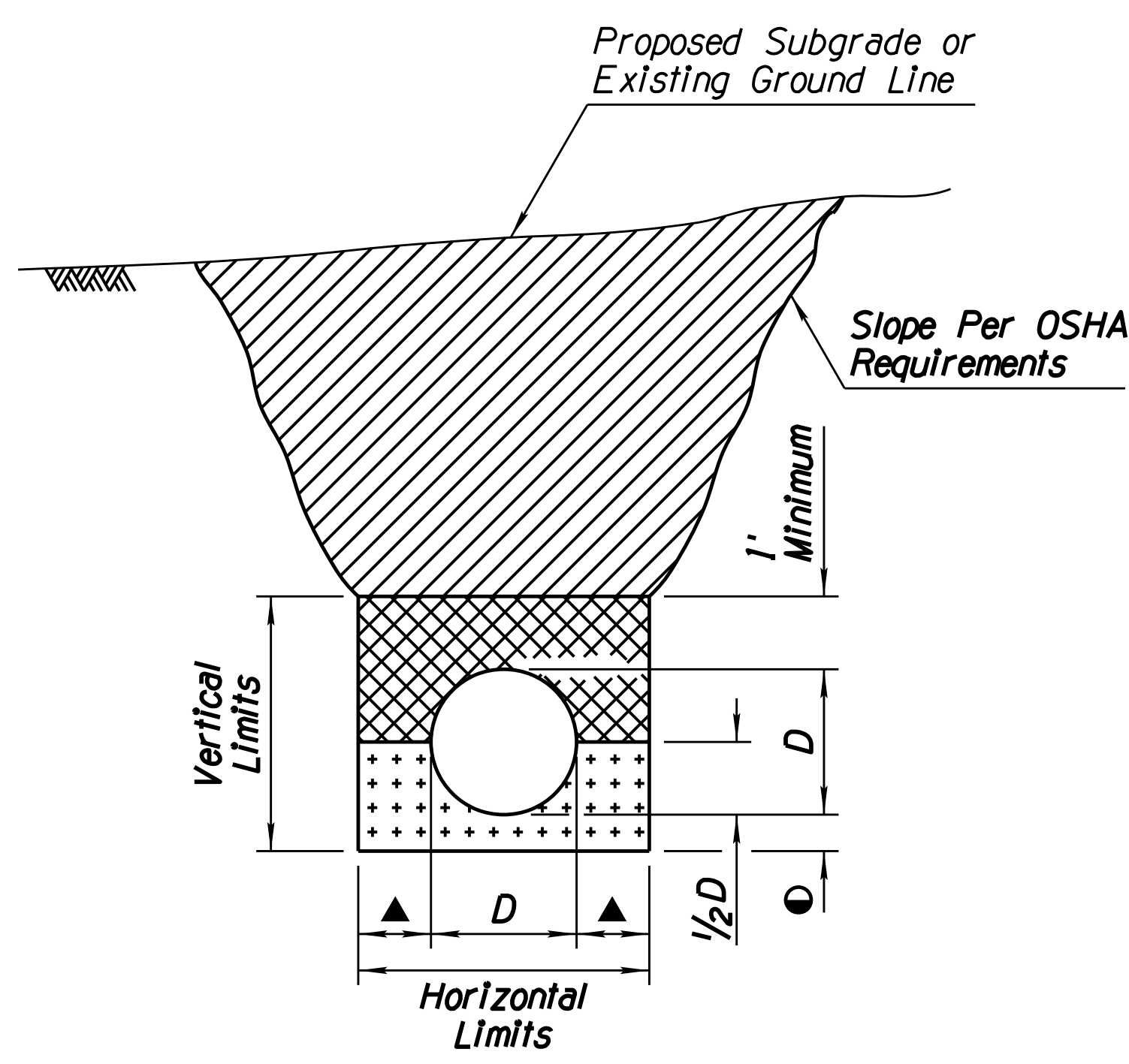
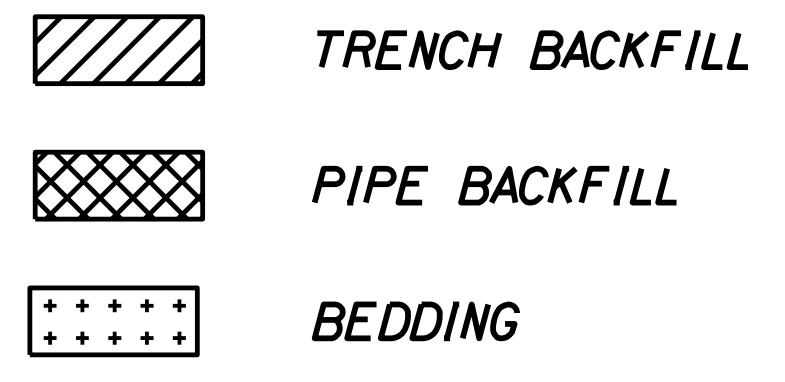


