

STEP 2: EXCAVATE DOWN TO LEVEL OF ABUTMENT BASE & INSTALL STONE COLUMNS. SAND EXTRACTED NOT STORED IN FLOOD PLAN. REFER TO SECTION 7.8.1 AND 7.10 OF ESCP

STEP 4: PLACE FLOOD PLAIN SCOUR PROTECTION TO ALSO UTILISE AS ACCESS. CONSTRUCTED FROM CLEAN GRANULAR MATERIAL REFER TO SECTION 7.10 OF ESCP. ANY UNDERCUT MATERIAL TO BE TAKEN OFF SITE.

STEP 1: REGRADE AND FLATTEN GROUND ADJACENT TO GROUND IMPROVEMENTS TO PROVIDE STORAGE AND LAYDOWN AREA ABOVE FLOOD LEVEL. ESTABLISH DECANTING EARTH BUND FOR FUTURE PUMPING FACILITY FOR TREATMENT. REFER TO 7.10 OF ESCP. AREA TO BE COVERED WITH CLEAN GRANULAR FILL.

STEP 3: DIVERT MUAUPOKO STREAM TO TEMPORARY ALIGNMENT AND BACKFILL EXISTING STREAM. REFER TO SECTION 7.10 OF ESCP

GROUND IMPROVEMENT BLOCK 50m BY 44m

- KEY:**
- 1% AEP RIVER CORRIDOR
 - RIVER BANK WORKS
 - CURRENT WAIKANAЕ RIVER BANK
 - MUAUPOKO STREAM AND TEMP ALIGNMENT
 - MUAUPOKO STREAM OLD ALIGNMENT
 - TOPSOIL BUND
 - ROCK FILTERS
 - CYCLEWAY
 - SUPER SILT FENCE
 - DESIGNATION BOUNDARY
 - ORIGINAL WAIKANAЕ RIVER BANK TOE TO BE RELOCATED
 - DECANTING EARTH BUND
 - DIVERSION BUND
 - ROCK RIP RAP
 - STREAM DIVERSION WITH ROCK FILLED GEOTEXTILE BLANKET
 - GRANULAR FILL
 - PEDESTRIAN ACCESS

NOTES:

