



City of Columbia, Missouri

Meeting Minutes

City Council

Monday, August 17, 2020
6:00 PM

Pre-Council

Council Chamber
Columbia City Hall
701 E. Broadway

I. CALL TO ORDER

The meeting was called to order by Mayor Pro Tem Karl Skala at 6:05 P.M. since there was a quorum present. Mayor Treece arrived at approximately 6:12 P.M.

Present: 5 - Peters, Treece, Skala, Pltzer, and Fowler

Absent: 2 - Trapp, and Thomas

Wilkes & 6th Street Stormwater

Attachments: [Presentation](#)

City Manager John Glascock said that tonight in discussion was the 6th and Wilkes street storm water project because there are three alignments to discuss that may involve eminent domain of 3 houses. It is better to do in a work session than public hearing so everyone was filled in on all of the details.

Erin Keys, Engineering Operations Manager introduced Tom Wellman Engineering Specialist and Cory Thompson Engineering supervisor to help her answer any additional questions. Ms. Keys explained that this project has a lot of moving parts and that is why she brought it to council to help evaluate risk versus costs.

Ms. Keys said that the current priorities of storm water is to prioritize safety meaning street flooding and repair failing infrastructure. She defined structure flooding as water running over land into someone's door, or their structure. Most structure flooding is not available to be eliminated but it is able to be reduced in occurrence and manage the storm water to minimize damage.

Ms. Keys showed a picture of the existing storm water box roof that is failing and collapsing. They do not know how long it will last but they know it is compromised. She explained that when they create new storm water residential designs they try to keep in mind the 10-year event infrastructure, meaning the rains that happen more frequently, as well as the 100-year event when there are larger and more damaging rain events. They attempt to manage the water to minimize risk. One way they do this is areas in the FEMA floodplain. The City requires them to build 2 feet above the flood plain.

Looking at the Hickman 6th and 7th Watershed area it included residential buildings, part of Hickman High School, Columbia College and other industrial buildings that are well developed. This total area is 125 acres. Any site that currently is over an acre and is redeveloped has to incorporate water detention and best water practices. Hickman and Columbia College have already participated in this. However, the water improvement practices are only effective for rain that is less than an inch of rain fall; they do not have much impact on the large flooding events. The large events are where the City prioritizes minimizing risk.

The yellow boundary is the water shed and the hatched area is the FEMA floodplain. That is where the water naturally flows too. The structures built there were done before FEMA existed and so they are not up to date with FEMA restrictions. Flooding has always existed there, it is not a new problem in the neighborhood. The question is should those expect to deal with some amount of flooding, and what is a reasonable amount?

Councilmember Skala asked if this was a pooled area of water or if it had a flow. Ms. Keys said that the water congregates in the yellow area and then slowly flows down to Flat Branch Park.

In a summary of projects already completed to aid in the watershed area Ms. Keys detailed 6th and 7th street improvements, I&I sewer work, as well as Alton Ave storm drainage. Currently, there is a project at 5th street to aid in Wilkes Relief sewer. Other projects included abandoned boxes in backyards.

Councilmember Pitzer asked if the green was the sewer and Ms. Keys said that the green is proposed sewer paths for alignment.

Ms. Keys said the timeline for this is that it was first identified in 2003 but it wasn't until 2015 where there was a storm water ballot initiative where they were able to fund similar projects. In January of 2020 there was an interested parties meeting and in August they met with different homeowners and neighbors in the area potentially being affected. There is a proposed public hearing for the Fall of 2020 but depending on how the discussion goes with Council it might not happen yet.

Ms. Keys said that this would be a replacement of 320 feet of Reinforced Concrete Box (RCB), 200 feet of pipe and 10 inlets. It is estimated to cost \$1.1 million but hopefully it can be done for cheaper.

Ms. Keys showed a picture and in the blue area is where the failed storm water box is. The existing box takes place where there are sharp turns. Ms. Key related it to when you drive and make a sharp turn you have to slow down, the water acts similarly meaning it has to slow down its flow and will back up. This is also true when there is a slow slope of the box.

The first project goal is to replace the failing box. But when you look at replacing it you also look at how you improve it, so you can look at potentially improving the hydraulics.

Councilmember Fowler asked to see at what part the box was failing. Ms. Keys said that it was in front of the Center Project, which is the house on the corner.

Councilmember Peters asked how long and big is the box? Mr. Wellman explained that it was 6 feet wide and 3 feet tall. This was going to be the box that carries the water down through Douglas Park and to Flat Branch park.

