
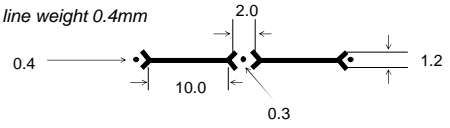

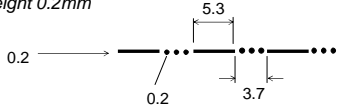

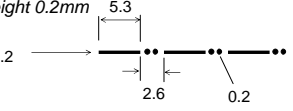
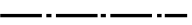
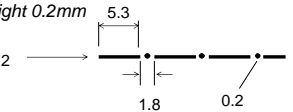


The Master Plan on Urban Restoration and Improvement in Monrovia in The Republic of Liberia


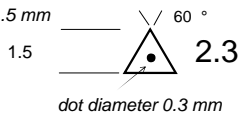

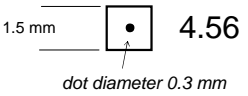
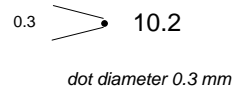
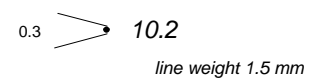
Map Symbol Specification of Topographic Map (1/10,000)

<i>Abbreviated keyword</i>	
Color	Entity
BK->Black	Pt->Point
BN->Brow No.30	Pg->Polygon
RD->Red	L->Line
OG->Oran No.40	
GN->Green	
BU->Blue	
CY>Cyan	




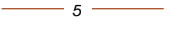
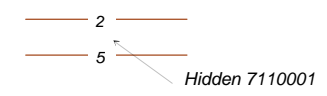
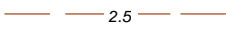
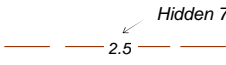

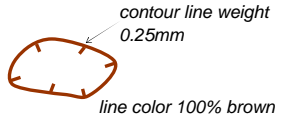

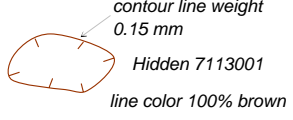
The List of Symbols for 1/10,000 Topographic Map 11-Boundaries

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
1	11	01	00	0	Boundary-National 国境		<p><i>line weight 0.4mm</i></p> 	L	4	BK	Follow the Line Type Definition Table.
2	11	02	00	0	Boundary-City, County 郡界		<p><i>line weight 0.2mm</i></p> 	L	2	BK	Follow the Line Type Definition Table.
3	11	03	00	0	Boundary-District 地区界		<p><i>line weight 0.2mm</i></p> 	L	2	BK	Follow the Line Type Definition Table.
4	11	04	00	0	Boundary-Zone 区域界		<p><i>line weight 0.2mm</i></p> 	L	2	BK	Follow the Line Type Definition Table.

The List of Symbols for 1/10,000 Topographic Map Relief, 73_Geodetic Control Points

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
5	73	05	00	0	Horizontal Control Point 三角点		<i>line weight 1.5 mm</i>  <i>dot diameter 0.3 mm</i>	Pt	1.5	BK	
6	73	06	00	0	Benchmark 水準点		<i>line weight 1.5 mm</i>  <i>dot diameter 0.3 mm</i>	Pt	1.5	BK	
7	73	07	00	0	Direct Leveling Point 直接水準標高点	• 10.2	 <i>dot diameter 0.3 mm</i>	Pt		BK	Express surveyed numeric value of direct leveling points in metric on the map. An smallest unit is 10cm.
8	73	08	00	0	Spot Height 図化標高点/図上10cm× 10cmで9点(標高点も含む) を取得する	• 10.2	 <i>line weight 1.5 mm</i>	Pt		BK	Distribution of Spot Height; acquire 9 spot heights, including contour value in 10cm by 10cm on the map. An smallest unit is 10cm. Shown in <i>Italic</i> .


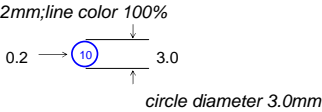
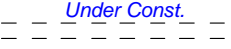
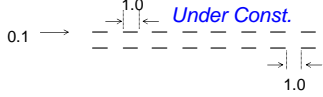
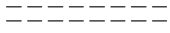
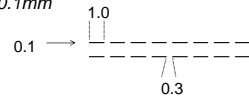
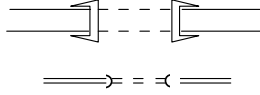
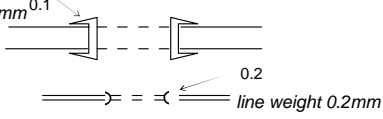
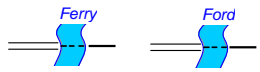
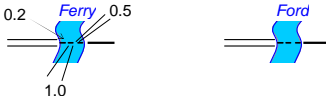
The List of Symbols for 1/10,000 Topographic Map Relief, 71_Contour lines

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
9	71	09	00	0 1	Index Contour Line 計曲線 等高線数値は高い方に向かって表示する		 line weight 0.25 mm; line color 100% brown line and text color 100% brown	L	2.5	BN	Shown at 10m vertical. *Orientation of contour value shall face the high point of land. Fourth code No.1 is hidden processing.
10	71	10	00	0 1	Intermediate Contour Line 主曲線 等高線数値は高い方に向かって表示する	 	 line weight 0.15 mm; line color 100% brown line and text color 100% brown	L	1.5	BN	Shown at 2m for flat area and 5m for hilly area *Orientation of contour value shall face to the high point of land. Fourth code No.1 is hidden processing.
11	71	11	00	0 1	Supplementary Contour Line 補助曲線		 dash length 4.0 mm; spacing 0.3 mm line weight 0.15 mm; line color 100% brown line and text color 100% brown	L	1.5	BN	Shown at 2.5m vertical interval, if necessary. Fourth code No.1 is hidden processing.
12	71	12	00	0 01	Depression, Index Contour Line おう地(計曲線)			L	2	BN	Fourth code No.1 is hidden processing.
13	71	13	00	0 01	Depression, Intermediate Contour Line おう地(主曲線)			L	1.5	BN	Fourth code No.1 is hidden processing.

The List of Symbols for 1/10,000 Topographic Map Transportation Features, 21_Roads & 22_Related-features

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
14	21	14	00 00 99	0 1 0	All weather, pavement road width of 5m or more, undivided (shown at scale) 5m以上の全天候型舗装道路		<p>outlines: line weights 0.2mm in 100% black</p> <p>2114000-edge line of road 2114001-hidden line for hatching 2114990-hatching</p>	Pg	2	BK OR	The road (width of 5m or more) shall be acquired as polygon data in actual scale size. Fill in areas of a graphic with orange in color.
15	21	15	00 00 99 00	0 1 0 2	All weather, pavement road (width of 5m or more), with road divider at the center (shown at scale) 5m以上の全天候型、2車線以上の舗装道路		<p>outlines and center line: line weights 0.2mm in 100% black</p> <p>fill: color fill 100%</p> <p>2115000-edge line of road 2115001-hidden line for hatching 2115990-hatching 2115002-separator</p>	Pg	2	BK OR	The road (width of 5m or more) shall be acquired as polygon data in actual scale size. Fill in areas of a graphic with orange in color. Central reservation shall be acquired as line data at road center.
16	21	16	00	0	Dry Weather Road (shown at scale) 3m以上の乾燥した道路		<p>line weight 0.1mm</p>	L	2	BK	The road (width of 3m or more) shall be acquired as line data in actual scale size.
17	21	17	00	0	Improved surface road/street in urban area; width of 3m or more -(shown at scale) 都市内の舗装道路		<p>line weight 0.1mm</p> <p>minimum width 0.3mm</p>	L	1	BK	The road (width of 3m or more) shall be acquired as line data in actual scale size.
18	21	18	00	0	Track/4 wheel Drive (shown with symbol) 軽車道/3m未満の未改良道路		<p>line weight 0.2mm</p>	L	2.5	BK	The road, width under 3m shall be acquired as a single line at road center.
19	21	19	00	0	Footpath (shown with symbol) 徒歩道		<p>line weight 0.2mm</p>	L	2.5	BK	The trail shall acquire a road center. It will be omitted at congested housing area.

The List of Symbols for 1/10,000 Topographic Map Transportation Features, 21_Roads & 22_Related-features

20	21	20	00	0	National Route Marker 国道番号		<i>line weight 0.2mm; line color 100%</i> 	Pt	2	BU	Express at an appropriate position.
21	21	21	00	0	Road, Under Construction (shown with "Under const.") 建設中の道路		<i>line weight 0.1mm; line color 100% black</i> 	L Text	1	BK BU	Acquire both sides of road edge.
22	21	22	00	0	Garden Path 庭園路		<i>line weight 0.1mm</i> 	L	1	BK	Acquire both sides of road edge.
23	21	23	00	0	Road, Underground 地下の道路		<i>line weight 0.2mm</i> 	L	1 2	BK	Expressed at scale.
24	21	24	00	0	Ferry/Ford フェリー/浅瀬		<i>line weight 0.1mm</i> 	L	2	BK	Express with symbols.

The List of Symbols for 1/10,000 Topographic Map
 Transportation Features, 21_Roads & 22_Related-features

25	22	25	00	0	Side Walk 歩道		line weight 0.1mm 0.1 →	L	1	BK	Acquire the side wake, having width of 3m or more.
26	22	26	00	0	Tree Row 並木		line weight 0.1mm 0.1 →	Pt	1	BK	
27	22	27	00	0	Grade Separation 立体交差: 高架の長さが図上 1cm 以上の道路に適用する		0.1 →	Pt	3	BK	Apply symbol to the elevated road with length more than 100m.
28	22	28	00	0	Pedestrian Overpass 歩道橋 歩道橋の幅は、最小 3m とする		line weight 0.1mm 0.1 →	L	1	BK	Minimum width of Pedestrian Overpass shall be 3m .
29	22	29	00	0	Bridge 橋 延長 20m ,幅員が 3m 以上を表示する		line weight 0.1mm 0.1 →	L	1	BK	The firm bridges (length of 20m or more and width of 3m or more) shall be acquired.
30	22	30	00	0	Foot Bridge 徒橋 上記 "2205"以外の橋に適用する		line weight 0.1mm 0.1 →	L	1	BK	Bridges other than the above "2205", shall be acquired.
31	22	31	00 99	0	Stone Steps 延長 20m ,幅員 5m 以上の石段に適用する		line weight 0.1mm 0.1 →	L	1	BK	Acquire stone steps length of 20m or more and width of 5m or more.


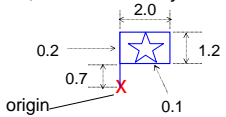

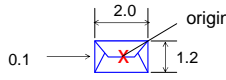

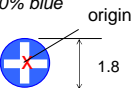

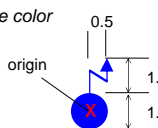

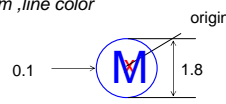

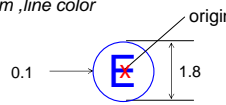

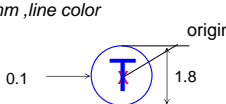
The List of Symbols for 1/10,000 Topographic Map
23_Railroad & Related-features

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
32	23	01	00	0	Railways/Normal gauge 4'8 1/2" (1435mm) - single track 鉄道(単線) 標準軌(単線)を表示する		<p>line weight 0.4mm</p> <p>tick length 1.0mm, lineweight 0.1mm</p>	L	4 1	BK	Acquire center of railways with Line Type Definition Table
33	23	02	00	0	Railways/normal gauge 4'8 1/2" (1435mm) - double track 鉄道(複線) 標準軌(複線)を表示する		<p>line weight 0.4mm</p> <p>tick length 1.0mm, lineweight 0.1mm</p>	L	4 1	BK	Acquire center of railways
34	23	03	00	0	Railways/Narrow gauge 3'6" (1067mm) - single track 鉄道(単線) 狭軌(単線)を表示する		<p>line weight 0.4mm</p> <p>tick length 0.5mm, lineweight 0.1mm</p>	L	4 1	BK	Acquire center of railways
35	23	04	00	0	Railways/Narrow gauge 3'6" (1435mm) - double track 鉄道(複線) 狭軌(複線)を表示する		<p>line weight 0.4mm</p> <p>tick length 0.5mm, lineweight 0.1mm</p>	L	4 1	BK	Acquire center of railways
36	23	05	00	0	Sidetracks 側線		<p>line weight 0.1mm</p>	L	1	BK	Acquire center of railways at scale
37	23	06	00	0	Railway Stations 駅		<p>line weight 0.1mm</p>	L	1	BK	Acquire outline of railways station at scale
38	23	07	00	0	Ropeways 索道 空中ケーブル、ベルトコンベアーを含む 部品は自動発生して表示する		<p>line weight 0.1mm</p>	L	1	BK	Acquire center of ropeways Parts of rope way shall be symbolized automatically.


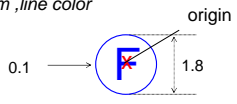

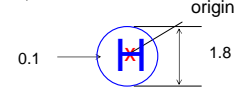

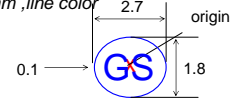

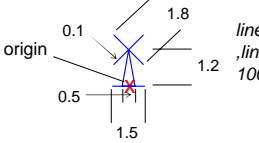

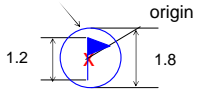

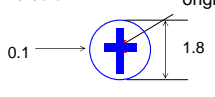

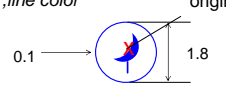
The List of Symbols for 1/10,000 Topographic Map
Inhabited Area, 30_Buildings & 35_Building Classification Symbols

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
39	30	01	00	0	Independent Building/ House 3階未満の建物で、短辺が図上0.5mm以上のものに適用する		<i>line weight 0.1mm, line color 100% brown</i> 	Pg	1	BN	Acquire buildings/houses less than two-stories and short side length more than 0.5mm on the map.
40	30	02	00	0	Prominent Building/ Reinforced Concrete Buildings/Houses 重要な建物/鉄筋コンクリートで3階以上の建物		 <i>line weight 0.2mm, line color 100% brown</i>	Pg	2	BN	Acquire buildings more than three (3) -stories and short side length more than 0.5mm on the map.
41	30	03	00	0	Ruins, None-wall Building and Building, Under Construction 廃墟及び無壁建物, 工事中の建物		 <i>line weight 0.1mm, line color 100% brown</i>	Pg	1	BN	Acquire ruins, none-wall buildings and under construction building as polygondata at scale.
42	30	04	00	0	Congested Housing Area 建物が密集した地域は総描表示を行う。ただし、総描内に"3002"がある場合はその建物は表示する		 <i>line weight 0.2mm, line color 100%</i>	Pg	2	BN	Congested housing area shall be shown by generalized expression as build-up area. when the prominent building "3002" is located in the area, it shall be expressed as an independent building at scale.
43	30	05	00	0	Temporary Housing Area 仮設住宅地域マーケットを含む。"3002"がある場合はその建物は表示する		 <i>line weight 0.2mm, dash length 1.0 mm, spacing 0.5 mm</i> <i>line weight 0.2mm, line color 100% brown</i>	Pg	1	BN	Acquire out line of temporary housing area including Market as polygon data. In case the Market, "3505" is located in the area.
44	30	06	00	0	Building, minium 最小建物記号/建物の長辺が図上0.5mm未満の建物		 0.1 → 0.5 x 0.5	Pt	1	BN	Acquire the house, long side is shorter than under 0.5mm on the map as point data.


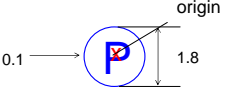

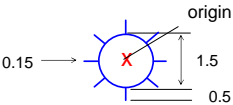

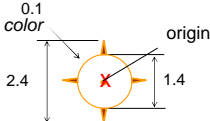

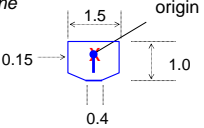

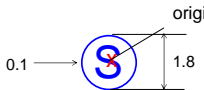

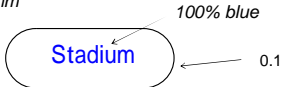
The List of Symbols for 1/10,000 Topographic Map
Inhabited Area,30_Buildings & 35_Building Classification Symbols

45	35	01	00	0	Public Building 公共建物 注記は不要		<i>line weight 0.1mm ,line color 100% cyan</i> 	Pt	1	BU	No annotation is required irrespective of its size.
46	35	02	00	0	Post Office 郵便局 注記は不要		 <i>line weight 0.1mm ,line color 100% blue</i>	Pt	1	BU	No annotation is required irrespective of its size.
47	35	03	00	0	Hospital 病院、診療所 注記は不要		<i>line weight 0.1mm ,line color 100% blue</i> 	Pt	1	BU	No annotation is required irrespective of its size.
48	35	04	00	0	Power Plant, Sub-Station 発電所、変電所 注記は不要		<i>line weight 0.1mm ,line color 100% blue</i> 	Pt	1	BU	No annotation is required irrespective of its size.
49	35	05	00	0	Market/Prominent Store 市場、顕著な商店		<i>line weight 0.1mm ,line color 100% blue</i> 	Pt	1	BU	No annotation is required irrespective of its size.
50	35	06	00	0	Embassy 大使館記号 注記は不要		<i>line weight 0.1mm ,line color 100% blue</i> 	Pt	1	BU	No annotation is required irrespective of its size.
51	35	07	00	0	Theater/Cinema (Prominent) 劇場、映画館		<i>line weight 0.1mm ,line color 100% blue</i> 	Pt	1	BU	No annotation is required irrespective of its size.

The List of Symbols for 1/10,000 Topographic Map
Inhabited Area, 30_Buildings & 35_Building Classification Symbols

52	35	08	00	0	Fire Station 消防署 注記は不要		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.
53	35	09	00	0	Hotel/Motel ホテル、モーター		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.
54	35	10	00	0	Gas Station ガソリンスタンド		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.
55	35	11	00	0	Windmill 風車		 line weight 0.1mm ,line color 100% blue	Pt	1	BU	No annotation is required irrespective of its size.
56	35	12	00	0	School(elementaryand high school) 小・高等学校 注記は不要		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.
57	35	13	00	0	Church/Mission 教会、ミッション		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.
58	35	14	00	0	Mosque イスラム寺院		line weight 0.1mm ,line color 100% blue 	Pt	1	BU	No annotation is required irrespective of its size.

The List of Symbols for 1/10,000 Topographic Map
Inhabited Area, 30_Buildings & 35_Building Classification Symbols

59	35	15	00	0	Police Station 警察署 注記は不要		line weight 0.1mm ,line color 100% blue		Pt	1	BU	No annotation is required irrespective of its size.
60	35	16	00	0	Factory 工場		line weight 0.15 mm ,line color 100% blue		Pt	1.5	BU	No annotation is required irrespective of its size.
61	35	17	00	0	Lighthouse 灯台		line weight 0.1mm ,line color 100% brown		Pt	1	BN	No annotation is required irrespective of its size.
62	35	18	00	0	Warehouse 倉庫		line weight 0.15 mm ,line color 100% blue		Pt	1.5	BU	No annotation is required irrespective of its size.
63	35	19	00	0	Stadium (shown as point symbol when too small express at scale) 小規模競技場		line weight 0.1 mm ,line color 100% blue		Pt	1	BU	Acquire small scaled stadium with symbol
64	35	20	00	0	Stadium (at scale) 大規模競技場 競技場/大規模なものは実形 で取得し、注記を入れる それ以外は記号を表示する		outline line weight 0.1 mm ,line color 100% black		L Text	1	BK BU	Acquire stadium as line data and indicate symbol. Annotation will be done only in large scaled stadium.


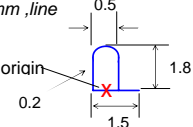

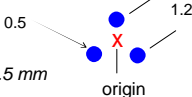

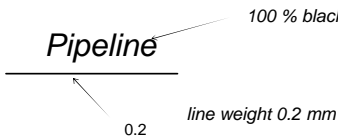
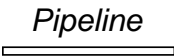
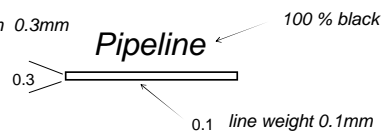

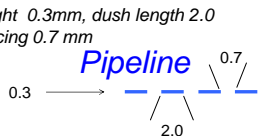

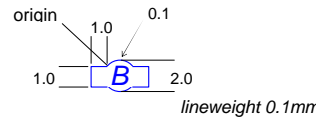

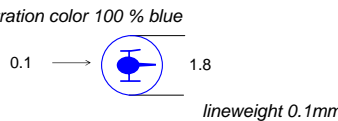
The List of Symbols for 1/10,000 Topographic Map
42_Related Features of Industry, Agriculture & Sociocultural Objects

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
65	42	01	00 01	0	High tower/power transmission tower, belfry, observation tower and water tower 送電塔、教会の鐘楼、展望台及び独立した給水塔 基部の大きさが図上2mm以上のものは、実形で表示		<p>line weight 0.1 mm ,line color 100% blue: code-4201000</p> <p>Express at scale code-4201010</p>	Pt Pg	1	BU	When its size is less than 10 m acquire as symbol. Acquire large-scale tower at scale.
66	42	02	00	0	Antenna Tower 電波塔		<p>line weight 0.1 mm ,line color 100% blue</p>	Pt	1	BU	
67	42	03	00	0	Active Mine or Quarry 活動中の鉱山又は採石場		<p>line weight 0.1 mm ,line color 100% blue</p>	Pt	1	BU	
68	42	04	00	0	Inactive Mine or Quarry 非活動の鉱山又は採石場		<p>line weight 0.1 mm ,line color 100% blue</p>	Pt	1	BU	
69	42	05	00	0	Water Tank 貯水槽		<p>circle diameter 1.0 mm</p> <p>line weight 0.2 mm ; line and text color 100% blue</p>	Pt Text	1	BU	Indicate the annotation "WT" to the right of the symbol.



