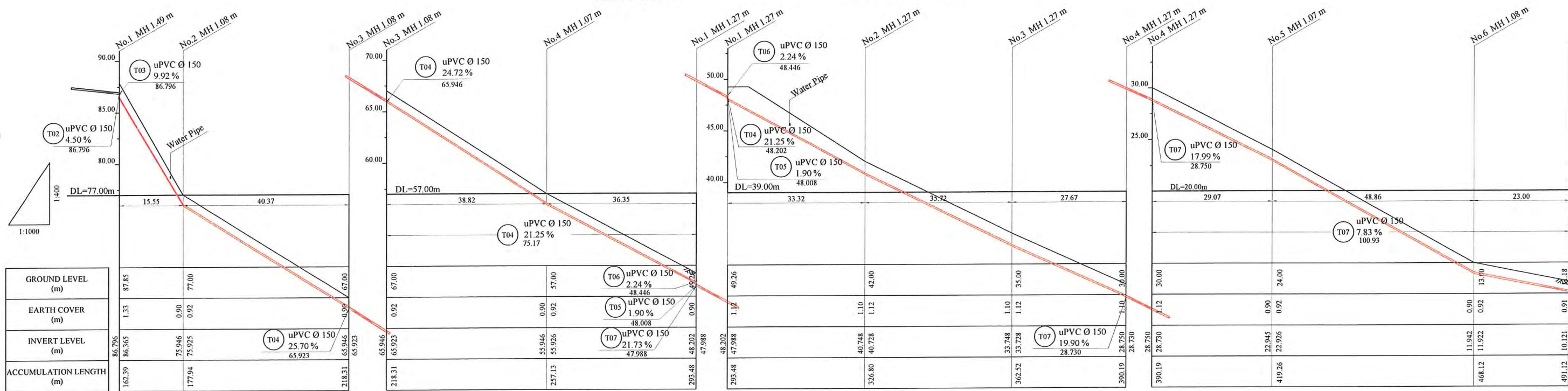


PLAN VIEW
Scale : 1:1000



PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

TITLE: Branch Sewer Pipe Plan and Profile (Touaguba_T4,T7)

CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

REVISIONS		
REV.	DATE	DESCRIPTION

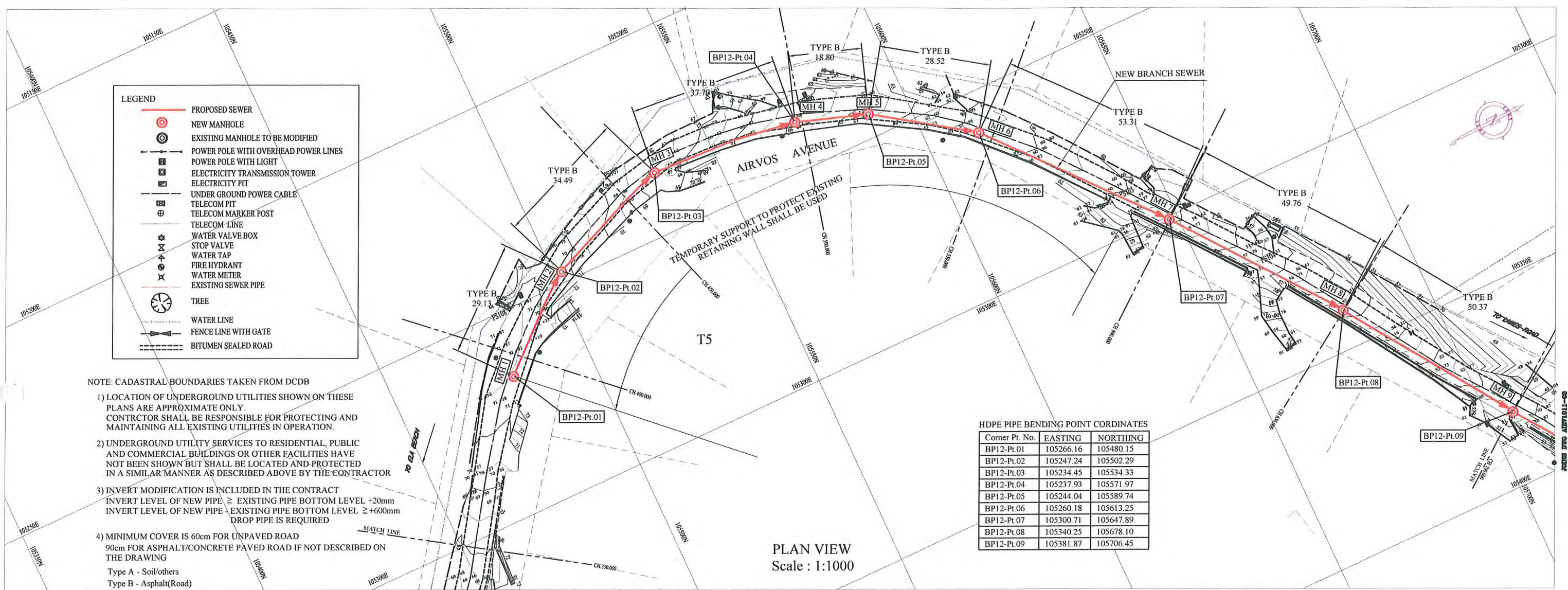
APPROVED by PMU:
 Project Director
 Lot G.Zauya

