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**STRUCTURAL | CIVIL
FIRE PROTECTION**

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Royal Mortier, PE
COO\Senior Engineer – Special Projects

RE: Kootenai County Building Codes, Building Code Ordinance Amendment Proposal

To whom it may concern;

Hello, my name is Royal Mortier, and I'm writing in support of Building Codes proposal option #3. I'm a home-builder and a licensed engineer, nationally certified inspector and plans examiner and certified home inspector. Presently, I'm the Chief Operating Officer and a Senior Engineer for Mortier Ang Engineers, aka MAE. MAE has provided engineering and building codes services to private and public clients for 45 years. We have also served as the building department for over 60 jurisdictions across Oregon, Washington, and Idaho.

I've reviewed through documents submitted in both support and opposition of building codes and would like to clarify something: building codes are not laws, nor are they product advertisements, nor something written to restrict ones' individuality; codes are documented corrections to hard lessons learned. I call them hard lessons because they are typically learned through death or significant financial loss. These 'lessons' are then reviewed by many professionals, a cause is determined, and a code is written to provide a feasible solution that reduces or eliminates the cause. As more lessons occur, or better practices developed, the codes are amended to reflect these changes.

Since building codes began being enforced in the late 1800s, following a span of significant property loss and death due to fire, the causes of these tragedies have been reduced or eliminated through their implementation. Comments have been made about fires having low probability of occurrence, and to that person you are correct, fires are now rare because we have building codes. All you have to do is begin typing "Great Fire" into Google, and a long list of cities begin to populate the search bar. For example, The Great Chicago Fire of 1871 began, and propagated, as result of multiple unregulated structures. The result was over 300 dead and 17,500 building damaged/destroyed with an estimated cost to repair of greater than \$4 billion, based on today's dollars.

It has been stated that building codes are required and imposed by law. Both these statements are false. Following building codes and permitting is already initially voluntary, which is why there's an 'as-built' process. The as-built process applies to buildings constructed without permits and allows the current, or future owners, to bring the structure within code compliance after the fact. Our firm works on as-built projects regularly, and we have yet to have one ever be constructed to even minimal structural compliance.

I'd like to provide two examples of projects we've worked on just in the last few years that would have met the "opt-out" requirements.

The first is someone who built a significant addition and shop on his home that was later inherited by his children. At sale, the home was found to have significant issues with plumbing, electrical, mechanical, and had a chimney that was improperly constructed. In the end, the children incurred over \$100K of repairs before a bank would even be willing to finance the residence for the

perspective buyer. That's correct, lack of code compliance can, and will, result in banks being unwilling to loan on the property for a perspective buyer.

The second example is someone who began by getting permits on their original 2-story, 3,000 SF residence, but then over the next 15 years began adding on, upwards. His neighbors asked him to stop, filed complaints, and even attempted legal action, but none of it stopped the work progression. In the end, his home wound up being 4- stories and over 10,000 SF. The finished home had 15-bedrooms, and the owner had thought to foster/adopt following retirement to fill it.

During our assessment of the home, the owner boasted how over-built it was with a massive foundation, 2x8 walls, and beams they had sized using free online software. They were correct, they had over-built the home, vertically.

The owner was also a car collector, the entire first floor was a garage space with multiple openings which provided little lateral resistance, and inspection found signs of lateral failure. The upper two floors had inadequate egress which would have resulted in anyone in the upper 10 bedrooms to be trapped in a fire at the 2nd floor, and the driveway was inaccessible to fire trucks. There was a comment of, "What is code trying to do, protect us from ourselves?" Yes, it is, because in tragedy there is never just one victim.

In Fire, Life, and Safety design we consider two systems, Passive and Active. Passive systems are the mechanisms that are simply there. We don't think about them, but in case of emergency, they perform their job without any outside input. Examples being fire partitions, handrails, guardrails, fire resistance materials, and egress doors that swing outward. These are everyday items in our homes and businesses but are only there because the code required them due to someone else's tragedy.

Active systems are systems that require something to occur for them to be activated, common examples being smoke detectors or fire sprinkler systems. Passive and active systems save thousands from injury or loss of life every year. Proper balance and implementation of passive and active systems has reduced our reliance on fire fighters and EMT's, but when we do need stateside heroes, they are there and need to be able to get to us.

As a certified home inspector and building inspector, I can tell you there is minimal correlation between the two professions. A building inspector has been trained, mentored, and lead to know the building codes. They spend multiple days' worth of man hours reviewing plans and inspecting the structure for compliance and has their name(s) are associated with that structure for eternity.

A home inspector assesses a structure commonly prior to purchase. The tools referred to in Commissioner Bingham's write-up making it capable to see through walls are not something commonly implemented by a home inspector, nor would this approach be timely or economical. A home inspection typically takes a few man-hours perform their inspection, and reports can be quickly compiled through the use of certain software. These assessments cost the client about \$400, with an indemnity clause holding them only liable for their fee.

To incorporate the tools referenced by Commissioner Bingham would add significant time and expense to an otherwise rudimentary assessment, and such tools are not commonly used as one may believe. Our firm works with a building envelope specialist who employs the tools cited, and their assessment fee starts at \$3,000 and it may take a few weeks to compile the raw data. They then bring this data to a firm like ours to verify if what they found is structurally adequate and complies with code. The projects we've worked on together have ended up costing the end user no less than \$5,000 and have taken multiple months to complete a full assessment. Considering the average building permit fee for a 2,000 SF residence is less than \$3,000 and provides verification of code

compliance and structural adequacy prior and during construction, having a building department with proper code enforcement is the most cost-effective option to the end consumer. To remove this service, whether at a residential or commercial level, will result in greater expense for those who opt to build in compliance and rely on private industry to verify. To opt out will result in difficulty attaining financing and insurance in the future.

To have quality inspectors and plans examiners who properly enforce the codes greatly depends on their training and leadership. Leadership of these civil servants doesn't start and stop with the building official, it extends all the way up to the mayor, and includes everyone in between. Within our company, we meet regularly with mayors, counselors, and contractors to discuss our teams' performance. We take this information, formulate it into constructive critiques, trainings, or policy changes, and execute. So, for those who have complained or suffered silently and are now believing this is the best option for correction, I'd strongly disagree. There are no bad teams, only bad leaders. And it can only rest solely in the leadership to make the small hard decisions, have the hard conversations, and train and appreciate their teams adequately to eliminate inspector ego and poor enforcement.

In closing, to remove the requirements for building code compliance is to turn a blind eye to centuries of lessons learned. Lessons that through implementation of codes have resulted in reduced fires and loss of life, fewer injuries, better accessibility and energy efficiency, cleaner interior environments, and less property damage. Thank you.

Cordially,

Royal Mortier, PE