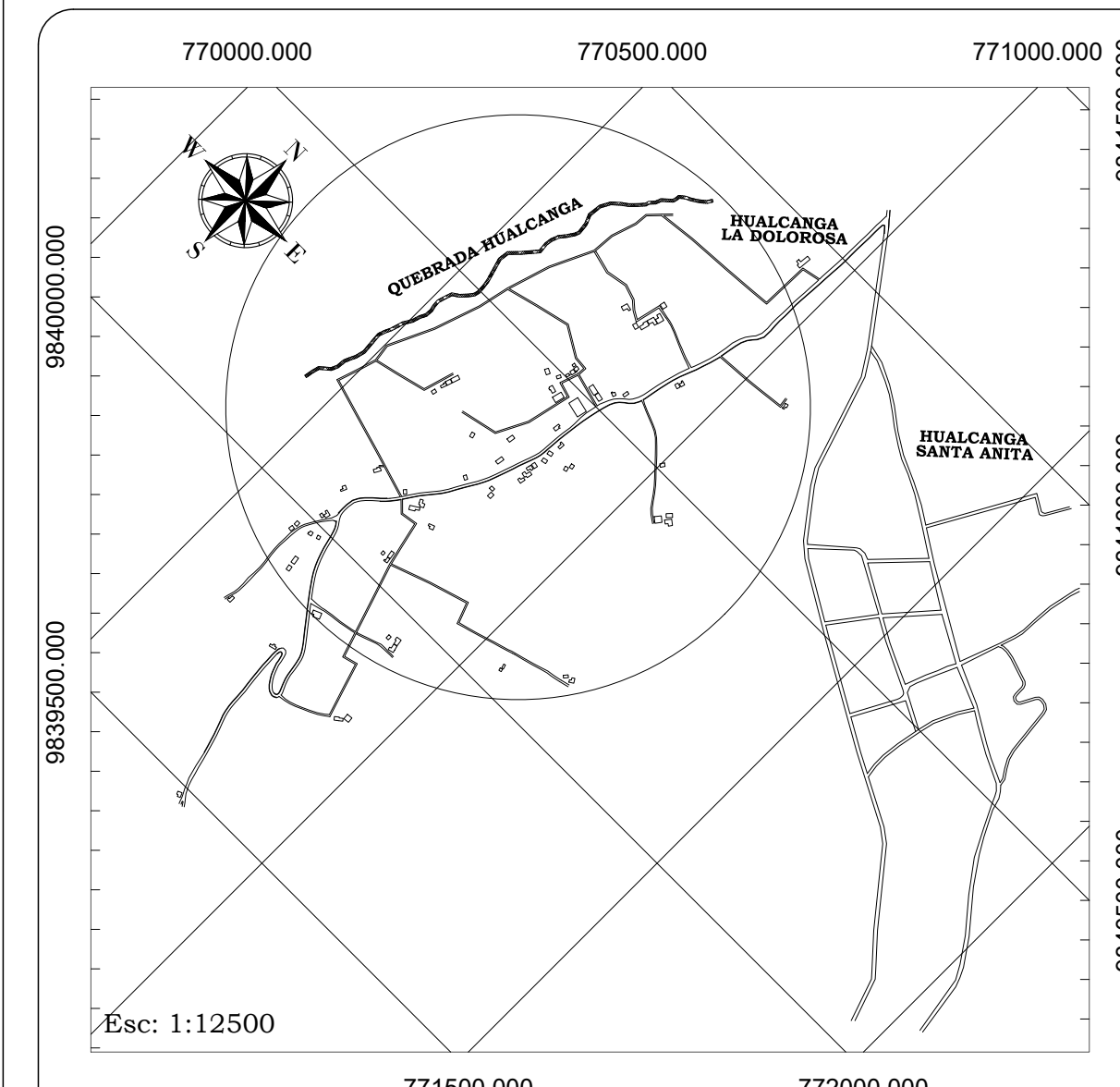


**UBICACIÓN DEL PROYECTO**  
 PROVINCIA: TUNGURAHUA  
 CANTÓN: QUERO  
 COMUNIDAD: HUALCANGA LA DOLOROSA

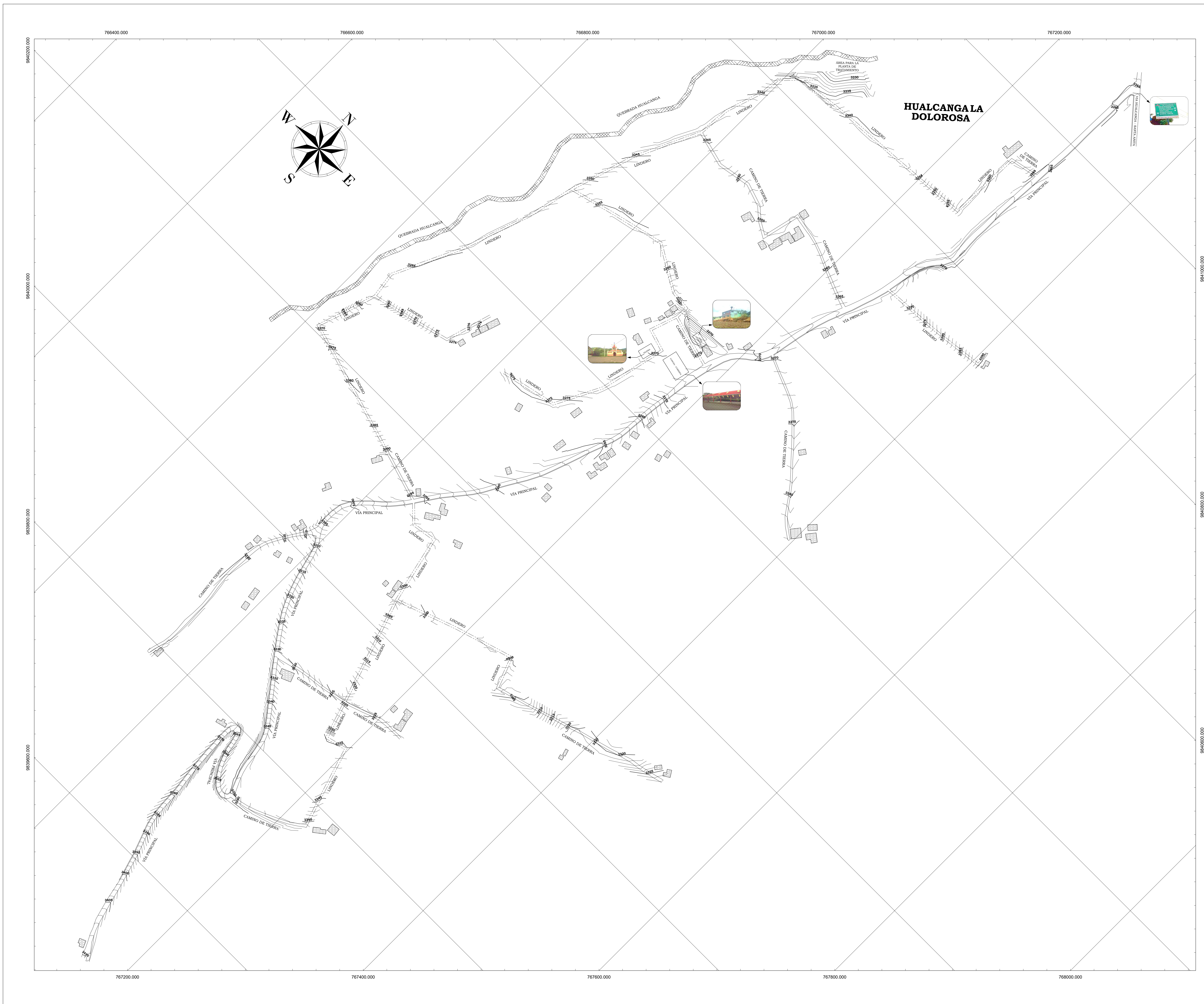


**PROYECTO:**  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

**CONTIENE:** LEVANTAMIENTO TOPOGRÁFICO      **ESCALA:** 1:1500      **FECHA:** ABRIL/2021

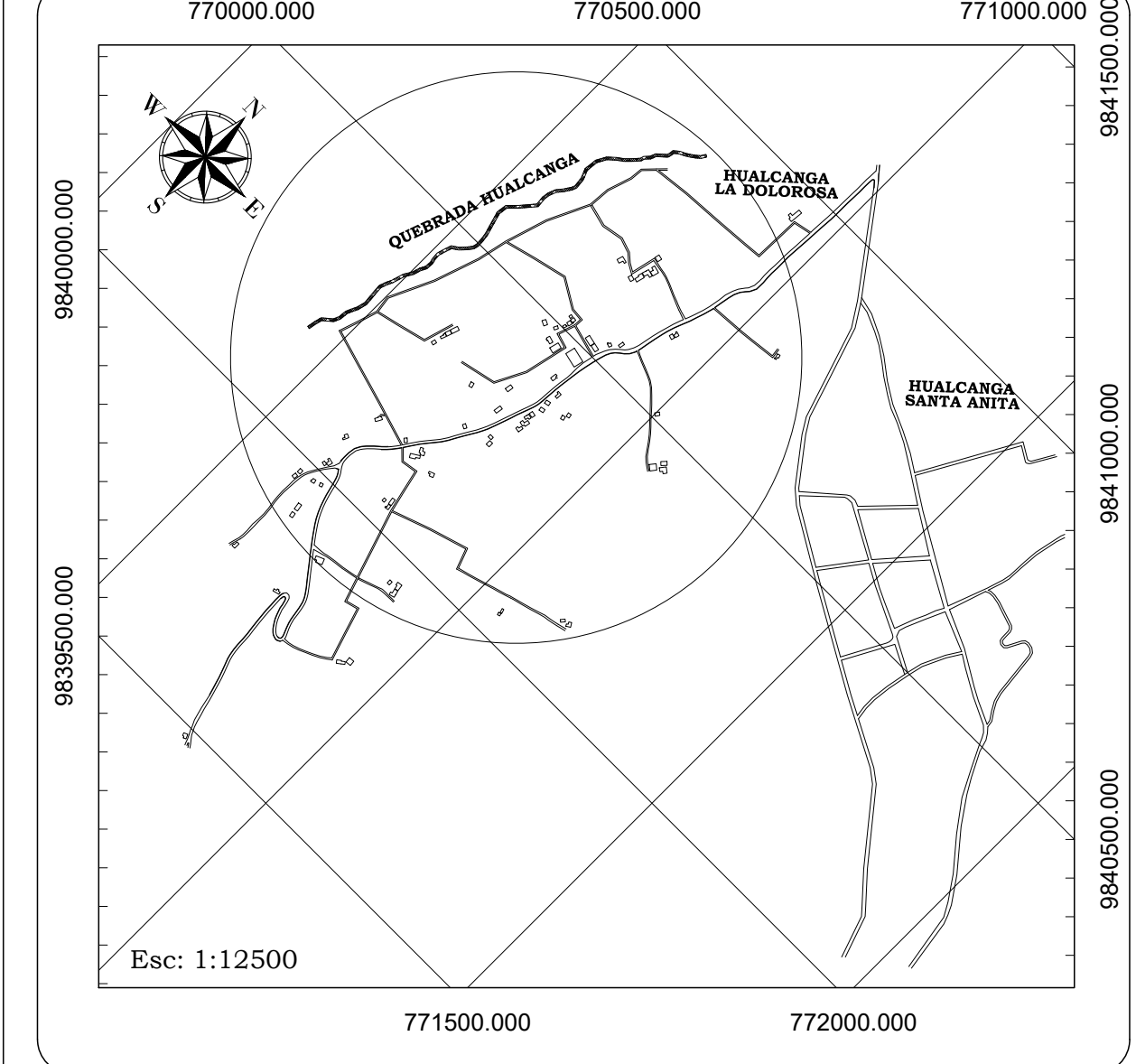
**DIBUJÓ:** EGDO. BRYAN TIBÁN, AUTOR DEL PROYECTO      **REVISÓ:** ING. DILON MOYA, TUTOR DEL PROYECTO      **LÁMINA:** N°01

DESCRIPCIÓN	SIMBOLOGÍA
• CASAS	
• CAMINOS	
• LINDEROS	
• CURVAS DE NIVEL	





**UBICACIÓN DEL PROYECTO**  
 PROVINCIA: TUNGURAHUA  
 CANTÓN: QUERO  
 COMUNIDAD: HUALCANGA LA DOLOROSA



**PROYECTO:**  
 DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA

**CONTIENE:** IMPLANTACION DE TUBERÍAS Y POZOS

**ESCALA:** 1:1500

**FECHA:** ABRIL/2021

**DIBUJÓ:** ECGO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

**REVISÓ:** ING. DILON MOYA  
 TUTOR DEL PROYECTO

**LÁMINA:** N°02

**UBICACIÓN DE POZOS - ALCANTARILLADO SANITARIO**

N°	ESTE (M)	NORTE (M)	ABSCISADO (M)	N°	ESTE (M)	NORTE (M)	ABSCISADO (M)
P1	76746.57	983941.66	0-000.00	P50	76653.68	983877.38	0-088.27
P2	76732.37	983951.96	0-037.03	P51	76649.01	983913.04	0-124.83
P3	76711.29	983935.30	0-120.00	P52	76649.62	983956.67	0-168.40
P4	76704.51	983914.02	0-140.00	P53	76654.30	983977.72	0-190.00
P5	76702.39	983930.41	0-179.35	P54	76662.38	983998.43	0-213.70
P6	76705.40	983926.56	0-214.83	P55	76677.87	984008.20	0-225.28
P7	76701.48	983929.05	0-317.45	P56	76679.70	984018.82	0-238.10
P8	76707.12	983927.14	0-327.42	P57	76748.30	984011.24	0-000.00
P9	76704.40	983929.05	0-358.17	P58	76743.50	984010.75	0-055.10
P10	76701.12	983922.00	0-366.05	P59	76738.78	984008.06	0-116.15
P11	76711.31	983942.30	0-388.23	P60	76732.92	984025.41	0-145.25
P12	76712.73	983929.43	0-406.11	P61	76734.06	984027.68	0-154.57
P13	76714.23	983929.77	0-416.64	P62	76733.79	984030.32	0-165.32
P14	76719.08	983923.55	0-424.97	P63	76731.74	984036.25	0-180.00
P15	76717.30	983928.50	0-460.00	P64	76727.08	984032.26	0-227.48
P16	76719.80	983907.81	0-500.00	P65	76750.16	984009.87	0-267.58
P17	76711.00	983921.77	0-520.00	P66	76718.64	984007.66	0-343.43
P18	76708.17	983907.10	0-560.00	P67	76713.86	984004.08	0-431.85
P19	76707.85	983891.16	0-605.82	P68	76709.91	983990.05	0-035.73
P20	76707.03	983937.71	0-660.00	P69	76725.45	983984.58	0-068.60
P21	76701.69	983961.66	0-686.09	P70	767156.62	983910.57	0-100.33
P22	76699.99	984001.82	0-745.64	P71	76723.70	983926.81	0-180.00
P23	76698.72	984003.37	0-765.59	P72	76720.44	983926.18	0-148.74
P24	76695.49	984005.39	0-786.54	P73	767155.90	983926.94	0-016.87
P25	76698.82	984007.50	0-807.34	P74	76717.84	983914.23	0-040.00
P26	76699.43	984001.20	0-825.94	P75	767209.92	983919.40	0-075.50
P27	76704.24	984014.54	0-860.00	P76	767228.66	983972.41	0-098.29
P28	76704.50	984019.32	0-892.01	P77	767212.87	983921.45	0-150.00
P29	76704.66	984019.52	0-928.32	P78	767197.66	983871.72	0-202.59
P30	76709.75	984026.66	0-975.52	P79	767171.59	983865.08	0-228.85
P31	76712.33	984027.07	1-055.79	P80	767164.99	983885.04	0-200.00
P32	767163.67	984030.28	1-154.13	P81	767144.69	983894.24	0-315.58
P33	767169.00	984031.86	1-220.00	P82	767136.20	983897.21	0-342.80
P34	767177.90	984030.94	1-285.56	P83	767125.35	984006.21	0-377.46
P35	767189.89	984030.84	1-317.78	P84	767118.29	984002.64	0-400.00
P36	767206.52	984036.90	1-343.73	P85	767103.10	984007.96	0-432.06
P37	767222.01	984038.36	1-367.83	P86	767094.61	984012.30	0-499.62
P38	767232.98	984026.10	1-422.23	P87	767064.54	984019.59	0-530.07
P39	767248.60	984069.23	1-470.00	P88	767094.76	984025.63	0-000.00
P40	767265.71	984072.31	1-526.77	P89	767275.48	984040.49	0-024.35
P41	767276.16	984072.47	1-579.94	P90	767320.99	984047.08	0-065.10
P42	767294.38	984079.59	1-610.00	P91	767307.85	984019.78	0-128.00
P43	767296.38	984088.57	1-700.00	P92	767291.01	984031.14	0-152.10
P44	767296.60	984094.08	1-726.55	P93	767278.13	984034.13	0-167.88
P45	767305.57	984107.37	1-820.00	P94	767402.42	984031.48	0-000.00
P46	767302.88	984102.00	1-833.65	P95	767407.78	984073.31	0-017.30
P47	766947.38	983978.30	0-000.00	P96	767383.24	984071.66	0-040.00
P48	766952.76	983968.66	0-020.00	P97	767363.23	984072.76	0-065.18
P49	766954.41	983928.05	0-040.00	P98	767333.54	984072.11	0-090.00

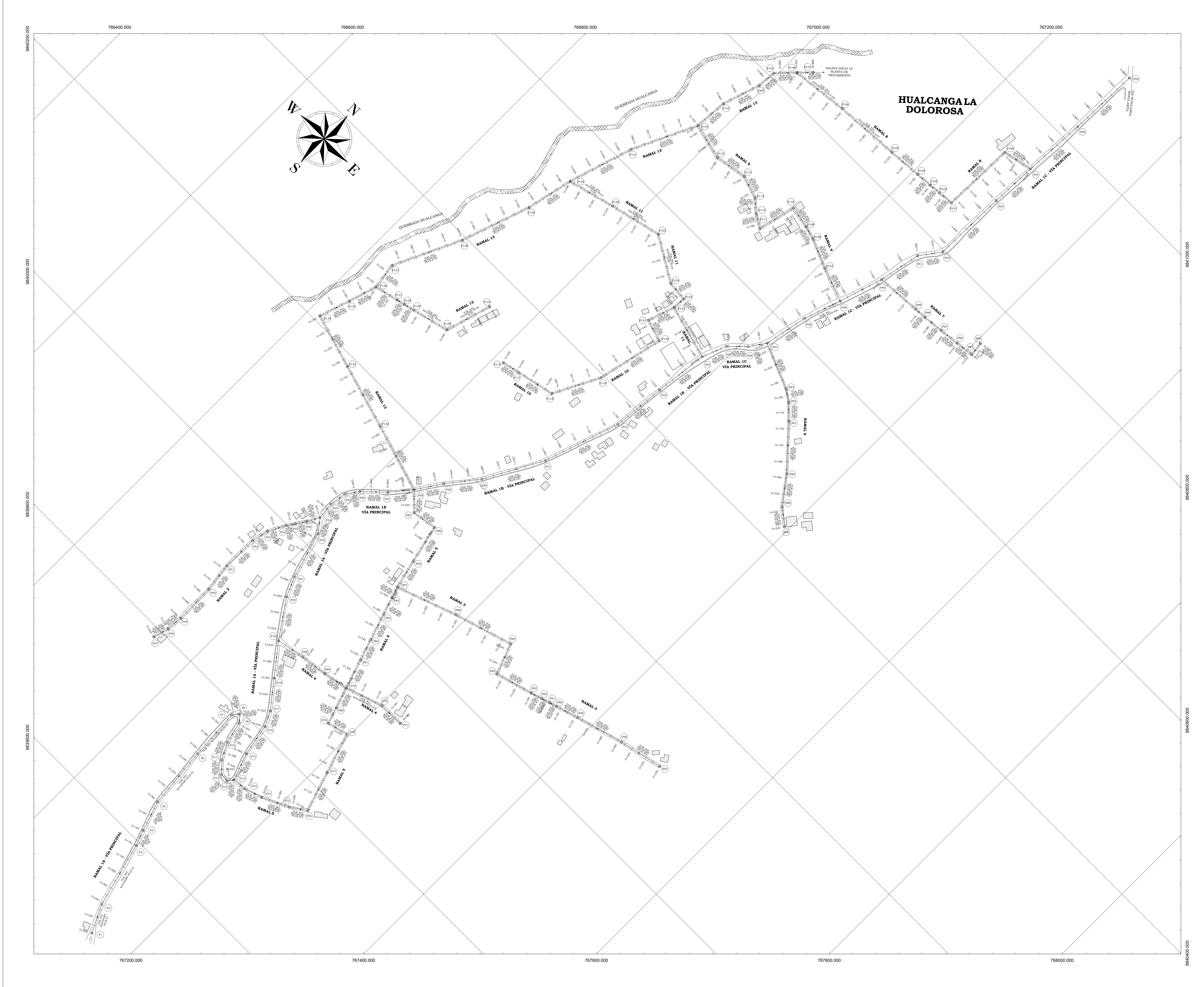
**DESCRIPCIÓN**

- CASAS
- CAMINOS
- LINDEROS
- POZOS DE REVISIÓN
- TUBERÍA
- SENTIDO DE FLUJO

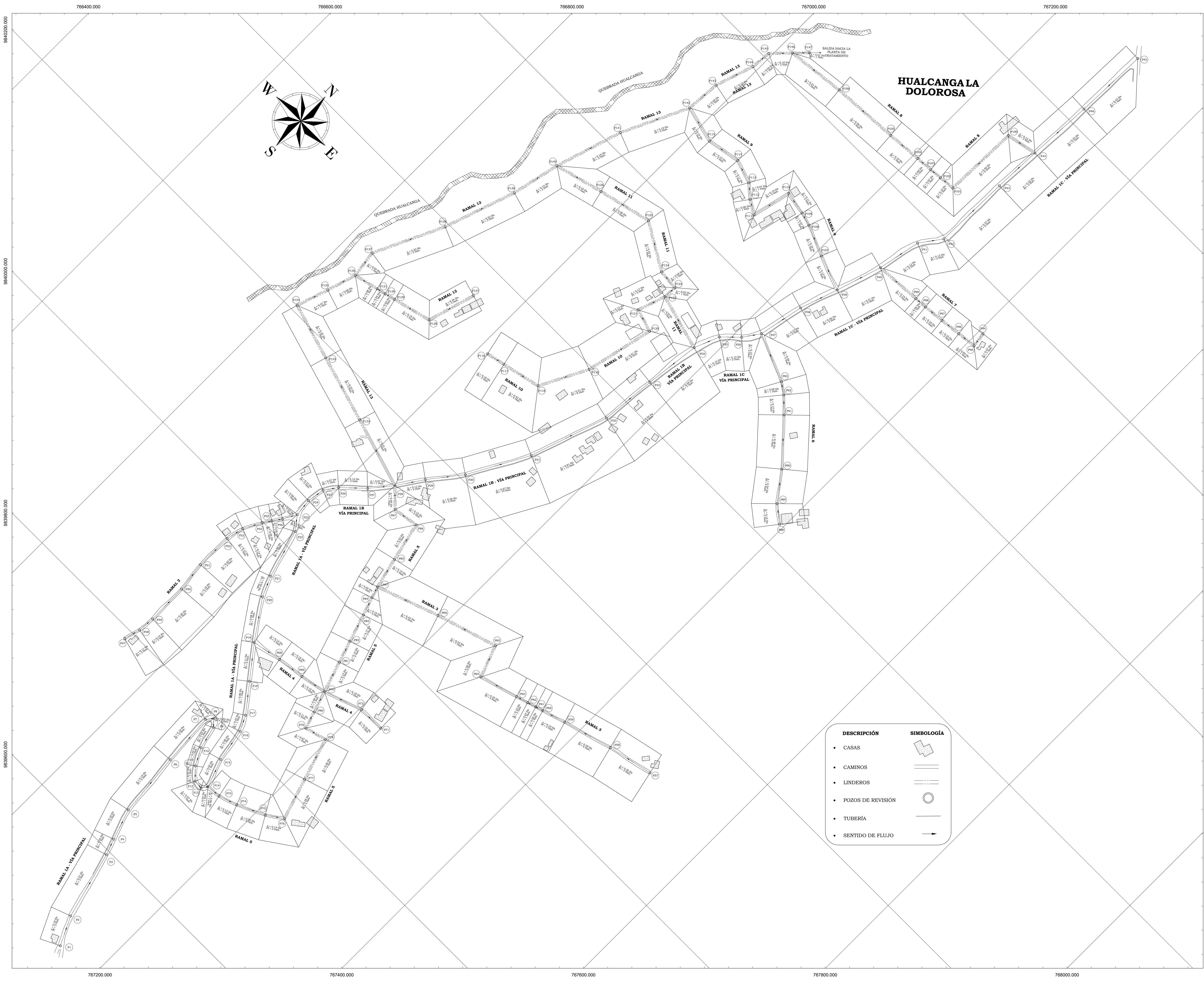
**SIMBOLOGÍA**

**LONGITUD DE TUBERÍAS**

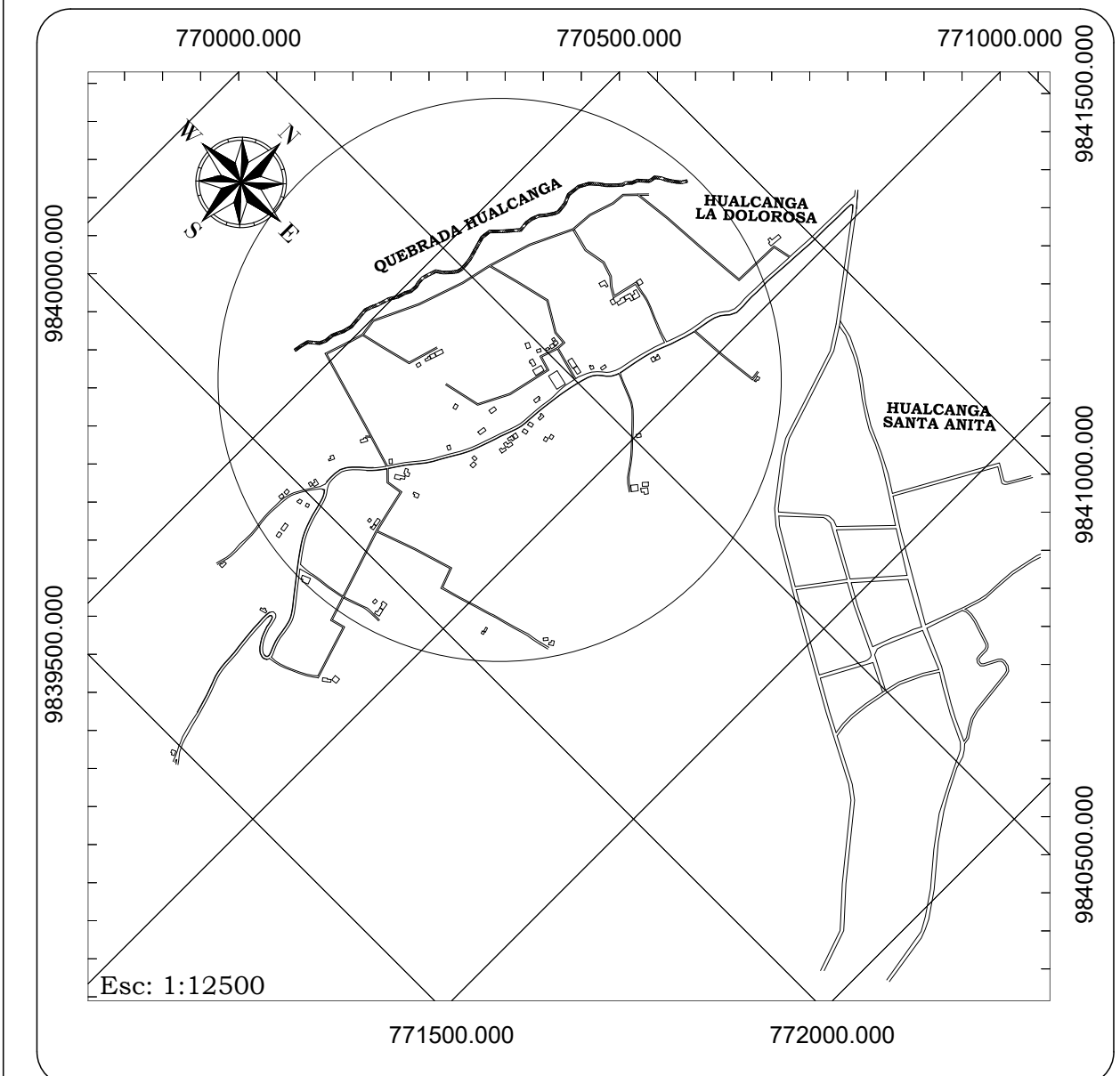
RAMAL	LONGITUD (M)	RAMAL	LONGITUD (M)
Ramal IA - Via Principal	765.59	Ramal 7	165.00
Ramal IB - Via Principal	519.97	Ramal 8	371.78
Ramal IC - Via Principal	634.45	Ramal 9	326.68
Ramal 2	256.07	Ramal 10	279.67
Ramal 3	421.85	Ramal 11	295.54
Ramal 4	179.99	Ramal 12	160.00
Ramal 5	358.19	Ramal 13	500.00
Ramal 6	228.64	TOTAL	6078.42







**UBICACIÓN DEL PROYECTO**  
 PROVINCIA: TUNGURAHUA  
 CANTÓN: QUERO  
 COMUNIDAD: HUALCANGALA LA DOLOROSA



**PROYECTO:**  
 DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGALA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA.

**CONTIENE:** ÁREAS TRIBUTARIAS      **ESCALA:** 1:1500      **FECHA:** ABRIL/2021

**DIBUJÓ:** ECGO. BRYAN TIBÁN, AUTOR DEL PROYECTO      **REVISÓ:** ING. DILON MOYA, TUTOR DEL PROYECTO      **LÁMINA:** N°03

**APORTES EN CADA TRAMO DE TUBERÍA**

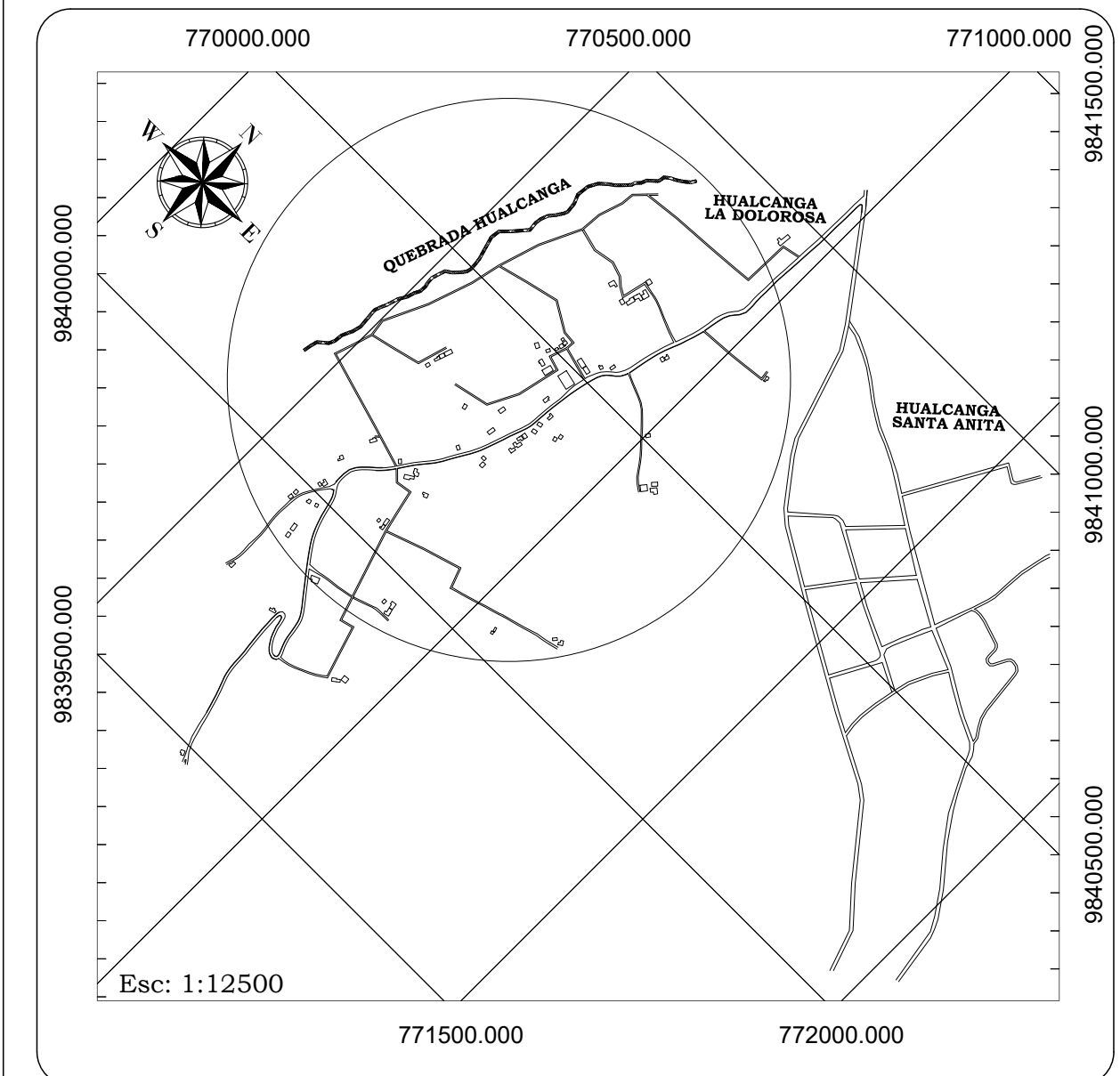
TRAMO	ÁREA (m²)	P. Actual (m)	P. Futuro (m)	TRAMO	ÁREA (m²)	P. Actual (m)	P. Futuro (m)	TRAMO	ÁREA (m²)	P. Actual (m)	P. Futuro (m)
P1-P2	0.10	2.00	P53-P54	0.14	2.00	P101-P102	0.10	2.00			
P2-P3	0.21	3.00	P54-P55	0.06	1.00	P102-P103	0.07	1.00			
P3-P4	0.05	1.00	P55-P56	0.05	1.00	P103-P104	0.09	1.00			
P4-P5	0.10	2.00	P56-P57	0.03	1.00	P104-P105	0.19	3.00			
P5-P6	0.19	3.00	P57-P58	0.36	5.00	P105-P106	0.36	5.00			
P6-P7	0.16	2.00	P58-P59	0.39	6.00	P106-P107	0.21	3.00			
P7-P8	0.03	1.00	P59-P60	0.19	3.00	P107-P108	0.13	2.00			
P8-P9	0.02	1.00	P60-P61	0.06	1.00	P108-P109	0.16	2.00			
P9-P10	0.03	1.00	P61-P62	0.07	1.00	P109-P110	0.07	1.00			
P10-P11	0.02	1.00	P62-P63	0.10	2.00	P110-P111	0.11	2.00			
P11-P12	0.03	1.00	P63-P64	0.35	5.00	P111-P112	0.19	3.00			
P12-P13	0.07	1.00	P64-P65	0.26	4.00	P112-P113	0.08	1.00			
P13-P14	0.04	1.00	P65-P66	0.45	7.00	P113-P114	0.07	1.00			
P14-P15	0.05	1.00	P66-P67	0.42	6.00	P114-P115	0.11	2.00			
P15-P16	0.06	1.00	P67-P68	0.14	2.00	P115-P116	0.15	2.00			
P16-P17	0.03	1.00	P68-P69	0.16	2.00	P116-P117	0.14	2.00			
P17-P18	0.06	1.00	P69-P70	0.10	2.00	P117-P118	0.18	3.00			
P18-P19	0.11	2.00	P70-P71	0.16	2.00	P118-P119	0.42	6.00			
P19-P20	0.08	1.00	P71-P72	0.18	3.00	P119-P120	0.51	8.00			
P20-P21	0.04	1.00	P72-P73	0.06	1.00	P120-P121	0.51	8.00			
P21-P22	0.09	1.00	P73-P74	0.13	2.00	P121-P122	0.14	2.00			
P22-P23	0.01	1.00	P74-P75	0.20	3.00	P122-P123	0.17	3.00			
P23-P24	0.08	1.00	P75-P76	0.14	2.00	P123-P124	0.20	3.00			
P24-P25	0.13	2.00	P76-P77	0.29	4.00	P124-P125	0.05	1.00			
P25-P26	0.07	1.00	P77-P78	0.26	4.00	P125-P126	0.09	1.00			
P26-P27	0.14	2.00	P78-P79	0.07	1.00	P126-P127	0.25	4.00			
P27-P28	0.07	1.00	P79-P80	0.11	2.00	P127-P128	0.26	4.00			
P28-P29	0.12	2.00	P80-P81	0.08	1.00	P128-P129	0.18	3.00			
P29-P30	0.36	5.00	P81-P82	0.13	2.00	P129-P130	0.24	4.00			
P30-P31	0.67	10.00	P82-P83	0.14	2.00	P130-P131	0.19	3.00			
P31-P32	0.81	12.00	P83-P84	0.17	3.00	P131-P132	0.05	1.00			
P32-P33	0.59	8.00	P84-P85	0.10	2.00	P132-P133	0.04	1.00			
P33-P34	0.48	7.00	P85-P86	0.04	1.00	P133-P134	0.08	1.00			
P34-P35	0.15	2.00	P86-P87	0.15	2.00	P134-P135	0.31	5.00			
P35-P36	0.15	2.00	P87-P88	0.24	4.00	P135-P136	0.33	5.00			
P36-P37	0.10	2.00	P88-P89	0.15	2.00	P136-P137	0.25	4.00			
P37-P38	0.27	4.00	P89-P90	0.09	1.00	P137-P138	0.07	1.00			
P38-P39	0.26	4.00	P90-P91	0.15	2.00	P138-P139	0.08	1.00			
P39-P40	0.31	5.00	P91-P92	0.24	4.00	P139-P140	0.04	1.00			
P40-P41	0.13	2.00	P92-P93	0.26	4.00	P140-P141	0.16	2.00			
P41-P42	0.13	2.00	P93-P94	0.09	1.00	P141-P142	0.15	2.00			
P42-P43	0.37	6.00	P94-P95	0.07	1.00	P142-P143	0.19	3.00			
P43-P44	0.23	3.00	P95-P96	0.09	1.00	P143-P144	0.08	1.00			
P44-P45	0.44	7.00	P96-P97	0.10	2.00	P144-P145	0.05	1.00			
P45-P46	0.45	7.00	P97-P98	0.06	1.00	P145-P146	0.10	2.00			
P46-P47	0.45	7.00	P98-P99	0.14	2.00	P146-P147	0.02	1.00			
P47-P48	0.11	2.00	P99-P100	0.12	2.00	TOTAL	25.76	394.00			
P48-P49	0.12	2.00									
P49-P50	0.26	4.00									
P50-P51	0.18	3.00									
P51-P52	0.20	3.00									
P52-P53	0.13	2.00									

