

ANNEX 1 OF PURCHASE ORDER NO.

SCOPE OF WORK

Project Name: Supply of Labor and Materials for the Installation of Fire Suppression System at LAMCO Mabalacat Warehouse

The SUBCONTRACTOR’S scope of work comprises:

ITEM	DESCRIPTION	QTY	UM	UNIT PRICE	LABOR COST	MARK-UP	TUC	AMOUNT
A	FEEDMAIN LINES & STUBOUTS							
I	BI PIPE @ ASTM A 53, S-40							
	200 mm Ø Pacific	31	length	19,564.00	5,869.20	2,288.99	27,722.19	859,387.83
	150 mm Ø Superior	58	length	9,595.00	2,878.50	1,122.62	13,596.12	788,574.67
	100 mm Ø Superior	8	length	5,393.00	1,617.90	630.98	7,641.88	61,135.05
	65 mm Ø Superior	8	length	2,733.00	819.90	319.76	3,872.66	30,981.29
II	PIPE FITTINGS							
	Elbow 90° BI							
	200 mm Ø welded	8	pcs	2,097.00	629.10	245.35	2,971.45	23,771.59
	150 mm Ø welded	3	pcs	1,081.90	324.57	126.58	1,533.05	4,599.16
	100 mm Ø welded	14	pcs	390.40	117.12	45.68	553.20	7,744.76
	65 mm Ø welded	5	pcs	145.60	43.68	17.04	206.32	1,031.58
	40 mm Ø threaded	1	pc	176.25	52.88	20.62	249.75	249.75
	Tee Equal BI							
	200 mm Ø welded	1	pc	2,744.67	823.40	321.13	3,889.20	3,889.20
	150 mm Ø welded	4	pcs	1,372.33	411.70	160.56	1,944.59	7,778.37
	100 mm Ø welded	1	pc	537.00	161.10	62.83	760.93	760.93
	65 mm Ø welded	5	pcs	310.27	93.08	36.30	439.65	2,198.26
	Tee Reducer BI							
	200 x 100 x 200 mm Ø welded	1	pc	2,530.00	759.00	296.01	3,585.01	3,585.01
	150 x 100 x 150 mm Ø welded	3	pcs	1,112.00	333.60	130.10	1,575.70	4,727.11
	150 x 65 x 150 mm Ø welded	3	pcs	1,112.00	333.60	130.10	1,575.70	4,727.11
	Bell Reducer BI							
	200 mm x 150 mm Ø welded	2	pcs	2,530.00	759.00	296.01	3,585.01	7,170.02
	150 mm x 100 mm Ø welded	3	pcs	637.00	191.10	74.53	902.63	2,707.89
	65 mm x 40 mm Ø welded	2	pcs	137.00	41.10	16.03	194.13	388.26
	Flange Connection BI							
	200 mm Ø SO	60	pcs	754.00	226.20	88.22	1,068.42	64,105.08
	150 mm Ø SO	118	pcs	512.00	153.60	59.90	725.50	85,609.47
	100 mm Ø SO	42	pcs	352.00	105.60	41.18	498.78	20,948.93
	65 mm Ø SO	15	pcs	209.00	62.70	24.45	296.15	4,442.30
	150 mm Ø BL	8	pcs	1,224.00	367.20	143.21	1,734.41	13,875.26
	100 mm Ø BL	6	pcs	720.00	216.00	84.24	1,020.24	6,121.44
	65 mm Ø BL	2	pcs	396.00	118.80	46.33	561.13	1,122.26
	HT Bolt & Nut 3/4 x 3	400	pcs	32.44	9.73	3.80	45.97	18,386.99
	HT Bolt & Nut 5/8 x 2 1/2	1120	pcs	21.00	6.30	2.46	29.76	33,327.84

