# ANEXO A

# ESTUDIO DE TRÁFICO

# A.1 : Conteo Vehicular

CUADRO : 1.1

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca** **Sentido 1**
**FECHA :** martes, 03 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | 1 | | | | | | | | | | | | | **1** | 0.19% |
| 1-2 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 2-3 | | 1 | | | 2 | | | | | | | | | | | | | | | | | | **3** | 0.57% |
| 3-4 | | 1 | | | 6 | | | | | | | | | | | | | | | | | | **7** | 1.33% |
| 4-5 | 2 | 2 | 2 | | 15 | | | | | 2 | | | | | | | | | | | | | **23** | 4.38% |
| 5-6 | 3 | 1 | 2 | 1 | 22 | | | | | 1 | 1 | | | | | | | | | | | | **31** | 5.90% |
| 6-7 | 4 | 4 | 3 | | 19 | | | | | 1 | 1 | | | 1 | | | | | | | | | **33** | 6.29% |
| 7-8 | 5 | 7 | 5 | | 22 | | | | | 5 | | | | | | | | | | | | | **44** | 8.38% |
| 8-9 | 2 | 2 | 5 | | 13 | | | | | 2 | 4 | | | | | 1 | | | | | | | **29** | 5.52% |
| 9-10 | 2 | 5 | 7 | | 13 | | | | | 3 | | | | | | | | | | | | | **30** | 5.71% |
| 10-11 | 5 | 6 | 4 | | 11 | | | | | 2 | 2 | | | | | | | | | | | | **30** | 5.71% |
| 11-12 | 4 | 5 | 6 | | 9 | | | | | 1 | 1 | | | | | | | | | | | | **26** | 4.95% |
| 12-13 | 2 | 1 | 2 | | 12 | | | | | 7 | 1 | | | | | | | | | | | | **25** | 4.76% |
| 13-14 | 2 | 5 | 5 | | 17 | | | | | 5 | 2 | | | | | 2 | | | | | | | **38** | 7.24% |
| 14-15 | 3 | 1 | 2 | | 21 | | | | | 1 | | | | | | | | | | | | | **28** | 5.33% |
| 15-16 | 5 | 5 | 5 | | 12 | | | | | 3 | 2 | | | | | | | | | | | | **32** | 6.10% |
| 16-17 | 5 | 10 | 7 | | 15 | | | | | 3 | | | | | | | | | | | | | **40** | 7.62% |
| 17-18 | 7 | 9 | 5 | | 20 | | | | | 4 | | | | | | | | | | | | | **45** | 8.57% |
| 18-19 | | 3 | 2 | | 17 | | | | | 3 | | | | | | | | | | | | | **25** | 4.76% |
| 19-20 | 2 | 4 | 5 | | 6 | | | | | 1 | | | | | | | | | | | | | **18** | 3.43% |
| 20-21 | 1 | 2 | | | 4 | | | | | 1 | 1 | | | | | | | | | | | | **9** | 1.71% |
| 21-22 | 1 | | 1 | | 3 | | | | | | | | | | | | | | | | | | **5** | 0.95% |
| 22-23 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 23-24 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | **2** | 0.38% |
| TOTAL | 55 | 76 | 69 | 1 | 259 | - | - | - | - | 46 | 15 | - | - | 1 | - | 3 | - | - | - | - | - | - | 525 | 100.00% |
| % | 10.48% | 14.48% | 13.14% | 0.19% | 49.33% | 0.00% | 0.00% | 0.00% | 0.00% | 8.76% | 2.86% | 0.00% | 0.00% | 0.19% | 0.00% | 0.57% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO: 1.2

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa** **Sentido 2**
**FECHA :** martes, 03 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 1-2 | | | 1 | | | | | | | | | | | | | | | | | | | | **1** | 0.20% |
| 2-3 | | 1 | | | 2 | | | | | | | | | | | | | | | | | | **3** | 0.59% |
| 3-4 | 1 | 2 | | | 3 | | | | | | 1 | | | | | | | | | | | | **7** | 1.37% |
| 4-5 | 1 | 3 | 3 | | 17 | | | | | 1 | | | | | | | | | | | | | **25** | 4.90% |
| 5-6 | 2 | 2 | 3 | | 19 | | | | | 2 | 2 | | | | | | | | | | | | **30** | 5.88% |
| 6-7 | 5 | 3 | 3 | | 20 | | | | | 2 | | | | 1 | 1 | | | | | | | | **35** | 6.86% |
| 7-8 | 4 | 7 | 2 | | 22 | | | | | 3 | 1 | | | | | | | | | | | | **39** | 7.65% |
| 8-9 | 3 | 2 | 4 | | 18 | | | | | 2 | 5 | | | | | 1 | | | | | | | **35** | 6.86% |
| 9-10 | 3 | 5 | 6 | | 14 | | | | | | 1 | | | | | 1 | | | | | | | **30** | 5.88% |
| 10-11 | 1 | 7 | 9 | 1 | 13 | | | | | 3 | | | | | | | | | | | | | **34** | 6.67% |
| 11-12 | 4 | 5 | 6 | | 14 | | | | | 8 | | | | | | | | | | | | | **37** | 7.25% |
| 12-13 | 1 | 2 | 4 | | 8 | | | | | 1 | | | | | | | | | | | | | **16** | 3.14% |
| 13-14 | 4 | 1 | | | 13 | | | | | 3 | 1 | | | | | | | | | | | | **22** | 4.31% |
| 14-15 | 4 | 2 | 7 | | 15 | | | | | 3 | 1 | | | | | | | | | | | | **32** | 6.27% |
| 15-16 | 2 | 1 | 2 | | 9 | | | | | 4 | | | | | | | | | | | | | **18** | 3.53% |
| 16-17 | 4 | 6 | 2 | | 13 | | | | | 3 | | | | | | | | | | | | | **28** | 5.49% |
| 17-18 | 1 | 4 | 1 | | 10 | | | | | 1 | | | | | | 1 | | | | | | | **18** | 3.53% |
| 18-19 | | 3 | 3 | | 16 | | | | | 1 | | | | | | | | | | | | | **23** | 4.51% |
| 19-20 | 3 | 10 | 1 | | 15 | | | | | 3 | | | | | | | | | | | | | **32** | 6.27% |
| 20-21 | 1 | 5 | 1 | 1 | 10 | 1 | | | | | | | | | | | | | | | | | **19** | 3.73% |
| 21-22 | 3 | 4 | 3 | | 2 | 5 | | | | | | | | | | | | | | | | | **17** | 3.33% |
| 22-23 | | | | 1 | 6 | | | | | | | | | | | | | | | | | | **7** | 1.37% |
| 23-24 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.39% |
| TOTAL | 47 | 76 | 61 | 3 | 260 | 6 | - | - | - | 40 | 12 | - | - | 1 | 1 | 3 | - | - | - | - | - | - | 510 | 100.00% |
| % | 9.22% | 14.90% | 11.96% | 0.59% | 50.98% | 1.18% | 0.00% | 0.00% | 0.00% | 7.84% | 2.35% | 0.00% | 0.00% | 0.20% | 0.20% | 0.59% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

Cuadro : 1.3.

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** martes, 03 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.10% |
| 1-2 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.10% |
| 2-3 | - | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **6** | 0.58% |
| 3-4 | 1 | 3 | - | - | 9 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **14** | 1.35% |
| 4-5 | 3 | 5 | 5 | - | 32 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **48** | 4.64% |
| 5-6 | 5 | 3 | 5 | 1 | 41 | - | - | - | - | 3 | 3 | - | - | - | - | - | - | - | - | - | - | - | **61** | 5.89% |
| 6-7 | 9 | 7 | 6 | - | 39 | - | - | - | - | 3 | 1 | - | - | 2 | 1 | - | - | - | - | - | - | - | **68** | 6.57% |
| 7-8 | 9 | 14 | 7 | - | 44 | - | - | - | - | 8 | 1 | - | - | - | - | - | - | - | - | - | - | - | **83** | 8.02% |
| 8-9 | 5 | 4 | 9 | - | 31 | - | - | - | - | 4 | 9 | - | - | - | - | 2 | - | - | - | - | - | - | **64** | 6.18% |
| 9-10 | 5 | 10 | 13 | - | 27 | - | - | - | - | 3 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **60** | 5.80% |
| 10-11 | 6 | 13 | 13 | 1 | 24 | - | - | - | - | 5 | 2 | - | - | - | - | - | - | - | - | - | - | - | **64** | 6.18% |
| 11-12 | 8 | 10 | 12 | - | 23 | - | - | - | - | 9 | 1 | - | - | - | - | - | - | - | - | - | - | - | **63** | 6.09% |
| 12-13 | 3 | 3 | 6 | - | 20 | - | - | - | - | 8 | 1 | - | - | - | - | - | - | - | - | - | - | - | **41** | 3.96% |
| 13-14 | 6 | 6 | 5 | - | 30 | - | - | - | - | 8 | 3 | - | - | - | - | 2 | - | - | - | - | - | - | **60** | 5.80% |
| 14-15 | 7 | 3 | 9 | - | 36 | - | - | - | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | **60** | 5.80% |
| 15-16 | 7 | 6 | 7 | - | 21 | - | - | - | - | 7 | 2 | - | - | - | - | - | - | - | - | - | - | - | **50** | 4.83% |
| 16-17 | 9 | 16 | 9 | - | 28 | - | - | - | - | 6 | - | - | - | - | - | - | - | - | - | - | - | - | **68** | 6.57% |
| 17-18 | 8 | 13 | 6 | - | 30 | - | - | - | - | 5 | - | - | - | - | - | 1 | - | - | - | - | - | - | **63** | 6.09% |
| 18-19 | - | 6 | 5 | - | 33 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **48** | 4.64% |
| 19-20 | 5 | 14 | 6 | - | 21 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **50** | 4.83% |
| 20-21 | 2 | 7 | 1 | 1 | 14 | 1 | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | **28** | 2.71% |
| 21-22 | 4 | 4 | 4 | - | 5 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **22** | 2.13% |
| 22-23 | - | 1 | - | 1 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **8** | 0.77% |
| 23-24 | - | 2 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.39% |
| TOTAL | 102 | 152 | 130 | 4 | 519 | 6 | - | - | - | 86 | 27 | - | - | 2 | 1 | 6 | - | - | - | - | - | - | 1,035 | 100.00% |
| % | 9.86% | 14.69% | 12.56% | 0.39% | 50.14% | 0.58% | 0.00% | 0.00% | 0.00% | 8.31% | 2.61% | 0.00% | 0.00% | 0.19% | 0.10% | 0.58% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 2.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** miércoles, 04 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | 1 | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 1-2 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 2-3 | | | | | 1 | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 3-4 | | 1 | | | 4 | | | | | | | | | | | | | | | | | | **5** | 0.94% |
| 4-5 | | | | | 6 | | | | | 3 | | | | | | | | | | | | | **9** | 1.69% |
| 5-6 | 1 | 3 | 6 | | 10 | | | | | | | | | | | 1 | | | | | | | **21** | 3.95% |
| 6-7 | 1 | 2 | | | 18 | | | | | | | | | 1 | | | | | | | | | **22** | 4.14% |
| 7-8 | 2 | 3 | 1 | | 18 | | | | | 3 | 2 | | | | | | | | | | | | **29** | 5.46% |
| 8-9 | 1 | 6 | 3 | 1 | 7 | | | | | 1 | | | | | | 1 | | | | | | | **20** | 3.77% |
| 9-10 | | 7 | 7 | | 10 | | | | | 4 | 2 | | | | | | | | | | | | **30** | 5.65% |
| 10-11 | | 4 | | | 12 | | | | | 5 | 3 | | | | | 2 | | | | | | | **26** | 4.90% |
| 11-12 | | 9 | 2 | | 12 | | | | | 6 | 4 | | | | | | | | | | | | **33** | 6.21% |
| 12-13 | | 20 | | | 15 | | | | | 3 | 1 | | | | | | | | | | | | **39** | 7.34% |
| 13-14 | 8 | 7 | 5 | 1 | 31 | 2 | | | | 2 | 3 | | | | | | | | | | | | **59** | 11.11% |
| 14-15 | 7 | 4 | 5 | | 16 | | | | | 2 | | | | | | 1 | | | | | | | **35** | 6.59% |
| 15-16 | 6 | 2 | 5 | | 20 | | | | | 3 | 4 | | | | | | | | | | | | **40** | 7.53% |
| 16-17 | 11 | 1 | 6 | | 18 | | | | | 4 | 1 | | | | | | | | | | | | **41** | 7.72% |
| 17-18 | 8 | 7 | 8 | | 17 | | | | | 6 | 1 | | | | | | | | | | | | **47** | 8.85% |
| 18-19 | 2 | 9 | 3 | | 10 | | | | | 5 | 3 | | | | | | | | | | | | **32** | 6.03% |
| 19-20 | | 4 | 3 | | 4 | | | | | 2 | | | | | | | | | | | | | **13** | 2.45% |
| 20-21 | | 6 | | | 3 | | | | | | 1 | | | | | | | | | | | | **10** | 1.88% |
| 21-22 | 3 | 2 | 1 | | 2 | | | | | 1 | | | | | | | | | | | | | **9** | 1.69% |
| 22-23 | | 3 | | | 1 | | | | | 1 | | | | | | | | | | | | | **5** | 0.94% |
| 23-24 | 1 | 1 | | | | | | | | 1 | | | | | | | | | | | | | **3** | 0.56% |
| TOTAL | 52 | 101 | 56 | 2 | 235 | 2 | - | - | - | 52 | 25 | - | - | 1 | - | 5 | - | - | - | - | - | - | 531 | 100.00% |
| % | 9.79% | 19.02% | 10.55% | 0.38% | 44.26% | 0.38% | 0.00% | 0.00% | 0.00% | 9.79% | 4.71% | 0.00% | 0.00% | 0.19% | 0.00% | 0.94% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 2.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** miércoles, 4 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S1/S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 1-2 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.18% |
| 2-3 | | 1 | 1 | | | | | | | 1 | | | | | | | | | | | | | **3** | 0.53% |
| 3-4 | | 1 | 1 | | 4 | | | | | | | | | | | | | | | | | | **6** | 1.07% |
| 4-5 | 1 | | 1 | | 2 | | | | | 3 | | 1 | | 1 | | | | | | | | | **9** | 1.60% |
| 5-6 | 1 | 1 | 2 | | 4 | | | | | 1 | | | | | | | | | | | | | **9** | 1.60% |
| 6-7 | | | 8 | | 10 | | | | | 1 | | | | | | | | | | | | | **19** | 3.37% |
| 7-8 | 5 | 4 | 4 | | 19 | | | | | 4 | 5 | 2 | | | | | | | | | | | **43** | 7.64% |
| 8-9 | 2 | 10 | 9 | 1 | 29 | | | | | 5 | 3 | | | | | | | | | | | | **59** | 10.48% |
| 9-10 | | 11 | 6 | | 18 | 1 | 2 | | | 9 | 3 | | | | | | | | | | | | **50** | 8.88% |
| 10-11 | | 18 | 8 | | 11 | | | | | 9 | 3 | | | | | | | | | | | | **49** | 8.70% |
| 11-12 | 3 | 20 | 9 | 1 | 15 | | | | | 3 | 1 | | | | | | | | | | | | **52** | 9.24% |
| 12-13 | 2 | 6 | 1 | 1 | 9 | | | | | 2 | 1 | | | | | | | | | | | | **22** | 3.91% |
| 13-14 | 1 | 2 | 7 | | 12 | | | | | 2 | 1 | | | | | | | | | | | | **25** | 4.44% |
| 14-15 | 4 | 2 | 5 | | 17 | | | | | 1 | 1 | | | | | | | | | | | | **30** | 5.33% |
| 15-16 | 8 | 2 | 5 | | 10 | | | | | 3 | 4 | | | | | 1 | | | | | | | **33** | 5.86% |
| 16-17 | 1 | 4 | 4 | 1 | 16 | | | | | 5 | 1 | | | | | | | | | | | | **32** | 5.68% |
| 17-18 | 1 | 2 | 1 | | 9 | | | | | 4 | | | | | | | | | | | | | **17** | 3.02% |
| 18-19 | 1 | 6 | | | 15 | | | | | | 1 | | | | | | | | | | | | **23** | 4.09% |
| 19-20 | | 11 | 4 | | 17 | | | | | 2 | | | | | | | | | | | | | **34** | 6.04% |
| 20-21 | | 11 | 2 | | 11 | | | | | | | | | | | | | | | | | | **24** | 4.26% |
| 21-22 | 1 | 1 | 2 | | 8 | | | | | 2 | | | | | | | | | | | | | **14** | 2.49% |
| 22-23 | | 2 | | | | | | | | | | | | | | | | | | | | | **2** | 0.36% |
| 23-24 | 2 | 3 | | | 1 | | | | | 1 | | | | | | | | | | | | | **7** | 1.24% |
| TOTAL | 33 | 119 | 80 | 4 | 237 | 1 | 2 | - | - | 58 | 24 | 3 | - | 1 | - | 1 | - | - | - | - | - | - | 563 | 100.00% |
| % | 5.86% | 21.14% | 14.21% | 0.71% | 42.10% | 0.18% | 0.36% | 0.00% | 0.00% | 10.30% | 4.26% | 0.53% | 0.00% | 0.18% | 0.00% | 0.18% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 2.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** miércoles, 4 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.09% |
| 1-2 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.18% |
| 2-3 | - | 1 | 1 | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.37% |
| 3-4 | - | 2 | 1 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **11** | 1.01% |
| 4-5 | 1 | - | 1 | - | 8 | - | - | - | - | 6 | - | 1 | - | 1 | - | - | - | - | - | - | - | - | **18** | 1.65% |
| 5-6 | 2 | 4 | 8 | - | 14 | - | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - | - | **30** | 2.74% |
| 6-7 | 1 | 2 | 8 | - | 28 | - | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | **41** | 3.75% |
| 7-8 | 7 | 7 | 5 | - | 37 | - | - | - | - | 7 | 7 | 2 | - | - | - | - | - | - | - | - | - | - | **72** | 6.58% |
| 8-9 | 3 | 16 | 12 | 2 | 36 | - | - | - | - | 6 | 3 | - | - | - | - | 1 | - | - | - | - | - | - | **79** | 7.22% |
| 9-10 | - | 18 | 13 | - | 28 | 1 | 2 | - | - | 13 | 5 | - | - | - | - | - | - | - | - | - | - | - | **80** | 7.31% |
| 10-11 | - | 22 | 8 | - | 23 | - | - | - | - | 14 | 6 | - | - | - | - | 2 | - | - | - | - | - | - | **75** | 6.86% |
| 11-12 | 3 | 29 | 11 | 1 | 27 | - | - | - | - | 9 | 5 | - | - | - | - | - | - | - | - | - | - | - | **85** | 7.77% |
| 12-13 | 2 | 26 | 1 | 1 | 24 | - | - | - | - | 5 | 2 | - | - | - | - | - | - | - | - | - | - | - | **61** | 5.58% |
| 13-14 | 9 | 9 | 12 | 1 | 43 | 2 | - | - | - | 4 | 4 | - | - | - | - | - | - | - | - | - | - | - | **84** | 7.68% |
| 14-15 | 11 | 6 | 10 | - | 33 | - | - | - | - | 3 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **65** | 5.94% |
| 15-16 | 14 | 4 | 10 | - | 30 | - | - | - | - | 6 | 8 | - | - | - | - | 1 | - | - | - | - | - | - | **73** | 6.67% |
| 16-17 | 12 | 5 | 10 | 1 | 34 | - | - | - | - | 9 | 2 | - | - | - | - | - | - | - | - | - | - | - | **73** | 6.67% |
| 17-18 | 9 | 9 | 9 | - | 26 | - | - | - | - | 10 | 1 | - | - | - | - | - | - | - | - | - | - | - | **64** | 5.85% |
| 18-19 | 3 | 15 | 3 | - | 25 | - | - | - | - | 5 | 4 | - | - | - | - | - | - | - | - | - | - | - | **55** | 5.03% |
| 19-20 | - | 15 | 7 | - | 21 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **47** | 4.30% |
| 20-21 | - | 17 | 2 | - | 14 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **34** | 3.11% |
| 21-22 | 4 | 3 | 3 | - | 10 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **23** | 2.10% |
| 22-23 | - | 5 | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **7** | 0.64% |
| 23-24 | 3 | 4 | - | - | 1 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **10** | 0.91% |
| TOTAL | 85 | 220 | 136 | 6 | 472 | 3 | 2 | - | - | 110 | 49 | 3 | - | 2 | - | 6 | - | - | - | - | - | - | 1,094 | 100.00% |
| % | 7.77% | 20.11% | 12.43% | 0.55% | 43.14% | 0.27% | 0.18% | 0.00% | 0.00% | 10.05% | 4.48% | 0.27% | 0.00% | 0.18% | 0.00% | 0.55% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 3.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** jueves, 5 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | **2** | 0.45% |
| 1-2 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.23% |
| 2-3 | 1 | 1 | | | | | | | | 1 | | | | | | | | | | | | | **3** | 0.68% |
| 3-4 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.23% |
| 4-5 | | 1 | | | 1 | | | | | 2 | | | | | | 1 | | | | | | | **5** | 1.13% |
| 5-6 | | 1 | 3 | 1 | 7 | | | | | 1 | | | | | | | | | | | | | **13** | 2.95% |
| 6-7 | 3 | 3 | 2 | | 21 | | | | | 4 | | | | 1 | | | | | | | | | **34** | 7.71% |
| 7-8 | 2 | | 4 | | 16 | | | | | 2 | 1 | | | | | | | | | | | | **25** | 5.67% |
| 8-9 | 5 | 2 | 11 | 1 | 10 | | | | | 1 | 3 | | | | | 1 | | | | | | | **34** | 7.71% |
| 9-10 | 3 | 3 | | | 15 | | | | | | | | | | | | | | | | | | **21** | 4.76% |
| 10-11 | 3 | 6 | 2 | | 11 | | | | | 3 | 4 | | | | | 1 | | | | | | | **30** | 6.80% |
| 11-12 | 2 | 3 | 5 | | 15 | 1 | | | | 3 | 1 | | | | | 1 | | | | | | | **31** | 7.03% |
| 12-13 | 7 | 3 | 1 | 1 | 4 | | | | | 2 | 1 | | | | | 1 | | | | | | | **20** | 4.54% |
| 13-14 | 5 | 3 | 8 | 1 | 18 | | | | | 2 | | | | | | | | | | | | | **37** | 8.39% |
| 14-15 | 2 | 3 | 4 | | 7 | | | | | 5 | 1 | | | | | | | | | | | | **22** | 4.99% |
| 15-16 | 2 | 4 | 4 | | 10 | | | | | 7 | 2 | | | | | | | | | | | | **29** | 6.58% |
| 16-17 | 5 | 4 | 2 | | 18 | | | | | | 2 | | | | | | | | | | | | **31** | 7.03% |
| 17-18 | 4 | 1 | 10 | | 12 | 2 | | | | | 1 | | | | | | | | | | | | **30** | 6.80% |
| 18-19 | 5 | 5 | 4 | | 17 | | | | | 1 | | | | | | | | | | | | | **32** | 7.26% |
| 19-20 | 6 | 2 | 2 | 1 | 7 | | | | | 1 | | | | | | | | | | | | | **19** | 4.31% |
| 20-21 | 1 | 2 | 2 | 1 | 3 | | | | | | | | | | | | | | | | | | **9** | 2.04% |
| 21-22 | 1 | 1 | 2 | | 7 | | | | | | | | | | | | | | | | | | **11** | 2.49% |
| 22-23 | | | | | | | 1 | | | | | | | | | | | | | | | | **1** | 0.23% |
| 23-24 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| TOTAL | 59 | 50 | 66 | 6 | 199 | 3 | 1 | - | - | 35 | 16 | - | - | 1 | - | 5 | - | - | - | - | - | - | 441 | 100.00% |
| % | 13.38% | 11.34% | 14.97% | 1.36% | 45.12% | 0.68% | 0.23% | 0.00% | 0.00% | 7.94% | 3.63% | 0.00% | 0.00% | 0.23% | 0.00% | 1.13% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 3.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** jueves, 5 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.25% |
| 1-2 | 2 | | | | | | | | | | | | | | | | | | | | | | **2** | 0.50% |
| 2-3 | 1 | 1 | | | | | | | | 1 | | | | | | | | | | | | | **3** | 0.75% |
| 3-4 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.25% |
| 4-5 | | 1 | | | 1 | | | | | 2 | | | | | | | | | | | | | **4** | 1.00% |
| 5-6 | 1 | 1 | | | 3 | | | | | 2 | | | | | | | | | | | | | **7** | 1.75% |
| 6-7 | | 3 | 4 | | 13 | 1 | | | | 1 | | | | 1 | | | | | | | | | **23** | 5.75% |
| 7-8 | 1 | | 3 | | 17 | | | | | 3 | | | | | | | | | | | | | **24** | 6.00% |
| 8-9 | 5 | 3 | 4 | | 20 | | | | | 1 | 1 | | | | | | | | | | | | **34** | 8.50% |
| 9-10 | 4 | 6 | 5 | 1 | 13 | | | | | 4 | | | | | | | | | | | | | **33** | 8.25% |
| 10-11 | 1 | 1 | 2 | 1 | 7 | | | | | 4 | 1 | | | | | 1 | | | | | | | **18** | 4.50% |
| 11-12 | 2 | 2 | 4 | 1 | 10 | | | | | 3 | 2 | | | | | 1 | | | | | | | **25** | 6.25% |
| 12-13 | 3 | 3 | 3 | | 12 | | | | | 2 | 2 | | | | | | | | | | | | **25** | 6.25% |
| 13-14 | 5 | 2 | 4 | | 11 | | | | | 4 | | | | | | 1 | | | | | | | **27** | 6.75% |
| 14-15 | 1 | 1 | 1 | | 8 | | | | | 3 | 1 | | | | | 1 | | | | | | | **16** | 4.00% |
| 15-16 | 4 | 3 | 4 | | 11 | | | | | | 2 | | | | | | | | | | | | **24** | 6.00% |
| 16-17 | 2 | 4 | 5 | 1 | 12 | 1 | | | | 3 | | | | | | | | | | | | | **28** | 7.00% |
| 17-18 | | 3 | 4 | | 10 | 1 | | | | 1 | | | | | | | | | | | | | **19** | 4.75% |
| 18-19 | 6 | 3 | 2 | | 19 | | | | | 1 | 1 | | | | | | | | | | | | **32** | 8.00% |
| 19-20 | 5 | 5 | 1 | | 17 | | | | | 1 | | | | | | | | | | | | | **29** | 7.25% |
| 20-21 | 3 | 1 | 1 | | 10 | | | | | 1 | | | | | | | | | | | | | **16** | 4.00% |
| 21-22 | 1 | 1 | 1 | | 2 | | | | | | | | | | | | | | | | | | **5** | 1.25% |
| 22-23 | 1 | | | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.50% |
| 23-24 | 1 | | | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.50% |
| TOTAL | 50 | 45 | 48 | 4 | 198 | 3 | - | - | - | 37 | 10 | - | - | 1 | - | 4 | - | - | - | - | - | - | 400 | 100.00% |
| % | 12.50% | 11.25% | 12.00% | 1.00% | 49.50% | 0.75% | 0.00% | 0.00% | 0.00% | 9.25% | 2.50% | 0.00% | 0.00% | 0.25% | 0.00% | 1.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 3.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** jueves, 5 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.36% |
| 1-2 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.36% |
| 2-3 | 2 | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **6** | 0.71% |
| 3-4 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.24% |
| 4-5 | - | 2 | - | - | 2 | - | - | - | - | 4 | - | - | - | - | - | 1 | - | - | - | - | - | - | **9** | 1.07% |
| 5-6 | 1 | 2 | 3 | 1 | 10 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **20** | 2.38% |
| 6-7 | 3 | 6 | 6 | - | 34 | 1 | - | - | - | 5 | - | - | - | 2 | - | - | - | - | - | - | - | - | **57** | 6.78% |
| 7-8 | 3 | - | 7 | - | 33 | - | - | - | - | 5 | 1 | - | - | - | - | - | - | - | - | - | - | - | **49** | 5.83% |
| 8-9 | 10 | 5 | 15 | 1 | 30 | - | - | - | - | 2 | 4 | - | - | - | - | 1 | - | - | - | - | - | - | **68** | 8.09% |
| 9-10 | 7 | 9 | 5 | 1 | 28 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **54** | 6.42% |
| 10-11 | 4 | 7 | 4 | 1 | 18 | - | - | - | - | 7 | 5 | - | - | - | - | 2 | - | - | - | - | - | - | **48** | 5.71% |
| 11-12 | 4 | 5 | 9 | 1 | 25 | 1 | - | - | - | 6 | 3 | - | - | - | - | 2 | - | - | - | - | - | - | **56** | 6.66% |
| 12-13 | 10 | 6 | 4 | 1 | 16 | - | - | - | - | 4 | 3 | - | - | - | - | 1 | - | - | - | - | - | - | **45** | 5.35% |
| 13-14 | 10 | 5 | 12 | 1 | 29 | - | - | - | - | 6 | - | - | - | - | - | 1 | - | - | - | - | - | - | **64** | 7.61% |
| 14-15 | 3 | 4 | 5 | - | 15 | - | - | - | - | 8 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | **38** | 4.52% |
| 15-16 | 6 | 7 | 8 | - | 21 | - | - | - | - | 7 | 4 | - | - | - | - | - | - | - | - | - | - | - | **53** | 6.30% |
| 16-17 | 7 | 8 | 7 | 1 | 30 | 1 | - | - | - | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | **59** | 7.02% |
| 17-18 | 4 | 4 | 14 | - | 22 | 3 | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | **49** | 5.83% |
| 18-19 | 11 | 8 | 6 | - | 36 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **64** | 7.61% |
| 19-20 | 11 | 7 | 3 | 1 | 24 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **48** | 5.71% |
| 20-21 | 4 | 3 | 3 | 1 | 13 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **25** | 2.97% |
| 21-22 | 2 | 2 | 3 | - | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **16** | 1.90% |
| 22-23 | 1 | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.36% |
| 23-24 | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.24% |
| TOTAL | 109 | 95 | 114 | 10 | 397 | 6 | 1 | - | - | 72 | 26 | - | - | 2 | - | 9 | - | - | - | - | - | - | 841 | 100.00% |
| % | 12.96% | 11.30% | 13.56% | 1.19% | 47.21% | 0.71% | 0.12% | 0.00% | 0.00% | 8.56% | 3.09% | 0.00% | 0.00% | 0.24% | 0.00% | 1.07% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 4.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** viernes, 6 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | **2** | 0.42% |
| 1-2 | | | 1 | | | | | | | | | | | | | | | | | | | | **1** | 0.21% |
| 2-3 | 1 | | | | | | | | | | 1 | | | | | | | | | | | | **2** | 0.42% |
| 3-4 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.21% |
| 4-5 | | 2 | 1 | | 1 | | | | | | | | | | | | | | | | | | **4** | 0.85% |
| 5-6 | | 2 | 1 | | 4 | | | | | | | | | | | | | | | | | | **7** | 1.48% |
| 6-7 | | 3 | | | 5 | | | | | 3 | | | | 2 | | | | | | | | | **13** | 2.75% |
| 7-8 | 1 | 5 | 1 | | 10 | | | | | 3 | | | | | | | | | | | | | **20** | 4.24% |
| 8-9 | 7 | 5 | 3 | 1 | 15 | | | | | 4 | | | | | | | | | | | | | **35** | 7.42% |
| 9-10 | 8 | 4 | 2 | | 10 | | | | | 2 | 3 | | | | | | | | | | | | **29** | 6.14% |
| 10-11 | 7 | 3 | 5 | 1 | 7 | | | | | 3 | 3 | | | | | 1 | | | | | | | **30** | 6.36% |
| 11-12 | 3 | 4 | 2 | | 6 | | | | | 3 | 1 | | | | | | | | | | | | **19** | 4.03% |
| 12-13 | 8 | 7 | 7 | | 14 | | | | | 1 | 4 | | | | | 1 | | | | | | | **42** | 8.90% |
| 13-14 | 9 | | 3 | 1 | 17 | | | | | 3 | | | | | | 1 | | | | | | | **34** | 7.20% |
| 14-15 | 8 | 2 | 5 | | 16 | | | | | 3 | 3 | | | | | | | | | | | | **37** | 7.84% |
| 15-16 | 3 | 4 | 1 | 1 | 18 | | | | | 6 | 2 | | | | | | | | | | | | **35** | 7.42% |
| 16-17 | 5 | 7 | 6 | | 18 | | 1 | | | 3 | | | | | | | | | | | | | **40** | 8.47% |
| 17-18 | 10 | 7 | 6 | | 18 | | | | | 2 | 2 | | | | | | | | | | | | **45** | 9.53% |
| 18-19 | 4 | 4 | 3 | | 11 | | | | | 1 | | | | | | 1 | | | | | | | **24** | 5.08% |
| 19-20 | 1 | 3 | 1 | | 12 | | | | | 2 | | | | | | | | | | | | | **19** | 4.03% |
| 20-21 | 1 | 1 | 3 | | 2 | | | | | 1 | 2 | | | | | | | | | | | | **10** | 2.12% |
| 21-22 | 2 | | 1 | | 2 | | | | | | | | | | | | | | | | | | **5** | 1.06% |
| 22-23 | 3 | 2 | 2 | | 4 | 2 | | | | 2 | | | | | | | | | | | | | **15** | 3.18% |
| 23-24 | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | **3** | 0.64% |
| TOTAL | 82 | 68 | 55 | 4 | 191 | 2 | 1 | - | - | 42 | 21 | - | - | 2 | - | 4 | - | - | - | - | - | - | 472 | 100.00% |
| % | 17.37% | 14.41% | 11.65% | 0.85% | 40.47% | 0.42% | 0.21% | 0.00% | 0.00% | 8.90% | 4.45% | 0.00% | 0.00% | 0.42% | 0.00% | 0.85% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 4.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** viernes, 6 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 1-2 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 2-3 | | | 1 | | 2 | | | | | | | | | | | | | | | | | | **3** | 0.56% |
| 3-4 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 4-5 | | | | | 2 | | | | | 1 | | | | | | | | | | | | | **3** | 0.56% |
| 5-6 | 1 | 2 | 1 | | 3 | | | | | 1 | | | | | | | | | | | | | **8** | 1.48% |
| 6-7 | 1 | 3 | 1 | | 6 | | | | | 2 | | | | | | | | | | | | | **13** | 2.41% |
| 7-8 | 5 | 5 | 1 | | 17 | | | | | 4 | 3 | | | | | | | | | | | | **35** | 6.48% |
| 8-9 | 13 | 8 | 8 | | 23 | | 1 | | | 2 | 2 | | | | | | | | | | | | **57** | 10.56% |
| 9-10 | 5 | 6 | 2 | 1 | 22 | | | | | 2 | 1 | | | | | 1 | | | | | | | **40** | 7.41% |
| 10-11 | 5 | 1 | 8 | 1 | 12 | | | | | 2 | 1 | | | | | | | | | | | | **30** | 5.56% |
| 11-12 | 6 | 6 | 7 | 1 | 11 | | | | | 4 | 1 | | | | | 2 | | | | | | | **38** | 7.04% |
| 12-13 | 9 | 3 | 3 | 1 | 11 | | | | | 3 | 3 | | | | | 1 | | | | | | | **34** | 6.30% |
| 13-14 | 3 | 1 | 2 | 1 | 14 | | | | | 1 | 2 | | | | | | | | | | | | **24** | 4.44% |
| 14-15 | 5 | | 1 | | 15 | | | | | 1 | 2 | | | | | | | | | | | | **24** | 4.44% |
| 15-16 | 10 | 1 | 9 | | 19 | | | | | 2 | | | | | | 1 | | | | | | | **42** | 7.78% |
| 16-17 | 3 | 4 | 2 | | 19 | | | | | 1 | 1 | | | | | | | | | | | | **30** | 5.56% |
| 17-18 | 5 | 3 | 6 | | 18 | | | | | | | | | | | | | | | | | | **32** | 5.93% |
| 18-19 | 4 | 1 | 3 | 1 | 17 | | | | | 1 | 1 | | | | | | | | | | | | **28** | 5.19% |
| 19-20 | 4 | 2 | 5 | | 20 | | | | | 2 | 2 | | | | | | | | | | | | **35** | 6.48% |
| 20-21 | 8 | 1 | 1 | | 18 | | | | | | | | | | | | | | | | | | **28** | 5.19% |
| 21-22 | 2 | 1 | 5 | | 7 | | | | | | | | | | | | | | | | | | **15** | 2.78% |
| 22-23 | 3 | 4 | | | 6 | 1 | | | | | | | | | | | | | | | | | **14** | 2.59% |
| 23-24 | 2 | | | | 2 | | | | | | | | | | | | | | | | | | **4** | 0.74% |
| TOTAL | 96 | 53 | 66 | 6 | 264 | 1 | 1 | - | - | 29 | 19 | - | - | - | - | 5 | - | - | - | - | - | - | 540 | 100.00% |
| % | 17.78% | 9.81% | 12.22% | 1.11% | 48.89% | 0.19% | 0.19% | 0.00% | 0.00% | 5.37% | 3.52% | 0.00% | 0.00% | 0.00% | 0.00% | 0.93% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 4.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** viernes, 6 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S. Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.30% |
| 1-2 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| 2-3 | 1 | - | 1 | - | 2 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **5** | 0.49% |
| 3-4 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| 4-5 | - | 2 | 1 | - | 3 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **7** | 0.69% |
| 5-6 | 1 | 4 | 2 | - | 7 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **15** | 1.48% |
| 6-7 | 1 | 6 | 1 | - | 11 | - | - | - | - | 5 | - | - | - | 2 | - | - | - | - | - | - | - | - | **26** | 2.57% |
| 7-8 | 6 | 10 | 2 | - | 27 | - | - | - | - | 7 | 3 | - | - | - | - | - | - | - | - | - | - | - | **55** | 5.43% |
| 8-9 | 20 | 13 | 11 | 1 | 38 | - | 1 | - | - | 6 | 2 | - | - | - | - | - | - | - | - | - | - | - | **92** | 9.09% |
| 9-10 | 13 | 10 | 4 | 1 | 32 | - | - | - | - | 4 | 4 | - | - | - | - | 1 | - | - | - | - | - | - | **69** | 6.82% |
| 10-11 | 12 | 4 | 13 | 2 | 19 | - | - | - | - | 5 | 4 | - | - | - | - | 1 | - | - | - | - | - | - | **60** | 5.93% |
| 11-12 | 9 | 10 | 9 | 1 | 17 | - | - | - | - | 7 | 2 | - | - | - | - | 2 | - | - | - | - | - | - | **57** | 5.63% |
| 12-13 | 17 | 10 | 10 | 1 | 25 | - | - | - | - | 4 | 7 | - | - | - | - | 2 | - | - | - | - | - | - | **76** | 7.51% |
| 13-14 | 12 | 1 | 5 | 2 | 31 | - | - | - | - | 4 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | **58** | 5.73% |
| 14-15 | 13 | 2 | 6 | - | 31 | - | - | - | - | 4 | 5 | - | - | - | - | - | - | - | - | - | - | - | **61** | 6.03% |
| 15-16 | 13 | 5 | 10 | 1 | 37 | - | - | - | - | 8 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | **77** | 7.61% |
| 16-17 | 8 | 11 | 8 | - | 37 | - | 1 | - | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | **70** | 6.92% |
| 17-18 | 15 | 10 | 12 | - | 36 | - | - | - | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | **77** | 7.61% |
| 18-19 | 8 | 5 | 6 | 1 | 28 | - | - | - | - | 2 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **52** | 5.14% |
| 19-20 | 5 | 5 | 6 | - | 32 | - | - | - | - | 4 | 2 | - | - | - | - | - | - | - | - | - | - | - | **54** | 5.34% |
| 20-21 | 9 | 2 | 4 | - | 20 | - | - | - | - | 1 | 2 | - | - | - | - | - | - | - | - | - | - | - | **38** | 3.75% |
| 21-22 | 4 | 1 | 6 | - | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **20** | 1.98% |
| 22-23 | 6 | 6 | 2 | - | 10 | 3 | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **29** | 2.87% |
| 23-24 | 2 | 1 | 1 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **7** | 0.69% |
| TOTAL | 178 | 121 | 121 | 10 | 455 | 3 | 2 | - | - | 71 | 40 | - | - | 2 | - | 9 | - | - | - | - | - | - | 1,012 | 100.00% |
| % | 17.59% | 11.96% | 11.96% | 0.99% | 44.96% | 0.30% | 0.20% | 0.00% | 0.00% | 7.02% | 3.95% | 0.00% | 0.00% | 0.20% | 0.00% | 0.89% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 5.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** sábado, 7 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 2 | | | | | | | | | | | | | | | | | | | | | | **2** | 0.40% |
| 1-2 | | | | | 1 | | | | | | | | | | | | | | | | | | **1** | 0.20% |
| 2-3 | | | | | | | | | | 1 | 1 | | | | | | | | | | | | **2** | 0.40% |
| 3-4 | | | | | | | | | | | | | | | | | | | | | | | **-** | 0.00% |
| 4-5 | | | 1 | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.40% |
| 5-6 | 2 | | | | 3 | | | | | 2 | | | | | | | | | | | | | **7** | 1.39% |
| 6-7 | 4 | 4 | 1 | | 11 | | | | | 4 | | | | | | 1 | | | | | | | **25** | 4.98% |
| 7-8 | | 2 | 2 | | 9 | | | | | 2 | 1 | | | | | | | | | | | | **16** | 3.19% |
| 8-9 | 4 | 5 | | 1 | 10 | | | | | 3 | | | | | 1 | | | | | | | | **24** | 4.78% |
| 9-10 | 5 | 3 | 4 | | 16 | | | | | 5 | 3 | | | | | 2 | | | | | | | **38** | 7.57% |
| 10-11 | 12 | 1 | 6 | | 12 | | | | | 1 | 3 | | | | | | | | | | | | **35** | 6.97% |
| 11-12 | 13 | 7 | 6 | | 10 | | | | | 2 | | | | | | | | | | | | | **38** | 7.57% |
| 12-13 | 7 | 6 | 6 | | 22 | | 1 | | | 2 | 2 | | | | | | | | | | | | **46** | 9.16% |
| 13-14 | 11 | 9 | 4 | 1 | 25 | | | | | 4 | 3 | | | | | 1 | | | | | | | **58** | 11.55% |
| 14-15 | 5 | 5 | 4 | | 15 | | | | | 2 | 2 | | | | | 2 | | | | | | | **35** | 6.97% |
| 15-16 | 1 | 5 | 2 | | 10 | | | | | 2 | 1 | | | | | | | | | | | | **21** | 4.18% |
| 16-17 | 12 | 4 | 6 | | 20 | | | | | 5 | 1 | | | | | 1 | | | | | | | **49** | 9.76% |
| 17-18 | 5 | 3 | 4 | | 10 | 1 | | | | 3 | 1 | | | | | | | | | | | | **27** | 5.38% |
| 18-19 | 3 | 3 | 2 | | 19 | | | | | 1 | | | | | | | | | | | | | **28** | 5.58% |
| 19-20 | 3 | 5 | 1 | | 14 | | | | | 1 | | | | | | | | | | | | | **24** | 4.78% |
| 20-21 | 3 | 1 | 1 | | 8 | | | | | | | | | | | | | | | | | | **13** | 2.59% |
| 21-22 | 1 | 1 | 1 | | 2 | | | | | | | | | | | | | | | | | | **5** | 1.00% |
| 22-23 | 2 | 1 | | | 1 | | | | | | | | | | | | | | | | | | **4** | 0.80% |
| 23-24 | 1 | | | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.40% |
| TOTAL | 96 | 65 | 51 | 2 | 220 | 1 | 1 | - | | 40 | 18 | - | - | - | 1 | 7 | - | - | - | - | - | - | 502 | 100.00% |
| % | 19.12% | 12.95% | 10.16% | 0.40% | 43.82% | 0.20% | 0.20% | 0.00% | 0.00% | 7.97% | 3.59% | 0.00% | 0.00% | 0.00% | 0.20% | 1.39% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 5.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** sábado, 7 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 1-2 | 1 | | | | | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 2-3 | | | | | | | | | | 1 | | | | | | | | | | | | | **1** | 0.19% |
| 3-4 | | | | | 1 | | | | | | | | | | | | | | | | | | **1** | 0.19% |
| 4-5 | | | | | | | | | | | | | | | | | | | | | | | **-** | 0.00% |
| 5-6 | 1 | | | | 7 | | | | | 1 | | | | | | | | | | | | | **9** | 1.72% |
| 6-7 | 5 | 5 | 4 | | 15 | | | | | 2 | | | | | | 1 | | | | | | | **32** | 6.12% |
| 7-8 | 6 | 11 | 5 | | 15 | | 1 | | | 4 | | | | | | 1 | | | | | | | **43** | 8.22% |
| 8-9 | 7 | 8 | 3 | | 25 | | | | | 2 | | | | | 1 | 1 | | | | | | | **47** | 8.99% |
| 9-10 | 3 | 2 | 2 | | 13 | | | | | 7 | 3 | | | | | 1 | | | | | | | **31** | 5.93% |
| 10-11 | 4 | 9 | 2 | | 16 | | 1 | | | 3 | 2 | | | | | | | | | | | | **37** | 7.07% |
| 11-12 | 7 | 5 | 5 | 1 | 23 | | | | | 1 | | | | | | 2 | | | | | | | **44** | 8.41% |
| 12-13 | 2 | 7 | 2 | | 16 | | | | | 3 | 2 | | | | | | | | | | | | **32** | 6.12% |
| 13-14 | 13 | 6 | 7 | | 17 | | | | | 1 | 2 | | | | | | | | | | | | **46** | 8.80% |
| 14-15 | 10 | 7 | 5 | | 20 | | | | | 1 | | | | | | | | | | | | | **43** | 8.22% |
| 15-16 | 2 | 3 | 1 | | 8 | | | | | 3 | | | | | | | | | | | | | **17** | 3.25% |
| 16-17 | 2 | 6 | 7 | | 15 | | 2 | | | 1 | | | | | | | | | | | | | **33** | 6.31% |
| 17-18 | 4 | 1 | 10 | | 12 | 2 | | | | 2 | | | | | | | | | | | | | **31** | 5.93% |
| 18-19 | 3 | 5 | 4 | | 17 | | | | | | 1 | | | | | 1 | | | | | | | **31** | 5.93% |
| 19-20 | 4 | 2 | 2 | 1 | 7 | | | | | 3 | | | | | | | | | | | | | **19** | 3.63% |
| 20-21 | 2 | 2 | 2 | 1 | 3 | | | | | 1 | | | | | | | | | | | | | **11** | 2.10% |
| 21-22 | 1 | 1 | 2 | | 7 | | | | | | | | | | | | | | | | | | **11** | 2.10% |
| 22-23 | | | | | | | 1 | | | | 1 | | | | | | | | | | | | **2** | 0.38% |
| 23-24 | | | | | | | | | | | | | | | | | | | | | | | **-** | 0.00% |
| TOTAL | 78 | 80 | 63 | 3 | 237 | 2 | 5 | - | - | 36 | 11 | - | - | - | 1 | 7 | - | - | - | - | - | - | 523 | 100.00% |
| % | 14.91% | 15.30% | 12.05% | 0.57% | 45.32% | 0.38% | 0.96% | 0.00% | 0.00% | 6.88% | 2.10% | 0.00% | 0.00% | 0.00% | 0.19% | 1.34% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 5.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** AMBOS
**FECHA :** sábado, 7 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.29% |
| 1-2 | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| 2-3 | - | - | - | - | - | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.29% |
| 3-4 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.10% |
| 4-5 | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| 5-6 | 3 | - | - | - | 10 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **16** | 1.56% |
| 6-7 | 9 | 9 | 5 | - | 26 | - | - | - | - | 6 | - | - | - | - | - | 2 | - | - | - | - | - | - | **57** | 5.56% |
| 7-8 | 6 | 13 | 7 | - | 24 | - | 1 | - | - | 6 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **59** | 5.76% |
| 8-9 | 11 | 13 | 3 | 1 | 35 | - | - | - | - | 5 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | **71** | 6.93% |
| 9-10 | 8 | 5 | 6 | - | 29 | - | - | - | - | 12 | 6 | - | - | - | - | 3 | - | - | - | - | - | - | **69** | 6.73% |
| 10-11 | 16 | 10 | 8 | - | 28 | - | 1 | - | - | 4 | 5 | - | - | - | - | - | - | - | - | - | - | - | **72** | 7.02% |
| 11-12 | 20 | 12 | 11 | 1 | 33 | - | - | - | - | 3 | - | - | - | - | - | 2 | - | - | - | - | - | - | **82** | 8.00% |
| 12-13 | 9 | 13 | 8 | - | 38 | - | 1 | - | - | 5 | 4 | - | - | - | - | - | - | - | - | - | - | - | **78** | 7.61% |
| 13-14 | 24 | 15 | 11 | 1 | 42 | - | - | - | - | 5 | 5 | - | - | - | - | 1 | - | - | - | - | - | - | **104** | 10.15% |
| 14-15 | 15 | 12 | 9 | - | 35 | - | - | - | - | 3 | 2 | - | - | - | - | 2 | - | - | - | - | - | - | **78** | 7.61% |
| 15-16 | 3 | 8 | 3 | - | 18 | - | - | - | - | 5 | 1 | - | - | - | - | - | - | - | - | - | - | - | **38** | 3.71% |
| 16-17 | 14 | 10 | 13 | - | 35 | - | 2 | - | - | 6 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **82** | 8.00% |
| 17-18 | 9 | 4 | 14 | - | 22 | 3 | - | - | - | 5 | 1 | - | - | - | - | - | - | - | - | - | - | - | **58** | 5.66% |
| 18-19 | 6 | 8 | 6 | - | 36 | - | - | - | - | 1 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **59** | 5.76% |
| 19-20 | 7 | 7 | 3 | 1 | 21 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **43** | 4.20% |
| 20-21 | 5 | 3 | 3 | 1 | 11 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **24** | 2.34% |
| 21-22 | 2 | 2 | 3 | - | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **16** | 1.56% |
| 22-23 | 2 | 1 | - | - | 1 | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **6** | 0.59% |
| 23-24 | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| TOTAL | 174 | 145 | 114 | 5 | 457 | 3 | 6 | - | - | 76 | 29 | - | - | - | 2 | 14 | - | - | - | - | - | - | 1,025 | 100.00% |
| % | 16.98% | 14.15% | 11.12% | 0.49% | 44.59% | 0.29% | 0.59% | 0.00% | 0.00% | 7.41% | 2.83% | 0.00% | 0.00% | 0.00% | 0.20% | 1.37% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 6.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** domingo, 8 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 1-2 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 2-3 | | 1 | | | | | | | | 1 | | | | | | | | | | | | | **2** | 0.46% |
| 3-4 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | **2** | 0.46% |
| 4-5 | 1 | 2 | 2 | | 2 | | | | | | | | | | | | | | | | | | **7** | 1.62% |
| 5-6 | 1 | 1 | 2 | 1 | 4 | | | | | 1 | | | | | | | | | | | | | **10** | 2.31% |
| 6-7 | 2 | 4 | 3 | | 5 | | | | | 2 | | | | | | | | | | | | | **16** | 3.70% |
| 7-8 | 2 | 2 | 3 | | 5 | | | | | 1 | | | | | | | | | | | | | **13** | 3.00% |
| 8-9 | 1 | 7 | 7 | | 9 | | | | | 3 | 2 | | | | | | | | | | | | **29** | 6.70% |
| 9-10 | 2 | 2 | 3 | | 12 | | | | | 1 | | | | | | | | | | | | | **20** | 4.62% |
| 10-11 | 4 | 5 | 5 | | 15 | | | | | 4 | | | | | | | | | | | | | **33** | 7.62% |
| 11-12 | 10 | 14 | 8 | | 14 | | 1 | | | 1 | | | | | | | | | | | | | **48** | 11.09% |
| 12-13 | 1 | 12 | 5 | | 11 | | | | | | | | | | | | | | | | | | **29** | 6.70% |
| 13-14 | 5 | 10 | 5 | | 13 | | | | | 1 | | | | | | | | | | | | | **34** | 7.85% |
| 14-15 | 7 | 9 | 2 | | 15 | | | | | 1 | | | | | | | | | | | | | **34** | 7.85% |
| 15-16 | 8 | 6 | 6 | | 17 | 1 | | | | | | | | | | | | | | | | | **38** | 8.78% |
| 16-17 | 12 | 12 | 5 | | 20 | | | | | 4 | | | | | | | | | | | | | **53** | 12.24% |
| 17-18 | | 4 | 1 | | 12 | | | | | 2 | | | | | | | | | | | | | **19** | 4.39% |
| 18-19 | 2 | | | | 11 | | | | | | | | | | | | | | | | | | **13** | 3.00% |
| 19-20 | | | | | 8 | | | | | | | | | | | | | | | | | | **8** | 1.85% |
| 20-21 | 3 | | | | 8 | | | | | 3 | | | | | | | | | | | | | **14** | 3.23% |
| 21-22 | | 2 | | | 3 | | | | | | | | | | | | | | | | | | **5** | 1.15% |
| 22-23 | | | | | 2 | | | | | | | | | | | | | | | | | | **2** | 0.46% |
| 23-24 | 2 | | | | 2 | | | | | | | | | | | | | | | | | | **4** | 0.92% |
| TOTAL | 64 | 94 | 57 | 1 | 188 | 1 | 1 | - | - | 25 | 2 | - | - | - | - | - | - | - | - | - | - | - | 433 | 100.00% |
| % | 14.78% | 21.71% | 13.16% | 0.23% | 43.42% | 0.23% | 0.23% | 0.00% | 0.00% | 5.77% | 0.46% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 6.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** domingo, 8 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 1-2 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 2-3 | | | 1 | | | | | | | | | | | | | | | | | | | | **1** | 0.24% |
| 3-4 | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | **3** | 0.71% |
| 4-5 | 1 | | 1 | | 2 | | | | | | | | | | | | | | | | | | **4** | 0.95% |
| 5-6 | 1 | 1 | 2 | | 2 | | | | | 1 | | | | | | | | | | | | | **7** | 1.65% |
| 6-7 | | 2 | 2 | | 3 | | | | | 1 | | | | | | | | | | | | | **8** | 1.89% |
| 7-8 | 5 | 4 | 4 | | 4 | | | | | | | | | | | | | | | | | | **17** | 4.02% |
| 8-9 | 5 | 10 | 7 | | 12 | | 1 | | | 4 | 1 | | | | | | | | | | | | **40** | 9.46% |
| 9-10 | 5 | 6 | 1 | | 10 | | | | | 2 | | | | | | | | | | | | | **24** | 5.67% |
| 10-11 | 5 | 11 | 9 | | 17 | | | | | 2 | 1 | | | | | | | | | | | | **45** | 10.64% |
| 11-12 | 7 | 10 | 4 | | 16 | | | | | 3 | | | | | | | | | | | | | **40** | 9.46% |
| 12-13 | 4 | 11 | 5 | | 13 | 1 | | | | | | | | | | | | | | | | | **34** | 8.04% |
| 13-14 | 11 | 4 | 4 | | 21 | | | | | 4 | | | | | | | | | | | | | **44** | 10.40% |
| 14-15 | 10 | 1 | 2 | | 18 | 1 | | | | 3 | | | | | | | | | | | | | **35** | 8.27% |
| 15-16 | 8 | 4 | 4 | | 17 | | | | | 1 | | | | | | | | | | | | | **34** | 8.04% |
| 16-17 | 14 | 4 | 3 | | 15 | | | | | 3 | | | | | | | | | | | | | **39** | 9.22% |
| 17-18 | | 2 | | | 10 | | | | | | | | | | | | | | | | | | **12** | 2.84% |
| 18-19 | 1 | | | | 10 | | | | | | | | | | | | | | | | | | **11** | 2.60% |
| 19-20 | | | | | 9 | | | | | | | | | | | | | | | | | | **9** | 2.13% |
| 20-21 | 1 | | | | 5 | | | | | 2 | | | | | | | | | | | | | **8** | 1.89% |
| 21-22 | | 1 | | | 2 | | | | | | | | | | | | | | | | | | **3** | 0.71% |
| 22-23 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | **2** | 0.47% |
| 23-24 | | 1 | | | 1 | | | | | 1 | | | | | | | | | | | | | **3** | 0.71% |
| TOTAL | 78 | 74 | 50 | - | 189 | 2 | 1 | - | - | 27 | 2 | - | - | - | - | - | - | - | - | - | - | - | 423 | 100.00% |
| % | 18.44% | 17.49% | 11.82% | 0.00% | 44.68% | 0.47% | 0.24% | 0.00% | 0.00% | 6.38% | 0.47% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 6.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** AMBOS
**FECHA :** domingo, 8 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | 0.00% |
| 1-2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | 0.00% |
| 2-3 | - | 1 | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.35% |
| 3-4 | 1 | 2 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **5** | 0.58% |
| 4-5 | 2 | 2 | 3 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **11** | 1.29% |
| 5-6 | 2 | 2 | 4 | 1 | 6 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **17** | 1.99% |
| 6-7 | 2 | 6 | 5 | - | 8 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **24** | 2.80% |
| 7-8 | 7 | 6 | 7 | - | 9 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **30** | 3.50% |
| 8-9 | 6 | 17 | 14 | - | 21 | - | 1 | - | - | 7 | 3 | - | - | - | - | - | - | - | - | - | - | - | **69** | 8.06% |
| 9-10 | 7 | 8 | 4 | - | 22 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **44** | 5.14% |
| 10-11 | 9 | 16 | 14 | - | 32 | - | - | - | - | 6 | 1 | - | - | - | - | - | - | - | - | - | - | - | **78** | 9.11% |
| 11-12 | 17 | 24 | 12 | - | 30 | - | 1 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **88** | 10.28% |
| 12-13 | 5 | 23 | 10 | - | 24 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **63** | 7.36% |
| 13-14 | 16 | 14 | 9 | - | 34 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | **78** | 9.11% |
| 14-15 | 17 | 10 | 4 | - | 33 | 1 | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **69** | 8.06% |
| 15-16 | 16 | 10 | 10 | - | 34 | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **72** | 8.41% |
| 16-17 | 26 | 16 | 8 | - | 35 | - | - | - | - | 7 | - | - | - | - | - | - | - | - | - | - | - | - | **92** | 10.75% |
| 17-18 | - | 6 | 1 | - | 22 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **31** | 3.62% |
| 18-19 | 3 | - | - | - | 21 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **24** | 2.80% |
| 19-20 | - | - | - | - | 17 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **17** | 1.99% |
| 20-21 | 4 | - | - | - | 13 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | **22** | 2.57% |
| 21-22 | - | 3 | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **8** | 0.93% |
| 22-23 | - | 1 | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.47% |
| 23-24 | 2 | 1 | - | - | 3 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **7** | 0.82% |
| TOTAL | 142 | 168 | 107 | 1 | 377 | 3 | 2 | - | - | 52 | 4 | - | - | - | - | - | - | - | - | - | - | - | 856 | 100.00% |
| % | 16.59% | 19.63% | 12.50% | 0.12% | 44.04% | 0.35% | 0.23% | 0.00% | 0.00% | 6.07% | 0.47% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : 7.1