**DESCRIPCIÓN**

- CASAS
- CAMINOS
- LINDEROS
- POZOS DE REVISION
- TUBERÍA
- SENTIDO DE FLUJO

**SIMBOLOGÍA**

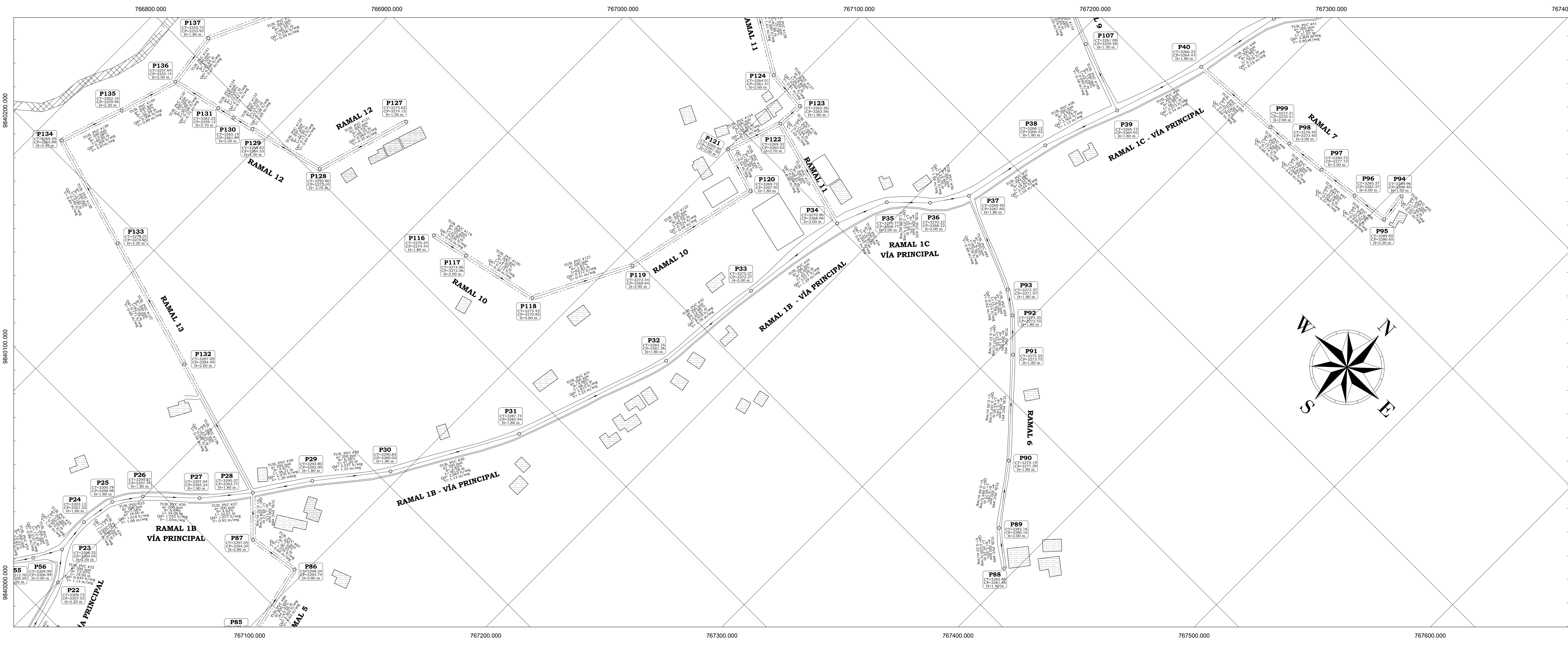
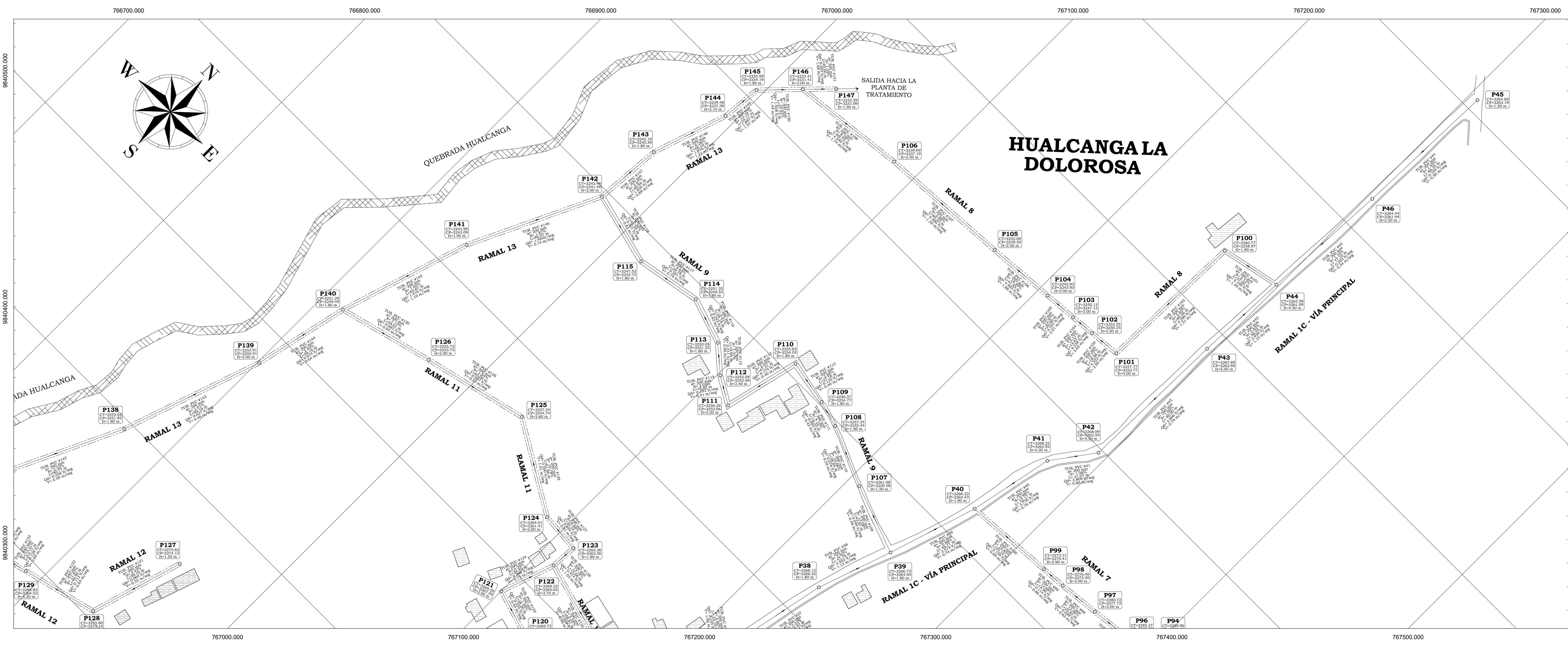




PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

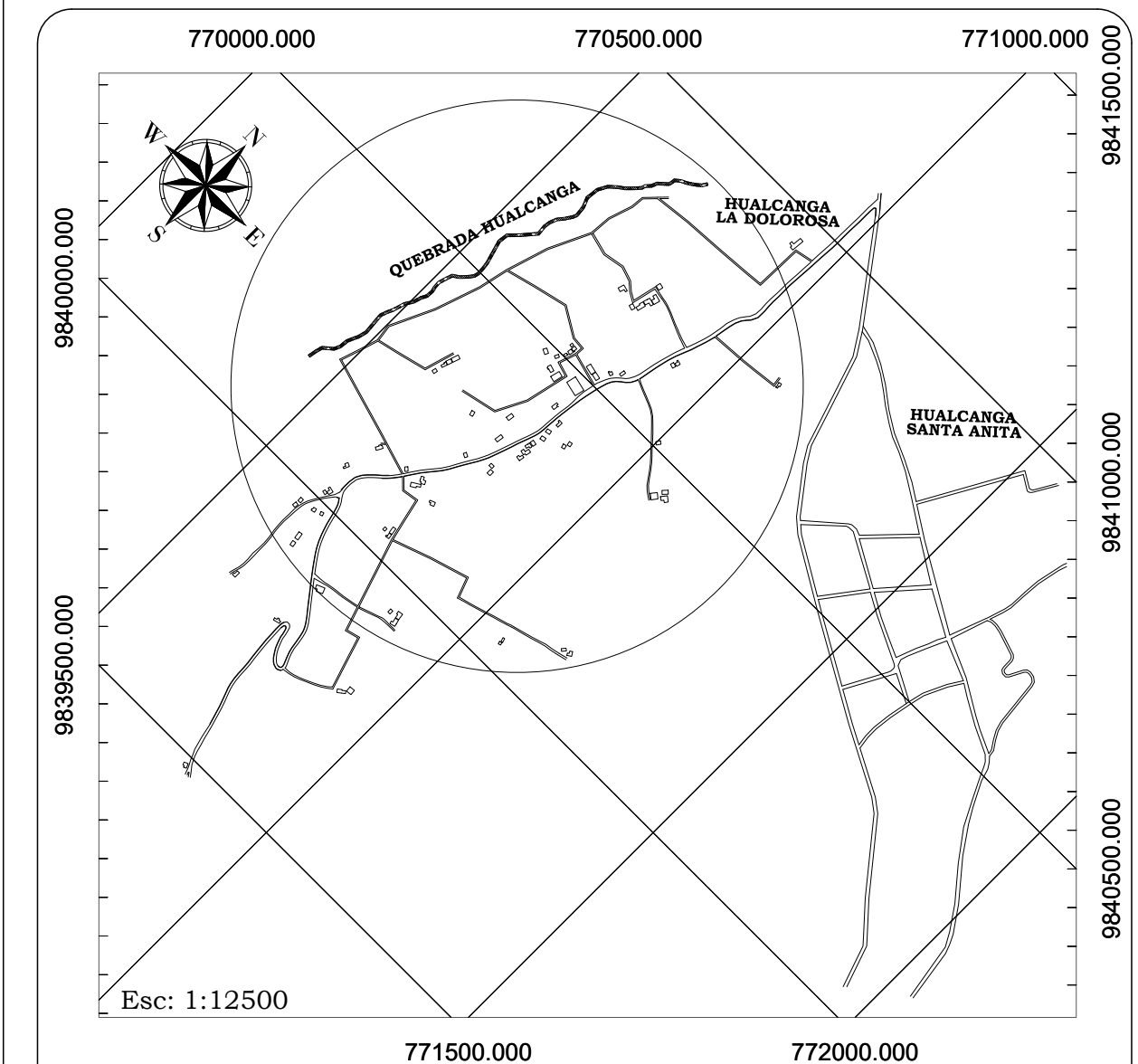
CONTIENE: RESULTADOS HIDRÁULICOS      ESCALA: 1:1000      FECHA: ABRIL/2021

DIBUJÓ: EGDO. BRYAN TIBÁN, AUTOR DEL PROYECTO      REVISÓ: ING. DILON MOYA, TUTOR DEL PROYECTO      LÁMINA: N°04



DESCRIPCIÓN	SIMBOLOGÍA
CASAS	
CAMINOS	
LINDEROS	
POZOS DE REVISIÓN	
TUBERÍA	
SENTIDO DE FLUJO	



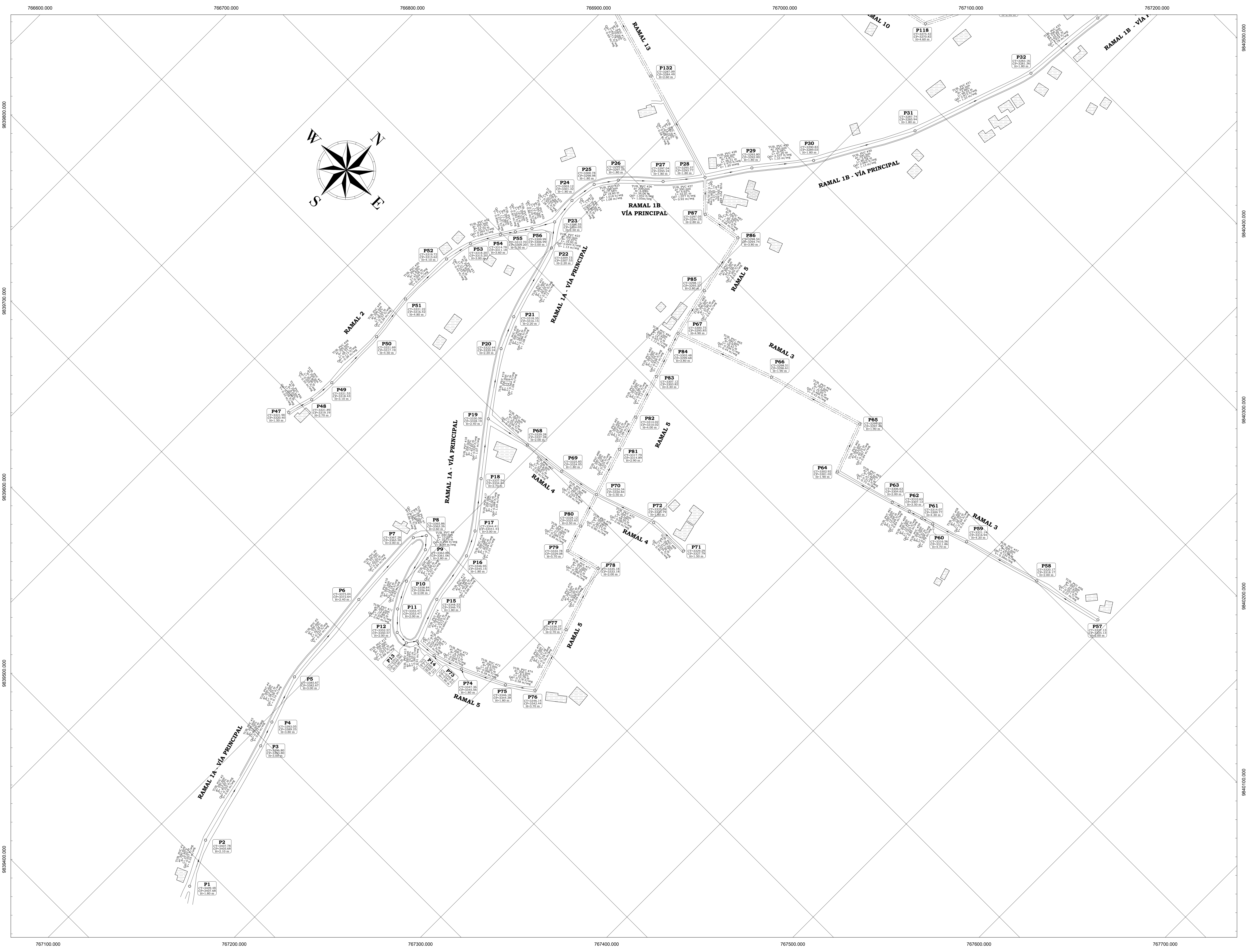


**PROYECTO:**  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

**CONTIENE:** RESULTADOS HIDRÁULICOS      **ESCALA:** 1:1000      **FECHA:** ABRIL/2021

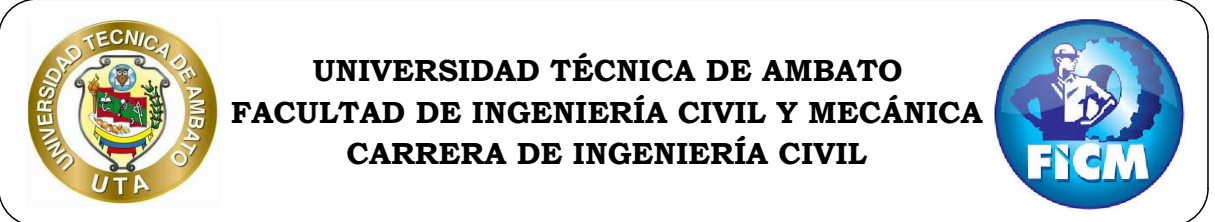
**DIBUJÓ:** EGDO. BRYAN TIBÁN, AUTOR DEL PROYECTO      **REVISÓ:** ING. DILON MOYA, TUTOR DEL PROYECTO      **LÁMINA:** N°05

DESCRIPCIÓN	SIMBOLOGÍA
CASAS	
CAMINOS	
LINDEROS	
POZOS DE REVISIÓN	
TUBERÍA	
SENTIDO DE FLUJO	





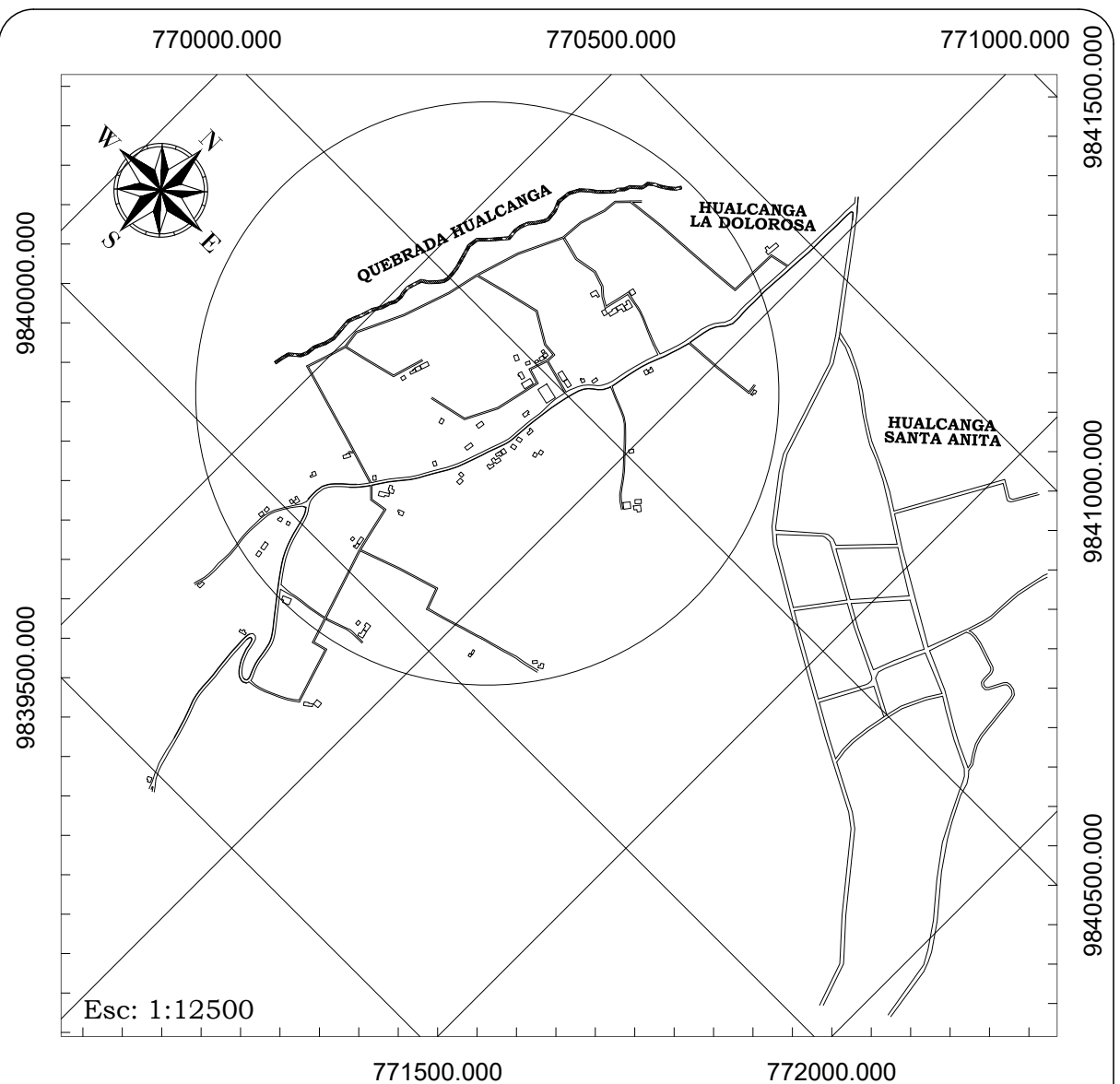
PERFIL LONGITUDINAL RAMAL 1A - VIA PRINCIPAL (0+000.00 m a 0+765.59 m)



**UNIVERSIDAD TÉCNICA DE AMBATO**  
FACULTAD DE INGENIERÍA CIVIL Y MECÁNICA  
CARRERA DE INGENIERÍA CIVIL

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**UBICACIÓN DEL PROYECTO**  
PROVINCIA: TUNGURAHUA  
CANTÓN: QUERO  
COMUNIDAD: HUALCANGA LA DOLOROSA



Esc: 1:12500

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**PROYECTO:**  
DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA

**CONTIENE:**  
PERFILES LONGITUDINALES

**ESCALA:**  
Esc. H=1:1000  
Esc. V=1:200

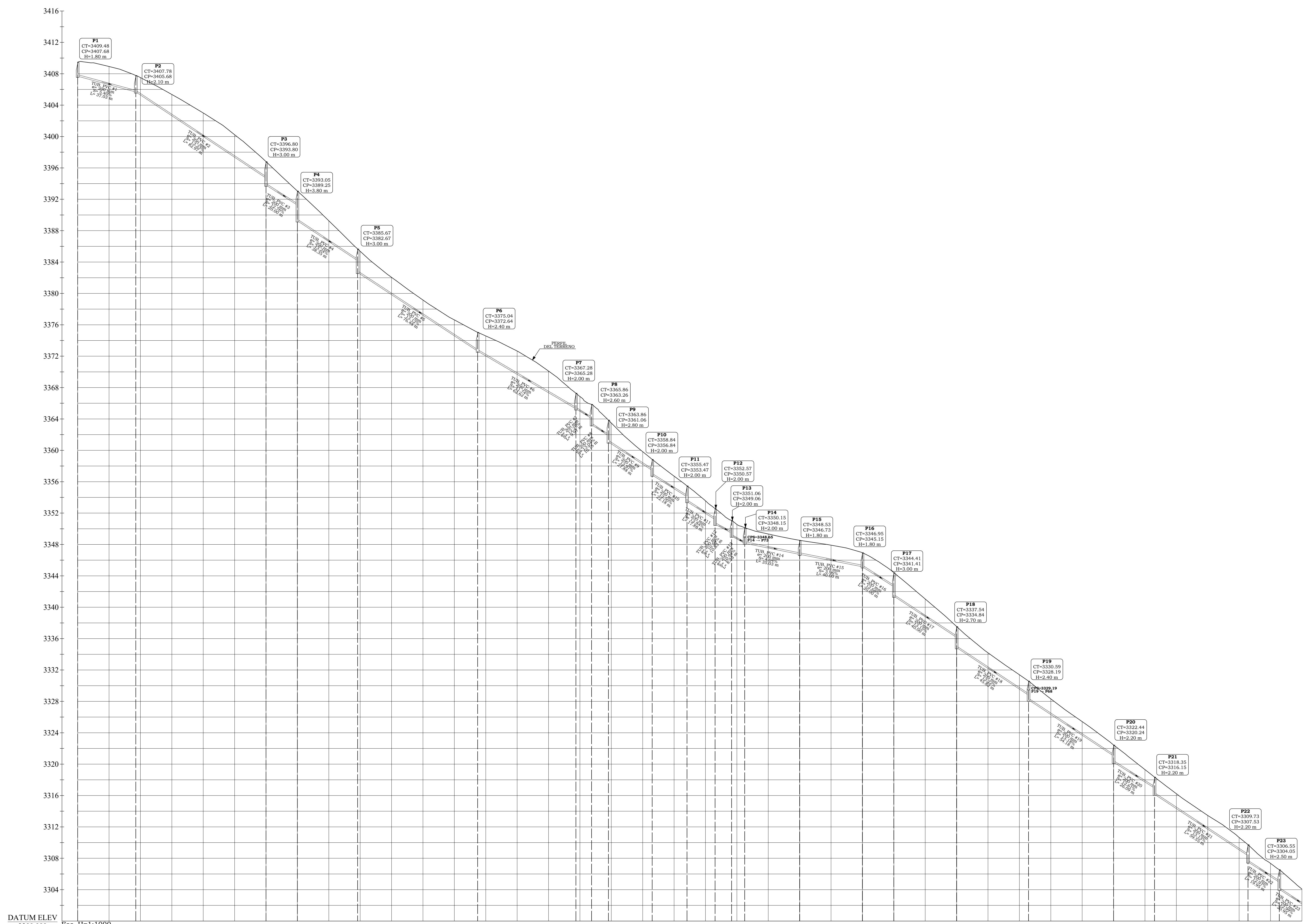
**FECHA:**  
ABRIL/2021

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**DIBUJO:**  
EGIDO. BRYAN TIBÁN  
AUTOR DEL PROYECTO

**REVISÓ:**  
ING. DILON MOYA  
TUTOR DEL PROYECTO

**LÁMINA:**  
N°06



**NOMENCLATURA**

DESCRIPCIÓN	SIMBOLOGÍA
• TUBERÍA	
• POZO DE ALCANTARILLADO	
• NÚMERO DE POZO	P1
• COTA TERRENO	CT
• COTA PROYECTO	CP
• COTA PROYECTO DE SALIDA	CPS
• ALTURA DE POZO	H
• MATERIAL DE TUBERÍA	TUB. PVC
• DIÁMETRO DE TUBERÍA	Ø
• PENDIENTE	S
• LONGITUD DE TUBERÍA	L
• CAUDAL A TUBERÍA TOTALMENTE LLENA	Q <sub>TLL</sub>
• VELOCIDAD A TUBERÍA TOTALMENTE LLENA	V <sub>TLL</sub>
• CAUDAL A TUBERÍA PARCIALMENTE LLENA	Q <sub>TLL</sub>
• VELOCIDAD A TUBERÍA PARCIALMENTE LLENA	V <sub>TLL</sub>

DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TLL</sub> = 90.17 l/seg V <sub>TLL</sub> = 2.87 m/seg Q <sub>TLL</sub> = 0.037 l/seg V <sub>TLL</sub> = 0.35 m/seg	0+000.00	3409.68	3409.68	1.80
Q <sub>TLL</sub> = 141.13 l/seg V <sub>TLL</sub> = 4.49 m/seg Q <sub>TLL</sub> = 0.153 l/seg V <sub>TLL</sub> = 0.65 m/seg	0+100.00	3408.92	3408.92	2.32
Q <sub>TLL</sub> = 138.60 l/seg V <sub>TLL</sub> = 4.43 m/seg Q <sub>TLL</sub> = 0.168 m/seg V <sub>TLL</sub> = 0.68 m/seg	0+137.03	3407.78	3407.78	2.10
Q <sub>TLL</sub> = 141.18 l/seg V <sub>TLL</sub> = 4.49 m/seg Q <sub>TLL</sub> = 0.158 l/seg V <sub>TLL</sub> = 0.74 m/seg	0+140.00	3405.29	3405.29	2.22
Q <sub>TLL</sub> = 141.18 l/seg V <sub>TLL</sub> = 4.49 m/seg Q <sub>TLL</sub> = 0.158 l/seg V <sub>TLL</sub> = 0.74 m/seg	0+160.00	3405.36	3405.36	2.72
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+200.00	3403.00	3403.00	3.00
Q <sub>TLL</sub> = 132.95 l/seg V <sub>TLL</sub> = 4.23 m/seg Q <sub>TLL</sub> = 0.284 l/seg V <sub>TLL</sub> = 0.86 m/seg	0+240.00	3400.23	3400.23	2.88
Q <sub>TLL</sub> = 139.74 l/seg V <sub>TLL</sub> = 4.46 m/seg Q <sub>TLL</sub> = 0.211 l/seg V <sub>TLL</sub> = 0.81 m/seg	0+300.00	3397.35	3397.35	2.48
Q <sub>TLL</sub> = 137.18 l/seg V <sub>TLL</sub> = 4.40 m/seg Q <sub>TLL</sub> = 0.240 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+317.45	3394.59	3394.59	2.10
Q <sub>TLL</sub> = 139.04 l/seg V <sub>TLL</sub> = 4.48 m/seg Q <sub>TLL</sub> = 0.253 l/seg V <sub>TLL</sub> = 0.84 m/seg	0+338.17	3392.64	3392.64	3.00
Q <sub>TLL</sub> = 132.95 l/seg V <sub>TLL</sub> = 4.23 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+360.00	3388.17	3388.17	1.50
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3385.67	3385.67	3.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3382.67	3382.67	2.65
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3379.84	3379.84	2.21
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3377.21	3377.21	1.95
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3374.59	3374.59	2.04
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3372.64	3372.64	2.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3372.04	3372.04	2.54
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3370.11	3370.11	2.97
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3367.34	3367.34	2.77
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3365.28	3365.28	2.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3363.56	3363.56	1.80
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3361.86	3361.86	2.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3360.09	3360.09	2.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3358.15	3358.15	2.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3356.05	3356.05	1.80
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3354.41	3354.41	1.80
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3352.44	3352.44	3.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3350.24	3350.24	2.27
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3348.15	3348.15	1.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3346.14	3346.14	2.70
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3344.81	3344.81	1.99
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3343.20	3343.20	1.83
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3341.56	3341.56	2.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3339.56	3339.56	1.83
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3337.79	3337.79	2.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3335.99	3335.99	2.00
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3334.32	3334.32	1.73
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3332.69	3332.69	1.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3331.04	3331.04	2.20
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3329.24	3329.24	1.58
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3327.39	3327.39	1.40
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3325.35	3325.35	2.20
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3323.35	3323.35	1.90
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3321.33	3321.33	1.76
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3319.36	3319.36	1.58
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3317.35	3317.35	2.20
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3315.35	3315.35	1.68
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3313.35	3313.35	1.68
Q <sub>TLL</sub> = 140.54 l/seg V <sub>TLL</sub> = 4.47 m/seg Q <sub>TLL</sub> = 0.270 l/seg V <sub>TLL</sub> = 0.82 m/seg	0+400.00	3311.33	3311.33	2.50

