north and northwest sections of the service territory, they would likely do something similar between the Perche Creek substation and the Bolstad substation, which would essentially complete a 161 kV ring around the City. There would then be an innerbelt and outerbelt. Mr. Skala understood they were potentially discussing an Option B with 161 kV lines for the long term and asked if that was correct. Mr. Johnsen asked for clarification regarding his reference to Option B. Mr. Skala replied he thought there might be a need further south from the Nifong Boulevard route. Mr. Johnsen clarified he had been talking about north Columbia, not south Columbia.

Mr. Skala understood the Nifong Boulevard route was the 161 kV connector line, and asked if the potential for having an entire 161 kV line south of Nifong Boulevard coinciding

with either Option B or Option B-2 was anticipated for the future. Mr. Johnsen replied he thought Option A would cover them in terms of their service territory to the south. The City's exposure would be to the northwest side of the service territory because it would be the missing ring once this project was completed. Mr. Skala understood Option A would complete that need better than something to the south. Mr. Johnsen stated that was correct.

Mayor McDavid opened the public hearing.

Lezlee Leonard, 415 Bailey Drive, stated she was the Coordinator for the Village of Bedford Walk, which was located at the corner of Nifong Boulevard and Bethel Street. It was a brand new, age 55 and older, luxury senior living community. Through the planning stages, they had worked with the neighbors and the City to provide the most aesthetically pleasing community possible. As a gerontologist, she believed older adults looking to live in a senior community wanted a safe and beautiful space in which to spend their hard earned retirement dollars. She noted this proposed project would be completed in June, and the proposed power lines would be placed only 27 feet away from the building. She felt this project would impact them more than anyone else as their second and third floor residents would look out of their windows at the lines. She did not feel anyone would choose this view, so it would impact them dramatically. She implored the Council to find a safer option for the lines that would impact fewer residential communities while keeping Columbia beautiful and attractive. She encouraged and urged the Council to consider moving the lines to the other side of Nifong Boulevard or to consider one of the other options.

Mike Hall, 5423 Steeplechase Drive, stated he had been part of the public hearing process when this project was initially considered. He noted there had been numerous public hearings, and did not believe the Council should go back on their word. He explained they recently built a new house adjacent and close to Howard Orchard Road because they knew it was more of a rural setting with the benefit of being close to the City. He believed it had been clearly demonstrated by Columbia Water and Light that Option B was inadequate, insufficient, and wasteful in terms of money. He commented that decisions had been made based on fact and the public input process. He pointed out that in addition to the impact to Steeplechase Estates and other existing subdivisions, numerous other subdivisions had been developed along the Option B route since the decision was made, and those included Oak Park, Barcus Ridge, Cobblestone Cottages, The Gates, and Deerfield Ridge. He reiterated public input had been received, Columbia Water and Light had made engineering sound decisions, and the Council had previously adhered to due diligence, and implored the Council to keep its word and proceed with Option A. He pointed out Option B was rural and would require new easements, condemnation processes, etc. costing the City more money and delaying the project. In addition, it would not meet the reliability standards.

Tamara Stam commented that she believed the engineers had done a great job in representing the engineering side and understood the need for 161 kV lines, but felt what was missing was input from the people that lived in the area. They were concerned about aesthetics and the environment where they lived. She thought the burying of lines should be considered, and felt they needed photographs of how the project would look when completed. She stated the people that lived in the area could not live with ugly wires. They wanted them

buried. She noted the matrix was heavily biased and there was not any validity or reliability to it. She stated it was not representative of those in the area of the lines.

Randy Curry, 1104 Merrill Court, commented that he was a high voltage expert as he had worked at 1,000 volts and 10 million volts, and noted they had always taken into account risk assessment, which he did not think had been done for this project in terms of biological effects, impact of the fields, etc. He wondered what the impact would be at peak load. He explained he had worked in industry in California for eleven years, and there had been an incident whereby a high voltage transmission line was placed within 60 meters of a school and the cluster of leukemia increased. He commented that there was supporting data on both sides of the issue with regard to whether two milligauss was sufficiently low for biological effects. These lines would be placed along Nifong Boulevard, which had a very crowded residential section, and he did not believe there would be sufficient distance there. He was concerned by the fact the City was not specifying the current carrying capability of the lines or the megawatt capability, and noted he would like to see those numbers in order to run his own calculations. He commented that he was working with implantable defibrillators and felt the magnetic fields needed to be assessed because the defibrillators were designed to turn on and off via a magnetic field, so the lines could affect the electronics. This was important since retirement homes and a Boone Hospital Clinic would be located nearby, and because there could be a potential effect any time a patient drove under the transmission lines. He noted California had changed its easement requirements based on the situation at the schools, and the lines were moved to 100 meters from schools for 110 kV lines and 345 meters from schools for 220 kV lines. This would mean a distance of 192 meters for 161 kV lines.

Jerry Kennett, 4614 Copperstone Court, explained he was speaking on behalf of the Trustees of Boone Hospital Center as they had owned property at the corner of Forum Boulevard and Nifong Boulevard for decades before there were tentative plans for power lines to be placed along Nifong Boulevard. He commented that they were investing \$20 million into the property and were not excited about power lines running along their property or near the Molly Bowden Memorial Park, which would be on the property as well. He stated they did not know whether the power lines created an increased risk of childhood cancer, but understood extra exposure could lead to cancer. There were articles on both sides of the issue. He believed it would be safer to not place the lines near schools and hospitals if there was conflict, and did not feel lines should be placed in areas that had already been developed. He noted the Trustees of Boone Hospital were asking the Council to move the power lines to a different location.

Jeanie Scott-Pillen stated she would live under one of these power lines as she lived between Bethel Street and Forum Boulevard and Green Meadows Road and Nifong Boulevard. She commented that she was concerned for her health and the health of her neighbors and the wildlife that followed Mill Creek in terms of cancer, abnormal EEGs, and altered biorhythms. She noted she had seen large steel poles in Iowa topple like dominos during a huge ice storm. She wondered what would happen to her property value, and whether she would be able to sell her home when she retired in a few years. She asked if anyone on the Council wanted to live under power lines.

Travis Miller commented that he was a resident of the Cascades subdivision and stated he was in support of the Council's decision from its previous vote made in 2013. While he sympathized with the individuals affected by Option A, he had other concerns, to include the notion that a small group of people could make a lot of noise to wipe out a lengthy process of decision-making. He stated there had been multiple meetings and announcements in the paper. The local civic government had run its course. A small group of people did not like the outcome and would now scream and make accusations. This was essentially saying that his opinion and the opinion of his neighbors were meaningless. He commented that he was not sympathetic to the people talking about property values and health risks, whether real or perceived, because they were essentially asking for it to be placed in his yard or in the yard of someone else. He pointed out his neighborhood was not even serviced by Columbia Water and Light. They were serviced by Boone Electric Cooperative. He asked why they should take the brunt of the downside of the project for other people to have power. He stated the Council, as elected members, had the duty of fiscal responsibility to their constituents regardless of whether this project physically or geographically impacted their respective wards, and reversing this decision at this late juncture was not fiscally responsible. He commented that the subject matter experts had spoken, and they supported Option A. He believed this project should be decided by subject matter experts instead of individuals that were making a lot of noise because they did not like the outcome for their self-serving reasons. He asked the Council to stand by its previous vote because reversing the decision would not be based on any moral, ethical, or legal reason. It would be a knee-jerk reaction and not good responsible governance by elected officials.

Jerry Daugherty, 3871 S. Forest Acres, stated he moved to Columbia in the fall of 1965 to attend the University of Missouri, and graduated in 1970 and had never left. He had built his home in 1988 and still resided there. He explained he was a contractor and had also built commercial properties and homes for people that lived the area of Option A, who were concerned about the power lines and the risks associated with electromagnetic fields. He stated he and others he had spoken with were opposed to Option A.

Michael Sykuta, 4103 Watertown Place, commented that he was an economist on faculty at the University of Missouri, and had read the project report that was made available on Friday with regard to the real estate effects. He was concerned the Council was not making decisions based on accurate information, and believed the staff had admitted to this in terms of the costs of the projects and what those costs actually included. He stated economic research had consistently demonstrated the real estate home values in the presence of high voltage lines and the visibility of towers had decreased by 5-20 percent. He pointed out homes were the most valuable asset most people had in their wealth as a form of retirement, and the decrease would be disproportionately placed on those with loans because lenders were not the ones that would bear the risk of a decrease in equity. Property values associated with this project could likely wipe out a significant portion of many families' long term savings in the form the value of their homes. He had identified about 260 properties lying immediately along the service area with a combined total value of over \$63 million, and believed this project would reduce taxable property values by \$3-\$12 million dollars if it

moved forward. This meant 260 families would again pay for the cost of the proposed project on top of the explicit dollar outlay the City had envisioned. He felt this was an inequitable distribution of costs for a project that was intended to support the entire community. He pointed out this would be true regardless of the option. He noted he lived along Option A, and would not prefer Option A to move forward above ground. He would also not prefer Options B or B-2 to move forward above ground because property owners along any of those lines would bear a disproportionate cost of the total community cost of this project, which was more than just the dollars the City paid. He encouraged the Council to protect the property values and life savings of individuals throughout the community and incur the costs of the more expensive underground treatment, and for those costs to be paid across the community by all taxpayers in the community.