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III	VALVES (CHPBV brand)							
	OS&Y Gate Valve 150 mm Ø UL/FM	3	sets	32,442.50	9,732.75	3,795.77	45,971.02	137,913.07
	OS&Y Gate Valve 100 mm Ø UL/FM	1	set	19,712.50	5,913.75	2,306.36	27,932.61	27,932.61
	OS&Y Gate Valve 65 mm Ø UL/FM	2	pcs	13,252.50	3,975.75	1,550.54	18,778.79	37,557.59
IV	STANDPIPE AND GENERAL COMPONENTS							
	Fire Department Connection							
	Check valve 100 mmØ UL/FM (CHPBV brand)	1	set	22,230.00	6,669.00	2,600.91	31,499.91	31,499.91
	FDC plate 2 holes	1	set	10,000.00	3,000.00	1,170.00	14,170.00	14,170.00
	Snoots 65 mm Ø w/ cap & chain (Giacomini)	2	pcs	6,500.00	1,950.00	760.50	9,210.50	18,421.00
V	FIRE & JOCKEY PUMP GENERAL COMPONENTS							
	Fire pump with control & standard accessories :	1	set	3,830,000.00	383,000.00	379,170.00	4,592,170.00	4,592,170.00
	UL/FM vertical turbine pump, rated to deliver 1250 gpm @ 150 psi TDH, driven by 150 hp electric motor, 400v, 1750 rpm, 3ph, 60hz. With UL/FM controller for 150 hp, 400V, 3ph, 60hz, wired in NEMA-2 enclosure, floor mounted							
	Jockey pump with control & standard accessories :							
	GOULDS Vertical-in-line multi stage jockey pump, Model: e SV stainless steel impeller, stainless steel pump shaft rated to deliver 30gpm @ 150 psi TDH, driven by 5 Hp motor, 400v, 3 phase, 60 hz. With UL Listed controller for 5 hp, 400v, 3ph, 60hz, wired in NEMA-2 enclosure, wall mounted							
	Pump system valves and other accessories;							
	Pressure Relief Valve 200 mmØ UL/FM (CHPBV brand)	1	set	451,250.00	135,375.00	52,796.25	639,421.25	639,421.25
	Flexible Connector 200mmØ	1	set	8,000.00	2,400.00	936.00	11,336.00	11,336.00
	Flexible Connector 50mmØ	1	set	1,900.00	570.00	222.30	2,692.30	2,692.30
	Alarm Check Valve 200mmØ UL/FM (Victaulic brand)	1	set	127,217.83	38,165.35	14,884.49	180,267.67	180,267.67
	Foot Valve FP 75 mm (Z-tide)	1	set	29,307.50	8,792.25	3,428.98	41,528.73	41,528.73
	Foot Valve JP 50mm (Z-tide)	1	set	21,090.00	6,327.00	2,467.53	29,884.53	29,884.53
	OS & Y Valve 200 mmØ UL/FM (CHPBV brand)	3	sets	49,020.00	14,706.00	5,735.34	69,461.34	208,384.02
	Check Valve 200 mmØ UL/FM (CHPBV brand)	1	set	58,083.00	17,424.90	6,795.71	82,303.61	82,303.61
	Check Valve 50 mmØ UL/FM (CHPBV brand)	1	set	11,780.00	3,534.00	1,378.26	16,692.26	16,692.26
	Gate Valve 50 mmØ UL/FM (CHPBV brand)	1	set	10,212.50	3,063.75	1,194.86	14,471.11	14,471.11
	Pressure Sensing Line 1/2" Ø	1	lot	3,000.00	900.00	351.00	4,251.00	4,251.00
	Testing Header							
	Fire Hose Valve 65 mm Ø with cover (Giacomini)	4	sets	7,125.00	2,137.50	833.63	10,096.13	40,384.50
	Test Header plate 2 holes	2	sets	10,000.00	3,000.00	1,170.00	14,170.00	28,340.00
	Pipes and fittings (to complete the pump system)	1	lot	120,000.00	36,000.00	14,040.00	170,040.00	170,040.00
	Electrical (from pumps to control panels)	1	lot	20,000.00	6,000.00	2,340.00	28,340.00	28,340.00
VI	FIREHOSE CABINET AND PACKAGE (Outdoor)							
	Fire hose cabinet size 36"x 32"x 7" steel body construction, gauge #20, full glass door with 1"x 1" tubular aluminum frame. Painted enamel white (interior) and enamel red (exterior). Complete with the following accessories:	2	sets	18,500.00	5,550.00	2,164.50	26,214.50	52,429.00
	Firehose, size 1-1/2"Ø x 100 ft, double jacket							
	Angle valve, 1-1/2"Ø							
	Nipple and locknut size 1-1/2"Ø							
	Variable nozzle 1-1/2"Ø							
	Hose Rack							
	Handle, Lock & Key							
	Fire Hose Valve 65 mm Ø with cover (Giacomini)	2	units	7,125.00	2,137.50	833.63	10,096.13	20,192.25
	Fire Extinguisher HFC-236 10 lbs (local brand)	2	units	7,500.00		750.00	8,250.00	16,500.00
VII	CIVIL WORKS							
	Construction of Manhole	5	units	6,000.00	3,000.00	810.00	9,810.00	49,050.00
	600 mm x 600 mm opening with removable concrete cover, scope is from excavation, concreting & finishing							
	Pipe Protection							
	Jute Sack	360	mts	150.00	75.00	20.25	245.25	88,290.00
	Black Coal Tar	40	gals	1,070.00	535.00	144.45	1,749.45	69,978.00
	Painting							
	Primer red	39	gals	550.00	275.00	74.25	899.25	35,070.75
	Sandbedding	39	cum	1,300.00	650.00	175.50	2,125.50	82,894.50
	Excavation	185	cum		600.00	54.00	654.00	120,990.00
	Backfilling & Compacting	131	cum		200.00	18.00	218.00	28,558.00
VIII	MISCELLANEOUS & CONSUMABLES							

