Republic of the Philippines
CITY OF ILAGAN
Province of Isabela

Name of Project : Construction of 4CL Two(2) Storey School Building @ Alinguigan 2nd Elem. School
Location : Alinguigan 2nd, City of Ilagan, Isabela

PROGRAM OF WORKS
SUMMARY

ITEM	DESCRIPTION	QTY.	UNIT	UNIT COST	AMOUNT
I	General Requirements	1.00	lot	243,800.00	243,800.00
II	Earthworks	415.25	cu.m.	566.48	235,230.00
III	Concrete Works	156.18	cu.m.	11,591.55	1,810,368.00
IV	Reinforcing Steel Works	32,774.63	kgs.	76.55	2,508,762.69
V	Masonry Works	1,790.16	sq.m.	654.81	1,172,215.80
VI	Doors and Windows	41	sets	9,950.93	407,988.00
VII	Roofing Works	275	ln.m.	2,729.22	750,536.64
VIII	Electrical Works	1	lot	215,861.68	215,148.78
IX	Plumbing Works	1	lot	402,553.20	402,553.20
X	Ceiling Works	602	sq.m.	811.05	488,250.00
XI	Painting Works	1,224.24	sq.m.	210.51	257,720.40
XII	Tile Works	679.35	sq.m.	1,084.77	736,937.50
XIII	Railings, Claddings and Signages	1	lot	769,843.75	769,843.75
				TOTAL PROJECT COST	**9,999,354.76**
				SAY	**10,000,000.00**

Prepared by :

ENGR. DIONICIO E. MENDOZA, JR.
Engineer III

Checked by :

ENGR. GARRY D. CABANILLA
City Engineer

Recommending Approval :

ENGR. CRISANTA D. CONCEPCION
OIC,City Planning & Dev't.Coordinator

Approved :

HON. JOSEMARIE L. DIAZ, DMD, MBA
City Mayor

PROGRAM OF WORK
(Bill of Materials and Cost Estimate)

I. GENERAL REQUIREMENTS

A. SAFETY AND HEALTH PROGRAM

QTY = 1.00 lot

Materials :

Safety Shoes	12.00	pairs	450.00			5,400.00
Safety Helmet	12.00	pcs.	650.00			7,800.00
Safety Gloves	12.00	pairs	100.00			1,200.00
Safety Vest	12.00	pcs.	200.00			2,400.00
Barricade	100.00	Ln.m	500.00			50,000.00
Billboard Frame & Tarpaulin	2.00	sets	10,000.00			20,000.00
Construction Signages	1.00	lot	10,000.00			10,000.00
			MATERIALS COST	=	PhP	96,800.00

B. TEMPORARY FACILITIES

QTY = 30.00 sq.m

Materials :

2'x3'x12' cocolumber	1,000	bd.ft.	35.00			35,000.00
# 26X12' GI Sheets	20	pcs	450.00			9,000.00
# 26X12' GI Sheets (used)	35	pcs	200.00			7,000.00
Roof nail	20	kgs	65.00			1,300.00
Assorted CW Nails	2	kegS.	3,300.00			6,600.00
1/4" Plywood	10	pcs	380.00			3,800.00
Temporary water connection	1	lot	10,000.00			10,000.00
Plumbing fixtures	1	lot	10,000.00			10,000.00
Temporary electricity connection	1	lot	10,000.00			10,000.00
Lighting fixtures	1	lot	5,000.00			5,000.00
Flush Door	2	pcS.	3,000.00			6,000.00
Cement	25	bags	250.00			6,250.00
Sand	3	cum	750.00			2,250.00
Gravel	3.00	cum	750.00			2,250.00
			MATERIAL COST	=	PhP	114,450.00

Labor:	No. of men	No. of days	Daily rate			
Foreman	1	7	650.00			4,550.00
Skilled Laborer	4	7	550.00			15,400.00
Unskilled Laborer	4	7	450.00			12,600.00
			LABOR COST	=	PhP	32,550.00
			DIRECT COST	=		243,800.00
			SUB-TOTAL	=	**PhP**	**243,800.00**

II. EARTHWORKS

QTY. = 415.25 cu.m.

