



The Sizewell C Project

8.5 Consolidated Transport Assessment Appendices Part 6 of 6

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APPENDIX 9C

A12 VISSIM Technical Note V.13 and Appendices



EDF Energy

A12 SIZEWELL C – MICROSIMULATION MODELLING

Model Validation and Forecasting Report



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May 2021 CONFIDENTIAL



EDF Energy

A12 SIZEWELL C –MICROSIMULATION MODELLING

Model Validation and Forecasting Report

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SIZEWELL C FLOW PROFILING TECHNICAL NOTE

1. PROJECT BACKGROUND

1.1. CHANGES SINCE TRANSPORT ASSESSMENT ADDENDUM

- 1.1.1. Since the submission of the Sizewell C Transport Assessment Addendum in January 2021, a refinement has been made to the 2023 A12 VISSIM model to remove the planned signalisation upgrade at the Seven Hills Interchange. This upgrade is associated with the committed Brightwell Lakes development and is expected to be operational after 2023 but before 2028. The upgrade has therefore been removed from the 2023 scenarios (Reference Case and Early Years) but is retained within the 2028 scenarios which remain unchanged.
- 1.1.2. A small number of tables have also been updated in the latest version of this report (v1.3) to correct some of the information presented previously in v1.0 of this report which was appended to the Transport Assessment Addendum.
- 1.1.3. The changes made to the report since the submission of the Transport Assessment Addendum can be summarised as follows:
- Updated 2023 results which exclude the Seven Hills upgrade (see Table 1, section 4.1.6, section 4.2, section 6.2 and Appendix C).
 - Updated demand summary tables to include rounding that was applied within the VISSIM model demand matrices (see Table 14, 15, 16, 19 and 20).

All changes to this report are highlighted in red text for clarity.

1.2. SIZEWELL C PROPOSALS

- 1.2.1. Sizewell C Co. are proposing to expand the existing nuclear power station at Sizewell on the Suffolk coast on land immediately to the north of the existing Sizewell B site. The Sizewell C Project (the Project) would be one of the biggest and most technologically complex construction projects ever built in the UK.
- 1.2.2. The construction of Sizewell C would involve the daily movement of large numbers of construction workers as well as the movement of large amounts of building materials and equipment. The peak construction workforce for Sizewell C is anticipated to be 7,900 construction workers and 600 associated development workers. The current associated development proposals include:
- An on-site accommodation campus, as well as a number of caravans on nearby land east of Eastlands Industrial Estate (LEEIE), helping to significantly reduce the number of workforce journeys through towns and villages close to the construction site;
 - Two park and ride sites, one for construction workers approaching Sizewell from the north on the A12 and the other for those approaching from the south on the A12;
 - A freight management facility on Felixstowe Road, west of the Seven Hills A12/A14 junction;
 - A two village bypass, around Farnham and Stratford St Andrew;
 - Sizewell Link Road, joining the A12 south of Yoxford to the B1122 east of Theberton; and
 - A12/B1122 Yoxford roundabout and other highway improvements.

1.3. STRATEGIC TRAFFIC MODELLING

- 1.3.1. A VISUM strategic traffic model was developed for the purposes of assessing Sizewell C traffic impacts. The study area and modelled network for the VISUM model was agreed with the local highway authority, Suffolk County Council (SCC) and extends to Lowestoft to the north, Ipswich to the south and the A140 to the west.
- 1.3.2. A VISUM Base Model of the existing road network has been developed using a wide range of Manual Classified Counts (MCC) and Automatic Traffic Counts (ATC) on the local road network which were conducted in May 2015, and from count information from the Highway England Traffic Flow Data System (TRADS) which holds information on traffic flows at sites on the motorway and trunk road network. In addition, SCC provided count data from a number of their permanent count sites.
- 1.3.3. A number of forecast scenarios were modelled in VISUM to represent 2023, 2028 and 2034. Each year was modelled as a Reference Case, without the addition of Sizewell C related traffic and a 'with-Sizewell' scenario known respectively as the Early Years, Peak Construction and Operational Phase scenarios. The Reference Case scenarios assume increases in traffic levels arising from general growth as well as the additional traffic associated with major development sites nearby. Committed highway schemes are also included in these scenarios. The forecast Sizewell C VISUM scenarios were developed based on assumptions about construction traffic provided by EDF and results from a bespoke gravity model.
- 1.3.4. The VISUM model was developed for seven individual hours; three AM hour models and four PM hour models as follows:
- 06:00 to 09:00 hours
 - 15:00 to 19:00 hours
- 1.3.5. Details of the VISUM model development are provided in chapters 6 to 8 of the Sizewell C Transport Assessment.

1.4. PURPOSE OF VISSIM MODELLING

- 1.4.1. Sizewell Co. have produced a microsimulation model of the A12 corridor to support the DCO application for the Sizewell C proposals. The VISSIM modelling is intended to supplement the assessment of the A12 between the Seven Hills Interchange (A12/A14) and the A1152 (Melton).
- 1.4.2. A VISSIM model will provide a more detailed assessment of operation along the extent of the A12 corridor by considering the effects of traffic over the fully modelled period as well as allowing for the interaction of traffic between junctions to be assessed.
- 1.4.3. The VISSIM modelling reported here draws on the gravity modelling and VISUM strategic traffic modelling and adopts the same forecast years traffic growth assumptions made for those studies. The growth flows being passed from VISUM to VISSIM are sourced from the latest VISUM model outputs (v16a). These flows represent forecast scenarios that exclude fuel and income adjustments which were previously concluded to provide a more realistic estimation of growth on the A12 corridor near Woodbridge which has limited reserve capacity.

2. METHODOLOGY

2.1. SCENARIO OVERVIEW

- 2.1.1. A VISSIM microsimulation model was developed in VISSIM 11.00-08, which was the latest version available when the modelling commenced. A 2019 base model was developed for a 3-hour AM and 3-hour PM period which forms the basis of all model scenarios. Further detail of the base model development is provided in section 2.2.
- 2.1.2. A total of twelve scenarios have been produced within the VISSIM model, all of which are managed using the scenario management function in VISSIM. This function was used so that all forecast scenarios are able to originate from the base model by applying various combinations of modifications.
- 2.1.3. The scenarios that have been modelled and analysed within this report are summarised in [Table 1](#). **Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios.**

Table 1 – Modelled Scenarios

Scenario Number	Name	Description
1 - 2	2019 AM/PM	2019 Base Year
3 – 4	2023 RC AM/PM	2023 Reference Case – 2019 base flows + background growth to 2023 from VISUM. Addition of the new Brightwell Lakes signalised access junction (J22b) on the A12 just north of Newbourne Road.
5 – 6	2023 EY AM/PM	2023 Early Years – Same as the 2023 Reference Case scenario but with the Sizewell C Early Years flows added.
7 – 8	2028 RC AM/PM	2028 Reference Case – 2019 base flows + background growth to 2028 from VISUM. Brightwell Lakes infrastructure improvements at A12 / A14 Seven Hills Interchange (J21), A12 / Foxhall Road roundabout (J22) and A12 / Barrack Square roundabout (J23) are included, plus the addition of the new Brightwell Lakes signalised access junction (J22b) on the A12 just north of Newbourne Road.
9 – 16	2028 PC AM/PM	2028 Peak Construction – Same as the 2028 Reference Case scenario but with the Sizewell C Peak Construction flows added for a variety of Sizewell C HGV volumes as described in Table 2 .

- 2.1.4. Scenarios 1 and 2 represent the 2019 base models for the AM and PM periods. Base year traffic matrices were produced using a process of matrix estimation in VISUM which made use of turning count data, as described in section 2.4. The base model validation and calibration is detailed in chapter 3.
- 2.1.5. Scenarios 3 to 6 represent the 2023 forecast models. Growth in background traffic and Sizewell C construction traffic were obtained from the strategic highway model (VISUM) and assigned as O-D matrices within the VISSIM model. The 2023 forecasting methodology and assumptions are detailed in chapter.

- 2.1.6. Scenarios 3 and 4 represent the 2023 Reference Case scenario for the AM and PM peak periods, which predicts the operation of the highway network under a “do nothing” scenario – i.e. forecast population and employment growth, but no Sizewell C construction activity. Scenarios 5 and 6 represent the 2023 Early Years scenario for the AM and PM peak periods, which adds the Sizewell C construction traffic to the Reference Case scenario.
- 2.1.7. Scenarios 7 to 16 represent the 2028 forecast models. This year marks the period of peak construction activity at Sizewell C. Scenarios 7 and 8 develop the Reference Case, which predicts the operation of the highway network under a “do nothing at Sizewell” scenario. Scenarios 9 to 16 represent the 2028 Peak Construction scenario, which adds the Sizewell C peak construction traffic onto the Reference Case scenario. The Peak Construction scenario considers a range of Sizewell C HGV volumes, as shown in [Table 2](#) below.

Table 2 – 2028 Peak Construction scenarios

Scn	Scenario description	Sizewell C daily HGV volume
9-10	Integrated Freight Strategy – busiest day estimate	1000 HGVs / day
11-12	Proposed changes to Freight Management Strategy – busiest day estimate	700 HGVs / day
13-14	Integrated Freight Strategy – typical day estimate	650 HGVs / day
15-16	Proposed changes to Freight Management Strategy – typical day estimate	500 HGVs / day

- 2.1.8. The transport network and traffic demand assumptions used to build the Peak Construction scenario and a summary of its performance are detailed in Chapter 5.

2.2. BASE MODEL DEVELOPMENT

- 2.2.1. The VISSIM model network extent has been selected to cover the area of the A12 where congestion is currently present, and where detailed analysis beyond that conducted in the junction modelling has been identified as beneficial by SCC due to the need to consider the potential effects arising from the interaction of junctions along the corridor. The model extent covers the A12 corridor between the A1152 (Melton) and the A14 Seven Hills Interchange, including all eight of the A12 roundabouts on this corridor and the Barrack Sq / Gloster Rd T-junction.
- 2.2.2. The modelled area is shown in Figure 1. Note that the dashed links represent roads that have not been explicitly included within VISSIM and are present to facilitate public transport lines only.
- 2.2.3. The AM scenarios cover the period from 06:00 to 09:00, while the PM scenarios cover 15:00 to 18:00. A warm-up period of 15-minutes has been included at the beginning of each modelled period to allow traffic to build up before the start of the evaluation period. Transport models are often evaluated for a peak hour only, however longer modelled periods were deliberately selected so that the assessment could consider both the traditional highway peak periods and also the early morning and afternoon periods (07:00-08:00 and 15:00-16:00) when Sizewell C traffic is at its peak. The VISSIM model is also able to consider the full effects of queueing and, in particular, allow for the dissipation of queues which remain in place at the end of the hour which is an effect that cannot be considered within the isolated junction modelling.

