

CONSTRUCTION OF AUTOMOTIVE LABORATORY BUILDING
NORTHWESTERN MINDANAO STATE COLLEGE OF SCIENCE & TECH.
BRGY. LABUYO, TANGUB CITY, MISAMIS OCCIDENTAL

QUANTITY COMPUTATION

August 19, 2015

Item 803	Structure Excavation					100.16	cu.m.
		width	length	depth	# of units	volume	
	F1	1.20	1.20	1.20	23	39.74	cu.m.
		width	depth	length			
	WF-1	0.40	0.40	96.00		15.36	cu.m.
		width	length	depth			
	Tie Beam	0.30	108.00	0.65		21.06	cu.m.
		width	length	depth			
	Septic Tank	6.00	2.00	2.00		24.00	cu.m.
					Total Vol. =	<u>100.16</u>	cu.m

Item 804	Embankment					250.76	cu.m.
	BACKFILL	width	length	depth	# of units	volume	
	F1	1.2	1.2	0.95	23	31.46	cu.m.
	WF-1	0.3	96.0	0.25		7.20	cu.m.
	Tie Beam	0.3	108.0	0.40		12.96	cu.m.
					Total Vol. =	<u>51.62</u>	cu.m
	EMBANKMENT	width	length	thk		volume	
	Classrooms	8.00	28.00	0.400		89.60	cu.m.
	Corridor	1.50	28.00	0.40		16.80	cu.m.
					Total Vol. =	<u>106.40</u>	cu.m.
					Total Volume =	158.02	cu.m
					+ 15% SF	<u>23.70</u>	cu.m
						<u>181.73</u>	cu.m

	GRAVEL BEDDING	width	length	thk	# of units	volume	
	F1	1.20	1.20	0.10	23	3.31	cu.m.
	WF-1	0.30	96.00	0.10	1	2.88	cu.m.
	Tie Beam	0.30	108.00	0.10	1	3.24	cu.m.
	Septic Tank	2.00	6.00	0.10	1	1.20	cu.m.
	Floor Slab	width	length	thk			
	Classrooms	8.00	52.00	0.10		41.60	cu.m.
	Corridor	1.50	52.00	0.10		7.80	cu.m.
					Total Vol. =	<u>60.03</u>	cu.m.
					+ 15% SF	<u>9.00</u>	cu.m
						<u>69.04</u>	cu.m

Item 1000	Soil Poisoning					266.00	sq.m.
		width	length	area			
	Area =	9.5	28.00	266.00	sq.m.		

Item 405	Structural Concrete					56.23	cu.m.
	Foundation	width	width	depth	# of units	volume	
	F1	1.00	1.00	0.25	23	5.75	
		width	depth	Length	# of units	volume	
	C-1	0.25	0.25	7.000	13	5.69	
	C-2	0.25	0.25	4.700	10	2.94	
	WF-1	0.30	0.15	96.000	1	4.32	
	Tie Beam	0.20	0.25	108.000	1	5.40	
	Roof Beam	0.20	0.25	108.000	1	5.40	
						<u>8.63</u>	cu.m.
	Floor Slab	width	length	thk	# of units		
	Classrooms	8.00	28.00	0.10	1	22.40	
	Corridor	1.50	28.00	0.10	6	<u>25.20</u>	

Total Vol 56.23 cu.m.

Item 404 Reinforcing Steel		7,334.82 kgs		Schedule 40	
		no of legnth	kg/m	kg	
Foundation					
F1	16 mmφ x 6.00 Def. Bars	54.00	1.579	511.60	
C-1	16 mmφ x 6.00 Def. Bars	67.00	1.579	634.76	
	10 mmφ x 6.00 Def. Bars	98.00	0.616	362.21	
C-2	16 mmφ x 6.00 Def. Bars	63.00	1.579	596.86	
	10 mmφ x 6.00 Def. Bars	55.00	0.616	203.28	
WF-1	10 mmφ x 6.00 Def. Bars	250.00	0.616	924.00	
Tie Beam	16 mmφ x 6.00 Def. Bars	126.00	1.579	1,193.72	
	10 mmφ x 6.00 Def. Bars	85.00	0.616	314.16	
Roof Beam	16 mmφ x 6.00 Def. Bars	188.00	1.579	1,781.11	
	10 mmφ x 6.00 Def. Bars	135.00	0.616	498.96	
Floor Slab and Corridor					
Long	10 mmφ x 6.00 Def. Bars	40.00	0.616	147.84	
Short	10 mmφ x 6.00 Def. Bars	45.00	0.616	166.32	
TOTAL KILOGRAMS				7,334.82	

