

SECTION 7 – DRIVERS RELIEF STATION

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SECTION 7 – DRIVER RELIEF STATION

7.1.0 GENERAL

This Design Criteria establishes the minimum standards to be used in the design of RTD bus transit facilities. This section is intended to direct the Design Engineer in the design of structures used at bus transit facilities for various applications that are necessary for RTD employees to carry out their assignments. These structures are the Drivers Relief Station (DRS). The purpose of the DRS is to contain a toilet and sink, exclusively for District employees (primarily drivers). Depending on the site requirements, these structures may also include rooms for maintenance storage and site security equipment.

All DRS buildings shall be designed in accordance with ADA and ADAAG.

7.2.0 LOCATION

The DRS shall be located adjacent to bus loading areas. Specific locations will vary from site to site and the Design Engineer shall consider the location of utilities when selecting an appropriate location. The building design shall be in accordance with the following criteria:

- convenient access for drivers, but placed beyond pedestrian traffic flow paths in the bus loading and plaza areas
- all sides shall be accessible to maintenance personnel
- all sides with access doors shall have a 6 foot (minimum) clearance for snow removal equipment

7.3.0 SIZE AND CONFIGURATION

There are four basic configuration options for the DRS, as described below. Please reference the RTD Standard Drawings for more details regarding each configuration. Based upon special needs or site conditions, the standard configurations may be customized for a specific location, but where possible, one of the four following options should be utilized. All four standard configurations are shown in the RTD Standard Drawings.

7.3.1 Prefabricated (Lavatory and Mechanical Room) – DRS I

The prefabricated option for the DRS shall contain all the basic components required in the lavatory and mechanical room. The restroom area should be approximately 5.5' by 5.0', and the attached mechanical room should be 2.0' by 5.0', resulting in a total building dimension of 7.5' by 5.0'.

7.3.2 Small (Lavatory and Mechanical Room) – DRS II

The basic, and most common, DRS building constructed on site will be this configuration, which contains a lavatory and a mechanical room. These two components will be found in all DRS buildings. The exterior dimensions of the small DRS are 11'-8" X 7'-2" and the interior space is split equally between the lavatory and the mechanical room.

7.3.3 Medium (Lavatory, Mechanical and Security Rooms) – DRS III

When security equipment that needs to be housed in a secured enclosure is required on site, an additional room will be included in the DRS. The exterior dimensions of the medium DRS are 11'-8" X 16'-8".

7.3.4 Large (Lavatory, Mechanical, Security and Maintenance Storage Rooms) – DRS IV

Some sites will require additional storage for maintenance equipment and supplies. When this is the case, it is preferable to have this space included as part of the DRS building rather than in a separate storage shed. The exterior dimensions of the large DRS building are 11'-8" X 29'-4".

7.4.0 MATERIALS AND EQUIPMENT

7.4.1 General

The DRS shall either be a prefabricated fiberglass unit or one that is constructed of concrete masonry units with a sloped metal roof. Each building shall be equipped with a backflow preventer in a heated area, or wrapped with heat tape and insulation (in a locked, weatherproof cabinet) to prevent freezing.

The Design Engineer shall include notes and graphics in the drawings and technical specifications to ensure the following:

- The pipe contractor shall install water and sanitary sewer service lines to within 5 feet of the structure. The plumbing contractor shall install the service connection from the service line, placed by the pipe contractor, to the interior plumbing of the DRS. The general contractor shall ensure compatible installations by the two contractors.

A hose bib shall be provided within or near the DRS.

Gutters and downspouts shall be schedule 40 or 60 painted steel, and not galvanized steel, which is often damaged during installation.

7.4.2 Lavatory

The restroom shall contain all the following components:

- Depending on its design size, the water service to the building shall start from a public water main with a corporation stop, a tee fitting tap (dry) or a wet tap; continue to the water meter, (typically installed by the local water utility), and connect to the structure water control valve and building potable plumbing.
- Domestic sewer service shall connect to a public sewer main a tee or wye tap (dry), or a wet tap saddle and wye, and connect to the building service sanitary plumbing.
- The domestic water service to the building from the water meter shall be a minimum of 3/4-inch diameter, continuous non-spliced Type K copper.
- The toilet shall be equipped with a pressure vessel in the tank. (If a one-inch, or larger, water service line is required to serve the site, the lavatory shall contain a flush valve toilet instead, with a 1 inch line to the DRS.)
- A 4-foot, 2-tube cool white fluorescent light fixture recessed in the ceiling should be used to light this room. (In the prefabricated DRS unit, this fixture shall be 2-feet in length.)
- The light and exhaust fan shall be controlled by an infrared detector switch in the restroom.
- Ceiling-mounted electric heating elements with fans.
- Stainless steel mirror and sink.
- The interior walls should be finished with two (2) coats of epoxy over block filler on the CMU wall.
- The lavatory door shall be equipped with an electronic proximity card reader and lock that is activated by RTD employee HID identification cards only. The proximity card reader shall read within 3-inches. The power supply shall be 12 Volts DC. The reader shall be able to operate as a stand-alone unit. The reader shall allow for a minimum of 5000 cards to be loaded into memory. The reader shall have a block/delete feature to delete cards from its memory and deny access to the deleted cards. Strike time for opening the door shall be adjustable from 1 to 99 seconds. A keyed exterior/toggle interior deadbolt lock shall be installed on the lavatory door to serve as a backup in case the card reader fails, and to allow the door to be locked from the inside when the lavatory is occupied.

7.4.3 Mechanical Room

The mechanical room shall contain all the following components:

- Ceiling-mounted electric heating elements with fans.
- The electrical panel for the DRS, as well as site lighting and security equipment.
- An instantaneous electric water heater shall be installed. This heater shall not be manufactured out of plastic since the debris in the water supply may reduce the water flow, which causes the plastic parts to deform and leak.
- The mechanical room door shall be equipped with a combination lock and a key lock.
- A 24-pair phone cable shall be run to and installed within the mechanical room. The installation shall include an appropriate panel board that meets Qwest requirements for security communications, pay phones, and remote access to the site irrigation controller. A phone cable and conduit shall be installed for irrigation monitoring.

7.4.4 Security Room

The components necessary for the security room will vary from site to site.

The security room door shall be equipped with a combination lock and a key lock.

7.4.5 Maintenance Storage Room

The maintenance storage room shall contain the following items:

- A 6 foot wide, steel roll up door, or doublewide door without an astragal.
- Properly ventilated storage space for maintenance equipment and 3 to 5 gallon fuel tanks containing gasoline or diesel fuel.
- The door shall be equipped with a combination lock and a key lock.
- Shelving for custodial supplies.