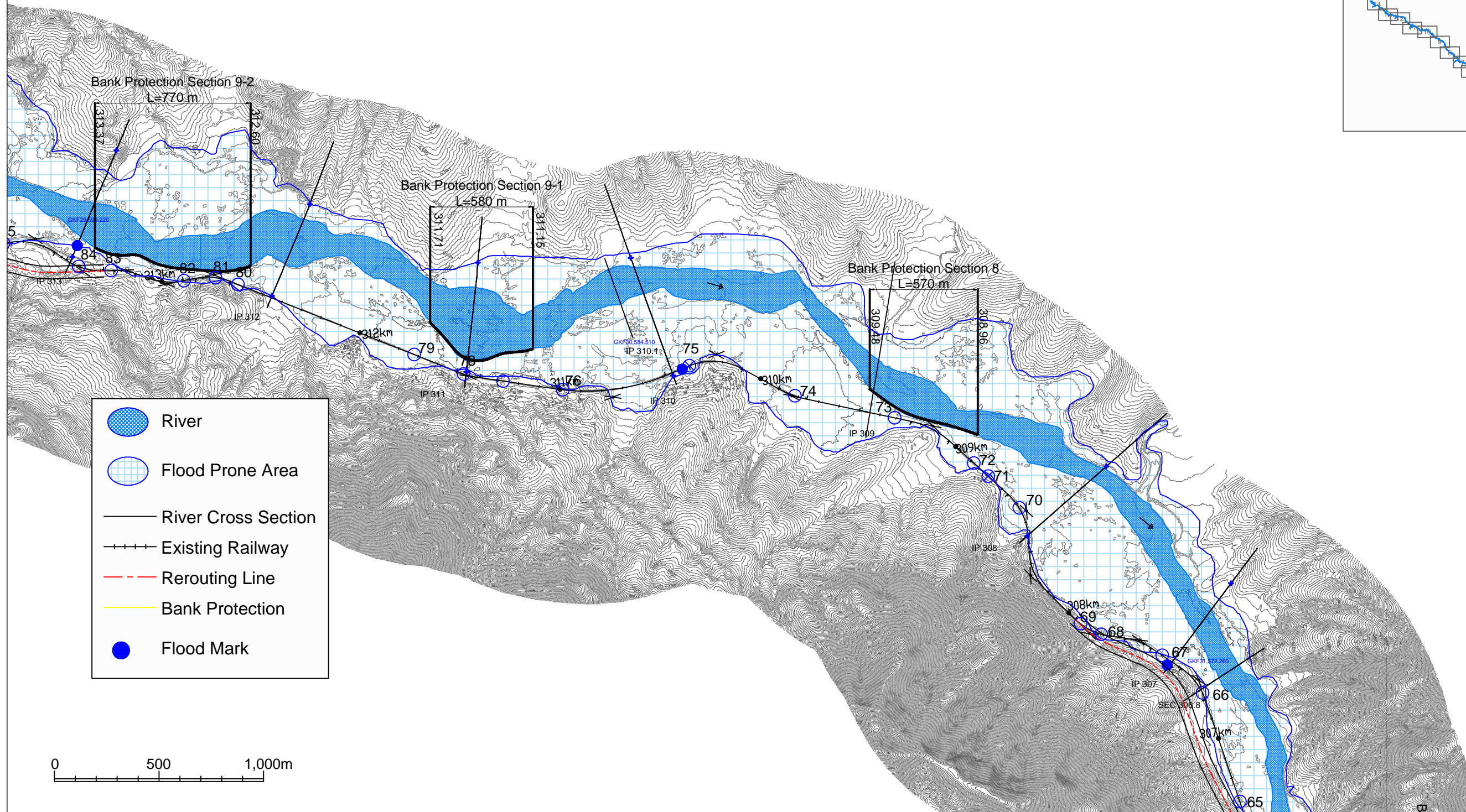
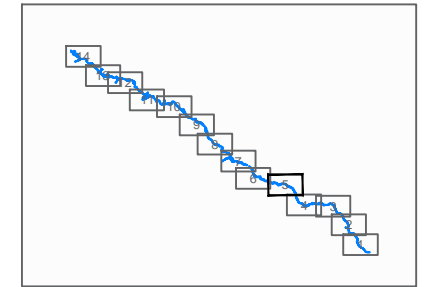
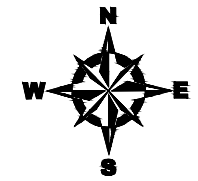
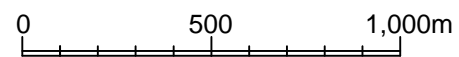


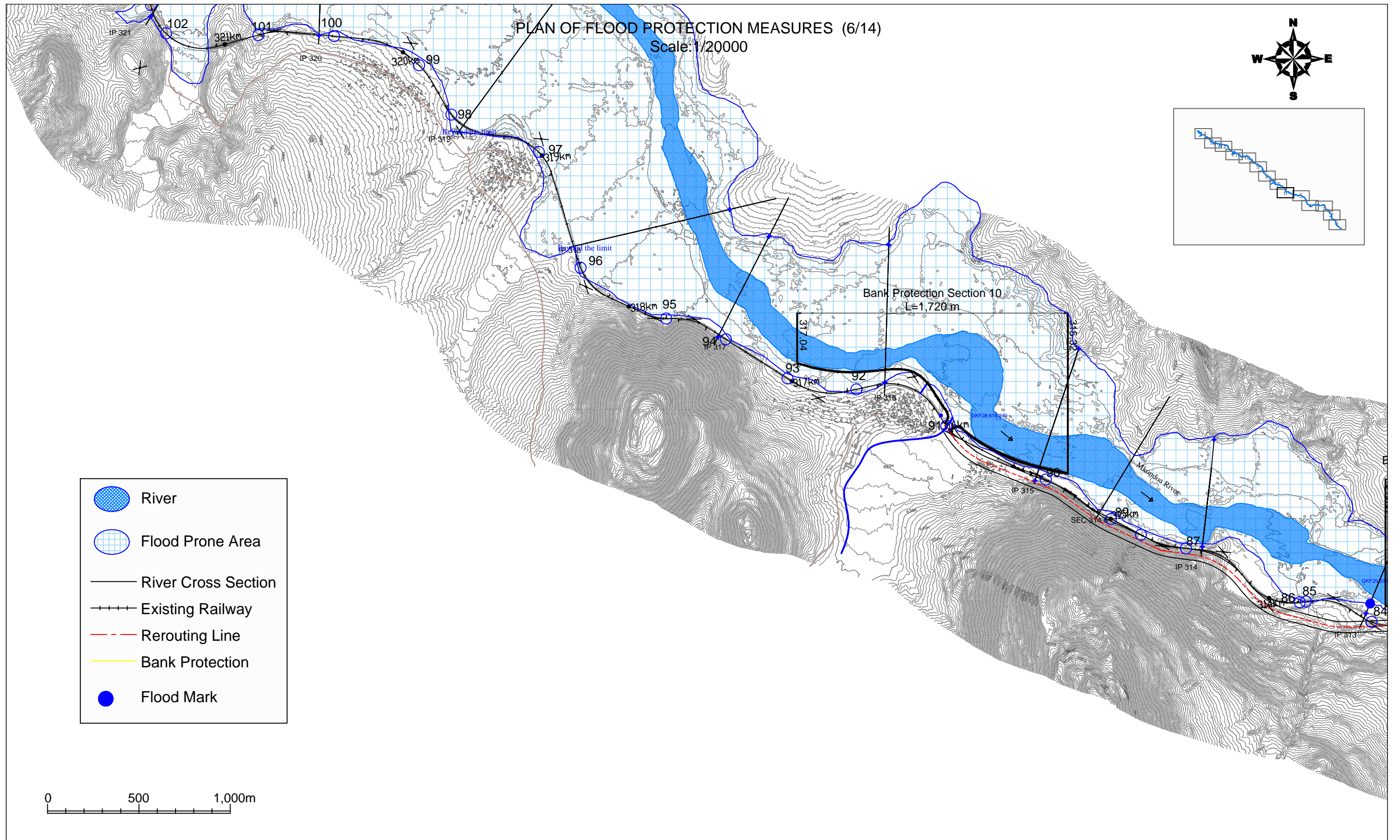
PLAN OF FLOOD PROTECTION MEASURES (5/14)  
Scale: 1/20000



