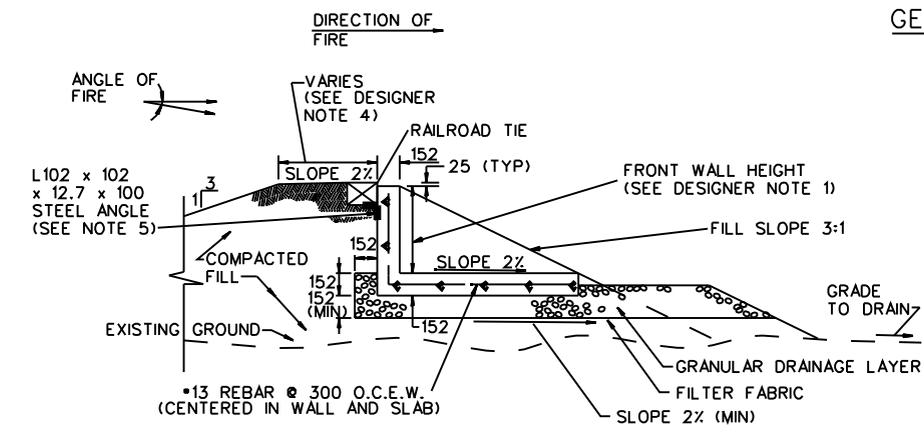


**SECTION B**  
SCALE: N.T.S.



**SECTION A**  
SCALE: N.T.S.

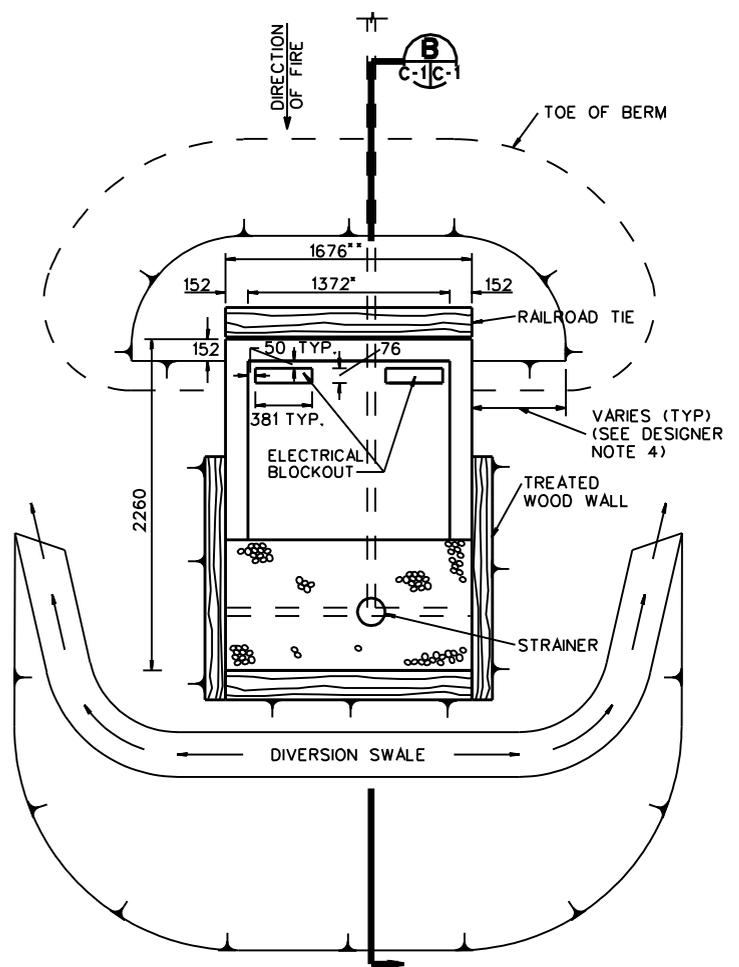
**GENERAL NOTES:**

1. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa IN 28 DAYS.
2. EMPLACEMENTS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE; CONCRETE STRUCTURES SHALL BE PRECAST OR CAST-IN-PLACE.
3. ALL REINFORCING STEEL SHALL BE PER ASTM A615, GRADE 60.
4. AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED OR RESURFACED CONSISTENT WITH THE NATURAL SURROUNDINGS. GROUND COVER SHALL NOT REDUCE TARGET VISIBILITY.
5. PLACE RAILROAD TIES AGAINST CONCRETE WALL ON L102x 102 x 12.7mm x 100mm STEEL ANGLES SPACED A MAXIMUM OF 900mm ON CENTER. ATTACH ANGLE TO CONCRETE WALL WITH CONCRETE ANCHORS.
6. ALL DIMENSIONS ARE mm UNLESS OTHERWISE INDICATED.

