

X.- REQUERIMIENTO DE MATERIALES PARA LA VIVIENDA
TRADICIONAL.

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|-----------------------------------|-------------------------|---------|
| DESARROLLOS Y CONSTRUC. DE SONORA | FECHA: 08-SEP-90 | HOJA: 1 |
| America y Agustin Melgar No. 1-A | OBRA: VIVIENDA TIPO "A" | |

VIVIENDA TRADICIONAL

| CLAVE | DESCRIPCION | UNIDAD | REQUERIMIENTO | PRECIO | IMPORTE | INCIDE |
|-------------------|--------------------------------|--------|---------------|-----------------|-----------------|--------|
| MATERIALES | | | | | | |
| M0002 | MALLA 6X6-10X10 | M2 | 0.300 | \$ 2,012.00 | \$ 603.60 | 0.007 |
| M0004 | ALAMBON DE 1/4" | TON | 0.052 | \$ 1,200,000.00 | \$ 62,400.00 | 0.679 |
| M0005 | ALAMBRE RECOCIDO | KG | 26.758 | \$ 1,750.00 | \$ 46,826.50 | 0.510 |
| M0006 | CLAVO DE 1/2" | KG | 21.868 | \$ 1,718.00 | \$ 37,569.22 | 0.409 |
| M0009 | ARENA | M3 | 20.545 | \$ 16,000.00 | \$ 328,720.00 | 3.577 |
| M0010 | GRAVA DE 1 1/2" | M3 | 5.025 | \$ 20,000.00 | \$ 100,500.00 | 1.094 |
| M0011 | GRAVA DE 3/4" | M3 | 4.562 | \$ 23,000.00 | \$ 104,926.00 | 1.142 |
| M0012 | TIERRA PARA RELLENO | M3 | 12.637 | \$ 16,000.00 | \$ 202,192.00 | 2.200 |
| M0013 | AGUA | M3 | 9.698 | \$ 500.00 | \$ 4,849.00 | 0.053 |
| M0014 | CEMENTO GRIS | TON | 6.727 | \$ 184,000.00 | \$ 1,237,768.00 | 13.468 |
| M0015 | CEMENTO BLANCO | TON | 0.021 | \$ 340,000.00 | \$ 7,140.00 | 0.078 |
| M0016 | CEMENTO CREST | KG | 14.440 | \$ 323.00 | \$ 4,664.12 | 0.051 |
| M0017 | MADERA DE PINO | P.T | 432.848 | \$ 1,300.00 | \$ 562,702.40 | 6.123 |
| M0018 | BLOCK 15X19.5X40 | PZA | 129.065 | \$ 862.00 | \$ 111,254.03 | 1.211 |
| M0024 | PIEDRA BOLA | M3 | 4.236 | \$ 20,000.00 | \$ 84,720.00 | 0.922 |
| M0025 | TABIQUE RECOCIDO | PZA | 5,672.990 | \$ 190.00 | \$ 1,077,868.10 | 11.728 |
| M0027 | COCOP.V.C 90 X 1 1/2" | PZA | 4.000 | \$ 1,836.00 | \$ 7,344.00 | 0.080 |
| M0031 | CESPOL BOTE DE 4"SAL.DE 1 1/2" | PZA | 1.000 | \$ 11,140.00 | \$ 11,140.00 | 0.121 |
| M0032 | TUBO P.V.C DE 2" | ML | 4.200 | \$ 2,567.00 | \$ 10,781.40 | 0.117 |
| M0033 | TUBO P.V.C DE 1 1/2" | ML | 3.600 | \$ 2,035.00 | \$ 7,326.00 | 0.080 |
| M0034 | TUBO P.V.C DE 4" | ML | 13.302 | \$ 7,367.00 | \$ 97,995.83 | 1.066 |