- River
- Flood Prone Area
- River Cross Section
- Existing Railway
- Rerouting Line
- Bank Protection
- Flood Mark

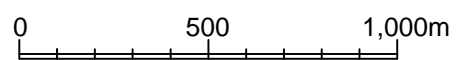
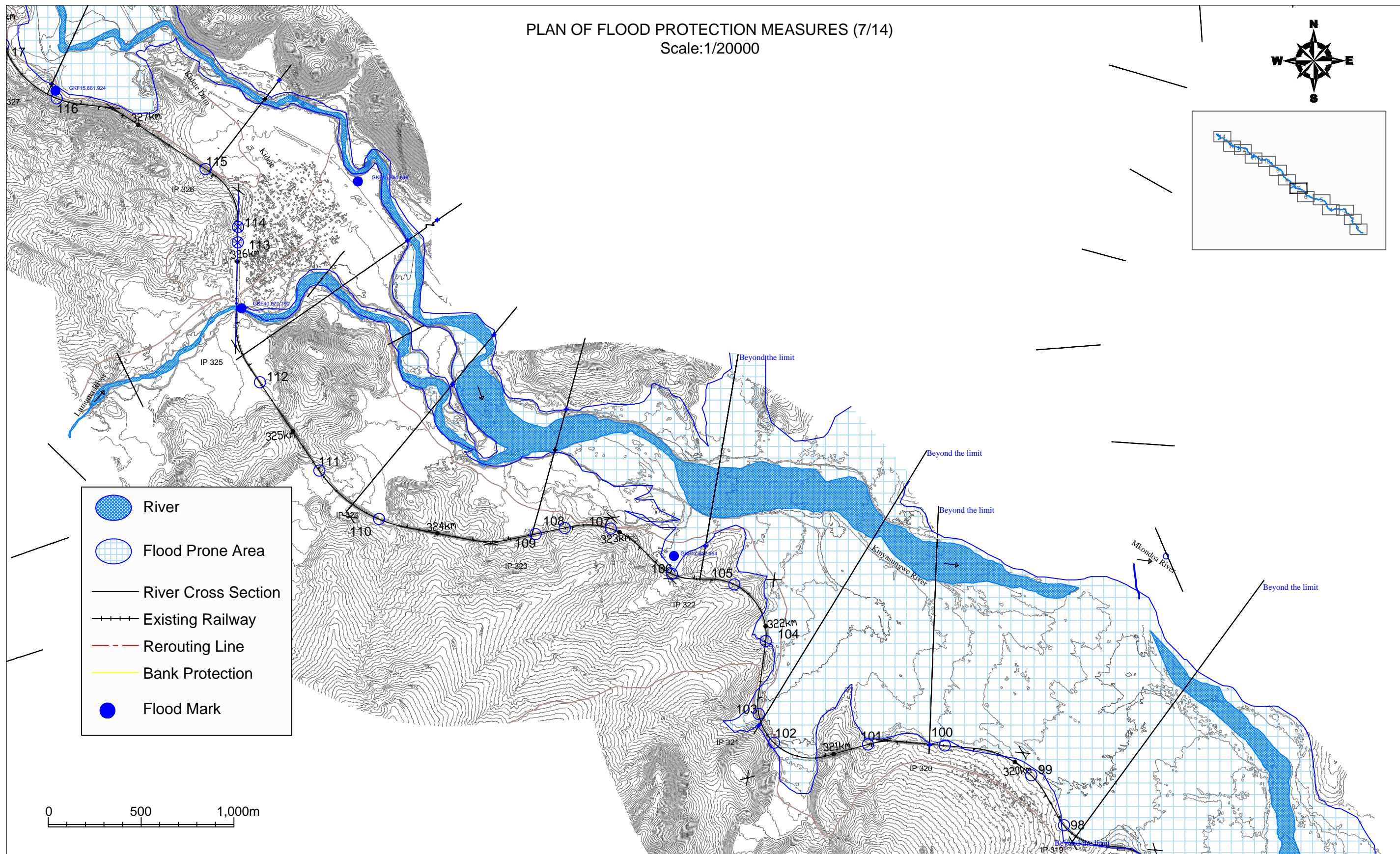
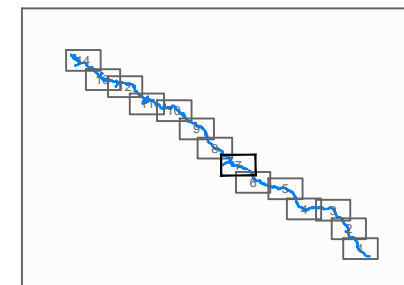
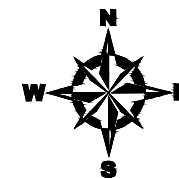




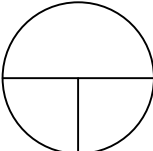
| GOVERNMENT AGENCIES:                   |   | JICA STUDY TEAM:   | PROJECT & LOCATION:   | SHEET CONTENTS:  | DWG NUM |
|--|---|--|---|--|---------|
| JAPAN International Cooperation Agency | Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on<br>Flood Protection<br>Measures for Central<br>Railway Line in the United<br>Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (5/14)<br>Scale: 1/20000 |         |



