

卷末資料 6-1-2 数量計算 (S4)



**MINISTRY OF PUBLIC WORKS AND HOUSING
DIRECTORATE GENERAL OF WATER RESOURCES
DIRECTORATE OF RIVER AND COAST
RIVER BASIN ORGANIZATION FOR BRANTAS**

**THE PROJECT FOR
CAPACITY DEVELOPMENT OF MT. SEMERU
VOLCANIC DISASTER MEASURES PLANNING**

**SUB-PROJECT PACKAGE S4
TANGGUL PENGARAH HULU LEPRAK, TANGGUL
LEPRAK 26-22, TANGGUL LEPRAK II D, TANGGUL
KEBONDELI XVII 2021, KD LEPRAK 3, DD LEPRAK 2, DD
LEPRAK 3, EMERGENCY DIKE**

**DRAFT
BILL OF QUANTITY**

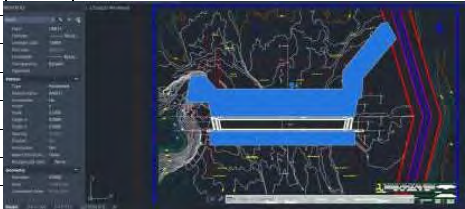
JICA Project Team


August 2024

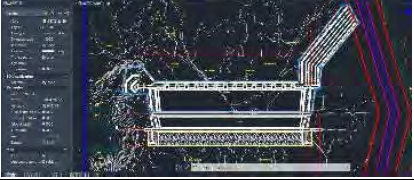
SUMMARY OF QUANTITY KD LEPRAK 3

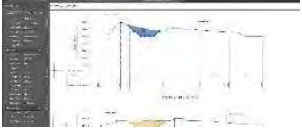
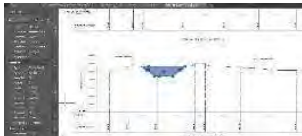
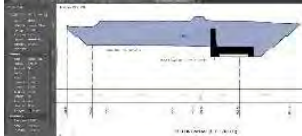

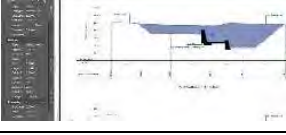

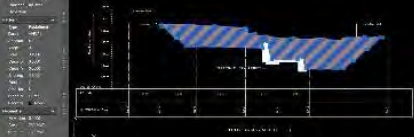
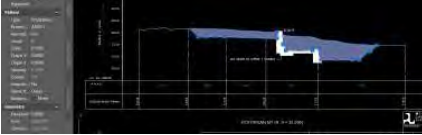
No.	Description	Unit	Volume
1	Stake Out	m2	9,218.12
2	Bouwplank	m	749.82
3	Cross Profile	m	929.59
4	Mechanical Sand Excavation	m3	71,989.50
5	Backfill	m3	14,894.13
6	Cyclops Concrete 60% Concrete fc' 15 Mpa: 40% Split Stone, with Concrete Pump (CP)	m3	9,869.45
7	Concrete Making and Casting fc' = 20 Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	3,056.33
8	Concrete Making and Casting fc' = 30 Mpa (K 350) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	1,010.85
9	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	6,796.17
10	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	1,844.14
11	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	8,640.30
12	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	6,796.17
13	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	1,844.14
14	Boulder Rip-Rap	m3	1,642.05
15	Joint filler	m3	6.10
16	Weep Hole	m	1,314.00
17	Geo Bag	pcs	140.00
18	Sand Fill	m3	87.00
19	Pump Operation Dewatering	hour	70.00

Name Structure : : KD LEPRAK 3
 Type of work : Stake Out



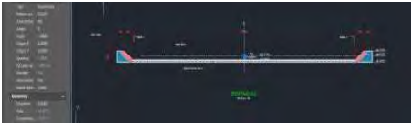

No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	9218.12	9,218.12	m ²	
		Stake Out Total Volume =	9,218.12	m ²	


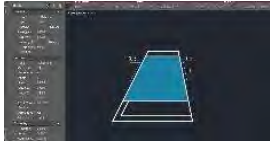

Name Structure : : KD LEPRAK 3					
Type of work : Cross Profile					
No.	Description	Calculation	Volume	Unit	Drawing reference
1	Cross Profile =	749.82	749.82	m	
	Total		749.82	m	



Name Structure : : KD LEPRAK 3					
Type of work : : Bouwplank					
No.	Description	Calculation	Volume	Unit	Drawing reference
1	Volume	929.59	929.59	m'	
	Total		929.59	m'	



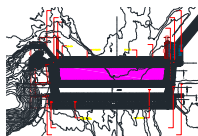
Name Structure :		: KD LEPRAK 3					
Type of work		: Sand Excavation					
No.	Description	Calculation	Volume	Unit	Drawing reference		
1	M0						
	Area =	0.00 m ²					
	Length =	8.00 m'					
	V=	0.00 m ³					
	Total Volume =		-	m ²			
1	M1						
	Area =	72.12 m ²					
	Length =	8.00 m'					
	V=	288.49 m ³					
	Total Volume =		288.49	m ²			
2	M2						
	Area =	104.68 m ²					
	Length =	4.00 m'					
	V=	353.62 m ³					
	Total Volume =		353.62	m ³			
3	M3						
	Area =	843.96 m ²					
	Length =	2.75 m'					
	V=	1304.38 m ³					
	Total Volume =		1,304.38	m ³			
4	M4						
	Area =	1191.45 m ²					
	Length =	2.75 m'					
	V=	2798.69 m ³					
	Total Volume =		2,798.69	m ³			
5	M5						
	Area =	1143.73 m ²					
	Length =	8.13 m'					
	V=	9492.52 m ³					
	Total Volume =		9,492.52	m ³			
6	M6						
	Area =	752.41 m ²					
	Length =	8.13 m'					
	V=	7707.80 m ³					
	Total Volume =		7,707.80	m ³			
7	MC						
	Area =	780.39 m ²					
	Length =	8.13 m'					
	V=	6230.83 m ³					
	Total Volume =		6,230.83	m ³			
8	M7						
	Area =	328.03 m ²					
	Length =	8.13 m'					
	V=	4392.00 m ³					
	Total Volume =		4,392.00	m ³			




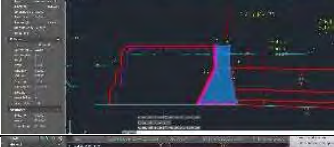
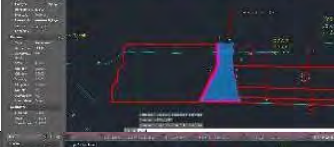

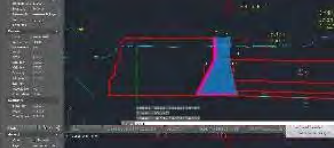
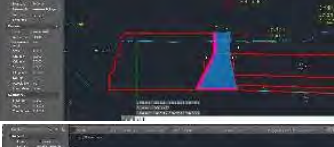

Name Structure :		: KD LEPRAK 3				
Type of work :		: Sand Excavation				
No.	Description	Calculation	Volume	Unit	Drawing reference	
9	M8					
	Area =	783.32 m ²				
	Length =	2.75 m'				
	V=	2150.11 m ³				
	Total Volume =		2,150.11	m ³		
10	M9					
	Area =	828.83 m ²				
	Length =	2.75 m'				
	V=	2216.71 m ³				
	Total Volume =		2,216.71	m ³		
11	M10					
	Area =	518.91 m ²				
	Length =	3.93 m'				
	V=	2648.31 m ³				
	Total Volume =		2,648.31	m ³		
12	M11					
	Area =	100.64 m ²				
	Length =	5.00 m'				
	V=	1548.88 m ³				
	Total Volume =		1,548.88	m ³		
13	M12					
	Area =	41.65 m ²				
	Length =	3.30 m'				
	V=	234.78 m ³				
	Total Volume =		234.78	m ³		
14	Volume Galian Dinding Buffer Fill Kanan					
	Area =	251.83 m ²				
	Length =	34.00 m'				
	V=	8562.18 m ³				
	Total Volume =		8,562.18	m ³		
15	Volume Galian Dinding Buffer Fill Kiri					
	Area =	251.83 m ²				
	Length =	87.60 m'				
	V=	22060.20 m ³				
	Total Volume =		22,060.20	m ³		
Sand Excavation Total Volume =				71,989.50	m³	


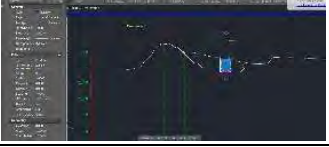



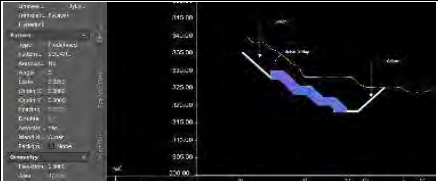
Name Structure :		: KD LEPRAK 3			
Type of work		: Backfill			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	M5-M8				
	Area =	15.75 m ²			
	Length =	130.00 m'			
	V=	2047.50 m ³			
	Total Volume =		2,047.50	m ³	
2	Backfill Volume Section C-C				
	Area =	89.81 m ²			
	Length =	23.11 m'			
	V=	2075.51 m ³			
	Total Volume =		2,075.51	m ³	
3	Backfill Volume Section G-G				
	Area =	50.41 m ²			
	Length =	14.00 m'			
	V=	705.74 m ³			
	Total Volume =		705.74	m ³	
4	Backfill Left Side Maindam Total Volume =				
	Area =	89.69 m ²			
	Length =	112.23 m'			
	V=	10065.38 m ³			
	Total Volume =		10,065.38	m ³	
			Backfill Total Volume =	14,894.13 m³	

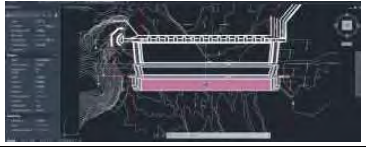
Name Structure :		: KD LEPRAK 3			
Type of work :		: Concrete K-350			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	M5-M8				
	Area =	8.80 m ²			
	Length =	130.00 m'			
	V=	1144.53 m ³			
	Total Volume =		1,144.53	m ³	
2	DRIP HOLE DINDING				
	Area =	22.16 m ²			
	Thickness =	0.50 m'			
	V=	22.16 m ³			
	Total Volume =		22.16	m ³	
	Area =	3.16 m ²			
	Width =	3.00 m'			
	V=	4.74 m ³			
	Total Volume =		4.74	m ³	
	3	Reduced Drip Hole Volume			
Drip Hole Area =		3.82 m ²			
Drip Hole High =		3.00 m'			
Numbers of Drip Hole =		14.00 pcs			
Volume Drip Hole =		160.59 m ³			
Total Volume =		160.59	m ³		
Concrete K-350 Total Volume =			1,010.85	m³	

Name Structure :		: KD LEPRAK 3					
Type of work		: K-225 Concrete					
No.	Description	Calculation	Volume	Unit	Drawing reference		
1	M0						
	Area =	3.50	m ²				
	Length =	3.50	m'				
	V=	6.13	m ³				
	Total Volume =			6.13	m ³		
1	M1						
	Area =	3.50	m ²				
	Length =	8.00	m'				
	V=	28.00	m ³				
	Total Volume =			28.00	m ³		
2	M2						
	Area =	6.11	m ²				
	Length =	4.00	m'				
	V=	19.21	m ³				
	Total Volume =			19.21	m ³		
3	M3						
	Area =	9.74	m ²				
	Length =	2.75	m'				
	V=	21.79	m ³				
	Total Volume =			21.79	m ³		
4	M4						
	Area =	9.74	m ²				
	Length =	2.25	m'				
	V=	21.92	m ³				
	Total Volume =			21.92	m ³		
5	M5-M8						
	Area =	0.00	m ²				
	Length =	130.00	m'				
	V=	0.00	m ³				
	Total Volume =			-	m ³		
6	M9						
	Area =	9.74	m ²				
	Length =	2.25	m'				
	V=	10.96	m ³				
	Total Volume =			10.96	m ³		
7	M10						
	Area =	6.11	m ²				
	Length =	2.75	m'				
	V=	21.79	m ³				
	Total Volume =			21.79	m ³		
8	M11						
	Area =	6.11	m ²				
	Length =	4.00	m'				
	V=	24.43	m ³				
	Total Volume =			24.43	m ³		

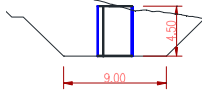
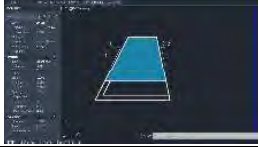


Name Structure :		: KD LEPRAK 3			
Type of work		: K-225 Concrete			
No.	Description	Calculation	Volume	Unit	Drawing reference
9	M12				
	Area =	3.50 m ²			
	Length =	5.00 m'			
	V=	24.02 m ³			
	Total Volume =		24.02	m ³	
10	M-				
	Area =	3.50 m ²			
	Length =	5.00 m'			
	V=	17.50 m ³			
	Total Volume =		17.50	m ³	
11	FLOOR APRON MAINDAM				
	Area =	2857.09 m ²			
	Thickness =	2.00 m'			
	V=	2860.59 m ³			
	Total Volume =		2,860.59	m ³	
Concrete K-225 Total Volume =			3,056.33	m³	

Name Structure :		: KD LEPRAK 3			
Type of work		: Cyclops Concrete			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	M0				
	Area =	10.00 m ²			
	Length =	3.50 m'			
	V=	17.50 m ³			
	Total Volume =		17.50	m ³	
2	M1				
	Area =	10.00 m ²			
	Length =	8.00 m'			
	V=	80.00 m ³			
	Total Volume =		80.00	m ³	
3	M2				
	Area =	19.54 m ²			
	Length =	4.00 m'			
	V=	59.09 m ³			
	Total Volume =		59.09	m ³	
4	M3				
	Area =	41.91 m ²			
	Length =	2.75 m'			
	V=	84.49 m ³			
	Total Volume =		84.49	m ³	
5	M4				
	Area =	41.91 m ²			
	Length =	2.25 m'			
	V=	94.29 m ³			
	Total Volume =		94.29	m ³	
6	M5-M8				
	Area =	26.57 m ²			
	Length =	130.00 m'			
	V=	3454.40 m ³			
	Total Volume =		3,454.40	m ³	
7	M9				
	Area =	41.91 m ²			
	Length =	2.25 m'			
	V=	77.04 m ³			
	Total Volume =		77.04	m ³	
8	M10				
	Area =	41.91 m ²			
	Length =	2.75 m'			
	V=	115.25 m ³			
	Total Volume =		115.25	m ³	
9	M11				
	Area =	19.54 m ²			
	Length =	4.00 m'			
	V=	122.90 m ³			
	Total Volume =		122.90	m ³	

No.	Description	Calculation	Volume	Unit	Drawing reference
10	M12				
	Area =	10.00 m ²			
	Length =	5.00 m'			
	V=	73.86 m ³			
	Total Volume =		73.86	m ³	
11	M-				
	Area =	10.00 m ²			
	Length =	5.00 m'			
	V=	50.00 m ³			
	Total Volume =		50.00	m ³	
12	Apron Wall Section, C-C				
	Area =	35.40 m ²			
	Length =	23.11 m'			
	V=	818.02 m ³			
	Total Volume =		818.02	m ³	
13	Apron Wall Section G-G				
	Area =	24.73 m ²			
	Length =	14.00 m'			
	V=	346.29 m ³			
	Total Volume =		346.29	m ³	
14	Right Buffer Fill Wall				
	Area =	47.50 m ²			
	Length =	34.00 m'			
	V=	1614.87 m ³			
	Total Volume =		1,614.87	m ³	
15	Left Buffer Fill Wall				
	Area =	47.50 m ²			
	Length =	87.50 m'			
	V=	4160.66 m ³			
	Total Volume =		4,160.66	m ³	
16	Reduced Drip Hole Volume				
	Drip Hole Area =	23.20 m ²			
	Drip Hole High =	4.00 m'			
	Numbers of Drip Hole =	14.00 pcs			
	Volume Drip Hole =	1299.20 m ³			
Total Volume =		1,299.20	m ³		
Cyclop Concrete Total Volume =					9,869.45 m³

Name Structure : : KD LEPRAK 3					
Type of work : Rip-Rap Boulder					
No.	Description	Calculation	Volume	Unit	Drawing reference
1	MAINDAM APRON SLAB				
	Area =	1642.05 m ²			
	Thickness =	1.00 m'			
	V =	1642.05 m ³			
	Total Volume =		1,642.05	m ³	
Rip-Rap Boulder Total Volume =			1,642.05 m³		

Name Structure :		: KD LEPRAK 3				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing reference	
1	M0					
	Formwork Legth =	9.00 m'				
	Length =	3.50 m'				
	V=	15.75 m ²				
	Total Volume =		15.75	m ²		
2	M1					
	Formwork Legth =	9.00 m'				
	Length =	8.00 m'				
	V=	72.00 m ²				
	Total Volume =		72.00	m ²		
3	M2					
	Formwork Legth =	15.41 m'				
	Length =	4.00 m'				
	V=	48.82 m ²				
	Total Volume =		48.82	m ²		
4	M3					
	Formwork Legth =	23.97 m'				
	Length =	2.75 m'				
	V=	54.15 m ²				
	Total Volume =		54.15	m ²		
5	M4					
	Formwork Legth =	23.97 m'				
	Length =	2.25 m'				
	V=	53.93 m ²				
	Total Volume =		53.93	m ²		
6	M5-M8					
	Formwork Legth =	14.96 m'				
	Length =	130.00 m'				
	V=	1944.80 m ²				
	Total Volume =		1,944.80	m ²		
7	M9					
	Formwork Legth =	23.97 m'				
	Length =	2.25 m'				
	V=	43.80 m ²				
	Total Volume =		43.80	m ²		
8	M10					
	Formwork Legth =	15.41 m'				
	Length =	2.75 m'				
	V=	54.15 m ²				
	Total Volume =		54.15	m ²		
9	M11					
	Formwork Legth =	15.41 m'				
	Length =	4.00 m'				
	V=	61.64 m ²				
	Total Volume =		61.64	m ²		
10	M12					
	Formwork Legth =	9.00 m'				
	Length =	5.00 m'				
	V=	61.03 m ²				
	Total Volume =		61.03	m ²		

Name Structure :		: KD LEPRAK 3				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing reference	
11	M-					
	Formwork Legth =	9.00 m'				
	Length =	5.00 m'				
	V=	45.00 m ²				
	Total Volume =		45.00	m ²		
12	DRIP HOLE WALL					
	Area =	23.75 m ²				
	Volume =	23.75 m ²				
	Drip Hole's Numbers =	14.00 pcs				
	Volume =	665.00 m ³	665.00	m ³		
13	Apron Wall Section C-C					
	Formwork Legth =	25.65 m'				
	Length =	23.11 m'				
	V=	592.87 m ²				
	Total Volume =		592.87	m ²		
14	Apron Wall Section G-G					
	Formwork Legth =	18.57 m'				
	Length =	14.00 m'				
	V=	260.01 m ²				
	Total Volume =		260.01	m ²		
15	Right Buffer Fill Wall					
	Formwork Legth =	26.54 m'				
	Length =	34.00 m'				
	V=	902.36 m ²				
	Total Volume =		902.36	m ²		
16	Left Buffer Fill Wall					
	Formwork Legth =	26.54 m'				
	Length =	87.60 m'				
	V=	2324.91 m ²				
	Total Volume =		2,324.91	m ²		
17	Reduced Drip Hole Volume					
	Drip Hole Area =	3.00 m				
	Drip Hole High =	9.62 m'				
	Numbers of Drip Hole =	14.00 pcs				
	Volume Drip Hole =	404.05 m ³				
	Total Volume =		404.05	m ³		
Exposed Formwork Total Volume =				6,796.17	m²	