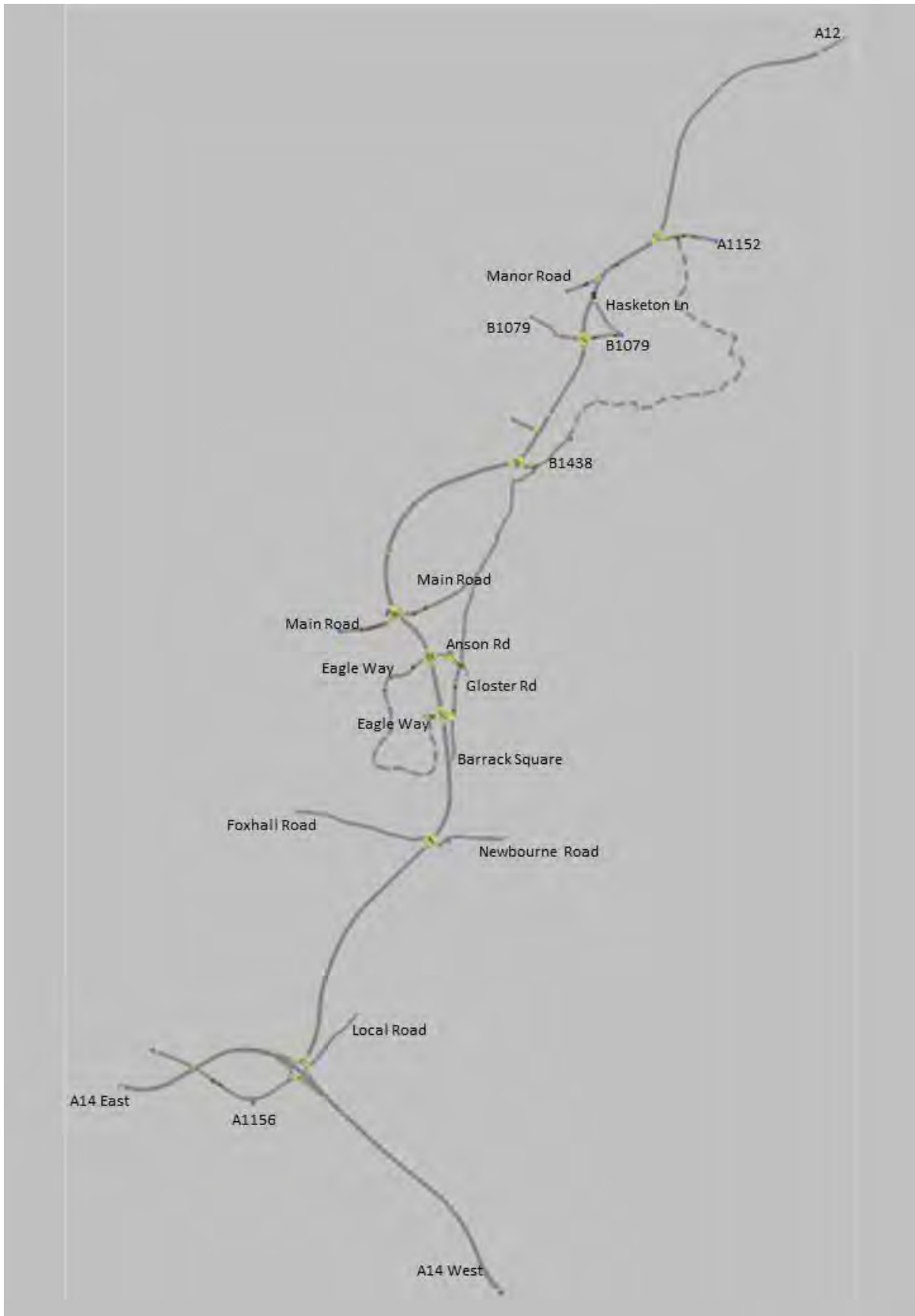


Figure 1 – Modelled Study Area

2.3. DATA COLLECTION

TRAFFIC COUNTS AND QUEUE LENGTHS

- 2.3.1. Manual classified turning counts (MCTCs) and queue length observations were recorded at each of the major junctions in the study area to allow the VISSIM model to be calibrated and validated to observations. The strategic VISUM modelling represents an average Monday to Thursday during AM modelled hours and a Friday during PM modelled hours, as this was shown to be busier than other weekdays. MCTCs and queues were collected for the AM period (06:00-10:00) on Monday 11th March 2019 and for the PM period (15:00-19:00) on Friday 15th March 2019, at the locations listed in Table 3.
- 2.3.2. The survey at J26 on 11th March was not completed successfully and was therefore repeated the following Monday so that a full set of flows and queue lengths were available.

Table 3 – MCC and queue length collection locations

Junction	Location	Data collection dates	
		AM period	PM period
J21	A12 / A14 / A1156 Seven Hills Interchange	Mon 11th March 2019	Fri 15 th March 2019
J22	A12 / Foxhall Road / Newbourne Road		
J23	A12 / Eagle Way / Barrack Square		
J24	A12 / Eagle Way / Anson Road		
J25	A12 / A1214 Main Road / Martlesham P&R		
J26	A12 / B1438	Mon 18 th March 2019	
J27	A12 / B1079 Grundisburgh Road	Mon 11th March 2019	
J28	A12 / A1152 Woods Lane		

- 2.3.3. All traffic surveys were conducted using cameras installed on-site by Traffic Survey Partners (TSP). Traffic counts were reported in 15-minute intervals and queue lengths were reported in 5-minute intervals. TSP also provided video files to allow for further analysis and verification of processed data. Figure 2 shows the locations of the junctions that were surveyed.
- 2.3.4. Turning movements at the Gloster Road / Barrack Square t-junction (J20) were subsequently counted based on the March 2019 video footage of J23 to allow this junction to be included within the Junction and VISSIM models but queue length observations were not possible due to the camera angles available in the footage.

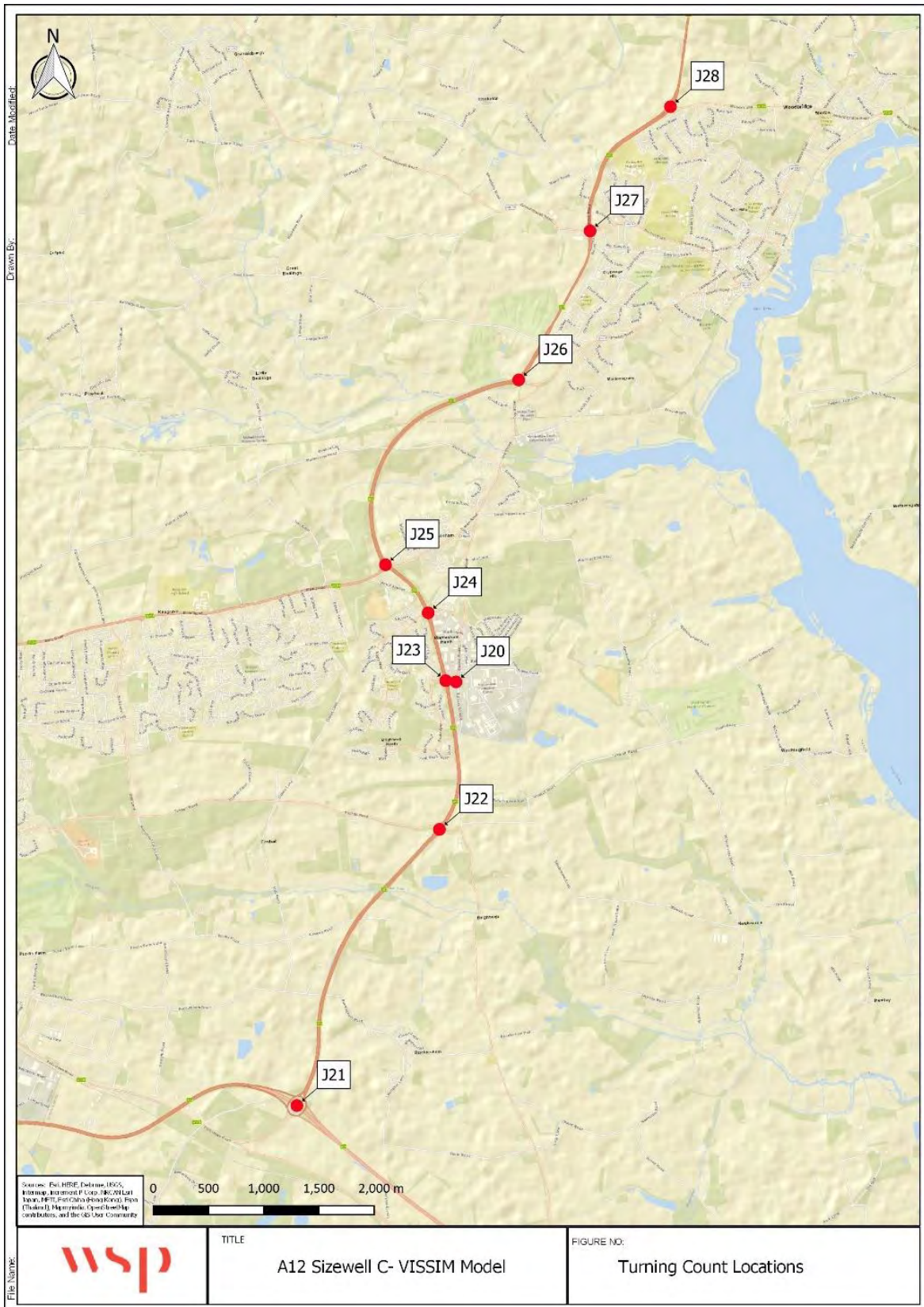


Figure 2 – MCC and Queue Length Survey Locations

JOURNEY TIMES

- 2.3.5. Journey time data was purchased from TomTom for the 50 routes shown in Figure 3. Journey times were collected to provide coverage across the entire modelled area so that a thorough model validation could be undertaken. The TomTom data was processed to provide median travel times on a typical Monday morning and Friday afternoon/evening during 2019. A typical day was defined using the TAG neutral day guidance (TAG unit M1-2) which includes all term time Mondays and Fridays from March to November excluding:
- the week before and after the Easter bank holiday weekend
 - the Friday leading into a bank holiday weekend (i.e. the Friday before a bank holiday Monday)
 - the entire week of a bank holiday
 - all school holiday days
- 2.3.6. The observed median journey time data is provided in Appendix A.

SITE OBSERVATIONS

- 2.3.7. A site visit was undertaken on Wednesday 4th November 2020 from 13:00-14:00 to establish whether any site-specific elements were present that had not been picked up in the survey data or video footage. All of the study area was covered by car and emphasis was placed on the operation of the eight key roundabouts within the VISSIM study area. The main findings of the site visit are summarised below:
- The A12 through movements at the roundabouts along the A12 are easy to make because visibility of circulating traffic is good and it's clear whether circulating vehicles intend to exit or continue round. Little hesitation from vehicles joining the circulatory.
 - A12 northbound from B1438 to Seckford Hall has the potential for large amounts of last-minute overtaking as it quickly goes from 2-lanes to 1-lane and back to 2-lanes over ~400m.
 - Visibility pulling out of Foxhall Road is low due to the roundabout island being banked and containing trees and signs. This actually makes it easier to pull out of Foxhall Road because drivers are unaware whether a vehicle is coming round the circulatory which leads to involuntary low gap acceptances.
 - The A12 undulates along its length with notable inclines between the A1214 and B1438 (J25 to J26) and between Foxhall Rd and Seven Hills (J21 to J22). If journey time validation is poor, consideration should be given to including gradients.
- 2.3.8. A review of the video footage collected on the day of the surveys also highlighted the following driver behaviours which have been replicated within the model:
- A12: The desired speed of drivers on the A12 varies dramatically between 40 and 70mph often leading to the formation of platoons of vehicles.
 - Vehicles travelling northbound on Barrack Square were observed to give priority to vehicles waiting on Gloster Road if queues on Barrack Square reach this junction. This courtesy behaviour has been included within the model (PM model only) using priority rules and VAP to reverse the priority briefly to allow a small number of Gloster Road vehicles to join the Barrack Square queue.
 - At 16:00-16:15, a number of vehicles appear to leave the businesses on Barrack Square, causing a sudden peak in arrivals into the network and temporary queues of 100-200m to form at J23. These queues were observed to have dissipated by just after 16:50.

- Queues on Gloster Road can be partially seen from the A12 / Barrack Square video footage and were observed to be short (0-6 vehicles) from 14:45 to 16:00. From 16:15 to 16:45 queues on Gloster Road were observed to exceed 10 vehicles (the maximum extent of the camera view) periodically and had dissipated by 17:15.
- On approach to the A12 / B1438 roundabout (J26), vehicles on the A12 northbound approach are predominantly in the left-hand land (following the lane markings).
- Demand at the Martlesham Park and Ride approach to the A12 / Main Road roundabout (J25) is intermittent and green time is only received if demand is present.
- Queues on the A12 southbound were observed to briefly block back from J23 to J24 in the AM period from 08:20-08:35 which is replicated in some random seeds in the model.
- At J25, vehicles entering Anson Road from the A12 were observed to slow down on several occasions. This is often due to vehicles entering/exiting the adjacent BP petrol station. To replicate this behaviour in the model, reduced speed areas are coded adjacent to petrol station entry to cause localised slowing of vehicles.