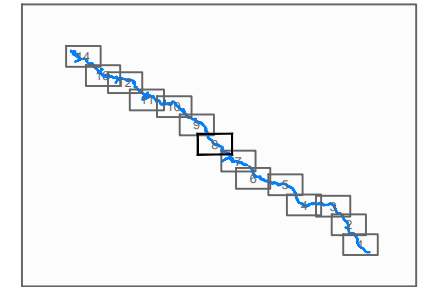
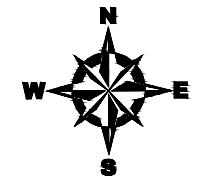
| GOVERNMENT AGENCIES:                       |   | JICA STUDY TEAM:   | PROJECT & LOCATION:   | SHEET CONTENTS:   | DWG NUM |
|--|---|--|---|---|---------|
| <br>JAPAN International Cooperation Agency | <br>Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | <b>PLAN OF FLOOD PROTECTION MEASURES (6/14)</b><br>Scale: 1/20000 |         |








PLAN OF FLOOD PROTECTION MEASURES (7/14)  
Scale: 1/20000

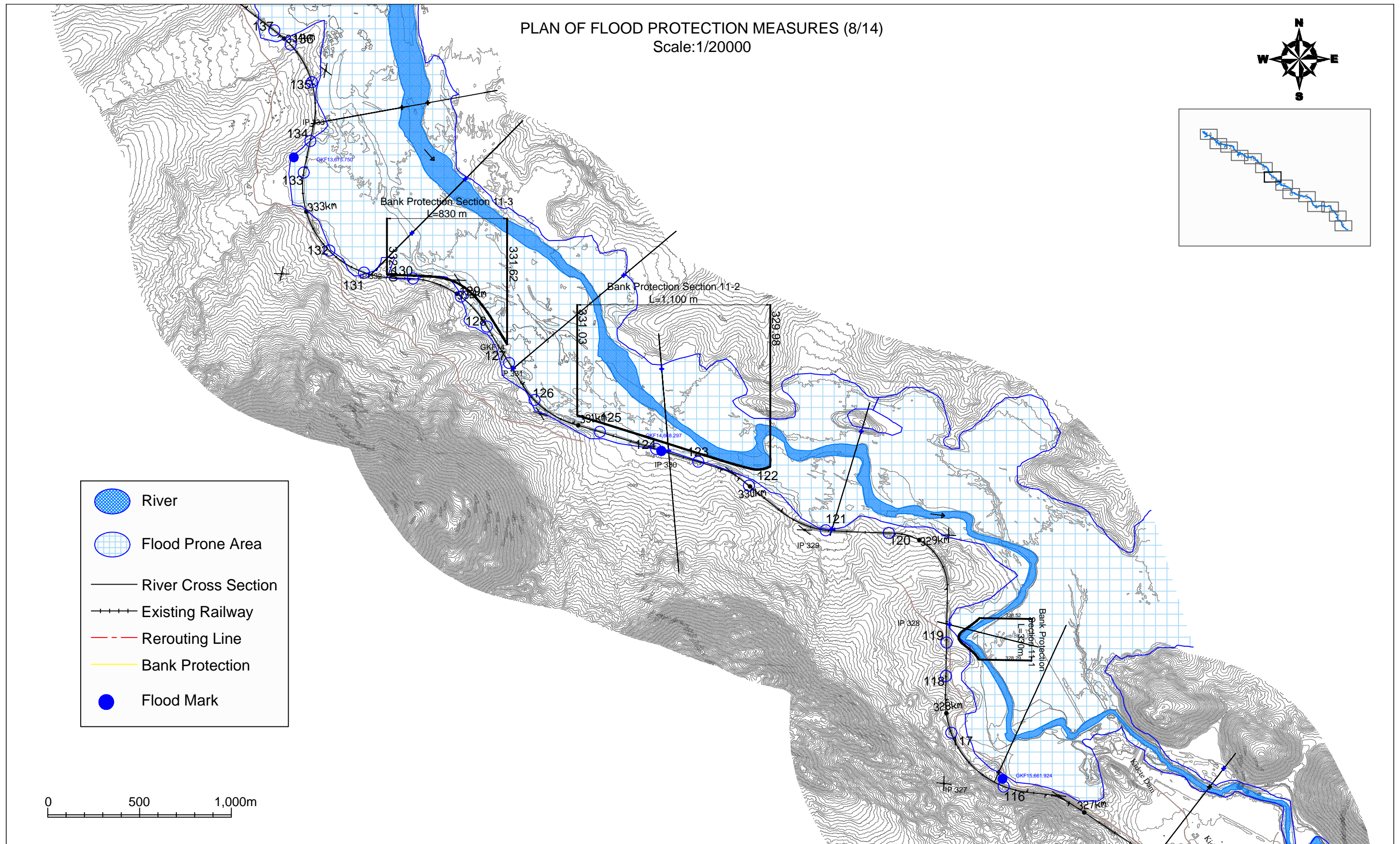
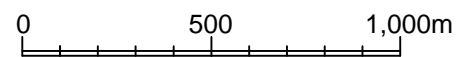




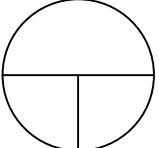
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|--|---|--|---|--|---|
|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (7/14)<br>Scale: 1/20000 |  |

