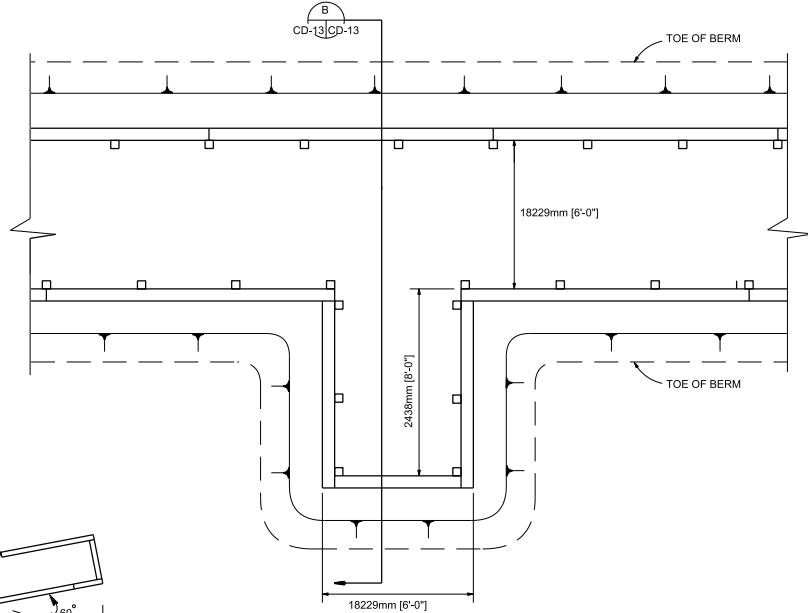
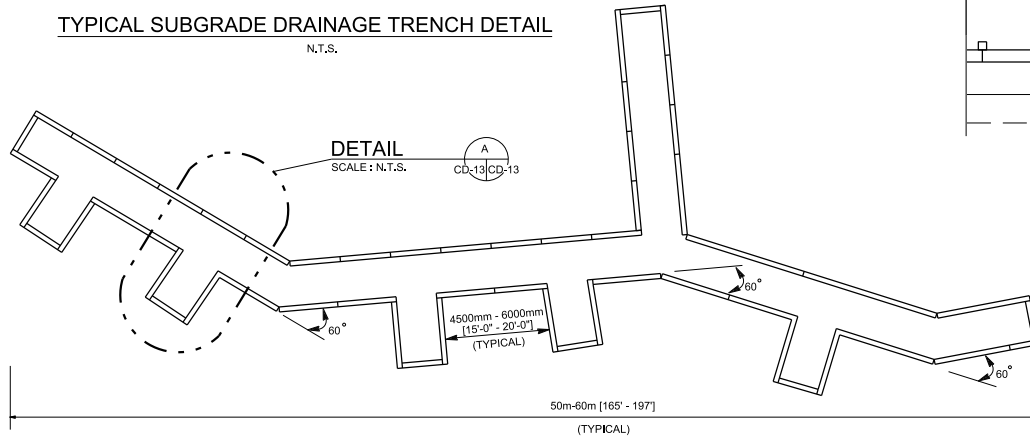


NOTES

1. SUBGRADE DRAINAGE, AS DEPICTED, IS INTENDED FOR USE WITH THE SURFACING PHASE OF CONSTRUCTION, AND SHALL BE INSTALLED ONLY AFTER THE SUBGRADE HAS BEEN COMPLETED, AND PRIOR TO CONSTRUCTING PAVING MATERIAL.
2. APPROXIMATELY 8 TO 12 FEET OF PIPE AT THE OUTLET SHALL BE NON-PERFORATED PIPE MEETING THE REQUIREMENTS OF THE PERFORATED PIPE, EXCEPT FOR PERFORATIONS.

TYPICAL SUBGRADE DRAINAGE TRENCH DETAIL

N.T.S.