A) Excavation

Equipment :	No. of units	No. of hrs.	Hourly rate			
Backhoe	1	40	1,875.00		PhP	75,000.00
Dumptruck	1	40	1,512.00			60,480.00
			EQUIPMENT COST	=	PhP	135,480.00

Labor:	No. of men	No. of days	Daily rate			
Foreman	1	5	650.00		PhP	3,250.00
Laborer	10	5	450.00			22,500.00
			LABOR COST	=	PhP	25,750.00

B) Backfill

Labor:	No. of men	No. of days	Daily rate			
Foreman	1	10	650.00		PhP	6,500.00
Laborer	15	10	450			67,500.00
			LABOR COST	=	PhP	74,000.00
			LABOR COST	=		99,750.00
			DIRECT COST	=		235,230.00
			SUB-TOTAL	=	**PhP**	**235,230.00**

III. CONCRETE WORKS

QTY. = 156.18 cu.m.

Materials :	QTY.	UNIT	UNIT COST		AMOUNT
Portland Cement	1417	bags	250.00	₱	354,250.00
Sand (s-1)	79	cu.m.	750.00		59,250.00
Gravel (g-1,)	156	cu.m.	750.00		117,000.00
Backfilling Materials	130	cu.m.	350.00		45,500.00
¼" Marine Plywood	60	pcs.	350.00		21,000.00
½" Marine Plywood	200	pcs.	700.00		140,000.00
Ass. Lumber	6000	bd.ft.	52.00		312,000.00
Ass. C.W. Nails	150	kgs.	80.00		12,000.00
			MATERIALS COST	₱	1,061,000.00

Equipment :	No. of units	No. of days	Daily rate		
One bagger Mixer w/ fuel	1	37	900.00	PhP	33,300.00
				PhP	33,300.00

Labor:	No. of men	No. of days	Daily rate			
Foreman	1	25	650.00		PhP	16,250.00
Skilled Laborer	9	25	550			123,750.00
Laborer	18	25	450			202,500.00
			LABOR COST	=	PhP	342,500.00
			DIRECT COST	=		1,436,800.00
			PROFIT	=		114,944.00
			OCM	=		172,416.00
			VAT	=		86,208.00
			SUB-TOTAL	=	**PhP**	**1,810,368.00**

IV. REINFORCING STEEL WORKS

QTY. = 32,774.63 kgs.

Materials :	QTY.	UNIT	UNIT COST		AMOUNT
25mm Ø RSB	2708.52	kgs.	50.00		135,426.00
20mm Ø RSB	12902.98	kgs.	50.00		645,149.00
16mm Ø RSB	3,309.49	kgs.	50.00		165,474.50
12mm Ø RSB	2,823.04	kgs.	50.00		141,152.00
10mm Ø RSB	11,030.60	kgs.	50.00		551,530.00
#16 G.I. Tie wire	350.00	kgs.	80.00		28,000.00
Cut Off Machine	1.00	pcs.	8,000.00		8,000.00
Cutting disc, 14"	30.00	pcs.	250.00		7,500.00
			MATERIALS COST	₱	1,682,231.50

Labor:	No. of men	No. of days	Daily rate			
Foreman	1	29	650.00		PhP	18,850.00
Skilled Laborer	10	29	550			159,500.00
Laborer	10	29	450			130,500.00
			LABOR COST	=	PhP	308,850.00
			DIRECT COST	=		1,991,081.50
			PROFIT	=		159,286.52
			OCM	=		238,929.78
			VAT	=		119,464.89
			SUB-TOTAL	=	**PhP**	**2,508,762.69**

V. MASONRY WORKS

QTY. = 1845.16 sq.m.

Materials : CHB Laying	QTY.	UNIT	UNIT COST		AMOUNT
Portland Cement	941	bags	250.00	₱	235,250.00
Sand	48	cu.m.	500.00		24,000.00
6" CHB	6280	pcs.	16.00		100,480.00
4" CHB	1800	pcs.	14.00		25,200.00
10mm Ø RSB	465	pcs.	200.00		93,000.00
#16 G.I. Tie wire	20	kgs.	80.00		1,600.00
Minor tools	1	lot	6,000.00		6,000.00
			MATERIALS COST	₱	485,530.00

Labor for CHB laying :	No. of men	No. of days	Daily rate		
Foreman	1	20	650.00	PhP	13,000.00
Skilled Laborer	10	20	550		110,000.00
Laborer	10	20	450		90,000.00

			LABOR COST	=	PhP	213,000.00

Materials : Plastering

	QTY.	UNIT	UNIT COST			AMOUNT
Portland Cement	352	bags	250.00	₱		88,000.00
Sand	20	cu.m.	500.00			10,000.00
Minor tools	1	lot	6,000.00			6,000.00
			MATERIALS COST	₱		104,000.00