PLAN OF FLOOD PROTECTION MEASURES (8/14)  
Scale: 1/20000

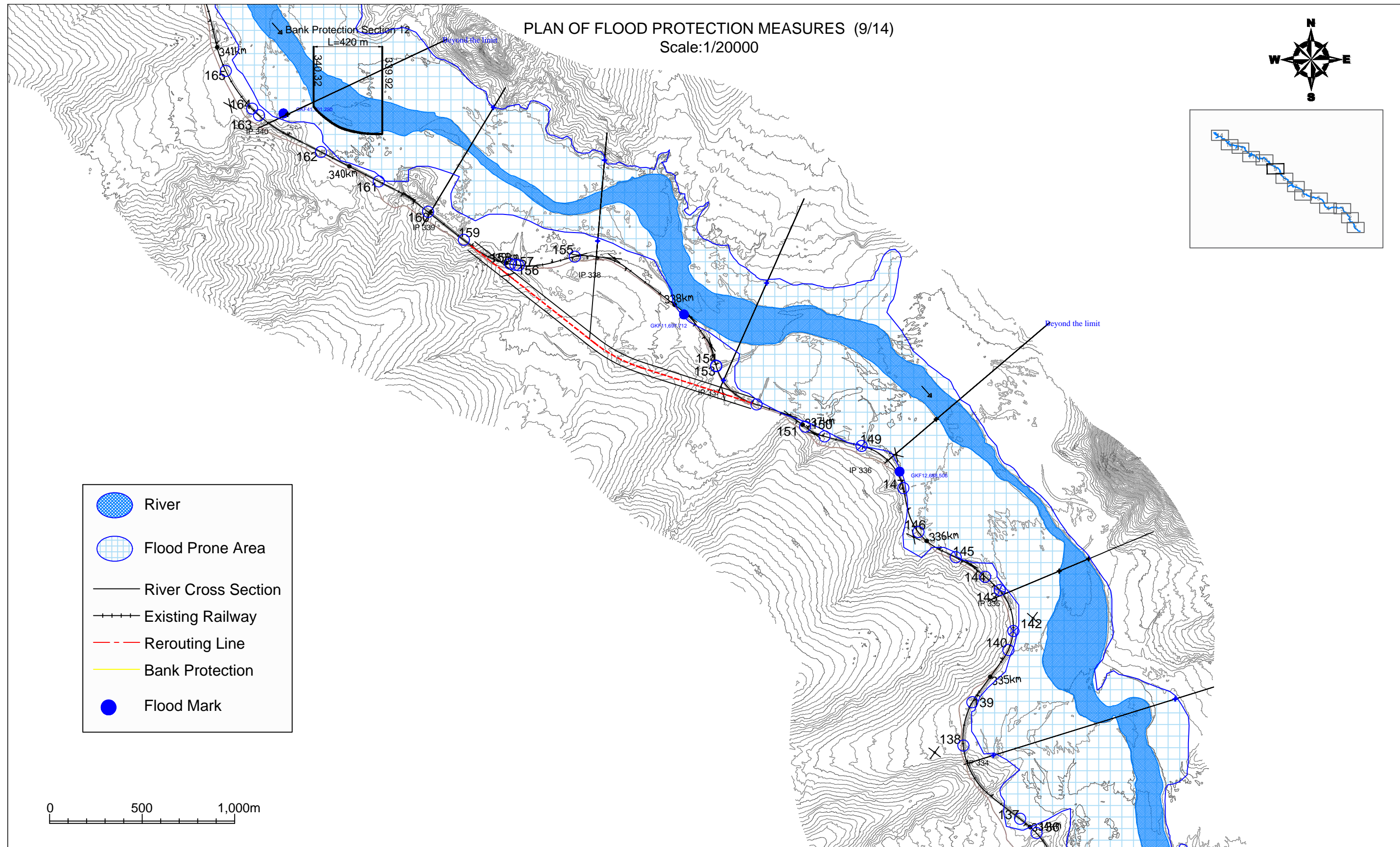
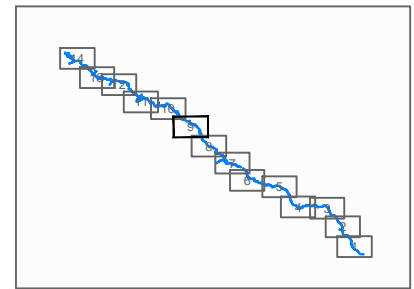
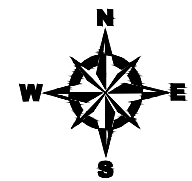









-  River
-  Flood Prone Area
-  River Cross Section
-  Existing Railway
-  Rerouting Line
-  Bank Protection
-  Flood Mark

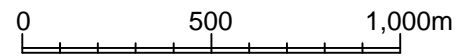




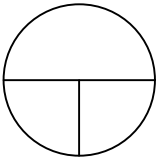
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|--|---|--|---|--|---|
|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on<br>Flood Protection<br>Measures for Central<br>Railway Line in the United<br>Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (8/14)<br>Scale: 1/20000 |  |

PLAN OF FLOOD PROTECTION MEASURES (9/14)  
Scale: 1/20000

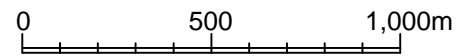
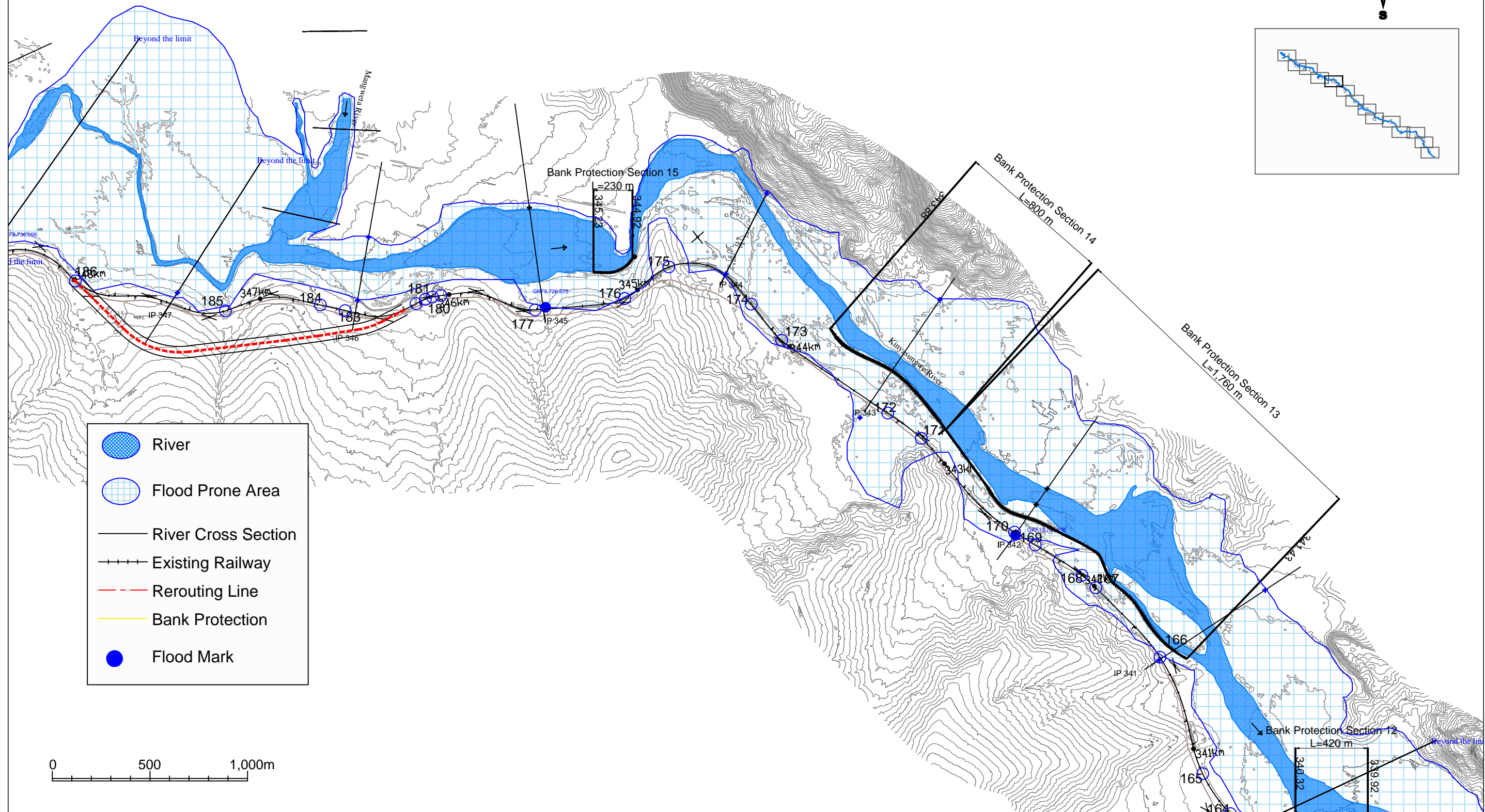
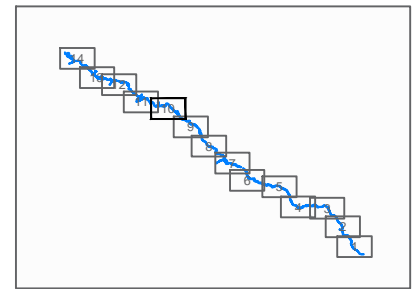
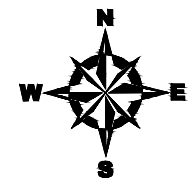