tie wire 220.04 kgs

Item 704 Masonry Works		352.36 sq.m			
100mm thk CHB	width	height	# of units	area	
Exterior Wall - front	12.00	6.000	1.00	72.00	
Exterior Wall - front	16.00	4.000	1.00	64.00	
Exterior Wall - rear	12.00	4.000	1.00	48.00	
Exterior Wall - left side	8.00	6.000	1	48.00	
Exterior Wall - left side	8.00	4.000	1	32.00	
Exterior Wall - rightside	8.00	6.000	1	48.00	
Exterior Wall - rightside	8.00	4.000	1	32.00	
Partition Wall - Classrooms	8.00	4.000	1	32.00	
partition wall -toilets	4.00	4.00	4	64.00	
				440.00 sq.m.	
LESS OPENING	width	height	# of units	area	
D1	2.50	3.20	4	32.00	
D2	1.00	2.10	3	6.30	
D3	0.60	2.00	2	2.40	
D4	0.60	1.50	5	4.50	
W1	1.80	1.90	7	23.94	
W2	2.50	1.85	4	18.50	
				87.64 sq.m.	
TOTAL WALL AREA				352.36 sq.m.	
				100mm thk CHB	

Item 1027 Cement Plaster Finishes		352.36 -			
100mm thk CHB	width	height	# of units	area	
Exterior Wall - front	12.00	6.000	1.00	72.00	
Exterior Wall - front	16.00	4.000	1.00	64.00	
Exterior Wall - rear	12.00	4.000	1.00	48.00	
Exterior Wall - left side	8.00	6.000	1	48.00	
Exterior Wall - left side	8.00	4.000	1	32.00	
Exterior Wall - rightside	8.00	6.000	1	48.00	
Exterior Wall - rightside	8.00	4.000	1	32.00	
Partition Wall - Classrooms	8.00	4.000	1	32.00	
partition wall -toilets	4.00	4.00	4	64.00	
				440.00 sq.m.	
LESS OPENING	width	height	# of units	area	
D1	2.50	3.20	4	32.00	

D2	1.00	2.10	3	6.30
D3	0.60	2.00	2	2.40
D4	0.60	1.50	5	4.50
W1	1.80	1.90	7	23.94
W2	2.50	1.85	4	18.50
				<u>87.64</u> sq.m.

TOTAL WALL AREA
100mm thk CHB 352.36 sq.m.

Item 403 Metal Structures 6,251.64 kgs

			pcs	kg/m	kg
A	ROOF TRUSSES	65mmx65mmx6mm thk. Angle Bar	65	5.91	2,304.90
	Purlins	150mmx65mmx20mmx2mm LC-Purlins	90	4.79	2,586.60
	Clip Angle	65mmx65mmx6mm thk. x 130mm	10	5.91	354.60
	Steel Fascia	Angular bar 20x20x2mm thk	30	0.74	133.20
	Sag Rod	10mmØ x 6.00 m. Def. Bars	40	0.616	147.84
	Cross Bracing	12mmØ x 6.00 m. Def. Bars	40	1.579	378.96
		50mmx50mmx6mm thk. Angle Bar	13	4.43	<u>345.54</u>
					6,251.64

Total Kilogram = 6,251.64 kgs

Welding Rod 62.5164 kg

Item 1013 Pre-Painted Metal Sheets 381.30 sq.m

	width	length	# of sides	area
Roof Area =	6.355	30.00	2	381.30 sq.m

SPL - I Ceiling 214.13 sq.m

	Width	Length	Area
Toilet - She	2.00	4.00	8.00
Toilet - He	2.000	4.00	8.00
Faculty Room	4.000	12.00	48.00
Eaves - Front	2.00	28.00	56.00
Eaves - Back	2.000	28.00	56.00
Eaves - Sides	1.000	25.42	25.42
Eaves - Sides	1.000	12.71	<u>12.71</u>
			214.13 sq.m

Item 1009	Windows		11.00 sets		
W-1	French Window on concrete Jamb With complete Hardware And Accessories	1.90 x 1.80	23.94	7.00 sets	
W-2	3mm Thk. x 2" x 3" Rectangular steel tubing	4.625	8.74	4.00 sets	
			32.68 sq.m		

