



Rujukan Kami : JUPEM.BDPP.100-1/6/1(24)  
Tarikh : 27 Oktober 2016

Semua Pengarah Ukur Bahagian  
Semua Pengarah Ukur dan Pemetaan Negeri

**PEKELILING KETUA PENGARAH UKUR DAN PEMETAAN  
BILANGAN 2 TAHUN 2016**

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**GARIS PANDUAN PENERIMAAN DATA DIGITAL DAN PELAN UTILITI DARI  
JURUUKUR TANAH BERTAULIAH (JTB) OLEH JABATAN UKUR DAN  
PEMETAAN MALAYSIA (JUPEM)**

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**1. TUJUAN**

Pekeliling ini bertujuan untuk memaklumkan tentang garis panduan yang memperuntukkan ketetapan-ketetapan yang telah dibuat mengenai prosedur penerimaan data digital dan pelan utiliti dari Juruukur Tanah Bertauliah (JTB) bagi maksud penyelarasan serta penyeragaman.

**2. LATAR BELAKANG**

2.1 Selaras dengan keputusan Jemaah Menteri di dalam Mesyuarat Jemaah Menteri pada 24 Ogos 1994 telah bersetuju agar JUPEM menyimpan dan menguruskan semua maklumat utiliti bawah tanah.

2.2 Mesyuarat Majlis Negara Bagi Kerajaan Tempatan (MNKT) ke 68 yang bersidang pada 18 September 2014 telah memutuskan bahawa utiliti bawah tanah baru yang dipasang melalui pengorekan terbuka atau penggerudian berarah (*horizontal directional drilling, HDD*) hendaklah diukur atau dibuat penentuan kedudukan semasa pemasangan oleh JTB serta dijadikan syarat kelulusan dalam permohonan merancang di peringkat Pihak Berkuasa Tempatan (PBT).

2.3 Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan (KPKT) telah mengeluarkan Pekeliling Bilangan 7 Tahun 2014 bertajuk Garis Panduan Pelaksanaan Pengukuran Ke Atas Jajaran Utiliti Bawah Tanah Semasa Pemasangan yang menjelaskan bahawa semua kerja pengukuran pemasangan utiliti bawah tanah hendaklah dijalankan oleh JTB dan satu (1) salinan data digital dan Pelan Utiliti yang memenuhi spesifikasi JUPEM dikemukakan kepada Pengarah Ukur dan Pemetaan Negeri (PUPN).

### **3. PENERIMAAN DATA DIGITAL DAN PELAN UTILITI DARI JTB OLEH JUPEM**

Garis Panduan ini disediakan sebagai rujukan utama bagi membolehkan JUPEM Negeri menguruskan penerimaan data dari JTB yang telah melaksanakan pengukuran ke atas pemasangan utiliti. Kandungan Garis Panduan ini terbahagi kepada empat (4) perkara utama iaitu:

- a. Penghantaran data digital dan Pelan Utiliti oleh JTB;
- b. Penerimaan dan semakan data;
- c. Pengesahan penerimaan; dan
- d. Pengemaskinian PADU Negeri dan PADU Ibu Pejabat.

### **4. PEMAKAIAN**

Pekeliling ini adalah terpakai bagi semua Negeri di Semenanjung Malaysia dan Wilayah Persekutuan di Malaysia.

### **5. PELAKSANAAN**

Garis Panduan ini berkuatkuasa mulai tarikh Pekeliling Ketua Pengarah Ukur dan Pemetaan Malaysia dikeluarkan.

## 6. PENUTUP

Garis Panduan ini hendaklah digunakan oleh semua JTB yang melaksanakan kerja-kerja pengesanan dan pengukuran jajaran utiliti bawah tanah.

Sekian, terima kasih.

**“BERKHIDMAT UNTUK NEGARA”**



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**GARIS PANDUAN  
PENERIMAAN DATA DIGITAL DAN PELAN UTILITI  
DARI JURUUKUR TANAH BERTAULIAH (JTB)  
OLEH JABATAN UKUR DAN PEMETAAN MALAYSIA  
(JUPEM)**

**OKTOBER 2016**

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## **1.0 TUJUAN**

Garis Panduan ini disediakan sebagai rujukan utama bagi membolehkan JUPEM Negeri menguruskan penerimaan data dari Juruukur Tanah Bertauliah (JTB) yang telah melaksanakan pengukuran ke atas pemasangan utiliti semasa pemasangan.

## **2.0 LATAR BELAKANG**

Selaras dengan keputusan Jemaah Menteri di dalam Mesyuarat Jemaah Menteri pada 24 Ogos 1994 telah bersetuju agar JUPEM menyimpan dan menguruskan semua maklumat utiliti bawah tanah.

Lanjutan dari Mesyuarat Majlis Negara Bagi Kerajaan Tempatan (MNKT) ke 68 yang bersidang pada 18 September 2014, Pekeliling Bilangan 7 Tahun 2014 telah dikeluarkan oleh Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan (KPKT) bertajuk Garis Panduan Pelaksanaan Pengukuran Ke Atas Jajaran Utiliti Bawah Tanah Semasa Pemasangan. Pekeliling tersebut menjelaskan bahawa semua kerja pengukuran pemasangan utiliti bawah tanah hendaklah dijalankan oleh JTB dan satu (1) salinan data digital dan Pelan Utiliti yang memenuhi spesifikasi JUPEM dikemukakan kepada Pengarah Ukur dan Pemetaan Negeri (PUPN).

## **3.0 OBJEKTIF**

Objektif penyediaan dokumen Garis Panduan ini adalah bagi:

- a) Membantu pegawai JUPEM dalam melaksanakan aktiviti yang berkaitan dengan pengurusan data utiliti bawah tanah yang diterima dari pihak JTB.
- b) Mewujudkan pemahaman dan koordinasi aktiviti antara JUPEM Negeri, JUPEM Ibu Pejabat dengan pihak JTB berkaitan serahan, semakan dan pengemaskinian data digital dan Pelan Utiliti.
- c) Memastikan kualiti dan ketepatan data digital dan Pelan Utiliti yang diterima mematuhi piawaian yang ditetapkan.
- d) Memastikan Pangkalan Data Utiliti Kebangsaan (PADU) sentiasa dikemaskini secara berterusan dan dapat dimanfaatkan oleh pengguna.