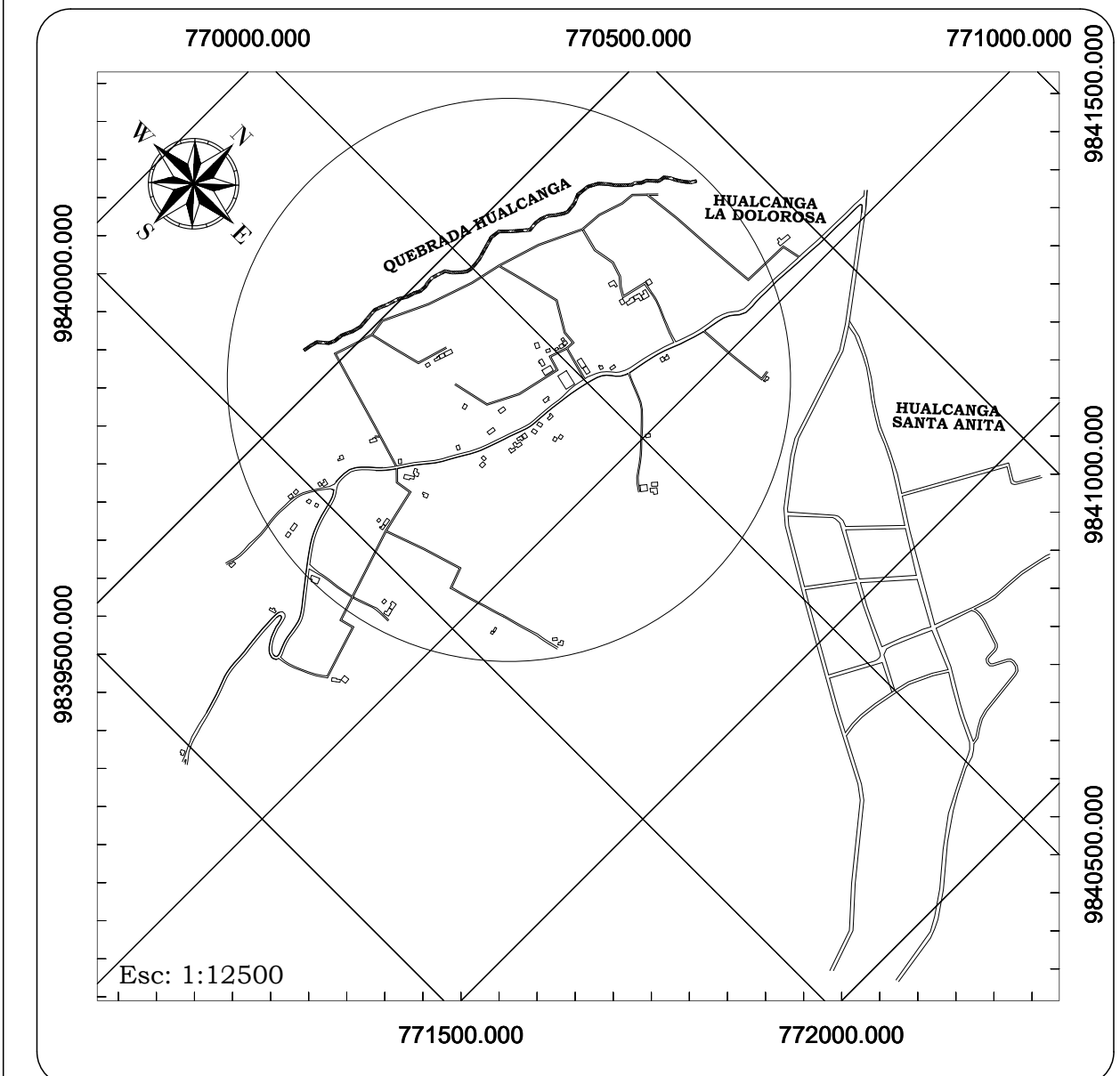












PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

CONTIENE:  
 PERFILES LONGITUDINALES

ESCALA:  
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 Esc. V=1:200

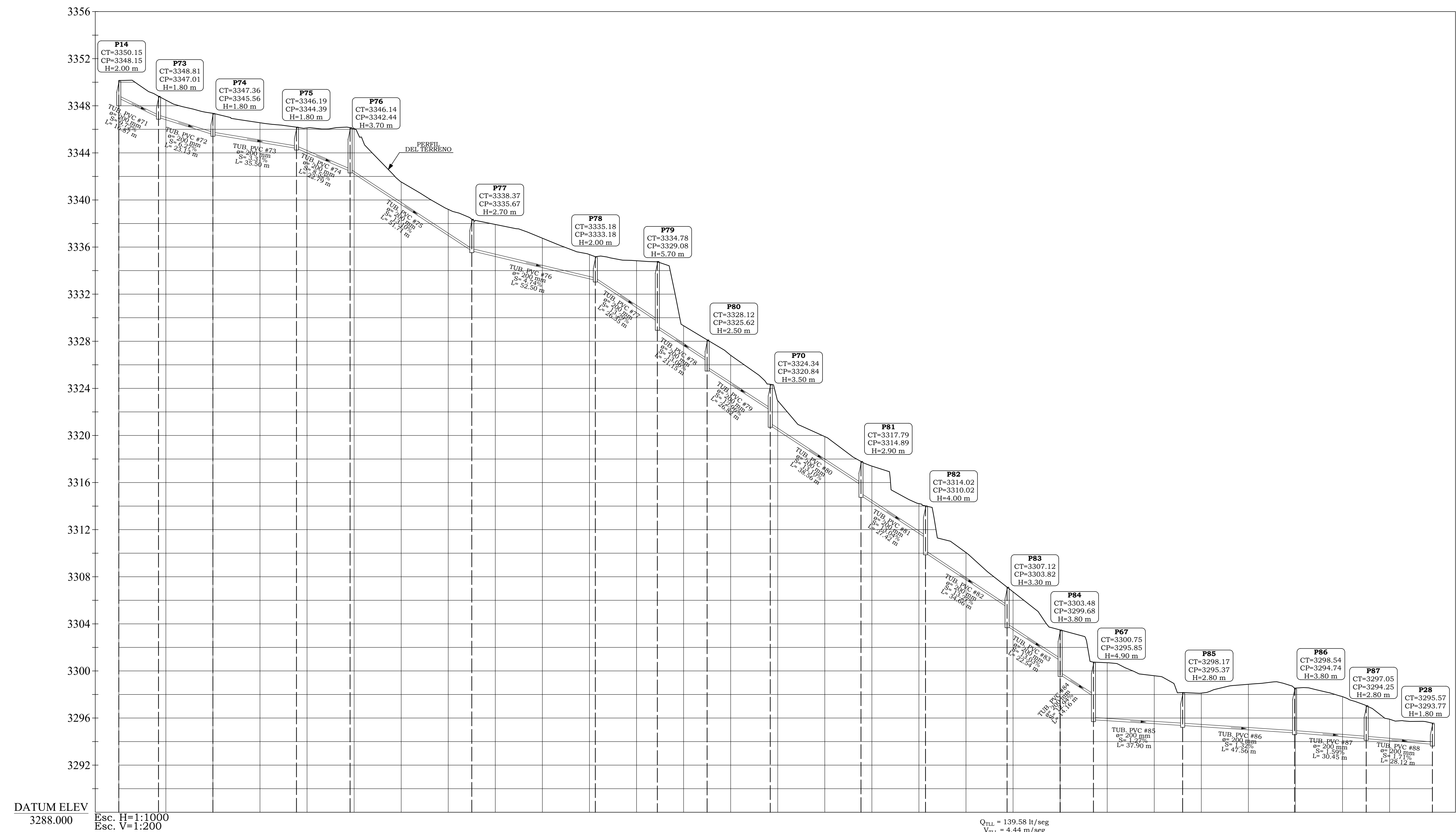
FECHA:  
 ABRIL/2021

DIBUJÓ:  
 EGOLO BRYAN TIBÁN  
 AUTOR DEL PROYECTO

REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

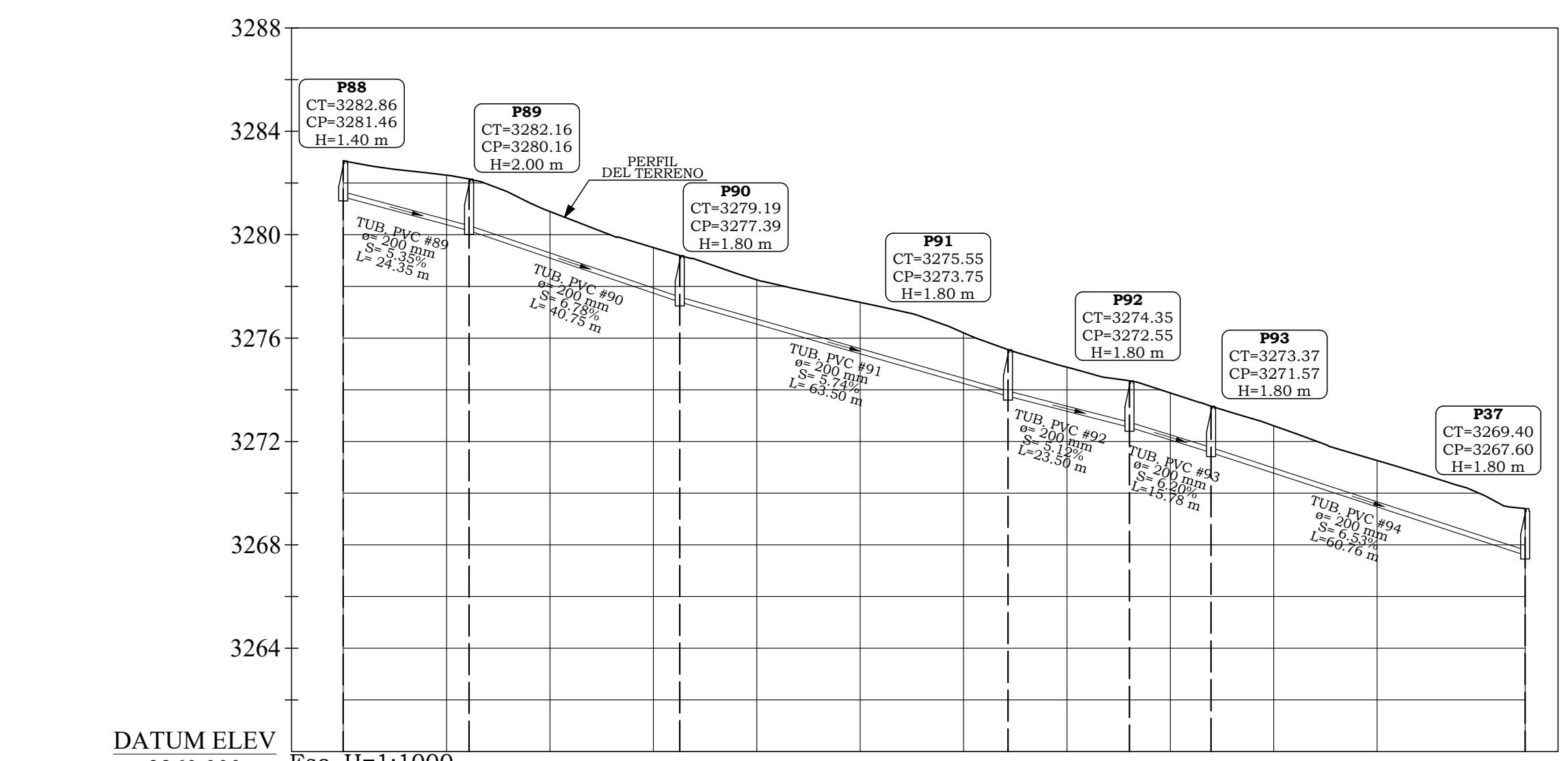
LÁMINA:  
 N°09

PERFIL LONGITUDINAL RAMAL 5 (0+000.00 m a 0+558.19 m)



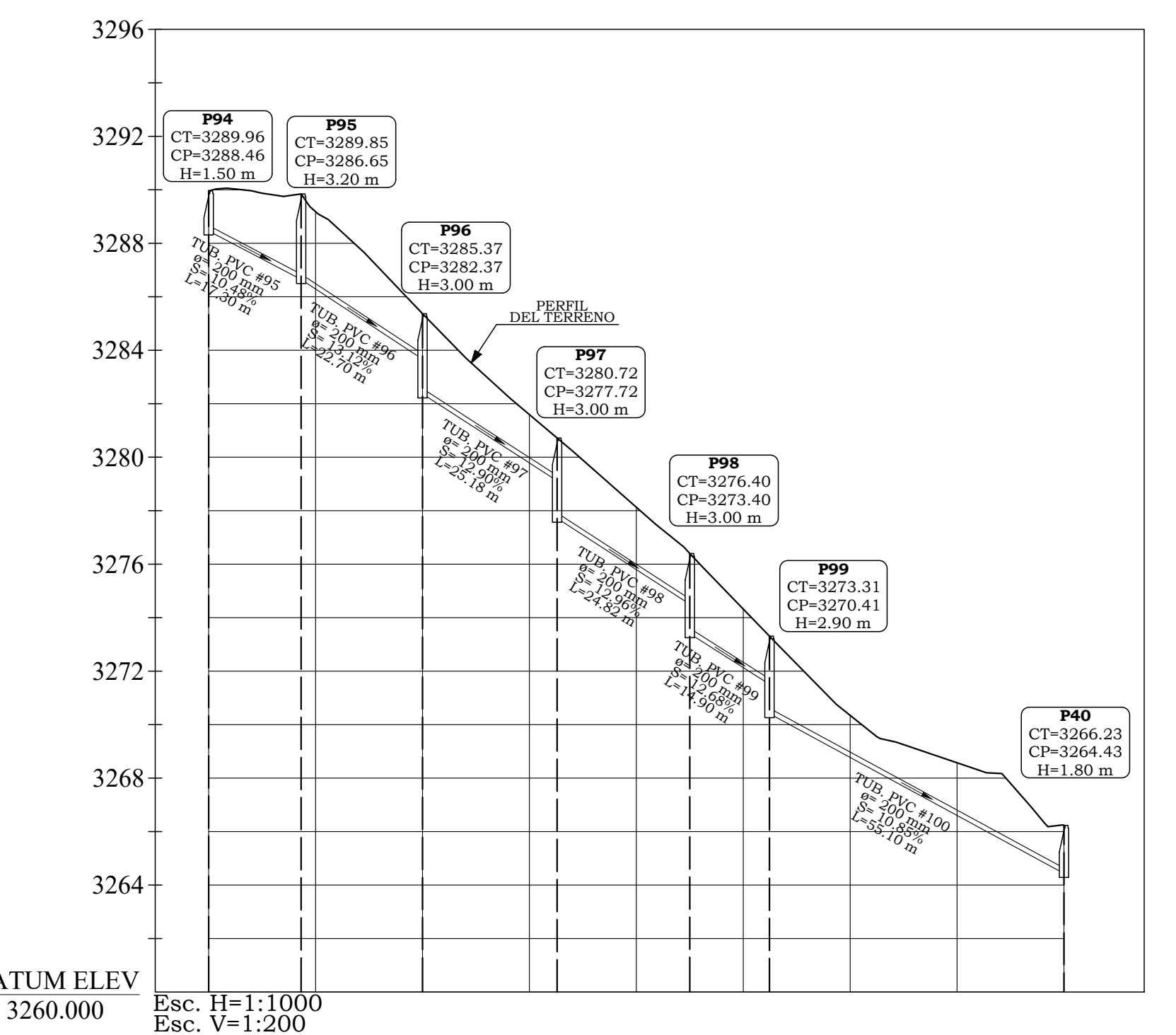
DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
$Q_{TL} = 128.97 \text{ l/seg}$ $V_{TL} = 0.017 \text{ m/seg}$ $V_{VL} = 0.38 \text{ m/seg}$	0+000.00	3348.65	3350.15	1.50
$Q_{TL} = 70.59 \text{ l/seg}$ $V_{TL} = 2.25 \text{ m/seg}$ $Q_{VL} = 0.090 \text{ l/seg}$ $V_{VL} = 0.38 \text{ m/seg}$	0+000.00	3348.15	3350.15	2.00
$Q_{TL} = 97.16 \text{ l/seg}$ $V_{TL} = 3.29 \text{ m/seg}$ $V_{VL} = 0.39 \text{ m/seg}$	0+020.00	3347.01	3348.81	1.80
$Q_{TL} = 32.97 \text{ l/seg}$ $V_{TL} = 0.29 \text{ m/seg}$ $V_{VL} = 0.39 \text{ m/seg}$	0+040.00	3346.81	3348.81	1.97
$Q_{TL} = 70.59 \text{ l/seg}$ $V_{TL} = 2.25 \text{ m/seg}$ $Q_{VL} = 0.090 \text{ l/seg}$ $V_{VL} = 0.38 \text{ m/seg}$	0+060.00	3345.56	3347.56	1.80
$Q_{TL} = 113.26 \text{ l/seg}$ $V_{TL} = 3.60 \text{ m/seg}$ $V_{VL} = 0.38 \text{ m/seg}$	0+080.00	3344.90	3346.56	1.66
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+100.00	3344.39	3346.19	1.80
$Q_{TL} = 84.48 \text{ l/seg}$ $V_{TL} = 2.69 \text{ m/seg}$ $V_{VL} = 0.239 \text{ l/seg}$ $V_{VL} = 0.59 \text{ m/seg}$	0+120.00	3343.90	3345.12	2.12
$Q_{TL} = 141.65 \text{ l/seg}$ $V_{TL} = 4.50 \text{ m/seg}$ $V_{VL} = 0.86 \text{ m/seg}$	0+140.00	3343.18	3343.18	2.00
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+160.00	3342.86	3343.84	3.98
$Q_{TL} = 140.22 \text{ l/seg}$ $V_{TL} = 4.46 \text{ m/seg}$ $V_{VL} = 0.89 \text{ m/seg}$	0+180.00	3342.44	3343.54	5.10
$Q_{TL} = 139.68 \text{ l/seg}$ $V_{TL} = 4.44 \text{ m/seg}$ $V_{VL} = 0.81 \text{ l/seg}$ $V_{VL} = 0.60 \text{ m/seg}$	0+200.00	3342.05	3343.25	5.70
$Q_{TL} = 139.68 \text{ l/seg}$ $V_{TL} = 4.44 \text{ m/seg}$ $V_{VL} = 0.81 \text{ l/seg}$ $V_{VL} = 0.60 \text{ m/seg}$	0+220.00	3341.62	3342.92	1.70
$Q_{TL} = 139.68 \text{ l/seg}$ $V_{TL} = 4.44 \text{ m/seg}$ $V_{VL} = 0.81 \text{ l/seg}$ $V_{VL} = 0.60 \text{ m/seg}$	0+240.00	3341.53	3342.83	1.90
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+260.00	3341.53	3342.83	2.35
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+280.00	3341.53	3342.83	2.49
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+300.00	3341.53	3342.83	2.65
$Q_{TL} = 140.44 \text{ l/seg}$ $V_{TL} = 4.47 \text{ m/seg}$ $Q_{VL} = 0.178 \text{ l/seg}$ $V_{VL} = 0.76 \text{ m/seg}$	0+320.00	3341.53	3342.83	3.30
$Q_{TL} = 139.58 \text{ l/seg}$ $V_{TL} = 4.44 \text{ m/seg}$ $Q_{VL} = 0.65 \text{ l/seg}$ $V_{VL} = 1.13 \text{ m/seg}$	0+340.00	3341.53	3342.83	2.90
$Q_{TL} = 139.58 \text{ l/seg}$ $V_{TL} = 4.44 \text{ m/seg}$ $Q_{VL} = 0.65 \text{ l/seg}$ $V_{VL} = 1.13 \text{ m/seg}$	0+360.00	3341.53	3342.83	4.00
$Q_{TL} = 43.73 \text{ l/seg}$ $V_{TL} = 1.39 \text{ m/seg}$ $Q_{VL} = 1.344 \text{ l/seg}$ $V_{VL} = 0.61 \text{ m/seg}$	0+380.00	3341.53	3342.83	2.60
$Q_{TL} = 44.58 \text{ l/seg}$ $V_{TL} = 1.42 \text{ m/seg}$ $Q_{VL} = 1.344 \text{ l/seg}$ $V_{VL} = 0.63 \text{ m/seg}$	0+400.00	3341.53	3342.83	2.80
$Q_{TL} = 48.03 \text{ l/seg}$ $V_{TL} = 1.50 \text{ m/seg}$ $V_{VL} = 0.68 \text{ m/seg}$	0+420.00	3341.53	3342.83	3.80
$Q_{TL} = 40.74 \text{ l/seg}$ $V_{TL} = 1.33 \text{ m/seg}$ $V_{VL} = 0.79 \text{ m/seg}$	0+440.00	3341.53	3342.83	3.41
$Q_{TL} = 40.74 \text{ l/seg}$ $V_{TL} = 1.33 \text{ m/seg}$ $V_{VL} = 0.79 \text{ m/seg}$	0+460.00	3341.53	3342.83	2.80
$Q_{TL} = 40.74 \text{ l/seg}$ $V_{TL} = 1.33 \text{ m/seg}$ $V_{VL} = 0.79 \text{ m/seg}$	0+480.00	3341.53	3342.83	1.82
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+500.00	3341.53	3342.83	3.80
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+520.00	3341.53	3342.83	3.41
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+540.00	3341.53	3342.83	2.80
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+560.00	3341.53	3342.83	1.80

PERFIL LONGITUDINAL RAMAL 6 (0+000.00 m a 0+228.64 m)



DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
$Q_{TL} = 101.03 \text{ l/seg}$ $V_{TL} = 3.21 \text{ m/seg}$ $Q_{VL} = 0.084 \text{ l/seg}$ $V_{VL} = 0.48 \text{ m/seg}$	0+000.00	3284.46	3285.86	1.40
$Q_{TL} = 92.96 \text{ l/seg}$ $V_{TL} = 3.96 \text{ m/seg}$ $Q_{VL} = 0.167 \text{ l/seg}$ $V_{VL} = 0.56 \text{ m/seg}$	0+020.00	3284.30	3285.30	1.90
$Q_{TL} = 87.80 \text{ l/seg}$ $V_{TL} = 4.197 \text{ m/seg}$ $V_{VL} = 0.27 \text{ m/seg}$	0+040.00	3284.10	3285.10	1.80
$Q_{TL} = 86.01 \text{ l/seg}$ $V_{TL} = 4.197 \text{ m/seg}$ $V_{VL} = 0.27 \text{ m/seg}$	0+060.00	3283.79	3284.79	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+080.00	3283.55	3284.55	1.95
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+100.00	3283.39	3284.39	1.99
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+120.00	3283.25	3284.25	1.95
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+140.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+160.00	3283.15	3284.15	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+180.00	3283.17	3284.17	1.84
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+200.00	3283.17	3284.17	1.70
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+220.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+240.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+260.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+280.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+300.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+320.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+340.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+360.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+380.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+400.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+420.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+440.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+460.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+480.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+500.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+520.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+540.00	3283.17	3284.17	1.80
$Q_{TL} = 99.15 \text{ l/seg}$ $V_{TL} = 3.15 \text{ m/seg}$ $Q_{VL} = 0.278 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+560.00	3283.17	3284.17	1.80

PERFIL LONGITUDINAL RAMAL 7 (0+000.00 m a 0+160.00 m)

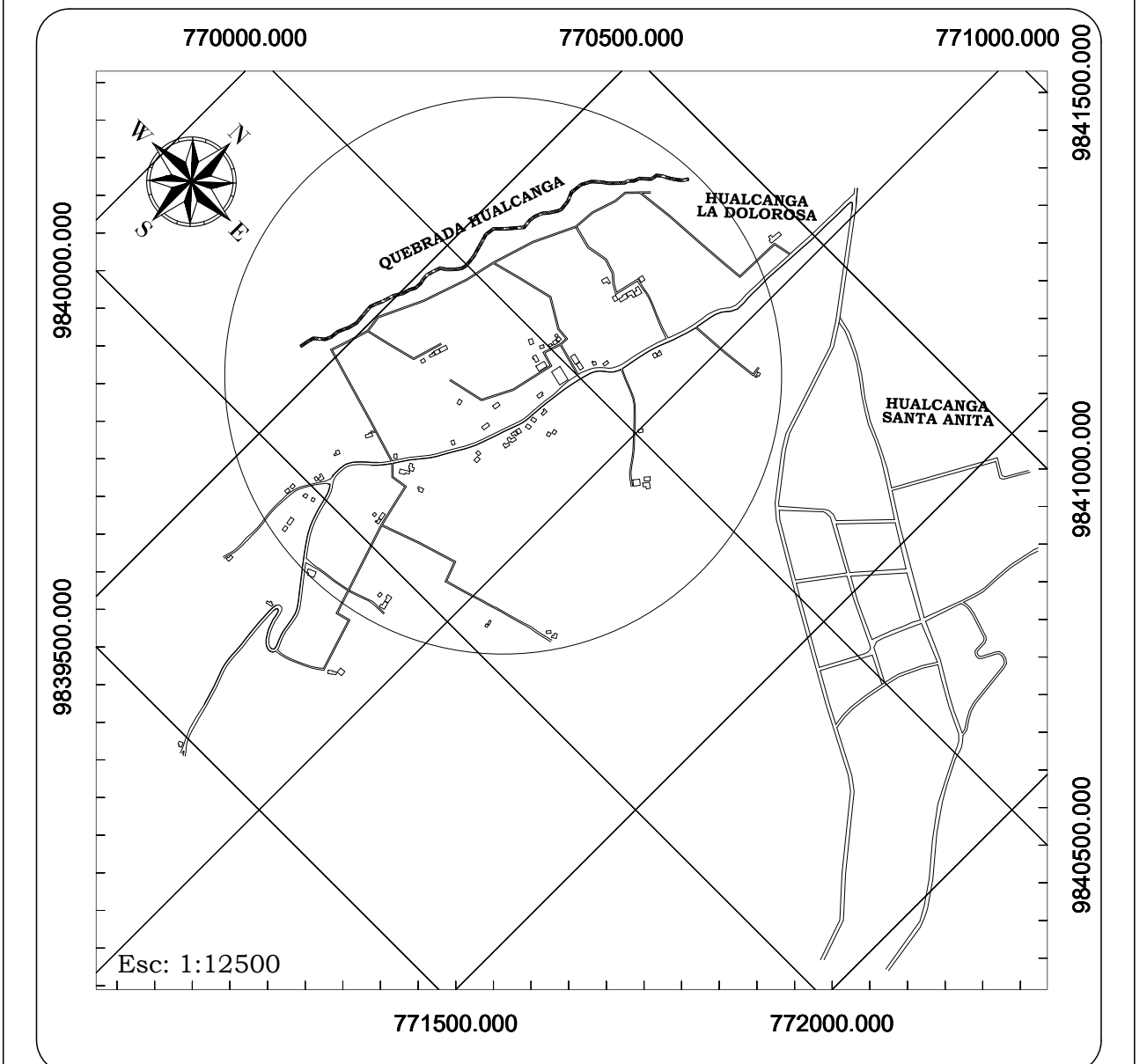


DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+000.00	3286.46	3286.96	1.50
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+020.00	3286.65	3287.15	3.20
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+040.00	3286.79	3287.29	2.80
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+060.00	3286.87	3287.37	1.70
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+080.00	3286.96	3287.46	3.00
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+100.00	3287.12	3287.62	1.60
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+120.00	3287.12	3287.62	3.00
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+140.00	3287.50	3288.00	1.95
$Q_{TL} = 13.01 \text{ l/seg}$ $V_{TL} = 4.00 \text{ m/seg}$ $V_{VL} = 0.35 \text{ m/seg}$	0+160.00	3287.60	3288.10	3.00
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+180.00	3287.51	3288.01	2.90
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+200.00	3287.41	3287.91	1.58
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+220.00	3287.35	3287.85	1.97
$Q_{TL} = 127.81 \text{ l/seg}$ $V_{TL} = 4.07 \text{ m/seg}$ $Q_{VL} = 0.159 \text{ l/seg}$ $V_{VL} = 0.69 \text{ m/seg}$	0+240.00	3287.43	3287.93	1.86

NOMENCLATURA

DESCRIPCIÓN	SIMBOLOGÍA
TUBERÍA	
POZO DE ALCANTARILLADO	
NÚMERO DE POZO	P1
COTA TERRENO	CT
COTA PROYECTO	CP
COTA PROYECTO DE SALIDA	CPS
ALTURA DE POZO	H
MATERIAL DE TUBERÍA	TUB. PVC
DIÁMETRO DE TUBERÍA	Ø
PENDIENTE	S
LONGITUD DE TUBERÍA	L
CAUDAL A TUBERÍA TOTALMENTE LLENA	$Q_{TL}$
VELOCIDAD A TUBERÍA TOTALMENTE LLENA	$V_{TL}$
CAUDAL A TUBERÍA PARCIALMENTE LLENA	$Q_{PL}$
VELOCIDAD A TUBERÍA PARCIALMENTE LLENA	$V_{PL}$





PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

CONTIENE:  
 PERFILES LONGITUDINALES

DIBUJO:  
 EGDO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

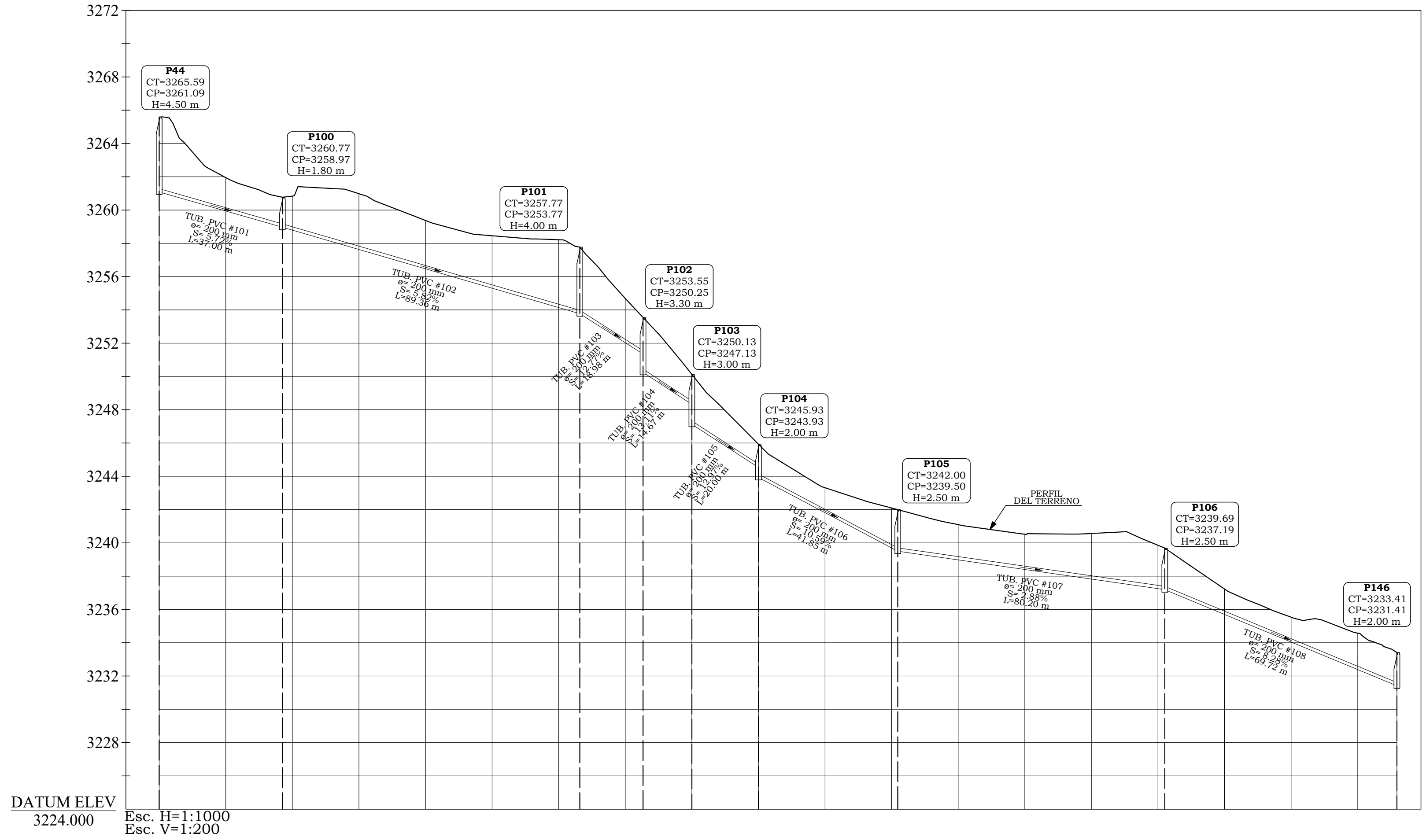
REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

ESCALA:  
 Esc. H=1:1000  
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FECHA:  
 ABRIL/2021

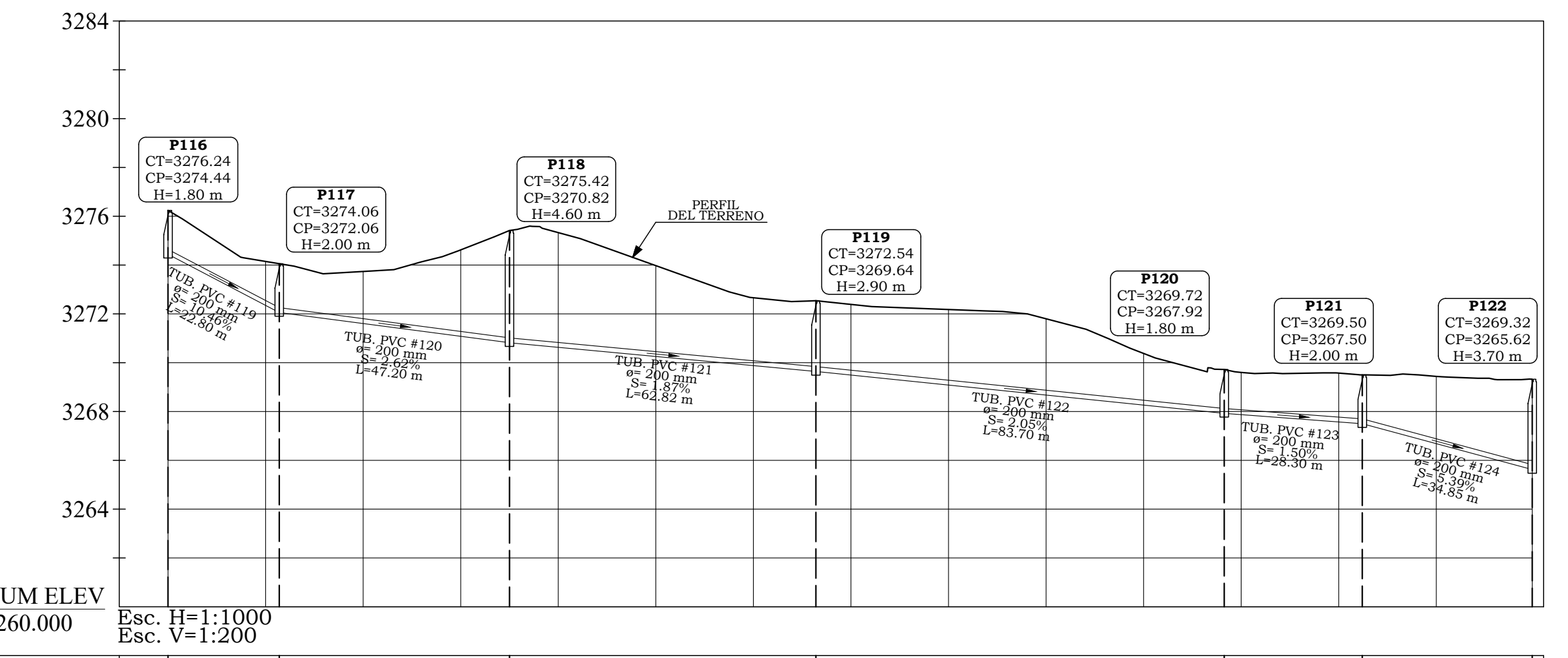
LÁMINA:  
 N° 10

PERFIL LONGITUDINAL RAMAL 8 (0+000.00 m a 0+371.78 m)



DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TL</sub> = 92.80 l/seg V <sub>TL</sub> = 2.95 m/seg Q <sub>VL</sub> = 4.180 l/seg V <sub>VL</sub> = 1.49 m/seg	0+000.00	3265.59	3261.09	4.50
Q <sub>TL</sub> = 93.61 l/seg V <sub>TL</sub> = 2.98 m/seg Q <sub>VL</sub> = 4.296 l/seg V <sub>VL</sub> = 1.51 m/seg	0+020.00	3261.95	3259.94	2.01
Q <sub>TL</sub> = 13.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+030.00	3260.77	3258.07	1.80
Q <sub>TL</sub> = 13.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+040.00	3260.84	3258.79	2.05
Q <sub>TL</sub> = 13.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+050.00	3260.98	3257.63	3.35
Q <sub>TL</sub> = 126.27 l/seg V <sub>TL</sub> = 4.02 m/seg Q <sub>VL</sub> = 4.403 l/seg V <sub>VL</sub> = 1.88 m/seg	0+080.00	3259.38	3256.47	2.91
Q <sub>TL</sub> = 65.85 l/seg V <sub>TL</sub> = 2.99 m/seg Q <sub>VL</sub> = 4.480 l/seg V <sub>VL</sub> = 1.20 m/seg	0+100.00	3258.45	3255.30	3.15
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+120.00	3258.22	3254.14	4.08
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+130.00	3257.77	3253.17	4.60
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+145.33	3253.52	3251.35	2.18
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+160.00	3250.13	3248.33	1.80
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+180.00	3245.93	3244.53	1.40
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+200.00	3243.31	3241.81	1.50
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+220.00	3242.10	3239.70	2.40
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+240.00	3242.00	3239.50	2.50
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+260.00	3240.52	3238.40	2.12
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+280.00	3240.57	3237.82	2.75
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+300.00	3239.86	3237.25	2.61
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+320.00	3237.19	3234.58	2.61
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+340.00	3237.23	3233.70	1.53
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+360.00	3233.54	3231.41	1.30
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+371.78	3234.58	3231.41	2.19

PERFIL LONGITUDINAL RAMAL 10 (0+000.00 m a 0+279.67 m)

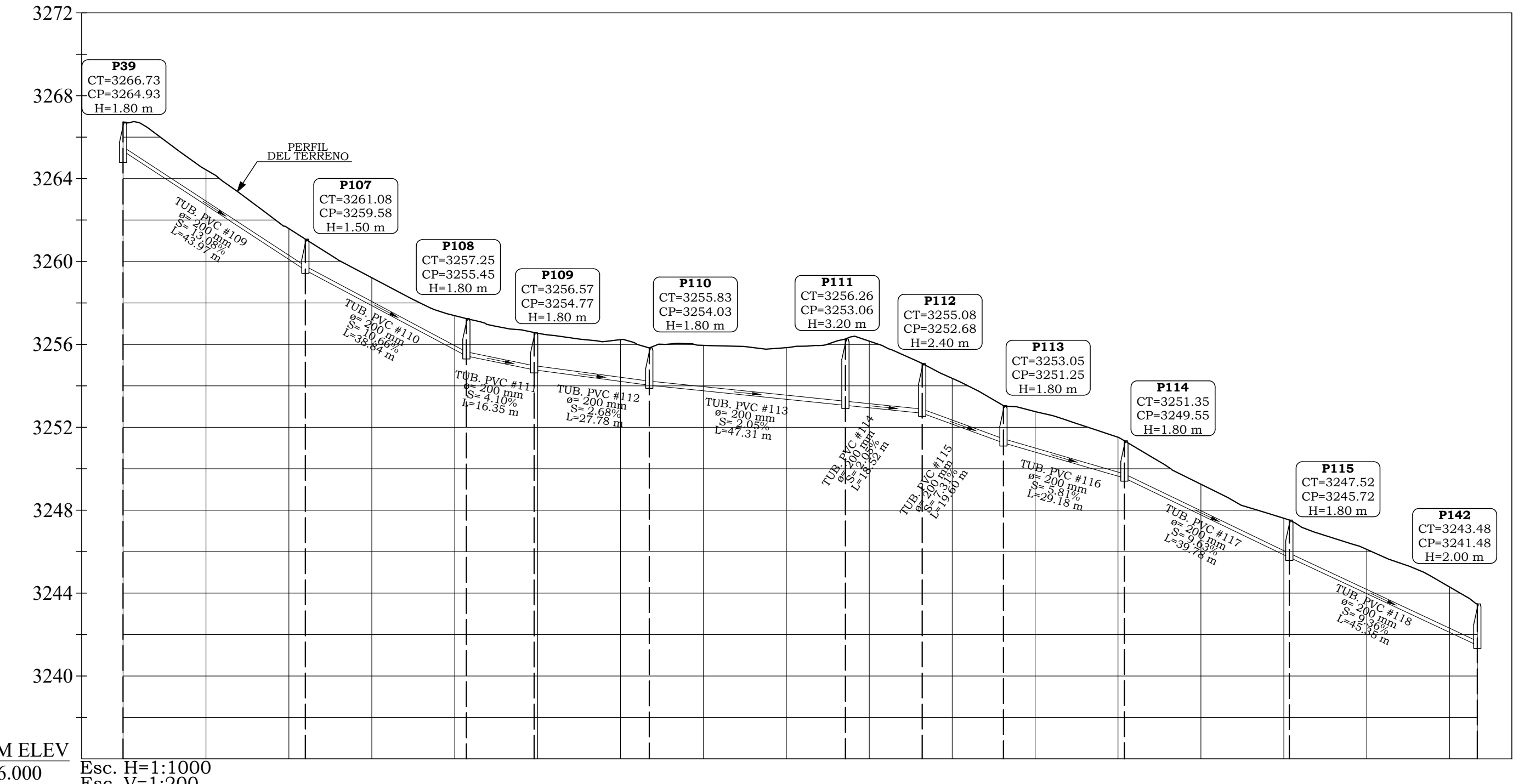


DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+000.00	3276.24	3274.44	1.80
Q <sub>TL</sub> = 62.80 l/seg V <sub>TL</sub> = 1.89 m/seg Q <sub>VL</sub> = 0.112 l/seg V <sub>VL</sub> = 0.38 m/seg	0+020.00	3274.15	3272.35	1.80
Q <sub>TL</sub> = 53.06 l/seg V <sub>TL</sub> = 1.69 m/seg Q <sub>VL</sub> = 0.212 l/seg V <sub>VL</sub> = 0.41 m/seg	0+040.00	3273.74	3271.60	2.14
Q <sub>TL</sub> = 55.55 l/seg V <sub>TL</sub> = 1.77 m/seg Q <sub>VL</sub> = 0.328 l/seg V <sub>VL</sub> = 0.48 m/seg	0+060.00	3274.62	3272.54	2.08
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+080.00	3275.33	3273.23	2.10
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+100.00	3273.98	3271.98	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+120.00	3272.66	3270.64	2.02
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+140.00	3272.54	3270.42	2.12
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+160.00	3272.18	3269.08	3.10
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+180.00	3271.80	3268.67	3.13
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+200.00	3270.38	3266.26	4.12
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+220.00	3269.62	3265.72	3.90
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+240.00	3269.57	3265.67	3.90
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+260.00	3269.57	3265.67	4.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+279.67	3269.44	3265.62	3.83

