

# CPB UGL JOINT VENTURE COPPERSTRING 2032 - ROAD UPGRADES PROJECT WIDE PACKAGE



LOCALITY PLAN  
NOT TO SCALE

REFERENCE FILES ATTACHED:

| DRAWING REVISION HISTORY |                       |       |          |          |            |
|--------------------------|-----------------------|-------|----------|----------|------------|
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE       |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023 |

SCALE (PLOTTED FULL SIZE) N.T.S. SHEET SIZE A1

APPROVED  
ORIGINAL COPY ON FILE  
\*e\* SIGNED BY

SIGNED  
DATE

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|                |                                 |
|----------------|---------------------------------|
| CLIENT         | CPB UGL JV                      |
| CONTRACT TITLE | COPPERSTRING 2032 ROAD UPGRADES |
| STATUS         | 30% DESIGN                      |

|   |                           |                               |     |
|---|---------------------------|-------------------------------|-----|
| DRAWING TITLE   |                           | COVER SHEET AND LOCALITY PLAN |     |
| DATUMS:   | GDA20 - MGA54/55          | CLIENT No.                    | CU2 |
| DRAWING No.   | CU2-PW00-DRG-PAS-200-0001 | REVISION                      | A   |
| <small>Jul. 5, 23 - 12:04:20 Name: CU2-PW00-DRG-PAS-200-0001.dwg Updated By: Shirley Gago Ujama</small> |                           |                               |     |





| DRAWING NUMBER:           | TITLE:  | REVISION: |
|---------------------------|---|-----------|
| CU2-PW00-DRG-PAS-200-0001 | COVER SHEET AND LOCALITY PLAN                                     | A         |
| CU2-PW00-DRG-PAS-200-0002 | DRAWING SCHEDULE  | A         |
| CU2-PW00-DRG-PAS-200-0005 | GENERAL NOTES   | A         |
| CU2-PW00-DRG-PAS-200-0006 | GENERAL LEGEND  | A         |
| CU2-PW00-DRG-PAS-200-0011 | TYPICAL DETAILS - STATE CONTROLLED ROAD - BAR & BAL TREATMENT     | A         |
| CU2-PW00-DRG-PAS-200-0012 | TYPICAL DETAILS - STATE CONTROLLED ROAD - SIGNAGE AND LINEMARKING | A         |
| CU2-PW00-DRG-PAS-200-0021 | TYPICAL DETAILS - LOCAL GOVERNMENT ROAD                           | A         |
| CU2-PW00-DRG-PAS-200-0041 | TYPICAL DETAILS - PAVEMENT PROFILES                               | A         |

REFERENCE FILES ATTACHED:

| DRAWING REVISION HISTORY |                       |       |          |          | SCALE<br>(PLOTTED FULL SIZE) | SHEET SIZE  | CLIENT                             | DRAWING TITLE                         |
|--------------------------|-----------------------|-------|----------|----------|------------------------------|---|------------------------------------|---------------------------------------|
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE                         | APPROVED  | CONTRACT TITLE                     | DATUMS:                               |
|                          |                       |       |          |          |                              | ORIGINAL COPY ON FILE<br>*e* SIGNED BY<br> | CPB UGL JV                         | GDA20 - MGA54/55                      |
|                          |                       |       |          |          |                              |   | COPPERSTRING 2032<br>ROAD UPGRADES | CLIENT No. CU2                        |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023                   | SIGNED  | STATUS                             | DRAWING No. CU2-PW00-DRG-PAS-200-0002 |
|                          |                       |       |          |          |                              | DATE  | 30% DESIGN                         | REVISION A                            |

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**GENERAL:**

1. ALL DIMENSIONS WITHIN THIS DRAWING SET ARE IN METERS UNLESS SHOWN OTHERWISE.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES BEFORE COMMENCING CONSTRUCTION. ANY COSTS ASSOCIATED WITH REPAIRING DAMAGE TO THE EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL ENSURE ALL SITE SPECIFIC PERMITS ARE IN PLACE PRIOR TO COMMENCEMENT OF WORKS (PERMITS TO DISTURB POWER LINES ETC).
4. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY GUIDELINES, SPECIFICATIONS AND DRAWINGS UNLESS DIRECTED OTHERWISE.
5. THE CONTRACTOR SHALL INFORM RELEVANT LOCAL, STATE, NATIONAL AUTHORITY AND THE SUPERINTENDENT OF CONSTRUCTION START DATE PRIOR TO COMMENCEMENT OF WORKS.
6. THE CONTRACTOR'S APPROVED TRAFFIC MANAGEMENT PLAN (T.M.P.) AND TRAFFIC GUIDANCE SCHEME SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORKS SHALL BE IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY.
7. THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN (E.S.C.P.) SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORKS IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY.
8. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY.
9. ALL MATERIALS SHALL BE TRANSPORTED VIA DESIGNATED CONSTRUCTION ACCESS ROUTES UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT
10. ALL LEVELS IN THIS CONTRACT ARE AUSTRALIAN HEIGHT DATUM (AHD).
11. LEVELS FOR CONNECTS TO EXISTING WORKS MAY BE VARIED WHERE NECESSARY ON SITE TO ACHIEVE A SATISFACTORY SMOOTH FINISH TO THE EXISTING WORKS UPON APPROVAL BY SUPERINTENDENT.
12. ALL LEVELS ARE DM DERIVED FOR LAYOUTS, LONGITUDINAL SECTIONS AND CROSS SECTIONS. CONTRACTOR TO CONFIRM LEVELS ON SITE BEFORE CONSTRUCTION.
13. ALL ROAD SIGNS TO BE IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY SPECIFICATIONS RESPECTIVELY.
14. DO NOT OBTAIN DIMENSIONS FROM SCALING OFF PLANS.

**EARTHWORKS:**

15. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY GUIDELINES UNLESS NOTED OTHERWISE.
16. ALL EARTHWORKS QUANTITIES ARE SOLID FILL.
17. EARTHWORKS SPOIL IS TO BE STOCKPILED AS DIRECTED BY THE SUPERINTENDENT. TOPSOIL IS TO BE STRIPPED TO A DEPTH OF 50mm AND STOCKPILED FOR LATER RE-SPREADING. AREAS REQUIRING FILLING OR ROAD WORKS ARE TO BE STRIPPED AND VEGETATION IN OTHER AREAS SHALL BE RETAINED.
18. NOT WITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION, SIMILARLY, FINISHED SURFACE LEVELS MAY BE ADJUSTED BY A WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION WITH PRIOR APPROVAL FROM RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY.
19. SILT FENCING IS TO BE PLACED ON THE DOWNSTREAM SIDE OF ALL STOCKPILE SITES AND AN ADEQUATE CUTOFF DRAIN IS TO BE PLACED ON THE UPSTREAM SIDE OF ALL STOCKPILE SITES.
20. BATTER SLOPES TO BE 1 IN 4 MAX UNLESS SPECIFIED OTHERWISE.
21. ALL GROUND SURFACES DISTURBED DURING EARTHWORKS ARE TO BE HYDROMULCHED IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY GUIDELINES.
22. CUT / FILL HEIGHTS PROVIDED IN THE DTM MUST BE ADHERED TO; EXISTING SURFACE HEIGHTS ARE INTERPOLATED FROM A TRIANGULATED DIGITAL TERRAIN MODEL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE EXISTING SURFACE LEVELS AND CORRESPONDING CUT / FILL HEIGHTS TO ACHIEVE THE DESIGN SURFACE LEVEL ON SITE.
23. PRIOR TO CONSTRUCTION OF THE ROAD EMBANKMENT. THE CONTRACTOR SHALL COMPLETE A DETAILED SURVEY OF THE CLEARED & GRUBBED SURFACE AND PROVIDE TO GLENCORE TO CONFIRM FINISHED SURFACE LEVELS.

**PAVEMENT:**

24. THE PAVEMENT DESIGN IS BASED ON P&S DOCUMENT NUMBER P.21.0700-PAVEMENT DESIGN.
25. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY GUIDELINES UNLESS NOTED OTHERWISE.
26. PAVEMENT THICKNESS SHOWN ON THESE DRAWINGS IS PROVISIONAL ONLY AND SHALL BE CONFIRMED AFTER SUBGRADE TESTING. THE CONTRACTOR SHALL INITIALLY EXCAVATE 210mm BELOW FINISHED SURFACE LEVEL AND CARRY OUT BR TESTING TO CONFIRM THE REQUIRED PAVEMENT DESIGN.