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** lunes, 9 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 1-2 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 2-3 | 3 | | | | 2 | | | | | 3 | | | | | | | | | | | | | **8** | 1.47% |
| 3-4 | | 4 | | | 5 | | | | | | | | | | | | | | | | | | **9** | 1.65% |
| 4-5 | 5 | 2 | | | 6 | | | | | | | | | | | | | | | | | | **13** | 2.38% |
| 5-6 | 5 | | | | 11 | | | | | | | | | | | | | | | | | | **16** | 2.93% |
| 6-7 | 3 | 3 | | | 8 | | 1 | | | | | | | | | | | | | | | | **15** | 2.75% |
| 7-8 | 6 | 8 | 3 | | 16 | | | | | | | | | | | | | | | | | | **33** | 6.04% |
| 8-9 | 3 | 4 | | | 17 | | | | | 4 | | | | | | | | | | | | | **28** | 5.13% |
| 9-10 | 4 | 9 | 6 | | 24 | | | | | 1 | | | | | | 2 | | | | | | | **46** | 8.42% |
| 10-11 | 3 | 5 | 5 | | 12 | | | | | 3 | | | | | | | | | | | | | **28** | 5.13% |
| 11-12 | 7 | 4 | 3 | | 18 | | | | | 5 | | | | | | | | | | | | | **37** | 6.78% |
| 12-13 | 3 | 5 | 1 | | 15 | | 1 | | | 3 | | | | | | | | | | | | | **28** | 5.13% |
| 13-14 | 8 | 4 | 5 | | 18 | | | | | 2 | | | | | | | | | | | | | **37** | 6.78% |
| 14-15 | 5 | 5 | 3 | | 20 | | | | | 2 | | | | | | | | | | | | | **35** | 6.41% |
| 15-16 | 5 | 6 | 5 | 1 | 21 | | | | | 1 | | | | | | | | | | | | | **39** | 7.14% |
| 16-17 | 4 | 7 | 7 | | 22 | | | | | 5 | | | | | | | | | | | | | **45** | 8.24% |
| 17-18 | 3 | 6 | 7 | | 18 | | | | | 3 | | | | | | | | | | | | | **37** | 6.78% |
| 18-19 | 4 | 6 | 3 | | 19 | | | | | 4 | | | | | | | | | | | | | **36** | 6.59% |
| 19-20 | 3 | 5 | 4 | | 13 | | | | | 2 | | | | | | | | | | | | | **27** | 4.95% |
| 20-21 | 1 | 2 | 1 | | 11 | | | | | | | | | | | | | | | | | | **15** | 2.75% |
| 21-22 | | 2 | | | 8 | | | | | 1 | | | | | | | | | | | | | **11** | 2.01% |
| 22-23 | | | | | 2 | | | | | | | | | | | | | | | | | | **2** | 0.37% |
| 23-24 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.18% |
| TOTAL | 75 | 88 | 53 | 1 | 286 | - | 2 | - | - | 39 | - | - | - | - | - | 2 | - | - | - | - | - | - | 546 | 100.00% |
| % | 13.74% | 16.12% | 9.71% | 0.18% | 52.38% | 0.00% | 0.37% | 0.00% | 0.00% | 7.14% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.37% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO: 7.2

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Lampa**
**FECHA :** lunes, 9 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.21% |
| 1-2 | | | | | | | | | | | | | | | | | | | | | | | **0** | 0.00% |
| 2-3 | 2 | | | | 1 | | | | | 2 | | | | | | | | | | | | | **5** | 1.04% |
| 3-4 | | 2 | | | 4 | | | | | | | | | | | | | | | | | | **6** | 1.25% |
| 4-5 | 3 | 1 | | | 4 | | | | | | | | | | | | | | | | | | **8** | 1.67% |
| 5-6 | | 2 | 1 | | 10 | | | | | 1 | | | | | | | | | | | | | **14** | 2.92% |
| 6-7 | 4 | 2 | | | 8 | | | | | | | | | | | | | | | | | | **14** | 2.92% |
| 7-8 | 6 | 5 | | | 24 | | 2 | | | 2 | | | | | | | | | | | | | **39** | 8.14% |
| 8-9 | 6 | 3 | 6 | | 28 | | | | | 6 | | | | | | | | | | | | | **49** | 10.23% |
| 9-10 | 9 | 6 | 7 | | 19 | | | | | 2 | | | | | | | | | | | | | **43** | 8.98% |
| 10-11 | 2 | 3 | 3 | | 8 | | 1 | | | 3 | | | | | | 1 | | | | | | | **21** | 4.38% |
| 11-12 | 7 | | 2 | | 20 | | | | | 5 | | | | | | | | | | | | | **34** | 7.10% |
| 12-13 | | 3 | 2 | | 12 | | | | | | | | | | | | | | | | | | **17** | 3.55% |
| 13-14 | 3 | 4 | 2 | | 16 | | | | | 3 | | | | | | 2 | | | | | | | **30** | 6.26% |
| 14-15 | 3 | | 2 | | 12 | | | | | 3 | | | | | | | | | | | | | **20** | 4.18% |
| 15-16 | 3 | 4 | 3 | | 14 | | | | | 3 | | | | | | | | | | | | | **27** | 5.64% |
| 16-17 | 2 | 2 | 4 | | 17 | | | | | | | | | | | | | | | | | | **25** | 5.22% |
| 17-18 | 1 | 6 | | | 13 | | | | | 10 | | | | | | | | | | | | | **30** | 6.26% |
| 18-19 | 2 | 6 | 2 | | 14 | | | | | 3 | | | | | | 1 | | | | | | | **28** | 5.85% |
| 19-20 | 6 | 7 | 5 | | 21 | | | | | 1 | | | | | | | | | | | | | **40** | 8.35% |
| 20-21 | | 2 | | | 13 | | | | | 1 | | | | | | | | | | | | | **16** | 3.34% |
| 21-22 | 2 | | | | 5 | | | | | 1 | | | | | | | | | | | | | **8** | 1.67% |
| 22-23 | | | | | 3 | | | | | | | | | | | | | | | | | | **3** | 0.63% |
| 23-24 | | 1 | | | | | | | | | | | | | | | | | | | | | **1** | 0.21% |
| TOTAL | 61 | 60 | 39 | - | 266 | - | 3 | - | - | 46 | - | - | - | - | - | 4 | - | - | - | - | - | - | 479 | 100.00% |
| % | 12.73% | 12.53% | 8.14% | 0.00% | 55.53% | 0.00% | 0.63% | 0.00% | 0.00% | 9.60% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.84% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO: 7.3

## CONTEO Y CLASIFICACION DEL TRAFICC

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** AMBOS
**FECHA :** lunes, 9 de Diciembre de 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.10% |
| 1-2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | 0.00% |
| 2-3 | 5 | - | - | - | 3 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | **13** | 1.27% |
| 3-4 | - | 6 | - | - | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **15** | 1.46% |
| 4-5 | 8 | 3 | - | - | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **21** | 2.05% |
| 5-6 | 5 | 2 | 1 | - | 21 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **30** | 2.93% |
| 6-7 | 7 | 5 | - | - | 16 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **29** | 2.83% |
| 7-8 | 12 | 13 | 3 | - | 40 | - | 2 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **72** | 7.02% |
| 8-9 | 9 | 7 | 6 | - | 45 | - | - | - | - | 10 | - | - | - | - | - | - | - | - | - | - | - | - | **77** | 7.51% |
| 9-10 | 13 | 15 | 13 | - | 43 | - | - | - | - | 3 | - | - | - | - | - | 2 | - | - | - | - | - | - | **89** | 8.68% |
| 10-11 | 5 | 8 | 8 | - | 20 | - | 1 | - | - | 6 | - | - | - | - | - | 1 | - | - | - | - | - | - | **49** | 4.78% |
| 11-12 | 14 | 4 | 5 | - | 38 | - | - | - | - | 10 | - | - | - | - | - | - | - | - | - | - | - | - | **71** | 6.93% |
| 12-13 | 3 | 8 | 3 | - | 27 | - | 1 | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **45** | 4.39% |
| 13-14 | 11 | 8 | 7 | - | 34 | - | - | - | - | 5 | - | - | - | - | - | 2 | - | - | - | - | - | - | **67** | 6.54% |
| 14-15 | 8 | 5 | 5 | - | 32 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | **55** | 5.37% |
| 15-16 | 8 | 10 | 8 | 1 | 35 | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | **66** | 6.44% |
| 16-17 | 6 | 9 | 11 | - | 39 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | **70** | 6.83% |
| 17-18 | 4 | 12 | 7 | - | 31 | - | - | - | - | 13 | - | - | - | - | - | - | - | - | - | - | - | - | **67** | 6.54% |
| 18-19 | 6 | 12 | 5 | - | 33 | - | - | - | - | 7 | - | - | - | - | - | 1 | - | - | - | - | - | - | **64** | 6.24% |
| 19-20 | 9 | 12 | 9 | - | 34 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **67** | 6.54% |
| 20-21 | 1 | 4 | 1 | - | 24 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **31** | 3.02% |
| 21-22 | 2 | 2 | - | - | 13 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **19** | 1.85% |
| 22-23 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **5** | 0.49% |
| 23-24 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.20% |
| TOTAL | 136 | 148 | 92 | 1 | 552 | - | 5 | - | - | 85 | - | - | - | - | - | 6 | - | - | - | - | - | - | 1,025 | 100.00% |
| % | 13.27% | 14.44% | 8.98% | 0.10% | 53.85% | 0.00% | 0.49% | 0.00% | 0.00% | 8.29% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.59% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : CT1

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : a Juliaca**
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 4 | 2 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **8** | 0.23% |
| 1-2 | 2 | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.12% |
| 2-3 | 5 | 3 | - | - | 5 | - | - | - | - | - | 6 | 2 | - | - | - | - | - | - | - | - | - | - | **21** | 0.61% |
| 3-4 | 1 | 9 | - | - | 15 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **25** | 0.72% |
| 4-5 | 8 | 9 | 6 | - | 32 | - | - | - | - | - | 7 | - | - | - | - | - | 1 | - | - | - | - | - | **63** | 1.83% |
| 5-6 | 12 | 8 | 14 | 3 | 61 | - | - | - | - | - | 5 | 1 | - | - | - | - | 1 | - | - | - | - | - | **105** | 3.04% |
| 6-7 | 17 | 23 | 9 | - | 87 | - | 1 | - | - | - | 14 | 1 | - | - | 5 | - | 1 | - | - | - | - | - | **158** | 4.58% |
| 7-8 | 18 | 27 | 19 | - | 96 | - | - | - | - | - | 16 | 4 | - | - | - | - | - | - | - | - | - | - | **180** | 5.22% |
| 8-9 | 23 | 31 | 29 | 4 | 81 | - | - | - | - | - | 18 | 9 | - | - | - | 1 | 3 | - | - | - | - | - | **199** | 5.77% |
| 9-10 | 24 | 33 | 29 | - | 100 | - | - | - | - | - | 16 | 8 | - | - | - | - | 4 | - | - | - | - | - | **214** | 6.20% |
| 10-11 | 34 | 30 | 27 | 1 | 80 | - | - | - | - | - | 21 | 15 | - | - | - | - | 4 | - | - | - | - | - | **212** | 6.14% |
| 11-12 | 39 | 46 | 32 | - | 84 | 1 | 1 | - | - | - | 21 | 7 | - | - | - | - | 1 | - | - | - | - | - | **232** | 6.72% |
| 12-13 | 28 | 54 | 22 | 1 | 93 | - | 2 | - | - | - | 18 | 9 | - | - | - | - | 2 | - | - | - | - | - | **229** | 6.64% |
| 13-14 | 48 | 38 | 35 | 4 | 139 | 2 | - | - | - | - | 19 | 8 | - | - | - | - | 4 | - | - | - | - | - | **297** | 8.61% |
| 14-15 | 37 | 29 | 25 | - | 110 | - | - | - | - | - | 16 | 6 | - | - | - | - | 3 | - | - | - | - | - | **226** | 6.55% |
| 15-16 | 30 | 32 | 28 | 2 | 108 | 1 | - | - | - | - | 22 | 11 | - | - | - | - | - | - | - | - | - | - | **234** | 6.78% |
| 16-17 | 54 | 45 | 39 | - | 131 | - | 1 | - | - | - | 24 | 4 | - | - | - | - | 1 | - | - | - | - | - | **299** | 8.67% |
| 17-18 | 37 | 37 | 41 | - | 107 | 3 | - | - | - | - | 20 | 5 | - | - | - | - | - | - | - | - | - | - | **250** | 7.25% |
| 18-19 | 20 | 30 | 17 | - | 104 | - | - | - | - | - | 15 | 3 | - | - | - | - | 1 | - | - | - | - | - | **190** | 5.51% |
| 19-20 | 15 | 23 | 16 | 1 | 64 | - | - | - | - | - | 9 | - | - | - | - | - | - | - | - | - | - | - | **128** | 3.71% |
| 20-21 | 10 | 14 | 7 | 1 | 39 | - | - | - | - | - | 5 | 4 | - | - | - | - | - | - | - | - | - | - | **80** | 2.32% |
| 21-22 | 8 | 8 | 6 | - | 27 | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | **51** | 1.48% |
| 22-23 | 5 | 7 | 2 | - | 10 | 2 | 1 | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | **30** | 0.87% |
| 23-24 | 4 | 4 | 2 | - | 4 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **15** | 0.43% |
| TOTAL | 483 | 542 | 407 | 17 | 1,578 | 9 | 6 | - | - | - | 279 | 97 | - | - | 5 | 1 | 26 | - | - | - | - | - | 3,450 | 100.00% |
| % | 14.00% | 15.71% | 11.80% | 0.49% | 45.74% | 0.26% | 0.17% | 0.00% | 0.00% | 0.00% | 8.09% | 2.81% | 0.00% | 0.00% | 0.14% | 0.03% | 0.75% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO : CT2

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** a Lampa
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.12% |
| 1-2 | 4 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **6** | 0.17% |
| 2-3 | 3 | 3 | 3 | - | 5 | - | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | **19** | 0.55% |
| 3-4 | 2 | 7 | 2 | - | 13 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | **25** | 0.73% |
| 4-5 | 6 | 5 | 5 | - | 28 | - | - | - | - | - | 7 | - | 1 | - | 1 | - | - | - | - | - | - | - | **53** | 1.54% |
| 5-6 | 7 | 9 | 9 | - | 48 | - | - | - | - | - | 9 | 2 | - | - | - | - | - | - | - | - | - | - | **84** | 2.44% |
| 6-7 | 15 | 18 | 22 | - | 75 | 1 | - | - | - | - | 9 | - | - | - | 2 | 1 | 1 | - | - | - | - | - | **144** | 4.19% |
| 7-8 | 32 | 36 | 19 | - | 118 | - | 3 | - | - | - | 20 | 9 | 2 | - | - | - | 1 | - | - | - | - | - | **240** | 6.98% |
| 8-9 | 41 | 44 | 41 | 1 | 155 | - | 2 | - | - | - | 22 | 12 | - | - | - | 1 | 2 | - | - | - | - | - | **321** | 9.34% |
| 9-10 | 29 | 42 | 29 | 2 | 109 | 1 | 2 | - | - | - | 26 | 8 | - | - | - | - | 3 | - | - | - | - | - | **251** | 7.30% |
| 10-11 | 18 | 50 | 41 | 3 | 84 | - | 2 | - | - | - | 26 | 8 | - | - | - | - | 2 | - | - | - | - | - | **234** | 6.81% |
| 11-12 | 36 | 48 | 37 | 4 | 109 | - | - | - | - | - | 27 | 4 | - | - | - | - | 5 | - | - | - | - | - | **270** | 7.85% |
| 12-13 | 21 | 35 | 20 | 2 | 81 | 1 | - | - | - | - | 11 | 8 | - | - | - | - | 1 | - | - | - | - | - | **180** | 5.24% |
| 13-14 | 40 | 20 | 26 | 1 | 104 | - | - | - | - | - | 18 | 6 | - | - | - | - | 3 | - | - | - | - | - | **218** | 6.34% |
| 14-15 | 37 | 13 | 23 | - | 105 | 1 | - | - | - | - | 15 | 5 | - | - | - | - | 1 | - | - | - | - | - | **200** | 5.82% |
| 15-16 | 37 | 18 | 28 | - | 88 | - | - | - | - | - | 16 | 6 | - | - | - | - | 2 | - | - | - | - | - | **195** | 5.67% |
| 16-17 | 28 | 30 | 27 | 2 | 107 | 1 | 2 | - | - | - | 16 | 2 | - | - | - | - | - | - | - | - | - | - | **215** | 6.25% |
| 17-18 | 12 | 21 | 22 | - | 82 | 3 | - | - | - | - | 18 | - | - | - | - | - | 1 | - | - | - | - | - | **159** | 4.62% |
| 18-19 | 17 | 24 | 14 | 1 | 108 | - | - | - | - | - | 6 | 4 | - | - | - | - | 2 | - | - | - | - | - | **176** | 5.12% |
| 19-20 | 22 | 37 | 18 | 1 | 106 | - | - | - | - | - | 12 | 2 | - | - | - | - | - | - | - | - | - | - | **198** | 5.76% |
| 20-21 | 15 | 22 | 7 | 2 | 70 | 1 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | **122** | 3.55% |
| 21-22 | 10 | 9 | 13 | - | 33 | 5 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | **73** | 2.12% |
| 22-23 | 4 | 7 | - | 1 | 17 | 1 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | **32** | 0.93% |
| 23-24 | 5 | 6 | - | - | 6 | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | **19** | 0.55% |
| TOTAL | 443 | 507 | 407 | 20 | 1,651 | 15 | 12 | - | - | - | 273 | 78 | 3 | - | 3 | 2 | 24 | - | - | - | - | - | 3,438 | 100.00% |
| % | 12.89% | 14.75% | 11.84% | 0.58% | 48.02% | 0.44% | 0.35% | 0.00% | 0.00% | 0.00% | 7.94% | 2.27% | 0.09% | 0.00% | 0.09% | 0.06% | 0.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |

CUADRO: CT 3

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 6 | 4 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | **12** | 0.17% |
| 1-2 | 6 | 1 | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **10** | 0.15% |
| 2-3 | 8 | 6 | 3 | - | 10 | - | - | - | - | - | 11 | 2 | - | - | - | - | - | - | - | - | - | - | **40** | 0.58% |
| 3-4 | 3 | 16 | 2 | - | 28 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | **50** | 0.73% |
| 4-5 | 14 | 14 | 11 | - | 60 | - | - | - | - | - | 14 | - | 1 | - | 1 | - | 1 | - | - | - | - | - | **116** | 1.68% |
| 5-6 | 19 | 17 | 23 | 3 | 109 | - | - | - | - | - | 14 | 3 | - | - | - | - | 1 | - | - | - | - | - | **189** | 2.74% |
| 6-7 | 32 | 41 | 31 | - | 162 | 1 | 1 | - | - | - | 23 | 1 | - | - | 7 | 1 | 2 | - | - | - | - | - | **302** | 4.38% |
| 7-8 | 50 | 63 | 38 | - | 214 | - | 3 | - | - | - | 36 | 13 | 2 | - | - | - | 1 | - | - | - | - | - | **420** | 6.10% |
| 8-9 | 64 | 75 | 70 | 5 | 236 | - | 2 | - | - | - | 40 | 21 | - | - | - | 2 | 5 | - | - | - | - | - | **520** | 7.55% |
| 9-10 | 53 | 75 | 58 | 2 | 209 | 1 | 2 | - | - | - | 42 | 16 | - | - | - | - | 7 | - | - | - | - | - | **465** | 6.75% |
| 10-11 | 52 | 80 | 68 | 4 | 164 | - | 2 | - | - | - | 47 | 23 | - | - | - | - | 6 | - | - | - | - | - | **446** | 6.48% |
| 11-12 | 75 | 94 | 69 | 4 | 193 | 1 | 1 | - | - | - | 48 | 11 | - | - | - | - | 6 | - | - | - | - | - | **502** | 7.29% |
| 12-13 | 49 | 89 | 42 | 3 | 174 | 1 | 2 | - | - | - | 29 | 17 | - | - | - | - | 3 | - | - | - | - | - | **409** | 5.94% |
| 13-14 | 88 | 58 | 61 | 5 | 243 | 2 | - | - | - | - | 37 | 14 | - | - | - | - | 7 | - | - | - | - | - | **515** | 7.48% |
| 14-15 | 74 | 42 | 48 | - | 215 | 1 | - | - | - | - | 31 | 11 | - | - | - | - | 4 | - | - | - | - | - | **426** | 6.18% |
| 15-16 | 67 | 50 | 56 | 2 | 196 | 1 | - | - | - | - | 38 | 17 | - | - | - | - | 2 | - | - | - | - | - | **429** | 6.23% |
| 16-17 | 82 | 75 | 66 | 2 | 238 | 1 | 3 | - | - | - | 40 | 6 | - | - | - | - | 1 | - | - | - | - | - | **514** | 7.46% |
| 17-18 | 49 | 58 | 63 | - | 189 | 6 | - | - | - | - | 38 | 5 | - | - | - | - | 1 | - | - | - | - | - | **409** | 5.94% |
| 18-19 | 37 | 54 | 31 | 1 | 212 | - | - | - | - | - | 21 | 7 | - | - | - | - | 3 | - | - | - | - | - | **366** | 5.31% |
| 19-20 | 37 | 60 | 34 | 2 | 170 | - | - | - | - | - | 21 | 2 | - | - | - | - | - | - | - | - | - | - | **326** | 4.73% |
| 20-21 | 25 | 36 | 14 | 3 | 109 | 1 | - | - | - | - | 10 | 4 | - | - | - | - | - | - | - | - | - | - | **202** | 2.93% |
| 21-22 | 18 | 17 | 19 | - | 60 | 5 | - | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | **124** | 1.80% |
| 22-23 | 9 | 14 | 2 | 1 | 27 | 3 | 2 | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | **62** | 0.90% |
| 23-24 | 9 | 10 | 2 | - | 10 | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | **34** | 0.49% |
| TOTAL | 926 | 1,049 | 814 | 37 | 3,229 | 24 | 18 | - | - | - | 552 | 175 | 3 | - | 8 | 3 | 50 | - | - | - | - | - | 6,888 | 100.00% |
| % | 13.44% | 15.23% | 11.82% | 0.54% | 46.88% | 0.35% | 0.26% | 0.00% | 0.00% | 0.00% | 8.01% | 2.54% | 0.04% | 0.00% | 0.12% | 0.04% | 0.73% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |
| | | | | | | | | | | | | | | | | | | | | - | - | - | - | |

CUADRO : PROMEDIO 1

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** a Juliaca
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.21% |
| 1-2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | 0.00% |
| 2-3 | 1 | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| 3-4 | - | 1 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| 4-5 | 1 | 1 | 1 | - | 5 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **9** | 1.85% |
| 5-6 | 2 | 1 | 2 | - | 9 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **15** | 3.08% |
| 6-7 | 2 | 3 | 1 | - | 12 | - | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - | - | - | - | **21** | 4.31% |
| 7-8 | 3 | 4 | 3 | - | 14 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **27** | 5.54% |
| 8-9 | 3 | 4 | 4 | 1 | 12 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **28** | 5.75% |
| 9-10 | 3 | 5 | 4 | - | 14 | - | - | - | - | 2 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **30** | 6.16% |
| 10-11 | 5 | 4 | 4 | - | 11 | - | - | - | - | 3 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | **30** | 6.16% |
| 11-12 | 6 | 7 | 5 | - | 12 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **34** | 6.98% |
| 12-13 | 4 | 8 | 3 | - | 13 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **32** | 6.57% |
| 13-14 | 7 | 5 | 5 | 1 | 20 | - | - | - | - | 3 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **43** | 8.83% |
| 14-15 | 5 | 4 | 4 | - | 16 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **32** | 6.57% |
| 15-16 | 4 | 5 | 4 | - | 15 | - | - | - | - | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | **33** | 6.78% |
| 16-17 | 8 | 6 | 6 | - | 19 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **43** | 8.83% |
| 17-18 | 5 | 5 | 6 | - | 15 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **35** | 7.19% |
| 18-19 | 3 | 4 | 2 | - | 15 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **26** | 5.34% |
| 19-20 | 2 | 3 | 2 | - | 9 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **17** | 3.49% |
| 20-21 | 1 | 2 | 1 | - | 6 | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | **12** | 2.46% |
| 21-22 | 1 | 1 | 1 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **7** | 1.44% |
| 22-23 | 1 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| 23-24 | 1 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| TOTAL | 69 | 75 | 58 | 2 | 226 | - | - | - | - | 39 | 14 | - | - | 1 | - | 3 | - | - | - | - | - | - | 487 | 100.00% |
| % | 14.17% | 15.40% | 11.91% | 0.41% | 46.41% | 0.00% | 0.00% | 0.00% | 0.00% | 8.01% | 2.87% | 0.00% | 0.00% | 0.21% | 0.00% | 0.62% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |
| | **60.78** | **66.07** | **51.09** | **1.76** | **199.08** | **-** | **-** | **-** | **-** | **37.64** | **13.51** | **-** | **-** | **0.97** | **-** | **2.90** | **-** | **-** | **-** | **-** | **-** | **-** | **434** | |

CUADRO : PROMEDIO 2

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO :** a Lampa
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** | 0.00% |
| 1-2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **1** | 0.21% |
| 2-3 | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **2** | 0.41% |
| 3-4 | - | 1 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| 4-5 | 1 | 1 | 1 | - | 4 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **8** | 1.65% |
| 5-6 | 1 | 1 | 1 | - | 7 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **11** | 2.27% |
| 6-7 | 2 | 3 | 3 | - | 11 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **20** | 4.13% |
| 7-8 | 5 | 5 | 3 | - | 17 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **34** | 7.02% |
| 8-9 | 6 | 6 | 6 | - | 22 | - | - | - | - | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | **45** | 9.30% |
| 9-10 | 4 | 6 | 4 | - | 16 | - | - | - | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | **35** | 7.23% |
| 10-11 | 3 | 7 | 6 | - | 12 | - | - | - | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | **33** | 6.82% |
| 11-12 | 5 | 7 | 5 | 1 | 16 | - | - | - | - | 4 | 1 | - | - | - | - | 1 | - | - | - | - | - | - | **40** | 8.26% |
| 12-13 | 3 | 5 | 3 | - | 12 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **26** | 5.37% |
| 13-14 | 6 | 3 | 4 | - | 15 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | **32** | 6.61% |
| 14-15 | 5 | 2 | 3 | - | 15 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **28** | 5.79% |
| 15-16 | 5 | 3 | 4 | - | 13 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | **28** | 5.79% |
| 16-17 | 4 | 4 | 4 | - | 15 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **29** | 5.99% |
| 17-18 | 2 | 3 | 3 | - | 12 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | **23** | 4.75% |
| 18-19 | 2 | 3 | 2 | - | 15 | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | **24** | 4.96% |
| 19-20 | 3 | 5 | 3 | - | 15 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | **28** | 5.79% |
| 20-21 | 2 | 3 | 1 | - | 10 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | **17** | 3.51% |
| 21-22 | 1 | 1 | 2 | - | 5 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **10** | 2.07% |
| 22-23 | 1 | 1 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | 0.83% |
| 23-24 | 1 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **3** | 0.62% |
| TOTAL | 63 | 71 | 58 | 1 | 238 | 1 | - | - | - | 40 | 11 | - | - | - | - | 1 | - | - | - | - | - | - | 484 | 100.00% |
| % | 13.02% | 14.67% | 11.98% | 0.21% | 49.17% | 0.21% | 0.00% | 0.00% | 0.00% | 8.26% | 2.27% | 0.00% | 0.00% | 0.00% | 0.00% | 0.21% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |
| | **55.50** | **62.54** | **51.09** | **0.88** | **209.65** | **0.88** | **-** | **-** | **-** | **38.60** | **10.62** | **-** | **-** | **-** | **-** | **0.97** | **-** | **-** | **-** | **-** | **-** | **-** | **431** | |

CUADRO : PROMEDIO 3

## CONTEO Y CLASIFICACION DEL TRAFICO

**CARRETERA PE - 3SQ : Juliaca - Lampa**
**UBICACIÓN : Ingreso a Lampa**
**ESTACION : E-1**

**SENTIDO : AMBOS**
**FECHA :** del 3 al 9 de diciembre del 2019

| HORA | VEHICULOS LIGEROS | | | | | | BUS | | | CAMIONES UNITARIOS | | | CAMIONES ACOPLADOS | | | | | | | | | | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Autos | S Wagon | Pick up | Panel | C.R. | Micros | 2E | 3E | 4E | 2E | 3E | 4E | 2S2 | 2S3 | 3S2 | 3S3 | 2T2 | 2T3 | 3T2 | 3T3 | 4T2 | E7 | | |
| 0-1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 0.10% |
| 1-2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 0.10% |
| 2-3 | 1 | - | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 0.51% |
| 3-4 | - | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 0.62% |
| 4-5 | 2 | 2 | 2 | - | 9 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 17 | 1.75% |
| 5-6 | 3 | 2 | 3 | - | 16 | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 26 | 2.68% |
| 6-7 | 4 | 6 | 4 | - | 23 | - | - | - | - | 3 | - | - | - | 1 | - | - | - | - | - | - | - | - | 41 | 4.22% |
| 7-8 | 8 | 9 | 6 | - | 31 | - | - | - | - | 5 | 2 | - | - | - | - | - | - | - | - | - | - | - | 61 | 6.28% |
| 8-9 | 9 | 10 | 10 | 1 | 34 | - | - | - | - | 6 | 3 | - | - | - | - | - | - | - | - | - | - | - | 73 | 7.52% |
| 9-10 | 7 | 11 | 8 | - | 30 | - | - | - | - | 6 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | 65 | 6.69% |
| 10-11 | 8 | 11 | 10 | - | 23 | - | - | - | - | 7 | 3 | - | - | - | - | 1 | - | - | - | - | - | - | 63 | 6.49% |
| 11-12 | 11 | 14 | 10 | 1 | 28 | - | - | - | - | 7 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | 74 | 7.62% |
| 12-13 | 7 | 13 | 6 | - | 25 | - | - | - | - | 5 | 2 | - | - | - | - | - | - | - | - | - | - | - | 58 | 5.97% |
| 13-14 | 13 | 8 | 9 | 1 | 35 | - | - | - | - | 6 | 2 | - | - | - | - | 1 | - | - | - | - | - | - | 75 | 7.72% |
| 14-15 | 10 | 6 | 7 | - | 31 | - | - | - | - | 4 | 2 | - | - | - | - | - | - | - | - | - | - | - | 60 | 6.18% |
| 15-16 | 9 | 8 | 8 | - | 28 | - | - | - | - | 5 | 3 | - | - | - | - | - | - | - | - | - | - | - | 61 | 6.28% |
| 16-17 | 12 | 10 | 10 | - | 34 | - | - | - | - | 5 | 1 | - | - | - | - | - | - | - | - | - | - | - | 72 | 7.42% |
| 17-18 | 7 | 8 | 9 | - | 27 | - | - | - | - | 6 | 1 | - | - | - | - | - | - | - | - | - | - | - | 58 | 5.97% |
| 18-19 | 5 | 7 | 4 | - | 30 | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | 50 | 5.15% |
| 19-20 | 5 | 8 | 5 | - | 24 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | 45 | 4.63% |
| 20-21 | 3 | 5 | 2 | - | 16 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | 29 | 2.99% |
| 21-22 | 2 | 2 | 3 | - | 9 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17 | 1.75% |
| 22-23 | 2 | 2 | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 0.72% |
| 23-24 | 2 | 2 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 0.62% |
| TOTAL | 132 | 146 | 116 | 3 | 464 | 1 | - | - | - | 79 | 25 | - | - | 1 | - | 4 | - | - | - | - | - | - | 971 | 100.00% |
| % | 13.59% | 15.04% | 11.95% | 0.31% | 47.79% | 0.10% | 0.00% | 0.00% | 0.00% | 8.14% | 2.57% | 0.00% | 0.00% | 0.10% | 0.00% | 0.41% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | |
| **IMD** | **116.28** | **128.61** | **102.18** | **2.64** | **408.74** | **0.88** | **-** | **-** | **-** | **76.24** | **24.13** | **-** | **-** | **0.97** | **-** | **3.86** | **-** | **-** | **-** | **-** | **-** | **-** | **865** | |