**NOMENCLATURA**

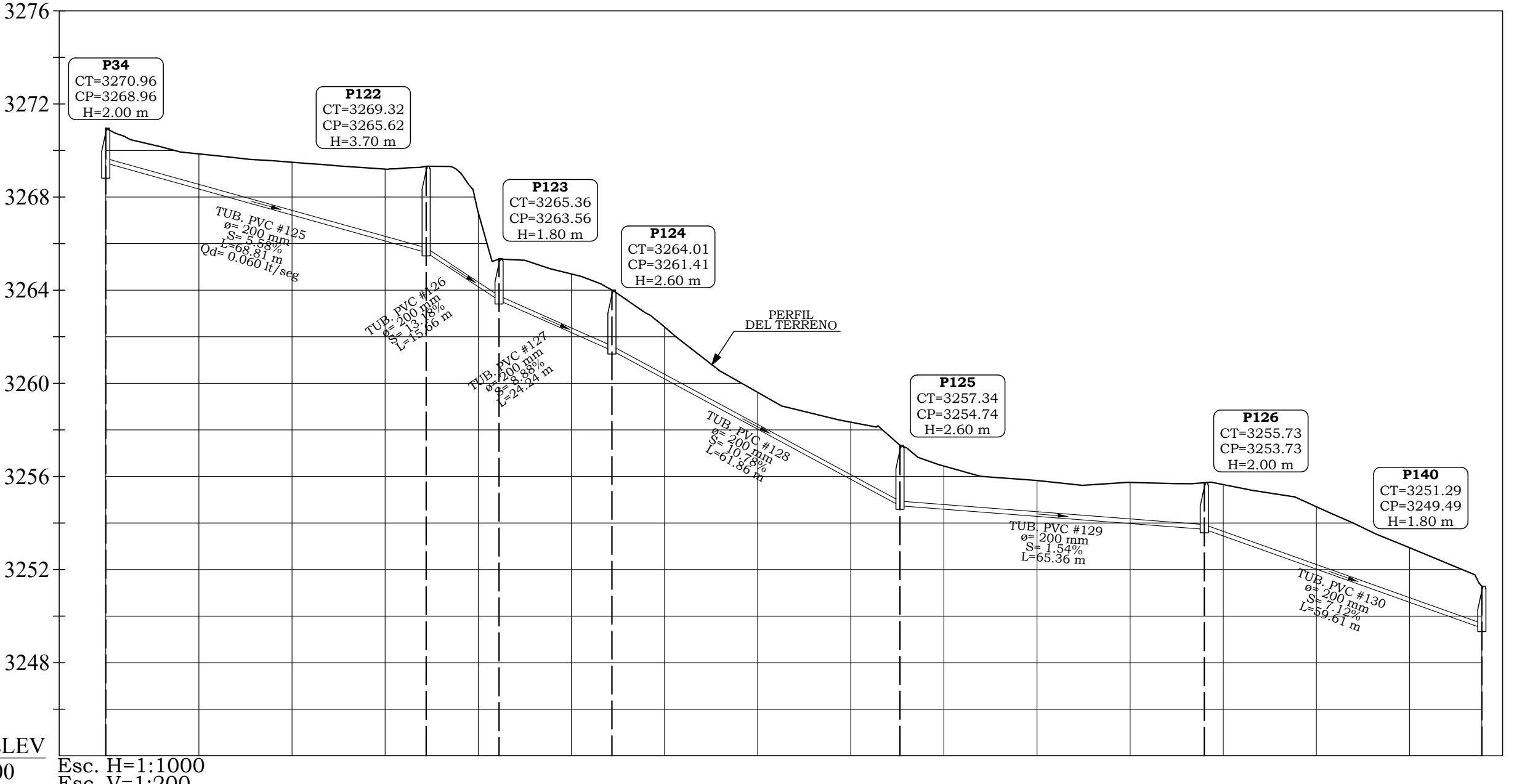
DESCRIPCIÓN	SIMBOLOGÍA
TUBERÍA	
POZO DE ALCANTARILLADO	
NÚMERO DE POZO	P1
COTA TERRENO	CT
COTA PROYECTO	CP
COTA PROYECTO DE SALIDA	CPS
ALTURA DE POZO	H
MATERIAL DE TUBERÍA	TUB. PVC
DIÁMETRO DE TUBERÍA	Ø
LONGITUD DE TUBERÍA	L
CAUDAL A TUBERÍA TOTALMENTE LLENA	Q <sub>TL</sub>
VELOCIDAD A TUBERÍA TOTALMENTE LLENA	V <sub>TL</sub>
CAUDAL A TUBERÍA PARCIALMENTE LLENA	Q <sub>VL</sub>
VELOCIDAD A TUBERÍA PARCIALMENTE LLENA	V <sub>VL</sub>

PERFIL LONGITUDINAL RAMAL 9 (0+000.00 m a 0+326.67 m)



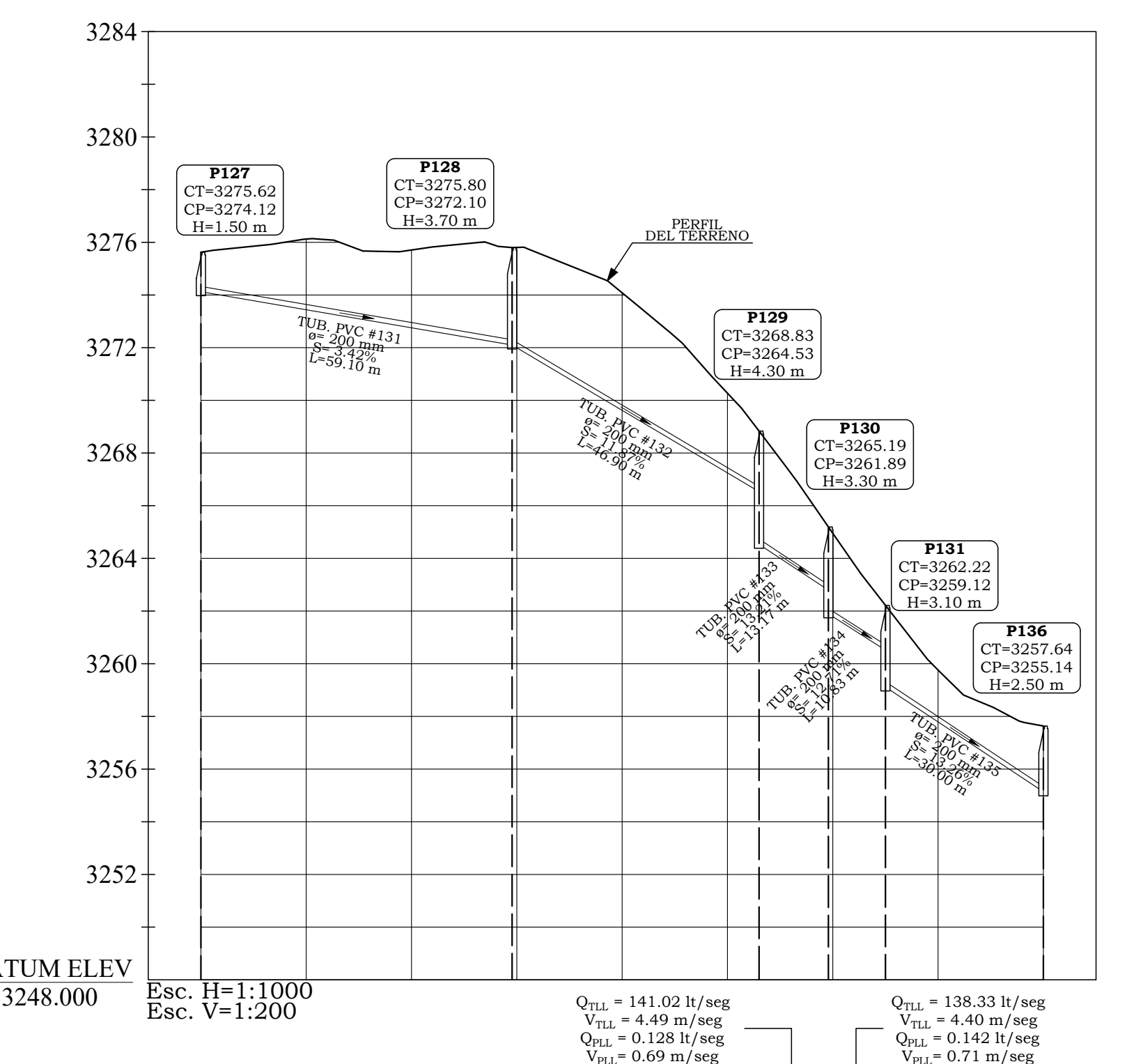
DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TL</sub> = 140.33 l/seg V <sub>TL</sub> = 4.46 m/seg Q <sub>VL</sub> = 0.040 l/seg V <sub>VL</sub> = 0.48 m/seg	0+000.00	3266.73	3266.73	0.00
Q <sub>TL</sub> = 126.68 l/seg V <sub>TL</sub> = 4.03 m/seg Q <sub>VL</sub> = 0.076 l/seg V <sub>VL</sub> = 0.55 m/seg	0+020.00	3261.08	3259.58	1.50
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+040.00	3257.39	3255.74	1.65
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+060.00	3257.25	3255.65	1.60
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+080.00	3256.57	3254.77	1.80
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+100.00	3256.54	3254.75	1.79
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+120.00	3256.23	3254.43	1.80
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+140.00	3255.95	3254.15	1.80
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+160.00	3255.84	3254.06	1.78
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+180.00	3254.26	3252.58	1.68
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+200.00	3252.16	3250.46	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+220.00	3251.96	3250.26	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+240.00	3251.52	3249.82	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+260.00	3247.61	3245.91	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+280.00	3247.52	3245.82	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+300.00	3246.11	3244.41	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+320.00	3244.29	3242.59	1.70
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+326.67	3243.48	3241.78	1.70

PERFIL LONGITUDINAL RAMAL 11 (0+000.00 m a 0+295.54 m)



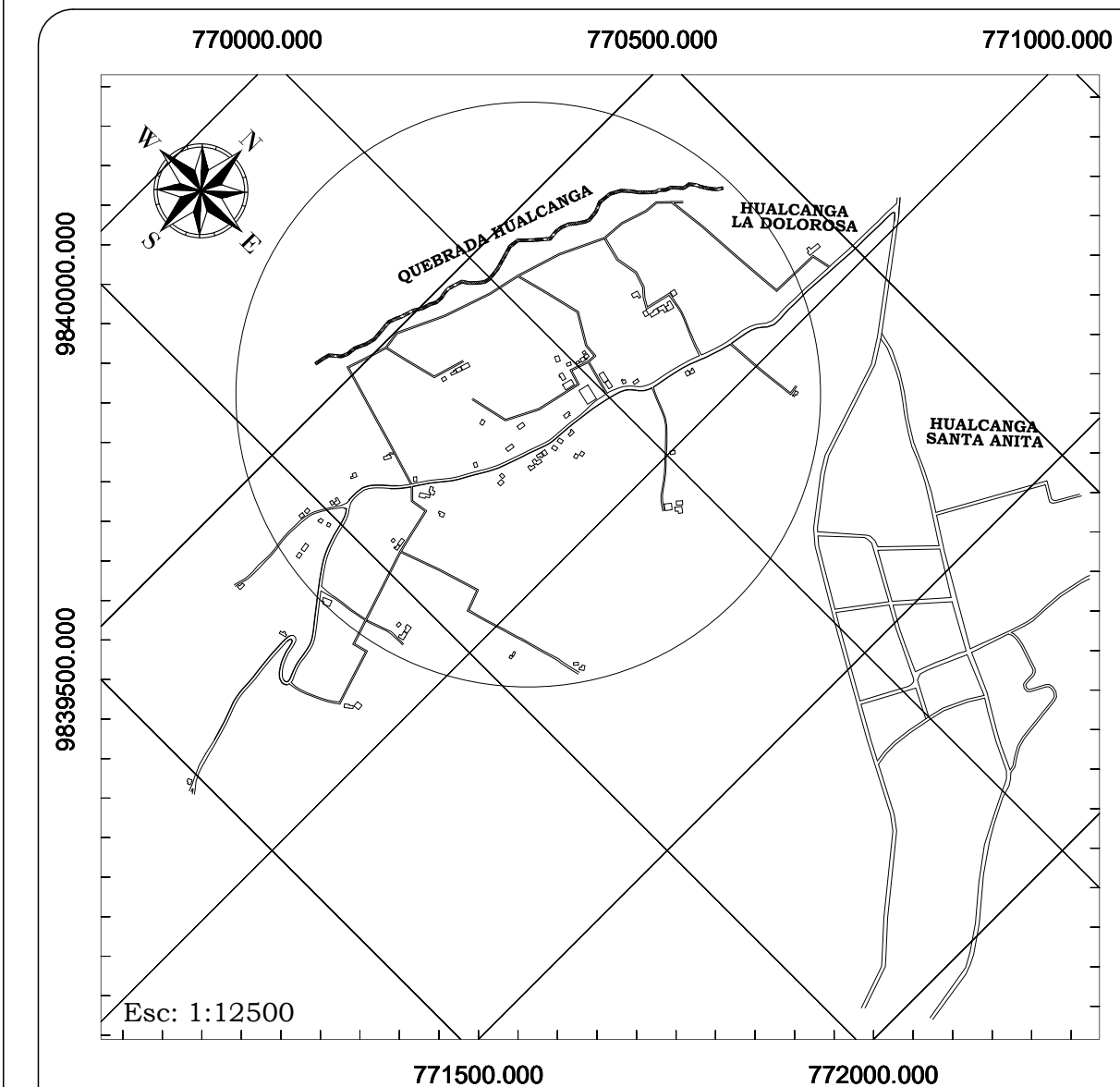
DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TL</sub> = 91.66 l/seg V <sub>TL</sub> = 2.92 m/seg Q <sub>VL</sub> = 0.059 l/seg V <sub>VL</sub> = 0.40 m/seg	0+000.00	3270.96	3268.96	2.00
Q <sub>TL</sub> = 120.41 l/seg V <sub>TL</sub> = 3.83 m/seg Q <sub>VL</sub> = 0.321 l/seg V <sub>VL</sub> = 0.79 m/seg	0+020.00	3270.96	3268.96	2.00
Q <sub>TL</sub> = 118.71 l/seg V <sub>TL</sub> = 3.78 m/seg Q <sub>VL</sub> = 0.112 l/seg V <sub>VL</sub> = 0.81 m/seg	0+040.00	3269.50	3267.50	2.00
Q <sub>TL</sub> = 127.39 l/seg V <sub>TL</sub> = 4.05 m/seg Q <sub>VL</sub> = 0.560 l/seg V <sub>VL</sub> = 1.01 m/seg	0+060.00	3269.85	3267.85	2.00
Q <sub>TL</sub> = 48.15 l/seg V <sub>TL</sub> = 1.53 m/seg Q <sub>VL</sub> = 0.607 l/seg V <sub>VL</sub> = 0.53 m/seg	0+080.00	3268.81	3266.81	2.00
Q <sub>TL</sub> = 103.53 l/seg V <sub>TL</sub> = 3.29 m/seg Q <sub>VL</sub> = 0.112 l/seg V <sub>VL</sub> = 0.93 m/seg	0+100.00	3267.33	3265.33	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+120.00	3265.65	3263.65	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+140.00	3263.74	3261.74	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+160.00	3263.52	3261.52	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+180.00	3262.74	3260.74	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+200.00	3262.54	3260.54	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+220.00	3262.29	3260.29	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+240.00	3261.88	3259.88	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+260.00	3261.54	3259.54	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+280.00	3261.17	3259.17	2.00
Q <sub>TL</sub> = 136.66 l/seg V <sub>TL</sub> = 4.41 m/seg Q <sub>VL</sub> = 2.30 m/seg V <sub>VL</sub> = 2.30 m/seg	0+295.54	3260.68	3258.68	2.00

PERFIL LONGITUDINAL RAMAL 12 (0+000.00 m a 0+160.00 m)



DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TL</sub> = 141.02 l/seg V <sub>TL</sub> = 4.49 m/seg Q <sub>VL</sub> = 0.128 l/seg V <sub>VL</sub> = 0.69 m/seg	0+000.00	3275.12		





PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

CONTIENE:  
 PERFILES LONGITUDINALES

DIBUJO:  
 EGINO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

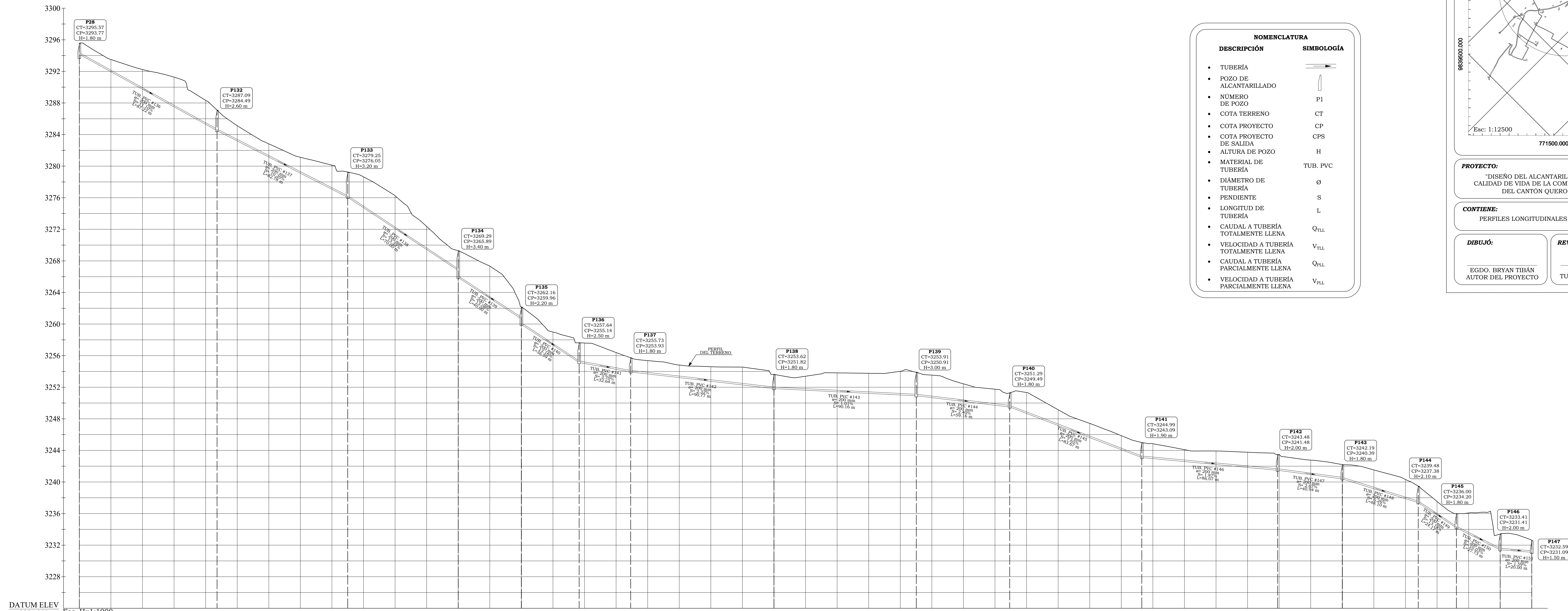
REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

ESCALA:  
 Esc. H=1:1000  
 Esc. V=1:200

FECHA:  
 ABRIL/2021

LÁMINA:  
 N° 11

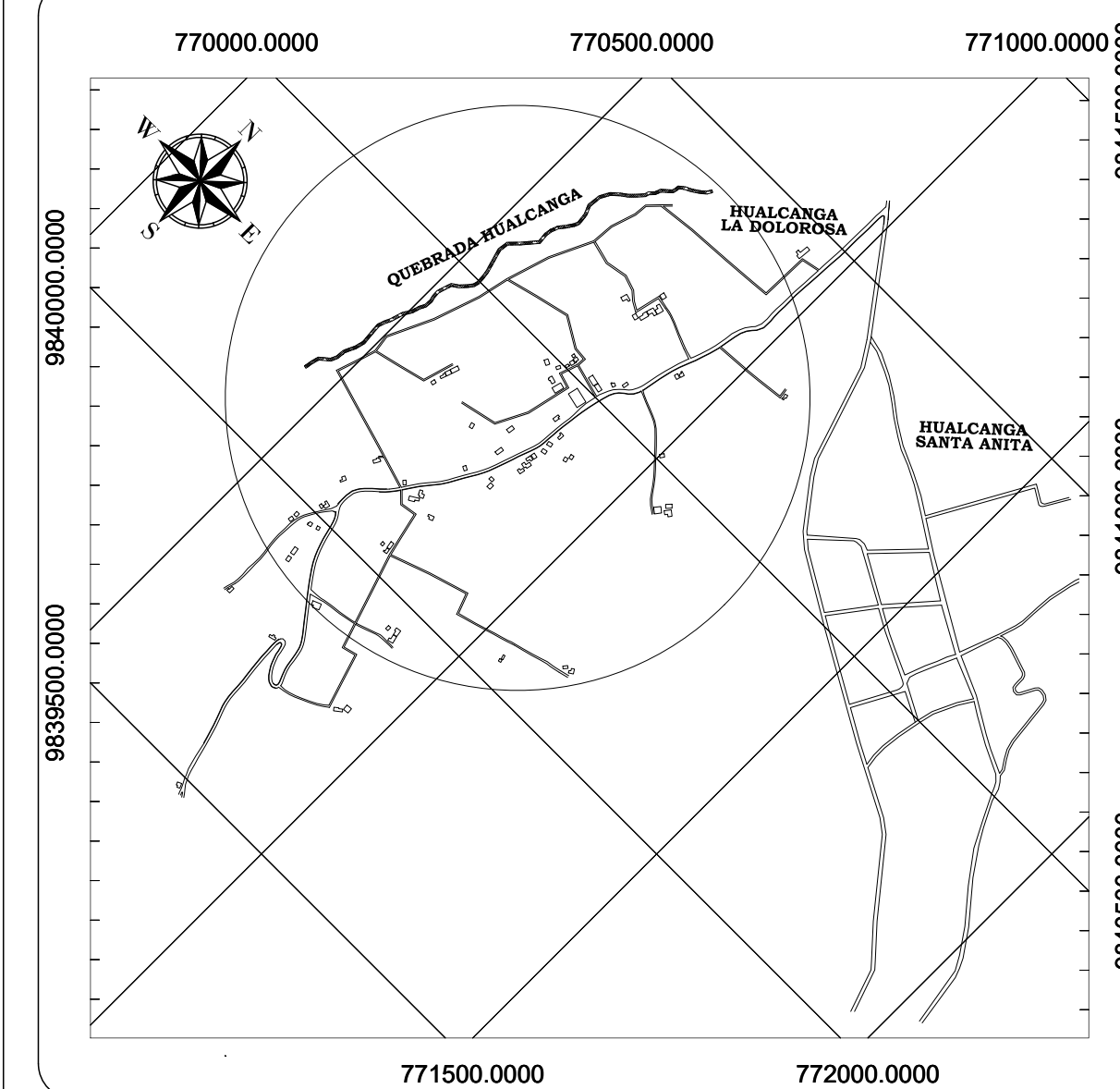
PERFIL LONGITUDINAL RAMAL 13 (0+000.00 m a 0+920.00 m)



NOMENCLATURA	
DESCRIPCIÓN	SIMBOLOGÍA
TUBERÍA	
POZO DE ALCANTARILLADO	
NÚMERO DE POZO	P1
COTA TERRENO	CT
COTA PROYECTO	CP
COTA PROYECTO DE SALIDA	CPS
ALTURA DE POZO	H
MATERIAL DE TUBERÍA	TUB. PVC
DIÁMETRO DE TUBERÍA	Ø
PENDIENTE	S
LONGITUD DE TUBERÍA	L
CAUDAL A TUBERÍA TOTALMENTE LLENA	Q <sub>TLL</sub>
VELOCIDAD A TUBERÍA TOTALMENTE LLENA	V <sub>TLL</sub>
CAUDAL A TUBERÍA PARCIALMENTE LLENA	Q <sub>PFL</sub>
VELOCIDAD A TUBERÍA PARCIALMENTE LLENA	V <sub>PFL</sub>

DATOS HIDRÁULICOS	ABCISADO	COTA TERRENO	COTA PROYECTO	CORTE
Q <sub>TLL</sub> = 129.27 l/seg V <sub>TLL</sub> = 4.11 m/seg Q <sub>PFL</sub> = 0.087 l/seg V <sub>PFL</sub> = 0.38 m/seg	0+000.00 0+000.00 0+000.00	3296.57 3296.57 3296.50	3296.57 3296.57 3296.50	1.60 1.80 1.55
Q <sub>TLL</sub> = 123.92 l/seg V <sub>TLL</sub> = 3.94 m/seg Q <sub>PFL</sub> = 0.171 l/seg V <sub>PFL</sub> = 0.69 m/seg	0+040.00 0+060.00	3292.24 3291.12	3292.24 3291.12	2.51 2.01
Q <sub>TLL</sub> = 141.13 l/seg V <sub>TLL</sub> = 4.49 m/seg Q <sub>PFL</sub> = 0.249 l/seg V <sub>PFL</sub> = 0.84 m/seg	0+100.00 0+160.00	3288.33 3286.13	3288.33 3286.13	3.03 3.06
Q <sub>TLL</sub> = 140.23 l/seg V <sub>TLL</sub> = 4.46 m/seg Q <sub>PFL</sub> = 0.296 l/seg V <sub>PFL</sub> = 0.89 m/seg	0+200.00 0+260.00	3278.64 3276.24	3278.64 3276.24	3.20 3.91
Q <sub>TLL</sub> = 140.86 l/seg V <sub>TLL</sub> = 4.48 m/seg Q <sub>PFL</sub> = 0.296 l/seg V <sub>PFL</sub> = 0.89 m/seg	0+300.00 0+360.00	3272.36 3270.43	3272.36 3270.43	4.16 4.16
Q <sub>TLL</sub> = 140.23 l/seg V <sub>TLL</sub> = 4.46 m/seg Q <sub>PFL</sub> = 0.296 l/seg V <sub>PFL</sub> = 0.89 m/seg	0+400.00 0+460.00	3262.16 3260.29	3262.16 3260.29	2.93 2.50
Q <sub>TLL</sub> = 74.64 l/seg V <sub>TLL</sub> = 2.37 m/seg Q <sub>PFL</sub> = 0.486 l/seg V <sub>PFL</sub> = 0.67 m/seg	0+500.00 0+560.00	3253.93 3253.73	3253.93 3253.73	2.99 2.12
Q <sub>TLL</sub> = 59.10 l/seg V <sub>TLL</sub> = 1.88 m/seg Q <sub>PFL</sub> = 0.556 l/seg V <sub>PFL</sub> = 0.59 m/seg	0+600.00 0+660.00	3253.93 3253.82	3253.93 3253.82	1.80 2.86
Q <sub>TLL</sub> = 38.99 l/seg V <sub>TLL</sub> = 1.24 m/seg Q <sub>PFL</sub> = 0.627 l/seg V <sub>PFL</sub> = 0.46 m/seg	0+700.00 0+760.00	3244.61 3244.61	3244.61 3244.61	3.01 3.00
Q <sub>TLL</sub> = 60.11 l/seg V <sub>TLL</sub> = 1.91 m/seg Q <sub>PFL</sub> = 0.674 l/seg V <sub>PFL</sub> = 0.64 m/seg	0+800.00 0+860.00	3243.43 3243.43	3243.43 3243.43	2.24 2.04
Q <sub>TLL</sub> = 107.32 l/seg V <sub>TLL</sub> = 3.41 m/seg Q <sub>PFL</sub> = 1.416 l/seg V <sub>PFL</sub> = 1.19 m/seg	0+900.00 0+960.00	3242.19 3242.19	3242.19 3242.19	1.80 2.06
Q <sub>TLL</sub> = 53.06 l/seg V <sub>TLL</sub> = 1.69 m/seg Q <sub>PFL</sub> = 1.484 l/seg V <sub>PFL</sub> = 0.74 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	1.51 1.71
Q <sub>TLL</sub> = 63.40 l/seg V <sub>TLL</sub> = 2.02 m/seg Q <sub>PFL</sub> = 1.834 l/seg V <sub>PFL</sub> = 0.89 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	1.92 2.00
Q <sub>TLL</sub> = 97.08 l/seg V <sub>TLL</sub> = 3.09 m/seg Q <sub>PFL</sub> = 1.876 l/seg V <sub>PFL</sub> = 1.21 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.03 2.03
Q <sub>TLL</sub> = 140.86 l/seg V <sub>TLL</sub> = 4.48 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	1.85 2.06
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	1.80 2.06
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q <sub>PFL</sub> = 1.546 l/seg V <sub>PFL</sub> = 1.08 m/seg	0+980.00 0+980.00	3242.19 3242.19	3242.19 3242.19	2.00 2.00
Q <sub>TLL</sub> = 122.88 l/seg V <sub>TLL</sub> = 3.92 m/seg Q				





PROYECTO:  
DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA.

