



**PROGRAM OF WORKS
 BILL OF QUANTITIES
 ELEC 2020 - R X - EL SALVADOR CITY**

SCHOOL NAME :	HINIGDAAN NATIONAL HIGH SCHOOL	Date:	
SCHOOL I. D. :	315318	Budget Allocation	PHP 0.00
REGIONAL OFFICE:	Region X	EAO :	PHP 0.00
DIVISION OFFICE :	EL-SALVADOR CITY	ABC :	PHP 0.00

Project Title:	Completion Period: 120 calendar days
UPGRADING OF UN-ENERGIZED AND MODERNIZATION OF ELECTRICAL SYSTEM	Minimum Required Manpower:
	Electrical Engineer Safety Officer Mason
	Master Electrician Electrician Labors

Plan:	Minimum Required Equipment:
Location:	Air/Electric Jack Hammer, Ladder
EL-SALVADOR CITY	Megger Tester Clamp Tester Crimping tools

ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. Direct Cost					
1.00	GENERAL REQUIREMENTS		lot	1.00		
2.00	PRIMARY LINES EXTENSION/CONVERSION		lot	1.00		
4.00	DISTRIBUTION TRANSFORMER		lot	1.00		
5.00	METERING SYSTEM		lot	1.00		
6.00	PANEL BOARDS, ENCLOSURE WITH BUS CONNECTION, 230 VOLTS, 3-PHASE, 4-WIRE		lot	1.00		
7.00	FEEDER PROTECTION SYSTEM		lot	1.00		
8.00	CABLES, COPPER, STRANDED, TW/THW, THHN, 600 VOLTS		lot	1.00		
9.00	ELECTRICAL CONDUIT, PVC, RGS, EMT AND FITTINGS		lot	1.00		
10.00	HAND HOLES, DUCT BANKS, TRANSFORMER PADS FRAME & EXCAVATION WORKS		lot	1.00		
11.00	AREA LIGHTINGS INCLUDING SWITCH		lot	1.00		
	Sub-total					
	II. INDIRECT COST 22% of (I-Gen Req)					
	Overhead Expenses (8%)					
	Contingencies (3%)					
	Miscellaneous (1%)					
	Contractor's Profit (10%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I+II+III)					

Prepared by:

 Contractor/Authorized Representative



DETAILED ESTIMATE

SCHOOL : HINIGDAAN NATIONAL HIGH SCHOOL
 SCHOOL I.D.: 315318
 REGION : Region X
 DIVISION : EL-SALVADOR CITY
 PROJECT : UPGRADING OF UN-ENERGIZED AND MODERNIZATION OF ELECTRICAL SYSTEM

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
1.00	GENERAL REQUIREMENTS							
1.10	Mobilization/Utilities and Services/Demobilization / Standard Billboard/	lot	1.000					
1.20	Security/ Bill Deposit	lot	1.000					
1.30	Testing and Commissioning	lot	1.000					
1.40	Safety and Health	lot	1.000					
1.50	Hauling Cost	lot	1.000					
	Sub-total							
2.000	PRIMARY LINES EXTENSION/CONVERTION							
	Conductor, Bare, ACSR, #2 AWG 6/1 (Meters)	mrtr	6.00					
	Fuse Cut-out & Arrester Combination, 15 KV, Class 200	pc	1.00					
	Rod, Ground Steel, Galvanized, 5/8" x 10', Hot Dip Galvanized	pc	5.00					
	Sub-total							
4.00	DISTRIBUTION TRANSFORMER							
	Brand New, Pole Mounted Compact Type, oil immersed, 3200/7620 Kv, 120/240V Secondary, 60 Hz, Single Phase with Tap Changer 2 1/2 % above and below normal high voltage, 95 KV Primary BIL, self							
4.03	Compact Type, Distribution Transformer, Conventional, Amorphous, 50 kVA,	pc	1.00					
	Sub-total							
5.00	METERING SYSTEM							
	Secondary Metering, Single Phase							
5.01	Meter, Base Socket Class- 200, 5 Jaws	pc	1.00					
5.02	KWH Meter, 1-Phase, Class 20, 240V, 2W, Form 3S, Electronics, with TOU and Load Profiling	pc	1.00					
5.08	Metering Box, 24" x 27" x 12"	pc	1.00					
5.09	CT, Box, 10" x 14" x 18"	pc	1.00					
5.12	Current Transformer 200 : 5, 600V, RF-4	pc	1.00					
	Sub-total							
6.00	PANEL BOARDS, ENCLOSURE WITH BUS CONNECTION, 230 VOLTS, 3-PHASE, 4-WIRE NEMA 3R, ENCLOSURE STANDARDS							
6.17	MAIN SWITCH BOARD (MSB)	set	2.00					
6.18	MAIN DISTRIBUTION BOARD (MDB)	set	3.00					
	Sub-total							
7.00	FEEDER PROTECTION SYSTEM							
	MOLDED CASE CIRCUIT BREAKER (MCCB), BOLT-ON, 2-POLE, INDUSTRIAL TYPE							
7.14	200 AMPERES	pc	4.00					
7.18	100 AMPERES	pc	7.00					
	MINIATURE CIRCUIT BREAKER (MCB), BOLT-ON, 2-POLE, RAIL TYPE							
7.29	63 AMPERES	pc	2.00					
7.30	32 AMPERES	pc	7.00					
	Sub-total							
8.00	CABLES, COPPER, STRANDED, TW/THW, THHN, 600 VOLTS							
	CABLES, COPPER, STRANDED, TW/THW, THHN, 600 VOLTS							
8.01	3.5 mm ² , Wire, Copper, Stranded, THHN	mtrs						
a	Red	mtrs	150.00					
b	Yellow	mtrs	150.00					
c	14 mm ² , Wire, Copper, Stranded 0.6, THHN							
8.04	Red	mtrs	30.00					
a	Yellow	mtrs	30.00					
8.05	22 mm ² , Wire, Copper, Stranded 0.6kV, THHN							
a	Red	mtrs	150.00					
b	Yellow	mtrs	150.00					
8.06	30 mm ² , Wire, Copper, Stranded 0.6kV, THHN							
a	Red	mtrs	100.00					
b	Yellow	mtrs	100.00					
8.07	38 mm ² , Wire, Copper, Stranded 0.6 kV, THHN							