Item 1010	Doors		14.00 sets		
D-1 ROLL-UP DOOR	Steel Roll-up Doors Complete With Hardware And Accessories	3.20 x 2.50	8.00	4.00 sets	
D-2 (Classroom)	Hardwood Panel Door Type Complete With Hardware And Accessories Keyed- Lever Type Lockset: 3 pcs - 3-3/4"x 1-1/2" door hinge	0.90 x 2.40	6.48	3.00 sets	
D-3 (Toilet Main Door)	Hollow Core Flush Type Swing Door Hardwood Jamb w/ Marine Plywood Facing Inside And Ordinary Outside Complete w/ Hardware and Accessories. Provide : Kick Plate; Keyed- Lever Type Lockset; 3 pcs - 3-3/4"x 1-1/2" door hinge	0.60 x 2.00	2.40	2.00 set	
D-4 (Toilet)	Hollow Core Flush Type Swing Door Hardwood Jamb and aluminum materials Complete w/ Hardware and Accessories. Keyed- Lever Type Lockset: 3 pcs - 3-3/4"x 1-1/2" door hinge	0.80 x 2.10	8.40	5.00 sets	
			25.28 sq.m		

Item 1100	Electrical		266.00 sq.m		
		width	length	area	
	Floor area	9.50	28.00	266.00	
				<u>266.00</u> sq.m	

Item 1002	Plumbing and Sanitary Works		34.63 sq.m		
	GROUND FLOOR	width	length	area	
	She Toilet	1.50	2.00	3.00	
	He Toilet	1.43	3.00	4.28	
		1.00	0.60	<u>0.60</u>	
				22.63 sq.m	
		width	length	depth	area
	Septic Tank	2.00	6.00	2.00	12.00 sq.m

Item 1001	Storm and Sewerage System		3.00 units		
		width	length	depth	# of units
	Catch Basin	0.60	0.60	0.60	3

Item 1018	Tile Works		55.62 sq.m		
	200 x 200 vitrified floor tiles (unglazed)				
	GROUND FLOOR	width	length	floor area	
	She Toilet	2.000	4.000	8.00	
	He Toilet	2.000	4.000	<u>8.00</u>	
				16.00 sq.m	

TOTAL FLOOR AREA 16.00 sq.m
 200 x 200 vitrified floor tiles (unglazed)

200 x 200 vitrified floor tiles (glazed)

GROUND FLOOR	width	wall height	wall area
She Toilet	2.000	1.60	3.20
	0.900	1.60	1.44
	0.900	1.60	1.44
	0.900	1.60	1.44
	1.200	1.60	1.92
	1.200	1.60	1.92
	1.200	1.60	1.92
	1.200	1.60	1.92
He Toilet	2.000	1.60	3.20
	0.900	1.60	1.44
	0.900	1.60	1.44
	1.200	1.60	1.92
	1.200	1.60	1.92
	1.200	1.60	1.92
	2.200	1.60	3.52
Sink, she	1.30	0.90	1.17
	0.50	0.90	0.45
	0.50	0.90	0.45
Sink, He	0.60	0.85	0.51
	0.30	0.85	0.26
	0.20	0.85	0.17
Urinal	0.60	1.10	0.66
	0.25	1.10	0.28
			47.30 sq.m

LESS OPENING	width	height	# of units	area
D3	0.60	1.60	6	5.76
D4	0.60	1.60	2	1.92
				7.68 sq.m

TOTAL FLOOR AREA 39.62 sq.m
 200 x 200 vitrified floor tiles (glazed)

Item 1032 Painting 415.47 sq.m.

Concrete Surface

Wall, column, beams	352.36
Fascia Board	20.61
	372.97 sq.m.

Wood Surface - door, jambs 17.50 sq.m.
 Steel Surface 25.00 sq.m.

SPL - 2 School Facilities 1.00 units

	length	height	depth	# of unit
Blackboard w/ Chalkboard	2.4	1.2	0.42	1

SPL - 3 Construction Safety and Health

Number of Personnel = 10
 Duration = 90 days
 Average Working = 8 hrs/day
 Mandays = 1200 m-day

Prepared :


EDISON R. CLAMONTE
 Civil Engineer