**STORMWATER:**

27. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT LOCAL, STATE AND NATIONAL AUTHORITY GUIDELINES.
28. THE LEVELS AND SLOPES SHOWN ON STORMWATER STRUCTURES ARE INDICATIVE ONLY.
29. ALL REINFORCED CONCRETE PIPES TO BE FLUSH JOINT AND MINIMUM CLASS 3 UNO.
30. ALL HEADWALLS ARE TO BE PRECAST TYPE REFER DTMR STD. DRAWING 1243 AND 1359 FOR CONSTRUCTION DETAILS. PIPE SUPPORT TO BE TYPE H2.
31. TEMPORARY BRACING, PROPPING ETC. TO DRAINAGE PIPES, CULVERTS AND STRUCTURES MAY BE REQUIRED DURING CONSTRUCTION. STRUCTURES SHALL BE MAINTAINED IN A STABLE POSITION AND NO PART SHALL BE OVERSTRESSED DURING CONSTRUCTION.
32. ALL LOCATIONS, ORIENTATION AND LEVELS SHALL BE VERIFIED ON SITE BEFORE COMMENCING ANY WORK. DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT.
33. ALL CULVERTS AND PIPES TO HAVE 600mm COVER PRIOR TO CONSTRUCTION LOADS BEING APPLIED, BASED ON A 50 TONNE TRUCK.
34. PIPE LENGTHS FOR TRANSVERSE DRAINAGE ARE SHOWN TO THE NEAREST MULTIPLE OF 1.22m OR 2.44m UNO ON THE DRAWINGS.
35. GEOTEXTILE IN ACCORDANCE WITH MRTS27 SHALL BE PLACED UNDER ALL ROCK PROTECTION AND STEEL WIRE MATTRESSES.
36. THE DESIGN ALLOWABLE BEARING PRESSURE OF THE BASE SLAB CAST ON GROUND IS 150ka UNO.

37. CONCRETE CLASS TO BE 32MPa/20 TO AS 3600.
38. COVER TO REINFORCEMENT IS 40mm.
39. REINFORCING STEEL TO BE AUSTRALIAN MADE GRADE D500N TO AS 4671 REINFORCING MESH TO AS 4671.

**SCOUR PROTECTION NOTES:**

40. ROCK SCOUR PROTECTION FOR STORMWATER OUTLETS TO BE IN ACCORDANCE WITH QUDM.
41. MINIMUM ROCK PROTECTION LENGTH (L) TO BE IN ACCORDANCE WITH QUDM.
42. MINIMUM DEPTH OF ROCK IS TO BE 2 x MINIMUM ROCK SIZE (d50).
43. CHECK DAMS MAY BE CONSTRUCTED OUT OF ROCKS AND SANDBAGS AND IN COMBINATION WITH GEOTEXTILE.
44. ROCK PROTECTION TO EXTEND UP THE BANKS TO EITHER THE HEIGHT OF THE PIPE'S OBVERT OR TO THE DESIGN TAILWATER LEVEL (WHICHEVER IS THE HIGHEST).
45. ROCK PROTECTION TO BE PROVIDED AROUND THE HEADWALL, WINGWALLS AND APRON AND WHERE APPLICABLE ABOVE THE HEADWALL WHERE THE HEADWALL IS LOCATED WITHIN AN OVERLAND FLOW PATH.
46. GEOTEXTILE TO BE CONSTRUCTED OUT OF WATER PERMEABLE MATERIAL USUALLY SYNTHETIC MATERIAL SUCH AS POLYPROPYLENE. TO BE USED AS PART OF EROSION AND SEDIMENT CONTROL METHOD IN CONSTRUCTION AND STORMWATER MANAGEMENT SITUATIONS TO TRAP OR PREVENT CLOGGING OF AGGREGATES BY SOIL/CLAY/SILT PARTICLES.
47. GEOTEXTILE MUST BE OF SUFFICIENT STRENGTH/DURABILITY TO WITHSTAND BREAKAGE FROM WATER FLOW, SEDIMENT BUILDUP, AND EXPOSURE TO SUNLIGHT.
48. CONSULT WITH MANUFACTURER OF GEOTEXTILE TO VERIFY THAT IT CAN PERFORM THE FUNCTION THAT IS REQUIRED OF IT.
49. IF SLOPE OF CHANNEL / TABLE DRAIN IS BETWEEN 1:1 AND 1:10, EXCAVATE OUT TO A DEPTH OF 300mm WHERE THE ROCK CHECK DAMS ARE GOING TO BE EMBEDDED.
50. LAY DOWN GEOTEXTILE OVER THE WHOLE AREA THE ROCK CHECK DAMS IS TO BE CONSTRUCTED UPON.
51. ROCK CHECK DAMS ARE LIMITED TO 0.5m IN HEIGHT, ALTHOUGH IF SPECIALLY DESIGNED CAN BE UP TO 1.0m IN HEIGHT. STRAW BALE AND SANDBAG DAMS ARE UP TO 0.6m IN HEIGHT, CHECK DAMS CAN NOT BE USED IN DEFINED WATERCOURSES AND SHOULD ONLY BE USED IN STRAIGHT SECTIONS OF CHANNEL.
52. CHECK DAMS ARE TO BE LOCATED SO THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME LEVEL AS THE SPILLWAY AT THE DOWNSTREAM DAM.
53. SAND BAGS ARE TO BE MADE OUT OF HESSIAN OR MATERIAL THAT WILL NOT RIP OR BE SHREDDED BY THE WATER FLOW. FILTER MATERIAL FOR THE SANDBAGS IS TO BE SAND. SHARP EDGED AGGREGATE OR STONE IS NOT TO BE USED. THE SAND BAGS ARE TO BE INTERLOCKED INTO THE POSITION SO THAT THEY CANNOT BE EASILY MOVED.

**SEDIMENT EROSION:**

54. ALL CONTROL MEASURES TO BE INSPECTED AT LEAST WEEKLY AND AFTER SIGNIFICANT RUNOFF PRODUCING STORMS.
55. CONTROL MEASURES MAY BE REMOVED WHEN ON-SITE EROSION IS CONTROLLED AND 70% PERMANENT SOIL COVERAGE IS OBTAINED OVER ALL UPSTREAM DISTURBED LAND.
56. IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
57. STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.

**SEDIMENT FENCE:**

58. NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
59. NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6HA PER 100m LENGTH OF FENCE.
60. WOVEN FABRICS ARE PREFERRED, NON-WOVEN FABRICS MAY BE USED ON SMALL WORK SITES. I.E. OPERATIONAL PERIOD LESS THAN 6 MONTHS OR ON SITES WHERE SIGNIFICANT SEDIMENT RUNOFF IS NOT EXPECTED.
61. FENCES ARE REQUIRED 2m MIN FROM TOE OF CUT OR FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1m MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.

**REFERENCE FILES ATTACHED:**

| DRAWING REVISION HISTORY |                       |       |          |          |            |
|--------------------------|-----------------------|-------|----------|----------|------------|
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE       |
|                          |                       |       |          |          |            |
|                          |                       |       |          |          |            |
|                          |                       |       |          |          |            |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023 |


|   |        |                  |
|---|--------|------------------|
| SCALE<br>(PLOTTED FULL SIZE)  | N.T.S. | SHEET SIZE<br>A1 |
|  |        |                  |
| ORIGINAL COPY ON FILE<br>*e* SIGNED BY  |        |                  |
| SIGNED<br>DATE  |        |                  |

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| CLIENT         | CPB UGL JV                      |
| CONTRACT TITLE | COPPERSTRING 2032 ROAD UPGRADES |
| STATUS         | 30% DESIGN                      |

|  |                           |   |     |
|--|---------------------------|---|-----|
| DRAWING TITLE  |                           | GENERAL NOTES   |     |
| DATUMS:  | GDA20 - MGA54/55          | CLIENT No.  | CU2 |
| DRAWING No.  | CU2-PW00-DRG-PAS-200-0005 | REVISION  | A   |
| Jul. 5, 23 - 12:09:13 Name: CU2-PW00-DRG-PAS-200-0005.dwg Updated By: Shirley Gago Ujama |                           |  |     |



EXISTING (SURVEY)

|  |                              |
|--|------------------------------|
|  | BANK - BOTTOM                |
|  | BANK - TOP - LEFT            |
|  | BANK - TOP - RIGHT           |
|  | CHANGE OF GRADE              |
|  | CULVERT HEADWALL             |
|  | DRAIN - DOWN                 |
|  | DRAIN - UP                   |
|  | DRIVEWAY EDGE                |
|  | PAVEMENT EDGE                |
|  | SHOULDER EDGE                |
|  | TRACK EDGE                   |
|  | WATER EDGE                   |
|  | FOOTPATH EDGE                |
|  | KERB - BACK                  |
|  | KERB - INVERT                |
|  | KERB - CHANNEL LIP           |
|  | KERB - TOP                   |
|  | RETAINING WALL - BOTTOM      |
|  | RETAINING WALL - TOP - LEFT  |
|  | RETAINING WALL - TOP - RIGHT |
|  | SAFETY FENCE - W-BEAM        |
|  | SAFETY FENCE - WIRE ROPE     |

EXISTING (LINE MARKING)

|  |                                |
|--|--------------------------------|
|  | SEPARATION 9X3                 |
|  | CONTINUITY LINE                |
|  | BARRIER LINE - DOUBLE UNBROKEN |
|  | HOLD/GIVE WAY LINE             |
|  | BARRIER LINE - BROKEN - LEFT   |
|  | CHEVRON MARKING OUTLINE        |
|  | BARRIER LINE - BROKEN - RIGHT  |
|  | TURN LINE                      |
|  | PAINTED LINE UNBROKEN          |
|  | STOP LINE                      |

