

**PLAN DE TRABAJOS - PORCENTAJE MENSUAL DE AVANCE**

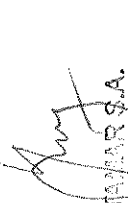
| ÍTEM | DESIGNACIÓN  | MES  |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |
|------|--|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
|      |  | 1    | 2   | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   |     |
| 1    | Movimiento de suelo  |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |
| 1.a  | Excavación   | -    | -   | 2%   | 3%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 6%   | 6%   | 6%   | 6%   | 6%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | -   |
| 2    | Conformación de Terreno y Depósito de Suelos Excavados         | -    | -   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | -   |
| 3    | Alambrados   | -    | -   | 2%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 3%  |
| 4    | Tranqueras   | -    | -   | 2%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 5%   | 3%  |
| 5    | SUMA PROVISIONAL: Interferencias, remociones y obstáculos      | -    | -   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 5%  |
| 6    | Servicios Profesionales:                                       |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | -   |
| 6.a  | Plan de Gestión Ambiental y Estudios Previos                   | 100% | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -   |
| 6.b  | Ingeniería Complementaria y de Detalle y Planos según Obra     | 40%  | 30% | 2.0% | 2.0% | 2.0% | 2.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 5.0% |     |
| 7    | Movilización y Desmovilización de equipos de armado de Obrador | 30%  | 25% | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | 20% |

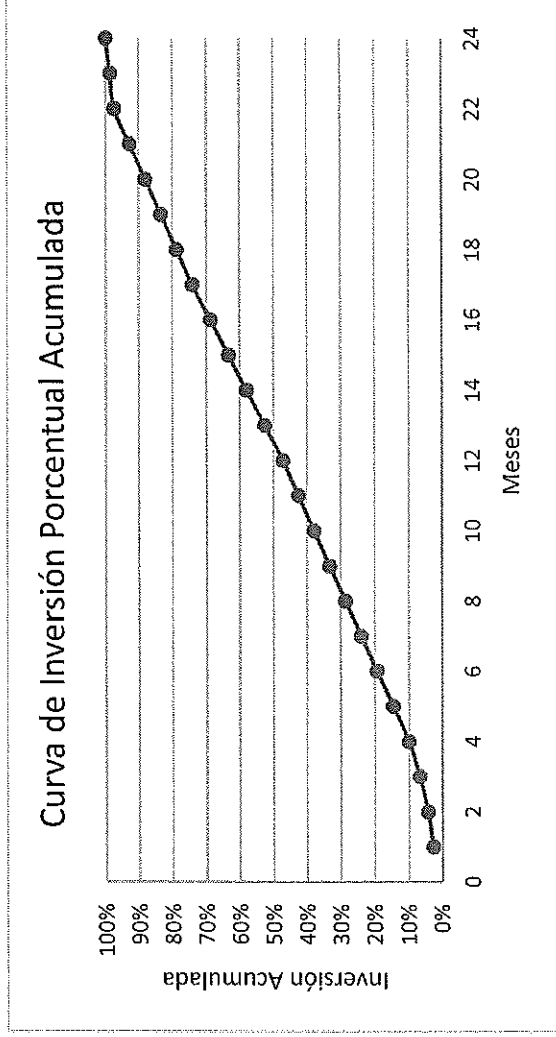
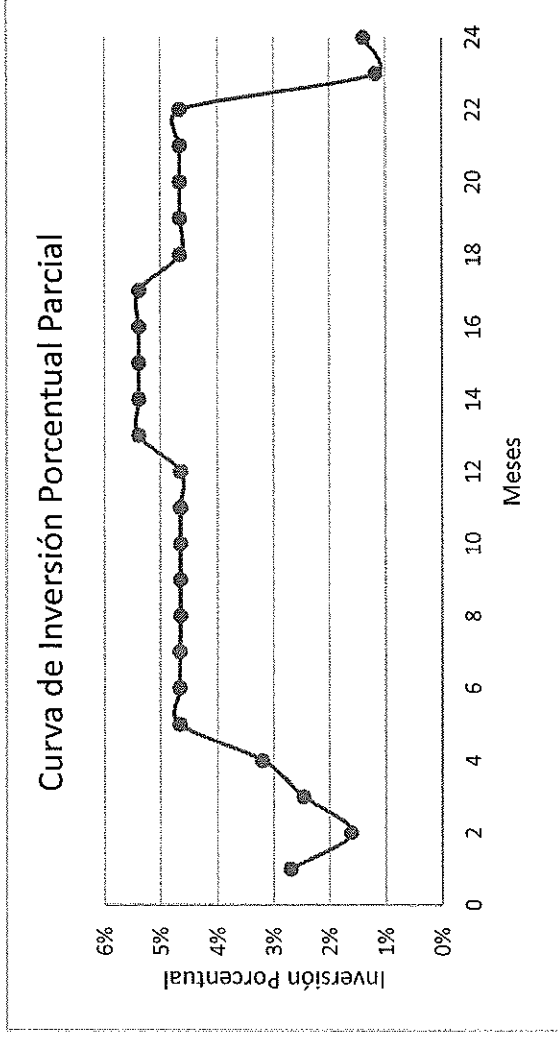
**EQUIPOS - CANTIDADES REQUERIDAS**