24
40

Factor de Corrección Livianos 0.8809
Factor Correción Pesados 0.9651

# A.2 : Encuestas Origen – Destino.

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 04/12/19 | 00:18 | AOW915 | PK | 2006 | L 200 | MITSUBISHI | DIESEL | 5 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 2 | 04/12/19 | 01:23 | J1J031 | PK | 2006 | HILUX | TOYOTA | DIESEL | 4 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 3 | 04/12/19 | 01:33 | E6M787 | PK | 2010 | FRONTIER | NISSAN | DIESEL | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 4 | 04/12/19 | 01:35 | Z3H967 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 5 | 04/12/19 | 02:35 | ZAD965 | CR | 2013 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 10 | JULIACA | LAMPA | 5/D | 25 MIN | | X | | | | |
| 6 | 04/12/19 | 03:08 | E6J561 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 7 | 04/12/19 | 03:21 | F2B893 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 8 | 04/12/19 | 03:54 | C8H894 | PK | 2008 | HILUX | TOYOTA | DIESEL | 4 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 9 | 04/12/19 | 04:10 | Z1K056 | CR | 1994 | DYNA | TOYOTA | DIESEL | 15 | 6 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 10 | 04/12/19 | 04:17 | V1U957 | CR | 1993 | DYNA | TOYOTA | DIESEL | 16 | 6 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 11 | 04/12/19 | 04:22 | A2M313 | A | 2011 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 12 | 04/12/19 | 04:49 | ZAH956 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 13 | 04/12/19 | 04:50 | W3A477 | SW | 2014 | AVANZA | TOYOTA | GASOLINA | 7 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 14 | 04/12/19 | 05:29 | A1Z952 | B2 | 1999 | B7S | VOLVO | DIESEL | 50 | 36 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 15 | 04/12/19 | 05:48 | BO6359 | A | 1993 | ACCENT | HYUNDAI | GASOLINA | 5 | 3 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 16 | 04/12/19 | 06:25 | V4G950 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 2/D | 25 MIN | 2 | X | | | | |
| 17 | 04/12/19 | 06:30 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 18 | 04/12/19 | 06:31 | D3Q957 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 19 | 04/12/19 | 06:36 | C8V395 | CR | 2011 | STAREX | HYUNDAI | DIESEL | 11 | 6 | LAMPA | JULIACA | 1/S | 25 MIN | 2 | | X | | | |
| 20 | 04/12/19 | 06:37 | Z4E951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 21 | 04/12/19 | 06:38 | ZBL963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 22 | 04/12/19 | 06:40 | V7O965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 1/D | 25 MIN | 2 | X | | | | |
| 23 | 04/12/19 | 06:42 | V7L964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 24 | 04/12/19 | 06:44 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 25 | 04/12/19 | 06:46 | ATL902 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | CUSCO | 1/M | 6H | | X | | | | |
| 26 | 04/12/19 | 06:46 | V2G793 | CR | 2011 | S/M | DONGFENG | GASOLINA | 11 | 1 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 27 | 04/12/19 | 06:48 | ZEL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 28 | 04/12/19 | 06:49 | Z8R961 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 29 | 04/12/19 | 06:50 | Z3J137 | CR | 2013 | INCAPOWER | GONOW | GASOLINA | 7 | 3 | LAMPA | JULIACA | 3/D | 25 MIN | | | X | | | |
| 30 | 04/12/19 | 06:52 | V6F959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 5/D | 25 MIN | 2 | X | | | | |
| 31 | 04/12/19 | 06:53 | Z8N959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 32 | 04/12/19 | 06:54 | Z0N959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 33 | 04/12/19 | 06:55 | Z4C720 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | OCUVIRI | 1/D | 2H | | X | | | | |
| 34 | 04/12/19 | 06:56 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 35 | 04/12/19 | 06:57 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 36 | 04/12/19 | 06:57 | Z0O958 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 37 | 04/12/19 | 06:58 | RUA007 | PANEL | 1996 | VANETTE | NISSAN | DIESEL | 3 | 2 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 38 | 04/12/19 | 06:59 | V2V401 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 5/D | 25 MIN | 2 | X | | | | |
| 39 | 04/12/19 | 06:59 | Z9S959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 40 | 04/12/19 | 07:00 | V7N384 | A | 2015 | ELANTRA | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/S | 20 MIN | | X | | | | |
| 41 | 04/12/19 | 07:01 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 42 | 04/12/19 | 07:02 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 14 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 43 | 04/12/19 | 07:02 | X3R760 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 2/D | 20 MIN | | | X | | | |
| 44 | 04/12/19 | 07:04 | D5G957 | CR | 2017 | H2L | JINBEI | DIESEL | 17 | 17 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 45 | 04/12/19 | 07:06 | V2T961 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 46 | 04/12/19 | 07:06 | AAF730 | PK | 1991 | FIERA | NISSAN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | X | | | | |
| 47 | 04/12/19 | 07:09 | Z9W954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 48 | 04/12/19 | 07:10 | V1D115 | SW | 1998 | SPACID | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 49 | 04/12/19 | 07:11 | Z2W017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 50 | 04/12/19 | 07:12 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 51 | 04/12/19 | 07:14 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 52 | 04/12/19 | 07:15 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 53 | 04/12/19 | 07:18 | Z5E050 | SW | 2004 | AD | NISSAN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 20 MIN | 2 | X | | | | |
| 54 | 04/12/19 | 07:18 | V4T418 | A | 1992 | CELICA | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 55 | 04/12/19 | 07:19 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 5/D | 25 MIN | 2 | X | | | | |
| 56 | 04/12/19 | 07:20 | Z9O965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 57 | 04/12/19 | 07:21 | Z5G670 | SW | 2016 | COROLLA | TOYOTA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 58 | 04/12/19 | 07:22 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 59 | 04/12/19 | 07:23 | V2T104 | A | 1994 | STARLET | TOYOTA | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 25 MIN | | X | | | | |
| 60 | 04/12/19 | 07:23 | X3R760 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 04/12/19 | 07:24 | V6O335 | A | 2015 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 62 | 04/12/19 | 07:25 | Z5A252 | A | 2016 | RIO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 4/S | 20 MIN | | | X | | | |
| 63 | 04/12/19 | 07:26 | Z3S409 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 64 | 04/12/19 | 07:26 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 65 | 04/12/19 | 07:26 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 66 | 04/12/19 | 07:29 | Z0O950 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 67 | 04/12/19 | 07:29 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 68 | 04/12/19 | 07:30 | Z2T336 | SW | 2012 | HUNTER | ZOTYE | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/S | 25 MIN | | | X | | | |
| 69 | 04/12/19 | 07:32 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 70 | 04/12/19 | 07:32 | V6O335 | A | 2015 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 71 | 04/12/19 | 07:34 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 72 | 04/12/19 | 07:35 | ZAZ961 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 73 | 04/12/19 | 07:39 | Z5W931 | PK | 2014 | NAVARA | NISSAN | DIESEL | 5 | 3 | JULIACA | VILAVILA | 1/D | 2H | | X | | | | |
| 74 | 04/12/19 | 07:40 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 75 | 04/12/19 | 07:42 | Z0O959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 76 | 04/12/19 | 07:42 | X3R760 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | X | | | | |
| 77 | 04/12/19 | 07:44 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 78 | 04/12/19 | 07:44 | ZBL950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 79 | 04/12/19 | 07:46 | Z5K337 | A | 2018 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 20 MIN | | | X | | | |
| 80 | 04/12/19 | 07:48 | V6H956 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 81 | 04/12/19 | 07:48 | X6Z962 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 82 | 04/12/19 | 07:50 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 83 | 04/12/19 | 07:52 | Z0A964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 84 | 04/12/19 | 07:52 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 85 | 04/12/19 | 07:53 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 86 | 04/12/19 | 07:55 | ZBX956 | CR | 2016 | CRAFTER | VOLKSWAGEN | DIESEL | 19 | 18 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 87 | 04/12/19 | 07:55 | VBB958 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 88 | 04/12/19 | 07:56 | C9K740 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 89 | 04/12/19 | 07:58 | Z2G733 | M | 1993 | ROSA | MITSUBISHI | DIESEL | 22 | 20 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 90 | 04/12/19 | 07:59 | D3Q957 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 91 | 04/12/19 | 07:59 | Z3S410 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 92 | 04/12/19 | 08:02 | Z2V839 | PK | 2007 | S/M | JMC | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | X | | | | |
| 93 | 04/12/19 | 08:04 | V7C964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 5/D | 25 MIN | 2 | X | | | | |
| 94 | 04/12/19 | 08:05 | ZAE959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 95 | 04/12/19 | 08:07 | C9V087 | A | 2007 | YARIS | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 96 | 04/12/19 | 08:08 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 5/D | 25 MIN | 2 | X | | | | |
| 97 | 04/12/19 | 08:10 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 98 | 04/12/19 | 08:10 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 99 | 04/12/19 | 08:11 | X2K583 | SW | 2015 | RAV4 | TOYOTA | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 100 | 04/12/19 | 08:12 | ZBL963 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 101 | 04/12/19 | 08:15 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 102 | 04/12/19 | 08:15 | Z1Z265 | A | 2015 | ELANTRA | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 2/D | 20 MIN | | | X | | | |
| 103 | 04/12/19 | 08:17 | Z2L372 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 104 | 04/12/19 | 08:17 | ZAH965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 105 | 04/12/19 | 08:19 | V8V041 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 106 | 04/12/19 | 08:20 | V6F959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 107 | 04/12/19 | 08:20 | Z2P444 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 108 | 04/12/19 | 08:21 | Z0N958 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 109 | 04/12/19 | 08:22 | D5Q957 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 110 | 04/12/19 | 08:23 | Z9W954 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 111 | 04/12/19 | 08:24 | ZCF965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 112 | 04/12/19 | 08:26 | Z3I821 | PANEL | 1990 | HIACE | TOYOTA | DIESEL | 3 | 3 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 113 | 04/12/19 | 08:28 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 114 | 04/12/19 | 08:29 | V5E283 | A | 1998 | FESTIVA XL | FORD | GASOLINA | 5 | 5 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 115 | 04/12/19 | 08:30 | ALF151 | A | 2015 | ELANTRA | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 2/M | 20 MIN | | | X | | | |
| 116 | 04/12/19 | 08:30 | Z2A847 | PK | 2006 | HILUX | TOYOTA | DIESEL | 4 | 4 | JULIACA | LAMPA | 1 | 25 MIN | | X | | | | |
| 117 | 04/12/19 | 08:31 | Z3I821 | PANEL | 1990 | HIACE | TOYOTA | DIESEL | 3 | 3 | JULIACA | LAMPA | 2/S | 30 MIN | | X | | | | |
| 118 | 04/12/19 | 08:32 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 119 | 04/12/19 | 08:33 | Z9O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 120 | 04/12/19 | 08:34 | V6W966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 04/12/19 | 08:35 | V6N209 | A | 2015 | I10 | HYUNDAI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 122 | 04/12/19 | 08:36 | B6A873 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 123 | 04/12/19 | 08:37 | D5G957 | CR | 2016 | HIASE | JINBEI | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 124 | 04/12/19 | 08:38 | Z2P444 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 125 | 04/12/19 | 08:39 | V9N968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 126 | 04/12/19 | 08:40 | Z0N959 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 127 | 04/12/19 | 08:41 | ZBL961 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 128 | 04/12/19 | 08:42 | X3L944 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 129 | 04/12/19 | 08:44 | Z9Z965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 130 | 04/12/19 | 08:45 | ZBA968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 131 | 04/12/19 | 08:46 | A3T360 | A | 2015 | RIO | KIA | GASOLINA | 4 | 1 | LAMPA | JULIACA | 1 | 25 MIN | | X | | | | |
| 132 | 04/12/19 | 08:47 | Z4N193 | A | 2014 | PICANTO | KIA | GASOLINA | 5 | 5 | JULIACA | LAMPA | 3/D | 25 MIN | | | X | | | |
| 133 | 04/12/19 | 08:49 | Z2P444 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 20 MIN | 2 | X | | | | |
| 134 | 04/12/19 | 08:50 | Z5K335 | SW | 2016 | DASTER | RENAULT | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 135 | 04/12/19 | 08:51 | Z4R869 | PK | 2008 | NAVARA | NISSAN | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/D | 20 MIN | 2 | X | | | | |
| 136 | 04/12/19 | 08:52 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 6 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 137 | 04/12/19 | 08:53 | B1H211 | A | 2010 | YARIS | TOYOTA | GASOLINA | 5 | 5 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 138 | 04/12/19 | 08:54 | X1L322 | A | 2010 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 139 | 04/12/19 | 08:54 | V1Y009 | A | 1994 | TERCEL | TOYOTA | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1 | 25 MIN | | | X | | | |
| 140 | 04/12/19 | 08:55 | Z5H617 | A | 2017 | GOL | VOLKSWAGEN | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 141 | 04/12/19 | 08:56 | V6W966 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 1/D | 20 MIN | 2 | X | | | | |
| 142 | 04/12/19 | 08:57 | Z1S060 | A | 2005 | BOOM | DAIHATSU | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 143 | 04/12/19 | 08:58 | Z1W677 | A | 2006 | STARLET | TOYOTA | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1 | 25 MIN | | | X | | | |
| 144 | 04/12/19 | 08:58 | Z4E703 | PK | 1997 | TFR164DL | CHEVROLET | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 2H | | | X | | | |
| 145 | 04/12/19 | 09:00 | VBB958 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 146 | 04/12/19 | 09:01 | Z0O959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 147 | 04/12/19 | 09:02 | SZ2824 | SW | 2003 | COROLLA | TOYOTA | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 148 | 04/12/19 | 09:04 | V8E951 | CR | 2013 | SPRINTER | MERCEDES BENZ | DIESEL | 20 | 20 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 149 | 04/12/19 | 09:04 | ZBL963 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 150 | 04/12/19 | 09:08 | Z6K953 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 151 | 04/12/19 | 09:08 | ZBK952 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 152 | 04/12/19 | 09:10 | V3T838 | PK | 2011 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 35 MIN | | | X | | | |
| 153 | 04/12/19 | 09:12 | ZAW959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 154 | 04/12/19 | 09:15 | Z2L372 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 155 | 04/12/19 | 09:15 | V5Q968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 156 | 04/12/19 | 09:17 | Z6O702 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 157 | 04/12/19 | 09:18 | Z5M399 | CR | 2018 | APV | SUZUKI | GASOLINA | 8 | 4 | JULIACA | LAMPA | 2/S | 25 MIN | 2 | | X | | | |
| 158 | 04/12/19 | 09:18 | Z6V840 | PK | 2018 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 1 | 25 MIN | | | X | | | |
| 159 | 04/12/19 | 09:20 | V7Y588 | A | 2016 | PICANTO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 160 | 04/12/19 | 09:20 | C0O857 | PK | 2007 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 35 MIN | | | X | | | |
| 161 | 04/12/19 | 09:22 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 162 | 04/12/19 | 09:25 | V4G950 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 163 | 04/12/19 | 09:28 | ZBL963 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 164 | 04/12/19 | 09:29 | Z4Z419 | SW | 2016 | ECOSPORT | FORD | GASOLINA | 5 | 4 | JULIACA | LAMPA | 3/D | 25 MIN | | | X | | | |
| 165 | 04/12/19 | 09:29 | A1A206 | SW | 2009 | SPORTAGE | KIA | DIESEL | 5 | 4 | PUNO | LAMPA | 1/M | 1 HORA 30 M | | | X | | | |
| 166 | 04/12/19 | 09:30 | D3Q957 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 167 | 04/12/19 | 09:30 | ZCF965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 168 | 04/12/19 | 09:31 | X2T714 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 169 | 04/12/19 | 09:32 | RUN036 | CR | 2003 | NOA | TOYOTA | GASOLINA | 8 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 170 | 04/12/19 | 09:34 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 171 | 04/12/19 | 09:35 | F8L254 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 172 | 04/12/19 | 09:35 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 173 | 04/12/19 | 09:37 | F8G860 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 174 | 04/12/19 | 09:38 | X1Z077 | A | 2012 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 175 | 04/12/19 | 09:40 | Z8R961 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 176 | 04/12/19 | 09:40 | Z3H022 | A | 2000 | DEMIO | MAZDA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 35 MIN | | | X | | | |
| 177 | 04/12/19 | 09:42 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 178 | 04/12/19 | 09:42 | Z2B359 | SW | 2011 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 35 MIN | | | X | | | |
| 179 | 04/12/19 | 09:44 | Z9Z965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 180 | 04/12/19 | 09:44 | Z3I804 | CR | 1990 | HIACE | TOYOTA | DIESEL | 16 | 10 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | 04/12/19 | 09:45 | V9N960 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 182 | 04/12/19 | 09:46 | V5I513 | A | 2013 | PICANTO | KIA | GASOLINA | 5 | 2 | AREQUIPA | LAMPA | 1/D | 4H | | | X | | | |
| 183 | 04/12/19 | 09:46 | Z5M399 | CR | 2018 | APV | SUZUKI | GASOLINA | 8 | 8 | LAMPA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 184 | 04/12/19 | 09:46 | Z5E050 | SW | 2004 | AD | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | X | | | | |
| 185 | 04/12/19 | 09:48 | ZCF965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 186 | 04/12/19 | 09:50 | Z8G966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 20 MIN | 2 | X | | | | |
| 187 | 04/12/19 | 09:50 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 188 | 04/12/19 | 09:51 | V9I086 | SW | 2018 | TIGUAN | VOLKSWAGEN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 189 | 04/12/19 | 09:54 | ZBP967 | CR | 2010 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 190 | 04/12/19 | 09:54 | Z4G102 | SW | 2014 | HUNTER | ZOTYE | GASOLINA | 5 | 2 | LAMPA | JULIACA | 3/S | 25 MIN | | | X | | | |
| 191 | 04/12/19 | 09:55 | FH7151 | A | 1999 | SUNNY | NISSAN | DIESEL | 5 | 3 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 192 | 04/12/19 | 09:57 | V2T961 | CR | 2016 | CRAFTER | VOLKSWAGEN | DIESEL | 20 | 20 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 193 | 04/12/19 | 09:58 | OH2704 | CR | 1998 | STAREX | HYUNDAI | DIESEL | 16 | 10 | JULIACA | /UNIDAD MIRAFLO | 1 | 30 MIN | | | X | | | |
| 194 | 04/12/19 | 09:58 | V6N209 | A | 2015 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 1 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 195 | 04/12/19 | 10:00 | D9B242 | A | 2012 | I10 | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 196 | 04/12/19 | 10:00 | ABL949 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/D | 30 MIN | | X | | | | |
| 197 | 04/12/19 | 10:01 | V5L595 | A | 2015 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 198 | 04/12/19 | 10:03 | M1P889 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 199 | 04/12/19 | 10:04 | ZAH965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 200 | 04/12/19 | 10:05 | ZBK952 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 201 | 04/12/19 | 10:05 | D7N578 | SW | 2000 | RAV4 | TOYOTA | GASOLINA | 5 | 2 | JULIACA | PALCA | 1/M | 50 | | | X | | | |
| 202 | 04/12/19 | 10:08 | Z1H570 | CR | 2002 | STAREX | HYUNDAI | DIESEL | 9 | 5 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 203 | 04/12/19 | 10:08 | EGN612 | SW | 2012 | D CRUISER PR | TOYOTA | DIESEL | 5 | 4 | PUNO | LAMPA | 2/D | 2H | | X | | | | |
| 204 | 04/12/19 | 10:10 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 205 | 04/12/19 | 10:12 | Z2R954 | CR | 2011 | HKL6540 | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 2/D | 25 MIN | 2 | X | | | | |
| 206 | 04/12/19 | 10:13 | Z0I964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 207 | 04/12/19 | 10:14 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 208 | 04/12/19 | 10:15 | Z3T558 | CR | 1985 | HIACE | TOYOTA | DIESEL | 14 | 5 | JULIACA | LAMPA | 2/D | 30 MIN | | | X | | | |
| 209 | 04/12/19 | 10:15 | V3D685 | CR | 2011 | CHG391C4 | CHANGHE | GASOLINA | 8 | 2 | LAMPA | JULIACA | 5/S | 30 MIN | | | X | | | |
| 210 | 04/12/19 | 10:16 | B0Q515 | A | 2011 | PICANTO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 211 | 04/12/19 | 10:18 | ZPA693 | PK | 2012 | NAVARA | NISSAN | DIESEL | 5 | 4 | JULIACA | PALCA | 1/D | 40 MIN | | X | | | | |
| 212 | 04/12/19 | 10:20 | Z2I416 | SW | 2012 | HAVAL H3 | GREATWALL | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 213 | 04/12/19 | 10:22 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 214 | 04/12/19 | 10:22 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 215 | 04/12/19 | 10:23 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 216 | 04/12/19 | 10:23 | Z2U953 | CR | 2010 | HIACE | TOYOTA | DIESEL | 16 | 16 | PUNO | LAMPA | 1/A | 2H | | | X | | | |
| 217 | 04/12/19 | 10:24 | Z5Y617 | A | 2017 | GOL | VOLKSWAGEN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | | X | | | |
| 218 | 04/12/19 | 10:24 | V5Q968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 219 | 04/12/19 | 10:25 | B4T494 | A | 2009 | GOL | VOLKSWAGEN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 220 | 04/12/19 | 10:25 | OO5418 | PK | 1985 | STATION | TOYOTA | GASOLINA | 3 | 3 | LAMPA | JULIACA | 2/D | 10 | | X | | | | |
| 221 | 04/12/19 | 10:26 | Z1L866 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 222 | 04/12/19 | 10:27 | ZCL966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 223 | 04/12/19 | 10:30 | Z0A964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 224 | 04/12/19 | 10:30 | C9K740 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 225 | 04/12/19 | 10:32 | V4G950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 226 | 04/12/19 | 10:32 | Z4Z419 | SW | 2016 | ECOSPORT | FORD | GASOLINA | 5 | 3 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 227 | 04/12/19 | 10:33 | D9B242 | A | 2012 | I10 | HYUNDAI | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 228 | 04/12/19 | 10:35 | V0Q968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 229 | 04/12/19 | 10:35 | A7I893 | PK | 1991 | LUV | CHEVROLET | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/S | 1.3 H | | | X | | | |
| 230 | 04/12/19 | 10:36 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 231 | 04/12/19 | 10:37 | Z3S409 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 232 | 04/12/19 | 10:38 | Z3T558 | CR | 1985 | HIACE | TOYOTA | DIESEL | 14 | 5 | LAMPA | JULIACA | 2/D | 30 MIN | | X | | | | |
| 233 | 04/12/19 | 10:39 | ZAE951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 234 | 04/12/19 | 10:39 | Z5L337 | SW | 2016 | AVANZA | TOYOTA | GASOLINA | 7 | 3 | LAMPA | JULIACA | 1/S | 35 MIN | | | X | | | |
| 235 | 04/12/19 | 10:41 | ZBL963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 236 | 04/12/19 | 10:41 | B2C912 | PK | 2010 | FRONTIER | NISSAN | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 237 | 04/12/19 | 10:41 | Z3O142 | SW | 2005 | PROBOX | TOYOTA | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 238 | 04/12/19 | 10:42 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 239 | 04/12/19 | 10:43 | V2K807 | CR | 2005 | BOXER | PEUGEOT | DIESEL | 16 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | | | | | X |
| 240 | 04/12/19 | 10:45 | D2R816 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 2 | JULIACA | LAMPA | 5/M | 25 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 241 | 04/12/19 | 10:46 | Z2M243 | SW | 2007 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | PUNO | LAMPA | 2/D | 25 MIN | | X | | | | |
| 242 | 04/12/19 | 10:47 | EGX912 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | X | | | | |
| 243 | 04/12/19 | 10:48 | V9I086 | SW | 2018 | TIGUAN | VOLKSWAGEN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 244 | 04/12/19 | 10:50 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 245 | 04/12/19 | 10:50 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 246 | 04/12/19 | 10:51 | F8G860 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/M | 25 MIN | | | X | | | |
| 247 | 04/12/19 | 10:52 | V6V712 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 248 | 04/12/19 | 10:53 | A1F914 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 249 | 04/12/19 | 10:55 | Z8R961 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 250 | 04/12/19 | 10:55 | X1K418 | CR | 2002 | STAREX | HYUNDAI | DIESEL | 12 | 10 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 251 | 04/12/19 | 10:57 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 252 | 04/12/19 | 10:58 | A7S519 | SW | 2010 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 253 | 04/12/19 | 10:58 | V8L595 | A | 2012 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 254 | 04/12/19 | 10:59 | Z9Q952 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 255 | 04/12/19 | 10:59 | C1X869 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 256 | 04/12/19 | 11:00 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 257 | 04/12/19 | 11:02 | X6Z962 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 258 | 04/12/19 | 11:04 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 259 | 04/12/19 | 11:05 | ZAR955 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 260 | 04/12/19 | 11:05 | V4T418 | A | 1992 | CELICA | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 261 | 04/12/19 | 11:08 | Z2I416 | SW | 2012 | HAVAL | GREATWALL | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | X | | | | |
| 262 | 04/12/19 | 11:09 | B7Q876 | SW | 2004 | PARTNER | PEUGEOT | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 263 | 04/12/19 | 11:10 | AVV629 | PK | 1997 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 264 | 04/12/19 | 11:12 | F6G519 | SW | 2013 | FORTUNER | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 265 | 04/12/19 | 11:13 | F8E867 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 266 | 04/12/19 | 11:15 | ZBP967 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 267 | 04/12/19 | 11:16 | Z5B231 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 3/M | 25 MIN | | | X | | | |
| 268 | 04/12/19 | 11:17 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 269 | 04/12/19 | 11:18 | V5L036 | A | 2013 | I10 | HYUNDAI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 270 | 04/12/19 | 11:18 | Z2Z949 | CR | 1995 | HIACE | TOYOTA | DIESEL | 16 | 6 | LAMPA | JULIACA | 3/S | 20 MIN | | | X | | | |
| 271 | 04/12/19 | 11:20 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 272 | 04/12/19 | 11:20 | V7E311 | A | 2015 | YARIS | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 273 | 04/12/19 | 11:21 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 3/D | 35 MIN | 2 | X | | | | |
| 274 | 04/12/19 | 11:22 | Z5G277 | SW | 2017 | TUCSON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 275 | 04/12/19 | 11:24 | EGX912 | PK | 2018 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 276 | 04/12/19 | 11:24 | B9F453 | SW | 2012 | FREELANDER | LAND ROVER | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/A | 30 MIN | | | X | | | |
| 277 | 04/12/19 | 11:25 | Z5F566 | A | 2006 | SAIL | CHEVROLET | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 278 | 04/12/19 | 11:26 | Z2S084 | CR | 2012 | H1 | HYUNDAI | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 20 MIN | | | X | | | |
| 279 | 04/12/19 | 11:27 | ZBX956 | CR | 2016 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 280 | 04/12/19 | 11:27 | AVG263 | CR | 2017 | APV | SUZUKI | GASOLINA | 8 | 2 | JULIACA | LAMPA | 2/A | 30 MIN | | | X | | | |
| 281 | 04/12/19 | 11:28 | Z2P162 | A | 2003 | IST | TOYOTA | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 1.2 | | | X | | | |
| 282 | 04/12/19 | 11:30 | VBF393 | SW | 2016 | TUCSON | HYUNDAI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 283 | 04/12/19 | 11:32 | Z3O142 | SW | 2005 | PROBOX | TOYOTA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 284 | 04/12/19 | 11:33 | Z3Y416 | SW | 2009 | COROLLA | TOYOTA | GASOLINA | 5 | 4 | PUNO | JULIACA | 1/M | 1H | | | X | | | |
| 285 | 04/12/19 | 11:36 | Z9S955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 286 | 04/12/19 | 11:36 | Z5F566 | A | 2010 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 287 | 04/12/19 | 11:39 | ZAZ961 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 288 | 04/12/19 | 11:40 | V6H956 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 289 | 04/12/19 | 11:40 | D2R816 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/S | 20 MIN | | X | | | | |
| 290 | 04/12/19 | 11:41 | Z9Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 291 | 04/12/19 | 11:44 | V5L036 | A | 2016 | I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 292 | 04/12/19 | 11:45 | AKH947 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 293 | 04/12/19 | 11:45 | Z5G231 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/S | 20 MIN | | X | | | | |
| 294 | 04/12/19 | 11:47 | ZCL966 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 295 | 04/12/19 | 11:48 | ABL949 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | X | | | | |
| 296 | 04/12/19 | 11:49 | ZAH965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 297 | 04/12/19 | 11:49 | Z8T958 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 298 | 04/12/19 | 11:50 | X2K583 | SW | 2015 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 299 | 04/12/19 | 11:51 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 300 | 04/12/19 | 11:53 | Z4U305 | A | 2015 | PICANTO | KIA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 301 | 04/12/19 | 11:54 | X1K418 | CR | 2002 | STAREX | HYUNDAI | DIESEL | 16 | 9 | JULIACA | LAMPA | 4/D | 25 MIN | | | X | | | |
| 302 | 04/12/19 | 11:55 | AAF730 | PK | 1991 | FIERA | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 303 | 04/12/19 | 11:56 | ZBL963 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 304 | 04/12/19 | 11:59 | C3D767 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 305 | 04/12/19 | 11:59 | D4E804 | PK | 2011 | BT50 | MAZDA | DIESEL | 5 | 3 | PUNO | LAMPA | 3/S | 20 MIN | | X | | | | |
| 306 | 04/12/19 | 12:01 | ZCF965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 307 | 04/12/19 | 12:05 | FGX857 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 14 | LAMPA | JULIACA | 1/D | 30 MIN | 2 | X | | | | |
| 308 | 04/12/19 | 12:05 | Z3W900 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 309 | 04/12/19 | 12:06 | ZAG959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 310 | 04/12/19 | 12:08 | Z0I964 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 311 | 04/12/19 | 12:09 | Z6C855 | CR | 2015 | GDQ33101 | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 1/M | 30 MIN | 2 | | X | | | |
| 312 | 04/12/19 | 12:10 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 313 | 04/12/19 | 12:12 | C5P480 | A | 2012 | I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 314 | 04/12/19 | 12:13 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 315 | 04/12/19 | 12:18 | Z2S084 | CR | 2011 | H1 | HYUNDAI | DIESEL | 12 | 2 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 316 | 04/12/19 | 12:20 | Z0W963 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 317 | 04/12/19 | 12:22 | V7C964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 318 | 04/12/19 | 12:25 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 319 | 04/12/19 | 12:26 | Z2Z585 | SW | 2012 | SANTA FE | HYUNDAI | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 30 MIN | | | X | | | |
| 320 | 04/12/19 | 12:28 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 321 | 04/12/19 | 12:29 | V4S965 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 322 | 04/12/19 | 12:32 | V6O662 | A | 2014 | VOLEX | GREATWALL | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | X | | | | |
| 323 | 04/12/19 | 12:32 | AMG896 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 324 | 04/12/19 | 12:33 | X2T714 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 325 | 04/12/19 | 12:35 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 326 | 04/12/19 | 12:36 | C3D767 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 327 | 04/12/19 | 12:37 | ZAN954 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 328 | 04/12/19 | 12:38 | A6H411 | A | 1997 | STARLET | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 329 | 04/12/19 | 12:40 | V6F959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 330 | 04/12/19 | 12:40 | V5G124 | A | 2014 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 331 | 04/12/19 | 12:40 | Z4R869 | PK | 2008 | NAVARA | NISSAN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/A | 20 MIN | | | X | | | |
| 332 | 04/12/19 | 12:43 | X3W900 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 333 | 04/12/19 | 12:45 | ZAR955 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 334 | 04/12/19 | 12:45 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 335 | 04/12/19 | 12:49 | V6O662 | A | 2016 | VOLEX | GREATWALL | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/A | 20 MIN | | | | | | X |
| 336 | 04/12/19 | 12:49 | Z2G576 | CR | 2011 | H1 | HYUNDAI | DIESEL | 16 | 14 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 337 | 04/12/19 | 12:50 | Z5E068 | A | 2017 | RIO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 338 | 04/12/19 | 12:54 | Z0A964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 339 | 04/12/19 | 12:54 | T2X094 | SW | 2014 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 340 | 04/12/19 | 12:55 | Z9S979 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 20 MIN | 2 | X | | | | |
| 341 | 04/12/19 | 12:57 | ZCL765 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 342 | 04/12/19 | 12:59 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 343 | 04/12/19 | 13:01 | OO8414 | PK | 1985 | CORONA | TOYOTA | GASOLINA | 3 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 344 | 04/12/19 | 13:03 | ZCL966 | PK | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 345 | 04/12/19 | 13:06 | V2V901 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 346 | 04/12/19 | 13:10 | Z0T958 | CR | 2012 | HIACE | TOYOTA | DIESEL | 16 | 16 | JULIACA | AZANGARO | 4/D | 30 MIN | 2 | X | | | | |
| 347 | 04/12/19 | 13:16 | V5Q968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 7 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 348 | 04/12/19 | 13:20 | Z9Z965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 349 | 04/12/19 | 13:20 | C0G230 | A | 2013 | RIO | KIA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 350 | 04/12/19 | 13:27 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 351 | 04/12/19 | 13:28 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 352 | 04/12/19 | 13:30 | V6H956 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 353 | 04/12/19 | 13:35 | ZBL963 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 354 | 04/12/19 | 13:35 | Z4Y708 | PK | 1997 | DATSUN | NISSAN | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 355 | 04/12/19 | 13:40 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 356 | 04/12/19 | 13:40 | Z9D965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 357 | 04/12/19 | 13:41 | Z9W954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 358 | 04/12/19 | 13:44 | A0T462 | A | 2003 | AVENSIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 359 | 04/12/19 | 13:46 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 360 | 04/12/19 | 13:47 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 361 | 04/12/19 | 13:49 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 362 | 04/12/19 | 13:49 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 363 | 04/12/19 | 13:50 | X3C474 | A | 2014 | YARIS | TOYOTA | GASOLINA | 5 | 2 | PUCARA | JULIACA | 1/D | 1.3 | | | X | | | |
| 364 | 04/12/19 | 13:51 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 365 | 04/12/19 | 13:54 | V8F137 | A | 2017 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | | | | | X |
| 366 | 04/12/19 | 13:54 | Z3Q343 | SW | 2000 | CALDINA | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 367 | 04/12/19 | 13:56 | Z2N454 | SW | 2008 | SUCCED | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 368 | 04/12/19 | 13:58 | ANG729 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 369 | 04/12/19 | 13:58 | Z1L774 | CR | 2010 | PANTOJA | TOYOTA | DIESEL | 14 | 10 | VILAVILA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 370 | 04/12/19 | 13:59 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 371 | 04/12/19 | 14:00 | Z4Y902 | PK | 2004 | RANGER | FORD | DIESEL | 5 | 4 | PUNO | LAMPA | 1/S | 1H | | | X | | | |
| 372 | 04/12/19 | 14:01 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 373 | 04/12/19 | 14:02 | ZAW959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 374 | 04/12/19 | 14:04 | AMX814 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | CABANILLAS | 2/D | 1H | | | X | | | |
| 375 | 04/12/19 | 14:05 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 376 | 04/12/19 | 14:07 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 377 | 04/12/19 | 14:08 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 378 | 04/12/19 | 14:10 | M2I783 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 379 | 04/12/19 | 14:12 | AMG896 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 380 | 04/12/19 | 14:12 | A7S519 | SW | 2010 | RAV4 | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | X | | | | |
| 381 | 04/12/19 | 14:13 | B0E706 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 382 | 04/12/19 | 14:14 | Z4R955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 383 | 04/12/19 | 14:15 | X4B118 | A | 2014 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 384 | 04/12/19 | 14:18 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 385 | 04/12/19 | 14:18 | X1K418 | CR | 2008 | H1 | HYUNDAI | DIESEL | 11 | 5 | JULIACA | LAMPA | 3/D | 25 MIN | | | X | | | |
| 386 | 04/12/19 | 14:20 | Z9S959 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 387 | 04/12/19 | 14:20 | Z3H022 | SW | 2008 | DEMIO | MAZDA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 388 | 04/12/19 | 14:22 | ZAC955 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 389 | 04/12/19 | 14:22 | Z4N476 | A | 1995 | LOGAN | RENAULT | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 30 MIN | | X | | | | |
| 390 | 04/12/19 | 14:26 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 391 | 04/12/19 | 14:26 | Z3S410 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 392 | 04/12/19 | 14:27 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 393 | 04/12/19 | 14:29 | Z5J318 | CR | 2018 | N300 | CHEVROLET | GASOLINA | 8 | 7 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 394 | 04/12/19 | 14:30 | ALF151 | A | 2015 | ELANTRA | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/A | 35 MIN | | X | | | | |
| 395 | 04/12/19 | 14:30 | C6I470 | SW | 2000 | WIZARD | ISUZU | DIESEL | 5 | 3 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 396 | 04/12/19 | 14:32 | V5G124 | A | 2012 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 397 | 04/12/19 | 14:32 | V8J173 | SW | 2017 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/S | 30 MIN | | | X | | | |
| 398 | 04/12/19 | 14:35 | Z2L372 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 399 | 04/12/19 | 14:36 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 400 | 04/12/19 | 14:36 | ZCL965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 401 | 04/12/19 | 14:38 | ZCF954 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 402 | 04/12/19 | 14:40 | ZC2966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 403 | 04/12/19 | 14:40 | EGP055 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | X | | | | |
| 404 | 04/12/19 | 14:41 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 405 | 04/12/19 | 14:44 | FH7151 | A | 1999 | SUNNY | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | | | | X |
| 406 | 04/12/19 | 14:45 | V4Q297 | A | 2015 | I10 | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 407 | 04/12/19 | 14:46 | Z8G966 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 408 | 04/12/19 | 14:46 | Z4D501 | SW | 2004 | PROBOX | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 409 | 04/12/19 | 14:49 | Z4Z419 | SW | 2017 | ECOSPORT | FORD | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 410 | 04/12/19 | 14:50 | Z9E969 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 411 | 04/12/19 | 14:50 | Z3Q344 | SW | 1993 | CORONA | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 412 | 04/12/19 | 14:51 | Z1L887 | PK | 2005 | VANETTE | NISSAN | GASOLINA | 3 | 2 | LAMPA | JULIACA | 4/S | 30 MIN | | | X | | | |
| 413 | 04/12/19 | 14:54 | X2V944 | PK | 2012 | L200 | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 414 | 04/12/19 | 14:56 | V5G087 | A | 2014 | SANDERO | RENAULT | GASOLINA | 5 | 3 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 415 | 04/12/19 | 15:00 | V8L334 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 3 | LAMPA | JULIACA | 4/S | 30 MIN | | | X | | | |
| 416 | 04/12/19 | 15:01 | Z5E068 | A | 2017 | RIO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 30 MIN | | X | | | | |
| 417 | 04/12/19 | 15:03 | B7Q876 | SW | 2009 | PARTNER | PEUGEOT | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 418 | 04/12/19 | 15:04 | Z5J316 | CR | 2018 | N300 | CHEVROLET | GASOLINA | 8 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 419 | 04/12/19 | 15:04 | Z2G733 | M | 1993 | ROSA | MITSUBISHI | DIESEL | 25 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 420 | 04/12/19 | 15:06 | ZAE951 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 421 | 04/12/19 | 15:06 | Z5S701 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | X | | | | |
| 422 | 04/12/19 | 15:08 | V6F959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 423 | 04/12/19 | 15:08 | Z0W965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 424 | 04/12/19 | 15:12 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 425 | 04/12/19 | 15:13 | C6S619 | A | 2008 | YARIS | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 426 | 04/12/19 | 15:14 | V2V401 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 427 | 04/12/19 | 15:14 | X4C332 | A | 2017 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 428 | 04/12/19 | 15:15 | V6M348 | A | 2014 | SAIL | CHEVROLET | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 429 | 04/12/19 | 15:16 | C8V395 | CR | 2001 | STAREX | HYUNDAI | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 430 | 04/12/19 | 15:16 | Z8R961 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 431 | 04/12/19 | 15:18 | EGO628 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 432 | 04/12/19 | 15:19 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 433 | 04/12/19 | 15:21 | V8F137 | A | 2016 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | AREQUIPA | 1/M | 6H | | | X | | | |
| 434 | 04/12/19 | 15:21 | Z4G511 | CR | 1991 | CARAVAN | NISSAN | DIESEL | 14 | 3 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 435 | 04/12/19 | 15:23 | Z6C855 | CR | 2005 | HKL865C | JOYLONG | DIESEL | 16 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 436 | 04/12/19 | 15:24 | X3Q065 | A | 2016 | EON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 437 | 04/12/19 | 15:24 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 438 | 04/12/19 | 15:27 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 439 | 04/12/19 | 15:28 | Z9W954 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 440 | 04/12/19 | 15:30 | X3R760 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 441 | 04/12/19 | 15:32 | D2H889 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 442 | 04/12/19 | 15:32 | V3T838 | PK | 2011 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 443 | 04/12/19 | 15:36 | ZBP967 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 444 | 04/12/19 | 15:38 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 445 | 04/12/19 | 15:39 | ZCL965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 446 | 04/12/19 | 15:40 | Z2L201 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 447 | 04/12/19 | 15:42 | Z9O965 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 448 | 04/12/19 | 15:44 | X4C332 | A | 2013 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 449 | 04/12/19 | 15:47 | Z1Q211 | A | 2010 | IRBAN CRUISEI | TOYOTA | GASOLINA | 5 | 3 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 450 | 04/12/19 | 15:48 | Z8I895 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 451 | 04/12/19 | 15:50 | V3N815 | SW | 2004 | PROBOX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 452 | 04/12/19 | 15:52 | OO8414 | PK | 1985 | HILUX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 453 | 04/12/19 | 15:54 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 454 | 04/12/19 | 15:59 | Z6O702 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 455 | 04/12/19 | 16:02 | X1W439 | A | 2012 | VOLEX | GREATWALL | GASOLINA | 5 | 4 | TUCCINA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 456 | 04/12/19 | 16:04 | ZBL963 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 457 | 04/12/19 | 16:08 | T2X094 | SW | 2014 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 458 | 04/12/19 | 16:08 | Z4R435 | SW | 2016 | RAV4 | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 459 | 04/12/19 | 16:10 | Z2P444 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 460 | 04/12/19 | 16:12 | V8A623 | A | 2016 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 461 | 04/12/19 | 16:15 | V6W966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 462 | 04/12/19 | 16:15 | D4E804 | PK | 2010 | BT50 | MAZDA | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 463 | 04/12/19 | 16:19 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | | X | | | | |
| 464 | 04/12/19 | 16:19 | C6S234 | SW | 2009 | RAV4 | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 465 | 04/12/19 | 16:20 | ZBG955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/S | 25 MIN | 2 | X | | | | |
| 466 | 04/12/19 | 16:24 | Z4H965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 467 | 04/12/19 | 16:25 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 468 | 04/12/19 | 16:32 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 469 | 04/12/19 | 16:35 | VBB952 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 470 | 04/12/19 | 16:35 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 471 | 04/12/19 | 16:38 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 472 | 04/12/19 | 16:39 | Z9Q952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 473 | 04/12/19 | 16:40 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 474 | 04/12/19 | 16:41 | B0Q515 | A | 2011 | RIO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 475 | 04/12/19 | 16:42 | Z8G966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 476 | 04/12/19 | 16:44 | Z2Z949 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 477 | 04/12/19 | 16:44 | KI5664 | A | 1978 | ESCARABAJO | VOLKSWAGEN | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 478 | 04/12/19 | 16:46 | Z6B477 | PK | 2008 | NAVARA | NISSAN | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 479 | 04/12/19 | 16:46 | Z6B917 | PK | 2008 | NAVARA | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 480 | 04/12/19 | 16:48 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 481 | 04/12/19 | 16:50 | V8J797 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | X | | | | |
| 482 | 04/12/19 | 16:51 | V0X150 | A | 2018 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 483 | 04/12/19 | 16:54 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 484 | 04/12/19 | 16:55 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 485 | 04/12/19 | 16:58 | Z8G966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 486 | 04/12/19 | 16:59 | Z9Z965 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 487 | 04/12/19 | 17:00 | V3R896 | PK | 1995 | HILUX | TOYOTA | DIESEL | 3 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 488 | 04/12/19 | 17:01 | Z5B433 | A | 2017 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 489 | 04/12/19 | 17:02 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 490 | 04/12/19 | 17:02 | X2O474 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | X | | | | |
| 491 | 04/12/19 | 17:02 | B0V836 | PK | 2007 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 492 | 04/12/19 | 17:05 | V6Y956 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 493 | 04/12/19 | 17:05 | Z4E703 | PK | 1997 | LUV | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | PUNO | 1/M | 2H | | | X | | | |
| 494 | 04/12/19 | 17:10 | D5G957 | CR | 2014 | H2L | JINBEI | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 495 | 04/12/19 | 17:11 | V4G950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 496 | 04/12/19 | 17:12 | ZAG954 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 497 | 04/12/19 | 17:16 | ZAW954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 498 | 04/12/19 | 17:18 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 499 | 04/12/19 | 17:20 | V6W966 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 500 | 04/12/19 | 17:23 | ZAE951 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 501 | 04/12/19 | 17:23 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 502 | 04/12/19 | 17:24 | ALV834 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 2/S | 20 MIN | | | X | | | |
| 503 | 04/12/19 | 17:26 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 9 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 504 | 04/12/19 | 17:27 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 505 | 04/12/19 | 17:30 | V8D623 | A | 2017 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 506 | 04/12/19 | 17:32 | M2P919 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 507 | 04/12/19 | 17:33 | Z5O093 | A | 2018 | PICANTO | KIA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 508 | 04/12/19 | 17:34 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 509 | 04/12/19 | 17:35 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 510 | 04/12/19 | 17:41 | BK1906 | A | 1989 | ACCENT | HYUNDAI | GASOLINA | 5 | 1 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 511 | 04/12/19 | 17:42 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 512 | 04/12/19 | 17:42 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 513 | 04/12/19 | 17:47 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 514 | 04/12/19 | 17:48 | Z6M877 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 515 | 04/12/19 | 17:49 | V4V337 | SW | 2015 | CAPTIVA | CHEVROLET | GASOLINA | 5 | 3 | LAMPA | PUNO | 2/S | 1.15H | | | X | | | |
| 516 | 04/12/19 | 17:51 | V7P956 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 517 | 04/12/19 | 17:52 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 518 | 04/12/19 | 17:53 | Z5D402 | A | 1988 | CORONA | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 519 | 04/12/19 | 17:54 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 520 | 04/12/19 | 17:55 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 521 | 04/12/19 | 17:58 | Z3R112 | A | 1997 | CALDINA | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 522 | 04/12/19 | 17:58 | Z5A252 | A | 2017 | RIO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 523 | 04/12/19 | 17:59 | V1Y009 | A | 1994 | TERCEL | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 524 | 04/12/19 | 18:02 | D2H889 | PK | 1990 | HILUX | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 525 | 04/12/19 | 18:02 | V1N147 | SW | 2008 | TUCSON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 526 | 04/12/19 | 18:08 | ZAE959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 527 | 04/12/19 | 18:12 | Z0J964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 528 | 04/12/19 | 18:15 | Z4X362 | A | 2017 | YARIS | TOYOTA | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 529 | 04/12/19 | 18:19 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 530 | 04/12/19 | 18:24 | Z8T958 | CR | 2012 | HIACE | TOYOTA | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 531 | 04/12/19 | 18:24 | EGK954 | PK | 2012 | HAWK | MAHINDRA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | | | | X |
| 532 | 04/12/19 | 19:07 | EGD240 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 533 | 04/12/19 | 19:12 | V8Q813 | CR | 2016 | HANGAN - SUP | CHANGAN | GASOLINA | 11 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 534 | 04/12/19 | 19:19 | B1K832 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 535 | 04/12/19 | 20:46 | Z1P783 | CR | 1992 | DINA | TOYOTA | DIESEL | 15 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 536 | 05/12/19 | 00:26 | B0O936 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 537 | 05/12/19 | 01:20 | A2B953 | CR | 2006 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 538 | 05/12/19 | 01:34 | Z2S517 | A | 2012 | I10 | HYUNDAI | GASOLINA | 5 | 3 | JULIACA | LAMPA | 3/D | 25 MIN | | X | | | | |
| 539 | 05/12/19 | 01:43 | A8J817 | PK | 2006 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 540 | 05/12/19 | 01:47 | Z2T749 | CR | 1999 | DINA | TOYOTA | DIESEL | 15 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 541 | 05/12/19 | 02:23 | D9B667 | A | 2011 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 542 | 05/12/19 | 03:17 | F2E720 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 543 | 05/12/19 | 03:24 | ZAD965 | CR | 2013 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 544 | 05/12/19 | 03:51 | AFC537 | CR | 2014 | C46430T | CHANGHE | GASOLINA | 11 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 545 | 05/12/19 | 03:54 | Z5X709 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 546 | 05/12/19 | 04:41 | D1F844 | PK | 2006 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 3/D | 25 MIN | | X | | | | |
| 547 | 05/12/19 | 05:24 | V0T955 | CR | 2015 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 548 | 05/12/19 | 05:53 | EGO164 | PK | 2013 | L200 | MITSUBISHI | DIESEL | 5 | 4 | JULIACA | LAMPA | 3/D | 25 MIN | | X | | | | |
| 549 | 05/12/19 | 06:10 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 550 | 05/12/19 | 06:14 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 551 | 05/12/19 | 06:14 | Z3L096 | SW | 1998 | FAMILIA DX | MAZDA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 552 | 05/12/19 | 06:16 | V6H956 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 553 | 05/12/19 | 06:16 | ZAE959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 554 | 05/12/19 | 06:20 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 555 | 05/12/19 | 06:22 | Z9S959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 556 | 05/12/19 | 06:25 | ZAE951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 557 | 05/12/19 | 06:27 | EGO958 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 2 | PUNO | LAMPA | 1/S | 1H | | | X | | | |
| 558 | 05/12/19 | 06:28 | Z4M113 | SW | 2009 | SUCCED | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 559 | 05/12/19 | 06:28 | TU1987 | SW | 1986 | COROLLA | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | | X | | | |
| 560 | 05/12/19 | 06:31 | Z4T067 | CR | 2015 | BJ400 | BAIC | GASOLINA | 8 | 1 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 561 | 05/12/19 | 06:32 | V7O965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 562 | 05/12/19 | 06:34 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 563 | 05/12/19 | 06:35 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 564 | 05/12/19 | 06:35 | V5S872 | CR | 2013 | CUSTOM VAN | WINGS | DIESEL | 15 | 5 | AREQUIPA | LAMPA | 2/A | 6H | | | X | | | |
| 565 | 05/12/19 | 06:39 | Z1L774 | CR | 2010 | HIACE | TOYOTA | DIESEL | 16 | 13 | JULIACA | LAMPA | 2/D | 30 MIN | | | X | | | |
| 566 | 05/12/19 | 06:39 | V2G793 | CR | 2012 | S/M | DONGFENG | DIESEL | 11 | 9 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 567 | 05/12/19 | 06:40 | ZBL963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 568 | 05/12/19 | 06:42 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 569 | 05/12/19 | 06:44 | X2O474 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 570 | 05/12/19 | 06:45 | Z5U823 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 21 | 20 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 571 | 05/12/19 | 06:45 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 572 | 05/12/19 | 06:48 | Z5N053 | A | 2018 | LOGAN | RENAULT | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 35 MIN | | X | | | | |
| 573 | 05/12/19 | 06:49 | V2V901 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 574 | 05/12/19 | 06:49 | V6F959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 575 | 05/12/19 | 06:51 | Z0N959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 576 | 05/12/19 | 06:53 | Z0O958 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 577 | 05/12/19 | 06:54 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | GASOLINA | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 578 | 05/12/19 | 06:56 | RV9045 | SW | 1998 | TERIOS | DAIHATSU | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 579 | 05/12/19 | 06:57 | V7T961 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 580 | 05/12/19 | 07:00 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 581 | 05/12/19 | 07:00 | ALV834 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 582 | 05/12/19 | 07:02 | Z9W954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 583 | 05/12/19 | 07:02 | Z2O013 | A | 2012 | YARIS | TOYOTA | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 584 | 05/12/19 | 07:02 | Z4E285 | SW | 2014 | HAVAL H3 | GREATWALL | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 585 | 05/12/19 | 07:04 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 586 | 05/12/19 | 07:04 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 587 | 05/12/19 | 07:05 | Z4B670 | CR | 2011 | N200 | CHEVROLET | GASOLINA | 7 | 2 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 588 | 05/12/19 | 07:06 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 15 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 589 | 05/12/19 | 07:08 | A6E916 | PK | 2010 | HILUX | TOYOTA | GASOLINA | 5 | 1 | PUNO | LAMPA | 1/M | 1 HORA | | | X | | | |
| 590 | 05/12/19 | 07:09 | X2V323 | A | 2014 | ALTO | SUZUKI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/M | 25 MIN | | | X | | | |
| 591 | 05/12/19 | 07:10 | V5Q968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 592 | 05/12/19 | 07:10 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 593 | 05/12/19 | 07:12 | Z9O965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 594 | 05/12/19 | 07:12 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 595 | 05/12/19 | 07:14 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 596 | 05/12/19 | 07:14 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 597 | 05/12/19 | 07:15 | ZAZ961 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 598 | 05/12/19 | 07:17 | ATE679 | SW | 2017 | ESCAPE | FORD | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 599 | 05/12/19 | 07:19 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 600 | 05/12/19 | 07:21 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 601 | 05/12/19 | 07:22 | Z5S037 | A | 2003 | IST | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 602 | 05/12/19 | 07:24 | ATE679 | SW | 2017 | ESCAPE | FORD | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 603 | 05/12/19 | 07:26 | V7X621 | A | 2015 | RIO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | 2 | | X | | | |
| 604 | 05/12/19 | 07:28 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 605 | 05/12/19 | 07:30 | V5M057 | CR | 2014 | N300 | CHEVROLET | GASOLINA | 8 | 6 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 606 | 05/12/19 | 07:32 | X2K509 | SW | 2008 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 607 | 05/12/19 | 07:36 | ZBL963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 608 | 05/12/19 | 07:38 | C8Z257 | SW | 2012 | HAVAL | GREATWALL | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 609 | 05/12/19 | 07:40 | Z5I058 | SW | 2017 | CRETA | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 610 | 05/12/19 | 07:44 | Z1K578 | A | 2010 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 611 | 05/12/19 | 07:46 | Z2O283 | A | 2009 | NOTE | NISSAN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 3/S | 25 MIN | | | X | | | |
| 612 | 05/12/19 | 07:50 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 613 | 05/12/19 | 07:50 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 614 | 05/12/19 | 07:50 | B2M874 | CR | 2012 | H1 | HYUNDAI | GASOLINA | 11 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | | X | | | |
| 615 | 05/12/19 | 07:52 | VBB958 | CR | 2010 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 616 | 05/12/19 | 07:53 | B1H313 | A | 1996 | GOL | VOLKSWAGEN | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 617 | 05/12/19 | 07:55 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 40 MIN | | X | | | | |
| 618 | 05/12/19 | 07:58 | ZCF965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 619 | 05/12/19 | 07:59 | Z9O965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 620 | 05/12/19 | 08:00 | V7O965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 621 | 05/12/19 | 08:05 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 622 | 05/12/19 | 08:06 | Z3E800 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 3/S | 30 MIN | | | X | | | |
| 623 | 05/12/19 | 08:08 | Z9S959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 624 | 05/12/19 | 08:08 | V9N968 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 625 | 05/12/19 | 08:12 | Z1T270 | A | 2005 | SWIFT | SUZUKI | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 626 | 05/12/19 | 08:14 | Z5H097 | A | 2017 | YARIS | TOYOTA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | | | | X |
| 627 | 05/12/19 | 08:15 | EGJ708 | B2 | 2011 | OF1730/59 | MERCEDES BENZ | DIESEL | 50 | 1 | VILAVILA | JULIACA | 3/S | 2.30 MINH | | | X | | | |
| 628 | 05/12/19 | 08:16 | ZAZ961 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 629 | 05/12/19 | 08:17 | Z5H876 | CR | 1991 | HIACE | TOYOTA | DIESEL | 2 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | | | | X |
| 630 | 05/12/19 | 08:18 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 631 | 05/12/19 | 08:19 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 632 | 05/12/19 | 08:20 | Z9Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 633 | 05/12/19 | 08:25 | Z5N297 | SW | 2018 | DUSTER | RENAULT | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 634 | 05/12/19 | 08:26 | V1Y009 | SW | 1994 | TERCEL | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 635 | 05/12/19 | 08:29 | Z1K811 | CR | 2016 | VANETTE | NISSAN | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | | | | | X |
| 636 | 05/12/19 | 08:30 | X1Z966 | CR | 2010 | H1 | HYUNDAI | DIESEL | 12 | 5 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 637 | 05/12/19 | 08:32 | Z3S410 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 638 | 05/12/19 | 08:35 | EGN612 | SW | 2016 | D CRUISER PR | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 639 | 05/12/19 | 08:36 | Z6S733 | CR | 2017 | CAMELLO | AICHISAN | DIESEL | 15 | 15 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 640 | 05/12/19 | 08:38 | X1C954 | CR | 2016 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | JULIACA | LAMPA | 1/S | 25 MIN | 2 | X | | | | |
| 641 | 05/12/19 | 08:40 | Z9Q952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 642 | 05/12/19 | 08:41 | X2D474 | A | 2016 | YARIS | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/D | 20 MIN | | | X | | | |
| 643 | 05/12/19 | 08:42 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 644 | 05/12/19 | 08:44 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 645 | 05/12/19 | 08:46 | ZAH965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 646 | 05/12/19 | 08:47 | ZAE955 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 647 | 05/12/19 | 08:47 | Z4J851 | CR | 2012 | VIEW | FOTON | DIESEL | 15 | 14 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 648 | 05/12/19 | 08:48 | Z4T813 | CR | 2012 | VIEW | FOTON | DIESEL | 17 | 16 | JULIACA | LAMPA | 4/S | 25 MIN | | | X | | | |
| 649 | 05/12/19 | 08:50 | Z2L372 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 650 | 05/12/19 | 08:50 | Z6W825 | CR | 2018 | CAMELLO | AICHISAN | DIESEL | 16 | 15 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 651 | 05/12/19 | 08:55 | Z5L605 | SW | 2018 | TUCSON | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 652 | 05/12/19 | 08:56 | ZAC955 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 653 | 05/12/19 | 08:59 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 654 | 05/12/19 | 09:01 | Z2O156 | CR | 2012 | S/M | AUTOCRAFT | DIESEL | 10 | 10 | JULIACA | LAMPA | 3/S | 30 MIN | | | X | | | |
| 655 | 05/12/19 | 09:03 | ZBL963 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 656 | 05/12/19 | 09:05 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 657 | 05/12/19 | 09:05 | B1H313 | A | 1996 | GOL | VOLKSWAGEN | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/M | 40 MIN | | | X | | | |
| 658 | 05/12/19 | 09:07 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 659 | 05/12/19 | 09:10 | V6G950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 660 | 05/12/19 | 09:10 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 9 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 661 | 05/12/19 | 09:12 | Z2L201 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 662 | 05/12/19 | 09:15 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 663 | 05/12/19 | 09:16 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 664 | 05/12/19 | 09:16 | D3Q457 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 665 | 05/12/19 | 09:18 | Z8G955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 666 | 05/12/19 | 09:18 | V3I556 | A | 2012 | PICANTO | KIA | GASOLINA | 5 | 3 | JULIACA | LAMPA | 4/D | 30 MIN | | | X | | | |
| 667 | 05/12/19 | 09:24 | Z8N959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 668 | 05/12/19 | 09:24 | C0S843 | PK | 2011 | HILUY | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 669 | 05/12/19 | 09:26 | Z7U962 | CR | 2012 | H1 | HYUNDAI | DIESEL | 12 | 5 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 670 | 05/12/19 | 09:26 | Z1K579 | SW | 2006 | PROBOX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 671 | 05/12/19 | 09:27 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 672 | 05/12/19 | 09:28 | ZAE951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 673 | 05/12/19 | 09:30 | V8F920 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 674 | 05/12/19 | 09:32 | Z1Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 675 | 05/12/19 | 09:32 | C8M750 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/A | 40 MIN | | | X | | | |
| 676 | 05/12/19 | 09:34 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 677 | 05/12/19 | 09:34 | X2V323 | A | 2014 | ALTO | SUZUKI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 678 | 05/12/19 | 09:35 | D3Q457 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 679 | 05/12/19 | 09:35 | XBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 680 | 05/12/19 | 09:37 | V7R073 | SW | 2015 | J6 | JAC | GASOLINA | 5 | 5 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 681 | 05/12/19 | 09:38 | X6Z962 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 682 | 05/12/19 | 09:40 | ZBX956 | CR | 2016 | CRAFTER | VOLKSWAGEN | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 683 | 05/12/19 | 09:41 | Z1C416 | SW | 2001 | S/M | MITSUBISHI | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 684 | 05/12/19 | 09:42 | Z9G952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 685 | 05/12/19 | 09:44 | VBE689 | SW | 2017 | RAV4 | TOYOTA | GASOLINA | 5 | 5 | AREQUIPA | LAMPA | 1/A | 4HORA | | | X | | | |
| 686 | 05/12/19 | 09:45 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 687 | 05/12/19 | 09:47 | Z3P115 | SW | 2009 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 688 | 05/12/19 | 09:48 | B4T494 | A | 2011 | GOL | VOLKSWAGEN | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 689 | 05/12/19 | 09:48 | X2V944 | PK | 2012 | L200 | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 690 | 05/12/19 | 09:50 | Z5E106 | A | 2017 | I20 | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 691 | 05/12/19 | 09:54 | DH1552 | SW | 1968 | CORONA | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/M | 25 MIN | | | X | | | |
| 692 | 05/12/19 | 09:55 | VBB958 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 693 | 05/12/19 | 09:55 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 694 | 05/12/19 | 09:56 | V0Q968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 695 | 05/12/19 | 09:58 | V2Z839 | PK | 2011 | NAVARA | NISSAN | DIESEL | 5 | 5 | JULIACA | PALCA | 4/S | 30 MIN | | | X | | | |
| 696 | 05/12/19 | 09:59 | V2V401 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 697 | 05/12/19 | 10:01 | A7B036 | PK | 2008 | HILUX | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 698 | 05/12/19 | 10:02 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 699 | 05/12/19 | 10:04 | BQM103 | SW | 1998 | DEMIO | MAZDA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 700 | 05/12/19 | 10:04 | AXZ322 | SW | 2017 | TUCSON | HYUNDAI | GASOLINA | 5 | 1 | LAMPA | JULIACA | 2/M | 30 MIN | | | X | | | |
| 701 | 05/12/19 | 10:05 | Z5A313 | A | 2016 | RIO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 702 | 05/12/19 | 10:07 | Z1E015 | SW | 2008 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 703 | 05/12/19 | 10:08 | Z4X327 | SW | 1999 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 2/A | 30 MIN | | | X | | | |
| 704 | 05/12/19 | 10:10 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 705 | 05/12/19 | 10:11 | PP6691 | PK | 1989 | DATSUN | NISSAN | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 706 | 05/12/19 | 10:12 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 707 | 05/12/19 | 10:13 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 708 | 05/12/19 | 10:15 | ZCM961 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 709 | 05/12/19 | 10:16 | Z4M349 | A | 2013 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 1.30 MINH | | | X | | | |
| 710 | 05/12/19 | 10:18 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 711 | 05/12/19 | 10:18 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 712 | 05/12/19 | 10:19 | V8C073 | A | 2017 | PICANTO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/S | 25 MIN | | | X | | | |
| 713 | 05/12/19 | 10:24 | ZAE959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 714 | 05/12/19 | 10:26 | Z5E673 | SW | 2017 | ECOSPORT | FORD | GASOLINA | 5 | 3 | JULIACA | PALCA | 3/S | 30 MIN | | | X | | | |
| 715 | 05/12/19 | 10:30 | FBE867 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 716 | 05/12/19 | 10:32 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 717 | 05/12/19 | 10:32 | X2R264 | A | 2014 | EON | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 718 | 05/12/19 | 10:34 | ZAE951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 719 | 05/12/19 | 10:35 | Z4E426 | A | 2014 | ALTO | SUZUKI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 720 | 05/12/19 | 10:35 | Z2L576 | CR | 2001 | H1 | HYUNDAI | DIESEL | 11 | 3 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 721 | 05/12/19 | 10:38 | ZAR955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 722 | 05/12/19 | 10:39 | Z5G277 | SW | 2017 | TUCSON | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 723 | 05/12/19 | 10:40 | X6Z962 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 724 | 05/12/19 | 10:40 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 725 | 05/12/19 | 10:40 | V4Z498 | A | 1985 | CORONA | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 726 | 05/12/19 | 10:42 | V6T953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 727 | 05/12/19 | 10:42 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 728 | 05/12/19 | 10:42 | Z3C290 | SW | 2014 | SPORTAGE | KIA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 729 | 05/12/19 | 10:45 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 730 | 05/12/19 | 10:45 | Z8N959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 731 | 05/12/19 | 10:49 | Z4E285 | A | 2014 | VOLEX | GREATWALL | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 732 | 05/12/19 | 10:51 | Z2K047 | A | 2012 | SAIL | CHEVROLET | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 40 MIN | | | X | | | |
| 733 | 05/12/19 | 10:52 | Z2G574 | SW | 2013 | BCROSS | JAC | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 734 | 05/12/19 | 10:54 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | | | X | | | |
| 735 | 05/12/19 | 10:59 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 736 | 05/12/19 | 10:59 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 737 | 05/12/19 | 11:00 | Z5B781 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 738 | 05/12/19 | 11:02 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 739 | 05/12/19 | 11:04 | D9V538 | A | 1993 | SEDAN | DAIHATSU | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 740 | 05/12/19 | 11:05 | Z2R954 | CR | 2011 | HKL6540 | JOYLONG | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 741 | 05/12/19 | 11:08 | V3S459 | A | 2013 | PICANTO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 742 | 05/12/19 | 11:09 | Z6A956 | CR | 2011 | HIACE | TOYOTA | DIESEL | 16 | 16 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 743 | 05/12/19 | 11:10 | ZCM961 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 744 | 05/12/19 | 11:10 | V6F959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 745 | 05/12/19 | 11:14 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 746 | 05/12/19 | 11:15 | ZBL963 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 747 | 05/12/19 | 11:16 | Z4X327 | SW | 1999 | HILUX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 748 | 05/12/19 | 11:17 | ZAE959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 749 | 05/12/19 | 11:18 | VBB958 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 750 | 05/12/19 | 11:20 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 751 | 05/12/19 | 11:22 | Z1E015 | SW | 2008 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 752 | 05/12/19 | 11:23 | V2S734 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 753 | 05/12/19 | 11:24 | V5R277 | A | 2013 | SPARK | CHEVROLET | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/S | 1HORA | | | X | | | |
| 754 | 05/12/19 | 11:25 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 755 | 05/12/19 | 11:26 | Z0N959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 756 | 05/12/19 | 11:26 | A5K795 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/A | 30 MIN | | | X | | | |
| 757 | 05/12/19 | 11:28 | C2S054 | A | 2011 | GOL | VOLKSWAGEN | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 758 | 05/12/19 | 11:29 | B0J857 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | | | | X |
| 759 | 05/12/19 | 11:29 | Z6M874 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 760 | 05/12/19 | 11:31 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 761 | 05/12/19 | 11:31 | X2O655 | SW | 2001 | PROBOX | TOYOTA | GASOLINA | 5 | 3 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 762 | 05/12/19 | 11:34 | Z2J507 | A | 2012 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 763 | 05/12/19 | 11:35 | V8J173 | SW | 2017 | RAV4 | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 3/S | 25 MIN | | | X | | | |
| 764 | 05/12/19 | 11:35 | Z3S229 | CR | 2016 | H1 | HYUNDAI | DIESEL | 12 | 11 | MOQUEGUA | LAMPA | 1/M | 6HORA | | | X | | | |
| 765 | 05/12/19 | 11:36 | Z0O958 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 766 | 05/12/19 | 11:40 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/M | 25 MIN | 2 | X | | | | |
| 767 | 05/12/19 | 11:41 | CN4361 | A | 1995 | ACCENT | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | AREQUIPA | 1/S | 3HORA | | | X | | | |
| 768 | 05/12/19 | 11:43 | V8B001 | SW | 1992 | RAV4 | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 769 | 05/12/19 | 11:44 | V6T953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 770 | 05/12/19 | 11:46 | F2L472 | PK | 1994 | FRONTIER | NISSAN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 771 | 05/12/19 | 11:46 | M2P919 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 772 | 05/12/19 | 11:48 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 773 | 05/12/19 | 11:49 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 774 | 05/12/19 | 11:50 | Z9W954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 775 | 05/12/19 | 11:53 | Z4J425 | SW | 2001 | DEMIO | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 776 | 05/12/19 | 11:55 | V2V401 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 777 | 05/12/19 | 11:56 | C2S054 | A | 2011 | GOL | VOLKSWAGEN | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 778 | 05/12/19 | 11:57 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 779 | 05/12/19 | 12:00 | ADE613 | A | 2014 | CROSSFOX | VOLKSWAGEN | GASOLINA | 5 | 1 | JULIACA | LAMPA | 2/A | 30 MIN | | | X | | | |
| 780 | 05/12/19 | 12:04 | Z6M874 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 781 | 05/12/19 | 12:06 | X1Z966 | CR | 2017 | H1 | HYUNDAI | DIESEL | 12 | 5 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 782 | 05/12/19 | 12:08 | V6T953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 783 | 05/12/19 | 12:10 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 784 | 05/12/19 | 12:16 | X2O655 | SW | 2008 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 785 | 05/12/19 | 12:18 | Z9O965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 786 | 05/12/19 | 12:20 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 787 | 05/12/19 | 12:22 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 788 | 05/12/19 | 12:28 | ZLB960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 789 | 05/12/19 | 12:31 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 9 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 790 | 05/12/19 | 12:39 | Z9S959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | | X | | | | |
| 791 | 05/12/19 | 12:42 | X2K035 | A | 2013 | I10 | HYUNDAI | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 792 | 05/12/19 | 12:43 | Z3R516 | A | 2013 | EON | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | PUNO | 1/S | 1.3H | | | X | | | |
| 793 | 05/12/19 | 12:46 | AWW423 | A | 2016 | SWIFT | SUZUKI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 794 | 05/12/19 | 12:47 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 6/D | 30 MIN | 2 | X | | | | |
| 795 | 05/12/19 | 12:48 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 796 | 05/12/19 | 12:51 | Z6X953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 797 | 05/12/19 | 12:54 | D3Q957 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 798 | 05/12/19 | 12:56 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 799 | 05/12/19 | 12:59 | V2S734 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 800 | 05/12/19 | 13:02 | V6H956 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 801 | 05/12/19 | 13:05 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 802 | 05/12/19 | 13:05 | BEA954 | CR | 2013 | HIACE | TOYOTA | DIESEL | 16 | 7 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 803 | 05/12/19 | 13:08 | ZAW349 | A | 2016 | I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 804 | 05/12/19 | 13:11 | V3I556 | A | 2012 | PICANTO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 805 | 05/12/19 | 13:12 | D3Q957 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 806 | 05/12/19 | 13:16 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 807 | 05/12/19 | 13:16 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | | X | | | | |
| 808 | 05/12/19 | 13:20 | X9I968 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 2/S | 25 MIN | 2 | X | | | | |
| 809 | 05/12/19 | 13:22 | ZAH965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 810 | 05/12/19 | 13:25 | X2X504 | SW | 2008 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 811 | 05/12/19 | 13:26 | ZAC955 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 812 | 05/12/19 | 13:28 | V7V968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 813 | 05/12/19 | 13:32 | Z0K968 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 2/S | 25 MIN | 2 | X | | | | |
| 814 | 05/12/19 | 13:32 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 815 | 05/12/19 | 13:33 | V6F959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 5/D | 30 MIN | 2 | X | | | | |
| 816 | 05/12/19 | 13:35 | X3Q065 | A | 2015 | PICANTO | KIA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 817 | 05/12/19 | 13:36 | Z8N959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 818 | 05/12/19 | 13:38 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 819 | 05/12/19 | 13:41 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 820 | 05/12/19 | 13:41 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 821 | 05/12/19 | 13:42 | ZBK952 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 822 | 05/12/19 | 13:45 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 823 | 05/12/19 | 13:45 | Z2L372 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 824 | 05/12/19 | 13:47 | AHB782 | PK | 2014 | NAVARA | NISSAN | DIESEL | 5 | 3 | JULIACA | LAMPA | 3/A | 30 MIN | | | X | | | |
| 825 | 05/12/19 | 13:49 | ZCF965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 826 | 05/12/19 | 13:51 | V6M348 | A | 2014 | SAIL | CHEVROLET | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 827 | 05/12/19 | 13:51 | X3A831 | PK | 2008 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/S | 25 MIN | | | X | | | |
| 828 | 05/12/19 | 13:55 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 829 | 05/12/19 | 13:57 | Z9E969 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 830 | 05/12/19 | 13:58 | A9M482 | SW | 1997 | PAJERO | MITSUBISHI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 831 | 05/12/19 | 14:02 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 832 | 05/12/19 | 14:03 | Z5V823 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 833 | 05/12/19 | 14:06 | ZBL963 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 834 | 05/12/19 | 14:07 | Z4E426 | A | 2014 | ALTO | SUZUKI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 835 | 05/12/19 | 14:08 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 836 | 05/12/19 | 14:10 | V2T109 | A | 1995 | STARLET | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 837 | 05/12/19 | 14:13 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 838 | 05/12/19 | 14:14 | Z8K964 | CR | 2012 | H1 | HYUNDAI | DIESEL | 12 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 839 | 05/12/19 | 14:15 | V9N968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 840 | 05/12/19 | 14:17 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 841 | 05/12/19 | 14:18 | Z5O093 | A | 2018 | PICANTO | KIA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | | X | | | |
| 842 | 05/12/19 | 14:21 | Z2P444 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 843 | 05/12/19 | 14:22 | V7R073 | SW | 2017 | J6 | JAC | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/D | 25 MIN | | | X | | | |
| 844 | 05/12/19 | 14:23 | Z5I058 | SW | 2017 | CRETA | HYUNDAI | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 845 | 05/12/19 | 14:25 | Z9P950 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 846 | 05/12/19 | 14:25 | Z9Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 847 | 05/12/19 | 14:26 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 848 | 05/12/19 | 14:27 | V5Q968 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 849 | 05/12/19 | 14:28 | Z6K453 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 850 | 05/12/19 | 14:29 | V2T261 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 15 | 12 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 851 | 05/12/19 | 14:32 | Z9Q952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 852 | 05/12/19 | 14:32 | D0C932 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 853 | 05/12/19 | 14:34 | X2S675 | A | 2011 | LOGAN | RENAULT | GASOLINA | 5 | 2 | JULIACA | LAMPA | 3/A | 30 MIN | | | X | | | |
| 854 | 05/12/19 | 14:34 | Z6F783 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | X | | | | |
| 855 | 05/12/19 | 14:35 | Z3S410 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 856 | 05/12/19 | 14:37 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 857 | 05/12/19 | 14:38 | Z6J842 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 858 | 05/12/19 | 14:38 | Z3I153 | CR | 2013 | S/M | AUTOCRAFT | GASOLINA | 8 | 5 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 859 | 05/12/19 | 14:39 | Z1F947 | SW | 2005 | MATIZ | DAEWOO | GASOLINA | 4 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 860 | 05/12/19 | 14:40 | ZAR955 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 861 | 05/12/19 | 14:42 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 862 | 05/12/19 | 14:42 | V1T958 | CR | 2004 | SPRINTER | MERCEDES BENZ | DIESEL | 15 | 10 | VILAVILA | JULIACA | 1/D | 40 MIN | | | X | | | |
| 863 | 05/12/19 | 14:45 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 864 | 05/12/19 | 14:46 | Z3V415 | CR | 2013 | SUPERVAN | CHANGAN | GASOLINA | 11 | 5 | LAMPA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 865 | 05/12/19 | 14:46 | Z4C328 | SW | 2002 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 866 | 05/12/19 | 14:48 | Z1W308 | SW | 2004 | PROBOX | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 867 | 05/12/19 | 14:50 | ZBE950 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 868 | 05/12/19 | 14:51 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 869 | 05/12/19 | 14:52 | V4G950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 870 | 05/12/19 | 14:52 | V4M967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 871 | 05/12/19 | 14:52 | AKH947 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 872 | 05/12/19 | 14:54 | ZAH965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 873 | 05/12/19 | 14:56 | V0Q968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 874 | 05/12/19 | 14:57 | V6H956 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 875 | 05/12/19 | 14:57 | Z5L605 | SW | 2017 | TUCSON | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 876 | 05/12/19 | 14:58 | D5G957 | CR | 2018 | HIASE | JINBEI | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 877 | 05/12/19 | 14:59 | Z2V359 | SW | 2004 | PROBOX | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 878 | 05/12/19 | 15:01 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 879 | 05/12/19 | 15:01 | F8E867 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/D | 20 MIN | | | X | | | |
| 880 | 05/12/19 | 15:03 | Z4J813 | CR | 2014 | VIEW | FOTON | DIESEL | 12 | 6 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 881 | 05/12/19 | 15:03 | X2R264 | A | 2014 | EON | HYUNDAI | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 882 | 05/12/19 | 15:05 | Z8N959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 883 | 05/12/19 | 15:05 | Z5G641 | A | 2017 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 884 | 05/12/19 | 15:07 | ZAW954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 885 | 05/12/19 | 15:07 | EGT539 | PK | 2011 | NAVARA | NISSAN | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 886 | 05/12/19 | 15:08 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 887 | 05/12/19 | 15:09 | V5J959 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 888 | 05/12/19 | 15:09 | D8O738 | CR | 2011 | LF5028XXY | LIFAN | GASOLINA | 3 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 889 | 05/12/19 | 15:10 | ZBK952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 890 | 05/12/19 | 15:10 | ZAR951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 891 | 05/12/19 | 15:11 | ABU749 | PK | 2014 | FRONTIER | NISSAN | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 892 | 05/12/19 | 15:12 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 893 | 05/12/19 | 15:12 | Z4I106 | A | 2015 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 894 | 05/12/19 | 15:14 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 895 | 05/12/19 | 15:14 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 896 | 05/12/19 | 15:15 | F0M936 | PK | 2013 | L200 | MITSUBISHI | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 897 | 05/12/19 | 15:16 | Z2Y873 | PK | 2010 | PICKUP | MAHINDRA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 898 | 05/12/19 | 15:17 | G4X595 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 899 | 05/12/19 | 15:17 | Z4K757 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 3/D | 20 MIN | | | X | | | |
| 900 | 05/12/19 | 15:18 | ZBA968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 3/S | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 901 | 05/12/19 | 15:18 | ZAW946 | SW | 2008 | TOWNACE | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 2/M | 30 MIN | | | X | | | |
| 902 | 05/12/19 | 15:19 | ZAG954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 4 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 903 | 05/12/19 | 15:19 | D6B779 | PK | 2012 | FRONTIER | NISSAN | DIESEL | 3 | 2 | JULIACA | LAMPA | 3/D | 25 MIN | | | X | | | |
| 904 | 05/12/19 | 15:20 | C2M836 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | PUNO | LAMPA | 1/D | 20 MIN | | | X | | | |
| 905 | 05/12/19 | 15:21 | V5Q968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 906 | 05/12/19 | 15:21 | Z8I965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 907 | 05/12/19 | 15:22 | Z9D969 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 908 | 05/12/19 | 15:22 | V6H956 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 3 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 909 | 05/12/19 | 15:23 | Z8L963 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 910 | 05/12/19 | 15:23 | Z5L674 | A | 2018 | CIAZ | SUZUKI | GASOLINA | 5 | 3 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 911 | 05/12/19 | 15:24 | ZAC955 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 912 | 05/12/19 | 15:25 | Z3V156 | A | 2013 | I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 20 MIN | | X | | | | |
| 913 | 05/12/19 | 15:25 | Z5J118 | SW | 2018 | SANTA FE | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/S | 30 MIN | | X | | | | |
| 914 | 05/12/19 | 15:26 | Z2V022 | A | 2012 | I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 915 | 05/12/19 | 15:26 | AET916 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 916 | 05/12/19 | 15:27 | B05402 | A | 1984 | CORONA | TOYOTA | GASOLINA | 5 | 3 | LAMPA | JULIACA | 1/D | 20 MIN | | X | | | | |
| 917 | 05/12/19 | 15:27 | Z4Y278 | CR | 2014 | HIACE | TOYOTA | DIESEL | 16 | 7 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 918 | 05/12/19 | 15:28 | EGI708 | B2 | 2011 | OF1730/54 | MERCEDES BENZ | DIESEL | 50 | 49 | JULIACA | VILAVILA | 1/M | 40 MIN | | X | | | | |
| 919 | 05/12/19 | 15:28 | Z6J842 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 920 | 05/12/19 | 15:29 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 921 | 05/12/19 | 15:30 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 922 | 05/12/19 | 15:31 | Z2S675 | A | 2011 | LOGAN | RENAULT | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 923 | 05/12/19 | 15:32 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 924 | 05/12/19 | 15:32 | X6Z962 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 925 | 05/12/19 | 15:33 | Z4L062 | A | 2014 | PICANTO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 926 | 05/12/19 | 15:35 | ZCF965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 927 | 05/12/19 | 15:35 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 3 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 928 | 05/12/19 | 15:36 | ABU749 | PK | 2014 | FRONTIER | NISSAN | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 929 | 05/12/19 | 15:38 | Z9E969 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 930 | 05/12/19 | 15:38 | F8Z591 | A | 2014 | RIO | KIA | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 931 | 05/12/19 | 15:38 | V6L620 | A | 2017 | PICANTO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 932 | 05/12/19 | 15:40 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 933 | 05/12/19 | 15:40 | ZBG955 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 934 | 05/12/19 | 15:40 | V6J965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 935 | 05/12/19 | 15:41 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 936 | 05/12/19 | 15:42 | EGJ708 | B2 | 2011 | OF1130 | MERCEDES BENZ | DIESEL | 50 | 36 | JULIACA | VILAVILA | 3/S | 25 MIN | | X | | | | |
| 937 | 05/12/19 | 15:43 | X2O474 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 4/D | 20 MIN | | | X | | | |
| 938 | 05/12/19 | 15:44 | V2Z839 | PK | 2011 | NAVARA | NISSAN | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 939 | 05/12/19 | 15:45 | ZBX956 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 20 MIN | 2 | X | | | | |
| 940 | 05/12/19 | 15:46 | V6W966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 4 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 941 | 05/12/19 | 15:48 | ZAE959 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 942 | 05/12/19 | 15:50 | V7X621 | A | 2013 | RIO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 943 | 05/12/19 | 15:50 | X2V944 | PK | 2012 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 944 | 05/12/19 | 15:54 | V9N968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/S | 25 MIN | 2 | X | | | | |
| 945 | 05/12/19 | 16:02 | V8V961 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 2/D | 25 MIN | 2 | X | | | | |
| 946 | 05/12/19 | 16:05 | ZCL966 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 947 | 05/12/19 | 16:12 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 948 | 05/12/19 | 16:12 | Z3S410 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 949 | 05/12/19 | 16:24 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 950 | 05/12/19 | 16:30 | AKN037 | SW | 2015 | SPORTAGE | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 951 | 05/12/19 | 16:30 | Z8J962 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 952 | 05/12/19 | 16:35 | X2P735 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 953 | 05/12/19 | 16:40 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 954 | 05/12/19 | 16:45 | ZBA968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/S | 25 MIN | 2 | X | | | | |
| 955 | 05/12/19 | 16:46 | VGJ959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 956 | 05/12/19 | 16:48 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 957 | 05/12/19 | 16:48 | ZAM965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 958 | 05/12/19 | 16:50 | Z9S959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 959 | 05/12/19 | 16:56 | Z1T074 | SW | 2007 | FAMILIA DX | MAZDA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 960 | 05/12/19 | 16:58 | Z4W069 | SW | 2016 | DUSTER | RENAULT | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/A | 30 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 961 | 05/12/19 | 17:02 | Z5I547 | A | 2016 | RIO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 962 | 05/12/19 | 17:06 | B0B846 | PK | 2008 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 963 | 05/12/19 | 17:10 | Z8L963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 964 | 05/12/19 | 17:10 | Z5L037 | SW | 2016 | UNO | FIAT | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 965 | 05/12/19 | 17:14 | Z4X013 | A | 2017 | PICANTO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 966 | 05/12/19 | 17:18 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 967 | 05/12/19 | 17:20 | Z9E969 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 968 | 05/12/19 | 17:24 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 969 | 05/12/19 | 17:26 | ALV834 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 970 | 05/12/19 | 17:28 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 971 | 05/12/19 | 17:28 | Z5O086 | CR | 2015 | PX33 | FOTON | GASOLINA | 8 | 5 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 972 | 05/12/19 | 17:30 | ZAE959 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 973 | 05/12/19 | 17:30 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 974 | 05/12/19 | 17:34 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 975 | 05/12/19 | 17:35 | AMX814 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 976 | 05/12/19 | 17:36 | V2V041 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 977 | 05/12/19 | 17:38 | Z3X374 | A | 2014 | CORONA | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 978 | 05/12/19 | 17:40 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 979 | 05/12/19 | 17:41 | AXZ737 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 980 | 05/12/19 | 17:42 | AKN037 | SW | 2015 | SPORTAGE | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 981 | 05/12/19 | 17:43 | Z4K753 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/D | 20 MIN | | | X | | | |
| 982 | 05/12/19 | 17:45 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 983 | 05/12/19 | 17:46 | V2S244 | SW | 2010 | SANTA FE | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 984 | 05/12/19 | 17:47 | Z3S950 | CR | 2010 | H1 | HYUNDAI | DIESEL | 11 | 11 | JULIACA | LAMPA | 1/M | 30 MIN | | X | | | | |
| 985 | 05/12/19 | 17:49 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 986 | 05/12/19 | 17:50 | V7O965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 987 | 05/12/19 | 17:50 | V9N968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 988 | 05/12/19 | 17:52 | D3I824 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 989 | 05/12/19 | 17:52 | Z3Z410 | SW | 2010 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 990 | 05/12/19 | 17:53 | C7B039 | SW | 2014 | SANDERO | RENAULT | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/S | 30 MIN | | | | X | | |
| 991 | 05/12/19 | 17:54 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 992 | 05/12/19 | 17:55 | V5J959 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 993 | 05/12/19 | 17:55 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 994 | 05/12/19 | 17:57 | V8R691 | SW | 2017 | FORTUNER | TOYOTA | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 995 | 05/12/19 | 17:58 | Z5K581 | A | 2014 | PICANTO | KIA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 996 | 05/12/19 | 17:59 | Z9Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 997 | 05/12/19 | 18:01 | D5D558 | A | 1987 | CHARADE | DAIHATSU | GASOLINA | 5 | 3 | LAMPA | JULIACA | 1/S | 20 MIN | | | X | | | |
| 998 | 05/12/19 | 18:02 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 999 | 05/12/19 | 18:02 | W5N825 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1000 | 05/12/19 | 18:03 | D5G957 | CR | 2018 | HIASE | JINBEI | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1001 | 05/12/19 | 18:04 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 1002 | 05/12/19 | 18:04 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1003 | 05/12/19 | 18:05 | Z2P444 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 9 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1004 | 05/12/19 | 18:05 | X3Q065 | A | 2015 | EON | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | X | | | | |
| 1005 | 05/12/19 | 18:06 | VAB966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1006 | 05/12/19 | 18:06 | Z1E542 | SW | 2008 | PROBOX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/M | 40 MIN | | | X | | | |
| 1007 | 05/12/19 | 18:07 | Z3P850 | PK | 2012 | FRONTIER | NISSAN | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/S | 20 MIN | | | X | | | |
| 1008 | 05/12/19 | 18:08 | Z2Y873 | PK | 2010 | PICKUP | MAHINDRA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 1009 | 05/12/19 | 18:10 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1010 | 05/12/19 | 18:10 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1011 | 05/12/19 | 19:06 | ZAW959 | CR | 2014 | CRAFTER | VOLKSWAGEN | DIESEL | 21 | 20 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1012 | 05/12/19 | 20:02 | W1Z501 | A | 2010 | YARIS | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1013 | 05/12/19 | 21:00 | W3A508 | SW | 2014 | RAV 4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1014 | 05/12/19 | 21:09 | V1Q956 | CR | 2010 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1015 | 05/12/19 | 21:31 | X1L927 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1016 | 05/12/19 | 21:46 | D2Z800 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1017 | 05/12/19 | 22:41 | Z1Y793 | CR | 1990 | DINA | TOYOTA | DIESEL | 15 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1018 | 05/12/19 | 22:46 | W3E507 | A | 2014 | YARIS | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1019 | 05/12/19 | 23:21 | V5A954 | CR | 2012 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1020 | 05/12/19 | 23:39 | A2Y955 | B2 | 1995 | B754 | VOLVO | DIESEL | 51 | 50 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1021 | 06/12/19 | 00:04 | Z4X259 | SW | 2014 | AVANZA | TOYOTA | GASOLINA | 7 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1022 | 06/12/19 | 00:13 | D9W738 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1023 | 06/12/19 | 00:39 | V3J884 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1024 | 06/12/19 | 02:46 | EGE072 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1025 | 06/12/19 | 03:01 | A1Z953 | B2 | 2009 | F114 | SCANIA | DIESEL | 50 | 27 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1026 | 06/12/19 | 04:00 | B2L960 | B2 | 1994 | MORILLAS | VOLVO | DIESEL | 51 | 50 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 1027 | 06/12/19 | 04:30 | A2T961 | B2 | 1994 | B754 | VOLVO | DIESEL | 47 | 46 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1028 | 06/12/19 | 05:02 | A9L839 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1029 | 06/12/19 | 05:03 | V5T960 | CR | 2012 | SPRINTER | MERCEDES BENZ | DIESEL | 20 | 19 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 1030 | 06/12/19 | 05:09 | W2T104 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1031 | 06/12/19 | 05:15 | C3S835 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1032 | 06/12/19 | 05:32 | EGJ802 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1033 | 06/12/19 | 05:38 | A2C963 | B2 | 1998 | OF1318 | MERCEDES BENZ | DIESEL | 42 | 41 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1034 | 06/12/19 | 05:39 | TK1773 | SW | 1995 | COROLLA | TOYOTA | GASOLINA | 5 | 3 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1035 | 06/12/19 | 05:40 | U8Q813 | CR | 2016 | HANGAN - SUP | CHANGAN | GASOLINA | 11 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1036 | 06/12/19 | 05:41 | A6M877 | PK | 2006 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1037 | 06/12/19 | 05:42 | P1E961 | CR | 1992 | DINA | TOYOTA | DIESEL | 15 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 1038 | 06/12/19 | 05:48 | ZAW967 | CR | 2015 | CRAFTER | VOLKSWAGEN | DIESEL | 21 | 20 | JULIACA | PALCA | 1/D | 25 MIN | | X | | | | |
| 1039 | 06/12/19 | 05:50 | B3R398 | SW | 2003 | GRAND NOMADI | SUZUKI | GASOLINA | 5 | 4 | JULIACA | PALCA | 1/D | 40 MIN | | X | | | | |
| 1040 | 06/12/19 | 05:51 | Z2J367 | SW | 2012 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1041 | 06/12/19 | 05:52 | Z4O855 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1042 | 06/12/19 | 05:55 | X1R961 | CR | 2009 | SPRINTER | MERCEDES BENZ | DIESEL | 20 | 19 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1043 | 06/12/19 | 05:58 | D3Y809 | PK | 2012 | L 200 | MITSUBISHI | DIESEL | 5 | 2 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1044 | 06/12/19 | 05:59 | EEK510 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 5/D | 25 MIN | | X | | | | |
| 1045 | 06/12/19 | 06:00 | EGR013 | PK | 2002 | FRONTIER | NISSAN | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1046 | 06/12/19 | 06:06 | Z2T749 | CR | 1999 | DINA | TOYOTA | DIESEL | 15 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1047 | 06/12/19 | 06:12 | Z2R954 | CR | 2011 | HKL6540 | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 2/D | 25 MIN | 2 | X | | | | |
| 1048 | 06/12/19 | 06:14 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1049 | 06/12/19 | 06:15 | Z2I416 | SW | 2012 | HAVAL H3 | GREATWALL | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 1050 | 06/12/19 | 06:16 | ZAH965 | CR | 2017 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1051 | 06/12/19 | 06:17 | X1K418 | CR | 2002 | STAREX | HYUNDAI | DIESEL | 16 | 9 | JULIACA | LAMPA | 4/D | 25 MIN | | | X | | | |
| 1052 | 06/12/19 | 06:18 | Z2L201 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1053 | 06/12/19 | 06:30 | Z2G733 | M | 1993 | ROSA | MITSUBISHI | DIESEL | 25 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1054 | 06/12/19 | 06:33 | Z5Y617 | A | 2017 | GOL | VOLKSWAGEN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | | X | | | |
| 1055 | 06/12/19 | 06:34 | ZAE951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1056 | 06/12/19 | 06:39 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1057 | 06/12/19 | 06:40 | C6S619 | A | 2008 | YARIS | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1058 | 06/12/19 | 06:47 | Z5A252 | A | 2017 | RIO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1059 | 06/12/19 | 06:48 | Z2Z949 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1060 | 06/12/19 | 06:50 | V6O662 | A | 2014 | VOLEX | GREATWALL | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | X | | | | |
| 1061 | 06/12/19 | 06:52 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1062 | 06/12/19 | 06:54 | V2V401 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1063 | 06/12/19 | 06:58 | V4Q297 | A | 2015 | I10 | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1064 | 06/12/19 | 07:01 | A0T462 | A | 2003 | AVENSIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 1065 | 06/12/19 | 07:02 | Z0W965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1066 | 06/12/19 | 07:05 | Z8G966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1067 | 06/12/19 | 07:08 | Z0J964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1068 | 06/12/19 | 07:11 | Z9S959 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1069 | 06/12/19 | 07:17 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1070 | 06/12/19 | 07:20 | Z6B477 | PK | 2008 | NAVARA | NISSAN | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1071 | 06/12/19 | 07:24 | B9F453 | SW | 2012 | FREELANDER | LAND ROVER | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/A | 30 MIN | | | X | | | |
| 1072 | 06/12/19 | 07:26 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1073 | 06/12/19 | 07:27 | C1X869 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 1074 | 06/12/19 | 07:28 | X6Z962 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1075 | 06/12/19 | 07:31 | Z6O702 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1076 | 06/12/19 | 07:32 | A7S519 | SW | 2010 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1077 | 06/12/19 | 07:38 | C3D767 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 1078 | 06/12/19 | 07:41 | V8F137 | A | 2017 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | X | | | | |
| 1079 | 06/12/19 | 07:49 | V6Y956 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1080 | 06/12/19 | 07:51 | V1Y009 | A | 1994 | TERCEL | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1081 | 06/12/19 | 07:54 | C9K740 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 1082 | 06/12/19 | 08:01 | AAF730 | PK | 1991 | FIERA | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 1083 | 06/12/19 | 08:04 | Z2S084 | CR | 2011 | H1 | HYUNDAI | DIESEL | 12 | 2 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1084 | 06/12/19 | 08:07 | ALV834 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 2/S | 20 MIN | | | X | | | |
| 1085 | 06/12/19 | 08:11 | B7Q876 | SW | 2009 | PARTNER | PEUGEOT | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1086 | 06/12/19 | 08:13 | Z8G966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1087 | 06/12/19 | 08:15 | ZAE951 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1088 | 06/12/19 | 08:17 | V6H956 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1089 | 06/12/19 | 08:18 | ZCL966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1090 | 06/12/19 | 08:22 | C3D767 | PK | 2012 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 1091 | 06/12/19 | 08:24 | Z4Y902 | PK | 2004 | RANGER | FORD | DIESEL | 5 | 4 | PUNO | LAMPA | 1/S | 1H | | | X | | | |
| 1092 | 06/12/19 | 08:25 | C6I470 | SW | 2000 | WIZARD | ISUZU | DIESEL | 5 | 3 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 1093 | 06/12/19 | 08:27 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 1094 | 06/12/19 | 08:28 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1095 | 06/12/19 | 08:30 | Z8G966 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1096 | 06/12/19 | 08:35 | V6W966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 1097 | 06/12/19 | 08:38 | ZPA693 | PK | 2012 | NAVARA | NISSAN | DIESEL | 5 | 4 | JULIACA | PALCA | 1/D | 40 MIN | | X | | | | |
| 1098 | 06/12/19 | 08:40 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1099 | 06/12/19 | 08:43 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1100 | 06/12/19 | 08:44 | V9I086 | SW | 2018 | TIGUAN | VOLKSWAGEN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1101 | 06/12/19 | 08:47 | Z2L201 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | JULIACA | LAMPA | 3/D | 35 MIN | 2 | X | | | | |
| 1102 | 06/12/19 | 08:47 | V3H353 | B2 | 1992 | B7E60 | VOLVO | DIESEL | 53 | 52 | JULIACA | LAMPA | 1/S | 35 MIN | | X | | | | |
| 1103 | 06/12/19 | 08:54 | Z4R923 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 1104 | 06/12/19 | 08:58 | Z9W954 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1105 | 06/12/19 | 09:01 | Z4R869 | PK | 2008 | NAVARA | NISSAN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/A | 20 MIN | | | X | | | |
| 1106 | 06/12/19 | 09:04 | VBB952 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1107 | 06/12/19 | 09:07 | V7E311 | A | 2015 | YARIS | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 1108 | 06/12/19 | 09:11 | V6F959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1109 | 06/12/19 | 09:12 | V5L036 | A | 2013 | I10 | HYUNDAI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 1110 | 06/12/19 | 09:14 | Z2P444 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 1111 | 06/12/19 | 09:15 | X2V944 | PK | 2012 | L200 | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 20 MIN | | | X | | | |
| 1112 | 06/12/19 | 09:18 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1113 | 06/12/19 | 09:20 | V6H956 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 1114 | 06/12/19 | 09:25 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1115 | 06/12/19 | 09:28 | ZAR955 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1116 | 06/12/19 | 09:30 | EGO628 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 1117 | 06/12/19 | 09:33 | D9B242 | A | 2012 | I10 | HYUNDAI | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1118 | 06/12/19 | 09:35 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1119 | 06/12/19 | 09:39 | ZBP967 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1120 | 06/12/19 | 09:40 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1121 | 06/12/19 | 09:42 | B0Q515 | A | 2011 | PICANTO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 1122 | 06/12/19 | 09:47 | V3N815 | SW | 2004 | PROBOX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1123 | 06/12/19 | 09:51 | Z3Q344 | SW | 1993 | CORONA | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 1124 | 06/12/19 | 09:52 | AKH947 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1125 | 06/12/19 | 09:55 | ZCL966 | PK | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1126 | 06/12/19 | 10:00 | Z9J950 | B2 | 1992 | SPORTWAGON | MITSUBISHI | DIESEL | 35 | 34 | JULIACA | LAMPA | 1/M | 45 MIN | | X | | | | |
| 1127 | 06/12/19 | 10:02 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1128 | 06/12/19 | 10:06 | A4P959 | B2 | 1998 | BTS4X265 | VOLVO | DIESEL | 51 | 50 | JULIACA | LAMPA | 1/M | 30 MIN | | X | | | | |
| 1129 | 06/12/19 | 10:10 | Z8I895 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1130 | 06/12/19 | 10:10 | V1Z967 | B2 | 1999 | FUSO | MITSUBISHI | DIESEL | 32 | 31 | JULIACA | LAMPA | 1/S | 30 MIN | | X | | | | |
| 1131 | 06/12/19 | 10:15 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1132 | 06/12/19 | 10:18 | Z5F566 | A | 2006 | SAIL | CHEVROLET | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1133 | 06/12/19 | 10:26 | A6H411 | A | 1997 | STARLET | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 1134 | 06/12/19 | 10:28 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1135 | 06/12/19 | 10:29 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1136 | 06/12/19 | 10:34 | C6S234 | SW | 2009 | RAV4 | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 1137 | 06/12/19 | 10:40 | Z3T558 | CR | 1985 | HIACE | TOYOTA | DIESEL | 14 | 5 | LAMPA | JULIACA | 2/D | 30 MIN | | X | | | | |
| 1138 | 06/12/19 | 10:48 | Z4N476 | A | 1995 | LOGAN | RENAULT | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 30 MIN | | X | | | | |
| 1139 | 06/12/19 | 10:49 | ZAE951 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1140 | 06/12/19 | 10:50 | X2K173 | B2 | 1995 | MERLIN | VOLKSWAGEN | DIESEL | 34 | 33 | JULIACA | LAMPA | 1/M | 40 MIN | | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1141 | 06/12/19 | 10:54 | ZC2966 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1142 | 06/12/19 | 10:55 | Z6C855 | CR | 2005 | HKL865C | JOYLONG | DIESEL | 16 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1143 | 06/12/19 | 10:59 | C0G230 | A | 2013 | RIO | KIA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 1144 | 06/12/19 | 11:00 | D2R816 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 2 | JULIACA | LAMPA | 5/M | 25 MIN | | | X | | | |
| 1145 | 06/12/19 | 11:04 | ZAM951 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1146 | 06/12/19 | 11:08 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1147 | 06/12/19 | 11:09 | B7Q876 | SW | 2004 | PARTNER | PEUGEOT | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1148 | 06/12/19 | 11:11 | Z0I964 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1149 | 06/12/19 | 11:12 | ZAN954 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 25 MIN | 2 | X | | | | |
| 1150 | 06/12/19 | 11:16 | ZCL965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 1151 | 06/12/19 | 11:18 | Z9W954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1152 | 06/12/19 | 11:20 | ZBA968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1153 | 06/12/19 | 11:21 | Z1L774 | CR | 2010 | PANTOJA | TOYOTA | DIESEL | 14 | 10 | VILAVILA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 1154 | 06/12/19 | 11:22 | X3R760 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 1155 | 06/12/19 | 11:23 | D5G957 | CR | 2014 | H2L | JINBEI | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1156 | 06/12/19 | 11:26 | V5Q968 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 7 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1157 | 06/12/19 | 11:28 | D4E804 | PK | 2011 | BT50 | MAZDA | DIESEL | 5 | 3 | PUNO | LAMPA | 3/S | 20 MIN | | X | | | | |
| 1158 | 06/12/19 | 11:29 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1159 | 06/12/19 | 11:30 | ZBG955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/S | 25 MIN | 2 | X | | | | |
| 1160 | 06/12/19 | 11:33 | ZAC955 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1161 | 06/12/19 | 11:36 | V6F959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1162 | 06/12/19 | 11:38 | Z5S701 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | X | | | | |
| 1163 | 06/12/19 | 11:39 | ZCF965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1164 | 06/12/19 | 11:41 | V2V901 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1165 | 06/12/19 | 11:43 | V8J173 | SW | 2017 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 3/S | 30 MIN | | | X | | | |
| 1166 | 06/12/19 | 11:48 | FH7151 | A | 1999 | SUNNY | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 1167 | 06/12/19 | 11:49 | V6W966 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 5/D | 30 MIN | 2 | X | | | | |
| 1168 | 06/12/19 | 11:50 | Z1Q211 | A | 2010 | JRBAN CRUISEI | TOYOTA | GASOLINA | 5 | 3 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1169 | 06/12/19 | 11:52 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1170 | 06/12/19 | 11:54 | ZBP967 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1171 | 06/12/19 | 11:56 | Z6B917 | PK | 2008 | NAVARA | NISSAN | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | | X | | | |
| 1172 | 06/12/19 | 11:59 | Z1L866 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 1173 | 06/12/19 | 12:02 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1174 | 06/12/19 | 12:03 | Z2Z949 | CR | 1995 | HIACE | TOYOTA | DIESEL | 16 | 6 | LAMPA | JULIACA | 3/S | 20 MIN | | | X | | | |
| 1175 | 06/12/19 | 12:05 | Z9Z965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1176 | 06/12/19 | 12:07 | Z9Q952 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1177 | 06/12/19 | 12:10 | Z2Z585 | SW | 2012 | SANTA FE | HYUNDAI | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1178 | 06/12/19 | 12:13 | OO5418 | PK | 1985 | STATION | TOYOTA | GASOLINA | 3 | 3 | LAMPA | JULIACA | 2/D | 10 | | X | | | | |
| 1179 | 06/12/19 | 12:14 | KI5664 | A | 1978 | ESCARABAJO | VOLKSWAGEN | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1180 | 06/12/19 | 12:18 | V4G950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1181 | 06/12/19 | 12:22 | Z4E703 | PK | 1997 | LUV | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | PUNO | 1/M | 2H | | | X | | | |
| 1182 | 06/12/19 | 12:25 | X3W900 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 1183 | 06/12/19 | 12:29 | Z9R952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1184 | 06/12/19 | 12:30 | X1W439 | A | 2012 | VOLEX | GREATWALL | GASOLINA | 5 | 4 | TUCCINA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1185 | 06/12/19 | 12:38 | Z4U305 | A | 2015 | PICANTO | KIA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 1186 | 06/12/19 | 12:47 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 1187 | 06/12/19 | 12:50 | V5G087 | A | 2014 | SANDERO | RENAULT | GASOLINA | 5 | 3 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 1188 | 06/12/19 | 12:53 | V8L334 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 3 | LAMPA | JULIACA | 4/S | 30 MIN | | | X | | | |
| 1189 | 06/12/19 | 13:02 | Z3O142 | SW | 2005 | PROBOX | TOYOTA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1190 | 06/12/19 | 13:05 | X2K173 | B2 | 1995 | MERLIN | VOLKSWAGEN | DIESEL | 34 | 33 | JULIACA | LAMPA | 1/M | 40 MIN | | X | | | | |
| 1191 | 06/12/19 | 13:05 | Z3O142 | SW | 2005 | PROBOX | TOYOTA | GASOLINA | 5 | 3 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1192 | 06/12/19 | 13:09 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1193 | 06/12/19 | 13:18 | Z4X362 | A | 2017 | YARIS | TOYOTA | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 1194 | 06/12/19 | 13:27 | F8E867 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1195 | 06/12/19 | 13:28 | Z9Q952 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1196 | 06/12/19 | 13:31 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | | X | | | | |
| 1197 | 06/12/19 | 13:34 | Z2L372 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1198 | 06/12/19 | 13:38 | X1K418 | CR | 2008 | H1 | HYUNDAI | DIESEL | 11 | 5 | JULIACA | LAMPA | 3/D | 25 MIN | | | X | | | |
| 1199 | 06/12/19 | 13:39 | B4T494 | A | 2009 | GOL | VOLKSWAGEN | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 1200 | 06/12/19 | 13:42 | ZAG959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1201 | 06/12/19 | 13:46 | Z6C855 | CR | 2015 | GDQ33101 | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 1/M | 30 MIN | 2 | | X | | | |
| 1202 | 06/12/19 | 13:48 | V5Q968 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1203 | 06/12/19 | 13:53 | V4T418 | A | 1992 | CELICA | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 1204 | 06/12/19 | 13:55 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1205 | 06/12/19 | 13:57 | V6O662 | A | 2016 | VOLEX | GREATWALL | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/A | 20 MIN | | X | | | | |
| 1206 | 06/12/19 | 13:58 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1207 | 06/12/19 | 14:05 | ZBL960 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1208 | 06/12/19 | 14:08 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1209 | 06/12/19 | 14:14 | Z3W900 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 1210 | 06/12/19 | 14:16 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1211 | 06/12/19 | 14:19 | ZBL963 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1212 | 06/12/19 | 14:20 | V3T838 | PK | 2011 | AMAROK | VOLKSWAGEN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1213 | 06/12/19 | 14:21 | V6V712 | PK | 2014 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1214 | 06/12/19 | 14:23 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1215 | 06/12/19 | 14:24 | Z3Y416 | SW | 2009 | COROLLA | TOYOTA | GASOLINA | 5 | 4 | PUNO | JULIACA | 1/M | 1H | | | X | | | |
| 1216 | 06/12/19 | 14:28 | Z6K953 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 8 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1217 | 06/12/19 | 14:29 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1218 | 06/12/19 | 14:31 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1219 | 06/12/19 | 14:36 | Z4R955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1220 | 06/12/19 | 14:37 | Z9E969 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1221 | 06/12/19 | 14:39 | Z2U953 | CR | 2010 | HIACE | TOYOTA | DIESEL | 16 | 16 | PUNO | LAMPA | 1/A | 2H | | | X | | | |
| 1222 | 06/12/19 | 14:41 | B2C912 | PK | 2010 | FRONTIER | NISSAN | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 1223 | 06/12/19 | 14:43 | V5G124 | A | 2014 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/D | 25 MIN | | | X | | | |
| 1224 | 06/12/19 | 14:58 | EGX912 | PK | 2018 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 1225 | 06/12/19 | 15:06 | D2R816 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/S | 20 MIN | | X | | | | |
| 1226 | 06/12/19 | 15:14 | ZCF964 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1227 | 06/12/19 | 15:15 | F6G519 | SW | 2013 | FORTUNER | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1228 | 06/12/19 | 15:19 | D5G957 | CR | 2017 | HIASE | JINBEI | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1229 | 06/12/19 | 15:21 | ZAE959 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1230 | 06/12/19 | 15:23 | ZBP967 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1231 | 06/12/19 | 15:24 | Z4Z419 | SW | 2016 | ECOSPORT | FORD | GASOLINA | 5 | 3 | JULIACA | LAMPA | 2/S | 25 MIN | | | X | | | |
| 1232 | 06/12/19 | 15:25 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1233 | 06/12/19 | 15:27 | F8G860 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/M | 25 MIN | | | X | | | |
| 1234 | 06/12/19 | 15:29 | Z2M243 | SW | 2007 | PROBOX | TOYOTA | GASOLINA | 5 | 4 | PUNO | LAMPA | 2/D | 25 MIN | | X | | | | |
| 1235 | 06/12/19 | 15:31 | V5G124 | A | 2012 | YARIS | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 2/D | 20 MIN | | | X | | | |
| 1236 | 06/12/19 | 15:36 | V3R896 | PK | 1995 | HILUX | TOYOTA | DIESEL | 3 | 2 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1237 | 06/12/19 | 15:37 | ZAR955 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1238 | 06/12/19 | 15:38 | T2X094 | SW | 2014 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1239 | 06/12/19 | 15:40 | ZCL765 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1240 | 06/12/19 | 15:41 | Z4Z419 | SW | 2017 | ECOSPORT | FORD | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 1241 | 06/12/19 | 15:42 | V7P956 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1242 | 06/12/19 | 15:43 | Z4G511 | CR | 1991 | CARAVAN | NISSAN | DIESEL | 14 | 3 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1243 | 06/12/19 | 15:48 | V7C964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1244 | 06/12/19 | 15:49 | Z4Y708 | PK | 1997 | DATSUN | NISSAN | DIESEL | 5 | 5 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1245 | 06/12/19 | 15:50 | B0Q515 | A | 2011 | RIO | KIA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1246 | 06/12/19 | 15:55 | ZAZ961 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1247 | 06/12/19 | 16:01 | V8L595 | A | 2012 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1248 | 06/12/19 | 16:05 | X2T714 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1249 | 06/12/19 | 16:07 | Z3T558 | CR | 1985 | HIACE | TOYOTA | DIESEL | 14 | 5 | JULIACA | LAMPA | 2/D | 30 MIN | | | X | | | |
| 1250 | 06/12/19 | 16:08 | X4C332 | A | 2013 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 1251 | 06/12/19 | 16:12 | Z6M877 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 1252 | 06/12/19 | 16:16 | Z2S084 | CR | 2012 | H1 | HYUNDAI | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 20 MIN | | | X | | | |
| 1253 | 06/12/19 | 16:18 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1254 | 06/12/19 | 16:21 | Z2I416 | SW | 2012 | HAVAL | GREATWALL | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | X | | | | |
| 1255 | 06/12/19 | 16:24 | AVV629 | PK | 1997 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 1256 | 06/12/19 | 16:30 | Z3R112 | A | 1997 | CALDINA | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 1257 | 06/12/19 | 16:31 | Z8R961 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1258 | 06/12/19 | 16:33 | Z5G231 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/S | 20 MIN | | X | | | | |
| 1259 | 06/12/19 | 16:34 | Z3S410 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1260 | 06/12/19 | 16:36 | Z0I964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1261 | 06/12/19 | 16:37 | V7O965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1262 | 06/12/19 | 16:39 | A1F914 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 2/D | 25 MIN | | | X | | | |
| 1263 | 06/12/19 | 16:40 | Z8T958 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1264 | 06/12/19 | 16:43 | V3D685 | CR | 2011 | CHG391C4 | CHANGHE | GASOLINA | 8 | 2 | LAMPA | JULIACA | 5/S | 30 MIN | | | X | | | |
| 1265 | 06/12/19 | 16:46 | M2I783 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | X | | | | |
| 1266 | 06/12/19 | 16:47 | D2H889 | PK | 1990 | HILUX | TOYOTA | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/S | 30 MIN | | | X | | | |
| 1267 | 06/12/19 | 16:49 | X2O474 | A | 2013 | YARIS | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 25 MIN | | X | | | | |
| 1268 | 06/12/19 | 16:50 | Z3Q343 | SW | 2000 | CALDINA | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1269 | 06/12/19 | 16:51 | A7S519 | SW | 2010 | RAV4 | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/M | 30 MIN | | X | | | | |
| 1270 | 06/12/19 | 16:53 | C8V395 | CR | 2001 | STAREX | HYUNDAI | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1271 | 06/12/19 | 17:01 | Z5O093 | A | 2018 | PICANTO | KIA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1272 | 06/12/19 | 17:03 | V4V337 | SW | 2015 | CAPTIVA | CHEVROLET | GASOLINA | 5 | 3 | LAMPA | PUNO | 2/S | 1.15H | | | X | | | |
| 1273 | 06/12/19 | 17:05 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1274 | 06/12/19 | 17:06 | ANG729 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1275 | 06/12/19 | 17:07 | Z0I964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 13 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1276 | 06/12/19 | 17:08 | Z4H965 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1277 | 06/12/19 | 17:12 | ZBL963 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1278 | 06/12/19 | 17:13 | V8J797 | PK | 2010 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/S | 25 MIN | | X | | | | |
| 1279 | 06/12/19 | 17:14 | Z0A964 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1280 | 06/12/19 | 17:15 | Z5D402 | A | 1988 | CORONA | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1281 | 06/12/19 | 17:17 | Z0A964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1282 | 06/12/19 | 17:18 | AVG263 | CR | 2017 | APV | SUZUKI | GASOLINA | 8 | 2 | JULIACA | LAMPA | 2/A | 30 MIN | | | X | | | |
| 1283 | 06/12/19 | 17:25 | Z1L887 | PK | 2005 | VANETTE | NISSAN | GASOLINA | 3 | 2 | LAMPA | JULIACA | 4/S | 30 MIN | | | X | | | |
| 1284 | 06/12/19 | 17:26 | Z5E068 | A | 2017 | RIO | KIA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/D | 30 MIN | | X | | | | |
| 1285 | 06/12/19 | 17:32 | AMG896 | PK | 2016 | HILUX | TOYOTA | DIESEL | 5 | 2 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1286 | 06/12/19 | 17:34 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1287 | 06/12/19 | 17:37 | ZBL963 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1288 | 06/12/19 | 17:42 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1289 | 06/12/19 | 17:46 | ABL949 | PK | 2014 | L200 | MITSUBISHI | DIESEL | 5 | 4 | LAMPA | JULIACA | 2/D | 20 MIN | | X | | | | |
| 1290 | 06/12/19 | 17:47 | Z9Z965 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | X | | | | |
| 1291 | 06/12/19 | 17:58 | V7R965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1292 | 06/12/19 | 18:01 | Z5B231 | A | 2016 | ACCENT | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 3/M | 25 MIN | | | X | | | |
| 1293 | 06/12/19 | 18:02 | ZCL965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1294 | 06/12/19 | 18:04 | D4E804 | PK | 2010 | BT50 | MAZDA | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 1295 | 06/12/19 | 18:05 | Z5F566 | A | 2010 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 1296 | 06/12/19 | 18:07 | T2X094 | SW | 2014 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 1297 | 06/12/19 | 18:09 | ZAG954 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1298 | 06/12/19 | 18:10 | Z2P162 | A | 2003 | IST | TOYOTA | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/M | 1.2 | | | X | | | |
| 1299 | 06/12/19 | 18:13 | V8D623 | A | 2017 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 1300 | 06/12/19 | 18:14 | Z2N017 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1301 | 06/12/19 | 18:15 | X2K583 | SW | 2015 | RAV4 | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 1302 | 06/12/19 | 18:16 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1303 | 06/12/19 | 18:18 | Z0O959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1304 | 06/12/19 | 18:19 | Z9S959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1305 | 06/12/19 | 18:23 | Z0T958 | CR | 2012 | HIACE | TOYOTA | DIESEL | 16 | 16 | JULIACA | AZANGARO | 4/D | 30 MIN | 2 | X | | | | |
| 1306 | 06/12/19 | 18:24 | V8F137 | A | 2016 | SAIL | CHEVROLET | GASOLINA | 5 | 4 | LAMPA | AREQUIPA | 1/M | 6H | | | X | | | |
| 1307 | 06/12/19 | 18:32 | Z3H022 | SW | 2008 | DEMIO | MAZDA | GASOLINA | 5 | 1 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1308 | 06/12/19 | 18:33 | ZBL963 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1309 | 06/12/19 | 18:50 | OO8414 | PK | 1985 | CORONA | TOYOTA | GASOLINA | 3 | 2 | JULIACA | LAMPA | 1/D | 30 MIN | | | X | | | |
| 1310 | 06/12/19 | 18:57 | BK1906 | A | 1989 | ACCENT | HYUNDAI | GASOLINA | 5 | 1 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1311 | 06/12/19 | 18:59 | A7I893 | PK | 1991 | LUV | CHEVROLET | GASOLINA | 5 | 4 | PUNO | LAMPA | 1/S | 1.3 H | | | X | | | |
| 1312 | 06/12/19 | 19:03 | Z5J318 | CR | 2018 | N300 | CHEVROLET | GASOLINA | 8 | 7 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1313 | 06/12/19 | 19:05 | Z5J316 | CR | 2018 | N300 | CHEVROLET | GASOLINA | 8 | 1 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1314 | 06/12/19 | 19:16 | Z5B433 | A | 2017 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 25 MIN | | | X | | | |
| 1315 | 06/12/19 | 19:18 | B0V836 | PK | 2007 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1316 | 06/12/19 | 19:24 | V0Q968 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 1/D | 30 MIN | | | X | | | |
| 1317 | 06/12/19 | 19:25 | V5L036 | A | 2016 | I10 | HYUNDAI | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 1318 | 06/12/19 | 19:30 | Z0A964 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1319 | 06/12/19 | 19:34 | Z9D965 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1320 | 06/12/19 | 19:38 | Z3S409 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1321 | 06/12/19 | 19:39 | AMX814 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | CABANILLAS | 2/D | 1H | | | X | | | |
| 1322 | 06/12/19 | 19:40 | ZBX956 | CR | 2016 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1323 | 06/12/19 | 19:42 | C5P480 | A | 2012 | I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1324 | 06/12/19 | 19:46 | Z9Z965 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 1325 | 06/12/19 | 19:51 | V1N147 | SW | 2008 | TUCSON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 2/S | 30 MIN | | | X | | | |
| 1326 | 06/12/19 | 20:01 | ZAR955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1327 | 06/12/19 | 20:02 | Z8S954 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1328 | 06/12/19 | 20:03 | V7C964 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1329 | 06/12/19 | 20:05 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 9 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1330 | 06/12/19 | 20:06 | ZAN954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1331 | 06/12/19 | 20:07 | EGP055 | PK | 2008 | FRONTIER | NISSAN | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | X | | | | |
| 1332 | 06/12/19 | 20:11 | V6M348 | A | 2014 | SAIL | CHEVROLET | GASOLINA | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | | X | | | |
| 1333 | 06/12/19 | 20:12 | Z9S955 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1334 | 06/12/19 | 20:21 | Z0W963 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1335 | 06/12/19 | 20:27 | ZAG954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 3/D | 30 MIN | 2 | X | | | | |
| 1336 | 06/12/19 | 20:32 | M2P919 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 3 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1337 | 06/12/19 | 20:33 | X3Q065 | A | 2016 | EON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1338 | 06/12/19 | 20:38 | Z9S979 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 20 MIN | 2 | X | | | | |
| 1339 | 06/12/19 | 20:40 | V7R965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/S | 25 MIN | 2 | X | | | | |
| 1340 | 06/12/19 | 20:41 | ZCL966 | CR | 2016 | MASTER | RENAULT | DIESEL | 16 | 15 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1341 | 06/12/19 | 20:44 | EGX912 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 1 | JULIACA | LAMPA | 1/S | 25 MIN | | X | | | | |
| 1342 | 06/12/19 | 20:53 | Z9O965 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1343 | 06/12/19 | 20:55 | VBF393 | SW | 2016 | TUCSON | HYUNDAI | GASOLINA | 5 | 2 | JULIACA | LAMPA | 1/A | 30 MIN | | | X | | | |
| 1344 | 06/12/19 | 20:56 | D5G957 | CR | 2018 | H2L | JINBEI | DIESEL | 16 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1345 | 06/12/19 | 20:58 | ZBE950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1346 | 06/12/19 | 21:01 | V8A623 | A | 2016 | YARIS | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1347 | 06/12/19 | 21:07 | F8L254 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 3/D | 30 MIN | 2 | X | | | | |
| 1348 | 06/12/19 | 21:10 | Z2G576 | CR | 2011 | H1 | HYUNDAI | DIESEL | 16 | 14 | LAMPA | JULIACA | 2/D | 30 MIN | | | X | | | |
| 1349 | 06/12/19 | 21:14 | Z8R961 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1350 | 06/12/19 | 21:15 | X4B118 | A | 2014 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1351 | 06/12/19 | 21:17 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 10 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1352 | 06/12/19 | 21:22 | V0X150 | A | 2018 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 5 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1353 | 06/12/19 | 21:33 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1354 | 06/12/19 | 21:38 | Z5L337 | SW | 2016 | AVANZA | TOYOTA | GASOLINA | 7 | 3 | LAMPA | JULIACA | 1/S | 35 MIN | | | X | | | |
| 1355 | 06/12/19 | 21:43 | Z5E068 | A | 2017 | RIO | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 2/D | 25 MIN | | X | | | | |
| 1356 | 06/12/19 | 21:45 | Z4D501 | SW | 2004 | PROBOX | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/M | 30 MIN | | | X | | | |
| 1357 | 06/12/19 | 21:46 | ZAW959 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1358 | 06/12/19 | 21:50 | Z4R435 | SW | 2016 | RAV4 | TOYOTA | GASOLINA | 5 | 2 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1359 | 06/12/19 | 21:51 | ZCL966 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1360 | 06/12/19 | 21:53 | V4G950 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1361 | 06/12/19 | 21:56 | V4S965 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 10 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1362 | 06/12/19 | 22:04 | Z5G277 | SW | 2017 | TUCSON | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | | X | | | |
| 1363 | 06/12/19 | 22:07 | X1K418 | CR | 2002 | STAREX | HYUNDAI | DIESEL | 12 | 10 | JULIACA | LAMPA | 1/M | 25 MIN | | | X | | | |
| 1364 | 06/12/19 | 22:09 | V2K807 | CR | 2005 | BOXER | PEUGEOT | DIESEL | 16 | 1 | JULIACA | LAMPA | 1/M | 30 MIN | | X | | | | |
| 1365 | 06/12/19 | 22:11 | ZCF954 | CR | 2018 | HKL6540C | JOYLONG | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1366 | 06/12/19 | 22:12 | FGX857 | CR | 2016 | HIACE | TOYOTA | DIESEL | 16 | 14 | LAMPA | JULIACA | 1/D | 30 MIN | 2 | X | | | | |
| 1367 | 06/12/19 | 22:22 | V7V965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 16 | LAMPA | JULIACA | 4/D | 30 MIN | 2 | X | | | | |
| 1368 | 06/12/19 | 22:24 | OO8414 | PK | 1985 | HILUX | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 1369 | 06/12/19 | 22:29 | D2H889 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/D | 25 MIN | | | X | | | |
| 1370 | 06/12/19 | 22:33 | X3C474 | A | 2014 | YARIS | TOYOTA | GASOLINA | 5 | 2 | PUCARA | JULIACA | 1/D | 1.3 | | | X | | | |
| 1371 | 06/12/19 | 22:36 | X4C332 | A | 2017 | GRAND I10 | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/M | 30 MIN | | | X | | | |
| 1372 | 06/12/19 | 22:40 | B0E706 | PK | 2012 | HILUX | TOYOTA | DIESEL | 5 | 1 | LAMPA | JULIACA | 2/S | 30 MIN | | | X | | | |
| 1373 | 06/12/19 | 22:41 | AMG896 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 20 MIN | | | X | | | |
| 1374 | 06/12/19 | 22:44 | ALF151 | A | 2015 | ELANTRA | HYUNDAI | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/A | 35 MIN | | X | | | | |
| 1375 | 06/12/19 | 22:49 | Z2N454 | SW | 2008 | SUCCED | TOYOTA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 30 MIN | | | X | | | |
| 1376 | 06/12/19 | 22:52 | ZAW954 | CR | 2014 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1377 | 06/12/19 | 22:55 | AZI123 | PK | 2009 | X6 | BMW | DIESEL | 4 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1378 | 06/12/19 | 22:58 | A8J817 | PK | 2006 | HILUX | TOYOTA | DIESEL | 5 | 5 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1379 | 07/12/19 | 00:22 | A1L779 | CR | 1986 | CIVILIAN | NISSAN | DIESEL | 27 | 26 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1380 | 07/12/19 | 01:06 | V7B168 | CR | 2014 | N300 | CHEVROLET | GASOLINA | 8 | 7 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE PASAJEROS)**