## 4.0 SKOP

Garis Panduan ini akan memberi fokus kepada pengurusan data digital dan Pelan Utiliti yang diterima dari pihak JTB oleh JUPEM Negeri yang melibatkan proses-proses berikut:

- a) Penghantaran data digital dan Pelan Utiliti oleh JTB;
- b) Penerimaan dan semakan data;
- c) Pengesahan penerimaan; dan
- d) Pengemaskinian PADU Negeri dan PADU Ibu Pejabat.

## 5.0 PENGHANTARAN DATA DIGITAL DAN PELAN UTILITI OLEH JTB

JTB hendaklah menyerahkan Pelan Utiliti yang telah disahkan olehnya serta data digital yang berkaitan kepada PUPN setelah siap kerja pengukuran yang melibatkan pemasangan utiliti bawah tanah.

## 6.0 PENERIMAAN DAN SEMAKAN DATA

Terdapat tiga (3) peringkat semakan terhadap data digital dan Pelan Utiliti yang diterima dari JTB melibatkan format dan spesifikasi yang ditetapkan. Peringkat-peringkat semakan tersebut adalah:

- a) Penerimaan data dari JTB oleh JUPEM Negeri

Seksyen Pangkalan Data Pelbagai di JUPEM Negeri hendaklah memastikan data yang diterima dari JTB adalah dalam bentuk data digital dan pelan bercetak. Perkara yang perlu diteliti adalah seperti berikut:

- i. Data digital

Data vektor utiliti bawah tanah hasil ukuran yang dijalankan oleh JTB hendaklah dikemukakan dalam bentuk *softcopy* yang dilabelkan secara teratur.

- ii. Pelan Utiliti

Pelan Utiliti hendaklah dikemukakan dalam bentuk digital dan *hardcopy* bersaiz A0 atau A1.



b) Pendaftaran

Seksyen Pangkalan Data Pelbagai di JUPEM Negeri hendaklah mendaftarkan setiap data digital dan Pelan Utiliti yang diterima daripada JTB dalam borang inventori yang telah ditetapkan oleh Jabatan. Format borang inventori yang dimaksudkan adalah seperti di **Lampiran 1**.

c) Semakan data digital

JUPEM Negeri bertanggungjawab memastikan perkara-perkara berikut dipatuhi:

i. Format data

Data yang diterima hendaklah di dalam format GIS *shapefile* (shp), *geodatabase* (gdb) atau *mapinfo* (TAB).

ii. Sistem koordinat data

Data yang diterima hendaklah dalam sistem koordinat GDM2000 *Rectified Skew Orthomorphic* dan GDM2000 *Cassini Soldner*.

iii. Kod butiran utiliti

Nama dan kod butiran bagi kategori utiliti yang perlu dipatuhi adalah seperti di **Lampiran 2**. Butiran lengkap bagi kategori tersebut boleh dirujuk dari dokumen *Malaysian Standard 1759 (MS1759)*.

d) Semakan Pelan Utiliti

JUPEM Negeri bertanggungjawab memastikan perkara-perkara berikut dipatuhi:

i. Format dan konvensyen nama fail data digital

Pelan Utiliti digital yang dikemukakan hendaklah dalam format PDF atau GeoPDF. Penamaan fail hendaklah mengikut konvensyen berikut:

➤ Singkatan Nama JTB > U > Nama Projek > Index > Tahun

Contoh: **JA U Salak Tinggi 10 2015**

JA - Singkatan Nama JTB (Juruukur Ahmad)

U - Utiliti

Salak Tinggi - Nama Projek

10 - Indeks

2015 - Tahun

ii. Format *Hardcopy*

Pelan Utiliti *hardcopy* hendaklah memenuhi spesifikasi berikut:

Bil.	Perkara	Spesifikasi
1.	Saiz Pelan	A0 atau A1
2.	<i>Layout</i>	<i>Landscape</i>
3.	<i>Medium</i>	Kertas <i>Polyester</i>
4.	<p>Maklumat Teks mengandungi</p> <ul style="list-style-type: none"> <li>i. Tajuk Pelan / Projek</li> <li>ii. Mukim / Daerah / Negeri</li> <li>iii. Skala - 1:500 atau 1:1000</li> <li>iv. Penunjuk Utara</li> <li>v. No. Rujukan Projek / Fail Kerja</li> <li>vi. Sistem koordinat dan Datum</li> <li>vii. Pengesahan JTB terhadap kualiti data yang dipaparkan di atas Pelan Utiliti mengikut contoh format yang disediakan. Kenyataan tahap kualiti data hanya pada tahap A atau B atau gabungan A dan B sahaja.</li> <li>viii. Tarikh siap ukuran</li> <li>ix. Tandatangan JTB berserta tarikh</li> </ul>	Rujuk <b>Lampiran 3</b>
5.	Petunjuk	
6.	Kenyataan Penafian Penentuan Sempadan	
7.	Kenyataan Status Pengkelasan Pelan sebagai Terhad	

## **7.0 PENGESAHAN PENERIMAAN DATA DIGITAL DAN PELAN UTILITI OLEH JUPEM NEGERI**

- a) Setelah data yang diterima daripada JTB melepasi kesemua peringkat semakan seperti di **Lampiran 4**, maka JUPEM Negeri hendaklah mengeluarkan satu (1) surat menyatakan penerimaan data kepada JTB seperti di **Lampiran 5**.
- b) JTB hendaklah bertanggungjawab sepenuhnya ke atas kualiti (ketepatan dan kesahihan) data digital dan Pelan Utiliti yang dihasilkan.
- c) Sekiranya didapati data digital dan Pelan Utiliti yang diterima daripada JTB tersebut tidak mematuhi mana-mana satu daripada peringkat kerja semakan (kecuali kualiti data) seperti yang dinyatakan di Para 6.0 maka data digital dan Pelan Utiliti tersebut boleh dikembalikan kepada JTB untuk pembetulan.

