

May 2019

Monthly Operations Report



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INTRODUCTION

Pursuant to Schedule 6, Section 1.8.2(a) of the Concession Agreement, Plenary Roads Denver (“PRD”) is required to submit a monthly report covering all essential statistics related to the Managed Lanes. The following data covers the month of May 2019. Operationally, May was a positive month. Several routine maintenance tasks were completed, there were minimal incidents to maintained elements, and traffic volumes were consistent with expectations.

1.0 VOLUMES AND LANE USAGE

Over the last several months as more commuters use the transponders for either ExpressToll™ (AVI) or HOV travel, License Plate (LPT) transactions have consistently decreased as a percentage of total traffic volume. The total monthly gantry traffic volume for May 2019 in the I-25 Central and US 36 Managed Lanes was 317,787 and 1,613,479, respectively.

The table below provides the monthly summary for each Managed Lanes roadway, along with a detailed breakdown of weekday volumes. For reference, the AM Peak Period is considered to be weekdays from 6:45 am – 8:45 am. The PM Peak Period is considered to be, weekdays, from 4:15pm – 5:45pm. It should be noted, that the I-25 Managed Lane traffic reflects traffic counts from a single gantry and US 36 Managed Lane counts reflect fourteen gantries, seven gantries in each direction. Therefore, US 36 data will indicate far greater traffic counts that are not comparative to those of I-25.

The following charts depict the distribution of traffic by type (Figure 1) and the daily traffic counts (Figure 2) and for the month.

Traffic Summary (US 36)						
	AVI	LPT	HOV	Non-Rev & Hybrid	Total	Hybrid
Total Monthly Traffic	905,017	399,866	266,880	41,716	1,613,479	3,534
Maximum Weekday Traffic	43,053	20,624	10,767	1,836	73,643	191
Average Weekday Traffic	36,327	15,358	8,814	1,701	62,200	144
Average Hourly AM Peak Traffic	5,184	1,858	1,011	213	8,266	N/A
Average Hourly PM Peak Traffic	5,480	2,127	1,194	204	9,005	N/A

Traffic Summary (I-25C)						
	AVI	LPT	HOV	Non-Rev & Hybrid	Total	Hybrid
Total Monthly Traffic	153,887	92,485	59,879	11,536	317,787	961
Maximum Weekday Traffic	7,891	4,684	2,494	516	15,572	51
Average Weekday Traffic	6,196	3,706	2,168	470	12,070	39
Average Hourly AM Peak Traffic	814	568	307	57	1,689	N/A
Average Hourly PM Peak Traffic	785	444	256	65	1,485	N/A