CHECKED by CONSULTANT
 Project Manager
 T. Fuji

DATE: 1. Dec 2011

SCALE: 1/1000

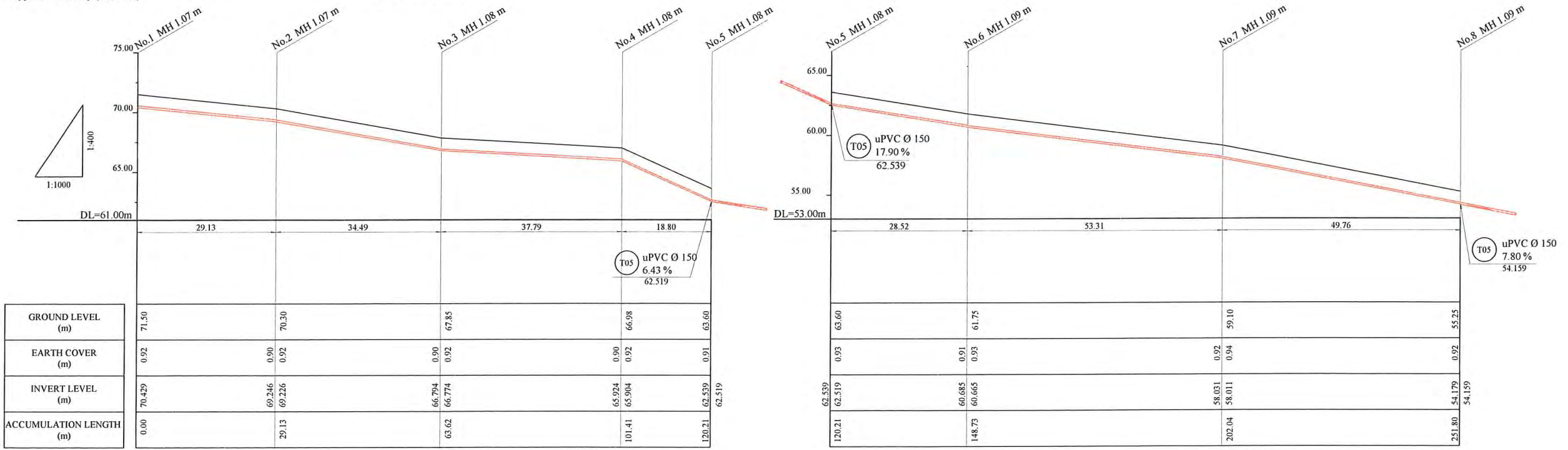
DRAWING NO.: BP-11



HDPE PIPE BENDING POINT CORDINATES

Corner Pt. No.	EASTING	NORTHING
BP12-Pt.01	105266.16	105480.15
BP12-Pt.02	105247.24	105502.29
BP12-Pt.03	105234.45	105534.33
BP12-Pt.04	105237.93	105571.97
BP12-Pt.05	105244.04	105589.74
BP12-Pt.06	105260.18	105613.25
BP12-Pt.07	105300.71	105647.89
BP12-Pt.08	105340.25	105678.10
BP12-Pt.09	105381.87	105706.45

- NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB
- 1) LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
 - 2) UNDERGROUND UTILITY SERVICES TO RESIDENTIAL, PUBLIC AND COMMERCIAL BUILDINGS OR OTHER FACILITIES HAVE NOT BEEN SHOWN BUT SHALL BE LOCATED AND PROTECTED IN A SIMILAR MANNER AS DESCRIBED ABOVE BY THE CONTRACTOR
 - 3) INVERT MODIFICATION IS INCLUDED IN THE CONTRACT
 INVERT LEVEL OF NEW PIPE \geq EXISTING PIPE BOTTOM LEVEL +20mm
 INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL \geq +600mm
 DROP PIPE IS REQUIRED
 - 4) MINIMUM COVER IS 60cm FOR UNPAVED ROAD
 90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
 Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)



PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

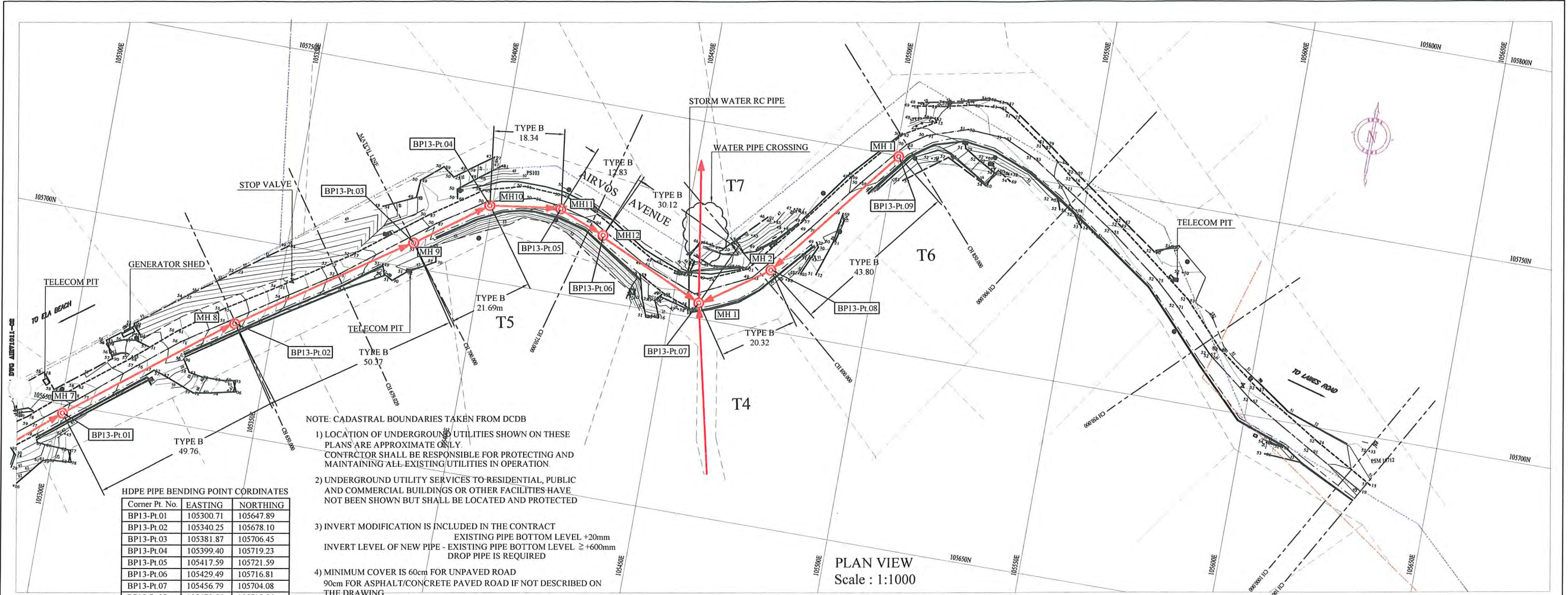
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