Name Structure :		: KD LEPRAK 3					
Type of work		: Non Exposed Formwork					
No.	Description	Calculation	Volume	Unit	Drawing reference		
1	M0						
	Formwork Legth =	4.50	m'				
	Length =	3.50	m'				
	V=	7.88	m ²				
	Total Volume =			7.88	m ²		
2	M1						
	Formwork Legth =	4.50	m'				
	Length =	8.00	m'				
	V=	36.00	m ²				
	Total Volume =			36.00	m ²		
3	M2						
	Formwork Legth =	7.84	m'				
	Length =	4.00	m'				
	V=	24.68	m ³				
	Total Volume =			24.68	m ²		
4	M3						
	Formwork Legth =	12.31	m'				
	Length =	2.75	m'				
	V=	27.71	m ³				
	Total Volume =			27.71	m ²		
5	M4						
	Formwork Legth =	12.31	m'				
	Length =	2.25	m'				
	V=	27.70	m ³				
	Total Volume =			27.70	m ²		
6	M5-M8						
	Formwork Legth =	7.83	m'				
	Length =	130.00	m'				
	V=	1017.41	m ³				
	Total Volume =			1,017.41	m ²		
7	M9						
	Formwork Legth =	12.31	m'				
	Length =	2.25	m'				
	V=	22.65	m ³				
	Total Volume =			22.65	m ²		
8	M10						
	Formwork Legth =	7.84	m'				
	Length =	2.75	m'				
	V=	27.71	m ³				
	Total Volume =			27.71	m ²		
9	M11						
	Formwork Legth =	7.84	m'				
	Length =	4.00	m'				
	V=	31.36	m ³				
	Total Volume =			31.36	m ²		


Name Structure :		: KD LEPRAK 3				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing reference	
10	M12					
	Formwork Legth =	4.50	m'			
	Length =	5.00	m'			
	V=	30.85	m ³			
	Total Volume =			30.85	m ²	
11	M-					
	Formwork Legth =	4.50	m'			
	Length =	5.00	m'			
	V=	22.50	m ³			
	Total Volume =			22.50	m ²	
12	DRIP HOLE WALL					
	Area =	22.16	m ²			
	Volume =	22.16	m ²			
	Drip Hole's Numbers =	14.00	pcs			
	Volume =	620.55	m ²	620.55	m ²	
13	JOINT					
	Area =	38.15	m ²			
	Numbers of formwork =	6.00	pcs			
	Volume =	228.90	m ²			
				228.90	m ²	
14	Reduced Drip Hole Volume					
	Drip Hole Width =	4.00	m			
	Drip Hole Length =	5.03	m'			
	Numbers of drip holes =	14.00	pcs			
	Drip Holes Volume =	281.75	m ²			
	Total Volume =			281.75	m ²	
Non Exposed Formwork Total Volume =					1,844.14	m³


Name Structure :		: KD LEPRAK 3			
Type of work		: Weep Hole			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	Apron Wall Section. C-C				The distance between pipes is 2 m, the number of 1 section is 4 pieces
	Numbers of pipe	46.00 pcs		Kanan Kiri	
	Length 1 Pipe =	3.00 m			
	Length =	23.11 m'			
	Volume =	138.00 m'			
	Total Volume =		138.00	m	
2	Apron Wall Section G-G				The distance between pipes is 2 m, the number of 1 section is 4 pieces
	Numbers of pipe	28.00 pcs			
	Length 1 Pipe =	3.00 m			
	Length =	14.00 m'			
	Volume =	84.00 m'			
	Total Volume =		84.00	m	
3	Right Buffer Fill Wall				The distance between pipes is 2 m, the number of 1 section is 6 pieces
	Numbers of pipe	102.00 pcs			
	Length 1 Pipe =	3.00 m			
	Length =	34.00 m'			
	Volume =	306.00 m'			
	Total Volume =		306.00	m	
4	Left Buffer Fill Wall				The distance between pipes is 2 m, the number of 1 section is 6 pieces
	Numbers of pipe	262.00 pcs			
	Length 1 Pipe =	3.00 m			
	Length =	87.60 m'			
	Volume =	786.00 m'			
	Total Volume =		786.00	m	
Weep Hole Total Volume =			1,314.00	m	

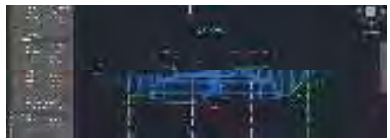



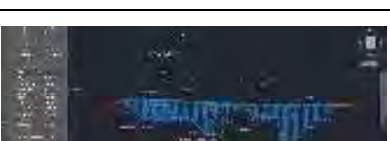


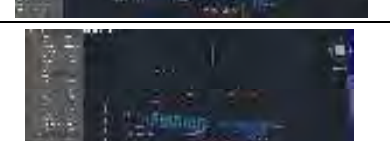
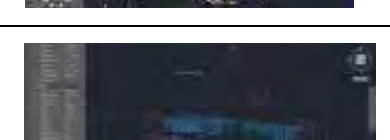
Name Structure :		: KD LEPRAK 3			
Type of work		: Joint Filler			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	JOINT				
	Area =	38.15 m ²			
	Number of Joint =	8.00 pcs			
	Volume =	305.20 m ²			
	Total Volume =		305.20	m ²	
		Joint Filler Total Area =	305.20	m²	
		Thickness =	0.02	m	
		Joint Filler Total Volume =	6.10	m³	




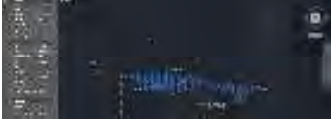
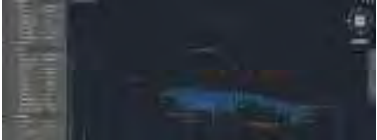





Name Structure :		: KD LEPRAK 3				
Type of work		: Geo Bag, Sandfill & Pump Operation				
No.	Description	Calculation	Volume	Unit	Drawing reference	
1	Number of Geobag =	7.00	Pcs			
	Fill Length =	50.000	m			
	Geobag Length =	2.400	m			
	Number of Geobags Lengthwise =	20.000	Pcs			
	Geo Bag Total Volume =			140.00		Pcs
2	Fill Area =	0.87	m ²			
	Length =	50	m			
	Fill Volume =	43.500	m ³			
	Moving Times =	2.000	Times			
	Total Volume =	87.000	m ³			
	Sand Fill Total Volume =			87.00	m ³	
	Pump Operation					
	Weekly =	2.000				
	Daily =	5.000				
	Hourly =	7.000				
	Total Volume =	Pump Operation Volume =		70.00	Hour	

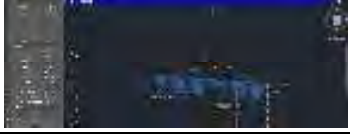

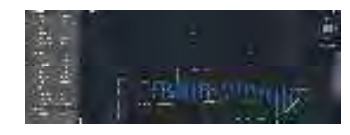


SUMMARY QUANTITY DD LEPRAK 3			
No.	Description	Unit	Volume
1	Stake Out	m2	39,456.17
2	Cross Profile	m	187.00
3	Bowplank	m	1,656.50
4	Mechanical Sand Excavation	m3	288,176.25
5	Sand Backfill	m3	863.23
6	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 200	m3	18,246.83
7	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	10,129.81
8	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	10,129.81
9	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	10,129.81
10	Joint Filler	m3	18.00
11	Weep Hole	m	945.00
12	Geo Bag	Pcs	1,015.00
13	sand Fill	m3	609.00
14	Pump Operation Dewatering	Hour	140.00




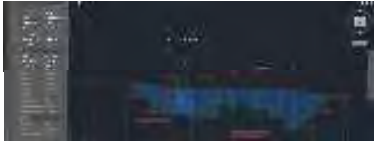
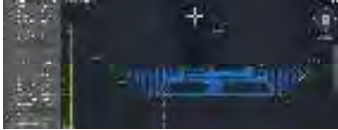
Name Structure : DD Leprak 3					
Type of work : Cross Profile					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Numbers of Section =	34.00	187.00	m	
	Cross Length =	5.50			
	Total		187.00	m	

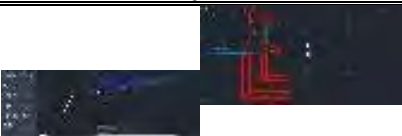

Name Structure : : DD Leprak 3					
Type of work : : Bowplank					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Volume	1656.50	1,656.50	m'	
	Bowplank Total =		1,656.50	m'	



Name Structure :		: DD Leprak 3			
Type of work		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	STA 0+025				
	Area =	465.31	m ²		
	Length =	25.00	m ¹		
	Volume =	11632.75	m ³		
	Total Volume =			11,632.75	
2	STA 0+050				
	Area =	361.20	m ²		
	Length =	25.00	m ¹		
	Volume =	9030.00	m ³		
	Total Volume =			9,030.00	
3	STA 0+075				
	Area =	493.51	m ²		
	Length =	25.00	m ¹		
	Volume =	12337.75	m ³		
	Total Volume =			12,337.75	
4	STA 0+100				
	Area =	447.30	m ²		
	Length =	25.00	m ¹		
	Volume =	11182.50	m ³		
	Total Volume =			11,182.50	
5	STA 0+125				
	Area =	398.73	m ²		
	Length =	25.00	m ¹		
	Volume =	9968.25	m ³		
	Total Volume =			9,968.25	
6	STA 0+150				
	Area =	292.45	m ²		
	Length =	25.00	m ¹		
	Volume =	7311.25	m ³		
	Total Volume =			7,311.25	
7	STA 0+175				
	Area =	256.84	m ²		
	Length =	25.00	m ¹		
	Volume =	6421.00	m ³		
	Total Volume =			6,421.00	
8	STA 0+200				
	Area =	227.79	m ²		
	Length =	25.00	m ¹		
	Volume =	5694.75	m ³		
	Total Volume =			5,694.75	
9	STA 0+225				
	Area =	222.64	m ²		
	Length =	25.00	m ¹		
	Volume =	5566.00	m ³		
	Total Volume =			5,566.00	

Name Structure :		: DD Leprak 3			
Type of work		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
10	STA 0+250				
	Area =	316.23 m ²			
	Length =	25.00 m ¹			
	Volume =	7905.75 m ³			
	Total Volume =		7,905.75	m ³	
11	STA 0+275				
	Area =	376.28 m ²			
	Length =	25.00 m ¹			
	Volume =	9407.00 m ³			
	Total Volume =		9,407.00	m ³	
12	STA 0+300				
	Area =	312.93 m ²			
	Length =	25.00 m ¹			
	Volume =	7823.25 m ³			
	Total Volume =		7,823.25	m ³	
13	STA 0+325				
	Area =	260.95 m ²			
	Length =	25.00 m ¹			
	Volume =	6523.75 m ³			
	Total Volume =		6,523.75	m ³	
14	STA 0+350				
	Area =	257.14 m ²			
	Length =	25.00 m ¹			
	Volume =	6428.50 m ³			
	Total Volume =		6,428.50	m ³	
15	STA 0+375				
	Area =	264.62 m ²			
	Length =	25.00 m ¹			
	Volume =	6615.50 m ³			
	Total Volume =		6,615.50	m ³	
16	STA 0+400				
	Area =	275.98 m ²			
	Length =	25.00 m ¹			
	Volume =	6899.50 m ³			
	Total Volume =		6,899.50	m ³	
17	STA 0+425				
	Area =	324.69 m ²			
	Length =	25.00 m ¹			
	Volume =	8117.25 m ³			
	Total Volume =		8,117.25	m ³	
18	STA 0+450				
	Area =	350.02 m ²			
	Length =	25.00 m ¹			
	Volume =	8750.50 m ³			
	Total Volume =		8,750.50	m ³	
19	STA 0+475				
	Area =	352.29 m ²			
	Length =	25.00 m ¹			
	Volume =	8807.25 m ³			
	Total Volume =		8,807.25	m ³	

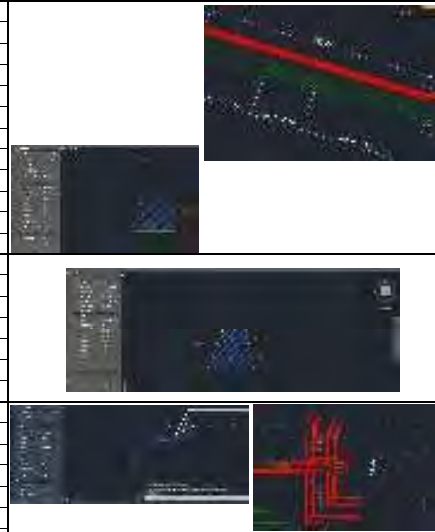
Name Structure :		DD Leprak 3			
Type of work :		Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
20	STA 0+500				
	Area =	344.73 m ²			
	Length =	25.00 m ¹			
	Volume =	8618.25 m ³			
	Total Volume =		8,618.25	m ³	
21	STA 0+525				
	Area =	343.63 m ²			
	Length =	25.00 m ¹			
	Volume =	8590.75 m ³			
	Total Volume =		8,590.75	m ³	
22	STA 0+550				
	Area =	291.95 m ²			
	Length =	25.00 m ¹			
	Volume =	7298.75 m ³			
	Total Volume =		7,298.75	m ³	
23	STA 0+575				
	Area =	240.66 m ²			
	Length =	25.00 m ¹			
	Volume =	6016.50 m ³			
	Total Volume =		6,016.50	m ³	
24	STA 0+600				
	Area =	258.59 m ²			
	Length =	25.00 m ¹			
	Volume =	6464.75 m ³			
	Total Volume =		6,464.75	m ³	
25	STA 0+625				
	Area =	368.86 m ²			
	Length =	25.00 m ¹			
	Volume =	9221.50 m ³			
	Total Volume =		9,221.50	m ³	
26	STA 0+650				
	Area =	414.26 m ²			
	Length =	25.00 m ¹			
	Volume =	10356.50 m ³			
	Total Volume =		10,356.50	m ³	
27	STA 0+675				
	Area =	395.32 m ²			
	Length =	25.00 m ¹			
	Volume =	9883.00 m ³			
	Total Volume =		9,883.00	m ³	
28	STA 0+700				
	Area =	285.77 m ²			
	Length =	25.00 m ¹			
	Volume =	7144.25 m ³			
	Total Volume =		7,144.25	m ³	
29	STA 0+725				
	Area =	287.00 m ²			
	Length =	25.00 m ¹			
	Volume =	7175.00 m ³			
	Total Volume =		7,175.00	m ³	







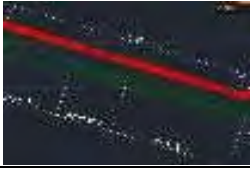
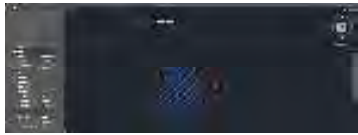



Name Structure :		: DD Leprak 3			
Type of work		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
30	STA 0+750				
	Area =	382.65 m ²			
	Length =	25.00 m ¹			
	Volume =	9566.25 m ³			
	Total Volume =		9,566.25	m ³	
31	STA 0+775				
	Area =	355.55 m ²			
	Length =	25.00 m ¹			
	Volume =	8888.75 m ³			
	Total Volume =		8,888.75	m ³	
32	STA 0+800				
	Area =	391.59 m ²			
	Length =	25.00 m ¹			
	Volume =	9789.75 m ³			
	Total Volume =		9,789.75	m ³	
33	STA 0+825				
	Area =	401.02 m ²			
	Length =	25.00 m ¹			
	Volume =	10025.50 m ³			
	Total Volume =		10,025.50	m ³	
34	STA 0+850				
	Area =	508.57 m ²			
	Length =	25.00 m ¹			
	Volume =	12714.25 m ³			
	Total Volume =		12,714.25	m ³	
Sand Excavation Total Volume =					288,176.25 m³

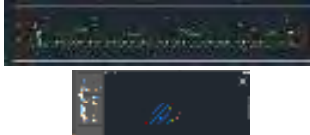
Name Structure :		: DD Leprak 3			
Type of work		: Backfill			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	LEFT WING				
	Area =	35.78 m ²			
	Length =	23.00 m'			
	Volume =	822.96 m ³			
	Total Volume =		822.96	m ³	
4	RIGHT WING				
	Area =	1.75 m ²			
	Length =	23.00 m'			
	Volume =	40.27 m ³			
	Total Volume =		40.27	m ³	
Backfill Total Volume =			863.23	m³	





Name Structure :		: DD Leprak 3			
Type of work		: K-225 Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	TYPE A (RIGHT WING)				
	Area =	14.36 m ²			
	Length =	44.00 m'			
	Volume =	631.94 m ³			
	Total Volume =		631.94	m ³	
2	TYPE A SABO DAM				
	Area =	22.50 m ²			
	Length =	316.62 m'			
	Volume =	7123.95 m ³			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	7.20 m ²			
	Drip Holes Width =	3.00 m'			
	Numbers of Drip Hole =	27.00 pcs			
	Volume Drip Hole =	583.20 m ³			
	Total Volume =		6,540.75	m ³	
3	TYPE A SABO DAM				
	Area =	22.50 m ²			
	Length =	191.40 m'			
	Volume =	4306.50 m ³			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	7.20 m ²			
	Drip Holes Width =	3.00 m'			
	Numbers of Drip Hole =	21.00 pcs			
	Volume Drip Hole =	453.60 m ³			
	Total Volume =		3,852.90	m ³	

4	TYPE ABC SABO DAM					
	Area =	22.50	m ²			
	Length =	265.26	m'			
	Volume =	5968.35	m ³			
	Reduced by Drip Hole Volume					
	Drip Holes Area =	7.20	m ²			
	Drip Holes Width =	3.00	m'			
	Numbers of Drip Hole =	28.00	pcs			
	Volume Drip Hole =	604.80	m ³			
	Total Volume =			5,363.55	m ³	
5	BODY SABO DAM RIGHT BANK					
	Area =	22.50	m ²			
	Length =	54.88	m'			
	Volume =	1234.80	m ³			
	Total Volume =			1,234.80	m ³	
6	TYPE A (LEFT WING)					
	Area =	14.36	m ²			
	Length =	43.37	m'			
	Volume =	622.89	m ³			
	Total Volume =			622.89	m ³	
				K-225 Concrete Total Volume =	18,246.83	m³



