



The purpose of this policy is to establish a private certification procedure for manhole vacuum testing for the City of Phoenix (City) Planning and Development Department (PDD). Additionally, it is intended to provide consistency among contractors, testing companies and inspection staff by providing a clear process on when and how vacuum tests shall be conducted and under what requirements.

The following procedure has been established:

1. For all public manholes installed, a vacuum test with passing result is required to be performed after it has been adjusted to final grade. The testing will be conducted per ASTM C-1244 with modified time requirements per the current City Supplement to the Maricopa Association of Governments (MAGs) Uniform Standard Specifications for Public Works Construction Section 611.
2. Testing shall be performed after all backfill and compaction operations are complete and prior to any interior protective coating applications. A negative air pressure of ten (10) inches of mercury shall be drawn on the manhole. The time shall be measured for the vacuum to drop from ten (10) inches to nine (9) inches of mercury. The manhole shall pass this test if the time to drop in mercury meets or exceeds the values in Table 611-2.
3. The developer shall retain a company with testing personnel who are qualified and/or directly supervised by persons competent to perform the vacuum tests. The tabulated test results shall be sealed by a registered Civil Engineer in the State of Arizona, certifying the test results are passing per the criteria in item 1 above. The certified manhole vacuum test report shall be included in the close out package to the Civil Inspector per TRT 00308.
4. The Civil Inspector shall be notified at least 48 hours before the testing will be performed and by whom. The Civil Inspector may witness testing to verify procedures are being followed correctly.
5. Retesting manholes more than once may result in additional inspection fees per Phoenix City Code, Chapter 9, Appendix A.2.
6. Sample certification cover letter and field results table are attached to this document as a preferred format. Contact the Civil Inspector for any questions.

SAMPLE LETTER

This document provides a standard cover letter format to be followed when submitting certified sanitary sewer concrete manhole vacuum testing results.

(Company letterhead with name and address)
Sanitary Sewer Manhole Vacuum Testing
(Date of Report)

City of Phoenix
Planning & Development Department
200 W. Washington Street, 2nd Floor
Phoenix, AZ 85003

Attention: (Name of Inspector)

Project: (Project Name)
(Project Location)
(Project number and KIVA number per approved plans)
(Permit Numbers)

Re: Certified public sewer manhole vacuum tests

In accordance with the request of the (Developer Name), we have completed the vacuum testing at the subject project.

To the best of my knowledge and belief, the vacuum tests were performed under my supervision or as noted and are found to be substantially in conformance with ASTM C-1244 including modified time requirements per city of Phoenix Supplement to MAG Uniform Standard Specification Section 611.

Attached find the field-test results performed on this work.

Respectfully submitted,
(Company Name)

(Sign and sealed by Civil Engineer registered in the State of Arizona)

Company Letterhead (with name and address)
Sanitary Sewer Manhole Vacuum Testing Certification
Field Test Report

Date: _____

Civil Sewer Permit (CSE) # _____ Project (KIVA) # _____

Phase # _____

Project Name: _____

Address/Location: _____

Manhole Depth	Minimum Test Duration (seconds) (48 inch Manhole)	Minimum Test Duration (seconds) (60 inch Manhole)
12 feet or less	60	75
Greater than 12 feet to 15 feet	Not applicable*	90
Greater than 15 feet	Not applicable*	105

* Manholes greater than 12 feet in depth shall be 60 inches in diameter.

Manhole #	Diameter	Depth Hold	Time	Gauge	Result

Technician(s): _____