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	Oxygen & acetylene, welding rod, grinding & cutting wheel, drill bits, teflon, machine oils, tools & equipments, etc.	1	lot	179,706.02	53,911.81	21,025.60	254,643.43	254,643.43
B	GENERAL REQUIREMENTS							
I	Mobilization & Demobilization	1	lot	60,000.00			60,000.00	60,000.00
II	Temporary Facilities	1	lot	25,000.00			25,000.00	25,000.00
III	Temporary Utilities	1	lot	25,000.00			25,000.00	25,000.00
	Power	1	lot	90,000.00			90,000.00	90,000.00
	Water	1	lot	40,000.00			40,000.00	40,000.00
IV	Safety Equipments/PPE	1	lot	20,000.00			20,000.00	20,000.00
V	General cleaning & disposal of waste	1	lot	20,000.00			20,000.00	20,000.00
VI	Management & Supervision	1	lot	150,000.00			150,000.00	150,000.00
VII	Testing & Commissioning	1	lot	25,000.00			25,000.00	25,000.00
	TOTAL DIRECT COST							9,694,944.47
	VAT 12%							1,163,393.34
C	TOTAL PROJECT COST							10,858,337.81

VAT Inclusive

D . SCOPE OF WORKS

MECHANICAL

Supply and installation of Automatic Fire Sprinkler System NFPA 13

Supply and Installation of Black Iron pipes, Schedule 40

Supply and installation of standard valves and fittings

Fabrication and installation of pipe brackets and hangers

Painting of pipes, brackets and hangers, primer and final coat

CIVIL WORKS

Construction of manhole for OS & Y control valves

Supply and on-ground layout of Black Iron pipes, Schedule 40

Excavation, sandbedding, backfill and compacting for on-ground BI pipe layout

Primer painting, jute sack covering and application of coal tar for on-ground pipes

Fabrication and installation of pipe stubouts

ENGINEERING

Sign and seal as-built drawings

Testing and Commissioning

E. TERMS AND CONDITIONS

Power source : For the account of the Contractor

Water source : For the account of the Contractor

Payment : 30% Downpayment, Balance in progress billing

Fire and Jockey pumps : Indent order, 4-5 months, 50% DP, 40% upon delivery, balance in progress billing

