

GENERAL NOTES

1. SITE LOCATION: MURRAY RIVER, MOAMA, NSW
2. THESE NOTES SHALL APPLY TO ALL DRAWINGS AND BE READ IN CONJUNCTION WITH THE REFERENCE DRAWINGS, CONTRACT DOCUMENTS, CONSTRUCTION SPECIFICATION, CEMP AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED BY THE SUPERINTENDENT DURING THE COURSE OF THE CONTRACT.
3. ALL LEVELS ARE IN METRES TO AUSTRALIAN HEIGHT DATUM (AHD).
4. ALL COORDINATES ARE IN METRES TO MGA ZONE 55 (GDA 94).
5. ALL RUNNING DISTANCES ARE IN METRES.
6. ALL DIMENSIONS IN MILLIMETRES UNO.
7. DIMENSIONS SHOULD NOT BE SCALED OFF DRAWINGS.
8. BEFORE PROCEEDING WITH THE WORK ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT.
9. ANY SETTING OUT DIMENSIONS SHALL BE CHECKED AND CONFIRMED BY THE CONTRACTOR OR BEFORE CONSTRUCTION COMMENCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECT SETTING OUT OF WORKS AS DETAILED IN THE DRAWINGS.
11. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AS REQUIRED FOR CARRYING OUT THE WORKS, APART FROM PRINCIPAL SUPPLIED ITEMS
12. ALL WORKS SHALL BE SUBJECT TO INSPECTION BY THE SUPERINTENDENT.
13. THE CONTRACTOR SHALL MAKE AN ASSESSMENT OF LOCAL GEOLOGICAL CONDITIONS WITH REGARD TO EXCAVATIONS AND TAKE FULL RESPONSIBILITY FOR SUCH.
14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS TO THE SITE AT ALL TIMES DURING THE CONSTRUCTION.
15. THE CONTRACTOR IS TO INFORM HIMSELF FULLY IN RELATION TO SITE ROAD ACCESS ARRANGEMENTS. ALL COSTS ASSOCIATED WITH ALTERNATIVE ACCESS SHALL BE BORNE BY THE CONTRACTOR. SITE SHALL BE REINSTATED AT COMPLETION TO THE SATISFACTION OF THE SUPERINTENDENT.
16. ALL GATES & FENCING ARE TO BE MAINTAINED DURING WORKS AND REINSTATED BEFORE THE COMPLETION OF WORKS.
17. SITE SHALL BE EXCAVATED SLOPES SHOWN IN THIS DRAWING. TOPSOIL SHALLBE KEPT SEPARATE AND SPREAD OVER DISTURBED AREAS AT THE COMPLETION OF WORKS.
18. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM THE LOCATION AND DEPTH OF ALL OBSTRUCTIONS AND UNDERGROUND SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE COMMENCEMENT OF ANY WORKS.

ROCK MATERIALS

19. ALL ROCK MUST BE WELL GRADED, CLEAN, SOUND, HARD, TOUGH ANGULAR ROCK OF UNIFORM QUALITY WITH CRUSHING STRENGTH OF NOT LESS THAN 25MPa AND FREE OF DEFINED CLEAVAGE PLANES.

| EQUIVALENT SPHERICAL DIAMETER | PERCENT (BY WEIGHT) OR ROCK SMALLER SIZE |
|-------------------------------|--|
| 1.5 –2.0 D ₅₀ | 100% |
| D ₅₀ | 50% |
| 0.3 – 0.4 D ₅₀ | 10–20% |
| 0.1 – D ₅₀ | <5% |

ROCK SUPPLY AND PLACEMENT

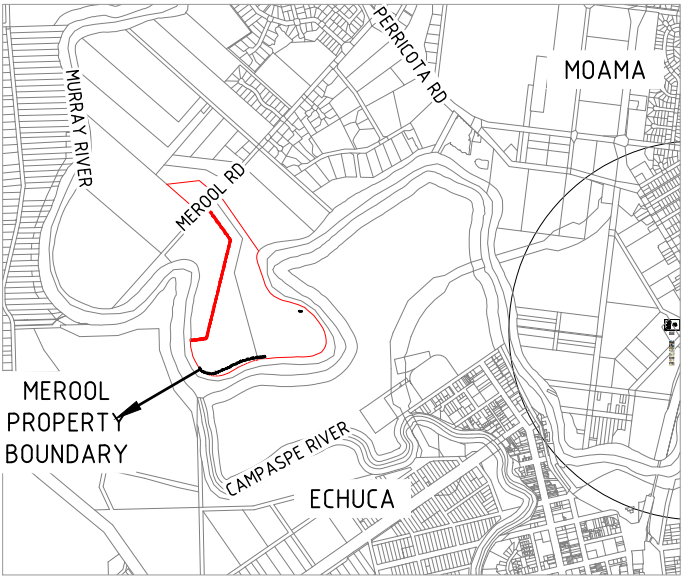
20. SUPPLY AND PLACEMENT OF ROCK TO BE IN ACCORDANCE WITH THIS DRAWING SET.
21. FINISHED SURFACE OF ROCK IS TO BE ROUGH AND ON DESIGN GRADE.
22. ROCK SHALL BE CAREFULLY PLACED FROM AN EXCAVATOR FROM NO GREATER THAN 1m ABOVE THE MATERIAL ONTO WHICH IT IS TO BE PLACED.
23. ROCK SHALL BE TAMPED INTO PLACE TO PROVIDE A BLANKET OF INTERLOCKING ROCK WITH NO SIGNIFICANT VOIDS AND DOES NOT MOVE UNDERFOOT.
36. ROCK IS TO BE PLACED ON GEOTEXTILE BIDIM A44 OR APPROVED EQUIVALENT WHERE SHOWN. GEOTEXTILE TO BE LAYERED IN SECTIONS PERPENDICULAR TO THE DIRECTION OF FLOW FROM DOWNSTREAM TO UPSTREAM WITH 500mm MINIMUM OVERLAP.

EXCAVATION

13. ALL EXCAVATIONS ASSOCIATED WITH THE DEVELOPMENT MUST BE PROPERLY GUARDED AND PROTECTED TO PREVENT THEM FROM BEING DANGEROUS TO LIFE OR PROPERTY.
15. PRIOR TO LAYING OF FILL, THE FULL DEPTH OF TOPSOIL (100mm) COMPRISING THE SURFACE LAYER INCLUDING GRASS, ROOTS AND ORGANIC MATTER SHALL BE CAREFULLY STRIPPED AND STOCKPILED SEPARATELY FOR REUSE AFTER REHABILITATION WORKS ARE COMPLETE.
18. ALL FILL SHALL BE LAID IN MAXIMUM 150mm LAYERS AND BE COMPACTED TO 95% OF STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289.
19. ALL DISTURBED SURFACES ARE TO BE SPREAD WITH TOPSOIL AT THE COMPLETION OF WORKS AND REVEGETATED WITH APPROVED NATIVE PLANTINGS.
20. EXCAVATION SHALL BE UNDERTAKEN IN ACCORDANCE WITH BEST PRACTICE IN A MANNER THAT MINIMISES IMPACT TO MATERIAL OUTSIDE THE LIMIT OF THE SITE.

