


## TYPICAL TRENCH DETAILS

### ALL TRENCHES MUST BE APPROVED BY NVE FIELD REPRESENTATIVE PRIOR TO ANY CONSTRUCTION.

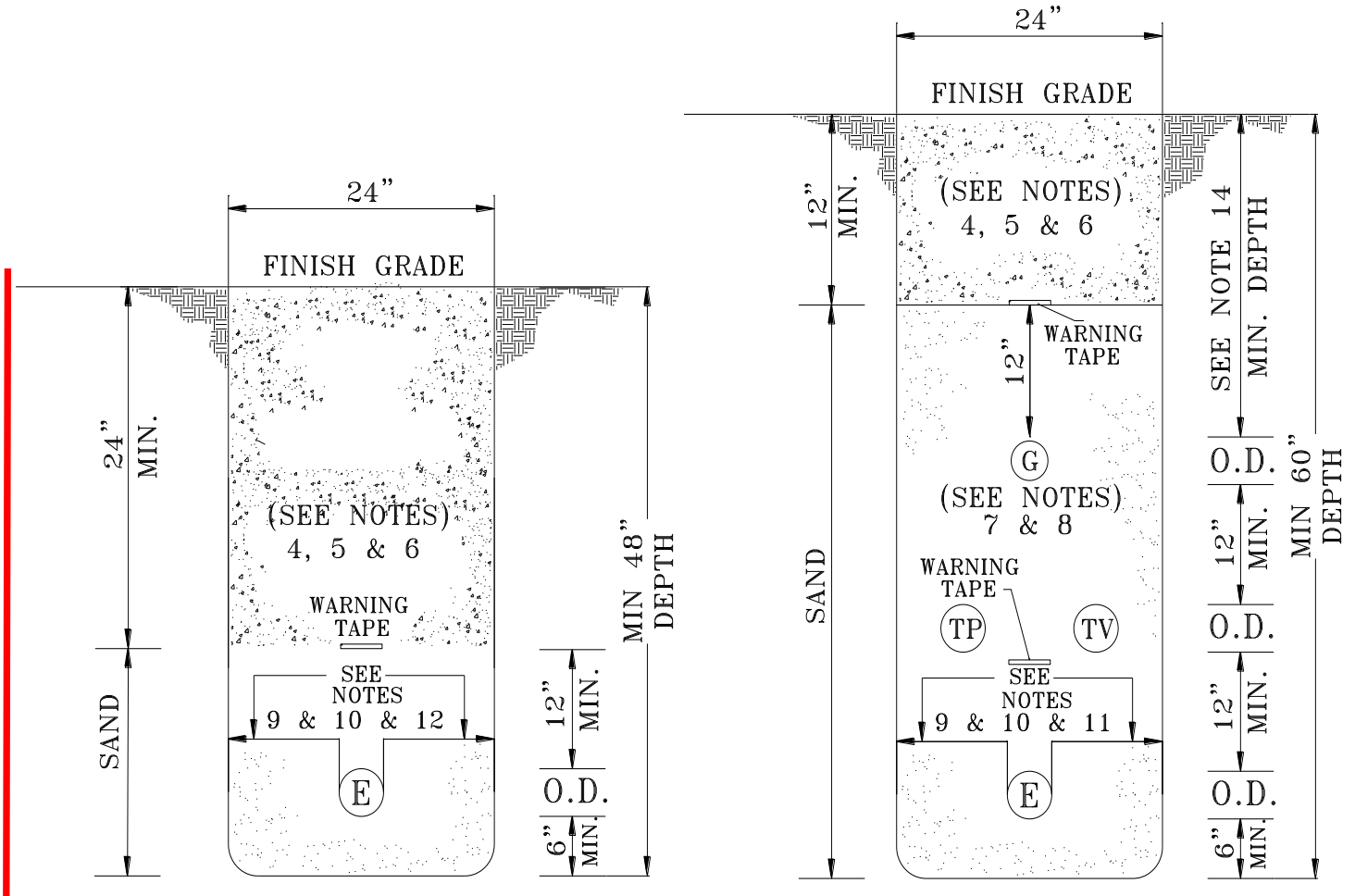
1. ALL TRENCHES MUST CONFORM TO THE LATEST APPLICABLE NVE, CITY, COUNTY, STATE, FEDERAL, AND OSHA SPECIFICATIONS AND REQUIREMENTS. IN THE CASE OF CONFLICT, THE MORE RIGID SPECIFICATION OR STANDARD SHALL APPLY. Refer to TE0001U, Section 6.0 for environmental requirements.
2. NATIVE MATERIAL requires 80% compaction. Refer to SUB01X, Section 5.4.2.
3. SAND requires 90% compaction.
4. TYPE II aggregate base requires 95% compaction.
5. THE TOP 18" of all trenches in ESTABLISHED HIGHWAYS, STREETS, and other PAVED AREAS subject to traffic, shall be backfilled with TYPE II base.
6. THE TOP 18" of all trenches on PRIVATE PROPERTY, (not subject to traffic) may be backfilled with NATIVE MATERIAL. Refer to SUB01X, Section 5.4.2.
7. NO CONDUITS SHALL BE INSTALLED ABOVE OR PARALLEL TO GAS LINES.
8. NONMETALLIC RED WARNING TAPE will be 6" wide, marked "NVE Utilities Buried Below" and shall be placed in ALL TRENCHES at least 18" below finish grade and 12" above NVE conduit.
9. ELECTRIC PRIMARY CONDUIT must be 6" minimum from side of trench. If more than one conduit is installed, maintain a 1-1/2" separation from each electric conduit.
10. ELECTRIC SECONDARY/SERVICE CONDUIT must be 2" minimum from side of trench. If more than one conduit is installed, maintain a 1-1/2" separation from each electric conduit.
11. ELECTRIC PRIMARY OR ANY JOINT TRENCH SHALL HAVE A MINIMUM TRENCH DEPTH OF 60", and maintain a minimum 12" radial clearance from all other utilities (See Pages 1 and 2). Exception: DB REFURBISHMENT, AND WATER.
12. PRIMARY ELECTRIC AND GAS WILL NOT OCCUPY THE SAME COMMON TRENCH and will be separated by virgin soil during parallel installations.