-  River
-  Flood Prone Area
-  River Cross Section
-  Existing Railway
-  Rerouting Line
-  Bank Protection
-  Flood Mark

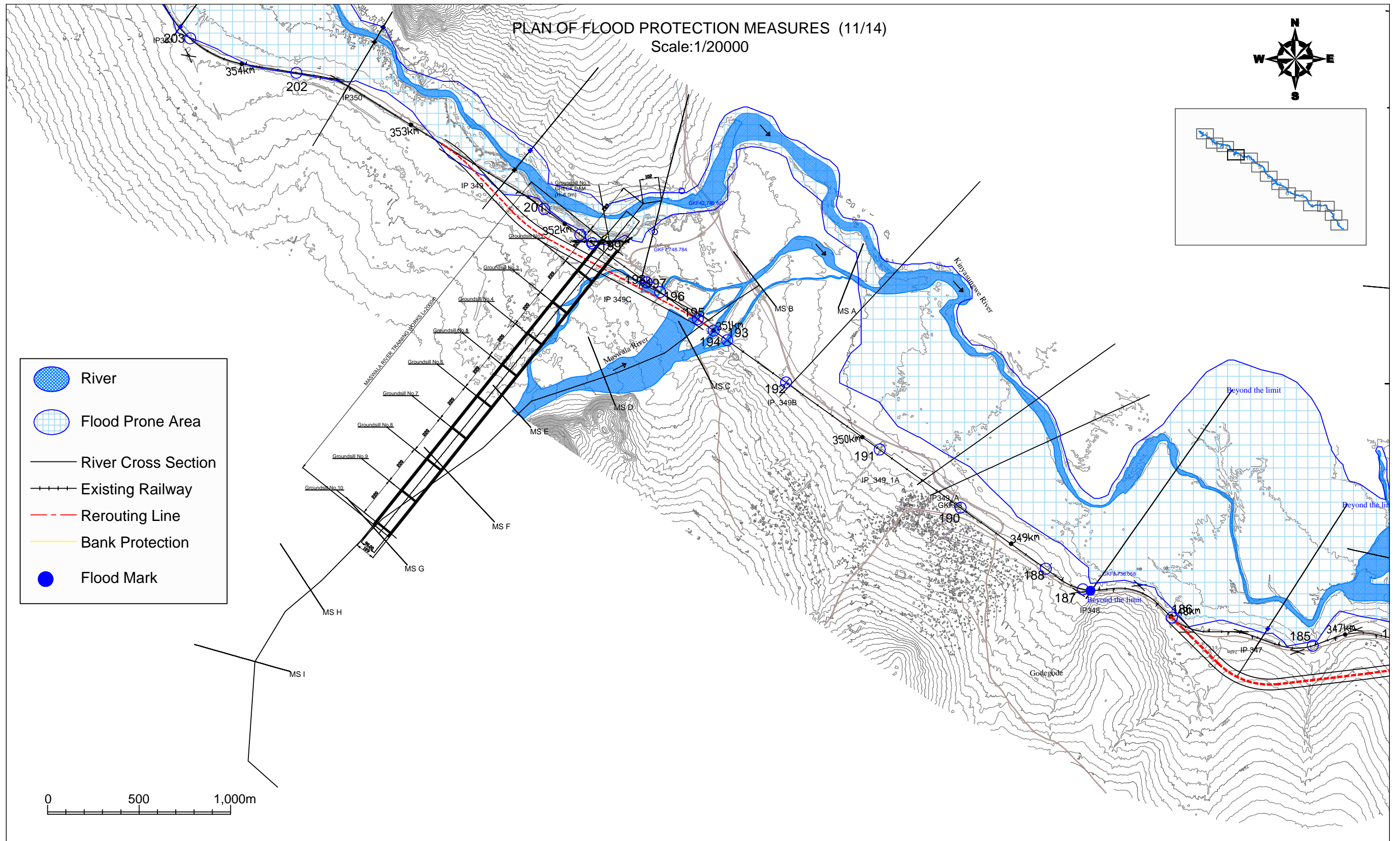


| GOVERNMENT AGENCIES:   |   | JICA STUDY TEAM:   | PROJECT & LOCATION:   | SHEET CONTENTS:  | DWG NUM   |
|--|---|--|---|--|---|
|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on<br>Flood Protection<br>Measures for Central<br>Railway Line in the United<br>Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (9/14)<br>Scale: 1/20000 |  |