Name Structure :		: DD Leprak 3					
Type of work		: Exposed Formwork					
No.	Description	Calculation	Volume	Unit	Drawing Reference		
1	TYPE A (RIGHT WING)						
	Formwork Length =	15.31	m'				
	Length =	44.00	m'				
	Volume =	673.64	m ²				
	Total Volume =			673.64			m ²
2	TYPE A SABO DAM						
	Formwork Length =	10.49	m'				
	Length =	316.62	m'				
	Volume =	3321.34	m ²				
	Reduced by Drip Hole Volume						
	Drip Holes Area =	3.00	m'				
	Drip Holes Height =	4.19	m'				
	Numbers of Drip Hole =	27.00	pcs				
Volume Drip Hole =	339.39	m ²					
Total Volume =			2,981.95	m ²			
3	TYPE A SABO DAM						
	Formwork Length =	10.49	m'				
	Length =	191.40	m'				
	Volume =	2007.79	m ²				
	Reduced by Drip Hole Volume						
	Drip Holes Area =	3.00	m'				
	Drip Holes Height =	4.19	m'				
	Numbers of Drip Hole =	21.00	pcs				
Volume Drip Hole =	263.97	m ²					
Total Volume =			1,743.82	m ²			
4	TYPE ABC SABO DAM						
	Formwork Length =	10.49	m'				
	Length =	265.26	m'				
	Volume =	2782.58	m ²				
	Reduced by Drip Hole Volume						
	Drip Holes Area =	3.00	m'				
	Drip Holes Height =	4.19	m'				
	Numbers of Drip Hole =	28.00	pcs				
Volume Drip Hole =	351.96	m ²					
Total Volume =			2,430.62	m ²			
5	BODY SABO DAM RIGHT BANK						
	Formwork Length =	10.49	m ²				
	Length =	54.88	m'				
	Volume =	575.69	m ³				
Total Volume =			575.69	m ³			
6	DRIP HOLE						
	Formwork Area =	7.00	m ²				
	1 Drip Hole need =	2.00	side				
	Total drip hole =	76.00	pcs				
Volume =	1064.00	m ²	1,064.00	m ²			
5	TYPE A (LEFT WING)						
	Formwork Length =	15.22	m'				
	Length =	43.37	m'				
	Volume =	660.09	m ²				
	Total Volume =			660.09			m ²
Exposed Formwork Total Volume =					10,129.81	m²	

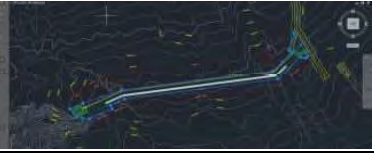
Name Structure : : DD Leprak 3					
Type of work : Joint Filler					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	JOINT				
	Area =	22.50 m ²			
	Number of joint =	40.00 pcs			
	Volume =	900.00 m ²			
	Total Volume =		900.00	m ²	
			Joint Filler Total Volume =	900.00	m2
			Thickness =	0.02	m
			Total volume =	18.00	m3

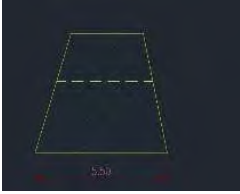
Name Structure :		: DD Leprak 3			
Type of work		: Weep Hole			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Left wing				Distance between pipes 2 m, number of 1 section 2 pieces
	Numbers of pipe =	236.00 pcs		Left-Right	 
	Length 1 Pipe	3.00 m			
	Length =	236.66 m'			
	Volume =	708.00 m ³			
	Total Volume =		708.00	m	
2	Right Wing				Distance between pipes 2 m, number of 1 section 2 pieces
	Numbers of pipe =	79.00 Buah			 
	Length 1 Pipe	3.00 m			
	Length =	79.10 m'			
	Volume =	237.00 m ³			
	Total Volume =		237.00	m	
Weephole Total volume =			945.00	m	

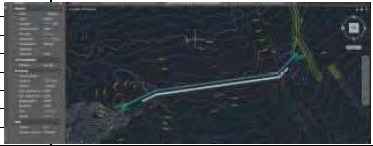
Name Structure : DD LEPRAK 3
 Type of work : Geo Bag, Sandfill & Pump Operation

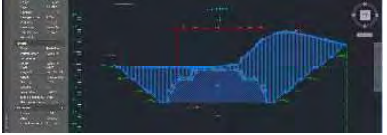
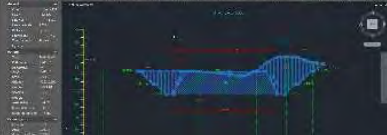







No.	Description	Calculation	Volume	Unit	Drawing reference
1	Number of Geobag =	7.00		Pcs	
	Fill Length =	350.000		m	
	Geobag Length =	2.400		m	
	Number of Geobags				
	Lengthwise =	145.000		Pcs	
		Geo Bag Total Volume =	1,015.00	Pcs	
2	Fill Area =	0.87		m ²	
	Length =	350		m	
	Fill Volume =	304.500		m ³	
	Moving Times =	2.000		Times	
	Total Volume =	609.000		m ³	
		Sand Fill Total Volume =	609.00	m³	
	Pump Operation				
	Weekly =	4.000			
	Daily =	5.000			
	Hourly =	7.000			
	Total Volume =	Pump Operation Volume =	140.00	Hour	

SUMMARY OF QUANTITY DD LEPRAK 2			
No.	Description	Unit	Volume
1	Stake Out	m2	38,958.53
2	Cross Profile	m	209.00
3	Bowplank	m	852.61
4	Mechanical Sand Excavation	m3	446,876.25
5	Sand Backfill	m3	20,106.86
6	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	17,798.43
7	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	18,328.23
8	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	18,328.23
9	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	18,328.23
10	Joint Filler	m3	14.45
11	Weep Hole	m	828.00
12	GeoBag		1,162.00
13	Sandfill		696.00
14	Pump Operation Dewatering		140.00

Name Structure : DD Leprak 2					
Type of work : Stake Out					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =				
		38958.53	38,958.53	m ²	
	Total Area Stake Out		38,958.53	m ²	

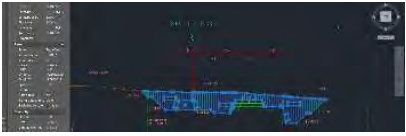






Name Structure : : DD Leprak 2					
Type of work : : Cross Profile					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Numbers of Section =	38.00	209.00	m	
	Cross Length =	5.50			
	Total		209.00	m	

Name Structure : : DD Leprak 2					
Type of work : : Bowplank					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Volume	852.61	852.61	m'	
	Bowplank Total =		852.61	m'	

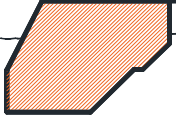
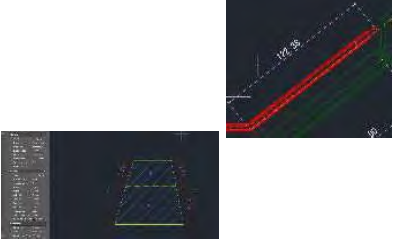
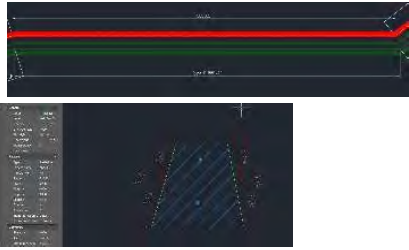
Name Structure :		: DD Leprak 2			
Type of work		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	STA 0+050				
		Luas = 1319.04	m ²		
		Panjang = 25.00	m'		
		Volume = 32976.00	m ³		
		Total Volume =		32,976.00	
2	STA 0+075				
		Luas = 617.56	m ²		
		Panjang = 25.00	m'		
		Volume = 15439.00	m ³		
		Total Volume =		15,439.00	
3	STA 0+100				
		Luas = 468.43	m ²		
		Panjang = 25.00	m'		
		Volume = 11710.80	m ³		
		Total Volume =		11,710.80	
4	STA 0+125				
		Luas = 304.15	m ²		
		Panjang = 25.00	m'		
		Volume = 7603.63	m ³		
		Total Volume =		7,603.63	
5	STA 0+150				
		Luas = 191.07	m ²		
		Panjang = 25.00	m'		
		Volume = 4776.70	m ³		
		Total Volume =		4,776.70	
6	STA 0+175				
		Luas = 157.07	m ²		
		Panjang = 25.00	m'		
		Volume = 3926.78	m ³		
		Total Volume =		3,926.78	
7	STA 0+200				
		Luas = 303.84	m ²		
		Panjang = 25.00	m'		
		Volume = 7596.05	m ³		
		Total Volume =		7,596.05	
8	STA 0+225				
		Luas = 441.32	m ²		
		Panjang = 25.00	m'		
		Volume = 11032.90	m ³		
		Total Volume =		11,032.90	
9	STA 0+250				
		Luas = 521.04	m ²		
		Panjang = 25.00	m'		
		Volume = 13025.88	m ³		
		Total Volume =		13,025.88	

10	STA 0+275	Luas = 536.70 m ²				
		Panjang = 25.00 m'				
		Volume = 13417.53 m ³				
		Total Volume =		13,417.53	m ³	
11	STA 0+300	Luas = 537.60 m ²				
		Panjang = 25.00 m'				
		Volume = 13440.10 m ³				
		Total Volume =		13,440.10	m ³	
12	STA 0+325	Luas = 521.12 m ²				
		Panjang = 25.00 m'				
		Volume = 13028.10 m ³				
		Total Volume =		13,028.10	m ³	
13	STA 0+350	Luas = 476.54 m ²				
		Panjang = 25.00 m'				
		Volume = 11913.40 m ³				
		Total Volume =		11,913.40	m ³	
14	STA 0+375	Luas = 514.28 m ²				
		Panjang = 25.00 m'				
		Volume = 12856.98 m ³				
		Total Volume =		12,856.98	m ³	
15	STA 0+400	Luas = 528.43 m ²				
		Panjang = 25.00 m'				
		Volume = 13210.78 m ³				
		Total Volume =		13,210.78	m ³	
16	STA 0+425	Luas = 553.35 m ²				
		Panjang = 25.00 m'				
		Volume = 13833.83 m ³				
		Total Volume =		13,833.83	m ³	
17	STA 0+450	Luas = 567.86 m ²				
		Panjang = 25.00 m'				
		Volume = 14196.53 m ³				
		Total Volume =		14,196.53	m ³	
18	STA 0+475	Luas = 576.06 m ²				
		Panjang = 25.00 m'				
		Volume = 14401.58 m ³				
		Total Volume =		14,401.58	m ³	
19	STA 0+500	Luas = 578.23 m ²				
		Panjang = 25.00 m'				
		Volume = 14455.80 m ³				
		Total Volume =		14,455.80	m ³	

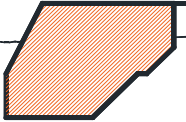
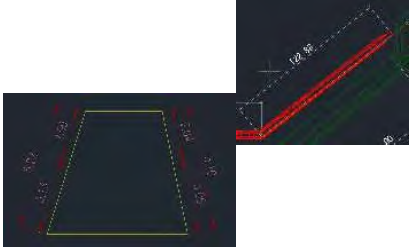
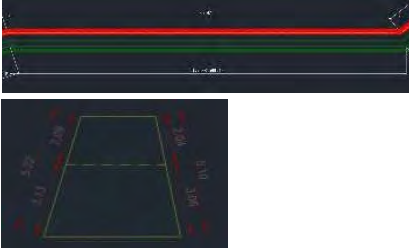
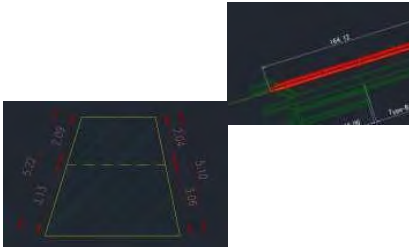
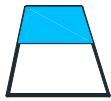

20	STA 0+525									
		Luas = 610.08	m ²							
		Panjang = 25.00	m'							
		Volume = 15251.95	m ³							
		Total Volume =				15,251.95		m ³		
21	STA 0+550									
		Luas = 569.81	m ²							
		Panjang = 25.00	m'							
		Volume = 14245.33	m ³							
		Total Volume =				14,245.33		m ³		
22	STA 0+575									
		Luas = 574.88	m ²							
		Panjang = 25.00	m'							
		Volume = 14372.08	m ³							
		Total Volume =				14,372.08		m ³		
23	STA 0+600									
		Luas = 551.99	m ²							
		Panjang = 25.00	m'							
		Volume = 13799.85	m ³							
		Total Volume =				13,799.85		m ³		
24	STA 0+625									
		Luas = 542.16	m ²							
		Panjang = 25.00	m'							
		Volume = 13554.00	m ³							
		Total Volume =				13,554.00		m ³		
25	STA 0+650									
		Luas = 502.32	m ²							
		Panjang = 25.00	m'							
		Volume = 12558.03	m ³							
		Total Volume =				12,558.03		m ³		
26	STA 0+675									
		Luas = 475.28	m ²							
		Panjang = 25.00	m'							
		Volume = 11882.08	m ³							
		Total Volume =				11,882.08		m ³		
27	STA 0+700									
		Luas = 472.05	m ²							
		Panjang = 25.00	m'							
		Volume = 11801.13	m ³							
		Total Volume =				11,801.13		m ³		
28	STA 0+725									
		Luas = 429.83	m ²							
		Panjang = 25.00	m'							
		Volume = 10745.80	m ³							
		Total Volume =				10,745.80		m ³		
29	STA 0+750									
		Luas = 347.60	m ²							
		Panjang = 25.00	m'							
		Volume = 8689.90	m ³							
		Total Volume =				8,689.90		m ³		

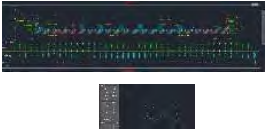
30	STA 0+775									
		Luas =	221.43	m ²						
		Panjang =	25.00	m'						
		Volume =	5535.65	m ³						
		Total Volume =					5,535.65	m ³		
31	STA 0+800									
		Luas =	260.56	m ²						
		Panjang =	25.00	m'						
		Volume =	6514.00	m ³						
		Total Volume =					6,514.00	m ³		
32	STA 0+825									
		Luas =	303.96	m ²						
		Panjang =	25.00	m'						
		Volume =	7599.10	m ³						
		Total Volume =					7,599.10	m ³		
33	STA 0+850									
		Luas =	362.23	m ²						
		Panjang =	25.00	m'						
		Volume =	9055.63	m ³						
		Total Volume =					9,055.63	m ³		
34	STA 0+875									
		Luas =	410.39	m ²						
		Panjang =	25.00	m'						
		Volume =	10259.78	m ³						
		Total Volume =					10,259.78	m ³		
35	STA 0+900									
		Luas =	559.17	m ²						
		Panjang =	25.00	m'						
		Volume =	13979.23	m ³						
		Total Volume =					13,979.23	m ³		
36	STA 0+925									
		Luas =	967.62	m ²						
		Panjang =	25.00	m'						
		Volume =	24190.43	m ³						
		Total Volume =					24,190.43	m ³		
37	STA 0+950									
		Luas =	0.00	m ²						
		Panjang =	25.00	m'						
		Volume =	0.00	m ³						
		Total Volume =					-	m ³		
38	STA 0+975									
		Luas =	0.00	m ²						
		Panjang =	25.00	m'						
		Volume =	0.00	m ³						
		Total Volume =					-	m ³		
							Sand Excavation Total Volume =	446,876.25	m³	



Name Structure :		DD Leprak 2			
Type of work :		Backfill			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	LESFT WING				
	Area =	288.80	m ²		
	Length =	38.41	m'		
	Volume =	11092.87	m ³		
	Total Volume =			11,092.87	
4	RIGHT WING				
	Area =	269.88	m ²		
	Length =	33.40	m'		
	Volume =	9013.99	m ³		
	Total Volume =			9,013.99	
Backfill Total Volume =			20,106.86	m³	

Name Structure :		: DD Leprak 2				
Type of work :		: K-225 Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
1	TYPE A (LEFT WING)					
	Area =	187.50 m ²				
	Sabo Dam Width =	5.50 m ¹				
	Volume =	1031.25 m ³				
	Total Volume =		1,031.25	m ³		
2	TYPE A SABO DAM					
	Area =	21.25 m ²				
	Length =	104.38 m ¹				
	Volume =	2218.08 m ³				
	Reduced by Drip Hole Volume					
	Drip Holes Area =	7.00 m ²				
	Drip Holes Width =	3.00 m ¹				
	Numbers of Drip Hole =	5.00 pcs				
	Volume Drip Hole =	105.00 m ³				
	Total Volume =		2,113.08	m ³		
2	TYPE B SABO DAM					
	Area =	21.25 m ²				
	Length =	565.62 m ¹				
	Volume =	12019.43 m ³				
	Reduced by Drip Hole Volume					
	Drip Holes Area =	7.00 m ²				
	Drip Holes Width =	3.00 m ¹				
	Numbers of Drip Hole =	55.00 pcs				
	Volume Drip Hole =	1155.00 m ³				
	Total Volume =		10,864.43	m ³		

No.	Description	Calculation	Volume	Unit	Drawing Reference
3	TYPE B SABO DAM				
	Area =	21.25 m ²			
	Length =	145.62 m ¹			
	Volume =	3094.43 m ³			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	7.00 m ²			
	Drip Holes Width =	3.00 m ¹			
	Numbers of Drip Hole =	16.00 pcs			
	Volume Drip Hole =	336.00 m ³			
	Total Volume =		2,758.43	m ³	
4	TYPE A (RIGHT WING)				
	Area =	187.50 m ²			
	Sabo Dam Width =	5.50 m ¹			
	Volume =	1031.25 m ³			
	Total Volume =		1,031.25	m ³	
K-225 Concrete Total Volume =			17,798.43	m³	

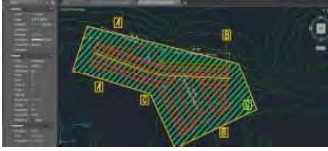
Name Structure :		: DD Leprak 2			
Type of work		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	TYPE A (LEFT WING)				
	Area =	187.50 m'			
	Sabo Dam Width =	26.32 m'			
	Volume =	4934.81 m ²			
	Total Volume =		4,934.81	m ²	
2	TYPE A SABO DAM				
	Area =	10.32 m ²			
	Length =	96.56 m'			
	Volume =	996.41 m ²			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	3.00 m'			
	Drip Holes Height =	4.13 m'			
	Numbers of Drip Hole =	5.00 pcs			
	Volume Drip Hole =	61.91 m ²			
	Total Volume =		934.50	m ²	
2	TYPE B SABO DAM				
	Area =	10.32 m ²			
	Length =	565.62 m'			
	Volume =	5836.63 m ²			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	3.00 m'			
	Drip Holes Height =	4.13 m'			
	Numbers of Drip Hole =	55.00 pcs			
	Volume Drip Hole =	681.05 m ²			
	Total Volume =		5,155.58	m ²	
3	TYPE B SABO DAM				
	Area =	10.32 m ²			
	Length =	145.62 m'			
	Volume =	1502.65 m ²			
	Reduced by Drip Hole Volume				
	Drip Holes Area =	3.00 m'			
	Drip Holes Height =	4.13 m'			
	Numbers of Drip Hole =	16.00 pcs			
	Volume Drip Hole =	198.12 m ²			
	Total Volume =		1,304.53	m ²	
4	DRIP HOLE				
	Formwork Area =	7.00 m ²			
	1 Drip Hole need =	2.00 side			
	Total drip hole =	76.00 pcs			
	Volume =	1064.00 m ²	1,064.00	m ²	
5	TYPE A (RIGHT WING)				
	Area =	187.50 m'			
	Sabo Dam Width =	26.32 m'			
	Volume =	4934.81 m ²			
	Total Volume =		4,934.81	m ²	
Exposed Formwork Total Volume =			18,328.23	m²	