## **8.0 PENYIMPANAN DAN PENGEMASKINIAN**

### **8.1 PENYIMPANAN PELAN UTILITI *HARDCOPY* DAN *SOFTCOPY***

Pelan Utiliti *hardcopy* serta *softcopy* disimpan mengikut peraturan dokumen terperingkat.

### **8.2 PENGEMASKINIAN PADU DI JUPEM NEGERI DAN IBU PEJABAT**

- a) JUPEM Negeri hendaklah mengemaskini data yang diterima ke dalam PADU JUPEM Negeri; dan
- b) Satu (1) salinan hendaklah dihantar ke Bahagian Pemetaan Utiliti Ibu Pejabat melalui kaedah yang sesuai.

## **9.0 CARTA ALIR**

Ringkasan proses aliran kerja adalah seperti di **Lampiran 6**.

## **10.0 PEMAKAIAN**

Pekeliling ini adalah terpakai bagi semua Negeri di Semenanjung Malaysia dan Wilayah Persekutuan di Malaysia.

## **11.0 PELAKSANAAN**

Garis Panduan ini berkuatkuasa mulai tarikh Pekeliling Ketua Pengarah Ukur dan Pemetaan Malaysia dikeluarkan.

## TAFSIRAN

Dalam Garis Panduan ini, melainkan jika kandungan ayatnya mempunyai makna yang lain;

**Juruukur Tanah Bertauliah (JTB)** bermaksud sesesorang Juruukur Tanah yang dilesenkan untuk amalan di bawah Akta Jurukur Tanah Berlesen 1958 (Akta 458); atau Pengarah Ukur dan Pemetaan atau mana-mana Pegawai Ukur yang dilantik dibawah Kanun Tanah Negara.

***Malaysian Standard 1759 (MS1759) Geographic Information/Geomatics-Feature and Attribute Codes*** adalah merupakan kod standard bagi butiran dan atribut yang dikeluarkan oleh SIRIM.

**Pangkalan Data Utiliti Kebangsaan (PADU)** adalah merupakan pangkalan data berkomputer yang menyimpan dan mengurus maklumat utiliti serta butiran-butiran berkaitan yang disenggara oleh JUPEM.

**Pelan Utiliti** bermaksud pelan yang menunjukkan maklumat ukuran utiliti bawah tanah dan butiran berkaitan yang diukur dan disahkan oleh Juruukur Tanah Bertauliah sama ada dalam bentuk salinan cetak atau digital.

**Pengarah Ukur dan Pemetaan Negeri** bermaksud Pengarah Ukur dan Pemetaan Negeri dan termasuklah Timbalan Pengarah Ukur dan Pemetaan yang dilantik dibawahnya.

**Tahap Kualiti A** adalah tahap kualiti terbaik yang diberi kepada data utiliti yang mematuhi spesifikasi ketepatan dan kejituan oleh JUPEM (melalui pengukuran terus ke atas pemasangan utiliti bawah tanah yang terdedah).

**Tahap Kualiti B** adalah tahap kualiti hasil dari kerja pengesanan yang mematuhi spesifikasi ketepatan dan kejituan oleh JUPEM (melalui kaedah *non-invasive* pengesanan geofizikal).

# LAMPIRAN



## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

### U - UTILITY

#### UA - Electricity

Feature Code:	<b>UA0010</b>
Feature Name:	Power Line
Description:	Cables that carry electricity power.
Feature Class:	Line
Possible Attribute:	Name (NAM), Grade Location (GRL) Power Line Characteristics (PLC), Power Line Type (PLT), Voltage (VLT), Custodian (CUS), Height (HEI), Number of Reference (NUM), Accuracy Category (ACC), Transmission Suspension Type (TLS)
Feature Code:	<b>UA0011</b>
Feature Name:	Electricity Cable Depth
Description:	Point along electricity cable showing depth obtained through direct measurement or detection of any measuring or detecting equipment
Feature Class:	Point
Possible Attribute:	Name (NAM), Depth (DPT), Voltage (VLT), Product Category (PRO)
Feature Code:	<b>UA0012</b>
Feature Name:	Electricity Cable Marker
Description:	A marker attached to permanent structure or located on the ground that described the underground power cable route.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UA0020</b>
Feature Name:	Street Light
Description:	Structures that provide lighting to streets.
Feature Class:	Point
Possible Attribute:	Name (NAM), Street Light Category (SLC), Custodian (CUS), Number of Reference (NUM), Type of Street Light (TSL)
Feature Code:	<b>UA0021</b>
Feature Name:	Lamp Pole
Description:	Structures that provide lighting to public places excluding street light.
Feature Class:	Point
Possible Attribute:	Name (NAM), Custodian (CUS), Status (STA), Date (DAT), Lamp Pole Usage (LPU), Lamp Pole Type (LPT)
Feature Code:	<b>UA0022</b>
Feature Name:	Highmast
Description:	A lighting system for large areas in which masts giving a mounting height of 18 m or more, normally carry cluster of luminaries.
Feature Class:	Point
Possible Attribute:	Name (NAM), Authority (AUT), Status (STA), Date (DAT), Height (HEI), Route Number (RTN), Road Location (RDL), Section Number (SEC), Highmast Usage (HMU), Aviation Light (AVL)



## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UA0023</b>
Feature Name:	Underpass Lighting
Description:	A lighting system which is installed at underpasses or tunnels for good visibility.
Feature Class:	Point
Possible Attribute:	Name (NAM), Custodian (CUS), Status (STA), Date (DAT), Route Number (RTN), Road Location (RDL), Section Number (SEC), Underpass Lighting Type (ULT)
Feature Code:	<b>UA0030</b>
Feature Name:	Power Station
Description:	Installations that generate electricity power.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Power Station Type (PST), Height (HEI), Power Station Type (PST), Voltage (VLT)
Feature Code:	<b>UA0040</b>
Feature Name:	Substation and Switching Station
Description:	Installations that distribute or transform electric voltage from one level to another.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Substation Category (SSC), Custodian (CUS), Voltage (VLT), Number of Reference (NUM), Substation Type (SST), Accuracy Category (ACC), Product Category (PRO)
Feature Code:	<b>UA0050</b>
Feature Name:	Pole
Description:	Structure made of wood/steel/concrete to support overhead cables.
Feature Class:	Point
Possible Attribute:	Name (NAM), Pole Usage (POU), Custodian (CUS), Number of Reference (NUM)
Feature Code:	<b>UA0060</b>
Feature Name:	Feeder Pillar
Description:	Equipment that branches low voltage underground cables single or dual to a multiple.
Feature Class:	Point
Possible Attribute:	Name (NAM), Custodian (CUS), Number of Reference (NUM)
Feature Code:	<b>UA0070</b>
Feature Name:	Pylon
Description:	Structure made of iron or concrete to support cables for electric power transmission and movement of cable cars.
Feature Class:	Point
Possible Attribute:	Name (NAM), Pylon Usage (PYU), Custodian (CUS), Number of Reference (NUM)
Feature Code:	<b>UA0080</b>
Feature Name:	Meter
Description:	A gadget used to record electricity flow and usage.
Feature Class:	Point
Possible Attribute:	Name (NAM), Custodian (CUS), Number of Reference (NUM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code: **UA0090**  
 Feature Name: Electricity Manhole  
 Description: End of the duct path where the underground power cable is interconnected.  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

Feature Code: **UA0100**  
 Feature Name: Electricity Traffic Light Sensor Cable  
 Description: Wire embedded in the surface of the road used to sense traffic.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Custodian (CUS)

Feature Code: **UA0110**  
 Feature Name: Closed Circuit Television  
 Description: Camera system which is installed at the roadside or public places and use either for surveillance or observe traffic condition and collecting traffic data.  
 Feature Class: Point  
 Possible Attribute: Identification Number (IDN), Name (NAM), Custodian (CUS), Status (STA), Date (DAT), Route Number (RTN), Road Location (RDL), Section Number (SEC), Direction (DIR), Closed Circuit Television Type (CTV), Closed Circuit Television Usage (CTU), Closed Circuit Television Support (CTS), Camera Type (CTM)

### UB - Telecommunication

Feature Code: **UB0010**  
 Feature Name: Telephone Exchange/Switch  
 Description: Telephone Exchange Switch for remote area  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

Feature Code: **UB0020**  
 Feature Name: Telecommunication Manhole  
 Description: End of the duct path where the underground cable is interconnected.  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

Feature Code: **UB0030**  
 Feature Name: Pier Crossing  
 Description: A structure crossing a small river or monsoon drain to support cable duct.  
 Feature Class: Line  
 Possible Attribute: Name (NAM)

Feature Code: **UB0040**  
 Feature Name: Telecommunication Tunnel  
 Description: Replacement of the duct ways to cater for the high number of cables (more than 48 cables).  
 Feature Class: Line  
 Possible Attribute: Name (NAM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UB0050</b>
Feature Name:	Duct Way
Description:	A cylindrical conduit provided between two manholes to pull cables and prevent from mechanical damage.
Feature Class:	Line
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0060</b>
Feature Name:	Cabinet
Description:	A passive cross connection point of main cables and distribution cables and installed, mostly, at road junctions.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0070</b>
Feature Name:	Distribution Point
Description:	Distribution cables that start from cabinet and end at the distribution Point.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0080</b>
Feature Name:	Main Distribution Frame
Description:	Cable distribution frame installed at exchange where copper cable starts and terminates at cabinet.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0090</b>
Feature Name:	Fibre Distribution Frame
Description:	Installed in the telephone exchanger or subscriber premises to Interconnect external cable.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0100</b>
Feature Name:	Tap Block
Description:	Cable connecting exchange to exchange, cabinet to cabinet, or Distribution Point to Distribution Point.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0110</b>
Feature Name:	Fibre Optic Cable
Description:	Cable that carries the light signal.
Feature Class:	Line
Possible Attribute:	Name (NAM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UB0120</b>
Feature Name:	Remote Terminal
Description:	Place to terminate the fibre optic cable where the light signal is converted to current on individual channel.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0130</b>
Feature Name:	Station/VSAT Station
Description:	Fixed satellite station/VSAT Station which is accommodates the parabolic antenna to receive/transmit signal from space satellite.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Height (HEI), Structure Shape Category (SHC), Highest Z-Value (ZV2)
Feature Code:	<b>UB0150</b>
Feature Name:	Cellular Radio Base Station
Description:	Radio Base Station which accommodates the telecommunication tower and base station
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Height (HEI), Structure Shape Category (SHC), Highest Z-Value (ZV2)
Feature Code:	<b>UB0160</b>
Feature Name:	Exchange Building
Description:	Building that accommodates the switching equipment and cables.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UB0170</b>
Feature Name:	Hill Station
Description:	Station that accommodates a tower station for transmitting and receiving radio signals.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Height (HEI), Structure Shape Category (SHC), Highest Z-Value (ZV2)
Feature Code:	<b>UB0180</b>
Feature Name:	Telecommunication Tower
Description:	Tower station where radio signal is transmitted/received.
Feature Class:	Point
Possible Attribute:	Name (NAM), Height (HEI), Length (LEN), Highest Z-Value (ZV2), Structure Shape Category (SHC)
Feature Code:	<b>UB0200</b>
Feature Name:	Transmitter/Receiver
Description:	Transmission/Receiving Equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UB0220</b>
Feature Name:	Repeater
Description:	Repeater Equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0250</b>
Feature Name:	Telecom Cable
Description:	Telecommunication cable belonging to telecommunication operators.
Feature Class:	Line
Possible Attribute:	Name (NAM), Height (HEI), Telecommunication Operators (TCO), Accuracy Category (ACC)
Feature Code:	<b>UB0251</b>
Feature Name:	Telecom Cable Depth
Description:	Point along telecommunication cable showing depth obtained through direct measurement or detection of any measuring or detecting equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM), Depth (DPT)
Feature Code:	<b>UB0300</b>
Feature Name:	Phone Booth
Description:	A small structure that is partly or completely enclosed, containing telephone for public use.
Feature Class:	Point
Possible Attribute:	Name (NAM), Telecommunication Operators (TCO)
Feature Code:	<b>UB0310</b>
Feature Name:	Radio Antenna
Description:	Antenna for point to point radio communication where signal is transmitted/received.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UB0320</b>
Feature Name:	Emergency Telephone
Description:	A device for transmitting information between pre-established point using a two way communication system which is located along the highway and the Traffic Control and Surveillance System (TCSS) room
Feature Class:	Point
Possible Attribute:	Name (NAM), Custodian (CUS), Date (DAT), Route Number (RTN), Status (STA), Section Number (SEC), Direction (DIR), Telephone Structure (ETS), Emergency Telephone Network (ETN)

