After the 7.1 magnitude earthquake on November 30, 2018, there were many comments stating we have more stringent building codes than elsewhere in the country. That is not quite true. The primary code in Anchorage and Alaska is the same one that is used in every other state: The International Building Code (IBC). The IBC recognizes that Alaska is a seismically active state and requires higher loads and more stringent detailing requirements for the structures that resist them. But those requirements also apply to most of the West Coast. Unlike those areas, we also design for hurricane force winds and heavier snow loads.

The State Fire Marshal adopts the IBC, the International Fire Code, International Mechanical Code and International Fuel Gas Code. The Department of Labor adopts the National Electrical Code and the Uniform Plumbing Code. Other specialized codes are adopted by various agencies. Each applies to the entire state. Local jurisdictions may adopt these or other codes, but their provisions must be equal to, or more stringent than, state code requirements.

The Fire Marshal and Department of Labor usually adopt each version of the codes, soon after they come out, with amendments to accommodate local climatic and industry standards. The Department of Labor is required to adopt each new code as it is published. The Fire Marshal had trouble getting the 2012 codes adopted and they did not become regulation until 2017. They still govern, even though the 2015 and 2018 codes have been published. These codes apply to all commercial and public structures in the state.

The Fire Marshal is precluded by State Law from adopting codes related to residential construction with three units or less. Some local jurisdictions have adopted the International Residential Code (IRC) to govern those structures. But outside those jurisdictions, the de facto code enforcement agencies have been the Alaska Housing Finance Corporation, banks, and credit unions, who may require design in accordance with the IRC. But that only applies to projects to which they are financing. If a residence is built outside one of the jurisdictions with a residential code and without financing, it may not be built in accordance with the basic requirements of the IRC.

Adopting a code is just the first step. That code must also be enforced. However, the Fire Marshal only provides plan reviews for the fire and life safety provisions of the code
and does not enforce the structural chapters. They do not do inspections during construction or before occupancy. The Department of Labor, on the other hand, does not do plan reviews. They do perform inspections on a selective basis, but getting to remote locations is not a regular occurrence.

Twelve jurisdictions have promised to enforce the same commercial codes to at least the level performed by the Fire Marshal’s office and have received deferrals from Fire Marshal review of commercial structures. Anchorage is one of those jurisdictions and it has also adopted the IRC. They do complete plan reviews for compliance with architectural, fire, structural, mechanical, and electrical provisions of the various codes. They also do inspections for compliance with the approved drawings.

However, while the adopted codes apply across the entire Municipality, due to the provisions of the Municipal Charter, some areas of the Municipality receive no enforcement because the residents have consistently turned down proposals to add those services. Those include Eagle River, Chugiak, Girdwood, and a small portion of the Hillside. With the exception of Municipality funded projects, including schools, commercial and residential projects in those areas only need to get a land use permit from the Municipality. Commercial structures will also need a Fire Marshal plan review, but no inspection. No structural review is done by either entity. Residences in those areas do not get plan reviews nor inspections from the Municipality.

The Matanuska-Susitna Borough has a similar patchwork of code enforcement. The Borough is not a deferred jurisdiction, but Palmer and the Wasilla Lakes FSA (Central Mat-Su FD) are. Palmer does plan reviews and inspections of commercial and residential structures. Wasilla Lakes does fire safety reviews of commercial structures.

There has been a much higher rate of damage to structures in Eagle River and Chugiak, than in the Anchorage Bowl. There is anecdotal evidence that the same could be said of the Mat-Su valley. This is despite the fact that the ground accelerations in those areas were not greater than accelerations seen in the Anchorage Bowl. Many homeowners in these areas were surprised to find out, after the earthquake, that the inspectors for their house construction were not independent or municipal inspectors, but employees of, or subcontractors to, the contractor. Commercial structures were also found to not have been constructed in accordance with the architect’s or engineer’s plans due to lack of inspection. In most cases, nonstructural damage was the majority of the reason for a building closure.

This patchwork of codes and enforcement has long been an issue to the design and construction community. Several attempts have been made to consolidate the codes in one state department, without success. Expanding building code enforcement to Eagle River and Chugiak has also been turned down by the residents. We don’t know of any attempts to adopt building codes for the entire Mat-Su Valley, but the history of residential opposition to any zoning or other codes indicate that it would be unsuccessful.
The 7.1 magnitude earthquake did not cause ground accelerations expected during a design earthquake. It was nowhere near the magnitude or length of the 1964 earthquake, which also is believed to not have had ground accelerations of a design event. Thus, unless something changes before the next major earthquake, we are likely to see some of the same types and extent of damage, in the same areas, as we are seeing now. Even more catastrophic damage is likely to occur, if that earthquake is closer to the magnitude of the 1964 quake than the 2018 quake, never mind a design earthquake.