Name Structure : : DD Leprak 2					
Type of work : Joint Filler					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	JOINT				
	Area =	21.25 m ²			
	Number of joint =	34.00 pcs			
	Volume =	722.50 m ²			
	Total Volume =		722.50	m ²	
			Joint Filler Total Volume =	722.50	m2
			Thickness =	0.02	m
			Total volume =	14.45	m3

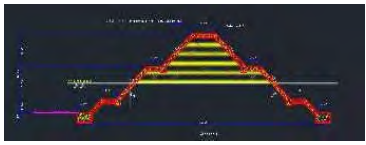
Name Structure : DD Leprak 2					
Type of work : Weep Hole					
No.	Uraian	Perhitungan	Volume	sat.	Gambar
1	Left wing				Distance between pipes 2 m, number of 1 section 2 pieces
	Numbers of pipe =	156.00 pcs		Left-Right	
	Length 1 Pipe	3.00 m			
	Length =	156.90 m'			
	Volume =	468.00 m'			
	Total Volume =		468.00	m	
2	Right Wing				Distance between pipes 2 m, number of 1 section 2 pieces
	Numbers of pipe =	120.00 Bush			
	Length 1 Pipe	3.00 m			
	Length =	120.82 m'			
	Volume =	360.00 m ³			
	Total Volume =		360.00	m	
Weephole Total volume =			828.00	m	

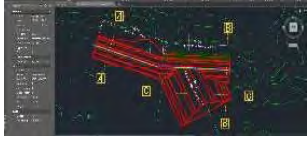
Name Structure :		: DD LEPRAK 2			
Type of work :		: Geo Bag, Sandfill & Pump Operation			
No.	Description	Calculation	Volume	Unit	Drawing reference
1	Number of Geobag =	7.00		Pcs	
	Fill Length =	400.000		m	
	Geobag Length =	2.400		m	
	Number of Geobags Lengthwise =	166.000		Pcs	
		Geo Bag Total Volume =	1,162.00	Pcs	
2	Fill Area =	0.87		m ²	
	Length =	400		m	
	Fill Volume =	348.000		m ³	
	Moving Times =	2.000		Times	
	Total Volume =	696.000		m ³	
		Sand Fill Total Volume =	696.00	m³	
	Pump Operation Weekly =	4.000			
	Daily =	5.000			
	Hourly =	7.000			
	Total Volume =	Pump Operation Volume =	140.00	Hour	


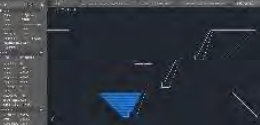

SUMMARY QUANTITY DIKE LEPRAK UPPER DIVERSION			
No.	Description	Unit	Volume
1	Stake Out Trace of New Infrastructure & Wooden Stakes (Raft 5/7) Length 1 m	m2	5,460.00
2	1 m Excavation Cross Profile	m	218.40
3	Bowplank	m	260.00
4	Mechanical Sand Excavation	m3	5,372.50
5	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	3,481.80
6	Cyclops Concrete 60% Concrete $f_c' 15$ Mpa: 40% Split Stone, with Concrete Pump (CP)	m3	9,435.29
7	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	3,858.86
8	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	3,079.13
9	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	6,937.99
10	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	3,858.86
11	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	3,079.13
12	Joint Filler	m3	3.37


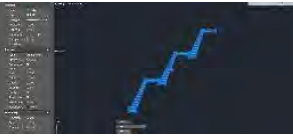

Name Structure : : Dike Leprak Upper Diversion					
Type of work : Stake Out					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	5,460.00	5,460.00	m ²	
	Total Area Stake Out		5,460.00	m ²	

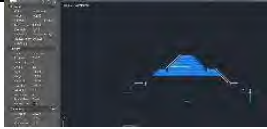


Name Structure : : Dike Leprak Upper Diversion
 Type of work : Cross Profile




No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Dike span =	43.68 <i>m</i>			
	Measure each section =	5.00 section	218.40	m	
	Total		218.40	m	




Name Structure : : Dike Leprak Upper Diversion					
Type of work : Bowplank					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Around Area =	260.00	260.00	m	
	Total Area Bowplank		260.00	m'	

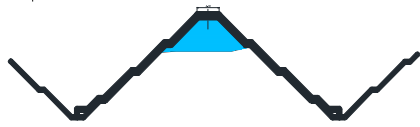

Name Structure :		: Dike Leprak Upper Diversion				
Type of work		: Sand Excavation				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
1	No. 0	Area = 100.75	m ²			
		Length = 30.00	m			
		Volume = 3022.50	m ³			
		Total Volume =		3,022.50		m ³
2	No. 1	Area = 23.50	m ²			
		Length = 50.00	m			
		Volume = 1175.00	m ³			
		Total Volume =		1,175.00		m ³
3	No. 2	Area = 23.50	m ²			
		Length = 50.00	m			
		Volume = 1175.00	m ³			
		Total Volume =		1,175.00		m ³
Excavation Total Volume =			5,372.50	m³		

Name Structure :		: Dike Leprak Upper Diversion			
Type of work		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	No. 0	Area = 33.96 m ²			
		Length = 30.00 m'			
		Volume = 1018.70 m ³			
		Total Volume =	1,018.70	m ³	
2	No. 1	Area = 24.63 m ²			
		Length = 50.00 m'			
		Volume = 1231.55 m ³			
		Total Volume =	1,231.55	m ³	
3	No. 2	Area = 24.63 m ²			
		Length = 50.00 m'			
		Volume = 1231.55 m ³			
		Total Volume =	1,231.55	m ³	
K-225 Concrete Total Volume =			3,481.80	m³	

Name Structure :		: Dike Leprak Upper Diversion				
Type of work		: Cyclop Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
1	No. 0	Area =	82.47	m ²		
		Length =	30.00	m		
		Volume =	2474.15	m ³		
		Total Volume =		2,474.15		m ³
2	No. 1	Area =	84.13	m ²		
		Length =	50.00	m		
		Volume =	4206.40	m ³		
		Total Volume =		4,206.40		m ³
3	No. 2	Area =	55.09	m ²		
		Length =	50.00	m		
		Volume =	2754.74	m ³		
		Total Volume =		2,754.74		m ³
Cyclop Concrete Total Volume =			9,435.29	m³		

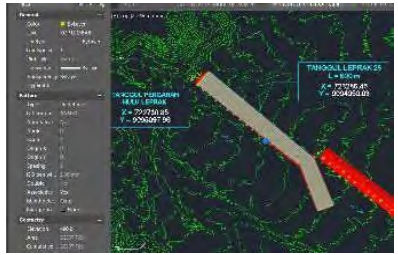
Name Structure :		: Dike Leprak Upper Diversion			
Type of work		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	No. 0				
	Formwork Length =	36.94 m			
	Length =	30.00 m ¹			
	Volume =	1108.20 m ²			
	Total Volume =		1,108.20	m ²	
2	No. 1				
	Formwork Length =	27.51 m			
	Length =	50.00 m ¹			
	Volume =	1375.33 m ³			
	Total Volume =		1,375.33	m ²	
3	No. 2				
	Formwork Length =	27.51 m ²			
	Length =	50.00 m ¹			
	Volume =	1375.33 m ³			
	Total Volume =		1,375.33	m ²	
Exposed Formwork Total Volume =			3,858.86	m ²	

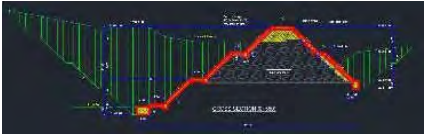
Name Structure :		: Dike Leprak Upper Diversion				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
1	No. 0	Formwork Length =	31.31	m		
		Length =	30.00	m ²		
		Volume =	939.41	m ³		
		Total Volume =		939.41		m ³
2	No. 1	Formwork Length =	21.40	m		
		Length =	50.00	m ²		
		Volume =	1069.86	m ³		
		Total Volume =		1,069.86		m ³
3	No. 2	Formwork Length =	21.40	m ²		
		Length =	50.00	m ²		
		Volume =	1069.86	m ³		
		Total Volume =		1,069.86		m ³
Non Exposed Formwork Total Volume =			3,079.13	m³		

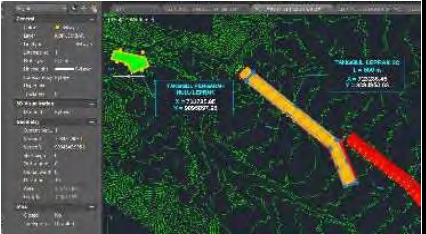
Name Structure :		: Dike Leprak Upper Diversion			
Type of work		: Joint Filler			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Bekisting Joint No. 1				Asumsi Joint per 25 m an 
	Area =	84.13 m ²			
	Volume =	84.13 m ³			
	Total Volume =		84.13	m ²	
2	Bekisting Joint No. 2				Asumsi Joint per 25 m an 
	Area =	84.13 m ²			
	Volume =	84.13 m ³			
	Total Volume =		84.13	m ²	
			Joint Filler Total Volume =	168.26	m ³
			Joint Filler Thickness =	0.02	m
			Joint Filler Total Volume =	3.37	m ²

LEPRAK 26 DIKE QUANTITY SUMMARY			
No.	Description	Unit	Volume
1	Stake Out Trace of New Infrastructure & Wooden Stakes (Raft 5/7) Length 1 m	m2	26,307.77
2	1 m Excavation Cross Profile	m	916.80
3	Bowplank	m	1,200
4	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	19,075.48
5	Cyclops Concrete 60% Concrete $f_c' 15$ Mpa: 40% Split Stone, with Concrete Pump (CP)	m3	9,395.16
6	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	24,327.28
7	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	31,676.78
8	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	24,327.28
9	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	7,349.50
10	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	7,349.50
11	Mechanical Sand Excavation	m3	230,439.15
12	Geotextile	m2	11,100.00

Name Structure : Dike Leprak 26
 Type of work : Stake Out

No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	26307.77	26,307.77	m ²	
		Stake Out Total Volume =	26,307.77	m ²	

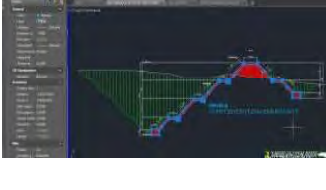



Name Structure :		: Dike Leprak 26			
Type of work		: Cross Profile			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Dike span =	38.20			
	Measure each section =	24.00	916.80	m	
		Cross Profile Total Volume =	916.80	m	

Name Structure :		: Dike Leprak 26			
Type of work		: Bowplank			
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Profile Length =	1156.00	1,200.00	m	
	Cross Section Length =	44.00			
		Bowplank Total Volume =	1,200.00	m'	

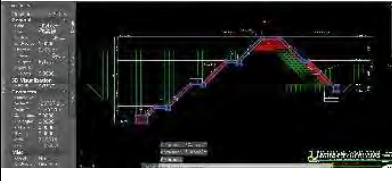
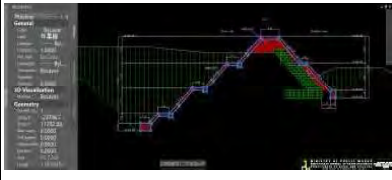
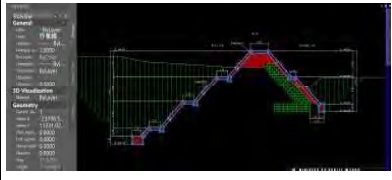

Name Structure :		: Dike Leprak 26					
Type of work :		: Sand Excavation					
No.	Description	Calculation	Volume	Unit	Drawing Reference		
0	Area = Length =	470.42 25,000 $V = (470,42) / 2 \times 25,00$	5,880.25	m ³			
1	Area = Length =	459.19 25,000 $V = (470,42 + 459,19) / 2 \times 25,00$	11,620.13	m ³			
2	Area = Length =	497.81 25,00 $V = (497,81 + 497,81) / 2 \times 25,00$	12,445.25	m ³			
3	Area = Length =	476.24 25,00 $V = (497,81 + 476,24) / 2 \times 25,00$	12,175.63	m ³			
4	Area = Length =	401.73 25,00 $V = (476,24 + 401,73) / 2 \times 25,00$	10,974.63	m ³			
5	Area = Length =	419.55 25,00 $V = (401,73 + 419,55) / 2 \times 25,00$	10,266.00	m ³			
6	Area = Length =	365.50 25,00 $V = (419,55 + 365,50) / 2 \times 25,00$	9,813.11	m ³			
7	Area = Length =	343.68 25,00 $V = (365,50 + 343,68) / 2 \times 25,00$	8,864.73	m ³			
8	Area = Length =	358.17 25,00 $V = (343,68 + 358,17) / 2 \times 25,00$	8,773.13	m ³			
9	Area = Length =	344.10 25,00 $V = (358,17 + 344,10) / 2 \times 25,00$	8,778.38	m ³			
10	Area = Length =	335.77 25,00 $V = (344,10 + 335,77) / 2 \times 25,00$	8,498.38	m ³			
11	Area = Length =	344.25 25,00 $V = (335,77 + 344,25) / 2 \times 25,00$	8,500.25	m ³			
12	Area = Length =	370.00 25,00 $V = (344,25 + 370,00) / 2 \times 25,00$	8,928.13	m ³			
13	Area = Length =	389.10 25,00 $V = (370,00 + 389,10) / 2 \times 25,00$	9,488.75	m ³			
14	Area = Length =	412.62 25,00 $V = (389,10 + 412,62) / 2 \times 25,00$	10,021.50	m ³			


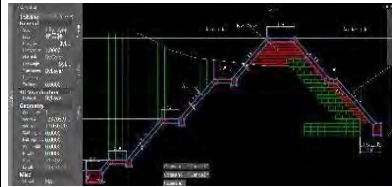


15	Area =	414.36				
	Length =	25.00				
	V=	$(412.62 + 414.36) / 2 \times 25.00$		10,337.25	m³	
16	Area =	445.84				
	Length =	25.00				
	V=	$(414.36 + 445.84) / 2 \times 25.00$		10,752.50	m³	
17	Area =	486.93				
	Length =	25.00				
	V=	$(445.84 + 486.93) / 2 \times 25.00$		11,659.63	m³	
18	Area =	478.54				
	Length =	25.00				
	V=	$(486.93 + 478.54) / 2 \times 25.00$		12,068.38	m³	
19	Area =	431.52				
	Length =	25.00				
	V=	$(478.54 + 431.52) / 2 \times 25.00$		11,375.75	m³	
20	Area =	342.73				
	Length =	25.00				
	V=	$(431.52 + 342.73) / 2 \times 25.00$		9,678.13	m³	
21	Area =	341.51				
	Length =	25.00				
	V=	$(342.73 + 341.51) / 2 \times 25.00$		8,553.00	m³	
22	Area =	428.61				
	Length =	25.00				
	V=	$(341.51 + 428.61) / 2 \times 25.00$		9,626.50	m³	
23	Area =	395.10				
	Length =	25.00				
	V=	$(428.61 + 395.10) / 2 \times 25.00$		10,296.38	m³	
				Sand Excavation Total Volume =	230,439.15	m³

Name Structure :		: Dike Leprak 26				
Type of work :		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
0	Area =	29.62 m ²				
	Length =	25.00 m ¹				
	Volume =	740.60 m ³				
	Total Volume =		740.60	m ³		
1	Area =	31.84 m ²				
	Length =	25.00 m ¹				
	Volume =	795.93 m ³				
	Total Volume =		795.93	m ³		
2	Area =	32.34 m ²				
	Length =	25.00 m ¹				
	Volume =	808.58 m ³				
	Total Volume =		808.58	m ³		
3	Area =	33.02 m ²				
	Length =	25.00 m ¹				
	Volume =	825.38 m ³				
	Total Volume =		825.38	m ³		

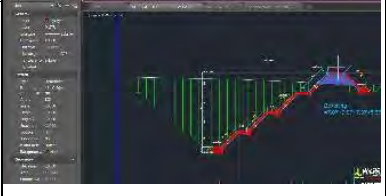
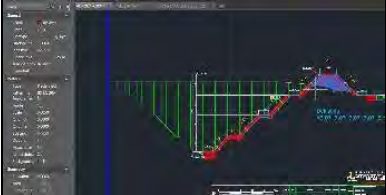
Name Structure :		: Dike Leprak 26			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Area =	33.69 m ²			
	Length =	25.00 m'			
	Volume =	842.15 m ³			
				842.15	
5	Area =	34.36 m ²			
	Length =	25.00 m'			
	Volume =	858.95 m ³			
	Total Volume =			858.95	
6	Area =	32.47 m ²			
	Length =	25.00 m'			
	Volume =	811.73 m ³			
	Total Volume =			811.73	
7	Area =	32.36 m ²			
	Length =	25.00 m'			
	Volume =	809.05 m ³			
	Total Volume =			809.05	

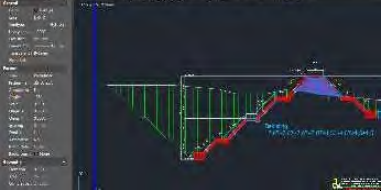
Name Structure :		: Dike Leprak 26				
Type of work :		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
8	Area =	32.26 m ²				
	Length =	25.00 m'				
	Volume =	806.38 m ³				
	Total Volume =		806.38	m3		
9	Area =	32.15 m ²				
	Length =	25.00 m'				
	Volume =	803.75 m ³				
	Total Volume =		803.75	m3		
10	Area =	32.04 m ²				
	Length =	25.00 m'				
	Volume =	801.10 m ³				
	Total Volume =		801.10	m3		
11	Area =	31.94 m ²				
	Length =	25.00 m'				
	Volume =	798.45 m ³				
	Total Volume =		798.45	m3		
		Concrete K-225 Sub Total Volume =		9,702.03	m³	

Name Structure :		: Dike Leprak 26			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
12					
	Area =	31.83 m ²			
	Length =	25.00 m ¹			
	Volume =	795.78 m ³			
	Total Volume =		795.78	m3	
					
13					
	Area =	31.73 m ²			
	Length =	25.00 m ¹			
	Volume =	793.15 m ³			
	Total Volume =		793.15	m3	
					
14					
	Area =	31.62 m ²			
	Length =	25.00 m ¹			
	Volume =	790.50 m ³			
	Total Volume =		790.50	m3	
					
15					
	Area =	31.51 m ²			
	Length =	25.00 m ¹			
	Volume =	787.75 m ³			
	Total Volume =		787.75	m3	
					





Name Structure :		: Dike Leprak 26				
Type of work :		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
16	Area =	31.40 m ²				
	Length =	25.00 m'				
	Volume =	785.08 m ³				
				785.08		
17	Area =	31.30 m ²				
	Length =	25.00 m'				
	Volume =	782.50 m ³				
	Total Volume =			782.50		
18	Area =	31.19 m ²				
	Length =	25.00 m'				
	Volume =	779.75 m ³				
	Total Volume =			779.75		
19	Area =	31.08 m ²				
	Length =	25.00 m'				
	Volume =	777.00 m ³				
	Total Volume =			777.00		