### UC - Water Supply

Feature Code:	<b>UC0010</b>
Feature Name:	Bunded Storage
Description:	Storage facilities for storing water resources.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UC0020</b>
Feature Name:	Water Treatment Plant
Description:	An engineering structure built for treatment of raw water.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Product Category (PRO)
Feature Code:	<b>UC0030</b>
Feature Name:	Water Intakes
Description:	An engineering structure built for river water extraction.
Feature Class:	Point
Possible Attribute:	Name (NAM), Length (LEN), Width (WID)
Feature Code:	<b>UC0040</b>
Feature Name:	River Gate
Description:	An engineering structure built across a river to raise the water level for river water extraction.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0060</b>
Feature Name:	Reservoir
Description:	A structure used for storage and regulation of water.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (h) (ARH), Reservoir Type (RVT), Custodian (CUS), Authority (AUT), Category of Water Level (CWL), Reservoir/Water Tank Category (RWC), Reservoir Usase (RVU), Spring/Well Characteristic Category (SWC), Highest Z-Value (ZV2)
Feature Code:	<b>UC0070</b>
Feature Name:	Water Pump
Description:	Equipment for pumping water.
Feature Class:	Point, Line
Possible Attribute:	Name (NAM), Water Pump Category (WPC), Water Pump Type (WPT)
Feature Code:	<b>UC0080</b>
Feature Name:	Pump House
Description:	Building constructed to house water pumps and its mechanical and electrical facilities.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Pump House Usage (PHU)
Feature Code:	<b>UC0100</b>
Feature Name:	Water Tank
Description:	Storage structure for storing water to be pumped.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Tank Type (TAT), Length/Diameter (meters) (LEN), Height (HEI), Width (WID), Reservoir/Water Tank Category (RWC), Location Category (LOC), Product Category (PRO), Structure Shape Category (SHC)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UC0110</b>
Feature Name:	Water Pipe
Description:	A string of pipes use for the transporting raw or treated water.
Feature Class:	Line
Possible Attribute:	Name (NAM), Grade Location (GRL), Water Pipe Type (WIT), Water Pipe Material (WPM)
Feature Code:	<b>UC0111</b>
Feature Name:	Water Pipeline Depth
Description:	Point along water pipeline showing depth obtained through direct measurement or detection of any measuring or detecting equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM), Depth (DPT)
Feature Code:	<b>UC0120</b>
Feature Name:	Water Valve
Description:	Water facilities for controlling water flow, air and pressure.
Feature Class:	Point
Possible Attribute:	Name (NAM), Water Valve Type (WVT)
Feature Code:	<b>UC0130</b>
Feature Name:	Fire Hydrant
Description:	Water facilities along main pipes used for fighting fires.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0140</b>
Feature Name:	Water Meter
Description:	Meter used to record water flow and usage.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0150</b>
Feature Name:	Remote Terminal Unit
Description:	Communication facilities for receiving and transmitting signals.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0160</b>
Feature Name:	Water Quality Monitoring System
Description:	Facilities to monitor water quality.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0170</b>
Feature Name:	Chlorine Booster Station
Description:	Facilities for boosting chlorine level.
Feature Class:	Point
Possible Attribute:	Name (NAM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UC0180</b>
Feature Name:	Water Tunnel
Description:	Underground aqueduct for raw water transmission.
Feature Class:	Line
Possible Attribute:	Name (NAM)
Feature Code:	<b>UC0190</b>
Feature Name:	Supply Zone
Description:	Supply area of a service reservoir or a distribution main.
Feature Class:	Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Supply Zone Type (SZT)
Feature Code:	<b>UC0200</b>
Feature Name:	Non-Revenue Water Control Zone
Description:	A definite supply area where non-revenue water control measure is imposed.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UC0210</b>
Feature Name:	Metering Zone
Description:	An area representing a group of water meters.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UC0220</b>
Feature Name:	Water Supply Manhole
Description:	Chamber containing valve or flow meter at various locations along water supply lines used for maintenance purposes.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM)
<b>UD - Oil and Gas</b>	
Feature Code:	<b>UD0010</b>
Feature Name:	Processing Plant
Description:	A complex where raw oil/gas is processed.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Processing Plant Type (PRT), Product Category (PRO)
Feature Code:	<b>UD0020</b>
Feature Name:	City Gate Station
Description:	A regulating and metering station located just after a tee valve off the PGU pipeline owned by Petronas which link up to GMSB's gas pipeline distribution system where the gas pressure of 500 psi to 800 psi is reduced to 260 psi. It also acts as a Custody Transfer Point for natural gas, between PGB and GMSB.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)



## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UD0030</b>
Feature Name:	Odoriser Station
Description:	An odorant dispensing facility located immediately after the City Gate Station where odorant is injected into the gas to odorise it so as to meet safety requirements before supplying to customers.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UD0040</b>
Feature Name:	District Station
Description:	A regulating station where the feeder pipeline gas pressure is reduced from 260 psi to 60 psi before it enters GMSB's distribution pipeline.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UD0050</b>
Feature Name:	Regulating Station
Description:	A regulating station where GMSB's distribution pipeline gas pressure of 60 psi is reduced to 4.3 psi before supply to the commercial customers.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UD0060</b>
Feature Name:	Area Station
Description:	A regulating station where GMSB's distribution pipeline gas pressure of 60 psi is reduced to 0.43 psi before supply to residential customers.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UD0070</b>
Feature Name:	Service Station
Description:	A station with gas measurement and pressure regulating facilities where gas is received directly from the gas pipeline distribution system and which thereafter delivers the gas through the customer owned internal piping to the gas appliances.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)
Feature Code:	<b>UD0071</b>
Feature Name:	Gas Meter
Description:	A gadget to record gas flow and usage.
Feature Class:	Point
Possible Attribute:	Name (NAM)
Feature Code:	<b>UD0080</b>
Feature Name:	Oil Pipeline
Description:	A pipeline for transporting oil.
Feature Class:	Line
Possible Attribute:	Name (NAM), Grade Location (GRL), Location Category (LOC), Product Category (PRO), Accuracy Category (ACC)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code:	<b>UD0081</b>
Feature Name:	Oil Pipeline Depth
Description:	Point along oil pipeline showing depth obtained through direct measurement or detection of any measuring or detecting equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM), Depth (DPT)
Feature Code:	<b>UD0082</b>
Feature Name:	Oil Valve
Description:	Valve along oil pipelines for controlling oil flow.
Feature Class:	Point
Possible Attribute:	Name (NAM),
Feature Code:	<b>UD0083</b>
Feature Name:	Oil Tank
Description:	A large container use for storing oil.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Tank Type (TAT), Location Category (LOC), Product Category (PRO), Accuracy Category (ACC)
Feature Code:	<b>UD0084</b>
Feature Name:	Oil Pipe Marker
Description:	A marker attached to permanent structure or located on the ground that described the underground oil pipe route.
Feature Class:	Point
Possible Attribute:	Name (NAM),
Feature Code:	<b>UD0085</b>
Feature Name:	Oil Derrick
Description:	A large container on ground or tower used for storing of oil.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM)
Feature Code:	<b>UD0090</b>
Feature Name:	Gas Pipeline
Description:	A pipeline for transporting gas.
Feature Class:	Line
Possible Attribute:	Name (NAM), Grade Location (GRL), Gas Pipeline Type (GET), Location Category (LOC), Product Category (PRO), Accuracy Category (ACC)
Feature Code:	<b>UD0091</b>
Feature Name:	Gas Pipeline Depth
Description:	Point along gas pipeline showing depth obtained through direct measurement or detection of any measuring or detecting equipment.
Feature Class:	Point
Possible Attribute:	Name (NAM), Depth (DPT)
Feature Code:	<b>UD0092</b>
Feature Name:	Gas Valve
Description:	Valve along gas pipeline for controlling gas flow.
Feature Class:	Point
Possible Attribute:	Name (NAM), Valve Material Type (VMT)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code: **UD0093**  
 Feature Name: Gas Tank  
 Description: A large container use for storing gas.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM), Tank Type (TAT), Location Category (LOC), Product Category (PRO), Accuracy Category (ACC)

Feature Code: **UD0094**  
 Feature Name: Gas Pipe Marker  
 Description: A stone marker attached to permanent structure or located on the ground that marks the underground gas pipe route.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Gas Marker Type (GMT)

Feature Code: **UD0095**  
 Feature Name: Gas Warning Signboard  
 Description: Signboard showing the location of an underground gas pipeline within the vicinity.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM)

### UE - Broadcasting

Feature Code: **UE0010**  
 Feature Name: Radio Station  
 Description: A complex where signals for radio broadcasting is managed.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

Feature Code: **UE0020**  
 Feature Name: Television Station  
 Description: A complex where signals for television broadcasting is managed.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

Feature Code: **UE0030**  
 Feature Name: Transmission Station  
 Description: A complex where signals for radio or television broadcasting is transmitted.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

Feature Code: **UE0040**  
 Feature Name: Monitoring Station  
 Description: Facility where off air signals are intercepted and processed to monitor its contents and quality.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code: **UE0050**  
 Feature Name: Broadcasting Coverage Area  
 Description: An area of coverage of certain band of signal.  
 Feature Class: Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

### UF - Sewerage

Feature Code: **UF0010**  
 Feature Name: Sewerage Treatment Plant  
 Description: Site that contains facilities for treating sewage.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM), Sewerage Treatment Plant Type (STT), Sewerage Treatment Plant Category (STP)

Feature Code: **UF0020**  
 Feature Name: Sewerage Pump Station  
 Description: Site that contains facilities for pumping sewage to the sewerage treatment plant.  
 Feature Class: Point, Polygon  
 Possible Attribute: Name (NAM), Area Measured (m<sup>2</sup>) (ARM)

Feature Code: **UF0030**  
 Feature Name: Sewerage Manhole  
 Description: Opening at various locations along sewerage lines for maintenance purposes.  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

Feature Code: **UF0040**  
 Feature Name: Sewerage Pipe  
 Description: Pipes that transport sewage.  
 Feature Class: Line  
 Possible Attribute: Name (NAM), Sewerage Pipe Diameter (SPD), Grade Location (GRL), Sewerage Pipe Material (SPM), Sewerage Pipe Type (SPT)

Feature Code: **UF0041**  
 Feature Name: Sewerage Pipeline Depth  
 Description: Point along sewerage pipeline showing depth obtained through direct measurement or detection of any measuring or detecting equipment.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Depth (DPT)

Feature Code: **UF0050**  
 Feature Name: Sewerage Transition Device  
 Description: Device for joining pipe end or fittings.  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

### UG - Waste Management

Feature Code:	<b>UG0010</b>
Feature Name:	Transportation Route
Description:	A route taken to by transportation vehicles to transfer solid waste to its final disposal sites.
Feature Class:	Line
Possible Attribute:	Name (NAM), Waste Type (WAT)
Feature Code:	<b>UG0020</b>
Feature Name:	Waste Treatment Plant
Description:	An installation for processing of waste.
Feature Class:	Point
Possible Attribute:	Name (NAM), Waste Type (WAT), Product Category (PRO)
Feature Code:	<b>UG0030</b>
Feature Name:	Transfer Station
Description:	A facility where waste is taken from smaller collection vehicles and placed in larger vehicles for transport, including truck trailers, railroad cars or barges to final disposal sites.
Feature Class:	Point
Possible Attribute:	Name (NAM), Waste Type (WAT)
Feature Code:	<b>UG0040</b>
Feature Name:	Incineration Plant
Description:	A facility in which solid waste is combusted.
Feature Class:	Point
Possible Attribute:	Name (NAM), Waste Type (WAT)
Feature Code:	<b>UG0050</b>
Feature Name:	Secured Landfill
Description:	A disposal facility, designed to permanently isolate wastes from the environment. This entails burial of the wastes in a landfill that includes clay and/or synthetic liners, leachate collection, gas collection (in cases where gas is generated), and an impermeable cover.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM), Waste Type (WAT)
Feature Code:	<b>UG0060</b>
Feature Name:	Collection Route
Description:	A path regularly followed by a collection vehicle to collect solid waste.
Feature Class:	Line
Possible Attribute:	Name (NAM)
Feature Code:	<b>UG0070</b>
Feature Name:	Bin House
Description:	A place where storage containers are placed for collection services of solid waste.
Feature Class:	Point, Polygon
Possible Attribute:	Name (NAM), Area Measured (m <sup>2</sup> ) (ARM)