PLAN OF FLOOD PROTECTION MEASURES (10/14)  
Scale: 1/20000

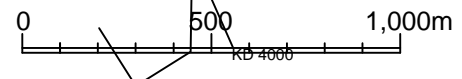
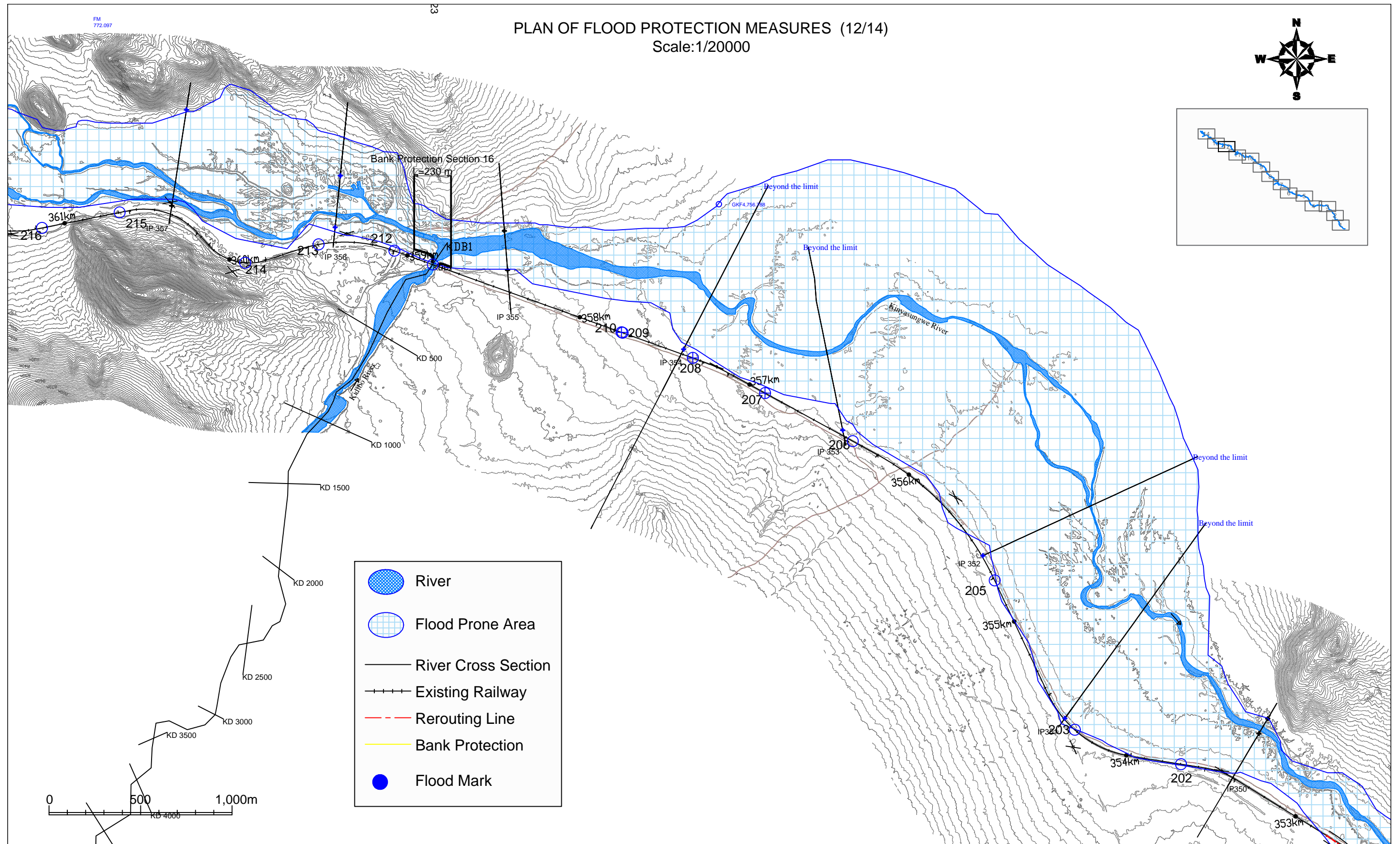
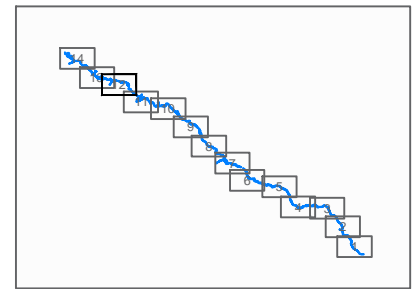
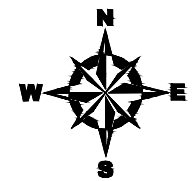




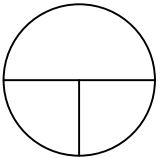
| GOVERNMENT AGENCIES:                   |   | JICA STUDY TEAM:   | PROJECT & LOCATION:   | SHEET CONTENTS:   | DWG NUM |
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| JAPAN International Cooperation Agency | Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (10/14)<br>Scale: 1/20000 |         |



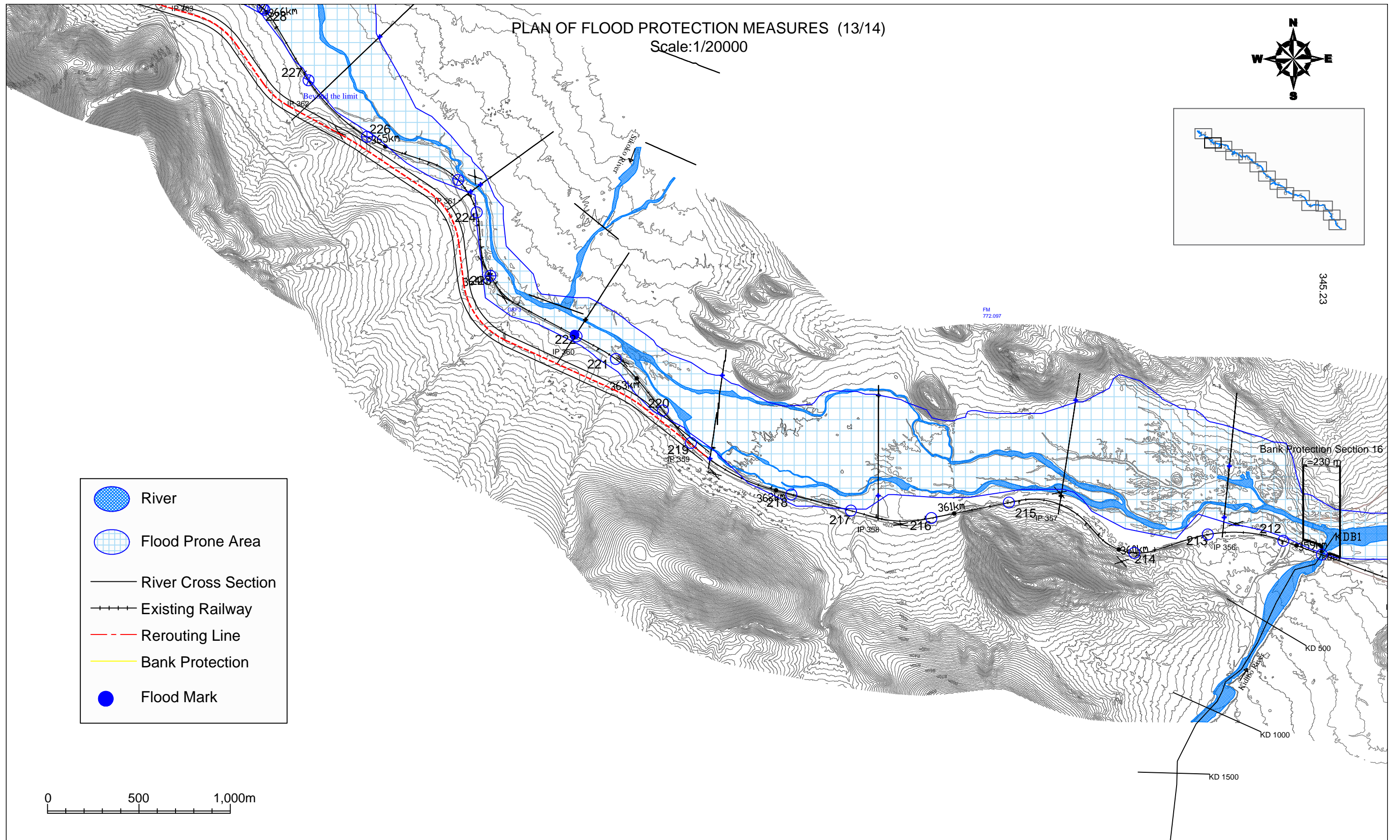
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|---|--|--|---|---------|
| <p>JAPAN International Cooperation Agency</p> | <p>Reli Assets Holding Company (RAHCO), Tanzania</p> | <p>PADECO Co., Ltd.,<br/>Nippon Koei Co., Ltd.,<br/>Japan International Consultants for Transportation Co., Ltd., and<br/>Fukken Engineering Co., Ltd.</p> | <p>Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania</p> <p><b>PLAN OF FLOOD PROTECTION MEASURES (11/14)</b><br/>Scale: 1/20000</p> |         |








