

Road Improvement- Sanbell Engineering 7/14/26

[Sanbell](#) Engineers did an extensive analysis of the Valley Grove Subdivision road conditions for further confirmation on the need to repair our roads. The entire document of their analysis including photos of damaged roads can be read [Here](#).

This Document is meant to summarize their analysis and compare the information to the evaluation provided by Morrison Maierle engineers. To read the summary of their Q/A from our May Board meeting follow the link [Here](#).

Phases 1-4

Phases 1-3 were constructed between 1994-1995. Phase 4 was constructed in 2000. The pavement observed in phases one, two and three have very similar conditions and remaining life.

Phase 1:

- **Severe deterioration** areas in **phase one** include Bison Trail, Frontier Drive, Buckhorn Trail, Valley Grove Drive, and Mountain Lion Trail.
 - **Frontier Drive** shows large longitudinal cracks with low point alligator cracking, and frequent transverse cracking.
 - **Buckhorn Trail** shows Alligator cracking, depression in the roadway, new unsealed cracks, centerline cracking/rutting, corner wear and drive lane rutting.
 - **Valley Grove Drive** shows depressions, surface damage, missing surface aggregate and transverse cracks causing low points in the pavement.
 - **Mountain Lion Trail** shows surface damage on the edge of roadway (potholes).

Phase 2:

- Phase two **major deterioration** areas include surface damage to pavement in Mountain Lion Trail cul-de-sac.

Phase 3:

- Phase three **severe deterioration** areas include Vigilante Trail, Drifter Drive, and Prospector Trail.
 - There are small ruts on **Vigilante Trail**
 - And cold joint cracking on **Drifter Drive**.
 - **Prospector Trail** shows longitudinal cracking causing a low point on the roadway.

Patches in the pavement were observed during inspection, possibly concluding maintenance under the surface and potential pothole repairs in phases one, two, and three.

Phase 4:

- There is very minimal crack sealing, new cracking, or deterioration in the roadway for phase four.

RECOMMENDATIONS:

- Based on the similar conditions and age of phases 1-3 in the subdivision, we recommend *at a minimum*, milling and overlaying the asphalt to restore the pavement to the original conditions.
 - **What is Milling and Overlaying?:**
 - A mill and overlay is a cost-effective asphalt maintenance process designed to refresh aging pavement, so it is structurally sound.
 - **How does it work?:**
 - Using a specialized milling machine, paving crews remove the top layer of asphalt, typically 1.5-2 inches deep. Once the old, damaged surface layer is ground away, the milled area is overlaid with a brand-new layer of hot-mix asphalt.
 - Prior to construction, we recommend performing a few cores throughout the subdivision to confirm the asphalt section is thick enough to perform the mill and overlay. The

construction in these phases can likely be phased as needed based on available funding, but we don't recommend pushing out construction since the existing cracking can deteriorate the roadway further to the point where full depth replacement is necessary, which is more expensive.

○ **What is the timeframe recommended to complete this process?:**

- We recommend completing construction of phases 1-3 within the next 5 years or less. In phases 1-3 there are isolated locations of alligator cracking and potholes which will need full depth repair.
- The asphalt in phase 4 of the subdivision is visually in better condition than the rest of the subdivision. However, asphalt is typically designed for a 20-year service life, which has already been exceeded.
 - We recommend applying a chip seal every 5 to 8 years and standard liquid seal coat every 2 to 3 years to protect the surface. Perform crack sealing and minor repairs annually to prevent potholes and repair potholes as soon as possible

Note: Sanbell only performed a visual observation, so we don't know the status of the original asphalt and base course thickness.