WHAT IS CLAIMED IS:

1. A method of video decoding at a video decoder, comprising:

receiving a first syntax element from a bitstream of a coded video, the first syntax element specifying a minimum luma coding block size;

verifying whether the minimum luma coding block size is within a range of allowable minimum luma coding block sizes having an upper limit smaller than a maximum allowable coding tree unit (CTU) size; and

in response to the minimum luma coding block size being within the range of allowable minimum luma coding block sizes, decoding a coded picture in the coded video based on the minimum luma coding block size,

wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the verifying includes verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to Min(N, log2_ctu_size_minus5 + 3), inclusive, where N is 4, and log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video.

~~2. The method of claim 1, wherein the upper limit of the range of allowable minimum luma coding block sizes is a predefined maximum allowable minimum luma coding block size.~~

~~3.~~2.The method of claim 1, further comprising:

receiving a second syntax element from the bitstream of the coded video, the second syntax element specifying ~~a~~ the CTU size~~,~~

~~wherein when the CTU size is greater than a predefined maximum allowable minimum luma coding block size, the predefined maximum allowable minimum luma coding block size is used as the upper limit of the range of allowable minimum luma coding block sizes~~.

~~4. The method of claim 3, wherein when the CTU size is smaller than the predefined maximum allowable minimum luma coding block size, the CTU size is used as the upper limit of the range of allowable minimum luma coding block sizes.~~

~~5. The method of claim 1, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and~~

~~the verifying whether the minimum luma coding block size is within the range of allowable minimum luma coding block sizes includes:~~

~~verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to N, inclusive, where N is an integer, and N+2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size.~~

~~6. The method of claim 1, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and~~

~~the verifying whether the minimum luma coding block size is within the range of allowable minimum luma coding block sizes includes:~~

~~verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to Min(N, log2_ctu_size_minus5 + 3), inclusive, where N is an integer, N+2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size, and log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video.~~

~~7. The method of claim 6, wherein N is equal to 4.~~

~~8. The method of claim 1, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and~~

~~the verifying whether the minimum luma coding block size is within the range of allowable minimum luma coding block sizes includes:~~

~~verifying whether the binary logarithm value of the minimum luma coding block size is greater than Min(N+2, log2_ctu_size), where N is an integer, N+2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size, and log2_ctu_size represents a binary logarithm value of a CTU size of the coded video.~~

~~9. The method of claim 8, wherein N is equal to 4.~~

~~10. The method of claim 1, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and~~

~~the verifying whether the minimum luma coding block size is within the range of allowable minimum luma coding block sizes includes:~~

~~verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to log2_ctu_size_minus5 + M, inclusive, where M is an integer, log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video, and log2_ctu_size_minus5 + M + 2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size.~~

~~11.~~3. An apparatus of video decoding, comprising circuitry configured to:

receive a first syntax element from a bitstream of a coded video, the first syntax element specifying a minimum luma coding block size;

verify whether the minimum luma coding block size is within a range of allowable minimum luma coding block sizes having an upper limit smaller than a maximum allowable coding tree unit (CTU) size; and

in response to the minimum luma coding block size being within the range of allowable minimum luma coding block sizes, decode a coded picture in the coded video based on the minimum luma coding block size,

wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the verifying includes verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to Min(N, log2_ctu_size_minus5 + 3), inclusive, where N is 4, and log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video.

~~12. The apparatus of claim 11, wherein the upper limit of the range of allowable minimum luma coding block sizes is a predefined maximum allowable minimum luma coding block size.~~

~~13.~~4. The apparatus of claim ~~11~~3, wherein the circuitry is further configured to:

receive a second syntax element from the bitstream of the coded video, the second syntax element specifying ~~a~~ the CTU size~~,~~

wherein when the CTU size is greater than a predefined maximum allowable minimum luma coding block size, the predefined maximum allowable minimum luma coding block size is used as the upper limit of the range of allowable minimum luma coding block sizes.

14. The apparatus of claim 13, wherein when the CTU size is smaller than the predefined maximum allowable minimum luma coding block size, the CTU size is used as the upper limit of the range of allowable minimum luma coding block sizes.

15. The apparatus of claim 11, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the circuitry is further configured to:

verify whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to N, inclusive, where N is an integer, and N+2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size.

16. The apparatus of claim 11, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the circuitry is further configured to:

verify whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to Min(N, log2_ctu_size_minus5 + 3), inclusive, where N is an integer, N+2 represents a binary logarithm value of a predefined maximum allowable minimum luma coding block size, and log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video.

17. The apparatus of claim 16, wherein N is equal to 4.

18. The apparatus of claim 11, wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the circuitry is further configured to:

verify whether the binary logarithm value of the minimum luma coding block size is greater than Min(N+2, log2_ctu_size), where N is an integer, N+2 represents a binary

~~logarithm value of a predefined maximum allowable minimum luma coding block size, and log2_ctu_size represents a binary logarithm value of a CTU size of the coded video.~~

~~19. The apparatus of claim 18, wherein N is equal to 4.~~

~~20.~~5. A non-transitory computer-readable medium storing instructions that, when executed by a processor, cause the processor to perform a method of video decoding, the method comprising:

receiving a first syntax element from a bitstream of a coded video, the first syntax element specifying a minimum luma coding block size;

verifying whether the minimum luma coding block size is within a range of allowable minimum luma coding block sizes having an upper limit smaller than a maximum allowable coding tree unit (CTU) size; and

in response to the minimum luma coding block size being within the range of allowable minimum luma coding block sizes, decoding a coded picture in the coded video based on the minimum luma coding block size,

wherein the first syntax element indicates a binary logarithm value of the minimum luma coding block size minus 2, and

the verifying includes verifying whether the binary logarithm value of the minimum luma coding block size minus 2 is in a range of 0 to Min(N, log2_ctu_size_minus5 + 3), inclusive, where N is 4, and log2_ctu_size_minus5 + 5 represents a binary logarithm value of a CTU size of the coded video.