

LEGEND / LEYENDA:

HATCHES/SOMBREADO	SYMBOLS/SÍMBOLOS	ABBREVIATIONS/ABREVIACIONES
		CL = Containment Liner Liner de la Contención
		CLT = Containment Liner Transition Item Elemento de transición del liner de Contención
		PL = Pool Liner Liner de las piscinas

MATERIAL

- ASME SA-516 Grade 60 normalized *) used for liner sheets with thickness of 1x8mm used for liner penetration sheets with thickness of 1x50mm
- EN10028-3-2009 P355NL2 *) used for containment liner sheets with thickness of 1x20mm or 1x30mm used for bottom liner sheets with thickness of 1x10mm or 1x12mm used for the innermost and outermost ring item of anchor grid at level -12,10m (1x20mm)
- EN10025-2-2005 S355J2-N *) used for anchor grid items with thickness of 1x15mm or 1x40mm

*) For additional requirements and the required certificates, use document CAREM-90-0009.

LINER ANCHORS

Headed Studs *)
Nelson headed studs type B
Material: Hot steel studs manufactured conform to ASTM A-108 specifications for 100, 100S, 300, 300S or 300T heavy headed studs.

Composite Dowels *)
according to German technical approval Z-26.4-56
Material: EN10025-2-2005 S355J2-N
Geometric: closthoide shape see (333)

*) For additional requirements and the required certificates, use document CAREM-90-0009.

DESIGNATION OF WELDING SEAMS (according to ISO 2553)

field weld symbol
"P" indicates welds proposed to be welded at the preassembling place
weld symbol

reference to an additional detail or additional remarks: i.e. see also welding detail W2
Type of examinations
Weld number (to be defined by the manufacturer)

Type of examinations	Percentage of weld to be examined
1 Visual Test (VT)	100%
2 Surface crack Test i.e. IPT or RT	100%
3 Ultrasonic Test (UT)	100%
4 Radiographic Test (RT)	100%
5 Leak Test (LT)	100%

Fillet welds:

ACCEPTANCE STANDARDS FOR EXAMINATION OF WELDS

The examination of welds shall be performed in accordance with ASME BPVC II-2 (CC-5500). As acceptance standard for visual testing, quality level B according to ISO 5817:2003 shall be fulfilled in addition to CC-5548. In cases that items are regulated differently in CC-5548 and ISO 5817 for level B, the stronger requirements (higher quality level) given.

COATING (Containment)

Surface Preparation
S1 Blasting according to EN ISO 12944-4:1998
Preparation grade Sa 2 1/2

Coating Drywall
To be specified in accordance with EN ISO 12944-1 to 5, 7 and 8. The specified coating system shall be tested for the use in hot zones of nuclear plants.
The surfaces shall be of such kind that radioactive decontamination is possible.

Coating Wetwall
(1) Metal coating ZnAl by arc spraying, thickness 0,35mm (135µm)
(2) Sealing for closing porosity with an epoxy resin which is qualified for the use in hot zones of nuclear plants

TOLERANCES

shall be in accordance with document CAREM-90-0010

QUALITY REQUIREMENTS

ASME BPVC II-2 and the additional and special requirements, specified in document CAREM-90-0010 or in the detail design drawings, have to be fulfilled.

CONCRETE REQUIREMENTS (due to the composite dowels)

- The maximal grain diameter of concrete shall not exceed 16mm.
- Slump flow of fresh concrete with soft consistency S3 (10-15cm).
- Asentamiento con una consistencia blanda S3 (10-15cm).
- The composite dowels have to be completely surrounded by concrete.
- Gravel cavities or air inclusions are not permissible.