ENVIRONMENTAL REQUIREMENTS


21. NO VEGETATION SHALL BE REMOVED DURING CONSTRUCTION.
22. EXCAVATION WORKS ARE NOT TO DISTURB TREE ROOTS GREATER THAN 15cm DIAMETER. AREAS ADJACENT TO LARGE TREES SHALL BE HAND EXCAVATED TO REDUCE IMPACT.
27. THE CONTRACTOR SHALL ENSURE THAT NOISE AND AIR EMISSIONS DURING CONSTRUCTION ARE WITHIN EPA AND LOCAL GOVERNMENT LIMITS.
29. CONTRACTOR TO MANAGE TIMING OF WORKS WITH REFERENCE TO LOCAL RAINFALL FORECASTS TO MINIMISE RISK OF EROSION AND SEDIMENT MOVEMENT FROM OPEN EXCAVATIONS. IF REQUIRED AFTER RAINFALL, CONTRACTOR IS TO REPAIR ERODED SURFACES AND REMOVE SEDIMENT FROM DRAINS AND OTHER AREAS.
30. ADEQUATE EROSION AND SEDIMENT CONTROLS MUST BE IN PLACE FOR THE DURATION OF CONSTRUCTION AND BE MAINTAINED BY THE CONTRACTOR.
31. CONTRACTOR TO MAINTAIN EQUIPMENT ON SITE FOR DEWATERING THE SITE PRIOR TO CONSTRUCTION AND AFTER RAIN. DISCHARGE LOCATION TO BE APPROVED BY THE SUPERINTENDENT.
32. NO FIRES ARE TO BE LIT OR WASTE MATERIALS BURNT ON THE SITE.
33. CONTRACTOR TO MINIMISE DUST GENERATION AT ALL TIMES THROUGHOUT CONSTRUCTION BY WATER APPLICATION ON AS-NEEDS BASIS.
34. ALL MACHINERY AND MATERIALS TO BE LOADED/UNLOADED WITHIN WORKSITE.
35. CONTRACTOR TO DEMONSTRATE ADHERENCE TO ‘COME CLEAN, GO CLEAN’ PRINCIPLE BY PROVIDING EVIDENCE OF PLANT WASHDOWN RECORDS TO THE SUPERINTENDENT, PRIOR TO PLANT MOVEMENT ON/OFF SITE. THE ‘SITE’ INCLUDES THE LOCATION OF THE BORROW PIT EXCAVATION, WHERE REQUIRED.



LOCALITY PLAN
SCALE 1:20,000

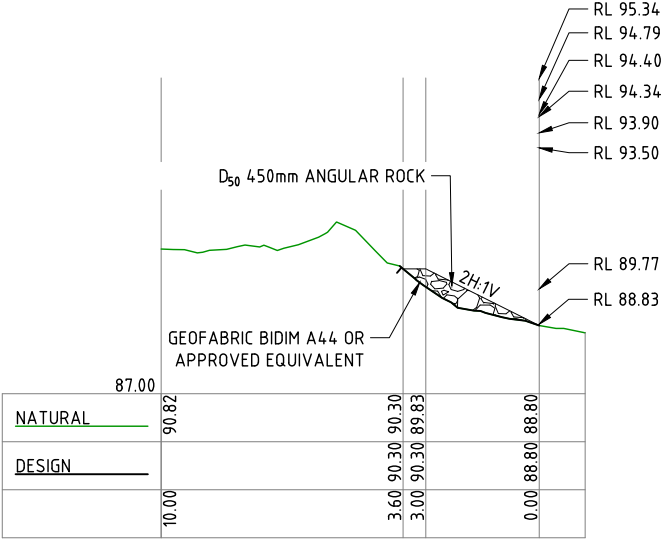
DRAWING INDEX

| | |
|---------|--------------------------------------|
| SHEET 1 | COVER SHEET |
| SHEET 2 | SITE 1 – PLAN AND CROSS-SECTION |
| SHEET 3 | SITE 2 – PLAN |
| SHEET 4 | SITE 2 – CROSS-SECTIONS SHEET 1 OF 3 |
| SHEET 5 | SITE 2 – CROSS-SECTIONS SHEET 2 OF 3 |
| SHEET 6 | SITE 2 – CROSS-SECTIONS SHEET 3 OF 3 |
| SHEET 7 | DETAILS |

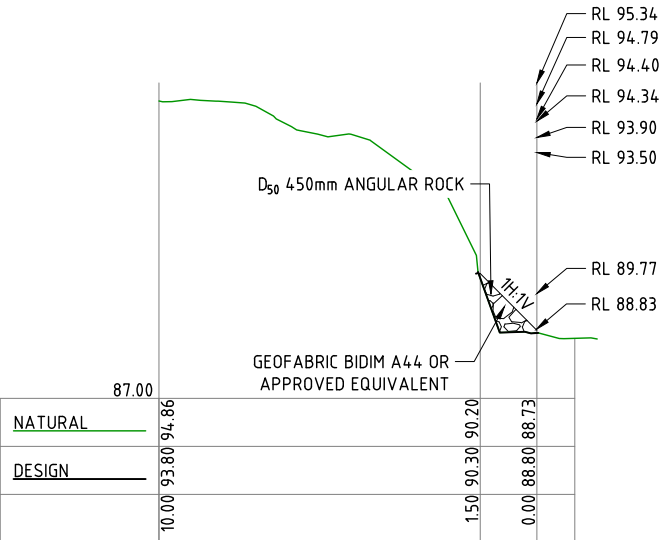
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| | | | | | DOCUMENTS ISSUED DO NOT BEAR ORIGINAL SIGNATURES EVIDENCE OF VERIFICATION AND APPROVAL MAY BE OBTAINED FROM THE COMPANY. | Name | | Date | Client: |  | FIFTEEN50 | Project: | Drawing Status: | | | | | | | | | | |
| | | | | | | Drawn | H. SINGH | 28/10/21 | | | | MEROOL RIVER BANK REHABILITATION | | | DRAFT | | | | | | | | |
| | | | | | | Design | H. SINGH | 28/10/21 | | | | | | | | | | | | | | | |
| | | | | | | Checked | S. WALES | 28/10/21 | | | | Title: | COVER SHEET | | | | | | | | | | |
| | | | | | Scale | Sheet | Discipline Head | N. HEINRICH | 29/10/21 | | | | | Drawing No. 21091-01 | | Sheet. 01/07 | Rev. B | | | | | | |
| | | | | | VARIES | A1 | Job Manager | S. WALES | 29/10/21 | | | | | | | | | | | | | | |
| B | ISSUED FOR COUNCIL APPLICATION | | | | H.S | S.W | N.H | 18/01/2022 | | | | | | | | | | | | | | | |
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| Rev. | Description | | | | Drn | Ckd | App | Date | | | | | | | | | | | | | | | |