Original Scale (A3)	1:1000
---------------------	--------

1	AEE LODGEMENT	GJR	15.03.12
Revision	Amendment	Approved	Date



Project: MACKAYS TO PEKA PEKA EXPRESSWAY

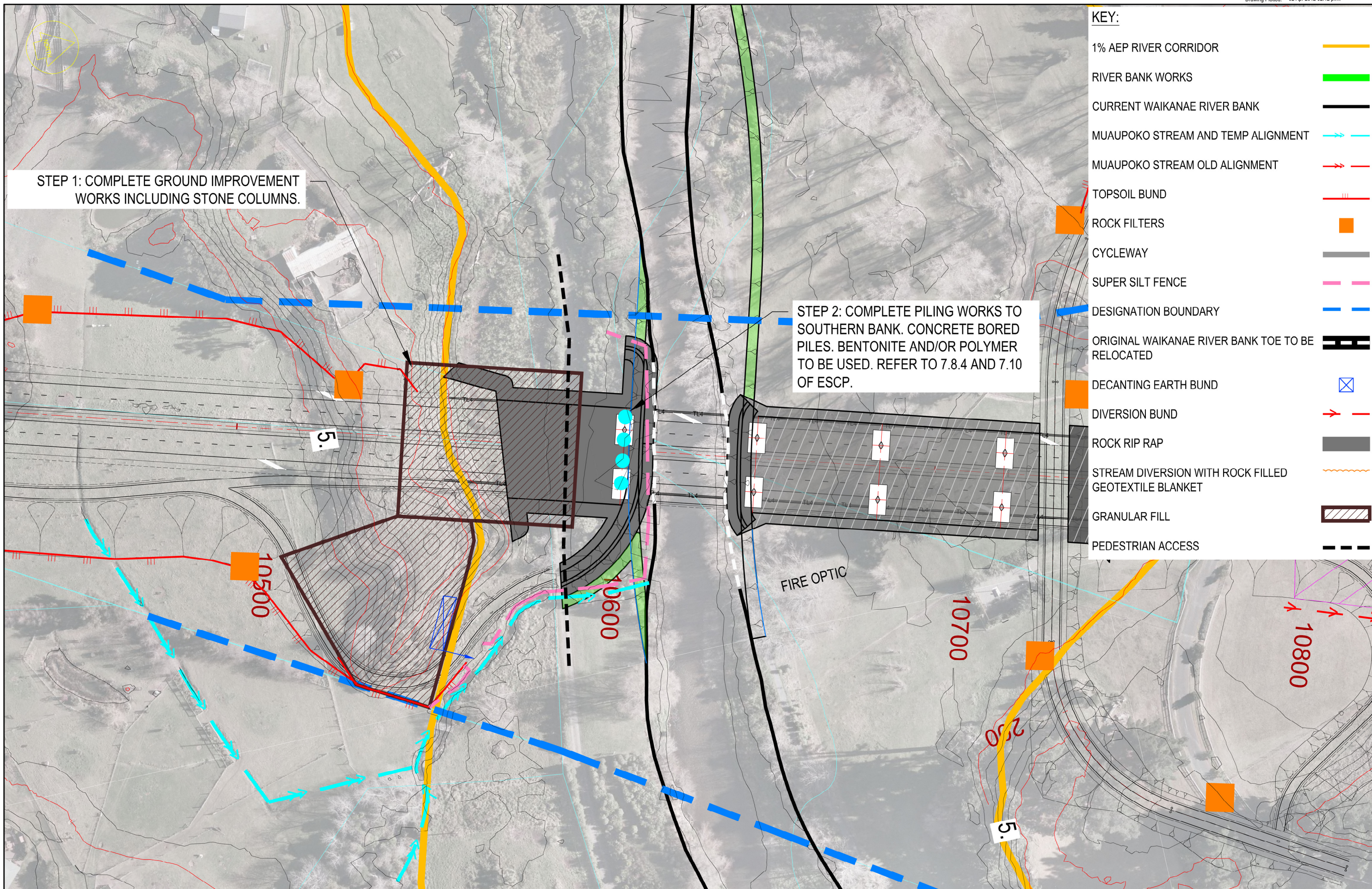
Title: WAIKANAЕ RIVER BRIDGE & STREAMWORKS SEQUENCING OF WOKS & ENVIRONMENTAL STAGE 1

Status: FOR CONSENTING

Document ID: M2PP-AEE-DWG

Drawing No: CV-CM-501

Rev: 1



STEP 1: COMPLETE GROUND IMPROVEMENT WORKS INCLUDING STONE COLUMNS.

STEP 2: COMPLETE PILING WORKS TO SOUTHERN BANK. CONCRETE BORED PILES. BENTONITE AND/OR POLYMER TO BE USED. REFER TO 7.8.4 AND 7.10 OF ESCP.

- KEY:**
- 1% AEP RIVER CORRIDOR —
 - RIVER BANK WORKS —
 - CURRENT WAIKANAЕ RIVER BANK —
 - MUAUPOKO STREAM AND TEMP ALIGNMENT —
 - MUAUPOKO STREAM OLD ALIGNMENT —
 - TOPSOIL BUND ■
 - ROCK FILTERS ■
 - CYCLEWAY —
 - SUPER SILT FENCE - - -
 - DESIGNATION BOUNDARY - - -
 - ORIGINAL WAIKANAЕ RIVER BANK TOE TO BE RELOCATED - - -
 - DECANTING EARTH BUND ■
 - DIVERSION BUND —
 - ROCK RIP RAP ■
 - STREAM DIVERSION WITH ROCK FILLED GEOTEXTILE BLANKET ~
 - GRANULAR FILL ■
 - PEDESTRIAN ACCESS - - -

NOTES:

Original Scale (A3)		1:1000	
1	AEE LODGEMENT	GJR	15.03.12
Revision:	Amendment:	Approved:	Date:



Project: MACKAYS TO PEKA PEKA EXPRESSWAY

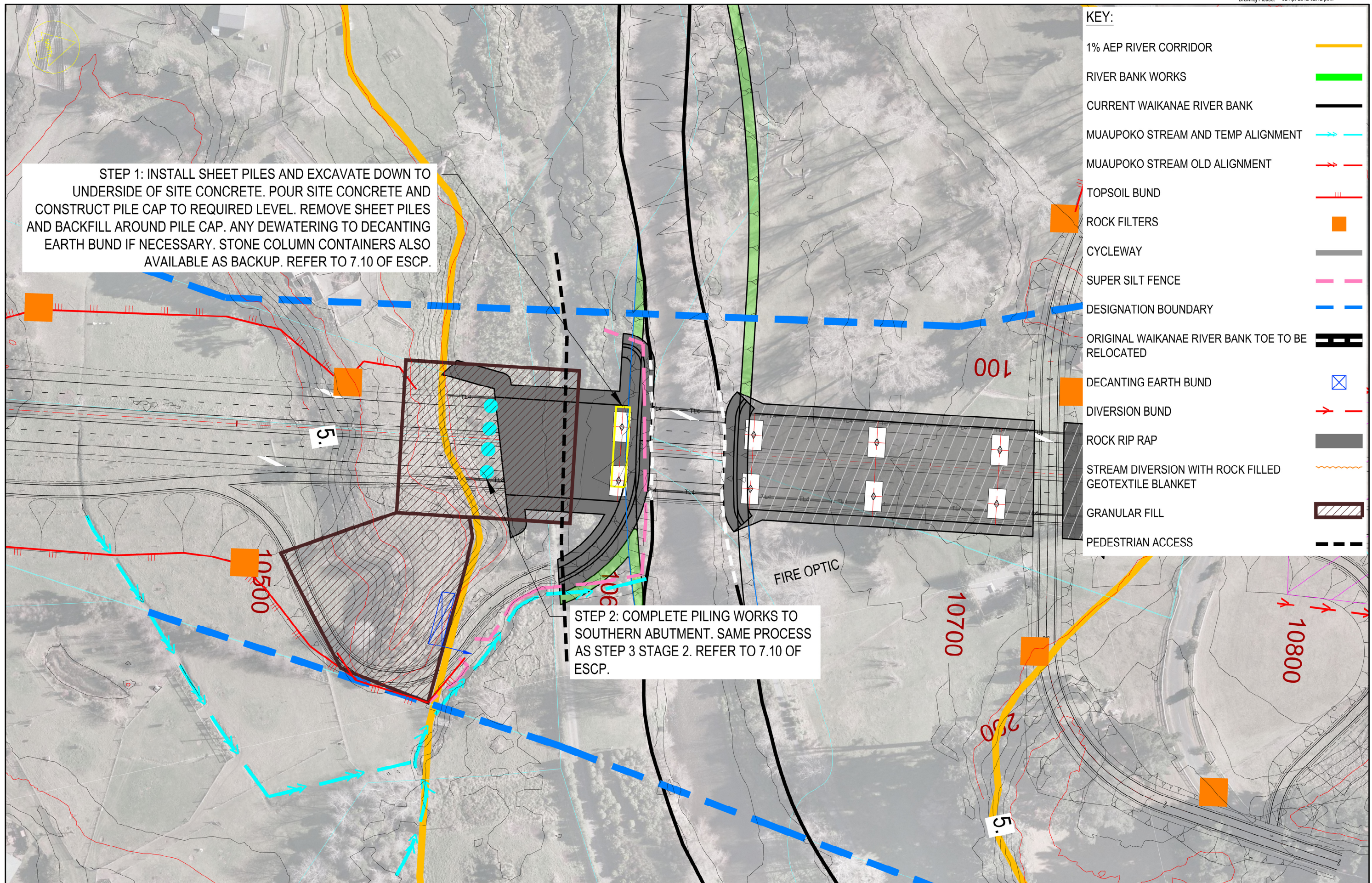
Title: WAIKANAЕ RIVER BRIDGE & STREAMWORKS SEQUENCING OF WOKS & ENVIRONMENTAL STAGE 2