DESIGN (ROADWORKS)

|  |                              |
|--|------------------------------|
|  | CONTROL LINE - CENTRELINE    |
|  | CONTROL LINE - FILLET        |
|  | CONTROL LINE - KERB          |
|  | OFFSET CROWN                 |
|  | EDGE OF LANE SEAL            |
|  | EDGE OF MEDIAN               |
|  | EDGE OF SHOULDER (SEALED)    |
|  | EDGE OF FORMATION (UNSEALED) |
|  | SAFETY BARRIER STEEL BEAM    |
|  | SAFETY BARRIER WIRE ROPE     |
|  | SAFETY BARRIER TYPE F        |
|  | KERB - LIP LINE/EDGE OF SEAL |
|  | KERB - INVERT                |
|  | KERB - TOP                   |
|  | KERB - BACK                  |
|  | FOOTPATH BACK/FOOTPATH FRONT |
|  | TABLE DRAIN                  |
|  | EDGE OF VERGE                |
|  | EARTHWORKS - HINGE           |
|  | EARTHWORKS - BATTER          |
|  | EARTHWORKS - BENCH           |
|  | DRIVEWAY/ACCESS              |
|  | INTERFACE/JOINT              |
|  | SUBGRADE                     |
|  | BATTER SYMBOL                |
|  | SLOPE SIGNATURE              |
|  | TOWER PAD                    |
|  | TOWER CLEARANCE ZONE         |
|  | ACCESS TRACK                 |
|  | PASSING BAY                  |
|  | CONDUCTOR CLEARANCE          |

SIGNAGE



NEW SIGN TO BE INSTALLED



PROPOSED SIGN

REFERENCE FILES ATTACHED:

| DRAWING REVISION HISTORY |                       |       |          |          |            |
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|  |        |
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| SCALE (PLOTTED FULL SIZE)                      | N.T.S. |
| SHEET SIZE                                     | A1     |
|  |        |
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| SIGNED   |        |
| DATE   |        |

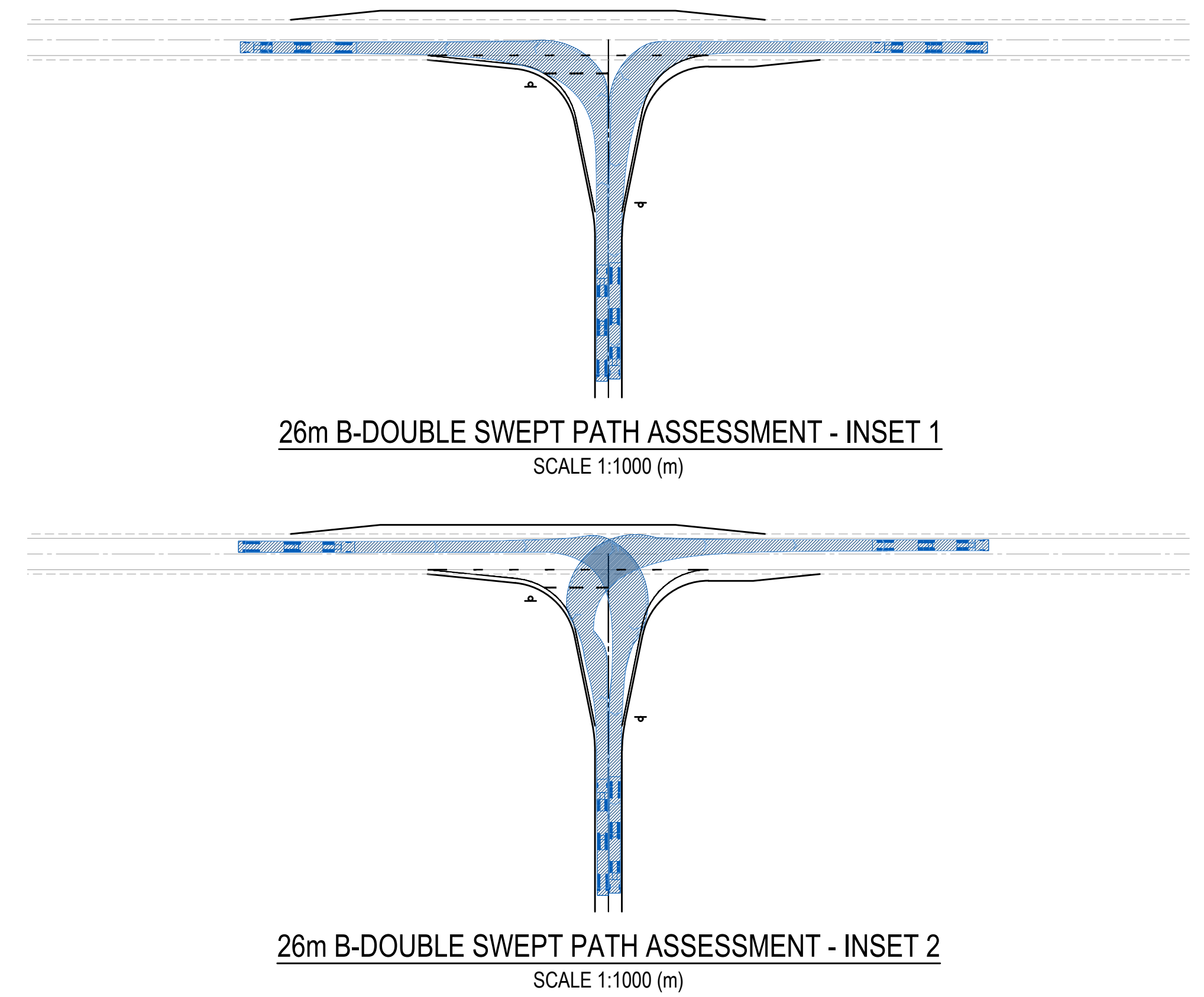
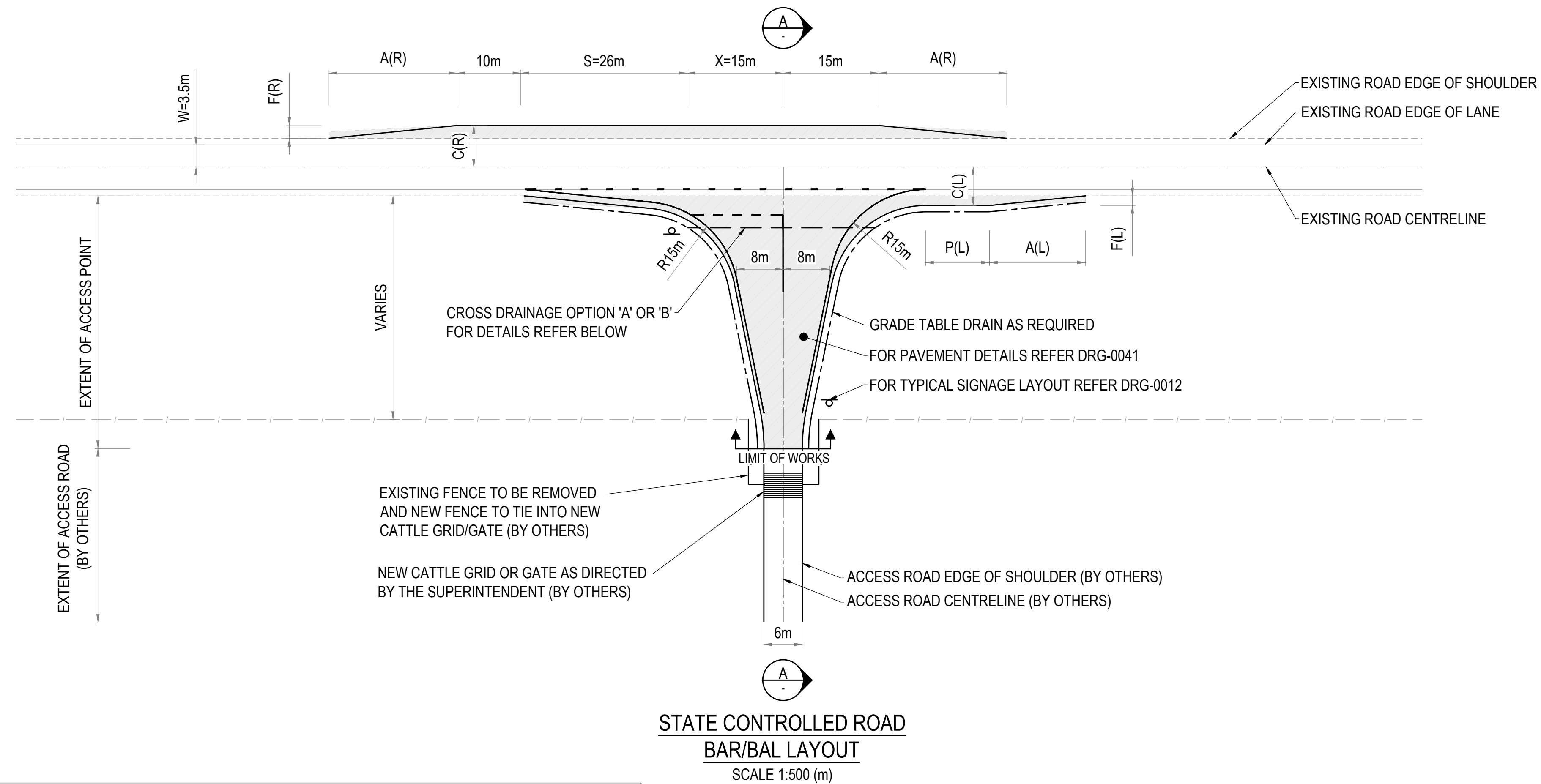
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| CONTRACT TITLE | COPPERSTRING 2032 ROAD UPGRADES |
| STATUS         | 30% DESIGN                      |