Table 1 – Monthly Traffic Summaries

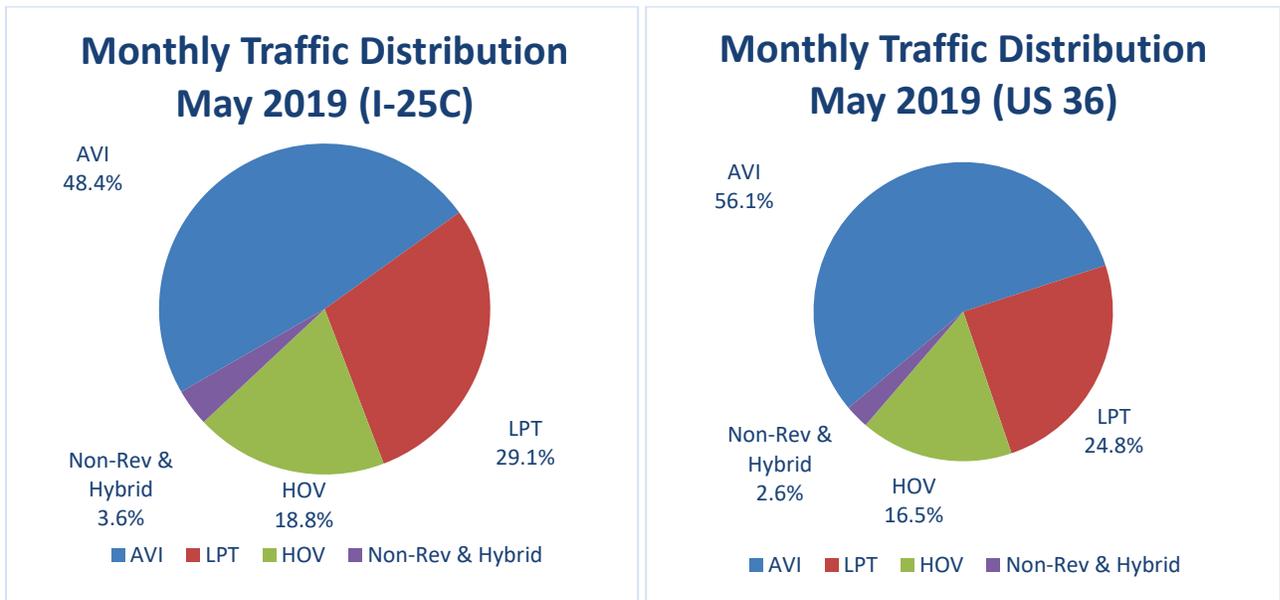
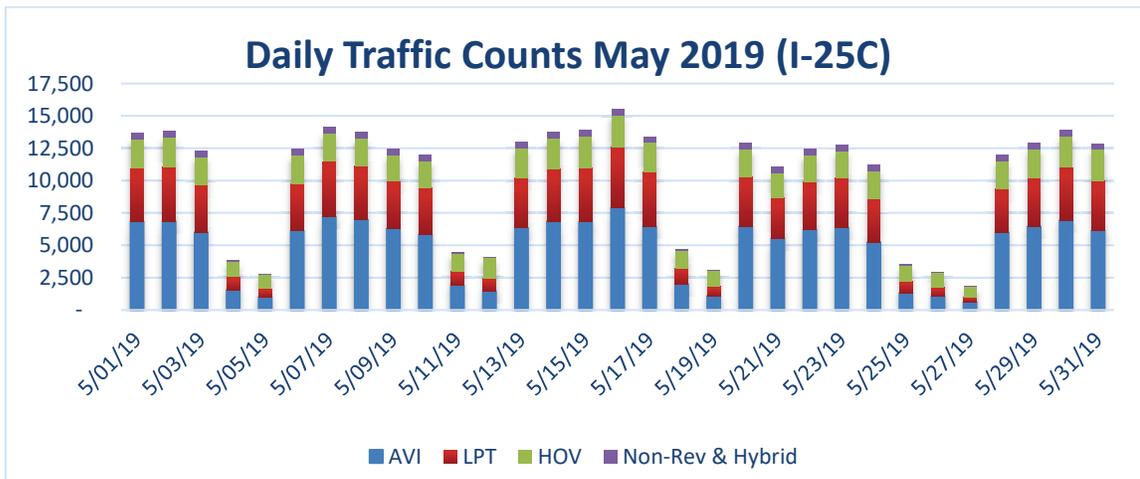