| M0035 | REMATE DE VENTILA | PZA | 1.000 | \$ 4,706.00 | \$ 4,706.00 | 0.051 |
| M0036 | PINTURA VINILICA | LT | 36.003 | \$ 6,944.00 | \$ 250,004.83 | 2.720 |
| M0037 | PINTURA ESMALTE | LT | 6.872 | \$ 5,595.00 | \$ 38,448.84 | 0.418 |
| M0038 | BARNIZ NATURAL | LT | 0.954 | \$ 5,595.00 | \$ 5,337.63 | 0.058 |
| M0039 | SELLADOR PARA MADERA | LT | 0.954 | \$ 5,595.00 | \$ 5,337.63 | 0.058 |
| M0040 | AGUARRAZ | LT | 0.970 | \$ 1,944.00 | \$ 1,885.68 | 0.021 |
| M0041 | THINER | LT | 0.286 | \$ 1,643.00 | \$ 469.90 | 0.005 |
| M0042 | ESTOPA BLANCA | KG | 0.095 | \$ 2,823.00 | \$ 268.18 | 0.003 |
| M0043 | TIROL DE ACUSTICOTE | KG | 35.060 | \$ 300.00 | \$ 10,518.00 | 0.114 |
| M0044 | CHAPA SCHALAGE A-52 W-P75 | PZA | 2.000 | \$ 37,213.00 | \$ 74,426.00 | 0.810 |
| M0045 | CHAPA DE PASO MARCA NOVO O SIM | PZA | 3.000 | \$ 15,448.00 | \$ 46,344.00 | 0.504 |
| M0046 | BISAGRAS LATONADAS DE 3" | PZA | 10.000 | \$ 841.00 | \$ 8,410.00 | 0.092 |
| M0047 | PIJAS | PZA | 4.000 | \$ 780.00 | \$ 3,120.00 | 0.034 |
| M0048 | TAQUETES DE PLASTICOS | PZA | 4.000 | \$ 144.00 | \$ 576.00 | 0.006 |
| M0051 | VIDRIO OPACO DE 3 MM | M2 | 0.280 | \$ 25,000.00 | \$ 7,000.00 | 0.076 |
| M0052 | INODORO COMPLETO | PZA | 1.000 | \$ 146,000.00 | \$ 146,000.00 | 1.589 |
| M0053 | LAVAMANOS COMPLETO | PZA | 1.000 | \$ 84,800.00 | \$ 84,800.00 | 0.923 |
| M0054 | REGADERA BRAZO Y CHAPETON | PZA | 1.000 | \$ 7,580.00 | \$ 7,580.00 | 0.082 |
| M0055 | BOTIQUIN MARCA GADI | PZA | 1.000 | \$ 21,600.00 | \$ 21,600.00 | 0.235 |
| M0056 | ACCESORIOS DE PORCELANA | JGO | 1.000 | \$ 19,880.00 | \$ 19,880.00 | 0.216 |
| M0057 | LAVADERO DE CEMENTO | PZA | 1.000 | \$ 34,500.00 | \$ 34,500.00 | 0.375 |
| M0062 | AZULEJO LISO | PZA | 511.700 | \$ 660.00 | \$ 337,722.00 | 3.675 |
| M0063 | AZULEJO ANTIDERRAPANTE | PZA | 103.200 | \$ 660.00 | \$ 68,112.00 | 0.741 |
| M0064 | PUERTA MULTIPANEL 0.83X2.06 | PZA | 2.000 | \$ 110,000.00 | \$ 220,000.00 | 2.394 |
| M0065 | PUERTA DE TAMBOR DE 0.83X 2.06 | PZA | 3.000 | \$ 100,000.00 | \$ 300,000.00 | 3.264 |
| M0068 | DIESSEL | LT | 44.031 | \$ 490.00 | \$ 21,575.19 | 0.235 |
| M0070 | FRIGOLITH DE 2" | M2 | 4.213 | \$ 10,000.00 | \$ 42,130.00 | 0.458 |
| M0071 | BASTIDOR TUBULAR CAL # 129 | PZA | 5.000 | \$ 30,000.00 | \$ 150,000.00 | 1.632 |

