STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING ABOVE
3rd PARTY SERVICE FOR 125mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-001	001	STANDARD 3rd PARTY CROSSING 125mm INDEX SHEET	00
XDC-CBL-STND-H-001	002	STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 125mm HV DUCTS	00
XDC-CBL-STND-H-001	003	STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 125mm HV DUCTS	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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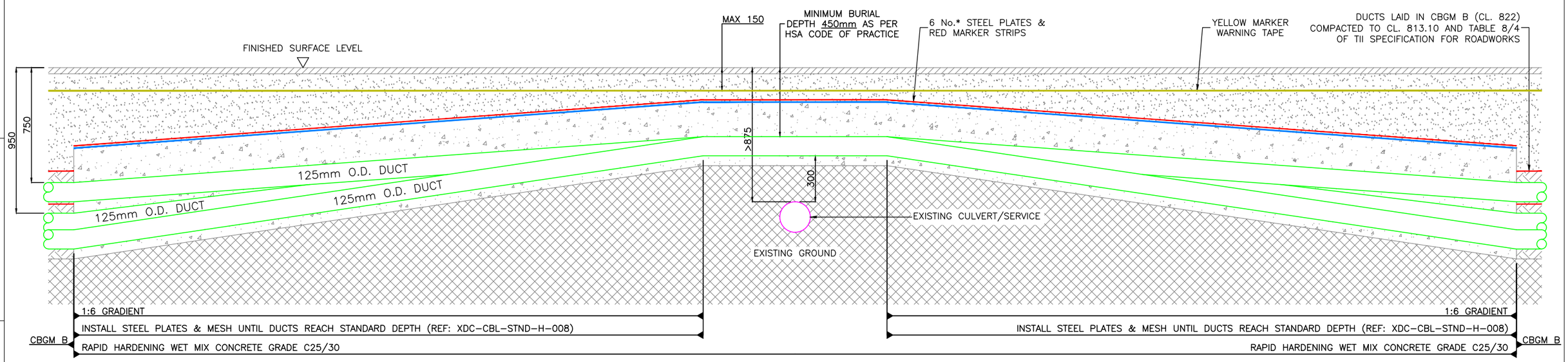
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
125mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-001	001	00

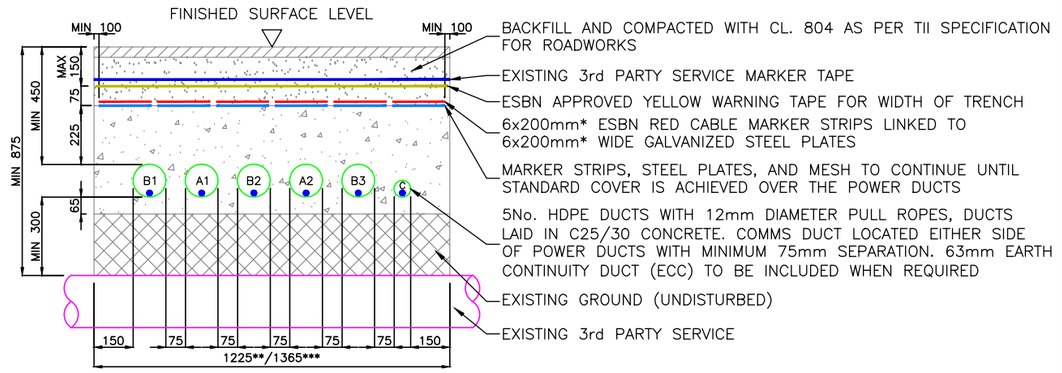


NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RE MARKERS AND WHERE ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

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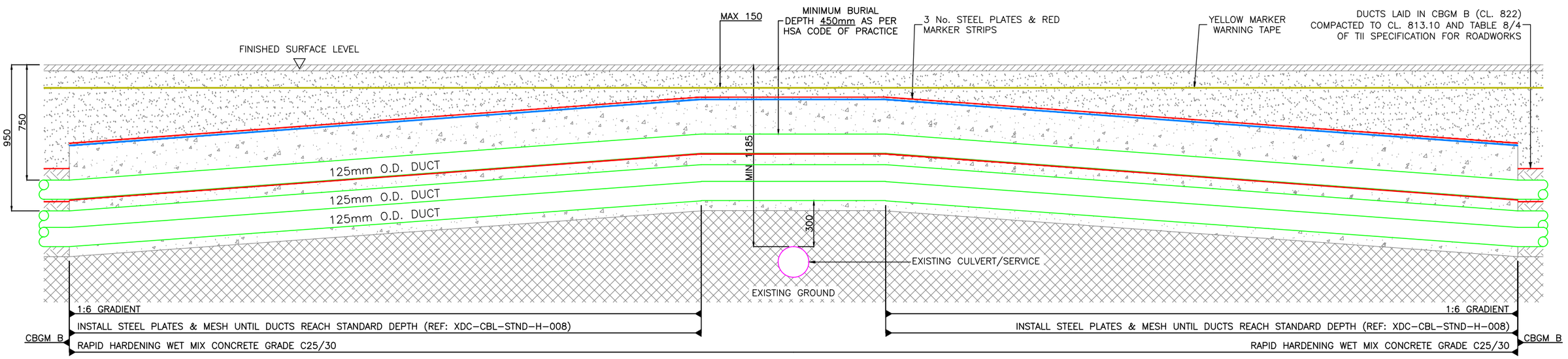
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 125mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-001	002	00