TITLE: Branch Sewer Pipe Plan and Profile (Touaguba_T5-1/2)

NOTES:

REVISIONS			APPROVED BY PMU:	DATE:	SCALE:
REV	DATE	DESCRIPTION			
			Project Director Lot G.Zauya	1. Dec 2011	1/1000
			CHECKED BY CONSULTANT Project Manager T.Fuji	1. Dec 2011	DRAWING NO.: BP-12



NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB

- 1) LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
- 2) UNDERGROUND UTILITY SERVICES TO RESIDENTIAL, PUBLIC AND COMMERCIAL BUILDINGS OR OTHER FACILITIES HAVE NOT BEEN SHOWN BUT SHALL BE LOCATED AND PROTECTED
- 3) INVERT MODIFICATION IS INCLUDED IN THE CONTRACT
 EXISTING PIPE BOTTOM LEVEL +20mm
 INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL \geq +600mm
 DROP PIPE IS REQUIRED
- 4) MINIMUM COVER IS 60cm FOR UNPAVED ROAD
 90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING

Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)

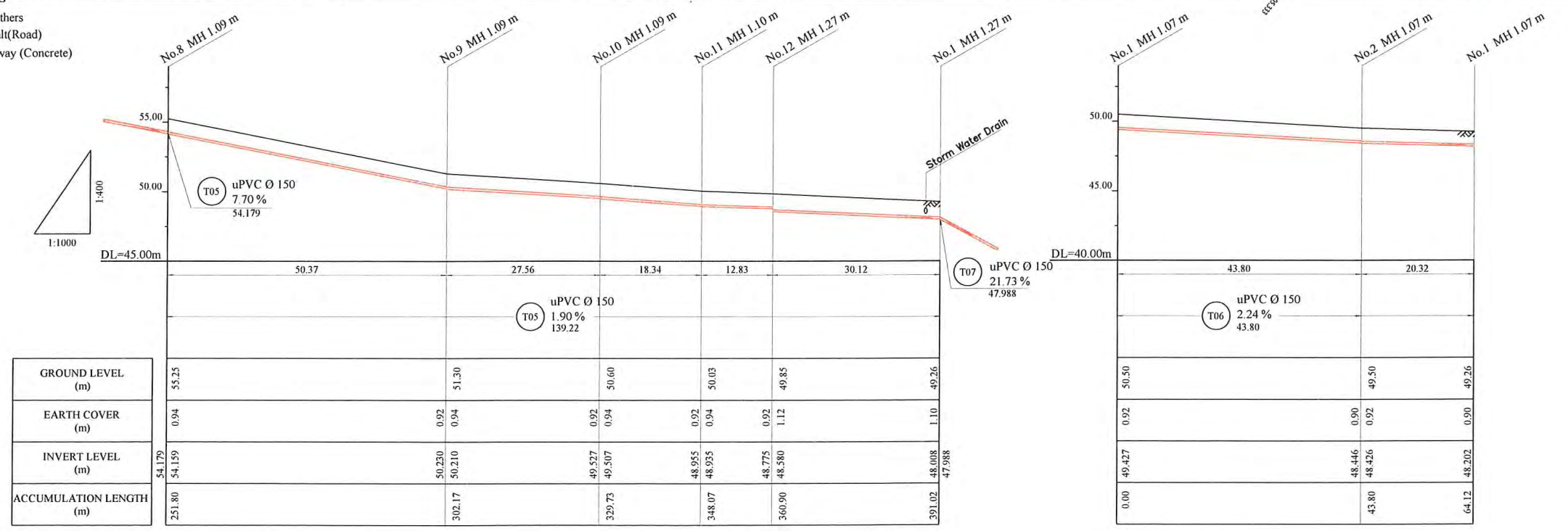
HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP13-Pt.01	105300.71	105647.89
BP13-Pt.02	105340.25	105678.10
BP13-Pt.03	105381.87	105706.45
BP13-Pt.04	105399.40	105719.23
BP13-Pt.05	105417.59	105721.59
BP13-Pt.06	105429.49	105716.81
BP13-Pt.07	105456.79	105704.08
BP13-Pt.08	105473.56	105715.56
BP13-Pt.09	105500.80	105749.86