Completion : Work completion will depend on the construction schedule

Warranty : One (1) year against factory defects and faulty workmanship

Validity : Ten (10) days

Exclusions : Permits and Clearances from government and non-government agencies

: Bonds and Insurances

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Tee Reducer BI									
150 x 100 x 150 mm Ø welded	4	pcs	1,112.00	333.60	130.10	1,575.70	6,302.82		
65 x 38 x 65 mm Ø welded	16	pcs	286.00	85.80	33.46	405.26	6,484.19		
50 x 25 x 50 mm Ø threaded	4	pcs	312.00	93.60	36.50	442.10	1,768.42		
38 x 25 x 38 mm Ø threaded	426	pcs	212.25	63.68	24.83	300.76	128,123.01		
32 x 25 x 32 mm Ø threaded	213	pcs	161.00	48.30	18.84	228.14	48,593.18		
Male Plug BI									
20 mm Ø threaded type	852	pcs	32.00	9.60	3.74	45.34	38,633.09		
Bell Reducer BI									
50 mm x 38 mm Ø threaded	213	pcs	150.00	45.00	17.55	212.55	45,273.15		
38 mm x 32 mm Ø threaded	213	pcs	103.25	30.98	12.08	146.31	31,163.02		
32 mm x 25 mm Ø threaded	213	pcs	80.75	24.23	9.45	114.42	24,372.05		
25 mm x 20 mm Ø threaded	852	pcs	54.75	16.43	6.41	77.58	66,098.80		
End Cap BI									
100 mm Ø	12	pcs	430.00	129.00	50.31	609.31	7,311.72		
Thredolet BI									
65 mm Ø	16	pcs	525.00	157.50	61.43	743.93	11,902.80		
50 mm Ø	107	pcs	240.00	72.00	28.08	340.08	36,388.56		
25 mm Ø	8	pcs	120.00	36.00	14.04	170.04	1,360.32		
Coupling BI									
38 mm Ø	110	pcs	91.35	27.41	10.69	129.44	14,238.72		
Flange Connection BI									
150 mm Ø SO	45	pcs	512.00	153.60	59.90	725.50	32,647.68		
100 mm Ø SO	4	pcs	352.00	105.60	41.18	498.78	1,995.14		
150 mm Ø BL	5	pcs	1,224.00	367.20	143.21	1,734.41	8,672.04		
100 mm Ø BL	4	pcs	720.00	216.00	84.24	1,020.24	4,080.96		
HT Bolt & Nut 5/8 x 2 1/2	48	pcs	21.00	6.30	2.46	29.76	1,428.34		
Firelock EZ Rigid Coupling Grooved (Victaulic brand)									
100 mm Ø	308	pcs	794.48	238.34	92.95	1,125.77	346,737.49		
65 mm Ø	48	pcs	557.49	167.25	65.23	789.96	37,918.31		
50 mm Ø	18	pcs	441.38	132.41	51.64	625.43	11,257.71		
Flexible Coupling Grooved (Victaulic brand)									
100 mm Ø	24	pcs	875.66	262.70	102.45	1,240.80	29,779.28		
IV STANDPIPE AND GENERAL COMPONENTS									
Inspection Test Connection									
25 mm Ø BI Pipe	8	length	794.00	238.20	92.90	1,125.10	9,000.78		
Elbow 25 mm Ø threaded	20	pcs	66.50	19.95	7.78	94.23	1,884.61		
Tee 25mmØ threaded	8	pcs	87.00	26.10	10.18	123.28	986.23		
Sight Glass 25mmØ	4	sets	650.00	195.00	76.05	921.05	3,684.20		
Gate Valve 25 mmØ 150 psi	4	pcs	1,080.00	324.00	126.36	1,530.36	6,121.44		
Auxiliary Drain									
Elbow 25 mm Ø threaded	8	pcs	66.50	19.95	7.78	94.23	753.84		
Tee 25mmØ threaded	8	pcs	87.00	26.10	10.18	123.28	986.23		