Figure 1 – Monthly Traffic Distribution



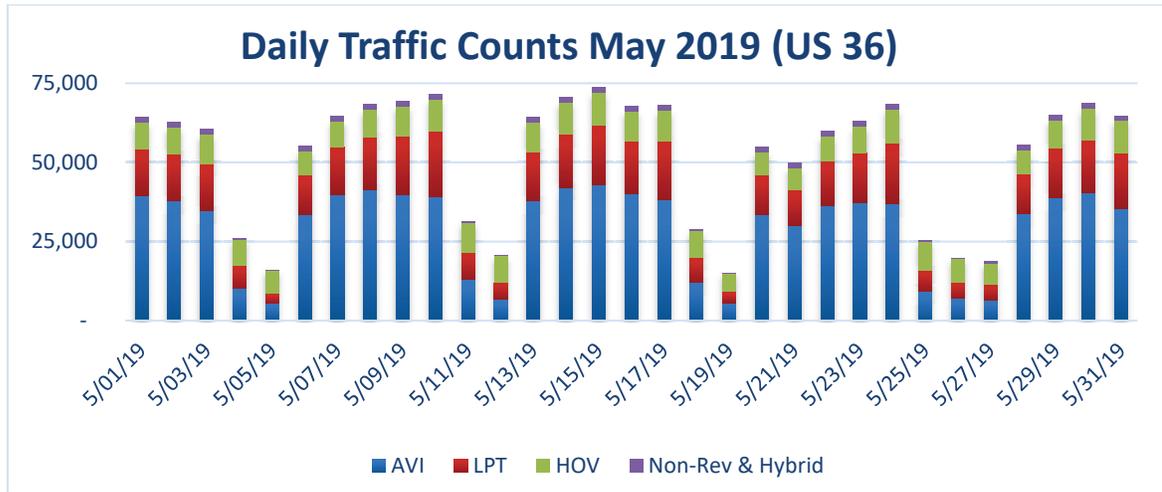


Figure 2 – Daily Traffic Counts

2.0 REVENUES

During the month of May 2019, PRD collected \$793,847 and \$859,380 from users of the I-25 Central and US36 Managed Lanes, respectively. For purposes of this report, revenues are recognized at the time of collection, which is typically sometime after they have been incurred for those customers who are billed based on their license plate. For example, if a single-occupant vehicle uses the lanes in October but pays in January, the associated revenue is attributed to January.

3.0 OPERATIONAL INCIDENTS, ISSUES, AND CLOSURES

The project had numerous routine debris removals, lighting incidents, guardrail incidents, sign incidents, and graffiti control during the month. The routine lighting, guardrail, roadway markings and sign incidents are all planned for repair within the allowable response period and several previously identified lighting incidents were repaired. All incidents were responded to and rectified within the allowable timeframes.

Date	Start	Stop	Duration
July 3, 2018	15:42	16:20	0:38
July 6, 2018	11:08	12:55	1:47
July 16, 2018	10:09	10:52	0:43
July 20, 2018	15:40	16:32	0:52
July 24, 2018	15:15	16:04	0:49
August 9, 2018	09:25	11:04	1:39
August 10, 2018	16:39	18:11	1:33



August 16, 2018	09:20	10:07	0:47
August 20, 2018	06:45	07:17	0:32
August 21, 2018	17:30	17:56	0:26
August 30, 2018	09:16	10:37	1:21
September 4, 2018	17:15	17:52	0:37
September 9, 2018	02:39	03:10	0:31
September 19, 2018	06:35	07:09	0:34
September 19, 2018	17:23	18:40	1:17
September 20, 2018	10:31	12:18	1:47
September 26, 2018	15:45	16:21	0:36
October 10, 2018	08:26	08:52	0:26
October 17, 2018	06:50	07:39	0:49
October 17, 2018	07:58	08:29	0:31
October 26, 2018	07:03	07:41	0:38
October 31, 2018	08:48	09:40	0:52
November 7, 2018	18:13	18:51	0:38
November 8, 2018	07:50	08:29	0:39
November 30, 2018	17:32	17:58	0:26
December 4, 2018	08:07	08:52	0:45
December 10, 2018	07:35	08:35	1:00
December 19, 2018	09:55	10:28	0:33
December 19,2018	18:45	19:37	0:52
December 31, 2018	14:55	15:25	0:30
January 4, 2019	18:15	19:10	0:55
January 18, 2019	10:50	11:56	1:06
January 18, 2019	12:05	13:08	1:03
January 23, 2019	08:04	08:32	0:28
January 23,2019	15:50	16:38	0:48
January 23,2019	17:08	18:16	1:08
January 25, 2019	16:26	17:06	0:40
January 25, 2019	07:48	08:32	0:44
January 31, 2019	16:31	17:14	0:43
February 1, 2019	08:18	09:03	0:43
February 6, 2019	07:03	07:33	0:30

February 11, 2019	16:22	17:02	0:40
February 14, 2019	08:20	09:07	0:47
February 19, 2019	17:27	18:30	1:03
February 21, 2019	15:47	16:21	0:34
February 26, 2019	07:02	07:50	0:48
February 28, 2019	09:02	09:30	0:28
March 4, 2019	15:52	16:15	0:23
March 7, 2019	16:27	17:22	0:55
March 12, 2019	18:20	19:10	0:50
March 13, 2019	06:52	07:43	0:51
April 8, 2019	14:33	15:02	0:29
April 11, 2019	17:03	17:47	0:44
April 11, 2019	18:11	18:43	0:32
May 10, 2019	07:48	08:18	0:30
May 15, 2019	16:38	17:20	0:42
May 18, 2019	06:30	08:08	1:38
May 22, 2019	05:00	06:35	1:35
May 22, 2019	06:10	06:58	0:48
May 22, 2019	14:29	15:19	0:50
Total			48 hours 6 minutes
Remaining Closure Hours Available (Ref: CA 29.7)			0 hours 0 minutes

Table 2 – Managed Lanes Closures to Date

The table below provides a listing of ETCS items recorded this month, consistent with Appendix 6-2 of Schedule 6.