PLAN VIEW
 Scale : 1:1000

LEGEND

- PROPOSED SEWER
- ⊙ NEW MANHOLE
- ⊙ EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
- ⊠ ELECTRICITY TRANSMISSION TOWER
- ⊠ ELECTRICITY PIT
- UNDER GROUND POWER CABLE
- ⊠ TELECOM PIT
- ⊠ TELECOM MARKER POST
- TELECOM LINE
- ⊠ WATER VALVE BOX
- ⊠ STOP VALVE
- ⊠ WATER TAP
- ⊠ FIRE HYDRANT
- ⊠ WATER METER
- EXISTING SEWER PIPE
- ⊠ TREE
- WATER LINE
- FENCE LINE WITH GATE
- BITUMEN SEALED ROAD



PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

TITLE: Branch Sewer Pipe Plan and Profile (Touaguba_T5-1/2,T6)

INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)

JICA
 JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS:
 NJS CONSULTANTS CO., LTD. - JAPAN

NOTES:

REVISIONS		
REV.	DATE	DESCRIPTION

APPROVED by PMU:
 Project Director
 Lot G.Zauya

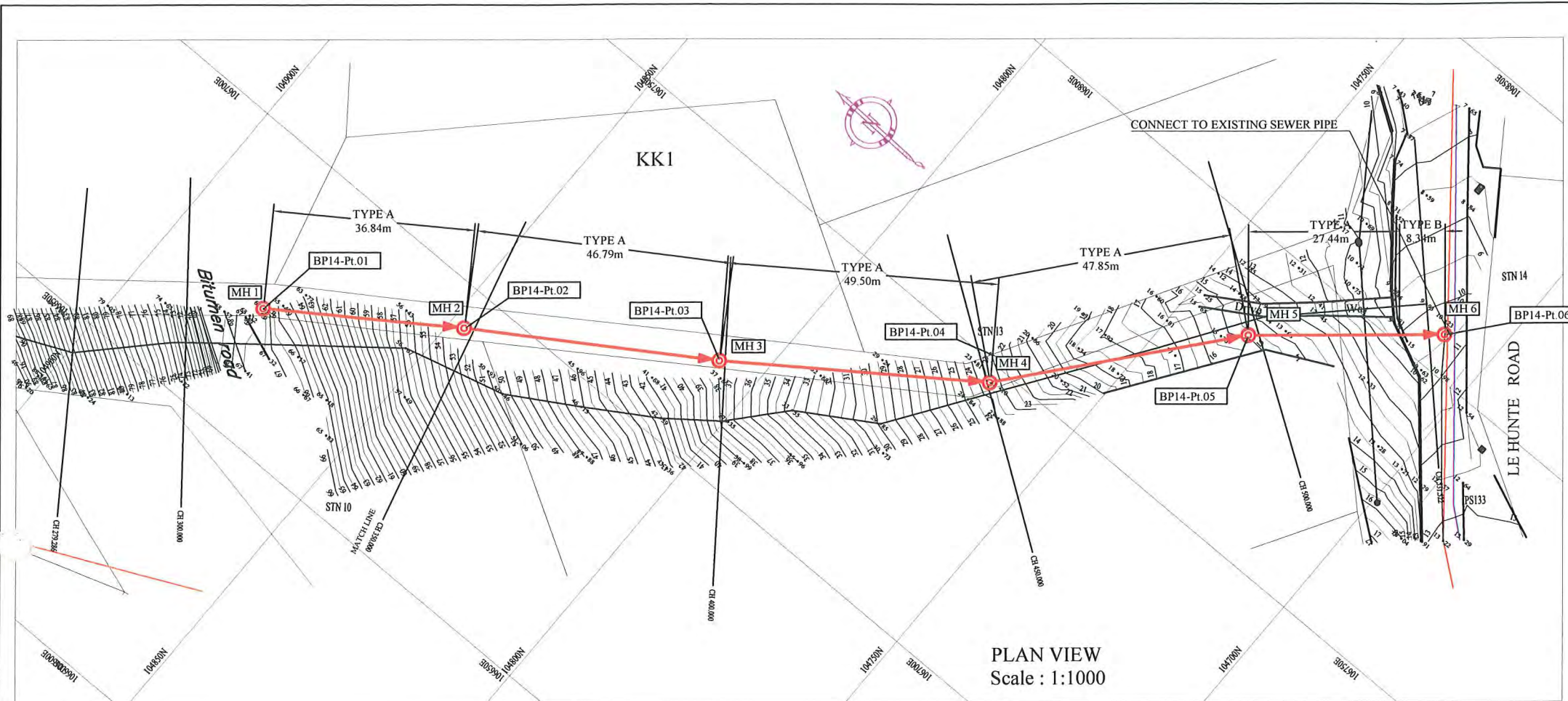
CHECKED by CONSULTANT
 Project Manager
 T.Fuji