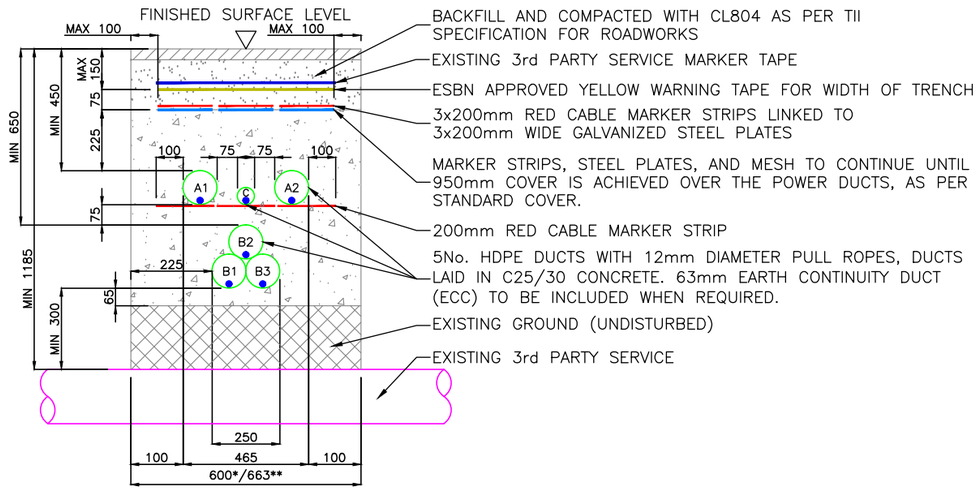


NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 125mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-001	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING ABOVE
3rd PARTY SERVICE FOR 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-002	001	STANDARD 3rd PARTY CROSSING 160mm INDEX SHEET	00
XDC-CBL-STND-H-002	002	STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 160mm HV DUCTS	00
XDC-CBL-STND-H-002	003	STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 160mm HV DUCTS	00

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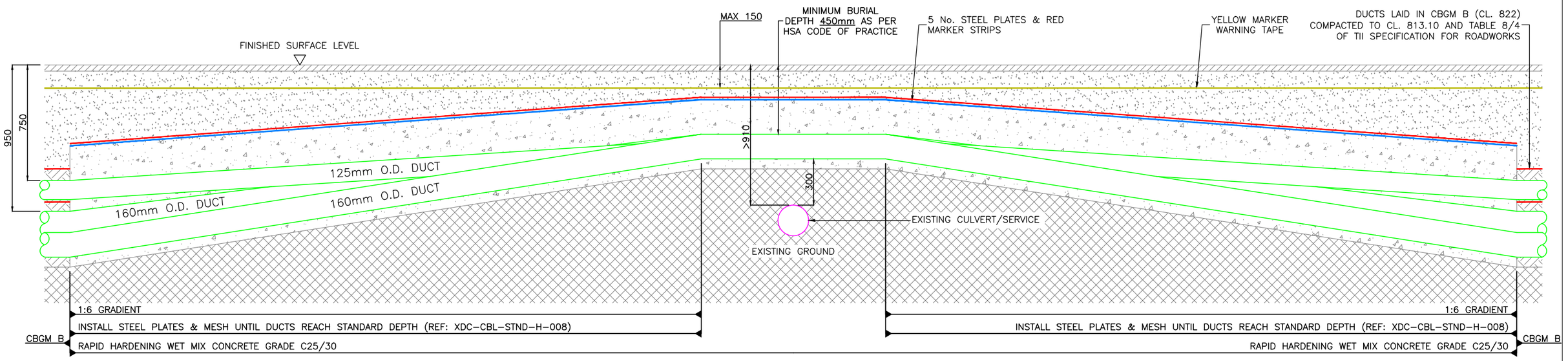
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
160mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-002	001	00

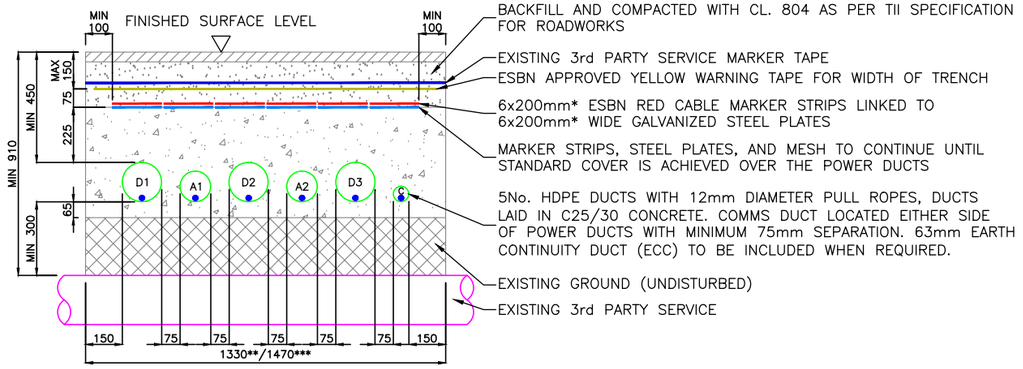


NOTES:

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2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
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6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RED MARKER WHERE AND ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