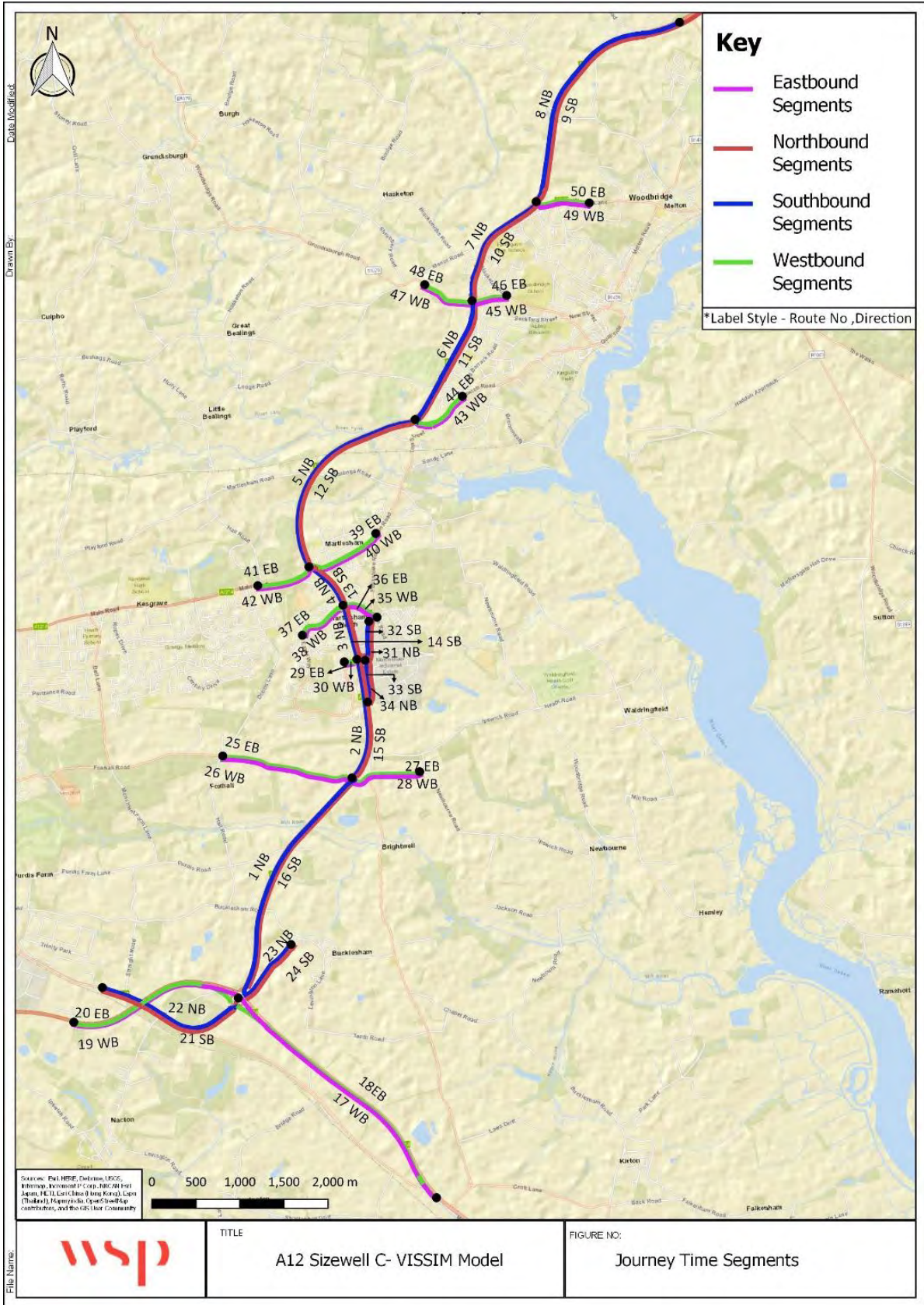


Figure 3 – Observed Journey Time Segments

2.4. MODEL CONSTRUCTION

BASE NETWORK STRUCTURE

- 2.4.1. The model study area shown in Figure 1 has been constructed in VISSIM based on Ordnance Survey Mastermap. The model extent was chosen so that the key junctions of interest were included, as well as sufficient areas of the surrounding network to allow traffic arriving at the key junctions to be accurately modelled, e.g. platooning. Entries into the model were extended where necessary to accommodate current and forecast queues to avoid unreleased vehicles leading to reduced demand in the network.
- 2.4.2. The majority of network links were coded as “Inter-urban (motorized) W99” links using the Wiedemann99 car-following model. The number of “observed vehicles” was increased from two to four to improve driver-vehicle interaction and the “minimum lateral distance at 0mph” was obtained from the TfL template (1.0 m.), but otherwise driver behaviour parameters were retained as per the VISSIM default settings.
- 2.4.3. The default “Inter-urban (motorized) W99” driving behaviour is suitable for most typical driving behaviours but it is not able to realistically simulate lane merge behaviour where drivers tend to be more assertive, cooperative and accept shorter than default gap times temporarily. For links where merging behaviour is likely to be present, for example due to heavily biased lane use or the number of lanes reducing, a specialised lane merging behaviour has been used. This merging behaviour type was based on the Transport for London (TfL) template merging behaviour type.
- 2.4.4. Desired speed profiles were created for car, LGV, HGV and bus as per TfL’s default VISSIM model template. These speed profiles cover the following speed limits: 20mph, 30mph, 40mph, 50mph, 60mph and 70mph. Each speed profile ranges between a lower and upper limit to replicate driver tendency to travel at speeds not exactly equal to the sign-posted speed. The speed profiles result in the formation of natural platoons on the A12 as faster moving vehicles catch-up with slower moving vehicles, particularly in the single carriageway sections of the A12. Desired Speed Decisions (DSDs) were applied using these speed profiles in the model to replicate speed limit changes. At the southern end of the A12, speed limits of 50 to 60mph have been applied and at the northern end of the A12 and on the A14, speed limits of 70mph have been applied in line with the signed speed limits. The minor arms along the A12 were assigned speed limits of 30mph as signed and/or observed on-street. Manor Road was assigned a desired speed of 40mph and Foxhall Road and Newbourne Road were assigned a desired speed of 60mph to reflect the posted speed limits in this area. Adjustments were made to the desired speeds on Felixstowe Road (A1156), Eagle Way, Gloster Road and Bucklesham Road to modify desired speeds as they were observed to differ from the signed speed limit.
- 2.4.5. Reduced Speed Areas (RSAs) were assigned across the model to replicate the need for vehicles to slow down on bends and at junctions. Appropriate reduced speed areas were placed based on curve radii to ensure realistic driving behaviour, speed and flow capacity.
- 2.4.6. Stop signs have been included on minor arms in the higher speed limit areas (i.e. Manor Road and Hasketon Road) to allow vehicles time to assess gaps on the mainline before joining.
- 2.4.7. Priority rules were applied at junction conflict points to replicate gap acceptance behaviour. Where appropriate, separate time and distance gap rules were applied. Rules were separated for light and

heavy vehicles. Gap acceptance times were selected depending on the nature of the conflict (merging / crossing) and to calibrate to the observed queue lengths.

- 2.4.8. The observed courtesy behaviour at the Gloster Road / Barrack Square junction (see paragraph 2.3.8) has been replicated using dummy signals which activate a yellow box style priority behaviour. If queues extend on Gloster Road and the queue on the Barrack square approach of J23 has reached Gloster Road then the behaviour was observed to begin. These are the criteria that have been set for this behaviour in the VISSIM model. This behaviour has only been included in the PM model as it was only observed to occur at this time of day.
- 2.4.9. The survey footage demonstrates that there is a concentrated surge in demand on Barrack Square at approximately 16:10 which appears to be caused by employees leaving one of the businesses at Adastral Park. To replicate this in VISSIM, a dummy signal head was coded on the Barrack Square entry to the model which holds back 40% of the origin demand at 15:55 and 16:45 for 5-minutes and at 16:15 and 16:35 for 200 seconds. This causes a platoon of vehicles to be released, leading to a sudden increase in queues on the Barrack Square approach to J23 as observed in the video footage.
- 2.4.10. Nodes were created at each junction and at each entry to the model to allow for the dynamic assignment of the origin–destination demand matrices. Nodes placed at the edges of the model represent the model zones which are connected to the network using “parking lots” as per the VISSIM User Manual. Table 4 list the VISSIM model zones.

Table 4 – VISSIM Zoning System

Zone	Name	Zone	Name
1	A12 North	13	Anson Road
2	A1152	14	Eagle way
3	Hasketon road	15	Barrack Square
4	Manor Road	16	Foxhall Road
5	B1079 (west)	17	Newbourne Road
6	B1079 (east)	18	A14 West
7	Seckford Road (inactive)	19	A1156
8	B1438	20	A14 East
9	Martlesham P&R	21	Bucklesham Road
10	Main road (west)	22	Gloster Road
11	Main road (east)	23	Brightwell Lakes (Forecast years only)
12	Eagle way		

- 2.4.11. Junction nodes are used in dynamic assignment to allow / prohibit certain movements (defined as “edges” in VISSIM). Edges have been closed where appropriate to avoid vehicle movements that would not happen in reality and also to restrict lane usage where prescribed / as observed. Junction nodes have also been used for flow calibration purposes.

- 2.4.12. For validation and evaluation purposes, travel time monitoring sections are included in the model along the A12 and also on the other roads that connect to the A12, replicating the sections defined in the observed TomTom data (see Figure 3).
- 2.4.13. Queue counters were added at the giveaway and signal stop lines at each junction to allow the modelled queues to be calibrated to the observed queue lengths and to allow a comparison of queues to be made in the forecast scenarios.

BASE YEAR MATRIX DEVELOPMENT

- 2.4.14. The A12 Sizewell C VISSIM model contains a total of 23 zones, as specified in Table 4. Matrices were produced based on this zone system which were split into the following three vehicle types in the base VISSIM model:
- Car (100);
 - LGV (700); and
 - HGV (200)
- 2.4.15. Buses were included in the model as fixed PT lines as detailed in section 2.4.25. Cars, LGVs and buses use the default 2D / 3D model distribution in VISSIM. HGVs have been assumed to contain both OGV1 and OGV2 models with a share of 59% and 41% respectively for AM and 66% and 34% respectively for PM, as observed from the MCC data.
- 2.4.16. The Car, LGV and HGV base demand matrices were produced using matrix estimation, as follows.
- #### **Matrix Estimation**
- 2.4.17. Observed turning flows were balanced and network flow diagrams were produced for each vehicle class and time period as shown in Appendix B. These observed turning flows were used to provide a series of target flows for the matrix estimation process.
- 2.4.18. An initial set of prior matrices were produced from the six cordoned VISUM models, each representing one of the six modelled hours. As the resolution of the VISSIM model is more refined, some of the VISUM zones were required to be disaggregated to represent the more detailed VISSIM zones. These trips were disaggregated based on observed turning flow data and local knowledge of the land uses in each area.
- 2.4.19. The disaggregated prior matrices were firstly assigned in the VISUM cordon models, then matrix estimation (ME) was applied using the VISUM “TFlowFuzzy” function to create a set of post-ME matrices. Observed turning flows were used as target values for the ME process, for Cars, LGVs and HGVs separately. The post-ME matrices were then assigned in VISUM and the resultant turning flows compared against observed values using the GEH statistic. Where the GEH was not below 5, the prior matrix demand was further adjusted to achieve a better fit in the prior assignment before ME was rerun. Such manual adjustments were required in particular for O-D pairs with observed flows but no modelled flows initially in the prior matrix, so some nominal flows were added to allow the ME process to apply to those OD pairs.
- 2.4.20. Manual adjustments to the prior matrices were continued until the ME process resulted in an assignment with minimal differences between the post-ME assigned turning flows and the observed turning flows. This provided confidence that the post-ME 2019 traffic demand matrices were reasonably representative of observed traffic O-D patterns, ready for input to the VISSIM model.

2.4.21. The post-ME 2019 hourly demand matrices from VISUM were loaded into the base VISSIM model in 15-minute segments based on the observed 15-minute traffic profile for each model entry point.

Convergence

2.4.22. Although no route choice is possible in the VISSIM network, dynamic assignment has been used as it is a more efficient way to pass origin–destination trips from VISUM to VISSIM rather than using static routes. It also allows more realistic origin-destination pair demands to be included within the model meaning lane changing / weaving between junctions will be more representative.

2.4.23. To assign the demand matrices to the VISSIM network, an iterative convergence procedure takes place by assigning vehicles to different paths until equilibrium is reached. The criterion for convergence in the model has been set as follows:

- Travel time on paths changes of up to 20% on 85% of links;
- Traffic volume on edges changes of up to 50 vehicles on 98% of edges;
- For a minimum of four consecutive iterations.

2.4.24. Convergence was reached for each scenario in the minimum permitted amount of simulation runs as there is no route choice in the network.

PUBLIC TRANSPORT SERVICES

2.4.25. Seventeen public bus services were identified as running through the study area. These bus services were added to the model according to published timetables. Table 5 lists the frequency of each bus service as they have been included in the model in each time period.