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| DESARROLLOS Y CONSTRUCC. DE SONORA | FECHA: 08-SEP-90 | HOJA: 2 |
| America y Agustin Melgar No. 1-A | OBRA: VIVIENDA TIPO "A" | |

VIVIENDA TRADICIONAL

| CLAVE | DESCRIPCION | UNIDAD | REQUERIMIENTO | PRECIO | IMPORTE | INCIDE |
|-------|----------------------------------|--------|---------------|-----------------|---------------|--------|
| M0072 | RESISTOL 5000 | LT | 1.214 | \$ 23,443.00 | \$ 28,459.80 | 0.310 |
| M0073 | ZOCLO DE HULE | ML | 49.521 | \$ 1,500.00 | \$ 74,281.50 | 0.808 |
| M0074 | IMPERMEABILIZACION DE LOSAS | M2 | 47.640 | \$ 8,615.00 | \$ 410,418.60 | 4.466 |
| M0077 | CALHIDRA | TON | 2.546 | \$ 128,000.00 | \$ 325,888.00 | 3.546 |
| M0078 | ACERO DE 5/16" | TON | 0.426 | \$ 1,214,393.00 | \$ 517,331.42 | 5.629 |
| M0080 | TRIPLAY DE 5/8" | M2 | 7.153 | \$ 25,000.00 | \$ 178,825.00 | 1.946 |
| M0081 | IMPERNOVA DE 15 CM. | ML | 44.638 | \$ 1,361.00 | \$ 60,752.32 | 0.661 |
| M0082 | CURACRETO | LT | 13.005 | \$ 3,384.00 | \$ 44,008.92 | 0.479 |
| M0083 | LLAVE DE GLOBO DE 1/2" | PZA | 1.000 | \$ 6,325.00 | \$ 6,325.00 | 0.069 |
| M0084 | LLAVE DE JARDIN | PZA | 2.000 | \$ 5,175.00 | \$ 10,350.00 | 0.113 |
| M0085 | TUBO GALVANIZADO 1/2" | ML | 37.300 | \$ 3,667.00 | \$ 136,779.10 | 1.488 |
| M0086 | CODO GALVANIZADO 1/2"X90 | PZA | 36.000 | \$ 903.00 | \$ 32,508.00 | 0.354 |
| M0087 | NIPLE GALVANIZADO 1/2"X3" | PZA | 22.000 | \$ 960.00 | \$ 21,120.00 | 0.230 |
| M0088 | TEE GALVANIZADO DE 1/2" | PZA | 10.000 | \$ 1,154.00 | \$ 11,540.00 | 0.126 |
| M0089 | TUERCA UNION 1/2" | PZA | 2.000 | \$ 3,403.00 | \$ 6,806.00 | 0.074 |
| M0090 | TAPON GALVANIZADO DE 1/2" | PZA | 12.000 | \$ 791.00 | \$ 9,492.00 | 0.103 |
| M0092 | YEE P.V.C DE 4"X2" | PZA | 1.000 | \$ 8,028.00 | \$ 8,028.00 | 0.087 |
| M0093 | CESPOL BOTE DE 4" SAL DE 2" | PZA | 1.000 | \$ 11,363.00 | \$ 11,363.00 | 0.124 |
| M0094 | LLAVE PARA EMPOTRAR | JGO | 1.000 | \$ 36,800.00 | \$ 36,800.00 | 0.400 |
| M0095 | ADAPTADOR CESPOL 2" SAL 1 1/2" | PZA | 1.000 | \$ 1,807.00 | \$ 1,807.00 | 0.020 |
| M0096 | MANGUERA POLIDUCTO DE 1/2" | ML | 79.400 | \$ 413.00 | \$ 32,792.20 | 0.357 |
| M0097 | TEE P.V.C DE 4"X4" SAL DE 2" | PZA | 1.000 | \$ 13,084.00 | \$ 13,084.00 | 0.142 |