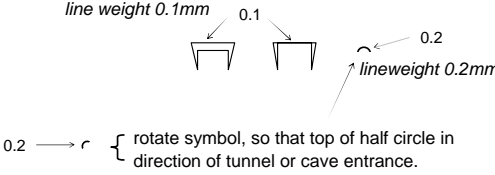

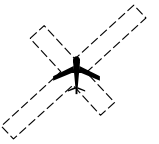
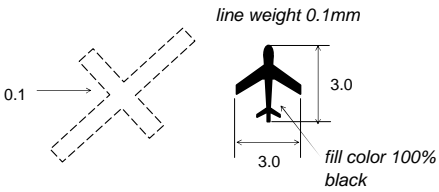



The List of Symbols for 1/10,000 Topographic Map
42_Related Features of Industry, Agriculture & Sociocultural Objects

70	42	06	00 01	0	Oil tank オイルタンク 直径10m以下は記号表示 大規模(火力発電所)は実形		circle diameter 1.0 mm lineweight 0.2 mm ; line and text color 100% blue Express at scale code-4206010 1.0 x Oil lineweight 0.2 mm ; line and text color 100% blue more than 2mm	Pt Pg Text	1	BU	When its diameter (size) is less than 10m indicate the symbol and indicate the annotation "Oil "to the right of the symbol or at appropriate positions. Acquire a large-scale tank at scale.
71	42	07	00	0	Well 井戸		circle diameter 0.8 mm 0.8 origin lineweight 0.2 mm ; line color 100% blue	Pt	1	BU	Place the symbol in its correct position
72	42	08	00	0	Power Transmission Lines 送電線 20Kv以上を取得する 鉄塔は"4201"を適用する		0.1 lineweight 0.1 mm ,line color 100% blue	L	1	BU	Acquire the center of transmission lines (power voltage of 20Kv or more) as line data. The expression of the transmission line tower is "4201".
73	42	09	00	0	Cemetery, Christian キリスト教墓地/墓地 区域を地物縁で表示できない場合は、植生界"6301"で外周を表示し、内部に記号を意匠的に配置する 小規模のものには記号単体で表示する		lineweight 0.2 mm ,line color 100% blue 0.2 0.7 0.5 0.8 origin Symbol for Individual small scale cemetery	L Pt	2	BU	When the area of cemetery can not be enclosed with other planimetric features such as road, river and so on, a symbol of vegetation boundary "6301" can be used instead. Symbols will be shown at a suitable position in the cemetery.
74	42	10	00	0	Cemetery, Muslim イスラム教墓地 区域を地物縁で表示できない場合は、植生界"6301"で外周を表示し、内部に記号を意匠的に配置する		lineweight 0.2 mm ,line color 100% blue 0.5 0.8 1.3 origin	L Pt	2	BU	Same as above

The List of Symbols for 1/10,000 Topographic Map
42_Related Features of Industry, Agriculture and Sociocultural Objects

75	42	11	00	0	Monument 目標となる記念碑及び銅像、記念塔		<i>line weight 0.2 mm ,line color 100% blue</i> 	Pt	2	BU	
76	42	12	00	0	Archeological Site 考古学的遺跡			Pt		BU	
77	42	13	00	0	Pipeline/above ground, includes Oil, Gas and Water 輸送管(地上)/油、ガス及び水を含む			L Text	2	BK	Annotate "Pipeline" above the line or at an appropriate position.
78	42	14	00	0	Pipeline, Air-Oil, Gas and Water 輸送管(空間)/油、ガス及び水を含む			L Text	1	BK	Same as above
79	42	15	00	0	Pipeline/underground 輸送管(地下埋設)			L	3	BU	Express based on data provided by counterpart.
80	42	16	00	0	Bus Terminal バスターミナル			Pt	1	BU	
81	42	17	00	0	Heliport ヘリポート			Pt	1	BU	


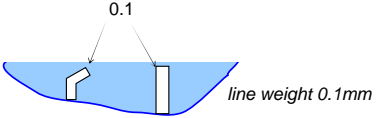

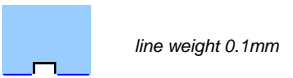



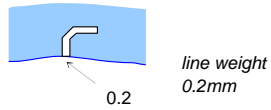
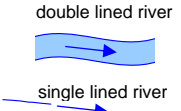
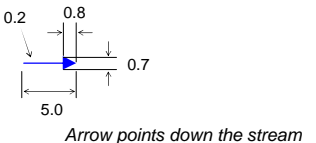

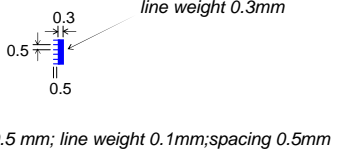

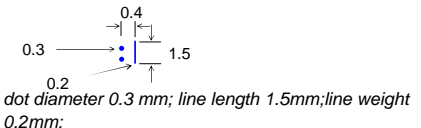
The List of Symbols for 1/10,000 Topographic Map
42_Related Features of Industry, Agriculture & Sociocultural Objects

82	42	18	00 01	0	<p>Tunnel/Pit Mouth/Culvert</p> <p>トンネル、坑口及び暗渠 内径が図上0.8mm以上の場 合、その形状により実寸で表 示し、未満ものは記号で表示 する</p>	<p>express at scale code-4218010</p>  <p>shown as symbol →  4218000</p>	<p>line weight 0.1mm</p>  <p>0.2 →  { rotate symbol, so that top of half circle in direction of tunnel or cave entrance.</p>	Pt L	1 2	BK	<p>When the diameter of Tunnel/Pit Mouth/Culvert is 0.8mm or more at map scale, it shall be shown at scale. Under 0.8mm will be shown with symbol.</p>
83	42	19	00	0	<p>Airport (shown at scale)</p> <p>空港 外周及び滑走路は区域界 "6302"で表示し、記号及び 注記を入れる</p>		<p>line weight 0.1mm</p>  <p>0.1 → </p> <p>fill color 100% black</p>	L Pt Text	1	BK	<p>Acquire outline of runway as line data "6302". Shown with symbol and with annotation. Font for Name of the Airport shall be shown in the Table of Geographical Names. (Forth importance)</p>
84	42	20	00	0	<p>Disposal Area</p> <p>ゴミ投棄区域/処分場 規模に応じて"Disposal area"を範囲内か外側に 配置する</p>		<p>Disposal Area</p> 	L Text	1	BK BU	<p>Acquire the area with "6302" and annotate "Disposal Area" either within area or outside depending on its size.</p>

The List of Symbols for 1/10,000 Topographic Map
51_Hydrology & 52_ Water-related Structures

85	51	01	00	0	Canals, rivers and streams/ 運河、河川及び小川 幅 2m 以上の運河、河川及び小川は実線で表示			Pg	1.5	CY	Canals, Rivers and Streams width 2.0m or more shall be shown with double lines as polygon data. The inside is filled in 20% cyan.
86	51	02	00	0	Canals, rivers and streams 運河、河川及び小川幅 2m 未満の運河、河川及び小川は1条線で表示			L	1.5	CY	Canals, Rivers and Streams under 2.0m in width shall be shown.
87	51	03	00	0	Fountainheads (springs/fountains) 源泉(湧水、泉)回転記号を真位置に配置			Pt	1	CY	Acquire rotate symbol at true position.
88	51	04	00	0	Indefinite/Dried Rivers and Streams 不明確及び涸れた河川と小川、幅 2m 以上の不明確及び涸れた河川は実形表示			L	1.5	CY	Indefinite/dried rivers and streams 2.0m or more in width shall be shown with double lines as line data.
89	51	05	00	0	Indefinite/Dried Rivers and Streams 不明確及び涸れた河川と小川、幅 2m 未満の不明確及び涸れた河川は1条線で表示			Pg	1.5	CY	Indefinite/Dried Rivers and Streams under 2.0m in width shall be shown.
90	51	06	00	0	Lake/Pond, Shoreline 湖、池及び水涯線			Pg	2	CY	The inside of a lake is filled in blue.


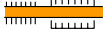
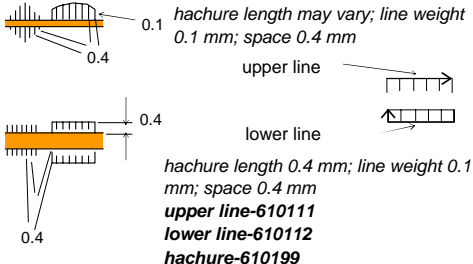
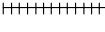
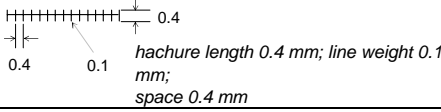
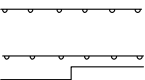
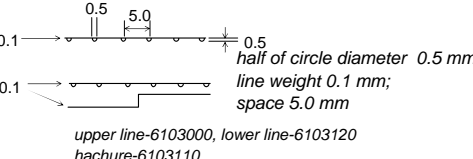

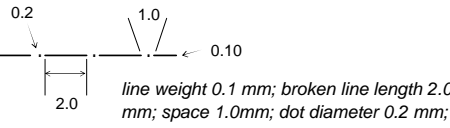
The List of Symbols for 1/10,000 Topographic Map
51_Hydrology & 52_ Water-related Structures

91	52	01	00	0	Pier/jetty 栈橋			Pg	1	CY	Shown at scale
92	52	02	00	0	Wharf 埠頭			L	1	CY	Shown at scale
93	52	03	00	0	Revetment 護岸			L	2	CY	Shown at scale
94	52	04	00	0	Breakwater 防波堤			L	2	CY	Shown at scale
95	52	05	00	0	Flow Arrow 流水方向 幅が図上0.8mm以上ある水路の場合は中央に表示する その他は河川を間断し表示			Pt	2	BU	When the river width is 0.8mm or more on the map, the flow arrow shall be shown inside of the river. In case of the single river, it is shown in a gap of single line rivers/streams.
96	52	06	00	0	Falls (double-line drainage) 滝(大)			L	3 1	BU	Acquire falls (wide river) with one-side generated symbol as line data. Hachures directed to the down stream. Length of line varies depending on the river width.
97	52	07	00	0	Fall (single-line drainage) 滝(小)			Pt	2	BU	

The List of Symbols for 1/10,000 Topographic Map 51_Hydrology & 52_ Water-related Structures

98	52	08	00	0	Dam ダム		 line weight 0.5 mm	L	5	BK	Length of line varies depending on the reservoir scale.
99	52	09	11 12	0	weir (at scale) 堰(実寸)		Actual size code 520912 dash length 0.4 mm; space 0.4 mm; line weight 0.1 mm straight line and dash line length may vary	L	1	BK	Both lengths of line varies depending on the rivers and streams width.
100	52	10	00 00	0 1	weir (symbolized) 堰(記号)		 dash length 0.4 mm; space 0.4 mm; line weight 0.1 mm straight line length 1.2 mm; line weight 0.1 mm	Pt	1	BK	Apply to small scaled weir.
101	52	11	00	0	Flood gate(at scale) 水門(実寸)		 all line weight 0.1 mm	L	1	BK	Flood gate length 15m or more shall be shown at scale. Length of line varies depending on the rivers and streams width.
102	52	12	00	0	Flood gate(symbolized) 水門(記号)		 all line weight 0.1 mm	Pt	1	BK	When the length is under 15m , it shall be symbolized.
103	52	13	00	0	Wreck 難破船		 line weight 0.3mm line weight 0.2 mm	Pt	2 3	BK	
104	52	14	00	0	Anchorage Area 繫留地/繫留地の外線を地域界"6302"で囲み記号を入れる		 circle diameter 0.5 mm line weight 0.2 mm	L	1 2	BU	Acquire outline of anchorage area as line data with "6302" and place symbol inside.

The List of Symbols for 1/10,000 Topographic Map
Land Classification, 61_Slope & Fence

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
105	61	01	11 12 99	0	Artificial Cut and Fill/Embankment 人工斜面(盛土・切土)斜面を示す短線の長さが図上1mm以上の場合は記号(大)を、それ未満の場合は記号(小)を使う	<p><i>shown at scale</i></p>  <p><i>Symbolized</i></p> 	 <p><i>hachure length may vary; line weight 0.1 mm; space 0.4 mm</i></p> <p>upper line</p> <p>lower line</p> <p><i>hachure length 0.4 mm; line weight 0.1 mm; space 0.4 mm</i></p> <p>upper line-610111 lower line-610112 hachure-610199</p>	L	1	BK	When a short-line slope length is 1mm or more on the map, all slopes shall be shown at scale. If smaller than 1mm or less, it is symbolized. Draw upper line (610111) in clockwise, then hachure is created direction of downslope. Draw lower line (610112) anticlockwise, then hachure(610199)
106	61	02	00	0	Earth Embankment 土手		 <p><i>hachure length 0.4 mm; line weight 0.1 mm; space 0.4 mm</i></p>	L	1	BK	Acquire center of Embankment as generated symbol. Generated hachure will be shown at both sides automatically. Follow the Line Type Definition Table
107	61	03	00 11 12	0	Retaining wall 擁壁		 <p><i>half of circle diameter 0.5 mm; line weight 0.1 mm; space 5.0 mm</i></p> <p>upper line-6103000, lower line-6103120 hachure-6103110</p>	L	1	BK	Length more than 100m shall be acquired. Half of circle directs downslope. Follow the Line Type Definition Table
108	61	04	00	0	Wall/ Fence 壁、サク		 <p><i>line weight 0.1 mm; broken line length 2.0 mm; space 1.0mm; dot diameter 0.2 mm;</i></p>	L	1	BK	Length more than 100m shall be acquired. Hachre directs interior side. Follow the Line Type Definition Table


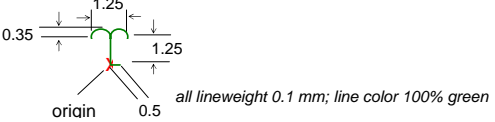
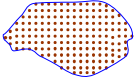
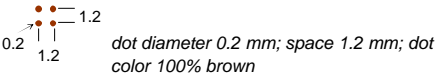

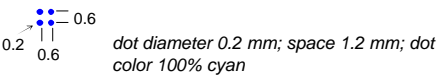
The List of Symbols for 1/10,000 Topographic Map
Land Classification, 63_Vegetation Covers & Soils

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
109	63	01	00	0	Vegetation boundaries 地類界 異なった植生の区分に使用する		 Line weight 0.1 mm; line color 100% green	L	1	GN	
110	63	02	00	0	Boundary of Territory/Zone 区域界 空港の滑走路、競技場(トラック)等、地類界が使えない場合に適用する		 dash 0.5 mm; space 1.0 mm Line weight 0.1 mm; line color green	L	1	GN	Enclose the Airport, Disposal Area, Anchorage Area and Track of Stadium and so on.
111	63	03	00	0	Rice Field 田圃 輪郭を"6303"で取得し、記号を適宜配置する		 all line weight 0.1 mm; line color cyan	L Pt	1	BU	Enclose Rice Field with "6303" and place symbols at appropriate position
112	63	04	00	0	Crop Land/Agricultural Land 耕作地、農地		 all line weight 0.1 mm; line color green	L Pt	1	GN	Enclose crop land/agricultural land with line data "6304" and place symbols at appropriate position
113	63	05	00 99	0	Mangrove マングローブ 輪郭を"6305"で取得、内部をハッチング(青色)し、記号を適宜配置する		Hatching; HONEY, Scale 50, Color 131 code-6305990 pattern	Pg	1	GN CY	Enclose Mangrove area with line data "6305" and symbols will be placed by hatching. (Tertiary code 99) Hatching Color No.131 Hatching Scale is 50 (Refer Sample)
114	63	06	00	0	Vineyard ブドウ畑 輪郭を"6306"で取得、記号を適宜配置する		 line weight 0.1 mm; circle diameter 1.0 mm; line color 100% green	L Pt	1	GN	Enclose vineyard as line data with "6306" and place symbols at appropriate position .
115	63	07	00	0	Orchard/Pineapple-Pi, Coconut-Co, Banana-Ba, Sugarcane-Su, Mango-Man 果樹園: 果樹種を略語で表示。輪郭を"6307"で取得して記号を適宜配置する		 line weight 0.1 mm; circle diameter 1.0 mm; line color 100% green	L Pt	1	GN	Enclose orchard (Pi -pineapple, Co -coconut, Ba -banana, Su -sugarcane, Man -mango area) with "6307" and place symbols and abbreviated names at appropriate position .

The List of Symbols for 1/10,000 Topographic Map
Land Classification, 63_Vegetation Covers & Soils

116	63	08	00	0	Plantation/Rubber, Palm,Cassava 農園-輪郭を"6308"で取得し て記号はパターンで表示す る。			line weight 0.1 mm; circle diameter 0.5 mm; line color 100% green: Annotation Rabber:6308001 Palm:6308002	L Pg	1	GN	Enclose with "6308"as polygon data and fill inside with specified dot pattern.
117	63	09	00	0	Broadleaf Forest 広葉樹林 記号を適宜配置する			elliptical long side 1.0 mm; elliptical short side 0.6 mm; all line weight 0.1 mm; line color 100% green	L Pt	1	GN	Place symbols at appropriate position.
118	63	10	00	0	Bushes/Shrub ブッシュ及び低木の茂み 記号を適宜配置する			all line weight 0.1 mm; line color 100% green	L Pt	1	GN	Place symbols at appropriate position.
119					Mixed Shrub & Broadleaf 低木の茂み及び広葉樹の混 交林/うっそうとした森林に適 用する 記号を適宜配置する				L Pt	1	GN	Place symbols at appropriate position. Show bushes/scrub and broadleaf separately
120	63	11	00	0	Grass Land 草地 疎林と灌木を交えた草原			all line weight 0.1 mm; line color 100% green	L Pt	1	GN	Place symbols at appropriate position.
121	63	12	00 99	0	Swamp/Marsh 湿地/沼地 輪郭を"6312"で取得,内部を ハッチング(青色)し、記号を 適宜配置する			Hatching; DOTS ,Scale 150, Color 131 code-6312990 all line weight 0.1 mm; line color 100% blue	Pg Pt	1	CY	Enclose Swamp/Marsh as polygon data with "6312"and place symbols as patterning. Hatching Color No.131 Hatching Scale is 150 (Refer sample)
122	63	13	00	0	Steppe 藪、灌木、草地等が一緒にな った茂み、木を中心とした 植生 記号を適宜配置する			dot diameter 0.2 mm; dot color 100% green	Pt	1	GN	Place dot inside with specified area.

The List of Symbols for 1/10,000 Topographic Map Land Classification, 63_Vegetation Covers & Soils

123	63	14	00	0	Palms-independent ヤシの木(独立)			Pt	1	GN	Place symbols at appropriate position. Symbol can be distributed wherever it exists independently.
124	63	15	00	0	Sand 砂地			L Pt	1	BN	Encloses as polygon data and place symbol appropriate position.
125	63	16	00	0	Mud 泥地			L Pt	1	BU	Encloses as polygon data and places symbol appropriate position and annotates "Mud" at appropriate position.

The List of Symbols for 1/10,000 Topographic Map
Relief, 72_Slope, Quarry, Depression & Cliff

No.	Classification Code				Description	Symbol	Cartographic Specification	Data Type			Notes on Usage
	Primary	Secondary	Tertiary	Fourth				Entity	weight	color	
126	72	01	11 12 99	0	Slope 土がけ			L	1 2	BK	Hachur directs downslope. 11;upper part 12;bottom an side 99;hatching
127	72	02	11 12 99	0	Cliff/ Rock 岩がけ			L	1	BK	Acquire top and bottom lines. Generate cliff/rock symbol with symbolization.
128	72	03	00	0	Scattered Rocks 散岩			Pt L	1	BK	It shall be applied depending on the size of cliff/rock
129	72	04	00	0	Reef/Coral さんご礁			L	1	BU	Acquire outline of reef/coral as line data.
130	72	05	00	0	Depression (shown at scale) 低地、くぼみ			L	1	BK	Acquire as line data. Huchursdirects inside depression.
131	72	06	00	0	Hummock (shown at scale) 小丘			L	1	BK	Acquire as line data. Huchures point away from hummock.
132	72	07	00	0	Hummock (shown as point symbol when too small to be shown at scale) 小丘			Pt	1	BK	Acquire small-scaled hummock of under 15m in diameter as point data.