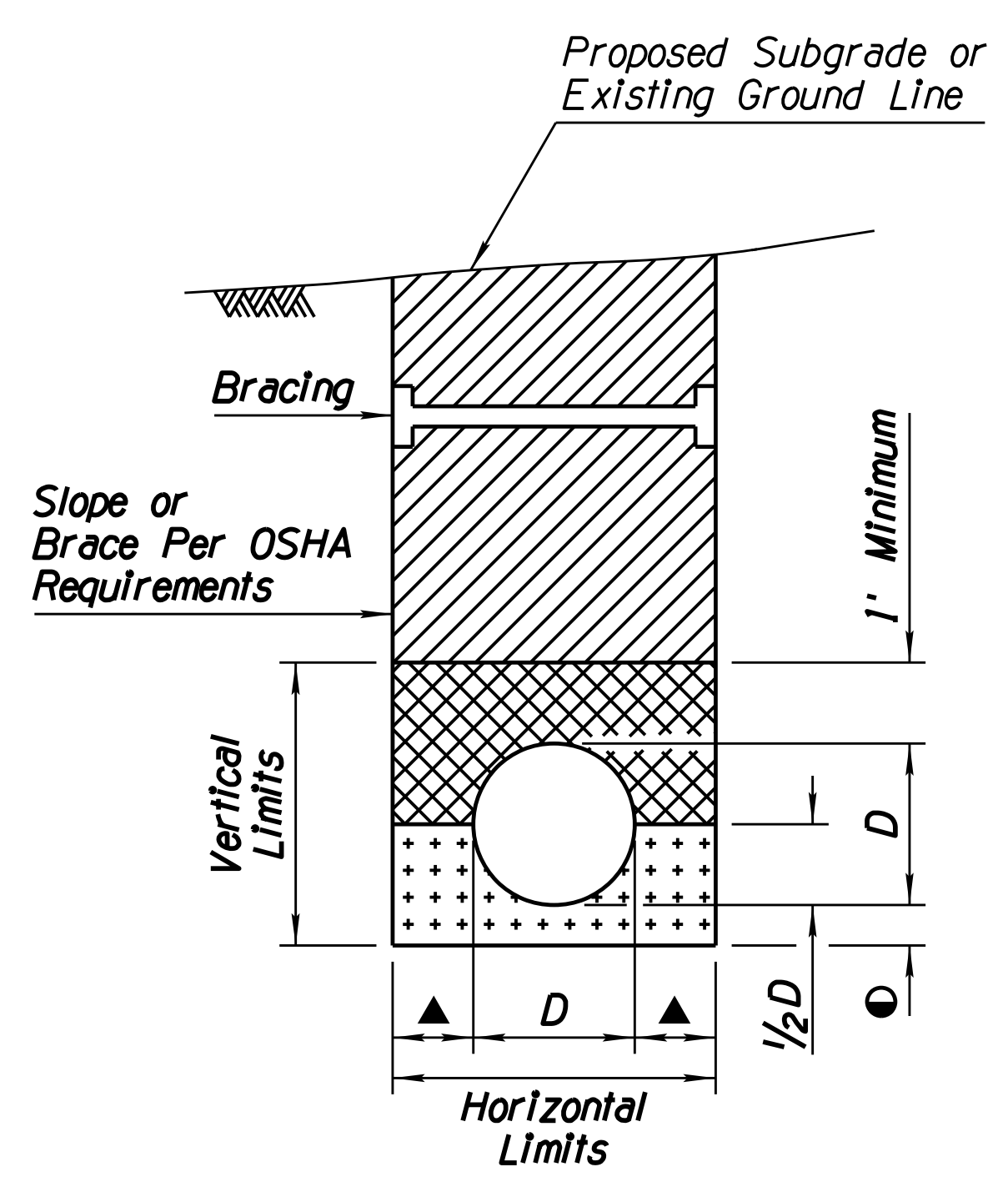
GENERAL NOTES

1. Pipes shall be installed either in a trench condition or in a non-trench condition in natural ground or in embankment.
 2. In a trench condition, the vertical and horizontal limits shall be maintained. If horizontal limits are exceeded or the vertical limits are not maintained, a non-trench condition exists.
 3. Bracing and sloping shall conform to OSHA requirements.
 4. Bedding material shall be used for pipe backfill on thermoplastic pipes, and may be used for pipe backfill on other pipes.
 5. In a non-trench condition, the embankment for pipe stability shall be constructed in lifts to the limits shown in the detail simultaneously with the bedding material and