



City of Broken Arrow

City of Broken Arrow
220 S 1st Street
Broken Arrow OK
74012

Minutes Drainage Advisory Committee

Chairperson Mary Ann Colston
Vice Chairperson Lori Hendricks
Member Craig Thurmond
Member Johnnie Parks
Member Donna Wallace
Member Jason Featherngill
Member Denise Mason

Monday, July 27, 2020

6:00 PM

Council Chambers
220 S. 1st St.
Broken Arrow, OK 74012

1. Call to Order

Chairperson Mary Ann Colston called the meeting to order at approximately 6:00 p.m.

2. Roll Call

Present: 6 - Jason Featherngill, Donna Wallace, Johnnie Parks, Lori Hendricks, Mary Ann Colston, Denise Mason
Absent: 1 - Craig Thurmond

Jason Featherngill and Denise Mason were present via videoconference.

3. Presentations

Assistant City Manager of Operations Kenny Schwab introduced Denise Mason, the newest Member of the Drainage Advisory Committee. He noted Ms. Mason had worked with the City of Broken Arrow regarding drainage issues in the past, as well as with the Corps of Engineers.

4. General Committee Business

- A. 20-875 Approval of the Drainage Advisory Committee meeting minutes of November 25, 2019**
There were no corrections or deletions to the November 25, 2019 Drainage Advisory Committee Meeting Minutes.

MOTION: A motion was made by Lori Hendricks, seconded by Johnnie Parks.

Move to approve the November 25, 2019 Drainage Advisory Committee Meeting Minutes

The motion carried by the following vote:

Aye: 6 - Jason Featherngill, Donna Wallace, Johnnie Parks, Lori Hendricks, Mary Ann Colston, Denise Mason

- B. 20-877 Consider and discuss possible action to recommend to Council to execute an Agreement for Professional Consultant Services with Tulsa Engineering & Planning Associates, Inc. for providing design services to increase the flow area and reduce the velocity on the flow in Deer Creek, Unnamed Tributary to Covington Creek, and Covington Creek in the vicinity of Deer Creek, Stanford Landing, Wyckford, and Covington Estates Subdivisions (Case No. 20-001)**
Chairperson Colston indicated this Item involved Forest Ridge of which she was a resident;

therefore, she was recusing herself from the discussion and vote regarding this Item. Chairperson Colston left the Chambers and turned the Meeting over to Vice Chairperson Lori Hendricks.

Assistant City Manager of Operations Kenneth Schwab reported this Item was an application for Engineering fees not to exceed \$35,000 dollars to prepare construction plans which would address erosion and bank stabilization along the man-made channel through Forest Ridge. He stated this Item had been an issue for several years, involved the Forest Ridge Homeowner's Association (who was the applicant), as well as others, including some residents in Wagoner County. He displayed and discussed a map which illustrated where the drainage issues, roads and creeks were located. He noted the issues predominantly involved Kenosha south to Houston in between Oneta Road and Midway Road. He discussed Covington Creek, Deer Creek, and an unnamed tributary. He discussed Kunze Lake, and the problematic man-made channel which ran from east to west. He noted the man-made channel was multijurisdictional in this area involving the City of Broken Arrow and Wagoner County. He indicated if the Committee agreed to recommend City Council move forward with the construction plans, Broken Arrow could do the engineering and coordinate with the Wagoner County Engineer, Rachel Cooper (ph). He displayed and discussed another map which illustrated Covington Estates which contained the east side of the man-made channel; the west side of the channel was in Wagoner County. He stated the channel was in a 40-foot drainage easement which was dedicated to Wagoner County.

Mr. Schwab displayed and discussed a map of the area from 1967 which illustrated the area prior to development. He discussed how the water drained through the area prior to construction of the man-made channel. He discussed the areas which were affected by the drainage issues with the man-made channel including Allison Estates (Covington Estates), Deer Creek at Forest Ridge, Stanford's Landing at Forest Ridge, the Highlands at Forest Ridge, as well as a new development which would have approximately 30 homes in Forest Ridge.

Mr. Schwab reported last October the City of Broken Arrow hired Tulsa Engineering and Planning (TEP) to see if there was anything which could be done to address the erosion, bank stabilization, etc., for the residents of Broken Arrow and Wagoner County. He indicated TEP took a hydraulic model, considered different techniques for stabilization and erosion control, and considered velocities and flows to determine if the difficulties could be addressed. He stated Proposition 6 funds were spent for this study; these funds (\$15,000 dollars) were spent prior to establishment of the Drainage Advisory Committee. He displayed and discussed photographs of erosion and sediment at Deer Creek, Deer Creek Trail Crossing, the man-made cutoff channel, and a pedestrian trail. He stated in these locations there were high velocities creating erosion, unsafe banks in need of stabilization, and excessive sediment. He stated if the channel were widened and stabilized there would be improvements gained relating to flood events; however, the area would continue to flood during a 50-year or 100-year flood event.