## Malaysian Standard Geographic Information/Geomatics Features and Attribute Codes (MS1759:2015)

Feature Code: **UG0080**  
 Feature Name: Recycling Centres  
 Description: A facility to which individuals bring their recyclable items to be recycled.  
 Feature Class: Point  
 Possible Attribute: Name (NAM)

Feature Code: **UG0090**  
 Feature Name: Transfer Haulage Network  
 Description: Supplemental transportation systems employed to reduce hauling costs by using semi-trailers, railroad cars, or barges to haul from a central point(s) within a jurisdiction to one or more distant solid waste management facilities. The act of transfer includes unloading collection vehicles at the transfer station, loading solid waste from the transfer station to the transfer vehicles, and hauling the solid waste to distant solid waste management facilities.  
 Feature Class: Line  
 Possible Attribute: Name (NAM)

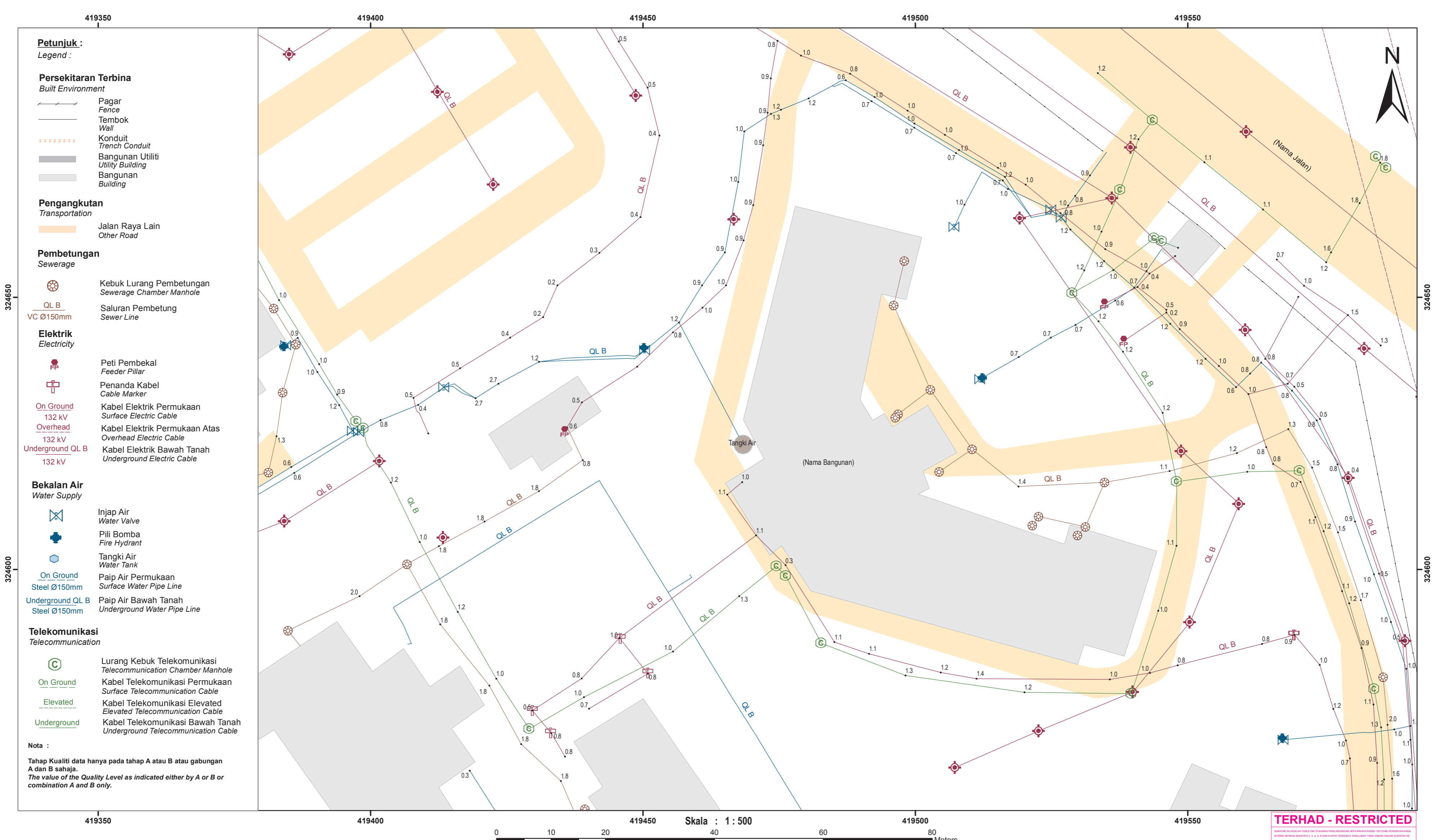
### UH - Meteorological

Feature Code: **UH0010**  
 Feature Name: Principal Station  
 Description: Weather station that observe weather elements at surface level for 24 hours a day.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Meteorological Station Type (MSC), WMO Station Identification Number (IDN)

Feature Code: **UH0011**  
 Feature Name: Automated Station  
 Description: An automated weather station that observe 24 hours of weather elements.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Meteorological Station Type (MSC), WMO Station Identification Number (IDN), ISO Meteorological Amount Measured (IAM)