Geographical Names and Other related futures names

Classification Code		Text	Arial	Height	color	Remarks
Geographical Name 9001	900101	City, County	MONTERRADO	4.5mm	BK	Arial/Capital letter
	900102	District	GREATER MONROVIA	4.0mm	BK	Arial /Capital letter
	900103	Zone,	Central Monrovia A	3.5mm	BK	Arial /Capital letter
	900104	Township	Mamba Point	2.0mm	BK	Arial
	900105	Sea	ATLANTIC OCEAN	4.5mm	BU	<i>Arial Italic</i>
	900106	Rivers	ST. PAUL RIVER	4.5mm	BU	<i>Arial Italic</i>
	900107	FREE PORT OF MONROVIA	FREE PORT OF MONROVIA	2.0mm	BU	<i>Arial Italic/Capital letter</i>
	900108	Creek	CREEK	4.0mm/2.0mm	BU	<i>Arial Italic/Capital letter</i>
	900109	Lake	Sherman Lake	2.0mm	BU	<i>Arial Italic/Capital letter</i>
	900110	Quarry	Quarry	2.0mm	BK	<i>Arial Italic</i>
	900111	Pipeline	Pipeline	2.0mm	BU	<i>Arial Italic</i>
	900112	Stadium	Samuel Kanyon Doe Sports Complex Antoinette Tubman Stadium	2.0mm	BK	Arial
Barclay Traning Center		Barclay Traning Center	2.0mm	BK	Arial	
Baptist Youth Camp		Baptist Youth Camp	2.0mm	BK	Arial	
Land Classification 9002	900201	Land-01	Park	1.5mm	BK	Arial
	900202	Land-02	Disposal Area	1.5mm	BK	<i>Arial Italic</i>
	900203	Land-03	Rubber,Pinepple, Palm	1.5mm	GN	<i>Arial Italic</i>
Hydrology & Road related features 9003	900301	WT	WT	1.0mm	BU	Romans
	900302	OIL	Oil	1.0mm	BU	Romans
	900303	Ferr	Ferry, Ford	1.5mm	BU	<i>Arial Italic</i>
	900304	Under Const.	Under Const.	1.5mm	BU	<i>Arial Italic</i>
	900305	Impassable Bridge	Impassable Bridge	1.5mm	BK	<i>Arial Italic</i>
	900306	Mud	Mud	1.5mm	BU	<i>Arial Italic</i>
Elevation Value 9004	900401	Triangulation Station-point	123.3	1.5mm	BK	Arial
	900402	Bench Mark	123.3	1.5mm	BK	Arial
	900403	Direct Leveling Point	123.3	1.5mm	BK	Arial
	900404	Spot Height	123.3	1.5mm	BK	<i>Arial Italic</i>
	900405	Contour Value	20	1.5mm	BK	Arial

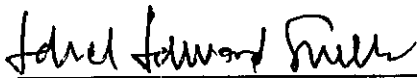
MINUTES OF MEETING
ON
DRAFT FINAL REPORT
(TOPOGRAPHIC MAPPING)
FOR

THE MASTER PLAN RESTORATION AND IMPROVEMENT
IN MONROVIA

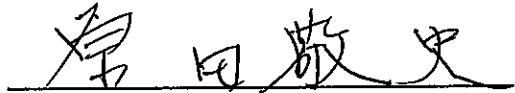
AGREED UPON
BETWEEN
MINISTRY OF PUBLIC WORK, LIBERIAN CARTOGRAPHIC SERVICES,
MINISTRY OF LANDS, MINES AND ENERGY
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Monrovia,

7th May, 2009

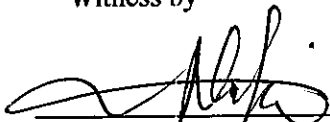


Mr. Edsel Edward Smith
Assistant Minister,
Technical Services Bureau
Ministry of Public Works



Mr. Takashi Harada
Leader,
JICA Study Team

Witness by



Mr. Nathaniel CISCO
Assistant Director
Liberian Cartographic Service
Ministry of Lands, Mines and Energy



INTRODUCTION

In response to the request of the Government of the Republic of Liberia (hereinafter referred to as “GOL”), the Government of Japan (hereinafter referred to as “GOJ”) dispatched the Digital Topographic Mapping Study Team (hereinafter referred to as “JICA Study Team”) headed by Mr. TAKASHI HARADA to discuss and conclude the Final Report (Draft) for the Mapping Works for “The Master Plan Study on Urban Facilities Restoration and Improvement in Monrovia” (hereinafter referred to as “the Study”).

JICA Study Team had a series of discussion with the representatives from Ministry of Public Works (hereinafter referred to as “MPW”) and Liberian Cartographic Services, Ministry of Lands, Mines and Energy (hereinafter referred to as “LCS”). Participants of the discussions are listed in APPENDIX 1.

This document summaries major items discussed and remarks expressed by both sides, and is meant to supplement the Final Report.

1. Final Report (Draft)

Both sides discussed and agreed on the outline of the Draft Final Report for the Topographic Mapping as attached APPEDIX 2.

2. Number of Final Report to be submitted

JICA Study Team agreed that five (5) sets of Final Report are submitted to GOL after the Work Completion.

3. Final Data Type for delivery

JICA Study Team and GOL agreed that final map data type for delivery is SHP DXF, PDF and KML data format.

4. Zone Boundaries

Zone boundaries are shown to the map along the distinct features such as roads and rivers and so on when a boundary runs along the lines of them. Boundaries are not shown in the sea area.

5. Report, Result of Surveying, Topographic Map and Ortho-photo Data Disclosure

JICA Study Team requested to GOL to disclose Report, Result of Surveying, produced Topographic Map and Ortho-photo Data to the Governmental, International and Academic organization with the approval of GOL (MPW). GOL agreed with Study Team.

6. Negative Films and Contact Prints

JICA Study Team delivered following result as a part of final deliveries to GOL.

- Negative Films :2 Rolls
- Contact Prints :1 set (281 photographs)

7. Polyester Base Sheet Map Print production

GOL (MPW) requested to JICA Study Team to produce one (1) set of the maps printed on polyester base sheet adding to the delivery. JICA Study Team agreed with GOL.

8. Handover of Equipment used for Study

GOL (MPW) requested to JICA the handover of Equipment, shown in APPENDIX 3 used for the Topographic Mapping Works in Liberia by JICA Study Team. JICA Study Team promised to convey the request to JICA.

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List of Participants

*Liberian Side

Mr. Edsel Edward Smith	Assistant Minister, Technical Service, MPW
Mr. Ambruse C. Wureh	Technical Assistant to the Minister, MPW
Mr. Nathaniel K. Cisco	Asst. Director, LCS, MLM&E
Mr. Stephen S. Doe	Special Assistant, LCS, MLM&E

*Japanese Side

Mr. Takashi Harada	Team Leader, JICA Study Team
Mr. Kentaro Usuda	Member, JICA Study Team
Mr. Yoshiteru Matsushita	Member, JICA Study Team
Mr. Isamu Kikuchi	Country Officer, JICA Liberia Field Office

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF PUBLIC WORKS

**THE MASTER PLAN STUDY
ON
URBAN FACILITIES RESTORATION AND IMPROVEMENT
IN MONROVIA
IN
THE REPUBLIC OF LIBERIA**

(DRAFT)

FINAL REPORT

(TOPOGRAPHIC MAPPING)

May 2009

AERO ASAHI CORPORATION

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**THE MASTER PLAN STUDY
ON
URBAN FACILITIES RESTORATION AND IMPROVEMENT
IN MONROVIA
IN
THE REPUBLIC OF LIBERIA**

(Draft)

**FINAL REPORT
(TOPOGRAPHIC MAPPING)**

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APPENDICES

APPENDIX 1: SW/MM

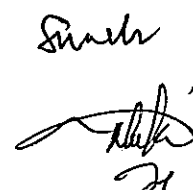
APPENDIX 2: M/M for 4th Working Group Meeting

APPENDIX 3: Study Area

APPENDIX 4: M/M for Inception Report

APPENDIX 5: M/M for Symbol Specification

APPENDIX 6: Photo Interpretation Key



APPENDIX 7: Description Sheet for Photo Controls

APPENDIX 8: Residuals of Aerial Triangulation

APPENDIX 9: Topographic Map and Ortho-photo Sheet Layout

APPENDIX 10: Symbol Specification

APPENDIX 11: Marginal Information (draft)

Smith

[Signature]
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1. Introduction

1.1 Background

During the years of conflict, Liberia's infrastructures have been nearly completely destroyed and the majority of services ceased being rendered. Moreover, the population in Monrovia was increased twice before conflict according to the preliminary results of 2008 National Population and Housing Census. So that, the living environment is rapidly getting worse, the improvement of infrastructures is immediately needed.

Employment and rehabilitation of the infrastructure were declared a top priority for the Government because of their direct impact on security and long-term peace process as noted in the Poverty Reduction Strategy.

As emergency projects have been conducted by some donors, it is also necessary to develop projects taking mid-term improvement and development into consideration. In order to achieve the urban facilities restoration and improvement for short- and mid-term, the Government of Republic of Liberia (hereinafter referred to as "GOL") requested the government of Japan (hereinafter referred to as "GOJ") for Development Study "Master Plan Study on Urban Facilities Restoration and Improvement in Monrovia" (hereinafter referred to as "the Study").

In response to the request of the GOL, the GOJ has decided to conduct the Study.

Accordingly, the Japan International Cooperation Agency (hereinafter called JICA), the official agency responsible for the technical cooperation program of GOJ, will undertake the Study in close cooperation with the concerned authorities of GOL. JICA dispatched this Study Team to produce as the initial step of the Study.

1.2 Study Objectives

The Objectives of the study was to produce the 1:10,000 Digital Topographic Map and Ortho-photo for successive THE MASTER PLAN STUDY ON URBAN FACILITIES RESTORATION AND IMPROVEMENT IN MONROVIA.

1.3 Study Area

The Study Area for Digital Topographic Mapping covers entire city of Monrovia and adjoining areas such as Paynesville, and Johnsonville. Previous Study Area was agreed on Scope of Works signed on is shown in APPENDIX 1 on June 11th 2008. However it was modified due to the latest change of boundary instructed by LISGIS (Liberia Institute of Statics & Geo-Information Services). GOL and Study Team agreed this change on the Minutes of Meeting on February 13th 2009 (refer to APPENDIX 2). As a result, the Study Team acquired new boundary data from LISGIS and took place to change the Study Area following new boundary as shown as APPENDIX 3.

1.4 Executed Work General

The general of executed work contents are shown in following Table 1.

Table 1. Executed Works

Category	Work Classification	Work Items	Work Contents	Work Volume	
1:10,000 Topographic mapping	Preparatory works in Japan	(1)Data Collection	-Existing Data collection, information and analysis -Preparation of bidding document for the determination of sub-contractor -Preparation of Symbol Specification (draft), basic approach, work plan, schedule and so on.	1 set	
		(2) Preparation of Inception Report			
	Works in Liberia	(3)Explanation and consultation of Inception Report	With counterpart		1 set
		(4)Field Reconnaissance	Collection of Existing data and information		1 set
		(5)Consultation of Work Specification	With counterpart		1 set
		(6)Aerial Photography (sub-contract)	Panchromatic film and 1:10,000 photo-scale is		Approx. 287km ²
		(7)Pre-marking, Control Point survey, Simple leveling (sub-contract)	GPS observation, leveling		Approx. 35points, 100km
		(8)Production of Interpretation Key	Main filed objects and etc		1 set
		(9)Field Verification (sub-contract)	With digitally compiled sheet		Approx. 260km ²
		(10)Digital Compilation of Field Verification Result	Data modification and addition if necessary		Approx. 260km ²
	Works in Japan	(11)Aerial Triangulation, DEM acquisition, Orthophoto production			266 models
		(12)Digital Plotting	Digitizing of various topographic features		Approx. 260km ²
		(13)Digital Compilation	Compilation of digitally plotted data		Approx. 260km ²
		(14)Symbolization	Map symbolization of digitally compiled data		Approx. 260km ²
		(15)Creation of Data File	Quality check, data file format check		1set
		(16)Final Report			1set

1.5 . Undertaking of Government of Liberia

Study Team requested counterpart followings items and the GOL (MPW) implemented following tasks for the Study Team.

1. To support an acquisition of miscellaneous permissions such as flight permission, permission for handing of aerial photographs, permission for taking out of contact prints from Liberia and photograph data from Liberia and so on
2. To provide the guide for field works
3. To provide project office to the Study Team
4. To cooperate Liberian Cartographic Service to this project

2. Work and Staffing Schedule

The study was conducted from October 2008 to May 2009. The Work Schedule of the Study is shown in Table 2 and Staffing Schedule are shown in following Table 3.

Table 2 Work Schedule

Work Items	Year/month	2008			2009					
		2008(fiscal year)						2009(fiscal year)		
		10	11	12	1	2	3	4	5	6
1. Work in Japan										
(1) Data collection		—								
Adjustment and analysis of collected data		—								
Preparation of tender document		—								
Preparation of Work Specification		—								
(2) Inception report		—								
2. Work in Liberia										
(3) Consultation of inception report			△△							
(4) Field reconnaissance		■								
(5) Consultation of work specification		■								
(6) Aerial photography					■					
(7) Pre-marking, control point survey, simple leveling			■	■	■					
(8) Interpretation key					■					
(9) Field verification							■	■	■	
(10) Digital compilation after field verification								■	■	
3. Work in Japan										
(11) Aerial triangulation, DEM creation, Orthophoto production					■	■	■			
(12) Digital plotting					■	■	■			
(13) Digital compilation after field verification					■	■	■			
(14) Symbolization								■		
(15) Creation of data file									■	
(16) Final report										■

Legend: — Preliminary study ■ Work in Liberia □ Work in Japan

Table 3 Staffing Schedule

Assignment	Name	2008			2009						
		2008(fiscal year)						2009(fiscal year)			
		10	11	12	1	2	3	4	5	6	
Works in Liberia	1 Team Leader	■							■		
	2 Pre-marking, control point survey, simple leveling	■									
	3 Field verification, Digital compilation							■	■		
	4 Field verification, Digital compilation							■	■		
	5 Coordinator	■									
Report			IC/R ▲							FR ▲5/30	
		10	11	12	1	2	3	4	5	6	

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3. Executed Works

3.1. Executed Works

The details of Executed Works for the Study are designated in following paragraphs.

3.1 Individual Works

Entire executed Work Flow is shown in following Figure 1.

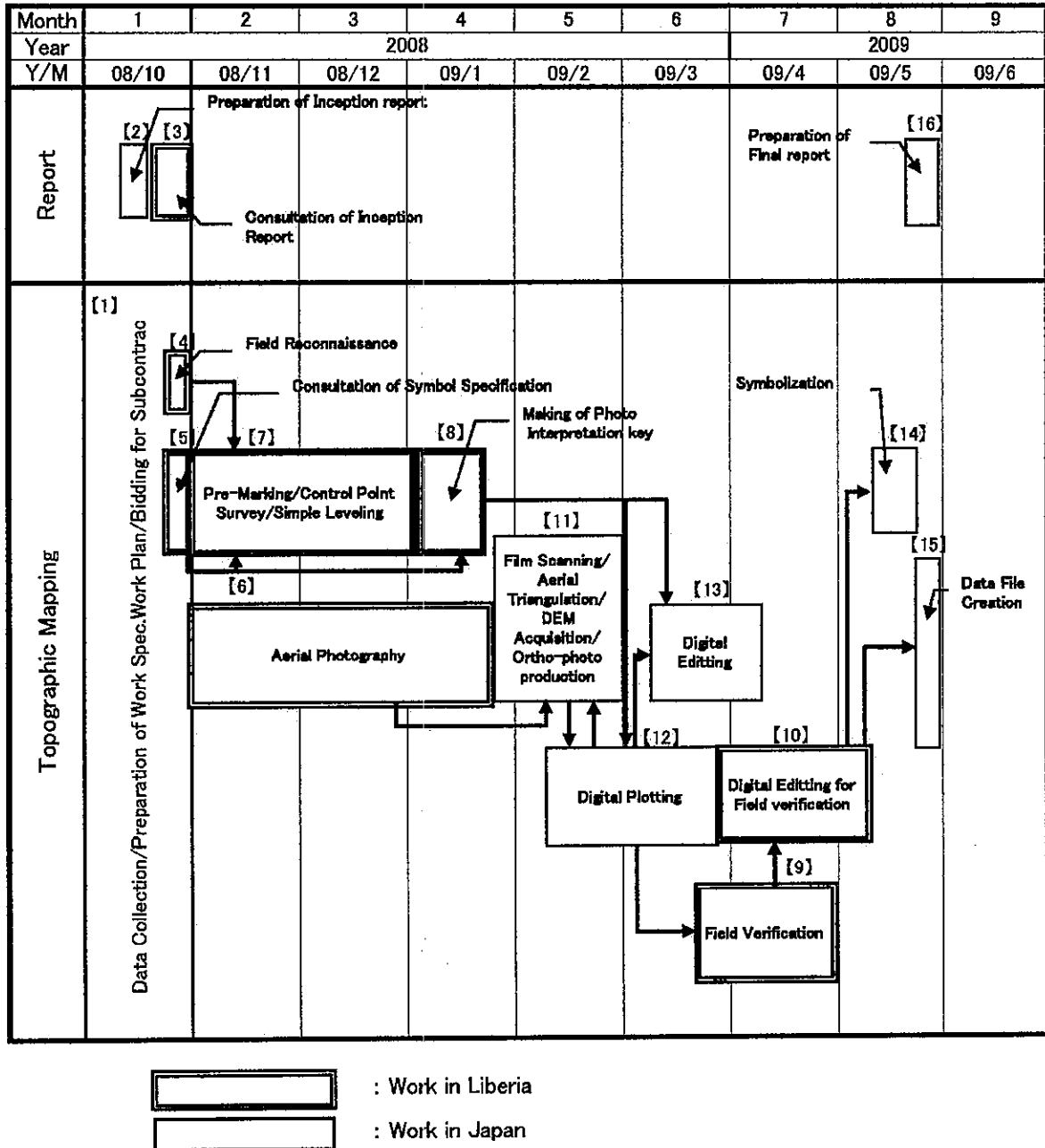


Figure 1. Work Flow

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<Works in Japan>

[1] Data Collection

Before work starts, following works were carried out in Japan.

- Adjustment and analysis of collected data.
 - Preparation of bidding documents, bidding and selection of subcontractor for Aerial Photography, Control Point survey and Field Verification.
 - Preparation of Symbol Specification
 - Adjustment of approach, methodology and schedule of the project.
- Especially the bidding of subcontracting work started after the sign of the contract of JICA immediately to complete study within contracted time period.

[2] Inception Report (Draft)

Before work starts, Inception Report (draft) including Study Approach, Methodology and Study Schedule was prepared for consultation with counterpart.

<Works in Liberia>

[3] Consultation of Inception Report

Consultation of work contents and methodology was carried out with counterpart to finalize the Inception Report for steering the study. At the same time, Minutes of Meeting was prepared and signed for a confirmation of agreement for both sides on November 5th 2008. (APPENDIX 4)

[4] Field Reconnaissance

Field Reconnaissance was carried out at the beginning of study for a data collection and work planning. Main checking work items were as follows:

- Location of the existing control points including benchmarks
- Geographical condition and vegetation of the study area
- Transportation, accommodation for the members and preparation of study office

[5] Consultation of Symbol Specification

Symbol Specification for Topographic Mapping was discussed and confirmed by consultation before work starts. The agreed Draft Symbol Specification was confirmed by Minutes of Meeting signed on December 2nd 2008 shown on APPENDIX 5. However Study Team informed that agreed Symbols might have minor changes during mapping works. GOL agreed with Study Team.

[6] Aerial Photography

Aerial photography included photo processing work were required for subsequent topographic mapping works. Acquisition of flight permission was projected on sub-contractor's hands with the assist of counterpart from LCAA (Liberian Civil Aviation Authority).

The Aerial Photography executed 287km² approximately of study area with the scale of 1:10,000 photographs (refer to Figure 2). Aerial Photography was carried out taking enough consideration of a geographical features condition in the project area into work execution with a monochrome film, not causing the loss of the overlap and the side lap, and the flight line and the quality control for the accuracy improvement of the Aerial Triangulation. Aerial Photography was started on January 15th 2009 due to the delay of flight permission and the weather. The generals of Aerial Photography and carried out works are as follows.

- **Air Base**

Air Base was the International airport in Margibi Conty due to the less vacant space for the aircraft parking of the domestic airport.