FECHA : 04-05-06-07/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | FRECUENCIA | TIEMPO | PRECIO | T | P | E | S | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1381 | 07/12/19 | 01:40 | Z6W951 | CR | 2008 | SPRINTER | MERCEDES BENZ | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1382 | 07/12/19 | 01:50 | AHK911 | PK | 2011 | HILUX | TOYOTA | DIESEL | 5 | 4 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1383 | 07/12/19 | 01:54 | Z1P783 | CR | 1992 | DINA | TOYOTA | DIESEL | 15 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1384 | 07/12/19 | 02:04 | T3J965 | CR | 2006 | SPRINTER | MERCEDES BENZ | DIESEL | 15 | 14 | LAMPA | JULIACA | 3/D | 25 MIN | | X | | | | |
| 1385 | 07/12/19 | 02:15 | C9S936 | PK | 2014 | BT 50 | MAZDA | DIESEL | 5 | 1 | LAMPA | JULIACA | 4/D | 25 MIN | | X | | | | |
| 1386 | 07/12/19 | 02:51 | AFJ765 | PK | 2009 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1387 | 07/12/19 | 03:28 | Z1Y793 | CR | 1990 | DINA | TOYOTA | DIESEL | 15 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1388 | 07/12/19 | 03:40 | Z1M471 | CR | 1993 | DINA | TOYOTA | DIESEL | 15 | 14 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1389 | 07/12/19 | 03:53 | F2E813 | PK | 2001 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1390 | 07/12/19 | 03:58 | U8C853 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 4/D | 25 MIN | | X | | | | |
| 1391 | 07/12/19 | 04:10 | ZCL965 | CR | 2018 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | | X | | | | |
| 1392 | 07/12/19 | 04:13 | Z9P950 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 11 | LAMPA | JULIACA | 3/D | 25 MIN | 2 | X | | | | |
| 1393 | 07/12/19 | 04:39 | ZAE959 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 15 | JULIACA | LAMPA | 4/D | 25 MIN | 2 | X | | | | |
| 1394 | 07/12/19 | 04:51 | V6W966 | CR | 2012 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1395 | 07/12/19 | 05:01 | AMX814 | PK | 2015 | HILUX | TOYOTA | DIESEL | 5 | 4 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 1396 | 07/12/19 | 05:18 | V2V041 | CR | 2011 | MASTER | RENAULT | DIESEL | 16 | 16 | JULIACA | LAMPA | 4/D | 30 MIN | 2 | X | | | | |
| 1397 | 07/12/19 | 05:29 | Z3X374 | A | 2014 | CORONA | TOYOTA | GASOLINA | 5 | 4 | JULIACA | LAMPA | 1/S | 20 MIN | | X | | | | |
| 1398 | 07/12/19 | 05:37 | ZBG955 | CR | 2015 | MASTER | RENAULT | DIESEL | 16 | 14 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |
| 1399 | 07/12/19 | 06:01 | AXZ737 | PK | 2017 | HILUX | TOYOTA | DIESEL | 5 | 2 | LAMPA | JULIACA | 1/D | 30 MIN | | X | | | | |
| 1400 | 07/12/19 | 06:03 | AKN037 | SW | 2015 | SPORTAGE | KIA | GASOLINA | 5 | 4 | LAMPA | JULIACA | 1/S | 20 MIN | | X | | | | |
| 1401 | 07/12/19 | 06:10 | Z4K753 | PK | 2013 | HILUX | TOYOTA | DIESEL | 5 | 3 | JULIACA | LAMPA | 1/D | 20 MIN | | X | | | | |
| 1402 | 07/12/19 | 06:22 | Z0W965 | CR | 2013 | MASTER | RENAULT | DIESEL | 16 | 12 | LAMPA | JULIACA | 4/D | 25 MIN | 2 | X | | | | |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE CARGA)**

FECHA : 04-05-06/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | CARROCERIA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | PRODUCTO | EMBALAJE | FRECUENCIA | TIEMPO | PRECIO | NETO | UTIL | CARGA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4/12/2019 | 06:42 | F7K925 | C2 | 2009 | 300 | HINO | BARANDA | DIESEL | 3 | 1 | JULIACA | LAMPA | VACIO | | 1/DIARIO | 40 MIN | | 3.52 | 3.98 | 7.5 |
| 2 | 4/12/2019 | 07:31 | Z3G818 | C2 | 2010 | SC1040KM | CARY | BARANDA | DIESEL | 3 | 1 | PUNO | LAMPA | MERCADERIA | CAJAS | 1/MES | 1 H 40 MIN | | 2.23 | 4 | 6.23 |
| 3 | 4/12/2019 | 08:06 | F7K925 | C2 | 2009 | 300 | HINO | BARANDA | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/MES | 40 MIN | | 3.52 | 3.98 | 7.5 |
| 4 | 4/12/2019 | 09:02 | Z6N947 | C2 | 2017 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 1 | JULIACA | MIRAFLORES | VACIO | | 1/MES | 50 MIN | | 2.99 | 4.51 | 7.5 |
| 5 | 4/12/2019 | 09:15 | ADK919 | C2 | 2014 | HFC1040K | JAC | FURGON | DIESEL | 3 | 1 | JULIACA | LAMPA | VACIO | | 2/MES | 30 MIN | | 2.56 | 3.8 | 6.36 |
| 6 | 4/12/2019 | 09:24 | V2D934 | C2 | 2015 | DUTRO | HINO | FURGON | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/MES | 40 MIN | | 2.8 | 3.7 | 6.5 |
| 7 | 4/12/2019 | 10:00 | D6B850 | C2 | 2011 | 300 | HINO | BARANDA | DIESEL | 3 | 1 | JULIACA | PALCA | VACIO | | 2/SEMANA | 40 MIN | | 3.077 | 4.423 | 7.5 |
| 8 | 4/12/2019 | 10:24 | Z3E941 | C2 | 2010 | FUSO | MITSUBISHI | FURGON | DIESEL | 2 | 2 | JULIACA | LAMPA | CERVEZA | CAJAS | 1/SEMANAL | 30 MIN | | 7.5 | 2.46 | 9.96 |
| 9 | 4/12/2019 | 10:34 | C9H849 | C2 | 2005 | 17212001 | FORD | FURGON | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 2/SEMANA | 40 MIN | | 6.48 | 11.52 | 18 |
| 10 | 4/12/2019 | 10:38 | ADK919 | C2 | 2014 | HFC1040K | JAC | FURGON | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 2/DIARIO | 30 MIN | | 2.56 | 3.8 | 6.36 |
| 11 | 4/12/2019 | 11:02 | Z6P830 | C2 | 2015 | HFC1040K | JAC | BARANDA | DIESEL | 2 | 2 | SUTUCA | CABANILLAS | LECHE | PORONGOS | 1/DIARIO | 4 HORAS | | 2.9 | 4.3 | 7.20 |
| 12 | 4/12/2019 | 11:18 | Z5S909 | C2 | 1991 | DINA | TOYOTA | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | ABARROTES | | 1/SEMANAL | 30 MIN | | 2.9 | 4.25 | 7.15 |
| 13 | 4/12/2019 | 11:27 | Z4Y726 | C2 | 1995 | F7 | VOLVO | BARANDA | DIESEL | 3 | 3 | JULIACA | LAMPA | TRANSPORTADOR | | 1/SEMANAL | 30 MIN | | 4.9 | 1.1 | 6.00 |
| 14 | 4/12/2019 | 11:29 | Z3O705 | C2 | 2011 | EXOR | AUTOCRAFT | BARANDA | DIESEL | 3 | 1 | CABANILLA | JULIACA | VACIO | | 1/SEMANAL | 4 HORAS | | 2.95 | 4.5 | 7.45 |
| 15 | 4/12/2019 | 11:36 | A4H889 | C2 | 1988 | FUSO | MITSUBISHI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | CEMENTO | BOLSAS | 1/SEMANAL | 40 MIN | | 2.6 | 4 | 6.60 |
| 16 | 4/12/2019 | 12:03 | ZSZ826 | C2 | 2014 | FUSO | MITSUBISHI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | CERVEZA | CAJAS | 1/SEMANAL | 30 MIN | | 2.8 | 4.7 | 7.50 |
| 17 | 4/12/2019 | 12:04 | B3C921 | C3 | 2010 | FM6X4 | VOLVO | VOLQUETE | DIESEL | 2 | 1 | JULIACA | LAMPA | VACIO | | 1/SEMANAL | 30 MIN | | 14.29 | 10.71 | 25.00 |
| 18 | 4/12/2019 | 12:26 | Z1A727 | C2 | 2010 | HD78 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | ABARROTES | | 1/SEMANAL | 30 MIN | | 3.34 | 4.46 | 7.80 |
| 19 | 4/12/2019 | 14:38 | B3E921 | C3 | 2010 | FM | VOLVO | VOLQUETE | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/DIARIO | 1 HORA | | 14.2 | 10.71 | 24.91 |
| 20 | 4/12/2019 | 15:01 | D6R734 | C2 | 1992 | HD78 | HYUNDAI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | CEMENTO | BOLSAS | 1/SEMANAL | 30 MIN | | 2.49 | 2.8 | 5.29 |
| 21 | 4/12/2019 | 15:03 | A4H889 | C2 | 1988 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/SEMANAL | 40 MIN | | 2.6 | 4 | 6.60 |
| 22 | 4/12/2019 | 15:26 | WH6631 | C2 | 1987 | 500 | DODGE | BARANDA | DIESEL | 3 | 1 | LAMPA | JULIACA | ABONO | | 1/MES | 40 MIN | | 5.235 | 5.832 | 11.07 |
| 23 | 4/12/2019 | 15:35 | ADG890 | C2 | 1974 | D500 | DODGE | BARANDA | DIESEL | 3 | 1 | LAMPA | JULIACA | ABONO | SACOS | 1/SEMANAL | 40 MIN | | 4.6 | 6.236 | 10.84 |
| 24 | 4/12/2019 | 16:00 | V4N712 | C2 | 2002 | 500 | HINO | BARANDA | DIESEL | 3 | 1 | CABANILLA | JULIACA | GAS | BALONES | 1/SEMANAL | 4 HORAS | | 3.5 | 6.9 | 10.40 |
| 25 | 4/12/2019 | 16:04 | V9V857 | C2 | 2018 | HD78 | HYUNDAI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | ITRUCTURAS METALICAS | | 1/MENSUAL | 30 MIN | | 3.7 | 5.9 | 9.60 |
| 26 | 4/12/2019 | 16:18 | A8S897 | C2 | 1996 | FUSO | MITSUBISHI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | VERDURAS | SACOS | 1/SEMANAL | 30 MIN | | 4.32 | 4.21 | 8.53 |
| 27 | 4/12/2019 | 16:22 | Z5Z826 | C2 | 2014 | CANTER | MITSUBISHI | FURGON | DIESEL | 3 | 1 | LAMPA | PUNO | VACIO | | 1/SEMANAL | 1 HORA | | 2.8 | 4.7 | 7.50 |
| 28 | 4/12/2019 | 16:42 | B3R921 | C3 | 2010 | FM6X4 | VOLVO | VOLQUETE | DIESEL | 2 | 1 | JULIACA | LAMPA | VACIO | | 2/SEMANAL | 30 MIN | | 14.2 | 10.8 | 25.00 |
| 29 | 4/12/2019 | 17:05 | C9K855 | C3 | 1990 | NL10 | VOLVO | VOLQUETE | DIESEL | 3 | 2 | JULIACA | LAMPA | ARENA | | 1/SEMANAL | 30 MIN | | 11.5 | 20 | 31.50 |
| 30 | 4/12/2019 | 17:36 | Z1E845 | C2 | 2009 | HD65 | HYUNDAI | FURGON | DIESEL | 2 | 2 | JULIACA | LAMPA | GAS | BALONES | 2/SEMANA | 30 MIN | | 2.99 | 3.51 | 6.5 |
| 31 | 4/12/2019 | 18:26 | F8S759 | C2 | 1992 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/SEMANAL | 50 MIN | | 2.8 | 3.5 | 6.30 |
| 32 | 5/12/2019 | 06:31 | X3E943 | C2 | 2014 | MIGHTY | HYUNDAI | CISTERNA | DIESEL | 2 | 1 | JULIACA | LAMPA | COMBUSTIBLE | | 2/M | 40 MIN | | 2.64 | 2.3 | 5.19 |
| 33 | 5/12/2019 | 06:31 | X3E943 | C2 | 1994 | MIGTHY | HYUNDAI | CISTERNA | DIESEL | 3 | 1 | JULIACA | LAMPA | COMBUSTIBLE | | 2/MES | 40 MIN | | 2.69 | 2.5 | 5.19 |
| 34 | 5/12/2019 | 06:58 | X2L859 | C2 | 1987 | CANTER | MITSUBISHI | FURGON | DIESEL | 3 | 2 | JULIACA | LAMPA | GASEOSA | | 1/S | 40 MIN | | 3.07 | 2.93 | 6 |
| 35 | 5/12/2019 | 07:11 | C6F730 | C2 | 2014 | FC500 | HINO | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | COLCHONES | | 1/M | 30 MIN | | 3.969 | 6.431 | 10.4 |
| 36 | 5/12/2019 | 07:16 | B0T812 | C2 | 1990 | MIGHTY | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | ITRUCTURAS METALICAS | | 1/M | 40 MIN | | 2.895 | 3.005 | 5.9 |
| 37 | 5/12/2019 | 07:34 | V4Z794 | C3 | 1988 | F12 | VOLVO | VOLQUETE | DIESEL | 3 | 1 | LAMPA | PICHINCHA | VACIO | | 3/DIARIO | 20 MIN | | 14.2 | 12 | 26.2 |
| 38 | 5/12/2019 | 08:00 | APZ921 | C2 | 2015 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 35 MIN | | 3 | 3.5 | 5 |
| 39 | 5/12/2019 | 08:04 | COG890 | C2 | 2005 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 1 | JULIACA | LAMPA | LADRILLOS | | 1/ANUAL | 40 MIN | | 2.9 | 2.8 | 5.7 |
| 40 | 5/12/2019 | 08:05 | Z6P830 | C2 | 2015 | HFC1040K | JAC | BARANDA | DIESEL | 3 | 1 | LAMPA | SUTUCA | LECHE | | 1/DIARIO | 30 MIN | | 2.25 | 3.5 | 5.75 |
| 41 | 5/12/2019 | 08:28 | F1B719 | 3S4 | 2009 | R470 | SCANIA | CAMABAJA | DIESEL | 2 | 1 | JULIACA | LAMPA | VACIO | | 1/M | 40 MIN | | 8.419 | 20.081 | 48 |
| 42 | 5/12/2019 | 08:31 | Z1N806 | C2 | 1997 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 30 MIN | | 2.6 | 4 | 8.5 |
| 43 | 5/12/2019 | 08:33 | Z6I829 | C2 | 2016 | 300 | HINO | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | GANADO | | 1/M | 30 MIN | | 3.01 | 4.49 | 8 |
| 44 | 5/12/2019 | 08:39 | V4Z794 | C3 | 1998 | F12 | VOLVO | VOLQUETE | DIESEL | 2 | 1 | PICHINCHA | LAMPA | RELLENO | | 3/D | 15 MIN | | 11 | 16 | 30 |
| 45 | 5/12/2019 | 08:45 | D9V944 | C2 | 2012 | M1 106 | FRIGHTLINER | FURGON | DIESEL | 3 | 2 | JULIACA | LAMPA | CERVEZA | CAJAS | 1/SEMANAL | 40 MIN | | 5.6 | 10.4 | 16 |
| 46 | 5/12/2019 | 08:47 | D9V944 | C2 | 2010 | M2 106 | FREIGHTLINER | FURGON | DIESEL | 3 | 3 | JULIACA | LAMPA | CERVEZA | | 4/S | 30 MIN | | 10 | 18 | 28 |
| 47 | 5/12/2019 | 08:55 | D8X819 | C2 | 2009 | M2 106 | FREIGHTLINER | FURGON | DIESEL | 3 | 3 | JULIACA | LAMPA | CERVEZA | | 4/S | 30 MIN | | 10 | 18 | 28 |
| 48 | 5/12/2019 | 08:56 | D8X819 | C2 | 2012 | M1 106 | FRIGHTLINER | FURGON | DIESEL | 5 | 4 | JULIACA | LAMPA | CERVEZA | | 1/SEMANAL | 40 MIN | | 5.6 | 10.4 | 16 |
| 49 | 5/12/2019 | 09:14 | APW709 | C2 | 2016 | HFC | JAC | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | GAS | | 1/S | 30 MIN | | 2.25 | 4 | 6.25 |
| 50 | 5/12/2019 | 09:42 | APZ921 | C2 | 2015 | HD65 | HYUNDAI | BARANDA | DIESEL | 5 | 4 | LAMPA | JULIACA | VACIO | | 2/SEMANAL | 40 MIN | | 2.85 | 4.5 | 7.35 |
| 51 | 5/12/2019 | 09:46 | Z3T849 | C2 | 1984 | DYNA | TOYOTA | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | CERVEZA | | 1/A | 30 MIN | | 1.8 | 1.97 | 1 |
| 52 | 5/12/2019 | 09:51 | X3E943 | C2 | 1994 | MIGTHY | HYUNDAI | CISTERNA | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | CISTERNA | 2/MES | 40 MIN | | 2.6 | 2.5 | 5.1 |
| 53 | 5/12/2019 | 09:53 | V4Z794 | C3 | 1981 | F12 | VOLVO | VOLQUETE | DIESEL | 3 | 2 | PICHINCHA | LAMPA | RELLENO | | 3/D | 15 MIN | | 11 | 18 | 30 |
| 54 | 5/12/2019 | 10:11 | F6O860 | C2 | 1998 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | CAMINACA | VACIO | | 1/D | 30 MIN | | 2.8 | 3.2 | 10 |
| 55 | 5/12/2019 | 10:20 | H1T916 | C2 | 1998 | FUSO | MITSUBISHI | CISTERNA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/D | 30 MIN | | 3.1 | 4.8 | 12 |
| 56 | 5/12/2019 | 11:01 | V8X841 | C2 | 2016 | AUMARK | FOTON | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | HUEVO | | 1/M | 40 MIN | | 2.35 | 5.14 | 4 |
| 57 | 5/12/2019 | 11:07 | V4Z794 | C3 | 1981 | F12 | VOLVO | VOLQUETE | DIESEL | 3 | 2 | PICHINCHA | LAMPA | RELLENO | | 3/D | 15 MIN | | 11 | 16 | 30 |
| 58 | 5/12/2019 | 11:18 | V4Z794 | C3 | 1988 | F12 | VOLVO | VOLQUETE | DIESEL | 3 | 1 | LAMPA | PICHINCHA | VACIO | | 3/DIARIO | 20 MIN | | 14 | 11 | 25 |
| 59 | 5/12/2019 | 11:21 | Z5R923 | C2 | 1996 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/M | 30 MIN | | 2.29 | 2.21 | 4 |
| 60 | 5/12/2019 | 11:28 | Z2N923 | C2 | 1993 | MIGHTY | HYUNDAI | PLATAFORMA | DIESEL | 3 | 2 | JULIACA | LAMPA | CEMENTO | | 3/D | 30 MIN | | 3.09 | 3.49 | 10 |
| 61 | 5/12/2019 | 12:14 | V4Z794 | C3 | 1981 | F12 | VOLVO | VOLQUETE | DIESEL | 3 | 2 | PICHINCHA | LAMPA | RELLENO | | 3/D | 15 MIN | | 11 | 16 | 30 |
| 62 | 5/12/2019 | 12:18 | Z4P852 | C3 | 1982 | F12 | VOLVO | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | MADERA | | 1/M | 30 MIN | | 10.5 | 17 | 25 |
| 63 | 5/12/2019 | 12:38 | Z1N806 | C2 | 1997 | FUSO | MITSUBISHI | FURGON | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/SEMANAL | 30 MIN | | 2.6 | 4 | 6.6 |
| 64 | 5/12/2019 | 13:13 | D6P748 | C2 | 1997 | HD72 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/M | 30 MIN | | 2.6 | 3.4 | 6 |
| 65 | 5/12/2019 | 13:23 | EGK178 | C3 | 2014 | FMX | VOLVO | VOLQUETE | DIESEL | 2 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 30 MIN | | 11.5 | 16.5 | 30 |
| 66 | 5/12/2019 | 13:32 | Z3T770 | C2 | 2012 | CA5083VXY | FAW | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/M | 30 MIN | | 3.9 | 6.6 | 10.5 |
| 67 | 5/12/2019 | 13:46 | Z5R923 | C2 | 1998 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | PICHINCHA | LAMPA | VACIO | | 3/D | 15 MIN | | 2.89 | 2.21 | 5.1 |