Element ID	Cat	Element	Performance Item	PRD Notified	Contractual Cure Period	Cure Achieved
None						

Table 3 – ETCS Issues per CA Schedule 6 Appendix 6-2

The table below provides a status of all Noncompliance categories in accordance with paragraph 1.2 of Schedule 10.

Non-compliance Location	Nature	Cause	Cure Date	Uncured Non-compliance Point	Unexpired Non-compliance Point	365 Day Expiration Date	1095 Day Expiration Date
None							

Table 4 – Status of Noncompliance Categories

4.0 MEAN TIME BETWEEN FAILURE (MTBF) AND MEAN TIME TO REPAIR (MTTR)

Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) data is provided in the table below. Only Maintained Elements that were repaired during the reporting period and had a failure type breakdown are listed in the table. We consider a breakdown to be a failure when the element cannot be used for its intended purpose until repaired.

Maintained Element	Mean Time Between Failure (MTBF) (Hours)	Mean Time To Repair (MTTR) (Hours)
None	N/A	N/A

Table 5 – Mean Time Between Failure & Mean Time To Repair

5.0 HYBRID UTILIZATION

Total Hybrid Trips	
I-25 Central	961
US 36	3,534

Table 6 – Hybrid Utilization

Fuel-efficient “Hybrid” vehicles are permitted to access the Express Lanes free of charge, regardless of occupant numbers, provided that they have obtained a permit from CDOT, obtained a Hybrid transponder from E-470, and display an E-470 Hybrid decal on the vehicle’s windshield.

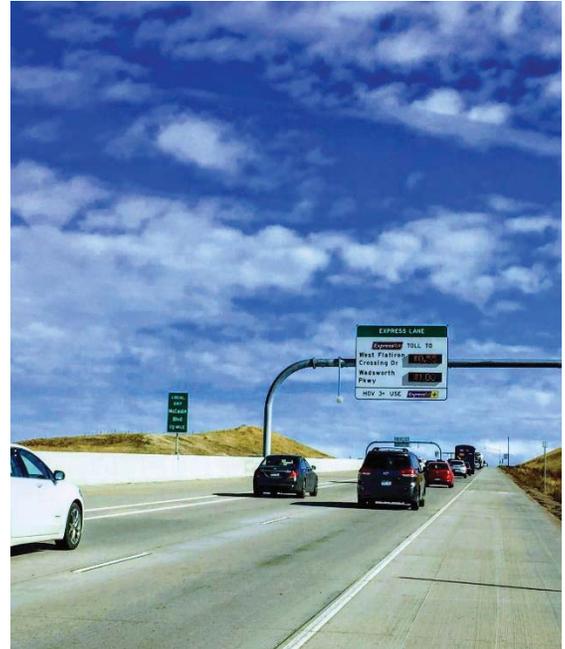
OPERATIONS AND
MAINTENANCE
MONTHLY REPORT
MAY 2019

US 36 and I-25 Express
Lanes Project

Prepared for:

Plenary Roads Denver, LLC
1700 Lincoln Street, Suite 3000
Denver, CO 80203

Attention: Mr. Christian Guevara, PE

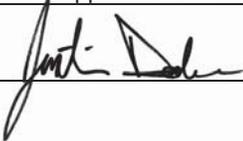


Prepared By:

Ferrovial Services
10525 West 120th Avenue
Broomfield, CO 80021
United States of America

Justin Doles, PE
Project Manager

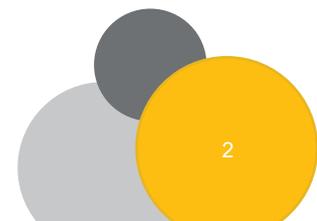
OPERATIONS AND MAINTENANCE – MONTHLY REPORT
MAY 2019
US 36 and I-25 Express Lanes Project

Revision	Date	Approved
Rev. 0	06/08/2019	

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The information and analyses contained herein have been completed to a level of detail commensurate with the objectives of the assignment and in light of the information made available to Ferrovial Services at the time of preparation. This report and its supporting documentation have been reviewed and/or checked for conformance with industry-accepted norms. To the best of the information and belief of Ferrovial Services, the information presented in this report is accurate to within the limitations specified herein.