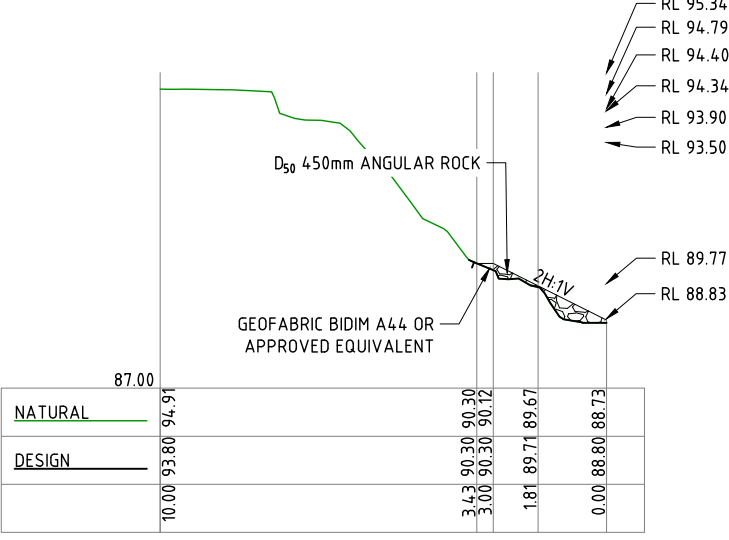
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SCALE 1:200



SECTION AT CH. 0.00
SCALE 1:100

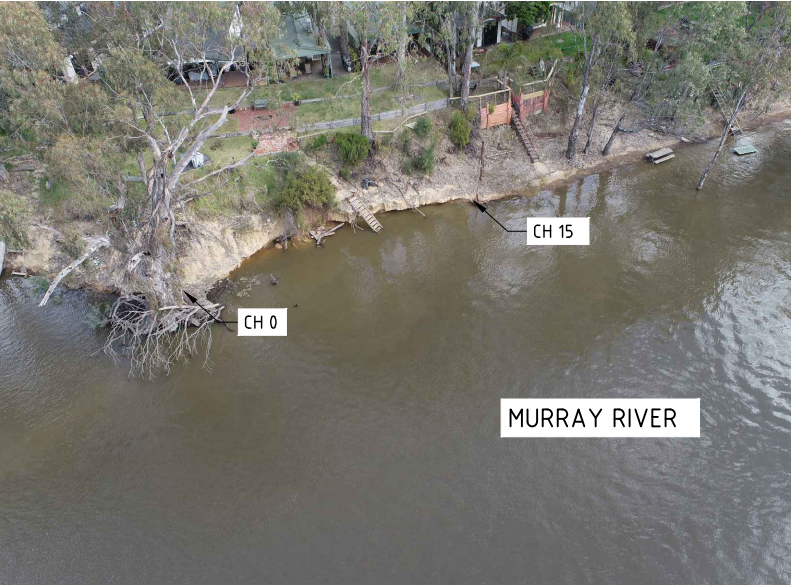


SECTION AT CH. 12.00
SCALE 1:100



SECTION AT CH. 15.00
SCALE 1:100

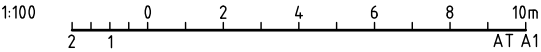
- LEGEND:**
- D₅₀ 450 mm ANGULAR ROCK ON 2H:1V
 - D₅₀ 450 mm ANGULAR ROCK ON 2H:1V TO 1H:1V
 - D₅₀ 450 mm ANGULAR ROCK ON 1H:1V
 - ROCK BEACHING TOP SET OUT POINTS
 - ROCK BEACHING BOTTOM SET OUT POINTS



SITE 1 - PHOTO

| QUANTITIES | | | |
|-------------------------------------|-----------|-------------------|--------|
| ROCK COMPOSITION | ROCK SIZE | VOLUME | WEIGHT |
| | (mm) | (m ³) | TONNES |
| D ₅₀ | 450.0 | 50.0 | 130.0 |
| GEOTEXTILE AREA = 50 m ² | | | |

| FLOOD LEVELS | |
|---------------------------------|---------|
| FLOOD TYPE | RL mAHD |
| DESIGN FLOOD (1 in 100 YEAR) | 95.34 |
| DESIGN FLOOD (1 in 20 YEAR) | 94.79 |
| BOM MAJOR FLOOD EVENT | 94.40 |
| DESIGN FLOOD (1 in 10 YEAR) | 94.34 |
| BOM MODERATE FLOOD EVENT | 93.90 |
| BOM MINOR FLOOD EVENT | 93.50 |
| PEAK WATER LEVEL (18/10/2021) | 89.77 |
| SURVEY WATER LEVEL (27/09/2021) | 88.83 |



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| | | Design | H. SINGH | 28/10/21 |
| | | | | |
| | | Checked | S. WALES | 28/10/21 |
| Scale | Sheet | Discipline Head | N. HEINRICH | 29/10/21 |
| VARIES | A1 | Job Manager | S. WALES | 29/10/21 |



Project:
MEROOL RIVER BANK REHABILITATION

Title:
SITE 1 - PLAN AND CROSS-SECTION

| | | |
|-------------------------|-----------------|-----------|
| Drawing Status: | | |
| DRAFT | | |
| Drawing No. 21091-02 | Sheet. 02/07 | Rev. B |