| M0098 | TEE P.V.C DE 4"X4" SAL 1/2" | PZA | 1.000 | \$ 12,468.00 | \$ 12,468.00 | 0.136 |
| M0099 | CODO P.V.C 87X 1 1/2" | PZA | 1.000 | \$ 7,359.00 | \$ 7,359.00 | 0.080 |
| M0100 | FUMIGACION ANTITERMITA | M2 | 42.870 | \$ 1,840.00 | \$ 78,880.80 | 0.858 |
| M0101 | CABLE THW-8 | ML | 55.200 | \$ 1,387.00 | \$ 76,562.40 | 0.833 |
| M0102 | CABLE THW-12 | ML | 130.600 | \$ 511.00 | \$ 66,736.60 | 0.726 |
| M0103 | CABLE THW-14 | ML | 55.600 | \$ 349.00 | \$ 19,404.40 | 0.211 |
| M0104 | POLIDUCTO DE 1/2" | ML | 7.200 | \$ 113.00 | \$ 813.60 | 0.009 |
| M0105 | POLIDUCTO DE 1" | ML | 13.000 | \$ 1,200.00 | \$ 15,600.00 | 0.170 |
| M0106 | CAJA OCTOGONAL | PZA | 9.000 | \$ 588.00 | \$ 5,292.00 | 0.058 |
| M0107 | CAJA CHALUPA DE 2 X 4 | PZA | 18.000 | \$ 557.00 | \$ 10,026.00 | 0.109 |
| M0108 | APAGADOR SENCILLO | PZA | 7.000 | \$ 775.00 | \$ 5,425.00 | 0.059 |
| M0109 | APAGADOR DOBLE | PZA | 1.000 | \$ 1,530.00 | \$ 1,530.00 | 0.017 |
| M0110 | CONTACTO DOBLE | PZA | 7.000 | \$ 526.00 | \$ 3,682.00 | 0.040 |
| M0111 | TAPA P/T.V, TELEFONO, TIMBRE T.Q | PZA | 18.000 | \$ 708.00 | \$ 12,744.00 | 0.139 |
| M0112 | ROSETA DE PORCELANA | PZA | 9.000 | \$ 1,448.00 | \$ 13,032.00 | 0.142 |
| M0113 | CENTRO DE CARGA DE 4 CIRCUITOS | PZA | 1.000 | \$ 25,480.00 | \$ 25,480.00 | 0.277 |
| M0114 | INTERRUPTOR TERMOMAGNETICO | PZA | 3.000 | \$ 9,600.00 | \$ 28,800.00 | 0.313 |
| M0115 | CONECTOR COPER-WELL. | PZA | 1.000 | \$ 689.00 | \$ 689.00 | 0.007 |
| M0116 | VARILLA COOPER-WELL | PZA | 1.000 | \$ 9,000.00 | \$ 9,000.00 | 0.098 |
| M0118 | BLANCA ESPANA | KG | 2.179 | \$ 1,500.00 | \$ 3,268.50 | 0.036 |
| M0124 | TUBO CONDUIT DE 1/4" | ML | 1.500 | \$ 0.00 | \$ 0.00 | 0.000 |
| M0126 | PLOMO PARA MUEBLES SANITARIOS | KG | 1.250 | \$ 5,000.00 | \$ 6,250.00 | 0.068 |
| M0137 | BOTE DE PASTA GALV. 25 GR. | BTE | 1.000 | \$ 1,500.00 | \$ 1,500.00 | 0.016 |
| M0138 | VENTANA DE ALUMINIO 0.90X1.0 | PZA | 3.000 | \$ 150,000.00 | \$ 450,000.00 | 4.897 |
| M0139 | VENTANA DE ALUMINIO 1.20X0.30 | PZA | 1.000 | \$ 90,000.00 | \$ 90,000.00 | 0.979 |
| M0140 | VENTANA DE ALUMINIO 0.725X 1.0 | PZA | 1.000 | \$ 130,000.00 | \$ 130,000.00 | 1.415 |
| M0163 | REIIRO DE ESCOMBRO FUERA OBRA | M3 | 6.500 | \$ 18,000.00 | \$ 117,000.00 | 1.273 |