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The O&M Monthly Report contains all relevant information for the month of May 2019. Ferrovial Services continues ongoing and preventive maintenance activities for the I-25 and US36 Managed Lanes Project.

Ferrovial Services Commitment to Safety

Ferrovial Services conducted weekly toolbox talk meetings during the month. The purpose of the tool box talks is to cover important safety items that relate to the project such as near misses, “better ways” as to how safety is conducted for the Project, and discussion on safety procedures for maintenance activities. In addition to the toolbox talks, Ferrovial Services conducts a weekly progress meeting. This is a forum for feedback from staff on Operations, Incident Response, and Maintenance activities.

Toolbox Talks this month included:

- Fatal Falls
- Fall Protection Saves Lives
- Fall Clearance
- Falls From Equipment
- Causes of Deaths from Falls

A. Summary of the Planned Maintenance Activities for the Upcoming Month – June 2019

Ferrovial Services has identified the upcoming planned maintenance activities as described in Table 1.7.1.3 of The Maintenance Management Plan. These activities include preventative and routine maintenance in order to successfully operate and maintain the Project. A listing of the planned maintenance activities for the month of June 2019 is included below.

B. Summary of Performed and Completed Maintenance Activities

Fig. B-1 Performed and Complete Maintenance Activities for May 2019

X Indicates the day of the month that the task was completed.

Performance Standard Identification Number (Table 6.1)	Work Activity-Description	Frequency	May-19																																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
			W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F						
ML-1	MAINTENANCE PATROL	Daily	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ML-1	FLEXIBLE PAVEMENT OBSERVATION / REPAIR	F-52	X				X					X										X																	
ML-1	RIGID PAVEMENT OBSERVATION / REPAIR	F-52	X				X					X										X																	
ML-4	DELINEATORS & MARKERS OBSERVE / CLEAN / REPAIR	F-12							X																														
ML-2	DRAINAGE STRUCTURE (INLET) INSPECTION	F-1							X				X									X																	
ML-2	DRAINAGE (INLET) OBSERVE / CLEAN / REPAIR	F-12							X			X										X																	
ML-2	DRAINAGE (PIPE/CULVERT) OBSERVE / CLEAN / RPR	F-12							X			X										X																	
ML-6	SIGN OBSERVATION / REPAIR	F-52													X																								
ML-8	STREET LIGHTING OBSERVATION / REPAIR	F-52	X										X																										
ML-8	ELECTRICAL SUPPLY INSPECTION / REPAIR	F-12	X																																				
ML-8	ACCESS PANEL OBSERVATION / REPAIR	F-12	X																																				
ML-10	HERBICIDE & WEED CONTROL MAINTENANCE	F-52																																					
ML-12	GRAFFITI OBSERVATION / REMOVAL	F-52																X																					
ML-14	MECHANICAL ROAD SWEEPING	F-12																X																					
ML-14	LITTER OBSERVATION / REMOVAL	Daily	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ML-15	NODE BUILDING 2 MAINTENANCE	F-1								X																													
ML-15	SAND STORAGE DOME MAINTENANCE	F-1								X																													
ML-15	LIQUID STORAGE FACILITY MAINTENANCE	F-1								X																													
	REVERSIBLE LANE OPERATIONS	Daily	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	GATE MAINTENANCE & REPAIR													X																									