SITE 2



CH60



CH120



CH192



CH198



CH234

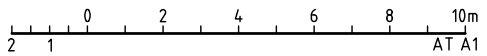
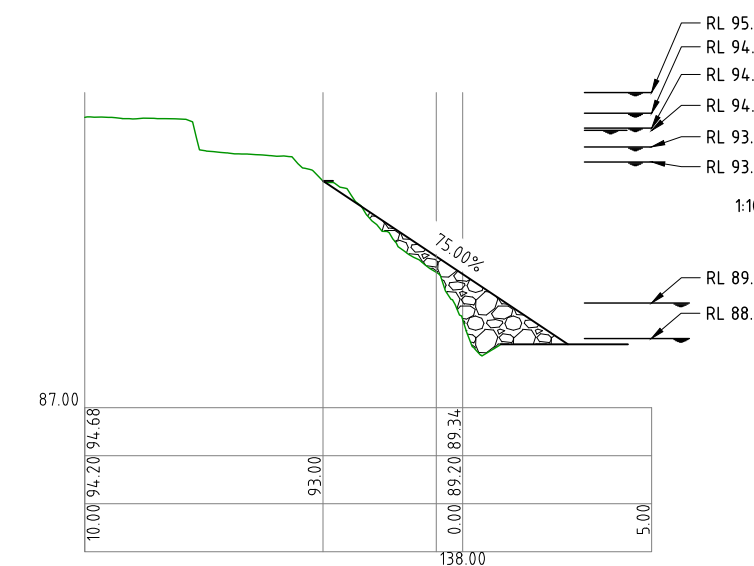
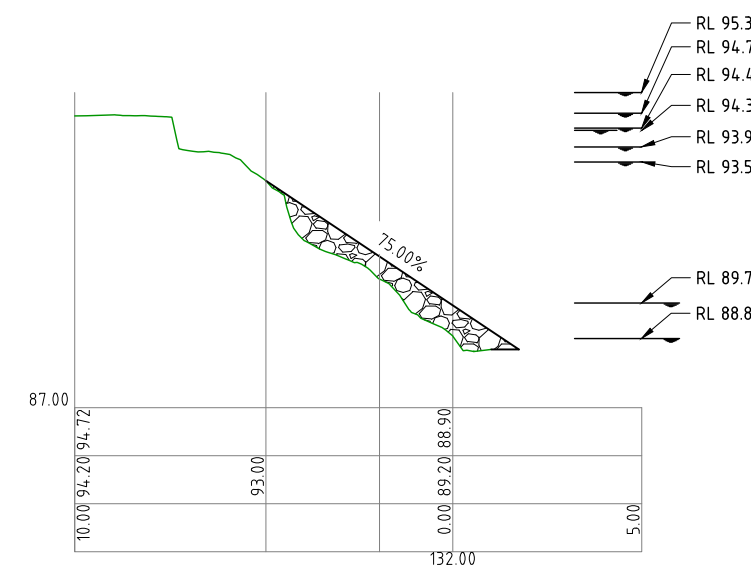
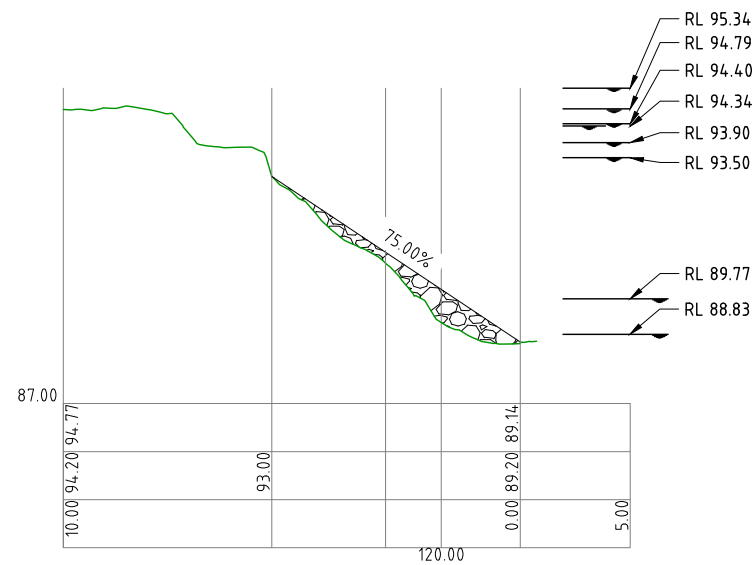
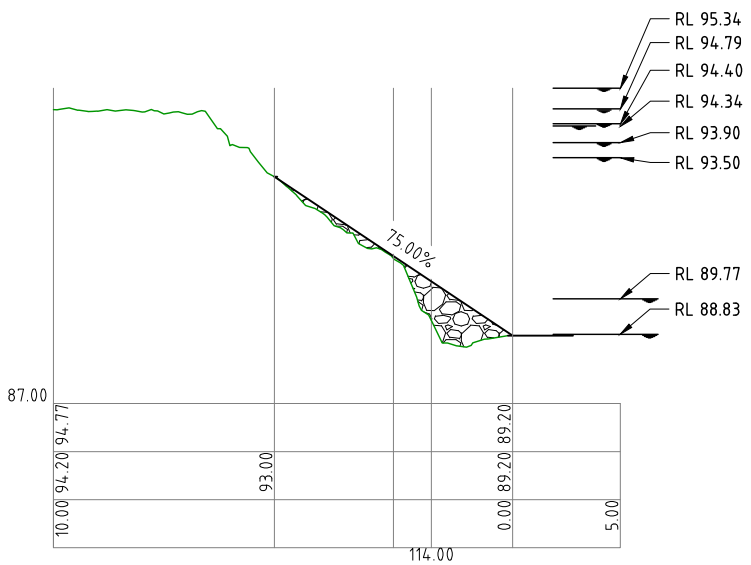
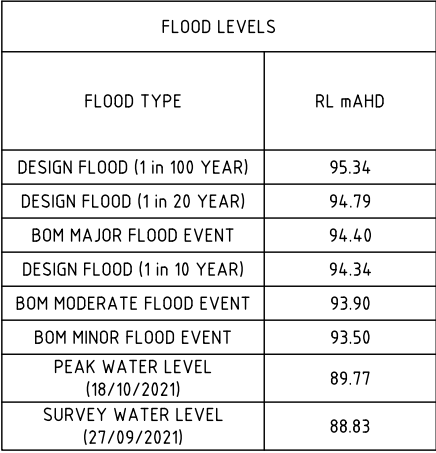
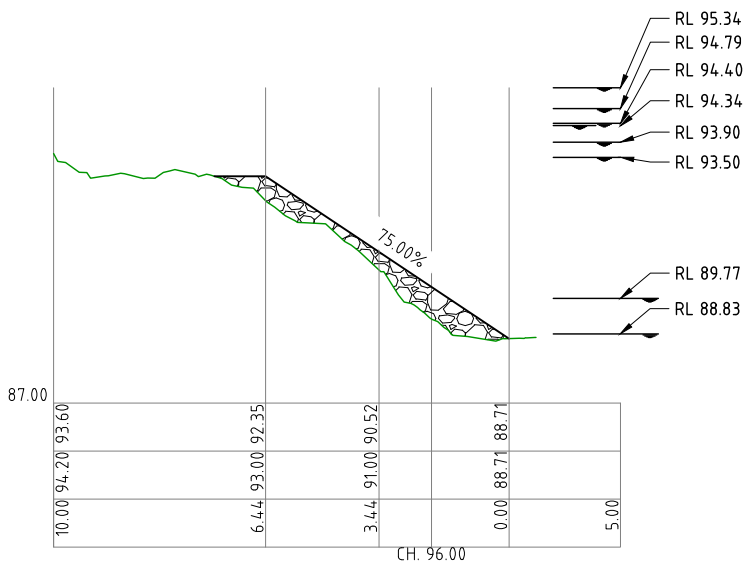
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| Drawn | H. SINGH | 28/10/21 | |
| Design | H. SINGH | 28/10/21 | |
| Checked | S. WALES | 28/10/21 | |
| Discipline Head | N. HEINRICH | 29/10/21 | |
| Job Manager | S. WALES | 29/10/21 | |
| Scale | VARIES | Sheet | A1 |



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| Project: MEROOL RIVER BANK REHABILITATION |
| Title: SITE 2- PLAN |

| | | |
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| Drawing Status: <div>DRAFT</div> | | |
| Drawing No. 21091-03 | Sheet. 03/07 | Rev. B |



WARNING
BWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.