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|---|---------------------------|----------------|-----|
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| DATUMS:   | GDA20 - MGA54/55          | CLIENT No.     | CU2 |
| DRAWING No.   | CU2-PW00-DRG-PAS-200-0006 | REVISION       | A   |
|   |                           |                |     |
| <small>Jul. 5, 23 - 12:09:53 Name: CU2-PW00-DRG-PAS-200-0006.dwg Updated By: Shirley Gago Ujuma</small> |                           |                |     |



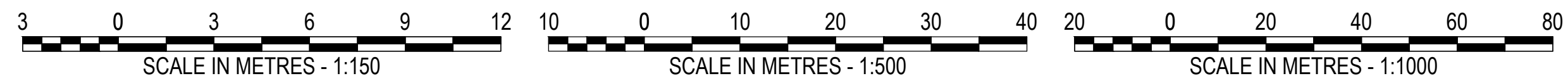
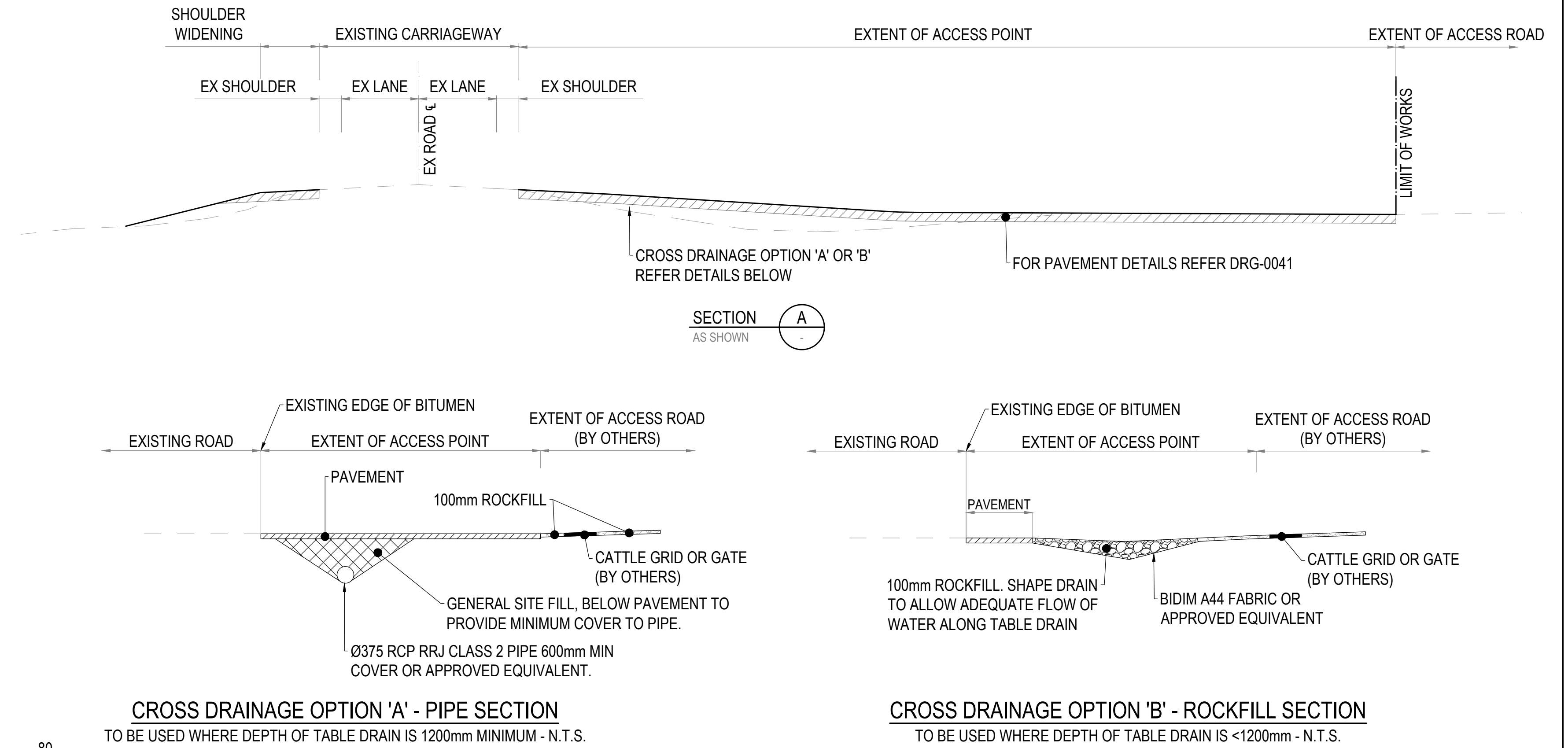
| BASIC RIGHT-TURN TREATMENT (BAR)* |      |        |      |      |
|-----------------------------------|------|--------|------|------|
| DESIGN VEHICLE: B-DOUBLE (26m)    |      |        |      |      |
| DESIGN SPEED (V)                  | W    | C(R)** | A(R) | F(R) |
| 70km/h                            | 3.5m | 6.5m   | 20m  | 2.0m |
| 80km/h                            | 3.5m | 6.5m   | 25m  | 2.0m |
| 90km/h                            | 3.5m | 6.5m   | 25m  | 2.0m |
| 100km/h                           | 3.5m | 6.5m   | 30m  | 2.0m |
| 110km/h                           | 3.5m | 6.5m   | 35m  | 2.0m |

\* TABLE VALUES ARE BASED ON A 3.5m WIDE LANE WITH 1.0m WIDE SHOULDER.  
\*\* MINIMUM VALUE ON STRAIGHTS.

| BASIC LEFT-TURN TREATMENT (BAL)* |      |        |      |      |      |
|----------------------------------|------|--------|------|------|------|
| DESIGN VEHICLE: B-DOUBLE (26m)   |      |        |      |      |      |
| DESIGN SPEED (V)                 | W    | C(L)** | A(L) | P(L) | F(L) |
| 70km/h                           | 3.5m | 6.0m   | 15m  | 10m  | 1.5m |
| 80km/h                           | 3.5m | 6.0m   | 20m  | 15m  | 1.5m |
| 90km/h                           | 3.5m | 6.0m   | 20m  | 20m  | 1.5m |
| 100km/h                          | 3.5m | 6.0m   | 25m  | 25m  | 1.5m |
| 110km/h                          | 3.5m | 6.0m   | 25m  | 35m  | 1.5m |

\* TABLE VALUES ARE BASED ON A 3.5m WIDE LANE WITH 1.0m WIDE SHOULDER.  
\*\* MINIMUM VALUE ON STRAIGHTS.

- NOTES:**
- FOR TYPICAL SIGNAGE AND LINEMARKING REFER DRG-0012.
  - FOR TYPICAL PAVEMENT PROFILE DETAILS REFER DRG-0041.



REFERENCE FILES ATTACHED: CU2-PW00-XRF-PAS-200-1110

|                          |  |  |  |       |  |          |  |          |  |            |  |                                     |  |  |  |                   |  |  |  |   |  |
|--------------------------|--|--|--|-------|--|----------|--|----------|--|------------|--|-------------------------------------|--|--|--|-------------------|--|--|--|---|--|
| DRAWING REVISION HISTORY |  |  |  | DRAWN |  | DESIGNED |  | REVIEWED |  | DATE       |  | APPROVED                            |  | SCALE (PLOTTED FULL SIZE) AS SHOWN   |  | SHEET SIZE A1     |  | CLIENT CPB UGL JV                              |  | DRAWING TITLE TYPICAL DETAILS - STATE CONTROLLED ROAD BAR & BAL TREATMENT |  |
| No. DESCRIPTION          |  |  |  | KSG   |  | GDM      |  | SG       |  | 07/07/2023 |  | ORIGINAL COPY ON FILE "e" SIGNED BY |  | CPB UGL CONTRACTORS  |  | pitt&sherry       |  | CONTRACT TITLE COPPERSTRING 2032 ROAD UPGRADES |  | DATUMS: GDA20 - MGA54/55  |  |
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|                          |  |  |  |       |  |          |  |          |  |            |  | DATE                                |  | © 2023 PITT & SHERRY (OPERATIONS) PTY LTD. THE DOCUMENT MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF ENGAGEMENT. |  |                   |  | REVISION A                                     |  | PRINT IN COLOUR   |  |

Jul. 5, 23 - 12:10:42 Name: CU2-PW00-DRG-PAS-200-0011.dwg Updated By: Shirley Gago Ujama



W5-22

180-250m

180-250m

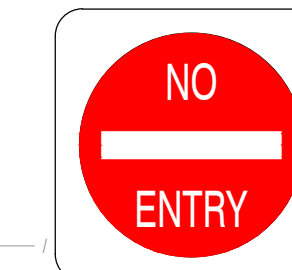
EXTENT OF ACCESS POINT

EXTENT OF ACCESS ROAD  
(BY OTHERS)



R1-2A

INSTALL NEW SIGN



R2-4A

INSTALL NEW SIGNS



R9-4B



W5-22

EXISTING ROAD CENTRELINE

ACCESS ROAD CENTRELINE (BY OTHERS)

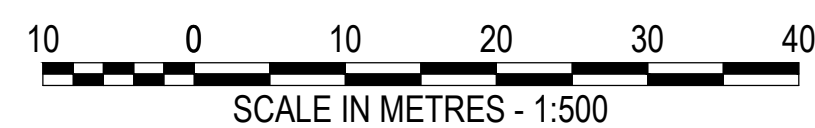
**TYPICAL SIGNAGE AND LINEMARKING**  
SCALE 1:500 (m)

NOTES:

1. ALL PAVEMENT MARKING AND SIGNS TO COMPLY WITH AS1742 (MUTCD) AND INCLUDED ON SEALED PAVEMENTS ONLY.
2. ALL SIGNS ARE TO BE SIZE "B" WITH CLASS 1 RETROREFLECTIVE SHEETING UNLESS NOTED OTHERWISE;
3. EXISTING SIGNAGE CONFLICTING WITH TYPICAL SIGNAGE LAYOUT ARE TO BE COVERED OR REMOVED.
4. "GATE No." SIGN TO BE SPECIFIED BY CPB UGL JV.
5. FOR TYPICAL BAR/BAL LAYOUT DETAILS REFER DRG.0011.
6. FOR PAVEMENT PROFILE DETAILS REFER DRG.0041.