CONTIENE: DETALLES DE POZOS, ACOMETIDA DOMICILIARIA Y ACCESORIOS

ESCALA: INDICADA

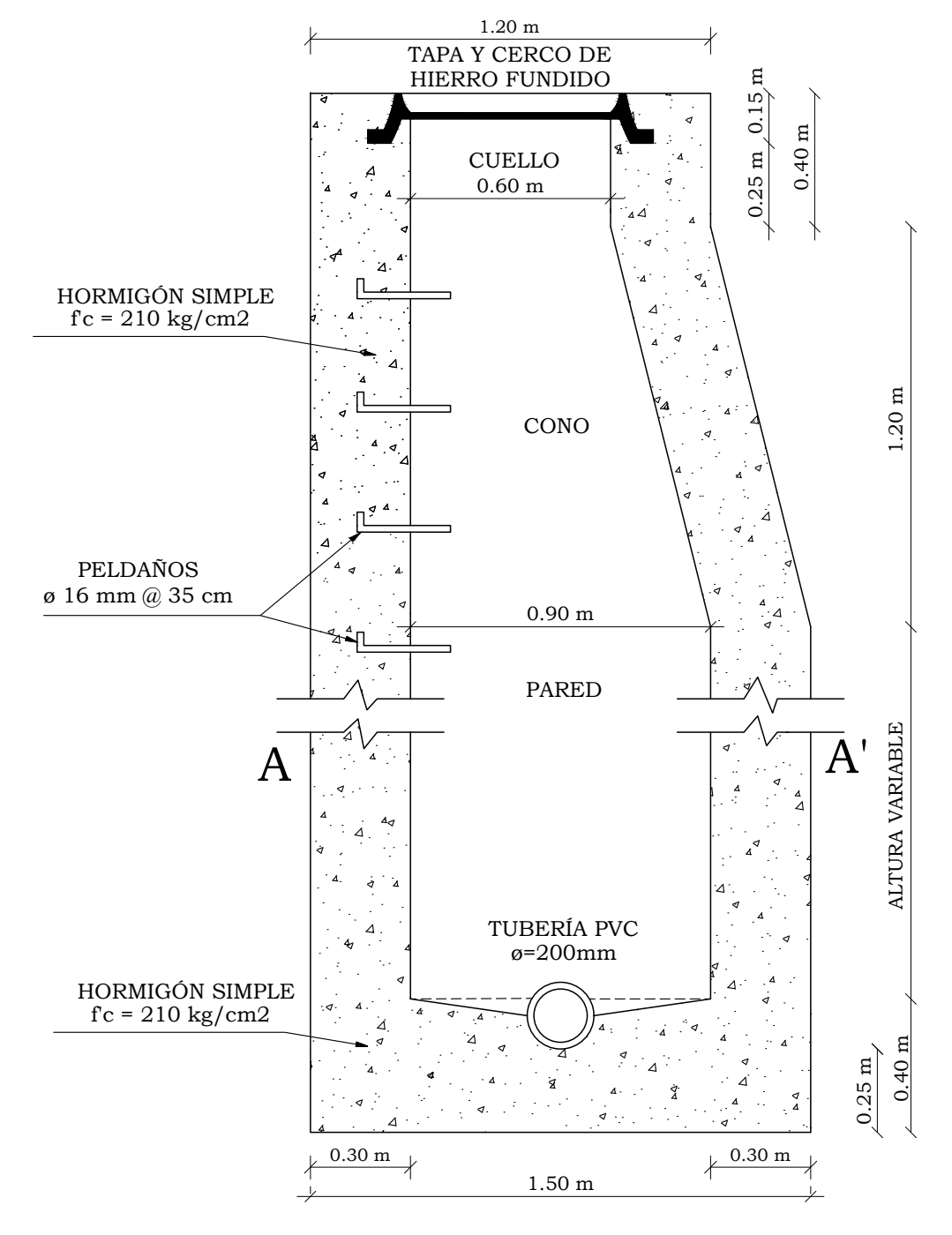
FECHA: ABRIL/2021

DIBUJO: EGO. BRYAN TIBÁN  
AUTOR DEL PROYECTO

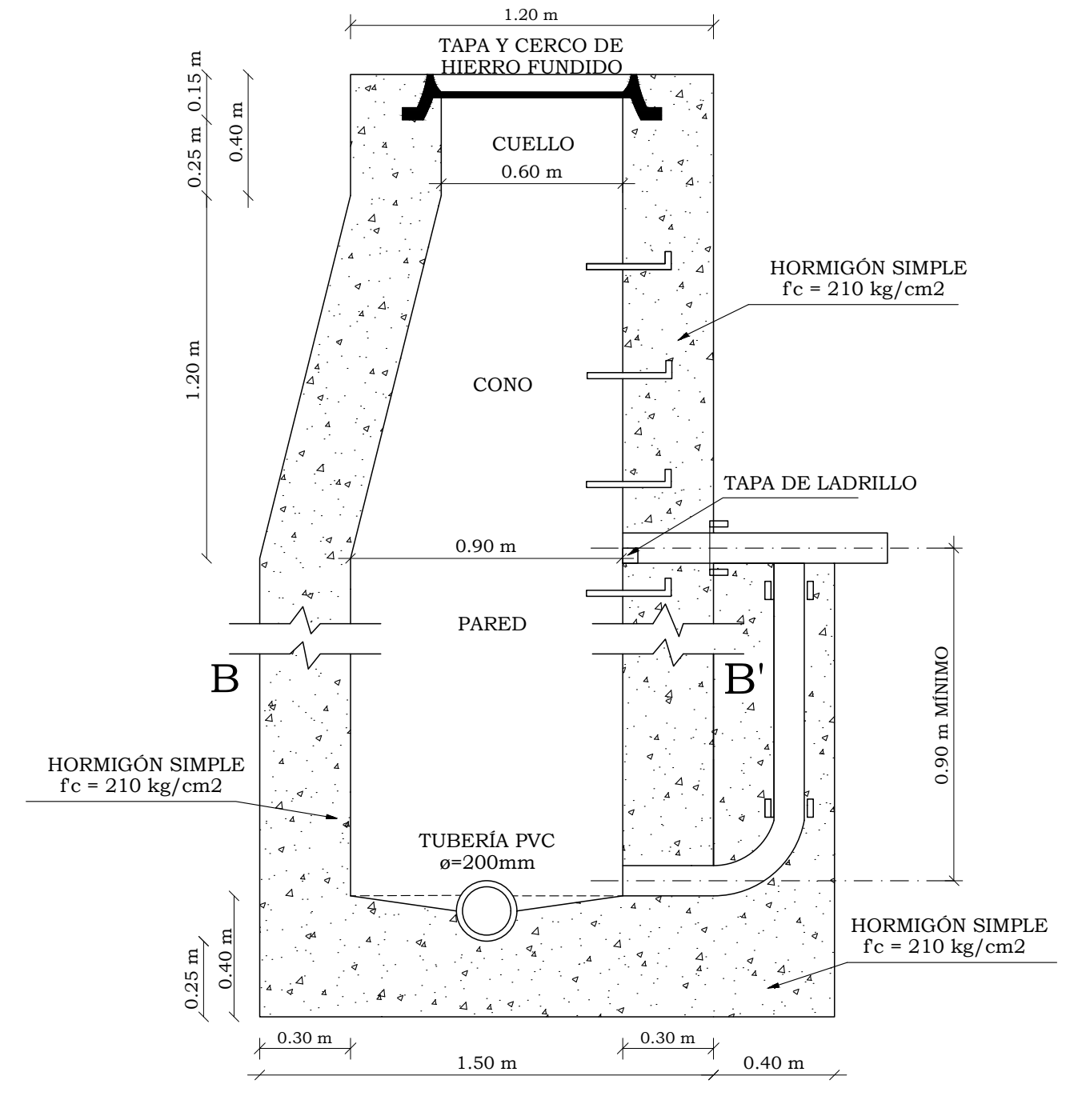
REVISÓ: ING. DILON MOYA  
TUTOR DEL PROYECTO

LÁMINA: N° 12

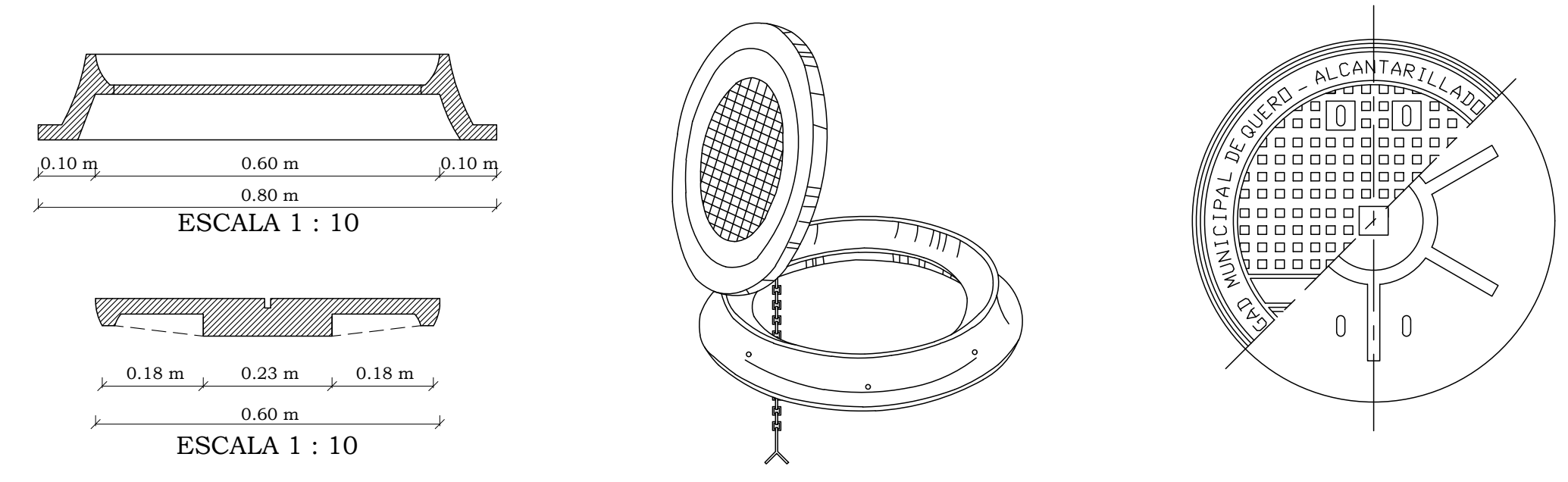
POZO DE REVISIÓN  
ESCALA 1 : 20



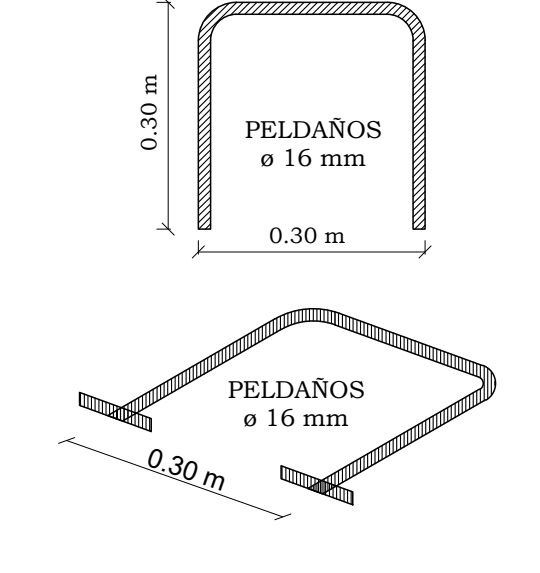
POZO DE SALTO  
ESCALA 1 : 20



DETALLE DE TAPA Y CERCO  
HIERRO FUNDIDO

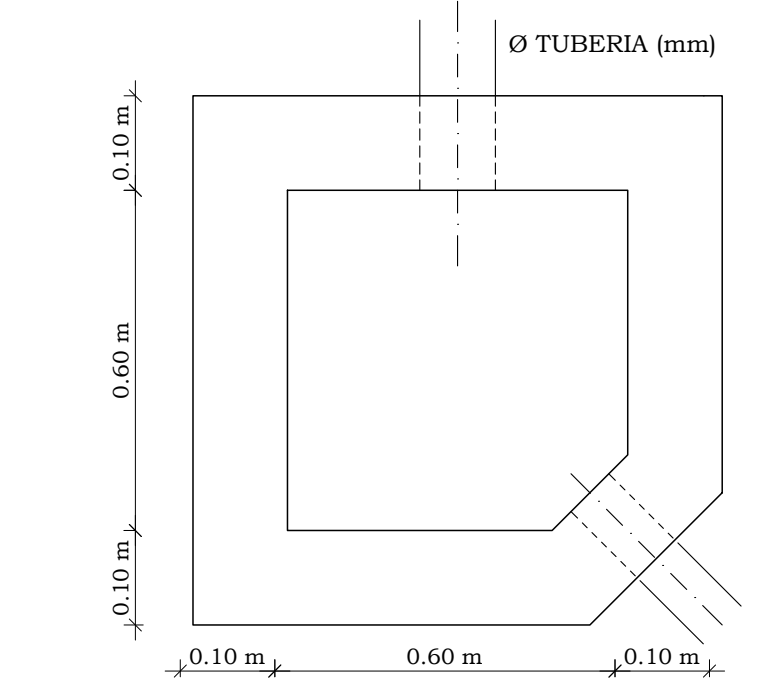


DETALLE DE PELDAÑOS  
ESCALA 1 : 10

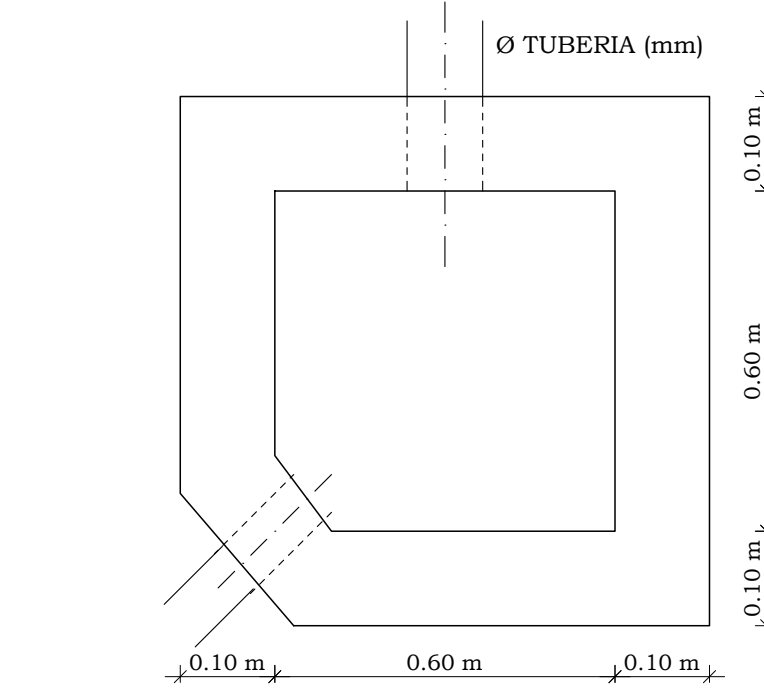


CONEXIÓN DOMICILIARIA  
TUBERÍA POCO PROFUNDA

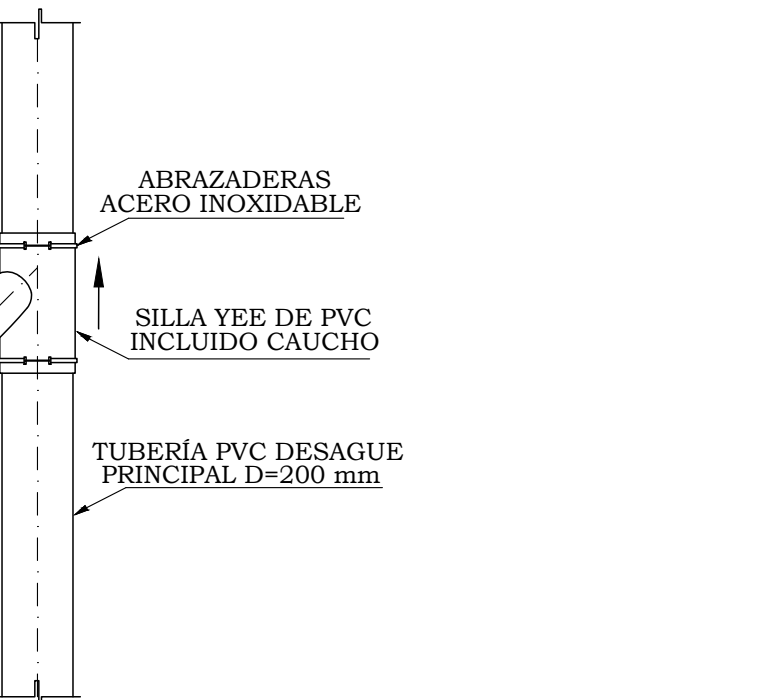
CAJAS DE REVISIÓN



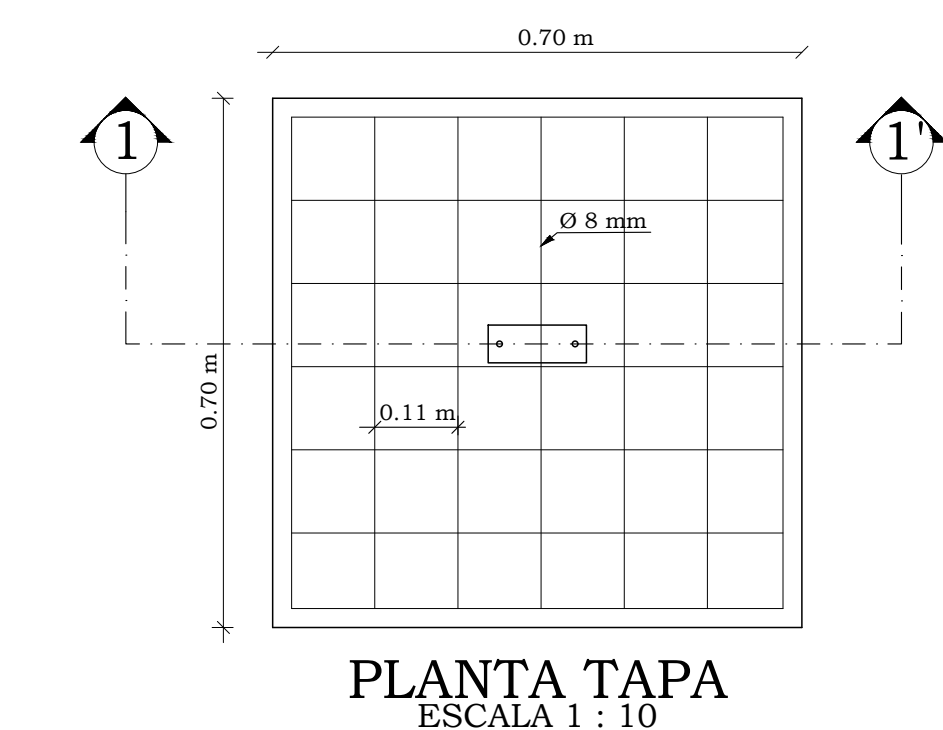
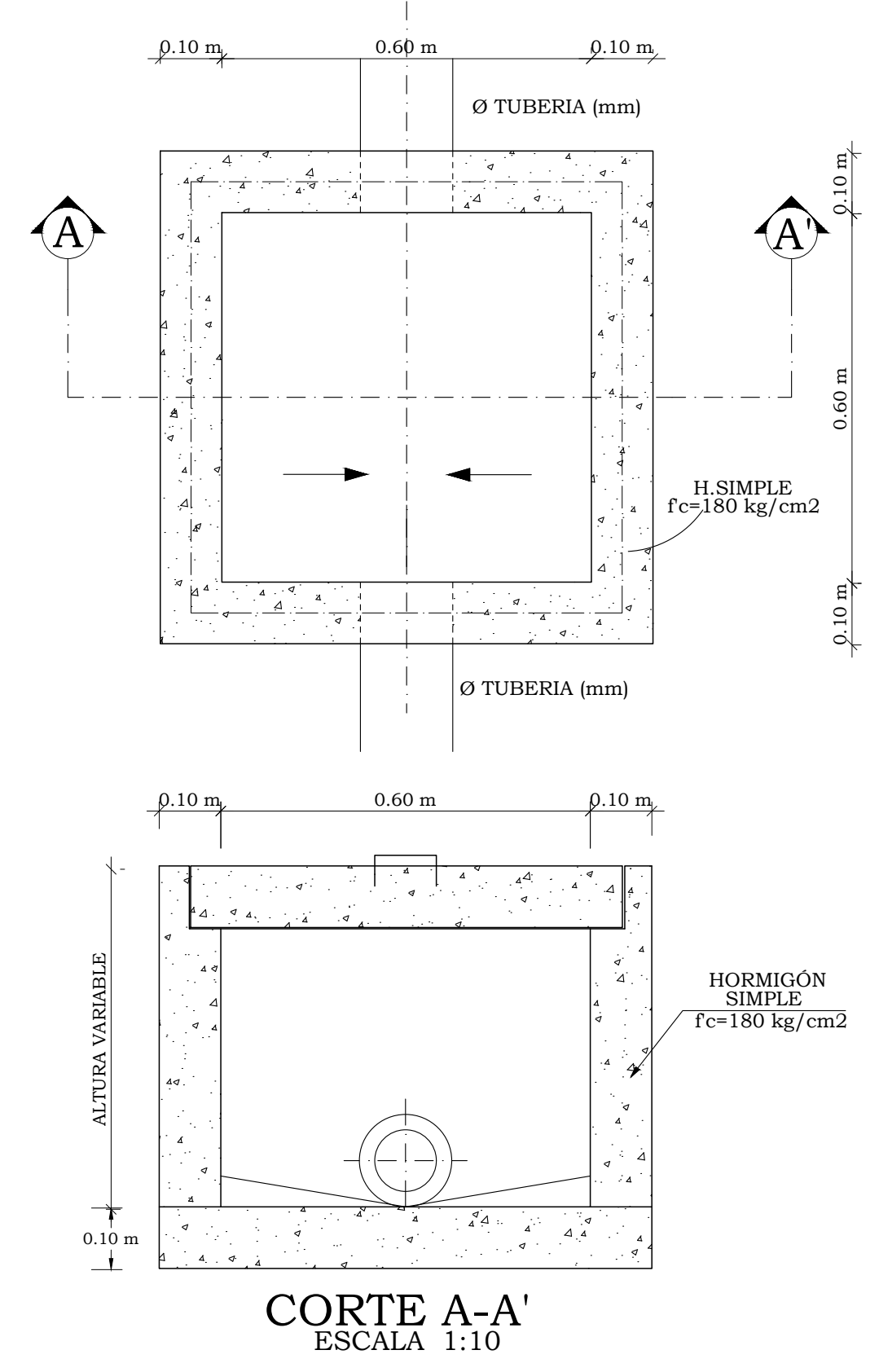
CONEXIÓN IZQUIERDA



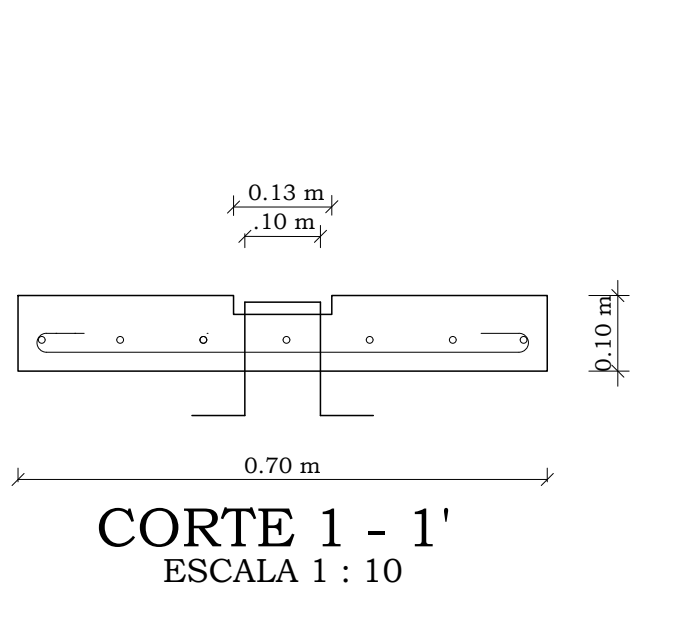
CONEXIÓN DERECHA



CONEXIÓN DOMICILIARIA  
EN PLANTA  
ESCALA 1:10



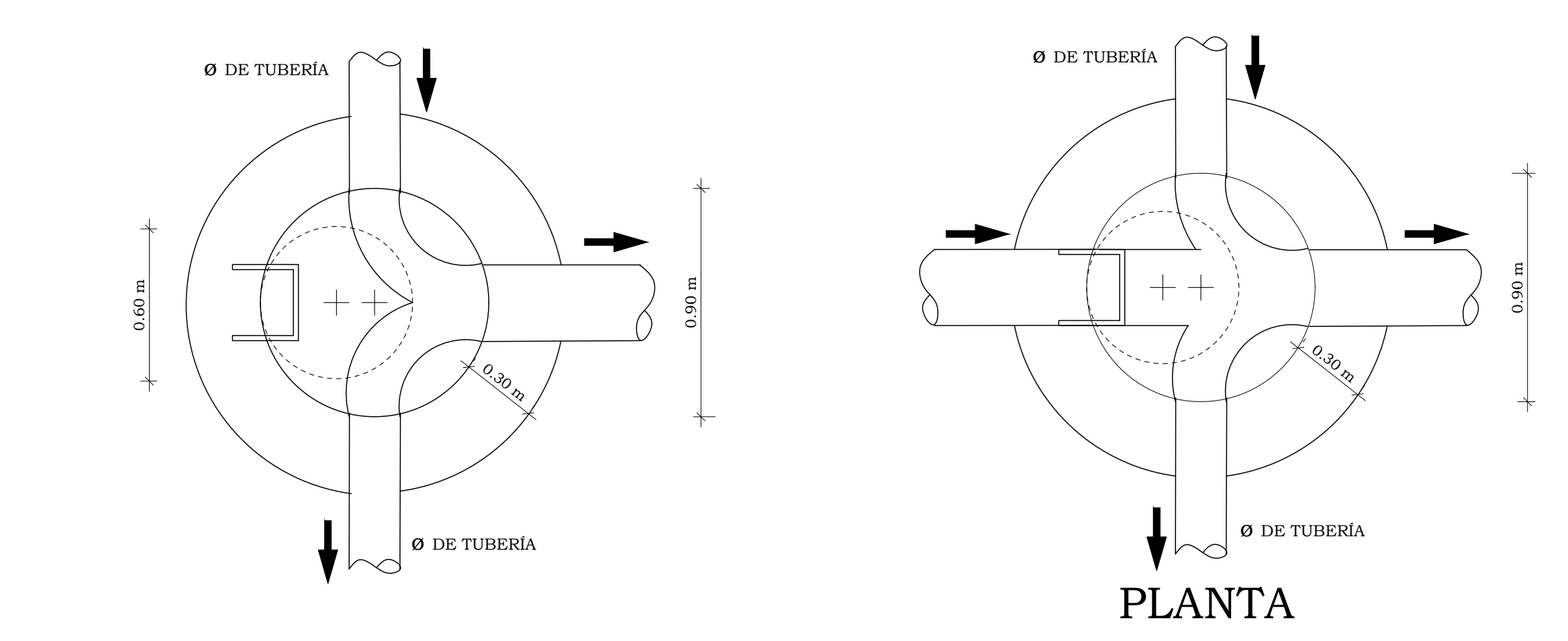
PLANTA TAPA  
ESCALA 1 : 10



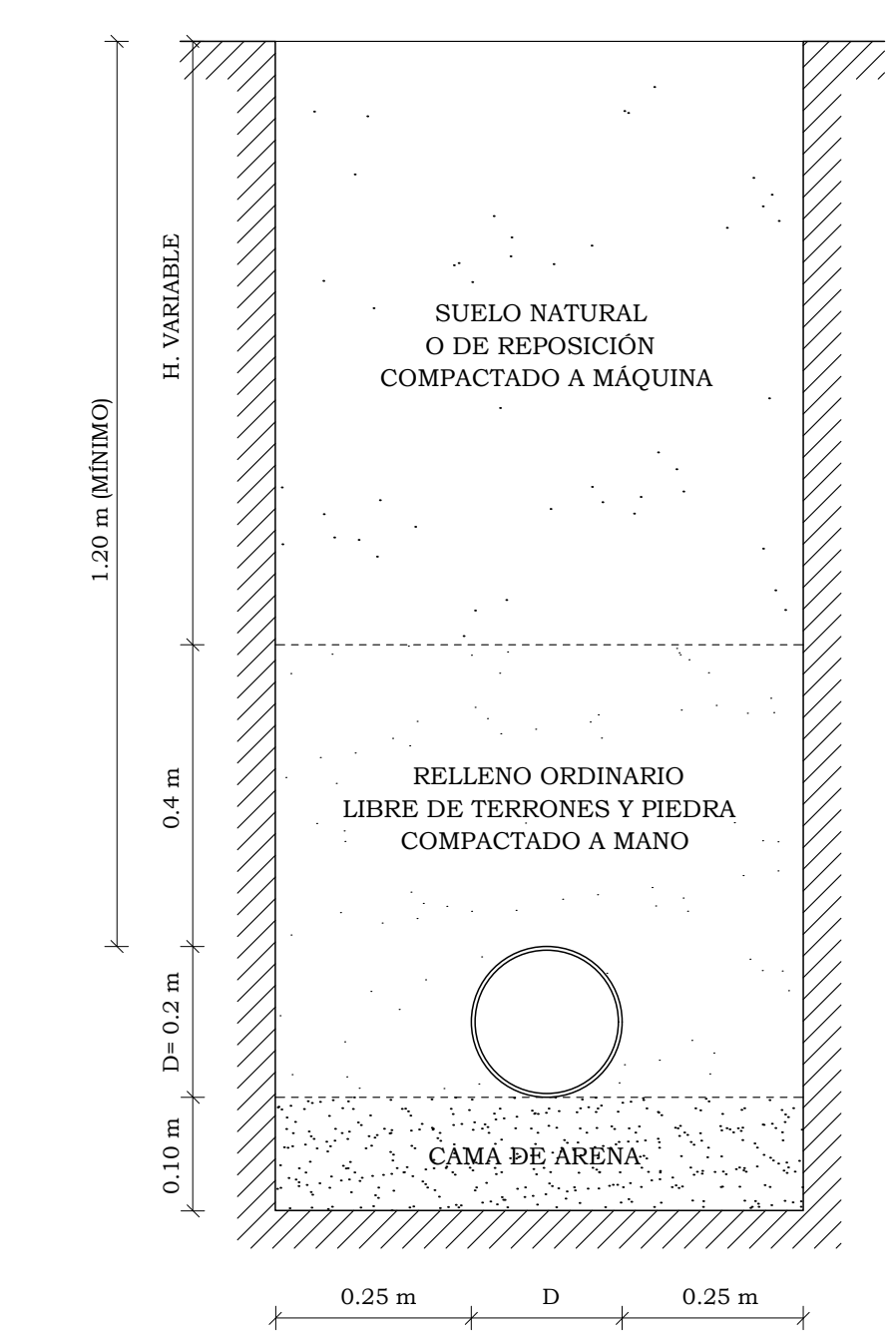
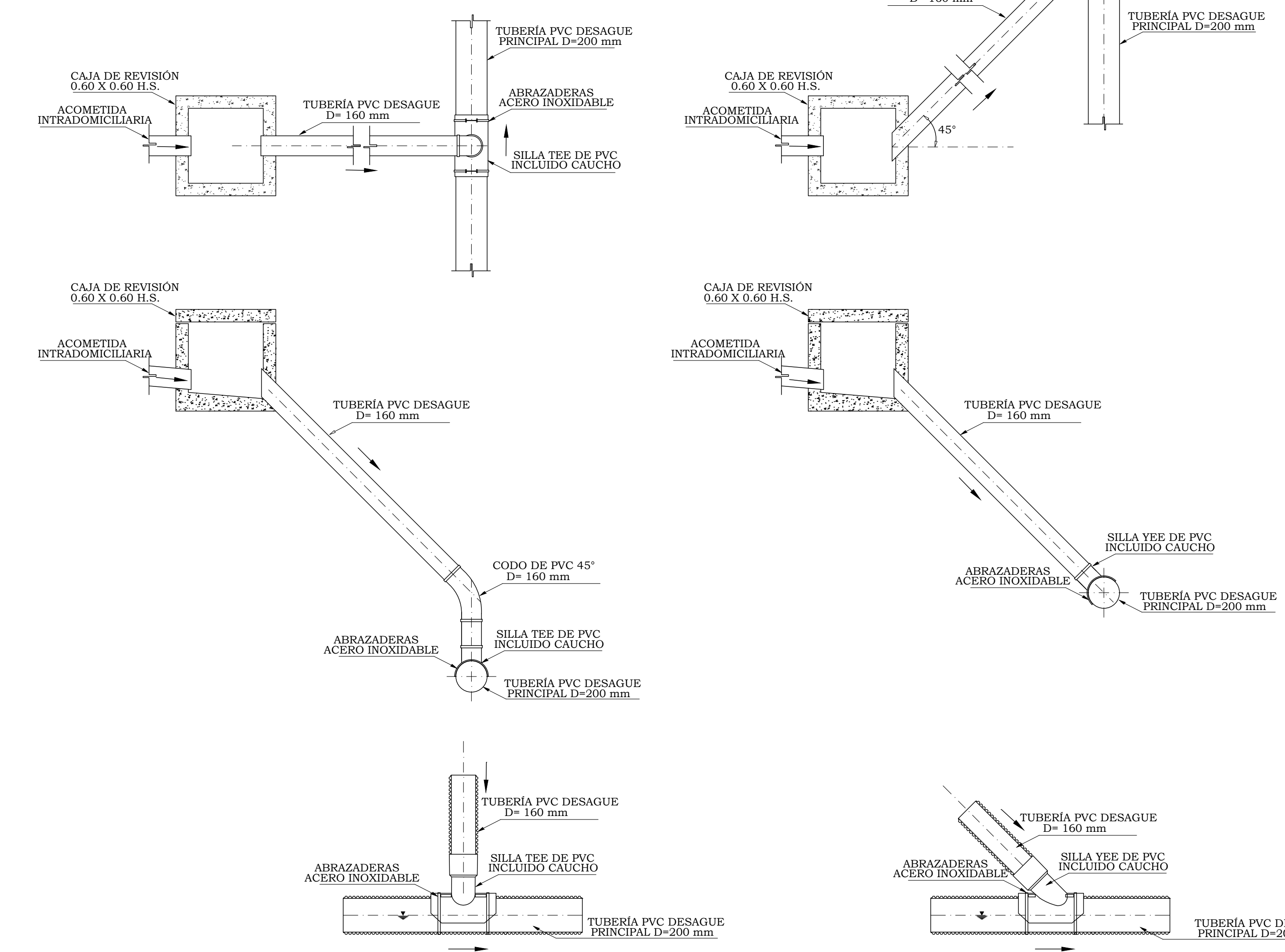
CORTE 1 - 1'  
ESCALA 1 : 10

CORTE A-A'  
ESCALA 1:10

EMPALME DE TRES Y CUATRO CANALES

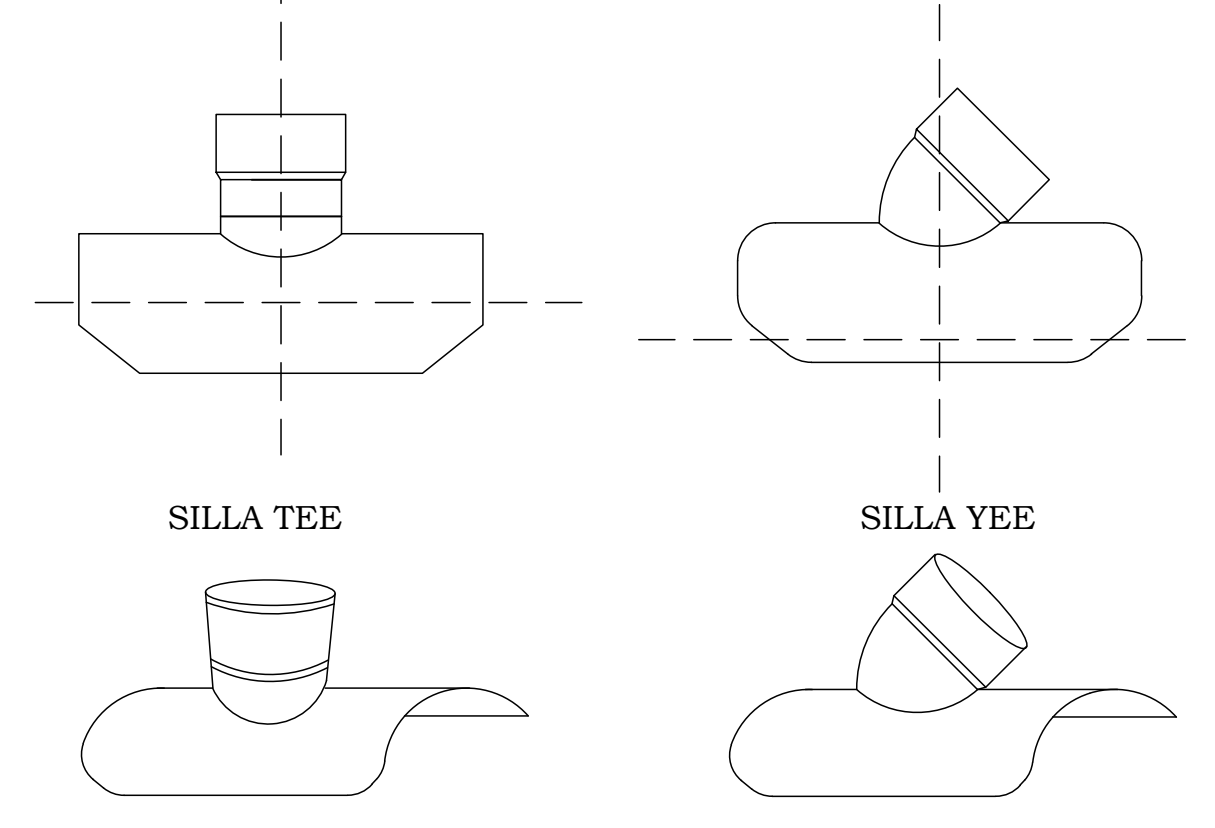


ACOMETIDA DOMICILIARIA  
CON TUBERÍA PVC - DESAGUE  
ESCALA 1 : 20

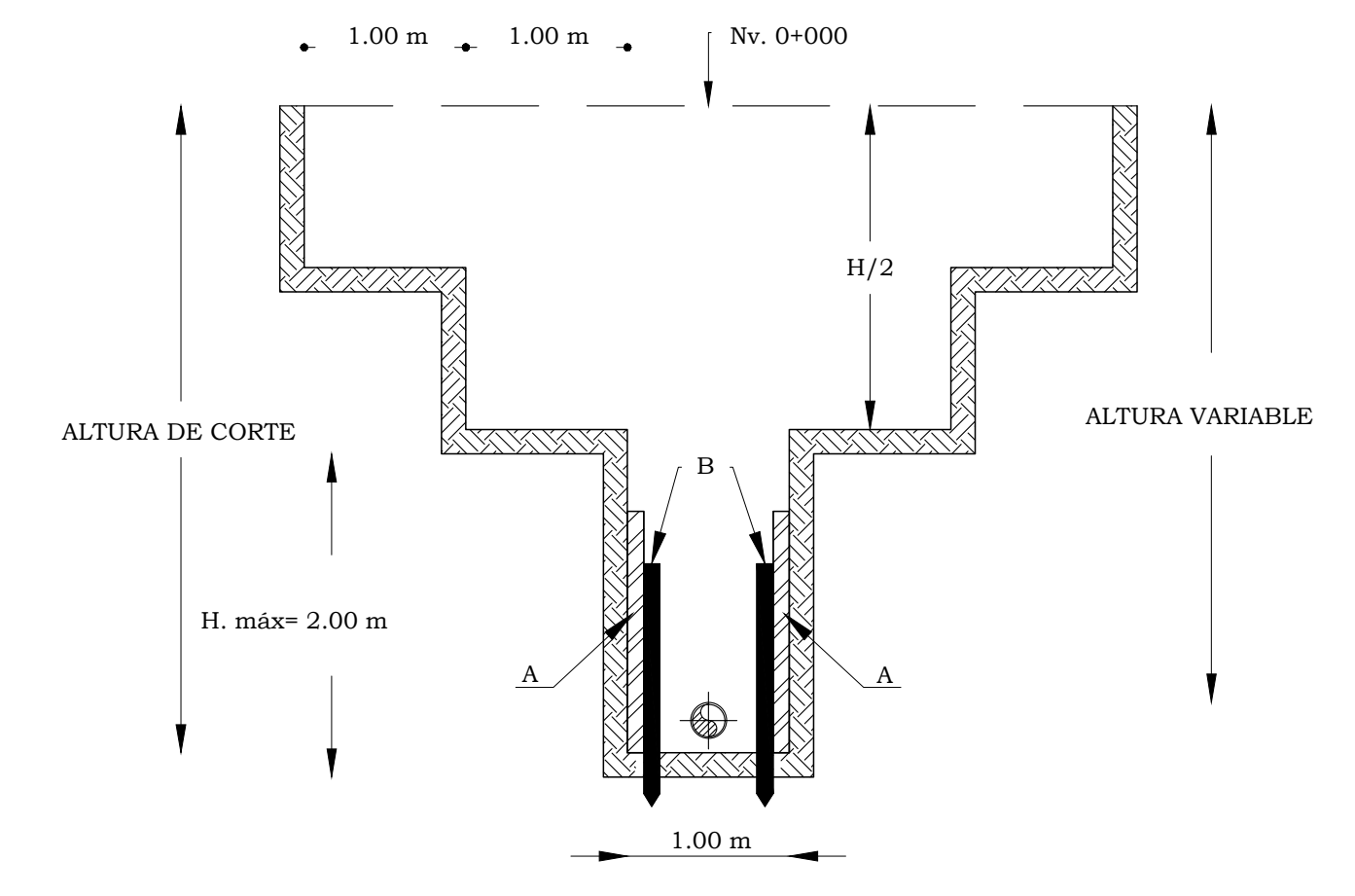
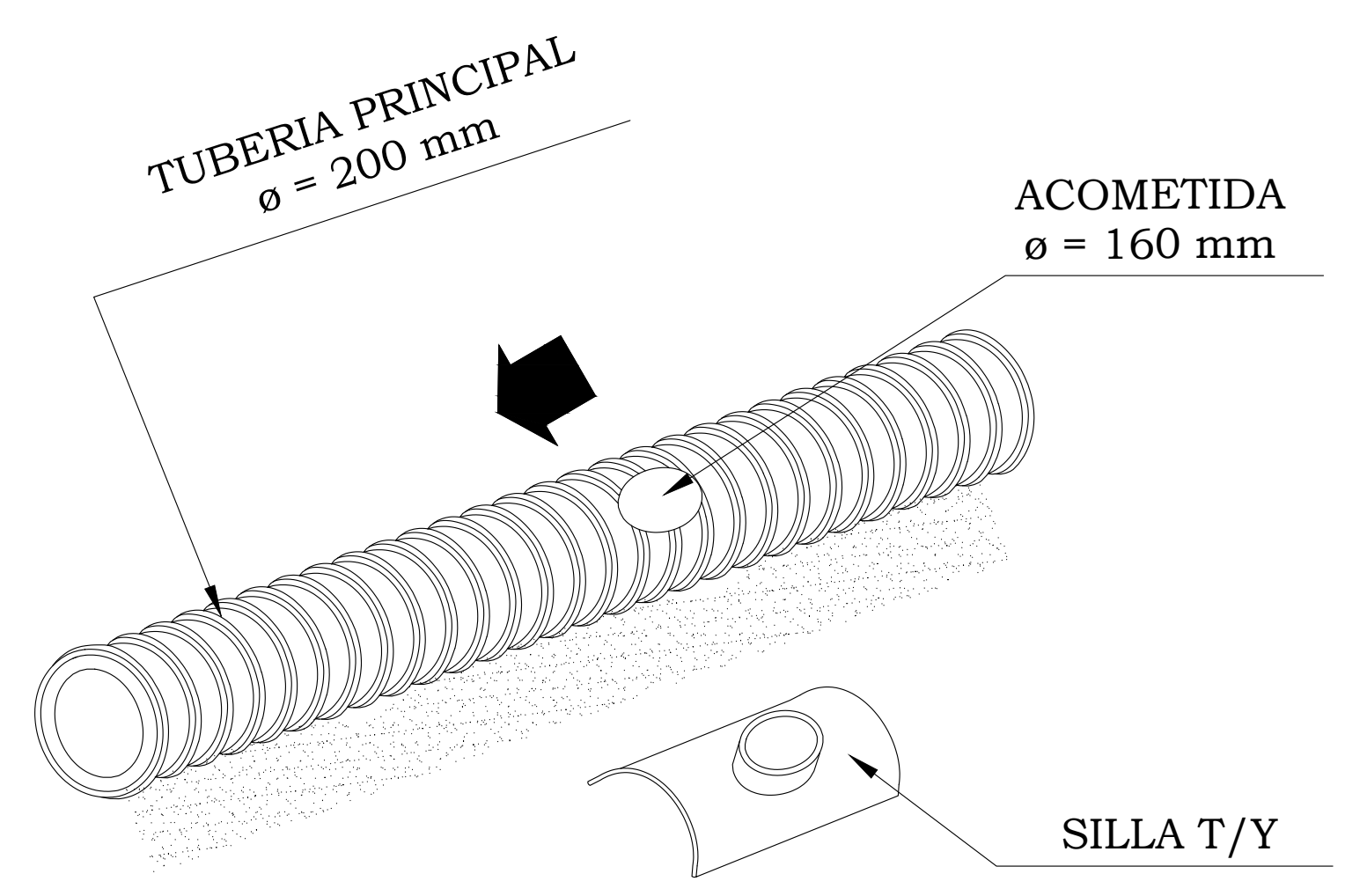