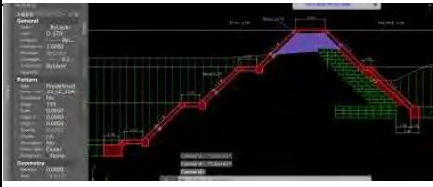

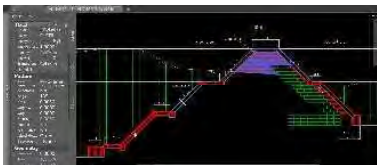
Name Structure :		: Dike Leprak 26			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
20	Area =	30.98 m ²			
	Length =	25.00 m'			
	Volume =	774.45 m ³			
	Total Volume =		774.45	m3	
21	Area =	30.87 m ²			
	Length =	25.00 m'			
	Volume =	771.75 m ³			
	Total Volume =		771.75	m3	
22	Area =	30.77 m ²			
	Length =	25.00 m'			
	Volume =	769.25 m ³			
	Total Volume =		769.25	m3	
23	Area =	30.66 m ²			
	Length =	25.00 m'			
	Volume =	766.50 m ³			
	Total Volume =		766.50	m3	
Concrete K-225 Total Volume =			19,075.48	m³	

Name Structure : : 26 Dike Leprak					
Type of work : Cyclop Concrete					
No.	Description	Calculation	Volume	Unit	Drawing Reference
0					
	Area =	12.57 m ²			
	Length =	25.00 m			
	Volume =	314.36 m ³			
	Total Volume =		314.36	m ³	
					
1					
	Area =	16.76 m ²			
	Length =	25.00 m			
	Volume =	419.03 m ³			
	Total Volume =		419.03	m ³	
					
2					
	Area =	15.06 m ²			
	Length =	25.00 m			
	Volume =	376.53 m ³			
	Total Volume =		376.53	m ³	
					
3					
	Area =	15.58 m ²			
	Length =	25.00 m			
	Volume =	389.50 m ³			
	Total Volume =		389.50	m ³	
					

Name Structure :		: 26 Dike Leprak				
Type of work :		: Cyclop Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
4	Area =	24.35 m ²				
	Length =	25.00 m				
	Volume =	608.75 m ³				
				608.75		
5	Area =	30.29 m ²				
	Length =	25.00 m				
	Volume =	757.25 m ³				
	Total Volume =			757.25		
6	Area =	15.31 m ²				
	Length =	25.00 m				
	Volume =	382.75 m ³				
	Total Volume =			382.75		
7	Area =	15.90 m ²				
	Length =	25.00 m				
	Volume =	397.50 m ³				
	Total Volume =			397.50		

Name Structure :		: Leprak 26 Dike				
Type of work		: Cyclop Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
12						
	Area =	13.08 m ²				
	Length =	25.00 m				
	Volume =	327.00 m ³				
	Total Volume =		327.00	m3		
13						
	Area =	13.58 m ²				
	Length =	25.00 m				
	Volume =	339.50 m ³				
	Total Volume =		339.50	m3		
14						
	Area =	14.15 m ²				
	Length =	25.00 m				
	Volume =	353.75 m ³				
	Total Volume =		353.75	m3		
15						
	Area =	14.73 m ²				
	Length =	25.00 m				
	Volume =	368.25 m ³				
	Total Volume =		368.25	m3		

Name Structure :		: Leprak 26 Dike			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Working Reference
16	Area =	15.16 m ²			
	Length =	25.00 m			
	Volume =	379.00 m ³			
				379.00	
17	Area =	15.62 m ²			
	Length =	25.00 m			
	Volume =	390.50 m ³			
	Total Volume =			390.50	
18	Area =	11.17 m ²			
	Length =	25.00 m			
	Volume =	279.25 m ³			
	Total Volume =			279.25	
19	Area =	11.63 m ²			
	Length =	25.00 m			
	Volume =	290.75 m ³			
	Total Volume =			290.75	

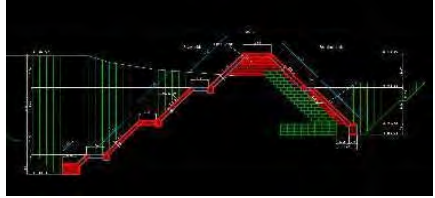



Name Structure :		: Leprak 26 Dike			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
20	Area =	12.11 m ²			
	Length =	25.00 m			
	Volume =	302.75 m ³			
	Total Volume =		302.75	m ³	
21	Area =	13.81 m ²			
	Length =	25.00 m			
	Volume =	345.25 m ³			
	Total Volume =		345.25	m ³	
22	Area =	13.08 m ²			
	Length =	25.00 m			
	Volume =	327.00 m ³			
	Total Volume =		327.00	m ³	
23	Area =	17.76 m ²			
	Length =	25.00 m			
	Volume =	444.00 m ³			
	Total Volume =		444.00	m ³	
Cyclop Concrete Total Volume =			9,395.16		

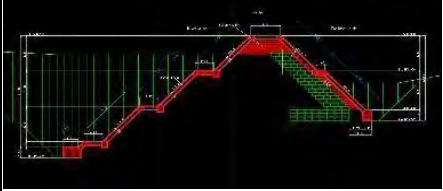
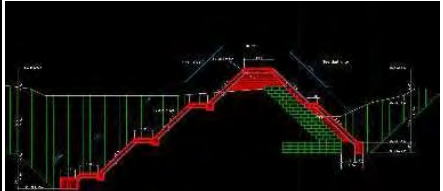
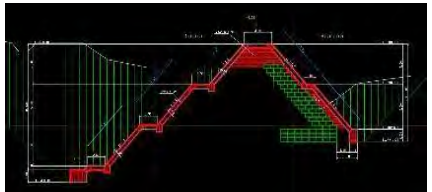
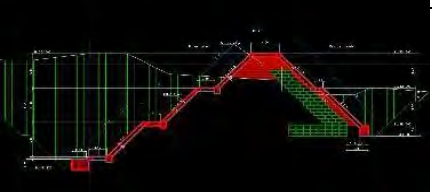
Name Structure :		: Dike Leprak 26			
Type of work :		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Formwork Length =	35.10 m'			
	Length =	25.00 m'			
	Volume =	877.50 m2			
	Total Volume =		877.50	m2	
1	Formwork Length =	36.44 m'			
	Panjang =	25.00 m'			
	Volume =	911.00 m2			
	Total Volume =		911.00	m2	
2	Formwork Length =	36.29 m'			
	Panjang =	25.00 m'			
	Volume =	907.25 m2			
	Total Volume =		907.25	m2	
3	Formwork Length =	39.13 m'	39.13		
	Panjang =	25.00 m'			
	Volume =	978.25 m2			
	Total Volume =		978.25	m2	

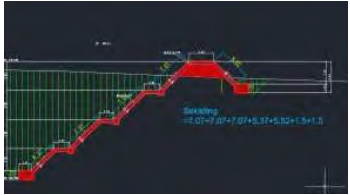


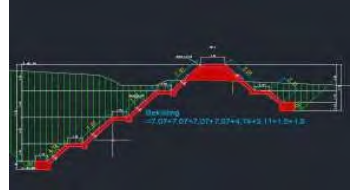
Name Structure :		: Dike Leprak 26			
Type of work :		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Formwork Length =	40.48 m'			
	Panjang =	25.00 m'			
	Volume =	1012.00 m2			
	Total Volume =		1,012.00	m2	
5	Formwork Length =	41.81 m'			
	Panjang =	25.00 m'			
	Volume =	1045.28 m2			
	Total Volume =		1,045.28	m2	
6	Formwork Length =	43.16 m'			
	Panjang =	25.00 m'			
	Volume =	1079.00 m2			
	Total Volume =		1,079.00	m2	
7	Formwork Length =	42.95 m'			
	Panjang =	25.00 m'			
	Volume =	1073.75 m2			
	Total Volume =		1,073.75	m2	


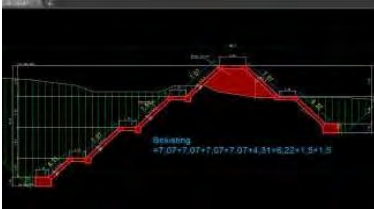
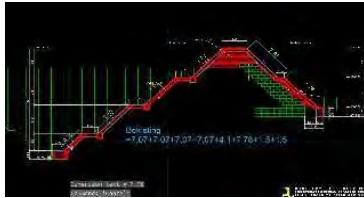

Name Structure :		: Dike Leprak 26				
Type of work :		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
8	Formwork Length =	42.74 m'				
	Panjang =	25.00 m'				
	Volume =	1068.50 m2				
	Total Volume =		1,068.50	m2		
9	Formwork Length =	42.52 m'				
	Panjang =	25.00 m'				
	Volume =	1063.00 m2				
	Total Volume =		1,063.00	m2		
10	Formwork Length =	42.31 m'				
	Panjang =	25.00 m'				
	Volume =	1057.75 m2				
	Total Volume =		1,057.75	m2		
11	Formwork Length =	42.10 m'				
	Panjang =	25.00 m'				
	Volume =	1052.50 m2				
	Total Volume =		1,052.50	m2		
		Exposed Formwork Sub Total Volume =	12,125.78	m2		



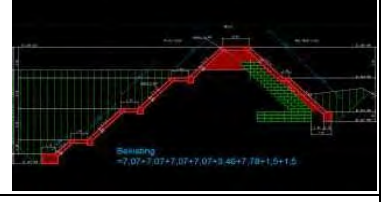
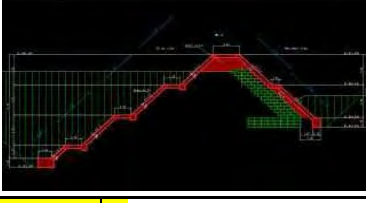
Name Structure :		: Dike Leprak 26				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
12						
	Formwork Length =	41.89 m'				
	Panjang =	25.00 m'				
	Volume =	1047.25 m2				
	Total Volume =		1,047.25	m2		
13						
	Formwork Length =	41.68 m'				
	Panjang =	25.00 m'				
	Volume =	1042.00 m2				
	Total Volume =		1,042.00	m2		
14						
	Formwork Length =	41.46 m'				
	Panjang =	25.00 m'				
	Volume =	1036.50 m2				
	Total Volume =		1,036.50	m2		
15						
	Formwork Length =	41.25 m'				
	Panjang =	25.00 m'				
	Volume =	1031.25 m2				
	Total Volume =		1,031.25	m2		


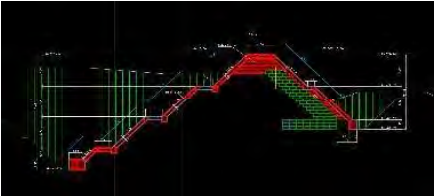
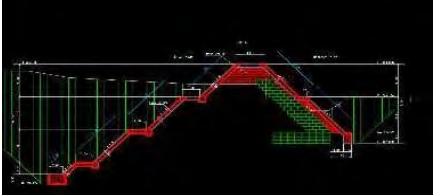
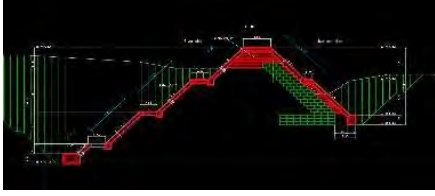
Name Structure :		: Dike Leprak 26				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
16						
	Formwork Length =	41.04 m'				
	Panjang =	25.00 m'				
	Volume =	1026.00 m2				
	Total Volume =		1,026.00	m2		
17						
	Formwork Length =	40.83 m'				
	Panjang =	25.00 m'				
	Volume =	1020.75 m2				
	Total Volume =		1,020.75	m2		
18						
	Formwork Length =	40.62 m'				
	Panjang =	25.00 m'				
	Volume =	1015.50 m2				
	Total Volume =		1,015.50	m2		
19						
	Formwork Length =	40.40 m'				
	Panjang =	25.00 m'				
	Volume =	1010.00 m2				
	Total Volume =		1,010.00	m2		


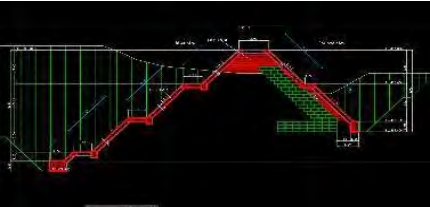


Name Structure :		: Dike Leprak 26				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
20						
	Formwork Length =	40.19 m'				
	Panjang =	25.00 m'				
	Volume =	1004.75 m2				
	Total Volume =		1,004.75	m2		
21						
	Formwork Length =	39.38 m'				
	Panjang =	25.00 m'				
	Volume =	984.50 m2				
	Total Volume =		984.50	m2		
22						
	Formwork Length =	39.77 m'				
	Panjang =	25.00 m'				
	Volume =	994.25 m2				
	Total Volume =		994.25	m2		
23						
	Formwork Length =	39.55 m'				
	Panjang =	25.00 m'				
	Volume =	988.75 m2				
	Total Volume =		988.75	m2		
Exposed Formwork Total Volume =			24,327.28	m2		





Name Structure :		: Dike Leprak 26						
Type of work :		: Non Exposed Formwork						
No.	Description	Calculation	Volume	Unit	Drawing Reference			
0	Formwork Length =	6.15	m'					
	Length =	25.00	m'					
	Volume =	153.75	m2					
	Total Volume =			153.75		m2		
1	Formwork Length =	7.68	m'					
	Panjang =	25.00	m'					
	Volume =	192.00	m2					
	Total Volume =			192.00		m2		
2	Formwork Length =	7.71	m'					
	Panjang =	25.00	m'					
	Volume =	192.75	m2					
	Total Volume =			192.75		m2		
3	Formwork Length =	7.33	m'					
	Panjang =	25.00	m'					
	Volume =	183.25	m2					
	Total Volume =			183.25		m2		

Name Structure :		: Dike Leprak 26				
Type of work :		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
4	Formwork Length =	9.71 m'				
	Panjang =	25.00 m'				
	Volume =	242.75 m2				
	Total Volume =		242.75	m2		
5	Formwork Length =	10.33 m'				
	Panjang =	25.00 m'				
	Volume =	258.25 m2				
	Total Volume =		258.25	m2		
6	Formwork Length =	13.86 m'				
	Panjang =	25.00 m'				
	Volume =	346.50 m2				
	Total Volume =		346.50	m2		
7	Formwork Length =	14.00 m'				
	Panjang =	25.00 m'				
	Volume =	350.00 m2				
	Total Volume =		350.00	m2		

Name Structure :		: Dike Leprak 26				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
8	Formwork Length =	14.14 m'				
	Panjang =	25.00 m'				
	Volume =	353.50 m2				
	Total Volume =		353.50	m2		
9	Formwork Length =	14.28 m'				
	Panjang =	25.00 m'				
	Volume =	357.00 m2				
	Total Volume =		357.00	m2		
10	Formwork Length =	14.43 m'				
	Panjang =	25.00 m'				
	Volume =	360.75 m2				
	Total Volume =		360.75	m2		
11	Formwork Length =	13.15 m'				
	Panjang =	25.00 m'				
	Volume =	328.75 m2				
	Total Volume =		328.75	m2		
		Non Exposed Formwork Sub Total Volume =	3,319.25	m2		

Name Structure :		: Dike Leprak 26			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
12	Formwork Length =	13.29 m'			
	Panjang =	25.00 m'			
	Volume =	332.25 m2			
	Total Volume =		332.25	m2	
13	Formwork Length =	13.44 m'			
	Panjang =	25.00 m'			
	Volume =	336.00 m2			
	Total Volume =		336.00	m2	
14	Formwork Length =	13.58 m'			
	Panjang =	25.00 m'			
	Volume =	339.50 m2			
	Total Volume =		339.50	m2	
15	Formwork Length =	13.72 m'			
	Panjang =	25.00 m'			
	Volume =	343.00 m2			
	Total Volume =		343.00	m2	

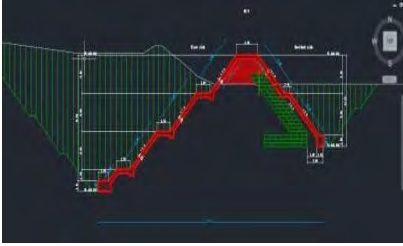
Name Structure :		: Dike Leprak 26				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
16						
	Formwork Length =	13.65 m'				
	Panjang =	25.00 m'				
	Volume =	341.25 m2				
			341.25	m2		
17						
	Formwork Length =	13.68 m'				
	Panjang =	25.00 m'				
	Volume =	342.00 m2				
	Total Volume =		342.00	m2		
18						
	Formwork Length =	12.73 m'				
	Panjang =	25.00 m'				
	Volume =	318.25 m2				
	Total Volume =		318.25	m2		
19						
	Formwork Length =	12.87 m'				
	Panjang =	25.00 m'				
	Volume =	321.75 m2				
	Total Volume =		321.75	m2		

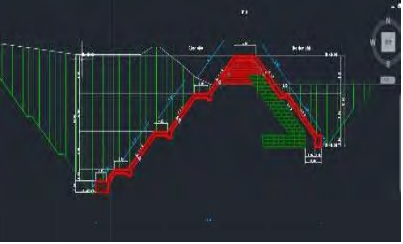
Name Structure :		: Dike Leprak 26				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
20						
	Formwork Length =	13.01 m'				
	Panjang =	25.00 m'				
	Volume =	325.25 m2				
	Total Volume =		325.25	m2		
21						
	Formwork Length =	13.81 m'				
	Panjang =	25.00 m'				
	Volume =	345.25 m2				
	Total Volume =		345.25	m2		
22						
	Formwork Length =	13.29 m'				
	Panjang =	25.00 m'				
	Volume =	332.25 m2				
	Total Volume =		332.25	m2		
23						
	Formwork Length =	14.14 m'				
	Panjang =	25.00 m'				
	Volume =	353.50 m2				
	Total Volume =		353.50	m2		
		Non Exposed Formwork Total Volume =		7,349.50	m2	

SUMMARY OF QUANTITY DIKE LEPRAK 25

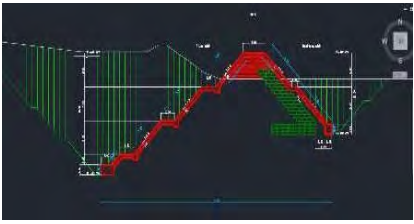
No.	Description	Unit	Volume
1	Stake Out Trace of New Infrastructure & Wooden Stakes (Raft 5/7) Length 1 m	m2	19,030.50
2	Excavation Cross Profile	m	676.64
3	Bowplank	m	996.58
4	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanical Transported radius 2000 m	m3	14,432.62
5	Cyclops Concrete 60% Concrete $f_c' = 15$ Mpa: 40% Stone	m3	9,388.90
6	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	18,655.50
7	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	22,293.00
8	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	18,655.50
9	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	3,637.50
10	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	3,637.50
11	Mechanical Sand Excavation (excavated material is dumped nearby)	m3	108,308.58
12	Geotextile	m2	5,795.00

Name Structure : : Dike Leprak 25
 Type of work : Stake Out





No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	19030.50	19,030.50	m ²	
		Stake Out Total Volume =	19,030.50	m ²	