Labor for plastering :	No. of men	No. of days	Daily rate			
Foreman	1	12	650.00		PhP	7,800.00
Skilled Laborer	10	12	550			66,000.00
Laborer	10	12	450			54,000.00
			LABOR COST	=	PhP	127,800.00
			DIRECT COST	=		930,330.00
			PROFIT	=		74,426.40
			OCM	=		111,639.60
			VAT	=		55,819.80
			SUB-TOTAL	=	**PhP**	**1,172,215.80**

VI. DOORS AND WINDOWS

QTY. = 41 sets

Materials :

8 sets D1	1.0m x 2.40m	8	sets	12,000.00	PhP	96,000.00
2 sets D2	1.0m x 2.10m	2	set	9,000.00		18,000.00
4 sets D3	0.70m x 2.10m	4	sets	3,000.00		12,000.00
4 sets D4	0.70m x 1.30m	4	sets	4,000.00		16,000.00
1 sets D5	0.70m x 2.10m	1	set	9,000.00		9,000.00
8 sets W1	2.70m x 1.50m	8	sets	12,000.00		96,000.00
8 sets W2	1.50m x 1.60m	8	sets	3,000.00		24,000.00
2 sets W3	1.20m x 0.50m	2	set	1,800.00		3,600.00
4 sets W4	1.0m x 0.50m	4	sets	3,000.00		12,000.00
					PhP	286,600.00

Labor for plastering :	No. of men	No. of days	Daily rate			
Foreman	1	8	650.00		PhP	5,200.00
Skilled Laborer	4	8	550			17,600.00
Laborer	4	8	450			14,400.00
			LABOR COST	=	PhP	37,200.00
			DIRECT COST	=		323,800.00
			PROFIT	=		25,904.00
			OCM	=		38,856.00
			VAT	=		19,428.00
			SUB-TOTAL	=	**PhP**	**407,988.00**

VII. ROOFING WORKS

QTY = 275.00 sq.m.

Materials :

0.5mm Long Span Rib Type	275	Ln.m	410.00			112,750.00
#26 x 10' G.I. Flushing	24	pcs.	350.00			8,400.00
Gutter	5	pcs.	380.00			1,900.00
16mm Thk. MS Plate	2	lots	17,000.00			34,000.00
2" x 2" x 1/4" L bar	108	pcs.	1,200.00			129,600.00
1 1/2" x 1 1/2" x 1/4" L Bar	128	pcs.	1,108.00			141,824.00
2" x 4" 1.5 mm C- purlins	68	pcs.	750.00			51,000.00
12 mm Ø Plain round bar	29	pcs.	240.00			6,960.00
12 mm Ø std. turn buckle	29	pcs.	220.00			6,380.00
Welding rod	5	boxes	400.00			2,000.00
Epoxy Primer	3	gal	700.00			2,100.00
Blind rivets	5	box	320.00			1,600.00
Tekscrew	1500	pcs	2.00			3,000.00
Vulcaseal	3	lits.	350.00			1,050.00
			MATERIALS COST	=		502,564.00

Labor:	No. of men	No. of days	Daily rate			Amount
Foreman	1	14	650.00		PhP	9,100.00

Skilled Laborer	6	14	550.00			46,200.00
Unskilled Laborer	6	14	450.00			37,800.00
			LABOR COST	=	PhP	93,100.00
			DIRECT COST	=		595,664.00
			PROFIT	=		47,653.12
			OCM	=		71,479.68
			VAT	=		35,739.84
			SUB-TOTAL		**PhP**	**750,536.64**

VIII. ELECTRICAL WORKS

QTY. = 1 lot

Materials :