				VOLUME 17 – ENGINEERING & CONSTRUCTION STANDARD		TE0003U
				TYPICAL TRENCH DETAILS		
Drawn:	Eng:	Appr:	Date:			Revision: 5
BSP	MB	DA	02/18			Page 1 of 4

- 13. ELECTRIC ONLY CONDUIT, SERVICE / SECONDARY shall have a minimum trench depth of 48".
  - a. Exceptions/deviations to these trench requirements may be appropriate. Any deviation must be approved by the appropriate local authority if applicable, and the NVE Inspector.
- 14. GAS shall be 12" minimum from side of trench.
- 15. GAS SHALL HAVE MINIMUM DEPTH TO TOP OF PIPE OF: 36" in State Highways; 30" in streets or roadways; 24" in private property; and maintain a minimum 12" radial clearance from all other utilities. **Exceptions: SEWER AND STORM DRAIN**
- 16. Sewer (SS) AND STORM DRAIN (SD) must maintain a 2' radial clearance from NVE Gas facilities and/or maintain a 1' radial clearance from NVE Electric Facilities, and separated by virgin soil during parallel installations. Any exceptions/deviations from these requirements must be approved by the appropriate NVE Engineering Department.
- 17. ELECTRIC MUST MAINTAIN 1' RADIAL CLEARANCE FROM ALL FACILITIES. If 1' radial clearance cannot be obtained, electric conduit must be concrete encased for at least 18" each side of conflicting utility, or electric facilities will be protected by means of rigid galvanized steel conduit. This will be done by using PVC to rigid steel transition fittings with rigid steel extending at least 4' each side of conflict.  
 Note: NVE's Inspector will provide determination of application to resolve conflict.  
**EXCEPTION: WATER MAINS WILL MAINTAIN 2' RADIAL CLEARANCE FROM ALL ELECTRIC FACILITIES.**
- 18. Whenever possible, locate hydrant on opposite side of street from electric main trench. Refer to TE0045U for details.
- 19. If field changes are required, all changes must be approved by a NVE Inspector.

				VOLUME 17 – ENGINEERING & CONSTRUCTION STANDARD		TE0003U
				TYPICAL TRENCH DETAILS		
Drawn:	Eng:	Appr:	Date:			Revision: 5
BSP	MB	DA	02/18			Page 2 of 4

