Abu Dhabi Utility Corridors Design Manual Chapter 4 - Utility Corridors Requirements

4.1 Introduction

This chapter sets out the utility corridor requirements for each utility (refer to Figure 1.1). The two main factors which influence the development of utility corridors are:

- 1. Utility corridor location
- 2. Utility corridor width.

A summary of location rules and widths (refer to Section 4.2) is provided together with a breakdown of requirements for each utility (refer to Section 4.3), including a description of integration of utilities within Complete Streets (refer to Section 4.6).

Utility Plots: such as GSM towers, primary substations, pumping stations, wastewater vacuum stations and district cooling plants shall be located on dedicated plots away from the RoW.

4.1.1 Utility Corridor Locations

Factors governing the location of utility corridors within the RoW (plot boundary to plot boundary) include:

- 1. **Type of network**: For example, some utilities, such as Power, require immediate access if damage to a cable occurs. Consequently, these utilities are normally placed under sidewalks and/or block paved surfaces.
- 2. **Street composition**: That is, Street Elements within the Traveled Way, Frontage Lane or Pedestrian Realm. For example, certain utilities may be installed under a Travel Lane, whereas other utilities may be better placed under a Furnishing, Edge or Through Zone.
- 3. **Frequency of access**: The impact that repeated access may have to utility providers, motor vehicles and transit users should be minimised during operation and maintenance activities;

4. Horizontal clearance:

- Minimum horizontal clearance between certain utilities (e.g. to prevent cross contamination between wet utilities).
- Minimum horizontal clearance from plot boundary, (e.g. to maintain minimum required safe distances from plots for the main gas network).

5. **Staggering of chambers**: Where feasible, staggering of chambers with adjacent utilities (refer to Figure 4.2) should be adopted to optimise the placement of utility corridors.

In the event that a wider RoW is required as a result of the street design in accordance with the USDM, utilities may be relocated away from the Traveled Way to under the Pedestrian Realm using the following order of priority, based on operations and maintenance requirements (including frequency of access):

- Power Distribution
- Telecommunication
- District Cooling
- Stormwater
- Wastewater
- Fibre Optics
- Gas

Table 4.1 summarises the location of all utility corridors and presents the associated location rules.

Two factors influence the development of utility corridors arrangements: namely location and width.