**ENCUESTA ORIGEN - DESTINO (VEHÍCULOS DE CARGA)**

FECHA : 04-05-06/12/2019

SENTIDO : AMBOS

| Nº | FECHA | HORA | PLACA | TIPO | AÑO | MODELO | MARCA | CARROCERIA | COMBUSTIBLE | ASIENTOS | PASAJEROS | ORIGEN | DESTINO | PRODUCTO | EMBALAJE | FRECUENCIA | TIEMPO | PRECIO | NETO | UTIL | CARGA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 | 5/12/2019 | 14:02 | C9C937 | C2 | 2001 | 1721 | FORD | FURGON | DIESEL | 3 | 2 | JULIACA | LAMPA | VARIOS | | 1/D | 35 MIN | | 4.1 | 7.6 | 5 |
| 69 | 5/12/2019 | 14:14 | D2E940 | C2 | 1997 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 1 | JULIACA | LAMPA | VACIO | | 1/M | 35 MIN | | 3.27 | 5.3 | 8.57 |
| 70 | 5/12/2019 | 14:35 | X3J891 | C2 | 1987 | 500 | DODGE | BARANDA | DIESEL | 3 | 1 | JULIACA | LAMPA | VACIO | | 3/S | 40 MIN | | 3.7 | 3.3 | 7 |
| 71 | 5/12/2019 | 14:36 | F6O860 | C2 | 1980 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | ABONO | | 3/D | 30 MIN | | 2.8 | 3.5 | 6.3 |
| 72 | 5/12/2019 | 14:38 | Z5R923 | C2 | 1996 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | PICHINCHA | LAMPA | VACIO | | 3/D | 18 | | 2.24 | 2.21 | 4.45 |
| 73 | 5/12/2019 | 15:05 | X3K823 | C2 | 2013 | AUMARK | FOTON | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 30 MIN | | 2.1 | 3 | 5.1 |
| 74 | 5/12/2019 | 17:29 | B0T812 | C2 | 1996 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 30 MIN | | 2.7 | 3.8 | 6.5 |
| 75 | 5/12/2019 | 17:39 | D9V944 | C2 | 2012 | M2 106 | FRIGHTLINER | FURGON | DIESEL | 3 | 1 | LAMPA | JULIACA | VACIO | | 1/SEMANAL | 30 MIN | | 5.6 | 10.4 | 16 |
| 76 | 6/12/2019 | 17:41 | D9V944 | C2 | S/P | M2 106 | FREIGHTLINER | FURGON | DIESEL | 3 | 2 | LAMPA | JULIACA | VACIO | | 4/D | 30 | | 10 | 18 | 28 |
| 77 | 6/12/2019 | 18:06 | Z4D807 | C2 | 1997 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 3 | JULIACA | LAMPA | PRODUCTOS | | 1/D | 30 MIN | | 2.8 | 3.9 | 7 |
| 78 | 6/12/2019 | 06:56 | Z3K802 | C2 | 1992 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | CARPAS | | 1/S | 30 MIN | | 3 | 3.5 | 5 |
| 79 | 6/12/2019 | 07:46 | Z2K919 | C2 | 1984 | DP 500 | DODGE | BARANDA | DIESEL | 3 | 2 | JULIACA | HUARAL | VACIO | | 1/D | 40 MIN | | 3.7 | 3.3 | 7 |
| 80 | 6/12/2019 | 08:17 | Z5R923 | C2 | 1997 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | PRODUCTOS | | 3/S | 35 MIN | | 3.04 | 6.16 | 9.2 |
| 81 | 6/12/2019 | 08:30 | B3E921 | C3 | 2014 | FM | VOLVO | VOLQUETE | DIESEL | 2 | 1 | JULIACA | LAMPA | VACIO | | 1/D | 30 MIN | | 10 | 15 | 25 |
| 82 | 6/12/2019 | 08:45 | B9T721 | C2 | 2006 | HD65 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/D | 30 MIN | | 3 | 3.5 | 5 |
| 83 | 6/12/2019 | 09:16 | C8M790 | C2 | 2012 | 500 | HINO | BARANDA | DIESEL | 3 | 3 | JULIACA | LAMPA | GASEOSA | | 1/M | 35 MIN | | 7.04 | 9.36 | 17 |
| 84 | 6/12/2019 | 09:18 | GDQ890 | C2 | 2015 | CANTER | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | TABLAS | | 2/A | 35 MIN | | 3.07 | 2.93 | 6 |
| 85 | 6/12/2019 | 09:24 | X2G737 | C2 | 1992 | DYNA | TOYOTA | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | FIERROS | | 1/S | 35 MIN | | 2.8 | 3.4 | 6.2 |
| 86 | 6/12/2019 | 09:42 | D6R791 | C2 | 1994 | MIGHTY | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | COLCHONES | | 1/S | 35 MIN | | 2.78 | 3.5 | 6.28 |
| 87 | 6/12/2019 | 09:49 | Z6P830 | C2 | 2015 | HFC1040 | JAC | BARANDA | DIESEL | 3 | 2 | SUTUCA | LAMPA | LECHE | | 1/D | 20 | | 2.25 | 4 | 6.25 |
| 88 | 6/12/2019 | 09:50 | X1T841 | C2 | 1992 | TRADE | KIA | BARANDA | DIESEL | 3 | 3 | JULIACA | LAMPA | MERCADERIA | | 1/D | 35 MIN | | 2.8 | 3.2 | 6 |
| 89 | 6/12/2019 | 09:54 | Z6S880 | C2 | 2017 | HD78 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | PICHINCHA | LAMPA | VARIOS | | 1/D | 40 | | 2.91 | 4.89 | 7.8 |
| 90 | 6/12/2019 | 10:02 | C4P773 | C2 | 2011 | OLLIN | FOTON | FURGON | DIESEL | 3 | 2 | JULIACA | LAMPA | LUBRICANTES | | 2/M | 40 MIN | | 1.845 | 1.655 | 3.5 |
| 91 | 6/12/2019 | 10:15 | D5R748 | C2 | 2012 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/A | 30 MIN | | 2.995 | 4.505 | 7.5 |
| 92 | 6/12/2019 | 10:20 | Z5Q839 | C2 | 2014 | BJ10 | AUTOCRAFT | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | VACIO | | 1/M | 30 MIN | | 2.9 | 4.5 | 7.4 |
| 93 | 6/12/2019 | 10:47 | A0H916 | 3S3 | 2014 | VNL670 | VOLVO | REMOLCADOR | DIESEL | 2 | 1 | JULIACA | PALCA | CEMENTO | | 1/M | 40 | | 15.21 | 16.2 | 22.85 |
| 94 | 6/12/2019 | 10:55 | F6O860 | C2 | 1998 | H350 | HYUNDAI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | D | 1H | | 3.3 | 4 | 7.3 |
| 95 | 6/12/2019 | 11:03 | B4Q705 | C3 | 2011 | FMX | VOLVO | TOLVA | DIESEL | 2 | 1 | PUNO | LAMPA | VACIO | | D | 1H | | 13.51 | 11.49 | 25 |
| 96 | 6/12/2019 | 11:10 | Z4W863 | C3 | 2004 | FM12 | VOLVO | VOLQUETE | DIESEL | 2 | 2 | JULIACA | LAMPA | VACIO | | D | 1H | | 8.78 | 4.22 | 23 |
| 97 | 6/12/2019 | 12:29 | Z1V911 | C2 | 1997 | CANTER | MITSUBISHI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | PAPA | | 2/M | 30 MIN | | 2.89 | 2.46 | 5.35 |
| 98 | 6/12/2019 | 13:40 | B4K784 | C3 | 2000 | NL | VOLVO | VOLQUETE | DIESEL | 3 | 2 | JULIACA | LAMPA | RELLENO | | 1/S | 40 | | 14000 | 11000 | 30000 |
| 99 | 6/12/2019 | 14:13 | D5S873 | C2 | 2008 | 300 | HINO | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/S | 40 | | 6960 | 3300 | 10260 |
| 100 | 6/12/2019 | 14:16 | D5L739 | 3S3 | 1999 | FH12 | VOLVO | PLATAFORMA | DIESEL | 2 | 1 | JULIACA | LAMPA | CEMENTO | | 1/S | 40 | | 7900 | 33000 | 48000 |
| 101 | 6/12/2019 | 14:35 | X1C854 | C2 | 1984 | FUSO | MITSUBISHI | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | COLCHONES | | 1/A | 45 | | 3040 | 6160 | 9200 |
| 102 | 6/12/2019 | 15:52 | B1Y800 | C2 | 2007 | 500 | HINO | BARANDA | DIESEL | 3 | 2 | JULIACA | LAMPA | VACIO | | 1/A | 50 | | 4790 | 5610 | 10400 |
| 103 | 6/12/2019 | 16:35 | D6P748 | C2 | 2004 | HD72 | HYUNDAI | BARANDA | DIESEL | 2 | 2 | JULIACA | LAMPA | VACIO | | 1/M | 30 | | 3100 | 3420 | 8600 |

# ANEXO B

# EVALUACIÓN FUNCIONAL

# B.1 : Regularidad IRI

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | DERECHO | 98+300 | 3.58 | 4.21 | 3.90 | Irregularidad, pav. rígido |
| LAMPA - JULIACA | DERECHO | 98+400 | 4.52 | 5.18 | 4.85 | Baches, pav. rígido |
| LAMPA - JULIACA | DERECHO | 98+500 | 3.58 | 4.21 | 3.90 | Fin pav. rígido, ini pav. flexible |
| LAMPA - JULIACA | DERECHO | 98+600 | 2.48 | 2.81 | 2.64 | |
| LAMPA - JULIACA | DERECHO | 98+700 | 1.91 | 2.19 | 2.05 | |
| LAMPA - JULIACA | DERECHO | 98+800 | 2.90 | 2.66 | 2.78 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 98+900 | 1.97 | 1.81 | 1.89 | |
| LAMPA - JULIACA | DERECHO | 99+000 | 1.67 | 1.56 | 1.62 | |
| LAMPA - JULIACA | DERECHO | 99+100 | 1.50 | 1.60 | 1.55 | |
| LAMPA - JULIACA | DERECHO | 99+200 | 2.45 | 2.60 | 2.52 | |
| LAMPA - JULIACA | DERECHO | 99+300 | 2.14 | 1.90 | 2.02 | |
| LAMPA - JULIACA | DERECHO | 99+400 | 2.51 | 1.83 | 2.17 | |
| LAMPA - JULIACA | DERECHO | 99+500 | 2.25 | 2.07 | 2.16 | Bache |
| LAMPA - JULIACA | DERECHO | 99+600 | 1.38 | 2.15 | 1.77 | |
| LAMPA - JULIACA | DERECHO | 99+700 | 2.23 | 1.70 | 1.97 | |
| LAMPA - JULIACA | DERECHO | 99+800 | 1.82 | 2.21 | 2.01 | |
| LAMPA - JULIACA | DERECHO | 99+900 | 1.50 | 2.17 | 1.83 | |
| LAMPA - JULIACA | DERECHO | 100+000 | 1.66 | 1.90 | 1.78 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 100+100 | 1.91 | 1.92 | 1.91 | |
| LAMPA - JULIACA | DERECHO | 100+200 | 1.73 | 1.45 | 1.59 | |
| LAMPA - JULIACA | DERECHO | 100+300 | 1.84 | 1.73 | 1.79 | Parche |
| LAMPA - JULIACA | DERECHO | 100+400 | 1.65 | 1.63 | 1.64 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 100+500 | 2.14 | 1.85 | 2.00 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 100+600 | 2.16 | 2.41 | 2.28 | |
| LAMPA - JULIACA | DERECHO | 100+700 | 2.15 | 1.85 | 2.00 | |
| LAMPA - JULIACA | DERECHO | 100+800 | 1.82 | 1.84 | 1.83 | |
| LAMPA - JULIACA | DERECHO | 100+900 | 2.06 | 2.22 | 2.14 | |
| LAMPA - JULIACA | DERECHO | 101+000 | 1.94 | 2.06 | 2.00 | |
| LAMPA - JULIACA | DERECHO | 101+100 | 2.64 | 2.64 | 2.64 | |
| LAMPA - JULIACA | DERECHO | 101+200 | 3.52 | 2.33 | 2.92 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 101+300 | 2.73 | 2.05 | 2.39 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 101+400 | 2.91 | 2.22 | 2.57 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 101+500 | 2.77 | 2.39 | 2.58 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 101+600 | 2.13 | 2.00 | 2.06 | |
| LAMPA - JULIACA | DERECHO | 101+700 | 1.83 | 1.94 | 1.89 | |
| LAMPA - JULIACA | DERECHO | 101+800 | 1.62 | 1.61 | 1.61 | |
| LAMPA - JULIACA | DERECHO | 101+900 | 1.83 | 1.99 | 1.91 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 102+000 | 2.79 | 2.72 | 2.76 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 102+100 | 2.78 | 2.93 | 2.86 | |
| LAMPA - JULIACA | DERECHO | 102+200 | 2.61 | 2.54 | 2.58 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 102+300 | 2.56 | 2.67 | 2.62 | |
| LAMPA - JULIACA | DERECHO | 102+400 | 3.28 | 2.32 | 2.80 | Parche |
| LAMPA - JULIACA | DERECHO | 102+500 | 3.49 | 2.60 | 3.05 | Parche |
| LAMPA - JULIACA | DERECHO | 102+600 | 2.29 | 2.08 | 2.18 | |
| LAMPA - JULIACA | DERECHO | 102+700 | 2.61 | 2.33 | 2.47 | |
| LAMPA - JULIACA | DERECHO | 102+800 | | | | Aceleración fuera de rango |
| LAMPA - JULIACA | DERECHO | 102+900 | 2.35 | 2.39 | 2.37 | |
| LAMPA - JULIACA | DERECHO | 103+000 | 2.17 | 1.75 | 1.96 | |
| LAMPA - JULIACA | DERECHO | 103+100 | 2.49 | 1.97 | 2.23 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 103+200 | 2.17 | 2.09 | 2.13 | |
| LAMPA - JULIACA | DERECHO | 103+300 | 2.68 | 2.26 | 2.47 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 103+400 | 2.29 | 2.28 | 2.28 | |
| LAMPA - JULIACA | DERECHO | 103+500 | 2.46 | 1.92 | 2.19 | |
| LAMPA - JULIACA | DERECHO | 103+600 | 2.19 | 2.30 | 2.24 | |
| LAMPA - JULIACA | DERECHO | 103+700 | 1.83 | 1.60 | 1.72 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 103+800 | 1.99 | 2.17 | 2.08 | |
| LAMPA - JULIACA | DERECHO | 103+900 | 2.26 | 2.16 | 2.21 | |
| LAMPA - JULIACA | DERECHO | 104+000 | 1.70 | 2.08 | 1.89 | |
| LAMPA - JULIACA | DERECHO | 104+100 | 1.50 | 2.26 | 1.88 | |
| LAMPA - JULIACA | DERECHO | 104+200 | 2.02 | 2.34 | 2.18 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 104+300 | 1.87 | 2.04 | 1.96 | Parche |
| LAMPA - JULIACA | DERECHO | 104+400 | 3.05 | 2.43 | 2.74 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 104+500 | 2.68 | 2.61 | 2.65 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 104+600 | 2.17 | 2.19 | 2.18 | |
| LAMPA - JULIACA | DERECHO | 104+700 | 2.92 | 2.30 | 2.61 | |
| LAMPA - JULIACA | DERECHO | 104+800 | 2.08 | 1.99 | 2.03 | |
| LAMPA - JULIACA | DERECHO | 104+900 | 2.21 | 1.97 | 2.09 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 105+000 | 2.49 | 2.63 | 2.56 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 105+100 | 2.26 | 3.29 | 2.77 | Parche |
| LAMPA - JULIACA | DERECHO | 105+200 | 2.25 | 2.81 | 2.53 | Parche |
| LAMPA - JULIACA | DERECHO | 105+300 | 2.97 | 2.57 | 2.77 | Parche |
| LAMPA - JULIACA | DERECHO | 105+400 | 1.80 | 2.01 | 1.91 | |
| LAMPA - JULIACA | DERECHO | 105+500 | 1.81 | 1.83 | 1.82 | |
| LAMPA - JULIACA | DERECHO | 105+600 | 2.82 | 1.95 | 2.38 | |
| LAMPA - JULIACA | DERECHO | 105+700 | 1.98 | 2.04 | 2.01 | |
| LAMPA - JULIACA | DERECHO | 105+800 | 2.19 | 1.92 | 2.06 | |
| LAMPA - JULIACA | DERECHO | 105+900 | 2.24 | 1.79 | 2.02 | |
| LAMPA - JULIACA | DERECHO | 106+000 | 2.70 | 2.28 | 2.49 | |
| LAMPA - JULIACA | DERECHO | 106+100 | 2.19 | 1.63 | 1.91 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 106+200 | 2.20 | 1.57 | 1.88 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 106+300 | 2.22 | 2.21 | 2.22 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 106+400 | 2.06 | 1.68 | 1.87 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 106+500 | 2.09 | 1.75 | 1.92 | Parche |
| LAMPA - JULIACA | DERECHO | 106+600 | 2.13 | 1.46 | 1.79 | |
| LAMPA - JULIACA | DERECHO | 106+700 | 2.28 | 1.51 | 1.90 | Parche |
| LAMPA - JULIACA | DERECHO | 106+800 | 1.84 | 1.69 | 1.77 | |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | DERECHO | 106+900 | 2.34 | 2.05 | 2.20 | |
| LAMPA - JULIACA | DERECHO | 107+000 | 1.38 | 1.84 | 1.61 | Parche |
| LAMPA - JULIACA | DERECHO | 107+100 | 1.85 | 1.46 | 1.66 | |
| LAMPA - JULIACA | DERECHO | 107+200 | 1.53 | 2.24 | 1.88 | Parche |
| LAMPA - JULIACA | DERECHO | 107+300 | 1.95 | 2.48 | 2.22 | Parche |
| LAMPA - JULIACA | DERECHO | 107+400 | 1.85 | 2.12 | 1.99 | Parche |
| LAMPA - JULIACA | DERECHO | 107+500 | 1.76 | 1.98 | 1.87 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 107+600 | 2.20 | 1.82 | 2.01 | Junta |
| LAMPA - JULIACA | DERECHO | 107+700 | 2.43 | 1.66 | 2.05 | |
| LAMPA - JULIACA | DERECHO | 107+800 | 2.24 | 2.50 | 2.37 | |
| LAMPA - JULIACA | DERECHO | 107+900 | 1.61 | 1.29 | 1.45 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 108+000 | 1.94 | 1.65 | 1.80 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 108+100 | 1.66 | 1.84 | 1.75 | Parche |
| LAMPA - JULIACA | DERECHO | 108+200 | 2.45 | 2.71 | 2.58 | Parche |
| LAMPA - JULIACA | DERECHO | 108+300 | 2.51 | 2.27 | 2.39 | Parche |
| LAMPA - JULIACA | DERECHO | 108+400 | 1.92 | 2.80 | 2.36 | Parche |
| LAMPA - JULIACA | DERECHO | 108+500 | 2.01 | 1.84 | 1.92 | Parche |
| LAMPA - JULIACA | DERECHO | 108+600 | 1.91 | 2.06 | 1.98 | |
| LAMPA - JULIACA | DERECHO | 108+700 | 2.15 | 1.74 | 1.95 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 108+800 | 1.56 | 1.85 | 1.70 | |
| LAMPA - JULIACA | DERECHO | 108+900 | 2.19 | 1.71 | 1.95 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 109+000 | 2.26 | 2.64 | 2.45 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 109+100 | 3.45 | 2.96 | 3.20 | Parche |
| LAMPA - JULIACA | DERECHO | 109+200 | 2.76 | 3.01 | 2.89 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 109+300 | 1.94 | 3.47 | 2.71 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 109+400 | 1.93 | 2.01 | 1.97 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 109+500 | 2.00 | 2.09 | 2.05 | Parche |
| LAMPA - JULIACA | DERECHO | 109+600 | 1.91 | 1.67 | 1.79 | |
| LAMPA - JULIACA | DERECHO | 109+700 | 2.47 | 2.28 | 2.37 | |
| LAMPA - JULIACA | DERECHO | 109+800 | 2.63 | 2.70 | 2.67 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 109+900 | 3.19 | 3.82 | 3.50 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+000 | 2.71 | 2.12 | 2.41 | |
| LAMPA - JULIACA | DERECHO | 110+100 | 1.77 | 1.50 | 1.64 | |
| LAMPA - JULIACA | DERECHO | 110+200 | 2.20 | 1.76 | 1.98 | Parche |
| LAMPA - JULIACA | DERECHO | 110+300 | 2.49 | 2.61 | 2.55 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+400 | 3.22 | 5.45 | 4.34 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+500 | 3.44 | 3.51 | 3.48 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+600 | 2.91 | 2.91 | 2.91 | |
| LAMPA - JULIACA | DERECHO | 110+700 | 3.48 | 2.99 | 3.23 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+800 | 2.46 | 2.45 | 2.46 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 110+900 | 2.10 | 2.29 | 2.19 | Junta |
| LAMPA - JULIACA | DERECHO | 111+000 | 1.55 | 1.26 | 1.41 | |
| LAMPA - JULIACA | DERECHO | 111+100 | 2.09 | 1.54 | 1.81 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 111+200 | 1.31 | 1.72 | 1.52 | |
| LAMPA - JULIACA | DERECHO | 111+300 | 2.15 | 2.08 | 2.11 | |
| LAMPA - JULIACA | DERECHO | 111+400 | 1.07 | 1.72 | 1.39 | |
| LAMPA - JULIACA | DERECHO | 111+500 | 1.56 | 1.62 | 1.59 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 111+600 | 1.47 | 1.84 | 1.65 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 111+700 | 1.63 | 1.47 | 1.55 | |
| LAMPA - JULIACA | DERECHO | 111+800 | 1.93 | 1.70 | 1.81 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 111+900 | 1.41 | 1.82 | 1.61 | |
| LAMPA - JULIACA | DERECHO | 112+000 | 2.12 | 1.87 | 2.00 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 112+100 | 2.02 | 2.10 | 2.06 | |
| LAMPA - JULIACA | DERECHO | 112+200 | 2.08 | 1.87 | 1.98 | |
| LAMPA - JULIACA | DERECHO | 112+300 | 2.08 | 1.23 | 1.66 | |
| LAMPA - JULIACA | DERECHO | 112+400 | 2.13 | 1.47 | 1.80 | |
| LAMPA - JULIACA | DERECHO | 112+500 | 2.31 | 1.52 | 1.91 | |
| LAMPA - JULIACA | DERECHO | 112+600 | 2.13 | 1.81 | 1.97 | Parche, parche |
| LAMPA - JULIACA | DERECHO | 112+700 | 2.17 | 1.62 | 1.90 | Parche |
| LAMPA - JULIACA | DERECHO | 112+800 | 2.13 | 2.05 | 2.09 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 112+900 | 2.31 | 2.69 | 2.50 | |
| LAMPA - JULIACA | DERECHO | 113+000 | 2.34 | 2.00 | 2.17 | Parche |
| LAMPA - JULIACA | DERECHO | 113+100 | 2.27 | 2.41 | 2.34 | Parche |
| LAMPA - JULIACA | DERECHO | 113+200 | 1.95 | 1.93 | 1.94 | Parche |
| LAMPA - JULIACA | DERECHO | 113+300 | 2.32 | 1.52 | 1.92 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 113+400 | 3.49 | 2.11 | 2.80 | |
| LAMPA - JULIACA | DERECHO | 113+500 | 2.76 | 1.78 | 2.27 | |
| LAMPA - JULIACA | DERECHO | 113+600 | 2.53 | 2.21 | 2.37 | |
| LAMPA - JULIACA | DERECHO | 113+700 | 2.23 | 1.69 | 1.96 | Parche |
| LAMPA - JULIACA | DERECHO | 113+800 | 2.35 | 1.22 | 1.78 | |
| LAMPA - JULIACA | DERECHO | 113+900 | 2.25 | 1.43 | 1.84 | |
| LAMPA - JULIACA | DERECHO | 114+000 | 1.82 | 1.95 | 1.89 | |
| LAMPA - JULIACA | DERECHO | 114+100 | 1.76 | 1.76 | 1.76 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 114+200 | 3.02 | 1.69 | 2.35 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 114+300 | 1.76 | 1.72 | 1.74 | |
| LAMPA - JULIACA | DERECHO | 114+400 | 1.59 | 1.53 | 1.56 | |
| LAMPA - JULIACA | DERECHO | 114+500 | 1.23 | 1.35 | 1.29 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 114+600 | 2.89 | 1.93 | 2.41 | Parche |
| LAMPA - JULIACA | DERECHO | 114+700 | 1.67 | 1.85 | 1.76 | Parche |
| LAMPA - JULIACA | DERECHO | 114+800 | 2.57 | 1.89 | 2.23 | Parche |
| LAMPA - JULIACA | DERECHO | 114+900 | 1.56 | 1.78 | 1.67 | Parche |
| LAMPA - JULIACA | DERECHO | 115+000 | 1.65 | 1.53 | 1.59 | |
| LAMPA - JULIACA | DERECHO | 115+100 | 2.96 | 3.05 | 3.00 | Junta |
| LAMPA - JULIACA | DERECHO | 115+200 | 3.88 | 2.88 | 3.38 | |
| LAMPA - JULIACA | DERECHO | 115+300 | 4.17 | 2.48 | 3.32 | |
| LAMPA - JULIACA | DERECHO | 115+400 | 3.45 | 2.42 | 2.94 | Parche, parche |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | DERECHO | 115+500 | 4.17 | 3.22 | 3.70 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 115+600 | 3.76 | 2.90 | 3.33 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 115+700 | 3.02 | 1.94 | 2.48 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 115+800 | 2.08 | 2.44 | 2.26 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 115+900 | 2.68 | 3.11 | 2.89 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+000 | 2.87 | 2.42 | 2.65 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+100 | 3.85 | 3.49 | 3.67 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+200 | 2.99 | 3.39 | 3.19 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+300 | 2.13 | 1.81 | 1.97 | |
| LAMPA - JULIACA | DERECHO | 116+400 | 2.82 | 2.01 | 2.41 | |
| LAMPA - JULIACA | DERECHO | 116+500 | 3.09 | 2.87 | 2.98 | |
| LAMPA - JULIACA | DERECHO | 116+600 | 3.30 | 2.69 | 2.99 | |
| LAMPA - JULIACA | DERECHO | 116+700 | 2.20 | 2.75 | 2.47 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+800 | 2.50 | 2.70 | 2.60 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 116+900 | 2.96 | 3.29 | 3.12 | |
| LAMPA - JULIACA | DERECHO | 117+000 | 2.77 | 2.12 | 2.45 | |
| LAMPA - JULIACA | DERECHO | 117+100 | 3.58 | 2.96 | 3.27 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 117+200 | 3.03 | 2.89 | 2.96 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 117+300 | 3.01 | 2.93 | 2.97 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 117+400 | 2.94 | 3.26 | 3.10 | |
| LAMPA - JULIACA | DERECHO | 117+500 | 3.00 | 3.24 | 3.12 | Parche, irregularidad |
| LAMPA - JULIACA | DERECHO | 117+600 | 2.78 | 3.41 | 3.10 | Parche |
| LAMPA - JULIACA | DERECHO | 117+700 | 3.02 | 3.56 | 3.29 | Parche |
| LAMPA - JULIACA | DERECHO | 117+800 | 2.37 | 2.20 | 2.29 | Parche, irregularidad |
| LAMPA - JULIACA | DERECHO | 117+900 | 1.91 | 2.46 | 2.18 | Parche |
| LAMPA - JULIACA | DERECHO | 118+000 | 2.40 | 2.57 | 2.48 | Parche |
| LAMPA - JULIACA | DERECHO | 118+100 | 1.96 | 2.36 | 2.16 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 118+200 | 1.66 | 1.99 | 1.82 | |
| LAMPA - JULIACA | DERECHO | 118+300 | 2.57 | 2.65 | 2.61 | Parche |
| LAMPA - JULIACA | DERECHO | 118+400 | 2.97 | 3.99 | 3.48 | Parche |
| LAMPA - JULIACA | DERECHO | 118+500 | 3.28 | 2.16 | 2.72 | Piel de cocodrilo |
| LAMPA - JULIACA | DERECHO | 118+600 | 2.80 | 2.41 | 2.60 | |
| LAMPA - JULIACA | DERECHO | 118+700 | 2.86 | 2.65 | 2.75 | Parche |
| LAMPA - JULIACA | DERECHO | 118+800 | 2.42 | 2.68 | 2.55 | Parche |
| LAMPA - JULIACA | DERECHO | 118+900 | 2.99 | 4.73 | 3.86 | Parche |
| LAMPA - JULIACA | DERECHO | 119+000 | 2.14 | 3.06 | 2.60 | Parche |
| LAMPA - JULIACA | DERECHO | 119+100 | 2.68 | 2.64 | 2.66 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 119+200 | 1.24 | 2.51 | 1.87 | |
| LAMPA - JULIACA | DERECHO | 119+300 | 1.40 | 2.23 | 1.82 | |
| LAMPA - JULIACA | DERECHO | 119+400 | 3.25 | 2.52 | 2.89 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 119+500 | 3.04 | 3.55 | 3.30 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 119+600 | 3.22 | 3.64 | 3.43 | Parche |
| LAMPA - JULIACA | DERECHO | 119+700 | 2.34 | 1.99 | 2.17 | |
| LAMPA - JULIACA | DERECHO | 119+800 | 1.62 | 1.67 | 1.65 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 119+900 | 1.99 | 1.67 | 1.83 | Parche |
| LAMPA - JULIACA | DERECHO | 120+000 | 1.65 | 1.46 | 1.55 | |
| LAMPA - JULIACA | DERECHO | 120+100 | 2.00 | 2.02 | 2.01 | |
| LAMPA - JULIACA | DERECHO | 120+200 | 1.47 | 1.54 | 1.50 | |
| LAMPA - JULIACA | DERECHO | 120+300 | 1.66 | 1.93 | 1.80 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 120+400 | 1.88 | 2.33 | 2.10 | |
| LAMPA - JULIACA | DERECHO | 120+500 | 1.31 | 1.66 | 1.49 | |
| LAMPA - JULIACA | DERECHO | 120+600 | 2.09 | 1.91 | 2.00 | |
| LAMPA - JULIACA | DERECHO | 120+700 | 2.61 | 2.82 | 2.72 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 120+800 | 2.25 | 1.87 | 2.06 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 120+900 | 2.34 | 2.98 | 2.66 | |
| LAMPA - JULIACA | DERECHO | 121+000 | 2.36 | 2.20 | 2.28 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 121+100 | 1.95 | 2.10 | 2.03 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 121+200 | 2.13 | 2.15 | 2.14 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 121+300 | 1.67 | 1.43 | 1.55 | |
| LAMPA - JULIACA | DERECHO | 121+400 | 2.12 | 1.53 | 1.83 | |
| LAMPA - JULIACA | DERECHO | 121+500 | 3.66 | 3.31 | 3.48 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 121+600 | 2.66 | 2.87 | 2.76 | |
| LAMPA - JULIACA | DERECHO | 121+700 | 2.65 | 3.19 | 2.92 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 121+800 | 4.15 | 2.74 | 3.45 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 121+900 | 3.07 | 2.67 | 2.87 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 122+000 | 4.07 | 2.91 | 3.49 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 122+100 | | | | Ini puente, irregularidad |
| LAMPA - JULIACA | DERECHO | 122+200 | | | | Puente, Irregularidad |
| LAMPA - JULIACA | DERECHO | 122+300 | 3.58 | 4.21 | 3.90 | Fin puente, irregularidad |
| LAMPA - JULIACA | DERECHO | 122+400 | 4.52 | 5.18 | 4.85 | |
| LAMPA - JULIACA | DERECHO | 122+500 | 3.58 | 4.21 | 3.90 | |
| LAMPA - JULIACA | DERECHO | 122+600 | | | | Aceleración fuera de rango, parche |
| LAMPA - JULIACA | DERECHO | 122+700 | | | | Velocidad baja, aceleración fuera de rango, parche, b |
| LAMPA - JULIACA | DERECHO | 122+800 | 4.86 | 6.41 | 5.63 | Bache, parche |
| LAMPA - JULIACA | DERECHO | 122+900 | 5.32 | 9.92 | 7.62 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 123+000 | 7.08 | 9.05 | 8.07 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 123+100 | 8.38 | 10.55 | 9.47 | Parche |
| LAMPA - JULIACA | DERECHO | 123+200 | 5.49 | 3.85 | 4.67 | Parche |
| LAMPA - JULIACA | DERECHO | 123+300 | 5.44 | 5.32 | 5.38 | Parche |
| LAMPA - JULIACA | DERECHO | 123+400 | 3.81 | 4.05 | 3.93 | Parche |
| LAMPA - JULIACA | DERECHO | 123+500 | 5.62 | 4.81 | 5.21 | Parche |
| LAMPA - JULIACA | DERECHO | 123+600 | 6.20 | 4.96 | 5.58 | Parche, irregularidad |
| LAMPA - JULIACA | DERECHO | 123+700 | 5.52 | 2.92 | 4.22 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 123+800 | 5.48 | 5.16 | 5.32 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 123+900 | 5.57 | 4.72 | 5.15 | Irregularidad, parche |
| LAMPA - JULIACA | DERECHO | 124+000 | 5.22 | 3.09 | 4.16 | Parche |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | DERECHO | 124+100 | 6.54 | 4.51 | 5.53 | Parche |
| LAMPA - JULIACA | DERECHO | 124+200 | 4.86 | 3.88 | 4.37 | Parche |
| LAMPA - JULIACA | DERECHO | 124+300 | 4.44 | 3.33 | 3.89 | |
| LAMPA - JULIACA | DERECHO | 124+400 | 2.81 | 3.24 | 3.03 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 124+500 | 3.43 | 3.75 | 3.59 | |
| LAMPA - JULIACA | DERECHO | 124+600 | 4.93 | 2.83 | 3.88 | |
| LAMPA - JULIACA | DERECHO | 124+700 | 4.05 | 3.16 | 3.60 | Irregularidad |
| LAMPA - JULIACA | DERECHO | 124+800 | 3.19 | 3.30 | 3.25 | Parche |
| LAMPA - JULIACA | DERECHO | 124+900 | 3.36 | 4.35 | 3.86 | Bache |
| LAMPA - JULIACA | DERECHO | 125+000 | 3.81 | 5.39 | 4.60 | Parche, irregularidad |
| LAMPA - JULIACA | DERECHO | 125+100 | 4.79 | 4.45 | 4.62 | Parche |
| LAMPA - JULIACA | DERECHO | 125+200 | 4.35 | 4.49 | 4.42 | |
| LAMPA - JULIACA | DERECHO | 125+300 | 7.57 | 4.38 | 5.97 | Adelantamiento, parche, bache |
| LAMPA - JULIACA | DERECHO | 125+400 | 6.12 | 5.78 | 5.95 | Bache, parche |
| LAMPA - JULIACA | DERECHO | 125+500 | 5.90 | 4.08 | 4.99 | Bache, parche |
| LAMPA - JULIACA | DERECHO | 125+600 | 5.23 | 3.60 | 4.42 | Bache |
| LAMPA - JULIACA | DERECHO | 125+700 | 6.83 | 4.40 | 5.61 | Bache, parche |
| LAMPA - JULIACA | DERECHO | 125+800 | 5.91 | 4.81 | 5.36 | Bache, parche |
| LAMPA - JULIACA | DERECHO | 125+900 | 7.60 | 6.30 | 6.95 | Bache, parche irregularidad |
| LAMPA - JULIACA | DERECHO | 126+000 | 4.75 | 5.76 | 5.26 | Parche, bache |
| LAMPA - JULIACA | DERECHO | 126+100 | 7.22 | 8.13 | 7.67 | Bache, parche irregularidad |
| LAMPA - JULIACA | DERECHO | 126+200 | 12.20 | 10.38 | 10.00 | Parche, bache |
| LAMPA - JULIACA | DERECHO | 126+300 | 11.80 | 10.96 | 10.00 | Parche, bache |
| LAMPA - JULIACA | DERECHO | 126+400 | 7.27 | 7.33 | 7.30 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 126+500 | 8.94 | 8.34 | 8.64 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 126+600 | 9.99 | 9.99 | 9.99 | Parche, bache |
| LAMPA - JULIACA | DERECHO | 126+700 | 9.60 | 9.60 | 9.60 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 126+800 | 12.39 | 11.72 | 10.00 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 126+900 | 9.79 | 9.79 | 9.79 | Bache, irregularidad |
| LAMPA - JULIACA | DERECHO | 127+000 | 12.76 | 12.76 | 10.00 | Parche, irregularidad |
| LAMPA - JULIACA | DERECHO | 127+100 | 6.04 | 6.44 | 6.24 | Parche |
| LAMPA - JULIACA | DERECHO | 127+200 | | | | Aceleración fuera de rango |
| LAMPA - JULIACA | DERECHO | 127+300 | 7.19 | 5.11 | 6.15 | Irregularidad, parche, bache |
| LAMPA - JULIACA | DERECHO | 127+400 | 5.18 | 4.49 | 4.83 | Parche, pozo |
| LAMPA - JULIACA | DERECHO | 127+500 | 3.08 | 3.78 | 3.43 | Carro estacionado, pozo |
| LAMPA - JULIACA | DERECHO | 127+600 | 3.47 | 3.69 | 3.58 | Parche, irregularidad, pozo |
| LAMPA - JULIACA | DERECHO | 127+700 | 5.82 | 3.48 | 4.65 | Parche, bache, pozo |
| LAMPA - JULIACA | DERECHO | 127+800 | | | | Velocidad baja, aceleración fuera de rango, parch |

| | |
|---|---|
| Valor promedio | 2.94 |
| Valor mínimo | 1.29 |
| Valor máximo | 10.00 |
| Desviación estandar | 1.70 |
| Valor caracteristico | 5.74 |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | IZQUIERDO | 127+800 | | | | Velocidad baja, cruce, ini czu |
| LAMPA - JULIACA | IZQUIERDO | 127+700 | | | | Velocidad baja, aceleración fuera de rango, pozo, bache, |
| LAMPA - JULIACA | IZQUIERDO | 127+600 | 2.78 | 2.96 | 2.87 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 127+500 | 2.60 | 2.33 | 2.46 | Se adelanta |
| LAMPA - JULIACA | IZQUIERDO | 127+400 | 2.11 | 1.90 | 2.00 | Bache, carro estracionado |
| LAMPA - JULIACA | IZQUIERDO | 127+300 | 5.72 | 6.15 | 5.94 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 127+200 | 2.69 | 2.66 | 2.68 | Pozo, se adelanta |
| LAMPA - JULIACA | IZQUIERDO | 127+100 | | | | Aceleración fuera de rango, irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 127+000 | | | | Aceleración fuera de rango, velocidad baj, bache |
| LAMPA - JULIACA | IZQUIERDO | 126+900 | 9.84 | 8.59 | 9.22 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 126+800 | 9.12 | 10.01 | 9.56 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 126+700 | 9.47 | 10.60 | 10.00 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 126+600 | 7.50 | 9.91 | 8.71 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 126+500 | 5.21 | 7.38 | 6.30 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 126+400 | | | | Aceleración fuera de rango, irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 126+300 | 6.40 | 9.64 | 8.02 | Irregularidad, piel de cocodrilo |
| LAMPA - JULIACA | IZQUIERDO | 126+200 | 6.25 | 6.87 | 6.56 | Irregularidad, piel de cocodrilo, bache |
| LAMPA - JULIACA | IZQUIERDO | 126+100 | 4.03 | 5.25 | 4.64 | |
| LAMPA - JULIACA | IZQUIERDO | 126+000 | 3.71 | 4.30 | 4.00 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+900 | 4.78 | 5.67 | 5.23 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+800 | 3.73 | 4.29 | 4.01 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+700 | 2.92 | 3.13 | 3.02 | |
| LAMPA - JULIACA | IZQUIERDO | 125+600 | 2.39 | 1.92 | 2.15 | |
| LAMPA - JULIACA | IZQUIERDO | 125+500 | 3.95 | 2.98 | 3.46 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+400 | 3.78 | 3.79 | 3.79 | |
| LAMPA - JULIACA | IZQUIERDO | 125+300 | 3.68 | 3.83 | 3.76 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+200 | 3.21 | 3.23 | 3.22 | |
| LAMPA - JULIACA | IZQUIERDO | 125+100 | 3.05 | 3.09 | 3.07 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 125+000 | 2.64 | 2.51 | 2.57 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 124+900 | 2.63 | 2.91 | 2.77 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 124+800 | 2.11 | 2.10 | 2.11 | |
| LAMPA - JULIACA | IZQUIERDO | 124+700 | 2.56 | 2.48 | 2.52 | |
| LAMPA - JULIACA | IZQUIERDO | 124+600 | 2.55 | 2.39 | 2.47 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 124+500 | 2.52 | 2.58 | 2.55 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 124+400 | 3.22 | 2.89 | 3.06 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 124+300 | 3.16 | 2.43 | 2.80 | |
| LAMPA - JULIACA | IZQUIERDO | 124+200 | 4.29 | 3.32 | 3.81 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 124+100 | 4.61 | 3.59 | 4.10 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 124+000 | 3.50 | 4.60 | 4.05 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 123+900 | 3.47 | 4.07 | 3.77 | |
| LAMPA - JULIACA | IZQUIERDO | 123+800 | 2.89 | 3.62 | 3.25 | |
| LAMPA - JULIACA | IZQUIERDO | 123+700 | 2.82 | 4.18 | 3.50 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 123+600 | 2.60 | 2.23 | 2.41 | |
| LAMPA - JULIACA | IZQUIERDO | 123+500 | 2.34 | 1.96 | 2.15 | |
| LAMPA - JULIACA | IZQUIERDO | 123+400 | 2.16 | 1.67 | 1.91 | |
| LAMPA - JULIACA | IZQUIERDO | 123+300 | 3.05 | 3.35 | 3.20 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 123+200 | 4.20 | 4.44 | 4.32 | Carro estacionado |
| LAMPA - JULIACA | IZQUIERDO | 123+100 | 4.54 | 3.85 | 4.19 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 123+000 | 4.30 | 3.03 | 3.66 | PR 7, Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+900 | 4.90 | 3.98 | 4.44 | |
| LAMPA - JULIACA | IZQUIERDO | 122+800 | 5.43 | 5.48 | 5.45 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+700 | 5.53 | 4.11 | 4.82 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 122+600 | 5.62 | 4.03 | 4.83 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 122+500 | 3.70 | 3.98 | 3.84 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+400 | 2.66 | 3.11 | 2.88 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+300 | 3.70 | 3.98 | 3.84 | Irregularidad, ini puente |
| LAMPA - JULIACA | IZQUIERDO | 122+200 | | | | Puente, irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+100 | | | | Fin puente, irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 122+000 | 2.83 | 2.82 | 2.83 | |
| LAMPA - JULIACA | IZQUIERDO | 121+900 | 2.52 | 2.65 | 2.58 | |
| LAMPA - JULIACA | IZQUIERDO | 121+800 | 2.76 | 2.46 | 2.61 | |
| LAMPA - JULIACA | IZQUIERDO | 121+700 | 3.58 | 3.05 | 3.31 | Piel de cocodrilo |
| LAMPA - JULIACA | IZQUIERDO | 121+600 | 2.11 | 1.89 | 2.00 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 121+500 | 2.00 | 2.90 | 2.45 | |
| LAMPA - JULIACA | IZQUIERDO | 121+400 | 2.91 | 3.03 | 2.97 | |
| LAMPA - JULIACA | IZQUIERDO | 121+300 | 2.47 | 2.59 | 2.53 | |
| LAMPA - JULIACA | IZQUIERDO | 121+200 | 2.24 | 2.21 | 2.22 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 121+100 | 2.38 | 2.14 | 2.26 | PR 9, parche |
| LAMPA - JULIACA | IZQUIERDO | 121+000 | 1.58 | 2.01 | 1.79 | |
| LAMPA - JULIACA | IZQUIERDO | 120+900 | 2.18 | 2.26 | 2.22 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 120+800 | 1.68 | 1.82 | 1.75 | Piel de cocodrilo, parche |
| LAMPA - JULIACA | IZQUIERDO | 120+700 | 1.90 | 1.62 | 1.76 | |
| LAMPA - JULIACA | IZQUIERDO | 120+600 | 2.12 | 2.55 | 2.33 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 120+500 | 1.38 | 1.72 | 1.55 | |
| LAMPA - JULIACA | IZQUIERDO | 120+400 | 1.68 | 1.77 | 1.72 | |
| LAMPA - JULIACA | IZQUIERDO | 120+300 | 1.46 | 1.64 | 1.55 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 120+200 | 1.67 | 1.83 | 1.75 | |
| LAMPA - JULIACA | IZQUIERDO | 120+100 | 1.88 | 2.54 | 2.21 | Irregularidad, bache, parche |
| LAMPA - JULIACA | IZQUIERDO | 120+000 | 1.70 | 1.77 | 1.73 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 119+900 | 2.31 | 2.47 | 2.39 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 119+800 | 2.87 | 2.20 | 2.53 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 119+700 | 2.86 | 2.11 | 2.49 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 119+600 | 2.28 | 2.49 | 2.38 | |
| LAMPA - JULIACA | IZQUIERDO | 119+500 | 2.55 | 3.27 | 2.91 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 119+400 | 2.30 | 2.18 | 2.24 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 119+300 | 2.14 | 1.83 | 1.99 | Irregularidad |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | IZQUIERDO | 119+200 | 2.03 | 1.36 | 1.69 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 119+100 | 2.60 | 2.12 | 2.36 | |
| LAMPA - JULIACA | IZQUIERDO | 119+000 | 3.24 | 2.68 | 2.96 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 118+900 | 3.15 | 3.24 | 3.20 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 118+800 | 2.89 | 3.51 | 3.20 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 118+700 | 1.94 | 1.91 | 1.92 | |
| LAMPA - JULIACA | IZQUIERDO | 118+600 | 3.78 | 2.87 | 3.33 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 118+500 | 2.66 | 2.06 | 2.36 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 118+400 | 3.61 | 2.53 | 3.07 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 118+300 | 2.86 | 2.44 | 2.65 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 118+200 | 1.87 | 2.16 | 2.02 | |
| LAMPA - JULIACA | IZQUIERDO | 118+100 | 2.14 | 2.55 | 2.35 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 118+000 | 2.10 | 2.42 | 2.26 | |
| LAMPA - JULIACA | IZQUIERDO | 117+900 | 2.19 | 2.11 | 2.15 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 117+800 | 2.37 | 2.08 | 2.22 | |
| LAMPA - JULIACA | IZQUIERDO | 117+700 | 3.12 | 3.80 | 3.46 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 117+600 | 3.40 | 3.30 | 3.35 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 117+500 | 3.01 | 3.45 | 3.23 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 117+400 | 2.62 | 2.61 | 2.61 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 117+300 | 2.65 | 2.92 | 2.78 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 117+200 | 2.06 | 2.68 | 2.37 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 117+100 | 2.55 | 2.09 | 2.32 | |
| LAMPA - JULIACA | IZQUIERDO | 117+000 | 3.74 | 1.87 | 2.81 | |
| LAMPA - JULIACA | IZQUIERDO | 116+900 | 1.88 | 2.23 | 2.05 | |
| LAMPA - JULIACA | IZQUIERDO | 116+800 | 1.86 | 2.39 | 2.12 | |
| LAMPA - JULIACA | IZQUIERDO | 116+700 | 2.21 | 2.90 | 2.55 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 116+600 | 3.59 | 2.19 | 2.89 | |
| LAMPA - JULIACA | IZQUIERDO | 116+500 | 3.55 | 3.03 | 3.29 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 116+400 | 2.57 | 2.82 | 2.70 | |
| LAMPA - JULIACA | IZQUIERDO | 116+300 | 2.47 | 3.17 | 2.82 | |
| LAMPA - JULIACA | IZQUIERDO | 116+200 | 4.18 | 3.73 | 3.95 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 116+100 | 3.57 | 2.98 | 3.28 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 116+000 | 3.83 | 2.92 | 3.38 | |
| LAMPA - JULIACA | IZQUIERDO | 115+900 | 2.97 | 2.77 | 2.87 | |
| LAMPA - JULIACA | IZQUIERDO | 115+800 | 3.55 | 3.01 | 3.28 | Carro estacionado |
| LAMPA - JULIACA | IZQUIERDO | 115+700 | 3.11 | 2.78 | 2.95 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+600 | 4.27 | 2.83 | 3.55 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+500 | 5.90 | 3.18 | 4.54 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+400 | 5.33 | 3.44 | 4.38 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+300 | 4.17 | 3.41 | 3.79 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+200 | 5.26 | 3.37 | 4.31 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 115+100 | 4.91 | 4.58 | 4.75 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 115+000 | 3.18 | 2.32 | 2.75 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+900 | 2.13 | 1.83 | 1.98 | |
| LAMPA - JULIACA | IZQUIERDO | 114+800 | 1.60 | 2.19 | 1.89 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 114+700 | 2.14 | 1.89 | 2.02 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+600 | 2.11 | 1.70 | 1.90 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+500 | 2.17 | 2.13 | 2.15 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+400 | 1.89 | 1.57 | 1.73 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+300 | 3.25 | 1.74 | 2.49 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 114+200 | 3.04 | 1.49 | 2.27 | |
| LAMPA - JULIACA | IZQUIERDO | 114+100 | 2.60 | 1.41 | 2.01 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 114+000 | 3.23 | 1.89 | 2.56 | |
| LAMPA - JULIACA | IZQUIERDO | 113+900 | 2.24 | 2.20 | 2.22 | |
| LAMPA - JULIACA | IZQUIERDO | 113+800 | 2.14 | 1.46 | 1.80 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 113+700 | 2.00 | 1.32 | 1.66 | |
| LAMPA - JULIACA | IZQUIERDO | 113+600 | 2.37 | 1.86 | 2.11 | |
| LAMPA - JULIACA | IZQUIERDO | 113+500 | 3.55 | 1.48 | 2.51 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 113+400 | 3.76 | 2.02 | 2.89 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 113+300 | 3.07 | 2.03 | 2.55 | |
| LAMPA - JULIACA | IZQUIERDO | 113+200 | 2.79 | 1.83 | 2.31 | |
| LAMPA - JULIACA | IZQUIERDO | 113+100 | 2.42 | 2.38 | 2.40 | |
| LAMPA - JULIACA | IZQUIERDO | 113+000 | 2.08 | 2.43 | 2.25 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 112+900 | 2.21 | 2.05 | 2.13 | |
| LAMPA - JULIACA | IZQUIERDO | 112+800 | 2.55 | 2.59 | 2.57 | |
| LAMPA - JULIACA | IZQUIERDO | 112+700 | 2.94 | 2.02 | 2.48 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 112+600 | 2.50 | 2.08 | 2.29 | Junta |
| LAMPA - JULIACA | IZQUIERDO | 112+500 | 2.02 | 1.73 | 1.87 | |
| LAMPA - JULIACA | IZQUIERDO | 112+400 | 1.90 | 1.33 | 1.62 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 112+300 | 1.93 | 1.58 | 1.76 | |
| LAMPA - JULIACA | IZQUIERDO | 112+200 | 1.62 | 1.79 | 1.71 | |
| LAMPA - JULIACA | IZQUIERDO | 112+100 | 2.02 | 1.83 | 1.93 | |
| LAMPA - JULIACA | IZQUIERDO | 112+000 | 1.21 | 1.29 | 1.25 | |
| LAMPA - JULIACA | IZQUIERDO | 111+900 | 1.36 | 1.23 | 1.30 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 111+800 | 1.68 | 1.32 | 1.50 | |
| LAMPA - JULIACA | IZQUIERDO | 111+700 | 1.37 | 1.13 | 1.25 | |
| LAMPA - JULIACA | IZQUIERDO | 111+600 | | | | Aceleración fuera de rango |
| LAMPA - JULIACA | IZQUIERDO | 111+500 | 2.31 | 1.59 | 1.95 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 111+400 | 1.50 | 1.69 | 1.59 | |
| LAMPA - JULIACA | IZQUIERDO | 111+300 | 2.44 | 3.13 | 2.79 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 111+200 | 1.63 | 1.99 | 1.81 | |
| LAMPA - JULIACA | IZQUIERDO | 111+100 | 1.77 | 1.84 | 1.80 | |
| LAMPA - JULIACA | IZQUIERDO | 111+000 | 1.72 | 1.70 | 1.71 | |
| LAMPA - JULIACA | IZQUIERDO | 110+900 | 2.06 | 1.89 | 1.97 | |
| LAMPA - JULIACA | IZQUIERDO | 110+800 | 2.20 | 1.98 | 2.09 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 110+700 | 1.98 | 2.19 | 2.08 | Parche |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | IZQUIERDO | 110+600 | 2.50 | 2.28 | 2.39 | |
| LAMPA - JULIACA | IZQUIERDO | 110+500 | 4.00 | 3.18 | 3.59 | |
| LAMPA - JULIACA | IZQUIERDO | 110+400 | 4.41 | 3.44 | 3.92 | |
| LAMPA - JULIACA | IZQUIERDO | 110+300 | 3.70 | 3.23 | 3.47 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 110+200 | 3.85 | 2.30 | 3.07 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 110+100 | 2.62 | 3.01 | 2.82 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 110+000 | 2.27 | 2.02 | 2.15 | |
| LAMPA - JULIACA | IZQUIERDO | 109+900 | 3.43 | 4.08 | 3.76 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 109+800 | 3.05 | 3.66 | 3.35 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 109+700 | 3.51 | 2.27 | 2.89 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 109+600 | 3.30 | 2.14 | 2.72 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 109+500 | 2.25 | 2.21 | 2.23 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 109+400 | 2.03 | 1.84 | 1.94 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 109+300 | 3.66 | 2.38 | 3.02 | |
| LAMPA - JULIACA | IZQUIERDO | 109+200 | 2.34 | 2.21 | 2.27 | |
| LAMPA - JULIACA | IZQUIERDO | 109+100 | 2.48 | 1.90 | 2.19 | |
| LAMPA - JULIACA | IZQUIERDO | 109+000 | 2.71 | 2.53 | 2.62 | |
| LAMPA - JULIACA | IZQUIERDO | 108+900 | 3.57 | 3.57 | 3.57 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 108+800 | 2.26 | 2.49 | 2.37 | |
| LAMPA - JULIACA | IZQUIERDO | 108+700 | 2.30 | 2.04 | 2.17 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 108+600 | 2.47 | 1.58 | 2.03 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 108+500 | 3.75 | 1.91 | 2.83 | |
| LAMPA - JULIACA | IZQUIERDO | 108+400 | 3.45 | 1.85 | 2.65 | |
| LAMPA - JULIACA | IZQUIERDO | 108+300 | 2.33 | 1.65 | 1.99 | |
| LAMPA - JULIACA | IZQUIERDO | 108+200 | 2.08 | 1.80 | 1.94 | |
| LAMPA - JULIACA | IZQUIERDO | 108+100 | 1.97 | 1.48 | 1.72 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 108+000 | 1.47 | 1.54 | 1.51 | |
| LAMPA - JULIACA | IZQUIERDO | 107+900 | 2.01 | 1.75 | 1.88 | |
| LAMPA - JULIACA | IZQUIERDO | 107+800 | 2.54 | 1.64 | 2.09 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 107+700 | 3.13 | 2.15 | 2.64 | |
| LAMPA - JULIACA | IZQUIERDO | 107+600 | 2.67 | 2.04 | 2.35 | Junta |
| LAMPA - JULIACA | IZQUIERDO | 107+500 | 1.76 | 2.31 | 2.03 | |
| LAMPA - JULIACA | IZQUIERDO | 107+400 | 1.65 | 1.94 | 1.80 | |
| LAMPA - JULIACA | IZQUIERDO | 107+300 | 2.18 | 2.30 | 2.24 | |
| LAMPA - JULIACA | IZQUIERDO | 107+200 | 2.05 | 1.95 | 2.00 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 107+100 | 2.39 | 2.00 | 2.19 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 107+000 | 1.38 | 1.48 | 1.43 | |
| LAMPA - JULIACA | IZQUIERDO | 106+900 | 2.21 | 2.19 | 2.20 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 106+800 | 2.18 | 1.74 | 1.96 | |
| LAMPA - JULIACA | IZQUIERDO | 106+700 | 1.59 | 1.38 | 1.48 | |
| LAMPA - JULIACA | IZQUIERDO | 106+600 | 2.26 | 1.33 | 1.80 | |
| LAMPA - JULIACA | IZQUIERDO | 106+500 | 1.97 | 1.21 | 1.59 | |
| LAMPA - JULIACA | IZQUIERDO | 106+400 | 1.90 | 2.06 | 1.98 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 106+300 | 2.93 | 2.44 | 2.68 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 106+200 | 2.53 | 2.24 | 2.39 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 106+100 | 2.78 | 2.20 | 2.49 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 106+000 | 2.77 | 2.38 | 2.57 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 105+900 | 1.74 | 1.58 | 1.66 | |
| LAMPA - JULIACA | IZQUIERDO | 105+800 | 2.39 | 1.84 | 2.12 | |
| LAMPA - JULIACA | IZQUIERDO | 105+700 | 2.14 | 1.99 | 2.07 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 105+600 | 2.25 | 1.75 | 2.00 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 105+500 | 1.84 | 1.65 | 1.74 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 105+400 | 2.20 | 2.00 | 2.10 | |
| LAMPA - JULIACA | IZQUIERDO | 105+300 | 1.92 | 2.58 | 2.25 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 105+200 | 2.96 | 3.43 | 3.19 | |
| LAMPA - JULIACA | IZQUIERDO | 105+100 | 2.66 | 2.45 | 2.56 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 105+000 | 1.91 | 2.68 | 2.30 | |
| LAMPA - JULIACA | IZQUIERDO | 104+900 | 2.45 | 2.52 | 2.49 | |
| LAMPA - JULIACA | IZQUIERDO | 104+800 | 2.80 | 2.57 | 2.69 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 104+700 | 4.36 | 3.30 | 3.83 | |
| LAMPA - JULIACA | IZQUIERDO | 104+600 | 3.59 | 2.91 | 3.25 | |
| LAMPA - JULIACA | IZQUIERDO | 104+500 | 2.78 | 2.36 | 2.57 | |
| LAMPA - JULIACA | IZQUIERDO | 104+400 | 2.83 | 2.50 | 2.66 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 104+300 | 2.34 | 1.91 | 2.12 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 104+200 | 2.43 | 1.97 | 2.20 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 104+100 | 1.85 | 1.93 | 1.89 | |
| LAMPA - JULIACA | IZQUIERDO | 104+000 | 2.76 | 2.37 | 2.56 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 103+900 | 2.79 | 2.35 | 2.57 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 103+800 | 2.50 | 2.27 | 2.38 | |
| LAMPA - JULIACA | IZQUIERDO | 103+700 | 2.48 | 1.74 | 2.11 | |
| LAMPA - JULIACA | IZQUIERDO | 103+600 | 2.07 | 2.07 | 2.07 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 103+500 | 1.97 | 2.26 | 2.12 | |
| LAMPA - JULIACA | IZQUIERDO | 103+400 | 2.27 | 2.20 | 2.24 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 103+300 | 2.55 | 2.08 | 2.31 | |
| LAMPA - JULIACA | IZQUIERDO | 103+200 | 2.28 | 1.86 | 2.07 | |
| LAMPA - JULIACA | IZQUIERDO | 103+100 | 3.03 | 1.86 | 2.44 | |
| LAMPA - JULIACA | IZQUIERDO | 103+000 | 2.82 | 1.96 | 2.39 | |
| LAMPA - JULIACA | IZQUIERDO | 102+900 | 2.52 | 2.20 | 2.36 | |
| LAMPA - JULIACA | IZQUIERDO | 102+800 | 2.54 | 1.89 | 2.21 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 102+700 | 2.61 | 2.60 | 2.61 | |
| LAMPA - JULIACA | IZQUIERDO | 102+600 | 1.67 | 2.27 | 1.97 | |
| LAMPA - JULIACA | IZQUIERDO | 102+500 | 2.63 | 2.96 | 2.80 | |
| LAMPA - JULIACA | IZQUIERDO | 102+400 | 2.60 | 2.09 | 2.35 | Irregularidad, bache |
| LAMPA - JULIACA | IZQUIERDO | 102+300 | 2.03 | 2.82 | 2.43 | |
| LAMPA - JULIACA | IZQUIERDO | 102+200 | 2.16 | 1.86 | 2.01 | |
| LAMPA - JULIACA | IZQUIERDO | 102+100 | 1.98 | 2.64 | 2.31 | |

