CLAIMS

1. A method of providing remote assistance for an autonomous vehicle, the method comprising:

determining, at a computing system, that the autonomous vehicle has stopped based on sensor data received from the autonomous vehicle, wherein the computing system is positioned remotely from the autonomous vehicle;

determining, by the computing system using the sensor data, one or more review criteria have been met, wherein the one or more review criteria includes an indication that the autonomous vehicle has stopped at least a threshold period of time awaiting the pickup of a passenger;

in response to the one or more review criteria being met, providing at least one image to an operator corresponding to a time prior to determining that one or more review criteria have been met;

receiving, at the computing system, an operator input; and

in response to the operator input, providing an instruction to the autonomous vehicle for execution by the autonomous vehicle via a network.

2. The method of claim 1, wherein the threshold period of time repeats for the duration the autonomous vehicle is stopped.

3. The method of claim 1, wherein at least one of the one or more review criteria relates to received audio.

4. The method of claim 1, wherein at least one of the one or more review criteria relates to a change in the environment of the autonomous vehicle.

5. The method of claim 1, wherein the at least one image comprises a video.

6. The method of claim 5, wherein the video is recorded by a camera of the autonomous vehicle.

7. The method of claim 6, wherein the video comprises a predetermined length of video stored from the autonomous vehicle.

8. The method of claim 1, wherein the instruction to the autonomous vehicle comprises an instruction for the autonomous vehicle to change location.

9. The method of claim 1, further comprising: determining the threshold period of time based on an environment of the autonomous vehicle.

10. The method of claim 9, wherein determining the threshold period of time based on the environment of the autonomous vehicle comprises: determining the threshold period of time based on the autonomous vehicle being stopped proximate a driveway or in a double-parked arrangement with at least one parked vehicle.

11. A system comprising:

a wireless communication system configured to communicate with an autonomous vehicle via a network, wherein the wireless communication system is configured to:

receive sensor data from the autonomous vehicle, the data comprising image data and location data,

send instructions to the autonomous vehicle for execution by the autonomous vehicle; and

a processor positioned remotely from the autonomous vehicle, wherein the processor is configured to:

determine the autonomous vehicle has stopped based on the sensor data received from the autonomous vehicle,

determine, using the sensor data, one or more review criteria have been met, wherein the one or more review criteria includes an indication that the autonomous vehicle has stopped for at least a threshold period of time awaiting the pickup of a passenger,

in response to the one or more review criteria being met, provide at least one image to an operator corresponding to a time prior to determining that one or more review criteria have been met,

receive an operator input, and

determine at least one instruction for the autonomous vehicle, and cause the wireless communication system to send the instruction to the autonomous vehicle.

12. The system of claim 11, further comprising a memory configured to store the image data.

13. The system of claim 11, wherein the image data comprises video data.

14. The system of claim 11, wherein the threshold period of time repeats for the duration the autonomous vehicle is stopped.

15. The system of claim 11, wherein at least one of the one or more review criteria relates to an audio signal.

16. The system of claim 11, wherein at least one of the one or more review criteria relates to a change in the environment of the autonomous vehicle.

17. An article of manufacture including a non-transitory computer-readable medium having stored thereon instructions that, when executed by a processor cause the processor to perform operations comprising:

determining an autonomous vehicle has stopped based on sensor data received from the autonomous vehicle, wherein the processor is positioned remotely from the autonomous vehicle,

determining, using the sensor data, one or more review criteria have been met, wherein the review criteria includes an indication that the autonomous vehicle has stopped for at least a threshold period of time awaiting the pickup of a passenger;

in response to the one or more review criteria being met, providing at least one image to an operator corresponding to a time prior to determining that one or more review criteria have been met;

receiving an operator input; and

in response to the operator input, providing an instruction to the autonomous vehicle for execution by the autonomous vehicle via a network.

18. The article of manufacture of claim 17, wherein at least one of the one or more review criteria relates to an audio signal or a change in the environment of the autonomous vehicle.

19. The article of manufacture of claim 18, wherein the threshold period of time repeats for the duration the autonomous vehicle is stopped.

20. The article of manufacture of claim 17, wherein the at least one image comprises a video.