Table 5 – Public bus services frequencies by peak period

Service and Direction	6-9 AM	3-6 PM
64 - Aldeburgh - Ipswich (SB)	2	2
65 Aldeburgh - Ipswich (SB)	1	0
64- Leiston - Aldeburgh (NB)	2	3
65-Ipswich - Redwald Road Opposite Spencer Road (NB)	0	1
66 -Internal Road Outside Tesco - Ipswich (WB)	6	5
66 -Ipswich - Internal Road Outside Tesco (EB)	5	6
66A - Ipswich - Eagle Way Opposite Manor Road (EB)	1	2
70 - Woodbridge - Ipswich (WB)	1	0
70 - Ipswich - Woodbridge (EB)	0	2
70A - Woodbridge - Ipswich (WB)	0	2
70A - Ipswich - Woodbridge (EB)	1	1
75 - Felixstowe - Ipswich (WB)	6	2

75 - Ipswich - Felixstowe (EB)	3	3
76 - Ipswich - Western Avenue Adjacent Norman Close (EB)	0	2
77 - Felixstowe Dock - Ipswich (WB)	1	3
77 - Ipswich - Felixstowe Dock (EB)	1	3
173 - Woodbridge - Hamilton Road Outside Great Eastern Square (SB)	0	1

2.4.26. Bus services were included in the model as fixed public transport lines and in lieu of observed dwell time information, an average dwell time of 20 seconds and a standard deviation of 2 seconds has been assumed.

3. BASE MODEL CALIBRATION AND VALIDATION

3.1. CRITERIA

- 3.1.1. The base year model was calibrated to observed traffic flows and queue lengths and independently validated against observed journey times to confirm that the base model represents observed conditions.
- 3.1.2. Each peak hour has been calibrated and validated individually. Calibration and validation results for all modelled hours can be found in Appendix C.
- 3.1.3. The calibration and validation criteria used was based on Department for Transport (DfT) guidelines set out in TAG Unit M3-1 Highway Assignment Modelling.

CALIBRATION

- 3.1.4. Modelled turning flows at junctions were compared against observed counts using the two criteria set out in Table 6. The first criterion uses differences in flow whilst the second criterion uses the GEH statistic which offers a reliable method of comparing the similarity of two flows irrespective of their magnitude, as shown below.

$$GEH = \sqrt{\frac{(M - C)^2}{(M + C)/2}}$$

where: GEH is the GEH statistic;
M is the modelled flow; and
C is the observed flow.

Table 6 – Traffic Flow Calibration Criteria (source: TAG Unit 3.1)

Table 2 Link Flow and Turning Movement Validation Criteria and Acceptability Guidelines		
Criteria	Description of Criteria	Acceptability Guideline
1	Individual flows within 100 veh/h of counts for flows less than 700 veh/h	> 85% of cases
	Individual flows within 15% of counts for flows from 700 to 2,700 veh/h	> 85% of cases
	Individual flows within 400 veh/h of counts for flows more than 2,700 veh/h	> 85% of cases
2	GEH < 5 for individual flows	> 85% of cases

- 3.1.5. Observed queue data has also been used to calibrate the model by comparing modelled and observed queues in 5-minute intervals. Queue lengths were measured as the maximum occurring during each 5-minute interval. There are no formal queue length comparison criteria prescribed by industry guidance, but in general the length, variability and profile of modelled queues throughout the hour should be similar to those observed.

VALIDATION

- 3.1.6. Journey times from the model were compared to observed journey times by way of an independent validation check. The WebTAG criteria set out in Table 7 has been used to assess the model validation.

Table 7 – Journey Time Validation Criteria (source: TAG Unit 3.1)

Table 3 Journey Time Validation Criterion and Acceptability Guideline	
Criteria	Acceptability Guideline
Modelled times along routes should be within 15% of surveyed times (or 1 minute, if higher than 15%)	> 85% of routes

3.2. TRAFFIC FLOW CALIBRATION

- 3.2.1. Modelled turning flows at each junction were compared against observed turning flows by vehicle type (Car, LGV and HGV) and for all vehicle types combined. As the observed traffic flows were directly input into the model, this check was considered to be calibration rather than an independent validation of the model's ability to replicate observations. Traffic flow calibration tables are provided in Appendix C for the AM and PM models.

AM PEAK (06:00-07:00)

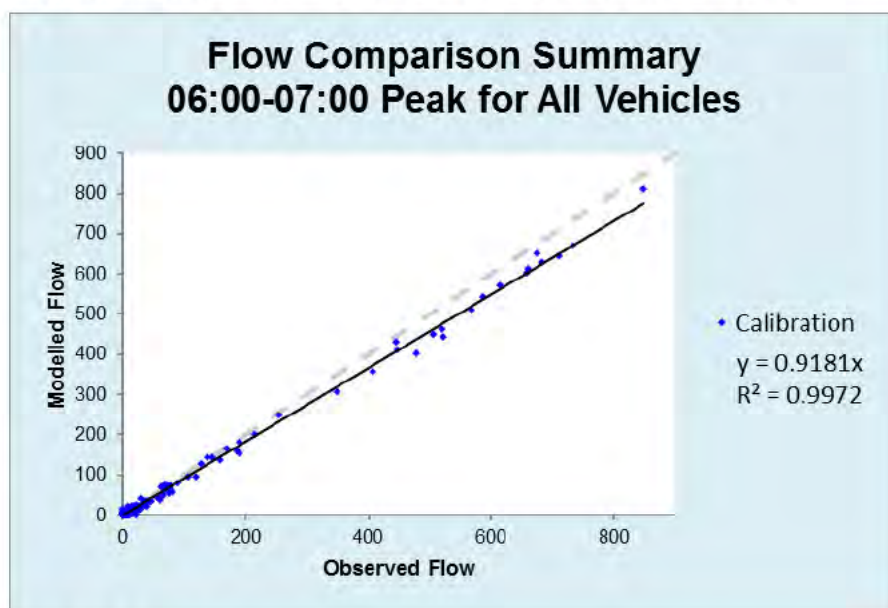
- 3.2.2. The 06:00-07:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.3. Overall the model slightly under-predicted observed flows (-8.6%), but overall flow totals were within DfT validation criteria (GEH < 5.0) with an average GEH value of 1.5 which reveals a good level of fit between modelled and observed data. Table 9 provides a summary of the flow calibration for 06:00-07:00 in line with DfT criteria.

Table 8 - 06:00-07:00 Turn Flow Calibration Summary

	GEH Statistics - 06:00 - 07:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	99.3%	100.0%	100.0%	97.9%	No Data	No Data
LGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicles	98.6%	99.3%	100.0%	97.8%	100.0%	No Data

- 3.2.4. Figure 5 shows how the modelled and observed turning flows compare and demonstrates that the correlation between the two is strong. The gradient is less than 1.0 (0.9181) which confirms the slight underestimate of flows. The R² value (0.9972) is very close to 1, which indicates that the modelled flows do correlate with observed flows and confirms that a good level of flow calibration has been achieved.

Figure 4: 06:00-07:00 Modelled vs. Observed Turn Flows



AM PEAK (07:00-08:00)

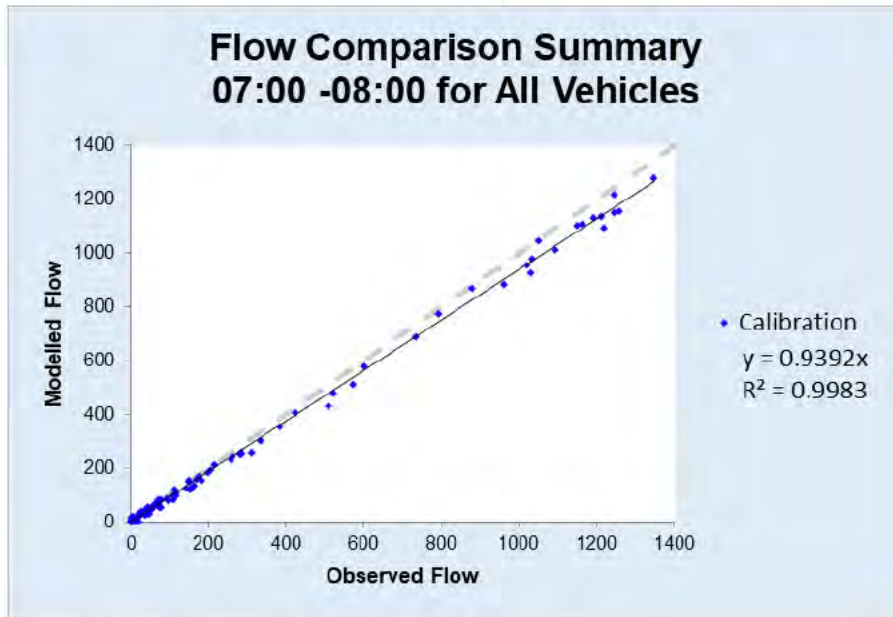
- 3.2.5. The 07:00-08:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.6. Overall the model slightly under-predicted observed flows (-6.4%), but overall flow totals were within DfT validation criteria (GEH < 5.0) with an average GEH value of 1.4. Table 9 provides a summary of the flow calibration for 07:00-08:00 in line with DfT criteria.

Table 9 - 07:00-08:00 Turn Flow Calibration Summary

	GEH Statistics - 07:00 - 08:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	100.0%	100.0%	100.0%	97.7%	100.0%	No Data
LGV	99.3%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicle	100.0%	100.0%	100.0%	97.6%	100.0%	No Data

- 3.2.7. Figure 5 shows how the modelled and observed turning flows compare and demonstrates that the correlation between the two is strong. The gradient is less than 1.0 (0.9392) which confirms the slight underestimate of flows. The R² value (0.9983) is very close to 1, which indicates that the modelled flows do correlate with observed flows and confirms that a good level of flow calibration has been achieved.

Figure 5: 07:00-08:00 Modelled vs. Observed Turn Flows



AM PEAK (08:00-09:00)

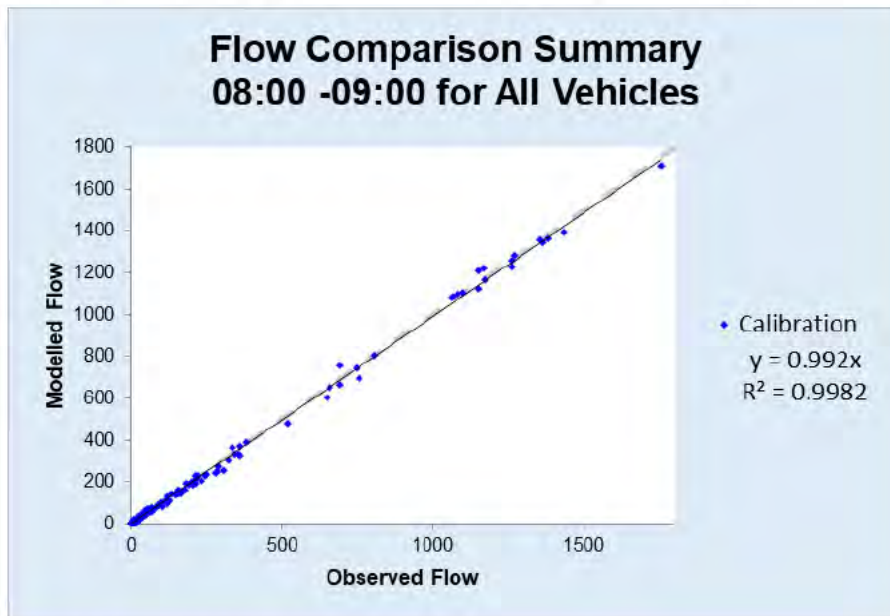
- 3.2.8. The 08:00-09:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.9. Overall the model slightly under represents the observed flows (-1.6%), but overall flow totals were within DfT validation criteria (GEH < 5.0) with an average GEH value of 1.1. Table 10 provides a summary of the flow calibration in line with DfT criteria.

Table 10 – 08:00-09:00 Turn Flow Calibration Summary

	GEH Statistics -08:00 - 09:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	100.0%	100.0%	100.0%	97.6%	100.0%	No Data
LGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicle	100.0%	100.0%	100.0%	97.5%	100.0%	No Data

- 3.2.10. Figure 6 shows a plot of modelled against observed junction turn flows showing that the correlation between modelled and observed flows was very good. The gradient is less than 1.0 (0.992) which confirms the slight underestimate of flows. The R² value (0.9982) is very close to 1, showing good correlation with observed flows.

