

Citywide Master Drainage Plan

City of Owasso, OK

Roger Stevens, Public Works Director / 918.272.4959

► Completed in March 2005

Meshek & Associates, PLC, was selected to prepare a citywide Stormwater Master Drainage Plan for the City of Owasso, Oklahoma. This project culminated in the submittal of a comprehensive plan which served as the roadmap for the implementation of flood hazard mitigation measures. To-date, the City has completed the construction of over \$3.5 million in drainage improvements and has plans to invest an additional \$1 million in the near future.

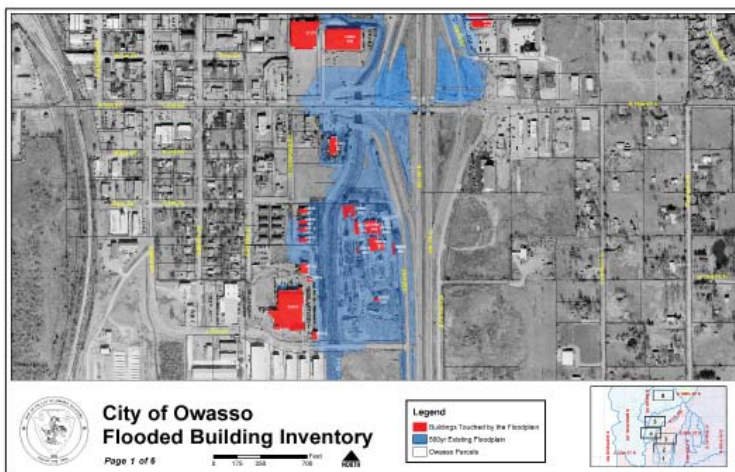
In addition to scope elements typical of a Master Drainage Plan, this project also called for the immediate evaluation of a few localized drainage problems caused by new development. As the result of rapid growth, the City of Owasso (one of the fastest-growing communities in the State of Oklahoma) found itself subject to the frequent flooding of newly developed residential subdivisions. To remedy the problem, the City requested the development of a “living” model of creeks and drainage systems; one which could serve to assist in the planned development of the City. These models, now maintained by City personnel, are used to ensure that historical flow rates are maintained as development continues.

The project included extensive public involvement to promote citizen support for the program. The process not only facilitated the inventory and discovery of flooding issues but also ensured that proposed solutions were tailored to address the pressing needs of the community. Also as part of this process,

a “Prioritization Criterion” was developed with input from citizens, community interest groups and City officials to facilitate implementation of the program.

The Prioritization Criterion was designed to facilitate the ranking of projects based on an objective, systematic approach that calls for the use of factors (each weighed accordingly) to assess the number of residents affected by the flooding, threat to life or property damage, size of area directly affected, effects on health and safety, type and extent of damage, frequency of problem, and years problem existed, among others. The Criterion provided an unbiased, methodical approach tailored to Owasso.

The DFIRM was submitted to FEMA and accepted for incorporation as the regulatory maps.



Numerous graphics were provided as part of the Master Drainage Plan to facilitate the communication of technical information to the public. The illustration above represents an area affected by the 100-year storm event. Buildings denoted in red indicate structural flooding.

Project Fee and Special Features

Project Fee: \$237,500

Notable aspects of this study include the development of a hydrologic and hydraulic “living” model of creeks and drainage basins to assist in the planned development of the City.



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