Status: FOR CONSENTING

Document ID: M2PP-AEE-DWG

Drawing No: CV-CM-502

Rev: 1



- KEY:**
- 1% AEP RIVER CORRIDOR —
 - RIVER BANK WORKS —
 - CURRENT WAIKANA E RIVER BANK —
 - MUAUPOKO STREAM AND TEMP ALIGNMENT —
 - MUAUPOKO STREAM OLD ALIGNMENT —
 - TOPSOIL BUND —
 - ROCK FILTERS —
 - CYCLEWAY —
 - SUPER SILT FENCE —
 - DESIGNATION BOUNDARY —
 - ORIGINAL WAIKANA E RIVER BANK TOE TO BE RELOCATED —
 - DECANTING EARTH BUND —
 - DIVERSION BUND —
 - ROCK RIP RAP —
 - STREAM DIVERSION WITH ROCK FILLED GEOTEXTILE BLANKET —
 - GRANULAR FILL —
 - PEDESTRIAN ACCESS —

STEP 1: INSTALL SHEET PILES AND EXCAVATE DOWN TO UNDERSIDE OF SITE CONCRETE. POUR SITE CONCRETE AND CONSTRUCT PILE CAP TO REQUIRED LEVEL. REMOVE SHEET PILES AND BACKFILL AROUND PILE CAP. ANY DEWATERING TO DECANTING EARTH BUND IF NECESSARY. STONE COLUMN CONTAINERS ALSO AVAILABLE AS BACKUP. REFER TO 7.10 OF ESCP.

STEP 2: COMPLETE PILING WORKS TO SOUTHERN ABUTMENT. SAME PROCESS AS STEP 3 STAGE 2. REFER TO 7.10 OF ESCP.

NOTES:

Original Scale (A3)	
1:1000	

1	AEE LODGEMENT	GJR	15.03.12
Revision	Amendment	Approved	Date



Project: MACKAYS TO PEKA PEKA EXPRESSWAY

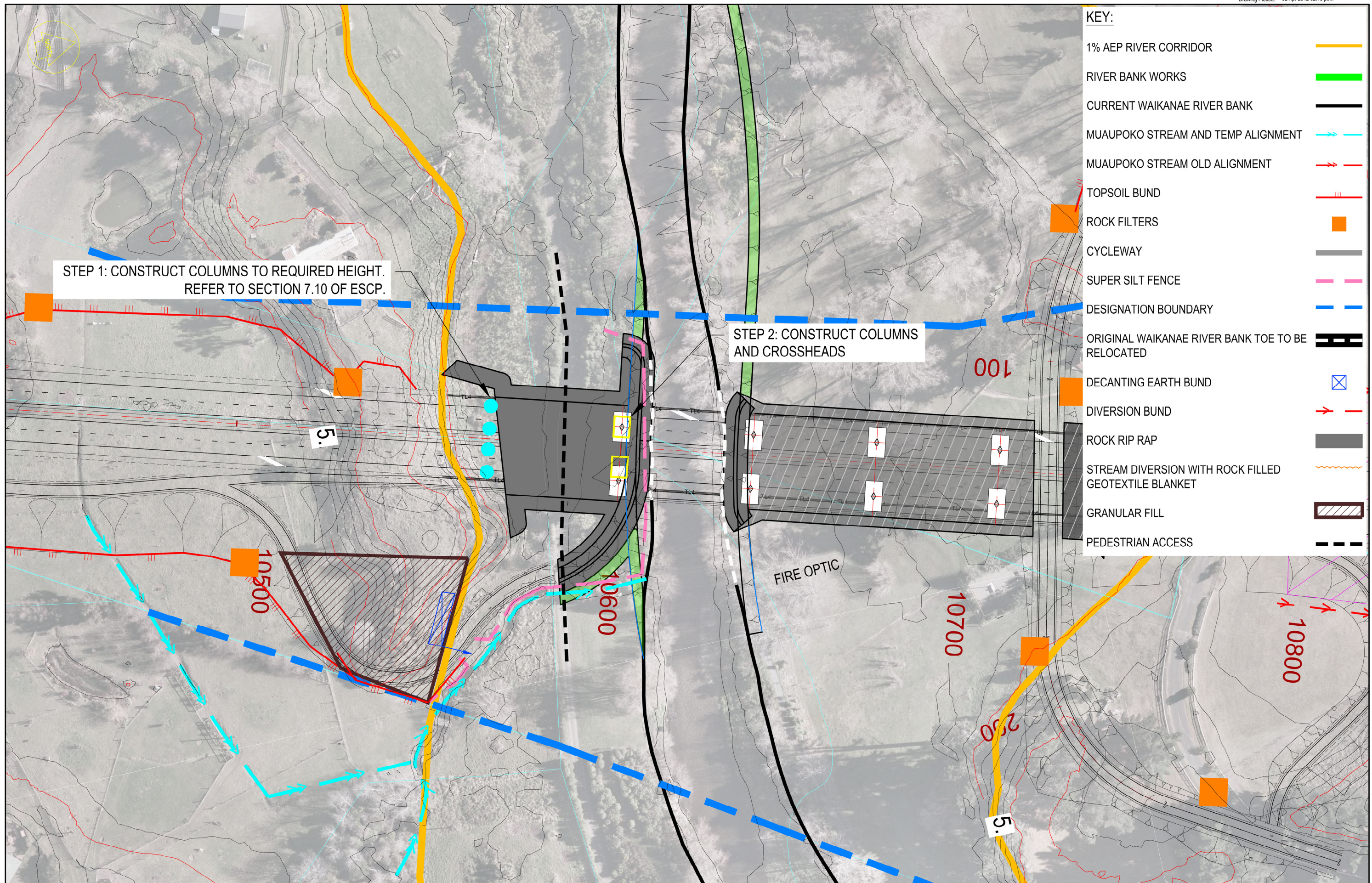
Title: WAIKANA E RIVER BRIDGE & STREAMWORKS SEQUENCING OF WOKS & ENVIRONMENTAL STAGE 3

Status: FOR CONSENTING

Document ID: M2PP-AEE-DWG

Drawing No: CV-CM-503

Rev: 1



KEY:

1% AEP RIVER CORRIDOR	
RIVER BANK WORKS	
CURRENT WAIKANAЕ RIVER BANK	
MUAUPOKO STREAM AND TEMP ALIGNMENT	
MUAUPOKO STREAM OLD ALIGNMENT	
TOPSOIL BUND	
ROCK FILTERS	
CYCLEWAY	
SUPER SILT FENCE	
DESIGNATION BOUNDARY	
ORIGINAL WAIKANAЕ RIVER BANK TOE TO BE RELOCATED	
DECANTING EARTH BUND	
DIVERSION BUND	
ROCK RIP RAP	
STREAM DIVERSION WITH ROCK FILLED GEOTEXTILE BLANKET	
GRANULAR FILL	
PEDESTRIAN ACCESS	

STEP 1: CONSTRUCT COLUMNS TO REQUIRED HEIGHT.
REFER TO SECTION 7.10 OF ESCP.

STEP 2: CONSTRUCT COLUMNS
AND CROSSHEADS

NOTES:

Original Scale (A3)	1:1000
---------------------	--------

1	AEE LODGEMENT	GJR	15.03.12
Revision	Amendment	Approved	Date



Project: MACKAYS TO PEKA PEKA EXPRESSWAY	
Title: WAIKANAЕ RIVER BRIDGE & STREAMWORKS SEQUENCING OF WOKS & ENVIRONMENTAL STAGE 4	
Status: FOR CONSENTING	Rev.
Document ID: M2PP-AEE-DWG	1
Drawing No: CV-CM-504	1