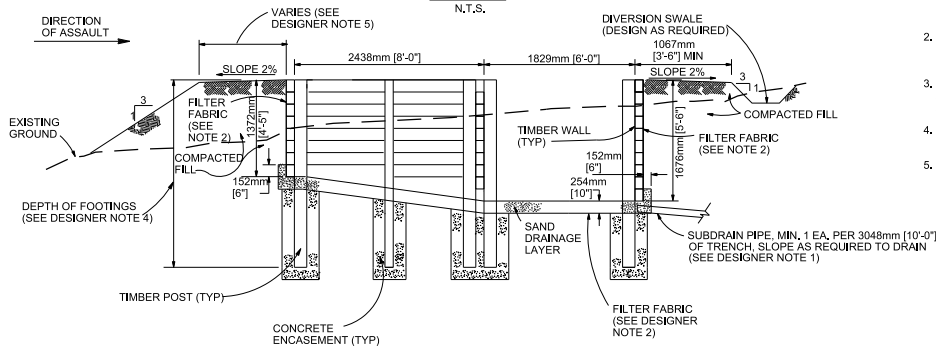


DETAIL

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SECTION

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GENERAL NOTES:

1. AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED OR RESURFACED CONSISTENT WITH THE NATURAL SURROUNDINGS. GROUND COVER SHALL NOT REDUCE TRENCH VISIBILITY.
2. WALLS SHALL BE CONSTRUCTED OF TREATED TIMBERS. FILTER FABRIC SHALL BE INSTALLED BEHIND ALL WOOD WALLS BELOW GRADE. FABRIC SHALL EXTEND THE FULL HEIGHT OF THE WALL.
3. SAND DRAINAGE LAYER SHALL CONFORM TO ASTM C33 FOR FINE AGGREGATE GRADING W/ A MAXIMUM OF 3% BY WEIGHT PASSING THE ASTM D1140, NO. 200 SIEVE (WASH).
4. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa [4000psi] IN 28 DAYS.
5. TRENCHES CONSTRUCTED ON STANDARD RANGES SHALL NOT BE USED FOR LIVE GRENADE TRAINING.

NOTES TO DESIGNER:

1. A SUB DRAIN SYSTEM SHALL BE PROVIDED TO ENSURE ADEQUATE DRAINAGE OF TRENCH.
2. THE NEED FOR FILTER FABRIC SHOULD BE EVALUATED AS PART OF THE SITE ADAPTATION PROCESS. A FILTER LAYER MAY OR MAY NOT BE REQUIRED DEPENDING UPON THE SOIL TYPE AT A PARTICULAR SITE.
3. THE GENERIC DESIGN FOR THE TRENCH MUST BE SITE ADAPTED TO SPECIFIC SITE CONDITIONS DETERMINED BY A SUBSURFACE INVESTIGATION AND TOPOGRAPHIC SURVEY.
4. DEPTH OF FOOTING WILL VARY DEPENDING UPON SUBSURFACE INVESTIGATIONS AND COMPACTION REQUIREMENTS DURING CONSTRUCTION.
5. REFER TO THE BERM THICKNESS FIGURES LOCATED IN THE DESIGN MANUAL TO DETERMINE THE REQUIRED BERM THICKNESS.
6. BERM SLOPES SHOWN AS 3:1 ARE MAXIMUM, FLATTER SLOPES MAY BE REQUIRED BY THE SITE SPECIFIC GEOTECHNICAL REPORT.
7. ACTUAL LAYOUT MAY VARY PER TRAINING REQUIREMENTS AND SITE CONDITIONS.

TRENCH

<p>US Army Corps of Engineers®</p>	
	DATE
	DRAWN BY: _____
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	SUBMITTED BY: _____
	PROJECT NUMBER: _____
	SIZE: _____
	AUGUST 2017
<p>U.S. ARMY CORPS OF ENGINEERS ENGINEERING & SUPPORT CENTER Huntsville, Alabama</p>	
<p>BRANCH AND TRAINING LAND PROGRAM STANDARD DESIGN MANUAL</p>	
<p>TRENCH LAYOUT DETAIL</p>	
<p>SHEET ID</p>	
<p>TRENCH</p>	