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| DESARROLLOS Y CONSTRUCC. DE SONORA | FECHA: 08-SEP-90 | HOJA: 3 |
| America y Agustin Melgar No. 1-A | OBRA: VIVIENDA TIPO "A" | |

VIVIENDA TRADICIONAL

CLAVE DESCRIPCION UNIDAD REQUERIMIENTO PRECIO IMPORTE INCIDE

TOTAL DE MATERIALES ==> \$ 9,190,345.24

MANO DE OBRA

| | | | | | |
|-----------------------------|-----|-----------|--------------|--------------|--------|
| 00001 ALBANIL | JOR | 51.983\$ | 48,000.00 \$ | 2,495,184.00 | 34.747 |
| 00002 PEON | JOR | 73.154 \$ | 24,750.00 \$ | 1,810,561.50 | 25.213 |
| 00003 AYUDANTE | JOR | 31.895 \$ | 32,000.00 \$ | 1,020,640.00 | 14.213 |
| 00004 PLOMERO | JOR | 8.854 \$ | 48,000.00 \$ | 424,992.00 | 5.918 |
| 00005 ELECTRICISTA | JOR | 7.627 \$ | 48,000.00 \$ | 366,096.00 | 5.098 |
| 00006 AZULEJERO | JOR | 0.927 \$ | 48,000.00 \$ | 44,496.00 | 0.620 |
| 00007 PINTOR | JOR | 8.332 \$ | 48,000.00 \$ | 399,936.00 | 5.569 |
| 00008 FIERRERO | JOR | 3.402 \$ | 48,000.00 \$ | 163,296.00 | 2.274 |
| 00011 CARPINTERO DE BANCO | JOR | 1.830 \$ | 48,000.00 \$ | 87,840.00 | 1.223 |
| 00013 CARPINTERO OBRA NEGRA | JOR | 7.666 \$ | 48,000.00 \$ | 367,968.00 | 5.124 |