Junction box	25	pcs	40.00		1,000.00
Utility box	10	pcs	40.00		400.00
Receptacle	2	pcs	50.00		100.00
square box	4	pcs	50.00		200.00
1 gang switch	9	set	85.00		765.00
2 gang switch	8	set	133.00		1,064.00
2 gang outlet	32	pcs	212.00		6,784.00
Ceiling Fan	16	pcs	1,800.00		28,800.00
Electrical Tape	20	pcs	32.00		640.00
PVC solvent	3	lit.	244.00		732.00
20mm dia. PVC pipe	70	pcs	69.00		4,830.00
Panel board	1	set	15,000.00		15,000.00
15 AT circuit breaker	3	pcs	400.00		1,200.00
20AT circuit breaker	2	pcs	430.00		860.00
30 AT circuit breaker	3	pcs	450.00		1,350.00
Entrance cap with adapter 3/4 Ø	1	set	160.00		160.00
3.5 sq.mm. THHN wire	3	box	3,800.00		11,400.00
5.5 sq.mm THHN wire	2	box	3,500.00		7,000.00
Fixture lighting LED (T8)	48	sets	350.00		16,800.00
LED bulb	9	pcs	400.00		3,600.00
Adapter with locknut	1	pack	58.00		58.00
1/2" PVC Pipe	30	pcs	65.00		1,950.00
3/4" PVC Elbow	3	pcs	20.00		60.00
1/2" PVC Elbow	20	pcs	15.00		300.00
			MATERIALS COST	=	105,053.00

Labor:	No. of men	No. of days	Daily rate			Amount
Foreman	1	18	650.00		PhP	11,700.00
Skilled Laborer	3	18	550.00			29,700.00
Unskilled Laborer	3	18	450.00			24,300.00
			LABOR COST	=	PhP	65,700.00
			DIRECT COST	=		170,753.00
			PROFIT	=		13,660.24
			OCM	=		20,490.36
			VAT	=		10,245.18
			SUB-TOTAL		**PhP**	**215,148.78**

IX. PLUMBING WORKS

QTY = 1.00 lot

MATERIALS:				
Water closet complete w/ accessories	6	sets	15,000.00	90,000.00
Lavatory w/ accessories	6	sets	8,000.00	48,000.00
Urinals complete w/ accessories	2	sets	8,000.00	16,000.00
Floor drain	8	sets	350.00	2,800.00
Faucet	6	sets	300.00	1,800.00
WATER LINES:				
1/2"Ø PPR pipes x 4m	17	pcs.	160.00	2,720.00
1/2"Ø PPR pipes fittings	1	lot	1,500.00	1,500.00
Teflon tape	15	rolls	25.00	375.00
WASTE LINES:				
2"Ø pvc pipe (orange) x 3m	21	pcs.	220.00	4,620.00
2"Ø pvc elbow (orange)	18	pcs.	40.00	720.00
2"x2"Ø pvc wye (orange)	12	pcs.	55.00	660.00
2"x2"Ø pvc wye w/ endplug	6	pcs.	55.00	330.00

2"x4"Ø pvc wye (orange)	12	pcs.	140.00			1,680.00
2"Ø pvc tee	12	pcs.	50.00			600.00
4"Ø pvc pipe (orange) x 3m	25	pcs.	570.00			14,250.00
4"x4"Ø pvc elbow (orange)	25	pcs.	100.00			2,500.00
4"x4"Ø pvc wye (orange)	9	pcs.	155.00			1,395.00
4"x4"Ø pvc wye w/ endplug	6	pcs.	165.00			990.00
4"x4"Ø pvc tee	12	pcs.	155.00			1,860.00
Solvent	3	lit.	250.00			750.00
SEPTIC TANK: (L=7.6m, w= 2.8m, h= 2.15m)						
Cement	90	bags	250.00			22,500.00
Sand	8	cu.m	450.00			3,600.00
Gravel	4	cu.m	750.00			3,000.00
4" CHB	750	pcs.	12.00			9,000.00
10"Ø RSB	70	pcs.	200.00			14,000.00
#16 G.I tie wire	9	kgs.	80.00			720.00
			MATERIALS COST			246,370.00
Labor:	No. of men	No. of days	Daily rate			Amount
Foreman	1	13	650.00		PhP	8,450.00
Skilled Laborer	5	13	550.00			35,750.00
Unskilled Laborer	5	13	450.00			29,250.00
			LABOR COST	=	PhP	73,450.00
			DIRECT COST	=		319,820.00
			PROFIT	=		25,585.60
			OCM	=		38,378.40
			VAT	=		18,769.20
			SUB-TOTAL		**PhP**	**402,553.20**

X. CEILING WORKS

QTY. = 602.00 sq.m.