PAVEMENT MARKING LEGEND:

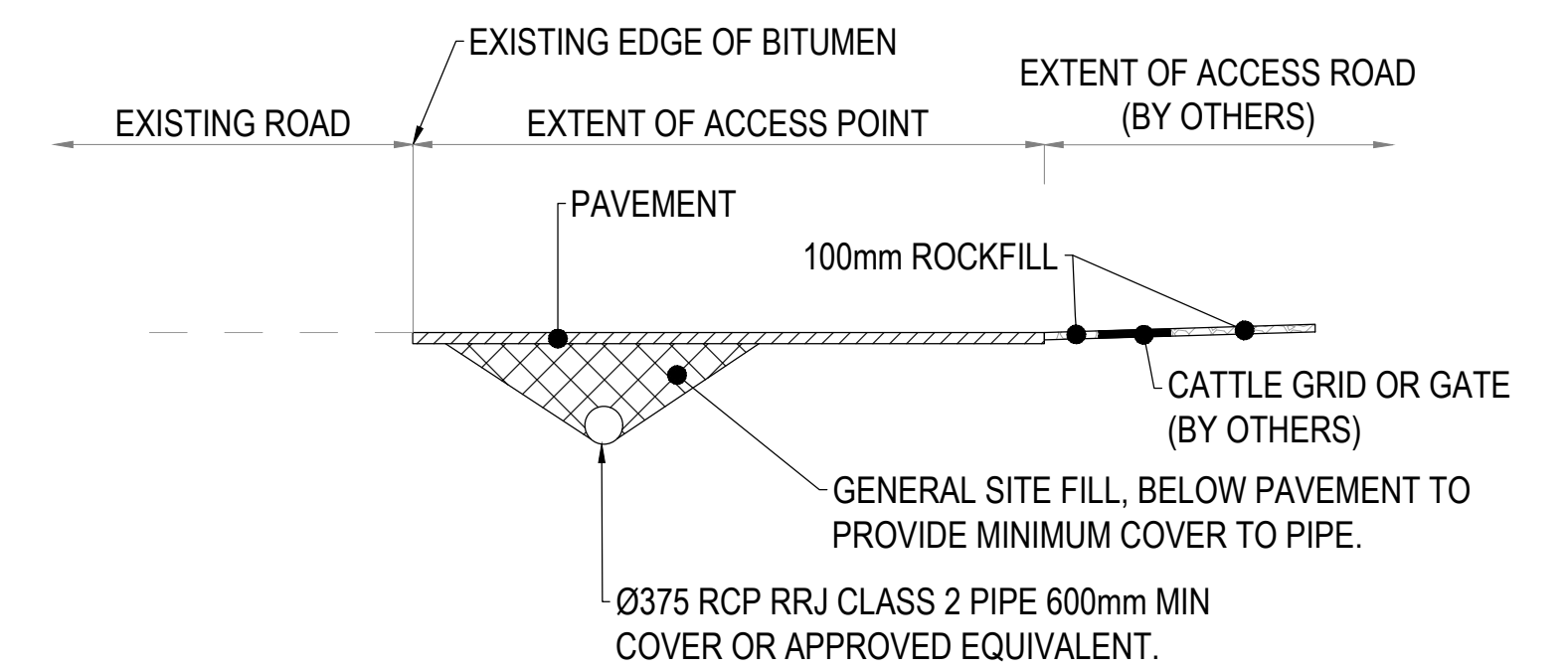
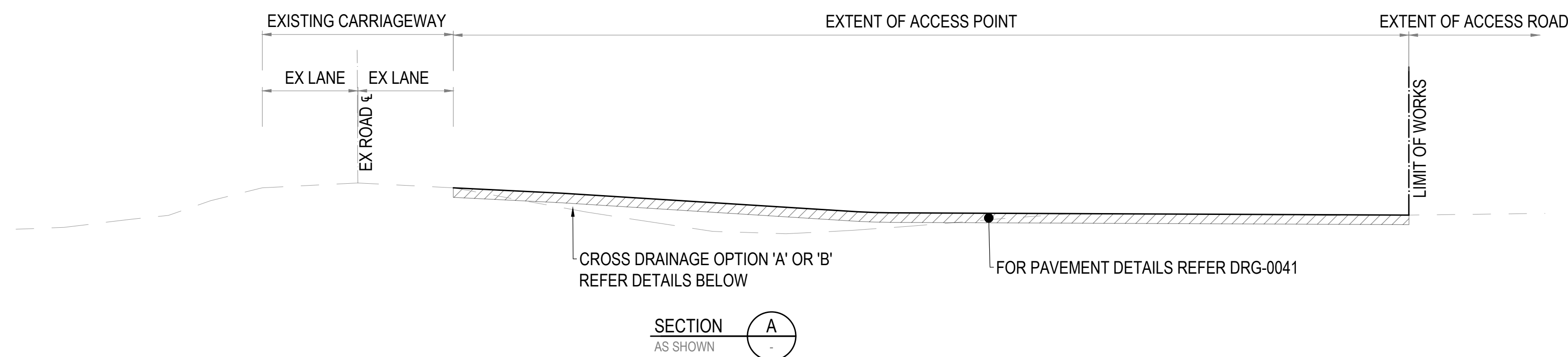
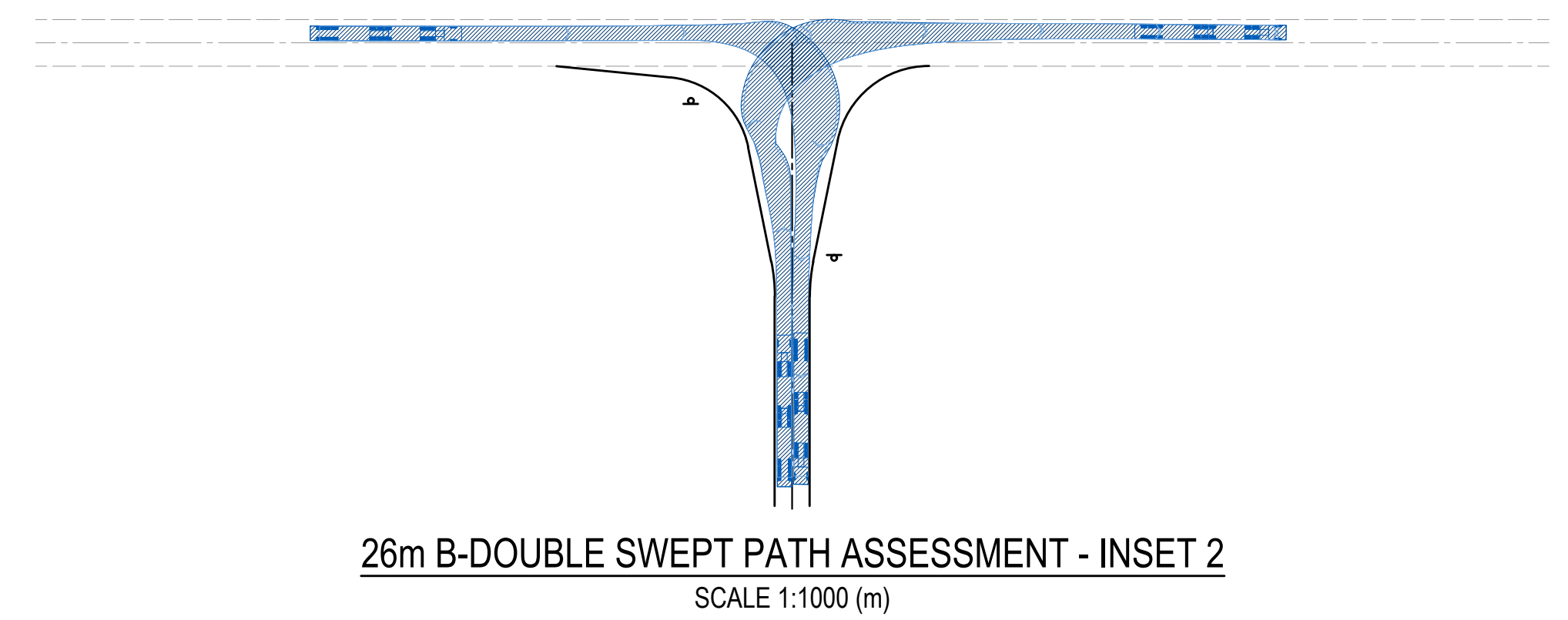
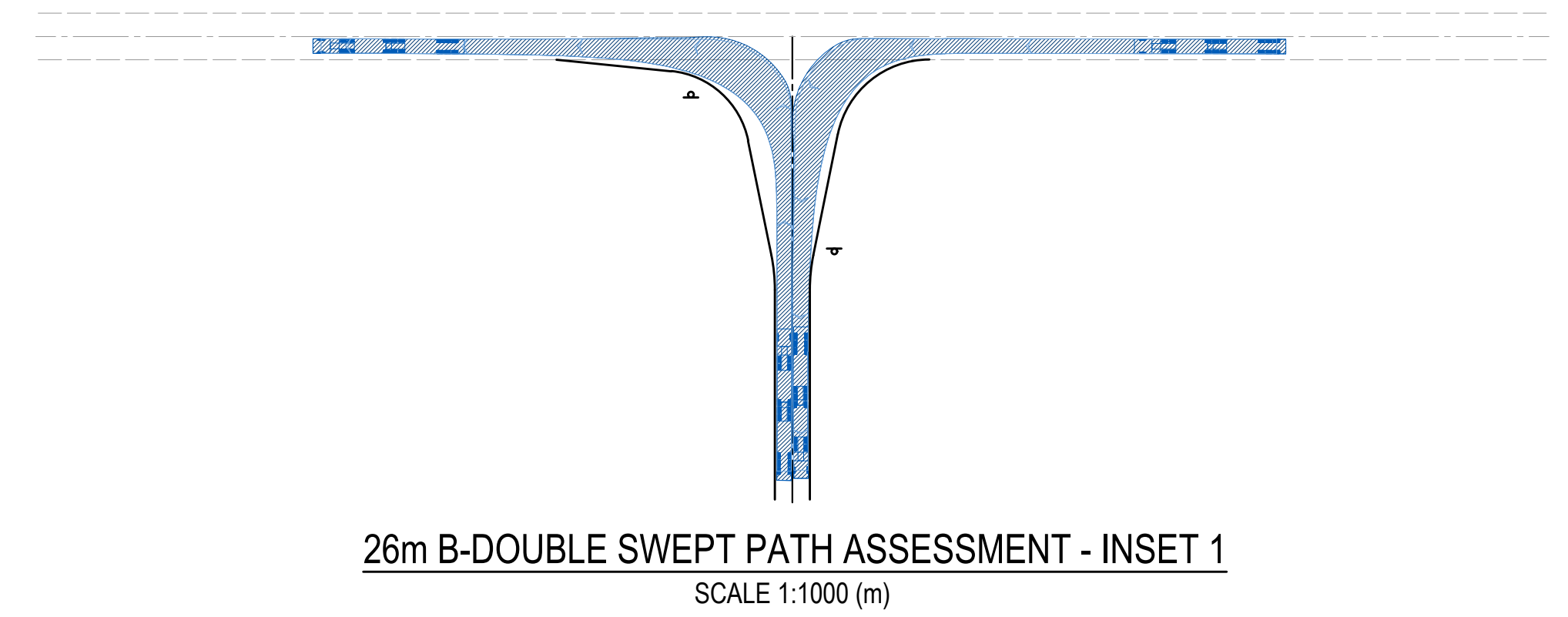
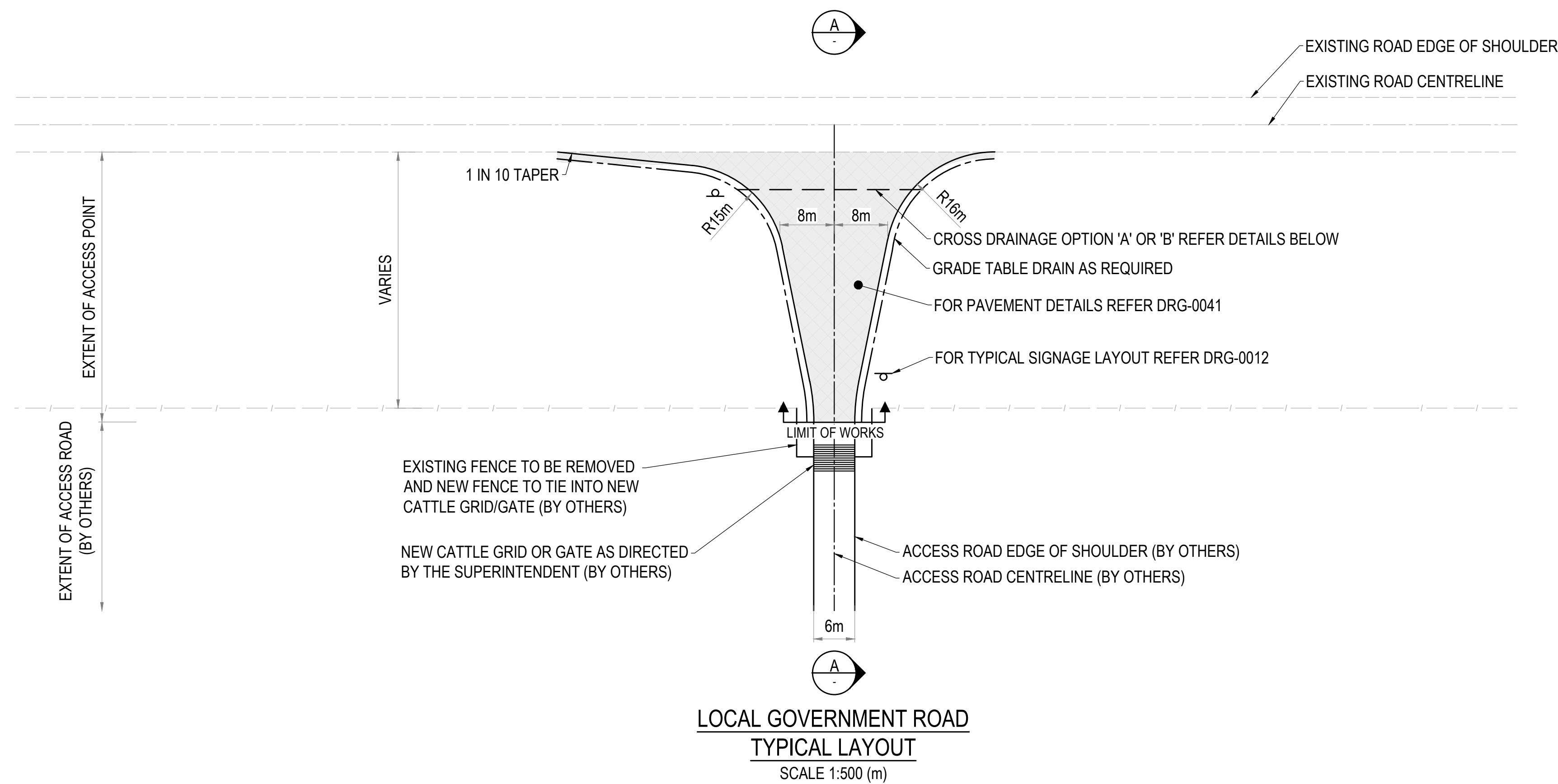
|                 |       |  |       |
|-----------------|-------|--|-------|
| EDGE LINE       | (EL)  |  | 150mm |
| CONTINUITY LINE | (CL)  |  | 200mm |
| GIVE WAY LINE   | (GWL) |  | 300mm |
| DIVIDING LINE   | (DL)  |  | 150mm |