**TYPICAL SERVICE TRENCH DETAILS**



**TYPICAL SECONDARY / SERVICE TRENCH ELECTRIC ONLY**


**TYPICAL SERVICE TRENCH JOINT TRENCH APPLICATION**

**ENGINEERING NOTES:**

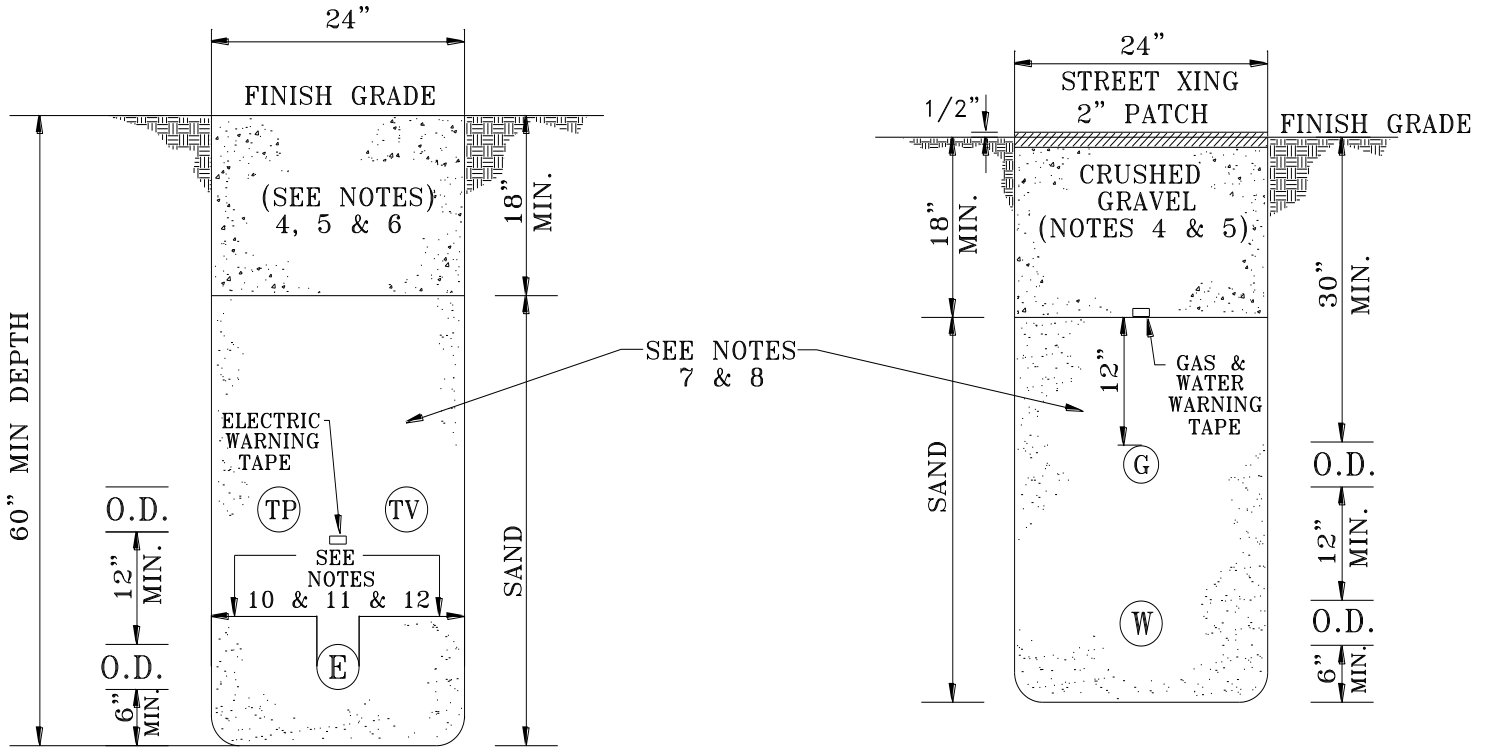
- A. If utilities on this page are not in a joint trench as shown, raise trench depths and comply with minimum depths and clearances referenced in Typical Trench Details 1-19.
- B. All trenches must be approved by NVE prior to any construction.

**UTILITY DESIGNATION AND LEGEND**

- TP TELEPHONE    W WATER
- TV CABLE TV    E ELECTRIC
- G GAS
- (O.D.) OUTSIDE DIAMETER

	VOLUME 17 – ENGINEERING & CONSTRUCTION STANDARD		TE0003U
	TYPICAL TRENCH DETAILS		Revision: 5 Page 3 of 4
Drawn:	Eng:	Appr:	Date:
BSP	MB	DA	02/18

**TYPICAL MAIN TRENCH DETAILS**



**TYPICAL PRIMARY OR SECONDARY TRENCH**

**TYPICAL GAS AND WATER MAIN TRENCH**

**UTILITY DESIGNATION AND LEGEND**

**ENGINEERING NOTES:**

- A. If utilities on this Page are not in a joint trench as shown, raise trench depths and comply with minimum depths and clearances referenced in Typical Trench Details 1-19.
- B. All trenches must be approved by NVE prior to any construction.

- TP** TELEPHONE    **W** WATER
- TV** CABLE TV    **E** ELECTRIC
- G** GAS
- (O.D.)** OUTSIDE DIAMETER

	VOLUME 17 – ENGINEERING & CONSTRUCTION STANDARD			TE0003U
	TYPICAL TRENCH DETAILS			
Drawn:	Eng:	Appr:	Date:	Revision: 5
BSP	MB	DA	02/18	Page 4 of 4