

A4.3 Cost effective inlet and mainline layout and connection configuration:

Figure A-4.3 shows the most cost effective inlet collector and main drain layout and connection configuration for both urban and rural divided dual-lane kerbed roadways where sand storm have minimal impacts as per new Islands or areas which are not subject to sand storm. Inlets shall be arranged to discharge directly to the stormwater main drain by direct connection through a manhole structure. For this configuration, the following items apply:

- a. Inlet connection shall be installed in straight alignment on a minimum uniform slope of 1 percent. Minimum sizes of pipes for expressways, freeways, and motorways shall measure 300 mm in diameter.
- b. Maximum number of inlets connect to a manhole is four.
- c. Maximum length of inlet connection drains is 35 m.
- d. Drainage structure grates shall never be placed directly in the wheel path.
- e. Locating grate inlets within pedestrian paths, or areas subject to bicycle traffic, shall also be avoided. If grate inlets must be located in roadway areas, where cyclists may be expected to travel, bicycle-proof grates are to be specified.
- f. Structure offsets, shown in the plans, shall be to the centre of grate or cover, not to the centre of structure, to ensure the grate is located along the kerb face.
- g. Proposed Stormwater drainage pipe lines and manholes shall follow the proposed by UPC – Abu Dhabi Infrastructure Framework plan and Utility Corridors location Design Manual and Design or the proposed Utility distribution Manual of DoT.
- h. Basket inlets equipped with sand traps may be used as inlet structures, being smaller and less expensive to install then the traditional precast or cast-in situ concrete inlets.
- i. Criteria for the location and spacing of manholes shall meet the requirements in DMAT design manual.