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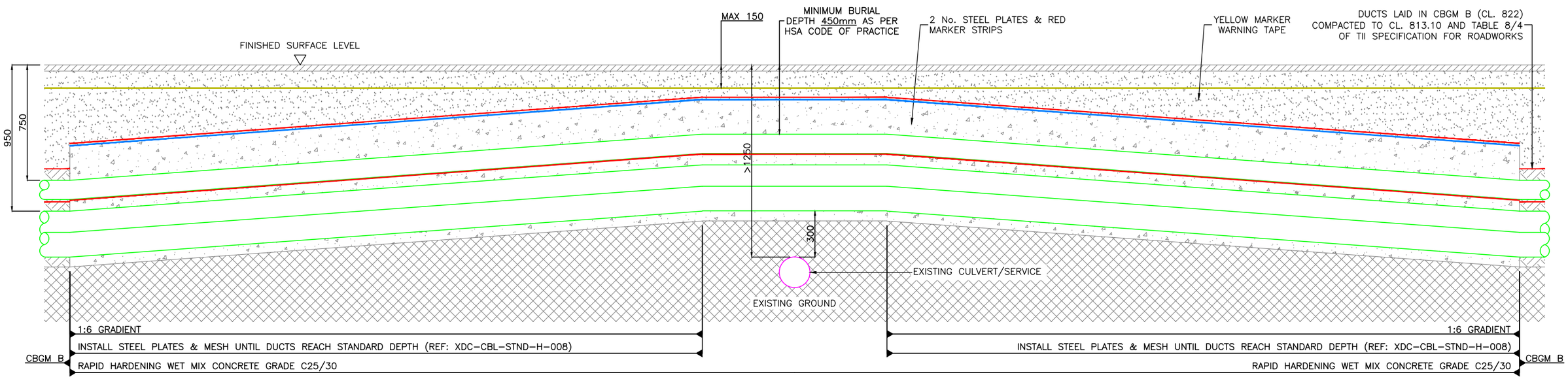
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 160mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-002	002	00

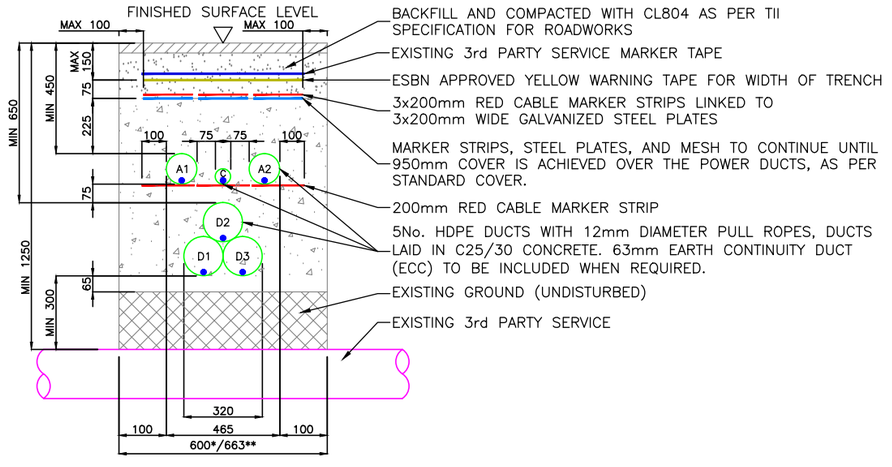


NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. PVC DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 160mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER: XDC-CBL-STND-H-002
SHEET: 003
REV: 00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
3rd PARTY SERVICE FOR 125mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-003	001	STANDARD 3rd PARTY CROSSING 125mm INDEX SHEET	00
XDC-CBL-STND-H-003	002	STANDARD 3rd PARTY CROSSING 125mm BELOW IN FULL FLAT FORMATION	00
XDC-CBL-STND-H-003	003	STANDARD 3rd PARTY CROSSING 125mm BELOW IN TREFOIL FORMATION	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
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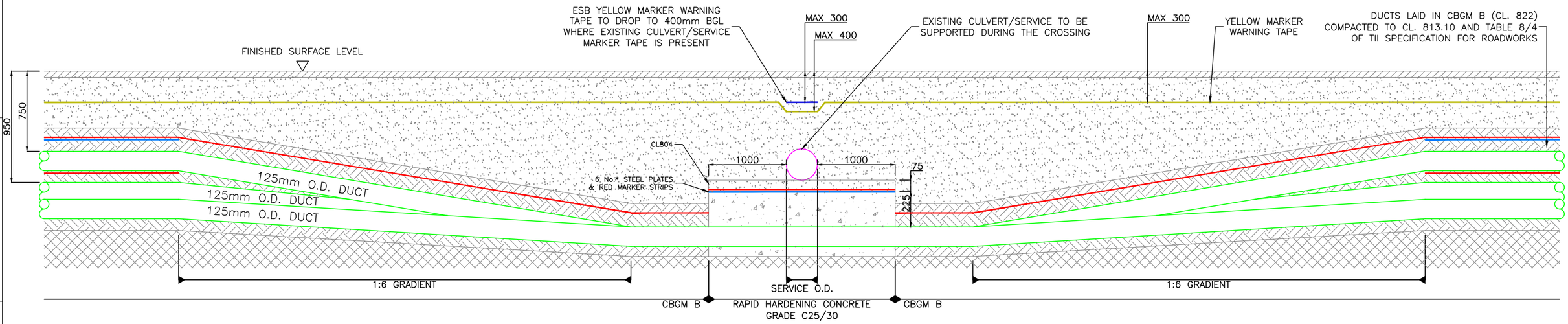
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
125mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	001	00



NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
8. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
9. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT, THE ESBN YELLOW MARKER TAPE SHOULD BE INSTALLED AT MAXIMUM 300mm BELOW FINISHED SURFACE LEVEL.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE

A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RED MARKER WHERE ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 8

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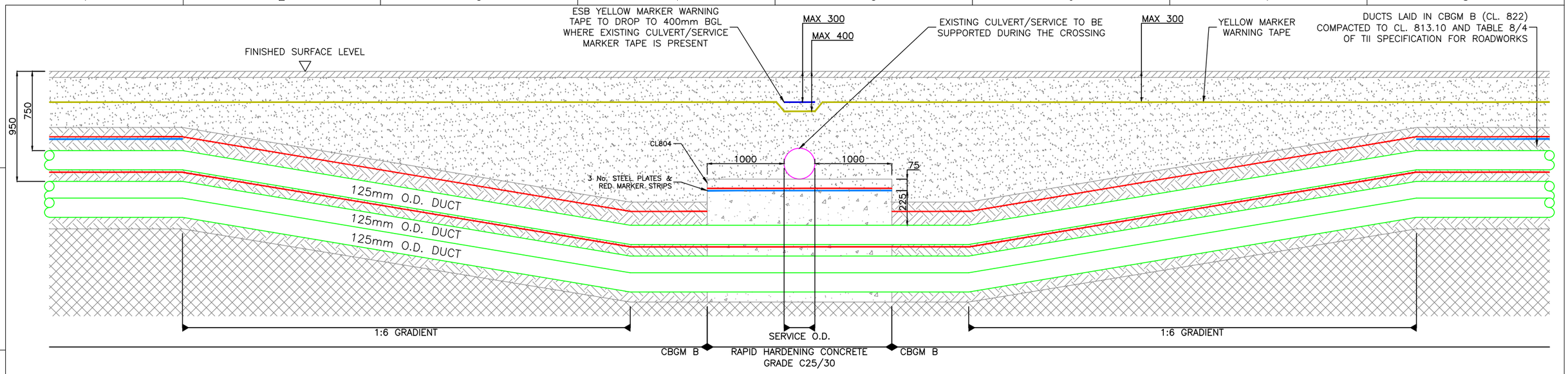
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 125mm BELOW IN FULL FLAT FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	002	00

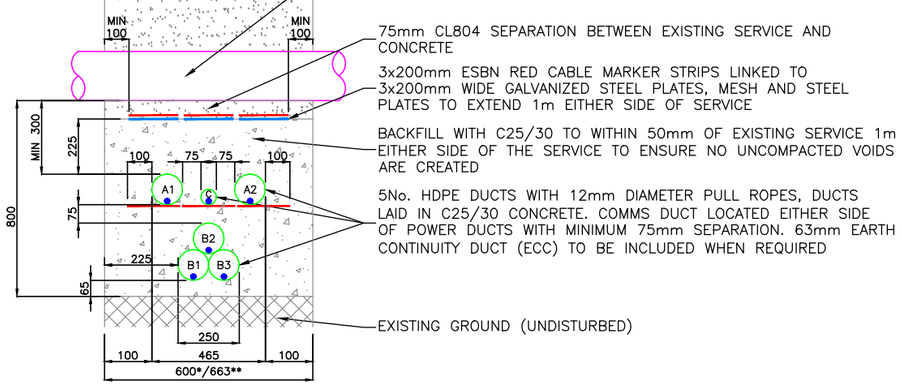


NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, (CABLE RATING CALCULATIONS TO BE REQUIRED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
8. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
9. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT, THE ESBN YELLOW MARKER TAPE SHOULD BE INSTALLED AT MAXIMUM 300mm BELOW FINISHED SURFACE LEVEL.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 8

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 125mm BELOW IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
3rd PARTY SERVICE FOR 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-004	001	STANDARD 3rd PARTY CROSSING 160mm INDEX SHEET	00
XDC-CBL-STND-H-004	002	STANDARD 3rd PARTY CROSSING 160mm BELOW IN FULL FLAT FORMATION	00
XDC-CBL-STND-H-004	003	STANDARD 3rd PARTY CROSSING 160mm BELOW IN TREFOIL FORMATION	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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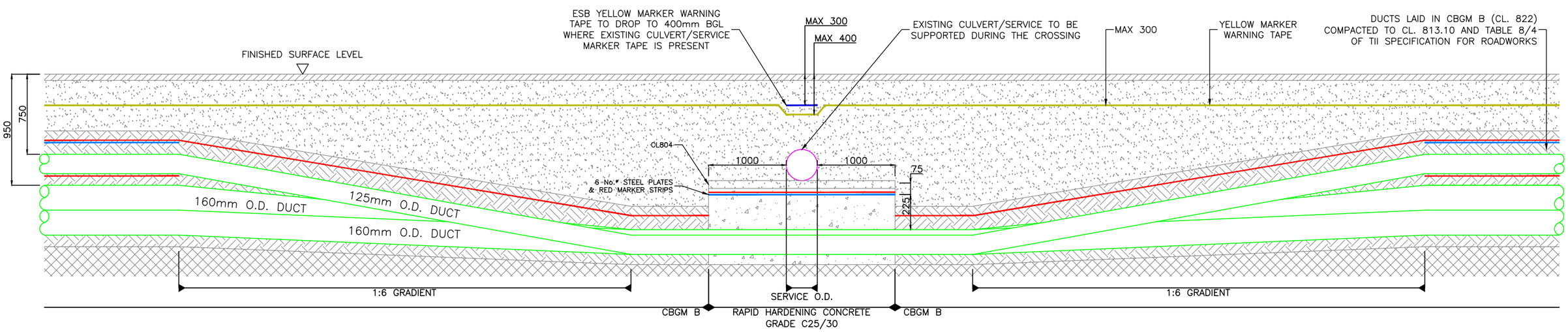
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
160mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-004	001	00



NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM SPACING BETWEEN POWER DUCTS TO BE CONFIRMED WITH RATING CALCULATION.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
10. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT, THE ESBN YELLOW MARKER TAPE SHOULD BE INSTALLED AT MAXIMUM 300mm BELOW FINISHED SURFACE LEVEL.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE

A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATE AND RED MARKER WHERE ECC IS NOT REQUIRED
** MIN 1330mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

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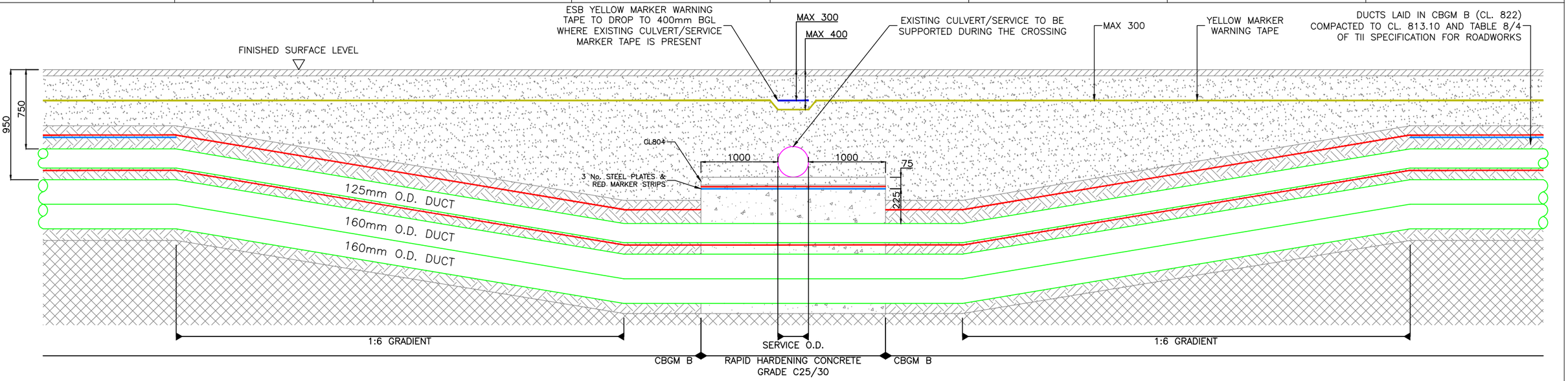
STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 160mm BELOW IN FULL FLAT FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER: XDC-CBL-STND-H-004
SHEET: 002
REV: 00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020



NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM SPACING BETWEEN POWER DUCTS TO BE CONFIRMED WITH RATING CALCULATION.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
10. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT, THE ESBN YELLOW MARKER TAPE SHOULD BE INSTALLED AT MAXIMUM 300mm BELOW FINISHED SURFACE LEVEL.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE

A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 160mm BELOW IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-004	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
RIVERBED FOR 125mm & 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-005	001	STANDARD RIVERBED CROSSING INDEX SHEET	00
XDC-CBL-STND-H-005	002	STANDARD RIVERBED CROSSING 125mm RIVERBED CROSSING	00
XDC-CBL-STND-H-005	003	STANDARD RIVERBED CROSSING 160mm RIVERBED CROSSING	00

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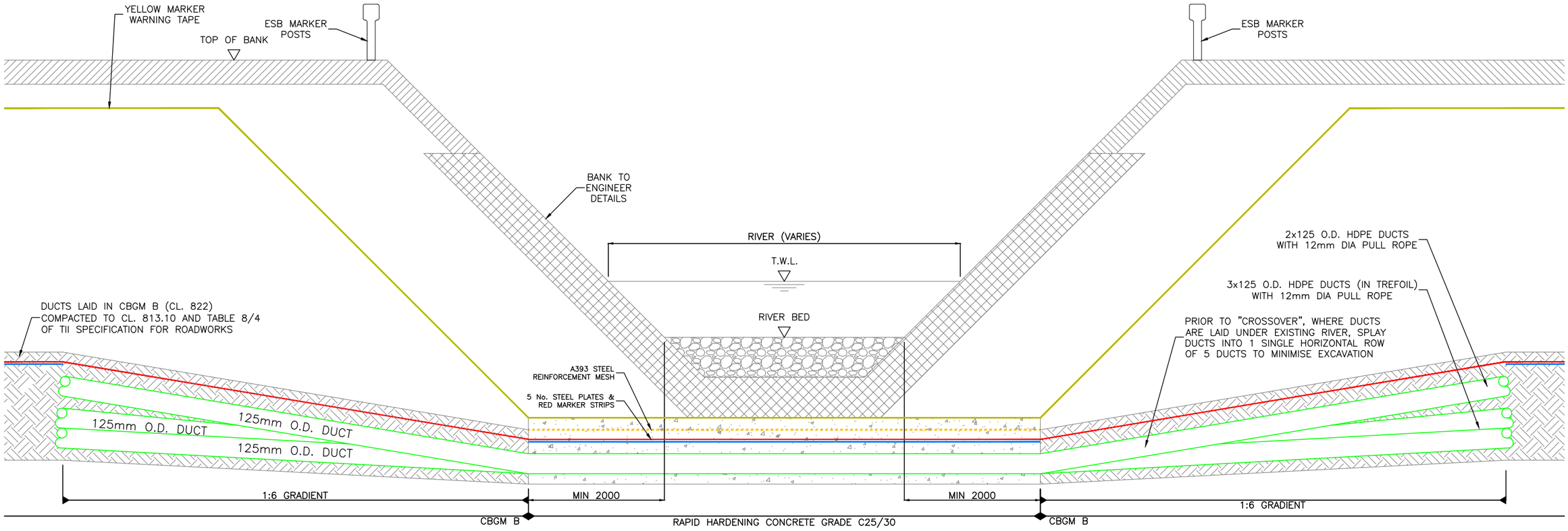
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