Figure 6 – 08:00-09:00 Modelled vs. Observed Turn Flows



PM PEAK (15:00-16:00)

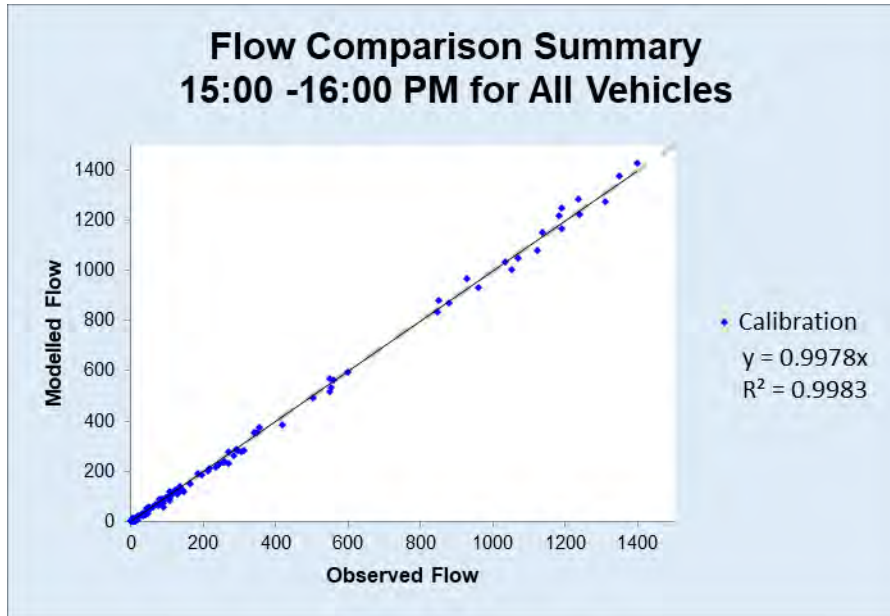
- 3.2.11. The 15:00 – 16:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.12. Overall the model slightly under-predicted observed flows (-1.7%) but overall flow totals were within DfT validation criteria (GEH < 5.0) with an average GEH value of 1.1. All individual surveyed turn movements met DfT flow validation criteria with a GEH value of less than 5.0. Table 11 provides a summary of the flow calibration in line with DfT criteria.

Table 11 – 15:00-16:00 Turn Flow Calibration Summary

	GEH Statistics - 15:00 -16:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	100.0%	100.0%	100.0%	97.6%	100.0%	No Data
LGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicle	100.0%	100.0%	100.0%	97.6%	100.0%	No Data

- 3.2.13. Figure 7 shows a plot of modelled against observed junction turn flows showing that the correlation between modelled and observed flows was very good. The gradient is less than 1.0 (0.9978) which confirms the slight underestimate of flows. The R² value (0.9983) is very close to 1, showing tight correlation with observed flows.

Figure 7 – PM Peak (15:00 - 16:00) Plot of Modelled vs. Observed Turn Flows



PM PEAK (16:00 – 17:00)

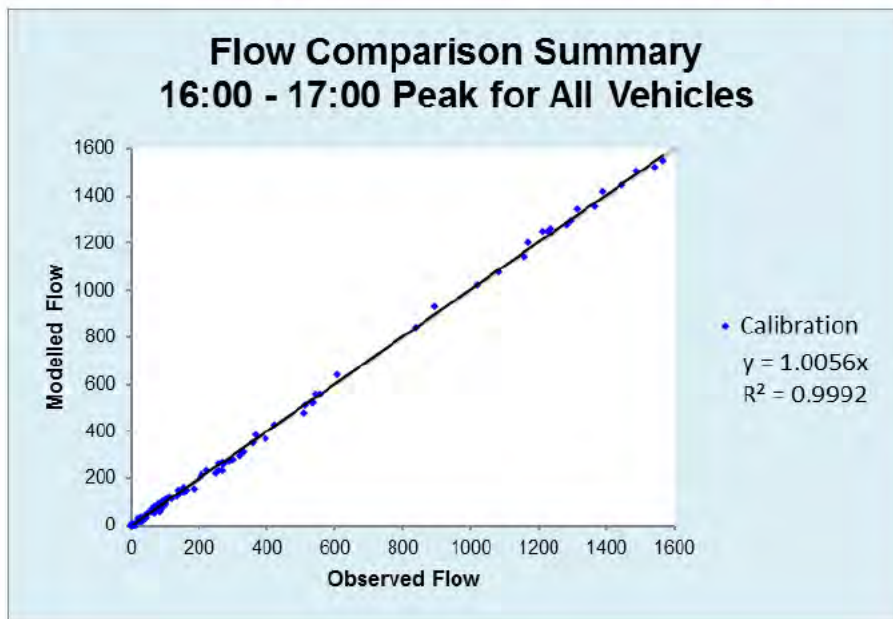
- 3.2.14. The 16:00 – 17:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.15. Overall, the model flows replicate observed flows well (-0.2%) and overall flow totals were within DfT validation criteria (GEH < 5.0) with an average GEH value of 1.0. All individual surveyed turn movements met DfT flow validation criteria with a GEH value of less than 5.0. Table 11 provides a summary of the flow calibration in line with DfT criteria.

Table 12 – 16:00 - 17:00 Turn Flow Calibration Summary

	GEH Statistics - 16:00 - 17:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	100.0%	100.0%	100.0%	97.6%	100.0%	No Data
LGV	99.3%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicle:	100.0%	100.0%	100.0%	97.6%	100.0%	No Data

- 3.2.16. Figure 7 shows a plot of modelled against observed junction turn flows showing that the correlation between modelled and observed flows was very good. The gradient is more than 1.0 (1.0056) which confirms the slight overestimate of flows. The R² value (0.9992) is very close to 1, showing tight correlation with observed flows.

Figure 8 – PM Peak (16:00 - 17:00) Plot of Modelled vs. Observed Turn Flows



PM PEAK (17:00-18:00)

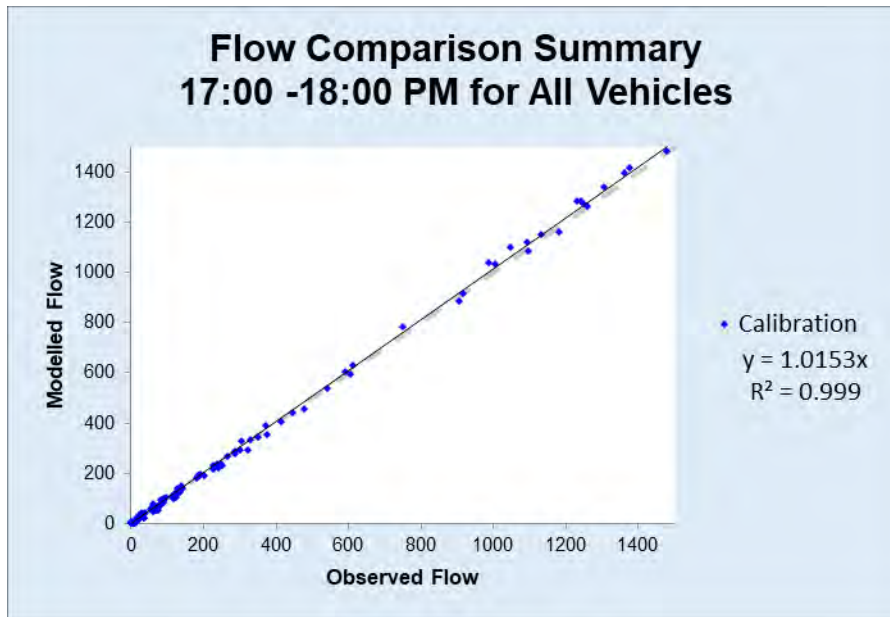
- 3.2.17. The 17:00 -18:00 modelled period was found to closely replicate observed turning flows for all vehicle types.
- 3.2.18. Overall, the modelled flows replicate those observed well (0.6% difference) with an average GEH of 1. All individual surveyed turn movements met DfT flow validation criteria with a GEH value of less than 5. Table 13 provides a summary of the flow calibration in line with DfT criteria.

Table 13 - 17:00-18:00 Turn Flow Calibration Summary

	GEH Statistics - 17:00 -18:00			Individual Flows		
	GEH < 5	GEH < 6	GEH < 10	f < 700	700 < f < 2700	f > 2700
Car	100.0%	100.0%	100.0%	97.6%	100.0%	No Data
LGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
HGV	100.0%	100.0%	100.0%	97.9%	No Data	No Data
All Vehicle	100.0%	100.0%	100.0%	97.6%	100.0%	No Data

- 3.2.19. Figure 9 shows a plot of modelled against observed junction turn flows showing that the correlation between modelled and observed flows was very good. The gradient is more than 1.0 (1.0153) which confirms the slight overestimate of flows. The R² value (0.999) is very close to 1, showing tight correlation with observed flows.

Figure 9 - 17:00-18:00 Modelled vs. Observed Turn Flows



3.2.20. Full detail of the flow calibration for each modelled hour can be found in Appendix C.

3.3. QUEUE LENGTH COMPARISON

- 3.3.1. Queue lengths were observed at the eight junctions identified in Section 2.3.1. Detailed queue length comparison graphs are provided in Appendix C for the six modelled hours and a summary is provided below.
- 3.3.2. It should be noted that it is not recommended to place emphasis on the ability of a model to replicate observed queue lengths, particularly in a microsimulation model where observed and modelled travel times provide a much more reliable metric.
- 3.3.3. Neither TfL, DMRB nor WebTAG provide any specific guidelines on queue assessments, and queue validation is actually discouraged by the modelling guidance.
- 3.3.4. DMRB states that (DMRB, Vol. 12, Sec 2, Part 1, Chapter 4, p.4/26, para. 4.4.31 [SAO3]):
“precise validation of queue lengths can be difficult because of the volatility of the observed data”.
- 3.3.5. Likewise, TfL identify that (TfL, Traffic Modelling Guidelines, p.69, section 2.4.4.3 [see Annex C]):
“the level of accuracy in queue measurement surveys can often [sic] lower than for other surveys as the definition of a queue can be ambiguous as well as difficult to identify”.
- 3.3.6. Queue length surveys are able to provide an estimation of conditions at the site but cannot be expected to be replicated accurately within a model, especially on a minute by minute basis. The primary reasons for this include:
- The tendency for the model results to fluctuate between different model runs - observations from one run will differ from another (otherwise the model would not replicate average conditions);

- The day-to-day variance in real-life conditions at the site (from minute to minute and from day to day) means that results taken from one day cannot be applied too rigidly or prescriptively; and
- The software’s mathematical interpretation of queue lengths compared with the subjective nature of human interpretation during manual surveys.
- Queue lengths are highly sensitive to fluctuations in the arrival profile of vehicles and therefore have a tendency to differ from one day to the next. Demand in the VISSIM model is input in 15-minute intervals with the arrival rate of vehicles within these intervals randomly seeded. Demands in the model are therefore unlikely to match the precise minute-by-minute arrival rates on the day of the survey so it is highly unlikely that the model will replicate the surveyed queues with any degree of precision.

Despite not being recommended, a queue length comparison is presented with the intention of giving confidence that notable queues are replicated by the model, even if their precise lengths and times of day are not intended to be matched.

3.3.7.

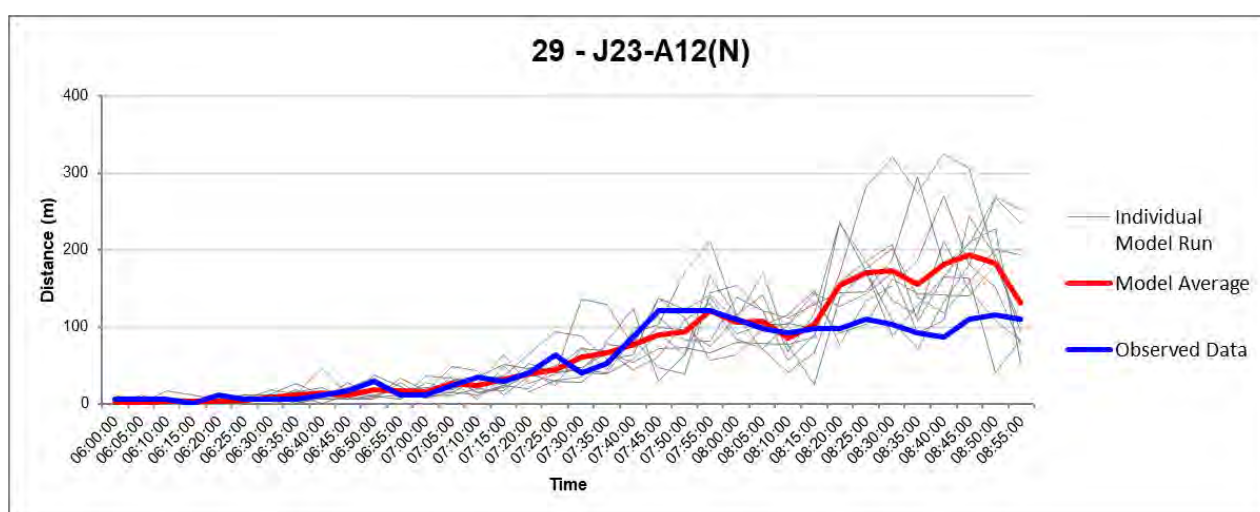
AM PERIOD

3.3.8. The AM period queue comparison demonstrates a good match between the observed and modelled queue lengths, for the majority of the junctions.