pipe backfill. If the contractor chooses to construct it as a trench condition, the embankment shall be constructed before excavating the trench.
- D - Outside diameter of full circle pipe or outside dimension (span or rise) of arch, arch pipe, elliptical pipe.
- T - Minimum wall thickness for NRCIPCP: See Plans.

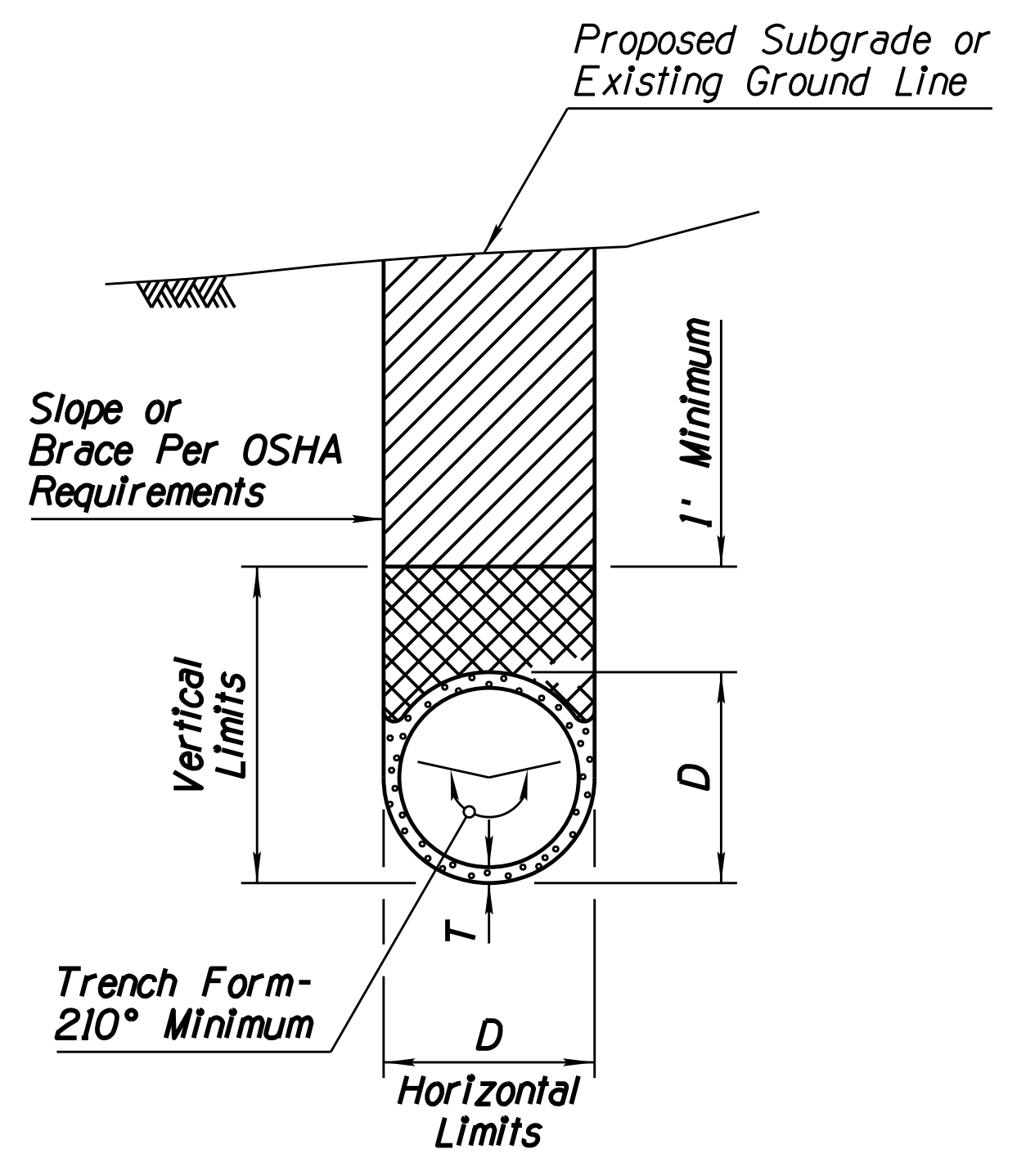
- ▲ Minimum = 12" ■ ●
Maximum = 24" for $D < 48"$
Maximum = 36" for $D \geq 48"$
- ▣ 6" minimum when using cement treated slurry for bedding and backfill.
- For thermoplastic pipe with $D \geq 24"$:
Minimum ▲ = $0.25D + 6"$
- - 6 inches except when on unyielding or unstable material. See Std Specs.
- = $3D$ for thermoplastic pipe with $D > 30"$ and fill height $> 10'$.