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| | | Discipline Head | N. HEINRICH | 29/10/21 |
| Scale | Sheet | Job Manager | S. WALES | 29/10/21 |
| VARIES | A1 | | | |

Client:



FIFTEEN 50

Project:
MEROOL RIVER BANK REHABILITATION

Title:

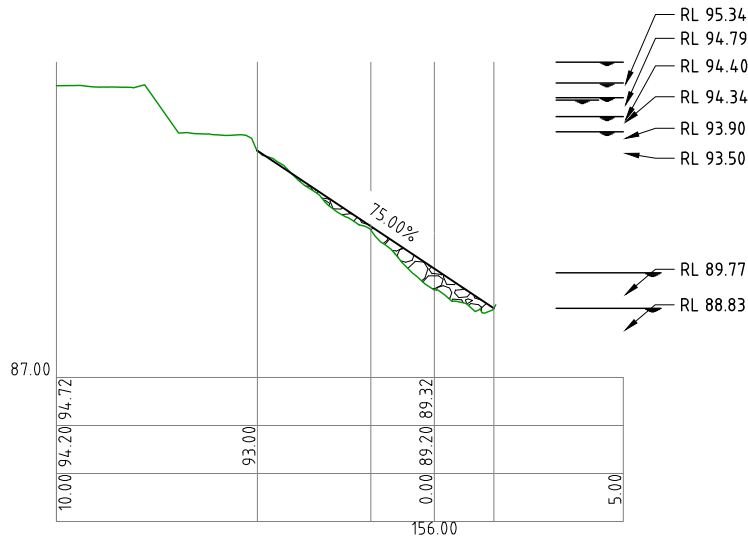
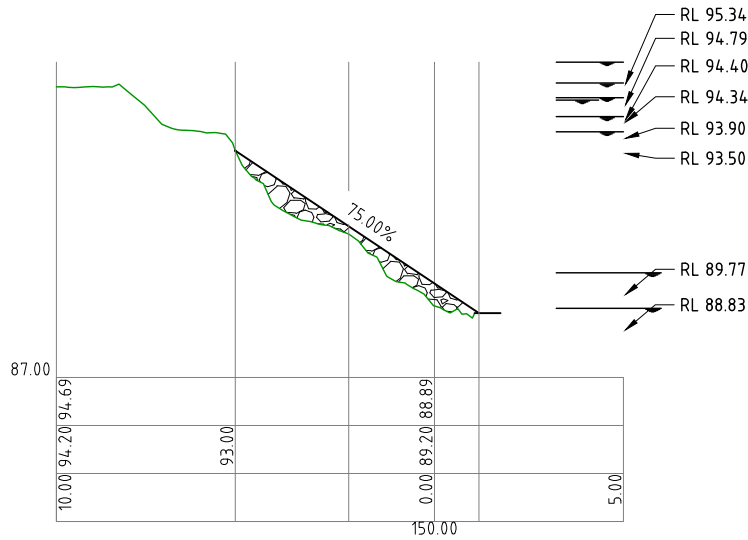
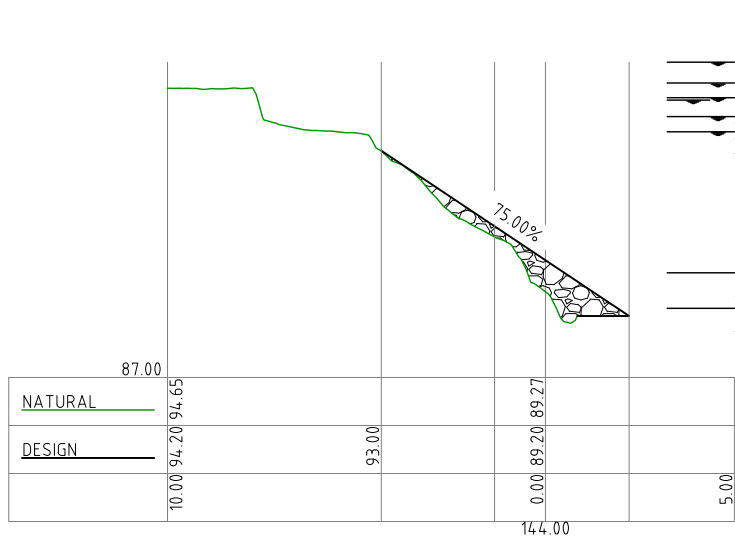
SITE 2- CROSS-SECTIONS SHEET 1 OF 3