3.3.9. The AM model showed some variation in queue lengths between iterations and across the peak hours, in line with fluctuations in demand, but the model generally replicated the observed queue lengths and profiles very well. The only exceptions to this are as follows:

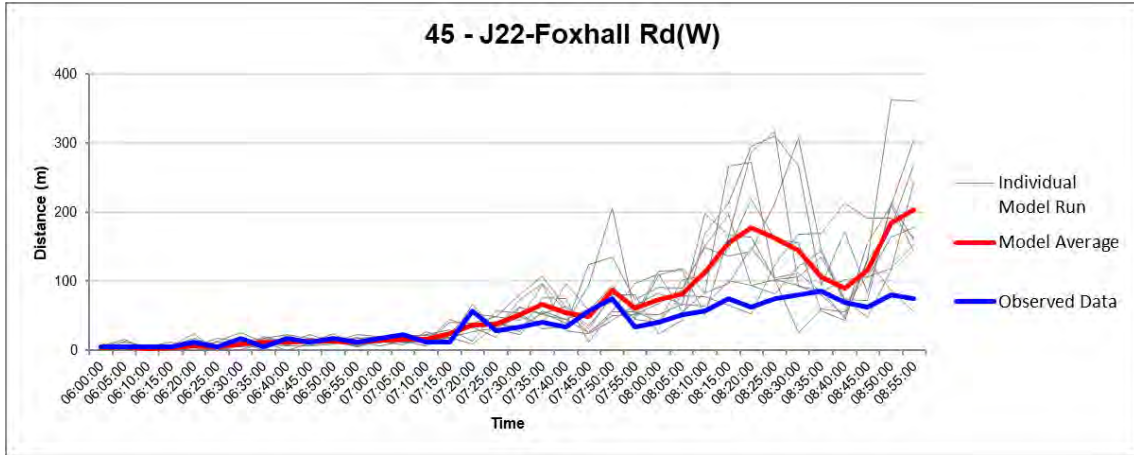
- The modelled queue on the A12(N) approach to the A12 / Barrack Square roundabout (J23) is slightly higher than that observed from 08:20-09:00 as shown in Figure 10. However, consultation of the video footage suggests that the observed data may slightly under report the observed queues and the higher modelled queue is therefore considered to be representative.

Figure 10 Queue Comparison AM Peak J23 A12(N)



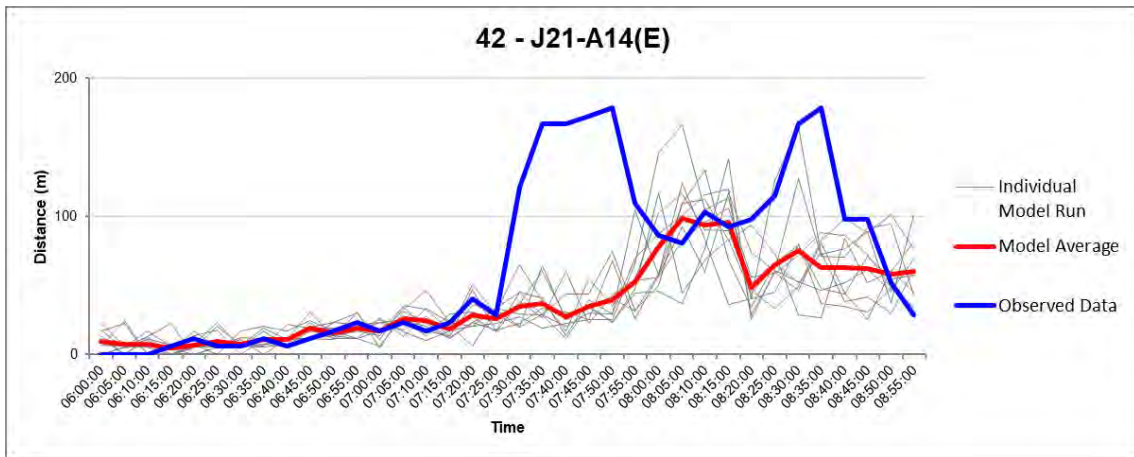
- The modelled queue on the Foxhall Road approach to the A12 / Foxhall Road roundabout (J22) is higher than that observed from 08:00-09:00 as shown in Figure 11. The queue length monitoring camera on Foxhall Road was not able to capture the full extent of the observed queue due to the available camera angle. The modelled queues are therefore likely to be reasonable.

Figure 11 Queue Comparison AM Peak J22 Foxhall Road(W)



- The modelled queue on the A14 westbound off-slip at the Seven Hills Interchange (J21) has been found to be lower than the observed queue for two 30-minute periods as shown in Figure 12.

Figure 12 Queue Comparison AM Peak J21 A14(E)



3.3.10. On the day of the survey, the peak in observed queues from 07:25 was observed to be caused by the presence of a ready-mix concrete truck which struggled to find a gap in the circulating traffic. Queues on the off-slip were also observed to be slow moving and it is difficult to calibrate queues in these conditions as determining whether or not vehicles are queued becomes quite subjective. Vehicles at the front of the queue are slow moving whilst the rear of the queue is stationary and vice versa. The approximate definition used by the survey company is unlikely to be consistent with the precise definition that VISSIM uses. This location is a good example of a location where observed queue lengths are likely to be particularly difficult to replicate. As described in section 3.4.2, a

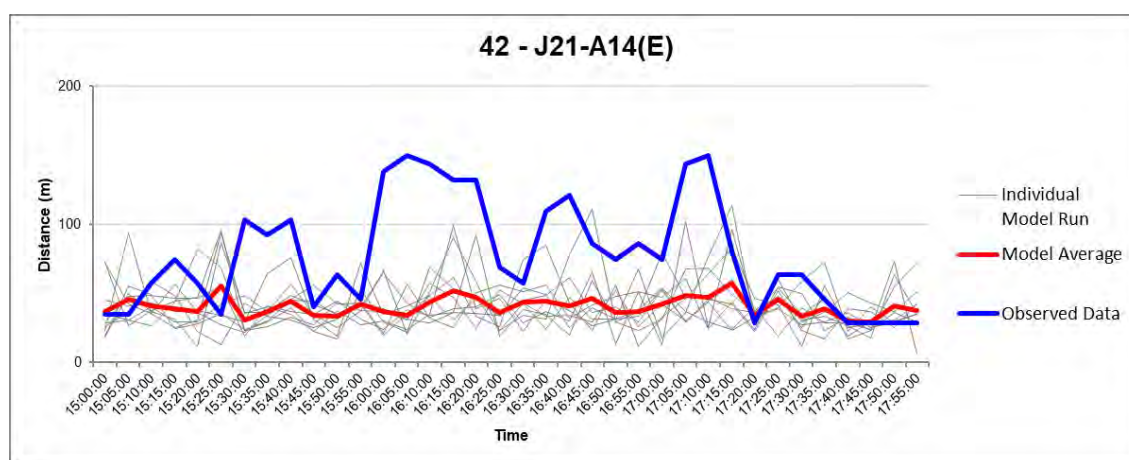
greater emphasis should be placed on matching travel times due to the limitations of replicating observed queue lengths.

- 3.3.11. In all three AM hours, the modelled travel time on the A14 westbound off-slip is shown to exceed the observed travel time. The modelled journey time is 2%, 15% and 24% higher than the observed travel time from 06:00-07:00, 07:00-08:00 and 08:00-09:00 respectively. This gives confidence that delays on the A14 westbound off-slip are not underestimated by the model.
- 3.3.12. Of the 34 queue lengths being monitored, the model was found to provide a good representation for 31 of the queues. Overall the model replicates the majority of observed queue lengths very well in the AM period (06:00 -09:00).

PM PERIOD

- The PM model showed some variation in queue lengths between iterations and across the peak hours, in line with fluctuations in demand, but the model generally replicated the observed queue lengths well. The only exceptions to this are as follows: The modelled queue on the A14 westbound off-slip at the Seven Hills Interchange (J21) is generally lower than the observed queue lengths. The observed maximum queue lengths fluctuate dramatically from 40-150m from 16:00-17:00 while the modelled queues are more consistent with a maximum queue length of around 50m as shown in Figure 13.

Figure 13 Queue Comparison PM Peak J21 A14(E)



- 3.3.13. As mentioned in paragraph 3.3.10, modelled queues on the A14 westbound off-slip appear to be underestimated by the model but this is not thought to be due to the model underestimating delays at this location. Modelled journey times on the A14 westbound off-slip compare very well to those observed (see Figure 19). In all three PM hours, the model is shown to slightly overestimate the travel time on the A14 westbound off-slip by 7-9% which is within the recommended TAG target of +/- 15%. This gives confidence that the model is able to replicate observed conditions here.
- 3.3.14. Of the 34 queue lengths being monitored, the model was found to provide a good representation for 33 of the queues. Overall the model replicates the majority of observed queue lengths very well in the PM period (15:00-18:00).

3.4. JOURNEY TIME VALIDATION

3.4.1. Detailed journey time validation tables and graphs are provided in Appendix C for the six modelled hours. A summary of the level of journey time validation is provided below.

AM PERIOD

3.4.2. The modelled journey times along the A12 northbound and southbound match the observed journey times very well in the AM model.

Figure 14 and

3.4.3. Figure 15 show the cumulative journey times along the A12 northbound and southbound respectively from 08:00-09:00. The overall and cumulative journey time is shown to be within DfT criteria (+/- 15%) in both directions. The profile of the modelled journey times between each junction was found to match the observed data well. Appendix C shows the equivalent travel time validation for 06:00-07:00 and 07:00-08:00 which also compares very well.

3.4.4. Figure 16 shows the modelled and observed journey times for the other (non-A12) routes. This demonstrates that the majority of modelled journey times compare well to the observed travel times. Full details for the AM period travel times can be seen in Appendix C.

3.4.5. Overall, the three AM hours validate well in terms of travel times with 100% of routes validating from 06:00-07:00, 07:00-08:00 and 08:00-09:00 which exceeds the target of 85% recommended by the DfT TAG.