- **Permission of Flight, handling of Aerial Photographs and Negative Film and taking out Contact Prints and Photograph Data from Liberia**

Flight permission was acquired by sub-contractor from LCAA (Liberia Civil Aviation Authority) and UNMIL (United Nation Mission in Liberia) with an assistance of counterpart. Regarding the permission of handling of aerial photographs and negative film and taking out contact prints and photograph data were the same.

- **Flying Requirement**

The quality control of aerial photography was carried out by sub-contractor and submitede to expert of Study Team. Study Team also checked and approved the quality of aerial photography.

- **Film processing**

The Film Processing work was done under the responsibility of sub-contractor after the aerial photography.

- **Production of Contact print**

2 sets of 281 Contact Prints were produced by using processed negative film under the responsibility of sub-contractor for the delivery. Another 1 set was produced and used for the quality control work of Aerial photography.

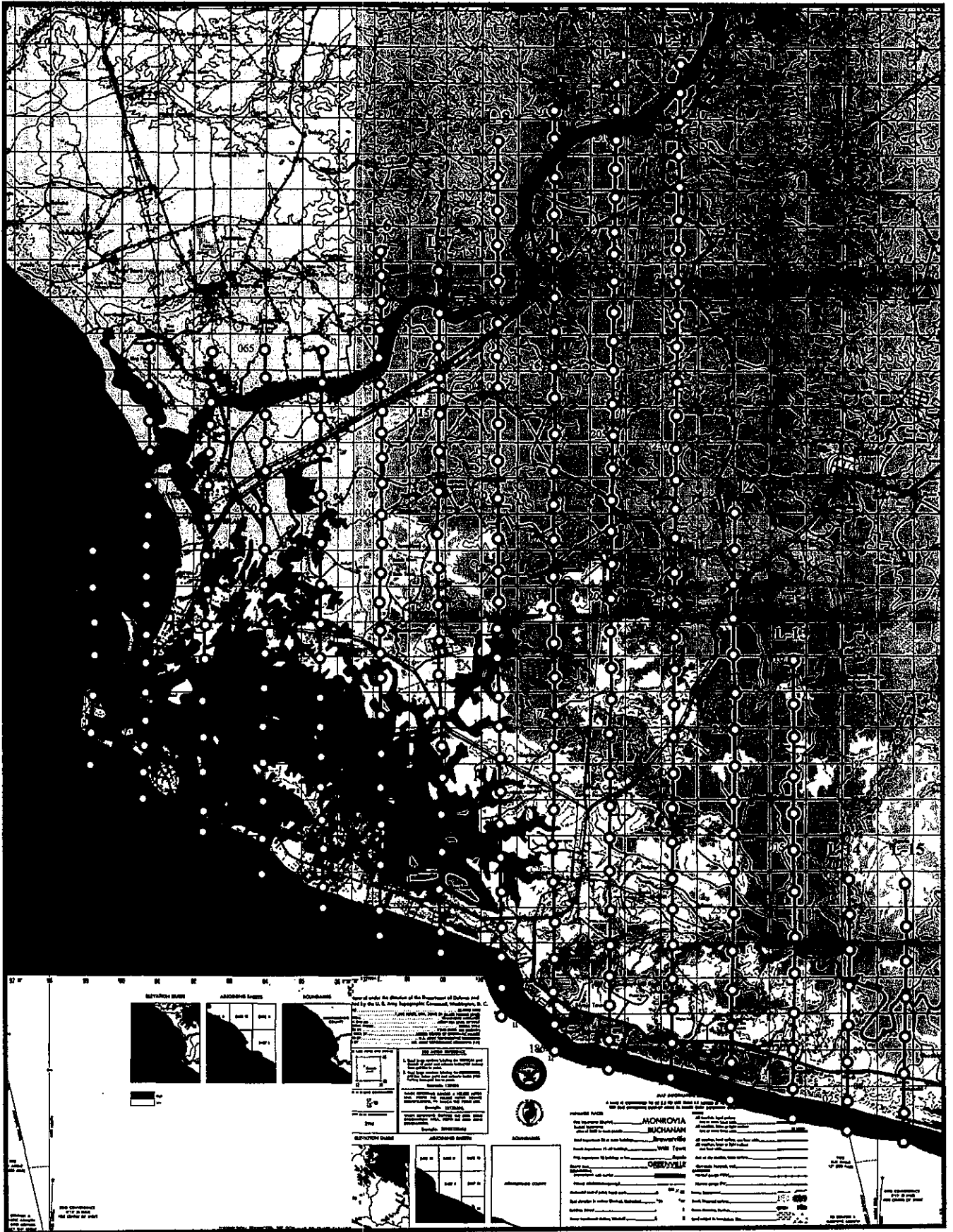


Figure 2. Flight Index for Aerial Photographs

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171 Pre-marking, Control Point Survey and Simple Leveling

Based on selected site at the scale of 1/50,000 map pre-marking and pricking were carried out taking their keeping period and environment surrounding into account. The number of photo control points (PC) was 37 points and their descriptions were prepared. (APPENDIX 7)

The photo control points (PC) distribution is shown in Figure 3.

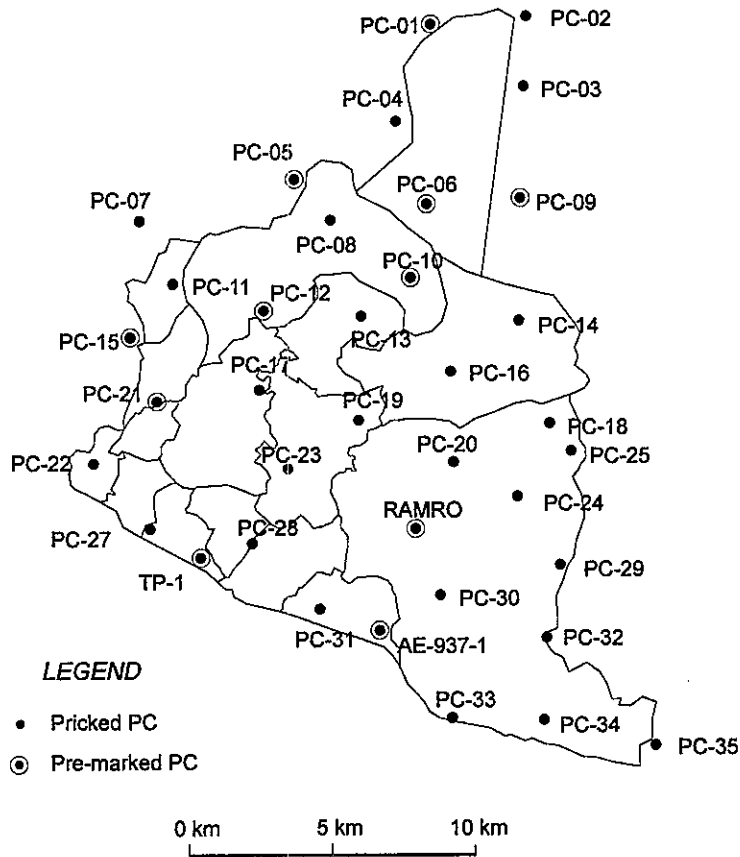


Figure 3. Distribution Map for Photo Control Points

- **Pre-marking**

In particular, the pre-marking (shape: three or four wings type, size: 75 cm x 25 cm) of 11 points was placed by taking their keeping period and reality surrounding into account. After aerial photography, all of them were clearly-identified as in the shape of three or four wings on the aerial photos successfully.

- **Pricking**

Since there were no places for pre-markings at a selected site, the pricking of 26 points was selected by taking an identifiable feature such as a corner of buildings/houses or a structural foundation into account. As with identification of pre-marking, all of pricking points were identified on the aerial photos clearly.

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- Control Point Survey

- i. At the beginning of the works, the Study Team explained that Liberian maps were produced with the local datum. The datum of Liberia 1964 was selected for the best fitting to Liberia. While the worldwide new maps are mostly produced with the geocentric datum. As a result, the following coordinate system was approved on the meeting of the technical specification for mapping between MPW and Study Team on December 2nd 2008 (shown in APPENDIX 5).

Coordinate System	:	UTM
Zone Name	:	Zone 29
Geodetic Datum		
- Ellipsoid Name	:	WGS 84
Semi-major Axis (m)	:	6378137.000
1/f	:	298.257223563
Map Projection	:	Transverse Mercator
- Map Projection Parameters		
False Northing	:	0.000 (m)
False Easting	:	500,000.000 (m)
Longitude of the Central Meridian	:	9 °W
Latitude of the Origin of the Projection	:	Equator
Scale Reduction Factor at the Central Meridian	:	0.9996

- ii. The remaining useful existing geodetic control points in the vicinity of Monrovia mainly were three (AE-937, RAMROD and TP-1). RAMROD was selected as a base station in the view of the location from among three. However, since RAMROD had not a geodetic coordinate such as the longitude and the latitude in WGS 84 coordinate system. The geodetic coordinates of RAMROD were determined by standalone positioning of GPS observation.
- iii. Static GPS surveying was carried out based on RAMROD to obtain a coordinate for each photo control point (PC) used in an aerial triangulation.
- iv. A height of each photo control point (PC) was determined based on existing BM 2 (located in Free Port) by leveling survey basically. However, in the case of some of photo controls located in a remote area their heights were determined by using a geoid height or interpolation from an undulation assumed on a Geoid Map. (refer to figure 5) The result of coordinates and height are listed on Table 4.

Table 4. Coordinates & Heights for Photo Control Points

Station	WGS 84						UTM/Zone 29			Geoid Ht. (m)	Remarks
	N (ddmmss)		W (ddmmss)		Ellipsoid Ht.	X (m)	Y (m)	H (m)			
PC01	6	27	52.14956	10	41	53.61748	714,863.728	312,196.398	13.259	31.29	by GPS
PC02	6	28	1.96593	10	40	3.36045	715,154.075	315,585.309	12.321	31.45	by direct leveling
PC03	6	26	37.32763	10	40	1.62238	712,553.858	315,630.206	23.235	31.55	"
PC04	6	25	52.66390	10	42	34.48709	711,197.323	310,928.261	9.65	31.53	by geoid map
PC05	6	24	48.03420	10	44	34.85344	709,224.347	307,222.624	none	none	
PC06	6	24	17.80830	10	41	57.36069	708,279.566	312,059.486	16.49	31.47	by geoid map
PC07	6	23	59.84037	10	47	39.53830	707,763.341	301,541.726	4.930	31.59	by direct leveling
PC08	6	24	1.92572	10	43	53.04152	707,803.523	308,502.786	6.958	31.58	"
PC09	6	24	27.86848	10	40	5.85416	708,577.371	315,487.207	12.85	31.37	by geoid map
PC10	6	22	52.22382	10	42	17.72574	705,652.488	311,424.926	9.973	31.42	by direct leveling
PC11	6	22	44.67845	10	47	1.91664	705,450.249	302,689.952	2.064	31.29	by direct leveling
PC12	6	22	10.94676	10	45	10.99027	704,402.292	306,095.639	5.60	31.54	by geoid map
PC13	6	22	6.65497	10	43	17.79094	704,258.740	309,574.272	6.778	31.60	by direct leveling
PC14	6	22	2.07662	10	40	7.13236	704,098.861	315,433.412	26.022	31.16	by direct leveling
PC15	6	21	30.53409	10	47	36.43856	703,176.114	301,621.033	4.835	31.58	"
PC16	6	21	0.59219	10	41	26.68491	702,218.029	312,982.327	15.47	31.28	by geoid map
PC17	6	20	33.91967	10	45	23.06726	701,422.809	305,714.342	4.36	31.51	"
PC18	6	20	0.26033	10	39	29.65832	700,353.053	316,573.120	7.773	31.11	by direct leveling

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PC19	6	19	58.68613	10	43	18.23474	36.10428	700,327.559	309,547.561	4.662	31.44	by direct leveling
PC20	6	19	11.94469	10	41	22.44695	41.15082	698,879.989	313,101.715	9.92	31.23	by geoid map
PC21	6	20	23.46201	10	47	17.10361	34.92039	701,113.518	302,208.190	3.436	31.48	by direct leveling
PC22	6	19	7.37343	10	48	38.42426	69.73458	698,784.626	299,700.505	38.238	31.50	"
PC23	6	19	2.14558	10	44	45.75760	34.00491	698,599.586	306,851.611	2.54	31.46	by geoid map
PC24	6	18	29.49202	10	40	11.73653	43.02822	697,568.855	315,270.895	11.895	31.13	by direct leveling
PC25	6	19	22.35996	10	39	3.46176	37.25443	699,186.224	317,374.570	6.14	31.11	by geoid map
PC27	6	17	46.14891	10	47	25.54506	39.98030	696,281.557	301,932.103	7.301	31.10	by direct leveling
PC28	6	17	33.01114	10	45	26.04666	35.39059	695,865.480	305,604.005	4.17	31.22	by geoid map
PC29	6	17	8.92106	10	39	21.35640	35.94554	695,088.848	316,811.556	4.83	31.12	"
PC30	6	16	27.50622	10	41	43.10740	45.29173	693,830.552	312,450.290	14.487	none	by direct leveling
PC31	6	16	10.72841	10	44	3.03382	41.72408	693,329.205	308,147.342	10.408	31.32	"
PC32	6	15	41.98339	10	39	34.11703	33.11924	692,419.441	316,410.868	2.00	31.12	by geoid map
PC33	6	14	2.53960	10	41	27.79409	35.89765	689,375.715	312,906.683	4.789	31.11	by direct leveling
PC34	6	13	59.77687	10	39	40.59219	42.30582	689,280.374	316,201.917	11.194	31.11	"
PC35	6	13	32.62984	10	37	21.79456	40.02923	688,433.177	320,456.076	8.940	31.09	"
RAMROD/PC26	6	17	47.62864	10	42	9.12582	48.10356	696,294.490	311,658.518	16.666	31.44	Based point for GPS
TPI_JFK	6	17	12.66297	10	46	25.32291	71.18758	695,246.521	303,779.788	none	none	none
AE973_1	6	15	47.33092	10	42	52.11342	52.26918	692,603.268	310,325.069	20.940	31.33	by direct leveling

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- Simple Leveling

Based on the existing BM-2 (3.034 m from mean sea level), established in 1967 by USGS located in free port, a height of some of photo control points (PC) as well as spot heights was obtained by simple leveling. The total length of the leveling was 102 km. The routes and closure errors are as follows. (See Table 5) The leveling routes are shown below. (See Figure 4)

Table 5. Closure Error of Leveling

No.	Route	Length	Error (Tolerances)
1	BM 2~ TBM1~TBM 2~BM2	31.5 km	- 46 mm < ± 224 mm
2	TBM 2~ TBM 4~ PC 8~TBM 3~BM 2	27.0 km	+120 mm < ± 207 mm
3	TBM 4~PC 8	17.0 km	-95mm < ± 165 mm
4	PC 10~PC 19	7.0 km	- 56mm < ± 106 mm
5	TBM 3~PC 7	7.0 km	+ 78mm < ± 106 mm
6	TBM 1~PC 35	12.5 km	- 103mm < ± 141 mm

*Tolerances: $40\text{mm}\sqrt{S}$ (S is one way distance in km)

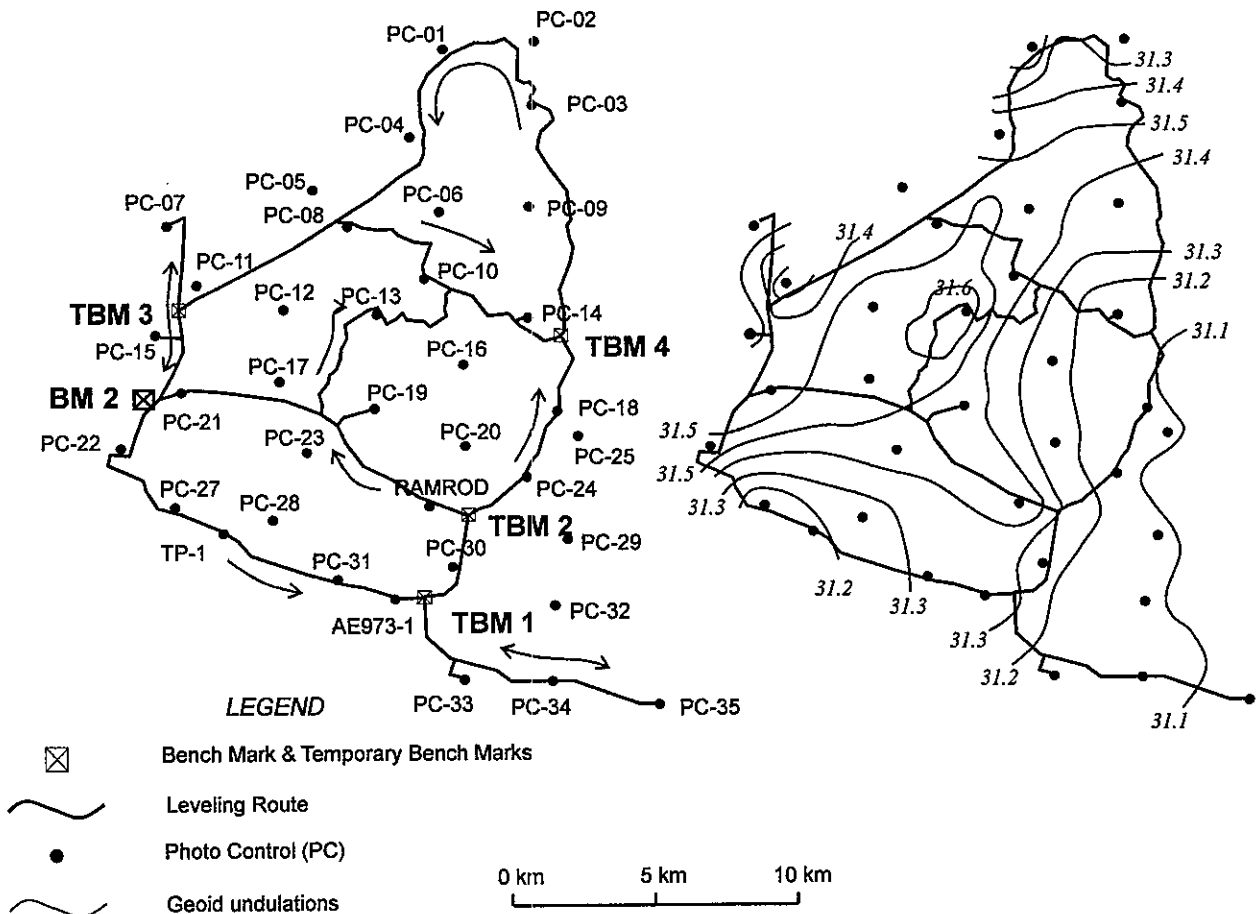


Figure 4. Leveling Route

Figure 5. Geoid Map

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[8] Interpretation Key

In order to secure the Digital Plotting work quality, Interpretation Key was produced by using of IKONOS satellite imagery when the Interpretation key started to prepare. After the aerial photography, IKONOS images of Interpretation Key were replaced to the stereo aerial photograph images. Filed objects for Interpretation Key was selected before work starts. The list of field object prepared as Interpretation key is shown in Table 6. The interpretation key is shown in APPENDIX 6.

Table 6. List of Photo Identification Keys

No.	Objects	No.	Objects
1	Antenna 1	17	Market
2	Antenna 2	18	Mixed Forest
3	Bridge 1	19	Overpass
4	Bridge 2	20	Palm
5	Bridge 3	21	Road, less than 3m
6	Cemetery 1	22	Road, unpaved
7	Cemetery 2	23	Rubber
8	Cemetery 3	24	Separator, narrow
9	Cemetery 4	25	Separator, wide
10	Cliff, Rock, Scattered Rock	26	Vegetation
11	Crop Land	27	Water Tank
12	Culvert 1	28	Well, large 1
13	Culvert 2	29	Well, large 2
14	Disposal Area	30	Well small
15	Gas Station	31	Wreck
16	Grass Land		

[9] Field Verification

Based on data collected from two organizations, which are UNMIL(United Nations Mission in Liberia) and LISGIS (Liberia Institute of Statistics & Geo-Information Services) as well as unidentified features in digital plotting, the field verification was carried out using an orthophoto at a scale of 1/5,000 at the site to verify their consistency and correctness.

Data collected in SHAPE file format from UNMIL were as follows:

- Road and street
- Building (Governmental buildings, Post offices, Hospitals/clinics, Power plant, Market, Embassies, Theaters, Fire station, Hotel, Gas station, Schools, Churches, Mosques, Police stations, Factories and Warehouses.
- Administrative boundaries (Zone boundaries)

Data collected in Excel and PDF format from LISGIS were as follows:

- Administrative boundaries in PDF format (County, District/Zone and Township/Communication boundaries)
- Road and street
- Building (Governmental buildings, Post offices, Hospitals/clinics, Power plant, Market, Embassies, Theaters, Fire station, Hotel, Gas station, Schools, Churches, Mosques, Police stations, Factories and Warehouses.
- Small objects (Well, Antennas and Oil tanks)

Unidentifiable items extracted in digital plotting were as follows:

- Road types (classification of paved or unpaved)
- Exact location of school, church, wells and towers/antennas and so on
- Vegetation classification (rice field, crop land, swamp, forest and plantation and so on)

Above-mentioned items were correctly verified at the site and compiled in digital format.