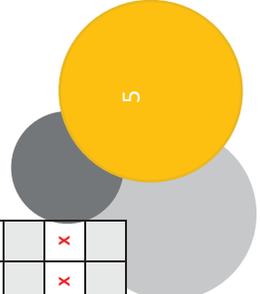


Fig. B-2 Work Accomplished This Month

Activity	Actual Work
152 Asphalt Pavement Surface Rpr (YD2)	26.5
153 Concrete Pavemnt Surface Rpr (YD2)	4.75
202 Clean Drains (EA)	46
214 Concrete Rpr Barrier Wall (LF)	15
216 Fence Maint (LF)	1,400
218 Debris in Roadway (HR)	18
218 Litter Barrel Trash Cleanup (YD3)	40.5
220 Sweeping (Mech) (MI)	120
222 Sweeping - Hand (HR)	20.5
254 Veg Cntrl Hnd/Chem (HR)	16
301 Misc Sign Maint (EA)	4
304 Del Post Maint (EA)	53
314 Reversible Lane Ops (HR)	308
329 Courtesy Assistance (HR)	363
402 Snow Plowing & Materials (MI)	480
540 Graffiti Removal (SF)	1,081

C. Summary of Planned Maintenance that was Not Completed for the Month

Ferrovial Services completed all scheduled maintenance activities for the period of May, 2019. Frequencies and/or actual date of the month of some activities may have been adjusted based on actual conditions.

D. Summary of the Maintenance Activities and Results Performed for the Month Beyond Planned Maintenance

A summary of unplanned maintenance activities provided below:

Snow and Ice Control:

Precipitation Event Start		Equipment Deployed		Precipitation Event End		Service Level "A" Achieved in ML		Service Level "B" Achieved in GP	
5/20/2019	21:07	5/20/2019	21:00	5/21/2019	10:25	5/21/2019	00:40	5/21/2019	00:40

Courtesy Patrol: None

Hazardous Materials Incidents: None

E. Operating Contractor's Incident Response Logs Related to Maintenance Activities

This section provides a summary of Ferrovial Services performance related to the Performance and Measurement Criteria listed in Appendix 6-1.1 of the Operating Contract.

The table below provides a listing of items recorded this month:

Element Category	Description	Location	BRS Notified	Response to Defects		
				Category 1		Category 2
				Hazard Mitigation	Permanent Remedy	Permanent Repair
GP8.1	Light Pole (Impact Damage)	US36 MP 39.3 EB	2/11/2019 09:05:00	N/A	N/A	Reqd: 6 Months Respnd: -- Actual: In Progress
GP6.1	Sign (Impact Damage)	US36 MP 37.4 EB	2/20/2019 09:10:00	N/A	N/A	Reqd: 6 Months Respnd: 5/14/2019 10:00 Actual: 2.76 Months
GP6.1	Sign (Impact Damage)	US36 MP 43.1 EB	2/23/2019 06:05:00	N/A	N/A	Reqd: 6 Months Respnd: 5/14/2019 11:00 Actual: 2.67 Months
GP6.1	Sign (Impact Damage)	US36 MP 54.8 WB	3/1/2019 11:41:00	N/A	N/A	Reqd: 6 Months Respnd: 5/14/2019 12:00 Actual: 2.46 Months
ML5.1	Barrier (Impact Damage)	US36 MP 49.2 WB	3/13/2019 10:15:00	N/A	N/A	Reqd: 6 Months Respnd: 5/1/2019 13:00 Actual: 1.63 Months
GP1.1	Debris (Cleared Metal from Lanes)	US36 MP 53.4 WB	5/3/2019 18:40:00	Reqd: 1 Hours Respnd: 5/3/2019 19:31 Actual: 0.84 Hours	N/A	N/A
GP1.1	Debris (Cleared Mattress from Lanes)	US36 MP 53.09 WB	5/3/2019 20:56:00	Reqd: 1 Hours Respnd: 5/3/2019 21:40 Actual: 0.73 Hours	N/A	N/A
GP1.1	Debris (Cleared Ladder from Lanes)	US36 MP 40.5 EB	5/3/2019 13:15:00	Reqd: 1 Hours Respnd: 5/3/2019 14:05 Actual: 0.83 Hours	N/A	N/A
GP1.1	Debris (Cleared Debris from Lanes)	US36 MP 50.05 EB	5/4/2019 13:33:00	Reqd: 1 Hours Respnd: 5/4/2019 14:20 Actual: 0.78 Hours	N/A	N/A
GP1.1	Debris (Cleared Debris from Lanes)	US36 MP 44.0 EB	5/5/2019 15:28:00	Reqd: 1 Hours Respnd: 5/5/2019 16:20 Actual: 0.86 Hours	N/A	N/A
GP1.1	Debris (Cleared Wood from Lanes)	US36 MP 54.2 WB	5/8/2019 16:24:00	Reqd: 1 Hours Respnd: 5/8/2019 17:19 Actual: 0.91 Hours	N/A	N/A
GP1.1	Debris (Debris Reported, Nothing Found)	US36 MP 47.50 WB	5/8/2019 15:40:00	Reqd: 1 Hours Respnd: 5/8/2019 16:03 Actual: 0.38 Hours	N/A	N/A
GP1.1	Debris (Cleared Rock from Lanes)	US36 MP 55.4 WB	5/10/2019 10:13:00	Reqd: 1 Hours Respnd: 5/10/2019 10:20 Actual: 0.11 Hours	N/A	N/A
GP5.1	Guardrail (Impact Damage)	US36 MP 45.9 WB	5/11/2019 22:54:00	N/A	N/A	Reqd: 6 Months Respnd: -- Actual: In Progress
GP1.1	Debris (Cleared Plywood from Lanes)	US36 MP 57.10 EB	5/19/2019 14:30:00	Reqd: 1 Hours Respnd: 5/19/2019 15:00 Actual: 0.50 Hours	N/A	N/A
ML1.1	Debris (Cleared Plastic Siding from Lanes)	I25 MP 212.85 NB	5/19/2019 11:30:00	Reqd: 1 Hours Respnd: 5/19/2019 12:05 Actual: 0.59 Hours	N/A	N/A
GP1.1	Debris (Debris Reported, Nothing Found)	US36 MP 55.90 EB	5/20/2019 08:20:00	Reqd: 1 Hours Respnd: 5/20/2019 08:45 Actual: 0.41 Hours	N/A	N/A
GP1.1	Debris (Debris Reported, Nothing Found)	US36 MP 47.90 EB	5/24/2019 12:10:00	Reqd: 1 Hours Respnd: 5/24/2019 12:30 Actual: 0.33 Hours	N/A	N/A
ML1.1	Debris (Cleared Hay Bale from Lanes)	I25 MP 213.9	5/24/2019 08:22:00	Reqd: 1 Hours Respnd: 5/24/2019 09:00 Actual: 0.63 Hours	N/A	N/A

