

Report to the City Council from the January 11, 2021 meeting

5. OLD BUSINESS

A. Belinder Low Water Crossing

Historical Summary

The State Park Road Ford was constructed in 1927 by J.R. Clark for the J.C. Nichols Company following a petition for construction in 1926. The State Park Road Ford was rebuilt in 1962 with two 4' by 3'7' by 31' culverts with a weir (small dam built across streams to control upstream water) on the West end. In the 1950's and early 1960's, the Police Department and City maintenance contractor placed barricades during reported flood events to prevent road crossings. During a rain event in May 1964, the creek waters over topped the Ford and Leonard A. Peters' vehicle was washed away and he subsequently perished. A year later during a rain event in September 1965 another car was washed into the Ford and Darlene Bowen was swept into the floodwaters and perished as a result. In both fatalities, the rain events occurred at night and the road closure barricades were not in place. In the lawsuits against the City following these deaths, it was documented that the City is at the "extreme end" of the Brush Creek Water Shed and during large water events endures floodwater control responsibilities. In November 1965, road closure gates were installed on Belinder Avenue to prevent vehicles entering floodwaters.

In 1974, the Belinder Low Water Crossing replaced the Ford and was constructed of six 10' by 4' by 29' culverts that were installed for \$133,000 (adj. for 2020 \$700,000). After completion the crossing required maintenance and repairs, and was subsequently rebuilt in 2004 for \$680,000 (adj. for 2020 \$936,000) with six 9' by 6' by 29' culverts, retaining walls, stacked stone channel walls, stone masonry facing, riprap, and an inclined weir drop.

Belinder Low Water Crossing Maintenance Costs since 2004

Following the replacement of the Belinder Low Water Crossing in 2004, the City has made more than 20 repairs to the stone channel walls, stone masonry facing, bridge road and deck, and culvert totaling \$1,216,125 in work (see attached report). Over the last 16 years, the average annual cost of repairs is \$76,008. Additionally, there is the cost for the Police Department to monitor and close the road during rain and high water events and storm damage debris removal.

Cost of Diverting Drivers

If the Belinder Low Water Crossing were closed to traffic then residents would have to take alternative routes to access the Fairway Shops and Shawnee Mission Parkway (at Belinder Avenue and State Park Road). The potential increase of cost in time and fuel for an alternative route to the Fairway Shops was measured by comparing the time it currently takes to access the Shops with the Belinder Low Water Crossing to a western route on 63rd Street; northern route Mission Road; or northern route on State Line and west on Shawnee Mission Parkway. Four quadrants within the City were identified, and from these locations, the average additional time incurred by taking an alternate route was less than 1 minute and .47 miles. Utilizing the federal reimbursement rate for mileage (\$0.575/mile) the average cost for an alternative route is \$0.27.