**EVALUACION FUNCIONAL**
**REGULARIDAD IRI**
**PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03**

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Tramo | Carril | Progresiva (Km) | Huella 1 IRI (m/km) | Huella 2 IRI (m/km) | IRI Promedio (m/km) | Observaciones |
|---|---|---|---|---|---|---|
| LAMPA - JULIACA | IZQUIERDO | 102+000 | 2.24 | 3.22 | 2.73 | |
| LAMPA - JULIACA | IZQUIERDO | 101+900 | 1.73 | 1.98 | 1.86 | |
| LAMPA - JULIACA | IZQUIERDO | 101+800 | 2.32 | 2.18 | 2.25 | |
| LAMPA - JULIACA | IZQUIERDO | 101+700 | 2.00 | 1.92 | 1.96 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 101+600 | 2.65 | 2.50 | 2.58 | Irregularidad, parche |
| LAMPA - JULIACA | IZQUIERDO | 101+500 | 2.45 | 3.00 | 2.72 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 101+400 | 2.45 | 2.65 | 2.55 | |
| LAMPA - JULIACA | IZQUIERDO | 101+300 | 2.69 | 2.16 | 2.42 | |
| LAMPA - JULIACA | IZQUIERDO | 101+200 | 1.93 | 2.37 | 2.15 | |
| LAMPA - JULIACA | IZQUIERDO | 101+100 | 2.70 | 2.29 | 2.49 | Junta |
| LAMPA - JULIACA | IZQUIERDO | 101+000 | 2.79 | 2.61 | 2.70 | |
| LAMPA - JULIACA | IZQUIERDO | 100+900 | 2.66 | 2.38 | 2.52 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 100+800 | 2.16 | 2.07 | 2.12 | |
| LAMPA - JULIACA | IZQUIERDO | 100+700 | 1.89 | 2.03 | 1.96 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 100+600 | 2.57 | 2.47 | 2.52 | |
| LAMPA - JULIACA | IZQUIERDO | 100+500 | 2.62 | 2.32 | 2.47 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 100+400 | 2.05 | 1.76 | 1.91 | |
| LAMPA - JULIACA | IZQUIERDO | 100+300 | 2.22 | 1.45 | 1.84 | |
| LAMPA - JULIACA | IZQUIERDO | 100+200 | 2.33 | 2.05 | 2.19 | |
| LAMPA - JULIACA | IZQUIERDO | 100+100 | 2.31 | 1.62 | 1.96 | |
| LAMPA - JULIACA | IZQUIERDO | 100+000 | 2.22 | 1.85 | 2.04 | |
| LAMPA - JULIACA | IZQUIERDO | 99+900 | 1.94 | 1.81 | 1.87 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 99+800 | 1.93 | 2.11 | 2.02 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 99+700 | 2.91 | 2.15 | 2.53 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 99+600 | 2.38 | 1.94 | 2.16 | Parche |
| LAMPA - JULIACA | IZQUIERDO | 99+500 | 1.85 | 1.67 | 1.76 | |
| LAMPA - JULIACA | IZQUIERDO | 99+400 | 2.06 | 2.01 | 2.03 | |
| LAMPA - JULIACA | IZQUIERDO | 99+300 | 2.61 | 2.92 | 2.76 | |
| LAMPA - JULIACA | IZQUIERDO | 99+200 | 3.31 | 3.21 | 3.26 | Irregularidad |
| LAMPA - JULIACA | IZQUIERDO | 99+100 | 2.04 | 1.54 | 1.79 | |
| LAMPA - JULIACA | IZQUIERDO | 99+000 | 1.70 | 1.42 | 1.56 | |
| LAMPA - JULIACA | IZQUIERDO | 98+900 | 2.29 | 2.34 | 2.31 | |
| LAMPA - JULIACA | IZQUIERDO | 98+800 | 1.98 | 2.56 | 2.27 | |
| LAMPA - JULIACA | IZQUIERDO | 98+700 | 2.06 | 2.33 | 2.20 | |
| LAMPA - JULIACA | IZQUIERDO | 98+600 | 3.08 | 2.44 | 2.76 | Bache |
| LAMPA - JULIACA | IZQUIERDO | 98+500 | 3.70 | 3.98 | 3.84 | Ini pav. rígido |
| LAMPA - JULIACA | IZQUIERDO | 98+400 | 2.66 | 3.11 | 2.88 | Irregularidad, pav. rígido |
| LAMPA - JULIACA | IZQUIERDO | 98+300 | 3.70 | 3.98 | 3.84 | Irregularidad, pav. rígido |

| | |
|---|---|
| Valor promedio | 2.71 |
| Valor mínimo | 1.25 |
| Valor máximo | 10.00 |
| Desviación estandar | 1.19 |
| Valor caracteristico | 4.67 |

# B.2 : Norma ASTM E 950 – 98

Designation: E 950 – 98 (Reapproved 2004)

# Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference[1]

This standard is issued under the fixed designation E 950; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This test method covers the measurement and recording of the profile of vehicular-traveled surfaces with an accelerometer established inertial reference on a profile-measuring vehicle.

1.2 The test method uses measurement of the distance between an inertial plane of reference and the traveled surface along with the acceleration of the inertial platform to detect changes in elevation of the surface along the length being traversed by the instrumented vehicle. In order to meet a particular class, the transducers must meet accuracy requirements and the calculated profile must meet the specifications of that class.

1.3 The values measured represent a filtered profile measured from a moving plane of reference using the equipment and procedures stated herein. The profile measurements obtained should agree with actual elevation measurements that are subjected to the same filtering. Selection of proper filtering allows the user to obtain suitable wavelength information for the intended data processing.

1.4 Either metric or inch-pound units may be used, but must be used consistently and not mixed.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary information is given in Section 7.

## 2. Referenced Documents

2.1 *ASTM Standards:* [2]

E 178 Practice for Dealing with Outlying Observations

E 867 Terminology Relating to Vehicle-Pavement Systems

E 1364 Test Method for Measuring Road Roughness by Static Level Method

F 457 Test Method for Speed and Distance Calibration of a Fifth Wheel Equipped with Either Analog or Digital Instrumentation

## 3. Terminology

3.1 *Definitions:*

3.1.1 *aliasing—in the context of this practice,*—the spectrum of a digitized data record exists over the range of frequencies from zero to one half the sampling frequency. If the spectrum of the original signal extends beyond one half the sampling frequency, then those components of the signal at frequencies higher than one half the sampling frequency will, when digitized, be folded back into the spectrum of the digitized signal. The excessively high frequency components will thus be "aliased" into low frequency components.

3.1.2 *anti-aliasing filter*—a low-pass analog filter applied to the original analog profile signal to suppress those components of the signal at frequencies higher than one half the intended digital sampling frequency.

3.1.3 *frequency domain filtering*—a filtering operation performed by first calculating the the spectrum of the profile record and then multiplying the spectral components by the frequency response transfer function of the filter.

3.1.4 *profile record*—a data record of the surface elevation, slope, or acceleration, of arbitrary length.

3.1.5 *profile segment*—that part of a profile record for which the profile index will be calculated.

3.1.6 *spatial domain filtering*—a filtering operation performed directly on the profile record

[1] This test method is under the jurisdiction of ASTM Committee E17 on Vehicle-Pavement Systems and is the direct responsibility of Subcommittee E17.31 on Methods for Measuring Profile and Roughness.

Current edition approved Dec. 1, 2004. Published December 2004. Originally approved in 1983. Last previous edition approved in 1998 as E 950 – 98.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

## 4. Summary of Test Method

4.1 The test apparatus consists of a vehicle equipped with the necessary transducers, computing, and recording equipment to measure and record elevation profile of the traveled surface (**1**).[3]

4.2 The sampling rate is selected and depends on the anticipated roadway conditions and data requirements for the intended data processing.

4.3 The test apparatus is driven in the wheel tracks or in the correct lateral location over the section of traveled surface to be profiled. Transducers measure vertical acceleration of the vehicle and the vertical distance between the accelerometer and the traveled surface and the longitudinal distance. These transducer signals are combined by a computer to produce the longitudinal profile of the traveled surface.

## 5. Significance and Use

5.1 The measurement of vehicular traveled surfaces using an instrumented vehicle with an inertial plane of reference provides a satisfactory method for acquiring traveled surface profile data (**1**).

5.2 The profile data can be processed to produce, by simulation, the outputs of other devices. This can be done on line in real time or can be computed as a post process. Some of the devices that can be simulated include road meters (**2**), various straightedge devices (**3**), profilographs, (**4**), as well as pavers and grinders. Comparisons of various equipment and their profile computer programs are given in reference (**5, 6**).

5.3 The raw data or the profile data can also be recorded for data processing at a later time and for analysis by more complex data processing procedures.

## 6. Apparatus

6.1 The test apparatus consists of a vehicle equipped with transducers and profile computing and recording equipment. The transducers are used to measure vertical acceleration, displacement, and the distance traveled. The computer is used to process the transducer outputs to produce the computed profile of the traveled surface. The test apparatus must have transducer capability for one or more tracks and a mass storage device for long term storage of the data. If two wheel tracks are measured, the displacement transducers shall be mounted 1.5 to 1.8 m (58 to 71 in.) apart so that they measure in the two wheel tracks of the traveled surface. A set of gage blocks must be included to calibrate and validate static transducer operation. Other supporting apparatus can include a driver speed display and a graphical display of the profile or data. Some form of data display is recommended to ensure correct data is being collected.

6.2 *Vehicle Requirements*—The vehicle is the platform for the mounting of the profile-measuring equipment. The vehicle shall be large enough to accommodate all the required equipment without major structural modifications. The engine, steering mechanisms, and suspension components shall be adequate to allow smooth maintenance of speed and direction of travel. The environment of the interior of the vehicle shall be maintained within tolerable limits of the instrumentation and operators.

6.3 *Transducers*:

6.3.1 *Accelerometer*—The accelerometer measures the acceleration used to establish the inertial reference. A high-quality accelerometer shall be used that meets the class requirements of the profiling device. The accelerometer shall be mounted on the measuring vehicle with the accelerometer's sensitive axis perpendicular to the traveled surface. The accelerometer range shall be large enough to accommodate the levels of acceleration expected from the bounce motions of the measuring vehicle (typically $\pm 1$ g). The accelerometer shall be biased to account for the 1-g acceleration of gravity. The accelerometer or external circuitry shall contain a self-calibration external voltage source which, on command, causes the output of the acceleration signal level to change a predetermined value. The accelerometer shall have a minimum resolution to allow profile calculation and accuracy and bias to meet the class requirements as given in this standard.

6.3.2 *Displacement Measurement*—A displacement transducer measures the distance between the accelerometer and the traveled surface. The transducer shall be mounted on the vehicle with its measuring axis perpendicular to the traveled surface and in line with the sensitive axis of the accelerometer. The displacement transducer shall measure the vertical distance to the traveled surface continuously, or sample at intervals not greater than that needed to allow calculated profile as given in Table 1. The vertical resolution is that necessary to meet the class given in Table 2.

6.3.3 *Distance Measurement*—The distance transducer may be of the type that produces a series of pulses, the intervals of which represent a distance along the traveled surface to a resolution needed to satisfy Table 1. The pulses are used to measure speed and can be used to convert from a function of time to a function of distance traveled. Any distance transducer that produces analog or digital signals with sufficient accuracy may be used. The accuracy of the distance measurement is established by calibration (see 9.2.3).

6.3.4 *Location Markers*—Use of a section start, intermediate feature location(s), and section end shall be identified by location marks that can be accurately detected by an automatic means, such as magnetic detection, photocells detection of reflective tape or similar means.

6.4 *Profile Computation*—A computer shall be used to process acceleration, and distance transducer outputs to produce measured traveled surface profile. There are two basic methods of computing measured traveled surface profile:

6.4.1 *Spatial Based*—In the spatial based method, the transducer outputs are acquired and profile data points are computed as a function of the distance traveled. In the spatial-based method, the computation of measured road profile is independent of the vehicle measuring speed.

**TABLE 1 Longitudinal Sampling**

| | |
|---|---|
| Class 1 | less than or equal to 25 mm (1 in.) |
| Class 2 | greater than 25 mm (1 in.) to 150 mm (6 in.) |
| Class 3 | greater than 150 mm (6 in.) to 300 mm (12 in.) |
| Class 4 | greater than 300 mm (12 in.) |

[3] The boldface numbers in parentheses refer to the list of references at the end of this standard.

**TABLE 2 Vertical Measurement Resolution**

| | |
|---|---|
| Class 1 | less than or equal to 0.1 mm (0.005 in.) |
| Class 2 | greater than 0.1 mm (0.005 in.) to 0.2 mm (0.010 in.) |
| Class 3 | greater than 0.2 mm (0.010 in.) to 0.5 mm (0.020 in.) |
| Class 4 | greater than 0.5 mm (0.020 in.) |

6.4.2 *Time-Based*—In the time-based system, the transducer outputs are acquired and profile data points are computed as a function of a fixed-time interval. In the time-based method, the computation of measured road profile is not independent of the vehicle measuring speed.

6.4.3 Filtering that permits the computation of measured elevation profile with no attenuation or amplification of road profile wave lengths at least 60 m (200 ft) long at test speeds of 25 to 95 km/h (15 to 60 mph) shall be provided. The computer and system shall not add noise in excess of 10 % of the displacement measuring transducer resolutions given in Table 2.

6.4.4 As part of the profile computation equipment, a computer terminal shall be provided that will allow the operator to perform system calibration, select system parameters, and monitor system outputs.

6.5 *Driver Speed Display*:

6.5.1 The vehicle speed shall be displayed conveniently for the driver to assist in maintaining the desired measuring speed on systems requiring constant speed during measurement. Some systems, especially in the case of spatial based systems, are independent of speed and the speedometer is sufficient.

6.5.2 The displayed vehicle speed, when required, may be computed by the profile computer from the distance pulses. Other means of measuring vehicle speed are acceptable.

6.6 *Display*—A display should be used that allows visual monitoring of the systems outputs. The display should allow profile amplitudes to be displayed as a function of time or distance traveled. Amplitude and distance scaling shall be controlled by the operator through the profile computer terminal.

6.7 *Storage Device*—A device shall be provided for the recording and long term storage of data or computed profile, or both. The device shall have play back ability for additional on-board processing or for later processing. Profile data for recording shall be scaled by the computer to maintain storage resolution of the computed profile and to accommodate the full range of amplitudes encountered during normal profile measuring operation. Signal to noise (S/N) ratio shall be 10 or better.

6.8 *Event Marker*—The operator shall be provided the means to event mark location data as part of the data records. The system may use a transducer (optionally) to automatically sense and automatically record location markers that have been placed on the traveled surface.

## 7. Safety Precautions

7.1 The test vehicle, as well as all attachments to it, shall comply with all applicable state and federal laws. Necessary precautions imposed by laws and regulations, as well as vehicle manufacturers, shall be taken to ensure safety of operating personnel and other traffic.

## 8. Digital Profile Recording

8.1 The computed profile shall be recorded at adequate intervals for accurate representation of the traveled surface for the intended use of the data. Also, antialiasing filters are required when the folding frequency (½ of sampling frequency) is close to the upper frequency of interest (see Terminology E 867). Identical antialiasing filtering must be applied to both the accelerometer signal and to the displacement measurement signal before computing profiles. The upper filter frequency depends upon the intended use of the profile.

8.2 Where two or more paths of traveled surface are measured, the recorded profile data for the paths shall be at the same longitudinal location. This requirement is not necessary if the analysis to be used is independent of the wheel tracks (for example, only quarter car analysis used).

## 9. Calibration Procedures

9.1 Due to the level of performance required of the class of traveled surface profile measuring apparatus, it is important that the system and its components be calibrated periodically as recommended by the manufacturer.

NOTE 1—Due to the complexity of the calibration, it is recommended that the calibration procedure be automated to reduce or eliminate operator involvement and decision making.

9.2 *Transducers*:

9.2.1 *Acceleration Transducer*—The acceleration transducer shall have an internal or external calibration feature. A measure of the accelerometer error shall then be displayed for the operator's acceptance. As an alternative, the acceleration transducer may be calibrated separately in the laboratory. In either case, an error larger than that allowed for the class shall not be accepted.

9.2.2 *Displacement Transducer*—The displacement transducer shall be statically calibrated by introducing an accurately measured step of displacement. The displacement step shall be at least 25 mm (1.0 in.) and accurate within class requirement. A measure of the displacement transducer error shall be displayed for the operator's acceptance or adjustment.

9.2.3 *Distance Transducer*—The distance transducer shall be calibrated by measuring a predetermined distance on a straight section in a similar manner as given in Test Method F 457. The measured distance shall be long enough to determine any significant difference between the measured distance and the predetermined actual distance. A measure of the distance transducer error shall be displayed for the operator's acceptance or adjustment. An error larger than 0.1 % of the actual distance shall not be accepted. The transducer shall be calibrated at the measuring speed(s) to be used.

## 10. Procedures

10.1 *General*:

10.1.1 *System Power*—Turn on electronic equipment prior to testing to allow electronic components to stabilize (see manufacturer's operating manual).

10.1.2 *System Parameters*—If required, select the system parameters that define the wavelength content of the surface profile to be measured (see manufacturer's operating manual).

10.1.3 *Calibration Checks*—Perform calibration checks at the beginning of a day of operation and at any other time the operator may suspect changes of system performance since the last calibration. Also, calibration checks should be made at the end of each day or prior to departing a region to ensure collected data is valid.

10.1.3.1 *System*—Check the calibration by using the simple procedure of bouncing the vehicle, while it is stationary, on a flat surface. This checks the major portion of the system. In this mode of operation, the surface profile is unchanging and the system output should be less than 1 % of the vehicle bounce amplitude. A measure of the traveled surface profile measuring system error shall be displayed for the operator's acceptance.

10.2 *Measuring Speed*:

10.2.1 Better quality profile calculations are generally obtained at higher measuring speeds because of the filters used. Higher measuring speeds may, however, be limited by the ability of the apparatus to measure an extremely rough surface at high speed. Measuring speed might have to be reduced for sampling of shorter intervals (**7**).

10.2.2 Avoid measuring speeds below 25 km/h (15 mph) since the quality of the long wavelength content of the measured profile will be affected or a much higher resolution accelerometer must be used. Measuring speeds as low as 2 m/s (5 mph) may be used where higher speeds are not practical and long wavelength content is not important; such as, on very rough roads, railroad crossings, or other special conditions.

10.2.3 Avoid sudden speed changes to minimize unwanted input to the acceleration transducer and transients to the filters.

10.3 *Test Sections*—In preparation for measuring short test sections of a traveled surface, the operator should become acquainted with the test section to be measured including the beginning, end, and any other features that should be identified within the test section. If identifying features within the test section are to be sensed automatically, the operator shall place the proper marker on the traveled surface at the locations to be identified. It is very important that the wheel tracks be identified on the roadway so that the measurements are made in the wheel tracks or in the paths that are to be measured.

10.4 *Data Acquisition*:

10.4.1 Enter information about the test section and conditions of the test (see Section 12).

10.4.2 At least 150 m (500 ft) (or at manufacturer's specified lead-in) prior to the beginning of the test section, bring the apparatus to the desired speed.

10.4.3 Prior to reaching the test section, at least 150 m (500 ft) or as needed because of the long wavelength filter, switch the system to the test mode.

10.4.4 At the start of the test section, identify its beginning as part of the recorded data. This can be done automatically or manually with an event marker.

10.4.5 Measure the surface profile within a traveled lane as close as possible to the track established by normal traffic. If a single track is measured, it should be in the center of the wheel track of the normal traffic track for that side or in the center of the path to be measured. If more than one path of the traveled surface is measured, then one track should be in the center of the normal traffic track (left or right, but should be the same each time the test section is measured). Note that if the distance between sensors is not that of the actual wheel tracks, then only one measurement is actually centered in a wheel track and should normally be the right track.

10.4.6 Observe and check that the data is reasonable as it is recorded. If profile data is collected for multiple wheel tracks, traces for the right and left wheel tracks should be very similar except for short wavelengths.

10.4.7 Identify, as part of the recorded data, other physical features or known reference points within the test section that will assist in relating the calculated profile to actual traveled surface profile.

10.4.8 Identify the end of the test section.

10.5 *Data Evaluation for Correctness*:

10.5.1 If there is a question about the performance of the test apparatus for the test run, make an immediate check by measuring the test section again. The calculated profile or a point by point basis for the two runs should be within that specified by the class the apparatus is to meet.

10.5.2 Occasionally, evaluate the profile or raw data recorded on the storage device by playing the recorded data back to the recorder or display. The calculated profile or raw data played back to the display should be identical to the data recorded on the display when it is first calculated. Any difference between the profiles indicates an equipment problem with the storage device. A printing recorder is especially helpful here.

## 11. Faulty Tests

11.1 Any observable differences between the measured profiles of the left and right wheel tracks (see 10.4.6) that cannot be attributed to actual differences in the roadway mandate a repeat measurement. Any observable differences between the two identical runs, in accordance with Practice E 178, other than differences due to differences in the paths that were measured, indicate an equipment problem and invalidate the tests.

## 12. Report

12.1 The field report for each test section shall contain data on the following items:

12.1.1 Date and time of day,

12.1.2 Operator, driver, and vehicle identification,

12.1.3 Weather conditions; principally temperature, cloud cover, and wind,

12.1.4 Location and description of test section,

12.1.5 Surface description; type of pavement and condition,

12.1.6 Run number,

12.1.7 Measuring speed,

12.1.8 Direction measured,

12.1.9 Lane measured, transverse position,

12.1.10 Profile data, and

12.1.11 Other system specific measurement options, for example, filter wavelength data interval, and resolution.

## 13. Precision and Bias

13.1 The accuracy of pavement profile measuring equipment can be defined by a statement on the precision and bias of the measuring equipment.

13.2 *Precision*—Precision in the measurement of pavement profile elevations is related to the closeness of agreement between repeat measurements of the same pavement profile.

13.2.1 Precision in the measurement of pavement profile is considered to be a specified combination of the repeatability standard deviation of observed values at specified locations along the measured profile.

13.2.2 The repeatability standard deviation of multiple observed values at one specified location along the measured pavement profile is expressed as a standard deviation of the multiple observed values about the computed mean value for that location.

13.2.3 The precision of a pavement profile measuring system is expressed as the mean of multiple repeatability standard deviations (SD) of the observed values at the multiple specified locations along the measured pavement profile.

13.2.4 For comparable statements of precision, the length of the measured pavement profile, the number of specified locations along the measured pavement profile, and the number of observed values at each specified location shall be maintained.

13.2.4.1 The length of the measured pavement profile to be used in the development of the precision statement shall be 320 m (1056 ft).

13.2.4.2 The number of specified locations along the measured pavement profile shall be one thousand fifty seven at 0.30 m (1.00 ft) intervals.

13.2.4.3 At least ten repeat pavement profile measurements shall be used in the development of the required precision statement.

13.2.4.4 In the development of the precision statement for the pavement profile measuring equipment, the independent variables that affect the pavement profile measuring process shall be tightly controlled.

13.2.4.5 The variation in the measurement of longitudinal profile can be minimized by selecting a pavement test section with minimal variation in the transverse pavement profile.

13.2.4.6 The variation in the measurement of longitudinal profile due to variations in transverse pavement profile can be minimized by following as closely as possible the same path during the required repeat profile measurements.

13.2.4.7 To ensure that the repeat pavement profile measurements are made at the same specified locations along the measured pavement profile, the longitudinal location of the pavement profile measurement shall be tightly controlled, for example, automatic location marks.

13.2.5 The precision requirements for equipment for the measurement of pavement profile by equipment classification shall not exceed the precision listed below.

| Equipment Classification | Precision (1 SD) |
|---|---|
| 1 | 0.38 mm (0.015 in.) |
| 2 | 0.76 mm (0.030 in.) |
| 3 | 2.50 mm (0.100 in.) |

13.3 *Bias*—Bias in the measurement of pavement profile is related to the consistent or systematic difference between the mean value of repeat pavement profile measurements at specified locations along the measured pavement profile and an accepted reference value for those specified locations.

13.3.1 Bias in the measurement of an individual profile data point at one specified location is the computed mean value for that specified location minus the accepted reference value for that specified location.

13.3.2 An accepted reference value for a specified location along the measured pavement profile shall be derived from an accepted reference pavement profile measuring method (for example, rod and level, Test Method E 1364, etc.).

13.3.2.1 To provide the maximum confidence in the accepted reference value, it would be highly desirable to repeat the reference profile measurements enough times to determine a valid mean value and standard deviation about that mean value for the measurements made at each specified location along the measured pavement profile.

13.3.3 An accepted reference value shall be derived from the reference pavement profile measurements using the identical processing (linear filtering, etc.) as the pavement profile measuring equipment being evaluated as long as the original amplitude and phase relationship of the reference pavement profile measurements are not affected over the specified wave length range of interest.

13.3.3.1 For comparable statements of bias, the original amplitude and phase relationship of the reference pavement profile measurements shall be unaffected for pavement profile wave lengths up to 100 m (300 ft).

13.3.4 Bias in the measurement of pavement profile is considered to be a specified combination of the biases of observed values at specified locations along the measured pavement profile.

13.3.5 The bias in the measurement of longitudinal profile shall be the summation of the absolute value of the individual biases at the multiple specified locations along the longitudianl profile measurement divided by the number of specified locations.

13.3.6 For comparable statements of bias, the length of the measured pavement profile, and the number of specified locations along the measured pavement profile shall be maintained.

13.3.6.1 The length of measured pavement profile to be used in the development of the bias statement shall be 350 m (1056 ft).

13.3.6.2 The number of specified locations along the measured pavement profile shall be one thousand fifty seven at 0.3 m (1.00 ft) intervals.

13.3.7 The bias requirements for equipment for the measurement of pavement profile by equipment classification shall not exceed the biases listed below.

| Equipment Classification | Bias |
|---|---|
| 1 | 1.25 mm (0.050 in.) |
| 2 | 2.50 mm (0.100 in.) |
| 3 | 6.25 mm (0.250 in.) |

## 14. Keywords

14.1 longitudinal profile; profiling device; profilometer

## REFERENCES

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(**7**) Darlington, J. R., and Milliman, P.," A Progress Report on the Evaluation of the General Motors Rapid Travel Road Profilometer," *Highway Research Record 214*, Washington, DC, 1968.

# B.3 : Macrotextura Superficial

## EVALUACION FUNCIONAL
## MACROTEXTURA SUPERFICIAL
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Progresiva Odometrica | | Long (m) | RMS (mm) | MPD (mm) | ETD (mm) | Observaciones |
|---|---|---|---|---|---|---|
| PK Inicio | PK Fin | | | | | |
| 98+000 | 98+200 | 200.000 | 0.45 | 0.73 | 0.79 | |
| 98+200 | 98+400 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 98+400 | 98+600 | 200.000 | 0.61 | 0.94 | 0.95 | |
| 98+600 | 98+800 | 200.000 | 0.48 | 0.77 | 0.81 | Bache |
| 98+800 | 99+000 | 200.000 | 0.41 | 0.67 | 0.74 | |
| 99+000 | 99+200 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 99+200 | 99+400 | 200.000 | 0.44 | 0.71 | 0.77 | Parche |
| 99+400 | 99+600 | 200.000 | 0.59 | 0.91 | 0.93 | Irregularidad |
| 99+600 | 99+800 | 200.000 | 0.58 | 0.90 | 0.92 | |
| 99+800 | 100+000 | 200.000 | 0.40 | 0.66 | 0.73 | |
| 100+000 | 100+200 | 200.000 | 0.40 | 0.65 | 0.72 | |
| 100+200 | 100+400 | 200.000 | 0.41 | 0.67 | 0.73 | Irregularidad |
| 100+400 | 100+600 | 200.000 | 0.46 | 0.74 | 0.79 | Irregularidad |
| 100+600 | 100+800 | 200.000 | 0.42 | 0.69 | 0.75 | |
| 100+800 | 101+000 | 200.000 | 0.39 | 0.65 | 0.72 | Irregularidad |
| 101+000 | 101+200 | 200.000 | 0.39 | 0.65 | 0.72 | |
| 101+200 | 101+400 | 200.000 | 0.40 | 0.65 | 0.72 | Irregularidad |
| 101+400 | 101+600 | 200.000 | 0.41 | 0.67 | 0.73 | Parche |
| 101+600 | 101+800 | 200.000 | 0.42 | 0.69 | 0.75 | |
| 101+800 | 102+000 | 200.000 | | | | Aceleración fuera de rango |
| 102+000 | 102+200 | 200.000 | 0.45 | 0.73 | 0.78 | Irregularidad |
| 102+200 | 102+400 | 200.000 | 0.42 | 0.68 | 0.75 | Irregularidad |
| 102+400 | 102+600 | 200.000 | 0.42 | 0.68 | 0.74 | |
| 102+600 | 102+800 | 200.000 | 0.41 | 0.67 | 0.74 | Irregularidad |
| 102+800 | 103+000 | 200.000 | 0.59 | 0.91 | 0.93 | |
| 103+000 | 103+200 | 200.000 | 0.50 | 0.79 | 0.83 | |
| 103+200 | 103+400 | 200.000 | 0.42 | 0.69 | 0.75 | Irregularidad |
| 103+400 | 103+600 | 200.000 | 0.41 | 0.66 | 0.73 | Irregularidad |
| 103+600 | 103+800 | 200.000 | 0.41 | 0.68 | 0.74 | |
| 103+800 | 104+000 | 200.000 | 0.43 | 0.70 | 0.76 | Irregularidad |
| 104+000 | 104+200 | 200.000 | 0.63 | 0.96 | 0.97 | Parche |
| 104+200 | 104+400 | 200.000 | 0.59 | 0.92 | 0.93 | |
| 104+400 | 104+600 | 200.000 | 0.38 | 0.63 | 0.70 | |
| 104+600 | 104+800 | 200.000 | 0.39 | 0.65 | 0.72 | |
| 104+800 | 105+000 | 200.000 | 0.43 | 0.70 | 0.76 | |
| 105+000 | 105+200 | 200.000 | 0.62 | 0.94 | 0.96 | Irregularidad |
| 105+200 | 105+400 | 200.000 | 0.65 | 0.99 | 0.99 | Irregularidad |
| 105+400 | 105+600 | 200.000 | 0.50 | 0.80 | 0.84 | |
| 105+600 | 105+800 | 200.000 | 0.51 | 0.81 | 0.85 | Parche |
| 105+800 | 106+000 | 200.000 | 0.49 | 0.78 | 0.82 | |
| 106+000 | 106+200 | 200.000 | 0.51 | 0.81 | 0.85 | Parche |
| 106+200 | 106+400 | 200.000 | 0.44 | 0.71 | 0.77 | |
| 106+400 | 106+600 | 200.000 | 0.43 | 0.70 | 0.76 | Irregularidad |
| 106+600 | 106+800 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 106+800 | 107+000 | 200.000 | 0.50 | 0.79 | 0.83 | Irregularidad |
| 107+000 | 107+200 | 200.000 | 0.61 | 0.93 | 0.95 | Parche |
| 107+200 | 107+400 | 200.000 | 0.57 | 0.89 | 0.91 | Parche |
| 107+400 | 107+600 | 200.000 | 0.65 | 0.99 | 0.99 | |
| 107+600 | 107+800 | 200.000 | 0.58 | 0.90 | 0.92 | Irregularidad |
| 107+800 | 108+000 | 200.000 | 0.52 | 0.82 | 0.86 | Irregularidad |
| 108+000 | 108+200 | 200.000 | 0.51 | 0.81 | 0.85 | Irregularidad, parche |
| 108+200 | 108+400 | 200.000 | 0.46 | 0.74 | 0.80 | |
| 108+400 | 108+600 | 200.000 | 0.46 | 0.73 | 0.79 | |
| 108+600 | 108+800 | 200.000 | 0.47 | 0.76 | 0.81 | |
| 108+800 | 109+000 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 109+000 | 109+200 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 109+200 | 109+400 | 200.000 | 0.44 | 0.72 | 0.77 | Irregularidad |
| 109+400 | 109+600 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 109+600 | 109+800 | 200.000 | 0.45 | 0.73 | 0.78 | Irregularidad |
| 109+800 | 110+000 | 200.000 | 0.47 | 0.75 | 0.80 | |
| 110+000 | 110+200 | 200.000 | 0.60 | 0.93 | 0.94 | Irregularidad |
| 110+200 | 110+400 | 200.000 | 0.52 | 0.82 | 0.85 | |
| 110+400 | 110+600 | 200.000 | 0.49 | 0.79 | 0.83 | Irregularidad |
| 110+600 | 110+800 | 200.000 | 0.51 | 0.81 | 0.85 | |
| 110+800 | 111+000 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 111+000 | 111+200 | 200.000 | 0.58 | 0.90 | 0.92 | |
| 111+200 | 111+400 | 200.000 | 0.51 | 0.81 | 0.85 | |
| 111+400 | 111+600 | 200.000 | 0.52 | 0.82 | 0.85 | |
| 111+600 | 111+800 | 200.000 | 0.51 | 0.81 | 0.85 | Parche, parche |
| 111+800 | 112+000 | 200.000 | 0.48 | 0.77 | 0.82 | |
| 112+000 | 112+200 | 200.000 | 0.50 | 0.80 | 0.84 | Parche |
| 112+200 | 112+400 | 200.000 | 0.47 | 0.76 | 0.81 | Parche |
| 112+400 | 112+600 | 200.000 | 0.53 | 0.84 | 0.87 | |
| 112+600 | 112+800 | 200.000 | 0.47 | 0.75 | 0.80 | Parche |
| 112+800 | 113+000 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 113+000 | 113+200 | 200.000 | 0.47 | 0.76 | 0.80 | Irregularidad |

## EVALUACION FUNCIONAL
## MACROTEXTURA SUPERFICIAL
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÒN** : NOVIEMBRE 2019

| Progresiva Odometrica | | Long (m) | RMS (mm) | MPD (mm) | ETD (mm) | Observaciones |
|---|---|---|---|---|---|---|
| PK Inicio | PK Fin | | | | | |
| 113+200 | 113+400 | 200.000 | 0.44 | 0.71 | 0.77 | |
| 113+400 | 113+600 | 200.000 | 0.44 | 0.71 | 0.77 | Irregularidad |
| 113+600 | 113+800 | 200.000 | 0.70 | 1.05 | 1.04 | Parche |
| 113+800 | 114+000 | 200.000 | 0.40 | 0.65 | 0.72 | |
| 114+000 | 114+200 | 200.000 | 0.40 | 0.66 | 0.72 | Junta |
| 114+200 | 114+400 | 200.000 | 0.37 | 0.62 | 0.69 | |
| 114+400 | 114+600 | 200.000 | 0.37 | 0.62 | 0.70 | Parche, parche |
| 114+600 | 114+800 | 200.000 | 0.37 | 0.62 | 0.69 | Irregularidad |
| 114+800 | 115+000 | 200.000 | 0.39 | 0.65 | 0.72 | Irregularidad |
| 115+000 | 115+200 | 200.000 | 0.40 | 0.66 | 0.73 | Irregularidad |
| 115+200 | 115+400 | 200.000 | 0.59 | 0.91 | 0.92 | |
| 115+400 | 115+600 | 200.000 | 0.45 | 0.73 | 0.78 | |
| 115+600 | 115+800 | 200.000 | 0.41 | 0.67 | 0.74 | Irregularidad |
| 115+800 | 116+000 | 200.000 | 0.41 | 0.68 | 0.74 | |
| 116+000 | 116+200 | 200.000 | 0.43 | 0.69 | 0.76 | Irregularidad |
| 116+200 | 116+400 | 200.000 | 0.53 | 0.83 | 0.87 | |
| 116+400 | 116+600 | 200.000 | 0.40 | 0.65 | 0.72 | Parche, irregularidad |
| 116+600 | 116+800 | 200.000 | 0.39 | 0.64 | 0.71 | Parche |
| 116+800 | 117+000 | 200.000 | 0.55 | 0.86 | 0.89 | |
| 117+000 | 117+200 | 200.000 | 0.90 | 1.30 | 1.24 | |
| 117+200 | 117+400 | 200.000 | 0.45 | 0.73 | 0.79 | Parche |
| 117+400 | 117+600 | 200.000 | 0.43 | 0.69 | 0.75 | Piel de cocodrilo |
| 117+600 | 117+800 | 200.000 | 0.60 | 0.92 | 0.94 | Parche |
| 117+800 | 118+000 | 200.000 | 0.40 | 0.66 | 0.73 | Parche |
| 118+000 | 118+200 | 200.000 | 0.65 | 0.98 | 0.99 | |
| 118+200 | 118+400 | 200.000 | 0.37 | 0.61 | 0.69 | |
| 118+400 | 118+600 | 200.000 | 0.36 | 0.60 | 0.68 | Irregularidad |
| 118+600 | 118+800 | 200.000 | 0.37 | 0.61 | 0.69 | |
| 118+800 | 119+000 | 200.000 | 0.59 | 0.91 | 0.93 | Irregularidad |
| 119+000 | 119+200 | 200.000 | 0.49 | 0.78 | 0.82 | |
| 119+200 | 119+400 | 200.000 | 0.42 | 0.69 | 0.75 | Irregularidad |
| 119+400 | 119+600 | 200.000 | 0.47 | 0.76 | 0.81 | |
| 119+600 | 119+800 | 200.000 | 0.48 | 0.77 | 0.81 | Irregularidad |
| 119+800 | 120+000 | 200.000 | 0.43 | 0.70 | 0.76 | |
| 120+000 | 120+200 | 200.000 | 0.43 | 0.69 | 0.75 | Irregularidad, parche |
| 120+200 | 120+400 | 200.000 | 0.40 | 0.66 | 0.73 | |
| 120+400 | 120+600 | 200.000 | 0.41 | 0.67 | 0.73 | Irregularidad |
| 120+600 | 120+800 | 200.000 | 0.43 | 0.70 | 0.76 | Irregularidad |
| 120+800 | 121+000 | 200.000 | 0.58 | 0.90 | 0.92 | Irregularidad, parche |
| 121+000 | 121+200 | 200.000 | 0.73 | 1.09 | 1.08 | |
| 121+200 | 121+400 | 200.000 | | | | Puente, Irregularidad |
| 121+400 | 121+600 | 200.000 | | | | Aceleración fuera de rango, parche |
| 121+600 | 121+800 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 121+800 | 122+000 | 200.000 | 0.41 | 0.67 | 0.74 | Bache, parche |
| 122+000 | 122+200 | 200.000 | 0.47 | 0.75 | 0.80 | Parche |
| 122+200 | 122+400 | 200.000 | 0.42 | 0.68 | 0.74 | Parche |
| 122+400 | 122+600 | 200.000 | 0.51 | 0.81 | 0.85 | |
| 122+600 | 122+800 | 200.000 | 0.46 | 0.74 | 0.80 | Parche, irregularidad |
| 122+800 | 123+000 | 200.000 | 0.50 | 0.80 | 0.84 | Irregularidad |
| 123+000 | 123+200 | 200.000 | 0.46 | 0.74 | 0.79 | |
| 123+200 | 123+400 | 200.000 | 0.53 | 0.83 | 0.87 | |
| 123+400 | 123+600 | 200.000 | 0.51 | 0.80 | 0.84 | Irregularidad |
| 123+600 | 123+800 | 200.000 | 0.48 | 0.77 | 0.81 | Irregularidad |
| 123+800 | 124+000 | 200.000 | 0.59 | 0.91 | 0.93 | |
| 124+000 | 124+200 | 200.000 | 0.59 | 0.91 | 0.93 | Parche, irregularidad |
| 124+200 | 124+400 | 200.000 | 0.65 | 0.99 | 0.99 | Adelantamiento, parche, bache |
| 124+400 | 124+600 | 200.000 | 0.55 | 0.86 | 0.89 | Bache, parche |
| 124+600 | 124+800 | 200.000 | 0.92 | 1.32 | 1.26 | Bache, parche |
| 124+800 | 125+000 | 200.000 | 0.57 | 0.89 | 0.91 | Bache, parche irregularidad |
| 125+000 | 125+200 | 200.000 | 0.65 | 0.99 | 0.99 | |
| 125+200 | 125+400 | 200.000 | 0.55 | 0.86 | 0.89 | Parche, bache |
| 125+400 | 125+600 | 200.000 | 0.67 | 1.01 | 1.01 | Bache, irregularidad |
| 125+600 | 125+800 | 200.000 | 0.57 | 0.89 | 0.91 | Bache, irregularidad |
| 125+800 | 126+000 | 200.000 | 0.79 | 1.16 | 1.13 | Parche, irregularidad |
| 126+000 | 126+200 | 200.000 | 0.54 | 0.85 | 0.88 | |
| 126+200 | 126+400 | 200.000 | | | | Aceleración fuera de rango |
| 126+400 | 126+600 | 200.000 | 0.63 | 0.97 | 0.97 | Parche, pozo |
| 126+600 | 126+800 | 200.000 | 0.64 | 0.98 | 0.98 | Parche, irregularidad, pozo |
| 126+800 | 127+000 | 200.000 | | | | Velocidad baja, aceleración fuera de rango, parche |
| 127+000 | 127+200 | 200.000 | 0.57 | 0.89 | 0.91 | Bache, irregularidad |
| 127+200 | 127+400 | 200.000 | 0.68 | 1.03 | 1.02 | Irregularidad |
| 127+400 | 127+600 | 200.000 | 0.56 | 0.87 | 0.90 | |
| 127+600 | 127+800 | 200.000 | 0.65 | 0.99 | 0.99 | Bache |
| | | | | | 0.83 | |

## EVALUACION FUNCIONAL
## MACROTEXTURA SUPERFICIAL
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : NOVIEMBRE 2019

| Progresiva Odometrica | | Long (m) | RMS (mm) | MPD (mm) | ETD (mm) | Observaciones |
|---|---|---|---|---|---|---|
| (Km) Inicio | (Km) Fin | | | | | |
| 127+800 | 127+600 | 200.000 | 0.54 | 0.85 | 0.88 | |
| 127+600 | 127+400 | 200.000 | 0.73 | 1.08 | 1.07 | Irregularidad, bache |
| 127+400 | 127+200 | 200.000 | 0.76 | 1.13 | 1.11 | Bache, pozo |
| 127+200 | 127+000 | 200.000 | 0.84 | 1.22 | 1.18 | Pozo, irregularidad |
| 127+000 | 126+800 | 200.000 | 0.54 | 0.85 | 0.88 | |
| 126+800 | 126+600 | 200.000 | | | | Velocidad baja, cruce, ini czu |
| 126+600 | 126+400 | 200.000 | 0.68 | 1.02 | 1.02 | Bache |
| 126+400 | 126+200 | 200.000 | 0.68 | 1.03 | 1.03 | Bache, carro estracionado |
| 126+200 | 126+000 | 200.000 | | | | Aceleración fuera de rango, irregularidad, bach |
| 126+000 | 125+800 | 200.000 | 0.46 | 0.74 | 0.79 | Bache |
| 125+800 | 125+600 | 200.000 | 0.38 | 0.63 | 0.70 | Bache, carro estracionado |
| 125+600 | 125+400 | 200.000 | 0.38 | 0.63 | 0.70 | Parche |
| 125+400 | 125+200 | 200.000 | | | | Aceleración fuera de rango, irregularidad, bach |
| 125+200 | 125+000 | 200.000 | 0.41 | 0.67 | 0.73 | Irregularidad |
| 125+000 | 124+800 | 200.000 | 0.46 | 0.74 | 0.79 | Irregularidad |
| 124+800 | 124+600 | 200.000 | 0.52 | 0.82 | 0.86 | Irregularidad |
| 124+600 | 124+400 | 200.000 | 0.40 | 0.66 | 0.73 | Irregularidad |
| 124+400 | 124+200 | 200.000 | 0.47 | 0.75 | 0.80 | Irregularidad |
| 124+200 | 124+000 | 200.000 | 0.63 | 0.97 | 0.97 | |
| 124+000 | 123+800 | 200.000 | 0.41 | 0.68 | 0.74 | |
| 123+800 | 123+600 | 200.000 | 0.40 | 0.65 | 0.72 | Parche |
| 123+600 | 123+400 | 200.000 | 0.42 | 0.68 | 0.74 | Irregularidad |
| 123+400 | 123+200 | 200.000 | 0.52 | 0.82 | 0.86 | Irregularidad |
| 123+200 | 123+000 | 200.000 | 0.53 | 0.83 | 0.86 | Irregularidad |
| 123+000 | 122+800 | 200.000 | 0.65 | 0.99 | 0.99 | |
| 122+800 | 122+600 | 200.000 | 0.51 | 0.81 | 0.84 | Irregularidad, bache |
| 122+600 | 122+400 | 200.000 | 0.61 | 0.93 | 0.95 | |
| 122+400 | 122+200 | 200.000 | 0.50 | 0.79 | 0.83 | Irregularidad |
| 122+200 | 122+000 | 200.000 | 0.58 | 0.90 | 0.92 | PR 7, Irregularidad |
| 122+000 | 121+800 | 200.000 | 0.35 | 0.59 | 0.67 | Irregularidad |
| 121+800 | 121+600 | 200.000 | 0.37 | 0.62 | 0.70 | Irregularidad, parche |
| 121+600 | 121+400 | 200.000 | 0.54 | 0.84 | 0.87 | Irregularidad |
| 121+400 | 121+200 | 200.000 | | | | Irregularidad, ini puente |
| 121+200 | 121+000 | 200.000 | | | | Fin puente, irregularidad |
| 121+000 | 120+800 | 200.000 | 0.35 | 0.59 | 0.67 | |
| 120+800 | 120+600 | 200.000 | 0.44 | 0.72 | 0.77 | Piel de cocodrilo |
| 120+600 | 120+400 | 200.000 | 0.59 | 0.91 | 0.93 | Parche |
| 120+400 | 120+200 | 200.000 | 0.35 | 0.58 | 0.67 | Parche |
| 120+200 | 120+000 | 200.000 | 0.36 | 0.60 | 0.68 | |
| 120+000 | 119+800 | 200.000 | 0.39 | 0.64 | 0.71 | Irregularidad |
| 119+800 | 119+600 | 200.000 | 0.40 | 0.66 | 0.73 | Irregularidad, bache |
| 119+600 | 119+400 | 200.000 | 0.39 | 0.64 | 0.71 | Irregularidad |
| 119+400 | 119+200 | 200.000 | 0.40 | 0.65 | 0.72 | Irregularidad |
| 119+200 | 119+000 | 200.000 | 0.39 | 0.64 | 0.71 | Parche |
| 119+000 | 118+800 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 118+800 | 118+600 | 200.000 | 0.38 | 0.64 | 0.71 | Parche |
| 118+600 | 118+400 | 200.000 | 0.36 | 0.61 | 0.69 | |
| 118+400 | 118+200 | 200.000 | 0.43 | 0.69 | 0.76 | |
| 118+200 | 118+000 | 200.000 | 0.45 | 0.73 | 0.78 | Irregularidad |
| 118+000 | 117+800 | 200.000 | 0.44 | 0.71 | 0.77 | Irregularidad, parche |
| 117+800 | 117+600 | 200.000 | 0.63 | 0.96 | 0.97 | Irregularidad |
| 117+600 | 117+400 | 200.000 | 0.42 | 0.69 | 0.75 | Parche |
| 117+400 | 117+200 | 200.000 | 0.43 | 0.70 | 0.76 | |
| 117+200 | 117+000 | 200.000 | 0.45 | 0.73 | 0.78 | Irregularidad |
| 117+000 | 116+800 | 200.000 | 0.47 | 0.75 | 0.80 | Irregularidad |
| 116+800 | 116+600 | 200.000 | 0.62 | 0.95 | 0.96 | Irregularidad, parche |
| 116+600 | 116+400 | 200.000 | 0.51 | 0.81 | 0.85 | Irregularidad, parche |
| 116+400 | 116+200 | 200.000 | 0.56 | 0.87 | 0.90 | Parche |
| 116+200 | 116+000 | 200.000 | 0.50 | 0.79 | 0.83 | |
| 116+000 | 115+800 | 200.000 | 0.50 | 0.80 | 0.84 | |
| 115+800 | 115+600 | 200.000 | 0.42 | 0.68 | 0.74 | Irregularidad |
| 115+600 | 115+400 | 200.000 | 0.52 | 0.82 | 0.86 | |
| 115+400 | 115+200 | 200.000 | 0.55 | 0.86 | 0.89 | Irregularidad |
| 115+200 | 115+000 | 200.000 | 0.39 | 0.64 | 0.71 | |
| 115+000 | 114+800 | 200.000 | 0.38 | 0.62 | 0.70 | |
| 114+800 | 114+600 | 200.000 | 0.38 | 0.63 | 0.70 | Irregularidad |
| 114+600 | 114+400 | 200.000 | 0.40 | 0.65 | 0.72 | Irregularidad |
| 114+400 | 114+200 | 200.000 | 0.42 | 0.68 | 0.74 | Irregularidad |
| 114+200 | 114+000 | 200.000 | 0.51 | 0.81 | 0.85 | |
| 114+000 | 113+800 | 200.000 | 0.50 | 0.79 | 0.83 | Parche |
| 113+800 | 113+600 | 200.000 | 0.42 | 0.69 | 0.75 | Parche |
| 113+600 | 113+400 | 200.000 | 0.47 | 0.76 | 0.81 | Parche |
| 113+400 | 113+200 | 200.000 | 0.51 | 0.81 | 0.84 | Parche |
| 113+200 | 113+000 | 200.000 | 0.52 | 0.82 | 0.86 | Irregularidad |
| 113+000 | 112+800 | 200.000 | 0.49 | 0.78 | 0.83 | Irregularidad |
| 112+800 | 112+600 | 200.000 | 0.50 | 0.80 | 0.84 | |

## EVALUACION FUNCIONAL
## MACROTEXTURA SUPERFICIAL
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÒN** : NOVIEMBRE 2019

| Progresiva Odometrica | | Long (m) | RMS (mm) | MPD (mm) | ETD (mm) | Observaciones |
|---|---|---|---|---|---|---|
| (Km) Inicio | (Km) Fin | | | | | |
| 112+600 | 112+400 | 200.000 | 0.45 | 0.73 | 0.78 | |
| 112+400 | 112+200 | 200.000 | 0.50 | 0.79 | 0.83 | |
| 112+200 | 112+000 | 200.000 | 0.53 | 0.83 | 0.86 | Irregularidad |
| 112+000 | 111+800 | 200.000 | 0.64 | 0.97 | 0.98 | |
| 111+800 | 111+600 | 200.000 | 0.43 | 0.70 | 0.76 | Irregularidad |
| 111+600 | 111+400 | 200.000 | 0.42 | 0.68 | 0.74 | Irregularidad |
| 111+400 | 111+200 | 200.000 | 0.73 | 1.09 | 1.07 | |
| 111+200 | 111+000 | 200.000 | 0.57 | 0.88 | 0.90 | |
| 111+000 | 110+800 | 200.000 | 0.67 | 1.02 | 1.02 | |
| 110+800 | 110+600 | 200.000 | | | | Aceleración fuera de rango |
| 110+600 | 110+400 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 110+400 | 110+200 | 200.000 | 0.61 | 0.93 | 0.95 | |
| 110+200 | 110+000 | 200.000 | 0.40 | 0.65 | 0.72 | |
| 110+000 | 109+800 | 200.000 | 0.37 | 0.61 | 0.69 | Irregularidad, parche |
| 109+800 | 109+600 | 200.000 | 0.38 | 0.63 | 0.70 | |
| 109+600 | 109+400 | 200.000 | 0.62 | 0.95 | 0.96 | |
| 109+400 | 109+200 | 200.000 | 0.63 | 0.96 | 0.97 | Irregularidad |
| 109+200 | 109+000 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 109+000 | 108+800 | 200.000 | 0.44 | 0.72 | 0.77 | Irregularidad |
| 108+800 | 108+600 | 200.000 | 0.38 | 0.62 | 0.70 | Parche |
| 108+600 | 108+400 | 200.000 | 0.40 | 0.66 | 0.72 | Parche |
| 108+400 | 108+200 | 200.000 | 0.44 | 0.71 | 0.77 | |
| 108+200 | 108+000 | 200.000 | 0.48 | 0.77 | 0.81 | |
| 108+000 | 107+800 | 200.000 | 0.38 | 0.63 | 0.70 | Irregularidad |
| 107+800 | 107+600 | 200.000 | 0.38 | 0.63 | 0.71 | Irregularidad |
| 107+600 | 107+400 | 200.000 | 0.39 | 0.64 | 0.71 | |
| 107+400 | 107+200 | 200.000 | 0.38 | 0.64 | 0.71 | |
| 107+200 | 107+000 | 200.000 | 0.38 | 0.63 | 0.71 | Irregularidad |
| 107+000 | 106+800 | 200.000 | 0.39 | 0.64 | 0.71 | |
| 106+800 | 106+600 | 200.000 | 0.40 | 0.66 | 0.73 | |
| 106+600 | 106+400 | 200.000 | 0.42 | 0.69 | 0.75 | |
| 106+400 | 106+200 | 200.000 | 0.44 | 0.71 | 0.77 | Parche |
| 106+200 | 106+000 | 200.000 | 0.41 | 0.67 | 0.74 | Bache |
| 106+000 | 105+800 | 200.000 | 0.43 | 0.70 | 0.76 | |
| 105+800 | 105+600 | 200.000 | 0.50 | 0.79 | 0.83 | |
| 105+600 | 105+400 | 200.000 | 0.42 | 0.68 | 0.75 | Irregularidad |
| 105+400 | 105+200 | 200.000 | 0.41 | 0.67 | 0.74 | Irregularidad |
| 105+200 | 105+000 | 200.000 | 0.39 | 0.64 | 0.71 | Irregularidad |
| 105+000 | 104+800 | 200.000 | 0.53 | 0.83 | 0.87 | |
| 104+800 | 104+600 | 200.000 | 0.58 | 0.90 | 0.92 | Irregularidad |
| 104+600 | 104+400 | 200.000 | 0.58 | 0.90 | 0.92 | Irregularidad, parche |
| 104+400 | 104+200 | 200.000 | 0.45 | 0.72 | 0.78 | |
| 104+200 | 104+000 | 200.000 | 0.47 | 0.75 | 0.80 | Irregularidad |
| 104+000 | 103+800 | 200.000 | 0.65 | 0.99 | 0.99 | Irregularidad |
| 103+800 | 103+600 | 200.000 | 0.68 | 1.03 | 1.02 | |
| 103+600 | 103+400 | 200.000 | 0.36 | 0.60 | 0.68 | Irregularidad, parche |
| 103+400 | 103+200 | 200.000 | 0.37 | 0.62 | 0.69 | |
| 103+200 | 103+000 | 200.000 | 0.38 | 0.63 | 0.71 | Irregularidad |
| 103+000 | 102+800 | 200.000 | 0.39 | 0.64 | 0.71 | |
| 102+800 | 102+600 | 200.000 | 0.56 | 0.87 | 0.90 | Irregularidad |
| 102+600 | 102+400 | 200.000 | 0.54 | 0.85 | 0.88 | |
| 102+400 | 102+200 | 200.000 | 0.55 | 0.86 | 0.89 | |
| 102+200 | 102+000 | 200.000 | 0.44 | 0.72 | 0.77 | |
| 102+000 | 101+800 | 200.000 | 0.59 | 0.91 | 0.93 | |
| 101+800 | 101+600 | 200.000 | 0.58 | 0.89 | 0.91 | Irregularidad |
| 101+600 | 101+400 | 200.000 | 0.50 | 0.79 | 0.83 | Irregularidad, bache |
| 101+400 | 101+200 | 200.000 | 0.54 | 0.84 | 0.88 | |
| 101+200 | 101+000 | 200.000 | 0.45 | 0.73 | 0.78 | |
| 101+000 | 100+800 | 200.000 | 0.47 | 0.76 | 0.80 | Parche |
| 100+800 | 100+600 | 200.000 | 0.42 | 0.68 | 0.74 | |
| 100+600 | 100+400 | 200.000 | 0.48 | 0.77 | 0.82 | |
| 100+400 | 100+200 | 200.000 | 0.43 | 0.70 | 0.76 | |
| 100+200 | 100+000 | 200.000 | 0.44 | 0.71 | 0.77 | Junta |
| 100+000 | 99+800 | 200.000 | 0.40 | 0.66 | 0.73 | |
| 99+800 | 99+600 | 200.000 | 0.42 | 0.68 | 0.74 | Irregularidad |
| 99+600 | 99+400 | 200.000 | 0.53 | 0.84 | 0.87 | |
| 99+400 | 99+200 | 200.000 | 0.53 | 0.83 | 0.86 | |
| 99+200 | 99+000 | 200.000 | 0.50 | 0.80 | 0.84 | |
| 99+000 | 98+800 | 200.000 | 0.52 | 0.82 | 0.85 | Irregularidad |
| 98+800 | 98+600 | 200.000 | 0.51 | 0.81 | 0.85 | Irregularidad |
| 98+600 | 98+400 | 200.000 | 0.62 | 0.95 | 0.96 | Parche |
| 98+400 | 98+200 | 200.000 | 0.51 | 0.81 | 0.85 | Irregularidad |
| 98+200 | 98+000 | 200.000 | 0.62 | 0.95 | 0.96 | |
| | | | | | 0.82 | |