The second goal Ms. Keys explained is to reduce flooding by improving hydraulics of RCB through a steeper slope and less abrupt turns. This would be done to improve overflow as well as by adding inlets to the system. The picture on the slide shows 6th street completely underwater looking towards Jefferson Middle School. There is currently a red fence to try and break the water flooding. The water typically goes from the red wall towards the blue residential home. This shows how much is in the way of the flooding to be affected. Ms. Keys said that many homeowners have probably had flooded crawl spaces or basements. For individual owners or residents it can be costly and stressful.

After talking to some of the owners they have ongoing maintenance costs to clean up after each flooding event. They also worry about being able to resell their property. Ms. Keys asked that these stories be involved in the decision. She also explained that the only way to truly protect these properties is by removing these properties; however, that would then take away the affordable housing that these properties provide. It must be considered how frequent a risk is acceptable for an individual owner should have to deal with. How often does their house flood, and is it okay and acceptable?

Ms. Keys then went into three different alignments that they have prepared. The first one goes through two residential properties removing 603 N. 6th Street and 513 Hickman Ave. It has fewer bends improving the hydraulics. There would still be a flooding risk at 515 Hickman. This box would flow about 270 cubic feet per second. Mr. Skala asked her to repeat it to make sense. Ms. Keys said that the current flow is 200 cubic feet per second and that this alignment would flow 270 cubic feet per second. The second alignment would remove the 515 Hickman Ave but has the straightest path. It would flow about 275 cubic feet per second. This would remove the Center Project, and leave 603 N. 6th street still at risk of flooding. The third alignment would stay in the right a way and would not remove any properties. The hydraulic capacity is a flow of 230 cubic feet per second.

Mr. Skala asked that if the difference in hydraulics is because there are more angles? Ms. Keys said yes due to the route it affects the flow.

Ms. Peters asked what the property owners think about having to sell their properties. Ms. Keys said staff has met with all three of the property owners. At 603 and 513 the owners have done significant improvements and renovations to protect their properties and crawl spaces. Each owner is interested in possibly selling to the City but they would like to know for how much. Before the City moved forward they wanted to bring this to Council to get the homes appraised to be able to report to the property owners. The City has never condemned to acquire property for storm water purposes and she said is not of interest to do that now.

The next steps Ms. Keys stated were to improve the street of Hickman and 5th, which would benefit a number of property owners. This would lower the intersection.

Ms. Keys showed a diagram that included what FEMA refers to as the standard project flood. The gray structures show where there are first floors above the water elevation. The rest of the houses would have water going into their basements. If the City were to improve and lower the level of the intersection there would still be the properties of 515 and 603 still having water going into their structures. The lowering is estimated to be about \$700,000, this is currently not in their program but they could bump it up to aid in this project.

Ms. Fowler said that went by her too fast and asked Ms. Keys to explain which intersection she would lower. Ms. Keys said it was at 5th and Hickman, and scrolled back a few slides. There is a little bit of a rise on 6th and Hickman looking towards 5th. This restricts the hydraulics. Ms. Fowler said there is a rise on the whole street. Ms. Keys said they focus on the box for the small events and the intersection hydraulics for the larger events. Ms. Fowler asked if that meant they were going to put in a slope and lower the road to have a side elevation of a retaining wall or something similar. Ms. Keys said that is something they would be doing. It would be a lowering of one and a half to two feet of lowering.

Mayor Treece yielded his time to Ms. Fowler since this street takes place in the First Ward and is in her own neighborhood.

Ms. Fowler stated that she lives across from 603 N. 6th Street. She shared when she was involved with her neighborhood association and they have continued to talk about the removal of affordable housing, especially when it has just been renovated. There is also the Center Project who are property owners in this area. She said she talked with the property owners recently and they are reluctantly willing to have the City do an evaluation. This would provide challenges to the owners of having to find another place for their organization to meet their needs. Ms. Fowler also shared that she is concerned with houses that get torn down when we have 14,000 houses who are burdened by the cost of their housing in Columbia. This is an instance when the City is looking at taking out 2 houses when they have previously taken out 3 houses at Again street and West Worley.