DATE: 1. Dec 2011

SCALE: 1/1000

DATE: 1. Dec 2011

DRAWING NO.: BP-13



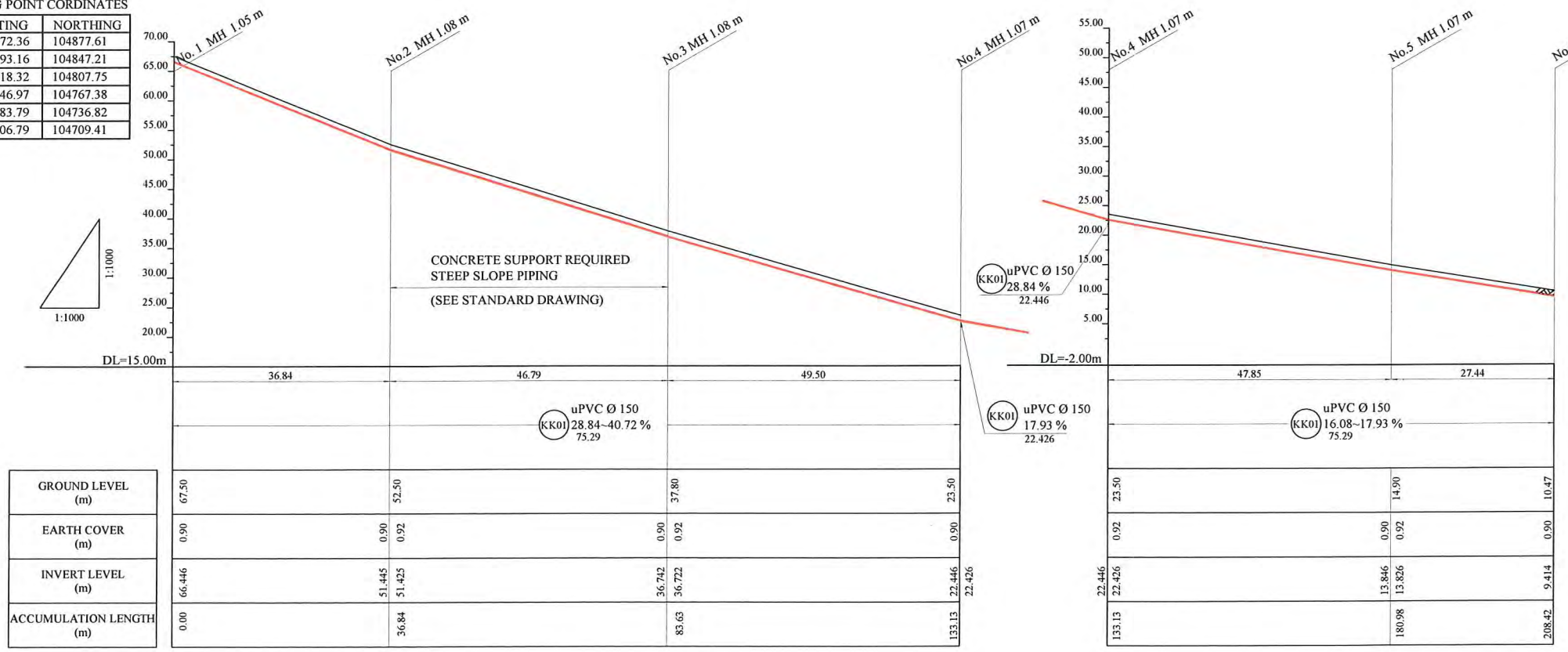
LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
- ELECTRICITY TRANSMISSION TOWER
- ELECTRICITY PIT
- UNDER GROUND POWER CABLE
- TELECOM PIT
- TELECOM MARKER POST
- TELECOM LINE
- WATER VALVE BOX
- STOP VALVE
- WATER TAP
- FIRE HYDRANT
- WATER METER
- EXISTING SEWER PIPE
- TREE
- WATER LINE
- FENCE LINE WITH GATE
- BITUMEN SEALED ROAD

PLAN VIEW
Scale : 1:1000

HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP14-Pt.01	106672.36	104877.61
BP14-Pt.02	106693.16	104847.21
BP14-Pt.03	106718.32	104807.75
BP14-Pt.04	106746.97	104767.38
BP14-Pt.05	106783.79	104736.82
BP14-Pt.06	106806.79	104709.41



- NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB
- LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
 - UNDERGROUND UTILITY SERVICES TO RESIDENTIAL, PUBLIC AND COMMERCIAL BUILDINGS OR OTHER FACILITIES HAVE NOT BEEN SHOWN BUT SHALL BE LOCATED AND PROTECTED IN A SIMILAR MANNER AS DESCRIBED ABOVE BY THE CONTRACTOR
 - INVERT MODIFICATION IS INCLUDED IN THE CONTRACT
 INVERT LEVEL OF NEW PIPE ≥ EXISTING PIPE BOTTOM LEVEL +20mm
 INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL ≥ +600mm
 DROP PIPE IS REQUIRED
 - MINIMUM COVER IS 60cm FOR UNPAVED ROAD
 90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
 Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)

PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS:
 NJS CONSULTANTS CO., LTD. - JAPAN

TITLE: **Branch Sewer Pipe Plan and Profile (Koki_KK1)**

NOTES:

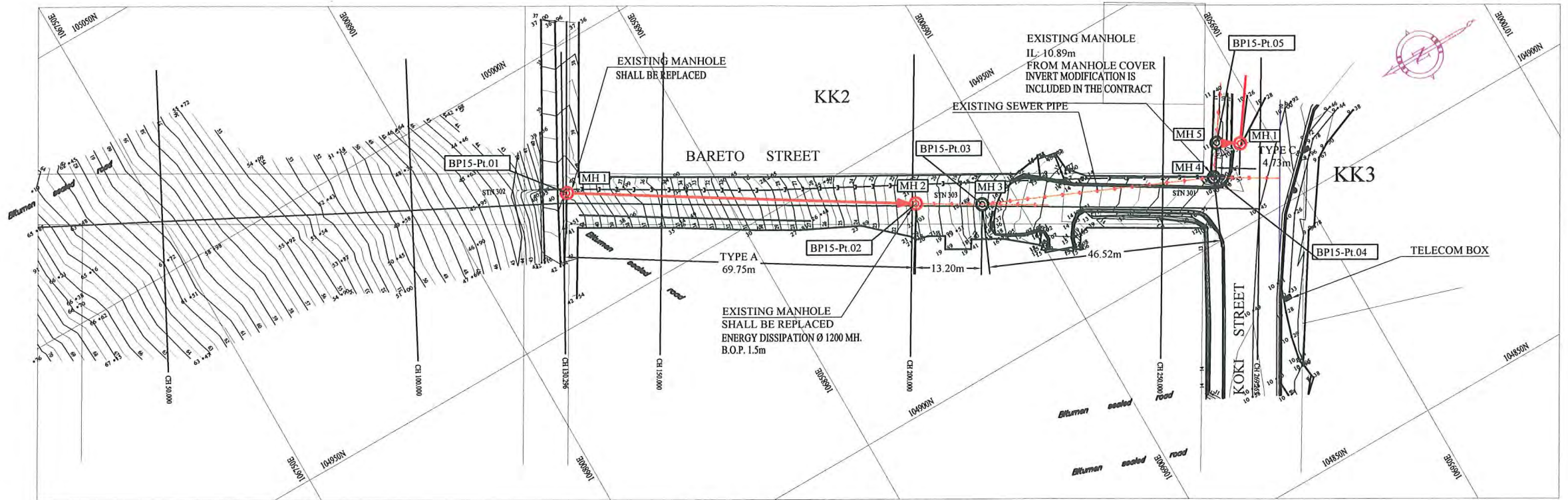
REVISIONS		
REV.	DATE	DESCRIPTION

APPROVED by PMU:
 Project Director
 Lot G.Zauya
 CHECKED by CONSULTANT
 Project Manager
 T.Fuji

DATE: 1. Dec 2011
 SCALE: 1/1000
 DATE: 1. Dec 2011
 DRAWING NO.: BP-14

LEGEND

	PROPOSED SEWER
	NEW MANHOLE
	EXISTING MANHOLE TO BE MODIFIED
	POWER POLE WITH OVERHEAD POWER LINES
	POWER POLE WITH LIGHT
	ELECTRICITY TRANSMISSION TOWER
	ELECTRICITY PIT
	UNDER GROUND POWER CABLE
	TELECOM PIT
	TELECOM MARKER POST
	TELECOM LINE
	WATER VALVE BOX
	STOP VALVE
	WATER TAP
	FIRE HYDRANT
	WATER METER
	EXISTING SEWER PIPE
	TREE
	WATER LINE
	FENCE LINE WITH GATE
	BITUMEN SEALED ROAD



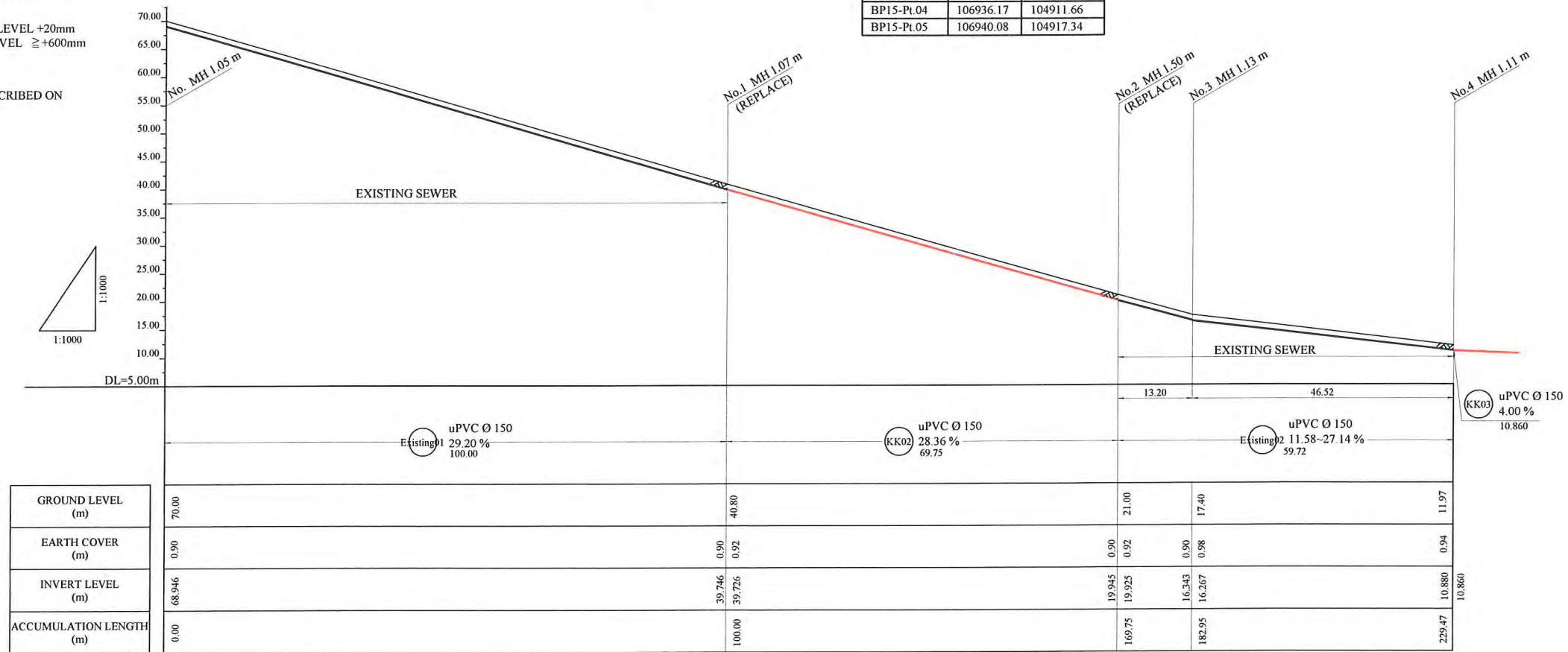
NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB