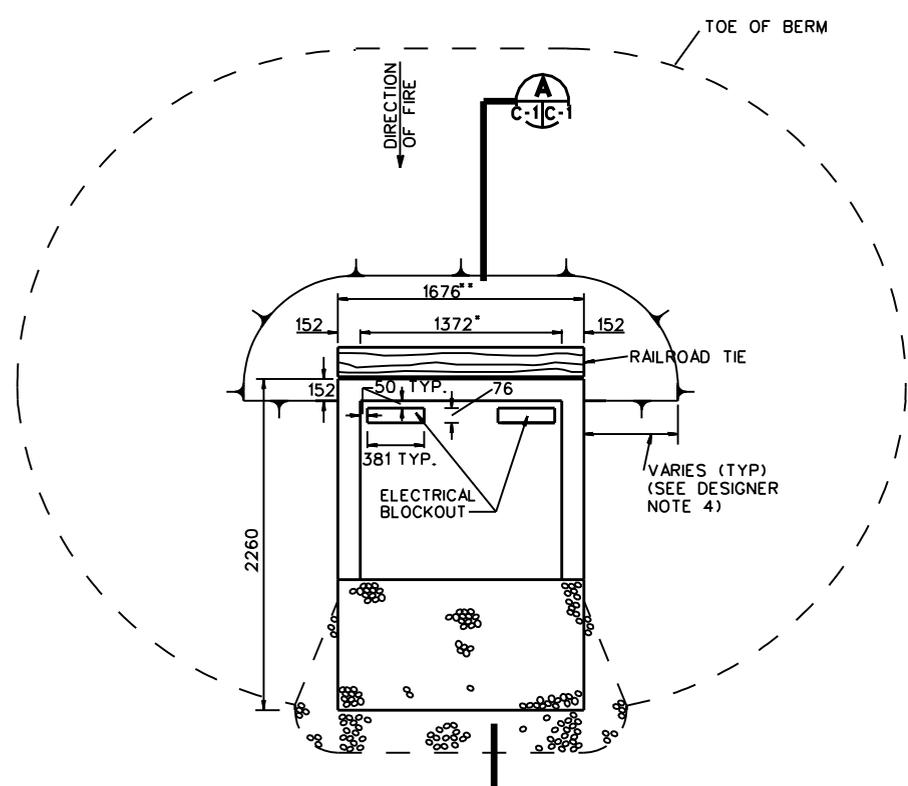
**NOTES TO DESIGNER:**

- \* 2020 FOR DOUBLE MECHANISM EMPLACEMENT
- \*\* 2324 FOR DOUBLE MECHANISM EMPLACEMENT

1. MINIMUM FRONT WALL HEIGHT IS 457 mm FOR ANGLES OF FIRE UP TO 15°. AN ALTERNATIVE DESIGN WILL HAVE TO BE DEVELOPED FOR ANGLES OF FIRE GREATER THAN 15°. IF THE TARGET MECHANISM IS TO BE ELEVATED, THE REQUIRED FRONT WALL HEIGHT SHOULD BE INCREASED BY THE DISTANCE BETWEEN THE BOTTOM OF THE MECHANISM AND THE TOP OF THE CONCRETE SLAB.
2. RETAINING WALLS SHALL BE CONSTRUCTED OF ADEQUATELY CONNECTED TIMBERS OR RAILROAD TIES (MAY BE PREFABRICATED). FILTER FABRIC SHALL BE INSTALLED BEHIND ALL WOOD RETAINING WALLS. FABRIC SHALL EXTEND THE FULL HEIGHT OF THE WALL.
3. THE DESIGNER SHOULD USE THE BELOW GRADE EMPLACEMENT DESIGN TO PROVIDE MORE REALISTIC TRAINING, IF THE SITE CONDITIONS ARE ADEQUATE TO SUPPORT POSITIVE DRAINAGE OF THE TARGET EMPLACEMENT. THE TOP OF THE SUBGRADE SHOULD HAVE A MINIMUM LONGITUDINAL SLOPE OF 2% TOWARD THE FRONT OF THE EMPLACEMENT.
4. REFER TO THE BERM THICKNESS FIGURES LOCATED IN THE DESIGN MANUAL TO DETERMINE THE REQUIRED BERM THICKNESS.
5. BERM SLOPES SHOWN AS 3:1 ARE TYPICAL. DIFFERENT SLOPES MAY BE REQUIRED BY SITE SPECIFIC GEOTECHNICAL REPORT.



**PLAN**  
**ASCENDING SLOPE OR BELOW GRADE EMPLACEMENT**  
SCALE: N.T.S.



**PLAN**  
**SURFACE / FILL EMPLACEMENT**  
SCALE: N.T.S.

**STATIONARY INFANTRY TARGET EMPLACEMENT**

Rev.	Date	Description

Designed by	Checked by	Reviewed by	Submitted by

Date	Rev.	Design file no.	Drawing scale	Site scale	Plot scale

**U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE HUNTSVILLE, ALABAMA**

**RANGE AND TRAINING LAND PROGRAM STANDARD DESIGN MANUAL**

**STATIONARY INFANTRY TARGET EMPLACEMENT**





















