

Section 9. MISCELLANEOUS

A. Maintenance Standards

1. General:

All drainage control, flood control and erosion control facilities both public and private shall be regularly maintained. Accumulations of silt, trash, litter or stagnant water which create a health or safety hazard or which endanger the design function of the facility are not permitted. Excessive growth or accumulation of woody vegetation in channels and on dams and levees shall not be permitted. Active erosion due to wind or water associated with drainage control, flood control and erosion control facilities shall not be permitted.

All newly constructed drainage facilities within a public right-of-way must provide restricted access to prevent unauthorized vehicular access. Restricted and authorized access shall be provided with City/SSCAFCA Standard Tube Gate.

2. Publicly Maintained Facilities:

Every effort shall be taken to operate and maintain publicly owned and maintained facilities to be functional and operate as designed recognizing the constraints of public funding. SSCAFCA reserves the right to schedule O&M as its purview.

3. Privately Maintained Facilities:

Every effort shall be taken to operate and maintain privately owned and maintained facilities to be functional and operate as designed recognizing the constraints of public funding. SSCAFCA reserves the right to schedule O&M as its purview.

The owner shall regularly maintain and keep written records of all maintenance activities for drainage control, flood control and erosion control facilities for which it has responsibility based on the above general requirements and the following schedule:

<u>Facility</u>	<u>Maintenance</u>	<u>Inspection</u>
Channels	Monthly June-October	Semi-Annual
Channel Joints	Monthly June-October	Semi-Annual
Crossing Structures	Monthly June-October	Semi-Annual
Pump Stations	Monthly June-October	Semi-Annual
Detention Facilities	Silt removal and weed control	After any major operation or

		monthly during flood season
Storm Pump	Periodic cycling	Semi-Annually in April and October
	Vibration analysis	3-5 Years
Storm Drain Systems	Annual	Bi-Annual
Storm Drain Inlets	On-going process	Semi-Annual during flood season

Every facility shall be inspected after ½” of rain to insure the water quality flow capacity features are functioning as designed.

Privately owned drainage control, flood control and erosion control facilities shall be maintained according to the general standards above and such that adjacent upstream or downstream public or private facilities are not damaged or endangered. A sign must be erected adjacent to the facility indicating the private maintenance responsibility. The sign must be prominently located and must include the name and telephone number of the party responsible for the maintenance.

B. Utilities in SSCAFCA ROW

Underground utilities will be allowed in and adjacent to arroyos when properly designed and appropriately permitted.

A. Engineering Design Criteria for Underground Utilities in and Adjacent to Arroyos

Underground Utilities in Arroyos and Utilities Adjacent to Arroyos include both “wet” utilities such as sanitary sewer lines, water lines, etc.; and “dry” utilities such as electric lines, communication lines, etc. Design considerations shall include 100-year flood plains, floodways, and the areas included within the LEE.

The design criterion applies to all arroyos.

B. Engineering Design Criteria for Gravity Sewer Lines in Arroyos

a. *Design Capacity Criteria*

Develop design flow as defined in the Water Utility Design of the City of Rio Rancho’s DPM.