Drawing Status

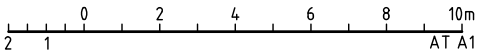
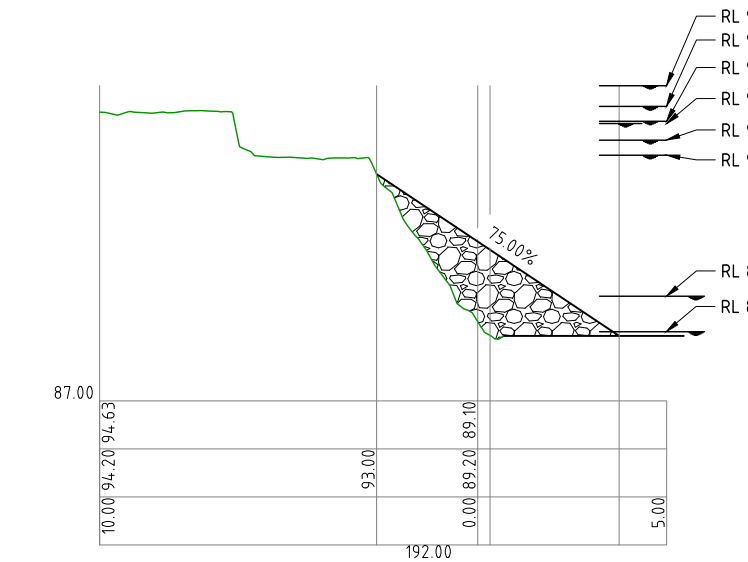
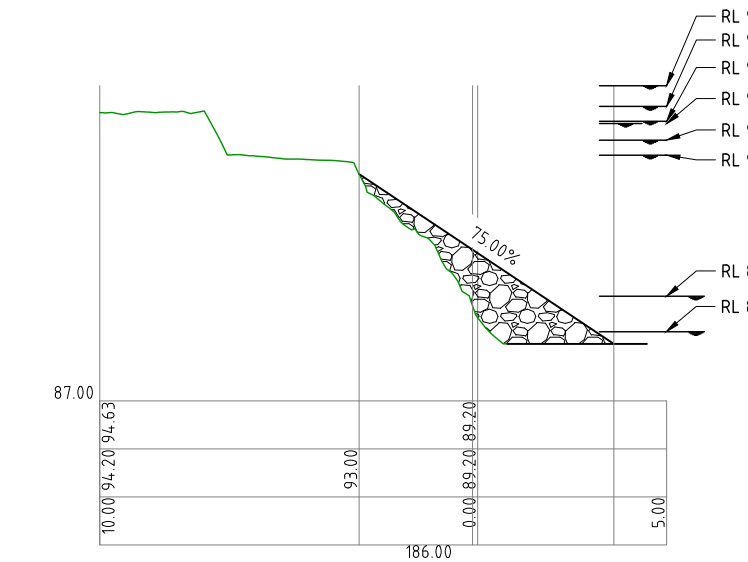
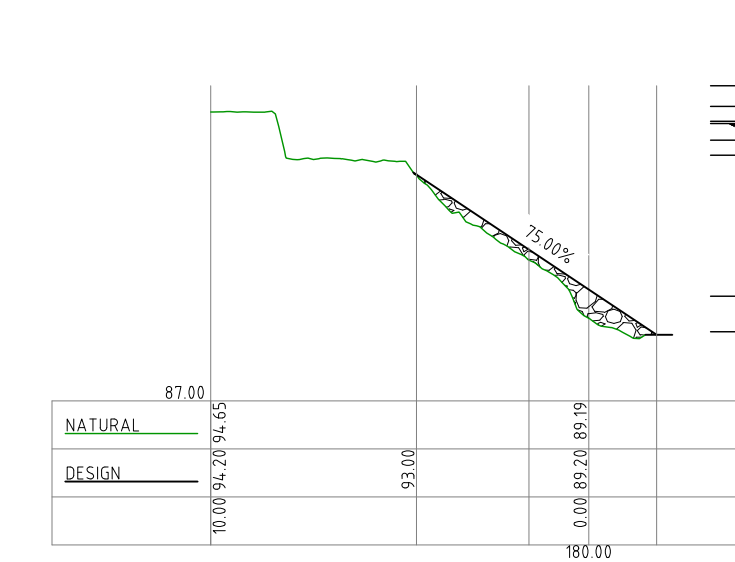
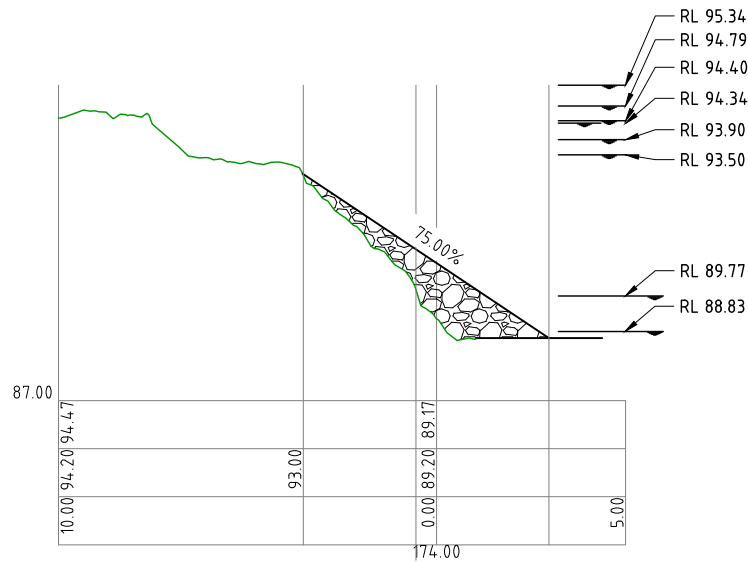
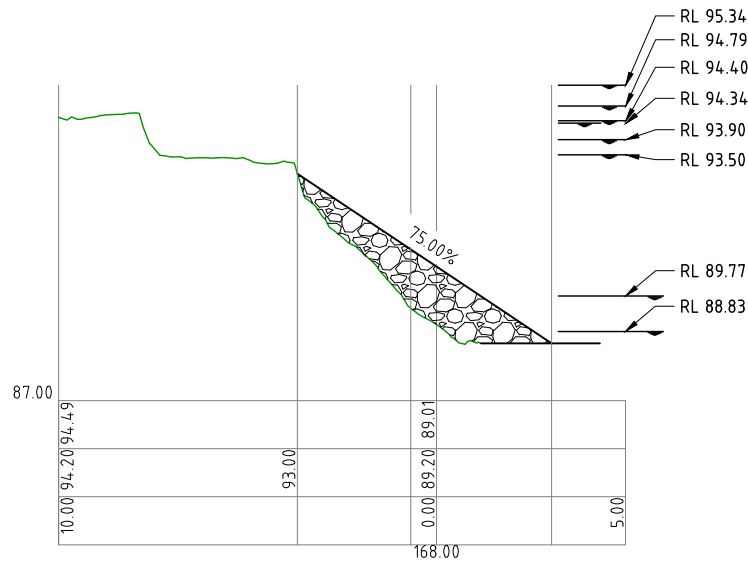
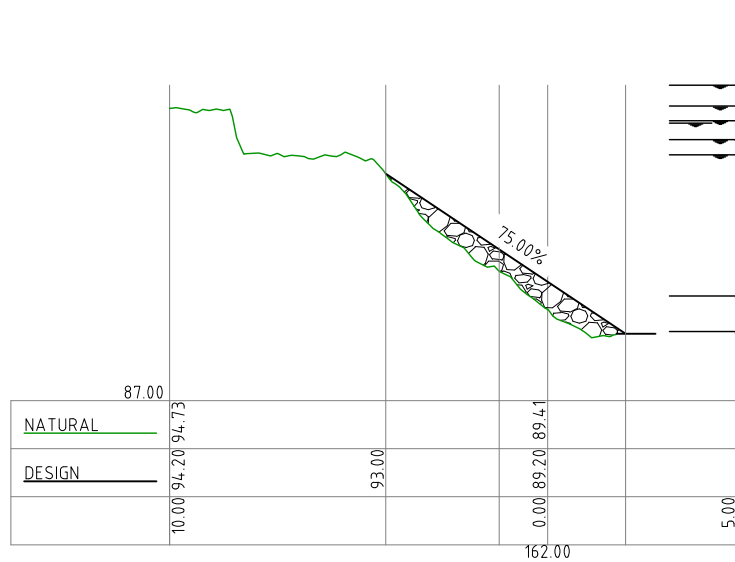
DRAFT