[10] Digital Compilation after Field Verification

Digital Compilation after Field Verification was carried out for the completion processing such as adding the results of Field Verification to compiled data and correcting them in order to create compiled and topographic map data that includes the results of Field Verification.

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[11] Film Scanning, Aerial Triangulation, DEM Acquisition & Ortho-photo Production

- **Film Scanning**

Analog/Digital conversion of aerial photographs was carried out by using of photogrammetric scanner with the resolution of 15 micron. Data was stored as uncompressed TIFF format.

The work had been involved in subcontracting works when the study started. However due to delay of aerial photography, the work was changed to the one of the “Works in Japan” to compensate the study schedule .

- **Aerial Triangulation**

Aerial Triangulation was performed with scanned photograph data, result of control point and simple leveling by using of work-station and bundle adjustment software ORIMA. Index Map for Aerial Triangulation is shown in Figure 6. The residuals of Aerial Triangulation is shown in APPENDIX 8.

- **DEM Acquisition**

By using of the result of Aerial Triangulation, 5m grid interval of DEM (Digital Elevation Model) was generated with stereo-matching method for ortho-photo.

- **Ortho-photo Production**

A scale of 1:10,000 ortho-photo was produced for the study area includes area of “White Plain”, water pump station and water pipeline exists, by using of generated DEM data. After generation of ortho-photo, contour line data was consolidated. Ortho-photo map sheet layout is shown on APPENDIX 9.

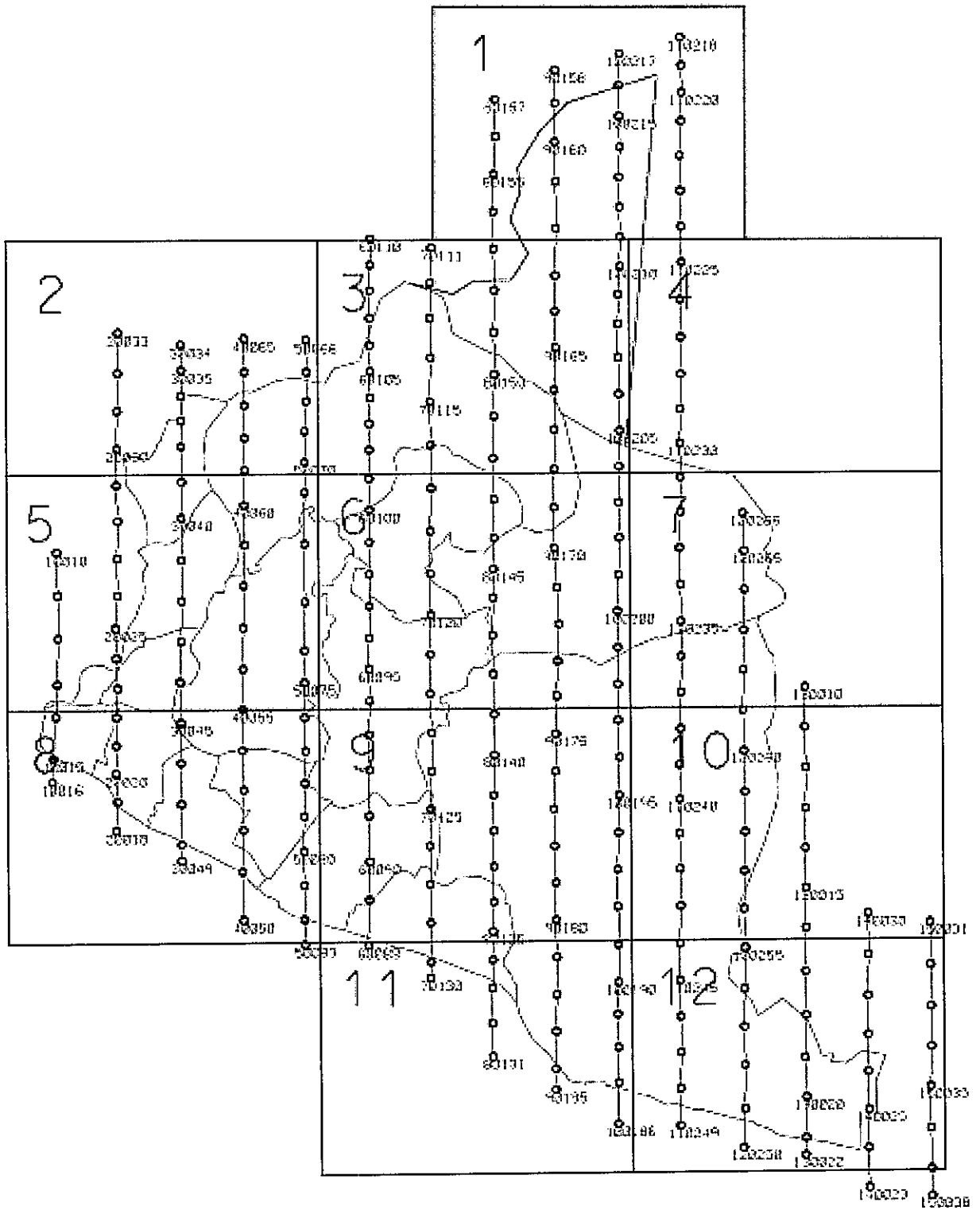


Figure 6. Index Map for Aerial Triangulation

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[12] Digital Plotting

Ground objects and topographic features were digitally plotted in spatial model created by stereo pair of aerial photograph data. Plotted and expressed topographic features were stored on each layers as a scale of 1:10,000 topographic map data. Individual feature and object data were categorized as based on the accuracy of aerial 1:10,000 photography as following manner.

i. Preparatory Work

Before work started following preparatory works were carried out.

i-1 Categorize of Data Structure of Topographic Data File

Topographic data file were categorized as the following four (4) data types.

- **Line data**

The continuous data from the starting point to the ending point.

- **Area (Polygon) data**

The data to be obtained as an enclosed feature such as building and continuous data from the starting point to the ending point as enclosed line. However, coordinates of the starting point and the ending point shall coincide each other.

- **Point data**

The data to be obtained independently as isolated points such as building, vegetation symbol and so on.

- **Text data**

The data to be shown as an annotation and explanation of features on the topographic map

Furthermore, above-mentioned data consists of following four (4) attribute data.

- **Layer (level)**

- **Color**

- **Line weight**

- **Line style**

i-2 Map Feature Code

Map Feature Code (MFC) was prepared prior to actual digital data acquisition to classify the obtained data. The Digital data were acquired based on the MFC.

i-3 Map Symbols

Prior to commencement of actual work, Map Symbol Specification was consulted and agreed on

the consultation between Counterpart and JICA Study Team. Some of map symbols were modified and finalized during the topographic mapping works. Finalized Symbol Specification is shown on APPENDIX 10.

ii. Digital Plotting Works

Following are the major points of field objects to be acquired as a digital data during the plotting based on the Symbol Specification.

ii-1 Road, bridge and railway

- National road, local main road
Roads were obtained one side by one side (not to use the parallel lined command). Sidewalk, roadside tree and green belt more than 3 meters width were defined and expressed on the map.
- Paved and earth road
The paved road and earth road were judged by photo interpretation (They were verified during Field Verification). The roads and tracks within the city area were judged as a paved road and the road in countryside was as an earth road basically.
- Under-construction road
The edge of under-construction road is not clear and the widths of under construction road become wide and narrow depending on the condition. In this case, the lines of under-construction road was obtained by same width at the average width estimated by zoom up of photo image of digital plotter.
- Footpath
The footpath with 100 m length (1 cm on 1:10,000 topographic map) was not expressed. However a footpath, shorter than 100m connecting between double line road and to village, connecting the double line road to double line road, were obtained according to the importance of footpath.
- Railway
Railway data was obtained by single line symbol at the center of railway's track.

ii-2. House and building

All houses and buildings were interpreted and plotted on 3D spatial image consists of photograph stereo pairs. The house under the tree or behind the tall building were interpreted carefully. Especially at the edge of photo model, the house behind the tall building may often not be identified. In congested housing area, considering the drawing limit on 1:10,000 scale topographic map, the shape of house were generalized. However generalization of houses was done only limited area in study area, such as Red Light, because of 1:10,000 photograph scale.

ii-3 Fences and Revetment

The fence/wall and artificial revetment of school, factory and so on, more than 100 m (1 cm on 1:10,000 scale topographic map) were expressed. Even shorter than 100m, if these objects were judged as their importance, fence and wall were acquired.

ii-4 River, stream, lake and pond

Minimum size data acquisition of pond was 50 m×50 m (5 mm×5 mm on 1:10,000 scale topographic map). The pond smaller than this size were omitted.

The stream less than 100 m (1 cm on 1:10,000 scale topographic map) and has no connection with another stream or river were not expressed.

ii-5 Vegetation

Vegetation were obtained at approximately 200m×200m unit (2cm×2cm on 1:10,000 scale topographic map). A small non-cultivation area (5mm×5mm on 1:10,000 scale topographic map) within cultivation area were not shown on the map.

ii-6 Zone Boundary

Zone Boundary was expressed on the map. However the boundary data was not suitable to express on to 1:10,000 topographic map due to the scale of collected boundary map. Study Team proposed that the alignment of Administrative boundaries following natural features such as Roads, Rivers and so on, were adjusted to its shapes to distinct features when boundary runs along the lines of such features. In the open area, such as fields, forest and so on, boundary is expressed as following the collected boundary data of LISGIS.

ii-7 Spot elevation

Spot elevation were obtained the density approximately 9 (nine) points within 1km x 1km (10cm×10cm on 1:10,000 scale topographic map) due to the importance of height information for the project.

The observation point and order of observation of spot elevation were as follows:

- Intersection of main road
- Intersection of double line road
- Corner of double line road
- Intersection of footpath or corner of footpath

ii-8 Contour line

The project area is considerably flat. The flying height of the aerial photography was made

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enough accuracy of 1:2,500 topographic map production. The contour line interval was set to 2 (two)m because of needs of further study. The contour line for depression area was drawn and spot height was observed as an additional height information if the size of depression area is large.

[13] Digital Compilation

Digital Compilation was carried out on the digital plotting data. The works include a data amendment, annotation of geographical names and other items not modified on digital plotting stage as following manner.

i. Checking of Data Structure

The checking of data structure consists of following items.

i-1 Planimetric features between adjacent sheets

The discrepancy of horizontal position of data at the neat-line was checked. In case the planimetric features don't coincide between adjacent sheets, data amendment was carried out by using orthophoto image.

i-2 Data type and attribute

The acquired topographic map data were checked according to the data type and attribute defined prior to the commencement of the actual work.

i-3 Visual check on a plotted Manuscript

After completion of digital compilation works, topographic data was plotted. Plotted data was checked with orthophoto image, field verification data and so on visually.

i-4 Control point and contour lines

- Density of geodetic points including spot heights and height values of contour lines.

The density of geodetic points including spot heights and contour value is approximately 9 (nine) points at 10cm × 10cm on 1:10,000 scale topographic map on average.

- Relation between geodetic points and contour lines

The relation between geodetic points including spot heights and contour lines was checked.

i-5 All expressed data were checked based on following check items.

- Lack of data acquisition

- Shape
- Type
- Location

ii. Marginal information

“Marginal information” is the map information shown at the outside of neat-line of topographic map. The information such as map scale, scale bar, map symbol, history of mapping and so on are shown in marginal information.

The items to be shown in marginal information are as follows:

- Neat-line
- Sheet name & number
- Administrative names
- Map scale
- Map symbols
- Grid and longitude and latitude
- Information and history of topographic map
- Sheet index, and

Marginal information was prepared sheet by sheet. The marginal information applied to the topographic maps of the study shown on APPENDIX 11.

[14] Symbolization

Digitally compiled data (point, line and polygon) were symbolized to convert the topographic map data to printing by printer. Digitized data were symbolized based on the finalized Topographic Map Symbols shown on APPENDIX 10.

[15] Creation of Data File

Finalized topographic data were checked for matching with work specification. Topographic data were recorded in certain format agreed with counterpart. Study Team converted topographic map data into following 3 (three) data types format.

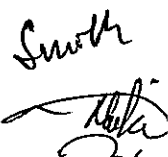
- SHAPE data
- KML data
- DXF file
- PDF file

[16] Quality Control

Quality control of individual works was carried out as follows. Work List for Quality Control is shown Table 7.

Table 7. List of Works for Quality Control

No.	Work Items
1	Control Point Survey
2	Simple Leveling
3	Aerial Photography
4	Digital Plotting and Compilation
5	Symbolization
6	Creation of Data File



3.2. Staffing

The members of Study Team and individual tasks is shown on Table 8.

Table 8. Members and Assignment

Name	Assignment	No.	Works
Takashi HARADA	Team Leader	(1)	Adjustment and analysis of collected data
		(2)	Preparation of Inception Report
		(3)	Consultation of Inception Report
		(4)	Field Reconnaissance
		(5)	Consultation of Work Specification
		(6)	Aerial Photography
		(7)	Pre-marking, Control Point Survey, Simple Leveling
		(8)	Interpretation Key
		(9)	Field Verification
		(10)	Digital Compilation after Field Verification
		(11)	Aerial Triangulation, DEM production, Ortho-photo Production
		(12)	Digital Plotting
		(13)	Digital Compilation
		(14)	Symbolization
		(15)	Creation of Data File
		(16)	Final Report
Kentaro USUDA	Interpretation key	(4)	Field Reconnaissance
		(5)	Consultation of Work Specification
		(7)	Pre-marking, Control Point Survey, Simple Leveling
		(8)	Interpretation Key
		(9)	Field Verification
		(10)	Digital compilation of Field Verification in field
		(16)	Final report
Nobuteru MATSUSHITA	Field verification	(9)	Field Verification
		(10)	Digital compilation of F.V.
Yuji OUCHI	Coordinator		

4. Participation to the Seminar

Study Team participated to the Interim Report Seminar of the Project held on April 29th 2009 in the Cape Hotel, Monrovia. Seminar Program is as follows. While the seminar implementing, Study Team presented methodology of Topographic Mapping and Ortho-photo Production and Data application simply by presentation of Fly Through movie created by Computer Graphic software by using produced Topographic Mapping Data and IKONOS satellite image. The CD_ROM of Fly Through Movie is attached to the Final Report.



The Master Plan Study on Urban Facilities Restoration and Improvement
in Monrovia in the Republic of Liberia



Interim Report Seminar Program Outline

- (1) Date: April 29, 2009
- (2) Venue: Cape Hotel, Monrovia
- (3) Program Schedule

Time	Speech/ Presentation	Presenter/ Speaker
9:00 – 9:30	Registration	
9:30 – 9:45	Opening Speech	Hon. Loseni Dunzo, Minister Ministry of Public Works
9:45 – 10:00	Speech by Chief Guest	Mr. Daniel G. Johnson, Chairman of City Council
10:00 - 10:20	Tea Break	
10:20 – 10:30	Presentation of Mapping Team	Mr. Takashi Harada, Team Leader, JICA Study Team for Mapping
10:30 – 10:45	Introduction of the Study by JICA Study Team Leader	Mr. Masatsugu Komiya, JICA Study Team Leader
10:45 – 11:15	Theme 1: Socio-Economic Characteristics and Land Use	Planning Sector Team
11:15 – 11:30	Questions & Answers	
11:30 – 12:00	Theme 2: Road and Transportation	Road Sector Team
12:00 – 12:15	Questions & Answers	
12:15 – 12:45	Theme 3: Water Supply / Sewerage / Storm Water Drainage	Water Sector Team
12:45 – 13:00	Questions & Answers	
13:00 – 13:10	Speech by Special Guest	Mr. Isamu Kikuchi, Country Manager, JICA Liberia Field Office
13:10 – 13:20	Vote of Thanks and Closing	Mr. Edsel Edward Smith, Assistant Minister for Technical Services, Ministry of Public Works
13:20 – 14: 20	Lunch	

Figure 7. Seminar Program

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5. Reports and Deliverables

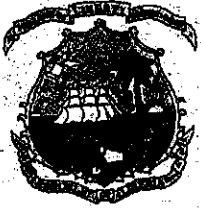
Reports and Deliverables are as follows.

(1) Reports

- 1) Inception Report : 5 sets (3 sets delivered to GOL)
- 2) Final Report
 - Main Report : 5 sets (3 sets for GOL)
 - Summary : 5 sets (3 sets for GOL)
 - Main Report (Japanese Version) : 5 sets

(2) Final Result (Topographic Map Data and others)

- 1) Aerial Photography
 - Negative Film : 1 set (Delivered to GOL)
 - Digital Data File : 2 sets (1 set for GOL)
 - Contact Print : 2 sets (1 set for GOL)
 - Flight Index Map : 2 sets (1 set for GOL)
- 2) Field Survey
 - Survey Result : 2 sets (1 sets for GOL)
- 3) 1:10,000 Topographic Map
 - Topographic Map Data : 6 sets (5 sets for GOL)
- 4) 1:10,000 Ortho-photo
 - Ortho-photo Data : 6 sets (5 sets for GOL)



OFFICE OF THE DEPUTY MINISTER
TECHNICAL SERVICES

REPUBLIC OF LIBERIA
MINISTRY OF PUBLIC WORKS

P. O. Box 9011
Lynch Street South
Monrovia, Liberia



Mr. Kunihiro YAMAUCHI
Chief Representative,
Japan International Cooperation Agency,
Ghana Office

Dear Sir,

Re: Request for Handover of Equipment to the Ministry of Public Works in Liberia

On behalf of the Government of the Republic of Liberia, I wish to extend our sincere thanks and appreciation to the Government of Japan and Study Team for the Study on THE MASTER PLAN STUDY ON URBAN FACILITIES RESTORATION AND IMPROVEMENT IN MONROVIA (Topographic Mapping) through JICA.

As we understand the Study has come to the end, I wish to make a request for handover of equipment for the Study provided by JICA. After the completion of the Study, the equipment would be useful not only for a short period, but for the improvement of our technologies in the future. The list of equipment is attached herewith.

We would like to request you that all equipment will be handed over. We promise to use properly the provided equipment. Your kind understanding on this matter is much appreciated.