b. *Longitudinal Placement*

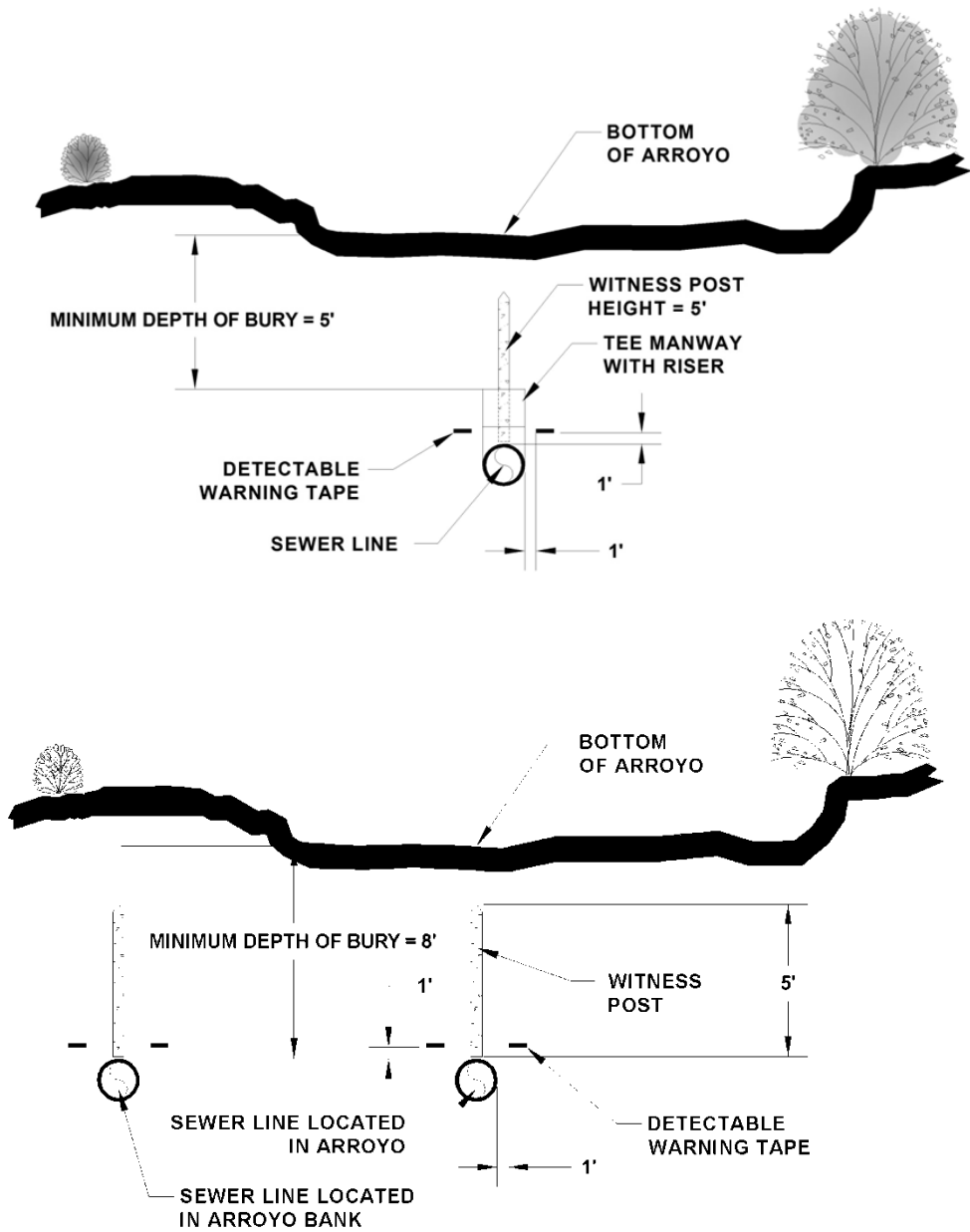
Longitudinal placement includes locations more or less aligned with the average down-valley direction as defined in SSCAFCA's Sediment and Erosion Design Guide, November 2008.

1) Horizontal Location

- a. Place the utility in the bottom of the existing arroyo where practical. This will minimize disturbance to existing habitat and vegetation.