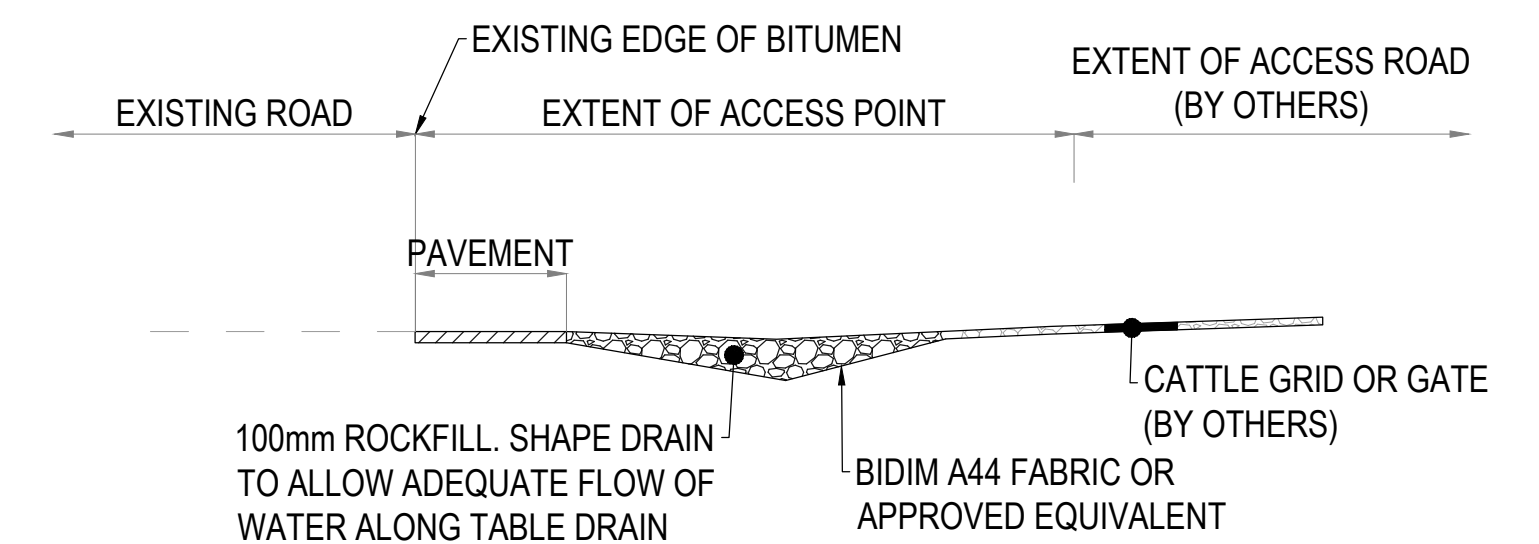
REFERENCE FILES ATTACHED: CU2-PW00-XRF-PAS-200-1110