- 1) LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
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 Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)

PLAN VIEW
Scale : 1:1000

HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP15-Pl.01	106822.93	104973.78
BP15-Pl.02	106882.14	104936.92
BP15-Pl.03	106893.49	104930.16
BP15-Pl.04	106936.17	104911.66
BP15-Pl.05	106940.08	104917.34



PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

TITLE: Branch Sewer Pipe Plan and Profile (Koki_KK2)

CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JICA JAPAN INTERNATIONAL COOPERATION AGENCY

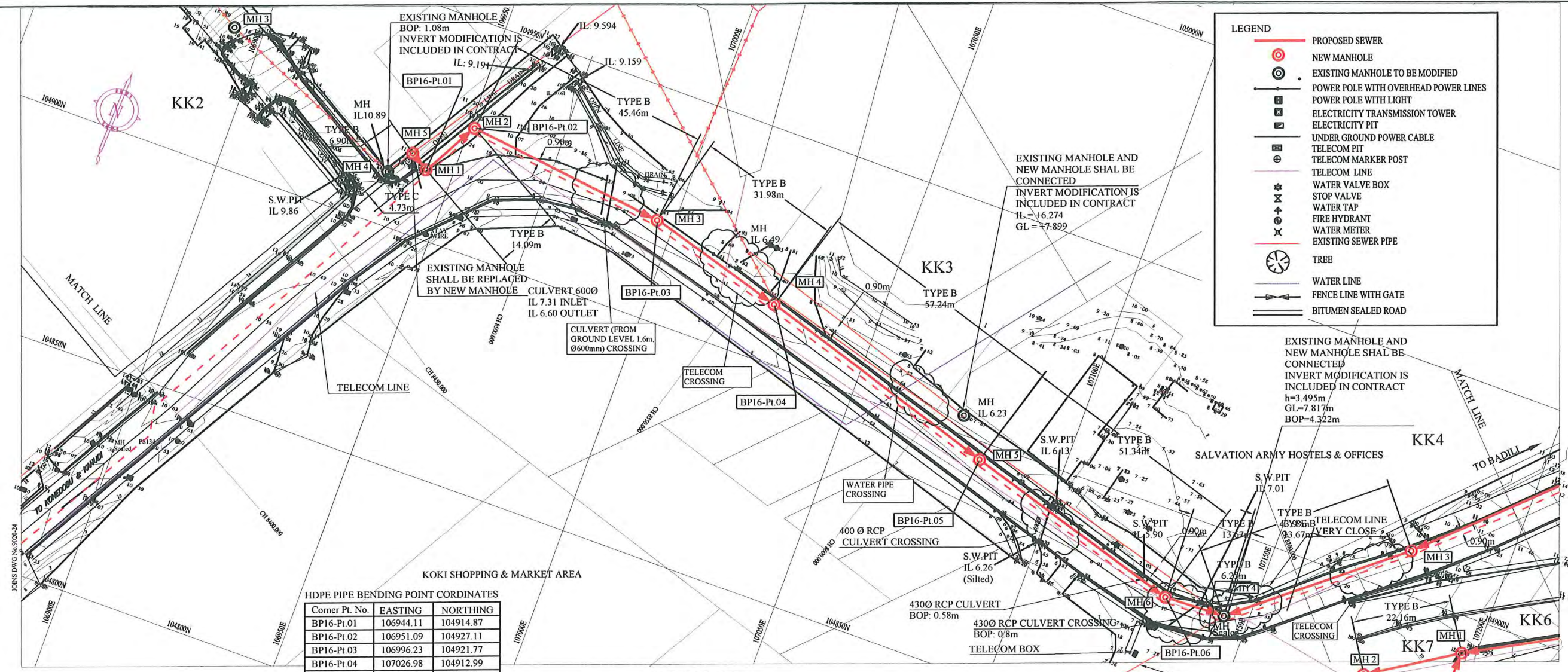
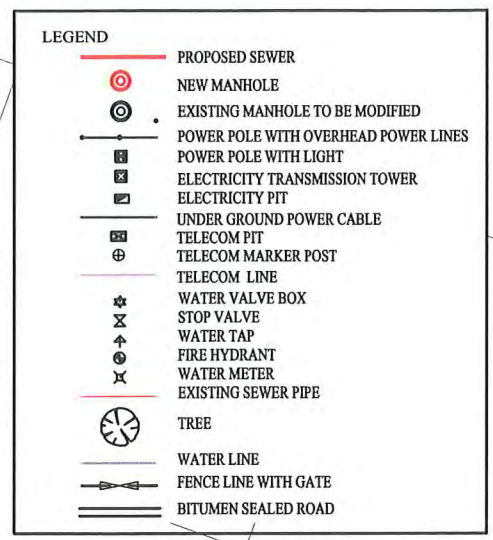
CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