Element Category	Description	Location	BRS Notified	Response to Defects		
				Category 1		Category 2
				Hazard Mitigation	Permanent Remedy	Permanent Repair
GP1.1	Debris (Debris Reported, Nothing Found)	US36 MP 56.90 EB	5/26/2019 08:37:00	Reqd: 1 Hours Respd: 5/26/2019 09:29 Actual: 0.86 Hours	N/A	N/A
GP1.1	Debris (Cleared Debris from Lanes)	US36 MP 42.00 WB	5/27/2019 07:36:00	Reqd: 1 Hours Respd: 5/27/2019 08:15 Actual: 0.65 Hours	N/A	N/A
GP1.1	Debris (Cleared Metal from Lanes)	US36 MP 46.2 EB	5/29/2019 10:25:00	Reqd: 1 Hours Respd: 5/29/2019 10:27 Actual: 0.03 Hours	N/A	N/A
GP1.1	Debris (Debris Reported, Nothing Found)	US36 MP 43.3 WB	5/29/2019 13:10:00	Reqd: 1 Hours Respd: 5/29/2019 13:28 Actual: 0.31 Hours	N/A	N/A
GP1.1	Debris (Cleared Wood from Lanes)	US36 MP 46.00 EB	5/30/2019 14:57:00	Reqd: 1 Hours Respd: 5/30/2019 15:41 Actual: 0.73 Hours	N/A	N/A

All items were completed within the required response time. Items that are *In Progress* are still within the allowed response time.

F. Detailed Results of All Inspections, Assessments, and Testing Activities

During this reporting period there were no special inspections, assessments, or testing results outside normal operating condition.

G. Monthly Toll System Performance Reports

Toll system operated within proposed parameters per Ferrovial Services observations.

H. Preventative Maintenance Plan and Progress

Preventative Maintenance work is contingent on Initial Works Package implementation.

I, J. Mean Time between Failure (MTBF), Mean Time To Repair (MTTR)

No Maintained Elements experienced a failure type breakdown this month. Ferrovial Services considers a breakdown to be a failure when the element cannot be used for its intended purpose until repaired.