**Ministry of Education**

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**Occupation: Surveying and Mapping Management L-V**

**MATERIALS AND SUPPLIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | Plotter paper | 2 | Pc | Fraction of roll paper |
| 2 | Printer ink for available printer | 1 set | pc | Plotter or printer |
| 3 | Printer paper | 30 | Pc | A4-size for reports |

**EQUIPMENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | Qty | Unit | Specification |
| 1 | Computer/photogrammetric work satation | 1 | pc | with Microsoft word and excel, fit for photogrammetric SW |
| 2 | CAD software | 1 | license |  |
| 3 | Plotter | 1 | pc | Standard size |
| 4 | Printer | 1 | Pc | A4 size |
| 5 | map of project area showing EMA’s GCPs | 1 | pc | Prepared to scale of assignment |
| 6 | Digital aerial photos of project area | 12 | Pc | Digital to make 10 stereo models |
| 7 | GPS receivers | 3 | Pc | 2 base stations, 1 rover |
| 8 | Satellite image | 1 | Pc | At least 4 bands [3 visible+NIR] |
| 9 | Image processing software | 1 | License |  |
| 10 | GIS software | 2 | licenses | plus Spatial Analyst |
| 11 | GCPs with land use info. | 10 | pts |  |
| 12 | DTM covering project area | 1 | ? | digital |
| 13 | Urban base map | 1 | ? | digital |

**Tools, equipment/ Instruments and Consumable materials to be used:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Item description** | **Quantity** | **Unit** | **Specification** |
|  | GPS receiver | 1 | set |  |
|  | Down Loading capable | 1 | pcs |  |
|  | Software | 1 | Pcs | Appropriate |
|  | Total Station | 1 | pcs | Standard |
|  | Peg | 6 | pcs | Wooden or pin arrow |
|  | Hammer | 1 | Pcs |  |
|  | Tape | 1 | Pcs | 30m or 50m steel tape |
|  | Ranging pole | 2 | pcs | Any type |
|  | String | 1 | m | 50m |
|  | Paper | 10 | pcs | A4 80gm |
|  | Calculator | 1 | Pcs | Scientific |
|  | Computer | 1 | Pcs | Any type |
|  | Software | 1 | Pcs | Auto CAD |

Note: Materials and tools may be modified by the Assessor, depending on the actual job performed, and location & the standard installation practices of the country.stallation practices of the country.