MISCELLANEOUS PROVISIONS

Dimensions:
- All dimensions are in millimeters (mm) unless otherwise noted

References to other drawings:
- Example: [314] references drawing EEPL-CAREM25C-314-86516 (Key number) (Drawing number)

REV.	FECHA	DESCRIPCIÓN	ELABORÓ	REVISÓ	APROBÓ	LIBERÓ
0	14-03-2016	Detail design release	Berni	Serra	Pansen	---
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R.TÉCNICO / COORDINADOR	REVISÓ	INTERVENIO CALIFICADO	APROBÓ

FECHA DE VERIFICACIÓN: ESTAD DEL DOCUMENTO

IMPRESIÓN CONTROLADA NO: FECHA: FIRMA:

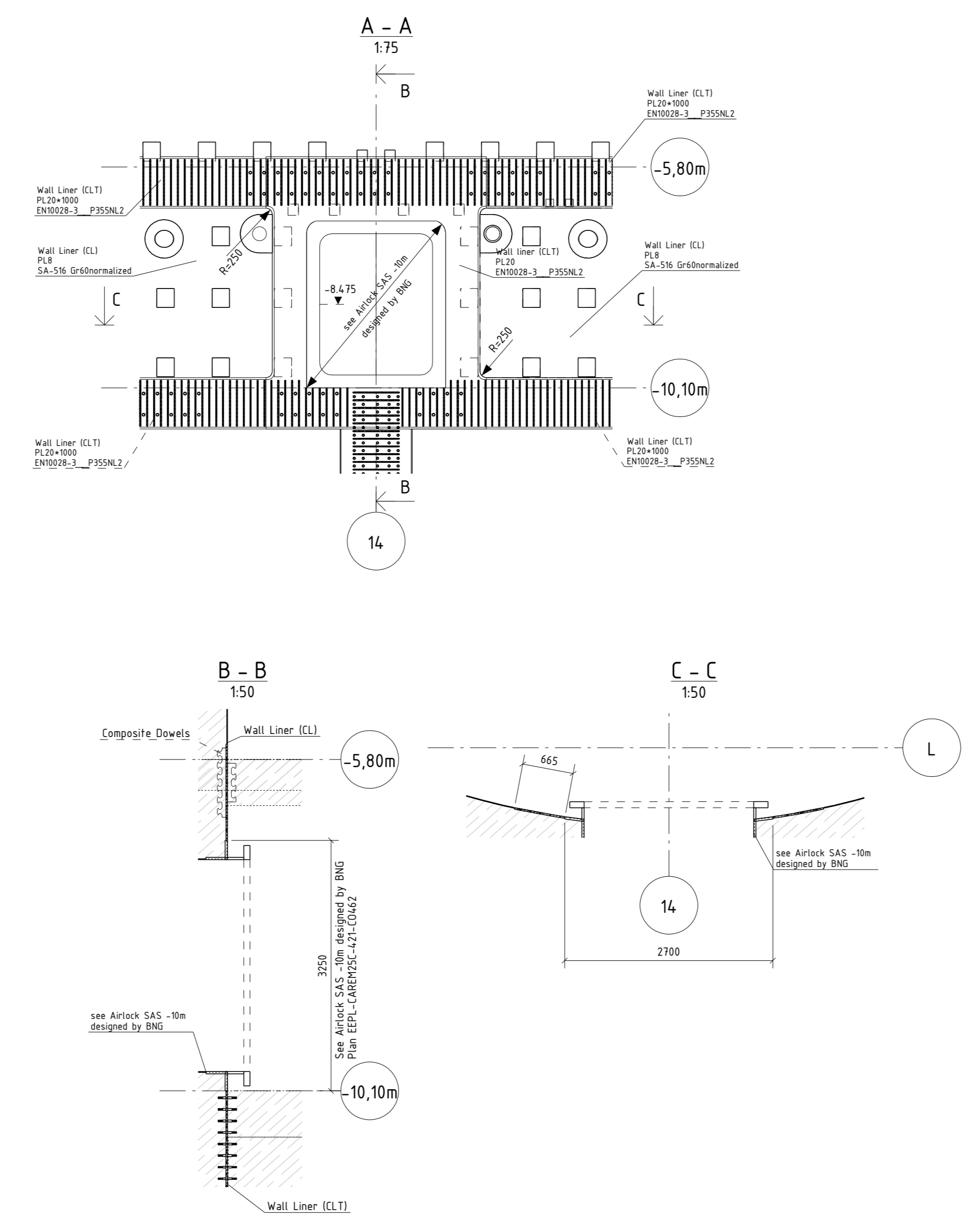
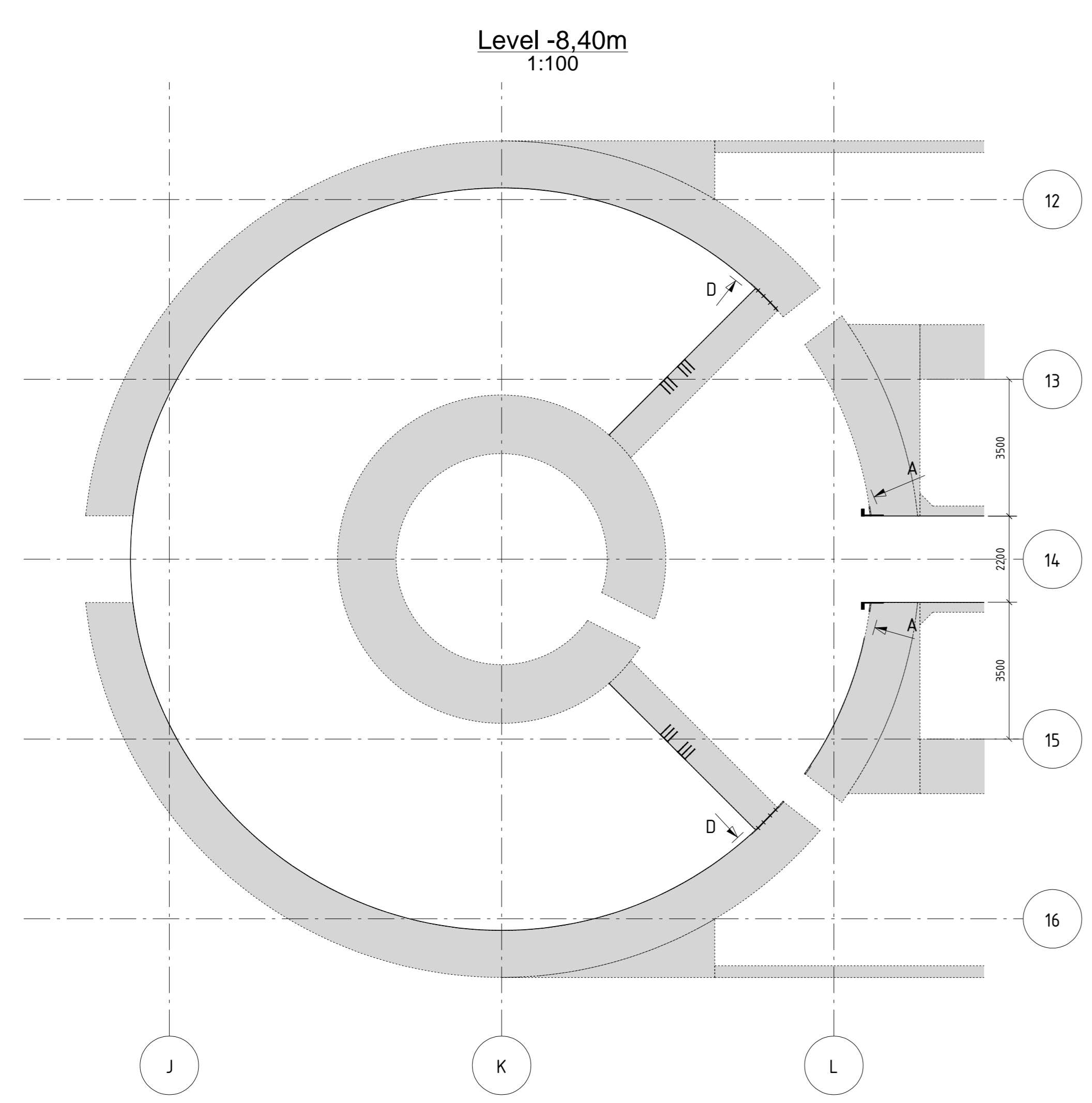
Este documento es una impresión controlada sólo si se encuentra firmado y numerado por el responsable del área.