PLAN OF FLOOD PROTECTION MEASURES (12/14)  
Scale:1/20000

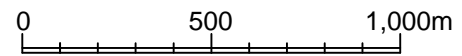




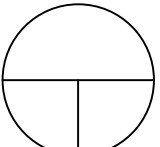
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|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (12/14)<br>Scale:1/20000 |  |



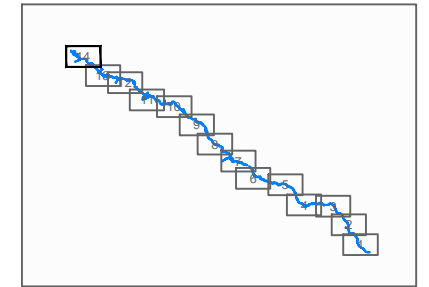
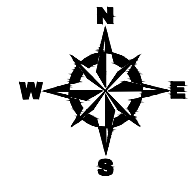









-  River
-  Flood Prone Area
-  River Cross Section
-  Existing Railway
-  Rerouting Line
-  Bank Protection
-  Flood Mark

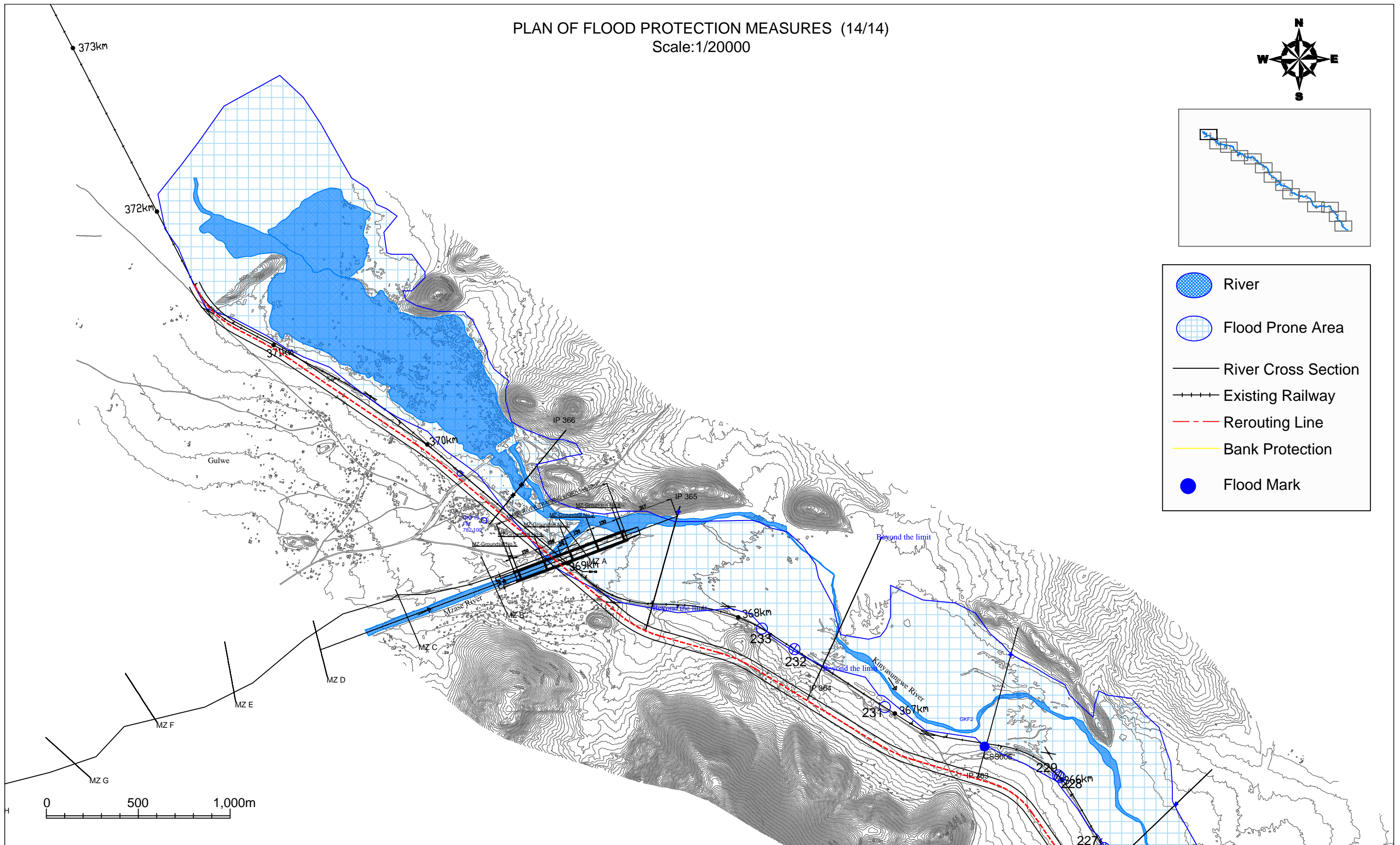




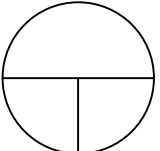
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|--|---|--|---|--|---|
|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (13/14)<br>Scale:1/20000 |  |