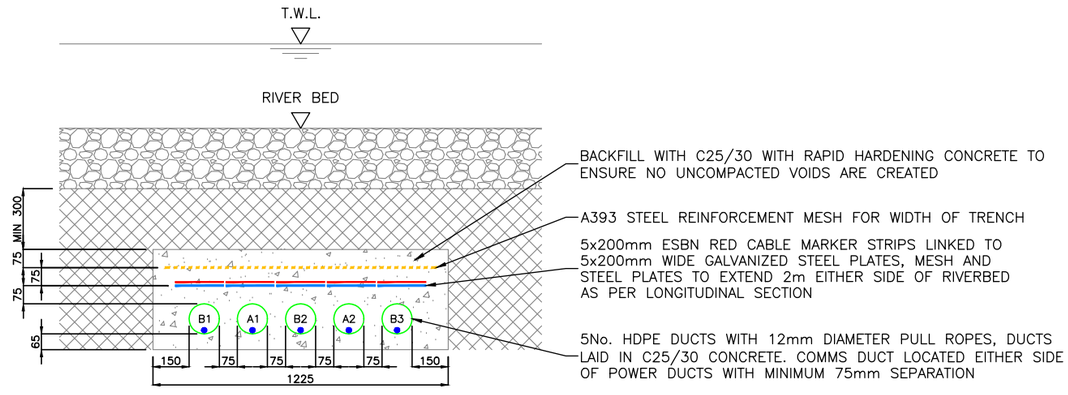
DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-005	001	00



NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM SPACING BETWEEN POWER DUCTS TO BE CONFIRMED WITH RATING CALCULATION.
8. MINIMUM CLEARANCE BETWEEN CABLE TRENCH CONCRETE AND RIVER BED TO BE AGREED WITH RELEVANT AUTHORITY. IN ANY CASE, NO LESS THAN 300mm.
9. STANDARD ESB MARKER POSTS TO BE INSTALLED AT EITHER SIDE OF RIVER CROSSING.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- A393 STEEL REINFORCEMENT MESH
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- EXISTING GROUND
- REINSTATED RIVERBED



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE

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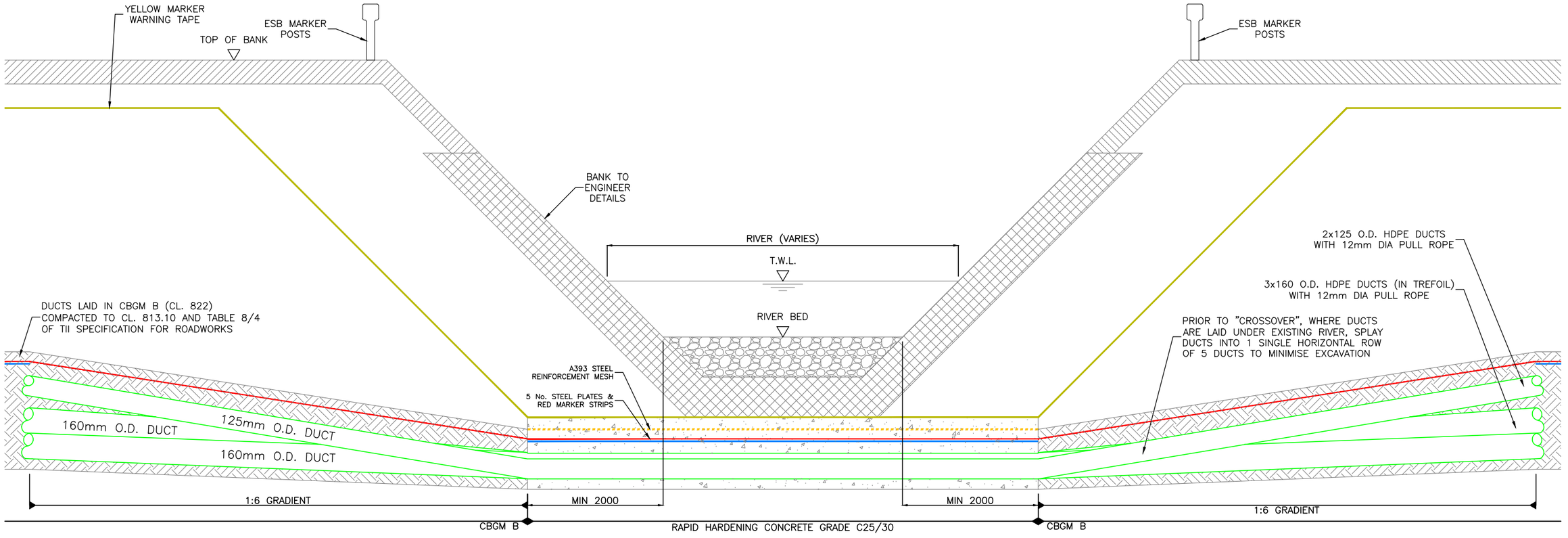
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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING
125mm RIVERBED CROSSING