DOCUMENTOS DE REFERENCIA:
 PL-CAREM25C-108-C08114 PL-CAREM25C-170-C08114 PL-CAREM25C-204-C08114 EEPL-CAREM25C-163-868114
 PL-CAREM25C-98-C08114 PL-CAREM25C-117-C08114 PL-CAREM25C-302-C08114 EEPL-CAREM25C-303-868014
 EEPL-CAREM25C-30-868131

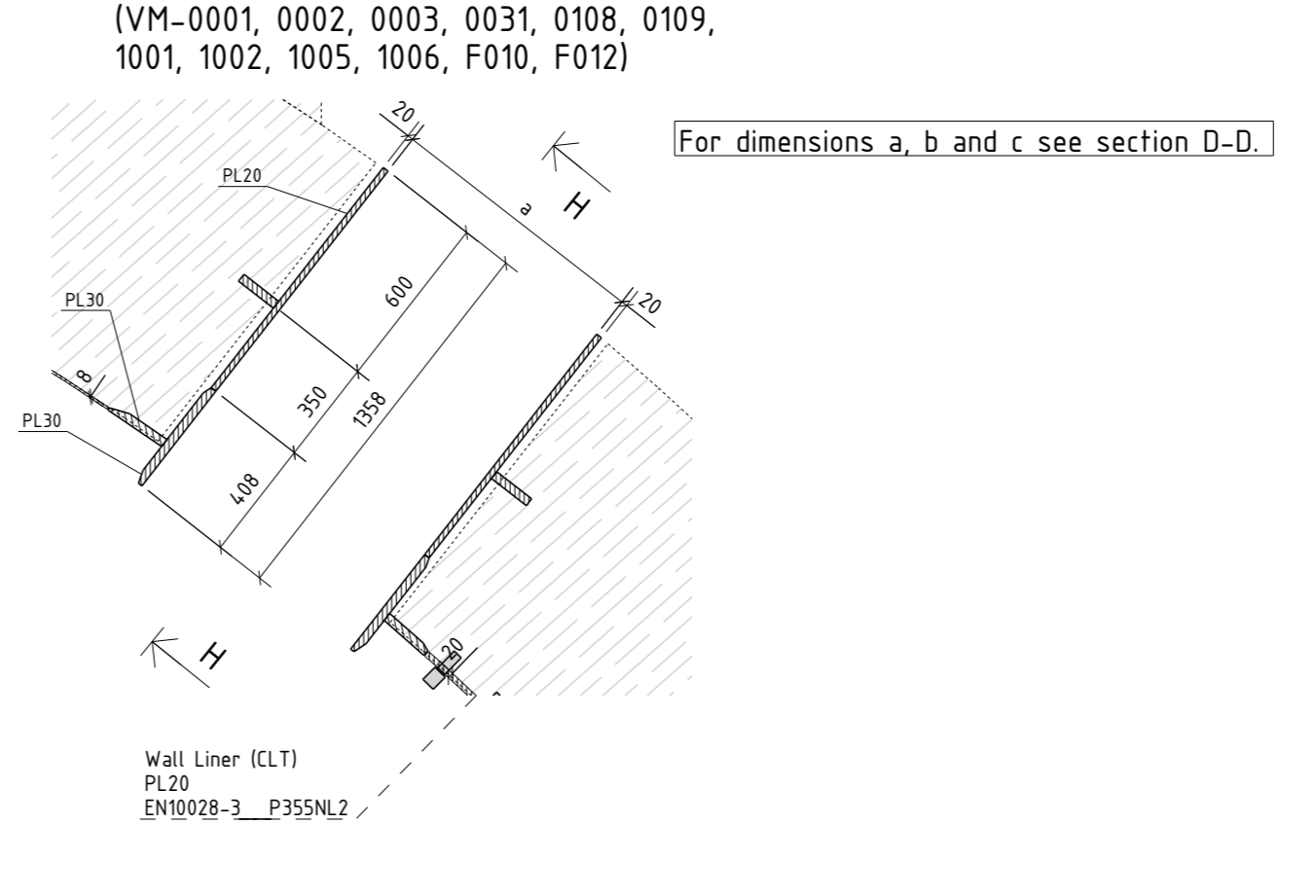
D	14-03-2016	Detail design release	Berni	Serra	Pansen	---
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CODIGO Nº: EEPL-CAREM25C-344-C6516 Rev. 0 1 de 1