Mr. Thomas asked if Mr. Sykuta calculated the annual loss in property taxes. Mr. Sykuta replied the numbers he had shared were the present value of lost future revenues, and the cost to the School District to be \$1.5-\$6.4 million based on the estimates he had calculated. Mr. Thomas asked if that was over multiple years. Mr. Sykuta replied it was the present value of the expected future tax discounts, so it was the perpetuity value of the decrease in taxable property. He thought the cost of property taxes as a whole was around \$2.5-\$7.5 million. Mr. Thomas asked if there was a way to translate this to dollars per year in lost property taxes collected. Mr. Sykuta replied yes, but noted he could not recall the numbers off of the top of his head.

Wilma Rajcher commented that she had come with the idea of being a proponent for Option A, but after listening to the comments tonight regarding the leukemia cases in California, she wondered if they had all of the information. She wondered if it was the only school that had these high-powered lines and students with leukemia, or if there were other instances in this country or in Europe with this problem. She thought that needed to be known before they decided how to proceed because none of them would forgive themselves if it were true. She did not feel either Option B or Option B-2 was right because they were 69 kV systems instead of the 161 kV system, and 69 kV was only for rural areas. She agreed burying the line was a possibility, but asked if burying the line would alleviate the health risk. Mayor McDavid replied it would not alter the electromagnetic field. Ms. Rajcher understood burying the line would not help. Mr. Thomas pointed out it would help with aesthetics and property values, but not with health. Ms. Rajcher stated it was the health issue that she was most concerned with, especially with regard to the Village of Bedford Walk as she did not realize the line would only be 27 feet from the building. She suggested the other side of the road be considered and for this issue to be thought through.

Mr. Thomas asked staff to respond to the issue of 27 feet. He asked if there was a minimum distance the lines would be designed from the buildings. Mr. Johnsen replied they only had preliminary placements so it would be hard to discuss final placements. Mr. Thomas asked if there was a minimum distance to which they would always adhere. Mr. Williams replied the National Electric Safety Code regulated it. Mr. Keim of Segal, Inc. explained he did not have the National Electric Safety Code value in front of him now, but noted it would be the minimum. He thought it would allow less than 27 feet. Mr. Matthes stated it was important to remember that process was not complete, so final placement was

not a decision that had been made. Mayor McDavid understood Bedford Walk could lobby the City to place the poles on the other side of the street. Mr. Johnsen stated that was correct.

Mr. Ruffin asked if it was possible to move the lines across the street. Mr. Matthes replied he thought the pole placement process would end up deciding the locations, to include which side of the street. Mr. Johnsen explained the purpose of what they had done was to provide a preliminary idea and to obtain community feedback with regard to concerns in an effort to try to address the concerns. He agreed it was possible. Mr. Ruffin understood the engineers had done soil testing to approximate where the poles would be best suited to be placed. Mr. Johnsen stated that was correct, and pointed out soil testing had been conducted on both sides of the road. They had also researched easements, utilities, etc. on both sides of the road.

Ms. Nauser commented that she did not understand how national standards could indicate that poles less than 27 feet from a building were safe. Mr. Keim of Segra, Inc. explained the standard was based upon the distance from the wires. Mr. Skala understood the standard of 27 feet or less solely addressed health risks, and did not address aesthetics. Mr. Keim stated that was correct. Ms. Nauser stated it defied logic for it to be considered safe in her mind. Mr. Keim noted he did not know the measurement of what had been taken in terms of whether it was from the pole or from the wires. He commented that the EMF value dropped immediately as one was further away, and that the National Electric Safety Code was addressing electrical clearances to buildings, the ground, and other obstacles around the line. There would be a vertical and horizontal clearance from the various obstacles, whether a building, sign, etc.

Jackie Vandelden stated she lived in the Heritage Woods subdivision. She commented that the Columbia Council of Parent-Teacher Associations (CCPTA) represented PTAs across the district, and in 2010, they had supported a resolution which asked the City to avoid schools when possible, or at a minimum to place high voltage transmission lines at least 300 feet from public schools, and Option A did not comply with this resolution. Options B and B-2 would comply as no schools were involved. She noted the Council should have received a letter that was co-signed by Columbia Public Schools (CPS) Superintendent Stiepleman and Board President James Whitt indicating that CPS had heard from many families concerned about high voltage lines being close to five schools, Mill Creek Elementary, the Career Center, Gentry Middle School, Rock Bridge High School, and Rock Bridge Elementary, and would like to work with the City to come up with a solution. She asked the Council to reject Option A and to find an alternative that complied with the CCPTA resolution. She also asked the Council to consider a hybrid between the three options by running a 161 kV line from the Grindstone substation to the Mill Creek substation, and a 161 kV line from the McBaine substation to the Perche Creek substation. The third leg of Option A could still be revisited in 2020 to connect the McBaine substation to the Mill Creek substation with 161 kV line, and this would allow them to avoid the most densely populated areas.

Larry Schilke, 7000 Sabine Drive, commented that he lived in Boone County and would be affected by Option B or Option B-2. He noted everyone that had spoken tonight

was concerned about EMFs, property values, or net worth, and asked the Council to try to come up with a solution that addressed all of those concerns. He stated Option A with above ground lines might be the best engineering solution and economic solution, but he did not feel it was the best for the residents that were affected by the lines. He thought the idea of burying the lines had not seriously been considered, and depending on the situation those costs could be anywhere from 4 to 20 times the cost for above ground lines. He did not feel they knew how much it would cost to bury the lines. In addition, there was a lot of information with regard to shielding the lines so EMFs were not above ground or being directly buried with only concrete on top. He commented that many of the examples were from Canada or Europe, but he thought they should be considered to address the concerns they all had.

Sue Thomas, 5251 W. Route K, stated she had attended these meetings since the beginning, and asked the Council to consider burying the lines regardless of the route chosen. She noted the Wisconsin Public Service Commission had a study that indicated soil was an impediment to EMFs, so burying the lines was a solution in Wisconsin. She commented that she also agreed with Mr. Sykuta in that the costs should be borne by those using the electrical service as she would not receive any benefit from these lines, but would bear the expense of lost property value. She stated she did not feel the cost of easements had been adequately addressed in the presentation and wondered if those impacted would receive payment.

Linda Cheatham, 4150 Bethel Street, stated she was representing the seniors at Bethel Ridge Estates and Gentry Estates, and noted they loved where they lived and did not want to look at ugly poles. She thought it would be worthwhile to consider burying the lines at it would solve a lot of the issues the City was having with the community. She asked those from the Bethel Ridge Estates and the Gentry Estates who were opposed to the presence of the poles to stand, and approximately 25 people stood. She commented that she was not familiar with the health issues and understood it was more expensive to bury, but noted they preferred to not have to look at the ugly poles. She was also concerned the owners of Bethel Ridge Estates and Gentry Estates would charge the residents more if their property values decreased.

Luke Heim, 5605 Autumn Ridge Court, explained he was representing the Thornbrook Homeowners Association and noted the Board had unanimously recommended Option A. He pointed out this process had started in 2007 and Option A had been approved in 2013. The best case scenario, if Option A was allowed to move forward, would be for the project to be completed by 2018. If the City had to start over with any other option, it could put them in the position of having energy insecurity. He understood no one wanted ugly poles in their backyard as he would not either, but he also did not want to see power outages in Columbia as he felt that was unacceptable. He agreed undergrounding would be aesthetically pleasing, but understood it would cost more, and did not feel it would get them where they needed to be in the long run as quickly as was needed.

Keith Sappington, 2303 Redmond Court, stated he was a Cascades Homes Association Board Member, and commented that no one person's property was valued any more or less than anyone else. He thought it was unfortunate that this issue had pitted neighborhoods against one another. He pointed out this issue had been vetted. There had

been a couple years of public testimony and hearings, and Option A had been chosen because it was the most viable option for the City. It would go down a major thoroughfare where distribution lines already existed, so the property values of many were likely already impacted. He thought the Council needed to stay with the decision it had previously made instead of reconsidering it as it would cost taxpayers another \$3-\$5 million.