No of Shts	SIZE	SCALE
3	A3	N/A

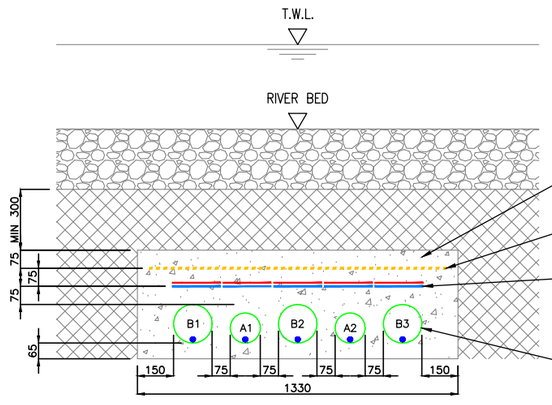
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XDC-CBL-STND-H-005	002	00



NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM SPACING BETWEEN POWER DUCTS TO BE CONFIRMED WITH RATING CALCULATION.
8. MINIMUM CLEARANCE BETWEEN CABLE TRENCH CONCRETE AND RIVER BED TO BE AGREED WITH RELEVANT AUTHORITY.
9. STANDARD ESB MARKER POSTS TO BE INSTALLED AT EITHER SIDE OF RIVER CROSSING.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- A393 STEEL REINFORCEMENT MESH
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- EXISTING GROUND
- REINSTATED RIVERBED



BACKFILL WITH C25/30 RAPID HARDENING CONCRETE TO ENSURE NO UNCOMPACTED VOIDS ARE CREATED

A393 STEEL REINFORCEMENT MESH FOR WIDTH OF TRENCH

5x200mm ESBN RED CABLE MARKER STRIPS LINKED TO 5x200mm WIDE GALVANIZED STEEL PLATES, MESH AND STEEL PLATES TO EXTEND 2m EITHER SIDE OF RIVERBED AS PER LONGITUDINAL SECTION

5No. HDPE DUCTS WITH 12mm DIAMETER PULL ROPES, DUCTS LAID IN C25/30 CONCRETE. COMMS DUCT LOCATED EITHER SIDE OF POWER DUCTS WITH MINIMUM 75mm SEPARATION

A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 160mm O.D. HDPE DUCT FOR HV CABLE

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING
160mm RIVERBED CROSSING

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-005	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD BRIDGE CROSSING

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-006	001	BRIDGE CROSSING INDEX SHEET	00
XDC-CBL-STND-H-006	002	BRIDGE CARRIAGEWAY STANDARD 110kV CABLE TRENCH	00

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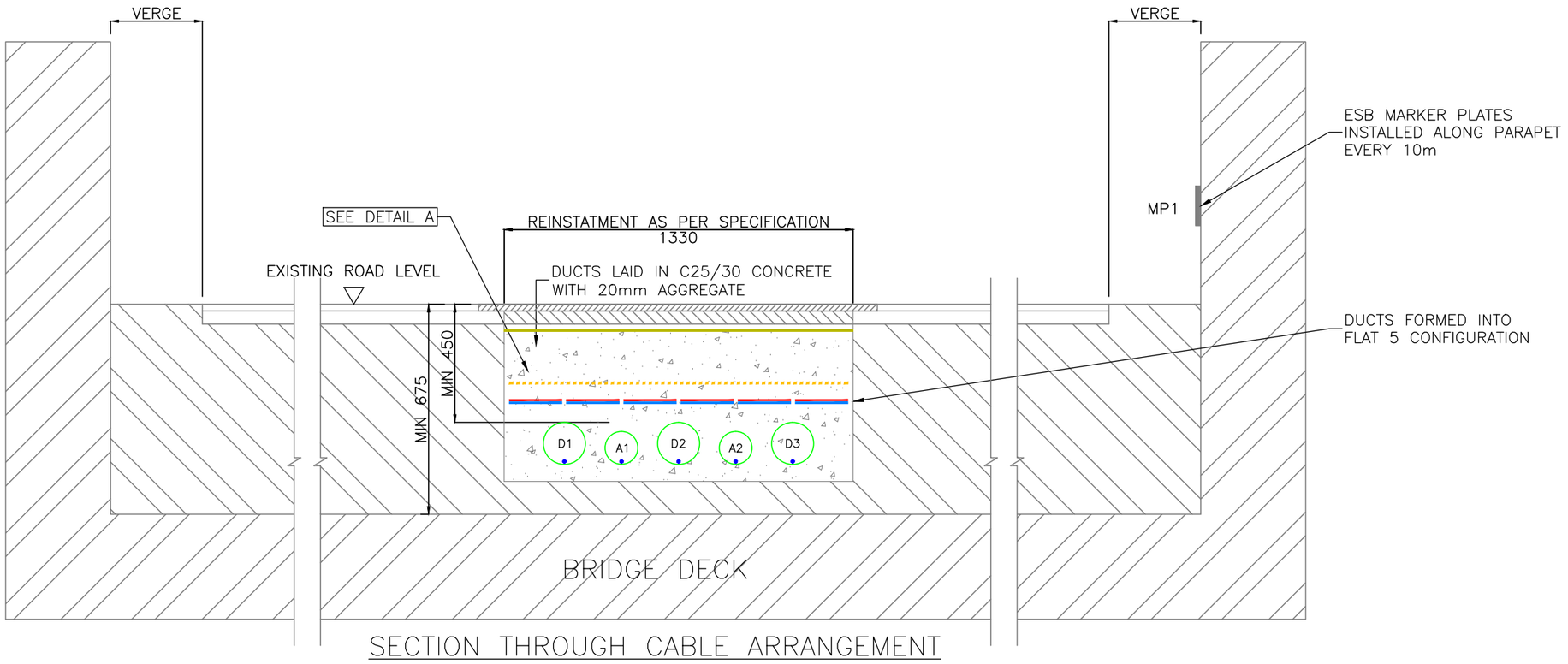
STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
BRIDGE CROSSING
INDEX SHEET