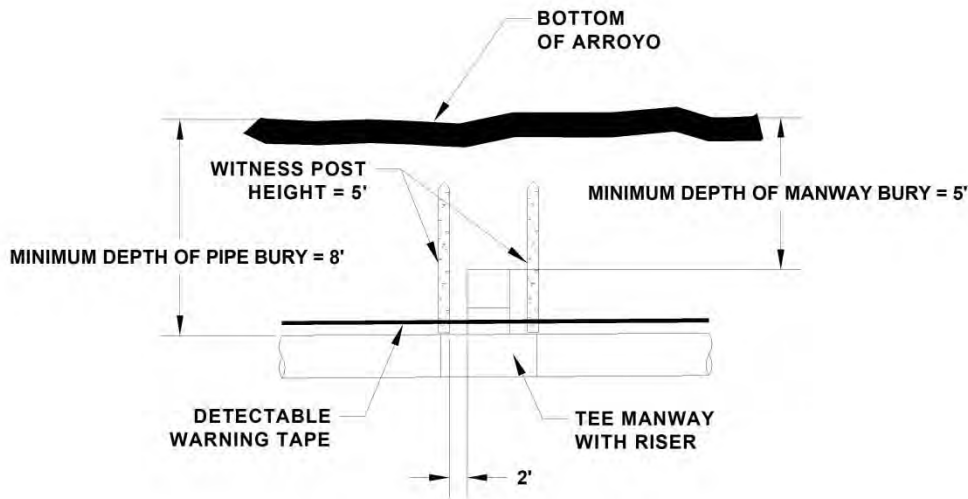
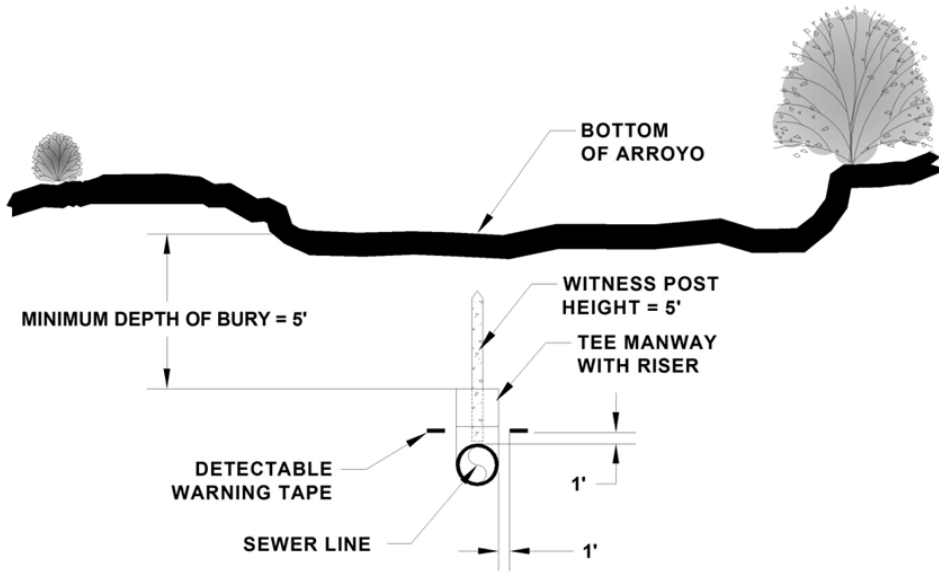
2) Vertical Location

- a. Place the utility at a depth below the existing arroyo bottom equal to or greater than the SAS erosion control zone. Under no circumstances shall the utility be placed less than 8-feet below the bottom of the arroyo.
 - i. Sewer line shall be marked with a witness post, 5-feet in height, placed above the pipe. Maximum distance between witness posts: 300-feet.
 - ii. Sewer line shall be marked with detectable warning tape on either side of the pipe, at 1-foot above the top of pipe, for the entire length of the pipe.



3. *Manway Criteria*

- 1) Manways must be located in the arroyo bottom and buried. Manholes in arroyos are not acceptable. All manways must be accessible by a sewer maintenance truck.
- 2) Manways shall be marked with two witness posts, one on each side of manway. Witness post shall be 5-feet in height.
- 3) Minimum depth of bury to top of manway: 5-feet below bottom of arroyo.



- 4) Manways shall be fabricated of a fused HDPE tee with a HDPE riser, and a bolted blind flange. The required inside diameter for a manway shall be the same inside diameter as the inlet/outlet pipe.
- 5) Inlet/outlet connections shall be continuously fused to manway and shall be restrained with an electrofusion flex restraint. Gasketed joints are not acceptable.
- 6) The maximum distance allowed between manways is 600-feet.

4. *Manhole Criteria*

- 1) Manholes shall be located at all roadway crossings. Manways in roadway crossings are not acceptable.
- 2) Manholes shall be fabricated from fusible HDPE.
- 3) Inlet/outlet connections shall be continuously fused to manholes and shall be restrained with an electrofusion flex restraint. Gasketed joints are not acceptable.
- 4) The minimum required inside diameter for a manhole is 6-feet.
- 5) Invert elevations shall be called out for each inlet and outlet at a manhole.

