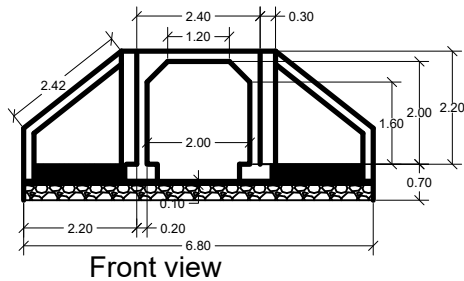
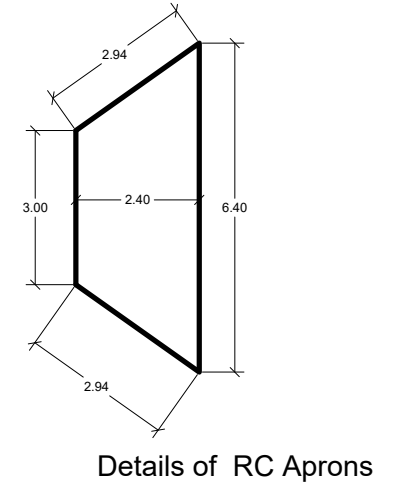
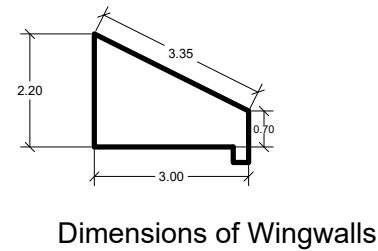
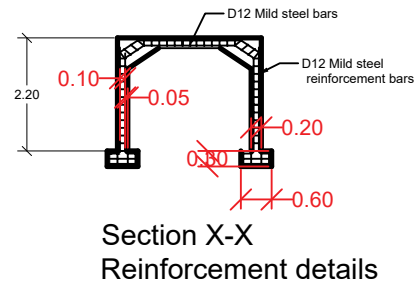
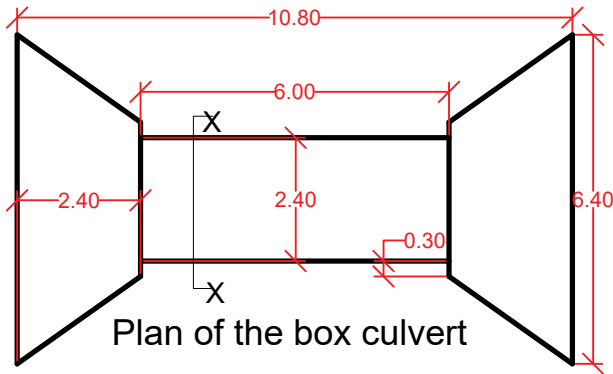


PROPOSED CONSTRUCTION OF A SMALL SPAN BOX CULVERT IN SINOGO- NZOIA ROAD



| | Bar size | Unit length (m) | No. of bars | Total length (m) |
|--|----------|-----------------|-------------|------------------|
| WINGWALLS | D12 | 3.0 | 72 | 264 |
| | | 1.45 | 176 | 243.6 |
| APRONS | D12 | 4.7 | 68 | 319.6 |
| | | 2.4 | 128 | 307.2 |
| BED | D12 | 6.0 | 34 | 204 |
| | | 2.4 | 82 | 196.8 |
| ABUTMENT WALLS | D12 | 6 | 64 | 384 |
| | | 2.2 | 164 | 360.8 |
| Decking | D12 | 6 | 34 | 204 |
| | | 2.4 | 82 | 196.8 |
| Total length of steel required for the structure | | | 0.889kg/m | 2,680.8 |
| Total weight of steel required for the structure | | | | 2,383.2kg |

| ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE. | | | | | |
|---|-------|--------|-----|------------|--------------|
| | AREA | VOLUME | No. | TOTAL AREA | TOTAL VOLUME |
| APRONS | 11.28 | 22.56 | 2 | 45.12 | 90.24 |
| BED | 3 | 6 | 6 | 18 | 36 |
| TOTAL ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE. | | | | | 126.24 |
| ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE. | | | | | |
| APRONS | 11.28 | 2.933 | 2 | 22.56 | 5.866 |
| BED | 3 | 0.78 | 6 | 18 | 4.68 |
| WINGWALLS | 4.35 | 1.131 | 4 | 17.4 | 4.524 |
| ABUTMENT WALLS | 13.2 | 3.432 | 2 | 26.4 | 6.864 |
| Decking | 18 | 4.68 | 1 | 18 | 4.68 |
| Total Volume of concrete required for the structure | | | | | 26.614 |

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED.
2. REINFORCEMENT TO BE AS PER THE BRITISH STANDARDS
3. HARDCORE TO BE OF GOOD SELECTED MATERIAL
4. REINFORCEMENT SHOULD BE PLACED 150MM C/C
5. EXCAVATION DEPTH WILL BE DETERMINED ON SITE.
6. PAYMENT OF THE WORKS WILL BE DONE BASED ON MEASURED WORKS.

| | | | |
|--|-----------------------------|---------------------------------|---------------|
| CLIENT: KCEP-CRAL | DRAWN BY | SINOGO - NZOIA ROAD | NOVEMBER 2018 |
| MINISTRY OF AGRICULTURE, LIVESTOCK FISHERIES AND IRRIGATION | D. S TELIENY (P.Eng. Techn) | IN LIKUYANI SUB COUNTY | NZOIA COOP |
| | DRWG NO. 003/2018 | PROPOSED SMALL SPAN BOX CULVERT | WAREHOUSE |