

by the vehicle Operators. SEPTA shall be able to assign functions pertaining to their operations to these keys.

- The functions assigned to each key shall be listed or displayed immediately above, below, or adjacent to the key. If the text describing the key's function is placed on the key, it shall be in a manner that precludes the text from being worn-off by repeated use by the vehicle Operators. The keys shall be durable, wear-resistant, and large enough for convenient selection. The keys shall be spaced sufficiently far apart to minimize inadvertent selection of adjacent keys. Color-coding of the keys and/or areas around the keys is required to help logically group keys according to their assigned functions. The backlighting of the keys shall be adjustable by the vehicle Operator. An audible tone or detent shall occur each time a button is pressed so that the Operator receives feedback that the action was successful. The backlighting of the keys shall return to the default value after an Operator logon.
  - The VLUs shall produce audible tones when a new text message has been received and is available for display on the VLU. The audible tones shall have the ability of being heard over normal bus ambient noise levels. The audio output level shall be adjustable by the vehicle Operator within a restricted range that prevents audio output from being inaudible. The audio output level shall return to the default value after an Operator logon.
  - The VLU shall display the current CAD/AVL System time to the vehicle Operator.
- b. In addition to the equipment, features, and functionalities listed above, the Norristown High Speed Line and Media–Sharon Hill Line vehicles shall be provided with the following:
- Double ended vehicles shall be equipped with two VLU's.
  - One VLU shall be active and the other shall be inactive. The inactive VLU shall be powered, but not provide operator functionality. The inactive VLU shall clearly indicates it is in standby mode.
  - The IVCU shall determine which VLU shall be active based on Active Cab and End of Train signals.
  - The IVCU shall automatically determine if a switch over to the inactive VLU is required. A switchover process shall take 5 seconds or less.
- c. In addition to the equipment, features, and functionalities listed above A high-performance cellular FirstNet capable Digi Router shall be provided and installed on all CCT vehicles. The Digi Router shall support 5G and 4G LTE-Advanced Pro, include an integrated WiFi access point, USB, serial and 4-port Gigabit Ethernet switch and meets or exceeds the NEMA TS2 environmental requirements. SKU for the 5G TX64 w/FirstNet is "TX64-A161-PR".
4. **Intelligent Vehicle Control Units** - The Contractor shall provide IVCUs to support the functional and device interface requirements defined herein. The