# ANEXO C

# EVALUACIÓN ESTRUCTURAL

# C.1 : Deflectometría

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 98+200 | 19 | 32 | 40 | 0.96 | 720 | 537 | 392 | 234 | 153 | 78 | 59 | 353894.906 | 8299096.545 |
| 98+400 | 19 | 32 | 40 | 0.98 | 570 | 405 | 285 | 164 | 105 | 64 | 54 | 354049.243 | 8298983.190 |
| 98+600 | 18 | 32 | 40 | 0.97 | 610 | 431 | 311 | 180 | 114 | 58 | 42 | 354218.379 | 8298868.083 |
| 98+800 | 18 | 29 | 40 | 0.98 | 625 | 440 | 316 | 174 | 104 | 44 | 32 | 354391.353 | 8298749.311 |
| 99+000 | 17 | 29 | 40 | 0.98 | 390 | 274 | 199 | 117 | 78 | 45 | 34 | 354513.884 | 8298609.937 |
| 99+200 | 17 | 29 | 40 | 0.97 | 458 | 330 | 251 | 160 | 116 | 71 | 58 | 354577.582 | 8298418.562 |
| 99+400 | 16 | 29 | 40 | 0.98 | 578 | 392 | 283 | 158 | 104 | 58 | 46 | 354612.191 | 8298225.160 |
| 99+600 | 16 | 29 | 40 | 0.99 | 597 | 397 | 277 | 151 | 93 | 44 | 32 | 354633.477 | 8298026.143 |
| 99+800 | 16 | 29 | 40 | 0.98 | 569 | 397 | 280 | 151 | 100 | 59 | 48 | 354647.130 | 8297827.078 |
| 100+000 | 17 | 29 | 40 | 0.98 | 1056 | 821 | 660 | 452 | 324 | 174 | 115 | 354678.875 | 8297633.658 |
| 100+200 | 17 | 29 | 40 | 0.96 | 496 | 350 | 260 | 147 | 88 | 30 | 13 | 354817.676 | 8297485.166 |
| 100+400 | 17 | 26 | 40 | 0.98 | 494 | 344 | 247 | 154 | 107 | 66 | 51 | 355016.389 | 8297443.999 |
| 100+600 | 16 | 26 | 40 | 0.98 | 886 | 673 | 520 | 359 | 277 | 184 | 142 | 355211.089 | 8297434.153 |
| 100+800 | 16 | 26 | 40 | 0.98 | 1091 | 765 | 580 | 352 | 257 | 166 | 129 | 355410.547 | 8297426.180 |
| 101+000 | 16 | 26 | 40 | 0.98 | 752 | 506 | 362 | 220 | 157 | 98 | 74 | 355608.573 | 8297418.195 |
| 101+200 | 16 | 26 | 40 | 0.98 | 652 | 453 | 327 | 195 | 131 | 73 | 54 | 355808.974 | 8297412.068 |
| 101+400 | 14 | 26 | 40 | 0.98 | 654 | 445 | 325 | 203 | 147 | 95 | 75 | 356002.787 | 8297391.146 |
| 101+600 | 15 | 24 | 40 | 0.98 | 598 | 402 | 289 | 174 | 117 | 68 | 58 | 356041.596 | 8297210.678 |
| 101+800 | 11 | 24 | 40 | 0.96 | 653 | 439 | 319 | 198 | 145 | 90 | 71 | 356010.419 | 8297007.646 |
| 102+000 | 15 | 24 | 40 | 0.98 | 849 | 616 | 466 | 302 | 222 | 140 | 107 | 355975.859 | 8296811.969 |
| 102+200 | 15 | 24 | 40 | 0.98 | 558 | 384 | 289 | 179 | 119 | 60 | 42 | 356030.512 | 8296615.003 |
| 102+400 | 16 | 24 | 40 | 0.97 | 618 | 405 | 285 | 159 | 100 | 45 | 29 | 356096.079 | 8296427.325 |
| 102+600 | 15 | 24 | 40 | 0.97 | 723 | 513 | 382 | 228 | 149 | 75 | 52 | 356148.674 | 8296254.317 |
| 102+800 | 16 | 24 | 40 | 0.98 | 639 | 434 | 316 | 182 | 116 | 63 | 45 | 356214.739 | 8296062.954 |
| 103+000 | 16 | 24 | 40 | 0.97 | 723 | 491 | 362 | 228 | 169 | 102 | 76 | 356244.585 | 8295865.833 |
| 103+200 | 16 | 24 | 40 | 0.96 | 560 | 370 | 270 | 170 | 123 | 75 | 53 | 356278.247 | 8295668.737 |
| 103+400 | 16 | 24 | 40 | 1.00 | 532 | 362 | 264 | 166 | 119 | 68 | 46 | 356368.556 | 8295490.431 |
| 103+600 | 16 | 24 | 40 | 0.96 | 655 | 418 | 292 | 163 | 107 | 56 | 43 | 356464.599 | 8295310.317 |
| 103+800 | 16 | 24 | 40 | 0.98 | 576 | 422 | 328 | 209 | 142 | 68 | 44 | 356587.226 | 8295150.652 |
| 104+000 | 16 | 23 | 40 | 0.97 | 522 | 365 | 275 | 171 | 117 | 60 | 45 | 356713.179 | 8294992.851 |
| 104+200 | 16 | 23 | 40 | 0.98 | 688 | 472 | 353 | 218 | 145 | 72 | 46 | 356839.596 | 8294836.896 |
| 104+400 | 15 | 23 | 40 | 0.99 | 558 | 395 | 304 | 192 | 133 | 73 | 54 | 356963.626 | 8294680.925 |
| 104+600 | 15 | 23 | 40 | 0.96 | 489 | 329 | 245 | 144 | 91 | 48 | 36 | 357096.603 | 8294543.449 |
| 104+800 | 15 | 23 | 40 | 0.99 | 611 | 427 | 285 | 164 | 101 | 50 | 36 | 357277.945 | 8294452.371 |
| 105+000 | 14 | 23 | 40 | 0.97 | 537 | 358 | 252 | 140 | 86 | 46 | 34 | 357462.567 | 8294370.531 |
| 105+200 | 15 | 23 | 40 | 0.98 | 515 | 350 | 245 | 141 | 89 | 45 | 31 | 357649.118 | 8294285.014 |
| 105+400 | 15 | 23 | 40 | 0.97 | 647 | 446 | 306 | 172 | 108 | 53 | 38 | 357827.048 | 8294204.975 |
| 105+600 | 15 | 23 | 40 | 0.97 | 592 | 403 | 287 | 167 | 105 | 49 | 33 | 358013.585 | 8294121.299 |
| 105+800 | 15 | 23 | 40 | 0.97 | 522 | 347 | 248 | 145 | 97 | 55 | 42 | 358200.087 | 8294043.153 |
| 106+000 | 14 | 22 | 40 | 0.98 | 561 | 359 | 248 | 140 | 91 | 51 | 40 | 358379.421 | 8293966.806 |
| 106+200 | 15 | 22 | 40 | 0.98 | 535 | 342 | 236 | 135 | 86 | 45 | 34 | 358559.232 | 8293890.461 |
| 106+400 | 14 | 22 | 40 | 0.99 | 631 | 406 | 287 | 167 | 110 | 63 | 47 | 358745.752 | 8293808.624 |
| 106+600 | 14 | 22 | 40 | 0.96 | 410 | 268 | 199 | 118 | 82 | 47 | 36 | 358924.140 | 8293730.423 |
| 106+800 | 15 | 22 | 40 | 0.97 | 582 | 404 | 293 | 146 | 98 | 52 | 40 | 359128.910 | 8293705.857 |
| 107+000 | 14 | 22 | 40 | 0.98 | 472 | 326 | 242 | 155 | 105 | 57 | 41 | 359328.775 | 8293703.387 |
| 107+200 | 13 | 22 | 40 | 0.98 | 642 | 407 | 289 | 158 | 104 | 55 | 39 | 359529.627 | 8293695.389 |
| 107+400 | 14 | 22 | 40 | 0.96 | 481 | 299 | 196 | 98 | 69 | 40 | 31 | 359726.187 | 8293687.364 |
| 107+600 | 14 | 22 | 40 | 0.97 | 677 | 411 | 276 | 144 | 88 | 47 | 35 | 359919.430 | 8293675.629 |
| 107+800 | 14 | 22 | 40 | 0.97 | 684 | 424 | 289 | 142 | 88 | 53 | 42 | 360114.148 | 8293656.525 |
| 108+000 | 5 | 22 | 40 | 0.99 | 813 | 495 | 334 | 179 | 113 | 60 | 43 | 360305.527 | 8293637.399 |
| 108+200 | 14 | 22 | 40 | 0.98 | 733 | 436 | 260 | 122 | 77 | 45 | 36 | 360511.657 | 8293623.893 |
| 108+400 | 13 | 22 | 40 | 0.98 | 887 | 531 | 344 | 165 | 104 | 54 | 40 | 360710.156 | 8293610.339 |
| 108+600 | 13 | 22 | 40 | 0.97 | 764 | 472 | 307 | 151 | 87 | 45 | 33 | 360911.073 | 8293591.266 |
| 108+800 | 13 | 22 | 40 | 0.97 | 573 | 333 | 211 | 114 | 79 | 47 | 35 | 361109.571 | 8293577.709 |
| 109+000 | 14 | 22 | 40 | 0.99 | 799 | 475 | 313 | 172 | 113 | 60 | 45 | 361306.183 | 8293560.451 |
| 109+200 | 11 | 22 | 40 | 0.98 | 803 | 488 | 304 | 162 | 107 | 55 | 39 | 361512.334 | 8293543.248 |
| 109+400 | 14 | 21 | 40 | 0.97 | 715 | 457 | 317 | 173 | 106 | 52 | 38 | 361714.192 | 8293526.018 |
| 109+600 | 13 | 21 | 40 | 0.97 | 733 | 431 | 279 | 169 | 115 | 54 | 38 | 361918.434 | 8293508.800 |
| 109+800 | 13 | 21 | 40 | 0.99 | 803 | 488 | 322 | 164 | 97 | 53 | 40 | 362116.941 | 8293493.391 |
| 110+000 | 12 | 21 | 40 | 0.99 | 739 | 460 | 263 | 171 | 117 | 60 | 43 | 362316.900 | 8293474.300 |
| 110+200 | 12 | 21 | 40 | 0.99 | 685 | 428 | 281 | 130 | 97 | 58 | 44 | 362514.464 | 8293457.037 |
| 110+400 | 12 | 21 | 40 | 0.98 | 570 | 326 | 200 | 99 | 66 | 44 | 37 | 362718.260 | 8293434.278 |
| 110+600 | 13 | 23 | 40 | 0.92 | 461 | 261 | 163 | 83 | 56 | 38 | 31 | 362911.042 | 8293418.828 |

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 110+800 | 14 | 23 | 40 | 0.91 | 454 | 254 | 159 | 81 | 58 | 40 | 33 | 363107.272 | 8293384.957 |
| 111+000 | 14 | 23 | 40 | 0.91 | 510 | 309 | 190 | 92 | 57 | 37 | 33 | 363305.354 | 8293360.315 |
| 111+200 | 15 | 23 | 40 | 0.92 | 629 | 379 | 243 | 117 | 71 | 46 | 38 | 363500.552 | 8293339.342 |
| 111+400 | 15 | 23 | 40 | 0.92 | 719 | 471 | 317 | 171 | 112 | 66 | 53 | 363695.283 | 8293316.521 |
| 111+600 | 16 | 23 | 40 | 0.92 | 736 | 511 | 376 | 229 | 161 | 97 | 76 | 363892.887 | 8293291.871 |
| 111+800 | 16 | 23 | 40 | 0.90 | 553 | 397 | 298 | 185 | 129 | 73 | 55 | 364092.842 | 8293272.765 |
| 112+000 | 16 | 23 | 40 | 0.92 | 644 | 443 | 326 | 201 | 134 | 74 | 52 | 364292.742 | 8293262.877 |
| 112+200 | 16 | 25 | 40 | 0.93 | 557 | 403 | 295 | 173 | 115 | 68 | 51 | 364497.434 | 8293249.327 |
| 112+400 | 16 | 25 | 40 | 0.93 | 678 | 482 | 356 | 206 | 129 | 62 | 45 | 364695.436 | 8293237.581 |
| 112+600 | 15 | 25 | 40 | 0.93 | 698 | 446 | 308 | 174 | 121 | 73 | 59 | 364896.788 | 8293224.008 |
| 112+800 | 17 | 25 | 40 | 0.93 | 581 | 410 | 308 | 196 | 138 | 81 | 61 | 365094.790 | 8293212.258 |
| 113+000 | 17 | 25 | 40 | 0.94 | 770 | 553 | 412 | 257 | 174 | 98 | 72 | 365296.618 | 8293198.684 |
| 113+200 | 18 | 25 | 40 | 0.94 | 763 | 561 | 435 | 280 | 198 | 110 | 86 | 365494.164 | 8293183.241 |
| 113+400 | 17 | 25 | 40 | 0.92 | 583 | 422 | 317 | 199 | 139 | 82 | 63 | 365696.013 | 8293165.976 |
| 113+600 | 18 | 25 | 40 | 0.93 | 884 | 639 | 485 | 307 | 218 | 119 | 81 | 365894.501 | 8293152.378 |
| 113+800 | 18 | 26 | 40 | 0.93 | 589 | 421 | 319 | 209 | 150 | 87 | 64 | 366091.559 | 8293138.770 |
| 114+000 | 18 | 26 | 40 | 0.93 | 520 | 357 | 257 | 156 | 108 | 65 | 50 | 366286.772 | 8293114.086 |
| 114+200 | 18 | 26 | 40 | 0.94 | 670 | 454 | 326 | 187 | 125 | 75 | 60 | 366483.522 | 8293070.971 |
| 114+400 | 18 | 26 | 40 | 0.94 | 627 | 418 | 296 | 168 | 113 | 70 | 58 | 366680.271 | 8293027.853 |
| 114+600 | 19 | 26 | 40 | 0.93 | 610 | 416 | 300 | 168 | 107 | 57 | 46 | 366879.404 | 8292984.748 |
| 114+800 | 19 | 26 | 40 | 0.93 | 737 | 537 | 405 | 249 | 169 | 90 | 65 | 367076.151 | 8292941.628 |
| 115+000 | 19 | 26 | 40 | 0.95 | 763 | 561 | 430 | 262 | 174 | 87 | 62 | 367272.908 | 8292896.662 |
| 115+200 | 19 | 26 | 40 | 0.93 | 692 | 521 | 399 | 254 | 176 | 92 | 71 | 367468.721 | 8292849.845 |
| 115+400 | 19 | 27 | 40 | 0.94 | 817 | 583 | 413 | 242 | 167 | 101 | 78 | 367670.458 | 8292851.002 |
| 115+600 | 20 | 27 | 40 | 0.95 | 656 | 473 | 341 | 198 | 129 | 61 | 40 | 367865.402 | 8292872.401 |
| 115+800 | 19 | 27 | 40 | 0.93 | 579 | 416 | 304 | 184 | 126 | 85 | 67 | 368059.828 | 8292901.172 |
| 116+000 | 19 | 27 | 40 | 0.94 | 594 | 405 | 295 | 160 | 112 | 62 | 47 | 368175.768 | 8293060.410 |
| 116+200 | 19 | 27 | 40 | 0.95 | 686 | 482 | 350 | 200 | 127 | 64 | 45 | 368271.118 | 8293234.281 |
| 116+400 | 18 | 27 | 40 | 0.96 | 752 | 552 | 417 | 261 | 188 | 117 | 87 | 368361.658 | 8293415.500 |
| 116+600 | 18 | 27 | 40 | 0.95 | 928 | 652 | 476 | 286 | 195 | 104 | 77 | 368453.185 | 8293591.192 |
| 116+800 | 18 | 27 | 40 | 0.95 | 737 | 534 | 397 | 233 | 152 | 84 | 64 | 368619.745 | 8293656.676 |
| 117+000 | 18 | 27 | 40 | 0.97 | 697 | 514 | 390 | 236 | 150 | 69 | 48 | 368801.918 | 8293576.580 |
| 117+200 | 19 | 28 | 40 | 0.95 | 715 | 447 | 299 | 175 | 119 | 69 | 51 | 368933.434 | 8293429.815 |
| 117+400 | 19 | 28 | 40 | 0.95 | 460 | 301 | 211 | 114 | 67 | 26 | 14 | 369028.828 | 8293260.717 |
| 117+600 | 20 | 28 | 40 | 0.94 | 604 | 393 | 280 | 161 | 105 | 51 | 33 | 369160.861 | 8293106.578 |
| 117+800 | 20 | 28 | 40 | 0.95 | 676 | 426 | 278 | 136 | 83 | 43 | 31 | 369333.127 | 8293006.139 |
| 118+000 | 20 | 28 | 40 | 0.96 | 851 | 627 | 454 | 259 | 165 | 81 | 54 | 369504.904 | 8292907.540 |
| 118+200 | 20 | 28 | 40 | 0.96 | 917 | 610 | 402 | 249 | 169 | 85 | 56 | 369682.858 | 8292812.662 |
| 118+400 | 20 | 28 | 40 | 0.95 | 590 | 410 | 279 | 161 | 109 | 61 | 44 | 369849.376 | 8292715.875 |
| 118+600 | 21 | 28 | 40 | 0.97 | 702 | 492 | 350 | 199 | 127 | 60 | 39 | 370025.514 | 8292604.390 |
| 118+800 | 21 | 28 | 40 | 0.95 | 604 | 416 | 279 | 150 | 90 | 39 | 25 | 370204.936 | 8292502.141 |
| 119+000 | 21 | 30 | 40 | 0.95 | 766 | 542 | 399 | 227 | 149 | 78 | 55 | 370389.893 | 8292433.112 |
| 119+200 | 19 | 30 | 40 | 0.96 | 660 | 479 | 344 | 194 | 123 | 67 | 52 | 370589.686 | 8292439.765 |
| 119+400 | 22 | 30 | 40 | 0.97 | 1150 | 916 | 759 | 541 | 409 | 233 | 155 | 370787.063 | 8292451.934 |
| 119+600 | 22 | 30 | 40 | 0.95 | 750 | 488 | 313 | 173 | 116 | 70 | 56 | 370980.159 | 8292462.233 |
| 119+800 | 22 | 30 | 40 | 0.97 | 580 | 387 | 264 | 143 | 90 | 50 | 38 | 371181.829 | 8292474.423 |
| 120+000 | 21 | 30 | 40 | 0.95 | 544 | 374 | 254 | 143 | 94 | 48 | 32 | 371374.468 | 8292481.029 |
| 120+200 | 21 | 30 | 40 | 0.95 | 565 | 361 | 238 | 116 | 63 | 21 | 12 | 371579.123 | 8292471.105 |
| 120+400 | 21 | 30 | 40 | 0.95 | 723 | 447 | 252 | 92 | 38 | 11 | 6 | 371766.875 | 8292413.144 |
| 120+600 | 20 | 30 | 40 | 0.97 | 779 | 532 | 379 | 217 | 138 | 68 | 46 | 371895.888 | 8292282.945 |
| 120+800 | 20 | 30 | 40 | 0.96 | 796 | 584 | 439 | 260 | 165 | 75 | 48 | 371994.148 | 8292108.321 |
| 121+000 | 21 | 30 | 40 | 0.97 | 783 | 540 | 382 | 211 | 144 | 68 | 44 | 372097.165 | 8291935.568 |
| 121+200 | 22 | 27 | 40 | 0.96 | 801 | 541 | 387 | 222 | 146 | 78 | 56 | 372199.216 | 8291764.652 |
| 121+400 | 22 | 27 | 40 | 0.97 | 765 | 532 | 338 | 188 | 112 | 44 | 22 | 372249.346 | 8291582.385 |
| 121+800 | 23 | 27 | 40 | 0.95 | 718 | 467 | 290 | 134 | 72 | 27 | 18 | 372288.847 | 8291252.549 |
| 122+000 | 22 | 27 | 40 | 0.95 | 613 | 430 | 297 | 166 | 104 | 50 | 36 | 372355.231 | 8291062.997 |
| 122+200 | 22 | 27 | 40 | 0.96 | 777 | 533 | 389 | 206 | 125 | 52 | 35 | 372410.169 | 8290873.381 |
| 122+400 | 22 | 27 | 40 | 0.95 | 639 | 449 | 320 | 196 | 144 | 79 | 61 | 372483.226 | 8290683.865 |
| 122+600 | 21 | 29 | 40 | 0.97 | 707 | 455 | 279 | 161 | 105 | 77 | 64 | 372625.011 | 8290570.329 |
| 122+800 | 21 | 29 | 40 | 0.96 | 860 | 598 | 430 | 253 | 176 | 101 | 79 | 372784.945 | 8290451.359 |
| 123+000 | 21 | 29 | 40 | 0.95 | 700 | 530 | 328 | 158 | 102 | 53 | 40 | 372945.831 | 8290332.394 |
| 123+200 | 22 | 29 | 40 | 0.97 | 822 | 573 | 386 | 223 | 151 | 83 | 66 | 373107.203 | 8290211.587 |
| 123+400 | 22 | 29 | 40 | 0.95 | 801 | 603 | 462 | 302 | 213 | 130 | 96 | 373269.516 | 8290092.628 |

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL DERECHO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 123+600 | 21 | 29 | 40 | 0.94 | 685 | 521 | 358 | 216 | 149 | 88 | 67 | 373434.212 | 8289973.681 |
| 123+800 | 22 | 29 | 40 | 0.95 | 725 | 545 | 364 | 239 | 177 | 117 | 91 | 373594.148 | 8289852.863 |
| 124+000 | 23 | 29 | 40 | 0.95 | 834 | 567 | 436 | 273 | 206 | 137 | 106 | 373754.579 | 8289728.359 |
| 124+200 | 22 | 30 | 40 | 0.96 | 663 | 474 | 332 | 214 | 150 | 86 | 64 | 373908.789 | 8289607.507 |
| 124+400 | 23 | 30 | 40 | 0.96 | 808 | 609 | 455 | 271 | 178 | 77 | 50 | 374064.916 | 8289484.822 |
| 124+600 | 23 | 30 | 40 | 0.96 | 889 | 672 | 477 | 255 | 157 | 81 | 60 | 374215.765 | 8289367.638 |
| 124+800 | 23 | 30 | 40 | 0.99 | 849 | 634 | 391 | 210 | 138 | 72 | 53 | 374371.927 | 8289237.575 |
| 125+000 | 23 | 30 | 40 | 0.98 | 726 | 542 | 366 | 227 | 161 | 97 | 74 | 374528.089 | 8289107.511 |
| 125+200 | 23 | 30 | 40 | 1.00 | 947 | 707 | 469 | 253 | 169 | 95 | 69 | 374688.540 | 8288977.469 |
| 125+400 | 23 | 30 | 40 | 0.96 | 863 | 661 | 483 | 274 | 171 | 81 | 56 | 374840.852 | 8288852.914 |
| 125+600 | 24 | 30 | 40 | 0.97 | 795 | 630 | 463 | 282 | 183 | 93 | 66 | 374986.498 | 8288726.478 |
| 125+800 | 24 | 30 | 40 | 0.97 | 965 | 681 | 494 | 276 | 183 | 96 | 74 | 375141.222 | 8288596.403 |
| 126+000 | 24 | 30 | 40 | 0.98 | 762 | 539 | 376 | 221 | 151 | 90 | 75 | 375293.580 | 8288462.626 |
| 126+200 | 25 | 34 | 40 | 0.96 | 739 | 557 | 405 | 246 | 162 | 89 | 64 | 375447.783 | 8288339.922 |
| 126+405 | 25 | 34 | 40 | 0.97 | 752 | 555 | 421 | 266 | 180 | 94 | 69 | 375605.819 | 8288213.549 |
| 126+600 | 25 | 34 | 40 | 0.95 | 499 | 366 | 280 | 190 | 151 | 103 | 83 | 375768.115 | 8288092.731 |
| 126+800 | 25 | 34 | 40 | 0.95 | 647 | 439 | 310 | 186 | 137 | 95 | 78 | 375924.251 | 8287964.502 |
| 127+000 | 25 | 34 | 40 | 0.96 | 788 | 630 | 490 | 350 | 274 | 177 | 136 | 376073.262 | 8287830.703 |
| 127+200 | 25 | 34 | 40 | 0.96 | 637 | 464 | 354 | 239 | 182 | 119 | 91 | 376231.301 | 8287702.483 |
| 127+400 | 16 | 16 | 40 | 0.94 | 534 | 407 | 343 | 256 | 200 | 126 | 92 | 376366.215 | 8287618.390 |
| 127+500 | 16 | 16 | 40 | 0.95 | 718 | 543 | 460 | 352 | 291 | 196 | 148 | 376465.389 | 8287618.923 |
| 127+600 | 16 | 16 | 40 | 0.93 | 729 | 529 | 434 | 312 | 243 | 157 | 121 | 376558.920 | 8287604.674 |
| 127+700 | 16 | 19 | 40 | 0.96 | 660 | 495 | 410 | 295 | 228 | 142 | 106 | 376656.723 | 8287594.135 |
| 127+800 | 16 | 19 | 40 | 0.95 | 657 | 498 | 414 | 309 | 250 | 173 | 136 | 376755.489 | 8287581.757 |

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 127+800 | 19 | 23 | 40 | 0.95 | 532 | 409 | 336 | 241 | 188 | 122 | 95 | 376564.027 | 8287630.515 |
| 127+700 | 19 | 23 | 40 | 0.96 | 671 | 529 | 450 | 338 | 278 | 193 | 149 | 376461.932 | 8287641.030 |
| 127+600 | 19 | 23 | 40 | 0.95 | 710 | 560 | 460 | 313 | 226 | 129 | 96 | 376366.066 | 8287646.047 |
| 127+500 | 25 | 41 | 40 | 0.96 | 754 | 634 | 506 | 342 | 250 | 136 | 91 | 376297.854 | 8287651.212 |
| 127+300 | 26 | 41 | 40 | 0.98 | 639 | 500 | 373 | 249 | 193 | 128 | 99 | 376148.428 | 8287773.948 |
| 127+100 | 25 | 33 | 40 | 0.97 | 685 | 480 | 364 | 248 | 198 | 137 | 110 | 375997.997 | 8287905.896 |
| 126+900 | 25 | 33 | 40 | 0.96 | 750 | 549 | 398 | 266 | 208 | 133 | 101 | 375839.021 | 8288030.422 |
| 126+700 | 24 | 33 | 40 | 0.96 | 620 | 474 | 351 | 230 | 170 | 107 | 83 | 375688.170 | 8288151.303 |
| 126+500 | 24 | 33 | 40 | 0.97 | 758 | 610 | 455 | 298 | 215 | 130 | 100 | 375530.641 | 8288272.147 |
| 126+300 | 25 | 33 | 40 | 0.99 | 839 | 650 | 478 | 288 | 201 | 111 | 80 | 375377.819 | 8288404.079 |
| 126+100 | 24 | 33 | 40 | 0.95 | 565 | 407 | 302 | 187 | 130 | 81 | 67 | 375224.995 | 8288536.010 |
| 125+900 | 24 | 39 | 40 | 0.97 | 612 | 479 | 363 | 240 | 175 | 106 | 81 | 375065.534 | 8288660.528 |
| 125+700 | 24 | 39 | 40 | 0.97 | 511 | 407 | 298 | 186 | 130 | 77 | 60 | 374914.614 | 8288792.467 |
| 125+500 | 24 | 39 | 40 | 0.97 | 648 | 502 | 393 | 250 | 175 | 95 | 70 | 374768.938 | 8288924.434 |
| 125+300 | 24 | 39 | 40 | 0.98 | 617 | 478 | 357 | 221 | 155 | 89 | 70 | 374612.789 | 8289052.656 |
| 125+100 | 25 | 39 | 40 | 0.97 | 566 | 446 | 343 | 217 | 145 | 72 | 46 | 374450.927 | 8289179.002 |
| 124+900 | 26 | 43 | 40 | 0.97 | 634 | 534 | 417 | 271 | 188 | 107 | 82 | 374300.030 | 8289305.406 |
| 124+700 | 26 | 43 | 40 | 0.97 | 565 | 443 | 321 | 195 | 130 | 71 | 53 | 374143.917 | 8289426.249 |
| 124+500 | 26 | 43 | 40 | 0.95 | 424 | 355 | 276 | 187 | 137 | 81 | 60 | 373985.894 | 8289547.081 |
| 124+300 | 26 | 43 | 40 | 0.97 | 602 | 496 | 388 | 262 | 187 | 101 | 72 | 373826.429 | 8289669.748 |
| 124+100 | 27 | 43 | 40 | 0.98 | 584 | 477 | 344 | 219 | 156 | 97 | 76 | 373665.979 | 8289797.940 |
| 123+900 | 27 | 43 | 40 | 0.96 | 662 | 575 | 441 | 285 | 198 | 106 | 79 | 373507.910 | 8289926.145 |
| 123+700 | 28 | 44 | 40 | 0.96 | 583 | 485 | 349 | 211 | 138 | 67 | 47 | 373348.521 | 8290034.058 |
| 123+500 | 27 | 44 | 40 | 0.96 | 449 | 372 | 281 | 183 | 132 | 76 | 56 | 373187.152 | 8290154.867 |
| 123+300 | 26 | 44 | 40 | 0.95 | 597 | 485 | 339 | 189 | 120 | 62 | 46 | 373026.715 | 8290279.367 |
| 123+100 | 26 | 42 | 40 | 0.95 | 325 | 257 | 188 | 130 | 101 | 68 | 57 | 372862.035 | 8290394.624 |
| 122+900 | 26 | 42 | 40 | 0.97 | 449 | 364 | 273 | 175 | 129 | 79 | 61 | 372702.102 | 8290513.594 |
| 122+700 | 29 | 42 | 40 | 0.97 | 429 | 357 | 270 | 167 | 116 | 67 | 52 | 372538.443 | 8290615.947 |
| 122+500 | 28 | 42 | 40 | 0.97 | 572 | 445 | 325 | 197 | 126 | 52 | 30 | 372433.538 | 8290786.848 |
| 122+300 | 27 | 42 | 40 | 1.00 | 597 | 443 | 299 | 169 | 110 | 54 | 35 | 372379.077 | 8290976.467 |
| 122+100 | 27 | 42 | 40 | 0.96 | 470 | 388 | 272 | 145 | 91 | 44 | 32 | 372330.308 | 8291171.648 |
| 121+700 | 25 | 42 | 40 | 0.98 | 540 | 370 | 222 | 103 | 51 | 14 | 5 | 372195.328 | 8291519.394 |
| 121+500 | 25 | 42 | 40 | 0.96 | 611 | 439 | 314 | 187 | 129 | 75 | 59 | 372245.416 | 8291689.309 |
| 121+300 | 25 | 39 | 40 | 0.99 | 600 | 447 | 325 | 191 | 126 | 71 | 52 | 372143.801 | 8291867.602 |
| 121+100 | 24 | 39 | 40 | 0.98 | 575 | 431 | 306 | 183 | 124 | 65 | 44 | 372040.795 | 8292038.513 |
| 120+900 | 24 | 39 | 40 | 0.97 | 589 | 478 | 355 | 210 | 140 | 78 | 60 | 371934.045 | 8292196.494 |
| 120+700 | 24 | 39 | 40 | 0.96 | 474 | 352 | 241 | 131 | 80 | 32 | 16 | 371832.071 | 8292352.658 |
| 120+500 | 24 | 39 | 40 | 0.96 | 536 | 399 | 285 | 161 | 103 | 49 | 31 | 371655.987 | 8292456.781 |
| 120+300 | 23 | 39 | 40 | 0.98 | 436 | 314 | 218 | 112 | 62 | 23 | 12 | 371455.024 | 8292488.853 |
| 120+100 | 23 | 39 | 40 | 0.99 | 479 | 358 | 250 | 144 | 95 | 55 | 40 | 371251.447 | 8292476.655 |
| 119+900 | 23 | 39 | 40 | 0.98 | 628 | 461 | 344 | 236 | 182 | 116 | 90 | 371049.787 | 8292462.622 |
| 119+700 | 24 | 39 | 40 | 0.98 | 841 | 623 | 440 | 257 | 183 | 109 | 87 | 370867.173 | 8292454.226 |
| 119+500 | 24 | 38 | 40 | 1.00 | 953 | 777 | 597 | 370 | 261 | 141 | 98 | 370661.222 | 8292440.166 |
| 119+300 | 24 | 38 | 40 | 1.00 | 781 | 570 | 395 | 221 | 145 | 78 | 56 | 370464.798 | 8292428.001 |
| 119+100 | 24 | 38 | 40 | 0.99 | 567 | 401 | 253 | 126 | 65 | 17 | 4 | 370273.403 | 8292454.585 |
| 118+900 | 24 | 38 | 40 | 0.99 | 644 | 496 | 352 | 189 | 119 | 53 | 31 | 370102.597 | 8292551.351 |
| 118+700 | 24 | 38 | 40 | 0.99 | 560 | 424 | 312 | 189 | 133 | 80 | 61 | 369924.605 | 8292653.606 |
| 118+500 | 23 | 38 | 40 | 0.98 | 520 | 359 | 247 | 144 | 102 | 62 | 44 | 369756.616 | 8292757.761 |
| 118+300 | 24 | 38 | 40 | 0.99 | 707 | 531 | 375 | 222 | 155 | 75 | 49 | 369583.876 | 8292858.201 |
| 118+100 | 24 | 38 | 40 | 0.98 | 576 | 439 | 316 | 186 | 127 | 71 | 55 | 369412.100 | 8292956.800 |
| 117+900 | 24 | 38 | 40 | 0.99 | 719 | 498 | 331 | 181 | 117 | 63 | 47 | 369235.999 | 8293060.906 |
| 117+700 | 23 | 34 | 40 | 1.00 | 552 | 368 | 255 | 134 | 77 | 25 | 11 | 369079.884 | 8293172.499 |
| 117+500 | 23 | 34 | 40 | 0.99 | 576 | 364 | 230 | 101 | 50 | 14 | 5 | 368978.705 | 8293352.628 |
| 117+300 | 23 | 34 | 40 | 0.98 | 769 | 521 | 352 | 184 | 117 | 60 | 44 | 368865.197 | 8293519.778 |
| 117+100 | 22 | 34 | 40 | 0.98 | 834 | 625 | 478 | 305 | 222 | 138 | 107 | 368698.596 | 8293629.466 |
| 116+900 | 22 | 34 | 40 | 0.98 | 698 | 497 | 358 | 209 | 144 | 90 | 72 | 368513.834 | 8293661.605 |
| 116+700 | 22 | 34 | 40 | 0.99 | 644 | 507 | 383 | 248 | 181 | 107 | 79 | 368404.140 | 8293493.186 |
| 116+500 | 22 | 34 | 40 | 0.97 | 586 | 417 | 279 | 131 | 66 | 17 | 7 | 368311.660 | 8293317.488 |
| 116+300 | 22 | 34 | 40 | 0.98 | 668 | 484 | 346 | 195 | 127 | 72 | 52 | 368210.587 | 8293143.584 |
| 116+100 | 22 | 34 | 40 | 0.98 | 692 | 472 | 314 | 160 | 103 | 66 | 55 | 368113.828 | 8292966.017 |
| 115+900 | 23 | 34 | 40 | 0.99 | 589 | 413 | 278 | 124 | 29 | 8 | 0 | 367948.863 | 8292872.879 |
| 115+700 | 23 | 34 | 40 | 1.01 | 749 | 573 | 429 | 268 | 194 | 117 | 86 | 367767.739 | 8292853.403 |
| 115+500 | 23 | 34 | 40 | 1.00 | 687 | 533 | 403 | 257 | 181 | 99 | 71 | 367563.193 | 8292843.011 |

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 115+300 | 23 | 34 | 40 | 1.00 | 875 | 657 | 482 | 285 | 187 | 88 | 56 | 367366.533 | 8292871.385 |
| 115+100 | 22 | 34 | 40 | 1.00 | 736 | 522 | 363 | 193 | 118 | 60 | 45 | 367169.808 | 8292910.820 |
| 114+900 | 22 | 34 | 40 | 0.98 | 813 | 617 | 437 | 259 | 166 | 85 | 61 | 366974.026 | 8292952.103 |
| 114+700 | 22 | 34 | 40 | 0.99 | 673 | 453 | 287 | 150 | 105 | 67 | 57 | 366780.563 | 8293004.461 |
| 114+500 | 22 | 34 | 40 | 0.99 | 621 | 425 | 283 | 159 | 110 | 70 | 58 | 366583.815 | 8293047.579 |
| 114+300 | 21 | 34 | 40 | 1.00 | 870 | 575 | 412 | 236 | 162 | 87 | 62 | 366387.065 | 8293090.696 |
| 114+100 | 21 | 34 | 40 | 0.97 | 585 | 372 | 273 | 169 | 122 | 76 | 61 | 366198.444 | 8293130.170 |
| 113+900 | 21 | 31 | 40 | 1.00 | 788 | 550 | 401 | 234 | 154 | 85 | 63 | 365996.564 | 8293152.971 |
| 113+700 | 20 | 31 | 40 | 0.98 | 671 | 487 | 356 | 209 | 136 | 81 | 63 | 365794.737 | 8293166.550 |
| 113+500 | 21 | 31 | 40 | 1.00 | 805 | 595 | 447 | 275 | 186 | 106 | 75 | 365593.875 | 8293178.289 |
| 113+300 | 21 | 31 | 40 | 1.00 | 726 | 484 | 315 | 207 | 145 | 84 | 62 | 365393.457 | 8293195.561 |
| 113+100 | 21 | 31 | 40 | 0.99 | 741 | 536 | 403 | 245 | 165 | 90 | 67 | 365193.537 | 8293209.147 |
| 112+900 | 19 | 31 | 40 | 0.99 | 703 | 508 | 350 | 202 | 142 | 80 | 61 | 364997.898 | 8293224.599 |
| 112+700 | 21 | 31 | 40 | 0.99 | 610 | 452 | 343 | 213 | 149 | 88 | 67 | 364797.977 | 8293238.181 |
| 112+500 | 21 | 31 | 40 | 0.99 | 709 | 515 | 375 | 221 | 151 | 87 | 67 | 364597.579 | 8293251.758 |
| 112+300 | 21 | 31 | 40 | 1.00 | 595 | 421 | 303 | 175 | 112 | 61 | 49 | 364396.703 | 8293265.331 |
| 112+100 | 21 | 31 | 40 | 0.99 | 657 | 489 | 362 | 217 | 147 | 81 | 65 | 364194.884 | 8293277.053 |
| 111+900 | 21 | 31 | 40 | 1.00 | 633 | 448 | 336 | 204 | 145 | 88 | 69 | 363994.019 | 8293288.779 |
| 111+700 | 21 | 31 | 40 | 1.00 | 756 | 491 | 335 | 194 | 140 | 88 | 71 | 363804.556 | 8293307.945 |
| 111+500 | 20 | 28 | 40 | 0.99 | 778 | 504 | 345 | 196 | 136 | 83 | 65 | 363606.053 | 8293323.370 |
| 111+300 | 20 | 28 | 40 | 1.01 | 768 | 503 | 332 | 190 | 128 | 79 | 59 | 363406.053 | 8293349.847 |
| 111+100 | 20 | 28 | 40 | 1.00 | 655 | 421 | 268 | 150 | 105 | 67 | 51 | 363205.110 | 8293374.473 |
| 110+900 | 20 | 28 | 40 | 0.98 | 638 | 400 | 262 | 142 | 100 | 62 | 49 | 363004.631 | 8293400.943 |
| 110+700 | 20 | 28 | 40 | 1.00 | 594 | 394 | 279 | 160 | 109 | 58 | 42 | 362802.245 | 8293427.401 |
| 110+500 | 20 | 28 | 40 | 0.98 | 658 | 428 | 282 | 162 | 118 | 71 | 53 | 362603.685 | 8293452.036 |
| 110+300 | 18 | 25 | 40 | 0.97 | 634 | 418 | 300 | 184 | 130 | 76 | 59 | 362408.972 | 8293471.161 |
| 110+100 | 16 | 25 | 40 | 1.00 | 828 | 545 | 369 | 209 | 139 | 80 | 57 | 362212.362 | 8293488.428 |
| 109+900 | 15 | 25 | 40 | 1.00 | 657 | 459 | 337 | 201 | 141 | 86 | 63 | 362005.747 | 8293503.790 |
| 109+700 | 15 | 25 | 40 | 1.00 | 708 | 458 | 320 | 181 | 118 | 63 | 46 | 361807.706 | 8293521.046 |
| 109+500 | 15 | 25 | 40 | 1.00 | 784 | 511 | 357 | 197 | 125 | 70 | 52 | 361614.455 | 8293534.640 |
| 109+300 | 15 | 25 | 40 | 1.00 | 912 | 580 | 352 | 197 | 136 | 81 | 59 | 361411.632 | 8293553.708 |
| 109+100 | 15 | 22 | 40 | 1.00 | 788 | 461 | 300 | 167 | 114 | 64 | 45 | 361213.590 | 8293570.958 |
| 108+900 | 15 | 22 | 40 | 1.01 | 935 | 592 | 399 | 211 | 123 | 60 | 42 | 361016.045 | 8293584.522 |
| 108+700 | 15 | 22 | 40 | 1.00 | 480 | 304 | 203 | 110 | 77 | 48 | 39 | 360814.175 | 8293603.590 |
| 108+500 | 14 | 22 | 40 | 1.00 | 946 | 626 | 446 | 253 | 154 | 73 | 50 | 360617.562 | 8293620.845 |
| 108+300 | 15 | 22 | 40 | 0.99 | 929 | 602 | 421 | 223 | 135 | 65 | 46 | 360418.086 | 8293638.080 |
| 108+100 | 15 | 22 | 40 | 1.00 | 924 | 612 | 419 | 235 | 152 | 78 | 54 | 360218.134 | 8293655.310 |
| 107+900 | 14 | 22 | 40 | 1.00 | 818 | 527 | 363 | 208 | 141 | 78 | 55 | 360019.622 | 8293670.704 |
| 107+700 | 14 | 22 | 40 | 0.97 | 1030 | 583 | 382 | 195 | 117 | 53 | 36 | 359818.737 | 8293684.238 |
| 107+500 | 14 | 22 | 40 | 1.00 | 702 | 444 | 306 | 172 | 117 | 66 | 47 | 359616.931 | 8293692.232 |
| 107+300 | 14 | 22 | 40 | 1.00 | 680 | 458 | 340 | 203 | 135 | 69 | 48 | 359418.963 | 8293696.560 |
| 107+100 | 14 | 22 | 40 | 1.00 | 675 | 449 | 337 | 207 | 139 | 70 | 48 | 359214.295 | 8293704.534 |
| 106+900 | 14 | 21 | 40 | 1.00 | 668 | 472 | 361 | 225 | 153 | 78 | 53 | 359016.293 | 8293714.390 |
| 106+700 | 14 | 21 | 40 | 0.99 | 454 | 289 | 204 | 115 | 77 | 44 | 37 | 358836.610 | 8293770.456 |
| 106+500 | 14 | 21 | 40 | 0.99 | 641 | 417 | 284 | 137 | 97 | 56 | 42 | 358657.278 | 8293846.806 |
| 106+300 | 14 | 21 | 40 | 1.00 | 595 | 373 | 223 | 134 | 91 | 51 | 40 | 358470.769 | 8293926.799 |
| 106+100 | 13 | 21 | 40 | 0.99 | 586 | 387 | 293 | 176 | 114 | 61 | 44 | 358287.597 | 8294006.811 |
| 105+900 | 13 | 21 | 40 | 1.00 | 626 | 422 | 306 | 180 | 117 | 59 | 41 | 358099.165 | 8294088.633 |
| 105+700 | 13 | 21 | 40 | 1.00 | 810 | 489 | 363 | 232 | 150 | 71 | 45 | 357917.909 | 8294166.810 |
| 105+500 | 13 | 21 | 40 | 0.98 | 692 | 476 | 348 | 202 | 129 | 60 | 39 | 357731.417 | 8294243.110 |
| 105+300 | 13 | 21 | 40 | 1.00 | 684 | 445 | 313 | 176 | 107 | 49 | 32 | 357554.928 | 8294321.313 |
| 105+100 | 13 | 21 | 40 | 0.99 | 675 | 474 | 359 | 215 | 141 | 69 | 46 | 357373.634 | 8294405.018 |
| 104+900 | 12 | 21 | 40 | 0.96 | 484 | 325 | 239 | 142 | 92 | 47 | 36 | 357183.265 | 8294490.510 |
| 104+700 | 12 | 21 | 40 | 0.99 | 512 | 344 | 260 | 159 | 107 | 56 | 39 | 357026.997 | 8294614.934 |
| 104+500 | 12 | 21 | 40 | 0.97 | 492 | 337 | 253 | 148 | 93 | 45 | 32 | 356902.037 | 8294767.211 |
| 104+300 | 12 | 21 | 40 | 0.98 | 693 | 505 | 393 | 243 | 156 | 63 | 34 | 356772.747 | 8294924.992 |
| 104+100 | 11 | 21 | 40 | 0.99 | 662 | 463 | 344 | 203 | 121 | 47 | 28 | 356645.841 | 8295082.788 |
| 103+900 | 11 | 18 | 40 | 1.01 | 1073 | 750 | 587 | 389 | 278 | 158 | 109 | 356527.054 | 8295238.790 |
| 103+700 | 11 | 18 | 40 | 0.98 | 698 | 446 | 316 | 185 | 121 | 66 | 48 | 356420.609 | 8295404.087 |
| 103+500 | 10 | 18 | 40 | 0.99 | 779 | 491 | 343 | 201 | 129 | 60 | 37 | 356328.404 | 8295580.537 |
| 103+300 | 10 | 18 | 40 | 0.98 | 557 | 326 | 217 | 124 | 83 | 53 | 42 | 356253.767 | 8295770.003 |
| 103+100 | 10 | 18 | 40 | 0.97 | 704 | 407 | 268 | 133 | 82 | 45 | 35 | 356238.696 | 8295969.060 |
| 102+900 | 11 | 18 | 40 | 0.98 | 611 | 381 | 270 | 155 | 98 | 43 | 26 | 356194.563 | 8296162.403 |

## EVALUACION ESTRUCTURAL
## DEFLEXIONES
## PROYECTO CORREDOR VIAL PROREGION PUNO : PAQUETE 03

**RUTA** : Emp. PE-3SQ RUTA 15 (LAMPA - JULIACA)
**SECTOR CONTROLADO** : Km 98+350 - Km 127+750
**PISTA CONTROLADA** : CARRIL IZQUIERDO
**SUPERFICIE** : ASFALTO
**FECHA DE MEDICIÓN** : ABRIL 2019

| PROGRESIVA (Km) | TEMP. Aire (ºC) | TEMP. Pavimento (ºC) | CARGA CORREGIDA (KN) | FACTOR DE CORRECIÓN POR CARGA | DEFLEXIONES CORREGIDAS A 40 KN (µm) | | | | | | | COORDENADAS UTM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Df0 | Df1 | Df2 | Df3 | Df4 | Df5 | Df6 | Este | Norte |
| 102+700 | 10 | 18 | 40 | 0.99 | 1051 | 687 | 493 | 280 | 168 | 63 | 36 | 356120.388 | 8296353.716 |
| 102+500 | 10 | 18 | 40 | 0.98 | 883 | 618 | 475 | 313 | 231 | 142 | 106 | 356061.523 | 8296537.749 |
| 102+300 | 10 | 17 | 40 | 1.00 | 606 | 389 | 285 | 173 | 120 | 70 | 54 | 355994.002 | 8296732.791 |
| 102+100 | 10 | 17 | 40 | 1.00 | 731 | 464 | 330 | 195 | 134 | 73 | 54 | 355996.148 | 8296924.578 |
| 101+900 | 11 | 17 | 40 | 0.97 | 647 | 401 | 285 | 160 | 102 | 50 | 35 | 356040.272 | 8297116.626 |
| 101+700 | 11 | 17 | 40 | 0.98 | 557 | 346 | 242 | 135 | 88 | 51 | 41 | 356054.765 | 8297317.710 |
| 101+500 | 10 | 17 | 40 | 0.98 | 734 | 444 | 329 | 201 | 138 | 83 | 65 | 355909.116 | 8297418.223 |
| 101+300 | 10 | 17 | 40 | 0.99 | 753 | 491 | 360 | 219 | 150 | 83 | 62 | 355709.193 | 8297424.355 |
| 101+100 | 10 | 17 | 40 | 0.98 | 774 | 509 | 378 | 245 | 177 | 107 | 84 | 355508.316 | 8297430.478 |
| 100+900 | 10 | 17 | 40 | 1.00 | 1133 | 720 | 503 | 259 | 154 | 87 | 72 | 355311.755 | 8297432.938 |
| 100+700 | 10 | 17 | 40 | 0.99 | 773 | 514 | 386 | 250 | 178 | 101 | 75 | 355106.095 | 8297440.872 |
| 100+500 | 10 | 17 | 40 | 0.99 | 804 | 550 | 425 | 278 | 195 | 102 | 67 | 354909.033 | 8297447.014 |
| 100+300 | 10 | 17 | 40 | 0.99 | 676 | 436 | 314 | 187 | 113 | 60 | 46 | 354743.750 | 8297558.462 |
| 100+100 | 10 | 15 | 40 | 1.00 | 839 | 519 | 388 | 249 | 174 | 104 | 79 | 354659.157 | 8297734.954 |
| 99+900 | 10 | 15 | 40 | 0.99 | 782 | 475 | 348 | 192 | 109 | 39 | 26 | 354642.654 | 8297932.157 |
| 99+700 | 9 | 15 | 40 | 0.97 | 675 | 420 | 301 | 175 | 115 | 65 | 54 | 354625.673 | 8298129.357 |
| 99+500 | 9 | 15 | 40 | 0.97 | 569 | 361 | 268 | 162 | 112 | 65 | 51 | 354609.623 | 8298330.252 |
| 99+300 | 9 | 15 | 40 | 0.97 | 543 | 342 | 250 | 144 | 93 | 51 | 41 | 354541.155 | 8298521.597 |
| 99+100 | 9 | 15 | 40 | 0.96 | 855 | 524 | 365 | 173 | 74 | 35 | 31 | 354467.030 | 8298701.842 |
| 98+900 | 9 | 15 | 40 | 0.98 | 760 | 466 | 335 | 196 | 128 | 68 | 50 | 354299.316 | 8298818.804 |
| 98+700 | 9 | 15 | 40 | 0.98 | 695 | 434 | 310 | 179 | 115 | 62 | 48 | 354137.837 | 8298930.272 |
| 98+500 | 9 | 15 | 40 | 0.98 | 781 | 518 | 384 | 220 | 128 | 55 | 37 | 353978.277 | 8299039.906 |
| 98+300 | 10 | 15 | 40 | 1.00 | 758 | 435 | 276 | 119 | 59 | 23 | 18 | 353853.227 | 8299199.546 |

# C.2 : Norma ASTM D 4694 – 96

Designation: D 4694 – 96

# Standard Test Method for Deflections with a Falling-Weight-Type Impulse Load Device[1]

This standard is issued under the fixed designation D 4694; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This test method covers the measurement of deflections of paved and unpaved surfaces with a falling-weight-type impulse load device. These devices are commonly referred to as falling-weight deflectometers or FWDs.

1.2 This test method describes the measurement of vertical deflection response of the surface to an impulse load applied to the pavement surface. Vertical deflections are measured on the load axis and at points spaced radially outward from the load axis.

NOTE 1—Subcommittee D04.39 is currently working on the development of a Precision and Bias statement. Therefore, the committee recommends that the results from this test method should not be used in a buying or selling relationship for construction materials or construction materials acceptance.

1.3 The values stated in SI units are to be regarded as the standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* A specific hazard statement is given in Section 6.

## 2. Referenced Documents

2.1 *ASTM Standards:*

D 4695 Guide for General Pavement Deflection Measurements[2]

2.2 *Strategic Highway Research Program:*

Manual for FWD Testing in the Long Term Pavement Performance Study, Operational Field Guidelines, Version 2.0, February 1993

## 3. Summary of Test Method

3.1 This test method is a type of plate-bearing test. The load is a force pulse generated by a weight dropped on a buffer system and is transmitted through a plate resting on the pavement surface. The test apparatus may be mounted in a vehicle or on a suitable trailer towed by a vehicle.

3.2 The vehicle is brought to a stop with the loading plate positioned over the desired test location. The plate and deflection sensors are lowered to the pavement surface. The weight is raised to the height that, when dropped, will impart the desired force to the pavement. The weight is dropped and the resulting vertical movement or deflection of the pavement surface is measured using suitable instrumentation. Multiple tests at the same or different heights of drop may be performed before the apparatus is then raised and moved to the next test site.

3.3 Peak pavement deflections at each measured location resulting from the force pulse are recorded in micrometres, millimetres, mils, or inches, as appropriate.

3.4 The peak force imparted by the falling weight is measured by a load cell and recorded, as the force in kN or lbf or mean stress (the load divided by the plate area) in $kN/m^2$ or psi as appropriate.

## 4. Significance and Use

4.1 This test method covers the determination of pavement surface deflections as a result of the application of an impulse load to the pavement surface. The resulting deflections are measured at the center of the applied load and at various distances away from the load. Deflections may be either correlated directly to pavement performance or used to determine the in-situ material characteristics of the pavement layers. Some uses of data include structural evaluation of load carrying capacity and determination of overlay thickness requirements for highway and airfield pavements.

## 5. Apparatus

5.1 *Instrumentation System*, conforming to the following general requirements:

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[1] This test method is under the jurisdiction of ASTM Committee D-4 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.39 on Non-Destructive Testing of Pavement Structures.

Current edition approved Feb. 10, 1996. Published April 1996. Last previous edition D 4694 – 87 (1995) ε[1]. Originally published as D 4694 – 87.

[2] *Annual Book of ASTM Standards*, Vol 04.03.

5.1.1 *Instruments Exposed to the Elements* (outside the vehicle), shall be operable in the temperature range of – 10 to 50°C (10 to 120°F) and shall tolerate relatively high humidity, rain or spray, and all other adverse conditions such as dust, shock, or vibrations that may normally be encountered.

5.1.2 *Instruments Not Exposed to the Elements* (inside the vehicle), shall be operable in the temperature range of 5 to 40°C (40 to 105°F).

5.2 *Force-Generating Device* (falling "weight"), with a guide system. The force-generating device shall be capable of being raised to one or more predetermined heights and dropped. The resulting force pulse transmitted to the pavement shall be reproducible within the requirements of 7.1. The force pulse shall approximate the shape of a haversine or half-sine wave, and a peak force of approximately 50 kN (11 000 lbf) shall be achievable.

NOTE 2—It is common practice to use a force-pulse duration of 20 to 60 ms or a rise time of 10 to 30 ms.

5.2.1 *Guide System*, designed to operate with negligible friction or resistance and designed so the weight falls perpendicular to the pavement surface.

5.3 *Loading Plate*, capable of an approximate uniform distribution of the load on the pavement surface. Typical loading plates are 300 and 450 mm (12 and 18 in.) in diameter for measurements on conventional roads and airfields or similar stiff pavements. The plate shall be suitably constructed to allow pavement deflection measurements at the center of the plate.

5.4 *Deflection Sensor*, capable of measuring the maximum vertical movement of the pavement and mounted in such a manner as to minimize angular rotation with respect to its measuring plane at the maximum expected movement. The number and spacing of the sensors is optional and will depend upon the purpose of the test and the pavement layer characteristics. A sensor spacing of 300 mm (12 in.) is frequently used. Sensors may be of several types such as displacement transducers, velocity transducers, or accelerometers.

