

CHAPTER 12
UTILITY LOCATIONS

1. The first part of the document is a list of names and their corresponding numbers.

2. The second part of the document is a list of names and their corresponding numbers.

3. The third part of the document is a list of names and their corresponding numbers.

4. The fourth part of the document is a list of names and their corresponding numbers.

**CHAPTER 12
UTILITY LOCATIONS**

INDEX

Section	Topic	Page
12.1	Plans Required	12.1
12.2	Design Standards	12.1
12.3	Location	12.2



**Supplemental Directory Aid
For Utility Construction**

CHAPTER	TITLE	PAGE
1	General Provisions	1.1-1.2
2	Final Construction Plans for County Roadway Access (large projects)	2.4
3	Submittal Requirements for Underground Utilities (large projects)	3.6
4	Roadway Design and Technical Criteria	4.1-4.48
	Construction Traffic Control	4.42
	Sight Distance (Above-ground structures)	4.33
	Sight Distance Triangle Detail	4.25
5	Material Specifications	5.14
8	Roadway Inspection and Testing	8.1-8.15
9	Trench Backfill and Compaction	9.1-9.11
	General	9.1
	Backfilling Procedures and Testing	9.2
	Subbase	9.3
	Foundation for Base Course	9.6
	Trench Cover - Subgrade	9.7
	Permanent Alternative	9.9
	Repair to Gravel Roads and Shoulders	9.10
	Maintenance Period	9.10
10	Permit Procedures and Bonding Requirements	10.1-10.9
	Application Requirements and Procedures	10.1
	Permit Standards and Conditions	10.3
	Refunds	10.3
	Bonds and Insurance Requirements	10.3
	Specifications General	10.7
	Road Closings	10.7
	Stop Work Orders	10.7
	Utility Installations	10.8
	Applicability	10.8
	Forms	10.8
	Fees	10.8
	Licensing	10.8
11	Acceptance Procedures and Requirements	11.1-11.7
	Application of Standards	11.1
	General Policies	11.1
	Probationary Acceptance	11.2
	Final Acceptance	11.5
12	Utility Locations	12.1-12.6
	Plans Required	12.1
	Design Standards	12.1
	Location	12.2

BLANK

CHAPTER 12 - DESIGN AND CONSTRUCTION STANDARDS FOR UTILITY LOCATION AND OTHER FACILITIES IN THE RIGHT-OF-WAY

12.1 PLANS REQUIRED

Any utility or other facility constructed in County R.O.W. shall have construction plans submitted and approved in accordance with requirements of Chapter 3 of these STANDARDS. No construction permit shall be issued for construction of new utilities or extension of existing utilities (except service taps or laterals to individual properties) without prior review and approval of the construction plans by Douglas County. Permits are required in all cases.

Exceptions:

1. Minor maintenance projects may be exempt from submitting formal construction plans. In such cases however, sketch plans must accompany the permit application. Utility companies may be exempt from the requirement of a professional engineer's signature and stamp on the construction plans if the project is of a nature that would not warrant design by a registered professional engineer.
2. To avoid delays and redesigns on large projects and in areas where future road improvements are expected, plan and profile sheets may be requested. A pre-design meeting must be held with the County Engineer or authorized representative to discuss the requirements of the plan submittal. The County will assist the utility company in determining what future roadway profiles and improvements are expected to minimize future utility relocations. Requirements for submitting plan and profile sheets may be waived upon written request of the utility company. This exception does not apply to water and sewer line projects.

12.1.1 If formal plans are required, the County will notify the applicant of such within 48 hours after the pre-design meeting.

12.1.2 The applicant's completed facility shall be in conformance with the drawings or sketches referred to above, unless a deviation has been requested and approved by Douglas County.

12.1.3 When the proposed facility involves pressure pipe lines, the following additional data is required:

- a) Design pressure of pipe.
- b) Normal operating pressure.
- c) Maximum operating pressure
- d) Nominal composition of material in pipeline.

This information is for reference only.

12.2 DESIGN STANDARDS

12.2.1 All work in connection with the facility authorized by the permit shall be done in a neat and workmanlike manner to the satisfaction of the County Engineer. The details of construction of the same shall conform to the requirements in effect at the time of permit issuance.

