VOLUME 15

Section 2: Guidelines

SECTION 2
GUIDELINES CONTENTS

1. INSTALLATION OF GAS FACILITIES

1.1. PURPOSE

The procedures and requirements as set forth in this standard are to provide guidance for work done by the applicant for the installation of gas facilities for the exclusive use by NV Energy.

1.2. DEFINITIONS

Applicant: The Owner(s), Developer(s), or their designated representative.

NVE: NV Energy

Utility Design Administrator (UDA): NVE's design and/or engineering representative.

Inspector: NVE's employee designated to inspect installation of any portion of gas facilities to be owned and/or maintained by NVE.

Operations Coordinator: NVE's operating representative who coordinates the start of construction dates.

1.3. SCOPE OF WORK

1.3.1. Work by Applicant: Applicant shall perform all work necessary to construct or install facilities in accordance with NVE's work order drawings, as follows:

1.3.1.1. Applicant's engineer shall provide all staking as outlined in NVE's Standard Volume 15 Section 3 Part 1 (Underground Facilities Staking Requirements).

1.3.1.2. Furnish excavation and approved backfill of trenches for gas facilities, Volume 15 Section 3 Parts 3 and 4 (Trench Bedding and Backfill and Trench Excavation Standards).

1.3.1.3. Provide and install gas main infrastructure including gas piping, valves, excess flow valves, cathodic protection equipment, etc. as shown on NVE work orders. Pipe fusers joining PE pipe and welders joining steel pipe must be approved and operator qualified by NVE.

1.3.1.4. Applicant-installed gas systems shall be in accordance with the standards issued for each project by the Gas Engineer and those outlined in this standard.

1.3.1.5. Applicant shall be solely responsible for protecting gas pipe, valves, etc. from superimposed loading created by construction equipment or otherwise.

Applicant shall repair or pay for any damage done to gas equipment to meet NVE's Inspector's approval.

1.3.1.6. **Applicant is responsible for contacting Underground System Alert (USAN) 811 two days before digging.**

1.3.1.7. Applicant is responsible for providing enough space for proper layout of all utilities.

1.3.1.8. Applicant shall not install other utilities' boxes or equipment over NVE gas mains and services.

1.3.2. Work by NVE: NVE shall perform the work necessary to complete the gas systems as contracted for by Applicant. This includes all project designs, inspection, tie-ins, and hot work.

1.4. INSPECTION AND PERFORMANCE

1.4.1. Preconstruction conferences will be scheduled to coordinate the start of construction. Those to attend should include NVE's UDA, Operations Coordinator, and/or Inspector(s); Applicant's General or Excavating Contractor, and Engineer; and Representatives of other utilities, i.e. Communication, TV, City, etc.

1.4.2. Applicant shall inform the gas inspection office **at least two** business days in advance before commencing any item of construction or installation of material to enable proper inspection of materials and workmanship by **BOTH** phone call and email. The gas inspection office may be contacted by calling **(775) 834-7356** and emailing **GASINSPECTION@NVENERGY.COM**. Materials and/or workmanship failing to meet specifications or installed without prior notice to inspector will be subject to rejection. Any work rejected shall be immediately corrected at applicant's expense. No work shall be backfilled or otherwise covered or concealed until it has been inspected and approved by the Inspector.

1.4.3. All materials and workmanship shall be first quality in every respect, plumb and true and according to the specific requirements of the work order drawings, NVE's standards, and this specification.

1.4.4. Where interpretation or clarification of intent of any drawing is required, the Inspector, UDA, NVE Gas Standards/Engineering, and the Contractor will work together to resolve the problem.

1.4.5. If any portion of the completed system fails to operate satisfactorily due to defects in applicant's work, the defect and any damaged portion of the system shall be corrected at the Applicant's expense and to the satisfaction of NVE Inspector.

1.5. CHANGES

1.5.1. By mutual consent, in writing, additions/deletions may be made to these requirements without voiding this standard.