Figure 14 - 08:00-09:00 A12 Northbound Journey Time Validation

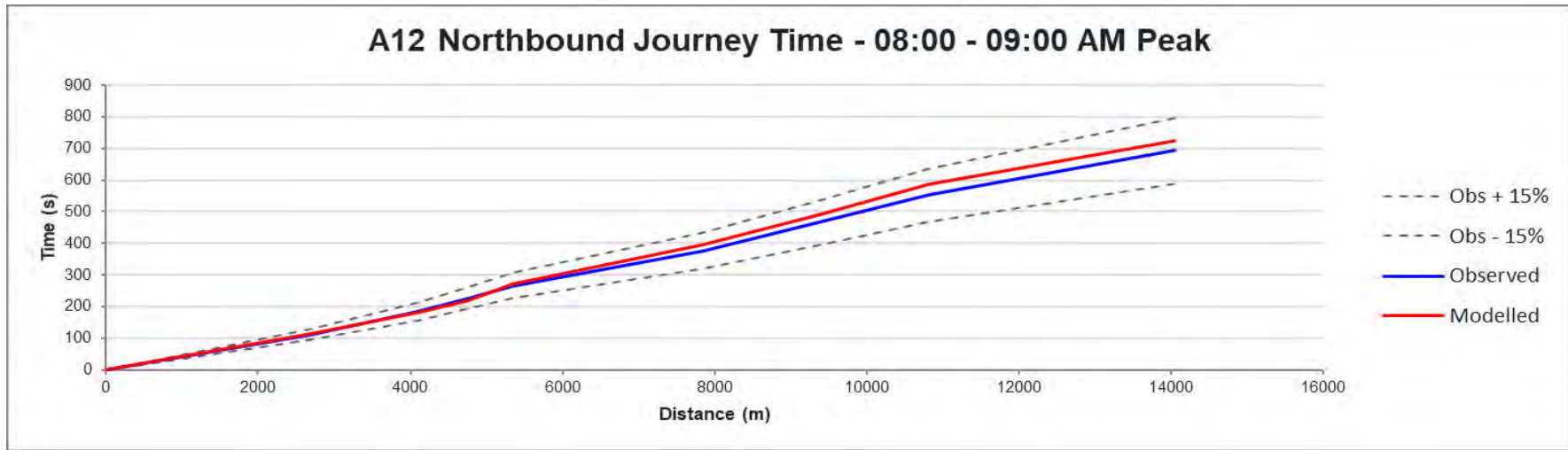


Figure 15 - 08:00-09:00 A12 Southbound Journey Time Validation

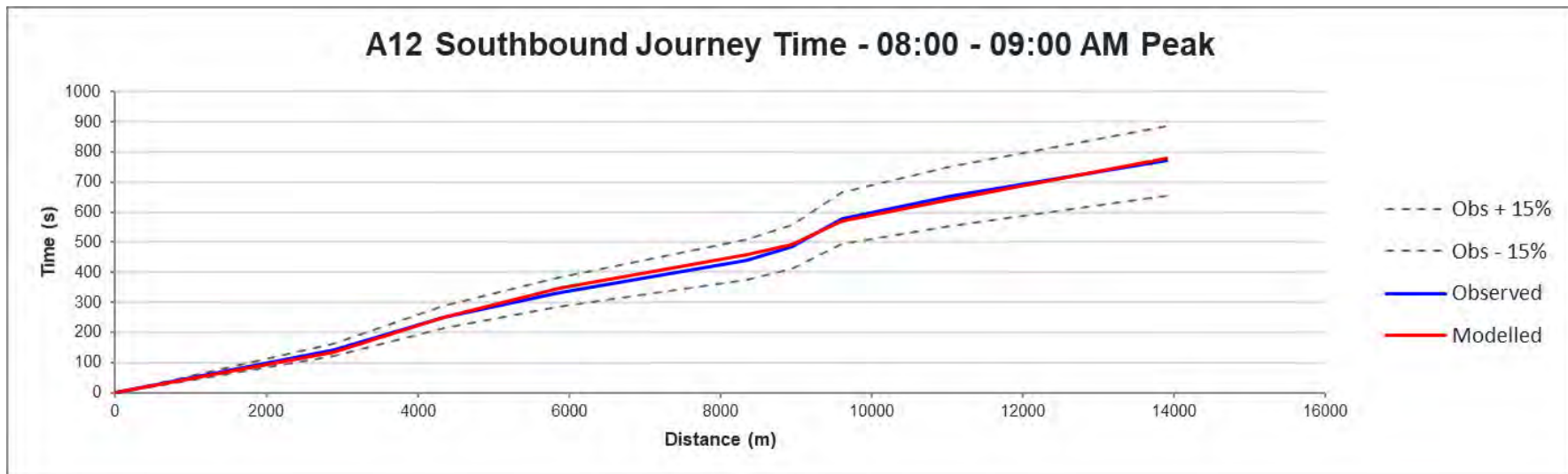
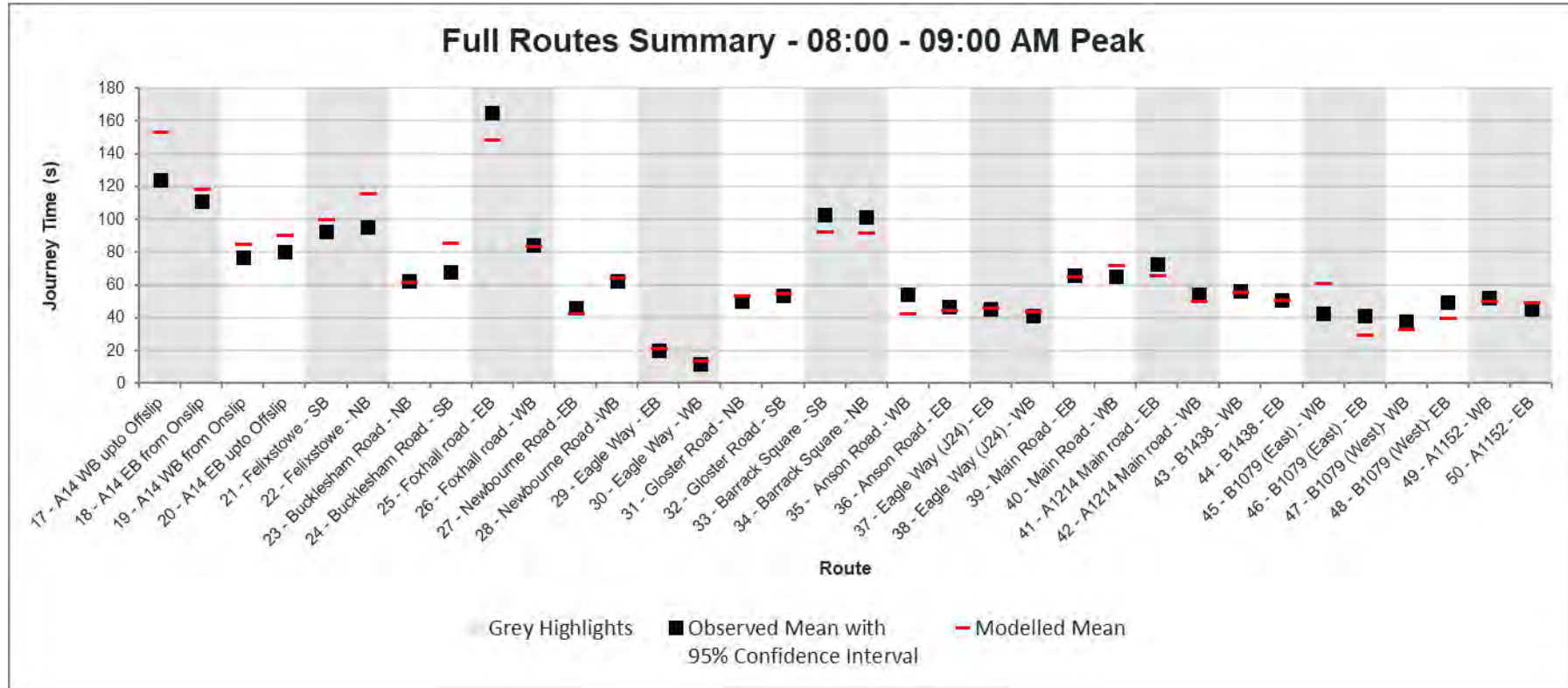


Figure 16 - 08:00-09:00 Journey Time Validation



PM PERIOD

- 3.4.6. The modelled journey times along the A12 northbound and southbound match the observed journey times very well in the PM model.
- 3.4.7. Figure 17 and
- 3.4.8. Figure 18 show the cumulative journey times along the A12 northbound and southbound respectively from 17:00-18:00. The overall and cumulative journey time is shown to be within DfT criteria (+/- 15%) in both directions. The profile of the modelled journey times between each junction was found to match the observed data well. Appendix C shows the equivalent travel time validation for 15:00-16:00 and 17:00-18:00 which also compares very well.
- 3.4.9. Figure 19 shows the modelled and observed journey times for the other (non-A12) routes. This demonstrates that the majority of modelled journey times compare well to the observed travel times. Full details for the PM period travel times can be seen in Appendix C.
- 3.4.10. Overall, the three PM hours validate well in terms of travel times with 100.0% of routes validating from 15:00-16:00, 94% from 16:00-17:00 and 97% from 17:00-18:00 which exceeds the target of 85% recommended by the DfT TAG.
- 3.4.11. Except for Barrack Square NB and Gloster Road SB, the other travel time segments all meet the required validation criteria from 17:00-18:00. Analysis of the TomTom data has revealed that observed journey times on Barrack Square and Gloster Road are extremely variable.
- 3.4.12. The Barrack Square NB observed travel time (#34) has a median time of approximately 3-minutes and an average of over 6-minutes. The range of observations varies greatly from a 5th percentile travel time of 28 seconds up to a 95th percentile of approximately 15-minutes from 17:00-18:00.
- 3.4.13. The Gloster Road SB observed travel time (#32) has a median time of nearly 2-minutes and an average of 7.5 minutes. The range of observations varies greatly from a 5th percentile travel time of 30 seconds up to a 95th percentile of approximately 15-minutes from 17:00-18:00.
- 3.4.14. Due to the level of variability in some routes it was considered sensible to use median travel times rather than average travel times for journey time validation purposes to lessen the risk of outliers skewing the observed time.
- 3.4.15. As the range of observed travel times on some routes is very large, it was likely to be difficult to match a single median travel time during validation. The modelled queues on Barrack Square do match the observed queues quite well which gives some confidence that the model is able to predict some of the delays in this area. The Barrack Square / Gloster Road area experiences some large temporary queues that dissipate quickly as well as difficult to predict courtesy behaviours which make calibration of this area challenging. This area calibrates well from 15:00-16:00 and 16:00-17:00 and calibrates to a reasonable degree from 17:00-18:00.