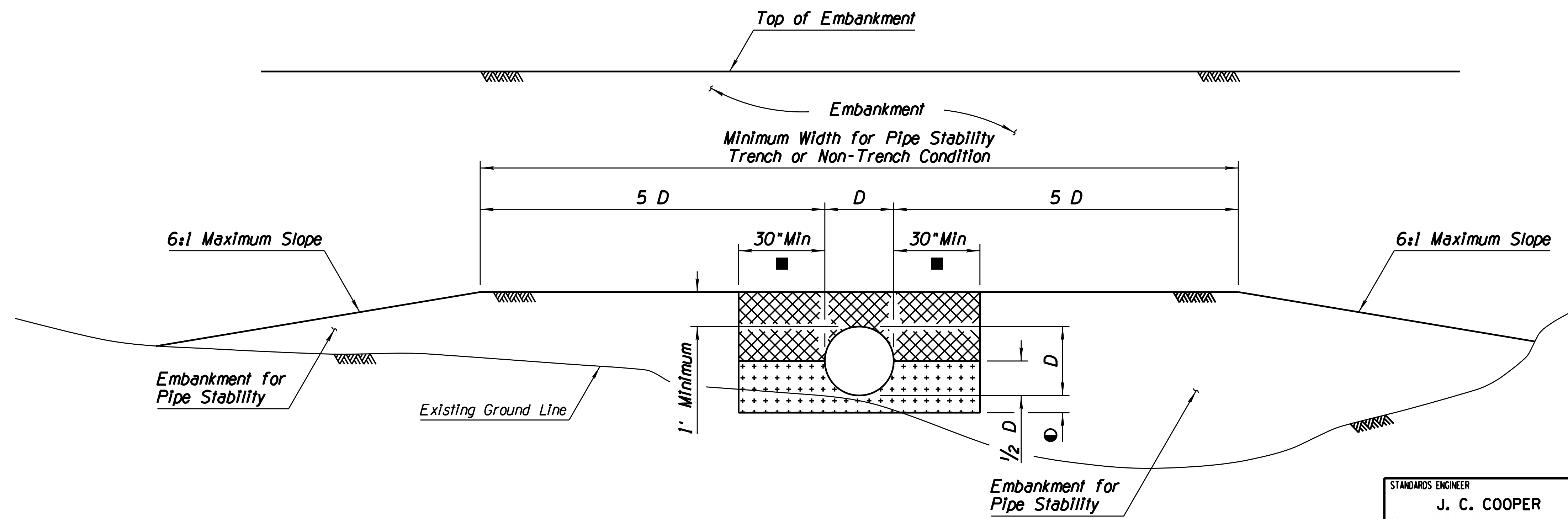
TRENCH CONDITION
IN NATURAL GROUND OR IN EMBANKMENT
WITHOUT BRACING



TRENCH CONDITION
IN NATURAL GROUND OR IN EMBANKMENT
WITH BRACING SHOWN



TRENCH CONDITION
NRCIPCP IN NATURAL GROUND
OR IN EMBANKMENT



NON-TRENCH CONDITION

Note to Designer: The information presented in this Standard Drawing has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

PRIOR DISTRIBUTION DATE 04/21

STANDARDS ENGINEER	J. C. COOPER
RECOMMENDED FOR APPROVAL	
GROUP MANAGER	M. DENBLEYKER
APPROVED	
STANDARDS COMMITTEE APPROVED FOR DISTRIBUTION	08/23 DATE

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY GROUP STANDARD DRAWING	
TYPICAL PIPE INSTALLATION	DRAWING NO. C-13.15