JOHNSON COUNTY BUILDING OFFICIALS
ENERGY CODE COMMITTEE PRIORITIES AND RECOMMENDATIONS
June 2010

Priorities	Recommendation	Comments
Verification of envelope compliance with Code	Documentation should be submitted to verify that the overall design complies with one of the design approaches prescribed by the codes and should be submitted with permit applications. 1. Prescriptive Path – 2. Total UA alternative Path – RESCHECK 3. Simulated performance alternate path – IECC 404	The code requires compliance with one of the listed methods. Doing this and the in addition to manual J, D, and S seems somewhat excessive. Compliance would mandate that current local amendments to delay basement wall insulation until the basement is finished would have to be included in the design procedure.
Compliance with Manual J, D, and S	Verification should be submitted with permit applications: Submit compliance documentation	Most mechanical contractors are performing calculations using compliance software. Requiring submittals with applications should not significantly affect current practices. By performing the required calculations, sealing, obtaining the required inspections homes would generally qualify for rebates from utility companies to offset any added costs. Benefits of reduced equipment costs and future utility savings. If approved design software is used doing the duct design per Manual D is not problematic for mechanical contractors. If the structure is inputted correctly via draw features in the software performing Manual J and D calculations are easily accomplished. Design modifications resulting from orientation changes can also be easily accomplished.
Verification that Designs performed in compliance codes and ACCA standards	A procedure to verify that designs conform to the minimum codes and standards should be established – compliance options can include: 1. Approved third parties 2. Minimum qualifications for designers 3. Adequate training for code officials and inspectors 4. Peer reviews	If designs are not performed using the correct design assumptions and equipment is not selected correctly the overall energy efficiency and home comfort levels will not provide adequate performance. How this will be accomplished needs further evaluation.
Uniform plan submittal and compliance guidelines	Designers should be able to do a manual J, S, and D design and REScheck calculations and have a reasonable expectation that if performed correctly it would be acceptable in any area jurisdiction with only minor	Calculations should be performed using appropriate calculation software. Using rules of thumb for sizing equipment and ductwork will not result in efficiently performing systems. To qualify for utility rebates calculations are required.

	changes. To accomplish this jurisdictions should have similar requirements for compliance including the following: 1. Uniformly adopted code requirements 2. Minimum submittal requirements 3. Acceptable software 4. Consistent design assumption guidelines	As much as possible guidelines for our area should be standardized so that code requirements, design parameters, and submittal requirements using acceptable software for a house design would be acceptable in any jurisdiction. Code edition and amendments: Elevation: varies Lenexa 1,000; KCMO 790 Latitude: KCMO 39 Winter design temperature 99% dry bulb: 4^0F Summer Cooling 1% dry bulb: 93^0F Coincident wet bulb: 75^0F Design grains: 33 @ 55%RH Daily Range: Medium (M) Heating indoor design temperature: 72^0F Cooling indoor design temperature: 75^0F Heating temperature difference (HTD): 68^0F Cooling temperature difference (CTD): 18^0F Infiltration ACH:
As built construction complies with design	Energy compliance designs should be field verified: Increased jurisdiction inspections Approved third parties	To assure that structure air changes per hour fall within code limits additional inspections for compliant installations is essential. In general there are significant structure ACH differences between those that are thoroughly inspected and those that are not. A inspections sequence needs to be established. Rough-in: envelope sealing/penetrations; duct sealing; window and door U-values; draft-stopping; soffit vent baffles; exhaust vents; soffit and roof vents; Insulation inspection: walls; rim joist and band joists; attic knee walls with vapor barrier; Final inspection: Attic insulation or third party certification

Training to understand and interpret software outputs	Code officials and designers should be adequately trained	Although code officials do not have to be as proficient as designers to perform Manual J, D, and S designs or REScheck they need enough training to accomplish the following: 1. Explain basic energy code requirements 2. Verify that those performing designs at least used acceptable design inputs and are qualified to perform the designs. 3. Verify that adequate design information has been submitted for permit approval. 4. Inspectors understanding what needs to be inspected and how it should be installed. 5. Keep records of design input data for future changes or equipment replacement
Implementation timeframes	Residential requirements - January 1, 2011	
Commercial construction	Appropriate procedures to verify that commercial projects comply with the energy requirements should also be addressed after residential construction has been addressed.	