Tad King, 2300 Port Townsend Court, commented that he lived the Cascades subdivision and stated he was in support of Option A. He thought they could all admit that government, even at the local level, could be inefficient, and there was no solution that would make everyone happy. From a fiscal responsibility standpoint, a lot of money would be wasted if they did not proceed with Option A. He believed there were more in favor of Option A rather than any other option and referred to a couple of online petitions. He was glad to see the local government taking on a tough issue in the community, and was pleased to see the community was involved in the process. He wondered where this opposition was four years ago.

Paul Hopkins, 4309 Watertown Place, understood 39,500 people utilized electricity, and about 1,500 returned a survey, and noted this was less than four percent, so he was not sure how City staff could say 75 percent of the people chose Option A. He commented that he did not realize huge poles would be utilized when he had attended the meeting at Rock Bridge. He understood Option A was the least expensive model and that the City thought they were doing what was right for the community, but he believed it was wrong because they were pitting neighborhoods against one another. The larger neighborhoods would be able to obtain the most signatures. He did not feel the easiest route was always the best. He recommended a review of this situation, and to get it right for the community even if it took a couple of years longer.

Jim Knoll stated he lived in the Grand Oaks subdivision, which was behind Woodcrest Chapel at the corner of Nifong Boulevard and Sinclair Street, and noted it was never too late to do the right thing. He did not believe they had to stick with how they voted several years ago. He thought they needed to weigh what was best for the community and do the best they could. He did not feel they should stay the course because of a previous decision where they might not have had all of the information. He pointed out that when they initially reviewed the options, Option A had three legs, and every comparison tonight was based on those three legs against Options B and B-2. He thought it would be a good idea to look at Option A without the third leg for a valid comparison. He believed they all wanted more power and felt there was middle ground for a better option.

Eugene Elkin, 3406 Range Line Street, wondered what the potential was for the high-powered lines to come down during high winds, and what would be impacted if they were to come down. He suggested the City hire outside electrical experts to ensure it was done correctly. He asked why the City had to supply Fulton, Missouri, and felt this might not be necessary if Fulton was no longer served. He also wondered if the lines could be buried deeper than normal.

Edgar Ailor, 1990 W. High Point Lane, stated his biggest concern was the health of children and grandchildren. The electrical power industry would argue there was no study that proved the exposure of the electromagnetic field of a 161 kV transmission line caused

childhood leukemia, but the predominance of the epidemiological evidence already indicated the electromagnetic field of a 161 kV line would cause childhood leukemia. In one night's search, he had found eleven articles suggesting the correlation. He commented that they did not have to work hard to think of instances where ignoring epidemiological evidence created disastrous results, and provided the tobacco industry as an example. Columbia had banned smoking in its restaurants and bars to protect the workers for that very reason. He also provided the change in water source in Flint, Michigan as an example as children had been poisoned with lead that would drastically affect their health and result in DNA changes in their offspring for generations to come. The State Department had ignored and denied the epidemiological evidence for over a year. He asked the Council to vote no on Option A in order to protect the homes and neighborhoods that would be in close proximity to the transmission lines, and noted he would rather pay higher utility rates for the next 30 years than to ask the children of the community to pay with their health.

Suzie Ailor, 1990 W. High Point Lane, commented that her concern was also the health of children. While she might not care to look at huge, 8-foot wide power poles and lines, that was not her concern. She stated the information the Council was given was not totally accurate because they were not given the details of some of the studies. She explained she had asked a representative of Segal, Inc. his thoughts on the health risks during an information meeting, and that representative had indicated there was not a problem because childhood leukemia was cured now. As a physician in a cancer hospital, she did not feel that was an appropriate response. She understood there were some genetic cases of leukemia, but questioned what happened with the genetics that was environmental. She felt the lines should not be installed next to schools because they did not currently know the impacts. She reiterated she understood they could not cure or prevent every case of childhood leukemia, but noted they had a chance of preventing some and thought that was what they should remember. She asked the Council to consider what they were not told. She pointed out everything started with the epidemiology of something, which was when bigger studies needed to be done to determine the cause. She understood the City needed more power, but suggested a different route be chosen. She noted even Boone Electric Cooperative avoided placing transmission lines by schools when possible.

Rachel Jokerst, 2601 Pine Tree Lane, stated she had resided in this location for eleven years, and her children attended Mill Creek Elementary School. She commented that she had driven the route today in an attempt to take an objective view of the proposed options. She passed around photos of homes next to distribution poles, and those poles were well within 50 feet of the homes on the route for Option A. The poles along the routes for Options B and B-2 would be well beyond those distances. Over two hundred homes would be affected by Option A, and fewer would be affected by Options B or B-2. She understood no one wanted the lines in their backyards, but felt they needed to be objective in terms of the loss of revenue and the safety of children. Nifong Boulevard was a pedestrian corridor whereby people ran, walked, etc. She noted children walked to school along this route. Options B and B-2 were not used in this manner because there was not a shoulder or sidewalk on which to run or walk. She asked the Council to take that into consideration when making a decision.

Henry White, 2814 Wild Plum Court, commented that all electromagnet waves were scattered by magnetized particles, and stated it was false to say a buried line did not give off anymore electromagnetic radiation at 60 hertz than it would in air because it was impossible due to physics.

Mark Blount, 1408 Dunbar, commented that they had heard from two physics professors at the University of Missouri indicate how ludicrous it was to think the dirt did not affect magnetic fields. He asked the Council to consider the children as that was all he cared about as he knew he would lose value in his property regardless. He referenced Fred Vom Saal who had discovered BPA caused problems, and understood he had received death threats from industry people as a result of his findings because they did not want to hear what he had to say. Now, the Environmental Protection Agency was looking at what Canada was doing with BPA in plastics. He noted in the old days people had their feet x-rayed for shoe sizes, and this was no longer done due to the risks. He stated high powered lines should not be located next to children.

Mr. Thomas understood Mr. Blount and Mr. White felt burying the transmission lines would reduce the intensity of the electromagnetic fields. Mr. White stated he believed it would because any electromagnetic wave was scattered from a magnetic particle and that could be calculated. Mr. Thomas asked how much of a difference it would make. Mr. White replied that would depend on the soil. If there were iron particles in the soil, they would scatter all electromagnetic waves at any frequency. The scattering was greater for higher frequencies, but there was scattering for even low frequencies at 60 hertz.

Ray Batt, 4713 W. Timber Ridge Road, stated he resided in the second home off of Route K, and submitted a petition with signatures of people that were opposed to Options B and B-2. He noted 98-99 percent of the names on the list were of people that would be directly affected by Options B and B-2. He agreed this project had pitted neighborhoods against one another, and thought the lines should be buried and for the costs to be spread among everyone. He explained that no one wanted to lose value in their property, and he had heard a loss of 20-30 percent.

Pat Stewart, 4902 Silver Cliff Drive, referred to a study done by the National Institute of Environmental Health Sciences and the National Institutes of Health on electric and magnetic fields associated with the use of electric power, which had indicated there was a link between EMF and childhood leukemia, but that the association was weak and it was not clear as to whether it represented a cause and effect relationship. The studies these organizations had reviewed were not from only the United States as some had been done in Europe and Canada. She commented that they were only looking at epidemiological data. In the review of tissue culture in animals, they had determined exposure to EMF did not have any effect on cell growth, DNA repair, etc. There was not an increase in cancer even when the animals were predisposed to cancer. She noted she had two grandchildren that would attend Rock Bridge Elementary so the safety of children was important to her, but she felt all of the studies needed to be reviewed as this study showed the association was a weak association at best.

Jason Swindle, 3701 Hunter Valley Drive, believed the process had been flawed as many people felt the lines would be buried, all three legs of Option A would be completed instead of only two legs, etc. He commented that he felt they should do no harm, and

wondered if there was enough harm to re-evaluate the situation. He stated there appeared to be a scaling problem with the model displayed, and that had not been shown to the public previously. He thought they should be shown the diagrams of what this would look like. He agreed with the comment of burying the lines and spreading the costs throughout all of the taxpayers. He reiterated he thought this project should be re-evaluated.

Jeremy Brown explained he was President of the Deerfield Ridge Homeowners Association and noted the subdivision was located at the corner of Scott Boulevard and Route K. He stated they did not want Options B and B-2.

John Larson, 4303 Esther Lee Court, commented that the test bores had been done on the west side of Scott Boulevard, and that was where all of the utilities were located in terms of water, electric, gas, cable, etc. He was concerned about these lines being placed near all of the other utilities as it was dangerous. He noted a test bore was done about ten feet from one nearby house. He understood this would be re-evaluated and it would likely be moved further south. He thought the entire project needed to be reconsidered as there were too many loose ends and items to consider.