|                          |                       |       |          |          |                                    |          |   |  |  |  |   |                |
|--------------------------|-----------------------|-------|----------|----------|------------------------------------|----------|---|--|--|--|---|----------------|
| DRAWING REVISION HISTORY |                       |       |          |          | SCALE (PLOTTED FULL SIZE) AS SHOWN |          | SHEET SIZE A1   |  | CLIENT CPB UGL JV                              |  | DRAWING TITLE TYPICAL DETAILS - STATE CONTROLLED ROAD SIGNAGE AND LINEMARKING                   |                |
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE                               | APPROVED | ORIGINAL COPY ON FILE "e" SIGNED BY   |  | CONTRACT TITLE COPPERSTRING 2032 ROAD UPGRADES |  | DATUMS: GDA20 - MGA54/55  | CLIENT No. CU2 |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023                         | SIGNED   | DATE  |  | STATUS 30% DESIGN                              |  | DRAWING No. CU2-PW00-DRG-PAS-200-0012   | REVISION A     |
|                          |                       |       |          |          |                                    |          |   |  |  |  |   |                |
|                          |                       |       |          |          |                                    |          | <p>pittsh.com.au Phone 1300 748 874 ABN 67 140 184 309</p> <p><small>© 2023 PITT &amp; SHERRY (OPERATIONS) PTY LTD. THE DOCUMENT MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF ENGAGEMENT.</small></p> |  | <p>STATUS 30% DESIGN</p>                       |  | <p>Jul. 5, 23 - 12:11:52 Name: CU2-PW00-DRG-PAS-200-0012.dwg Updated By: Shirley Gago Ujumo</p> |                |



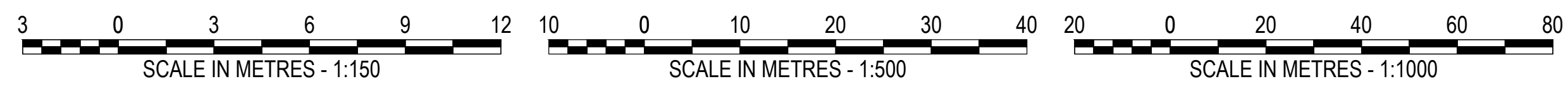


CROSS DRAINAGE OPTION 'A' - PIPE SECTION  
TO BE USED WHERE DEPTH OF TABLE DRAIN IS 1200mm MINIMUM - N.T.S.



CROSS DRAINAGE OPTION 'B' - ROCKFILL SECTION  
TO BE USED WHERE DEPTH OF TABLE DRAIN IS <1200mm - N.T.S.

- NOTES:
1. FOR TYPICAL SIGNAGE AND LINEMARKING REFER DRG-0012.
  2. FOR TYPICAL PAVEMENT PROFILE DETAILS REFER DRG-0041.
  3. LINEMARKING TO BE INCLUDED ON SEAL PAVEMENTS ONLY.



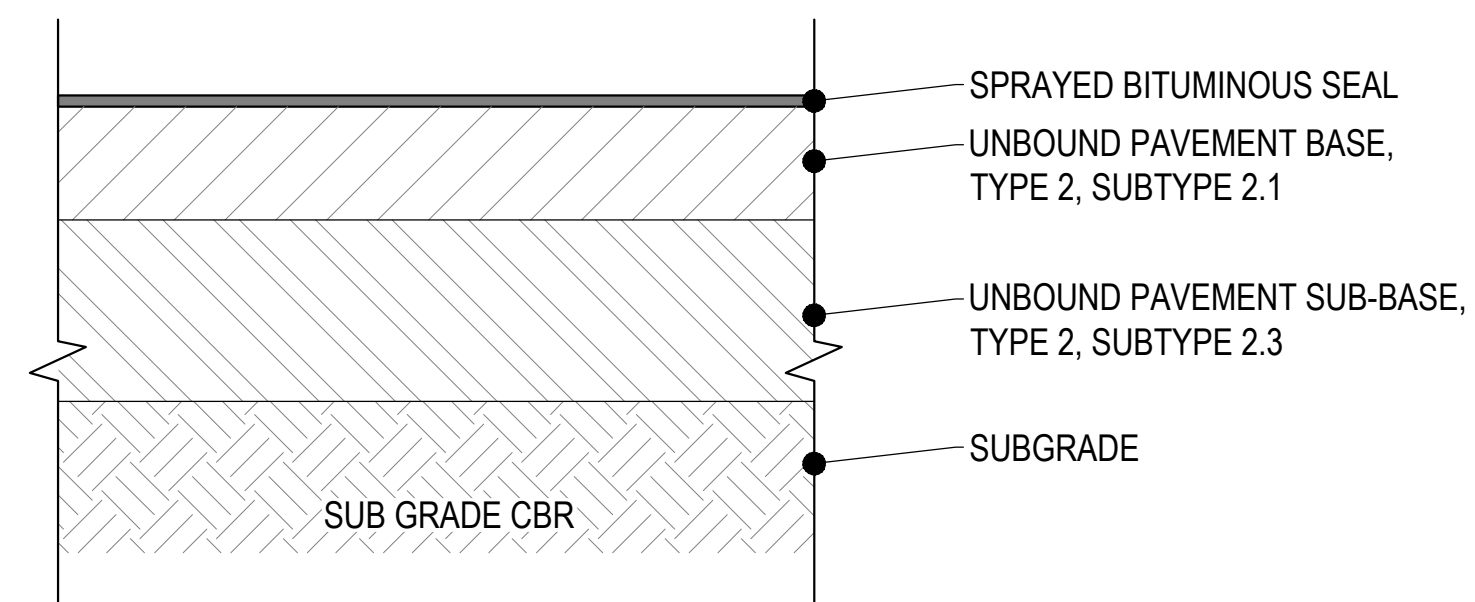
REFERENCE FILES ATTACHED: CU2-PW00-XRF-PAS-200-1110

| DRAWING REVISION HISTORY |                       |       |          |          |            | SCALE (PLOTTED FULL SIZE)           |  | SHEET SIZE |  | CLIENT               |  | DRAWING TITLE   |  |
|--------------------------|-----------------------|-------|----------|----------|------------|-------------------------------------|--|------------|--|----------------------|--|---|--|
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE       | AS SHOWN                            |  | A1         |  | CPB UGL JV           |  | TYPICAL DETAILS - LOCAL GOVERNMENT ROAD   |  |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023 | ORIGINAL COPY ON FILE "e" SIGNED BY |  |            |  |                      |  | CONTRACT TITLE<br>COPPERSTRING 2032 ROAD UPGRADES   |  |
|                          |                       |       |          |          |            | SIGNED                              |  |            |  | STATUS<br>30% DESIGN |  | DATUMS: GDA20 - MGA54/55<br>CLIENT No: CU2<br>DRAWING No: CU2-PW00-DRG-PAS-200-0021<br>REVISION: A<br><small>Jul. 5, 23 - 12:12:09 Name: CU2-PW00-DRG-PAS-200-0021.dwg Updated By: Shirley Gago Ujama</small> |  |
|                          |                       |       |          |          |            | DATE                                |  |            |  |                      |  |   |  |