- 12.2.2 All utilities including water, sanitary sewer and storm sewer shall be stubbed out to the R.O.W. at all locations that are planned for future tie-ins. Other reasonable stub-outs may be requested by the County based on sound engineering judgement and knowledge of adjacent development.
- 12.2.3 All manhole lids, utility access covers and range box access covers shall be depressed 1/4" to 1/2" below the adjacent finished street surface.
- 12.2.4 During initial construction, Utility Companies shall install all utilities within a Schedule 40 PVC sleeve across all public streets to accommodate future repairs without street cuts. Sleeves shall be installed at a minimum depth of 42" to the top of the pipe from the top of curb. Sleeve location shall be determined on a case-by-case basis.

A minimum of six (6) additional 4" PVC sleeves on arterials, and a minimum of four (4) additional 4" PVC sleeves on collectors, shall be required to be installed by the Developer at all street intersections along both sides of all collectors and arterials, and at intersections of local streets where there is a utility corridor. Any intersection along a collector or arterial, which may warrant signalization, shall have additional sleeves (as described above) installed across all streets at the intersection.

12.3 LOCATION

(See also Figures 12.1 thru 12.3)

12.3.1 Water

Water mains shall be located on the North and East sides of streets. Provide minimum 10' horizontal separation from sanitary sewer. Fire hydrants will be located 3' minimum from back of curb, 1' minimum from back of attached walk, or 10' minimum from edge of pavement if no curb is present.

12.3.2 Sanitary Sewer

Sanitary sewer shall be located on the South and West sides of streets.

12.3.3 Storm Sewer

Storm sewer shall be located on the street centerline or three (3) feet either side of centerline for adequate utility separation. Other locations may be considered if given written approval by County Engineer.

12.3.4 Natural gas

Gas mains shall be located either within the right-of-way or in an adjacent easement on the South and West sides of the street or three (3) feet either side of centerline adequate utility separation. For utility companies that wish to run double mains (a main on each side of the street), the requirement of north and east/south and west may be waved by the Public Works Department. The Public Works Department generally recommends double mains.

12.3.5

Power and Telephone

Generally, power and telephone lines shall be located in the North and East sides of the street either within the right-of-way or in an adjacent easement. For utility companies that wish to run double mains (a main on each side of the street), the requirement of north and east/south and west may be waived by the Public Works Department, or as directed by the National Electrical Safety Code.