Karin Foley stated she lived in the Country Woods subdivision and asked for more information as some of the images of what the poles would look like were misleading. All of the images had been described as presuming the undergrounding of the distribution lines, but she was not sure funding for burying the distribution lines had been budgeted. Since Option A had been approved without undergrounding, she thought the images were misleading, and wanted to see images with the distribution lines as they existed today with the new poles. She felt that would help in the decision-making process.

Corey Zacherl stated he lived in the Grand Oaks subdivision and had a daughter that attended Mill Creek Elementary. He commented that he thought the survey should have been mailed separately, and should not have been included with the utility bill. He understood about 130-150 people in Ward 5 had voiced their opinion through the survey, which was only a small fraction of the population. He felt the children should be the most important factor in the decision-making process. He stated he thought the survey was misleading, and that the scoring to cross a stream should not be equivalent to being near a school. He felt the survey should have been sent out multiple times so they had more responses. He asked the Council to consider burying the lines or an alternative route. He commented that he had moved to southwest Columbia because it was beautiful, and believed this project would make it the ugliest part of town. He again asked the Council to consider an option other than Option A.

Louie Mousadakos stated he lived on Forum Boulevard and had two young children so he was concerned about the lines being near schools. He thought there had been a lot of misrepresentation, and did not feel the Council had all of the information when they had previously voted on this issue. He commented that the survey had asked citizens if they wanted better power in Columbia, and of course they did, but they might have ranked that and other items lower if it meant high powered lines near schools and homes. He stated he would have likely completed the survey differently if he had known what this project would entail, and thought the Council might have been misinformed then as well.

Roger Fries, 3512 Hedgewood Drive, commented that he would not be closely affected by these lines. He explained he had been a real estate appraiser for 30 years, and believed houses that backed up to the Nifong Boulevard and Grindstone Parkway corridor were affected 10-15 percent by the high traffic count in their backyard. As a result, he did not feel this proposed project would affect the property values of those properties to any great extent. He thought making Vawter School Road and the Grindstone Parkway corridor four lanes would affect those properties in terms of value more than the power lines. He also felt rolling brownouts would affect property values more than power lines. In terms of undergrounding, he did not believe it was fair to ask people that lived on West Ash Street to pay for the aesthetics for people on Grindstone Parkway through their utility bills. The City's utility rates were already amongst some of the highest in the State, and Columbia already had the highest cost of living in the State of Missouri. He did not feel they needed to add to this.

Jennifer James, 605 Sudbury Drive, stated she was the President of the Bedford Walk Homeowners Association and noted she did not agree with Mr. Fries regarding property values. She commented that she had been involved with this process from the very beginning and had attended all of the meetings, but was hearing some things for the first time tonight, such as the fact they were now talking about two legs instead of the entire project. She noted she had asked about placing the poles on the other side of Nifong Boulevard when she had attended the meeting at Rock Bridge, and four Water and Light Department staff people had told her it would be impossible because too much was buried on the other side. Earlier tonight a staff person had indicated that decision had not yet been made, and that it could possibly be considered. She stated many of them were still interested in undergrounding the lines, and asked the Council to not be in a hurry and to take the time to make the right decision. She stated she was uncomfortable with where they were now after having been involved in the process for years, and noted she was not sure what she should oppose any longer. The information continued to change so they did not know what they were deciding. This involved residential corridors, children, and the biggest investments people made. She asked the Council to not make a quick decision as they needed to know what they were deciding on first.

Detelina Marinova, 4107 Nashua Court, commented that she represented concerned citizens and explained they wanted to share information they had received after filing a Sunshine Law request in December with the Council because they felt the information provided to date had been incomplete and misleading. She stated that at the November 2015 meeting, Columbia Water and Light staff had reported \$7.1 million had been spent on this project, and \$5.6 million had been lost, but the actual invoices they had received from the City had revealed the total amount spent was about \$6.1 million, and only \$1.9 million had been lost. She described how they arrived at those numbers. She displayed a table with the costs moving forward for the three options, and pointed out the cost of Option A was significantly more than Options B and B-2. She noted Option A also affected the most residents and it traveled by five schools, nursing homes, pre-schools, and hospitals. Options B and B-2 would affect fewer residents, and 161 kV lines would not travel by any schools, nursing homes, pre-schools, or hospitals. She stated there was widespread opposition to

Option A, and submitted a petition signed by over 1,600 residents. She asked the Council to reject Option A. She asked those in support of rejecting Option A to stand, and approximately 40 people stood. She also asked the Council to adopt an adequate engineering solution with the least negative impact on the community, which she believed to be Options B and B-2. She commented that this was an issue for all Columbia citizens as they would pay for the project through their rates.

Melinda Jenne, 2735 W. Mill Creek Court, explained her home was not affected by any of the routes, but noted she was also asking the Council to reject Option A. She provided a handout and commented that the process had been flawed from the beginning. Responses to the survey were a critical part of developing the decision matrix, which was subsequently used to support the route selection. She noted the residential areas most impacted by Option A were customers of Boone Electric Cooperative, and unless the Boone Electric Cooperative customer lived within 250 feet of a route, they would not have received a survey or communication about this public hearing. She stated a Water and Light Department spokesperson had told her that they had not had the time to communicate with all Boone Electric Cooperative customers before the public hearing even though they were significantly impacted. She displayed a copy of the decision matrix and noted the City had added arbitrary importance factors. She understood the City had suggested avoiding wooded areas was twice as important as avoiding schools within 200 feet, and wondered why the wooded areas were considered more important to avoid than children. She commented that she felt the City had added questionable numbers to all of the options. The City's numbers suggested Options B and B-2 impacted twice as many schools as Option A, which had five schools on the route while Options B and B-2 did not have any schools that would be impacted by high voltage power lines. She noted Option A also had a 23 percent more negative impact than Options B and B-2 until they had added all possible positive points for longevity and reliability to Option A. By not giving Options B and B-2 any positive points, the City was able to suggest all routes were within one percentage point of each other making Option A appear to have roughly the same negative impact on the community as Options B and B-2. She thought Option B should have received positive points for being the cheapest and Option B-2 should have received positive points for being the route to impact the fewest homes. She stated she felt the numbers were achieved to make Option A more desirable. She believed the role of the Columbia Water and Light should have been to provide facts to the Council with regard to the three options, and to then allow the Council to make the final decision for what was best for the community as the elected officials. Instead, Columbia Water and Light took the role of advocating for Option A, which created a skewed process.

Kim Fallis, 4805 Muirfield Court, stated she did not live along any of the routes, but did not feel the current plan was the right thing for the community, and asked the Council to reject Option A. One consideration for the project was the option that would provide the best long term solution, and when Council voted in 2013, they had voted on Option A in its entirety as had been originally presented by Columbia Water and Light. At some point after that vote, Columbia Water and Light decided to remove the third leg, which would connect the Mill Creek substation to the McBaine substation, from the bond, and according to the contract with Segal, Inc., Option A would be revisited in 2022 to address the third leg. As a result, the

City would ask for another bond in six years to complete the project. She noted Columbia Water and Light had suggested the existing 69 kV lines would need to be upgraded in 10-20 years if Option B or Option B-2 was chosen, and felt this estimation was arbitrary when considering the 69 kV lines at the Perche Creek substation had been in place since 1968. She stated Columbia Water and Light had anticipated peak consumption would reach 378 megawatts by 2014, but peak consumption on a hot day this past summer was only at 271 megawatts, which was well below their estimations. She understood the City's energy consumption over the last ten years had been relatively flat, and all options would provide the same amount of electrical capacity. As a result, she felt the alternatives were a better choice because they were less expensive, provided the same additional capacity, met the City's need for redundancy, and intruded on the least amount of people. She believed placing a project such as this through a densely populated area, past five schools, multiple daycares, and retirement communities was unprecedented. The only similar example provided by Columbia Water and Light was in an area in St. Louis. She commented that she had spoken to engineers at Kansas City Power and Light (KCPL), Empire Electric, and Excel Energy, and all had indicated that minimizing the impact on an established neighborhood was one of their highest priorities. The KCPL engineer had indicated they had chosen Troost Avenue because rural options were not readily available in Kansas City and Troost was 70-75 percent industrial. She thought the right decision should be the one that provided adequate engineering while intruding on the least people, and Options B and B-2 fulfilled that need.