No of Shts	SIZE	SCALE
2	A3	N/A

DRAWING NUMBER
XDC-CBL-STND-H-006

SHEET	REV
001	00



SECTION THROUGH CABLE ARRANGEMENT

NOTES:

1. THE REQUIREMENT FOR THE BRIDGE INSTALLATION SHALL BE AGREED IN ADVANCE BY THE CUSTOMER WITH THE LOCAL AUTHORITY, OR RELEVANT PUBLIC/PRIVATE BODY.
2. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
3. REINSTATEMENT TO BE AS PER TII SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN NATIONAL ROADS. WHERE ENTIRE ROAD TO BE RELAID IT IS TO BE DONE AS PER NRA SPECIFICATION FOR ROADWORKS.
4. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
5. STEEL PLATES MUST COVER DUCTS. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
6. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
7. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
8. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED FOR INSTALLATION IN WET CONCRETE.
9. MINIMUM BURIAL DEPTH IS 450mm.

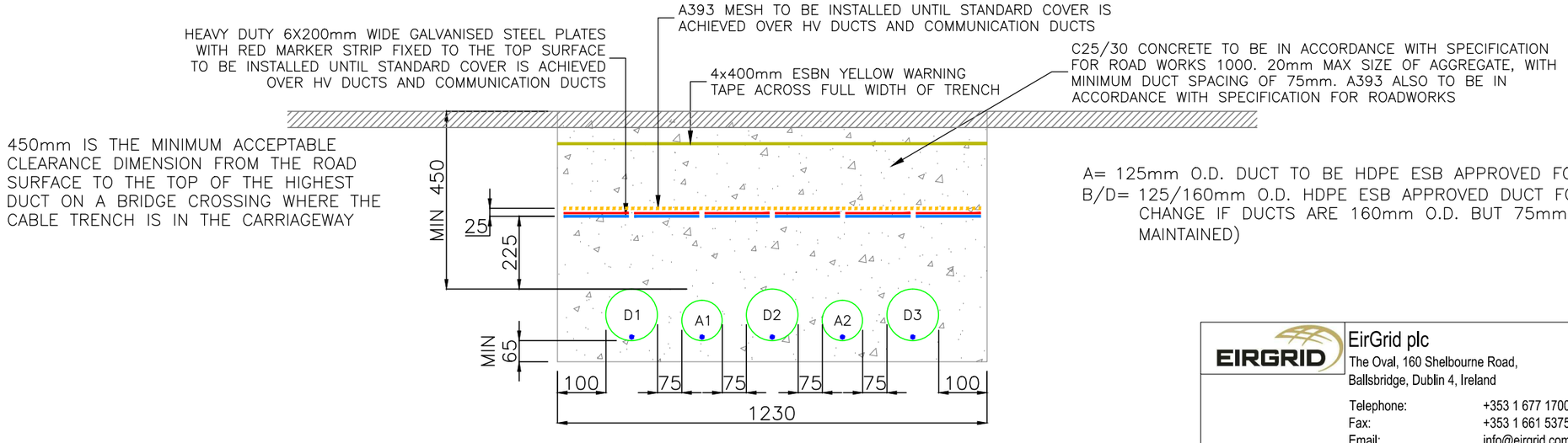
RED MARKER STRIP

YELLOW MARKER WARNING TAPE

A393 STEEL MESH

6mm STEEL PLATE

DETAIL A



450mm IS THE MINIMUM ACCEPTABLE CLEARANCE DIMENSION FROM THE ROAD SURFACE TO THE TOP OF THE HIGHEST DUCT ON A BRIDGE CROSSING WHERE THE CABLE TRENCH IS IN THE CARRIAGEWAY

A= 125mm O.D. DUCT TO BE HDPE ESB APPROVED FOR COMMUNICATIONS
B/D= 125/160mm O.D. HDPE ESB APPROVED DUCT FOR HV CABLE (OVERALL TRENCH WIDTH MAY CHANGE IF DUCTS ARE 160mm O.D. BUT 75mm DISTANCE REQUIREMENT BETWEEN DUCTS TO BE MAINTAINED)

PROPOSED FLAT 5 CONFIGURATION OVER BRIDGES WITH SHALLOW COVER – WITHIN CARRRIAGEWAY

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
BRIDGE CARRIAGEWAY
STANDARD 110kV CABLE TRENCH

No of Shts	SIZE	SCALE
2	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-006	002	00