

# Services to the Natural Gas Industry

THA Engineering Solutions provides a variety of engineering design and drafting services for the full range of natural gas facilities including pipeline, compression and measurement. THA Engineering project management will utilize both in-house personnel as well as outside resources as special needs arise.

# **As-Built Drafting**

THA Engineering Solutions provides "as-built" documentation support for any type of project, including documentation on-site during construction or post-construction.

### Office Drafting

THA Engineering Solutions provides personnel to convert mark-ups to As-Built drawings in our office. We utilize furnished pictures and consultation with field personnel to resolve discrepancies between mark-ups and As-Built drawings. The drawings are reviewed by engineers before they are returned to the client. We strive to minimize the turn-around time between receipt of mark-ups and the completion of As-Builts.



## Occasional Site Visits

The amount of time from end of construction to the completion of the As-Built drawings can be greatly reduced by making occasional visits to the job site to collect information. The mark-ups are brought back to our office and the As-Built drawings are created. Drawings are continually updated as "For-Construction" drawings for the duration of the project.



#### On-Site

THA Engineering Solutions can provide man power and equipment at field locations to gather As-Built information. This information is used to correct the For-Construction drawings on the job site. Field Information can also be used for material management. The onsite personnel can also provide sketches to construction crews if changes are necessary. The As-Built drawings are essentially complete when the facilities are placed in service for new construction. For existing facilities drawings can be created for the entire facility, including the bill of materials. The As-Built drawing package can be as detailed or as general as required by the client, including civil, mechanical and electrical drawings.

#### **Drafting Software**

THA Engineering Solutions utilizes the following software packages:

- Microstation V8 XM Edition
- □ In Roads XM
- □ AutoCAD
- □ I/RAS B XM