Drue Duncan asked the Council to reject Option A. He understood engineering was an important component of this decision, but did not feel it should be the only component. They needed a solution that would adequately solve the reliability problems, while taking into account the overall impact to the Columbia community. City staff had indicated that Options B and B-2 technically solved the current reliability needs. Option A would impact 320 existing homes, while Options B and B-2 would impact 84 and 76 homes respectively. There were also 123 retirement units within 300 feet of Option A. He noted Option A would impact five times the number of people as Options B and B-2, and Option A was the only option that would have 161 kV lines running by five public schools. The alternative options were much less intrusive. He understood City staff had indicated there would be a 4-5 year delay if they chose an alternative route, and stated he was not sure how they could come to this conclusion when Sega, Inc. had only worked specifically on Option A for thirteen months. In addition, it had only taken Sega, Inc. two months to develop Option B, and Option A was already two months behind schedule due to unanticipated engineering problems. He felt it was disingenuous and not accurate for City staff to suggest changing routes would add 4-5 years to the project. He commented that Columbia was a great community, and believed they deserved better than placing a 161 kV line through a residential neighborhood. He stated he also thought it was disingenuous to have included undergrounding the line in the survey when they later indicated the cost would be too high to do. He did not feel that question should have been included in the survey.

Carolyn Hawks, 3212 Westcreek Circle, explained she did not live on any of the routes and stated she believed the selection of a power line route was more than an engineering issue as they all agreed it should have adequate engineering. She noted all three options

being discussed tonight provided adequate engineering, and felt they needed adequate engineering and not excessive engineering. Over-engineering was not necessary and it was not cost-efficient. She understood City staff had been tasked to present the Council with viable options for new power line routes, and had not been instructed to advocate for one or the other. She believed tonight the Council needed to decide which option intruded on the fewest people and which option cost the least amount of money. She commented that Option A impacted five times as many people as Options B and B-2. Power providers in Minneapolis, Kansas City, and Joplin had all stated they would never run high voltage lines through a residential area unless they had no other option. The City had two other options, and those were Options B and B-2. She stated Option A also cost the most, and had numerous and expensive engineering issues from the too crowded and too narrow utility easements to bedrock difficulties, which would likely lead to additional future costs. She believed it was the obligation of Council to consider the most economic option possible, which was Option B or Option B-2. She asked the Council to vote to reject Option A.

Hank Fisher, 3700 Cross Timber Court, commented that he had worked in public education in Columbia for about 31 years, and had been involved in the purchase of the site for Mill Creek Elementary School. He stated they would not have considered purchasing that site from the University of Missouri had they had any idea they would be considering a high voltage power line by the school. He thought the School District was against Option A, but was hesitant to oppose what they believed the City wanted due to their relationship with the City. He understood a pole would be placed in his backyard as well, and had repeatedly asked where he could see a similar pole without any response other than a picture until this week.

Matthew Murphy, 2411 Bremerton Court, stated he had been in Columbia for a long time and recalled when Rock Bridge High School felt like it so far outside the City. If that were today, Option A would not make sense, but the landscape of Columbia had changed significantly. Nifong Boulevard was no longer a street that was away from the center of town. It was in the heart of a community with a population of over 100,000 people. He understood many years ago, people likely purchased land thinking it would always be out in the middle of nowhere. There was now a high demand for electricity and Option A was a plan for the future. It was the most cost-effective plan for the long run. He commented that he had continued to move due to growth and understood it was a part of life.

Russell Crane, 3809 Timber Run Drive, explained he had previously spoken in favor of Option A as he was doing today, and noted the Boone County Commission had written a letter indicating it was in favor of Option A. He did not feel this issue was an issue concerning population density as he felt it should be about equity. He did not believe it was fair for someone to not want it in their backyard and to then ask for it to go in someone else's backyard. He pointed out there had been a civil discussion for two years and "not in my backyard" had not been brought up as it was not a part of the discussion as that had been agreed upon, but today it was a theme. He felt it needed to be removed from the argument because no one wanted it in their backyard. They all had a civic responsibility, which meant they were sometimes required to have something in their backyard. He commented that a siren was placed on his property five days after he moved into his home, and he understood

it was needed for the safety of everyone. It was not an issue of aesthetics or a question of misrepresentation as no one intentionally tried to misrepresent. He stated he had participated in fourteen meetings and had done research on the effect of EMFs and property values. He noted he did not feel Mr. Sykuta had shown both sides, and thought the economics would show he would be impacted more than those in more populated areas. This issue was about which option was the most reliable, provided for a long term solution, and the costs associated with the long term solution. He pointed out there were lots of costs associated with the project, such as the cost to the University of Missouri, the City, property owners, businesses, etc. when the electricity went out. Option A had been the best option for two years, and remained the best option. He stated he believed the County should have input if the City decided to go with Option B or Option B-2 because it would affect County residents.

Cory Ridenhour explained he represented the Cascades Homes Association, Thornbrook Homeowners Association, and Oak Park Homes Association, and submitted a petition of affected homeowners if the route was changed from Option A to Option B. He commented that the three associations were in favor of and had actively participated in the process that had resulted in the selection of Option A. The purpose of the meeting tonight was to discuss new information that had not come to light previously, but the same topics, to include EMFs, had been discussed. He noted the florescent lighting in schools were 20 milligauss while this would produce only 0.2 milligauss as the lines would be more than 160 feet from the playground. He commented that the elected officials had made a decision after a very comprehensive process, and many people had made major financial decisions after the transmission line decision had been made. He pointed out the retirement home and Boone Hospital had built there facilities after the decision had been made by the Council. He understood they might not have known where the poles would be located as that was still unknown and not being decided tonight. He felt the public process had been complete, the engineering was sound, and the information that had been provided was accurate, and did not believe there was any reason to change the decision previously made.

Mark Farnen, 103 E. Brandon Road, stated he was representing the Village at Bedford Walk and noted he did not feel Option A was acceptable. He thought it was appropriate to revisit the issue. He commented that they had submitted a petition with 1,600 names of people from all over the City, similar to the City survey, because this affected all ratepayers, not just those along the line. Although there was a public process for the pole locations, it had not happened yet, so they did not know what it would entail. Some had indicated there would be a hearing on easements, but that would only include those places where the City did not already have an easement. These were parts of the process that were unknown as decisions were being made. This had been conceptual in nature, and now that they were getting into the details, people were upset. He commented that he understood City staff had been directed to provide three preferred 161 kV route options, and in April 2012 a change order had been requested by City staff to allow the two other options to come in as 69 kV options. Staff then immediately began to criticize those options because they were 69 kV options. He did not understand why the change was made.

Rob Hill, 5796 S. Route K, commented that he owned dozens of properties in the Fifth and Sixth Wards, and understood the City needed more power. He believed they needed to go with 161 kV lines, but noted he was not a fan of Option A because it would affect his property values. He was also concerned about the health risks of children if it was determined in the future there was actually a health risk. He did not feel they should risk the health of children. He asked the Council to find a way to protect the people, homeowners, and children.

Melissa Ailor, 3903 Creekfront Way, suggested they not draw any more negative attention to Columbia and not be Flint, Michigan. She asked the Council to change its opinion tonight.

John Clark, 403 N. Ninth Street, asked the Council to reject Option A, and noted they did not have to choose Options B or B-2 tonight either. He believed there was overwhelming evidence to reverse the previous decision as there had been a flawed planning process. The City was massively understaffed and City staff were only decent system managers. They could manage systems, but were not competent enough to do long term capital planning and to provide the Council independent and trustworthy information as they did not have the time, background, or inclination. He suggested they hire outside competency and reject Option A tonight.

There being no further comment, Mayor McDavid closed the public hearing.

Ms. Nauser commented that she was the reason this issue was back before the Council and did not do this to procure any votes because she would make half of her constituents angry regardless of her decision tonight. She stated this had been a long process. In 2005, she recalled the then Water and Light Director telling her the City would have to add high powered transmission lines in the Fifth Ward when she had been elected. She pointed out she had voted against Option A in 2013 and would vote against it again tonight. The issue for her was the impact in terms of the number of homes, schools, etc. impacted. She believed they should try to solve the problems with the least impact possible. She commented that she had read all of her e-mails and correspondence even if she had not yet had the opportunity to respond. She reiterated the most compelling factor to her was the impact of this line on five schools. She noted she also wanted to impact the least amount of people possible with this project. She pointed out she lived in the back of the Thornbrook subdivision and Option B would likely impact her more personally than Option A. She stated she had some very strong concerns regarding pole placements for when this process moved forward, and thought some of the issues could have been alleviated if those poles were placed elsewhere. She felt 27 feet from a building was not acceptable regardless of the standards. She noted she would also prefer to have the lines undergrounded near schools, but she understood that was not an option based on comments of other council members so she would not even address that issue.