DETALLE DE ZANJA  
ESCALA 1:10

ACCESORIOS DE INSTALACIÓN



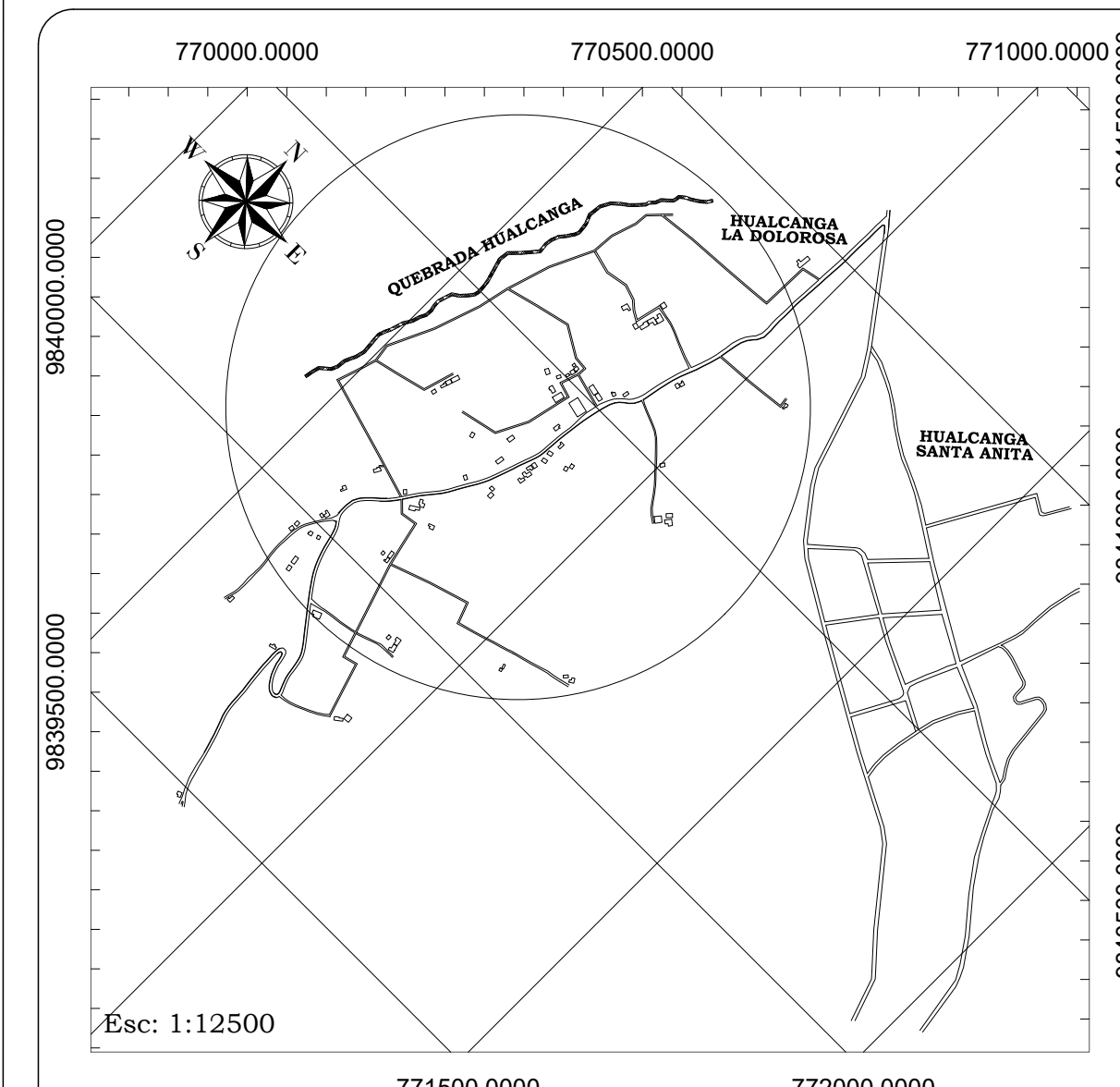
ESCALA 1 : 10



SECCIÓN TÍPICA DE EXCAVACIÓN  
ALTURA MAYOR A 6.00 m  
ESCALA S/E

A. ENTIBADO DE PROTECCIÓN  
B. PUNTALES @ 1.50 m





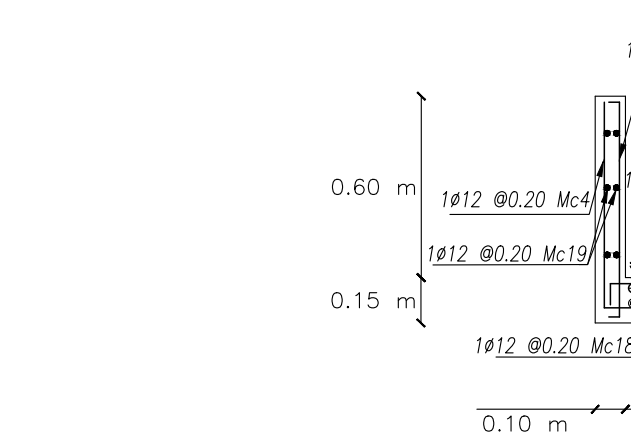
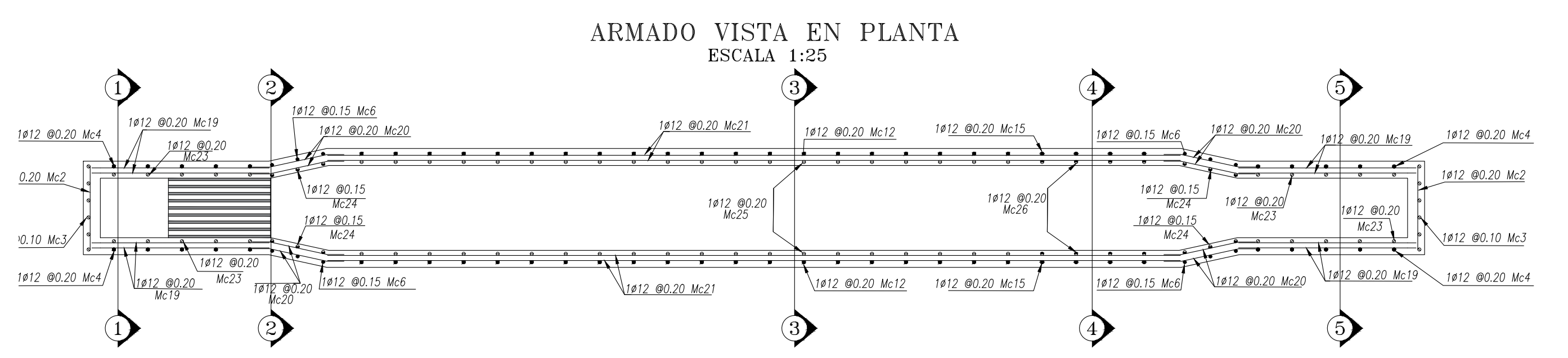
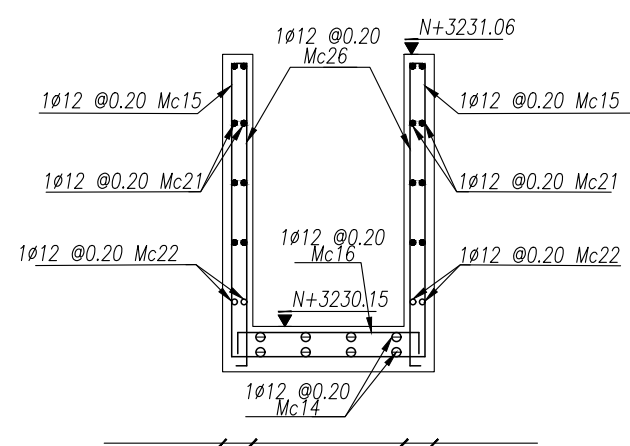
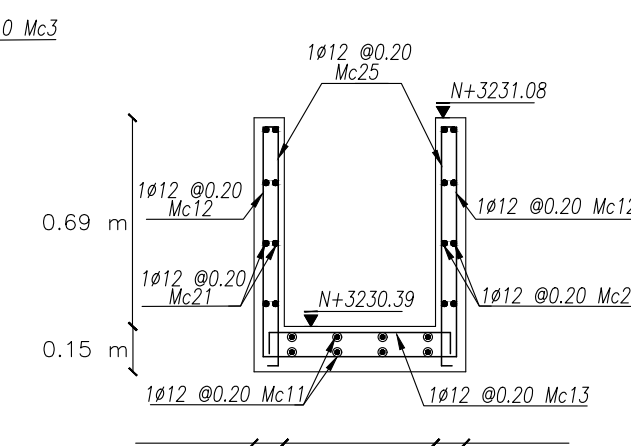
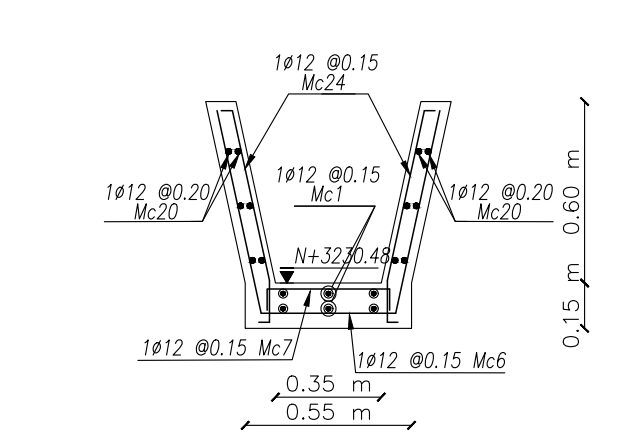
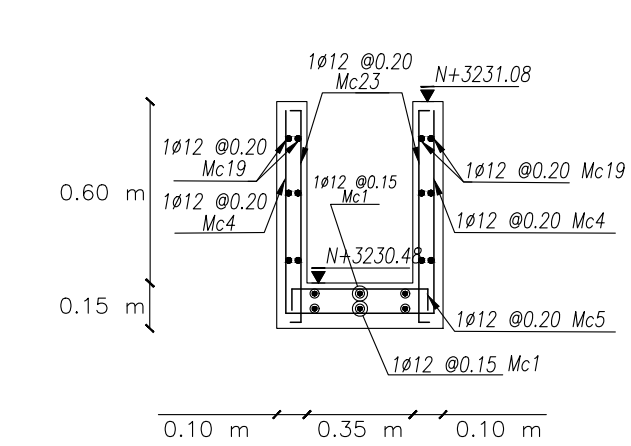
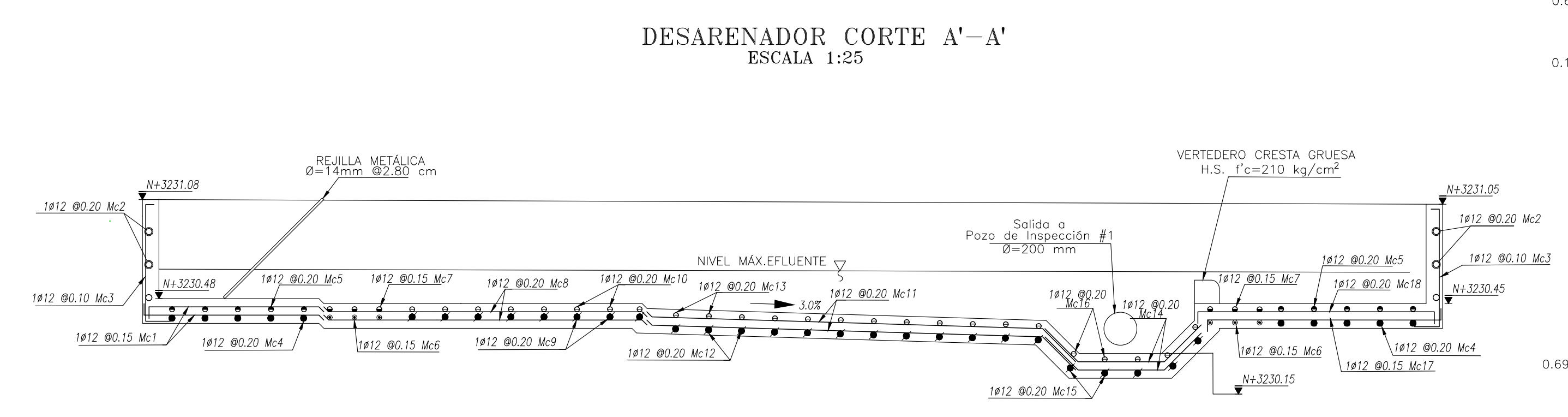
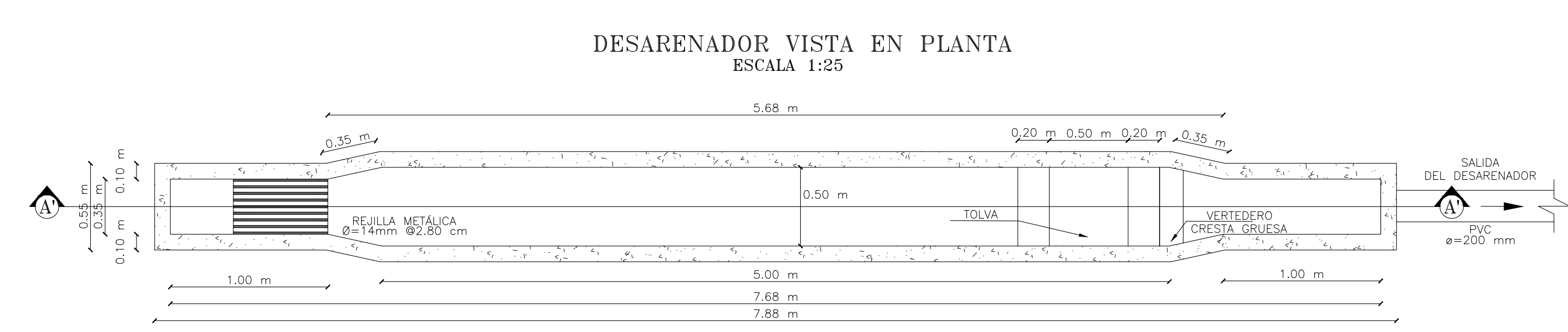
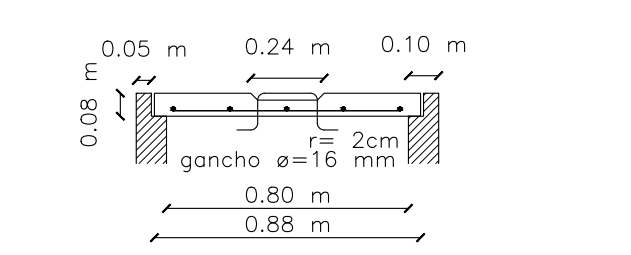
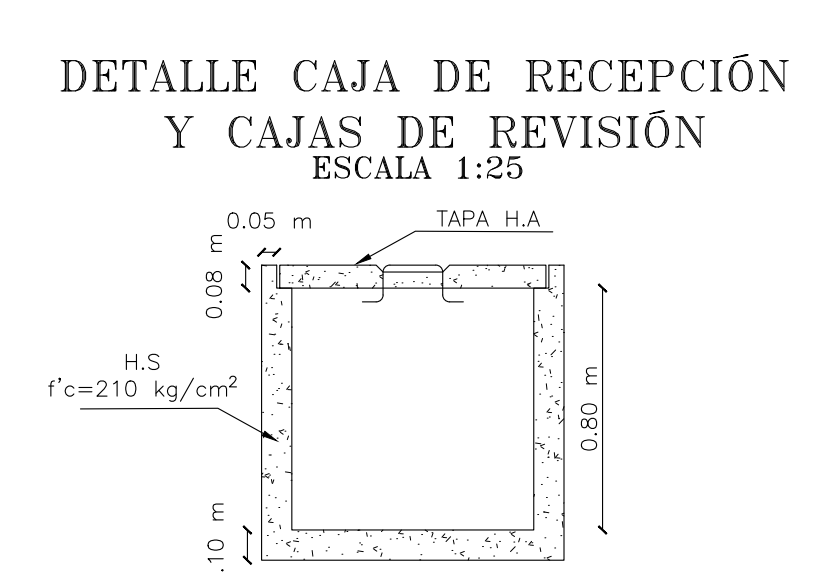
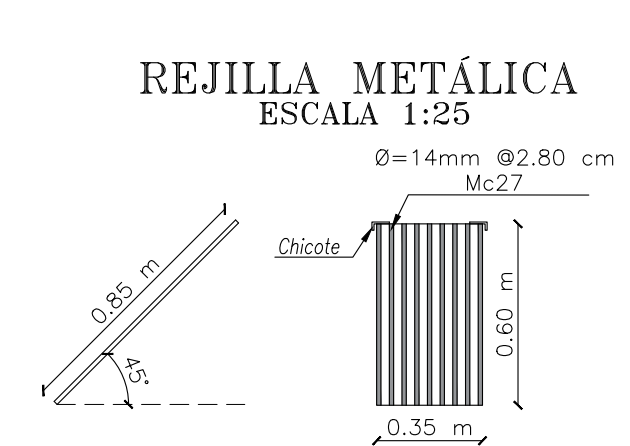
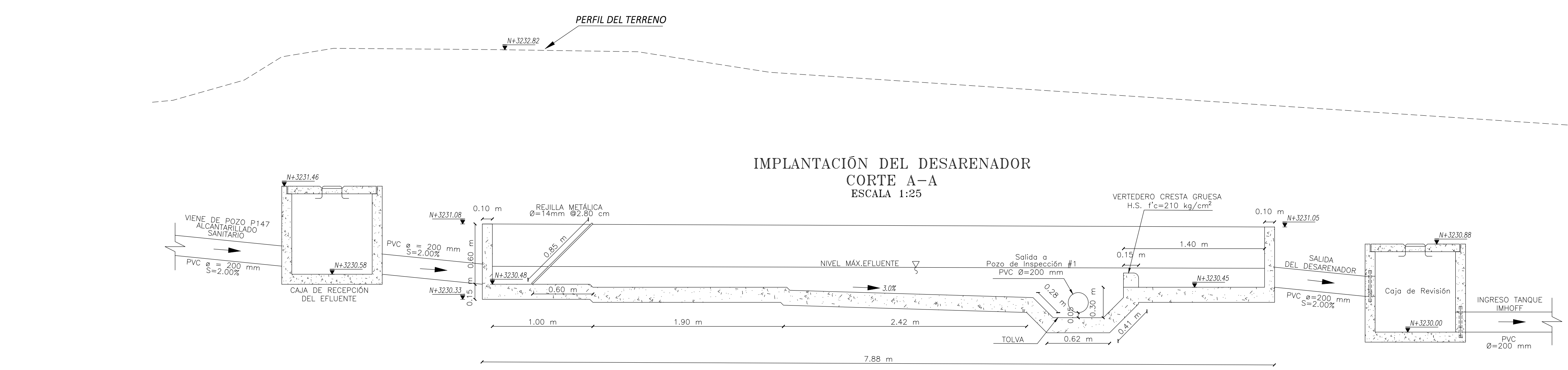
PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

CONTIENE:  
 REJILLA METÁLICA Y DESARENADOR  
 ESCALAS: INDICADA  
 FECHA: ABRIL/2021

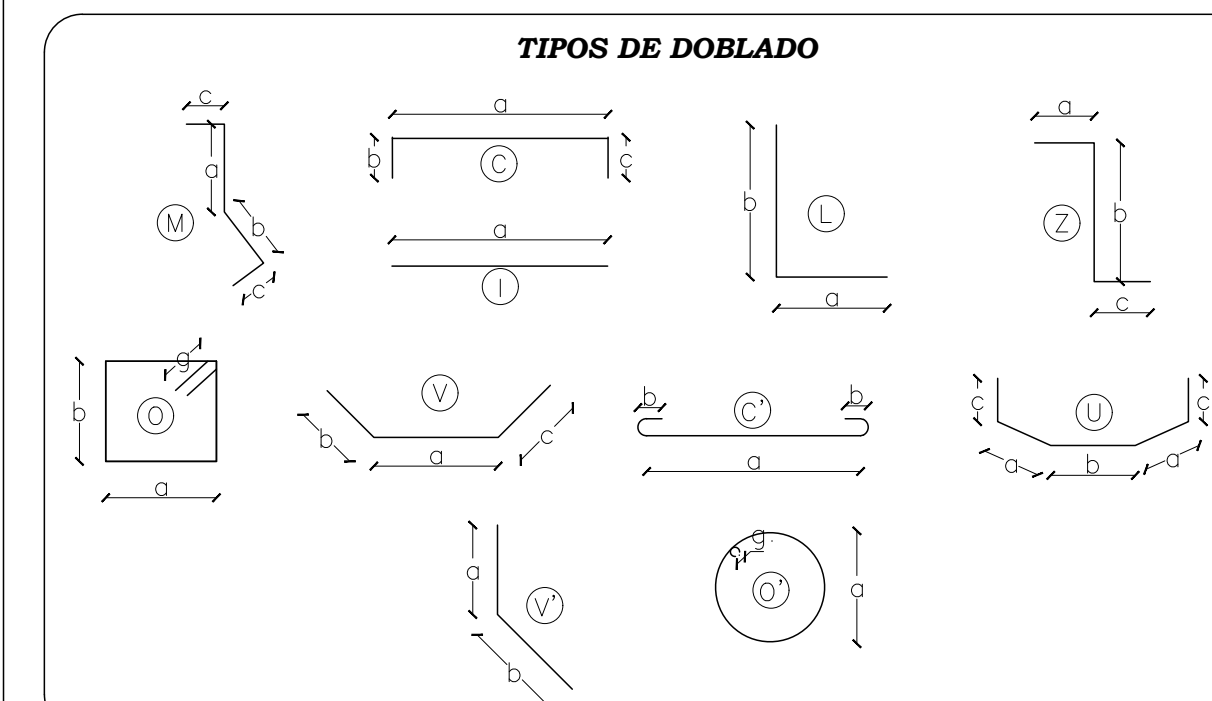
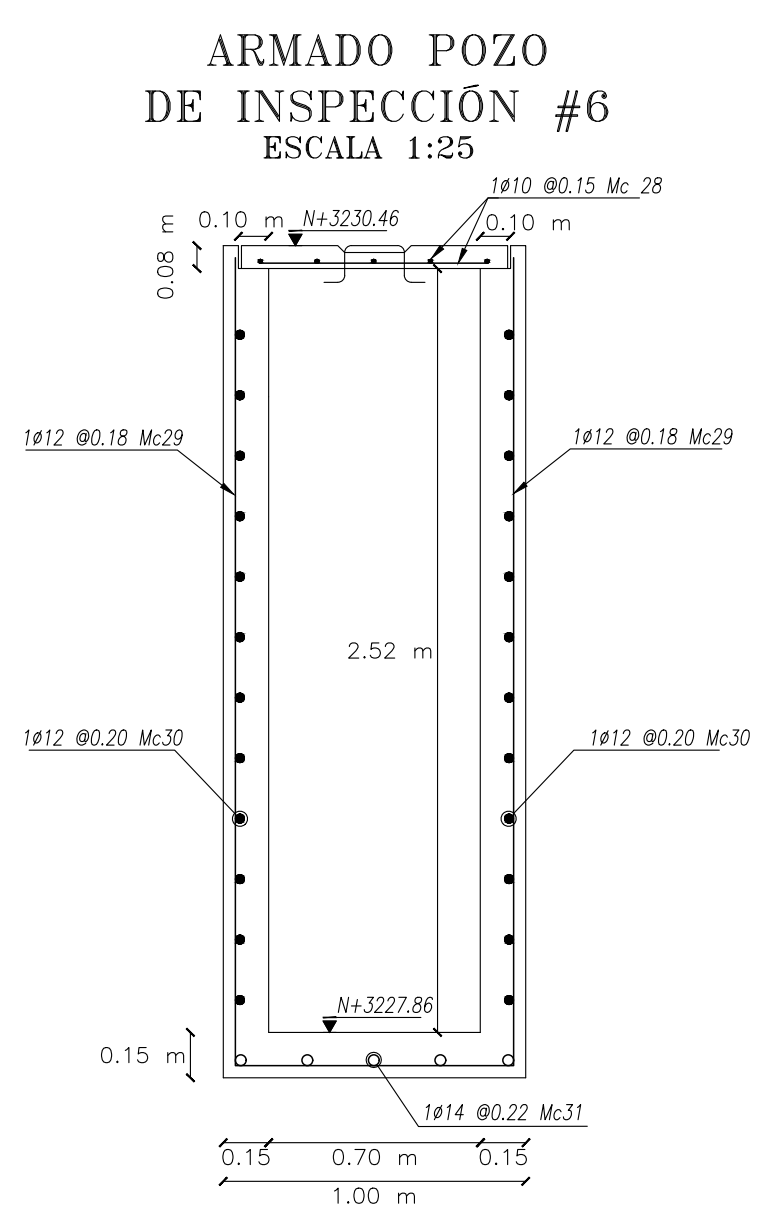
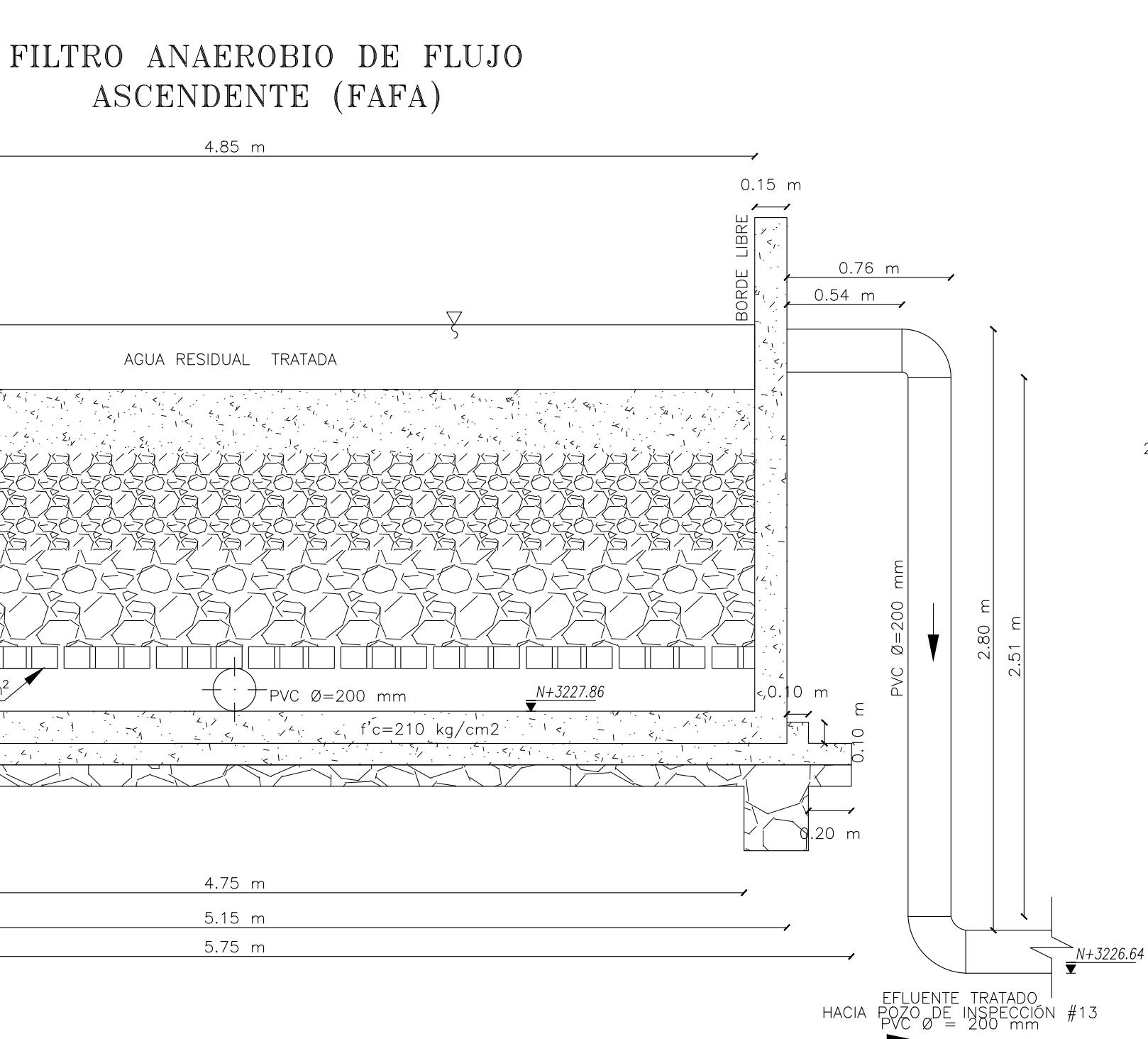
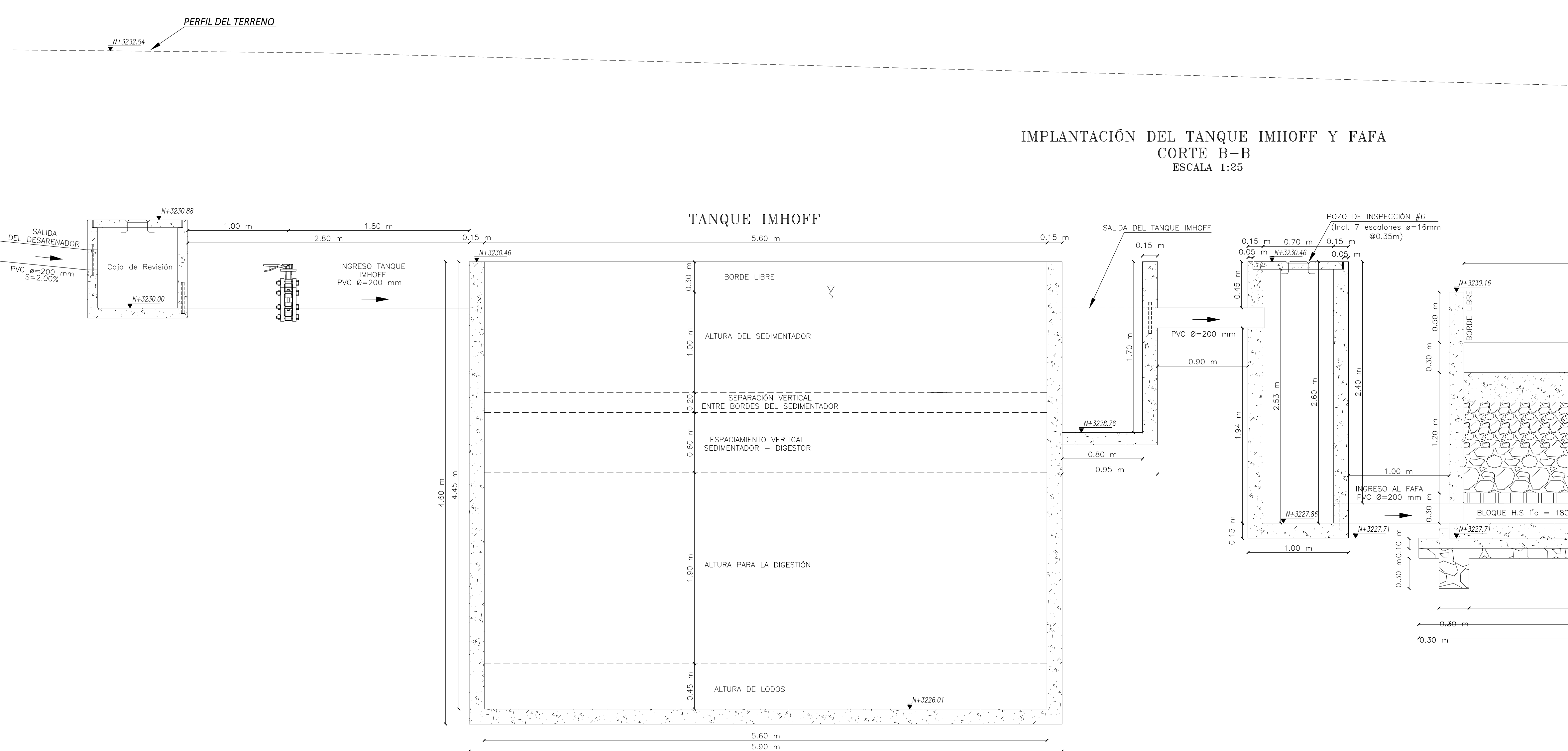
DIBUJO:  
 ECGO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