12.3.6

Cable TV

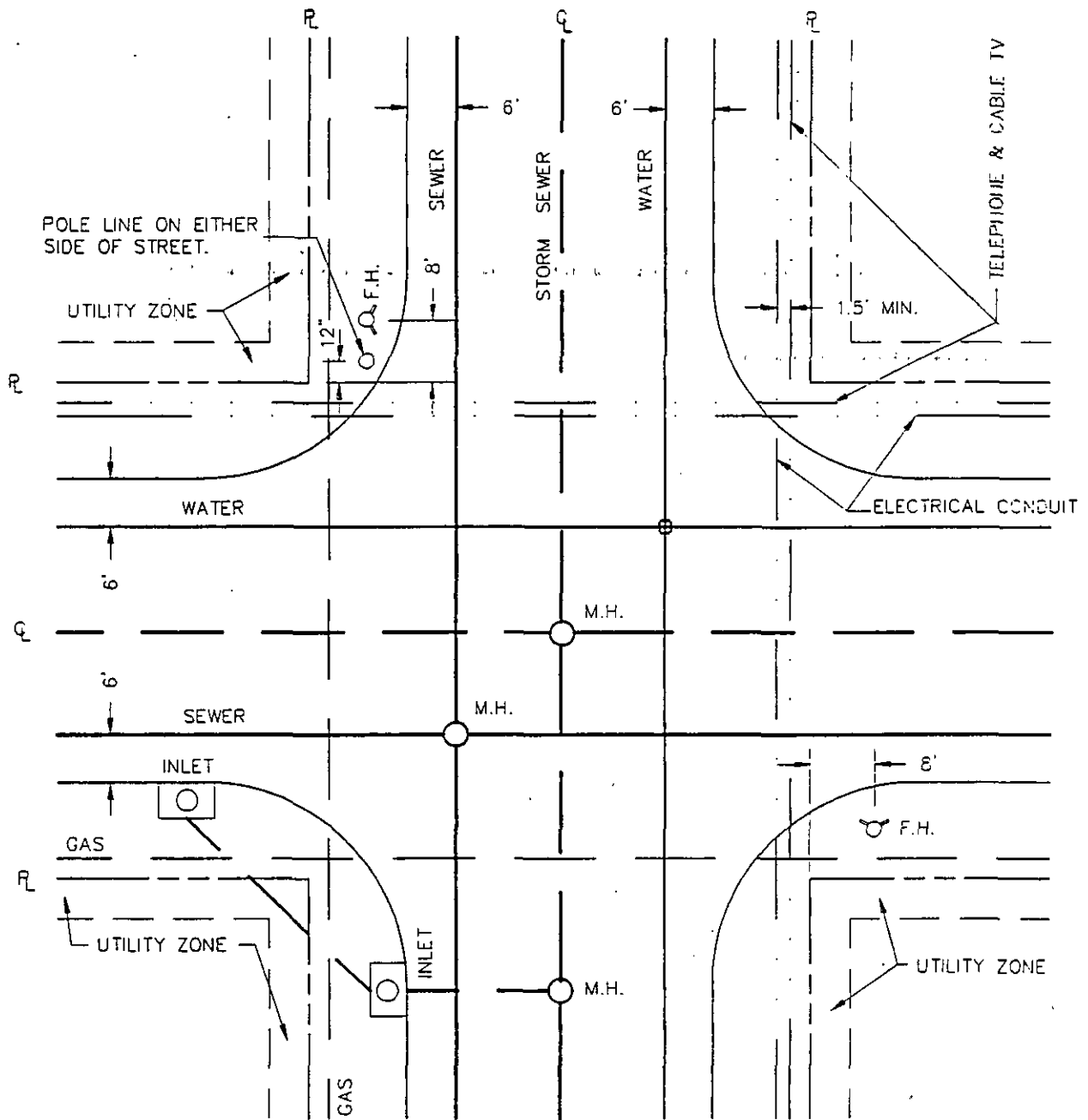
Cable TV lines shall be located in the North and East sides of the street either within the right-of-way or in an adjacent easement. For utility companies that wish to run double mains (a main on each side of the street), the requirement of north and east/south and west may be waived by the Public Works Department.

12.3.7

Additional Structures

Poles, signs and any other above-ground streetscape (except regulatory signs) shall be generally located within five feet of the right-of-way line or ten feet from the travel lane (flowline), whichever is most restrictive. Where existing roadways are constructed to something other than present County standards, variances will be considered on a case-by-case basis. Light poles may be placed a minimum of two feet behind a vertical curb line, or two feet behind the sidewalk for attached sidewalk conditions with prior written approval by the County. Poles placed within County right-of-way having a posted speed limit of 40 m.p.h., or higher, may be required to be breakaway, per CDOT Roadway Design Manual, Section 1002.6, Specifications, for **ALL** poles within County right-of-way must be accepted by the Public Works Department prior to the permit application for installation.

CAUTION: Trees or large shrubs shall not be planted over buried utilities, within the sight distance triangle at intersections or accesses, or within 10' of the flowline of the public street. On low speed (posted 30 m.p.h. or less) minor collectors and local streets, trees may be planted to within six (6) feet of the flowline (except within 150' in either direction from an intersection, where the trees must be a minimum of 10' back from the flowline). In no case shall landscaping over 36" above the adjacent flowline be allowed to encroach into the sight-distance triangle.



NOTE: This standard is a guide only and deviations may be acceptable where conditions dictate. Dimensions shown are desirable but do not govern. The intention is to show the relative position of all utilities. This does not preclude the use of utilities in easements in other locations (i.e. back lot lines).