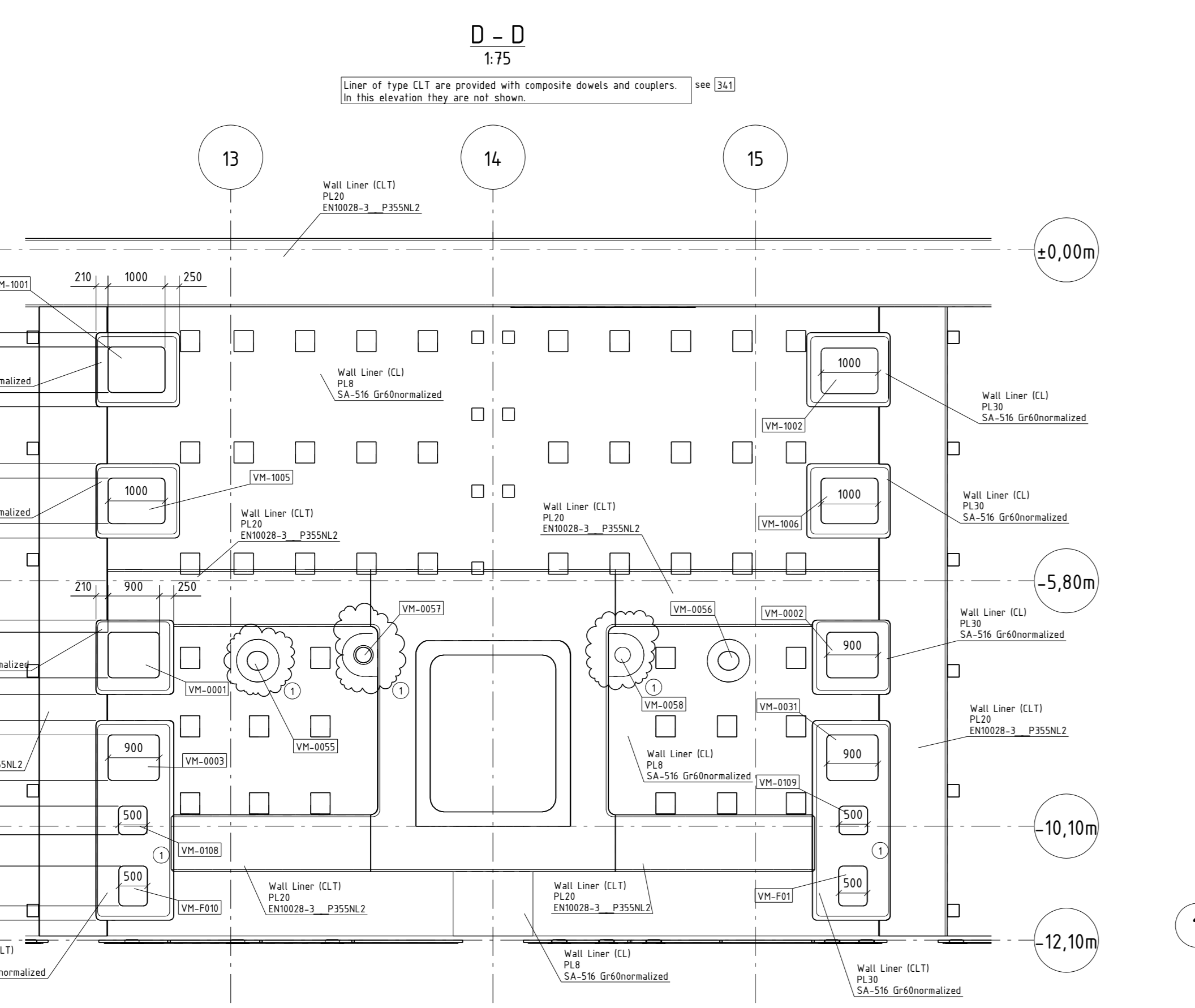
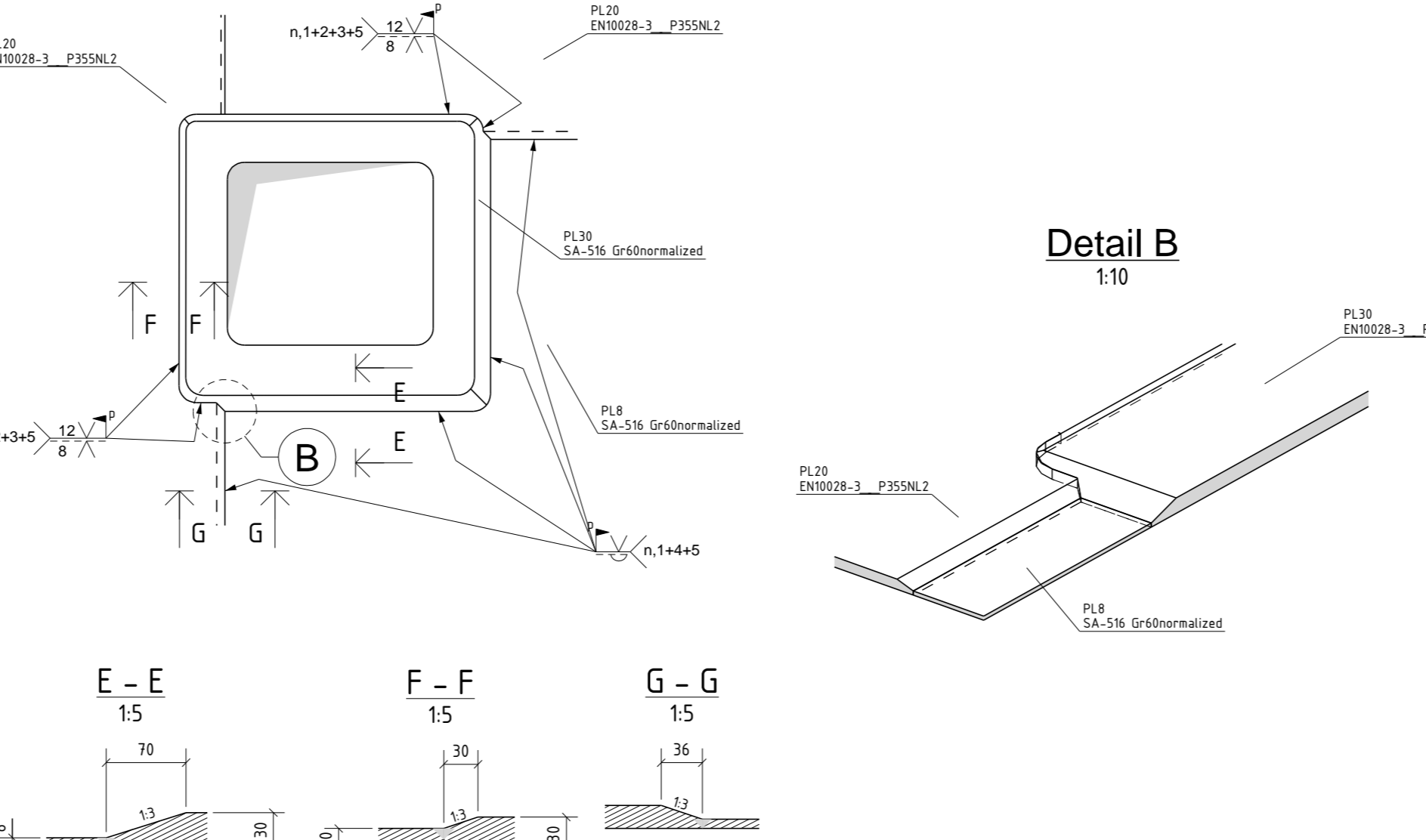
Eq. 1/1	TÍTULO: CAREM 25	Docum. 25000
1/1	Steel Liner Containment	Sheet: 2
1/1	Penetrations - Module 3 - Part 5	Archivo Externos: EEPL-CAREM25C-344.r0.dwg
1/1	CONTRATISTA: HOCHTIEF	Edición Externa: EEPL-CAREM25C-344.r0



Typical Detail Penetration in Wall Liner (Cylinder)



Typical Detail Welds around penetration



ON HOLD
(final design and verification by HTS after submission of required design basis by CNEA)