LÁMINA:  
 N° 13



PLANILLA DE MATERIAS									
Nº	Q	Tipo	Cantidad	Unidad	Longitud de corte	Longitud Total	PESO	TOTAL	
DESARENADOR									
1	12	Z	6	0.81	0.85	5.19	3.78	2.30	6.06
2	12	I	6	0.80	0.85	6.69	6.69	2.04	2.61
3	12	C	12	0.70	0.85	0.15	0.96	10.80	9.59
4	12	C	10	0.85	0.87	0.87	1.83	19.30	19.25
5	12	C	10	0.45	0.87	0.87	0.99	5.90	5.24
6	12	V	6	0.45	0.87	0.87	0.99	3.54	3.14
7	12	C	6	0.40	0.87	0.87	0.74	3.24	2.98
8	12	Z	8	0.70	0.85	0.85	2.35	16.80	19.32
9	12	C	8	0.64	0.85	0.85	1.74	13.92	13.16
10	12	C	8	0.60	0.87	0.87	0.74	5.92	5.30
11	12	Z	8	0.89	2.17	0.90	2.77	22.16	19.68
12	12	C	11	0.64	0.76	0.76	2.11	20.88	20.56
13	12	C	13	0.60	0.87	0.87	0.74	9.62	8.54
14	12	C	4	0.55	0.89	0.89	1.17	8.06	7.56
15	12	C	4	0.64	0.87	0.87	2.56	10.32	9.16
16	12	Z	4	0.60	0.87	0.87	0.74	2.96	2.65
17	12	Z	3	0.87	1.40	0.87	1.24	4.62	4.10
18	12	C	3	1.40	0.87	0.87	1.54	4.62	4.10
19	12	I	24	1.04	1.40	0.87	1.54	24.96	23.16
20	12	Z	24	0.80	0.85	0.85	0.96	15.20	11.72
21	12	I	16	0.80	0.87	0.87	5.80	80.00	73.04
22	12	I	4	0.80	0.87	0.87	0.96	3.60	3.20
23	12	C	20	0.70	0.84	0.84	0.78	15.00	13.85
24	12	C	12	0.72	0.84	0.84	0.80	9.60	8.52
25	12	C	42	0.80	0.84	0.84	0.98	36.96	33.52
26	12	C	8	1.00	0.84	0.84	1.08	8.64	7.87
SUBTOTAL DESARENADOR									
REJILLA									
27	14	I	9	0.85			0.68	7.65	6.94
SUBTOTAL REJILLA									
TAPAS DE CAJAS DE REVISIÓN E INSPECCIÓN (TOTAL)									
28	10	I	10	0.75			0.75	11.50	10.41
SUBTOTAL TAPAS									
POZO DE INSPECCIÓN #6									
29	12	C	6	0.92	2.67	2.67	6.26	17.56	15.15
30	12	I	34	0.92			0.92	31.08	28.14
31	14	I	5	0.92			0.92	4.60	4.56
SUBTOTAL POZO DE INSPECCIÓN #6									
TOTAL									



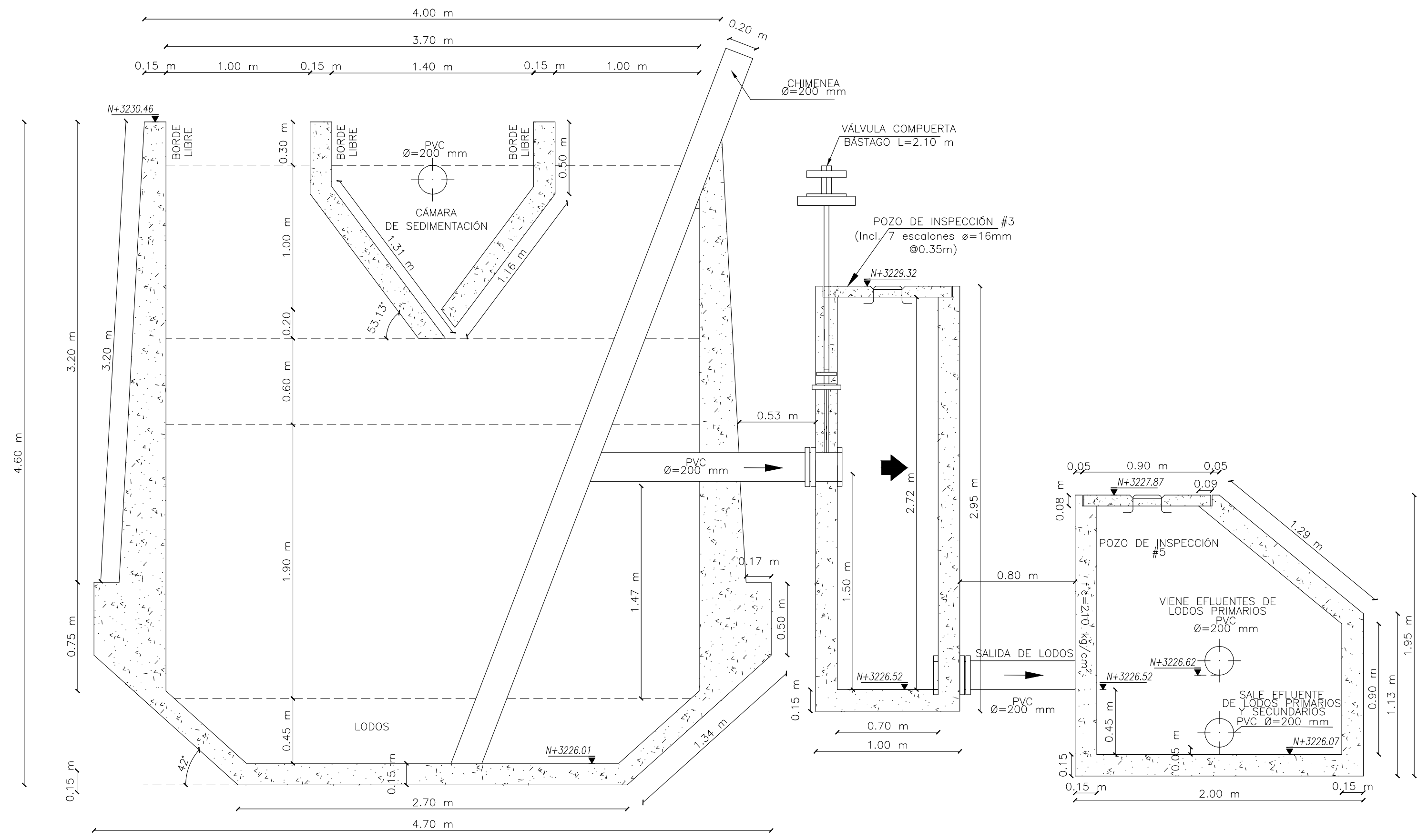
VOLUMENES DE HORMIGÓN	RECOMENDACIONES DOBLADOS	PESO VARRILLAS
Desarenador: 1.85 m³	Doblez: 90°	Ø 10: 6.20
Cajas de revisión, recepción y control de válvula: 1.23 m³		Ø 12: 8.79
Pozo de Inspección #6: 1.45 m³	Doblez: 135°	Ø 10: 6.20
Tapas pozo de inspección #6, cajas de revisión, recepción y control de válvulas: 0.24 m³		Ø 12: 8.79

ESPECIFICACIONES TÉCNICAS

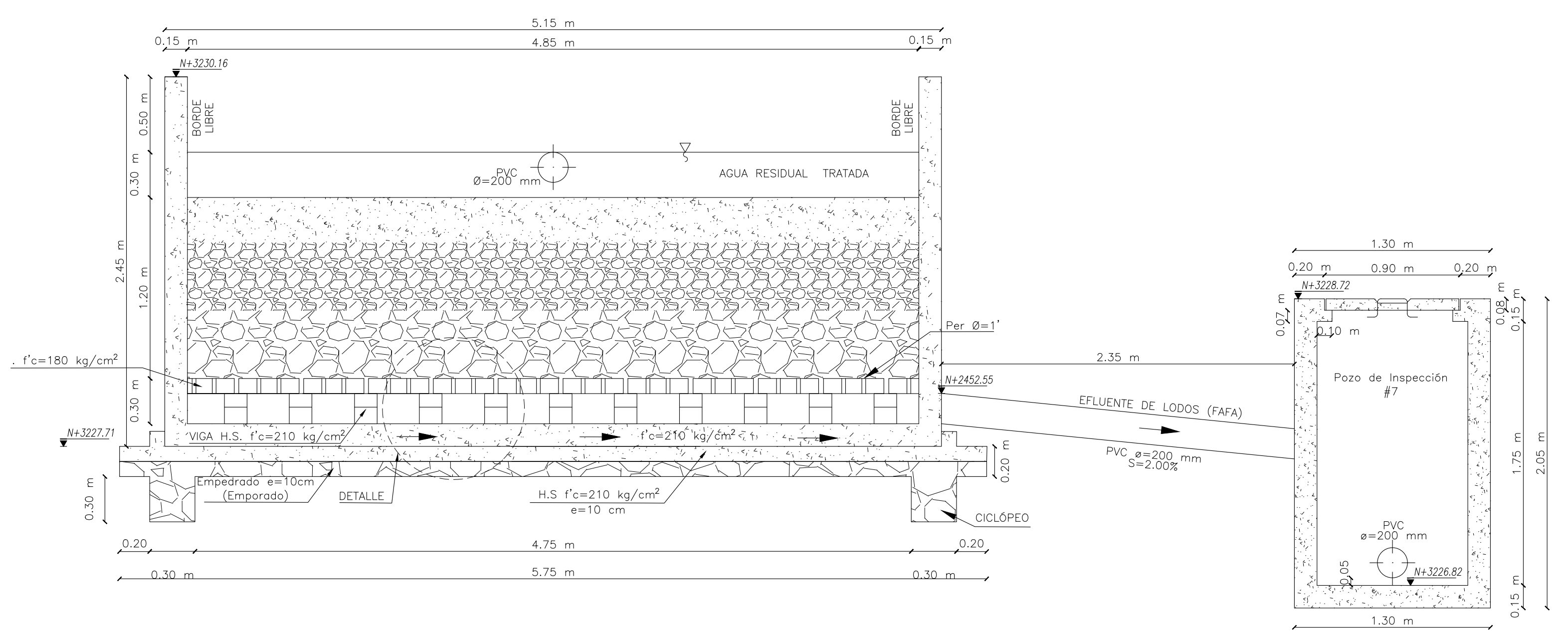
- Resistencia Hormigón (28 días):  $f_c = 180 \text{ kg/cm}^2$  (Replanteo, hormigón ciclópeo, base cerramiento)  $f_c = 210 \text{ kg/cm}^2$  (Cajas de Revisión y pozos de inspección) (Unidades FTAB)
- Acero de Refuerzo: Corrugado con límite de fluencia  $f_y = 4200 \text{ kg/cm}^2$
- Esfuerzo admisible del acero:  $\sigma_s = 15 \text{ ton/m}^2$
- Recubrimiento mínimo: En cimentaciones será de 5 cm y en elementos superiores será de 3 cm
- Cualquier cambio o modificación estructural será consultado con el calculista
- Generalidades: El diseño de hormigón armado, cumple con las normas técnicas del código ACT 318-14. Los detalles que aquí no constan se deberán regir por el mismo código.



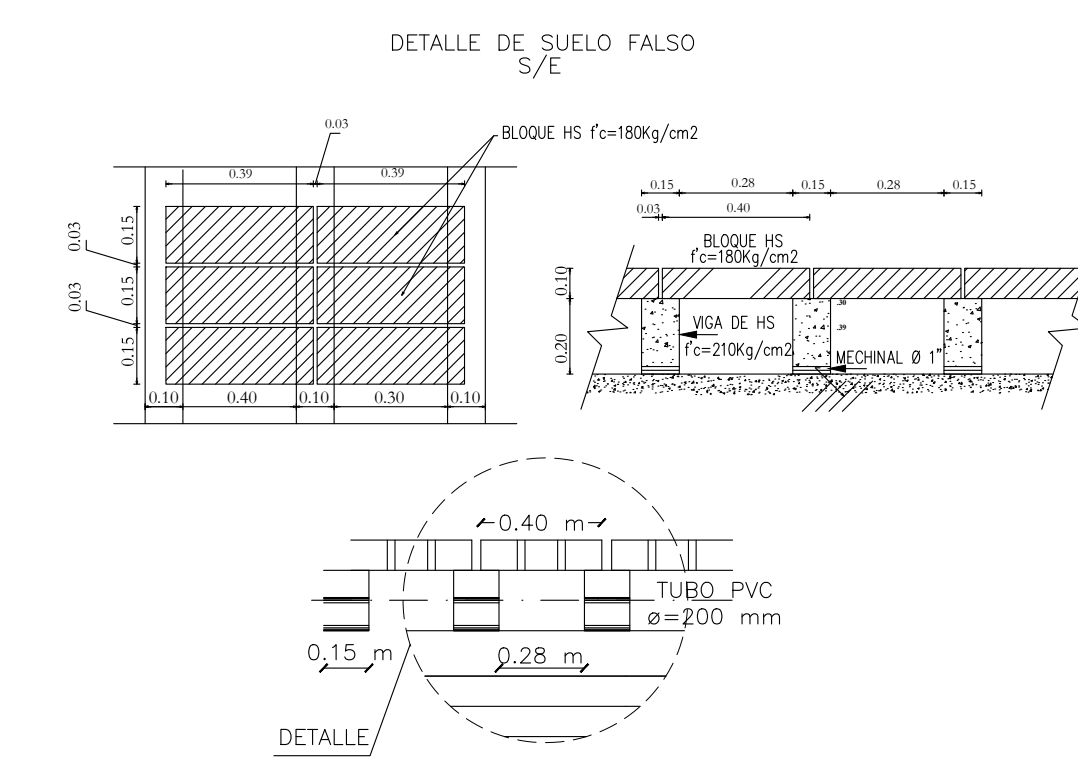
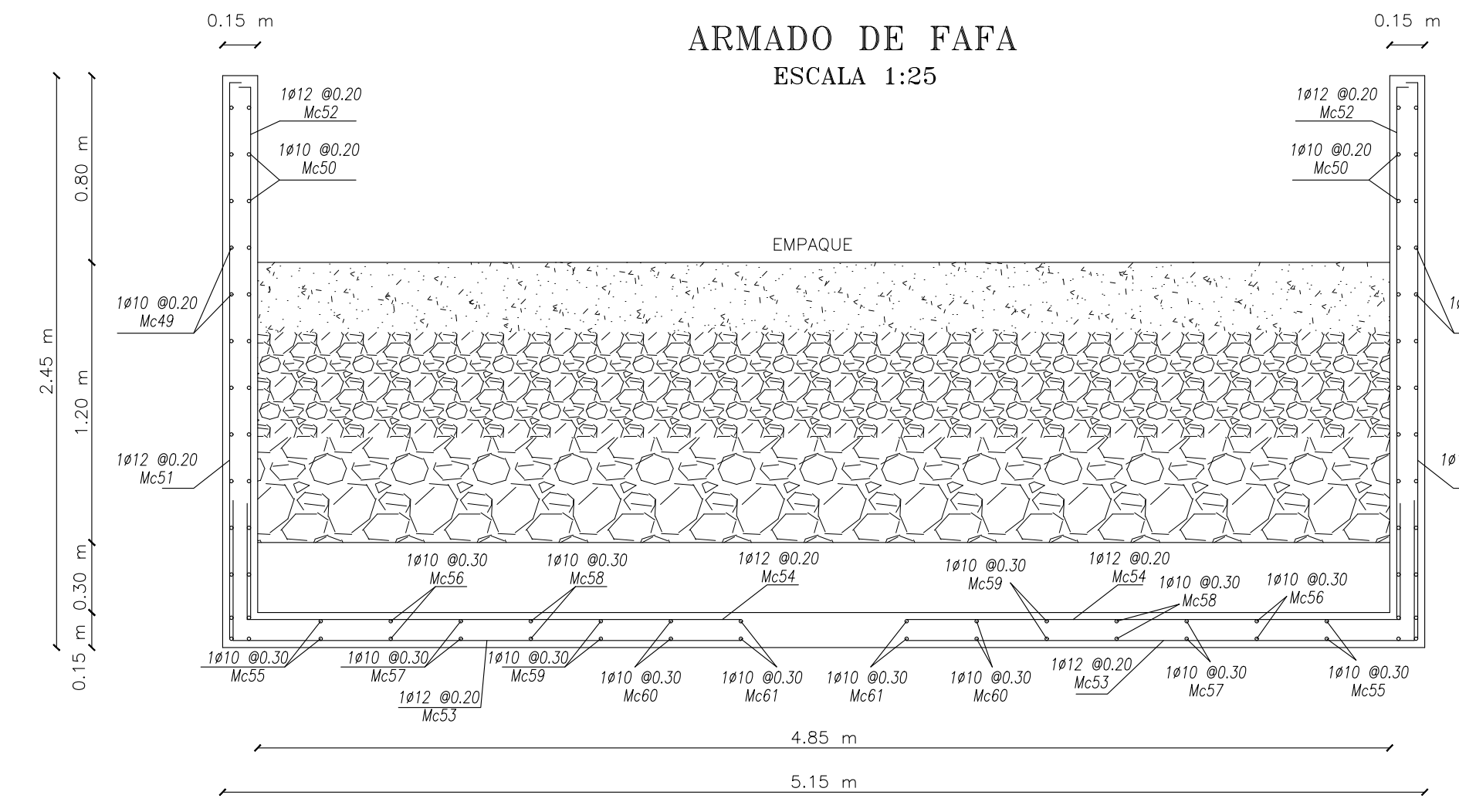
TANQUE IMHOFF CORTE C-C  
 ESCALA 1:25