* UTILITY ZONE EASEMENT IF REQUIRED

UTILITY LINE LOCATION GENERAL



DOUGLAS COUNTY

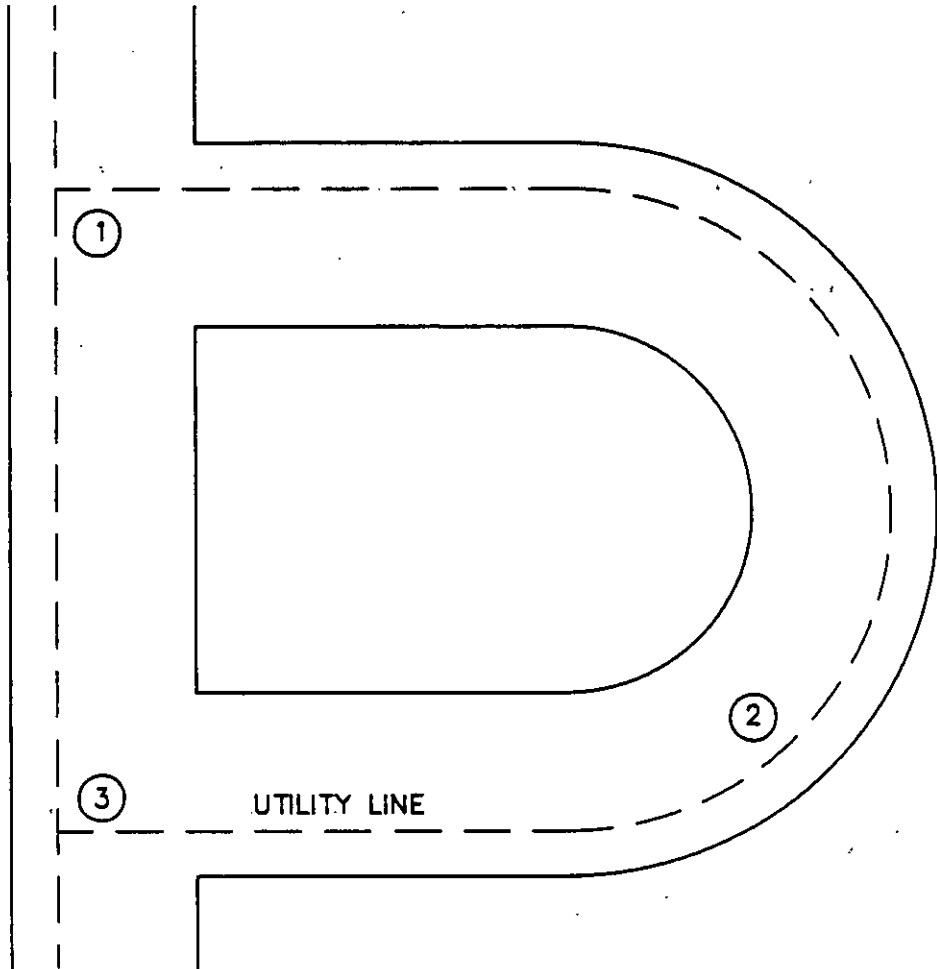
12.4

Issued: _____

Revised: _____

Drawing No. _____

FIGURE 12.1



EXAMPLE OF A UTILITY RELOCATION
TO A NORMAL POSITION AT AN INTERSECTION

1. Carry Utility around corner.
2. Stay on same side of street.
3. Return Utility to normal side of street at intersection.