PLAN OF FLOOD PROTECTION MEASURES (14/14)  
Scale: 1/20000



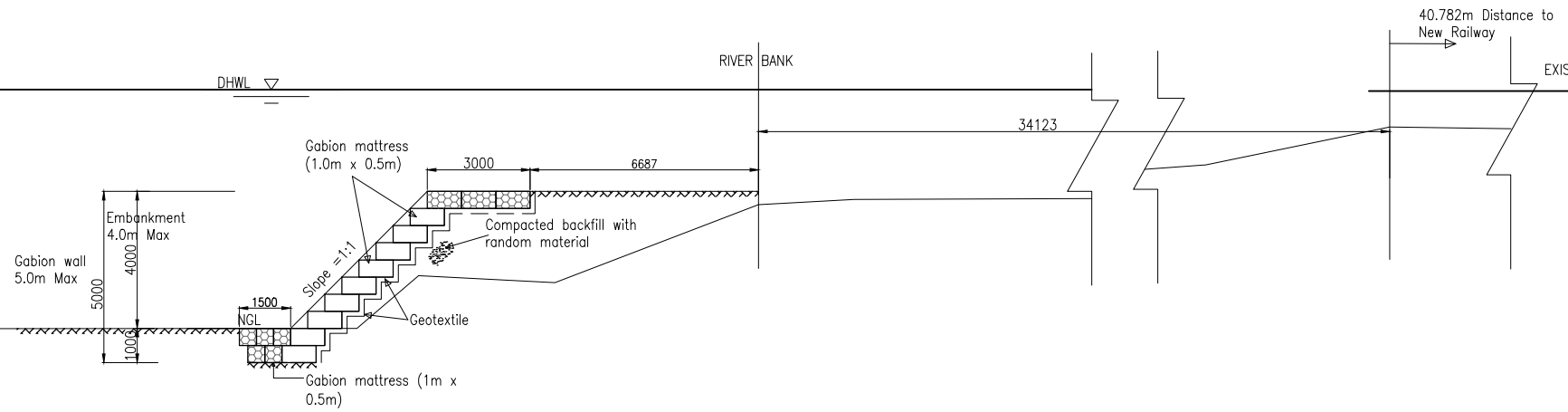
-  River
-  Flood Prone Area
-  River Cross Section
-  Existing Railway
-  Rerouting Line
-  Bank Protection
-  Flood Mark



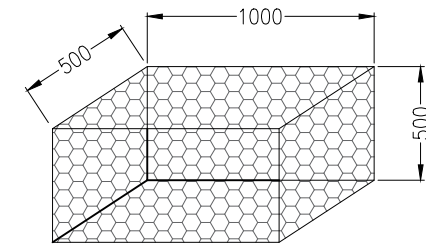
| GOVERNMENT AGENCIES:   |   | JICA STUDY TEAM:   |   | PROJECT & LOCATION:   | SHEET CONTENTS:   | DWG NUM |
|--|---|--|---|---|---|---------|
|  JAPAN International Cooperation Agency |  Reli Assets Holding Company (RAHCO), Tanzania | PADECO Co., Ltd.,<br>Nippon Koei Co., Ltd.,<br>Japan International Consultants for Transportation Co., Ltd., and<br>Fukken Engineering Co., Ltd. | Preparatory Survey on Flood Protection Measures for Central Railway Line in the United Republic of Tanzania | PLAN OF FLOOD PROTECTION MEASURES (14/14)<br>Scale: 1/20000 |  |         |

# TYPICAL CROSS SECTION OF BANK PROTECTION WORKS

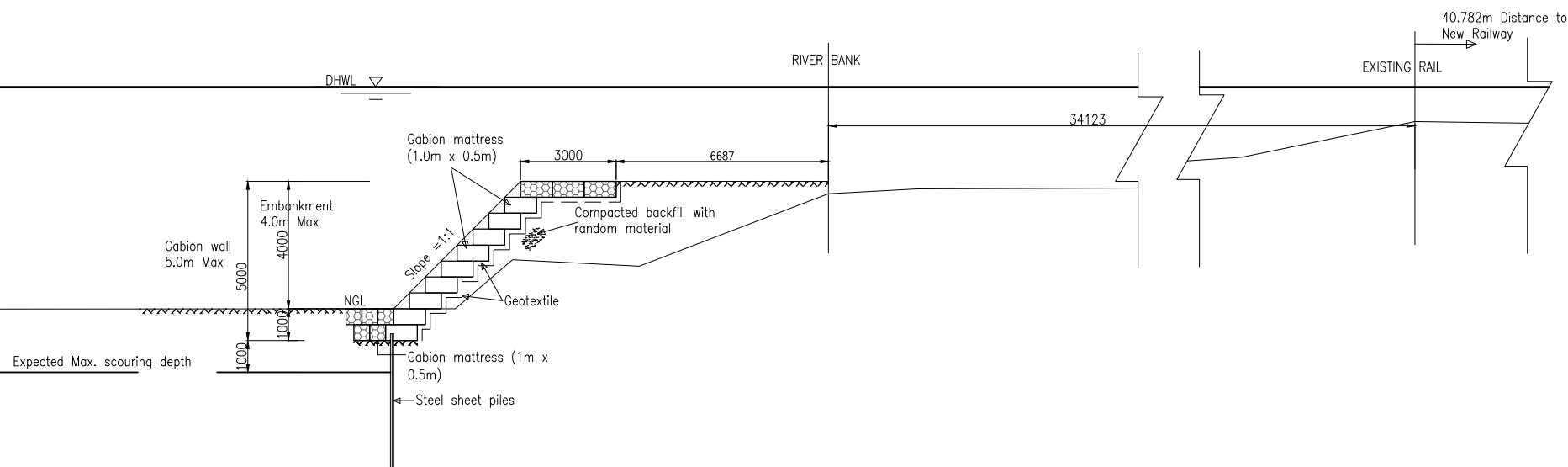
GABION MATTRESS  
SCALE: 1:200



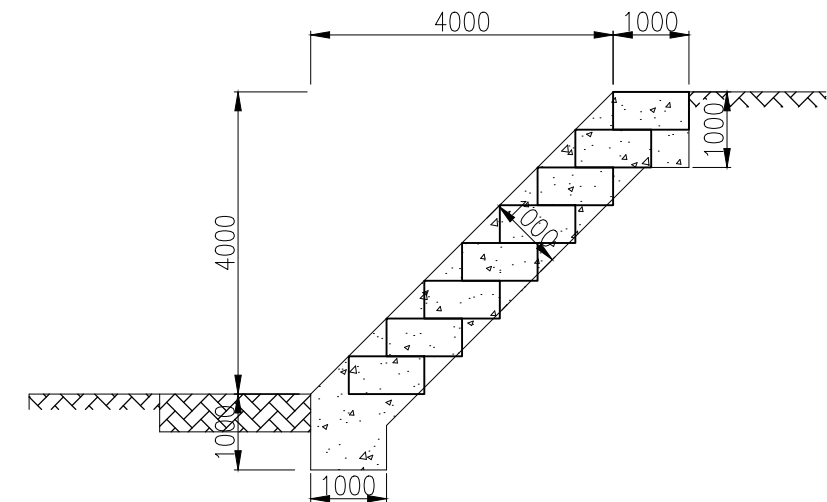
DETAILS - GABION MATTRES (1m x 0.5m x 0.5m)  
SCALE: 1:100



GABION MATTRESS WITH SHEET PILE  
SCALE: 1:200



SIDE PROTECTION TO GABIONS  
SCALE: 1:100



GOVERNMENT AGENCIES:



JAPAN International  
Cooperation Agency



Reli Assets Holding  
Company (RAHCO),  
Tanzania

JICA STUDY TEAM:

PADECO Co., Ltd.,  
Nippon Koei Co., Ltd.,  
Japan International Consultants  
for Transportation Co., Ltd., and  
Fukken Engineering Co., Ltd.

PROJECT & LOCATION:

Preparatory Survey on  
Flood Protection  
Measures for Central  
Railway Line in the United  
Republic of Tanzania

SHEET CONTENTS:

DWG NUM