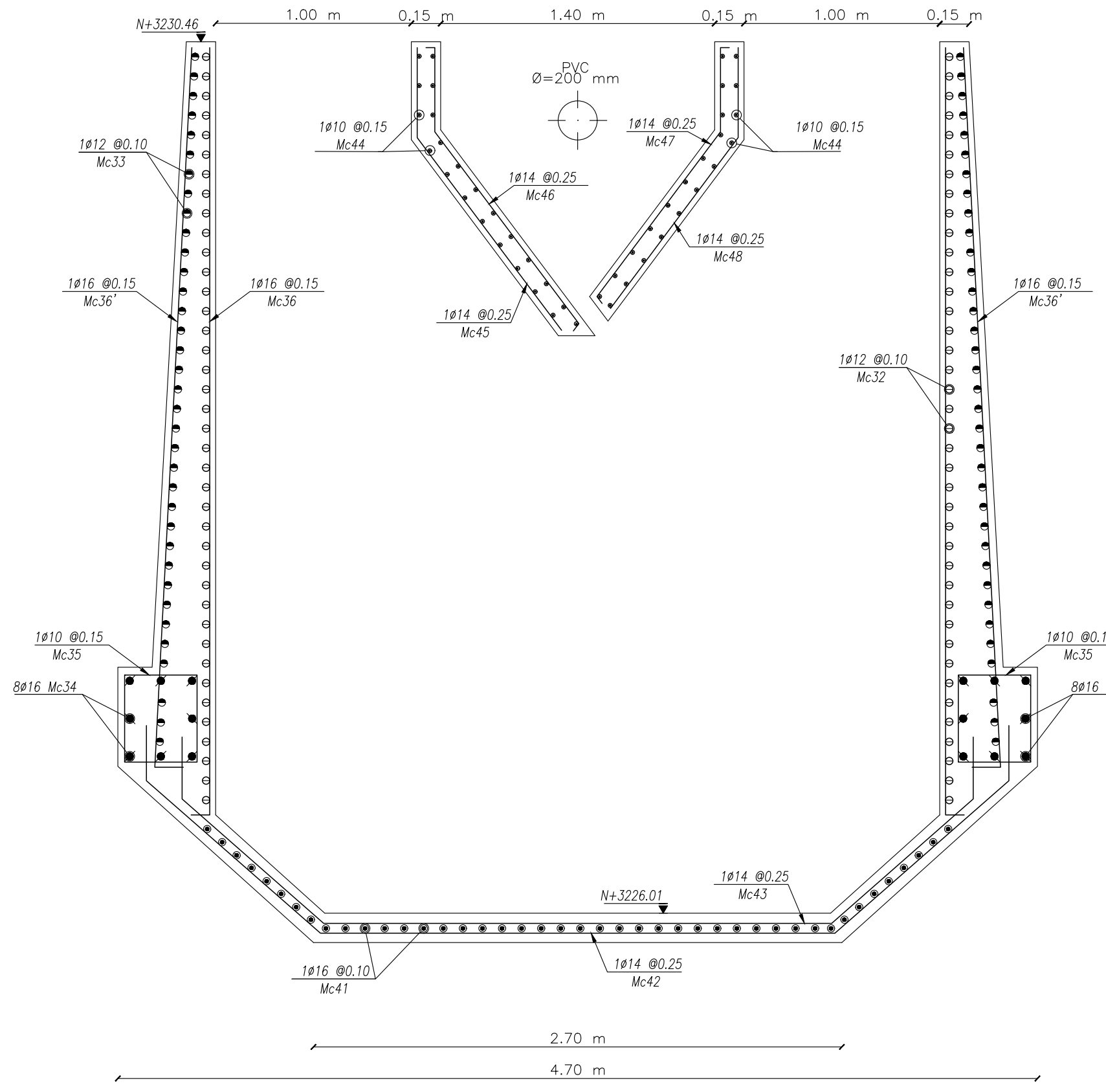
FILTRO ANAEROBIO DE FLUJO ASCENDENTE (FAFA)  
 CORTE D-D  
 ESCALA 1:25



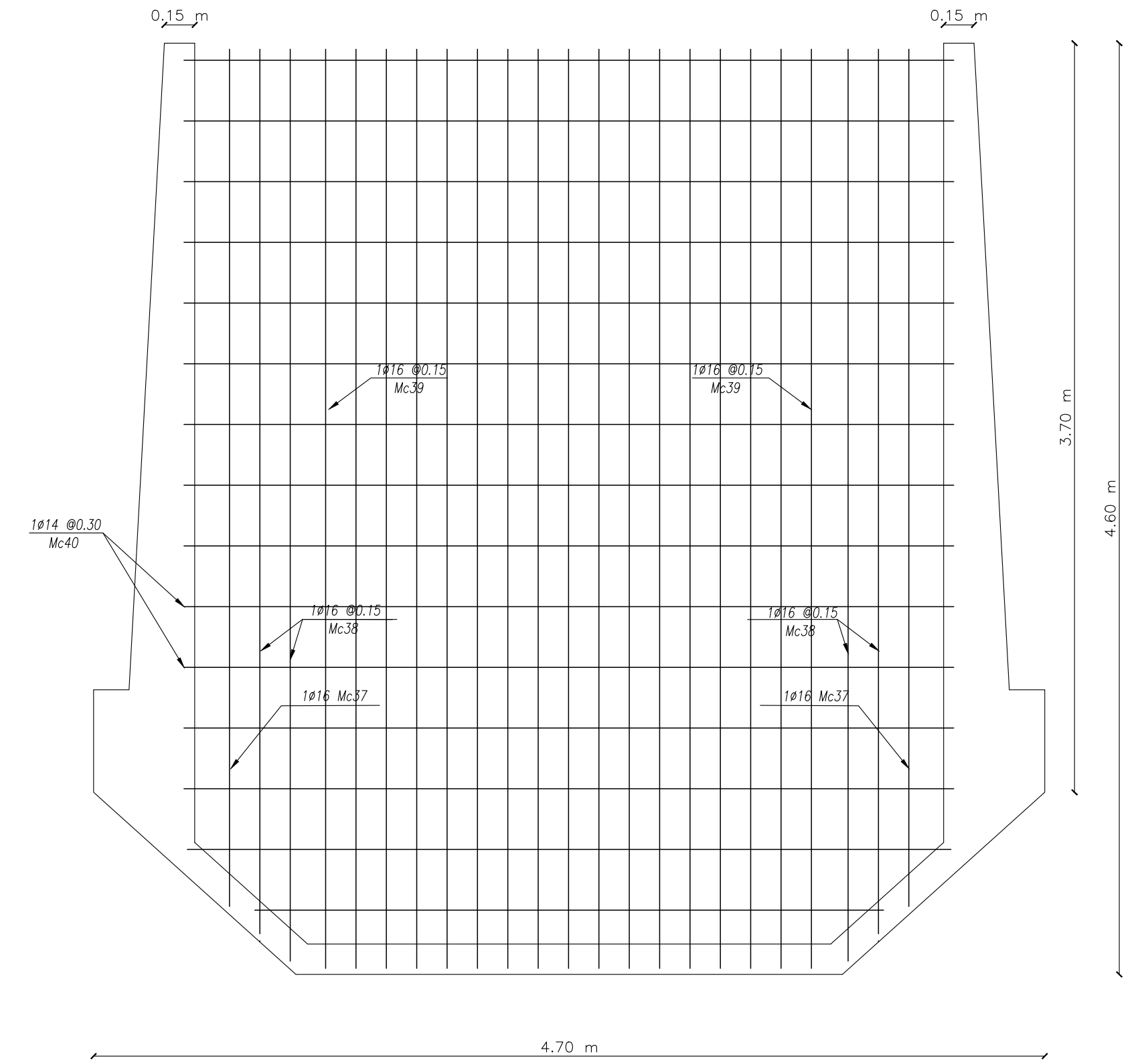
ARMADO DE FAFA  
 ESCALA 1:25



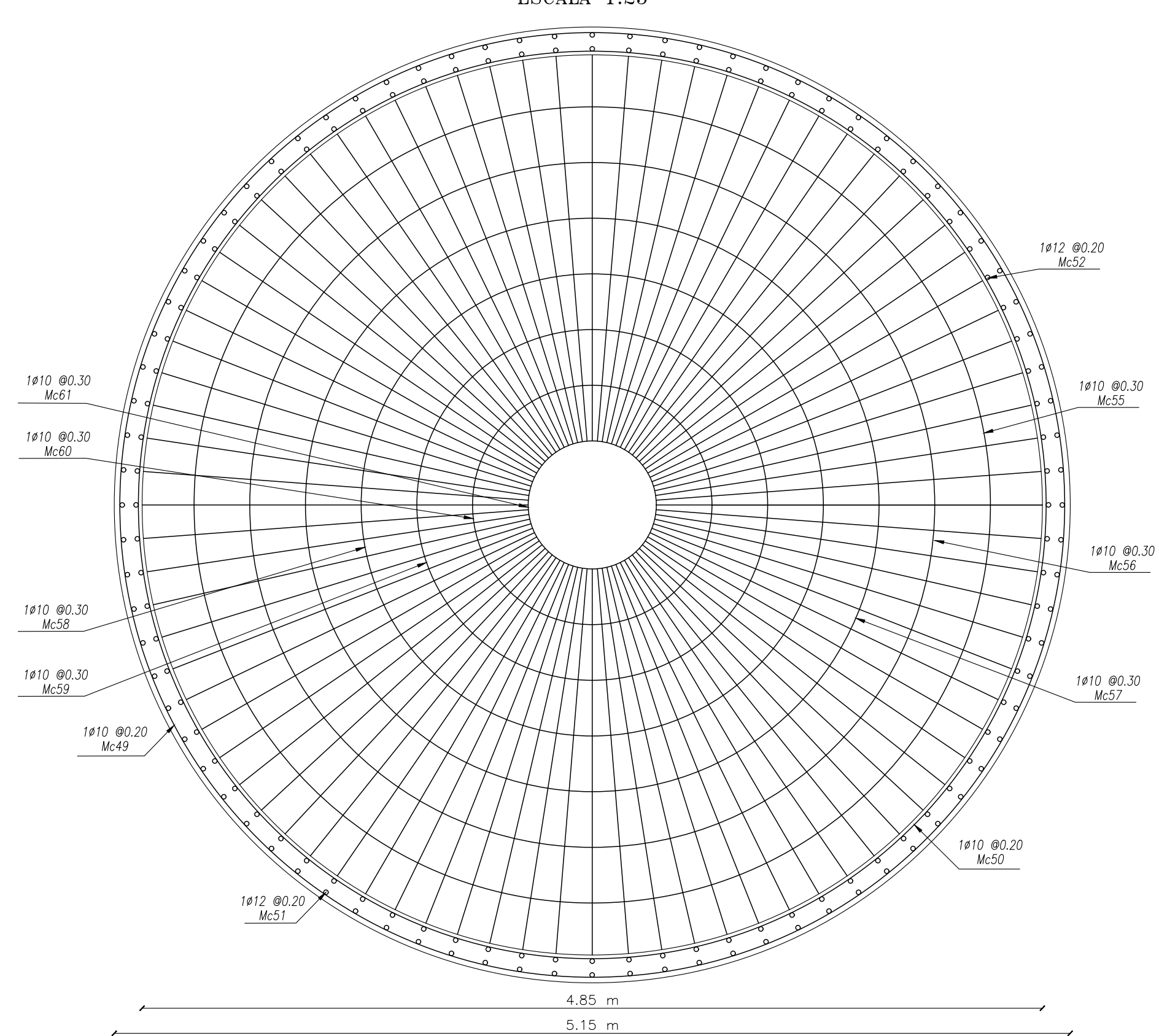
ARMADO DEL TANQUE IMHOFF  
 ESCALA 1:25



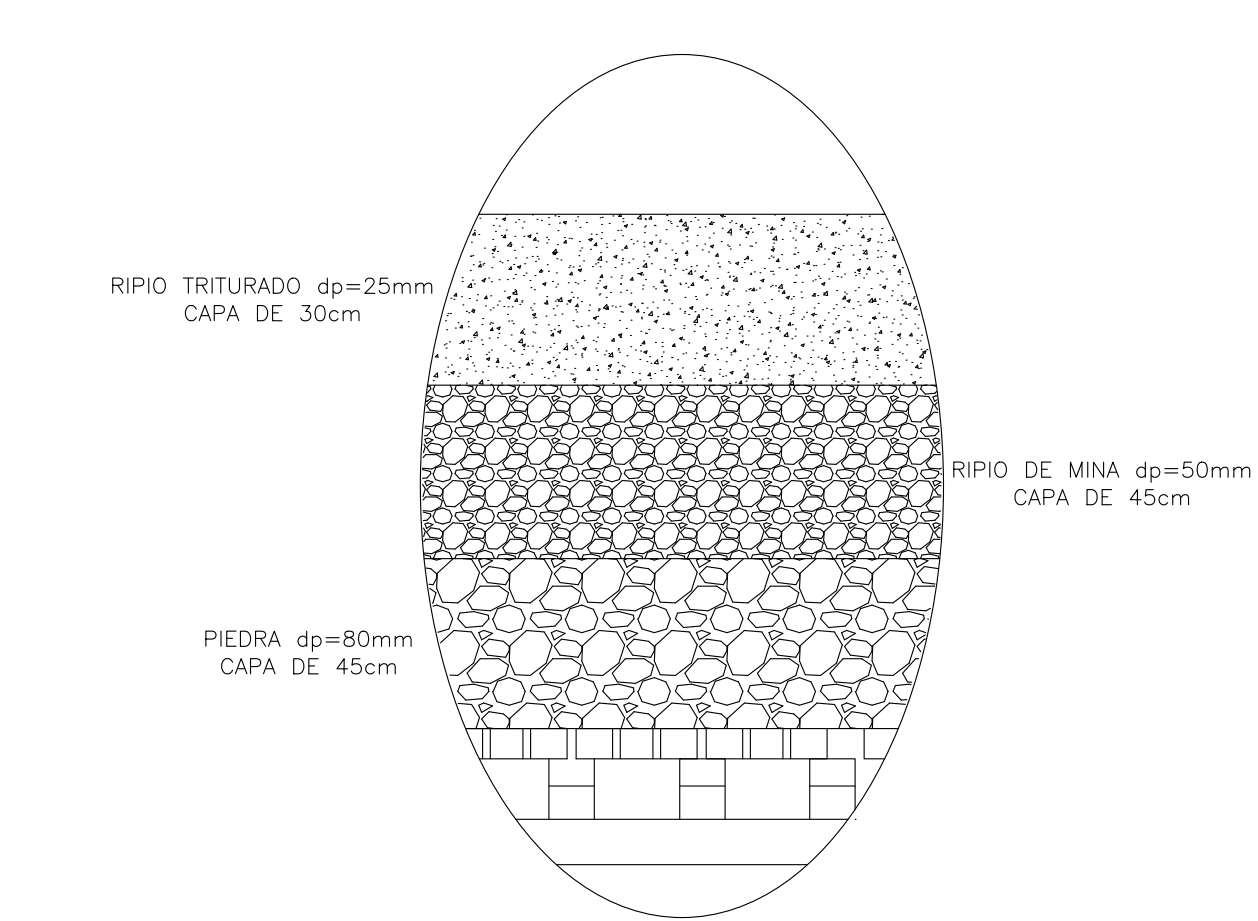
ARMADO DEL TANQUE IMHOFF  
 ESCALA 1:25



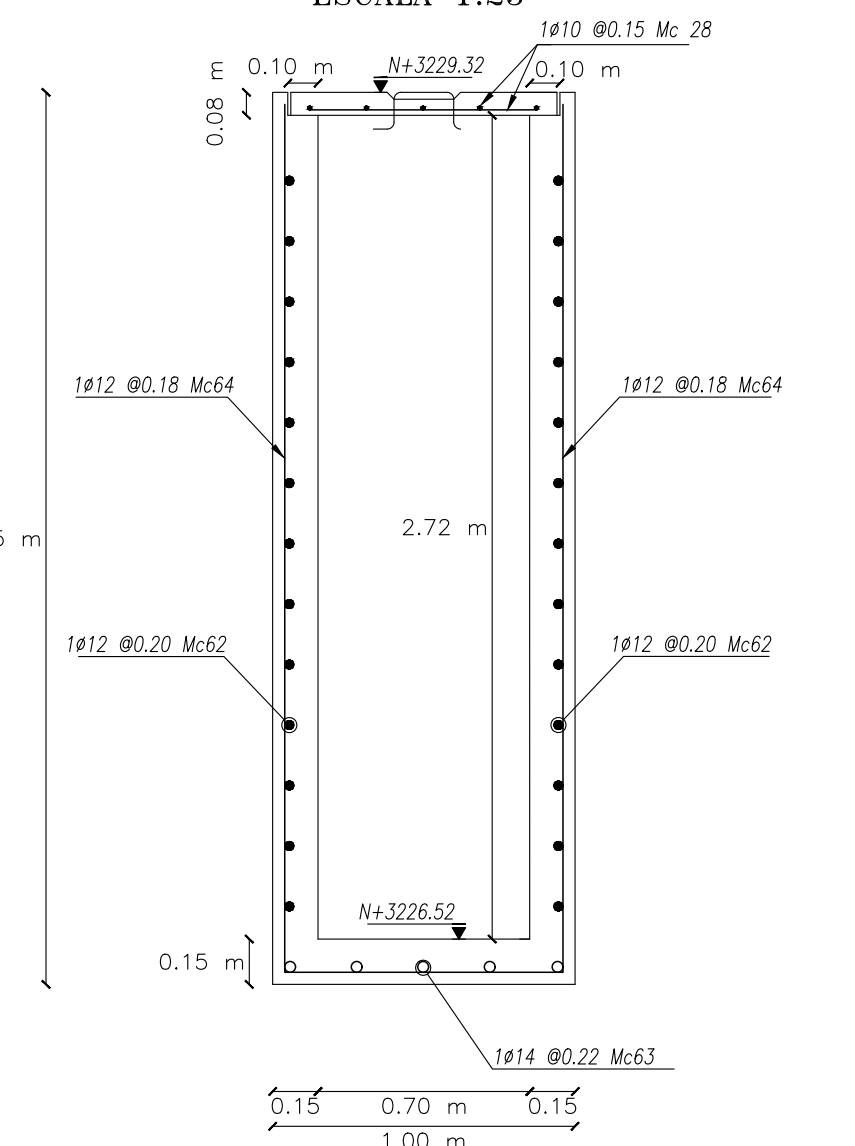
ARMADO DE PISO (FAFA)  
 ESCALA 1:25



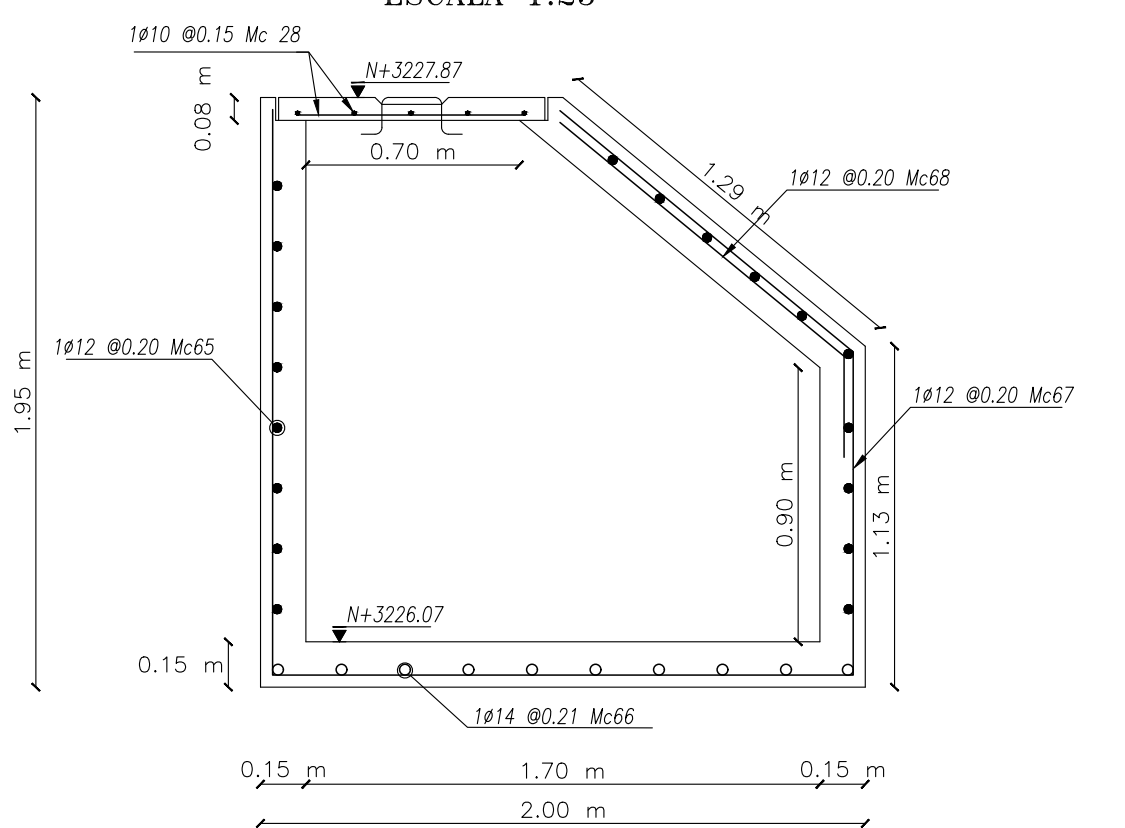
DETALLE DEL EMPAQUE  
 ESCALA S/E



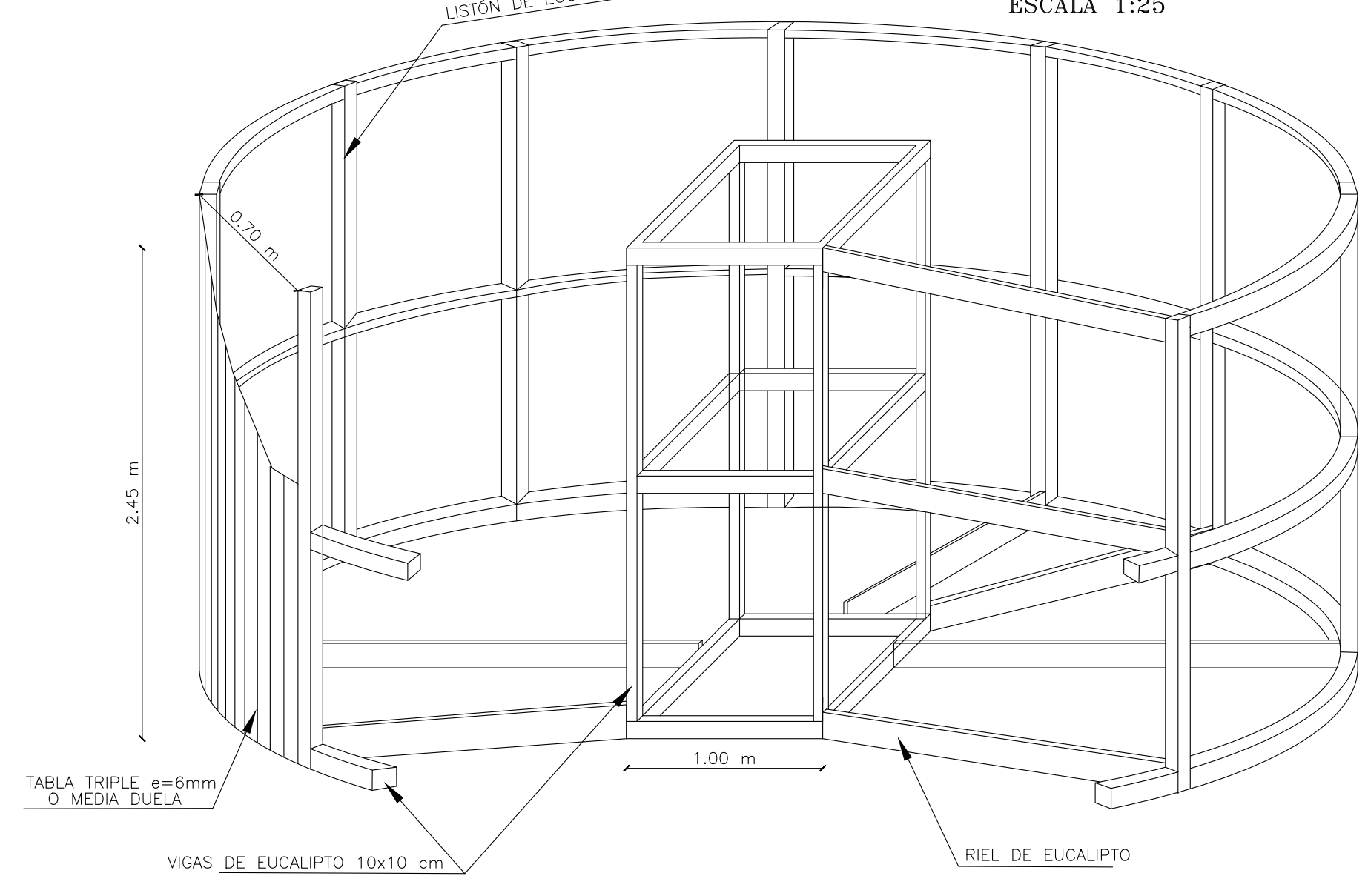
ARMADO POZO DE INSPECCIÓN #2, #3, #4  
 ESCALA 1:25



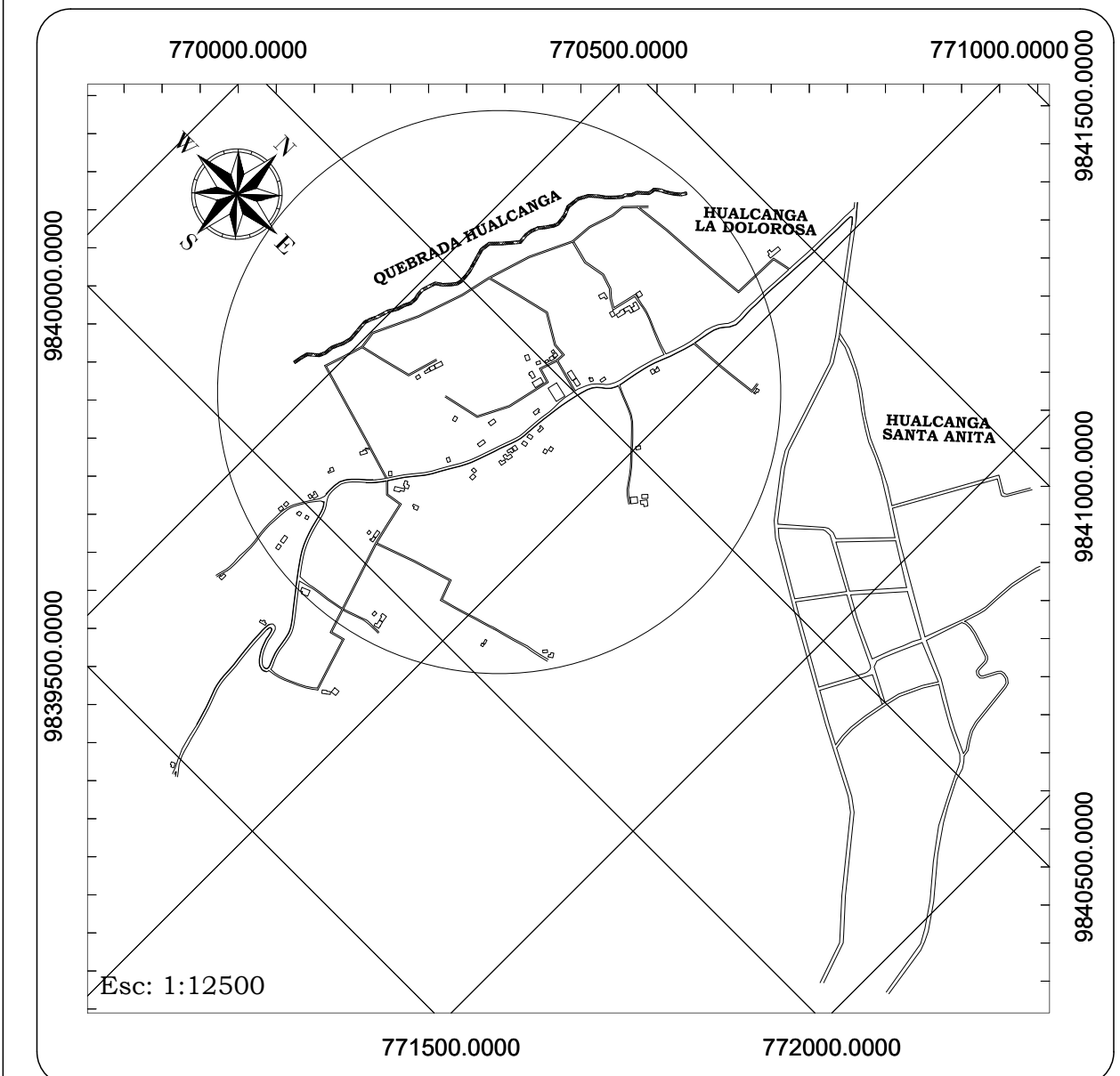
ARMADO POZO DE INSPECCIÓN #5  
 ESCALA 1:25



ARMADO DE ENCOFRADO DE PARED (FAFA)  
 ESCALA 1:25



UBICACIÓN DEL PROYECTO  
 PROVINCIA: TUNGURAHUA  
 CANTÓN: QUERO  
 COMUNIDAD: HUALCANGA LA DOLOROSA



PROYECTO:  
 "DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA"

CONTIENE:  
 TANQUE IMHOFF Y FAFA  
 CORTE Y DETALLES

ESCALA:  
 INDICADA

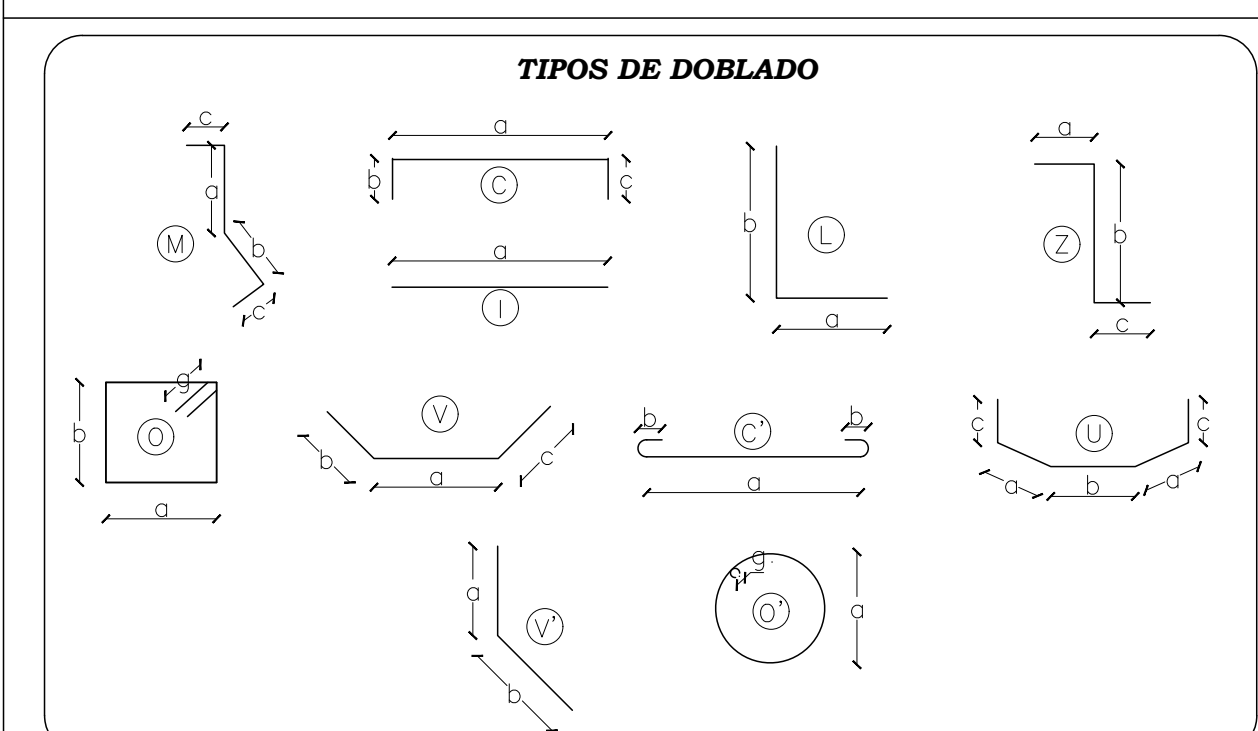
FECHA:  
 ABRIL/2021

DIBUJÓ:  
 ECGO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

LÁMINA:  
 N° 14

PLANILLA DE ACEROS											
Mc	o	Tipo	Cantidad	DIMENSIONES (cm)			Longitud de corte	Longitud Total	PESO TOTAL	PESO	
				a	b	h				kg	kg
TANQUE IMHOFF											
32	12	C	76	5.84	1.00	1.00	7.84	411.51	141.00		
33	12	C	76	5.84	1.00	1.00	7.84	548.80	487.33		
34	10	C	30	3.08	0.15	0.15	3.08	78.74	170.00		
35	10	O	48	0.44	0.44	0.15	0.68	35.20	21.72		
36	10	L	56	2.07	0.15		4.80	277.02	170.00		
37	16	L	56	2.07	0.15		3.93	214.68	119.45		
38	16	L	56	2.07	0.15		4.40	248.40	130.82		
39	16	L	16	1.45	0.09		1.51	89.80	121.70		
40	14	C	30	1.82	0.09	1.00	2.40	174.00	210.00		
41	16	C	42	5.84	1.00	1.00	7.84	328.28	519.00		
42	14	U	21	1.26	2.44	0.30	3.44	129.72	195.70		
43	14	U	21	0.93	2.40	0.30	3.10	115.30	141.70		
44	10	I	48	0.44			0.44	262.80	161.11		
45	14	V	21	0.46	1.23		1.69	36.87	48.05		
46	14	M	21	0.43	1.23	0.05	1.76	40.48	48.90		
47	14	M	21	0.43	1.05	0.05	1.58	36.14	43.90		
48	14	V	21	0.46	1.00		1.56	35.88	45.51		
SUBTOTAL											
4076.75											
FILTRO ANAEROBIO DE FLUJO ASCENDENTE (FAFA)											
49	10	CV	36	16.07			16.42	420.92	261.41		
50	10	CV	31	15.05			15.41	279.00	224.41		
51	12	L	44	2.35	0.05		2.43	204.12	103.26		
52	12	L	44	2.37	0.05		2.52	194.88	170.05		
53	12	L	44	2.48	0.05		2.78	215.52	200.27		
54	12	O	84	2.07	0.30		2.40	214.40	105.86		
55	10	CV	2	11.51			11.70	27.82	17.04		
56	10	CV	2	11.62			11.82	24.04	14.83		
57	10	CV	2	9.74			9.94	19.14	12.81		
58	10	CV	2	7.87			8.07	16.50	10.18		
59	10	CV	2	6.97			7.17	15.14	9.46		
60	10	CV	2	4.02			4.22	8.36	5.13		
61	10	CV	2	3.20			3.40	5.20	3.11		
SUBTOTAL											
1524.73											
POZO DE INSPECCIÓN #2, #3, #4											
62	12	L	78	0.92			0.92	71.76	63.72		
63	14	L	11	0.92			0.92	13.80	10.67		
64	12	C	18	0.92	2.87	2.87	6.66	119.88	106.45		
SUBTOTAL											
190.65											
POZO DE INSPECCIÓN #5											
65	12	L	18	1.02			1.80	34.56	30.00		
66	14	L	10	1.02			1.50	19.20	23.19		
67	12	M	11	1.87	1.92	1.96	3.75	67.71	59.68		
68	12	L	11	1.21	1.93		1.92	12.87	12.84		
TOTAL											
6791.21											



VOLIMENES DE HORMIGÓN		RECOMENDACIONES DOBLADOS		PESO VARRILLAS	
- Tanque Imhoff:	25.40 m³	φ=200	90°	φ=10mm	Area (cm²) / Peso (kg/m)
- FAFa:	8.55 m³	φ=200	90°	φ=10mm	10 / 0.785
- Soporte FAFa:	2.77 m³	φ=200	90°	φ=10mm	11 / 0.88
- Empotrado (Base H. Ciclopeo):	3.99 m³	φ=200	90°	φ=10mm	11 / 0.88
- Material Granular:	22.16 m³	φ=200	90°	φ=10mm	11 / 0.88
- Pozo Inspección #2, #3, #4:	2.68 m³	φ=200	90°	φ=10mm	11 / 0.88
- Pozo Inspección #5:	2.64 m³	φ=200	90°	φ=10mm	11 / 0.88
- Tapa pozos inspección #2, #3, #4, #5:	0.24 m³	φ=200	90°	φ=10mm	11 / 0.88

ESPECIFICACIONES TÉCNICAS

- Resistencia Hormigón (28 días):  $f_c=180 \text{ kg/cm}^2$  (Replanteo, hormigón ciclopeo, base cerramiento)  
 $f_c=210 \text{ kg/cm}^2$  (Cajas de Revisión y pozos de inspección y (Unidades PFAM)

- Acero de Refuerzo: Corrugado con límite de fluencia  $f_y=4200 \text{ kg/cm}^2$

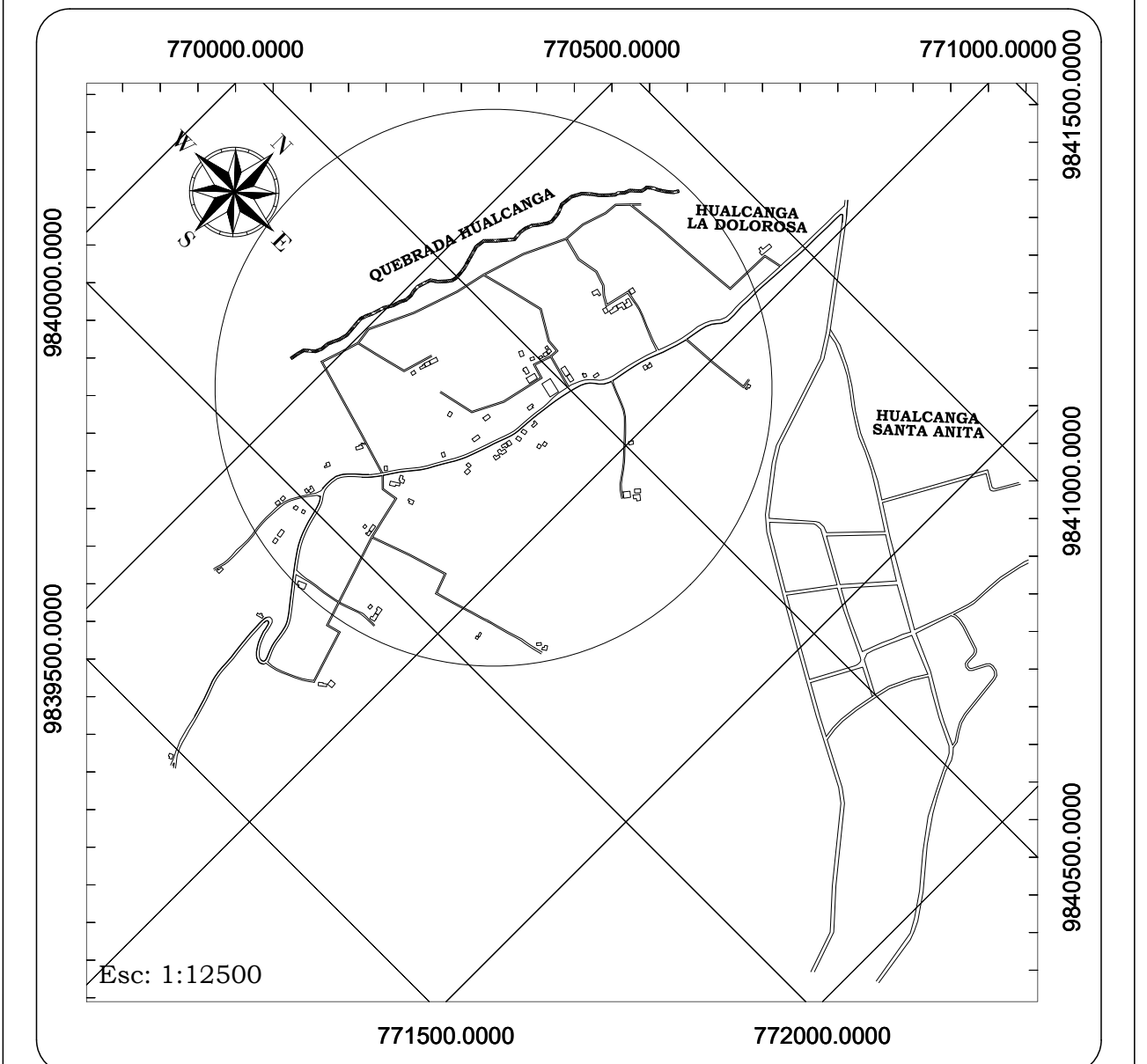
- Esfuerzo admisible del acero:  $\sigma_{adm} = 15 \text{ ton/cm}^2$

- Recubrimiento mínimo: En cimentaciones será de 5 cm y en elementos superiores será de 3 cm

- Cualquier cambio o modificación estructural será consultado con el calculista

- Generalidades: El diseño de hormigón armado, cumple con las normas técnicas del código ACT 318-14. Los detalles que aquí no constan se deberán regir por el mismo código.





PROYECTO:  
 DISEÑO DEL ALCANTARILLADO SANITARIO PARA MEJORAR LA CALIDAD DE VIDA DE LA COMUNIDAD DE HUALCANGA LA DOLOROSA, DEL CANTÓN QUERO, PROVINCIA DE TUNGURAHUA

CONTIENE:  
 LECHO DE SECADOS, CORTES - DETALLES, IMPLANTACIÓN GENERAL DEL PTAR

DIBUJO:  
 ECGO. BRYAN TIBÁN  
 AUTOR DEL PROYECTO

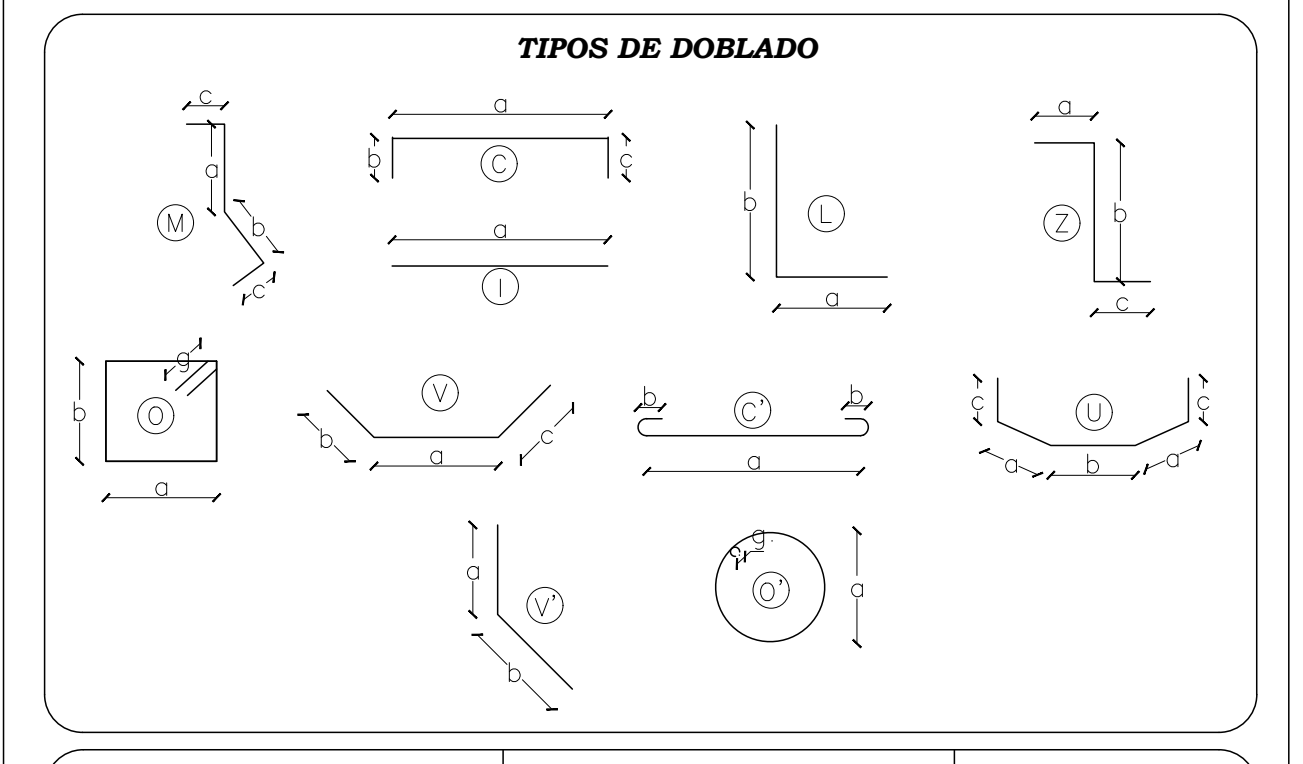
REVISÓ:  
 ING. DILON MOYA  
 TUTOR DEL PROYECTO

ESCALA:  
 INDICADA

FECHA:  
 ABRIL/2021

LÁMINA:  
 N° 15

PLANILLA DE ACEROS									
No	O	Tipo	Cantidad	REINFORZOS en		L longitud de corte	L longitud Total	PESO	TOTAL
				a	b				
69	12	L	50	1.00	0.15	0.30	1.35	67.50	51.06
70	12	C	7	0.15	1.15	0.30	2.05	110.80	193.51
71	12	U	50	0.30	0.45	0.15	1.35	67.50	50.84
72	12	C	4	0.15	0.15	0.15	2.05	110.80	193.51
73	10	L	4	1.05	0.05		1.10	54.00	34.53
74	10	L	4	1.05	0.05		1.10	54.00	34.53
75	10	L	4	1.05	0.05		1.10	54.00	34.53
76	10	L	4	1.05	0.05		1.10	54.00	34.53
77	10	L	4	1.05	0.05		1.10	54.00	34.53
78	10	L	4	1.05	0.05		1.10	54.00	34.53
79	10	L	4	1.05	0.05		1.10	54.00	34.53
80	10	L	4	1.15	0.05		1.20	60.00	37.50
81	10	L	4	1.15	0.05		1.20	60.00	37.50
82	10	L	4	1.15	0.05		1.20	60.00	37.50
83	10	L	4	1.15	0.05		1.20	60.00	37.50
84	10	L	4	1.15	0.05		1.20	60.00	37.50
85	10	L	4	1.15	0.05		1.20	60.00	37.50
86	10	L	4	1.15	0.05		1.20	60.00	37.50
87	10	L	4	1.15	0.05		1.20	60.00	37.50
88	10	L	4	1.15	0.05		1.20	60.00	37.50
89	10	L	4	1.15	0.05		1.20	60.00	37.50
90	10	L	4	1.25	0.05		1.30	66.00	39.60
91	10	L	4	1.25	0.05		1.30	66.00	39.60
92	10	L	4	1.25	0.05		1.30	66.00	39.60
93	10	L	4	1.25	0.05		1.30	66.00	39.60
94	10	L	6	1.55	0.05		1.60	78.00	47.22
95	10	L	4	1.55	0.05		1.60	78.00	47.22
96	10	C	2	1.25	0.10	0.10	1.45	72.60	44.88
97	10	C	2	1.25	0.10	0.10	1.45	72.60	44.88
98	10	C	14	4.70	0.10	0.10	4.90	252.00	151.20
99	10	C	10	3.45	0.10	0.10	3.65	182.70	109.62
100	10	C	3	0.45	0.05	0.05	0.55	28.35	16.83
SUBTOTAL								520.02	
101	12	L	27	1.22			1.22	32.94	24.11
102	14	C	7	1.22			1.22	85.4	61.82
103	12	C	7	1.22	2.35	2.35	6.56	44.52	33.13
104	12	C	7	0.25	0.05	0.05	0.35	2.45	1.84
SUBTOTAL								167.81	
105	12	L	17	2.50			2.50	102.50	74.26
106	14	L	4	2.50			2.50	100.00	72.54
107	12	C	10	1.42	1.47	1.47	4.76	47.60	35.17
108	12	C	10	0.45	0.10	0.10	0.60	6.00	4.50
SUBTOTAL								262.36	
109	12	L	108	1.25			1.25	135.00	117.00
110	14	C	42	1.22			1.22	51.24	41.00
111	12	C	42	1.22			1.22	51.24	41.00
112	12	C	42	1.22			1.22	51.24	41.00
SUBTOTAL								238.48	
TOTAL								1501.18	



VOLUMENES DE HORMIGÓN		RECOMENDACIONES DE VOLADROS		PESO VARRILLAS	
- Lecho de secado:	4.59 m³	- Base Cerramiento:	1.27 m³	- #4:	4.50 kg
- Material granular:	9.34 m³	- #10:	1.27 kg	- #6:	8.79 kg
- Pozo Inspección #8:	2.42 m³	- #12:	1.27 kg	- #8:	17.58 kg
- Pozo Inspección #9:	1.98 m³	- #14:	1.27 kg	- #10:	27.00 kg
- Pozo Inspección #10:	1.98 m³	- #16:	1.27 kg	- #12:	36.00 kg
- Pozo Inspección #11:	1.98 m³	- #18:	1.27 kg	- #14:	45.00 kg
- Pozo Inspección #12:	1.98 m³	- #20:	1.27 kg	- #16:	54.00 kg
- Pozo Inspección #13:	1.98 m³	- #22:	1.27 kg	- #18:	63.00 kg
- Tapas pozos inspección #8, #9, #10, #11, #12, #13:	9.54 m³	- #24:	1.27 kg	- #20:	72.00 kg
- Base Cerramiento:	1.27 m³	- #26:	1.27 kg	- #22:	81.00 kg
		- #28:	1.27 kg	- #24:	90.00 kg
		- #30:	1.27 kg	- #26:	99.00 kg
		- #32:	1.27 kg	- #28:	108.00 kg
		- #34:	1.27 kg	- #30:	117.00 kg
		- #36:	1.27 kg	- #32:	126.00 kg
		- #38:	1.27 kg	- #34:	135.00 kg
		- #40:	1.27 kg	- #36:	144.00 kg
		- #42:	1.27 kg	- #38:	153.00 kg
		- #44:	1.27 kg	- #40:	162.00 kg
		- #46:	1.27 kg	- #42:	171.00 kg
		- #48:	1.27 kg	- #44:	180.00 kg
		- #50:	1.27 kg	- #46:	189.00 kg
		- #52:	1.27 kg	- #48:	198.00 kg
		- #54:	1.27 kg	- #50:	207.00 kg
		- #56:	1.27 kg	- #52:	216.00 kg
		- #58:	1.27 kg	- #54:	225.00 kg
		- #60:	1.27 kg	- #56:	234.00 kg
		- #62:	1.27 kg	- #58:	243.00 kg
		- #64:	1.27 kg	- #60:	252.00 kg
		- #66:	1.27 kg	- #62:	261.00 kg
		- #68:	1.27 kg	- #64:	270.00 kg
		- #70:	1.27 kg	- #66:	279.00 kg
		- #72:	1.27 kg	- #68:	288.00 kg
		- #74:	1.27 kg	- #70:	297.00 kg
		- #76:	1.27 kg	- #72:	306.00 kg
		- #78:	1.27 kg	- #74:	315.00 kg
		- #80:	1.27 kg	- #76:	324.00 kg
		- #82:	1.27 kg	- #78:	333.00 kg
		- #84:	1.27 kg	- #80:	342.00 kg
		- #86:	1.27 kg	- #82:	351.00 kg
		- #88:	1.27 kg	- #84:	360.00 kg
		- #90:	1.27 kg	- #86:	369.00 kg
		- #92:	1.27 kg	- #88:	378.00 kg
		- #94:	1.27 kg	- #90:	387.00 kg
		- #96:	1.27 kg	- #92:	396.00 kg
		- #98:	1.27 kg	- #94:	405.00 kg
		- #100:	1.27 kg	- #96:	414.00 kg
		- #102:	1.27 kg	- #98:	423.00 kg
		- #104:	1.27 kg	- #100:	432.00 kg
		- #106:	1.27 kg	- #102:	441.00 kg
		- #108:	1.27 kg	- #104:	450.00 kg
		- #110:	1.27 kg	- #106:	459.00 kg
		- #112:	1.27 kg	- #108:	468.00 kg
		- #114:	1.27 kg	- #110:	477.00 kg
		- #116:	1.27 kg	- #112:	486.00 kg
		- #118:	1.27 kg	- #114:	495.00 kg
		- #120:	1.27 kg	- #116:	504.00 kg
		- #122:	1.27 kg	- #118:	513.00 kg
		- #124:	1.27 kg	- #120:	522.00 kg
		- #126:	1.27 kg	- #122:	531.00 kg
		- #128:	1.27 kg	- #124:	540.00 kg
		- #130:	1.27 kg	- #126:	549.00 kg
		- #132:	1.27 kg	- #128:	558.00 kg
		- #134:	1.27 kg	- #130:	567.00 kg
		- #136:	1.27 kg	- #132:	576.00 kg
		- #138:	1.27 kg	- #134:	585.00 kg
		- #140:	1.27 kg	- #136:	594.00 kg
		- #142:	1.27 kg	- #138:	603.00 kg
		- #144:	1.27 kg	- #140:	612.00 kg
		- #146:	1.27 kg	- #142:	621.00 kg
		- #148:	1.27 kg	- #144:	630.00 kg
		- #150:	1.27 kg	- #146:	639.00 kg
		- #152:	1.27 kg	- #148:	648.00 kg
		- #154:	1.27 kg	- #150:	657.00 kg
		- #156:	1.27 kg	- #152:	666.00 kg
		- #158:	1.27 kg	- #154:	675.00 kg
		- #160:	1.27 kg	- #156:	684.00 kg
		- #162:	1.27 kg	- #158:	693.00 kg
		- #164:	1.27 kg	- #160:	702.00 kg
		- #166:	1.27 kg	- #162:	711.00 kg
		- #168:	1.27 kg	- #164:	720.00 kg
		- #170:	1.27 kg	- #166:	729.00 kg
		- #172:	1.27 kg	- #168:	738.00 kg
		- #174:	1.27 kg	- #170:	747.00 kg
		- #176:	1.27 kg	- #172:	756.00 kg
		- #178:	1.27 kg	- #174:	765.00 kg
		- #180:	1.27 kg	- #176:	774.00 kg
		- #182:	1.27 kg	- #178:	783.00 kg
		- #184:	1.27 kg	- #180:	792.00 kg
		- #186:	1.27 kg	- #182:	801.00 kg
		- #188:	1.27 kg	- #184:	810.00 kg
		- #190:	1.27 kg	- #186:	819.00 kg
		- #192:	1.27 kg	- #188:	828.00 kg
		- #194:	1.27 kg	- #190:	837.00 kg
		- #196:	1.27 kg	- #192:	846.00 kg
		- #198:	1.27 kg	- #194:	855.00 kg
		- #200:	1.27 kg	- #196:	864.00 kg
		- #202:	1.27 kg	- #198:	873.00 kg
		- #204:	1.27 kg	- #200:	882.00 kg
		- #206:	1.27 kg	- #202:	891.00 kg
		- #208:	1.27 kg	- #204:	900.00 kg
		- #210:	1.27 kg	- #206:	909.00 kg
		- #212:	1.27 kg	- #208:	918.00 kg
		- #214:	1.27 kg	- #210:	927.00 kg
		- #216:	1.27 kg	- #212:	936.00 kg
		- #218:	1.27 kg	- #214:	945.00 kg
		- #220:	1.27 kg	- #216:	954.00 kg
		- #222:	1.27 kg	- #218:	963.00 kg
		- #224:	1.27 kg	- #220:	972.00 kg
		- #226:	1.27 kg	- #222:	981.00 kg
		- #228:	1.27 kg	- #224:	990.00 kg
		- #230:	1.27 kg	- #226:	999.00 kg
		- #232:	1.27 kg	- #228:	1008.00 kg
		- #234:	1.27 kg	- #230:	1017.00 kg