5. *Line Criteria*

- 1) Sewer line shall be continuously fused HDPE pipe only. All other materials are not acceptable. Gasketed joints are not acceptable.
- 2) Minimum line size allowed: 15-inch inside diameter.
- 3) Curvilinear sewers are permitted, in accordance with manufacturer's recommendations.
- 4) Service connections are not acceptable.
- 5) Sewer line shall be marked with a witness post, 5-feet in height, placed at the top of the pipe. Maximum distance between witness posts: 300-feet.
- 6) Sewer line shall be marked with detectable warning tape on either side of the pipe, at 1-foot above the top of pipe, for the entire length of the pipe.
- 7) Connecting sewer lines are only allowable at a manway or manhole. Connections on the pipe, between manways or manholes, are not acceptable. Minimum connecting line size allowed: 8-inch inside diameter. Connecting sewer lines shall conform to the same criteria listed above from LEE line to LEE line or manhole to manhole, whichever is the greater distance.

C. Engineering Design Criteria for Gravity Sanitary Sewer Lines Crossing Arroyos

Sewer lines crossing the arroyo shall conform to the same criteria listed above from LEE line to LEE line or manhole to manhole, whichever is the greater distance.

1. AMENITIES

If an amenity is identified as required with the installation of a utility, it shall be designed in accordance with the City of Rio Rancho Development Standards for Parkland and the following criteria. Appropriate Watershed Park amenities associated with a utility line include linkage elements such as trails and wildlife corridors; and, supporting elements such as trailheads, view sites, benches, and educational/informational signage.

2. Design Criteria for Trail Systems

- 1) For public health, safety, and welfare, trails shall have signage notifying users they are in an arroyo. The sign shall use SSCAFCA standard language for warning signs.
- 2) Trails shall have signage notifying users the agency operating and maintaining the trail (i.e. Utility Owner, City of Rio Rancho, etc.).
- 3) Due to location, trails may not be ADA compliant. Trails shall have signage that indicates ADA accessibility constraints.

3. Design Criteria for Trail Heads

Construct Trail Heads in conjunction with trail systems at roadway crossings.

- 1) Trail heads shall control access to the arroyos with the following elements:
 - a. Fencing
 - b. Trail head step-through gates
 - c. Access gates for operations and maintenance
- 2) Trail heads shall have areas designated for vehicular and bicycle parking.
- 3) Trail heads shall be designed in accordance with ADA.
- 4) Trail heads shall have signage notifying users of trail name.
- 5) It is recommended to incorporate the following design elements at trail heads:
 - a. Shade structures
 - b. Benches
 - c. Educational/informational signage and maps

- d. Bear-proof trash receptacles
- e. Dog-waste bag dispensers

4. Protection and Restoration of Existing Wildlife Habitat and Existing Vegetation

Maintain wildlife habitat and existing vegetation to the maximum extent practicable.

- 1) Provide for the protection of existing wildlife habitat and existing vegetation in the design and construction of the utility.
- 2) Limit construction work zone areas to minimize disturbance to existing wildlife habitat and existing vegetation.
- 3) Re-vegetate all disturbed areas not in arroyo bottom.
- 4) Restore disturbed habitat as appropriate.

5. Operations and Maintenance

The City of Rio Rancho is responsible for the operation and maintenance of the Watershed Park amenities.

Operation in arroyos during monsoon season is potentially dangerous and is discouraged.

C. Watershed Park/Quality of Life Plan

Development that encroaches or is adjacent to a Lateral Erosion Envelope (LEE) must:

- A. Comply with Watershed Parks/Quality of Life Plan and consider inclusion of Quality of Life amenities acceptable to SSCAFCA and the City of Rio Rancho.
- B. Dedicate in fee simple the LEE Line to SSCAFCA.
- C. The type of amenities required shall be determined on a case-by-case basis approved by the Executive Engineer.

D. Lateral Erosion Envelope

Encroachment into the LEE Line will require the following:

- A. Update the existing Lee Line Study
- B. Identify the drainage improvements required to reduce the LEE Line
- C. Construct and/or financially guarantee the required drainage improvements prior to building permit/subdivision plat approval. If these drainage improvements benefit other properties within the drainage basin, the methodology for prorating cost outlined in Section 10 of this chapter can be used.
- D. Provide construction plans for the required drainage improvements and the Watershed Management Park Plan amenities.
- E. Dedicate to SSCAFCA without compensation the required drainage rights-of-way/easements for the proposed drainage improvements, LEE Line and the Watershed Management Plan amenities.
- F. If the proposed LEE Line reduction is in the SSCAFCA right-of-way and/or easement, a vacation request to the SSCAFCA Board will be required.