



CITY OF IDAHO FALLS

ENGINEERING DEPARTMENT

208-612-8250

Design Guidelines for Storm Drainage

January 1, 2010

GENERAL INFORMATION

Where a storm drain is available in ADJACENT street, alley or easement, the private property grades shall be designed to flow to an underground onsite system connected to the city system. Storm Water in these areas will be prohibited from draining across the surface of the sidewalks.

All construction shall be in accordance with the current edition of the *City of Idaho Falls Standard Drawings and Specifications*. All sprinkler systems shall be designed in accordance with the current edition of the Standard Specifications for Sprinkler Systems.

All storm drain systems that ultimately flow to an Irrigation District system must have said Irrigation District approval prior to City of Idaho Falls approval and acceptance.

Storm drain system master plans, along with calculations, shall be submitted to the City for approval. All storm pond designs shall include a master plan, piping, pond, pump station, energy dissipater, electronically controlled sprinkler system, grading, landscaping, etc., and shall be designed and stamped by an engineer licensed in the State of Idaho.

INLET BOXES, CROSS DRAINS, PIPES, AND MANHOLES

An inlet box shall be required for a maximum of 1000 lineal feet of curb and gutter (including cross drains, alley curb, etc.).

All inlet boxes shall be City Standard side opening type, unless otherwise approved by the City Engineer.

Cross drains shall be allowed only with written approval from the City Engineer. Approved cross drains shall have a minimum slope of 1 percent.

All storm drain pipes and inlet boxes shall be designed to provide capacity based upon the 2 year storm frequency. (Nomographs, forms, etc. can be obtained at the City Engineering Office.)

Minimum pipe velocity is 2 feet per second at 80% full. Table shows minimum slope for pipe size at required velocity.

<u>Diameter</u>	<u>Minimum Slope</u>
12"	0.22%
15"	0.16%
18"	0.12%
21"	0.10%
24"	0.08%
27"	0.07%
30"	0.06%

Minimum size pipe diameter is 12 inches.

Maximum spacing between manholes is 360 feet.

RETENTION POND

The volume of pond shall equal 1.3 inches of water (over frozen ground) multiplied by the entire contributing area that flows to said pond. All ponds shall have a positive outlet or be sized at least 10 times the required volume.

The pond outlet shall be designed to drain the entire pond within 72 hours. The pond outlet shall be designed to retain the last 1 foot of storm water, so that it will either evaporate or seep into the soil.

All ponds shall have a minimum 15 foot wide asphalt access road and a minimum asphalt area of 20 feet x 20 feet at any lift station. Asphalt shall be 2 inches thick over 6 inches of aggregate base. The lift station and appurtenances shall be placed to allow clear access to the pond with trucks, mowers, etc.

The pond must have a minimum of a 10 foot wide (flat) area around the top perimeter of the pond.

The sides of the pond shall have a maximum slope of 4 feet horizontal to 1 foot vertical (4:1). A 5:1 slope is preferred.

A minimum depth of 12 inches of topsoil shall be compacted (85% to 90%) in place over the entire surface area of the pond.

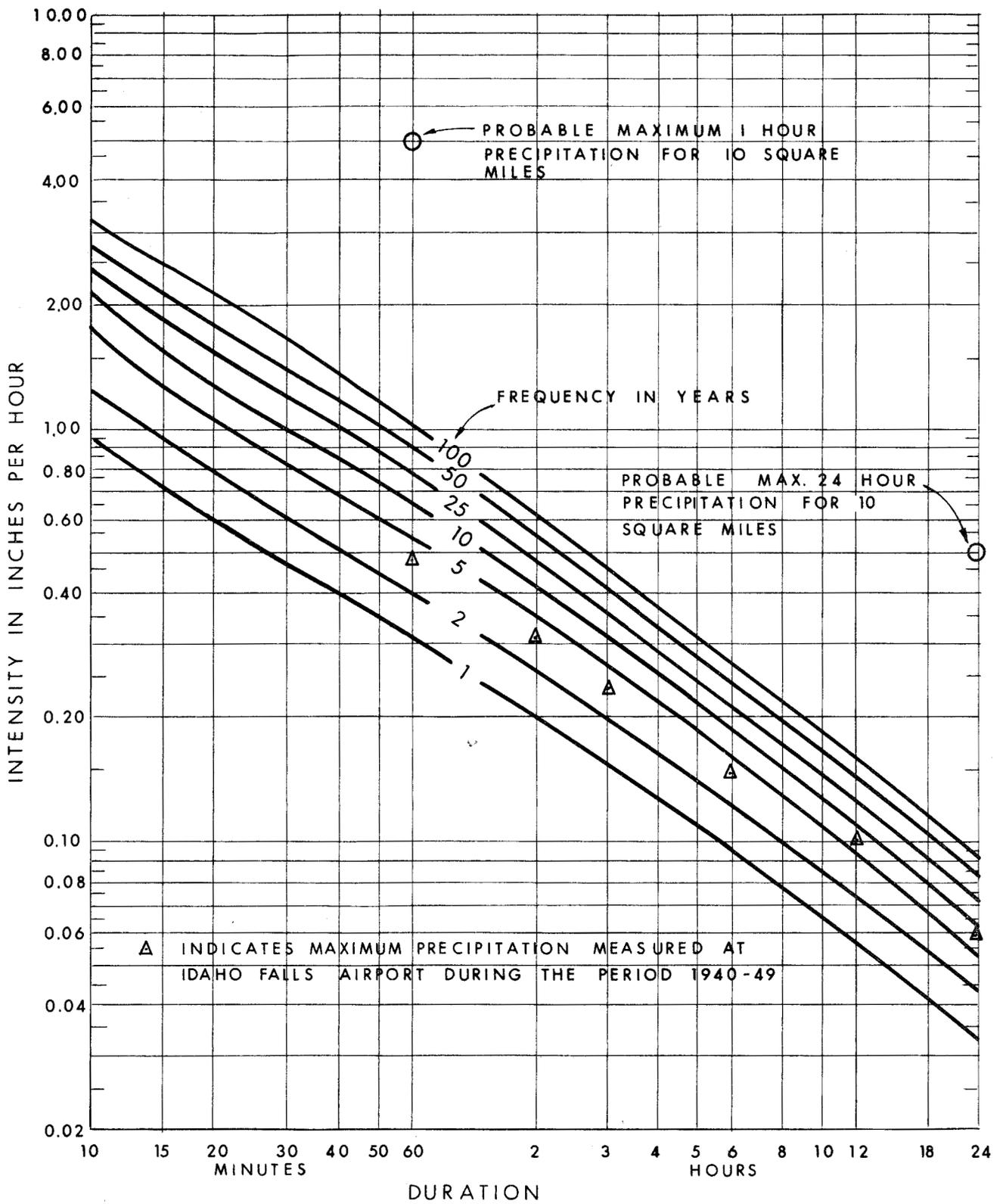


FIGURE 4
IDAHO FALLS, IDAHO
STORM SEWER STUDY
RAINFALL - INTENSITY - DURATION - FREQUENCY