Ms. Fowler said that she brought questions from her neighborhood. They asked for numbers and modeling in regards to flow of the water in any of the three configurations that Ms. Keys put together. Ms. Fowler also asked questions from her neighbors. What's the most effective solution from an engineering point of view that does not include the removal of the houses in the neighborhood? The neighbors would also like data on that answer. What is the most effective solution, from an engineering point of view, that could maximize upstream space? The North Central Neighborhood would also like to ask about shared remediation in the green space that runs between 6th and 7th street. Ms. Fowler was wondering if she could get some of that information. Ms. Keys said that is why she tried to bring back some specific numbers of box capacity and alignment. She explained that is why with the third alignment where it would not remove any existing buildings, but there is potential to still have floods. Ms. Keys explained that is why she was there to figure out what risks they are willing to accept. She said that alignment three would carry a little more than the 10 year event but that the other two alignments would be better with the 25 year and greater events. Ms. Fowler said that she understood but asked if some modeling could be done with the third alignment and if there could be consideration for rain gardens and or remediation to the north to see what that would look like. Ms. Keys said that rain gardens and bio retention basins are more focused on water quality improvement for events that are less than an inch have an impact. Larger events with 7 - 8 inches of rainfall aren't going to have any benefit. A large detention center is going to have more effect on the larger storms. These are all things that would be considered when they go to work on the 5th Wilkes relief sewer near the abandoned box.

Ms. Fowler asked if the abandoned box had to do with the sewer or storm water. Ms. Keys said that she believes it to be a storm box. She shared that there is a lot of yard ponding that occurs back there and that the sewer alignment could also consider some storm water management best practices. Ms. Fowler said she understands that but that the neighborhood would like to have a conversation because decimating that corner would have an effect.

Ms. Fowler said there is also a problem across the street that they need the protection of the City with Columbia Public Schools (CPS). They want to put a gymnasium over on top of a landfill. Ms. Fowler said that there are always consequences that come of it. This comes to trusting that the school district will follow through with what they say they are doing. Ms. Fowler has experience with this when CPS did their last construction project in the neighborhood. Mr. Glascock asked if they didn't meet the ordinance? Ms. Fowler said they had put impervious pavement and maintained it so badly that they have diminished its capacity and they act like they haven't. This was supposed to have all different kinds of remediation benefits but they did not follow through.

Mayor Treece asked if it was too late for an alignment number four to remove some of the dog legs to smooth out the line to back up an additional 100 feet and add a new box from

the first dog leg, so as to not remove any properties. Mr. Wellman said that it certainly would, but then it would be dependent on the cost. This way, as Mayor Treece pointed out that it would improve the hydraulics as well. It would just take coordination with CPS for their construction timeline of the gymnasium.

Mayor Treece also asked if the property owners at 513 and 603 were also the tenants. Ms. Fowler said no, that 513 has 3 college students renting. 603 is owner occupied and 515 is the Center Project, a community organization that is valued in the neighborhood.

Mr. Skala stated that it was a good idea to get rid of the doglegs and backup a bit. He also said that alignment 2 might be the best because it has the least amount of doglegs, but it gets rid of two properties. He asked the question of how is the street improvement going to affect the alignments. He is curious to understanding how fixing the intersection affects the alignment. Ms. Keys said that is why they focused on the box improvements because that improves the situation for the most frequent events. By improving the overflow it would improve some of the infrequent events. The intersection at 5th and Wilkes will help the improvements for some of the larger structures. It is all about improving the best capacity for where the water is flowing.

Mr. Pitzer asked if there was a number of capacity that she was trying to get at, as an engineer. She said the design standard for residential neighborhoods is 10 years. In this situation where there is so much flooding it would be nice to carry as much of the 25 year event in the box itself and manage the overflow as much as it can in the neighborhoods. She said it would not be possible to manage the 100 year without any flooding wouldn't be possible without removing the structures and filling in some of the basements. Trying to minimize risk as much as possible for as many people as possible is the ideal. However there is always an in between because of the cost associated with that.

Mr. Skala asked if there was a limit to expanding the capacity of the boxes because of the restrictions from the other size of the boxes. Ms. Keys said that was correct because of the downstream capacity would restrict the capacity overall.

Ms. Fowler wondered if there could be some modeling around option four as well as some upstream remediation to have some numbers with. Mayor Treece agreed and said he would like to see an alignment four. Ms. Keys said that alignment three and four is what she should come back with and that the next question is the intersection at 5th and Hickman if it was something to move forward with more quickly. Mayor Treece said if she thinks it'll help. Mr. Skala said he was not convinced that option three was the best idea moving forward. He said the biggest trade off maximizing as much as possible and saving as much as possible.

Mayor Treece asked what the time frame is to coming back and Ms. Keys said with alignment four it would be shooting towards next spring so they can do some modeling.

II. ALL OTHER ITEMS COUNCIL MAY WISH TO DISCUSS

No other items were discussed.

III. ADJOURNMENT

Meeting was adjourned at 6:54 P.M.