Mr. Trapp stated this was a complicated issue. He understood there were risks associated with reliable electricity, but noted there were also immense benefits associated with it, and felt this was something they could call a first world problem as there were billions of people that would love to have this problem. He commented that he believed the City's reliable electricity was at risk primarily due to the actions of Council. Columbia had utility

costs that were about 106 percent of the average in Missouri. Although the rates were competitive nationally, they mostly competed within the region. The high utility rates hurt the City's ability to create jobs, people's ability to earn a living wage, and families struggling to pay their utility bills. He stated they had been re-examining the issue for many years, and if they reject their original decision of Option A, he was not confident they could pull together anything else that would get four votes. They would then be faced with this issue down the road as they got closer and closer to the time when they would have issues with rolling blackouts and large fines for endangering the regional electric grid. He noted that was a very real risk that increased each day, and pointed out they had been bailed out previously by the economic downturn that had slowed growth. They already had substations that were running at unsafe levels of capacity, so it was not all related to future growth. It was related to growth that had already occurred. He commented that there were huge technological challenges with undergrounding these lines. In addition, when undergrounding portions of Option A had been discussed in 2013, the cost associated with it was about \$8 per month per ratepayer. He understood this was not a lot of money to some people, but it was to others. He explained the City had conducted a health impact assessment on the cost of transit, and had considered treating transit like a utility because there were many benefits to transit, to include fewer vehicles on the roads, allowing people to get to work, providing economic opportunity for those who did not own a car, etc. As little as \$5 per month from everyone would allow for a deluxe and elaborate transit system, but that amount would push many families into food insecurity causing all of the robust benefits of a great transit system to be overwhelmed by the negative impacts of that \$5 per month. He understood Option A cost more at this time, but noted they would be futureproofing the City's electrical grid. He stated he did not think this was over-engineering because when they had looked at Option B, they did not know the University would want to add 20 extra megawatts on the 69 kV system. He did not believe Option B was a viable option now because they would have to begin the planning processes for the expansion of the 69 kV system almost immediately. He commented that any time there was a complicated issue, people would be able to point out flaws because no solution or process was perfect. The main points in this issue had not changed. The City would receive more value out of the 161 kV system as it would ensure reliability for generations for not much more in costs, and this would ultimately affect ratepayers. He stated he had read all of the information except for anyone that had contacted him after 2:00 p.m. today, and noted he still believed Option A was in the best long term interest for the residents of Columbia, the ratepayers of Columbia Water and Light, and the region which included all of those that benefited from the interconnected electrical grid. He understood there were risks to children, but those risks were so small that they were unquantifiable. He noted they knew the risks of poverty, economic stagnation, and rolling blackouts, and when they weighed all of the risk factors together, Option A was clearly the best route.

Mr. Ruffin commented that he had asked that the decision be postponed in November because he was new to the Council, had not been involved in the first process, and felt he did not have enough information to make an intelligent decision. He commended City staff for their willingness to present this comprehensive information again as it helped him learn more about the choices. He understood it was important to have a 161 kV system installed for the

future of the City, but noted he had some concerns regarding the placement of the poles, which he also believed to be the dividing issue. Very few people were against the installation of the high voltage lines, but were concerned about the placement of the poles. He stated he still had questions. He wanted to know if it was possible to provide a more accurate picture of the placement of poles so they could avoid locations really close to schools, retirement homes, or health care facilities, or if there was another alternative route that would allow a 161 kV system. He commented that he respected the knowledge and expertise of staff, but he was also sensitive to the voices of the people, and noted he was still thinking on the issue.

Mr. Thomas stated he did not feel the Council should make a decision tonight as it was late and there had been a lot of new information. He noted he was still thinking as well, and thought they all might need to think on this issue a bit longer. He understood they needed another 161 kV line into the Perche Creek substation, and had projected load shortages in the area of Nifong Boulevard and Providence Road. If they had to take another 161 kV line into the Perche Creek substation and the two options were to either bring it in along Grindstone Parkway, Nifong Boulevard, and Vawter School Road or to bring it in from the McBaine substation up around the southwest side of the City, the impact would be much less with Options B and B-2. He commented that the only technical problem he was aware of with Option B was that it would not have capacity at the Mill Creek substation. If they were trying to minimize the negative impacts on homeowners, schools, etc., they would choose Option B, and if that were to be their final decision, it would create an unfair impact to the people that lived in the Steeplechase subdivision as it was being platted when they had made their initial decision to proceed with Option A. He stated he was interested in knowing if there was a precedent in other cities for paying compensation to those impacted. He understood they paid for easements and thought one could argue a visual impact was a type of easement as well. He suggested they develop a long list of questions for further research. He understood staff had indicated they were close to the 50 percent capacity on two transformers which would create a problem if one of the transformers went out, but explained he was having trouble accepting a lot of the categorical technical information because the information had been changing. He commented that he respected the work of staff, but felt they had been very committed to Option A since before Options B and B-2 had been discussed, and he believed that was a problem. He stated he did not want to give up on the idea of addressing the load capacity issue with 69 kV connections as shown in Option B and through improving the 69 kV connection across the City later if it could be done without dramatically, ugly poles, and depending on the cost. He felt the data provided on costs had been so unreliable that he could not see how they could make a decision tonight. He wanted better data on cost, to include what the cost would be and when it would be needed. He also wanted to look at the projections for the growth of the City and the growth of capacity needs. He understood staff had reported in 2013 that 378 megawatts would be needed at peak, and a year later they had indicated only 270 megawatts would be needed at peak. He believed people were more efficient in the use of electrical apparatuses, homes were better insulated, etc. People were beginning to understand the threat of climate change was serious and were changing their behaviors. He believed there was an opportunity to examine the way they planned for energy consumption and transmission. He noted \$33 million could subsidize a lot of solar systems

on people's homes, which would take an enormous load off the need for fossil fuel generation and heavy transmission capacity. He questioned the growth predictions and projections that drove this need, and hoped they would pause to think about whether to focus on conservation and efficiency. He felt the proposed plans had been grossly over-engineered in the current climate. He noted he and his wife could get close to net zero with only eight solar panels on a 2,400 square foot house, and thought they could use this as an opportunity to think differently about long term energy planning. He suggested they look at the best practices in renewable energy and distributed energy generation to develop a less over-engineered plan that could serve the City well enough while saving money.

Mr. Skala commented that he had been on the Council when it voted on this project in 2013, and there were two issues. He noted he was one of the five votes that had rejected undergrounding, and one of the five votes that agreed to move forward with the broad outlines of Option A. He congratulated the public for looking into this issue and for encouraging staff to look further into this issue as well. He stated he had received almost an equal amount of pro and con e-mails with regard to this subject so it was not an easy decision. He commented that growth had lots of benefits, and some growth was needed so they did not stagnate, but growth also had some costs, and this was one of those costs. This capacity needed to be addressed. He noted he was a comparative and physiological psychologist, and had dealt with issues of power lines and EMFs during his schooling and career. He explained there were 44 years of EMF health related research and 2,900 studies, and the studies that suggested there was a potential for childhood leukemia were primarily based upon epidemiology. The laboratory science and clinical science had not suggested there was a significant risk, and it was not clear there was any risk when looking at it from the aggregate of all of the approaches. He admitted there was a possibility of being wrong because with science nothing was ever proven. He, however, was convinced there was virtually no risk from overhead lines, if properly engineered, depending on their height, and there was increased risk for buried lines because they would be closer to the source. He understood the issue of aesthetics, and pointed out they had rejected the undergrounding of the transmission lines previously, but would improve the aesthetics by burying the distribution lines. There was very little history with burying transmission lines in the United States, and the expense of placing the lines underground and then maintaining the buried lines was significant. He commented that he was not sure how they would address equity, and pointed out there were 161 kV and 69 kV lines in Ward 3 and none of them were buried. This was a community-wide decision even if it affected some people more directly than others. The people in his ward had not been given alternatives or options. He stated he was not entirely pleased with the process as there were some flaws, but they had made the decision for not undergrounding and for Option A on the basis of the best information they had the time. He had indicated he wanted new information and that his decision would be based on compelling information that would change his mind, and he did not believe what had been provided was sufficiently compelling for him to change his mind. He noted he would vote to uphold Option A.

Ms. Peters explained she had not been on the Council in 2013 so it had been new information for her. She thanked staff for spending the extra time trying to educate her and

others coming in later in the process. She stated she was mainly concerned about the health risk to children since she was a pediatrician, but in her review, she could not find any definitive. The larger studies and many statisticians and oncologists had indicated there was no evidence of EMF risks. Although there was always a concern, there was not any specific evidence. In reviewing the options, she felt they should place the power lines as far away from as many people as possible, which meant placing them in more rural areas if possible. She understood the Boone County Commission was in support of Option A because they did not want the lines in their backyard either. She stated she would vote against Option A, which was somewhat frustrating because they had spent money on it, but she believed it was a bad decision to place these lines near schools and so many neighborhoods.