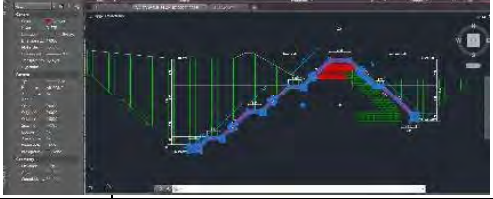
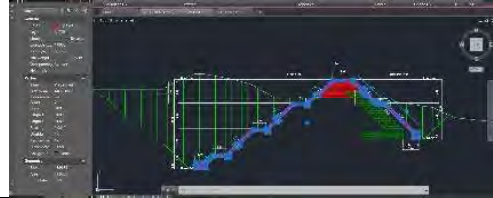
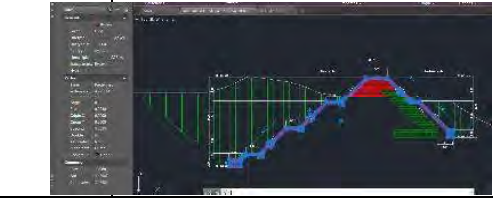
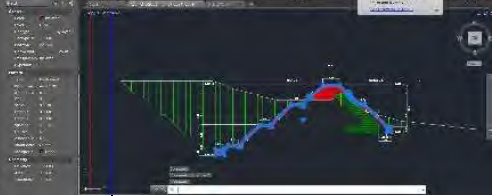
Name Structure : : Dike Leprak 25					
Type of work : Cross Profile					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Profile Length =	925.00	676.64	m	
	Cross Length =	676.640			
		Cross Profile Total Volume =	676.64	m	

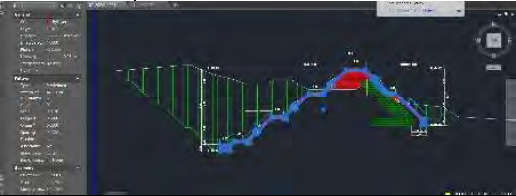
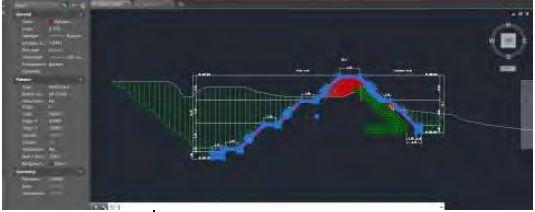
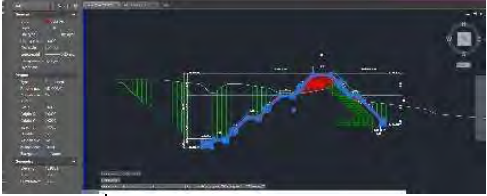
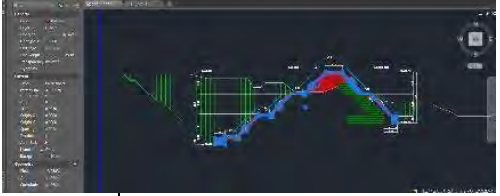
Name Structure : : Dike Leprak 25
 Type of work : Bowplank

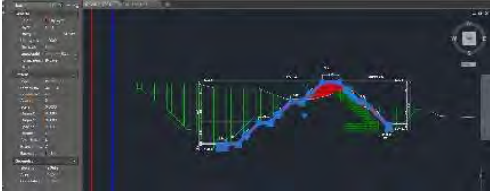
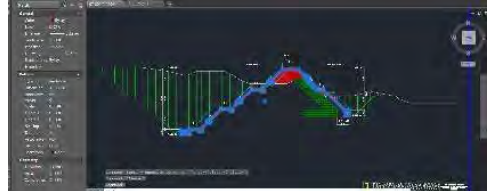
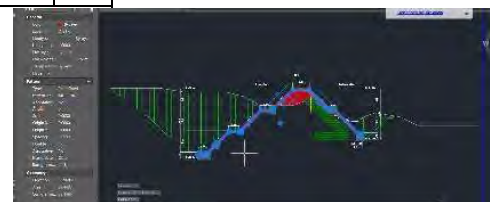

No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Profile Length =	906.00	996.58	m	
	Cross Section Length =	90.58			
		Bowplank Total Volume =	996.58	m'	

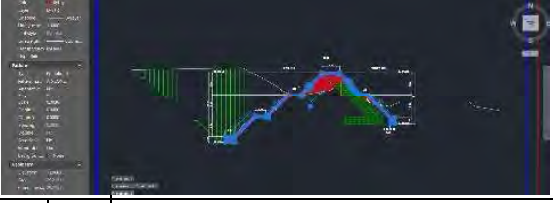
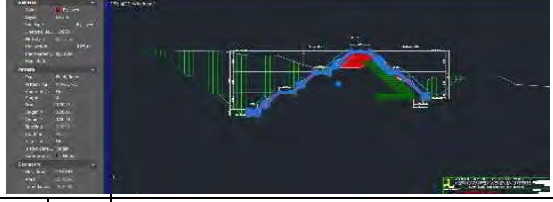
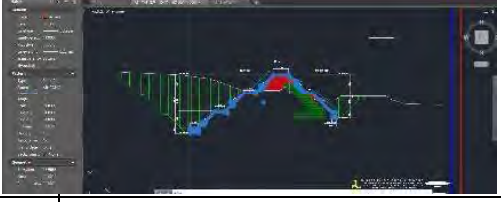
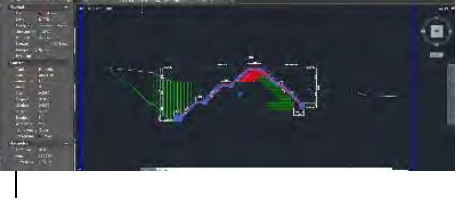
Name Structure :		: Dike Leprak 25					
Type of work :		: Sand Excavation					
No.	Description	Calculation	Volume	Unit	Drawing Reference		
0	Area = Length =	524,99 25,000					
		$V = (524,99) / 2 \times 25,00$	6,562.38	m ³			
1	Area = Length =	412,36 25,000					
		$V = (524,99 + 412,36) / 2 \times 25,00$	11,716.88	m ³			
2	Area = Length =	371,52 25,00					
		$V = (371,52 + 371,52) / 2 \times 25,00$	9,288.00	m ³			
3	Area = Length =	397,65 25,00					
		$V = (371,52 + 397,65) / 2 \times 25,00$	9,614.63	m ³			
4	Area = Length =	371,92 25,00					
		$V = (397,65 + 371,92) / 2 \times 25,00$	9,619.63	m ³			
5	Area = Length =	315,20 25,00					
		$V = (371,92 + 315,20) / 2 \times 25,00$	8,589.00	m ³			
6	Area = Length =	323,35 25,00					
		$V = (315,20 + 323,35) / 2 \times 25,00$	7,981.88	m ³			
7	Area = Length =	351,24 25,00					
		$V = (323,35 + 351,24) / 2 \times 25,00$	8,432.38	m ³			
8	Area = Length =	351,41 25,00					
		$V = (351,24 + 351,41) / 2 \times 25,00$	8,783.13	m ³			
9	Area = Length =	380,60 25,00					
		$V = (351,41 + 380,60) / 2 \times 25,00$	9,150.13	m ³			
10	Area = Length =	335,83 25,00					
		$V = (380,60 + 335,83) / 2 \times 25,00$	8,955.38	m ³			
11	Area = Length =	318,48 25,00					
		$V = (335,83 + 318,48) / 2 \times 25,00$	8,178.88	m ³			
12	Area = Length =	339,89 25,00					
		$V = (318,48 + 339,89) / 2 \times 25,00$	8,229.63	m ³			
13	Area = Length =	313,38 25,00					
		$V = (339,89 + 313,38) / 2 \times 25,00$	8,165.88	m ³			
14	Area = Length =	312,14 206,55 25,00					
		$V = (313,38 + 206,55) / 2 \times 25,00$	6,499.13	m ³			

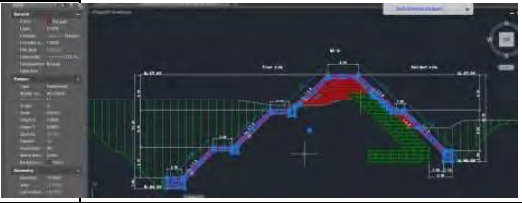
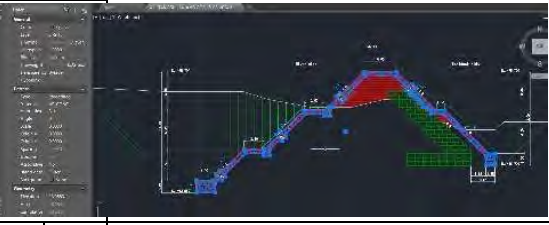
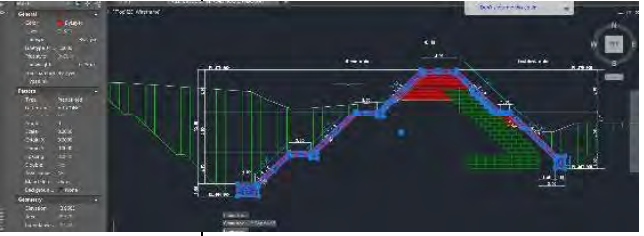
Name Structure :		: Dike Leprak 25			
Type of work :		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
15	Area = Length =	245.19 25.00			
	V=	$(206,55 + 245,19) / 2 \times 25,00$	5,646.76	m ³	
16	Area = Length =	217.41 25.00			
	V=	$(245,19 + 217,41) / 2 \times 25,00$	5,782.50	m ³	
17	Area = Length =	235.90 25.00			
	V=	$(217,41 + 235,90) / 2 \times 25,00$	5,666.38	m ³	
18	Area = Length =	226.96 25.00			
	V=	$(235,90 + 226,96) / 2 \times 25,00$	5,785.75	m ³	
		Sand Excavation Total Volume =	108,308.58	m³	

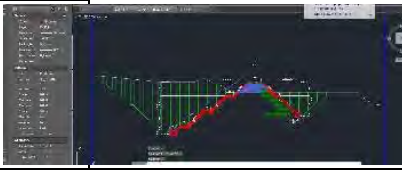
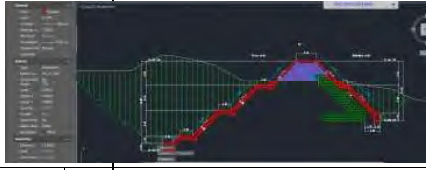
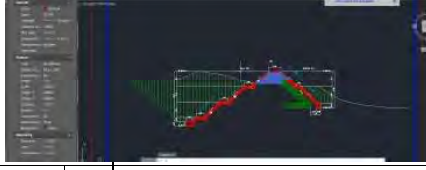
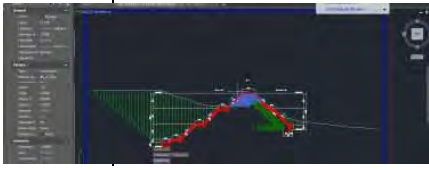
Name Structure :		: Dike Leprak 25			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Area =	32.10 m ²			
	Length =	25.00 m			
	Volume =	802.55 m ³			
	Total Volume =		802.55	m ³	
1	Area =	32.00 m ²			
	Length =	25.00 m			
	Volume =	799.92 m ³			
	Total Volume =		799.92	m ³	
2	Area =	31.89 m ²			
	Length =	25.00 m			
	Volume =	797.27 m ³			
	Total Volume =		797.27	m ³	
3	Area =	31.78 m ²			
	Length =	25.00 m			
	Volume =	794.62 m ³			
	Total Volume =		794.62	m ³	
					



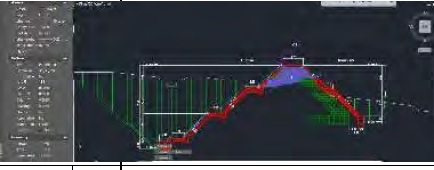
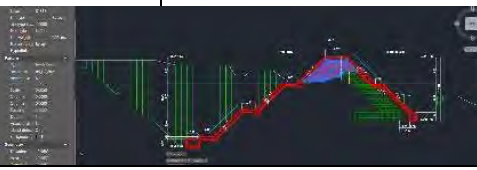
Name Structure :		: Dike Leprak 25			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Area =	31.68 m ²			
	Length =	25.00 m			
	Volume =	791.97 m ³			
			791.97	m ³	
					
5	Area =	31.57 m ²			
	Length =	25.00 m			
	Volume =	789.31 m ³			
	Total Volume =		789.31	m ³	
					
6	Area =	31.47 m ²			
	Length =	25.00 m			
	Volume =	786.66 m ³			
	Total Volume =		786.66	m ³	
					
7	Area =	31.36 m ²			
	Length =	25.00 m			
	Volume =	784.01 m ³			
	Total Volume =		784.01	m ³	
					


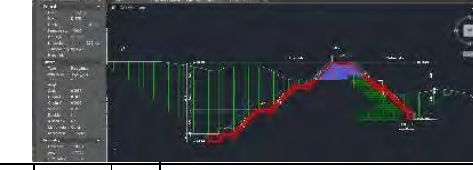


Name Structure :		: Dike Leprak 25			
Type of work		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Area =	31.25 m ²			
	Length =	25.00 m			
	Volume =	781.36 m ³			
	Total Volume =		781.36	m ³	
					
9	Area =	31.15 m ²			
	Length =	25.00 m			
	Volume =	778.71 m ³			
	Total Volume =		778.71	m ³	
					
10	Area =	29.45 m ²			
	Length =	25.00 m			
	Volume =	736.24 m ³			
	Total Volume =		736.24	m ³	
					
11	Area =	29.32 m ²			
	Length =	25.00 m			
	Volume =	733.03 m ³			
	Total Volume =		733.03	m ³	
					
			Concrete K-225 Sub Total Volume =	9,375.64	m³

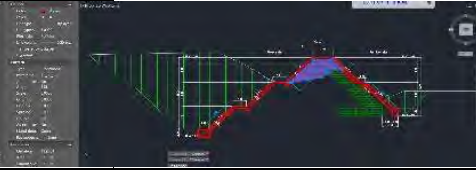

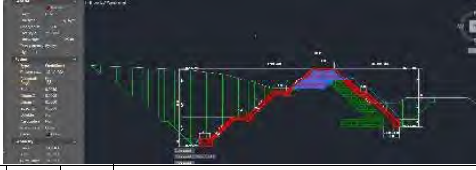
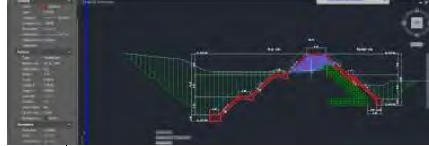
Name Structure :		: Dike Leprak 25			
Type of work :		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
12					
	Area =	29.22 m ²			
	Length =	25.00 m'			
	Volume =	730.38 m ³			
	Total Volume =		730.38	m3	
					
13					
	Area =	29.11 m ²			
	Length =	25.00 m'			
	Volume =	727.73 m ³			
	Total Volume =		727.73	m3	
					
14					
	Area =	29.00 m ²			
	Length =	25.00 m'			
	Volume =	725.07 m ³			
	Total Volume =		725.07	m3	
					
15					
	Area =	28.90 m ²			
	Length =	25.00 m'			
	Volume =	722.45 m ³			
	Total Volume =		722.45	m3	
					

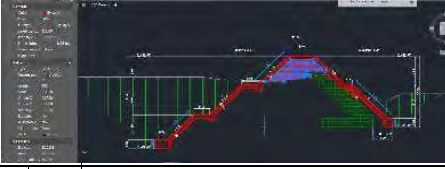


Name Structure :		: Dike Leprak 25				
Type of work		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
16	Area =	28.79 m ²				
	Length =	25.00 m'				
	Volume =	719.77 m ³				
			719.77	m ³		
						
17	Area =	28.68 m ²				
	Length =	25.00 m'				
	Volume =	717.12 m ³				
	Total Volume =		717.12	m ³		
						
18	Area =	28.58 m ²				
	Length =	25.00 m'				
	Volume =	714.47 m ³				
	Total Volume =		714.47	m ³		
						
				Concrete K-225 Total Volume =	14,432.62 m ³	



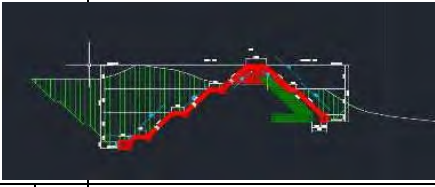

Name Structure :		: DikeLeprak 25			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Area = Length = Volume = Total Volume =	18.53 m ² 25.00 m ² 463.25 m ³	463.25	m ³	
					
1	Area = Length = Volume = Total Volume =	19.22 m ² 25.00 m ² 480.50 m ³	480.50	m ³	
					
2	Area = Length = Volume = Total Volume =	19.93 m ² 25.00 m ² 498.25 m ³	498.25	m ³	
					
3	Area = Length = Volume = Total Volume =	19.76 m ² 25.00 m ² 494.00 m ³	494.00	m ³	
					

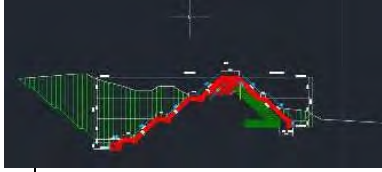
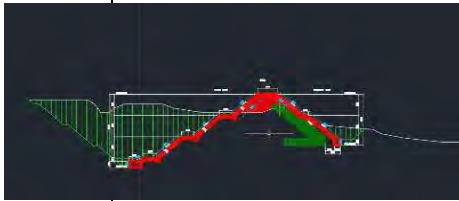

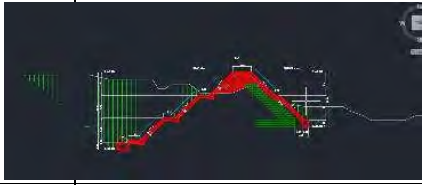
Name Structure :		: DikeLeprak 25			
Type of work :		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Area = Length = Volume =	20.42 m ² 25.00 m ² 510.50 m ³	510.50	m ³	
					
5	Area = Length = Volume = Total Volume =	20.41 m ² 25.00 m ² 510.25 m ³	510.25	m ³	
					
6	Area = Length = Volume = Total Volume =	19.94 m ² 25.00 m ² 498.58 m ³	498.58	m ³	
					
7	Area = Length = Volume = Total Volume =	20.56 m ² 25.00 m ² 514.00 m ³	514.00	m ³	
					

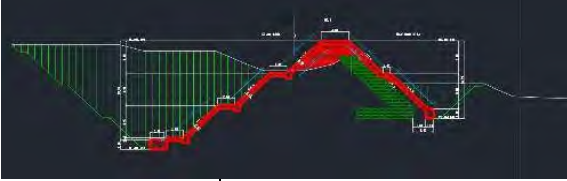
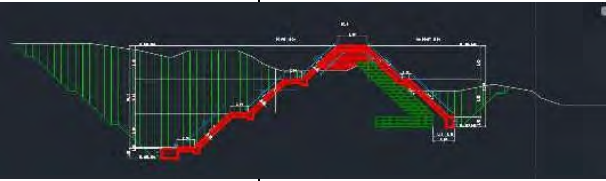
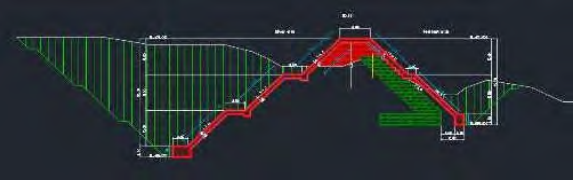
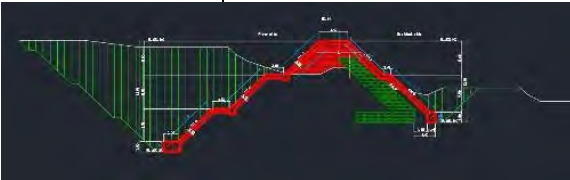
Name Structure :		: DikeLeprak 25			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Area = Length = Volume = Total Volume =	19.60 m ² 25.00 m ² 490.07 m ³	490.07	m ³	
					