Edsel Edward Smith, 07.05.09

Edsel Edward Smith
Assistant Minister
Technical Service
Ministry of Public Works
Republic of Liberia

Smith
[Signature]
21

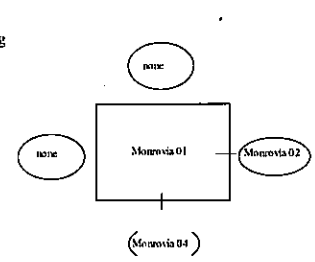
List of Equipment

- | | | | |
|----|---------------------|--------|----------------------------------------------|
| 1. | UPS | 4 sets | Uninterruptible Power Supply system(300W) |
| 2. | Large Sized Printer | 1 set | HP Designjet 500 (42inch) with LAN Card |
| 3. | Copier (B/W) | 1 set | MF4010 (A4) Unified with Scanner and Printer |

Smith
21
Wick

QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. <u>Monrovia 01</u>				Checked by <u>N. Ishiyaka</u>				Date: <u>11/9/09</u>							
Item		Code	Omission	SI>Description	Item		Code	Omission	SI>Description	Item		Code	Omission	SI>Description	
90_Geographical and other related features names	Geographical name	9001	1		Transportation Features: 21_Roads & 22_Related-features	All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill /Embankment	6101			
	Land classificatio	9002				All weather more than 5mwith road divider at the center (shown at scale)	2115				Earth Embankment	6102			
	Hydology	9003	2			Dry Weather Road	2116				Retaining wall	6103			
	Elevation value	9004				Improved surface road	2117				Wall/ Fence	6104			
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Houses, Buildings	3001		4		Track/4 wheel Drive	2118				Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301		
	prominent Building	3002				Footpath	2119	4				Boundary of Territory/Zone	6302		
	Ruins, non-wall building	3003		2		National Route Marker	2120					Rice Field	6303		
	Temporary housing	3005				Road, Under Construction	2121					Crop Land/Agricultural Land	6304		
	Building-minimum	3006		1		Garden Path	2122					Mangrove	6305		4
	Public building	3501				Road, Underground	2123					Vineyard	6306		
	Post office	3501				Ferry/Ford	2124					Oreland	6307		
	Hospital	3503			Side Walk	2225				Plantation		6308			
	Power Plant, Sub-Station	3504			Tree Row	2226		1, 2		Broadleaf Forest		6309			
	Market/Prominent Store	3505			Grade Separation	2227				Bushes/Shrub		6310			
	Embassy	3506			pedestrian overpass	2228				Grass Land		6311		9	
	Theater/Cinema (Prominent)	3507			Bridge	2229				Swamp/Marsh	6312				
	Fire Station	3508			Foot Bridge	2230		3		Palms-independent	6314				
	Hotel/Motel	3509			Stone Steps	2231				Sand	6315				
	Gas Station	3510								Mud	6316				
	Windmill	3511			51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)	5101			Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201			
	School	3512		2		Canals, rivers and streams (single)	5102					Cliff/ Rock	7202		
	Church/Mission	3513				Indefinite/Dried Rivers and Streams (double)	5104					Scattered Rocks	7203		
	Mosque	3514		1		Indefinite/Dried Rivers and Streams (single)	5105					Reef/Coral	7204		
Police Station	3515			Lake/Pond, Shoreline		5106				Depression (shown at scale)	7205				
Factory	3516			Pier/Jetty		5201				Hummock (at scale)	7206				
Lighthouse	3517			Wharf		5202				Hummock (symbol)	7207				
Warehouse	3518			Revetment		5203									
Stadium (symbol)	3519			Breakwater		5204									
Stadium (at scale)	3520			Flow Arrow		5205									
42_Related Features of Industry, Agriculture & Sociocultural Objects	High lower	4201		2		Fals (double-line drainage)	5206			23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm)-single track	2301			
	Antenna Tower	4202		7	Fals (single-line drainage)	5207			Sidetracks		2305				
	Active Mine or Quarry	4203			Dam	5208			Railway Stations		2306				
	Inactive Mine or Quarry	4204			weir (at scale)	5209									
	Water Tank	4205			weir (symbolized)	5210									
	Oil tank	4206			Flood gate(at scale)	5211									
	Well	4207		4	Flood gate(symbol)	5212									
	Power Transmission Lines	4208			Wreck	5213									
	Cemetery, Christian	4209			Anchorage Area	5214									
	Cemetery, Muslim	4210													
	Monument	4111													
	Pipeline/underground	4215													
	Heliport	4217													
	Tunnel/Pit Mouths/Culvert	4218													
Airport	4219														
Disposal Area	4220														



QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

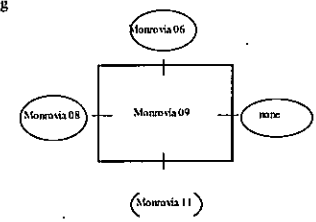
Sheet No. <u>Monrovia 02</u>				Checked by <u>N. Ishiguro</u>				Date: <u>11 / 4 / 09</u>												
Item	Code	Omission	Mt. description	Item	Code	Omission	Mt. description	Item	Code	Omission	Mt. description	Item	Code	Omission	Mt. description					
90_Geographical and other related features names	Geographical name	9001		/	Land Classification, 61_Slope & Fence	Artificial Cut and Fill/Embankment	6101			11-Boundaries	Boundary-National	1101								
	Land classification	9002				Earth Embankment	6102				Boundary-City, County	1102								
	Hydrology	9003				Retaining wall	6103				Boundary-District	1103								
	Elevation value	9004		4		Wall/ Fence	6104		4		Boundary-Zone	1104								
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area			Transportation Features, 21_Roads & 22_Related-features	Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301			Relief	71_Contour lines				Index Contour Line	7109				
	Houses, Buildings	3001				6	Boundary of Territory/Zone	6302								Intermediate Contour Line	7110			
	Prominent Building	3002					Rice Field	6303								Supplementary Contour Line	7111			
	Ruins, non-wall building	3003					Crop Land/Agricultural Land	6304								Depression, Index Contour Line	7112			
	Temporary housing	3005					Mangrove	6305								Depression, Intermediate Contour Line	7113			
	Building-minimum	3006				5	Vineyard	6306								73_Geodetic Control Points	Horizontal Control Point	7305		
	Public building	3501					Orchard	6307									Benchmark	7306		
	Post office	3501					Plantation	6308									Direct Leveling Point	7307		
	Hospital	3503					Broadleaf Forest	6309									Spot Height	7308		
	Power Plant, Sub-Station	3504					Bushes/Shrub	6310												
	Market/Prominent Store	3505					Grass Land	6311												
	Embassy	3506					Swamp/Marsh	6312												
	Theater/Cinema (Prominent)	3507					Palms-independent	6314												
	Fire Station	3508					Sand	6315												
	Hotel/Motel	3509					Mud	6316												
	Gas Station	3510					Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201											
	Windmill	3511						Cliff/Rock	7202											
	School	3512				/		Scattered Rocks	7203											
	Church/Mission	3513						Reef/Coast	7204											
	Mosque	3514						Depression (shown at scale)	7205											
Police Station	3515			Hummock (at scale)	7206															
Factory	3516			Hummock (symbol)	7207															
Lighthouse	3517																			
Warehouse	3518																			
Stadium (symbol)	3519																			
Stadium (at scale)	3520																			
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols			51_Hydrology & 52_Water-related Structures	23_Railways	Railways/Normal gauge 4' 8 1/2" (1435mm)-single track	2301			Edge Matching										
	High tower	4201					Canals, rivers and streams (double)	5101												
	Antenna Tower	4202				3	Canals, rivers and streams (single)	5102							4					
	Active Mine or Quarry	4203					Indefinite/Dried Rivers and Streams (double)	5104												
	Inactive Mine or Quarry	4204					Indefinite/Dried Rivers and Streams (single)	5105												
	Water Tank	4205					Lake/Pond, Shoreline	5106												
	Oil tank	4206					Pier/Jetty	5201												
	Well	4207				7	Wharf	5202												
	Power Transmission Lines	4208					Revetment	5203												
	Cemetery, Christian	4209					Breakwater	5204												
	Cemetery, Muslim	4210					Flow Arrow	5205							/					
	Monument	4111					Falls (double-line drainage)	5206												
	Pipeline/underground	4215					Fall (single-line drainage)	5207												
	Heliport	4217					Dam	5208												
	Tunnel/Pit Mouth/Culvert	4218					Weir (at scale)	5209												
	Airport	4219					Weir (symbolized)	5210												
	Disposal Area	4220					Flood gate(at scale)	5211												
							Flood gate(symbol)	5212												
							Wreck	5213												
							Anchorage Area	5214												

QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. <u>Monrovia 10</u>				Checked by <u>N. Ishiyaka</u> Date: <u>17/4/08</u>																			
Item		Code	Omission	Misdescription	Item				Code	Omission	Misdescription	Item				Code	Omission	Misdescription					
90 Geographical and other related features names	Geographical name	9001			Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101			11-Boundaries	Boundary-National	1101						
	Land classification	9002				All weather more than 5m with road divider at the center (shown at scale)	2115	/			Earth Embankment	6102				Boundary-City, County	1102						
	Hydrology	9003	3			Dry Weather Road	2116				Retaining wall	6103				Boundary-District	1103						
	Elevation value	9004				Improved surface road	2117				Wall Fence	6104	7	2		Boundary-Zone	1104						
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001				Track/4 wheel Drive	2118				Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301				Relief	71_Contour lines	Index Contour Line	7109		
		Prominent Building	3002				Footpath	2119					Road, Under Construction	6302						Intermediate Contour Line	7110		
		Ruins, non-wall building	3003				National Route Marker	2120			6		Garden Path	6303						Supplementary Contour Line	7111		
		Temporary housing	3005				Road, Underground	2123					Rice Field	6304						Depressions, Inlets, Contour Line	7112		
		Building-minimum	3006				Ferry/Ford	2124					Crop Land/Agricultural Land	6304						Depressions, Intermittent Contour Line	7113		
		Public building	3501				Side Walk	2225					Mangrove	6305		4			73_Geodetic Control Points	Horizontal Control Point	7305		
		Post office	3501				Tree Row	2226			Vineyard		6306			Benchmark	7306						
		Hospital	3503			2	Grade Separation	2227			Orchard		6307			Direct Levelling Point	7307						
		Power Plant, Sub-Station	3504				pedestrian overpass	2228			Plantation		6308			Spot Height	7308						
		Market/Prominent Store	3505				Bridge	2229	2	1	Broadleaf Forest		6309										
	Symbols	42_Related Features of Industry, Agriculture & Sociocultural Objects	Embassy	3506				Foot Bridge	2230			Bushes/Shrub	6310										
			Theater/Cinema (Prominent)	3507				Stone Steps	2231			Grass Land	6311										
			Fire Station	3508			51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)	5101	1		Swamp/Banah	6312										
			Hotel/Motel	3509				Canals, rivers and streams (single)	5102			Palms-independent	6314	3									
			Gas Station	3510	3			Indefinite/Dried Rivers and Streams (double)	5104			Sand	6315										
			Windmill	3511				Indefinite/Dried Rivers and Streams (single)	5105			Mud	6316										
			School/Elementary and high school	3512		4		Lake/Pond, Shoreline	5106			Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201									
			Church/Mission	3513				Pier/Jetty	5201				Cliff Rock	7202									
			Mosque	3514				Wharf	5202				Scattered Rocks	7203									
			Police Station	3515				Revetment	5203				Reef/Coral	7204									
Factory	3516			Breakwater	5204				Depression (shown at scale)	7205													
Lighthouse	3517			Flow Arrow	5205				Hummock (at scale)	7206													
Warehouse	3518			Falls (double-line drainage)	5206			Hummock (symbol)	7207														
Stadium (symbol)	3519			Fall (single-line drainage)	5207																		
Stadium (at scale)	3520			Dam	5208			23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm)-single track	2301				Edge Matching									
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201	4	3	Pier/Jetty	5201				Railway Stations		2306										
		Antenna Tower	4202			Wharf	5202																
		Active Mine or Quarry	4203			Revetment	5203																
		Inactive Mine or Quarry	4204			Breakwater	5204																
		Water Tank	4205			Flow Arrow	5205																
		Oil tank	4206			Falls (double-line drainage)	5206																
		Well	4207	5		Fall (single-line drainage)	5207																
		Power Transmission Lines	4208			Dam	5208																
		Cemetery, Christian	4209			weir (at scale)	5209																
		Cemetery, Muslim	4210			weir (symbolized)	5210																
Monument	4111			Flood gate(at scale)	5211																		
Pipeline/Underground	4215			Flood gate(symbolized)	5212																		
Harbour	4217			Wreck	5213																		
Tunnel/Pit Mouth/Culvert	4218			Anchorage Area	5214																		
Airport	4219																						
Disposal Area	4220																						

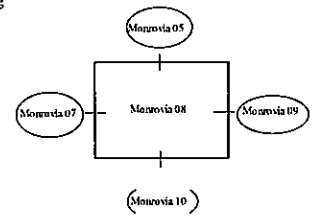
QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. <u>Monrovia 09</u>				Checked by <u>A. Jabinjaka</u>				Date: <u>20/4/09</u>											
Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription				
90_Geographical and other related features names	Geographical name	9001			All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101		11-Boundaries	Boundary-National	1101				
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115				Earth Embankment	6102			Boundary-City, County	1102				
	Hydrology	9003			Dry Weather Road	2116				Retaining wall	6103			Boundary-District	1103				
	Elevation value	9004			Improved surface road	2117				Wall/Fence	6104			Boundary-Zone	1104				
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001	3	Track/4 wheel Drive	2118			Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301	4	Relief	71_Contour lines	Index Contour Line	7109			
		Prominent Building	3002			Footpath	2119				Boundary of Territory/Zone	6302				Intermediate Contour Line	7110	1	
		Ruins, non-wall building	3003			National Route Marker	2120				Rice Field	6303				Supplementary Contour Line	7111		
		Temporary housing	3005			Road, Under Construction	2121				Crop Land/Agricultural Land	6304				Depression, Index Contour Line	7112		
		Building-minimum	3006			Garden Path	2122				Mangrove	6305		6	Depression, Intermediate Contour Line	7113		1	
		Public building	3501			Road, Underground	2123				Vineyard	6306			73_Geodetic Control Points	Horizontal Control Point	7305		
		Post office	3501			Ferry/Ford	2124				Orchard	6307				Benchmark	7306		
		Hospital	3503		2	Side Walk	2225				Plantation	6308				Direct Leveling Point	7307		
		Power Plant, Sub-Station	3504			Tree Row	2226				Grass Land	6311			Spot Height	7308			
		Market/Prominent Store	3505			Grade Separation	2227				Swamp/Marsh	6312							
	Embassy	3506			pedestrian overpass	2228			Palm-independent	6314	7	9							
	Theater/Cinema (Prominent)	3507			Bridge	2229			Sand	6315									
	Fire Station	3508			Foot Bridge	2230			Mud	6316									
	Hotel/Motel	3509			Stone Steps	2231			Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201								
	Gas Station	3510	6		Creek, river and stream (double)	5101				CR/Rock	7202	2							
	Windmill	3511			Creek, river and stream (single)	5102	2			Scattered Rocks	7203								
	School (elementary and high school)	3512			Indefinite/Dried Rivers and Streams (double)	5104				Reef/Coral	7204								
	Church/Mission	3513			Indefinite/Dried Rivers and Streams (single)	5105				Depression (shown at scale)	7205								
	Mosque	3514			Label/Point, Shoreline	5106				Hummock (at scale)	7206								
	Police Station	3515			Pier/Jetty	5201				Hummock (symbol)	7207								
Factory	3516			Wharf	5202														
Lighthouse	3517			Revetment	5203														
Warehouse	3518			Breakwater	5204														
Stadium (symbol)	3519			Flow Arroy	5205														
Stadium (at scale)	3520			Falls (double-line drainage)	5206														
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	Light tower	4201		2	Fall (single-line drainage)	5207		23_Railways	Railways/Normal gauge 4' 8 1/2" (1435mm)-single track	2301		Edge Matching						
		Antenna Tower	4202	6		Dam	5208				Sidetracks	2305							
		Active Mine or Quarry	4203			Weir (at scale)	5209				Railway Stations	2306							
		Inactive Mine or Quarry	4204			Weir (symbolized)	5210												
		Water Tank	4205			Flood gate(at scale)	5211												
		Oil tank	4206			Flood gate(symbolized)	5212												
		Well	4207	4		Wreck	5213												
		Power Transmission Lines	4208			Anchorage Area	5214												
		Cemetery, Christian	4209																
		Cemetery, Muslim	4210																
		Monument	4111																
		Pipeline/underground	4215																
Heliprot	4217																		
Tunnel/Pit Mouth/Culvert	4218																		
Airport	4219																		
Disposal Area	4220																		



QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. <u>Monrovia 08</u>				Checked by <u>N. Jahizuka</u>				Date: <u>16/04/09</u>													
Item		Code	Omission	Misdescription	Item		Code	Omission	Misdescription	Item		Code	Omission	Misdescription							
90_Geographical and other related features names	Geographical name	9001			Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101			11-Boundaries	Boundary-National	1101				
	Land classification	9002				All weather more than 5m with road divider at the center (shown at scale)	2115				Earth Embankment	6102				Boundary-City, County	1102				
	Hydrology	9003				Dry Weather Road	2116				Retaining wall	6103				Boundary-District	1103				
	Elevation value	9004				Improved surface road	2117				Wall Fence	6104	✓	✓		Boundary-Zone	1104				
				Track/4 wheel Drive		2118															
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001				Footpath	2119	✓	✓	Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301			Relief	71_Contour lines	Index Contour Line	7109		
		Prominent Building	3002				National Route Marker	2120				Boundary of Territory/Zone	6302					Intermediate Contour Line	7110		
		Ruins, non-wall building	3003				Road, Under Construction	2121				Rice Field	6303					Supplementary Contour Line	7111		
		Temporary housing	3005				Garden Path	2122				Crop Land/Agricultural Land	6304					Depression, Index Contour Line	7112		
		Building-minimum	3006				Road, Underground	2123				Mangrove	6305		✓			Depression, Intermediate Contour Line	7113		
		Public building	3501				Ferry/Ford	2124				Vineyard	6306				73_Geodetic Control Points	Horizontal Control Point	7305		
		Post office	3501				Side Walk	2225		✓		Orchard	6307					Benchmark	7306		
		Hospital	3503	✓			Tree Row	2226				Plantation	6308					Direct Leveling Point	7307		
		Power Plant, Sub-Station	3504				Grade Separation	2227				Broadleaf Forest	6309					Spot Height	7308		
		Market/Prominent Store	3505				pedestrian overpass	2228				Bushes/Shrub	6310								
		Embassy	3506				Bridge	2229		✓		Grass Land	6311		✓						
		Theater/Cinema (Prominent)	3507				Foot Bridge	2230			Swamp/Marsh	6312		✓							
		Fire Station	3508				Foot Bridge	2230			Palms-independent	6314									
		Hotel/Motel	3509				Stone Steps	2231			Sand	6315									
		Gas Station	3510								Mud	6316									
		Windmill	3511				51_Hydrology & 52_Water-related Structures	Canal, open and streams (double)	5101			Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201							
		School (elementary and high school)	3512			Canal, open and streams (single)		5102			Cliff/Rock		7202								
		Church/Mission	3513		✓	Indefinite/Dried Rivers and Streams (double)		5104			Scattered Rocks		7203								
	Mosque	3514	✓		Indefinite/Dried Rivers and Streams (single)	5105				Reef/Coral	7204										
	Police Station	3515			Lake/Pond, Shoreline	5106				Depression (shown at scale)	7205										
	Factory	3516			Pier/Jetty	5201				Hummock (at scale)	7206										
	Lighthouse	3517			Wharf	5202				Hummock (symbol)	7207										
	Warehouse	3518			Revetment	5203															
Stadium (symbol)	3519			Breakwater	5204				23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm) -single track	2301			Edge Matching							
Stadium (at scale)	3520			Flow Arrow	5205					Shletracks	2305										
				Falls (double-line drainage)	5206					Railway Stations	2306										
				Fall (single-line drainage)	5207																
				Dam	5208																
				Weir (at scale)	5209																
				Weir (symbolized)	5210																
				Flood gate (at scale)	5211																
				Flood gate (symbolized)	5212																
				Wreck	5213																
				Anchorage Area	5214																
42_Related Features of Industry, Agriculture and Sociocultural Objects	Symbols	High tower	4201	✓																	
		Antenna Tower	4202		✓																
		Active Mine or Quarry	4203																		
		Inactive Mine or Quarry	4204																		
		Water Tank	4205																		
		Oil tank	4206																		
		Well	4207		✓																
		Power Transmission Lines	4208																		
		Cemetery, Christian	4209																		
		Cemetery, Muslim	4210																		
		Monument	4111																		
		Pipeline/underground	4215																		
Heliport	4217																				
Tunnel/Pit Mouth/Culvert	4218																				
Airport	4219																				
Disposal Area	4220																				

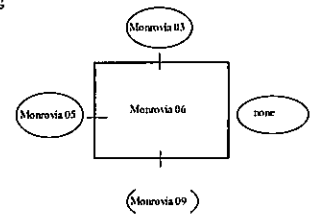


QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. Monrovia 07				Checked by <u>N. Jahingulaa</u>				Date: <u>15/4/09</u>											
Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription				
90_Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artic at Cut and Fill Embankment	6101		11-Boundaries	Boundary-National	1101					
	Land classification	9002			All weather more than 5m with med divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102					
	Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103					
	Elevation value	9004			Improved surface road	2117			Wall/ Fence	6104			Boundary-Zone	1104					
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Built-up Area	Houses, Buildings	3001		4	Track/4 wheel Drive	2118			Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301		Relief	71_Contour lines	Index Contour Line	7109		
		Prominent Building	3002			Footpath	2119		6			Boundary of Territory/Zone	6302				Intermediate Contour Line	7110	
		Ruins, non-wall building	3003			National Route Marker	2120					Rice Field	6303				Supplementary Contour Line	7111	
		Temporary housing	3005			Road, Under Construction	2121					Crop Land/Agricultural Land	6304				Depression, Index Contour Line	7112	
		Building-minium	3006			Garden Path	2122					Mangrove	6305			2	Depression, Intermediate Contour Line	7113	
		Public building	3501			Road, Underground	2123					Vineyard	6306				73_Geodetic Control Points	Horizontal Control Point	7305
		Post office	3501		Ferry/Ford	2124		Orchard	6307				Benchmark			7306			
		Hospital	3503		Side Walk	2225		Plantation	6308				Direct Levelling Point			7307			
		Power Plant, Sub-Station	3504		Tree Row	2226		Broadleaf Forest	6309				Spot Height			7308			
		Market/Prominent Store	3505		Grade Separation	2227		Bushes/Shrub	6310				Slope, Quarry, Depression & Cliff			Slope	7201		
	Embassy	3506	2	pedestrian overpass	2228		Grass Land	6311	6	Cliff/ Rock	7202								
	Theater/Cinema (Prominent)	3507		Bridge	2229	2	Swamp/Marsh	6312		Scattered Rocks	7203								
	Fire Station	3508		Foot Bridge	2230		Palms-independent	6314		Reef/Coral	7204								
	Hotel/Motel	3509		Stone Steps	2231		Sand	6315		Depression (shown at scale)	7205								
	Gas Station	3510		51_Hydrology & 52_ Water-related Structures	Canals, rivers and streams (double)	5101		Relief, 72_Slope, Quarry, Depression & Cliff	Slope, Quarry, Depression & Cliff	Hummock (at scale)	7206			Edge Matching	Edge Matching				
	Windmill	3511				Canals, rivers and streams (single)	5102				Hummock (symbol)	7207							
	School (elementary and high school)	3512			Indefinite/Dried Rivers and Streams (double)	5104				23_Railways	Railways/Normal gauge 4'8/12" (1435mm)-single track	2301							
	Church/Mission	3513			Indefinite/Dried Rivers and Streams (single)	5105					SWetracks	2305							
	Mosque	3514	2		Lake/Pond, Shoreline	5106					Railway Stations	2306							
	Police Station	3515			Pier/Jetty	5201													
Factory	3516		Wharf		5202														
Lighthouse	3517		Revetment		5203														
Warehouse	3518		Breakwater		5204														
Stadium (symbol)	3519		Flow Arrow		5205														
Stadium (at scale)	3520	2	Falls (double-line drainage)	5206															
			Fall (single-line drainage)	5207															
42_Related Features of Industry, Agriculture and Sociocultural Objects	Symbols	High tower	4201	4	Dam	5208													
		Antenna Tower	4202	6	weir (at scale)	5209													
		Active Mine or Quarry	4203		weir (symbolized)	5210													
		Inactive Mine or Quarry	4204		Flood gate(at scale)	5211													
		Water Tank	4205		Flood gate(symbolized)	5212													
		Oil tank	4206		Wreck	5213													
		Well	4207	3	Anchorage Area	5214													
		Power Transmission Lines	4208																
		Cemetery, Christian	4209																
		Cemetery, Muslim	4210																
Monument	4111																		
Pipeline/underground	4215																		
Heliport	4217																		
Tunnel/Pit Mouth/Culvert	4218																		
Airport	4219																		
Disposal Area	4220																		

QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

Sheet No. <u>Monrovia 06</u>				Checked by <u>/ Isakiguba</u>				Date: <u>15/4/09</u>														
Item		Code	Omission	Mdescription	Item		Code	Omission	Mdescription	Item		Code	Omission	Mdescription								
90_Geographical and other related features names		Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & fence	Artificial Coe and FA Embankment	6101		11-Boundaries	Boundary-National	1101							
		Land classificatio	9002			All weather more than 5m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102							
		Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103							
		Elevation value	9004			Improved surface road	2117			Wall Fence	6104			Boundary-Zone	1104							
Inhabited Area, 30_Buildings & 35_Building Classification Symbols		Houses, Buildings	3001			Transportation Features, 21_Roads & 22_Related-features	Track/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils			71_Contour lines									
		prominent Building	3002				Footpath	2119						Vegetation boundaries	6301		Index Contour Line	7109				
		Ruins, non-wall building	3003				National Route Marker	2120						Boundary of Territory/Zone	6302		Intermediate Contour Line	7110				
		Temporary housing	3005				Road, Under Construction	2121						Rice Field	6303		Supplementary Contour Line	7111				
		Building-medium	3006	2			Garden Path	2122						Crop Land/Agricultural Land	6304		Depression, Inksa Contour Line	7112				
		Public building	3501				Road, Underground	2123						Mangrove	6305		Depression, Intermediate Contour Line	7113				
		Post office	3501		Ferry/Ford		2124					Vineyard		6306								
		Hospital	3503		Sido Walk		2225					Orchard		6307								
		Power Plant, Sub-Station	3504		Tree Row		2226					Plantation		6308								
		Market/Prominent Store	3505		Grade Separation		2227					Broadleaf Forest		6309								
		Embassy	3506		pedestrian overpass		2228				Bushes/Shrub	6310										
		Theater/Cinema (Prominent)	3507		Bridge		2229				Grass Land	6311										
		Fire Station	3508		Foot Bridge		2230				Swamp/Marsh	6312	4									
		Hotel/Motel	3509		Stone Steps		2231				Palms-independent	6314	6									
		Gas Station	3510	2							Sand	6315										
Windmill	3511							Mud	6316													
Inhabited Area, 30_Buildings & 35_Building Classification Symbols		Warehouse	3518		51_Hydrology & 52_Water-related Structures	Canal, river and stream (double)	5101		Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201		73_Geodetic Control Points									
		Factory	3516			Canal, river and stream (single)	5102					Cliff/Rock		7202		Horizontal Control Point	7305					
		Lighthouse	3517			Indefinite/Dried Rivers and Streams (double)	5104					Scattered Rocks		7203		Benchmark	7306					
		Warehouse	3518			Indefinite/Dried Rivers and Streams (single)	5105					Reef/Coral		7204		Direct Leveling Point	7307					
		Stadium (symbol)	3519			Lake/Pond, Shoreline	5106					Depression (shown at scale)		7205		Spot Height	7308					
		Stadium (at scale)	3520			Pier/Jetty	5201					Hammock (at scale)		7206								
		42_Related Features of Industry, Agriculture and Sociocultural Objects		High tower		4201		51_Hydrology & 52_Water-related Structures		Wharf	5202			23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm) -single track	2301		Edge Matching				
				Antenna Tower		4202	3			Revetment	5203						Sidetracks		2305			
				Active Mine or Quarry		4203				Breakwater	5204						Railway Stations		2306			
				Inactive Mine or Quarry		4204				Flow Arrow	5205											
				Water Tank		4205			Falls (double-line drainage)	5206												
				Oil tank		4206			Fall (single-line drainage)	5207												
				Well		4207	4		Dam	5208												
				Power Transmission Lines		4208			Weir (at scale)	5209												
				Cemetery, Christian		4209			Weir (symbolized)	5210												
Cemetery, Muslim	4210				Flood gate(at scale)	5211																
Monument	4111				Flood gate(symbolized)	5212																
Pipeline/underground	4215				Wreck	5213																
Helipart	4217				Anchorage Area	5214																
Tunnel/Pit Mouth/Culvert	4218																					
Airport	4219																					
Disposal Area	4220																					



QUALITY CONTROL TABLE FOR DIGITAL PLOTTING AND COMPILATION

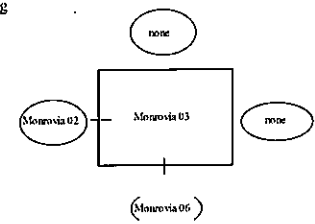
Sheet No. <u>Monrovia 03</u>				Checked by <u>S. Ishiguro</u>				Date: <u>12/9/09</u>								
Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	
90_Geographical and other related features names	Geographical name	9001			All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill /Embankment	6101		11_Boundaries	Boundary-National	1101		
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102		
	Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103		
	Elevation value	9004			Improved surface road	2117			Wall/ Fence	6104			Boundary-Zone	1104		
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001		Truck/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301		Relief	71_Contour lines	Index Contour Line	7109	
		prominent Building	3002		Track/4 wheel Drive	2118			Boundary of Territory/Zone	6302				Intermediate Contour Line	7110	
		Ruins, non-wall building	3003		Footpath	2119			Rice Field	6303				Supplementary Contour Line	7111	
		Temporary housing	3005		National Route Marker	2120			Crop Land/Agricultural Land	6304				Depression, Lake, Contour Line	7112	
		Building-minium	3006		Road, Under Construction	2121			Mangrove	6305				Depression, Intermediate Contour Line	7113	
		Public building	3501		Garden Path	2122			Vineyard	6306			73_Geodetic Control Points	Horizontal Control Point	7305	
		Post office	3501		Road, Underground	2123			Orchard	6307				Benchmark	7306	
		Hospital	3503		Ferry/Ford	2124			Plantation	6308				Direct Levelling Point	7307	
		Power Plant, Sub-Station	3504		Side Walk	2225			Broadleaf Forest	6309				Spot Height	7308	
		Market/Prominent Store	3505		Tree Row	2226			Bushes/Shrub	6310						
		Embassy	3506		Grade Separation	2227		Grass Land	6311	?						
		Theater/Cinema (Prominent)	3507		pedestrian overpass	2228		Swamp/Marsh (double)	6312	?						
		Fire Station	3508		Bridge	2229		Palms-independent	6314	?						
		Hotel/Motel	3509		Foot Bridge	2230		Sand	6315	?						
		Gas Station	3510		Stone Steps	2231		Mud	6316							
		Windmill	3511		51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)	5101		Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201					
		School	3512			Canals, rivers and streams (single)	5102			Cliff/ Rock	7202					
		Church/Mission	3513			Indefinite/Dried Rivers and Streams (double)	5104			Scattered Rocks	7203					
		Mosque	3514			Indefinite/Dried Rivers and Streams (single)	5105			Reef/Coral	7204					
		Police Station	3515			Lake/Pond, Shoreline	5106		Depression (shown at scale)	7205						
		Factory	3516			Pier/Jetty	5201		Hummock (at scale)	7206						
		Lighthouse	3517			Wharf	5202		Hummock (symbol)	7207						
		Warehouse	3518			Revetment	5203									
		Stadium (symbol)	3519			Breakwater	5204									
		Stadium (at scale)	3520			Flow Arrow	5205									
		42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower		4201		Falls (double-line drainage)	5206		23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm)-single track	2301		Edge Matching	
Antenna Tower	4202					Fall (single-line drainage)	5207		Sidetracks	2305						
Active Mine or Quarry	4203					Dam	5208		Railway Stations	2306						
Inactive Mine or Quarry	4204					weir (at scale)	5209									
Water Tank	4205					weir (symbolized)	5210									
Oil tank	4206					Flood gate(at scale)	5211									
Well	4207				Flood gate(symbol)	5212										
Power Transmission Lines	4208				Wreck	5213										
Cemetery, Christian	4209				Anchorage Area	5214										
Cemetery, Muslim	4210															
Monument	4111															
Pipeline/underground	4215															
Helipport	4217															
Tunnel/Pit Mouth/Culvert	4218															
Airport	4219															
Disposal Area	4220															

QUALITY CONTROL TABLE FOR SYMBOLIZATION

Sheet No. <u>Monrovia 02</u>				Checked by: <u>[Signature]</u> Date: <u>04/05/09</u>														
Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description			
90_Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill/Embankment	6101		11-Boundaries	Boundary-National	1101				
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102				
	Hydrology	9003	✓		Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103				
	Elevation value	9004			Improved surface road	2117			Wall/ Fence	6104			Boundary-Zone	1104				
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001		5	Track/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301	2	Relief	71_Contour lines	Index Contour Line	7109		
		prominent Building	3002		2	National Route Marker	2120				Boundary of Territory/Zone	6302				Intermediate Contour Line	7110	
		Reins, non-wall building	3003		2	Road, Under Construction	2121				Rice Field	6303				Supplementary Contour Line	7111	
		Temporary housing	3005			Garden Path	2122	5			Crop Land/Agricultural Land	6304			Depression Index Contour Line	7112		
		Building-minimum	3006		6	Road, Underground	2123				Mangrove	6305		2	Depression, Intermediate Contour Line	7113		
		Public building	3501			Ferry/Ford	2124				Vineyard	6306			73_Geodetic Control Points	Horizontal Control Point	7305	
		Post office	3501			Side Walk	2225				Orchard	6307				Benchmark	7306	
		Hospital	3503		✓	Tree Row	2226	10			Plantation	6308				Direct Leveling Point	7307	
		Power Plant, Sub-Station	3504			Grade Separation	2227				Broadleaf Forest	6309		7		Spot Height	7308	
		Market/Prominent Store	3505			pedestrian overpass	2228				Bushes/Shrub	6310			Edge Matching			
	Embassy	3506			Bridge	2229	5	Grass Land	6311	8								
	Theater, Cinema (Prominent)	3507			Foot Bridge	2230		Swamp/Marsh	6312									
	Fire Station	3508		Stone Steps	2231		Palms-independent	6314	10									
	Hotel/Motel	3509		51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)	5101	2	Sand	6315									
	Gas Station	3510	2		Canals, rivers and streams (single)	5102		Mud	6316									
	Windmill	3511			Indefinite/Dried Rivers and Streams (double)	5104	2	Slope	7201									
	School	3512	6		Indefinite/Dried Rivers and Streams (single)	5105		Cliff/ Rock	7202									
	Church/Mission	3513			Lake/Pond, Shoreline	5106		Scattered Rocks	7203									
	Mosque	3514	2		Pier/Jetty	5201		Reef/Coral	7204									
	Police Station	3515			Wharf	5202		Depression (shown at scale)	7205									
Factory	3516	✓	Revetment		5203		Hummock (at scale)	7206										
Lighthouse	3517		Breakwater		5204		Hummock (symbol)	7207										
Warehouse	3518		Flow Arrow		5205		23_Railways	Railways/Normal gauge 4 8/12" (1435mm)-single track	2301		Edge Matching							
Stadium (symbol)	3519		Falls (double-line drainage)	5206		Sidetracks			2305									
Stadium (at scale)	3520		Fall (single-line drainage)	5207		Railway Stations			2306									
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201		Dam	5208				Relief, 72_Slope, Quarry, Depression & Cliff		Slope, Quarry, Depression & Cliff	7201					
		Antenna Tower	4202	✓	weir (at scale)	5209												
		Active Mine or Quarry	4203		weir (symbolized)	5210												
		Inactive Mine or Quarry	4204		Flood gate(at scale)	5211												
		Water Tank	4205		Flood gate(symbol)	5212												
		Oil tank	4206		Wreck	5213												
		Well	4207	4	Anchorage Area	5214												
		Power Transmission Lines	4208															
	Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Cemetery, Christian	4209														
			Cemetery, Muslim	4210														
			Monument	4111														
			Pipeline/underground	4215														
			Helipport	4217														
			Tunnel/Pit Mouth/Culvert	4218														
			Airport	4219														
			Disposal Area	4220														

QUALITY CONTROL TABLE FOR SYMBOLIZATION

Sheet No. Monrovia 03				Checked by <u>[Signature]</u> Date: <u>04/05/16</u>															
Item	Code	Omission	Description	Item	Code	Omission	Description	Item	Code	Omission	Description	Item	Code	Omission	Description				
90_Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill /Embankment	6101		11-Boundaries	Boundary-National	1101					
	Land classification	9002			All weather more than 5m with road divider at the center (skewed at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102					
	Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103					
	Elevation value	9004			Improved surface road	2117			Wall/ Fence	6104	6		Boundary-Zone	1104					
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001			Land Classification, 63_Vegetation Covers & Soils	Track/4 wheel Drive		2118		Relief, 72_Slope, Quarry, Depression & Cliff	71_Contour lines	Vegetation boundaries	6301		Index Contour Line	7109		
		prominent Building	3002				National Route Marker		2120				Boundary of Territory/Zone	6302		Intermediate Contour Line	7110		
		Ruins, non-wall building	3003				Road, Under Construction		2121				Rice Field	6303		Supplementary Contour Line	7111		
		Temporary housing	3005				Garden Path		2122				Crop Land/Agricultural Land	6304		Depression, Index Contour Line	7112		
		Building-minimum	3006				Road, Underground		2123	/			Mangrove	6305		Depression, Intermediate Contour Line	7113		
		Public building	3501				Ferry/Ford		2124				Vineyard	6306		73_Geodetic Control Points	Horizontal Control Point	7305	
		Post office	3501				Side Walk		2225				Orchard	6307			Benchmark	7306	
		Hospital	3503				Tree Row		2226				Plantation	6308			Direct Leveling Point	7307	
		Power Plant, Sub-Station	3504		Grade Separation		2227		Broadleaf Forest	6309				Spot Height	7308				
		Market/Prominent Store	3505		pedestrian overpass		2228		Busies/Shrub	6310									
		Embassy	3506		Bridge		2229		Grass Land	6311									
		Theater/Cinema (Prominent)	3507		Foot Bridge		2230		Swamp/Marsh	6312									
		Fire Station	3508		Stone Steps	2231		Palms-independent	6314										
		Hotel/Motel	3509		51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)	5101		Sand	6315									
		Gas Station	3510	2		Canals, rivers and streams (single)	5102		Mud	6316									
		Windmill	3511			Indefinite/Dried Rivers and Streams (double)	5104		Slope	7201									
		School	3512			Indefinite/Dried Rivers and Streams (single)	5105		Cliff/ Rock	7202									
		Church/Mission	3513			Lake/Pond, Shoreline	5106		Scattered Rocks	7203									
		Mosque	3514	/		Pier/jetty	5201		Reef/Coral	7204									
		Police Station	3515			Wharf	5202		Depression (shown at scale)	7205									
Factory	3516		Revetment	5203			Hummock (at scale)	7206											
Lighthouse	3517		Breakwater	5204			Hummock (symbol)	7207											
Warehouse	3518		Flow Arrow	5205		/													
Stadium (symbol)	3519		Falls (double-line drainage)	5206															
Stadium (at scale)	3520		Fall (single-line drainage)	5207															
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201		Dam	5208		23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm) - single track	2301		Edge Matching							
		Antenna Tower	4202	/	weir (at scale)	5209			Sidetracks	2305									
		Active Mine or Quarry	4203		weir (symbolized)	5210			Railway Stations	2306									
		Inactive Mine or Quarry	4204		Flood gate(at scale)	5211													
		Water Tank	4205		Flood gate(symbol)	5212													
		Oil tank	4206		Wreck	5213													
		Well	4207		Anchorage Area	5214													
		Power Transmission Lines	4208																
		Cemetery, Christian	4209																
		Cemetery, Muslim	4210																
		Monument	4111																
		Pipeline/underground	4215																
		Helipport	4217																
		Tunnel/Pit Mouth/Culvert	4218																
Airport	4219																		
Disposal Area	4220																		

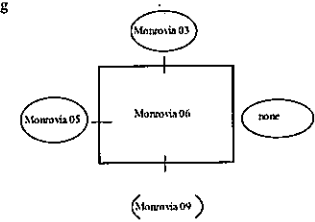


QUALITY CONTROL TABLE FOR SYMBOLIZATION

Sheet No. Monrovia 04				Checked by <u>[Signature]</u> Date: <u>04/05/10</u>																				
Item	Code	Omission	Description	Item	Code	Omission	Description	Item	Code	Omission	Description	Item	Code	Omission	Description									
90_Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill /Embankment	6101		11-Boundaries	Boundary-National	1101										
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102										
	Hydrology	9003			Dry Weather Road	2116	2		Retaining wall	6103			Boundary-District	1103										
	Elevation value	9004			Improved surface road	2117			Wall/ Fence	6104	6		Boundary-Zone	1104										
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001		3	Track/4 wheel Drive	2118			Land Classification, 63_Vegetation Covers & Soils				71_Contour lines	Index Contour Line	7109								
		prominent Building	3002			Footpath	2119		4						National Route Marker	2120		Intermediate Contour Line	7110					
		Ruins, non-wall building	3003			National Route Marker	2120								Road, Under Construction	2121		Supplementary Contour Line	7111					
		Temporary housing	3005			Garden Path	2122								Road, Under Construction	2121		Depression, Intermediate Contour Line	7112					
		Building-minimum	3006		6	Road, Under Construction	2121								Grade Separation	2227		Depression, Intermediate Contour Line	7113					
		Public building	3501			pedestrian overpass	2228								Bridge	2229	2	Horizontal Control Point	7305					
		Post office	3501			Bridge	2229								Foot Bridge	2230		Benchmark	7306					
		Hospital	3503		2	Stone Steps	2231								Stone Steps	2231		Direct Leveling Point	7307					
		Power Plant, Sub-Station	3504			51_Hydrology & 52_Water-related Structures	Canals, rivers and streams (double)		5101						Relief, 72_Slope, Quarry, Depression & Cliff					73_Geodetic Control Points	Spot Height	7308		
		Market/Prominent Store	3505				Canals, rivers and streams (single)		5102					2							Slope	7201		Edge Matching
	Embassy	3506	1		Indefinite/Dried Rivers and Streams (double)		5104							Cliff/ Rock							7202			
	Theater/Cinema (Prominent)	3507			Indefinite/Dried Rivers and Streams (single)		5105							Scattered Rocks							7203			
	Fire Station	3508		Lake/Pond, Shoreline	5106			Reef/Coral	7204															
	Hotel/Motel	3509		Pier/jetty	5201			Depression (shown at scale)	7205															
	Gas Station	3510	2	Wharf	5202			Hummock (at scale)	7206															
	Windmill	3511		Revetment	5203			Hummock (symbol)	7207															
	School	3512	4	Breakwater	5204			23_Railways																
	Church/Mission	3513		Flow Arrow	5205																			
	Mosque	3514		Falls (double-line drainage)	5206																			
	Police Station	3515		Fall (single-line drainage)	5207																			
Factory	3516	1	Dam	5208																				
Lighthouse	3517		weir (at scale)	5209																				
Warehouse	3518		weir (symbolized)	5210																				
Stadium (symbol)	3519		Flood gate(at scale)	5211																				
Stadium (at scale)	3520		Flood gate(symbol)	5212																				
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201	2	Wreck	5213							23_Railways											
		Antenna Tower	4202	4	Anchorage Area	5214																		
		Active Mine or Quarry	4203		Railways/Normal gauge 4' 8 1/2" (1435mm) - single track	2301																		
		Inactive Mine or Quarry	4204			Sidetracks	2305																	
		Water Tank	4205	3		Railway Stations	2306																	
		Oil tank	4206			Edge Matching																		
		Well	4207	7																				
		Power Transmission Lines	4208																					
		Cemetery, Christian	4209																					
		Cemetery, Muslim	4210																					
		Monument	4111																					
		Pipeline/underground	4215																					
Heliport	4217																							
Tunnel/Pit Mouth/Culvert	4218																							
Airport	4219																							
Disposal Area	4220																							

