Figure 1 - Preliminary Reference Speed (PRS) Determination

**Step 1**
Enterance Speed = 32 km/h (20 mph)

**Step 2**
Enter Start Gate at Entrance Speed

**Step 3**
Conduct a Test Run

**Step 4**
Criteria 1 and 2 Met?

- **Step 4.1**
  Criteria 1 and 2 met
  - Test Completed (Compute and Record PRS)

- **Step 4.2**
  Criterion 1 met, 2 was not met
  - Increase entrance speed 1.6 km/h (1 mph)
  - Repeat test run at same entrance speed
  - Go to Step 2

- **Step 4.3**
  Criterion 1 not met
  - Increase entrance speed 1.6 km/h (1 mph)
  - Repeat test run at same entrance speed
  - Go to Step 3

**Criteria:**

1. The wheels of the test vehicle remain within the lane between the start and end gates during the test run.

2. The ESC system applies service brake pressure at any wheel for a continuous duration of at least 0.5 seconds of at least 34 kPa (5 psi) for air braked systems and at least 172 kPa (25 psi) for hydraulic-braked systems.

**TR** = Test Run

**COR** = Contracting Officer’s Representative
Figure 2 - Reference Speed (RS) Determination

Step 1
Entrance Speed = PRS

Step 2
Enter the Start gate at Entrance Speed

Step 3
Conduct 4 consecutive Test Runs

Step 4
Criteria 1 and 2 met during at least 2 of the 4 test runs?

Step 4.1
Criteria 1 and 2 met
Test Completed
(Compute the entrance speeds and record the minimum entrance speed as the Reference Speed)

Step 4.2
Criterion 1 met, 2 was not met
Increase entrance speed 1.6 km/h (1 mph)

Step 4.3
Criterion 1 not met
STOP
(Indication of test failure and possible non-compliance)
Consult with COR

No

Go to Step 3

Yes

Criteria:

1. The wheels of the test vehicle remain within the lane between the start and end gates during the test run.

2. The ESC system applies service brake pressure at any wheel for a continuous duration of at least 0.5 seconds of at least 34 kPa (5 psi) for air braked systems and at least 172 kPa (25 psi) for hydraulic-braked systems.
**Figure 3 - Engine Torque Reduction Determination**

**Step 1**
Entrance Speed = Reference Speed

**Step 2**
Enter the Start gate at Entrance Speed

**Step 3**
Conduct 4 consecutive Test Runs

**Step 4**
Criteria 1 and 2 met during at least 2 of the 4 test runs?

- **Yes**
  - PASS
  - The engine torque reduction requirement is met and the test is completed

- **No**
  - STOP
  - (Indication of test failure and possible non-compliance)
  - Consult with COR

**Criteria:**

1. The wheels of the test vehicle remain within the lane between the start and end gates during the test run.

2. The ESC system reduces the driver requested engine torque by at least 10% for a minimum continuous duration of 0.5 seconds during the time period from 1.5 seconds after the vehicle crosses the start gate to when it crosses the end.
**Figure 4 - Roll Stability Control Test at Maximum Test Speed Determination**

**Step 1**
Entrance Speed = Max. Test Speed

**Step 2**
Enter the start gate at entrance speed

**Step 3**
Conduct 8 consecutive Test Runs

**Step 4**
Criteria 1-4 were met during at least 6 of the 8 test runs?

- **Yes**
  - PASS
  - Roll Stability Control Requirement met. Test completed

- **No**
  - STOP
  - (Indication of test failure and possible non-compliance)
  - Consult with COR

**Criteria:**

1. The wheels of the test vehicle remained within the lane between the start and end gates during the test run.
2. The vehicle speed measured at 3.0 seconds after the vehicle crosses the start gate did not exceed 46.7 km/h (29 mph).
3. The vehicle speed measured at 4.0 seconds after the vehicle crosses the start gate did not exceed 45.1 km/h (28 mph).
4. The ESC system applied service brake pressure at any wheel for a continuous duration of at least 0.5 seconds of at least 34 kPa (5 psi) for air braked systems and at least 172 kPa (25 psi) for hydraulic-braked systems.
Figure 5 - Roll Stability Control Test at Test Speed less than Maximum Test Speed Determination

Criteria:

1. The wheels of the test vehicle remained within the lane between the start and end gates during the test run.

2. The vehicle speed measured at 3.0 seconds after the vehicle crosses the start gate did not exceed 46.7 km/h (29 mph).

3. The vehicle speed measured at 4.0 seconds after the vehicle crosses the start gate did not exceed 45.1 km/h (28 mph).

4. The ESC system applied service brake pressure at any wheel for a continuous duration of at least 0.5 seconds of at least 34 kPa (5 psi) for air braked systems and at least 172 kPa (25 psi) for hydraulic-braked systems.