Mayor McDavid stated he had sensed the pending angst about 161 kV lines down Nifong Boulevard so he had asked staff to consider 69 kV solutions, which resulted in Options B and B-2, and they now had to deal with it. He thought this was a fascinating look at democracy, and he was impressed with the passion, research, and depth of knowledge of the citizens that had spoken tonight. By the end of tonight, they would make a couple thousand people unhappy, but if they delayed a decision and there were rolling blackouts, 50,000 people would be unhappy. He commented that he viewed delaying this project as conservation via rolling blackouts, which he did not feel was a policy that would be acceptable to anyone living in south Columbia. He stated he had studied the health issues. There were 6,000 cases of acute lymphocytic leukemia in the country, and 3-4 years the average peak age. In spite of the marked increase in ambient electromagnetic fields over the generations, there was no increase in acute lymphocytic leukemia. He noted there were two milligauss in the average home, and more could be experienced when near a toaster, hair dryer, etc., but the energy dissipated very rapidly. He understood the electromagnetic field outside the front door to be 0.1 milligauss, and once inside it would be at least two milligauss because there was electricity. He commented that burying the lines involved creating a 10 foot by 10 foot tunnel of concrete with the power lines in the middle, and the cost of this would be \$8 per month for every household in Columbia. He pointed out the citizens could submit a petition to place the undergrounding of these lines on the ballot for the people to decide. He noted he believed the future of Columbia was best served by putting the most reliable, long term solution in place, and had not seen any compelling evidence to change his vote for Option A.

Mr. Trapp made a motion directing staff to continue transmission line design work using the Option A route plan for the 161 kV transmission line to the Perche Creek substation and system transmission improvements. The motion was seconded by Mr. Skala.

Mr. Thomas stated he would oppose the motion as he felt it was irresponsible to make a decision like this when there was so much uncertainty on the data. They had seen a lot of variability in the technical information and cost information. He believed a better study of these options was needed, and thought an outside consultant might be needed. Mayor McDavid pointed out an outside consultant had been utilized. Mr. Thomas understood outside consultants had been used for specific parts, but not with regard to reviewing the different route options. He urged the Council to oppose this motion so they could get together a list of questions that needed to be answered before committing this amount of money to a potentially flawed option. He noted he had not yet seen an example of a

previously developed corridor that resembled Nifong Boulevard and Vawter School Road with these types of power lines. The example provided was in Chesterfield, Missouri where it was quite clear the power lines had been constructed prior to development or the power lines had already been planned to go in that location with the development being built around the corridor. He was not convinced this was typically done. He agreed the undergrounding was excessively expensive and was also not typically done. He did not feel they should push forward with Option A at this time. He stated he had voted for Option A previously, but noted he felt he had not understood the issues, so he would oppose Option A tonight. He wanted to see more evidence with regard to the need and the truth about the available options.

Mr. Trapp commented that this uncertainty with regard to the options and continuing in this vane threatened the City's reliable electricity and already high utility rates, which had huge impacts on those that struggled to pay their bills. He asked the Council to consider the best interest of the people in their wards and the City. He believed they had compelling information with regard to Option A as it was the engineering choice, which was counter to the political choice, and felt there were times when leaders had to lead. In any complex issue, there would always be an array of facts and uncertainty, but they had clear and compelling information that indicated moving forward with Option A was the right thing to do in 2013 and today.

Mr. Ruffin asked how much flexibility there was with regard to pole placement if they were to go forward with Option A. He asked if there would be opportunity for the public to be engaged in that decision process or if it was purely an engineering decision. Mr. Johnsen replied they had held a public meeting with a 30 percent design because they wanted public feedback. Mr. Matthes stated that once a route was chosen, pole placement was the next decision, and that was what they had begun to do. They had halted when this question arose in November. The pole placement design would still need to be completed if the Council chose Option A, and it was negotiable. He commented that it was not decided by engineers. They understood the concerns that had been raised. He pointed out there could be physical issues, which was the reason they conducted soil testing. In addition, there might be a reason a particular pole had to be placed in a certain location, but in most cases, there were options to move a pole a certain number of feet left, right, backwards, or forwards. Staff would be as sensitive as they could be in regard to the issue.

The motion made by Mr. Trapp and seconded by Mr. Skala directing staff to continue transmission line design work using the Option A route plan for the 161 kV transmission line to the Perche Creek substation and system transmission improvements was defeated by voice vote with only Mr. Trapp, Mr. Skala, and Mayor McDavid voting in favor of it.

## **OLD BUSINESS**

**B9-16 Rezoning property located on the west side of Peach Court and approximately 600 feet south of Nifong Boulevard from District C-1 to District C-P; changing the uses allowed on C-P zoned property located on the west side of Peach Court and southwest of Peachtree Drive; approving the C-P Development Plan of Mill Creek Substation; approving less stringent outdoor lighting requirements.**

The bill was given second reading by the Clerk.

Mr. Matthes and Mr. Teddy provided a staff report.

Mr. Thomas explained he had pulled this off the consent agenda because some constituents felt it was connected, and because he wanted to know what the stormwater would look like. Mr. Teddy replied it would be a dry bottom detention basin. Mr. Thomas understood it would provide temporary storage. Mr. Nichols explained it would be used more for water quality as it would not have the depth necessary for full detention. Mr. Thomas asked for clarification. Mr. Nichols replied it would include features for all of the sediment to drop out before the water continued to runoff. Mr. Thomas explained the reason he was interested was because he had noticed the entire area to the north and east was essentially unremitting concrete, and asked for the stormwater management requirements of the developers of those properties. He wondered if the City had changed its rules since then. Mr. Teddy replied the stormwater ordinance was established in 2006, and this was platted well before then. Mr. Thomas understood the developers did not have any responsibility to manage stormwater. Mr. Teddy thought conveyances systems, which were essentially storm drains, had been required at the time, but he did not believe treatment trains, stormwater runoff volume detention, etc. were required. Mr. Thomas asked if the need for this project was related to the fact there was a lot of impervious surfaces there. Mr. Nichols replied yes. Mr. Thomas understood this put the City on the hook financially for the problems caused by the area, and that the project would be built with stormwater utility funds. Mr. Nichols stated that was correct.

Eugene Elkin, 3406 Range Line Street, asked for a report to be provided with regard to the amount of money had been generated due to improvements at the airport and the natural gas station.

Mr. Elkin stated three individuals had approached him for sleeping bags, and he hoped someone would take on this issue by making them available in the City. Luckily someone had provided them with sleeping bags. He noted the three individuals would soon be headed to a motel in the general Boonville area for employment, and would no longer be on the streets of Columbia.

Zach Thomas explained he was with Engineering Surveys and Services and noted they had been working with the Public Works Department and the Water and Light Department with regard to this C-P plan, the rezoning, and the three projects, which included the substation, the roadway improvements, and the stormwater improvements. The roadway improvements were mainly to improve the Peachtree Drive access onto Nifong Boulevard, specifically with regard to left turns, as it would tie into Arora Drive at a new signalized intersection. With regard to the stormwater improvements, he explained they had looked at providing more stormwater detention for the Peachtree development, but there was too much shallow rock in the area and space confinements. They had reviewed ways they could hydrologically reduce flooding, and the rock was the main issue as it would greatly increase costs and could do more harm than good in terms of blasting and removing rock to relocate a stream. They also had some jurisdictional issues with the Corps of Engineers. As a result, they had come up with a plan to provide detention and water quality mainly for the roadway and the substation. There would be some improvements of the floodplain for a small section of the creek as well but the majority would remain in place per Corps of Engineers requirements, so there would not be much improvement in the Peachtree development runoff

as the water would continue to flow to the creek. There would only be a little flood reduction through there due to more storage by widening two box culverts in the area. He reiterated the C-P plan incorporated the three projects.

B9-16 was given third reading with the vote recorded as follows: VOTING YES: RUFFIN, TRAPP, SKALA, THOMAS, NAUSER, PETERS, MCDAVID. VOTING NO: NO ONE. Bill declared enacted, reading as follows:

## CONSENT AGENDA

The following bills were given second reading and the resolutions were read by the Clerk.