9	Area = Length = Volume = Total Volume =	16.77 m ² 25.00 m ² 419.25 m ³	419.25	m ³	
					
10	Area = Length = Volume = Total Volume =	16.90 m ² 25.00 m ² 422.50 m ³	422.50	m ³	
					
11	Area = Length = Volume = Total Volume =	23.98 m ² 25.00 m ² 599.50 m ³	599.50	m ³	
					
Cyclop Concrete Sub Total Volume =			5,900.65	m³	

Name Structure :		: Dike Leprak 25			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	wing Reference
12	Area = Length = Volume = Total Volume =	21.70 m ² 25.00 m ² 542.50 m ³ 	542.50	m3	
					
13	Area = Length = Volume = Total Volume =	19.83 m ² 25.00 m ² 495.75 m ³ 	495.75	m3	
					
14	Area = Length = Volume = Total Volume =	20.29 m ² 25.00 m ² 507.25 m ³ 	507.25	m3	
					
15	Area = Length = Volume = Total Volume =	20.26 m ² 25.00 m ² 506.50 m ³ 	506.50	m3	
					




Name Structure :		: Dike Leprak 25			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	wing Reference
16	Area = Length = Volume =	19.93 m ² 25.00 m 498.25 m ³	498.25	m3	
					
17	Area = Length = Volume = Total Volume =	20.27 m ² 25.00 m 506.75 m ³	506.75	m3	
					
18	Area = Length = Volume = Total Volume =	17.25 m ² 25.00 m 431.25 m ³	431.25	m3	
					
Cyclop Concrete Total Volume =			9,388.90		



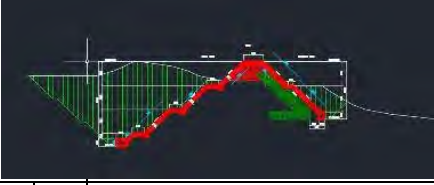

Name Structure :		: Dike Leprak 25			Drawing Reference	
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit		
0	Formwork Length =	41.18 m'				
	Length =	25.00 m'				
	Volume =	1029.50 m2				
	Total Volume =		1,029.50	m2		
						
1	Formwork Length =	40.97 m'				
	Length =	25.00 m'				
	Volume =	1024.25 m2				
	Total Volume =		1,024.25	m2		
						
2	Formwork Length =	40.76 m'				
	Length =	25.00 m'				
	Volume =	1019.00 m2				
	Total Volume =		1,019.00	m2		
						
3	Formwork Length =	40.54 m'				
	Length =	25.00 m'				
	Volume =	1013.50 m2				
	Total Volume =		1,013.50	m2		
						




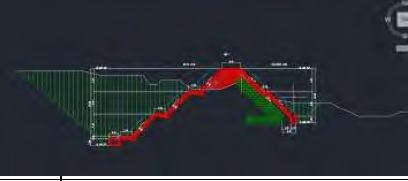
Name Structure :		: Dike Leprak 25			
Type of work		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Formwork Length =	40.33 m'			
	Length =	25.00 m'			
	Volume =	1008.25 m2			
			1,008.25	m2	
					
5	Formwork Length =	40.12 m'			
	Length =	25.00 m'			
	Volume =	1003.00 m2			
	Total Volume =		1,003.00	m2	
					
6	Formwork Length =	39.91 m'			
	Length =	25.00 m'			
	Volume =	997.75 m2			
	Total Volume =		997.75	m2	
					
7	Formwork Length =	39.70 m'			
	Length =	25.00 m'			
	Volume =	992.50 m2			
	Total Volume =		992.50	m2	
					

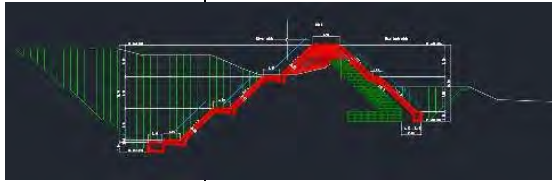
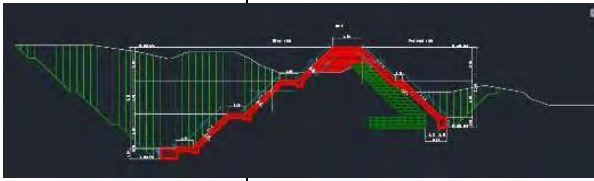
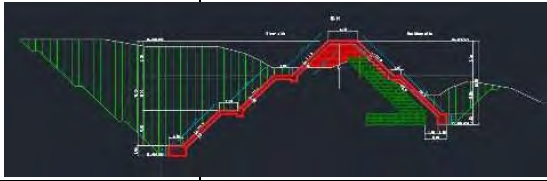
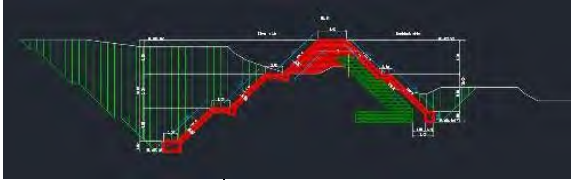
Name Structure :		: Dike Leprak 25			
Type of work :		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Formwork Length =	39.48 m'			
	Length =	25.00 m'			
	Volume =	987.00 m ²			
	Total Volume =		987.00	m ²	
					
9	Formwork Length =	39.27 m'			
	Length =	25.00 m'			
	Volume =	981.75 m ²			
	Total Volume =		981.75	m ²	
					
10	Formwork Length =	39.06 m'			
	Length =	25.00 m'			
	Volume =	976.50 m ²			
	Total Volume =		976.50	m ²	
					
11	Formwork Length =	38.85 m'			
	Length =	25.00 m'			
	Volume =	971.25 m ²			
	Total Volume =		971.25	m ²	
					
Exposed Formwork Sub Total Volume =			12,004.25	m²	

Name Structure :		: Dike Leprak 25				
Type of work		: Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
12						
	Formwork Length =	38.64 m ¹				
	Length =	25.00 m ¹				
	Volume =	966.00 m ²				
	Total Volume =		966.00	m ²		
13						
	Formwork Length =	38.42 m ¹				
	Length =	25.00 m ¹				
	Volume =	960.50 m ²				
	Total Volume =		960.50	m ²		
14						
	Formwork Length =	38.21 m ¹				
	Length =	25.00 m ¹				
	Volume =	955.25 m ²				
	Total Volume =		955.25	m ²		
15						
	Formwork Length =	38.00 m ¹				
	Length =	25.00 m ¹				
	Volume =	950.00 m ²				
	Total Volume =		950.00	m ²		


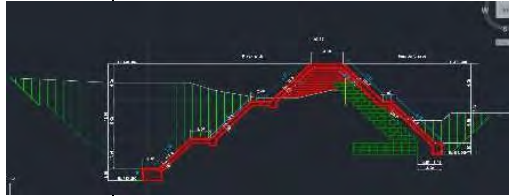
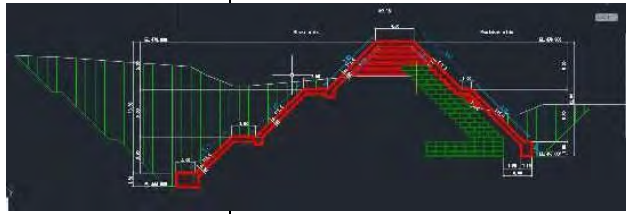
Name Structure :		: Dike Leprak 25					
Type of work		: Exposed Formwork					
No.	Description	Calculation	Volume	Unit	Drawing Reference		
16	Formwork Length = 37.84	m ¹					
	Length = 25.00	m ¹					
	Volume = 946.00	m ²					
			946.00	m ²			
							
17	Formwork Length = 37.58	m ¹					
	Length = 25.00	m ¹					
	Volume = 939.50	m ²					
	Total Volume =		939.50	m ²			
							
18	Formwork Length = 37.36	m ¹					
	Length = 25.00	m ¹					
	Volume = 934.00	m ²					
	Total Volume =		934.00	m ²			
							
Exposed Formwork Total Volume =			18,655.50 m²				

Name Structure :		: Dike Leprak 25			Drawing Reference	
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit		
0	Formwork Length =	7.50 m'				
	Length =	25.00 m'				
	Volume =	187.50 m2				
	Total Volume =		187.50	m2		
						
1	Formwork Length =	7.64 m'				
	Length =	25.00 m'				
	Volume =	191.00 m2				
	Total Volume =		191.00	m2		
						
2	Formwork Length =	7.78 m'				
	Length =	25.00 m'				
	Volume =	194.50 m2				
	Total Volume =		194.50	m2		
						
3	Formwork Length =	7.83 m'				
	Length =	25.00 m'				
	Volume =	195.75 m2				
	Total Volume =		195.75	m2		
						

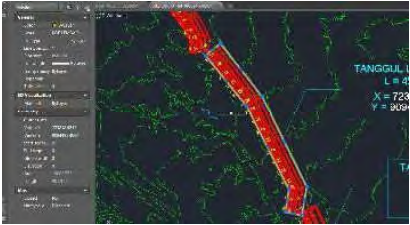
Name Structure :		: Dike Leprak 25			
Type of work :		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Formwork Length =	8.06 m'			
	Length =	25.00 m'			
	Volume =	201.50 m2			
			201.50	m2	
					
5	Formwork Length =	8.20 m'			
	Length =	25.00 m'			
	Volume =	205.00 m2			
	Total Volume =		205.00	m2	
					
6	Formwork Length =	8.35 m'			
	Length =	25.00 m'			
	Volume =	208.75 m2			
	Total Volume =		208.75	m2	
					
7	Formwork Length =	8.49 m'			
	Length =	25.00 m'			
	Volume =	212.25 m2			
	Total Volume =		212.25	m2	
					

Name Structure :		: Dike Leprak 25			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Formwork Length =	8.63 m'			
	Length =	25.00 m'			
	Volume =	215.75 m ²			
	Total Volume =		215.75	m ²	
					
9	Formwork Length =	7.36 m'			
	Length =	25.00 m'			
	Volume =	184.00 m ²			
	Total Volume =		184.00	m ²	
					
10	Formwork Length =	7.50 m'			
	Length =	25.00 m'			
	Volume =	187.50 m ²			
	Total Volume =		187.50	m ²	
					
11	Formwork Length =	9.05 m'			
	Length =	25.00 m'			
	Volume =	226.25 m ²			
	Total Volume =		226.25	m ²	
					
Non Exposed Formwork Sub Total Volume =			2,409.75 m²		

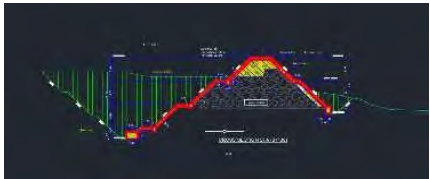
Name Structure :		: Leprak 25 Dike				
Type of work		: Non Exposed Formwork				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
12						
	Formwork Length =	9.19 m'				
	Length =	25.00 m'				
	Volume =	229.75 m2				
	Total Volume =		229.75	m2		
13						
	Formwork Length =	7.92 m'				
	Length =	25.00 m'				
	Volume =	198.00 m2				
	Total Volume =		198.00	m2		
14						
	Formwork Length =	8.06 m'				
	Length =	25.00 m'				
	Volume =	201.50 m2				
	Total Volume =		201.50	m2		
15						
	Formwork Length =	8.20 m'				
	Length =	25.00 m'				
	Volume =	205.00 m2				
	Total Volume =		205.00	m2		

Name Structure :		: Leprak 25 Dike			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	aving Reference
16	Formwork Length =	8.35 m'			
	Length =	25.00 m'			
	Volume =	208.75 m2			
			208.75	m2	
					
17	Formwork Length =	8.49 m'			
	Length =	25.00 m'			
	Volume =	212.25 m2			
	Total Volume =			-	
					
18	Formwork Length =	7.39 m'			
	Length =	25.00 m'			
	Volume =	184.75 m2			
	Total Volume =			184.75	
					
Non Exposed Formwork Total Volume =			3,637.50 m2		















SUMMARY OF QUANTITY DIKE LEPRAK 24			
No.	Description	Unit	Volume
1	Stake Out Trace of New Infrastructure & Wooden Stakes (Raft 5/7) Length 1 m	m2	16,002.00
2	1 m Excavation Cross Profile	m	708.90
3	Bowplank	m	945.40
4	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	12,336.72
5	Cyclops Concrete 60% Concrete $f_c' 15$ Mpa: 40% Split Stone, with Concrete Pump (CP)	m3	9,993.40
6	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	15,948.00
7	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	23,147.74
8	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	15,948.00
9	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	7,199.74
10	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	7,199.74
11	Mechanical Sand Excavation	m3	87,223.68
12	Geotextile	m2	7,862.50


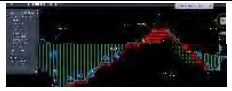

Name Structure : : Dike Leprak 24					
Type of work : Stake Out					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	16002.00	16,002.00	m ²	
		Stake Out Total Volume =	16,002.00	m ²	

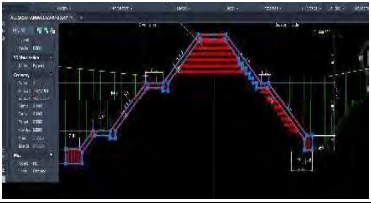
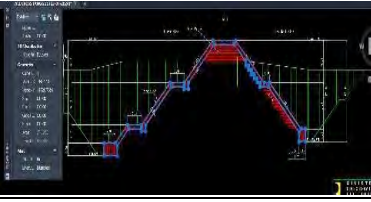


Name Structure : : Dike Leprak 24
 Type of work : Cross Profile

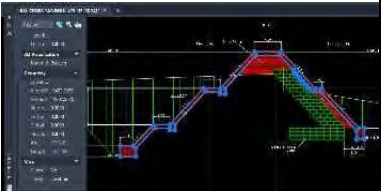


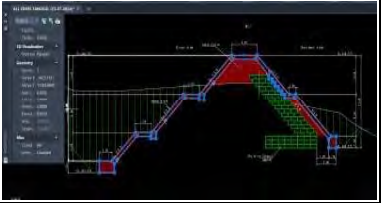
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Dike span =	41.70			
	Measure each section =	17.00	708.90	m ²	
		Cross Profile Total Volume =	708.90	m	

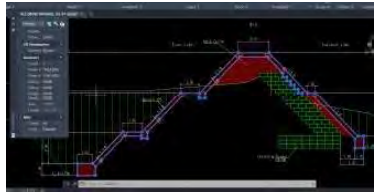

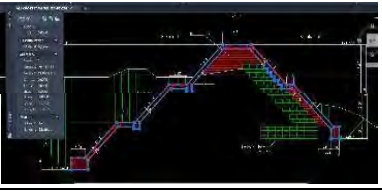
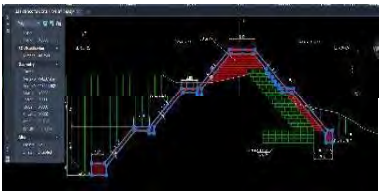
Name Structure : : Dike Leprak 24					
Type of work : Bowplank					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Profile Length =	856.00	945.40	m	
	Cross Section Length =	89.40			
		Bowplank Total Volume =	945.40	m'	





Name Structure :		: Dike Leprak 24			
Type of work :		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Area = Length = V=	209.64 25.000 (209,64) / 2 x 25,00	2,620.52	m ³	
1	Area = Length = V=	242.28 25.000 (209,64 + 242,28) / 2 x 25,00	5,649.03	m ³	
2	Area = Length = V=	212.76 25.00 (212,76 + 212,76) / 2 x 25,00	5,319.04	m ³	
3	Area = Length = V=	167.74 25.00 (212,76 + 167,74) / 2 x 25,00	4,756.33	m ³	
4	Area = Length = V=	181.87 25.00 (167,74 + 181,87) / 2 x 25,00	4,370.23	m ³	
5	Area = Length = V=	181.40 25.00 (181,87 + 181,40) / 2 x 25,00	4,540.88	m ³	
6	Area = Length = V=	199.84 25.00 (181,40 + 199,84) / 2 x 25,00	4,765.44	m ³	
7	Area = Length = V=	192.71 25.00 (199,84 + 192,71) / 2 x 25,00	4,906.84	m ³	
8	Area = Length = V=	180.71 25.00 (192,71 + 180,71) / 2 x 25,00	4,667.72	m ³	
9	Area = Length = V=	203.87 25.00 (180,71 + 203,87) / 2 x 25,00	4,807.30	m ³	
10	Area = Length = V=	204.89 25.00 (203,87 + 204,89) / 2 x 25,00	5,109.59	m ³	
11	Area = Length = V=	225.56 25.00 (204,89 + 225,56) / 2 x 25,00	5,380.64	m ³	
12	Area = Length = V=	191.33 25.00 (225,56 + 191,33) / 2 x 25,00	5,211.14	m ³	
13	Area = Length = V=	254.82 25.00 (191,33 + 254,82) / 2 x 25,00	5,576.89	m ³	

Name Structure :		: Dike Leprak 24			
Type of work :		: Sand Excavation			
No.	Description	Calculation	Volume	Unit	Drawing Reference
14	Area = Length =	242.32 25.00			
	V=	$(254,82 + 242,32) / 2 \times 25,00$	6.214.23	m ³	
15	Area = Length =	268.26 25.00			
	V=	$(242,32 + 268,26) / 2 \times 25,00$	6.382.25	m ³	
16	Area = Length =	287.39 25.00			
	V=	$(268,26 + 287,39) / 2 \times 25,00$	6.945.63	m ³	
		Sand Excavation Total Volume =	87,223.68	m³	

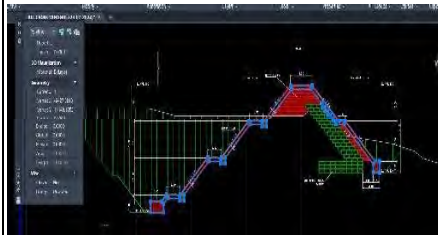
Name Structure :		: Dike Leprak 24			
Type of work		: Concrete K-225			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Area =	27.24 m ²			
	Length =	25.00 m'			
	Volume =	680.88 m ³			
	Total Volume =		680.88	m3	
1	Area =	27.40 m ²			
	Length =	25.00 m'			
	Volume =	684.88 m ³			
	Total Volume =		684.88	m3	
2	Area =	27.59 m ²			
	Length =	25.00 m'			
	Volume =	689.75 m ³			
	Total Volume =		689.75	m3	
3	Area =	27.76 m ²			
	Length =	25.00 m'			
	Volume =	693.94 m ³			
	Total Volume =		693.94	m3	

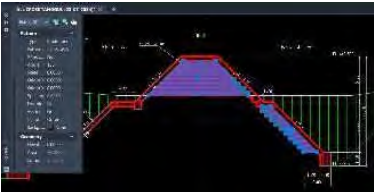
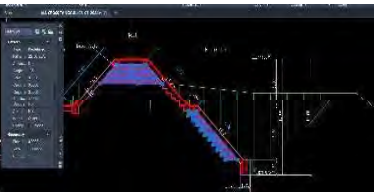
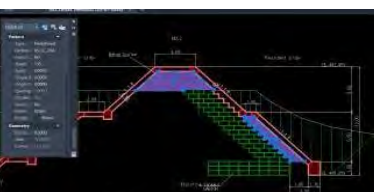

