



**TERRASYSTEMS  
SOUTHWEST, INC.**

2761 N. Country Club Rd, Suite 202  
Tucson, Az 85716

December 10, 2021

To Whom It May Concern,

John Ehlen has been a critical asset to the State of Arizona through his contract work with TerraSystems Southwest on various projects including the following significant efforts:

Arizona 911 Program Office Statewide Data Append

John designed numerous FME workspaces to incorporate into our existing processes to significantly reduce the amount of manual labor done by me and my staff. Previously, during the data aggregation process for NG911 migration, many conversion steps and reporting metrics were generated by hand. John created many modular workspaces to accomplish tasks such as:

- Clipping agency data to their authoritative boundaries using datasets stored in the Arizona Geospatial Clearing House (AZGEO)
- Updating and calculating discrepancy agency id's
- Reporting on NENA Domain Violations using the NG 911 data model as a reference, along with Arizona-specific logic.
- Using the AZGIV database engine to perform data validation and repair for agencies data located in one area but reported as being in another
- Back populating legacy datasets based on NENA values, and vice versa
- Repairing street part names to be consistent across fields and compliant with NENA standards for abbreviations

Arizona Department of Health Services Medical Marijuana Mapping Program

The successful fulfillment of this contract with AZDHS relies on cleanly parsed and geocoded address information. John developed processes in FME to automate rule training for the raw-address parsing and cleaning engine created by Gistic Research for this purpose. The FME application creates XML files and automates system commands and the resulting analysis to determine the best performing rule combinations.

I highly recommend John for any FME application development, as he is very competent and efficient in his development and subsequent training and documentation work.

Sincerely,

Howard L. Ward  
President, TerraSystems Southwest



**TERRASYSTEMS SOUTHWEST, INC.**  
*Geographic Information Solutions*