



Engineering Response to Remonstrance Concerns
Department of Engineering
Town of McCordsville

July 20, 2021

Project: PC-21-008, Colonnade PUD

Petitioner: Platinum Properties

Request: The petitioner is seeking a favorable recommendation on a rezone from Residential-1 (R-1) to Colonnade PUD.

Concerns and response:

Traffic: Vehicular site access will be provided via an entrance on CR 750N and an entrance on CR 700N. Additionally, two street stubs will be provided to adjoining properties to the east and west. A joint traffic study is being planned between town center, the Pulte development east of town center and the Platinum Properties site. Traffic counts are going to be collected and the proposed traffic from all three sites. Several intersections will be evaluated, including the entrances for all sites, CR 750 North and CR 600 West, CR 700 North and CR 600 West, CR 750 North and CR 500 West, CR 500 West and SR 234. The traffic study will give the anticipated traffic from the developments added to the existing traffic and give evaluations of the studied intersections along with improvement recommendations. With multiple developments all in close proximity, I anticipate there to be significant improvements needed and an opportunity to partner to share the cost.

Intersection of 750 North and CR 600 West: Special attention is being given to this intersection. There will be some improvements to the 750N legs. A&F is going to look at the need for either a roundabout or signal.

Intersection of 700 North and CR 600 West: Special attention is being given to this intersection. A minimum of turn lane improvements to the westbound leg of CR 700N will be required. The traffic study will determine if additional improvements are needed.

CR 700 North: This road is a minor collector. Expect a two-lane section to be the town's long term plan for CR 700 North. In 2020, a structural resurface (2.5" mill and resurface) was installed on CR 700 North. Currently there is no additional plans for this road. Long term there could be a widening project, but no other projects are expected in the next 10 years.

CR 750 North: This road is a major collector. Expect a two-lane section to be the town's long-term plan for CR 750 North. In 2015, a one-inch overlay was installed on CR 750 North over the existing chip and seal. Expect reconstruction of CR 750 North within 10 years.

School traffic: The original design did not anticipate having the drop off and pick up utilizing the 700N entrance. That entrance was intended for bus traffic only. The school, looking to improve its pickup traffic, changed its plan. Police and engineering have evaluated and assisted the school to modify the pickup to increase the number of vehicles that can stack on the site. The changes did improve things prior to Covid. Further monitoring is recommended. Additional improvements to the site may be needed. Walk to school and use of buses is recommended to lower impacts from growth.

Sanitary Sewer

One of the remonstrations letters had some questions about sewer capacity. First off, the number of zoning approvals since January 1, 2018 is 1,102 lots plus 119 senior apartments. The number listed in the letter are incorrect.

- Oakcrest - 55
- Weavers Landing - 202
- Pine Vail Estates - 78
- Summerton - 287
- Preserve at Brookside (BridgeNorth) – 98
- Liberty Ponds - 255
- Vintner's Park – 127
- Gardens on Gateway – 119 senior apt units

The design and construction of the wastewater treatment plant (WWTP) is not based on number of approved lots, but on treatment capacity of the existing WWTP.

The existing WWTP has a capacity of 500,000 gallons per day (gpd). The current flows are around 450,000 gpd or about 90% capacity. These flows are from 2,154 residential customers and 328.5 commercial EDUs (equivalent dwelling units) for a total EDU count of 2,482.5. The average flow for a McCordsville resident is 181 gallons per day, which is less than the traditional expected flow of 310 gallons per day per household. This is calculated from just dividing the flow by the EDUs.

The wastewater treatment plant is undergoing an expansion that is scheduled to finish in September that will increase the capacity to 1,000,000 gpd. Assuming the flows remain similar, the additional capacity of 550,000 gallons per day will allow for an additional 3,034 EDUs.

IDEM (Indiana Department of Environmental Management) requires the town enter into design when the WWTP is at 80% capacity and enter construction at 90%. Only if the town fails to comply with these requirements would IDEM consider a sewer ban.

80% capacity = 800,000 gpd; or after 1,930 additional EDUs

90% capacity = 900,000 gpd; or after 2,482 additional EDUs (double the current town population)

Building permits history to project future

2019 single family building permits = 105

2020 single family building permits = 240

P&B's 2021 projection (slowed some in June and July) is under 300

In discussions with Ryan, he does not anticipate McCordsville ever exceeding 450 permits per year based on his experience with Fishers during their growth. So, the 300-400 range is high and gives an accelerated timeline for the expansion of the WWTP.

Potential schedule for the next expansion

80% (1,930 EDU's) is estimated to be somewhere between 4 and 6.5 years

90% (2,482 EDU's) is estimated to be somewhere between 6.2 and 8.3 years

The town will have plenty of time to react to the increase of building permits.

The permits will also provide at least a large amount of the needed funds for the next expansion.

Impacts to existing septic systems: Septic are impacted by the soil conditions, the design of the finger system, and the drainage to the lot. The adjacent development will not impact Champion Lake septic systems. The town has a sewer ready to be extended at the intersection of 700N and 600W designed to service the Champion Lake lots when it is needed.