CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising:

reporting, to a base station, an enhanced downlink control channel monitoring capability, wherein the enhanced downlink control channel monitoring capability facilitates monitoring by the UE of more downlink control channel monitoring opportunities per slot than a baseline downlink control channel monitoring capability;

receiving, based at least on the UE reporting the enhanced downlink control channel monitoring capability, a configuration for enhanced downlink control channel monitoring; and

monitoring one or more downlink control channels in accordance with the enhanced downlink control channel monitoring capability of the UE.

2. The method of claim 1, wherein the receiving comprises:

receiving at least one control resource set configuration that includes an indication that a corresponding control resource set is configured for enhanced downlink control channel monitoring.

3. The method of claim 1, wherein reporting the enhanced downlink control channel monitoring capability comprises:

reporting a number of cells for which the UE supports the enhanced downlink control channel monitoring.

4. The method of claim 3, wherein the number of cells is less than or equal to a number of cells for which the UE supports a shorter of two different minimum downlink processing times.

5. The method of claim 3, further comprising:

determining that a number of cells configured for enhanced downlink control channel monitoring exceeds the number of cells.

6. The method of claim 3, wherein:

a number of blind decodings for the enhanced downlink control channel monitoring is based at least in part on an equal split of a maximum number of blind decodings across a number of cells configured for the enhanced downlink control channel monitoring; and

a number of control channel elements for the enhanced downlink control channel monitoring is based at least in part on an equal split of a maximum number of control channel elements across the number of cells configured for the enhanced downlink control channel monitoring.

7. The method of claim 1, further comprising:

reporting, to the base station, a number of downlink control information sizes supported by the UE for the enhanced downlink control channel monitoring capability.

8. The method of claim 1, further comprising:

reporting, to the base station, a per downlink control channel monitoring span blind decoding limit or a per downlink control channel monitoring span control channel element processing limit supported by the UE that corresponds with the enhanced downlink control channel monitoring capability.

9. The method of claim 1, wherein receiving the configuration comprises:

receiving a plurality of control resource set configurations, each for a corresponding control resource set, wherein a first portion of the corresponding control resource sets are configured for enhanced downlink control channel monitoring and a second portion of the corresponding control resource sets are configured for baseline downlink control channel monitoring.

10. The method of claim 9, further comprising:

receiving search space configurations which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the search space configurations are associated with only the second portion of the corresponding control resource sets.

11. The method of claim 1, wherein receiving the configuration comprises:

receiving a plurality of control resource set configurations, each for a corresponding control resource set, wherein each of the corresponding control resource sets are configured for enhanced downlink control channel monitoring.

12. The method of claim 11, further comprising:

receiving search space configurations which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the overbooking of downlink control channel candidates occurs only in a first downlink control channel monitoring span of a slot.

13. The method of claim 12, further comprising:

dropping lower priority downlink control channel candidates associated with the first downlink control channel monitoring span based at least in part on the overbooking.

14. The method of claim 11, wherein the plurality of control resource set configurations are configured for a primary cell.

15. The method of claim 1, wherein receiving the configuration comprises:

receiving a plurality of search space configurations, each for a corresponding search space, wherein each of the corresponding search spaces are configured for enhanced downlink control channel monitoring.

16. The method of claim 15, wherein the plurality of search space configurations result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the overbooking of downlink control channel candidates occurs only in a first downlink control channel monitoring span of a slot.

17. The method of claim 15, wherein the plurality of search space configurations are configured for a primary cell.

18. The method of claim 15, further comprising:

dropping lower priority downlink control channel candidates associated with the first downlink control channel monitoring span based at least in part on the overbooking.

19. The method of claim 1, further comprising:

receiving search space configurations, configured for enhanced downlink control channel monitoring, which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the overbooking is associated with only downlink control channel monitoring spans that include common search spaces.

20. The method of claim 19, wherein the search space configurations are further associated with only a portion of slots that include both common search spaces and UE-specific search spaces within the downlink control channel monitoring spans that include common search spaces and UE-specific search spaces.

21. The method of claim 1, wherein the reporting comprises:

reporting the baseline downlink control channel monitoring capability to the base station.

22. A method for wireless communication at a base station, comprising:

receiving, from a user equipment (UE), an enhanced downlink control channel monitoring capability of the UE, wherein the enhanced downlink control channel monitoring capability facilitates monitoring by the UE of more downlink control channel monitoring opportunities per slot than a baseline downlink control channel monitoring capability of the UE;

transmitting, to the UE and based at least on receipt of the enhanced downlink control channel monitoring capability of the UE, a configuration for enhanced downlink control channel monitoring; and

transmitting one or more downlink control channel messages on one or more downlink control channels in accordance with the configuration.

23. The method of claim 22, wherein transmitting the configuration comprises:

transmitting a plurality of control resource set configurations, each for a corresponding control resource set, wherein a first portion of the corresponding control resource sets are configured for enhanced downlink control channel monitoring and a second portion of the corresponding control resource sets are configured for baseline downlink control channel monitoring.

24. The method of claim 23, further comprising:

transmitting search space configurations which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the search space configurations are associated with only the second portion of the corresponding control resource sets.

25. The method of claim 22, wherein transmitting the configuration comprises:

transmitting a plurality of control resource set configurations, each for a corresponding control resource set, wherein each of the corresponding control resource sets are configured for enhanced downlink control channel monitoring.

26. The method of claim 25, further comprising:

transmitting search space configurations which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the overbooking is associated with only in a first downlink control channel monitoring span of a slot.

27. The method of claim 25, further comprising:

transmitting search space configurations which result in overbooking of downlink control channel candidates to be monitored or non-overlapping control channel elements to be processed, wherein the overbooking is associated with only downlink control channel monitoring spans that include common search spaces.

28. The method of claim 27, wherein the search space configurations are further associated with only a portion of slots that include both common search spaces and UE-specific search spaces within the downlink control channel monitoring spans that include common search spaces and UE-specific search spaces.

29. An apparatus for wireless communication at a user equipment (UE), comprising:

a processor,

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

report, to a base station, an enhanced downlink control channel monitoring capability, wherein the enhanced downlink control channel monitoring capability facilitates monitoring by the UE of more downlink control channel monitoring opportunities per slot than a baseline downlink control channel monitoring capability;

receive, based at least on the UE reporting the enhanced downlink control channel monitoring capability, a configuration for enhanced downlink control channel monitoring; and

monitor one or more downlink control channels in accordance with the enhanced downlink control channel monitoring capability of the UE.

30. An apparatus for wireless communication at a base station, comprising:

a processor,

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

receive, from a user equipment (UE), an enhanced downlink control channel monitoring capability of the UE, wherein the enhanced downlink control channel monitoring capability facilitates monitoring by the UE of more downlink control channel monitoring opportunities per slot than a baseline downlink control channel monitoring capability of the UE;

transmit, to the UE and based at least on receipt of the enhanced downlink control channel monitoring capability of the UE, a configuration for enhanced downlink control channel monitoring; and

transmit one or more downlink control channel messages on one or more downlink control channels in accordance with the configuration.