- B1-16 Accepting conveyances for street, sewer, utility, drainage, sidewalk and temporary construction purposes.
- B2-16 Accepting Stormwater Management/BMP Facilities Covenants.
- B3-16 Authorizing a cooperative agreement with the Missouri Department of Conservation for a Tree Resource Improvement and Maintenance (TRIM) grant to provide advanced forestry training and education for Parks and Recreation Department employees; appropriating funds.
- B4-16 Calling a municipal election for Council Member-at-large (Mayor) and Council Members for Wards 3 and 4.
- B5-16 Authorizing an agreement with The Curators of the University of Missouri for physician services.
- B6-16 Authorizing a program services contract with the Missouri Department of Health and Senior Services for child care health consultation.
- B7-16 Authorizing Amendment No. 1 to the program services contract with the Missouri Department of Health and Senior Services for WIC local agency nutrition services.
- B8-16 Appropriating funds for Share the Light Program.
- B10-16 Amending Chapter 23 of the City Code as it relates to the attachment of banners to city street light standards.
- B11-16 Authorizing a banner attachment agreement with the Business Loop Community Improvement District for the installation of banners along Business Loop 70, between Poplar Street and Creasy Springs Road.
- R5-16 Setting a public hearing: construction of shelter, playground, parking lot, walkway, lighting, signage and lake improvements at the Frank G. Nifong Memorial Park.
- R6-16 Authorizing an agreement for professional services with Fifty Plus Resources, LLC as it relates to the implementation of Microsoft Project software to manage capital improvement projects in the Water and Light Department.
- R7-16 Authorizing a warehouse agreement with Metal One America, Inc. for storage of carbon steel at the City's Transload Facility.

The bills were given third reading and the resolutions were read with the vote recorded as follows: VOTING YES: RUFFIN, TRAPP, SKALA, THOMAS, NAUSER, PETERS,

MCDAVID. VOTING NO: NO ONE. Bills declared enacted and resolutions declared adopted, reading as follows:

**NEW BUSINESS**

None.

**INTRODUCTION AND FIRST READING**

The following bills were introduced by the Mayor unless otherwise indicated, and all were given first reading.

- B12-16**     Approving the Final Plat of The Park at Somerset Village Plat 1 located on the west side of Battle Avenue and north of Spartan Drive; authorizing a performance contract.
- B13-16**     Approving the Final Plat of Somerset Village Plat 4 located west of Battle Avenue and between St. Charles Road and Spartan Drive; authorizing a performance contract.
- B14-16**     Authorizing a contract for the sale of real estate with The Callaway Bank for property located in the Auburn Hills Subdivision to be used for the future Municipal Service Center.
- B15-16**     Authorizing construction of shelter, playground, parking lot, walkway, lighting, signage and lake improvements at the Frank G. Nifong Memorial Park; calling for bids for a portion of the project through the Purchasing Division; appropriating funds.
- B16-16**     Accepting and appropriating donated funds for the Parks and Recreation Department’s Holiday Toys for Columbia’s Youth Program.
- B17-16**     Authorizing a software license agreement and software support contract for basic software service with KEMA, Inc., d/b/a DNV GL Software, for tracking Bulk Electric System (BES) substation asset maintenance in compliance with NERC standards; appropriating funds.
- B18-16**     Authorizing an agreement for engineering services with HDR Engineering, Inc. for development of an Integrated Management Plan (IMP) for the City’s sanitary sewer and storm water utilities; appropriating funds.
- B19-16**     Accepting conveyances for water utility and underground electric utility purposes.

**REPORTS AND PETITIONS**

- REP9-16**    Youth Advisory Council – Request to Change Member Terms.

Mayor McDavid thought this request was reasonable since the school year ended in May.

Mr. Thomas made a motion directing staff to bring forth an ordinance to amend Section 2-362 of the Code of Ordinances to change the terms so they begin and end in May. The motion was seconded by Mr. Trapp and approved unanimously by voice vote.

Mr. Thomas made a motion directing the City Clerk to not advertise the upcoming vacancies until the change was made to the terms. The motion was seconded by Mr. Trapp and approved unanimously by voice vote.

- REP10-16**   Intra-Departmental Transfer of Funds Request.

Mayor McDavid understood this report had been provided for informational purposes.

## **COMMENTS BY PUBLIC, COUNCIL AND STAFF**

Mr. Thomas commented that from a procedural point of view, the ball was in the court of those who opposed Option A to decide how to proceed with regard to the NERC issue and the capacity issue, and suggested they each come up with a set of questions that would help them examine the proposals so this could be brought back for discussion in the future.

Mr. Matthes suggested this be discussed at a pre-council meeting or work session. Mr. Thomas stated that was a good idea.

Mr. Thomas explained one of the more popular recommendations that had come from the Affordable Housing Symposium was to establish a community land trust. The land trust would be a non-profit entity that held land and built houses on the land. The houses would be sold, but the land would only be leased. The land trust would also maintain the housing in an affordable price range. This concept had been successful in many other cities and they thought it would be effective in Columbia in increasing the affordable housing stock. He noted Mr. Cole in the Community Development Department had identified a planning consultant that would conduct a feasibility study, and if it was determined to be feasible, the consultant would develop a plan to establish the land trust in terms of bylaws, structure, etc. He understood the estimated cost for Phase I was a little more than \$10,000, and the estimated cost for Phase 2 was about \$14,500. He also understood about \$6,500 that had been allocated to the Affordable Housing Symposium was unspent and could be used for this effort. He wanted to earmark \$20,000 of the \$45,000 they had in council reserve funds for the consultant, but to stipulate that any unused money be returned to the council reserve fund.

Mr. Thomas made a motion to allocate \$20,000 from the council reserve fund for the consultant with the stipulation that any unused funds be returned to the council reserve fund.

Mayor McDavid understood this would require legislation. Mr. Thomas thought he had to first ask Council to support using the council reserve money for this project.

Ms. Nauser understood that meant only \$20,000 would be left in the council reserve fund. Mr. Thomas stated about \$25,000 would remain in the fund. Ms. Nauser understood this would be the amount left for the rest of the fiscal year. Mr. Matthes stated that was correct.

Mr. Matthes explained this was a request to appropriate funds and staff would then come to Council with a contract to create the business plan.

Mr. Skala stated he wanted see a draft plan prior to authorizing the funds. Mayor McDavid noted he agreed with Mr. Skala.

The motion made by Mr. Thomas to allocate \$20,000 from the council reserve fund for the consultant with the stipulation that any unused funds be returned to the council reserve fund was seconded by Mr. Trapp.

Mr. Trapp commented that they needed to move forward at this meeting in order for a resolution to be prepared for the next meeting if they wanted to stay on track with the Lynn

Street properties. He thought that would provide time to build the case, and the Council could make the decision regarding funding at the next meeting.

Mr. Skala felt they should know what it was they were appropriating the funds for prior to appropriating the funds. Mr. Matthes understood and thought staff could come back to council with a resolution and a contract. Ms. Thompson pointed out an appropriation would require an ordinance. Ms. Amin explained her understanding was that only a transfer was needed, and not an appropriation.

Mr. Matthes stated staff would bring forward a resolution if at least four of the council members were supportive.

Mr. Thomas understood they were not voting to move the money at this time, and that it could be done with the resolution. He noted he had been under the impression that it had to be done at two different meetings. Mr. Trapp thought they needed to ask to move forward with this process.

Mr. Thomas pointed out there was a detailed proposal from the consultant laying out the two phases of the project, and the associated costs.

It was decided the motion did not need to be voted on, and staff would bring forward a resolution on this issue.

Mr. Skala understood the Downtown Community Improvement District (CID) was changing some of the street lighting downtown. Several years ago, the City had been involved in determining the appearance of some of the street lights, and a lighting ordinance had been passed in 2006. He noted the ordinance had not address LEDs at the time, and suggested they refer this potential change to the Environment and Energy Commission because they had some expertise in it. He also thought they should determine if collaborative work with the Downtown CID was necessary. He understood the Downtown CID wanted to change some of the lighting for security reasons, and noted they wanted effective lighting without it being too bright because it tended to inhibit witness identification and transgressions. He thought there needed to be discussion on why the change was necessary and what it would entail. He commented that the wall packs on the building at Broadway and Ninth Street seemed to be excessively bright, although staff had indicated they were in compliance. He reiterated they had not addressed LED lighting through the ordinance, and asked where they were in that process as the lights appeared to be bright. He thought lighting in the downtown needed to be addressed in terms of security and aesthetics, and that they should weigh in on the process with the Downtown CID. He asked for a report if it was necessary.

Mr. Trapp commented that the New Horizons Pathways program always had sleeping bags as they had the State contract for homeless outreach. He noted Project Homeless Connect would be held at the Family Access Center on Ash Street on January 28 from 8:00 a.m. to 1:00 p.m. It was a one stop shop where someone could obtain an ID, submit applications for housing, determine if they qualified for VA benefits or homelessness outreach services, schedule substance abuse treatment, etc. It was a great community effort and something more people needed to know about because it showed them at their best.

Mr. Ruffin stated he was not philosophically opposed to Option A as he believed in the benefits of Option A. He hoped they would be able to move forward quickly, instead of years from now, to revisit the plan to get their questions answered. He explained he still had many unanswered questions.

The meeting adjourned at 12:49 a.m.

Respectfully submitted,

Sheela Amin  
City Clerk