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ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
a	Red	mtrs	100.00					
b	Yellow	mtrs	100.00					
8.08	50 mm ² , Wire, Copper, Stranded 0.6 kV, THHN							
a	Red	mtrs	150.00					
b	Yellow	mtrs	150.00					
a	Red	mtrs	300.00					
b	Yellow	mtrs	300.00					
	Grounding Cables, Copper, Stranded, 0.6 KV, TW/THW							
8.21	8.0 mm ² , Wire, Copper, Stranded	mtrs	180.00					
8.22	14 mm ² , Wire, Copper, Stranded	mtrs	350.00					
8.23	22 mm ² , Wire, Copper, Stranded	mtrs	300.00					
	Sub-total							
9.00	ELECTRICAL CONDUIT, PVC, RGS ,EMT AND FITTINGS							
	Electrical Conduits, Socket Type PVC							
9.03	2-1/2" x 3mtrs	lngh	80.00					
9.04	2" x 3mtrs	lngh	15.00					
9.05	1-1/2" x 3mtrs	lngh	10.00					
9.08	Electrical Tape (3m)	roll	2.00					
9.09	Rubber Electrical Tape	roll	2.00					
9.10	Electrical Warning Tape, RED "DANGER" Color	roll	2.00					
	Electrical Conduits, RGS, EMT, Flexible, Liquid Tight							
9.13	2" x 3mtrs, RGS	lngh	5.00					
9.22	2" Dia.	set	2.00					
9.27	1 Inches Liquid tight	mtrs	10.00					
9.30	Nylon Rope # 4	roll	1.00					
9.31	Duct Seal	Box	8.00					
	Sub-total							
10.00	HAND HOLES, DUCT BANKS, TRANSFORMER PADS FRAME & EXCAVATION WORKS							
10.01	Excavation Works and Backfilling	cu.m	83.20					
10.04	Reinforced Concrete Encased Duct Bank, 310mm x 260mm (2-Way x 4" PVC Conduit)	lm	10.00					
10.06	Hand Holes, Type "A", Class Concrete Mixture with Gray Color Outdoor Rubberized Concrete paint inside & outside	set	5.00					
10.08	Hand Holes, Type "C", Class Concrete Mixture with Gray Color Outdoor Rubberized Concrete paint inside & outside	set	5.00					
	Sub-total							
11.00	AREA LIGHTINGS INCLUDING SWITCH							
11.01	Bracket Mounted LED Flood Lights 3-EYED, 220 VOLTS 100 watts 2-years warranty	set	20.00					
11.02	Bracket Mounted LED Flood Lights SOLAR 200 watts with 5 meter wire, 1-year warranty	set	12.00					
11.03	Wall Mounted with 0.4 meter Arms, 200 watts, integrated Solar Supply, 1-year Warranty	set	10.00					
	Sub-total							
I.	Direct Cost							
II.	Indirect Cost (22% of (I-Gen Req))							
III.	Tax (5% of I & II)							
IV.	Total Construction Cost (I + II + III)							

Prepared by:

Contractor/Authorized Representative