QUALITY CONTROL TABLE FOR SYMBOLIZATION

Sheet No. <u>Monrovia 06</u>				Checked by <u>Awat</u>				Date: <u>05/05/19</u>								
Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description	
90. Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101		11-Boundaries	Boundary-National	1101		
	Land classificatio	9002			All weather more than 3m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102		
	Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103		
	Elevation value	9004			Improved surface road	2117			Wall/Fence	6104			Boundary-Zone	1104		
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Houses, Buildings	3001	6		Track/4 wheel Drive	2118										
	Prominent Building	3002			Footpath	2119										
	Ruins, rene-wall building	3003			National Route Marker	2120										
	Temporary housing	3005			Road, Under Construction	2121										
	Building-minimum	3006			Garden Path	2122										
	Public building	3501	7		Road, Underground	2123										
	Post office	3501			Ferry/Ford	2124										
	Hospital	3503	8		Side Walk	2225										
	Power Plant, Sub-Station	3504			Tree Row	2226										
	Market/Prominent Store	3505			Grade Separation	2227										
	Embassy	3506			pedestrian overpass	2228										
	Theater/Cinema (Prominent)	3507			Bridge	2229										
	Fire Station	3508		Foot Bridge	2230											
	Hotel/Motel	3509		Stone Steps	2231											
	Gas Station	3510	9	51_Hydrology & 52_Water-related Structures	Canal, rivers and streams (double)	5101										
	Windmill	3511			Canal, rivers and streams (single)	5102										
	School (Elementary and high school)	3512			Indefinite/Dried Rivers and Streams (double)	5104										
	Church/Mission	3513	10		Indefinite/Dried Rivers and Streams (single)	5105										
	Mosque	3514			Lake/Pond, Shordine	5106										
	Police Station	3515			Pier/Jetty	5201										
Factory	3516		Wharf		5202											
Lighthouse	3517		Revetment		5203											
Warehouse	3518		Breakwater		5204											
Stadium (symbol)	3519		Flow Arrow		5205											
Stadium (at scale)	3520		Falls (double-line drainage)		5206											
42_Related Features of Industry, Agriculture and Sociocultural Objects	High tower	4201			Fall (single-line drainage)	5207										
	Antenna Tower	4202			Dam	5208										
	Active Mine or Quarry	4203			weir (at scale)	5209										
	Inactive Mine or Quarry	4204			weir (symbolized)	5210										
	Water Tank	4205			Flood gate(at scale)	5211										
	Oil tank	4206		Flood gate(symbolized)	5212											
	Well	4207		Wreck	5213											
	Power Transmission Lines	4208		Anchorage Area	5214											
	Cemetery, Christian	4209														
	Cemetery, Muslim	4210														
	Monument	4111														
	Pipeline/underground	4215														
	Heliprot	4217														
	Tunnel/Pit Mouth/Culvert	4218														
Airport	4219															
Disposal Area	4220															
23_Railways	Edge Matching															



QUALITY CONTROL TABLE FOR SYMBOLIZATION

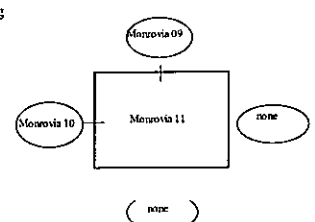
Sheet No. <u>Monrovia 08</u>				Checked by <u>[Signature]</u> Date: <u>06/05/09</u>															
Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription	Item	Code	Omission	Misdescription				
90_Geographical and other related features names	Geographical name	9001			All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101		11-Boundaries	Boundary-National	1101				
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115				Earth Embankment	6102			Boundary-City, County	1102				
	Hydrology	9003			Dry Weather Road	2116				Retaining wall	6103			Boundary-District	1103				
	Elevation value	9004			Improved surface road	2117				Wall/ Fence	6104			Boundary-Zone	1104				
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001		Transportation Features, 21_Roads & 22_Related-features	Track/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301		71_Contour lines	Index Contour Line	7109				
		Prominent Building	3002			Footpath	2119				Boundary of Territory/Zone	6302			Intermediate Contour Line	7110			
		Ruins, non-wall building	3003			National Route Marker	2120				Rice Field	6303			Supplementary Contour Line	7111			
		Temporary housing	3005			Road, Under Construction	2121				Crop Land/Agricultural Land	6304			Depression, Index Contour Line	7112			
		Building-minimum	3006			Garden Path	2122				Mangrove	6305			Depression, Intermediate Contour Line	7113			
		Public building	3501			Road, Underground	2123				Vineyard	6306							
		Post office	3501			Ferry/Ford	2124				Orchard	6307			73_Geodetic Control Points	Horizontal Control Point	7305		
		Hospital	3503			Side Walk	2225				Plantation	6308				Benchmark	7306		
		Power Plant, Sub-Station	3504			Tree Row	2226				Broadleaf Forest	6309				Direct Leveling Point	7307		
		Market/Prominent Store	3505			Grade Separation	2227				Bushes/Shrub	6310				Spot Height	7308		
		Embassy	3506			pedestrian overpass	2228			Grass Land	6311								
		Theater/Cinema (Prominent)	3507			Bridge	2229			Swamp/Marsh	6312								
		Fire Station	3508			Foot Bridge	2230			Palm-independent	6314								
		Hotel/Motel	3509			Stone Steps	2231			Sand	6315								
		Gas Station	3510							Mud	6316								
		Windmill	3511																
		School (elementary and high school)	3512																
		Church/Mission	3513																
		Mosque	3514																
		Police Station	3515																
Factory	3516																		
Lighthouse	3517																		
Warehouse	3518																		
Stadium (symbol)	3519																		
Stadium (at scale)	3520																		
42_Related Features of Industry, Agriculture and Sociocultural Objects	Symbols	High tower	4201		51_Hydrology & 52_Water-related Structures	Crack, river and stream (double)	5101		Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201		Edge Matching						
		Antenna Tower	4202			Crack, river and stream (single)	5102			Cliff/Rock	7202								
		Active Mine or Quarry	4203			Indefinite/Dried Rivers and Streams (double)	5104			Scattered Rocks	7203								
		Inactive Mine or Quarry	4204			Indefinite/Dried Rivers and Streams (single)	5105			Reef/Coral	7204								
		Water Tank	4205			Lake/Pond, Shoreline	5106			Depression (shown at scale)	7205								
		Oil tank	4206			Pier/Jetty	5201			Hummock (at scale)	7206								
		Well	4207			Wharf	5202			Hummock (symbol)	7207								
		Power Transmission Lines	4208			Revelment	5203												
		Cemetery, Christian	4209			Breakwater	5204												
		Cemetery, Muslim	4210			Flow Arrow	5205												
		Monument	4111			Falls (double-line drainage)	5206												
		Pipeline/underground	4215			Fall (single-line drainage)	5207												
		Helipad	4217			Dam	5208												
		Tunnel/Pit Mouth/Culvert	4218			Weir (at scale)	5209												
		Airport	4219			Weir (symbolized)	5210												
		Disposal Area	4220			Flood gate(at scale)	5211												
						Flood gate(symbolized)	5212												
						Wreck	5213												
				Anchorage Area	5214														

QUALITY CONTROL TABLE FOR SYMBOLIZATION

Sheet No. Monrovia 09				Checked by <u>Shumb</u> Date: <u>07/05/09</u>																							
Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description	Item	Code	Omission	M/description												
90_Geographical and other related features names	Geographical name	9001		Transportation Features, 21_Roads & 22_Related-features	All weather more than 5m	2114		Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101		11-Boundaries	Boundary-National	1101													
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115			Earth Embankment	6102			Boundary-City, County	1102													
	Hydrology	9003			Dry Weather Road	2116			Retaining wall	6103			Boundary-District	1103													
	Elevation value	9004			Improved surface road	2117			Wall/Fence	6104			Boundary-Zone	1104													
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001			Track/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils	Vegetation boundaries	6301		Relief	71_Contour lines	Index Contour Line	7109											
		prominent Building	3002		✓	Footpath	2119	✓			Boundary of Territory/Zone	6302				Intermediate Contour Line	7110										
		Ruins, non-wall building	3003			National Route Marker	2120				Rice Field	6303				Supplementary Contour Line	7111										
		Temporary housing	3005			Road, Under Construction	2121				Crop Land/Agricultural Land	6304				Depression Index Contour Line	7112										
		Building-minimum	3006			Garden Path	2122				Mangrove	6305				Depression, Intermediate Contour	7113										
		Public building	3501			Road, Underground	2123				Vineyard	6306				73_Geodetic Control Points	Horizontal Control Point	7305									
		Post office	3501		Ferry/Ford	2124		Orchard			6307				Benchmark		7306										
		Hospital	3503		Side Walk	2225		Plantation			6308				Direct Leveling Point		7307										
		Power Plant, Sub-Station	3504		Tree Row	2226	∞	Bandakof Forest			6309				Spot Height		7308										
		Market/Prominent Store	3505		Grade Separation	2227		Bushes/Shrub			6310				72_Relief, Depression & Cliff	Slope, Quarry, Depression & Cliff	Slope	7201									
	Embassy	3506		pedestrian overpass	2228		Grass Land	6311		CR/Rock	7202																
	Theater/Cinema (Prominent)	3507		Bridge	2229		Swamp/Marsh	6312		Scattered Rocks	7203																
	Fine Station	3508		Foot Bridge	2230		Palms-Independent	6314		Reef/Coral	7204																
	Hotel/Motel	3509		Stone Steps	2231		Sand	6315		Depression (shown at scale)	7205																
	Gas Station	3510		51_Hydrology & 52_Water-related Structures	Canal, race and stream (double)	5101		Mud	6316		Hummock (at scale)	7206															
	Windmill	3511				Canal, race and stream (single)	5102		Hummock (symbol)	7207		23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm)-single track	2301													
	School/Elementary and high school	3512			Indefinite/Dried Rivers and Streams (double)		5104		Edge Matching		Railway Stations			2306													
	Church/Mission	3513			Indefinite/Dried Rivers and Streams (single)	5105		23_Railways						Skeletal tracks				2305									
	Mosque	3514			Lake/Pond, Shoreline	5106												23_Railways	Railway Stations	2306							
	Police Station	3515			Pier/Jetty	5201									23_Railways	Railway Stations	2306										
Factory	3516		Wharf		5202		23_Railways										Railway Stations			2306							
Lighthouse	3517		Revetment		5203															23_Railways	Railway Stations	2306					
Warehouse	3518		Breakwater		5204																	23_Railways	Railway Stations	2306			
Stadium (symbol)	3519		Flow Arrow		5205																			23_Railways	Railway Stations	2306	
Stadium (at scale)	3520		Falls (double-line drainage)	5206		23_Railways																				Railway Stations	2306
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201		Fall (single-line drainage)							5207															23_Railways
		Antenna Tower	4202		Dam				5208		23_Railways	Railway Stations	2306														
		Active Mine or Quarry	4203		weir (at scale)			5209		23_Railways			Railway Stations	2306													
		Inactive Mine or Quarry	4204		weir (symbolized)			5210						23_Railways				Railway Stations	2306								
		Water Tank	4205		Flood gate(at scale)			5211							23_Railways	Railway Stations			2306								
		Oil tank	4206		Flood gate(symbolized)		5212		23_Railways								Railway Stations		2306								
		Well	4207	✓	Wreck		5213												23_Railways	Railway Stations	2306						
		Power Transmission Lines	4208		Anchorage Area		5214														23_Railways	Railway Stations	2306				
		Cemetery, Christian	4209																				23_Railways	Railway Stations	2306		
		Cemetery, Muslim	4210					23_Railways																	Railway Stations	2306	
Monument	4111					23_Railways	Railway Stations																			2306	
Pipeline/underground	4215										23_Railways	Railway Stations														2306	
Heliport	4217									23_Railways			Railway Stations													2306	
Tunnel/Pit Mouth/Culvert	4218													23_Railways				Railway Stations								2306	
Airport	4219														23_Railways	Railway Stations										2306	
Disposal Area	4220								23_Railways								Railway Stations									2306	

QUALITY CONTROL TABLE FOR DIGITAL COMPILATION

Sheet No. <u>Monrovia 11</u>				Checked by <u>DeVada</u> Date: <u>08/06/09</u>																	
Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription	Item	Code	Omission	Mdescription						
90_Geographical and other related features names	Geographical name	9001			All weather more than 5m	2114			Land Classification, 61_Slope & Fence	Artificial Cut and Fill Embankment	6101			11-Boundaries	Boundary-National	1101					
	Land classification	9002			All weather more than 5m with road divider at the center (shown at scale)	2115				Earth Embankment	6102				Boundary-City, County	1102					
	Hydrology	9003			Dry Weather Road	2116				Retaining wall	6103				Boundary-District	1103					
Elevation value	9004			Improved surface road	2117			Wall/ Fence		6104			Boundary-Zone		1104						
Inhabited Area, 30_Buildings & 35_Building Classification Symbols	Buildings and Build-up Area	Houses, Buildings	3001			Track/4 wheel Drive	2118		Land Classification, 63_Vegetation Covers & Soils	Vegetation botanicals	6301			71_Contour Lines	Index Contour Line	7109					
		prominent Building	3002			Footpath	2119				Boundary of Territory/Zone	6302				Intermediate Contour Line	7110				
		Ruins, non-wall building	3003			National Route Marker	2120				Rice Field	6303				Supplementary Contour Line	7111				
		Temporary housing	3005			Road, Under Construction	2121				Crop Land/Agricultural Land	6304				Depression, Index Contour Line	7112				
		Building-medium	3006			Garden Path	2122				Mangrove	6305				Depression, Intermediate Contour Line	7113				
		Public building	3501			Road, Underground	2123				Vineyard	6306									
		Post office	3501			Ferry/Ford	2124				Orchard	6307									
		Hospital	3503			Sidle Walk	2225				Plantation	6308									
		Power Plant, Sub-Station	3504			Tree Row	2226				Broadleaf Forest	6309									
		Market/Prominent Store	3505			Grade Separation	2227				Bushes/Shrub	6310									
		Embassy	3506			pedestrian overpass	2228			Grass Land	6311										
		Theater/Cinema (Prominent)	3507			Bridge	2229			Swamp/Marsh	6312										
		Fire Station	3508			Foot Bridge	2230			Palms-independent	6314										
		Hotel/Motel	3509			Stone Steps	2231			Sand	6315										
		Gas Station	3510							Mud	6316										
		Wardmill	3511																		
		School (elementary and high school)	3512																		
		Church/Mission	3513																		
		Mosque	3514																		
		Police Station	3515																		
Factory	3516																				
Lighthouse	3517																				
Warehouse	3518																				
Stadium (symbol)	3519																				
Stadium (at scale)	3520																				
42_Related Features of Industry, Agriculture & Sociocultural Objects	Symbols	High tower	4201						Relief, 72_Slope, Quarry, Depression & Cliff	Slope	7201			73_Geodetic Control Points	Horizontal Control Point	7305					
		Antenna Tower	4202							Cliff Rock	7202					Benchmark	7306				
		Active Mine or Quarry	4203							Scattered Rocks	7203					Direct Leveling Point	7307				
		Inactive Mine or Quarry	4204							Reef/Coral	7204					Spot Height	7308				
		Water Tank	4205							Depression (shown at scale)	7205										
		Oil tank	4206							Hummock (at scale)	7206										
		Well	4207							Hummock (symbol)	7207										
		Power Transmission Lines	4208																		
		Cemetery, Christian	4209																		
		Cemetery, Muslim	4210																		
		Monument	4111																		
		Pipeline/underground	4215																		
		Helipad	4217																		
		Tunnel/Pit Mouth/Culvert	4218																		
		Airport	4219																		
		Disposal Area	4220																		
		51_Hydrology & 52_Water-related Structures									23_Railways	Railways/Normal gauge 4'8 1/2" (1435mm)-single track	2301			Edge Matching					
													Sidetracks	2305							
													Railway Stations	2306							



QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 01

Checked by: 李 同 敬 文 Date: 28 / 05 / 09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	
							Digitalizing classification		/	✓
							Accuracy classification		/	✓
							Annotation classification		/	✓
							Dislocation classification		/	✓

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 02

Checked by: 李同敬 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	/		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	—
							Digitalizing classification		/	✓
							Accuracy classification		/	✓
							Annotation classification		/	✓
							Dislocation classification		/	✓

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 03

Checked by: 李用波 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphiclal segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	—
				/			Digitalizing classificatio		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classification		/	✓
				/			Dislocation classificatio		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 04

Checked by: 原田敬文 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Each record	/	✓	Record layer type	Map classification	Each record	/	✓	
			Created date and time	/		✓		Record type	/	✓
			Surveyed date and time	/		✓		Used data type	/	✓
			Geodetic reference	/		✓		Direction	/	✓
			<i>Project</i>	/		✓		Graphical segment	/	✓
	Element		Created date and time	/		✓		Coordinate	/	✓
			Grid	/		✓		Group processing	/	✓
			Annotation	/		✓		Dislocation processing	/	✓
			Coordinates	/		✓		Break line processing	/	—
				/				Digitalizing classification	/	✓
				/				Accuracy classification	/	✓
				/				Annotation classification	/	✓
				/				Dislocation classification	/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 05

Checked by: 李田敬文 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	
				/			Digitalizing classification		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classification		/	✓
				/			Dislocation classification		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 06

Checked by: 岸田敬史 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Each record	/	✓	Record layer type	Map classification	Each record	/	✓	
			Created date and time	/		✓		Record type	/	✓
			Surveyed date and time	/		✓		Used data type	/	✓
			Geodetic reference	/		✓		Direction	/	✓
			<i>Project Name</i>	/		✓		Graphical segment	/	✓
	Element		Created date and time	/		✓		Coordinate	/	✓
			Grid	/		✓		Group processing	/	✓
			Annotation	/		✓		Dislocation processing	/	✓
			Coordinates	/		✓		Break line processing	/	
				/				Digitalizing classification	/	✓
				/				Accuracy classification	/	✓
				/				Annotation classification	/	✓
				/				Dislocation classification	/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 07

Checked by: *[Signature]* Date: 08/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	
				/			Digitalizing classificatio		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classification		/	✓
				/			Dislocation classificatio		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 08

Checked by: *[Signature]* Date: *28/05/09*

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	
				/			Digitalizing classificatio		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classificatio		/	✓
				/			Dislocation classificatio		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 09

Checked by: *李田敬文* Date: *28/05/09*

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphical segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	✓
				/			Digitalizing classificatio		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classificatio		/	✓
				/			Dislocation classificatio		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 10

Checked by: *李田敬* Date: *28/05/09*

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Mapping Scale	Each record	/	✓	Record layer type	Map classification	Each record	/	✓
		Created date and time		/	✓		Record type		/	✓
		Surveyed date and time		/	✓		Used data type		/	✓
		Geodetic reference		/	✓		Direction		/	✓
		<i>Project Name</i>		/	✓		Graphiclal segment		/	✓
	Element	Created date and time		/	✓		Coordinate		/	✓
		Grid		/	✓		Group processing		/	✓
		Annotation		/	✓		Dislocation processing		/	✓
		Coordinates		/	✓		Break line processing		/	
				/			Digitalizing classificatio		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classification		/	✓
				/			Dislocation classificatio		/	✓
				/					/	

QUALITY CONTROL TABLE FOR DATA FILE

Project name : The Master Plan on Urban Restoration and Improvement in Monrovia in Th eRepublic of Liberia

Sheet No. : Monrovia 11

Checked by: 曾田敬史 Date: 28/05/09

Item	Details	Coverage	Checking method		Item	Details	Coverage	Checking method		
			logic check	visual check				logic check	visual check	
Record Descriptive Content	Marginal information	Each record	Mapping Scale	/	✓	Record layer type	Map classification	Each record	/	✓
			Created date and time	/	✓		Record type		/	✓
			Surveyed date and time	/	✓		Used data type		/	✓
			Geodetic reference	/	✓		Direction		/	✓
			<i>Project Name</i>	/	✓		Graphical segment		/	✓
	Element		Created date and time	/	✓		Coordinate		/	✓
			Grid	/	✓		Group processing		/	✓
			Annotation	/	✓		Dislocation processing		/	✓
			Coordinates	/	✓		Break line processing		/	
				/			Digitalizing classification		/	✓
				/			Accuracy classification		/	✓
				/			Annotation classification		/	✓
				/			Dislocation classification		/	✓
				/					/	