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	Union Patente 25mm Ø	4	pcs	145.00	43.50	16.97	205.47	821.86
	Sight Glass 25mmØ	4	sets	650.00	195.00	76.05	921.05	3,684.20
	Gate Valve 25 mmØ 150 psi	8	sets	1,080.00	324.00	126.36	1,530.36	12,242.88
	Accessories							
	Check Valve 100 mmØ UL/FM (CHPBV brand)	4	sets	22,230.00	6,669.00	2,600.91	31,499.91	125,999.64
	OS & Y Gate Valve 100 mmØ UL/FM (CHPBV brand)	4	sets	19,712.50	5,913.75	2,306.36	27,932.61	111,730.45
	Water Flow Switch 100mmØ (system sensor brand)	4	pcs	6,507.50	1,952.25	761.38	9,221.13	36,884.51
	Water Pressure Gauge, 3" dial Face, 0-300psi (Ironman brand)	4	sets	935.00	280.50	109.40	1,324.90	5,299.58
V	PIPE HANGERS & BRACKETS							
	100 mm Ø pipe	344	pcs	200.00	60.00	23.40	283.40	97,489.60
	65 mm Ø pipe	48	pcs	150.00	45.00	17.55	212.55	10,202.40
	50 mm Ø pipe	18	pcs	58.50	17.55	6.84	82.89	1,492.10
	38 mm Ø pipe	390	pcs	54.00	16.20	6.32	76.52	29,842.02
	32 mm Ø pipe	528	pcs	46.50	13.95	5.44	65.89	34,790.18
	25 mm Ø pipe	34	pcs	30.00	9.00	3.51	42.51	1,445.34
VI	FIREHOSE CABINET AND PACKAGE (Indoor)							
	Firehose cabinet size 36" x 32" x 7" steel body construction, gauge #18, full glass door with 1" x 1" tubular aluminum frame. Painted enamel white (interior) and enamel red (exterior). Complete with the following accessories:	16	sets	18,500.00	5,550.00	2,164.50	26,214.50	419,432.00
	Fire Hose, size 1-1/2"Ø x 100 ft, double jacket							
	Angle valve, 1-1/2"Ø							
	Nipple and locknut size 1-1/2"Ø							
	Variable nozzle 1-1/2"Ø							
	Hose Rack							
	Handle, Lock & Key							
	Fire Hose Valve 65 mm Ø (Giacomini)	16	sets	7,125.00	2,137.50	833.63	10,096.13	161,538.00
	Fire Extinguisher HFC-236 10 lbs (local brand)	16	units	7,500.00		750.00	8,250.00	132,000.00
VII	SPRINKLER MONITORING PANEL							
	Panel HSPC10	1	set	23,596.00	7,078.80	2,760.73	33,435.53	33,435.53
	Back up Battery 12v	2	pcs	1,040.00	312.00	121.68	1,473.68	2,947.36
	TF Wire 1.25	3	rolls	2,620.00	786.00	306.54	3,712.54	11,137.62
	EMT Pipe 1/2 mm Ø	92	length	165.00	49.50	19.31	233.81	21,510.06
	EMT Fittings	1	lot	3,000.00	900.00	351.00	4,251.00	4,251.00
VIII	PAINTING							
	Primer red	6	sets	8,000.00	2,400.00	936.00	11,336.00	68,016.00
	International Red	6	sets	9,000.00	2,700.00	1,053.00	12,753.00	76,518.00
IX	CIVIL WORKS							
	Pipe Protection							
	Jute Sack	69	mts	150.00	75.00	20.25	245.25	16,922.25
	Black Coal Tar	8	gal	1,070.00	535.00	144.45	1,749.45	13,995.60
	Painting							
	Primer red	8	gal	550.00	275.00	74.25	899.25	7,194.00
	Sandbedding	8	cum	1,300.00	650.00	175.50	2,125.50	17,004.00
	Excavation	30	cum		600.00	54.00	654.00	19,620.00
	Backfilling & Compacting	21	cum		200.00	18.00	218.00	4,578.00
X	MISCELLANEOUS & CONSUMABLES AFSS							
	Oxygen & acetylene, welding rod, grinding & cutting wheel, drill bit, teflon, machine oils, tools & equipments, etc.	1	lot	124,281.32	37,284.40	14,540.91	176,106.63	176,106.63
B	GENERAL REQUIREMENTS							
I	Mobilization & Demobilization	1	lot	60,000.00			60,000.00	60,000.00
II	Temporary Facilities	1	lot	25,000.00			25,000.00	25,000.00
III	Temporary Utilities							
	Power	1	lot	96,000.00			96,000.00	96,000.00
	Water	1	lot	40,000.00			40,000.00	40,000.00
IV	Safety Equipments/PPE	1	lot	25,000.00			25,000.00	25,000.00
V	General cleaning & disposal of waste	1	lot	20,000.00			20,000.00	20,000.00
VI	Management & Supervision	1	lot	150,000.00			150,000.00	150,000.00
VII	Preparation of as-built plans, sign and seal	1	lot	50,000.00			50,000.00	50,000.00
VIII	Testing & Commissioning	1	lot	25,000.00			25,000.00	25,000.00
	TOTAL DIRECT COST							6,881,172.47
	VAT 12%							825,740.70
C	TOTAL PROJECT COST							7,706,913.16

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D . SCOPE OF WORKS

MECHANICAL

Supply and installation of Automatic Fire Sprinkler System NFPA 13

Supply and Installation of Black Iron pipes, Schedule 40

Supply and installation of standard valves and fittings

Installation of sprinkler monitor panel

Fabrication and installation of pipe brackets and hangers

Painting of pipes, brackets and hangers, primer and final coat

CIVIL WORKS

Construction of manhole for OS & Y control valves

Supply and on-ground layout of Black Iron pipes, Schedule 40

Excavation, sandbedding, backfill and compacting for on-ground BI pipe layout

Primer painting, jute sack covering and application of coal tar for on-ground pipes

Fabrication and installation of pipe stubouts

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