NOTES:

REVISIONS		
REV.	DATE	DESCRIPTION

APPROVED by PMU:
 Project Director
 Lot G.Zauya
 CHECKED by CONSULTANT
 Project Manager
 T.Fuji

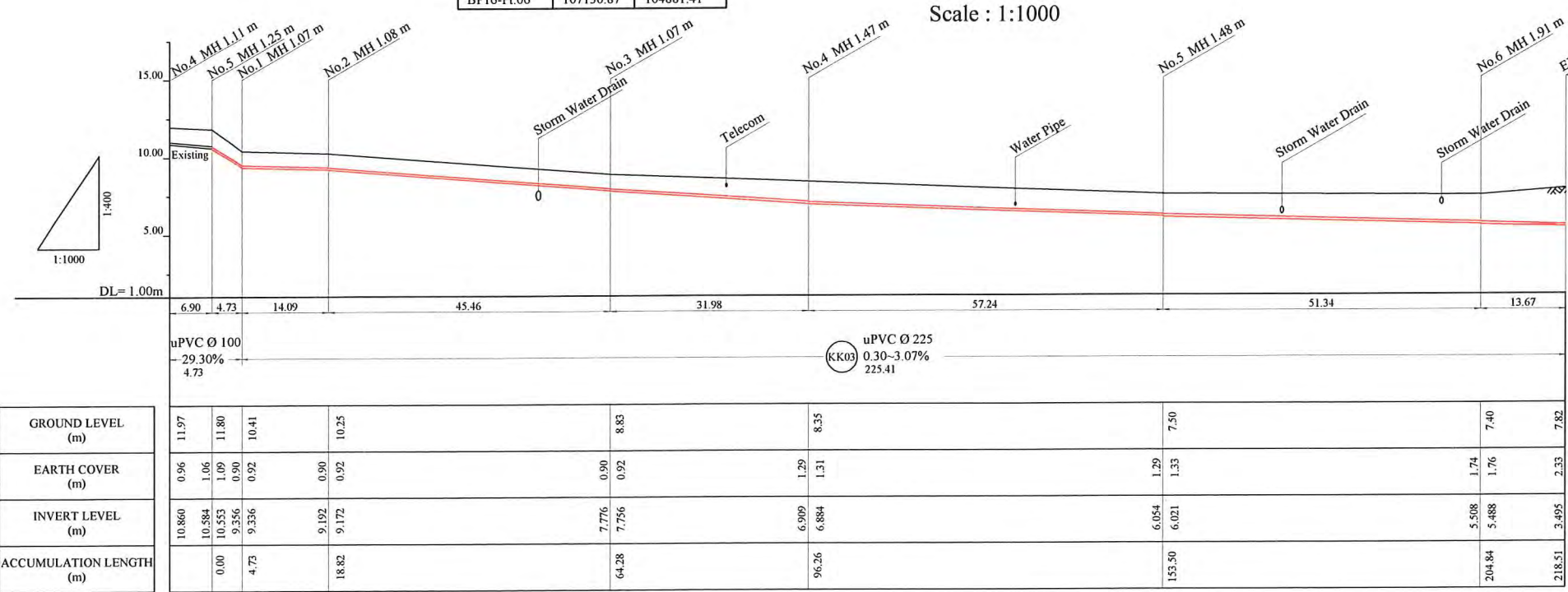
DATE: 1. Dec 2011
 SCALE: 1/1000
 DATE: 1. Dec 2011
 DRAWING NO.: BP-15



HDPE PIPE BENDING POINT CORDINATES

Corner Pt. No.	EASTING	NORTHING
BP16-Pt.01	106944.11	104914.87
BP16-Pt.02	106951.09	104927.11
BP16-Pt.03	106996.23	104921.77
BP16-Pt.04	107026.98	104912.99
BP16-Pt.05	107081.70	104896.19
BP16-Pt.06	107130.87	104881.41

PLAN VIEW
Scale : 1:1000



EXISTING SEWER (EDA RANU SHALL CHECK THE CAPACITY OF THIS PIPE TO MEET FUTURE FLOW VOLUME)

- NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB
- LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
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 - MINIMUM COVER IS 60cm FOR UNPAVED ROAD
90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
Type A - Soil/others
Type B - Asphalt(Road)
Type C - Walkway (Concrete)

PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)		TITLE: Branch Sewer Pipe Plan and Profile (Koki_KK3)																
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT PROJECT MANAGEMENT UNIT (PMU) JICA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN	NOTES:	<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS			REV.	DATE	DESCRIPTION									
REVISIONS																		
REV.	DATE	DESCRIPTION																
APPROVED by PMU: Project Director Lot G.Zauya		DATE: 1. Dec 2011	SCALE: 1/1000															
CHECKED by CONSULTANT: Project Manager T.Fuji		DATE: 1. Dec 2011	DRAWING NO: BP-16															