Materials :	**QUANTITY**	**UNIT**	**UNIT COST**			**TOTAL COST**
4.5mm Thk. Fiber Cement Ceiling Board	250.00	sq.m.	700.00			175,000.00
Metal Furring	450.00	pcs.	110.00			49,500.00
Metal Furring Wall clip	1,200.00	pcs.	2.00			2,400.00
Carrying Channels	200.00	pcs.	110.00			22,000.00
Hanger	80.00	pcs.	110.00			8,800.00
Wall angles	40.00	pcs.	65.00			2,600.00
Blind Rivets	30.00	box	250.00			7,500.00
			MATERIALS COST	=		267,800.00
Labor:	No. of men	No. of days	Daily rate			Amount
Foreman	1	18	650.00		PhP	11,700.00
Skilled Laborer	6	18	550.00			59,400.00
Unskilled Laborer	6	18	450.00			48,600.00
			LABOR COST	=	PhP	119,700.00
			DIRECT COST	=		387,500.00
			PROFIT	=		31,000.00
			OCM	=		46,500.00
			VAT	=		23,250.00
			SUB-TOTAL		**PhP**	**488,250.00**

XI. PAINTING WORKS

QTY. = 1,224.24 sq.m.

Materials : 3- COATINGS					
Concrete Neutralizer	25	gals.	550.00		13,750.00
Flat Latex Paint	35	gals.	650.00		22,750.00
Gloss Latex Paint	35	gals.	650.00		22,750.00
Acrylic Paint	10	gals.	650.00		6,500.00
Paint Roller w/ pan	7	pcs.	150.00		1,050.00
Paint Brush	7	pcs.	100.00		700.00
Skim Coat	100	bags	475.00		47,500.00
Paint Thinner	9	gals.	260.00		2,340.00
Sand Paper	70	pcs.	35.00		2,450.00
			MATERIALS COST	=	119,790.00

Labor:	No. of men	No. of days	Daily rate		Amount
Foreman	1	15	650.00	PhP	9,750.00
Skilled Laborer	5	15	550.00		41,250.00
Unskilled Laborer	5	15	450.00		33,750.00
			LABOR COST =	PhP	84,750.00
			DIRECT COST =		204,540.00
			PROFIT =		16,363.20
			OCM =		24,544.80
			VAT =		12,272.40
			SUB-TOTAL	**PhP**	**257,720.40**

XII. TILE WORKS

QTY = 679.35 sq.m.

Materials :					
0.40mx0.40m Ceramic Tiles	3,600.00	pcs.	75.00	PhP	270,000.00
0.30mx0.30m Ceramic Floor Tiles	300.00	pcs.	45.00		13,500.00
0.30mx0.30m Ceramic Wall Tiles	1,100.00	pcs.	45.00		49,500.00
Portland Cement	175.00	bags	250.00		43,750.00
Sand	20.00	cu.m.	650.00		13,000.00
Tile Grout	70.00	packs	80.00		5,600.00
Tile Adhesive	110.00	bags	350.00		38,500.00
			MATERIALS COST	PhP	433,850.00

Labor:	No. of men	No. of days	Daily rate		Amount
Foreman	1	18	650.00	PhP	11,700.00
Skilled Laborer	8	18	550.00		79,200.00
Unskilled Laborer	8	18	450.00		64,800.00
			LABOR COST =	PhP	155,700.00
			DIRECT COST =		589,550.00
			PROFIT =		47,164.00
			OCM =		70,746.00
			VAT =		29,477.50
			SUB-TOTAL	**PhP**	**736,937.50**

XIII. RAILINGS, CLADDINGS and SIGNAGES

QTY = 1 lot

Materials :					
Stainless Steel Railings	50.00	ln.m.	4,000.00	PhP	200,000.00
Signages	1.00	set	50,000.00		50,000.00
White Board	4.00	sets	7,000.00		28,000.00
Aluminum Cladding	56.25	sq.m.	4,500.00	PhP	253,125.00
			MATERIALS COST	PhP	531,125.00

Labor:	No. of men	No. of days	Daily rate		Amount
Foreman	1	15	650.00	PhP	9,750.00
Skilled Laborer	5	15	550.00		41,250.00
Unskilled Laborer	5	15	450.00		33,750.00
			LABOR COST =	PhP	84,750.00
			DIRECT COST =		615,875.00
			PROFIT =		49,270.00
			OCM =		73,905.00
			VAT =		30,793.75
			SUB-TOTAL	**PhP**	**769,843.75**

TOTAL PROJECT COST =	**PhP**	**9,999,354.76**
SAY	**PhP**	**10,000,000.00**

Prepared by :

Engr. DIONICIO E. MENDOZA, JR.
Engineer III