UTILITY LOCATION
GENERAL

Issued: _____

Revised: _____

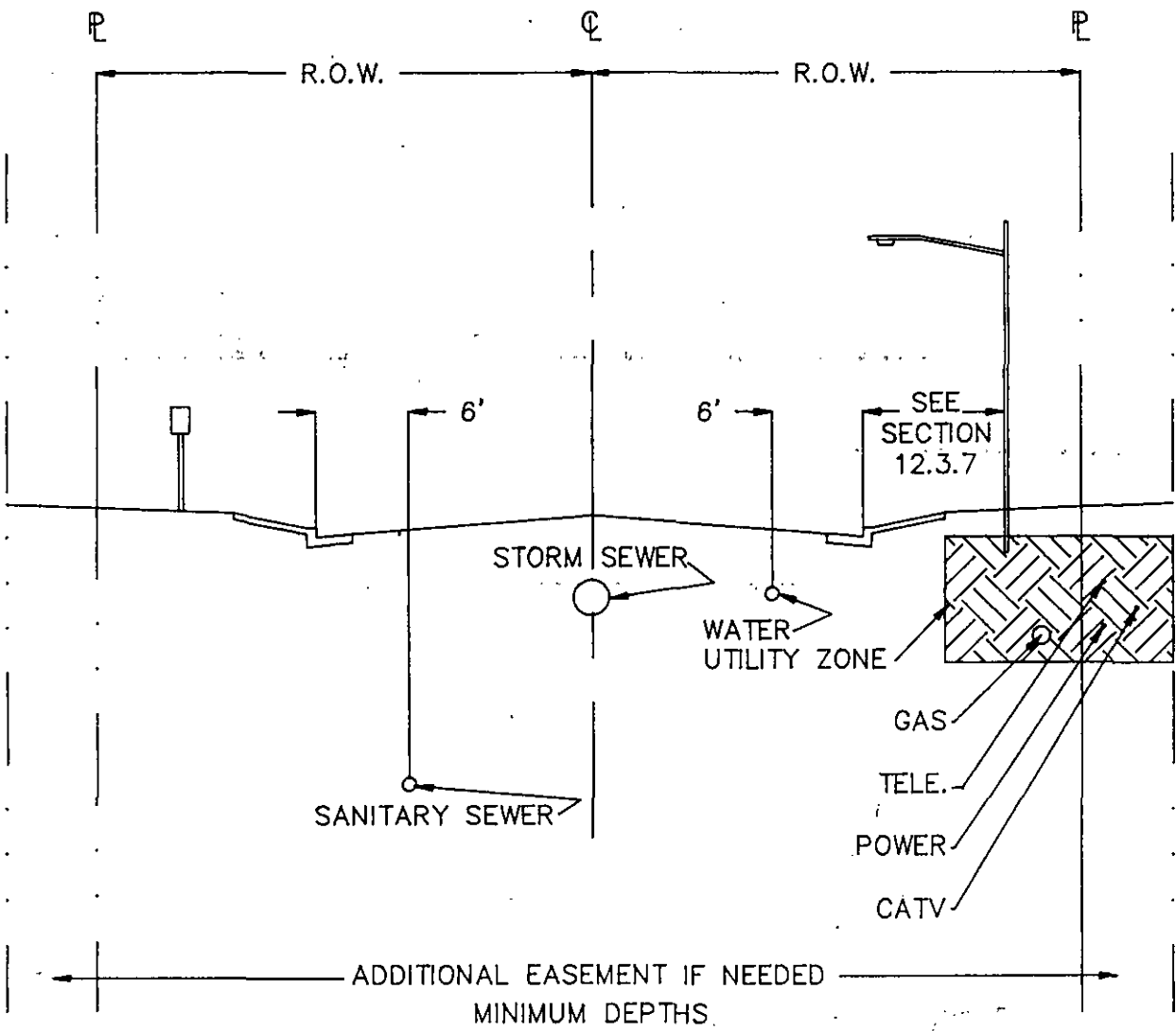


DOUGLAS COUNTY

12.5

Drawing No.

FIGURE 12.2



Street Lights	30"
Gas	30"
Telephone	*
Electric Power	*
Storm Sewer	40"
Sanitary Sewer	60"
CATV	24" (Urban) 30" (Rural)
Water	54"
Fiber Optic (with tracer wire 1' above th line)	48"
Other	30"

NOTE: This standard is a guide only and deviations may be acceptable where conditions dictate. Dimensions shown are desirable but do not govern. The intention is to show the relative position of all utilities. This does not preclude the use of utilities in easements in other locations (i.e. back lot lines).

* Electric and Telephone lines per latest addition of National Electric Safety Code

UTILITY LOCATION GENERAL



DOUGLAS COUNTY
12.6

Issued: _____

Revised: _____

Drawing No.
FIGURE 12.3