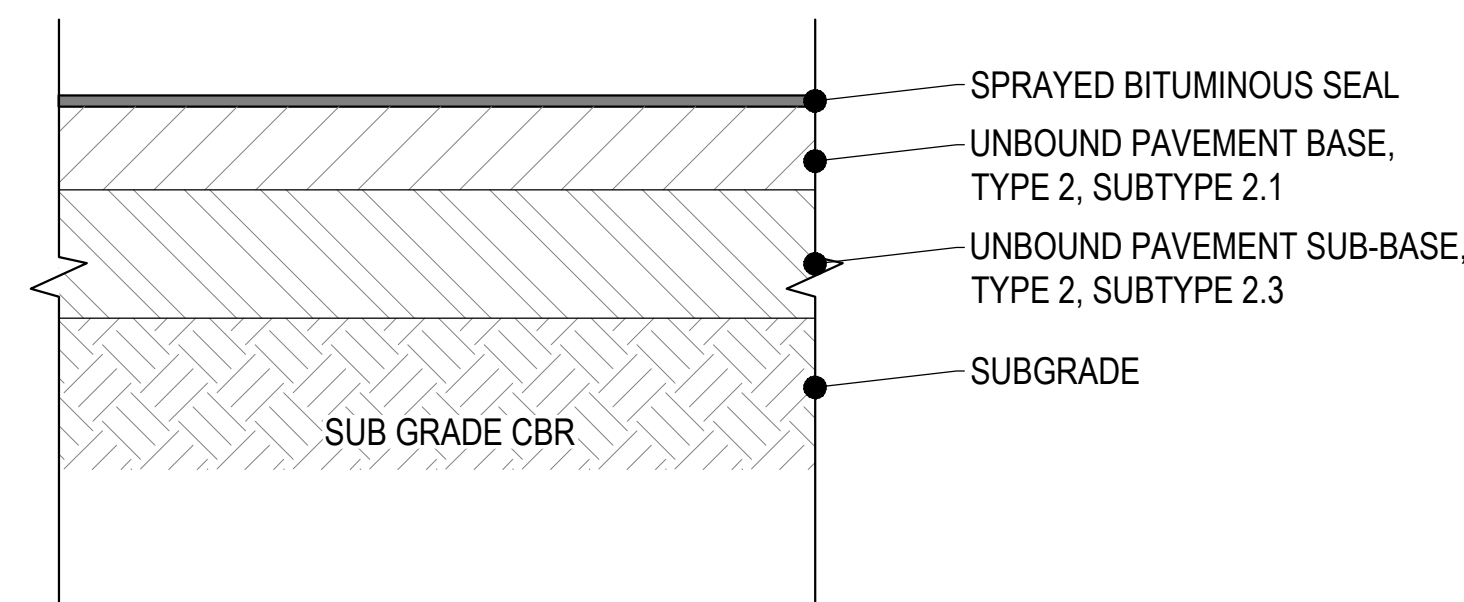
| STATE CONTROLLED ROAD               |                              |     |     |     |
|-------------------------------------|------------------------------|-----|-----|-----|
| TYPICAL PAVEMENT PROFILE            |                              |     |     |     |
| DESIGN ESA = 2.94 x 10 <sup>6</sup> |                              |     |     |     |
| SUBGRADE CBR (%)                    | 3.5                          | 4   | 5   | 7   |
| TOTAL MATERIAL THICKNESS            | 560                          | 520 | 460 | 390 |
| MIN. BASE COURSE THICKNESS          | 150                          |     |     |     |
| MIN. SUB-BASE THICKNESS             | 410                          | 370 | 310 | 240 |
| SEAL                                |                              |     |     |     |
| SHOULDER / WIDENING:                | TYPE HSS2 – PRIME & 14/7 PMB |     |     |     |
| INTERSECTION:                       | TYPE XSS2 – PRIME & 14/7 PMB |     |     |     |

| LOCAL GOVERNMENT ROAD               |                         |     |     |     |
|-------------------------------------|-------------------------|-----|-----|-----|
| TYPICAL PAVEMENT PROFILE            |                         |     |     |     |
| DESIGN ESA = 1.35 x 10 <sup>5</sup> |                         |     |     |     |
| SUBGRADE CBR (%)                    | 3.5                     | 4   | 5   | 7   |
| TOTAL MATERIAL THICKNESS            | 400                     | 370 | 330 | 280 |
| MIN. BASE COURSE THICKNESS          | 110                     |     |     |     |
| MIN. SUB-BASE THICKNESS             | 290                     | 260 | 220 | 170 |
| SEAL                                |                         |     |     |     |
| SHOULDER / WIDENING:                | PRIME & 14/7 C170 (S/S) |     |     |     |
| INTERSECTION:                       | PRIME & 14/7 C170 (D/D) |     |     |     |

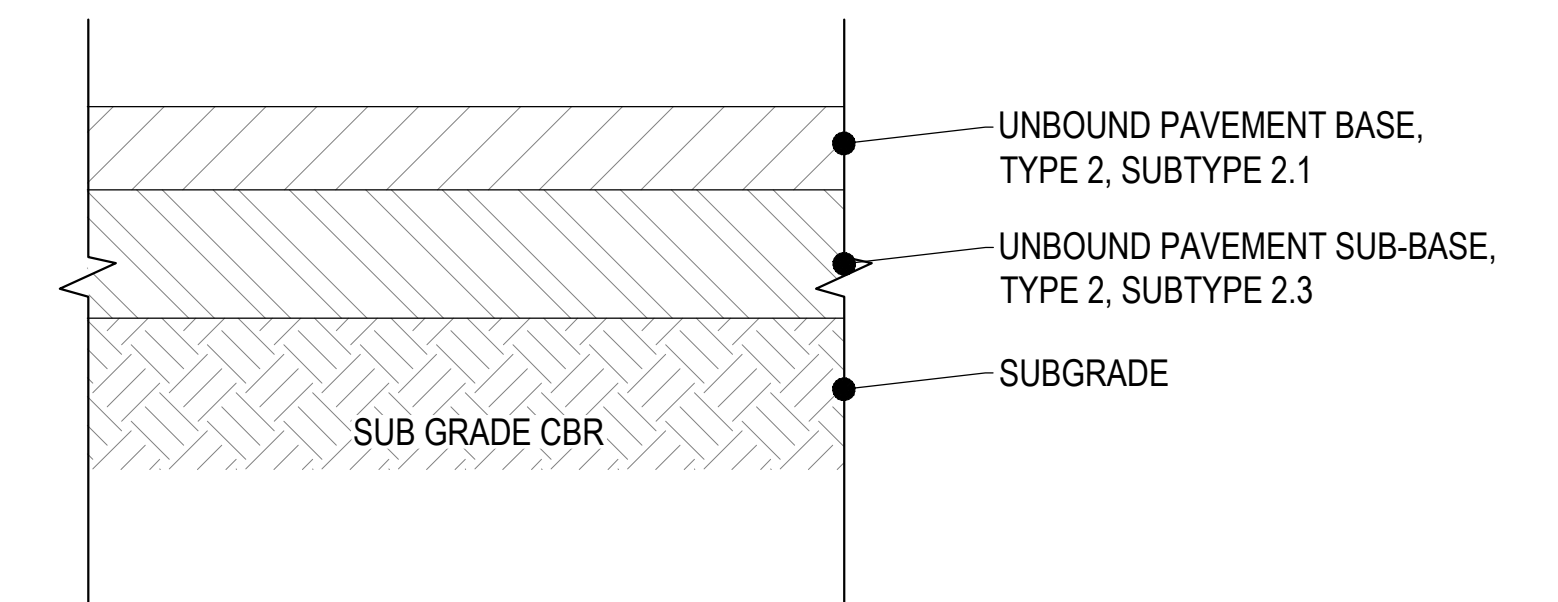
| UNSEALED ROAD                       |     |     |     |     |
|-------------------------------------|-----|-----|-----|-----|
| TYPICAL PAVEMENT PROFILE            |     |     |     |     |
| DESIGN ESA = 1.35 x 10 <sup>5</sup> |     |     |     |     |
| SUBGRADE CBR (%)                    | 3.5 | 4   | 5   | 7   |
| TOTAL MATERIAL THICKNESS            | 400 | 370 | 330 | 280 |
| MIN. BASE COURSE THICKNESS          | 110 |     |     |     |
| MIN. SUB-BASE THICKNESS             | 290 | 260 | 220 | 170 |



STATE CONTROLLED ROAD PAVEMENT DETAIL  
NOT TO SCALE



LOCAL GOVERNMENT ROAD PAVEMENT DETAIL  
NOT TO SCALE



UNSEALED ROAD PAVEMENT DETAIL  
NOT TO SCALE

NOTES

1. PAVEMENT TYPES CAN VARY IN ACCORDANCE WITH TABLES SHOWN FOLLOWING FIELD TESTING.
2. BASE AND SUB-BASE DEPTHS ARE BASED ON CBR VALUES.
3. FIELD TESTING TO BE UNDERTAKEN AS DIRECTED BY THE ADMINISTRATOR.

REFERENCE FILES ATTACHED:

| DRAWING REVISION HISTORY |                       |       |          |          |            |
|--------------------------|-----------------------|-------|----------|----------|------------|
| No.                      | DESCRIPTION           | DRAWN | DESIGNED | REVIEWED | DATE       |
| A                        | ISSUED FOR 30% DESIGN | KSG   | GDM      | SG       | 07/07/2023 |

SCALE (PLOTTED FULL SIZE) AS SHOWN SHEET SIZE A1

ORIGINAL COPY ON FILE \*e\* SIGNED BY

SIGNED DATE

**pitt&sherry**

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CLIENT CPB UGL JV

CONTRACT TITLE COPPERSTRING 2032 ROAD UPGRADES

STATUS 30% DESIGN

DRAWING TITLE TYPICAL DETAILS PAVEMENT PROFILES

DATUMS: GDA20 - MGA54/55 CLIENT No. CU2

DRAWING No. CU2-PW00-DRG-PAS-200-0041 REVISION A

Jul. 6, 23 - 16:29:45 Name: CU2-PW00-DRG-PAS-200-0041.dwg Updated By: Shirley Gago Ujama