5.5 *Data Processing and Storage System*—Load and deflection data shall be recorded on either or both a magnetic storage device or paper strip recorder. Supporting information such as air temperature, pavement surface temperature, distance measurements, and identification data for each test point can be recorded either automatically or manually.

5.6 *Load Cell*, to measure the applied load on each impact shall be placed in a position to minimize the mass between the load cell and the pavement. The load cell shall be positioned in such a way that it does not restrict the ability to obtain deflection measurements under the center of the load plate. The load cell shall be water resistant, and shall be resistant to mechanical shocks from road impacts during testing or travelling, or both.

## 6. Hazards

6.1 The test vehicle, as well as all attachments to it, shall comply with all applicable state and federal laws. Precautions shall be taken beyond those imposed by laws and regulations to ensure maximum safety of operating personnel and other traffic.

## 7. Calibration

7.1 *Force-Generating Device*—Prior to load and deflection sensor calibration, pre-condition the device by dropping the weight at least five times and checking the relative difference in each loading. Loadings shall not vary from each other more than 3 %. If the variations exceed this tolerance, the height of the drop, cleanliness of the track, as well as any springs or rubber pads that are used to condition the load shall be checked. Improperly operating parts shall be replaced or repaired prior to calibration to ensure that the horizontal forces are minimized.

7.2 *Load Calibration Platform*—Follow the manufacturer's recommendations for calibration since several types of these devices are commercially available.

7.3 *Deflection Sensors*—Calibrate sensors at least once a month or in accordance with the manufacturer's recommendations.

7.3.1 *Relative Deflection Calibration*—The relative deflection calibration procedure shall be used to adjust the deflection measurements from each deflection sensor so that they will produce the same deflection measurement (within the precision limits specified in 8.2). The relative deflection calibration requires a sensor holding tower available from the manufacturer. The tower must have sufficient sensor positions to accommodate all of the sensors used during testing. The tower shall position the sensors one above the other along a vertical axis. The base of the tower shall have a single support post on the same vertical axis. The tower shall have sufficient stiffness to allow each sensor to experience the same deflection generated by the Force-Generating Device. Mount the sensors in the tower and position as near the load plate as possible. The tower position shall be fixed by making a small divot in the pavement or by cementing a washer on the pavement to provide a solid contact point for the support post. The load plate shall stay in continuous contact with the pavement surface while gathering calibration data. During calibration, rotate the sensors so that each sensor occupies every level in the tower. At each tower position, record five deflections for each sensor. The tower shall be manually held in a vertical position with a moderate downward pressure while measuring the deflections. Deflection magnitudes of about 400 μm (15 mils) are desired. The same load setting shall be maintained throughout the calibration. Determine deflection ratios for each sensor by dividing the average for all the sensors by the average of that sensor. If any of the resulting ratios are greater than 1.003 or less than 0.997, all of the sensor calibration factors shall be replaced by the existing calibration factor multiplied by the ratio. If any of the calibration factors exceed the limits established by the manufacturer, the device should be repaired and recalibrated according to the manufacturer's recommendations.

7.3.2 To ensure that small deflections (as typically encountered near the outer edge of the deflection basin) are monitored to a reasonable degree of accuracy, repeat the above procedure at a distance of 1 to 1.5 m (3 to 5 ft) from the load plate. Deflection magnitudes of between 50 μm and 100 μm (2 to 4 mils) are desired. Ensure that the average difference between any two sensor readings is 2 μm (0.08 mils) or less; the sensor calibration factors should not be altered. If any differences in

average deflection greater than 2 μm (0.08 mils) are found, the device should be repaired and recalibrated according to the manufacturer's recommendations.

NOTE 3—Several methods have been developed by agencies other than the manufacturers to calibrate falling-weight-type impulse load devices using independent load cells and deflection sensors. One such method is the Reference Calibration procedure developed by the Strategic Highway Research Program (SHRP), presently under the direction of the Long Term Pavement Performance (LTPP) Office of the Federal Highway Administration (FHWA). For the purpose of using this reference method to calibrate the Falling Weight Deflectometers used in the LTPP study, four regional calibration centers have been established, one in each LTPP region. These centers are in Pennsylvania, Minnesota, Texas, and Nevada, operated by their respective State Departments of Transportation. Another method is a transportable calibration verification system developed at the University of Texas at El Paso (UTEP) for the Texas DOT. This also uses independent load cells and deflection sensors to measure the load and deflections created by a falling-weight-type device. Both SHRP and the UTEP method can use the same point on the pavement surface to calibrate the deflection readings by removing the "sensor under test" from its holder and placing it in a reference holder, while the UTEP method can also retain the use of the sensor holders provided by the manufacturer, with the verification deflection sensor(s) placed as close as possible to the sensor under test. These two calibration methods are more complementary than interchangeable, with the stationary method used to make adjustments of 2 % or less to the deflection sensor gains and the portable UTEP method used as a verification of the deflection sensor/sensor holder combination as used in the field, under actual field conditions.

## 8. Signal Conditioning and Recorder System

8.1 All signal conditioning and recording equipment shall allow data reading resolution to meet the following requirements:

8.1.1 Load measurements shall be displayed and stored with a resolution of 200 N (50 lbf) or less.

8.1.2 Deflection measurements shall be displayed and stored with a resolution of ±1 **μm (0.04 mils) or less.**

8.2 The load and deflection measurements shall be recorded as specified under 8.1.1 and 8.1.2, respectively, within a time period or measurement window of at least 60 ms, to an accuracy at the time of peak load and deflection of ± 2 %, and a precision for deflections of ± 2 μm (0.08 mils).

## 9. Procedure

9.1 Transport the device to the test location and position the loading plate over the desired test point. The test location shall be as clean as possible of rocks and debris to ensure that the loading plate will be properly seated. Gravel or soil surfaces shall be as smooth as possible and all loose material removed. (See Guide D 4695.)

9.2 Lower the loading plate and the sensors to ensure they are resting on a firm and stable surface.

9.3 Raise the force generator to the desired height and drop the "weight". Record the resulting peak surface deflections and peak load.

NOTE 4—If significant permanent deformation under the loading plate occurs, move the apparatus and reduce the applied force until the permanent deformation is of no significance to the first test at a test location.

9.4 Perform at least two loading sequences (9.3) and compare the results. If the difference is greater than 3 % for any sensor, note the variability in the report. Additional tests may be run at the same or different loads.

## 10. Precision and Bias

10.1 *Precision*—At this time, no precision from a statistically designed series of tests with different devices has been obtained. Test results from the same device or from different devices may vary due to variations in buffer stiffness or pavement stiffness. Each device, however, should be able to meet the accuracy requirements of 8.2 and the calibration requirements established by the manufacturer and SHRP.

10.2 *Bias*—No statement is being made as to the bias of this test method at the present time.

## 11. Keywords

11.1 deflection surveys; deflection testing; falling weight deflectometer (FWD); impulse deflection testing device; load/deflection testing; nondestructive testing (NDT); pavement deflection; pavement testing

Designation: D 4695 – 96

# Standard Guide for General Pavement Deflection Measurements[1]

This standard is issued under the fixed designation D 4695; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This guide provides recommendations for measuring pavement deflections resulting from the application of a known transient load, a steady-state dynamic load, or an impulse load applied by a nondestructive deflection testing (NDT) device. Deflections are measured with sensors that monitor the vertical movement of the pavement surface. This guide describes the general information that should be obtained regardless of the type of testing device used.

1.2 This guide is applicable for deflection measurements made on flexible (asphalt concrete (AC)), rigid (Portland Cement Concrete (PCC) or continuously reinforced concrete (CRCP)), or composite (AC/PCC) pavements.

1.3 This guide provides general information that is required for three suggested levels of testing effort, as follows:

1.3.1 *Level I*—a general overview of pavement condition for network analysis.

1.3.2 *Level II*—a routine analysis of the pavement for purposes such as overlay or rehabilitation design projects.

1.3.3 *Level III*—a detailed or specific analysis of the pavement, such as the evaluation of joint efficiency or foundation support for PCC slabs.

1.4 The values stated in SI units are to be regarded as standard. Inch-pound units given in parentheses are for information purposes only.

1.5 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

2.1 *AASHTO Standard:*[2]

T256—Standard Recommended Practice for Pavement Deflection Measurements

## 3. Summary of Guide

3.1 This guide consists of recommendations for measuring vertical or normal pavement surface deflections, directly under or at locations radially outward (offset), or both, from the load center. Several offset deflection measurements at a specific test location describe what is called a deflection" basin". Each NDT device is operated according to the standard operating procedure applicable to the device.

3.2 Recommendations for collection of general information such as ambient temperature, pavement temperature, equipment calibration, number of tests, and test location pertains to all devices.

## 4. Significance and Use

4.1 The nondestructive measurement of pavement deflections provides information that can be used for the structural analysis of the pavement system. The series of measured deflections or deflection basins may serve as inputs for models that estimate the overall stiffness of the pavement system, the effective or apparent modulus of elasticity of individual pavement layers (also known as "backcalculation"), or an equivalent thickness of a reference material. Either the effective modulus of elasticity or equivalent thickness may be used for mechanistic pavement evaluation and overlay design.

## 5. Apparatus

5.1 The apparatus used in this guide shall be one of the deflection measuring devices given in 5.2 and shall consist of some type of probe or surface contact sensor to measure normal pavement movements when subjected to a given load type.

5.2 *Deflection Measuring Devices*:

**5.2.1 *Noncontinuous Static Device,*[3]** that operates on a single lever-arm principle. This device should have a minimum 2.5 m (8 ft) long probe and the extension of the probe should depress a dial gage or electronic sensor that measures maximum pavement deflection with a resolution of 0.025 mm (0.001 in.) or better. The vehicle used with the static deflection device should be a truck carrying an 80 kN (18 000 lb) test load on a single rear axle. The rear axle should have dual 280 by 570

[1] This guide is under the jurisdiction of Committee D-4 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.39 on Non-Destructive Testing of Pavement Structures.

Current edition approved Feb. 10, 1996. Published April 1996. Last previous edition D 4695 – 87. Originally published as D 4695 – 87.

[2] Available from the American Association of State Highway and Transportation Officials, 444 N. Capitol St., NW, Washington, DC 20001.

[3] An example of this instrument is the Soiltest Benkelman Beam, manufactured by Soiltest Inc., Materials Testing Div., 2205 Lee St., Evanston, IL 60202.

mm (11.0 by 22.5 in.) 12-ply tires inflated to 480 kPa (70 psi). Other axle loads, tire sizes, and inflation pressures are permissible; however, the loading configuration must be indicated in the engineering report, for example as outlined in AASHTO Standard T256.

5.2.2 *Semicontinuous Static Device,*[4] that operates on a double lever-arm principle. The vehicle operating this device should be a truck carrying a 130 kN (29 000 lb) single-axle test load. It should have dual 280 by 570 mm (11.0 by 22.5 in.) 12-ply tires inflated to 480 kPa (70 psi). Other axle loads, tire sizes and inflation pressures are permissible, however, the loading configuration should be indicated in the engineering report. The test vehicle should be equipped with a double lever arm with probes, the geometry and size of which makes it possible to measure the maximum pavement deflection in both wheel paths with a resolution of 0.025 mm (0.001 in.) or better. The extension of each lever arm holding the probe should depress an electronic sensor, which may be of any type provided it delivers an analog or digital signal correlated with the movement of this extension, and therefore with the deflection of the pavement surface under the effect of the moving test load. The truck should be able to lift and move the probes from one measurement point to the next, lower them onto the pavement surface, and make another set of measurements in a fully automated process, and at constant vehicle speed.

5.2.3 *Steady State Dynamic Device,*[5] that uses a dynamic force generator to produce an oscillatory load. The force generator should either use counter-rotating masses or a servo-controlled hydraulic actuator to produce the peak-to-peak load. It should measure pavement deflections using four or more sensors with a resolution of 0.001 mm (0.00004 in.) or better, and should be capable of producing a 4.5 kN (1000 lb) peak-to-peak load or greater.

5.2.4 *Impulse Device,*[6] that creates an impulse load on the pavement by dropping a mass from different heights onto a rubber or spring buffer system. It should measure pavement deflections using five or more sensors with a resolution of 0.001 mm (0.00004 in.) or better, and should be capable of producing a 40 kN (9000 lb) load or greater.

## 6. Calibration of Deflection Measuring Devices

6.1 *Load*—The procedure for calibrating the load cell (if a load cell is used by the device) is dependent upon the type of apparatus used. Regardless of the apparatus used, the load cell calibration should be checked at least once per month during continuous operation. Whenever the device is used on an intermittent basis, the load cell calibration should be checked before testing begins. For impulse devices, reference load cell calibration should be carried out at least once per year, for example as outlined in Appendix A of SHRP Report SHRP-P-661.[7] Steady state dynamic devices equipped with load cells may be calibrated by measuring the load cell output under known static loading conditions, such as the load of the device itself. Load cells should be calibrated at least once per year following the manufacturer's instructions. For noncontinuous and semicontinuous static deflection equipment, immediately prior to testing weigh the axle load of the truck if the ballast consists of a material that can absorb moisture (sand, etc). Trucks with steel or concrete block loads only need to be weighed if the loads are changed.

6.2 *Deflection*—The procedure for calibrating the deflection sensors is dependent upon the type of apparatus used. Regardless of the apparatus used, the calibration of the deflection sensors should be checked at least once per month of continuous daily operation. Reference deflection sensor calibration should be carried out in accordance with the manufacturer's recommendations or any other applicable procedures. Whenever the device is used on an intermittent basis, the deflection sensor calibration should be checked before testing begins. If the device has more than one sensor, a relative calibration check may be conducted by stacking the sensors in a column that measures the deflection at a single point, for example as outlined in Appendix A of SHRP Report SHRP-P-661.[7] Also, a standard test area may be used to check the calibration of the sensors. This consists of establishing a reference test point, such as at the interior of a known slab. Static devices should be calibrated daily with feeler gages. When performing deflection sensor calibration, induced deflections should be similar in magnitude to the deflections encountered during normal testing.

## 7. Testing Procedures

7.1 General—The procedure to be followed is dependent upon which type of apparatus is used. The following general information is suggested as the minimum data that needs to be collected, regardless of the type of device used:

7.1.1 *Load*—For impulse load devices, record the peak load applied to the pavement surface by the deflection device. For steady state devices, record the peak-to-peak load. For transient (static) devices, record the axle load of the test vehicle.

7.1.2 *Load Frequency*—If applicable, record the frequency of oscillatory loading for those devices such as a Road Rater. The Dynaflect frequency is set by the manufacturer, generally at 8 Hz.

7.1.3 *Geometry of Loaded Area and Deflection Sensor Locations*—For proper modeling of the pavement structure and backcalculation, etc, it is necessary that the locations of the load, deflection sensors, pavement surface cracks, and PCC joints are known and recorded. Record the location of the nearest joint or crack, in any direction from the center of the load. Record the location and orientation of all sensors as measured radially outward from the center of the load, for example "300 mm (12 in.) ahead of the applied load". In accordance with the selected method of evaluating joint efficiency (or load transfer), the load(s) and deflection sensor(s)

[4] An example of this instrument is the Lacroix Deflectograph.

[5] Examples of this instrument are the Geolog Dynaflect and the Foundation Mechanics Road Rater, manufactured by Geolog Inc., 103 Industrial Blvd., Granbury, TX and Foundation Mechanics Inc., 421 E. El Segundo Blvd., El Segundo, CA 90245.

[6] Examples of this instrument are the Dynatest Falling Weight Deflectometer (FWD), the KUAB 2m-FWD, The Phonix FWD, and the Jils FWD.

[7] Report SHRP-P-661-Manual for FWD Testing in the Long-Term Pavement Performance Study.

should be properly positioned, for example with one or more sensors on each side of the joint and the load placed as close as possible to the "leave" (downstream) side of the joint in question. Failure to note the presence of joints and cracks within the zone of influence of the load could result in errors in estimating layer moduli through backcalculation, etc.

7.1.4 *Time of Test*—Record the date and time the measurements were obtained.

7.1.5 *Air and Pavement Temperatures*—At a minimum, record the pavement surface temperature at each test location to provide data for estimating the average temperature of the bound pavement layer(s). If needed for the analyses, the ambient air temperatures should also be recorded. In lieu of the ambient air temperature, some procedures use the five-day mean air temperature, that is, the sum of the high and low air temperatures for the five days immediately preceding testing, divided by ten to estimate the weighted average or mid-depth temperature of the bound layer(s). If feasible, pavement layer temperatures may be more accurately determined by drilling holes to various depths within the pavement layer(s), filling the bottom of these holes with glycerin or any other suitable liquid, and recording the temperature of the fluid at the desired depth. If testing is done for an extended period of time, take temperature measurements of the fluid every 1 to 2 h to establish a direct correlation between air, pavement surface, and depth temperature measurements. Often, temperature gradients may exist within PCC slabs that can cause curling or warping of the slabs, and thereby significantly affect the measured deflections. In these cases it may be necessary to monitor the temperatures within the slab (for example, with thermocouples), at the surface, mid-depth and bottom of a control slab.

7.2 *Test Method*—Depending on the type of apparatus, there are a number of test methods that can be applied. Steady state devices capable of variable loads and frequencies can be used to conduct "load sweeps" (multiple tests at various loads, at the same test location and frequency) or "frequency sweeps" (multiple tests at various frequencies, at the same test location and load). Impulse devices are typically capable of applying various loads, and some can control the shape and duration of the load pulse. Joint efficiency measurements on jointed PCC pavements can be made with devices equipped with multiple sensors by placing the load plate on one side of the joint and positioning sensors on both sides of the joint (see also 7.1.3).

7.3 *Testing Locations*—The test location and number of tests are dependent upon the testing level selected. Three suggested levels of testing are as follows:

7.3.1 *Level 1*—This test level provides for a general (for example, network) overview of pavement condition with limited testing. Testing should be performed at 200 to 500 m (500 to 1500 ft) intervals, depending on specific pavement conditions, but a minimum of 5 to 10 tests per uniform pavement section are recommended to ensure a statistically significant sample. For AC and CRCP pavements, as a minimum, the load should be positioned along the outer wheel path, or alternatively along the centerline of CRCP slabs. For jointed PCC pavements, the load should first be positioned at or near the geometric center of the slab. For Level I testing, at least 5 % of the slabs covered should be tested at the joints as well, for deflection or load transfer efficiency.

7.3.2 *Level 2*—This test level provides for a more detailed analysis of the pavement, for example, for the purpose of overlay or rehabilitation design. Testing should be performed at 25 to 200 m (100 to 500 ft) intervals, depending on specific pavement conditions, with a minimum coverage of 10 to 20 tests recommended per uniform pavement section. For AC and CRCP pavements, as a minimum the load should be positioned along the outer wheel path, or alternatively along the centerline of CRCP slabs. For jointed PCC pavements, the load should first be positioned at or near the geometric center of the slab and then moved to the nearest joint and positioned along the same line, generally on the leave side of the joint. On roads, streets and highways, joint tests are often conducted along the outer wheel path. Generally, not every joint associated with each interior slab test is covered; however, a minimum joint coverage rate of 25 % is recommended. On airfield PCC pavements, joint efficiency measurements may be carried out on both transverse and longitudinal joints.

7.3.3 *Level 3*—This test level provides for a highly detailed or specific analysis of the pavement for purposes such as identifying localized areas of high deflection or detecting subsurface voids on PCC pavements. For AC or CRCP pavements, testing should be performed at 3 to 25 m (10 to 100 ft) intervals, along one or more test lines. On roads, streets and highways, testing is often carried out in both wheel paths. For jointed PCC pavements, the load should first be positioned at or near the geometric center of every slab along the length of the test section, and then moved to the nearest joint or crack on each slab, either along the outer wheel path or at the corner of the slab, or both. On airfield PCC pavements, joint efficiency measurements should be carried out on both transverse and longitudinal joints.

## 8. Keywords

8.1 Benkelman beam; deflection surveys; deflection testing; deflectograph; falling-weight deflectometer (FWD); heavy-weight deflectometer (HWD); impulse deflection testing device; load/deflection testing; nondestructive testing (NDT); pavement deflection; pavement testing; static deflection testing device; steady-state dynamic deflection testing device

# ANEXO D

# MÉTODO DE ANÁLISIS POR DIFERENCIAS ACUMULADAS, AASHTO 1993

# GUÍA PARA EL DISEÑO DE ESTRUCTURAS DE PAVIMENTO, AASHTO

## APÉNDICE J [6]

## ANÁLISIS DE DELINEACIÓN UNITARIA POR DIFERENCIAS ACUMULADAS

### J-1 LOS FUNDAMENTOS DE LA APROXIMACIÓN

Un método analítico para delinear estadísticamente unidades homogéneas de medidas de un pavimento a lo largo de un sistema de carretera es la aproximación de diferencias acumuladas. Mientras la metodología presentada es fundamentalmente fácil de visualizar, la implementación del manual para grandes bases de datos se convierte en un consumo de tiempo y puede resultar muy laborioso. Sin embargo, la aproximación es presentada debido a que es fácilmente adaptable a una solución computarizada y a un análisis gráfico. Esta aproximación puede ser utilizada para una gran diversidad de variables de respuesta medidas en un pavimento, tal como, la deflexión, serviciabilidad, resistencia al deslizamiento, índices, etc.

La Figura J-1 ilustra el concepto de aproximación total usando la suposición inicial de un valor de respuesta ($r_i$) continuo y constante dentro de varios intervalos (0 a $x_1$; $x_1$ a $x_2$; $x_2$ a $x_3$) a lo largo de la longitud del proyecto. De esta Figura, es obvio que existen tres únicas unidades, teniendo diferentes magnitudes de respuesta ($r_1$, $r_2$, y $r_3$) a lo largo del proyecto. La Figura J-1 (a) ilustra cómo resultaría una gráfica respuesta-distancia. Si se quiere determinar la tendencia del área acumulada bajo la línea del cuadro respuesta-distancia, tendría como resultado la Figura J-1 (b). La línea sólida indica los resultados de las curvas actuales de respuesta. Debido a que las funciones son continuas y constantes dentro de una unidad, el área acumulada, en cualquier punto x, es simplemente la integral o,

$$A = \int_0^{x_1} r_1 \cdot dx + \int_{x_1}^{x} r_2 \cdot dx \qquad \text{(J-1)}$$

donde cada integral es continua dentro de los respectivos intervalos:

$$\left(0 \le x \le x_1\right) y \left(x_1 \le x \le x_2\right)$$

En la Figura J-1 (b), la línea punteada representa el área acumulada provocada por la respuesta total promediada del proyecto. Debe reconocerse que las pendientes (derivadas) de las curvas del área acumulada son simplemente el valor de respuesta para cada unidad ($r_1$, $r_2$, y $r_3$) mientras que la pendiente de la línea punteada es el valor de respuesta promedio total de la longitud completa del proyecto considerado. En la distancia, x, el área acumulada de la respuesta promedio del proyecto es:

$$A_x = \int_0^{x} r \cdot dx \qquad \text{(J-2)}$$

Con

$$\bar{r} = \frac{\int_0^{x_1} r_1 \cdot dx + \int_{x_1}^{x_2} r_2 \cdot dx + \int_{x_2}^{x_3} r_3 \cdot dx}{L_P} = \frac{A_T}{L_P}$$

Y además

$$A_x = L_P \times A_T$$

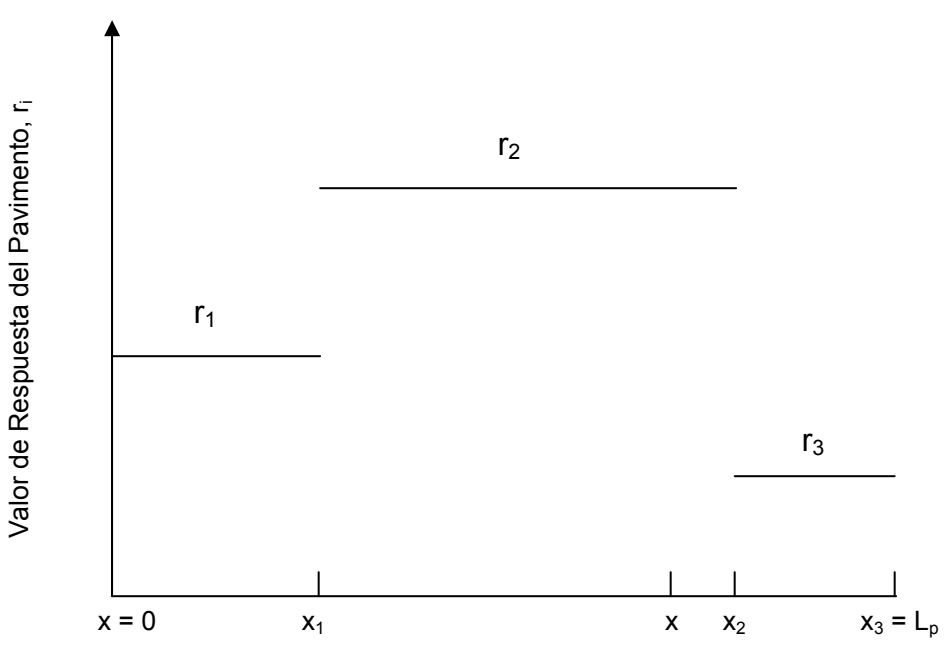
Conocer $A_x$ y $\overline{A}_x$, permite la determinación de la variable $Z_x$ de la diferencia acumulada de:

$$Z_x = A_x - \overline{A}_X$$

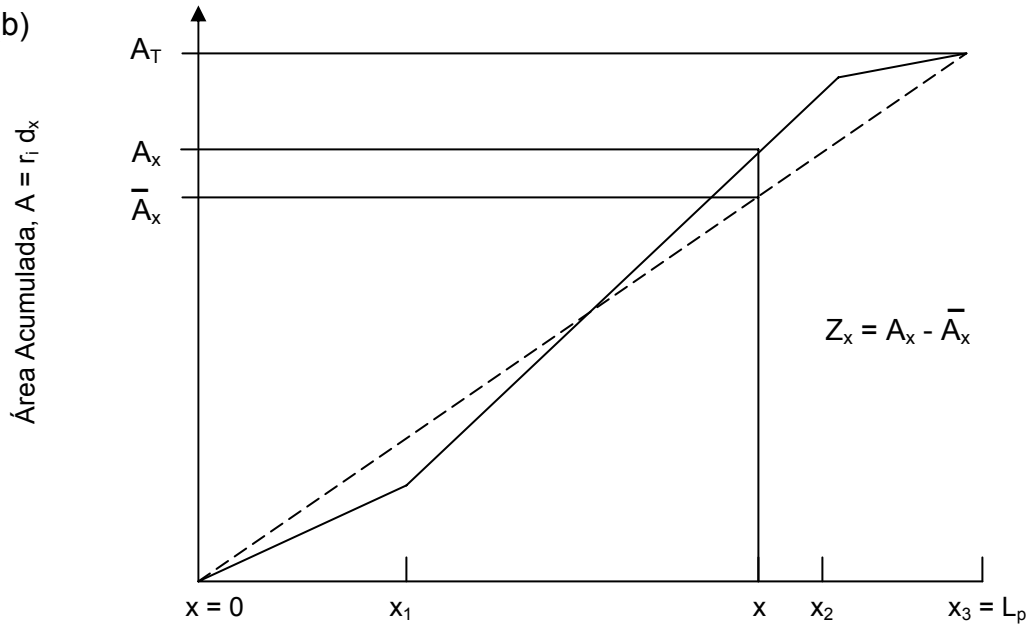
Como se nota en la Figura J-1 (b), $Z_x$ es simplemente la diferencia en los valores de área acumulada, en un punto x dado, entre la línea promedio del proyecto y la línea actual. Si el valor $Z_x$ es ploteado, a su vez, versus la distancia, x, resultaría la Figura J-1 (c). Una evaluación de esta gráfica demuestra que la ubicación de los límites siempre coincide con la ubicación (a lo largo de x) en donde la pendiente de $Z_x$ cambia de signo (de negativo a positivo o viceversa). Este concepto fundamental es la base esencial usada para determinar analíticamente la ubicación del límite para las unidades de análisis.

**Figura J-1.** Conceptos de aproximación de diferencia acumulada para análisis de delineación unitaria

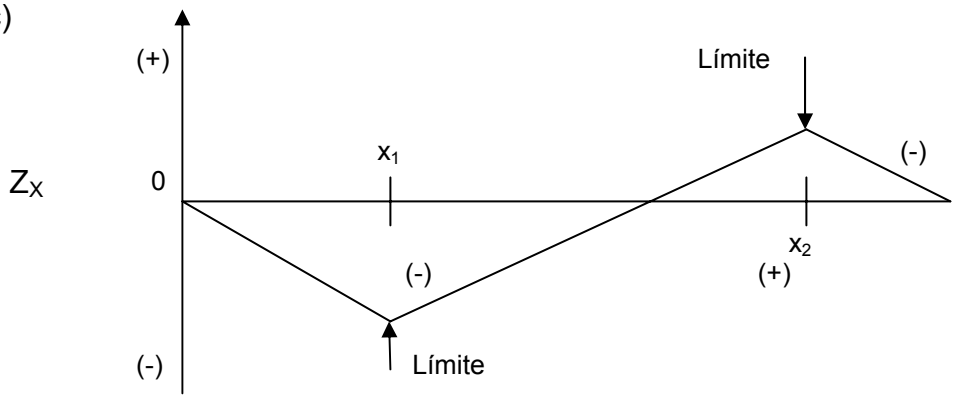
(a)



(b)


Área Acumulada, A = $r_i$ $d_x$
$A_T$
$A_x$
$\bar{A}_x$
$Z_x = A_x - \bar{A}_x$
x = 0
$x_1$
x
$x_2$
$x_3 = L_p$

(c)


$Z_X$
(+)
0
(-)
Límite
$x_1$
(-)
$x_2$
(+)
Límite

## J-2 APLICACIÓN A VARIABLES DISCONTINUAS

Las figuras esquemáticas mostradas en la Figura J-1 son altamente idealizadas. En la práctica, las medidas son normalmente discontinuas (puntos de medida), frecuentemente obtenidos a intervalos desiguales y nunca constantes, aunque dentro de una unidad. A fin de aplicar los principios en una solución metodológica capaz de tratar con estas condiciones, debe ser usada una aproximación de diferencia numérica. La forma de la función $Z_x$ es:

$$Z_x = \sum_{i=1}^{n} a_i - \frac{\sum_{i=1}^{n} a_i}{L_P} \sum_{i=1}^{n} x_i$$

Con

$$a_i = \frac{\left(r_{i-1} + r_i\right) \times x_i}{2} = \bar{r}_i \times x_i \qquad \text{(J-6)}$$

(NOTA: dejar $r_0 = r_1$ para el primer intervalo)

donde:

- n = la $n^{ésima}$ medida de respuesta del pavimento,
- $n_t$ = número total de medidas de respuesta del pavimento tomadas en el proyecto,
- $r_i$ = valor de respuesta del pavimento de la $i^{ésima}$ medida,
- $r_i$ = Promedio de los valores de respuesta del pavimento entre las pruebas (i – 1) e $i^{ésima}$, y
- $L_P$ = Longitud total del proyecto.

Si se utilizan intervalos de prueba iguales:

$$Z_x = \sum_{i=1}^{n} a_i - \frac{n}{n_t} \sum_{i=1}^{n_t} a_i$$

## J-3 SECUENCIA DE SOLUCIÓN TABULAR

La Tabla J-1 es una tabla que ilustra cómo la secuencia de solución progresa y los pasos computacionales necesarios que se requieren para el análisis de un intervalo desigual. La tabla y las entradas son aclaratorias por sí mismas.

**Tabla J-1.** Aproximación de Diferencia Acumulada

| Col. 1 Estación (Distancia) | Col. (2) Valor de Respuesta del Pavimento ($r_i$) | Col. (3) Intervalo de Número (n) | Col. (4) Intervalo de Distancia ($\Delta x_i$) | Col. (5) Intervalo de Distancia Acumulada ($\sum \Delta x_i$) | Col. (6) Intervalo de Respuesta Promedio ($r_i$) | Col. (7) Intervalo de Área Actual ($a_i$) | Col. (8) Área Acumulada $\sum a_i$ | Col. (9) Valor $Z_x$ $Z_x$ = Col. (8) – F*Col.(5) |
|---|---|---|---|---|---|---|---|---|
| 1 | $r_1$ | 1 | $\Delta x_1$ | $\Delta x_1$ | $\bar{r}_1 = r_1$ | $a_1 = \bar{r}_1 \Delta x_1$ | $a_1$ | $Z_{x1} = a_1 - F * \Delta x_1$ |
| 2 | $r_2$ | 2 | $\Delta x_2$ | $(\Delta x_1 + \Delta x_2)$ | $\bar{r}_2 = \frac{(r_1 + r_2)}{2}$ | $a_2 = \bar{r}_2 \Delta x_2$ | $a$ | $Z_{x2} = (a_1 + a_2) - F * (\Delta x_1 + \Delta x_2)$ |
| 3 | $r_3$ | 3 | $\Delta x_3$ | $(\Delta x_1 + \Delta x_2 + \Delta x_3)$ | $\bar{r}_3 = \frac{(r_2 + r_3)}{2}$ | $a_3 = \bar{r}_3 \Delta x_3$ | $a_1 + a_2 + a_3$ | |
| $L_P$ | $r_n$ | $N_t$ | $\Delta x_{nt}$ | $(\Delta x_1 + \ldots + \Delta x_1)$ | $\bar{r}_{nt} = \frac{(r_{n-1} + r_n)}{2}$ | $a_{nt} = \bar{r}_{nt} \Delta x_{nt}$ | $a_1 + \cdots + a_{2t}$ | $Z_{xnt} = (a_1 + \cdots + a_{nt}) - F * (\Delta x_1 + \cdots + \Delta x_{nt})$ |
| | | | | | | | $A_t = \sum_{i=1}^{h_t} a_i$ | |
| | | | | | | | $F* = \frac{A_t}{L_P}$ | |

# ANEXO E

# DATOS DE ENTRADA DHM-4

# E.1 : Características Básicas de los Tramos

HDM - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Tramos de carretera - básico

Nombre del estudio: **PE-3SQ Juliaca - Lampa**
Fecha de ejecución: **08-05-2020**

| ID tramo | Nombre | Tipo de velocidad / capacidad | Modelo de tránsito | Tipo de carretera | Zona climática | Clase de superficie | Juego de calibración | Longitud (Km) | Ancho (m) | Ancho de acot. (m | ELanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T-1 | 1. Km 98+350 - Km 115 | Two Lane Road | Carretera Juliaca | Secondary or Main | Puno - Altiplano | Asfáltica | Concreto Asfáltico | 16.65 | 7.20 | 0.60 | 2 |
| T-2 | 2. Km 115+000 - Km 12 | Two Lane Road | Carretera Juliaca | Secondary or Main | Puno - Altiplano | Asfáltica | Concreto Asfáltico | 7.30 | 7.20 | 0.60 | 2 |
| T-3 | 3. Km 122+300 - Km 12 | Two Lane Road | Carretera Juliaca | Secondary or Main | Puno - Altiplano | Asfáltica | Concreto Asfáltico | 5.45 | 7.20 | 0.60 | 2 |

# E.2 : Características Geométricas de los Tramos

HDM - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Tramos de carretera - geometría

Nombre del estudio: **PE-3SQ Juliaca - Lampa**
Fecha de ejecución: **09-05-2020**

| ID tramo | Nombre | Tipo de velocidad capacidad | Asc. y desc (m/km | No. de asc. y desc. (/km | Curvatura horizontal (grad./km | Sobreelevación (% | Altitud (m | Sigma adral (m/s | Límite de vel (km/h | Factor de cump. del límite vel | Tipo drenaje | Fricción TNM (XNMT) | Fricción lateral (XFRI | Fricción TM (XMT) | Long. (Km) | Ancho (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T-1 | 1. Km 98+350 - Km 115+ | Two Lane Road | 6.4 | 1 | 27 | 3.00 | 3,852 | 0.10 | 90 | 1.10 | Superficial - revestido | 1.00 | 1.00 | 1.00 | 16.65 | 7.20 |
| T-2 | 2. Km 115+000 - Km 122 | Two Lane Road | 2.5 | 1 | 65 | 2.50 | 3,835 | 0.10 | 90 | 1.10 | Superficial - revestido | 1.00 | 1.00 | 1.00 | 7.30 | 7.20 |
| T-3 | 3. Km 122+300 - Km 127 | Two Lane Road | 1.5 | 1 | 10 | 1.00 | 3,828 | 0.10 | 80 | 1.10 | Superficial - revestido | 1.00 | 1.00 | 1.00 | 5.45 | 7.20 |

# E.3 : Condición de la Superficie

HDM - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Tramos de carretera - condición

Nombre del estudio: **PE-3SQ Juliaca - Lampa**
Fecha de ejecución: **09-05-2020**

**Tramos asfálticos:**

| ID | Nombre | Condición para el año | Irregularidad IRI (m/km | Área de agrie estructura total (% | ACW Área de agriet estructura ancho (% | ACT Área de agriet térmico (%) | ARV Área cor desprendi mientos (%) | NPT Baches (no./km | AEB Rotura de borde (m²/km | RDM Prof. de roderas (mm) | TD Prof. de la textura (mm) | SFC50 Resistencia al deslizamiento (SCRIM | Condición del drenaje |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T-1 | 1. Km 98+350 - Km 115 | 2019 | 3.00 | 1.52 | 0.05 | 0.00 | 0.00 | 30.00 | 20.00 | 2 | 1 | 0 | Bueno |
| T-3 | 3. Km 122+300 - Km 12 | 2019 | 8.38 | 5.65 | 2.35 | 0.00 | 0.56 | 220.00 | 25.00 | 2 | 1 | 0 | Pobre |
| T-2 | 2. Km 115+000 - Km 12 | 2019 | 3.62 | 1.23 | 0.04 | 0.00 | 0.00 | 60.00 | 20.00 | 2 | 1 | 0 | Bueno |

# ANEXO F

# DATOS DE SALIDA DHM-4

# F.1 : Comparación de Costos

HDM - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Comparación de flujos de costos (actualizados)

Nombre del estudio: **Modelo de Gestión de Conservación Vial de la carretera Juliaca - Lampa Ok**
Fecha de ejecución: **20-09-2020**
Unidad monetaria: **Soles (millones)**
Tasa de actualización: **8.00 %**

**Tramo:** 1. Km 98+350 - Km 115+000
**Alternativa:** ALT2 - Reciclado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-1
Longitud: 16.65 km Ancho: 7.20 m
Tipo de carretera: Secondary or Main
Ascensos y descensos: 6.45 m/km Curvatura: 27.03 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2022 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2024 | 4.090 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -4.090 |
| 2025 | 0.000 | -0.055 | 0.000 | 0.124 | 0.067 | 0.000 | 0.006 | 0.003 | 0.000 | 0.000 | 0.000 | 0.256 |
| 2026 | 0.000 | 0.000 | 0.000 | 0.150 | 0.066 | 0.000 | 0.007 | 0.003 | 0.000 | 0.000 | 0.000 | 0.226 |
| 2027 | 0.000 | 0.000 | 0.000 | 0.182 | 0.066 | 0.000 | 0.009 | 0.003 | 0.000 | 0.000 | 0.000 | 0.261 |
| 2028 | 0.000 | 0.000 | 0.000 | 0.212 | 0.068 | 0.000 | 0.011 | 0.003 | 0.000 | 0.000 | 0.000 | 0.294 |
| 2029 | 0.000 | 0.000 | 0.000 | 0.240 | 0.072 | 0.000 | 0.012 | 0.004 | 0.000 | 0.000 | 0.000 | 0.328 |
| 2030 | 0.000 | 0.000 | 0.000 | 0.266 | 0.080 | 0.000 | 0.013 | 0.004 | 0.000 | 0.000 | 0.000 | 0.363 |
| 2031 | 0.000 | -0.001 | 0.000 | 0.282 | 0.091 | 0.000 | 0.014 | 0.005 | 0.000 | 0.000 | 0.000 | 0.392 |
| 2032 | 0.000 | -0.036 | 0.000 | 0.293 | 0.106 | 0.000 | 0.015 | 0.005 | 0.000 | 0.000 | 0.000 | 0.455 |
| 2033 | 0.649 | 0.000 | 0.000 | 0.300 | 0.123 | 0.000 | 0.015 | 0.006 | 0.000 | 0.000 | 0.000 | -0.204 |
| 2034 | -0.379 | 0.000 | 0.000 | 0.418 | 0.158 | 0.000 | 0.021 | 0.008 | 0.000 | 0.000 | 0.000 | 0.983 |
| **Total:** | 4.360 | -0.092 | 0.000 | 2.466 | 0.897 | 0.000 | 0.123 | 0.045 | 0.000 | 0.000 | 0.000 | -0.737 |

**Tramo:** 1. Km 98+350 - Km 115+000
**Alternativa:** ALT3 - Fresado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-1 Tipo de carretera: Secondary or Main
Longitud: 16.65 km Ancho: 7.20 m Ascensos y descensos: 6.45 m/km Curvatura: 27.03 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2022 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2024 | 3.121 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -3.121 |
| 2025 | 0.000 | -0.055 | 0.000 | 0.142 | -0.014 | 0.000 | 0.007 | -0.001 | 0.000 | 0.000 | 0.000 | 0.190 |
| 2026 | 0.000 | 0.000 | 0.000 | 0.162 | -0.011 | 0.000 | 0.008 | -0.001 | 0.000 | 0.000 | 0.000 | 0.158 |
| 2027 | 0.000 | 0.000 | 0.000 | 0.188 | -0.007 | 0.000 | 0.009 | 0.000 | 0.000 | 0.000 | 0.000 | 0.190 |
| 2028 | 0.000 | 0.000 | 0.000 | 0.204 | -0.002 | 0.000 | 0.010 | 0.000 | 0.000 | 0.000 | 0.000 | 0.213 |
| 2029 | 0.000 | 0.000 | 0.000 | 0.208 | 0.006 | 0.000 | 0.010 | 0.000 | 0.000 | 0.000 | 0.000 | 0.224 |
| 2030 | 0.817 | 0.000 | 0.000 | 0.213 | 0.016 | 0.000 | 0.011 | 0.001 | 0.000 | 0.000 | 0.000 | -0.578 |
| 2031 | 0.000 | -0.001 | 0.000 | 0.335 | 0.037 | 0.000 | 0.017 | 0.002 | 0.000 | 0.000 | 0.000 | 0.391 |
| 2032 | 0.000 | -0.036 | 0.000 | 0.364 | 0.056 | 0.000 | 0.018 | 0.003 | 0.000 | 0.000 | 0.000 | 0.477 |
| 2033 | 0.000 | 0.000 | 0.000 | 0.385 | 0.077 | 0.000 | 0.019 | 0.004 | 0.000 | 0.000 | 0.000 | 0.485 |
| 2034 | -0.434 | 0.000 | 0.000 | 0.406 | 0.106 | 0.000 | 0.020 | 0.005 | 0.000 | 0.000 | 0.000 | 0.971 |
| **Total:** | 3.505 | -0.092 | 0.000 | 2.606 | 0.264 | 0.000 | 0.130 | 0.013 | 0.000 | 0.000 | 0.000 | -0.400 |

**Tramo:** 2. Km 115+000 - Km 122+300
**Alternativa:** ALT2 - Reciclado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-2 Tipo de carretera: Secondary or Main
Longitud: 7.30 km Ancho: 7.20 m Ascensos y descensos: 2.50 m/km Curvatura: 65.07 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2022 | 2.092 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -2.092 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.064 | 0.030 | 0.000 | 0.003 | 0.002 | 0.000 | 0.000 | 0.000 | 0.099 |
| 2024 | 0.000 | 0.000 | 0.000 | 0.079 | 0.030 | 0.000 | 0.004 | 0.001 | 0.000 | 0.000 | 0.000 | 0.115 |
| 2025 | 0.000 | 0.000 | 0.000 | 0.095 | 0.030 | 0.000 | 0.005 | 0.002 | 0.000 | 0.000 | 0.000 | 0.131 |
| 2026 | 0.000 | -0.024 | 0.000 | 0.109 | 0.032 | 0.000 | 0.005 | 0.002 | 0.000 | 0.000 | 0.000 | 0.172 |
| 2027 | 0.000 | 0.000 | 0.000 | 0.119 | 0.033 | 0.000 | 0.006 | 0.002 | 0.000 | 0.000 | 0.000 | 0.160 |
| 2028 | 0.000 | 0.000 | 0.000 | 0.131 | 0.036 | 0.000 | 0.007 | 0.002 | 0.000 | 0.000 | 0.000 | 0.175 |
| 2029 | 0.000 | 0.000 | 0.000 | 0.139 | 0.041 | 0.000 | 0.007 | 0.002 | 0.000 | 0.000 | 0.000 | 0.189 |
| 2030 | 0.000 | 0.000 | 0.000 | 0.144 | 0.049 | 0.000 | 0.007 | 0.002 | 0.000 | 0.000 | 0.000 | 0.202 |
| 2031 | 0.332 | 0.000 | 0.000 | 0.148 | 0.058 | 0.000 | 0.007 | 0.003 | 0.000 | 0.000 | 0.000 | -0.115 |
| 2032 | 0.000 | -0.014 | 0.000 | 0.202 | 0.075 | 0.000 | 0.010 | 0.004 | 0.000 | 0.000 | 0.000 | 0.305 |
| 2033 | 0.000 | 0.000 | 0.000 | 0.216 | 0.088 | 0.000 | 0.011 | 0.004 | 0.000 | 0.000 | 0.000 | 0.319 |
| 2034 | -0.166 | 0.000 | 0.000 | 0.232 | 0.105 | 0.000 | 0.012 | 0.005 | 0.000 | 0.000 | 0.000 | 0.520 |
| **Total:** | 2.257 | -0.039 | 0.000 | 1.676 | 0.608 | 0.000 | 0.084 | 0.030 | 0.000 | 0.000 | 0.000 | 0.179 |

**Tramo:** 2. Km 115+000 - Km 122+300
**Alternativa:** ALT3 - Fresado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-2 Tipo de carretera: Secondary or Main
Longitud: 7.30 km Ancho: 7.20 m Ascensos y descensos: 2.50 m/km Curvatura: 65.07 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2022 | 1.596 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -1.596 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.073 | -0.009 | 0.000 | 0.004 | 0.000 | 0.000 | 0.000 | 0.000 | 0.067 |
| 2024 | 0.000 | 0.000 | 0.000 | 0.086 | -0.008 | 0.000 | 0.004 | 0.000 | 0.000 | 0.000 | 0.000 | 0.082 |
| 2025 | 0.000 | 0.000 | 0.000 | 0.098 | -0.005 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | 0.097 |
| 2026 | 0.000 | -0.024 | 0.000 | 0.106 | -0.002 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | 0.133 |
| 2027 | 0.000 | 0.000 | 0.000 | 0.104 | 0.001 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | 0.110 |
| 2028 | 0.418 | 0.000 | 0.000 | 0.106 | 0.005 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | -0.301 |
| 2029 | 0.000 | 0.000 | 0.000 | 0.164 | 0.015 | 0.000 | 0.008 | 0.001 | 0.000 | 0.000 | 0.000 | 0.188 |
| 2030 | 0.000 | 0.000 | 0.000 | 0.177 | 0.024 | 0.000 | 0.009 | 0.001 | 0.000 | 0.000 | 0.000 | 0.212 |
| 2031 | 0.000 | 0.000 | 0.000 | 0.188 | 0.036 | 0.000 | 0.009 | 0.002 | 0.000 | 0.000 | 0.000 | 0.236 |
| 2032 | 0.000 | -0.014 | 0.000 | 0.197 | 0.050 | 0.000 | 0.010 | 0.002 | 0.000 | 0.000 | 0.000 | 0.273 |
| 2033 | 0.000 | 0.000 | 0.000 | 0.201 | 0.064 | 0.000 | 0.010 | 0.003 | 0.000 | 0.000 | 0.000 | 0.278 |
| 2034 | 0.073 | 0.000 | 0.000 | 0.208 | 0.082 | 0.000 | 0.010 | 0.004 | 0.000 | 0.000 | 0.000 | 0.231 |
| **Total:** | 2.087 | -0.039 | 0.000 | 1.706 | 0.252 | 0.000 | 0.085 | 0.013 | 0.000 | 0.000 | 0.000 | 0.008 |

**Tramo:** 3. Km 122+300 - Km 127+750
**Alternativa:** ALT2 - Reciclado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-3 Tipo de carretera: Secondary or Main
Longitud: 5.45 km Ancho: 7.20 m Ascensos y descensos: 1.50 m/km Curvatura: 10.09 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 1.822 | -0.028 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -1.794 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.224 | 0.105 | 0.000 | 0.011 | 0.005 | 0.000 | 0.000 | 0.000 | 0.346 |
| 2022 | 0.000 | 0.000 | 0.000 | 0.241 | 0.113 | 0.000 | 0.012 | 0.006 | 0.000 | 0.000 | 0.000 | 0.372 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.258 | 0.125 | 0.000 | 0.013 | 0.006 | 0.000 | 0.000 | 0.000 | 0.402 |
| 2024 | 0.000 | 0.000 | 0.000 | 0.275 | 0.139 | 0.000 | 0.014 | 0.007 | 0.000 | 0.000 | 0.000 | 0.435 |
| 2025 | 0.000 | 0.000 | 0.000 | 0.293 | 0.156 | 0.000 | 0.015 | 0.008 | 0.000 | 0.000 | 0.000 | 0.471 |
| 2026 | 0.000 | 0.000 | 0.000 | 0.312 | 0.174 | 0.000 | 0.016 | 0.009 | 0.000 | 0.000 | 0.000 | 0.510 |
| 2027 | 0.000 | -0.017 | 0.000 | 0.329 | 0.195 | 0.000 | 0.016 | 0.010 | 0.000 | 0.000 | 0.000 | 0.567 |
| 2028 | 0.000 | 0.000 | 0.000 | 0.342 | 0.213 | 0.000 | 0.017 | 0.011 | 0.000 | 0.000 | 0.000 | 0.582 |
| 2029 | 0.289 | 0.000 | 0.000 | 0.358 | 0.234 | 0.000 | 0.018 | 0.012 | 0.000 | 0.000 | 0.000 | 0.333 |
| 2030 | 0.000 | 0.000 | 0.000 | 0.415 | 0.259 | 0.000 | 0.021 | 0.013 | 0.000 | 0.000 | 0.000 | 0.708 |
| 2031 | 0.000 | 0.000 | 0.000 | 0.441 | 0.280 | 0.000 | 0.022 | 0.014 | 0.000 | 0.000 | 0.000 | 0.757 |
| 2032 | 0.000 | 0.000 | 0.000 | 0.468 | 0.301 | 0.000 | 0.023 | 0.015 | 0.000 | 0.000 | 0.000 | 0.807 |
| 2033 | 0.000 | -0.010 | 0.000 | 0.493 | 0.322 | 0.000 | 0.025 | 0.016 | 0.000 | 0.000 | 0.000 | 0.866 |
| 2034 | -0.124 | 0.000 | 0.000 | 0.513 | 0.341 | 0.000 | 0.026 | 0.017 | 0.000 | 0.000 | 0.000 | 1.020 |
| **Total:** | 1.986 | -0.055 | 0.000 | 4.961 | 2.957 | 0.000 | 0.248 | 0.148 | 0.000 | 0.000 | 0.000 | 6.382 |

**Tramo:** 3. Km 122+300 - Km 127+750
**Alternativa:** ALT3 - Fresado y Reposición con MAM
**Sensibilidad:** No se realizó análisis de sensibilidad

ID tramo: T-3 Tipo de carretera: Secondary or Main
Longitud: 5.45 km Ancho: 7.20 m Ascensos y descensos: 1.50 m/km Curvatura: 10.09 grados/km

| Año | Incremento en costos de la agencia | | | Ahorro en costos de los usuarios | | | | | | | Beneficios sociales / exógenos netos | Beneficios totales netos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trabajos de inversión | Trabajos recurrentes | Trabajos especiales | Tránsito normal (+ atraído) | | | Tránsito generado | | | Reducción en costos de accidentes | | |
| | | | | COV TM | Tiempo TM | Operación y tiempo TNM | COV TM | Tiempo TM | Operación y tiempo TNM | | | |
| 2020 | 1.390 | -0.028 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -1.362 |
| 2021 | 0.000 | 0.000 | 0.000 | 0.232 | 0.072 | 0.000 | 0.012 | 0.004 | 0.000 | 0.000 | 0.000 | 0.319 |
| 2022 | 0.000 | 0.000 | 0.000 | 0.246 | 0.082 | 0.000 | 0.012 | 0.004 | 0.000 | 0.000 | 0.000 | 0.345 |
| 2023 | 0.000 | 0.000 | 0.000 | 0.261 | 0.095 | 0.000 | 0.013 | 0.005 | 0.000 | 0.000 | 0.000 | 0.374 |
| 2024 | 0.000 | 0.000 | 0.000 | 0.273 | 0.111 | 0.000 | 0.014 | 0.006 | 0.000 | 0.000 | 0.000 | 0.403 |
| 2025 | 0.000 | 0.000 | 0.000 | 0.282 | 0.129 | 0.000 | 0.014 | 0.006 | 0.000 | 0.000 | 0.000 | 0.431 |
| 2026 | 0.364 | 0.000 | 0.000 | 0.292 | 0.149 | 0.000 | 0.015 | 0.007 | 0.000 | 0.000 | 0.000 | 0.099 |
| 2027 | 0.000 | -0.017 | 0.000 | 0.349 | 0.173 | 0.000 | 0.017 | 0.009 | 0.000 | 0.000 | 0.000 | 0.565 |
| 2028 | 0.000 | 0.000 | 0.000 | 0.368 | 0.193 | 0.000 | 0.018 | 0.010 | 0.000 | 0.000 | 0.000 | 0.589 |
| 2029 | 0.000 | 0.000 | 0.000 | 0.391 | 0.215 | 0.000 | 0.020 | 0.011 | 0.000 | 0.000 | 0.000 | 0.636 |
| 2030 | 0.000 | 0.000 | 0.000 | 0.411 | 0.238 | 0.000 | 0.021 | 0.012 | 0.000 | 0.000 | 0.000 | 0.682 |
| 2031 | 0.000 | 0.000 | 0.000 | 0.429 | 0.260 | 0.000 | 0.021 | 0.013 | 0.000 | 0.000 | 0.000 | 0.724 |
| 2032 | 0.229 | 0.000 | 0.000 | 0.449 | 0.282 | 0.000 | 0.022 | 0.014 | 0.000 | 0.000 | 0.000 | 0.538 |
| 2033 | 0.000 | -0.010 | 0.000 | 0.505 | 0.306 | 0.000 | 0.025 | 0.015 | 0.000 | 0.000 | 0.000 | 0.862 |
| 2034 | -0.142 | 0.000 | 0.000 | 0.530 | 0.326 | 0.000 | 0.026 | 0.016 | 0.000 | 0.000 | 0.000 | 1.040 |
| **Total:** | 1.841 | -0.055 | 0.000 | 5.018 | 2.631 | 0.000 | 0.251 | 0.132 | 0.000 | 0.000 | 0.000 | 6.245 |

# F.2 : Relación Beneficio Costo

HDM - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Resumen de indicadores económicos

Nombre del estudio: **Modelo de Gestión de Conservación Vial de la carretera Juliaca -Lampa**
Fecha de ejecución: **16-09-2020**
Unidad monetaria: **Soles (millones)**
Tasa de actualización: **8.00%**

**Sensibilidad:** Base Sensitivity Scenario

| Alternativa | Valor presente de los costos totales de la agencia (RAC) | Valor presente de los costos de inversión de la agencia (CAP ) | Incremento e costos de l agencia ( C ) | Decrement en costos d usuaric ( B ) | Beneficios exógenos netos (E) | Valor present neto (VPN = B+E-C | Relació VPN/cost (VPN/RAC | Relació VPN/cost (VPN/CAP | Tasa intern de retorn ( TIR |
|---|---|---|---|---|---|---|---|---|---|
| ALT1 - Alternativa base | 2.053 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ALT2 - Reciclado y Reposición con MAM | 10.770 | 8.903 | 8.716 | 14.940 | 0.000 | 6.223 | 0.578 | 0.699 | 18.4 (1) |
| ALT3 - Fresado y Reposición con MAM | 10.111 | 8.244 | 8.058 | 13.854 | 0.000 | 5.796 | 0.573 | 0.703 | 19.7 (1) |

La cifra entre paréntesis es el número de resultados para la TIR en un rango de -90 a +900

# F.3 : Resumen de Análisis Económico

H D M - 4
HIGHWAY DEVELOPMENT & MANAGEMENT

# Resumen del análisis económico

Nombre del estudio: **Modelo de Gestión de Conservación Vial de la carretera Juliaca - Lampa Ok**
Fecha de ejecución: **20-09-2020**
Unidad monetaria: **Soles (millones)**
Tasa de actualización: **8.00%**
Tipo de análisis: **Por proyecto**

**Alternativa: ALT2 - Reciclado y Reposición con MAM vs Alternativa: ALT1 - Alternativa base**
**No se realizó análisis de sensibilidad**

| | Incremento en costos de l agencia de carretera | | | Ahorros er COV del TM | Ahorros er costos de tiempo de viaje del TM | Ahorros er COV y costos de tiempo de viaje del TNM | Reducción en costos de accidentes | Beneficios sociales / exógenos netos | Beneficios económicos netos (VPN) |
|---|---|---|---|---|---|---|---|---|---|
| | Inversión | Recurrentes | Especiales | | | | | | |
| Sin actualizar | 10.98 | -0.33 | 0.00 | 20.24 | 10.01 | 0.00 | 0.00 | 0.00 | 19.61 |
| Actualizado | 8.60 | -0.19 | 0.00 | 9.56 | 4.68 | 0.00 | 0.00 | 0.00 | 5.82 |

**Tasa interna de retorno económico (TIRE) = 18.0% (No. de soluciones = 1)**

**Alternativa: ALT3 - Fresado y Reposición con MAM vs Alternativa: ALT1 - Alternativa base**
**No se realizó análisis de sensibilidad**

| | Incremento en costos de l agencia de carretera | | | Ahorros er COV del TM | Ahorros er costos de tiempo de viaje del TM | Ahorros er COV y costos de tiempo de viaje del TNM | Reducción en costos de accidentes | Beneficios sociales / exógenos netos | Beneficios económicos netos (VPN) |
|---|---|---|---|---|---|---|---|---|---|
| | Inversión | Recurrentes | Especiales | | | | | | |
| Sin actualizar | 9.72 | -0.33 | 0.00 | 20.78 | 7.35 | 0.00 | 0.00 | 0.00 | 18.75 |
| Actualizado | 7.43 | -0.19 | 0.00 | 9.80 | 3.30 | 0.00 | 0.00 | 0.00 | 5.85 |

**Tasa interna de retorno económico (TIRE) = 20.0% (No. de soluciones = 1)**