Feature Code: **UH0012**  
 Feature Name: Climatological Station  
 Description: An Auxiliary Meteorological station that observe certain meteorological elements.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Meteorological Station Type (MSC), WMO Station Identification Number (IDN), ISO Meteorological Amount Measured (IAM)

Feature Code: **UH0013**  
 Feature Name: Rainfall Station  
 Description: An Auxiliary Meteorological station that observe rainfall.  
 Feature Class: Point  
 Possible Attribute: Name (NAM), Meteorological Station Type (MSC), WMO Station Identification Number (IDN), ISO Meteorological Amount Measured (IAM)



CONTOH PELAN UTILITI

Lampiran 3

Ukuran Pengesanan Oleh :  <div style="border: 1px dashed black; padding: 5px; display: inline-block;">LOGO SYARIKAT</div> (ALAMAT JURUUKUR BERTAULIAH)	Mukim : Daerah : Negeri :	Nota : Kedalaman butiran bawah tanah berdasarkan kepada ketinggian permukaan sebenar di lapangan. Pelan ini bukanlah kuasa bagi penentuan sempadan pentadbiran mahupun sempadan hakmilik. Pelan ini disusun di atas Bentuk Benar Serong Ditepati Sferoid GRS80, Datum GDM2000  <b>PERINGATAN :</b> Pengukuran ini adalah tepat dan betul pada tarikh dan masa kerja ukuran itu dijalankan.	Tarikh :	Tajuk : <b>(TAJUK PELAN/PROJEK)</b>
	Pemilik :  <div style="border: 1px dashed black; padding: 5px; display: inline-block;">LOGO SYARIKAT</div> (ALAMAT/NAMA PEMILIK)		Diukur Oleh : Dilukis Oleh : Disemak Oleh :  Disahkan Oleh : _____ (Tandatangan/Cop Pengukur)	No. Rujukan Projek/Fail Kerja :  Tarikh Cetak :

**SENARAI SEMAKAN**

Bil.	Perkara	Semakan (√ / X)	Catitan
1.	Data Digital :		
	a) Berlabel		
	b) Format data (.shp/.gdb/.TAB)		
	c) Sistem koordinat data GDM2000 <i>Rectified Skew Orthomorphic</i> dan GDM2000 <i>Cassini Soldner</i>		
	d) Kod Butiran Utiliti (mematuhi MS1759)		
2.	Pelan Utiliti :		
	a) Digital :		
	i. pdf		
	ii. geopdf		
	iii. nama fail (menurut konvensyen)		
	b) <i>Hardcopy</i> :		
	i. Kuantiti		
	ii. Saiz pelan (A0 atau A1)		
	iii. <i>Layout (landscape)</i>		
	iv. <i>Medium (kertas polyster)</i>		
	iv. Maklumat teks :		
	• Tajuk Pelan/Projek		
	• Mukim/Daerah/Negeri		
	• Skala - 1:500 atau 1:1000		
	• Penunjuk Utara		
	• No. Rujukan Projek/Fail Kerja		
	• Sistem koordinat dan Datum		
	• Pengesahan JTB terhadap kualiti data yang dipaparkan di atas Pelan Utiliti yang disediakan mengikut contoh format yang disediakan. Tahap kualiti data hanya pada tahap A atau B atau gabungan A dan B sahaja.		
	• Tarikh siap ukuran		
	• Tandatangani JTB beserta tarikh		
v. Petunjuk			
vi. Kenyataan Penafian Penentuan Sempadan			
vii. Kenyataan Status Pengelasan Pelan sebagai Terhad			





**BORANG PENGESAHAN PENERIMAAN PELAN UTILITI  
JABATAN UKUR DAN PEMETAAN SELANGOR**

Rujukan Kami : .....

Tarikh : .....

Kepada:

**Pengurus  
(Nama syarikat JTB)**

Tuan,

**PENGESAHAN PENERIMAAN PELAN UTILITI**

Dengan hormatnya saya merujuk kepada perkara di atas.

2. Sukacita dimaklumkan bahawa Jabatan ini telah menerima pelan utiliti daripada pihak tuan untuk tindakan Jabatan ini selanjutnya.

3. Butiran penerimaan adalah seperti berikut (contoh):

<b>Bil.</b>	<b>Perkara</b>	<b>Maklumat Serahan</b>
1.	Diterima daripada:	Nama syarikat JTB
2.	Tarikh serahan:	DD MM YYYY
3.	Nama projek:	Nama Projek sebenar
4.	<b>Jenis dokumen;</b>	
	<i>i. Hardcopy</i>	Salinan Pelan Utiliti: (kuantiti, skala, bilangan salinan)
	<i>ii. Softcopy</i>	Nama Fail
5.	<b>Maklumat Metadata</b>	
	<i>i. Tarikh Ukuran</i>	DD MM YYYY
	<i>ii. Jenis Datum</i>	GDM Cassini Soldner / RSO Geosentrik
	<i>iii. Jenis Peralatan Ukur:</i>	Senarai Peralatan yang digunakan.
	<i>iv. Lain-lain</i>	

Sekian, terima kasih.

**“BERKHIDMAT UNTUK NEGARA”**

Saya yang menurut perintah,

t.t  
(nama pegawai)  
b.p. Pengarah Ukur  
Jabatan Ukur dan Pemetaan Selangor

s.k. Pengarah Ukur Bahagian (Kadaster)  
Pengarah Ukur Bahagian (Pemetaan Utiliti)

Setiausaha  
Lembaga Juruukur Tanah Malaysia  
Level 5-7, Wisma LJT  
Lorong Perak, Pusat Bandar Melawati  
53100 Kuala Lumpur  
No. Faks : 03-4108 5178

Pengarah  
Jabatan Kejuruteraan  
Majlis Perbandaran Kajang  
Menara MPKj Jalan Cempaka Putih,  
Off Jalan Semenyih,  
43000 Kajang, Selangor  
No. Faks : 03-8737 7897

**CARTA ALIR STANDARD OPERATING PROCEDURE (SOP)  
PENERIMAAN DATA DIGITAL DAN PELAN UTILITI  
DARI JURUUKUR TANAH BERTAULIAH (JTB)  
OLEH JABATAN UKUR DAN PEMETAAN MALAYSIA (JUPEM)**