| Nº | EQUIPOS                         | MES |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
|----|---------------------------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
|    |                                 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |   |
| 1  | Dragas                          | -   | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | - |
| 2  | Pontones/Embarcaciones de apoyo | -   | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | - |
| 3  | Retroexcavadoras                | -   | - | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 2 |
| 4  | Palas cargadoras                | -   | - | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1 |
| 5  | Camiones                        | -   | - | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | - |
| 6  | Topadora                        | -   | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | - |
| 7  | Motoniveladora                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | - |
| 8  | Tractor                         | -   | - | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1 |
| 9  | Grupo Electrónico               | -   | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1 |
| 10 | Motosoldadora                   | -   | - | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2 |

**HISTOGRAMA DE NECESIDADES DE MANO DE OBRA**

| ÍTEM | DESIGNACIÓN  | MES |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|------|--|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|      |  | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |    |
| 1    | Movimiento de suelo  |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1.a  | Excavación   | -   | -  | 25 | 28 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 24 |
| 1.b  | Limpieza de Lagunas  | -   | -  | -  | -  | -  | -  | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | -  |
| 2    | Conformación de Terreno y Depósito de Suelos Excavados         | -   | -  | 8  | 8  | 8  | 8  | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9  | 8  | 8  | 8  | 8  | 8  | 8  | 8  | 8  | 8  | 8  | -  |
| 3    | Alambrados   | -   | -  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  |
| 4    | Tranqueras   | -   | -  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | -  |
| 5    | SUMA PROVISIONAL: Interferencias, remociones y obstáculos      | -   | -  | 2  | 3  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 2  |
| 6    | Servicios Profesionales:                                       |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | -  |
| 6.a  | Plan de Gestión Ambiental y Estudios Previos                   | -   | -  | 3  | 3  | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | -  |
| 6.b  | Ingeniería Complementaria y de Detalle y Planos según Obra     | -   | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 7    | Movilización y Desmovilización de equipos de armado de Obrador | 18  | 15 | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | 14 |

  
**PENTAMAR S.A.**  
 Ing. FRANCISCO ANTONIO MARRASQUÍN  
 REPRESENTANTE LEGAL Y TÉCNICO



Para las curvas de inversiones de máxima y mínima, se considera un apartamento del +5% para la curva de máxima y del -5% para la curva de mínima.

PENTAMAR S.A.  
ING. JERÓNIMO MARTÍNEZ ARRASAGUE  
REPRESENTANTE LEGAL Y TÉCNICO