



# PARMER LANE FIRE CASE STUDY

## Incident Summary:

The Parmer Lane Fire began on August 8, 2023, in Cedar Park, Texas at approximately 6:00 p.m. This wildfire caused the evacuation of 395 residences and multiple businesses. The wildfire resulted in the complete loss of one apartment building with three other apartment buildings damaged.

The final acreage of this wildfire was 37 acres, with multiple local, state and federal agencies responding.

## About this Case Study

For the full case study StoryMap, including drone and dashcam videos as well as more information on wildfire preparedness, visit the QR link below.

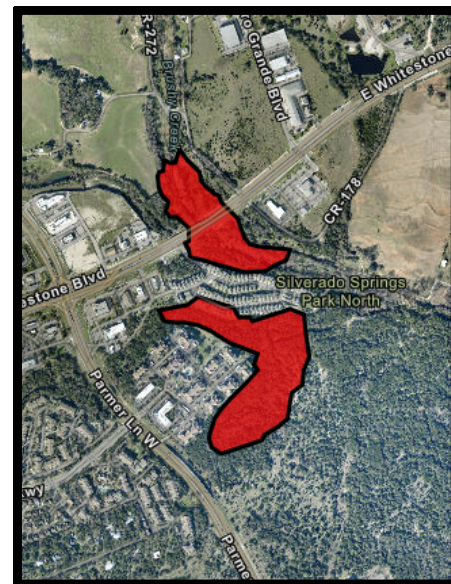


## Case Study Summary

Building construction plays a crucial role the survivability of structures when faced with wildfire. Nationwide, codes and ordinances continue to be developed and improved to influence the design and resiliency of communities to wildfire effects. On August 8, 2023, Cedar Park, Texas experienced a fast-moving and relatively small wildfire that had potential to cause significant structure loss. Damage to structures was minimized in part due to critical design elements in the neighborhoods that were affected.

The Parmer Lane Fire impacted two different housing developments, the Bexley at Silverado apartment complex and the Whitestone Landing neighborhood. Both were built with construction techniques often found in Wildland Urban Interface (WUI) building codes that specifically address structural ignitability due to wildfire. Considering the location of buildings in relation to extreme fire behavior, the neighborhoods experienced relatively minimal damage compared to fire officials expectations.

This case study seeks to examine the various characteristics of the structures that were impacted to determine what role they played in structure survivability as well as highlight the increasing risks to communities with wildfires occurring within the occluded wildland urban interface.



## Community Impacts



### Burning juniper with ember shower

Due to low live fuel moisture and extended drought, most vegetation in the fire fully consumed. This created a large amount of embers, which, along with the embers from the burning apartment building, showered down on Whitestone Landing throughout the night of August 8th.



### Attic fire damage, Building 11

An attic fire was discovered in a second apartment building and was able to be extinguished before it damaged the entirety. It is suspected that embers entered the attic of both this structure and the one which was destroyed.



### Radiant heat damage & scorched grass

This apartment building experienced moderate damage from extreme radiant heat and embers due to an attic fire and radiant heat melting decorative vinyl up to the third floor and cracking the first pane in a bottom story window. The building has no exposed wood and limited openings into the structure.

## Wildland Urban Interface

Central Texas has a large wildland-urban interface environment, with the majority of high-risk areas being typically classified as "intermix" or "interface". The Parmer Lane Fire occurred within the city limits of Cedar Park on both private and public property, in an area that would be classified as "occluded WUI," or wildlands completely surrounded by development. The previous maps show the approximate location and final perimeter of the Parmer Lane Fire, highlighting the non-traditional WUI communities impacted by this fire. Occluded WUI areas in Texas are not generally thought of as high-risk by members of the public, however, under the appropriate conditions, these relatively small fires can threaten densely populated communities and provide unique challenges for incident management. Therefore, it is especially important for cities to conduct comprehensive wildfire risk reduction pre-planning.

## Lessons Learned

### Tactics & Coordination

- Prior relationships built between local and state entities engaged in wildfire response have proven instrumental in improving the region's ability to respond to wildfires.
- Personnel with wildland fire training that were able to organize and respond quickly when the wildfire occurred.
- Existing mutual aid agreements allowed for the coordinated response of wildland and structural firefighting resources from nearby fire departments, state and federal agencies.
- Brush trucks shadowing when leaving stations for daily duties to improve wildland fire response times, in part due to observed fuel dryness and live fuel moistures.
- Strategic mutual aid agreements that account for backfill of resources when necessary.

### Fire Adapted Communities

- The two impacted housing development displayed many characteristics of fire resistant landscaping and construction materials commonly recommended in wildland urban interface municipal codes.
  - Where wooden fences were present in the townhomes, they did not attach to the homes and were often surrounded at the base with rock or short grass, decreasing the likelihood of structures igniting from a burning wooden fence line.
  - The townhomes had a maintained setback from surrounding vegetation on the south side, resulting in better access for firefighters and less intense fire behavior as it approached the neighborhood.
- Limited damage was caused by the significant radiant heat from the wildfire as it approached within ten feet of buildings. This damage was contained to melted vinyl shutters and a few broken window panes on double-pane windows despite the intense, direct heat.
- Significant damage occurred where embers were able to gain access to apartment attics.