Name Structure :		: Dike Leprak 24				
Type of work		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
4	Area =	27.94 m ²				
	Length =	25.00 m'				
	Volume =	698.59 m ³				
			698.59	m3		
5	Area =	28.11 m ²				
	Length =	25.00 m'				
	Volume =	702.78 m ³				
	Total Volume =		702.78	m3		
6	Area =	28.30 m ²				
	Length =	25.00 m'				
	Volume =	707.40 m ³				
	Total Volume =		707.40	m3		
7	Area =	28.47 m ²				
	Length =	25.00 m'				
	Volume =	711.82 m ³				
	Total Volume =		711.82	m3		

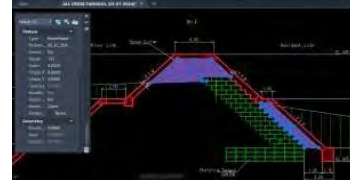
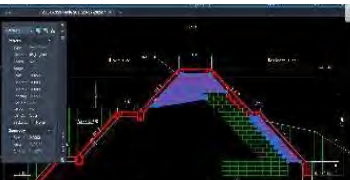


Name Structure : : Dike Leprak 24					Type of work : Concrete K-225					
No.	Description	Calculation		Volume	Unit	Drawing Reference				
8	Area =	28.65	m ²							
	Length =	25.00	m ¹							
	Volume =	716.24	m ³							
	Total Volume =			716.24	m ³					
9	Area =	28.83	m ²							
	Length =	25.00	m ¹							
	Volume =	720.66	m ³							
	Total Volume =			720.66	m ³					
10	Area =	29.01	m ²							
	Length =	25.00	m ¹							
	Volume =	725.14	m ³							
	Total Volume =			725.14	m ³					
11	Area =	29.18	m ²							
	Length =	25.00	m ¹							
	Volume =	729.56	m ³							
	Total Volume =			729.56	m ³					
Concrete K-225 Sub Total Volume =					8,461.61	m³				

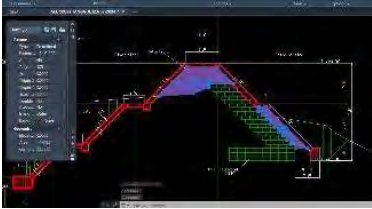
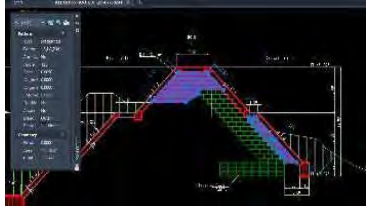


Name Structure :		: Dike Leprak 24				
Type of work		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
12						
	Area =	29.35 m ²				
	Length =	25.00 m'				
	Volume =	733.72 m ³				
	Total Volume =		733.72	m3		
13						
	Area =	31.15 m ²				
	Length =	25.00 m'				
	Volume =	778.71 m ³				
	Total Volume =		778.71	m3		
14						
	Area =	31.33 m ²				
	Length =	25.00 m'				
	Volume =	783.16 m ³				
	Total Volume =		783.16	m3		
15						
	Area =	31.50 m ²				
	Length =	25.00 m'				
	Volume =	787.50 m ³				
	Total Volume =		787.50	m3		


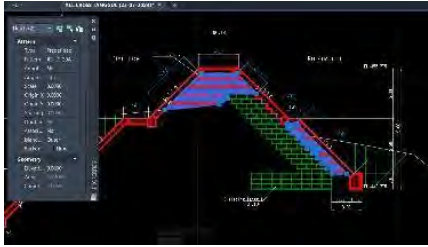
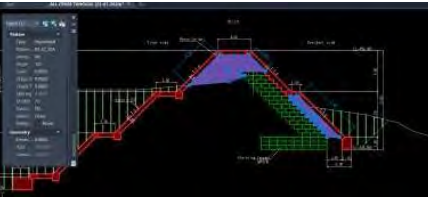
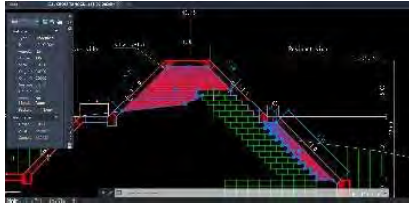
Name Structure :		: Dike Leprak 24				
Type of work		: Concrete K-225				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
16						
	Area =	31.68 m ²				
	Length =	25.00 m'				
	Volume =	792.03 m ³				
			792.03	m3		
		Concrete K-225 Total Volume =		12,336.72 m3		



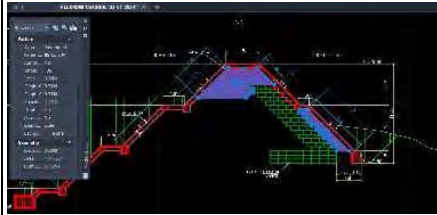
Name Structure : : Dike Leprak 24					
Type of work : : Cyclop Concrete					
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Area =	33.90 m ²			
	Length =	25.00 m'			
	Volume =	847.40 m ³			
	Total Volume =		847.40	m3	
1	Area =	17.31 m ²			
	Length =	25.00 m'			
	Volume =	432.75 m ³			
	Total Volume =		432.75	m3	
2	Area =	18.12 m ²			
	Length =	25.00 m'			
	Volume =	453.00 m ³			
	Total Volume =		453.00	m3	
3	Area =	19.90 m ²			
	Length =	25.00 m'			
	Volume =	497.50 m ³			
	Total Volume =		497.50	m3	

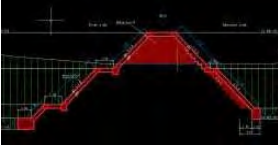
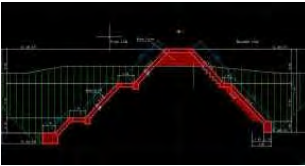
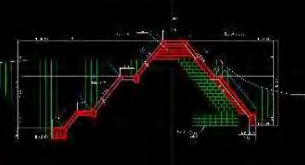
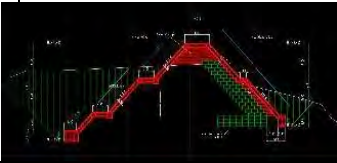
Name Structure :		: Dike Leprak 24				
Type of work :		: Cyclop Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference	
4	Area =	20.44 m ²				
	Length =	25.00 m'				
	Volume =	511.00 m ³				
			511.00	m3		
5	Area =	24.36 m ²				
	Length =	25.00 m'				
	Volume =	609.00 m ³				
	Total Volume =		609.00	m3		
6	Area =	22.75 m ²				
	Length =	25.00 m'				
	Volume =	568.75 m ³				
	Total Volume =		568.75	m3		
7	Area =	23.23 m ²				
	Length =	25.00 m'				
	Volume =	580.75 m ³				
	Total Volume =		580.75	m3		




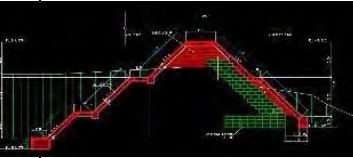
Name Structure : : Dike Leprak 24					Type of work : Cyclop Concrete				
No.	Description	Calculation	Volume	Unit	Drawing Reference				
8	Area =	23.52 m ²							
	Length =	25.00 m ¹							
	Volume =	588.00 m ³							
	Total Volume =		588.00	m3					
9	Area =	23.94 m ²							
	Length =	25.00 m ¹							
	Volume =	598.50 m ³							
	Total Volume =		598.50	m3					
10	Area =	21.98 m ²							
	Length =	25.00 m ¹							
	Volume =	549.50 m ³							
	Total Volume =		549.50	m3					
11	Area =	24.09 m ²							
	Length =	25.00 m ¹							
	Volume =	602.25 m ³							
	Total Volume =		602.25	m3					
Cyclop Concrete Sub Total Volume =			6,838.40	m³					

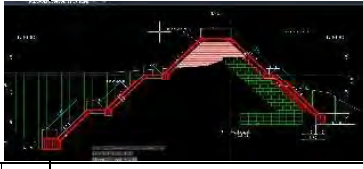
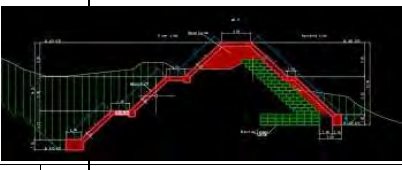


Name Structure :		: Dike Leprak 24			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Working Reference
12	Area =	24.91 m ²			
	Length =	25.00 m'			
	Volume =	622.75 m ³			
	Total Volume =		622.75	m3	
13	Area =	24.07 m ²			
	Length =	25.00 m'			
	Volume =	601.75 m ³			
	Total Volume =		601.75	m3	
14	Area =	24.64 m ²			
	Length =	25.00 m'			
	Volume =	616.00 m ³			
	Total Volume =		616.00	m3	
15	Area =	26.25 m ²			
	Length =	25.00 m'			
	Volume =	656.25 m ³			
	Total Volume =		656.25	m3	

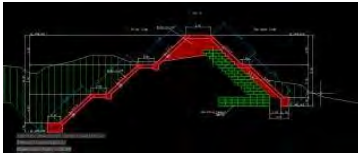
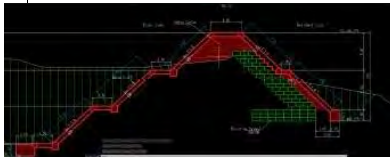



Name Structure :		: Dike Leprak 24			
Type of work		: Cyclop Concrete			
No.	Description	Calculation	Volume	Unit	Drawing Reference
16					
	Area =	26.33 m ²			
	Length =	25.00 m'			
	Volume =	658.25 m ³			
			658.25	m3	
Cyclop Concrete Total Volume =					9,993.40 m³

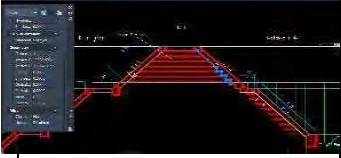

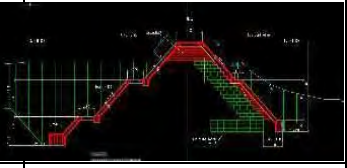



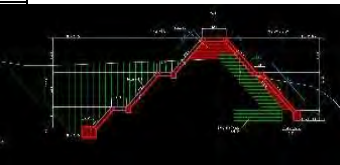

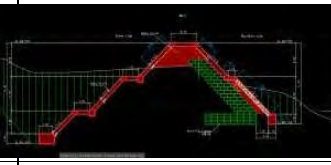
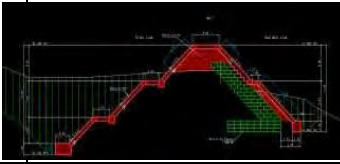
Name Structure :		: Dike Leprak 24					
Type of work :		: Exposed Formwork					
No.	Description	Calculation	Volume	Unit	Drawing Reference		
0	Formwork Length = Length = Volume = Total Volume =	34.68 m' 25.00 m' 867.00 m ²					
			867.00	m ²			
1	Formwork Length = Length = Volume = Total Volume =	35.03 m' 25.00 m' 875.75 m ²					
			875.75	m ²			
2	Formwork Length = Length = Volume = Total Volume =	35.38 m' 25.00 m' 884.50 m ²					
			884.50	m ²			
3	Formwork Length = Length = Volume = Total Volume =	35.75 m' 25.00 m' 893.75 m ²					
			893.75	m ²			



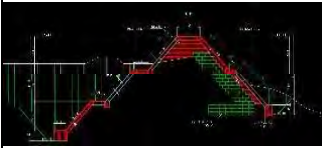
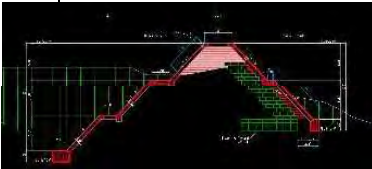
Name Structure :		: Dike Leprak 24			
Type of work :		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Formwork Length = 35.23 Length = 25.00 Volume = 905.75	m' m' m ²	905.75	m ²	
5	Formwork Length = 35.45 Length = 25.00 Volume = 911.25 Total Volume =	m' m' m ²	911.25	m ²	
6	Formwork Length = 35.94 Length = 25.00 Volume = 923.50 Total Volume =	m' m' m ²	923.50	m ²	
7	Formwork Length = 37.15 Length = 25.00 Volume = 928.75 Total Volume =	m' m' m ²	928.75	m ²	



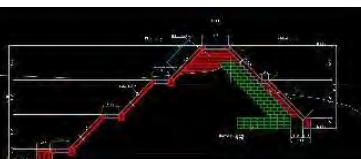


Name Structure :		: Dike Leprak 24			
Type of work :		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Formwork Length = 37.51 Length = 25.00 Volume = 937.75 Total Volume =	m' m' m ²	937.75	m ²	
9	Formwork Length = 37.86 Length = 25.00 Volume = 946.50 Total Volume =	m' m' m ²	946.50	m ²	
10	Formwork Length = 38.21 Length = 25.00 Volume = 955.25 Total Volume =	m' m' m ²	955.25	m ²	
11	Formwork Length = 38.57 Length = 25.00 Volume = 964.25 Total Volume =	m' m' m ²	964.25	m ²	
Exposed Formwork Sub Total Volume =			10,994.00	m³	

Name Structure :		: Dike Leprak 24			
Type of work		: Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
12	Formwork Length = 38.95 m' Length = 25.00 m' Volume = 973.75 m2 Total Volume =		973.75	m2	
13	Formwork Length = 39.27 m' Length = 25.00 m' Volume = 981.75 m2 Total Volume =		981.75	m2	
14	Formwork Length = 39.63 m' Length = 25.00 m' Volume = 990.75 m2 Total Volume =		990.75	m2	
15	Formwork Length = 39.98 m' Length = 25.00 m' Volume = 999.50 m2 Total Volume =		999.50	m2	
16	Formwork Length = 40.33 m' Length = 25.00 m' Volume = 1008.25 m2 Total Volume =		1,008.25	m2	
Exposed Formwork Total Volume =			15,948.00	m2	

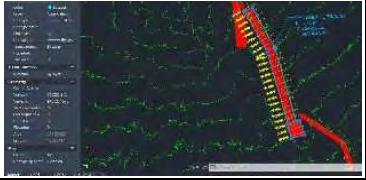
Name Structure :		: Dike Leprak 24			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
0	Formwork Length = 20.77 m' Length = 25.00 m' Volume = 519.34 m ² Total Volume =		519.34	m ²	
1	Formwork Length = 14.69 m' Length = 25.00 m' Volume = 367.32 m ² Total Volume =		367.32	m ²	
2	Formwork Length = 14.94 m' Length = 25.00 m' Volume = 373.50 m ² Total Volume =		373.50	m ²	
3	Formwork Length = 14.97 m' Length = 25.00 m' Volume = 374.27 m ² Total Volume =		374.27	m ²	

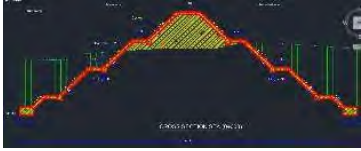
Name Structure :		: Dike Leprak 24			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
4	Formwork Length = 15.71 m' Length = 25.00 m' Volume = 392.76 m2		392.76	m2	
5	Formwork Length = 27.10 m' Length = 25.00 m' Volume = 427.42 m2 Total Volume =		427.42	m2	
6	Formwork Length = 26.39 m' Length = 25.00 m' Volume = 409.65 m2 Total Volume =		409.65	m2	
7	Formwork Length = 26.45 m' Length = 25.00 m' Volume = 411.34 m2 Total Volume =		411.34	m2	

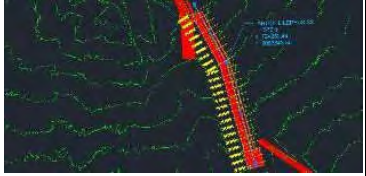
Name Structure :		: Dike Leprak 24			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
8	Formwork Length = 16.88 Length = 25.00 Volume = 422.07 Total Volume =	m' m' m2	422.07	m2	
9	Formwork Length = 16.71 Length = 25.00 Volume = 417.75 Total Volume =	m' m' m2	417.75	m2	
10	Formwork Length = 16.67 Length = 25.00 Volume = 416.75 Total Volume =	m' m' m2	416.75	m2	
11	Formwork Length = 17.21 Length = 25.00 Volume = 430.25 Total Volume =	m' m' m2	430.25	m2	
Non Exposed Formwork Sub Total Volume =			4,962.41	m³	

Name Structure :		: Dike Leprak 24			
Type of work		: Non Exposed Formwork			
No.	Description	Calculation	Volume	Unit	Drawing Reference
12	Formwork Length = Length = Volume = Total Volume =	17.46 m' 25.00 m' 436.50 m2	519.34	m2	
13	Formwork Length = Length = Volume = Total Volume =	17.02 m' 25.00 m' 425.50 m2	425.50	m2	
14	Formwork Length = Length = Volume = Total Volume =	17.12 m' 25.00 m' 428.00 m2	428.00	m2	
15	Formwork Length = Length = Volume = Total Volume =	17.61 m' 25.00 m' 440.25 m2	440.25	m2	
16	Formwork Length = Length = Volume = Total Volume =	16.97 m' 25.00 m' 424.25 m2	424.25	m2	
Non Exposed Formwork total Volume =			7,199.74	m2	

SUMMARY OF QUANTITY DIKE LEPRAK 22			
No.	Description	Unit	Volume
1	Stake Out	m2	21,410.29
2	Cross Profile	m	1,368.00
3	Bowplank	m	632.00
4	Mechanical Sand Excavation	m3	147,475.41
5	Sand Backfill	m3	1,673.44
6	Concrete Making and Casting $f_c' = 20$ Mpa (K 225) Mechanically Transported within a radius of 2000 m with a Concrete Pump (CP)	m3	9,039.27
7	Cyclops Concrete 60% Concrete $f_c' = 15$ Mpa: 40% Split Stone, with Concrete Pump (CP)	m3	2,406.89
8	1 m2 Exposed Concrete Wall Formwork with 18 mm Multiflex	m2	14,205.39
9	1 m2 Regular Formwork for Concrete Walls with Multiflex 12 mm or 18 mm	m2	1,193.85
10	1 m2 Scaffolding / Supporting Formwork Rafters 5/7 for Concrete Walls Tm 2.50 m	m2	15,399.24
11	Carefully dismantle 1 m2 of Formwork and Scaffolding	m2	14,205.39
12	Dismantle 1 m2 of Formwork and Scaffolding in the Normal Way (and Clear Debris) for Non Expose	m2	1,193.85
13	Joint Filler	m3	2.51

Name Structure : : Dike Leprak 22					
Type of work : Stake Out					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1	Area =	21410.29	21,410.29	m ²	
		Stake Out Total Volume =	21,410.29	m²	

Name Structure : : Dike Leprak 22					
Type of work : Cross Profile					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Numbers of Section =	24.00	1,368.00	m	
	Cross Length =	57.000			
		Cross Profile Total Volume =	1,368.00	m	

Name Structure : : Dike Leprak 22					
Type of work : Bowplank					
No.	Description	Calculation	Volume	Unit	Drawing Reference
1					
	Profile Length =	575.00	632.00	m	
	Cross Section Length	57.00			
		Bowplank Total	632.00	m'	