TOTAL DE MANO DE OBRA ==> \$ 7,181,009.50

DESTAJOS O CUADRILLAS

TOTAL DE DESTAJOS O CUADRILLAS ==> \$ 0.00

MAQUINARIA O EQUIPO

TOTAL DE MAQUINARIA O EQUIPO ==> \$ 0.00

BASICOS O AUXILIARES

| | | | | | |
|--------------------------------------|-----|-----------|-----------------|------------|--------|
| 80003 MORTERO CEMENTO CAL-ARENA 1:1 | M3 | 0.015\$ | 99,213.38 \$ | 1,488.20 | 0.027 |
| 80004 PASTA DE CEMENTO BLANCO | M3 | 0.016 \$ | 442,499.97 \$ | 7,080.00 | 0.128 |
| 80005 CONCRETO F'C 100 KG/CM2 | M3 | 0.033 \$ | 114,693.38 \$ | 3,784.88 | 0.068 |
| 80006 CONCRETO F'C=100 KG/CM2 38 MM | M3 | 4.840 \$ | 105,391.88 \$ | 510,096.71 | 9.201 |
| 80007 CONCRETO F'C=150 KG/CM2 | M3 | 1.419 \$ | 126,543.88 \$ | 179,565.76 | 3.239 |
| 80008 CONCRETO F'C=150 KG/CM2 38 | M3 | 5.331 \$ | 123,386.89 \$ | 657,775.51 | 11.865 |
| 80009 CONCRETO F'C=200 KG/CM2 19 MM | M3 | 5.462 \$ | 140,174.92 \$ | 765,635.42 | 13.810 |
| 80010 COLADO DE CONCRETO EN CIMENTAC | M3 | 1.721 \$ | 21,258.38 \$ | 36,585.67 | 0.660 |
| 80011 COLADO DE CONCRETO EN LOSAS | M3 | 0.861 \$ | 31,374.11 \$ | 27,013.11 | 0.487 |
| 80013 ACERO DE REFUERZO 2.5 (5/16) | TON | 0.016 \$ | 2,014,730.25 \$ | 32,235.68 | 0.581 |
| 80014 MORTERO CEMENTO CAL-ARENA 1.18 | M3 | 0.060 \$ | 80,057.88 \$ | 4,803.47 | 0.087 |
| 80015 CIMBRA Y DESCIMBRA DE LOSAS | M2 | 52.020 \$ | 15,879.45 \$ | 826,049.05 | 14.900 |
| 80016 MORTERO CAL-ARENA 1:4 | M3 | 0.337 \$ | 86,175.67 \$ | 29,041.20 | 0.524 |
| 80017 ACERO DE REFUERZO 2 (1/4") | TON | 0.048 \$ | 2,016,313.88 \$ | 96,783.07 | 1.746 |
| 80018 ACERO DE REFUERZO 2.5 (5/16") | TON | 0.386 \$ | 2,019,706.38 \$ | 779,606.66 | 14.063 |
| 80019 MORTERO CAL ARENA 1:2.5 | M3 | 6.655 \$ | 97,501.32 \$ | 648,871.29 | 11.704 |
| 80020 MORTERO CEMENTO ARENA 1:6 | M3 | 1.149 \$ | 107,508.67 \$ | 123,527.46 | 2.228 |
| 80021 MORTERO CAL-ARENA CERNIDA 1:2 | M3 | 1.070 \$ | 102,286.67 \$ | 109,446.74 | 1.974 |
| 80022 MORTERO CEMENTO ARENA 1:3 | M3 | 1.184 \$ | 140,116.38 \$ | 165,897.79 | 2.992 |
| 80023 CIMBRA COMUN CADENA CIMENTACIO | M2 | 32.312 \$ | 16,638.69 \$ | 537,629.33 | 9.698 |

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| DESARROLLOS Y CONSTRUC. DE SONORA | FECHA: 08-SEP-90 | HOJA: 4 |
| America y Agustin Melgar No. 1-A | OBRA: VIVIENDA TIPO "A" | |

VIVIENDA TRADICIONAL

| CLAVE | DESCRIPCION | UNIDAD | REQUERIMIENTO | PRECIO | IMPORTE | INCIDE |
|-------|-------------|--------|---------------|--------|---------|--------|
|-------|-------------|--------|---------------|--------|---------|--------|

TOTAL DE BASICOS O AUXILIARES ==> \$ 5,542,917.00

ACTIVIDADES CON MAQUINARIA

| | | | | | | |
|-------|---------------------------|-----|----------|--------------|------------|--------|
| A0001 | COSTO HORARIO REVOLVEDORA | CH. | 18.352\$ | 20,678.10 \$ | 379,484.48 | 98.212 |
| A0002 | COSTO HORARIO DE VIBRADOR | CH | 0.573 \$ | 12,040.04 \$ | 6,898.94 | 1.785 |

TOTAL DE ACTIVIDADES CON MAQUINARIA ==> \$ 386,383.42

S U M A R I A

| DESCRIPCION | INCIDE | IMPORTE |
|----------------------------|--------------|---------------|
| MATERIALES | 52.589 % \$ | 9,190,345.24 |
| MANO DE OBRA | 41.091 % \$ | 7,181,009.50 |
| DESTAJOS O CUADRILLAS | 0.000 % \$ | 0.00 |
| MAQUINARIA O EQUIPO | 0.000 % \$ | 0.00 |
| BASICOS O AUXILIARES | 0.000 % \$ | 5,542,917.00 |
| ACTIVIDADES CON MAQUINARIA | 2.211 % \$ | 386,383.42 |
| SUBCONTRATOS | 0.000 % \$ | 0.00 |
| MANDO INTERMEDIO | 2.876 % \$ | 502,668.36 |
| HERRAMIENTA MENOR | 1.233 % \$ | 215,429.24 |
| PRESTACIONES AL DESTAJO | 0.000 % \$ | 0.00 |
| T O T A L E S | 100.000 % \$ | 17,475,835.76 |