1.5.2. Any charges for additional work for NVE brought about by Applicant's changes will be billed directly to the Applicant with payment due prior to service(s) being made available.

1.6. EXCAVATION

1.6.1. Before starting any excavation work using mechanical equipment, call Underground Service Alert of Northern/Central California and Nevada (USA North) at 811. This call must be placed a minimum of 2 working days before excavation begins.

1.6.2. Typical order of Utility installation is: Sewer and/or Storm Drains, Electric-Telephone-Cable TV, Water and/or Gas. Subgrade shall be established prior to staking of Gas facilities. A **Letter of Subgrade** must be received by the NVE Gas Inspector prior to gas and pipe installation. A sample Letter of Subgrade is provided on sheet 6 of this section.

1.7. BACKFILL

1.7.1. Backfill material shall be approved by the Inspector and shall meet NVE's Standard Volume 15 Section 3 Part 3. In addition, backfill material shall meet governmental codes and ordinances, as applicable (see Section 3).

1.7.2. A minimum of 6" of NVE approved sand compacted to 90% of the relative maximum density shall be placed below gas mains and services. Additionally, a minimum of 12" of NVE approved sand compacted to 90% shall be installed above and on the sides of gas mains and services. Refer to Volume 15 Section 3 for additional requirements.

1.7.3. Approved backfill contractors, on behalf of the Applicant shall place NVE approved backfill in trenches to the satisfaction of the Inspector. When joint construction is utilized, two or more backfill operations shall be required. Applicant shall be responsible for the cost of repair if any damage occurs to other utilities where damage results from failure of Applicant to follow proper backfill procedures. The current list of NVE approved backfill contractors is available on the following website.

https://www.nvenergy.com/business/building-and-new-construction/gas-backfill-contractors

1.7.4. No native backfill larger than 4" shall be permitted and no native backfill shall be placed directly on the pipe in accordance with Volume 15 Section 3 Part 3.

1.8. CONCRETE

1.8.1. Concrete and concrete slurry shall not be placed directly against gas main and service piping without approval.

1.8.2. All risers and steel pipe installed in concrete shall have a sleeve such that the concrete is not making contact with the pipe wall.

1.9. COMPACTION

1.9.1. Backfill above the first 12" lift shall be secured with mechanical tamping units (not the tire or track of vehicles).

1.9.2. Backfill shall be placed in maximum loose lifts of 12".

1.9.3. Backfill shall be moistened as required to obtain compaction.

1.9.4. Compaction shall be a minimum of 90% of the relative maximum density, as determined by the Method ASTM D-1557. Local agencies whose ordinances require compaction in excess of 90% shall prevail.

1.9.5. Refer to Volume 15 Section 3 for additional compaction requirements.

1.10. WORKMANSHIP

1.10.1. All curb valve boxes located behind sidewalk shall be placed according to Volume 15 Section 6 and shall be raised to finish grade. The gas curb valve box must be raised by the applicant at various points during construction, including landscaping, and shall be left accessible and visible. See Volume 15 Section 6.

1.10.2. If there are no sidewalks, another reference will be established by NVE's UDA, Inspector and the Contractor.

1.10.3. All material furnished by Applicant are to be onsite prior to the start of any work by NVE. Material specifications shall be provided to the UDA for review and approval prior to applicant purchase of any materials.

1.10.4. All work is to be done in accordance with OSHA regulations

1.11. SAMPLE LETTER OF SUBGRADE

ATTENTION: (*INSPECTOR OR NVE REPRESENTATIVE*)

RE: (*JOB NAME*)

The above referenced project has been surveyed by (*independent certified engineering firm*) and it has been determined that the existing subgrade is within ± 0.3 feet of design subgrade. This "subgrade" is defined as: final grade prior to roadway base and asphalt.

NVE utilities will be staked and installed from this subgrade.

In the event that this subgrade changes and effects the final depth and/or condition of the utilities, the Developer/Applicant will be responsible, at their expense, for the relocation and/or repair of the utilities effected by the change.

Sincerely,

(Developer/Applicant and/or its Contractor