Drawing No. 21091-04

Sheet.
04/07



| FLOOD LEVELS | |
|------------------------------------|---------|
| FLOOD TYPE | RL mAHD |
| DESIGN FLOOD (1 in 100 YEAR) | 95.34 |
| DESIGN FLOOD (1 in 20 YEAR) | 94.79 |
| BOM MAJOR FLOOD EVENT | 94.40 |
| DESIGN FLOOD (1 in 10 YEAR) | 94.34 |
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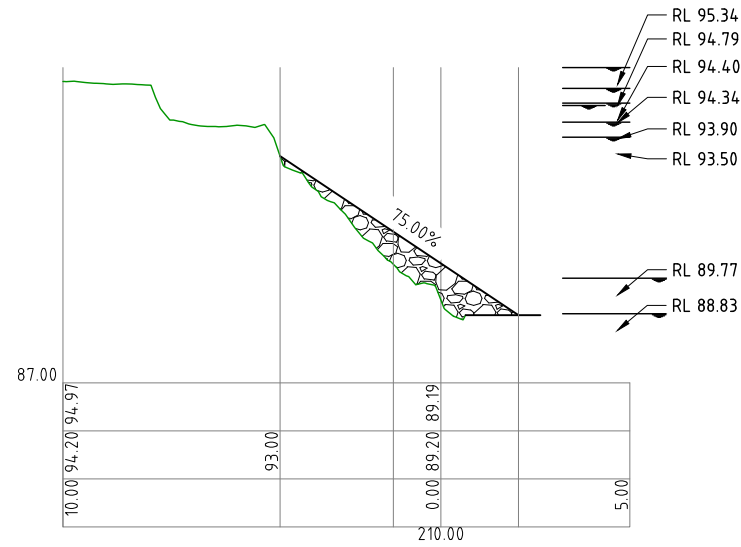
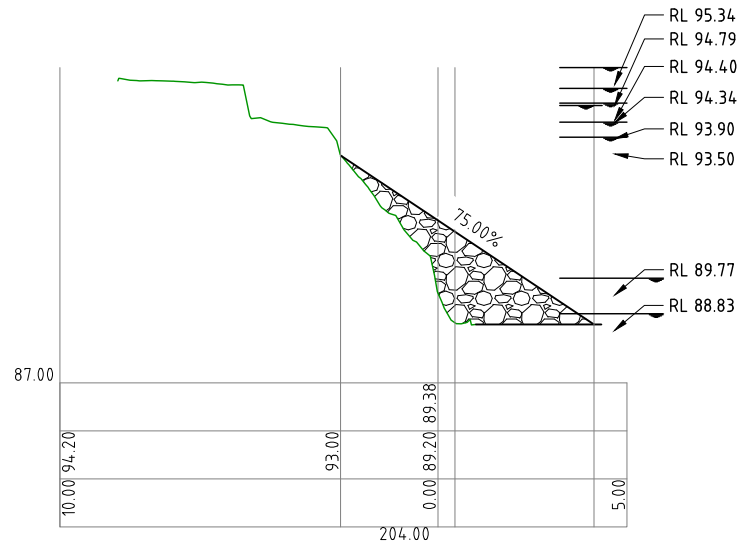
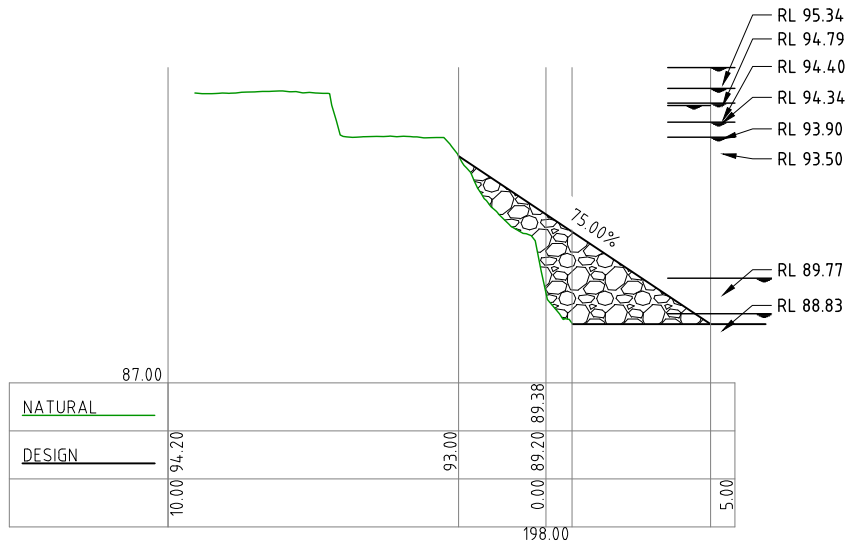
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|---|-------|-----------------|----------------------|
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| | | Drawn | H. SINGH 28/10/21 |
| | | Design | H. SINGH 28/10/21 |
| | | Checked | S. WALES 28/10/21 |
| Scale | Sheet | Discipline Head | N. HEINRICH 29/10/21 |
| VARIES | A1 | Job Manager | S. WALES 29/10/21 |