Mr. Schwab displayed and discussed slides created by TEP including a map which illustrated Deer Creek and the man-made channel and Covington Creek Tributary. He discussed the flow rate through the channel of approximately 6,500 cubic feet per second (cfs) before Covington Creek Tributary, and 1,700 cfs after Covington Creek Tributary. He discussed the new detention pond which would go in the new development which would reduce the flow rate by 100 cfs at the new development's location. He reported Broken Arrow Staff agreed with TEP's recommendation of Armormax as the best solution for stabilization of the Creek bank. He explained Armormax was a synthetic material which would be laid along the bank. He discussed the installation of Armormax. He displayed and discussed before and after photos of a creek in Tulsa where Armormax had been installed, and photos of the Armormax being installed. He noted the end result was the bank was stabilized, organic growth returned

to the banks and sediment was not traveling downstream.

Mr. Schwab reported in July, City Staff met with Forest Ridge HOA and the Wagoner County residents to present the proposed solution. He indicated it was important to ensure the residents were on board as this was not only a Broken Arrow issue, but a Wagoner County issue as well. He stated the meeting went extremely well and the residents were in support of this solution. He indicated the recommendation from Staff was to move forward with construction plans, to spend up to \$35,000 dollars hiring TEP to finalize and create the construction plan documents for potential bidding. He stated for construction and installation to come to fruition, the City would have to meet with the Corps of Engineers and obtain a nationwide permit or an individual permit. He noted he did not believe a nationwide permit would be required; he believed an individual permit would be required which meant public hearings would be held. He stated estimated construction costs were between \$425,000 dollars and \$500,000 dollars. He indicated in 2015 Forest Ridge HOA was willing to construct along the south side and make repairs at approximately \$100,000 dollars; at this point Forest Ridge was still committed to investing in the project as it moved forward. He indicated the Forest Ridge funds would actually be spent on the Wagoner County side of the channel to allow Broken Arrow Bond money to be spent on the Broken Arrow side of the channel. He noted the Legal Department confirmed this was acceptable.

Mr. Schwab stated Staff was asking the Committee to approve its recommendation of spending up to \$35,000 dollars to develop the construction plans and specifications. He noted he believed, if approved, the plans would be completed around January 2021 at which point Staff would return to the Drainage Advisory Committee for discussion of the next steps in the process.

Vice Chairperson Hendricks asked if the existing easements were sufficient for installation of Armormax or if would there be further costs associated with obtaining additional easements. Mr. Schwab responded the easement sizes were sufficient for installation; however, the City was required to obtain the existing easements. He explained the City would not spend any funds obtaining these existing easements; separate instruments would be written over the existing easements to dedicate the easements to Broken Arrow as currently the easements were dedicated to Wagoner County.

Committee Member Denise Mason asked why this project would not require a nationwide permit. Mr. Schwab responded typically a nationwide permit was limited to 300 feet. He stated the Corps could extend this up to 450 feet; however, this project was longer than 450 feet and he fully expected this project to fall under an individual permit. Committee Member Mason asked if the channel was Corps controlled; if it was "blue lined." Mr. Schwab responded the creeks were blue-lined, but once the man-made channel was cut it was not necessarily blue-lined. He noted, however, he had not asked the Corps if it would take jurisdiction of this as of yet; he fully expected the Corps to exercise jurisdiction and then exercise the 404.

Committee Member Parks asked if the Engineer's estimate was approximately \$500,000 dollars. Mr. Schwab responded in the affirmative; this included mitigation for the individual permit. Committee Member Parks asked if there were several different funding sources which needed to come together if the City moved forward with the project. Mr. Schwab responded in the affirmative; an agreement would be needed between the Forest Ridge HOA and the City of Broken Arrow (these were the two funding sources). Committee Member Parks asked how much money was in Proposition 6. Mr. Schwab responded there was approximately \$5.5 million dollars total in Proposition 6. Committee Member Parks noted he recalled discussing which areas were in dire need of Proposition 6 funds and this area was near the top of the list. He stated he was pleased this project was being considered. He noted he would have liked to have the flooding issues better addressed but he understood the new

development would improve the situation.

MOTION: A motion was made by Johnnie Parks, seconded by Donna Wallace.

Move to recommend to Council to execute an Agreement for Professional Consultant Services with Tulsa Engineering & Planning Associates, Inc. for providing design services to increase the flow area and reduce the velocity on the flow in Deer Creek, Unnamed Tributary to Covington Creek, and Covington Creek in the vicinity of Deer Creek, Stanford Landing, Wyckford, and Covington Estates Subdivisions (Case No. 20-001) not to exceed \$35,000 dollars

The motion carried by the following vote:

Aye: 5 - Jason Featherngill, Donna Wallace, Johnnie Parks, Lori Hendricks, Denise Mason

5. Adjournment

The meeting adjourned at approximately 6:38 p.m.

MOTION: A motion was made by Johnnie Parks, seconded by Donna Wallace.

Move to adjourn

The motion carried by the following vote:

Aye: 5 - Jason Featherngill, Donna Wallace, Johnnie Parks, Lori Hendricks, Denise Mason

Lori Hendricks, Vice Chairperson

Lisa Blackford, Deputy City Clerk