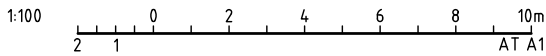
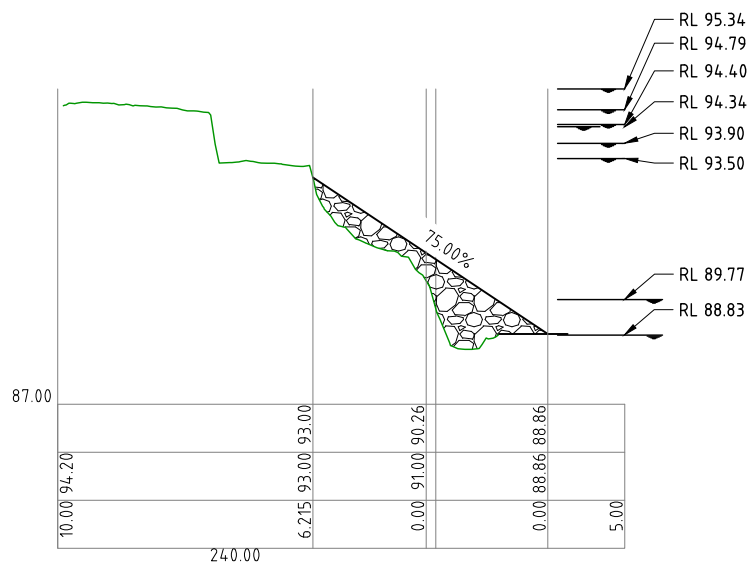
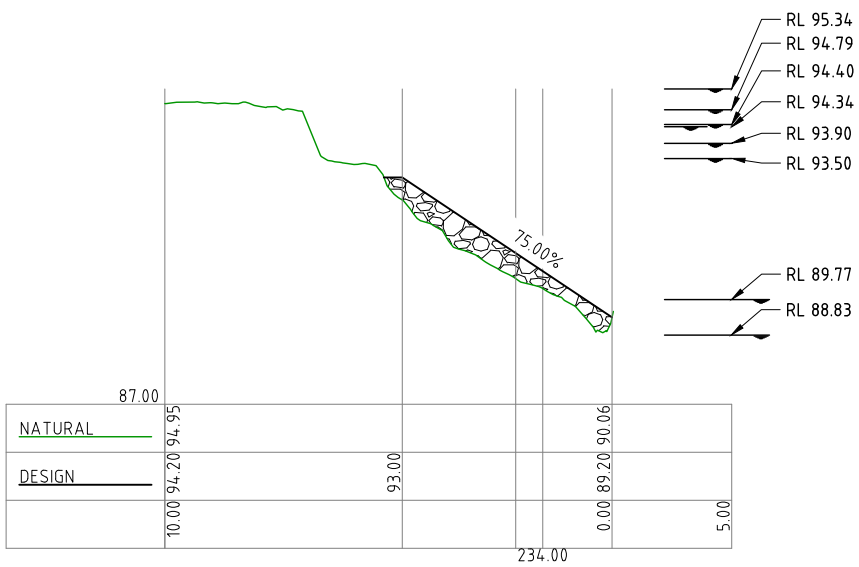
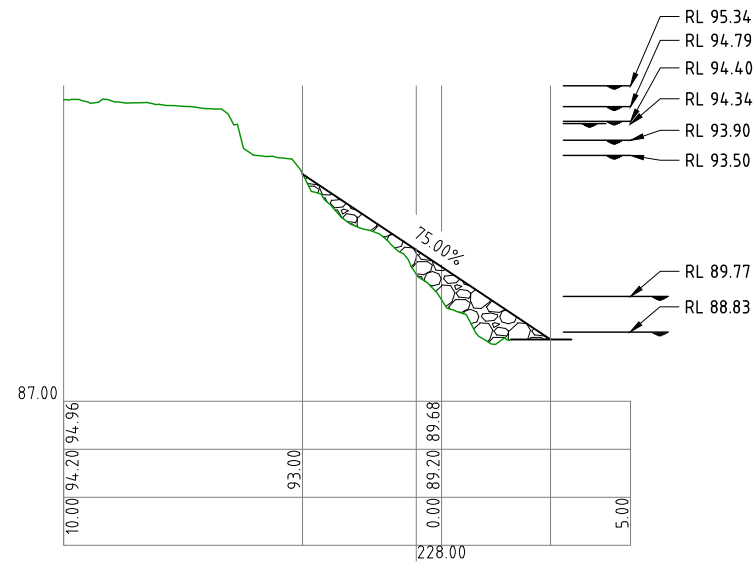
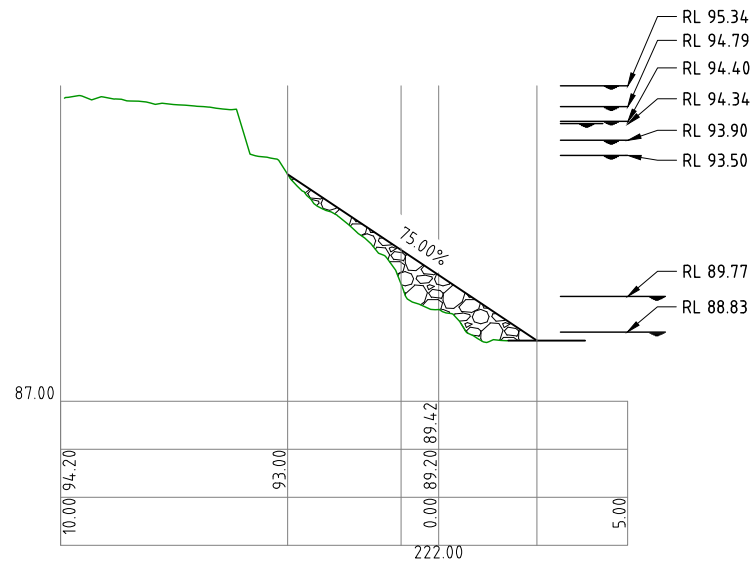
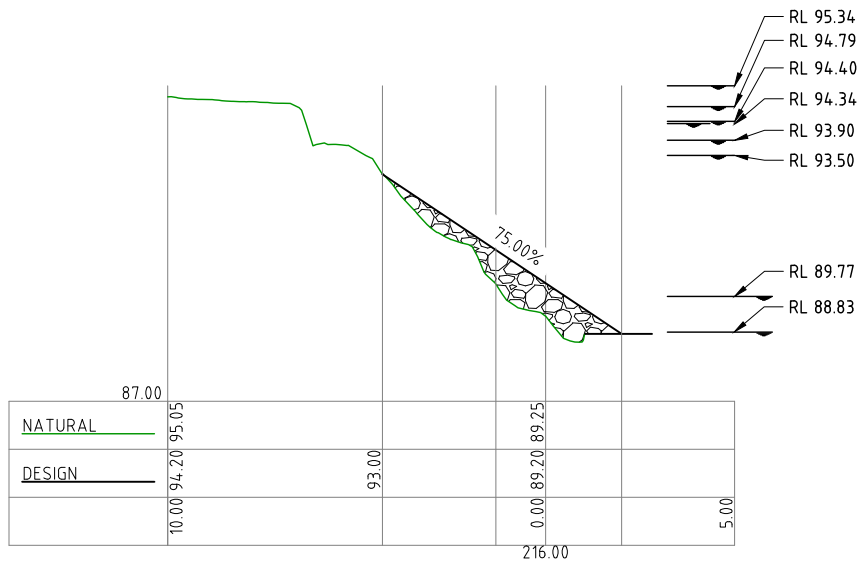
FIFTEEN 50

Project:
MEROOL RIVER BANK REHABILITATION
Title:
SITE 2- CROSS-SECTIONS SHEET 2 OF 3

| | | |
|-------------------------------------|-----------------|-----------|
| Drawing Status: <div>DRAFT</div> | | |
| Drawing No. 21091-05 | Sheet. 05/07 | Rev. B |



| FLOOD LEVELS | |
|---------------------------------|---------|
| FLOOD TYPE | RL mAHD |
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| DESIGN FLOOD (1 in 20 YEAR) | 94.79 |
| BOM MAJOR FLOOD EVENT | 94.40 |
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| DOCUMENTS ISSUED | | Name | Date |
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| | Design | H. SINGH | 28/10/21 |
| | Checked | S. WALES | 28/10/21 |
| | Discipline Head | N. HEINRICH | 29/10/21 |
| Scale | Sheet | Job Manager | S. WALES |
| VARIES | A1 | | 29/10/21 |



FIFTEEN 50

| | |
|----------|-------------------------------------|
| Project: | MEROOL RIVER BANK REHABILITATION |
| Title: | SITE 2- CROSS-SECTIONS SHEET 3 OF 3 |

| | | |
|-----------------|--------|------|
| Drawing Status: | | |
| DRAFT | | |
| Drawing No. | Sheet. | Rev. |
| 21091-06 | 06/07 | B |

1. NO VEGETATION TO BE REMOVED TO FACILITATE INSTALLATION OF ROCK BEACHING. HAND EXCAVATE AROUND TREE ROOTS TO REDUCE IMPACT. ALL TREES TO BE RETAINED.

[illegible]