Figure 17 - PM Peak (17:00 -18:00) Journey Time Northbound

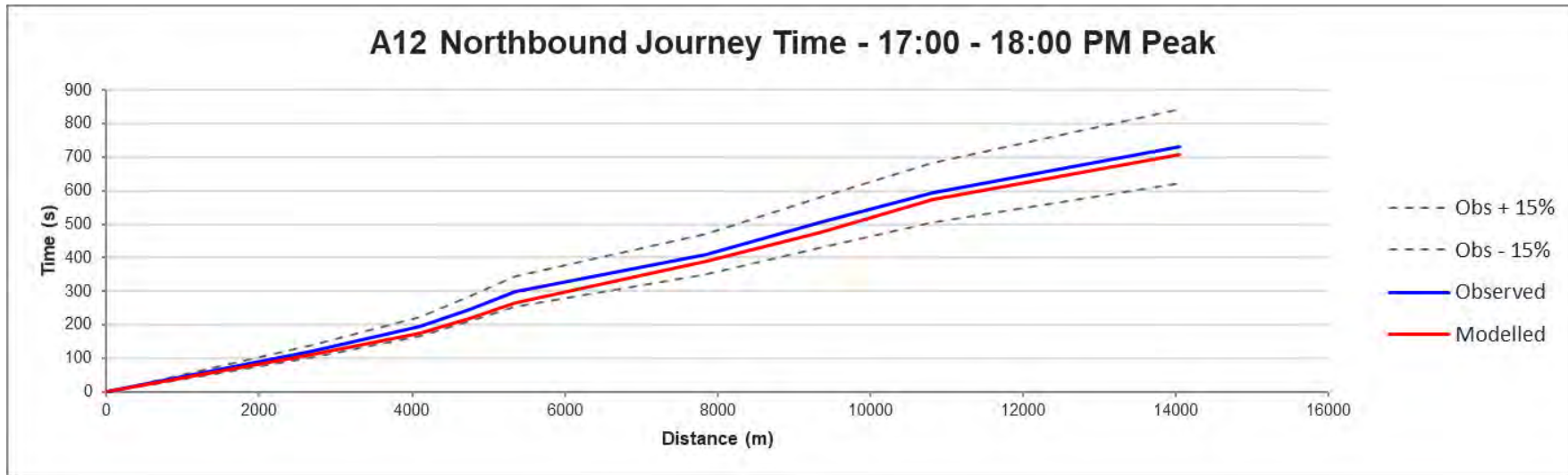


Figure 18 - PM Peak (17:00 -18:00) Journey Time Southbound

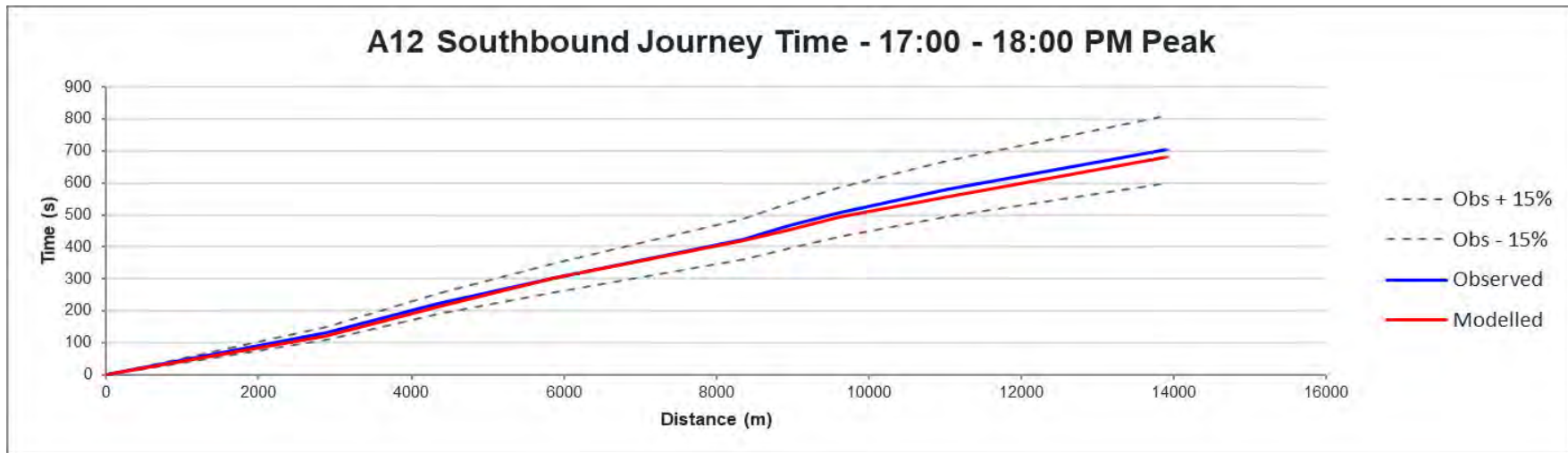
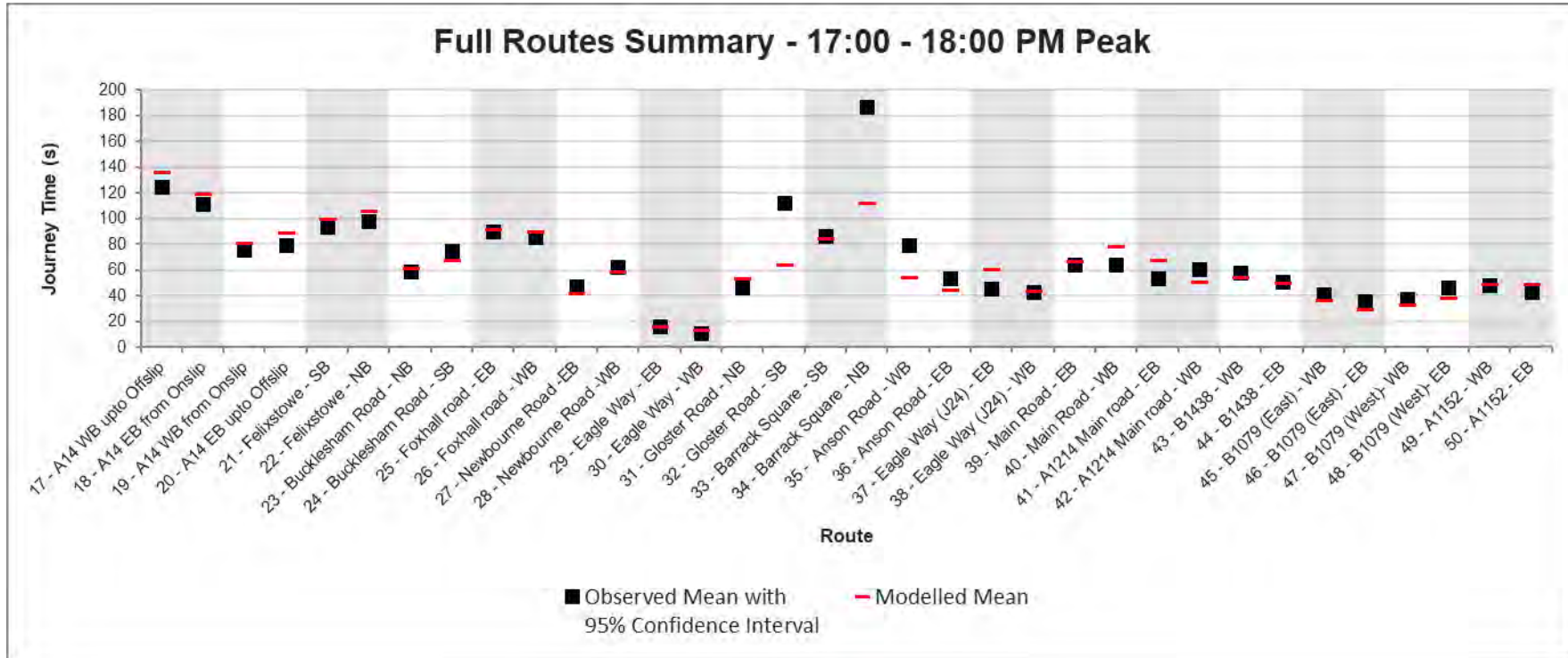


Figure 19 - PM Peak (17:00 - 18:00) Journey Time Segments



3.5. SUMMARY OF MODEL CALIBRATION AND VALIDATION

- 3.5.1. The model has been developed with the intention of assessing the impact of the Sizewell C development for the 2023 Early Years 2028 Peak Construction scenarios.
- 3.5.2. The 2019 base VISSIM model has been developed in accordance with the model extent shown in Figure 1. The base model has been calibrated and validated to observed traffic data covering a Monday AM (06:00-09:00) and Friday PM (15:00-18:00) period.
- 3.5.3. The VISUM strategic model provided base demand matrices for the VISSIM model through a process of cordoning and prior matrix adjustment including matrix estimation.
- 3.5.4. Detailed interrogation of the signal controller information, survey data and video footage enabled the development of traffic signal timings for each peak hour for all signalised junctions in the base model.
- 3.5.5. The turning flow calibration results for the AM and PM periods demonstrate that the model achieves a close match with observed traffic flows across the network.
- 3.5.6. Observed queue lengths are well replicated within the model with the only discrepancies being present on the northern approach to the A12 / Barrack Square junction, the A14 westbound off-slip and Foxhall Road.
- 3.5.7. Validation of the AM and PM peak periods against journey time data shows that journey times across the study area are well represented, particularly along the A12. This gives confidence that the discrepancies between a small number of modelled and observed queue lengths are largely due to the reliability of the observed queue data which is typically considered to be subjective in nature.
- 3.5.8. Observed journey times along the A12 northbound and southbound were replicated well by the model meeting DfT criteria (within +/- 15%) during all peak hours. Journey times for individual segments were also compared to confirm that delays were in the correct locations along the full route.
- 3.5.9. The level of calibration and validation achieved evidences that the model provides a suitable basis for the assessment of the Sizewell C construction traffic during both periods with the following caveats:
 - Modelled queues on the A14 westbound off-slip appear to be underestimated by the model, however journey times match well. Queues on the off-slip are slow moving and it is difficult to calibrate queues in these conditions as determining whether or not vehicles are queued becomes quite subjective. Vehicles at the front of the queue are slow moving whilst the rear of the queue is stationary and vice versa. The approximate definition used by the survey company is unlikely to be consistent with the precise definition that VISSIM uses. A higher degree of confidence should therefore be placed on the journey times and the off-slip is considered to be modelled in a representative way based on the journey times.
 - Queues on Foxhall Road and the A12-North approach to the A12/Barrack Square junction (J23) are slightly overestimated by the model.

4. FORECAST SCENARIO – 2023 EARLY YEARS

4.1. SCENARIO ASSUMPTIONS

- 4.1.1. 2023 represents the 'Early Years' stage of the construction of Sizewell C. During this year, an initial workforce of 1,500 workers is forecast to be deployed at the Sizewell C construction site. Of these workers, 600 will be residing in 400 caravans at land east of Eastlands Industrial Estate (LEEIE) and the remaining workers with journey origins as per the gravity model.
- 4.1.2. Whilst 2023 does not represent the full demand in terms of the number of workers, it does represent a scenario where the workforce has begun to arrive but most mitigation is yet to be provided. It is important to test 2023 to establish the level of impact that may occur whilst the mitigation schemes are being built and therefore not yet providing their intended relief.
- 4.1.3. In addition to the 1,500 main site construction workers, a further 730 workers are estimated to be deployed to construct the Additional Development (AD) sites as follows:
- 100 workers at Two Village bypass construction site;
 - 300 workers at Sizewell Link Road construction site;
 - 100 workers at northern park & ride construction site;
 - 100 workers at southern park & ride construction site;
 - 30 workers at A12/B1122 Yoxford roundabout construction site; and
 - 100 workers at the Freight Management Facility.
- 4.1.4. All these construction sites have their associated HGV deliveries per day, travelling along the A12 from the north and south on fixed routes, as follows:
- SZC main development site – 300 HGVs each way;
 - Two Village bypass construction – 60 HGVs each way;
 - Sizewell Link Road construction – 100 HGVs each way;
 - Northern park & ride construction – 21 HGVs each way;
 - Southern park & ride construction – 21 HGVs each way; and
 - A12/B1122 Yoxford roundabout construction – 10 HGVs each way.
- 4.1.5. The proposed hourly HGV delivery profile across the day, for all sites, is shown in Figure 20 below.

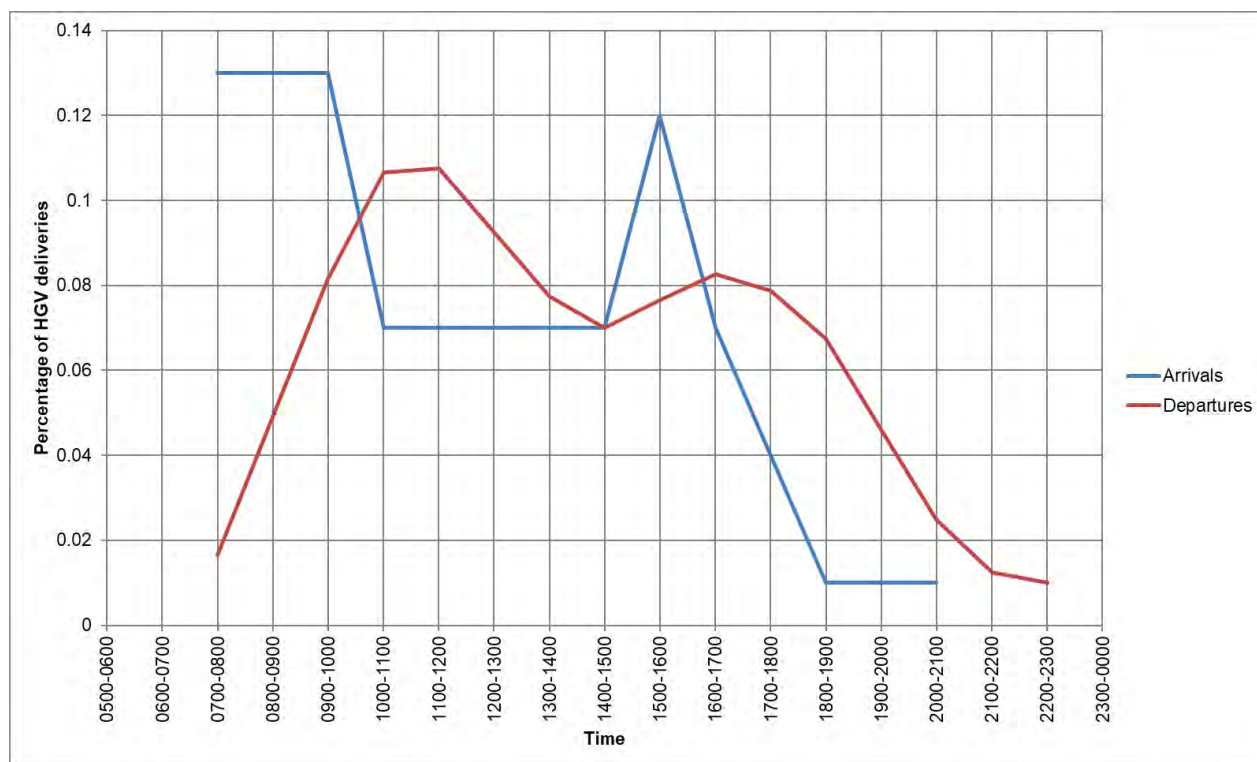


Figure 20 – Proposed HGV delivery profile

TRANSPORT NETWORK ASSUMPTIONS - 2023

4.1.6. The transport network for the 2023 model scenarios includes one committed network improvement that is assumed to have been implemented by 2023:

- The addition of the new Brightwell Lakes signalised access junction (J22b) on the A12 just north of Newbourne Road.

Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios.

4.1.7. The proposed Brightwell Lakes access junction (J22b) that has been modelled is shown in Appendix D. A speed limit of 50 mph has been assumed for traffic approaching J22b on the A12.

TRAFFIC DEMAND ASSUMPTIONS - 2023

4.1.8. Growth in demand from 2019 to 2023 has been extracted from the strategic VISUM model that is described in Section 1.2. To extract growth, a subnetwork representing the VISSIM study area was created for each base and forecast VISUM model. Cordoning the VISUM model in this way allowed a set of origin-destination demand matrices to be extracted for each traffic layer. Figure 21 shows the extent of the VISUM subnetwork and the nineteen VISUM zones it contains.

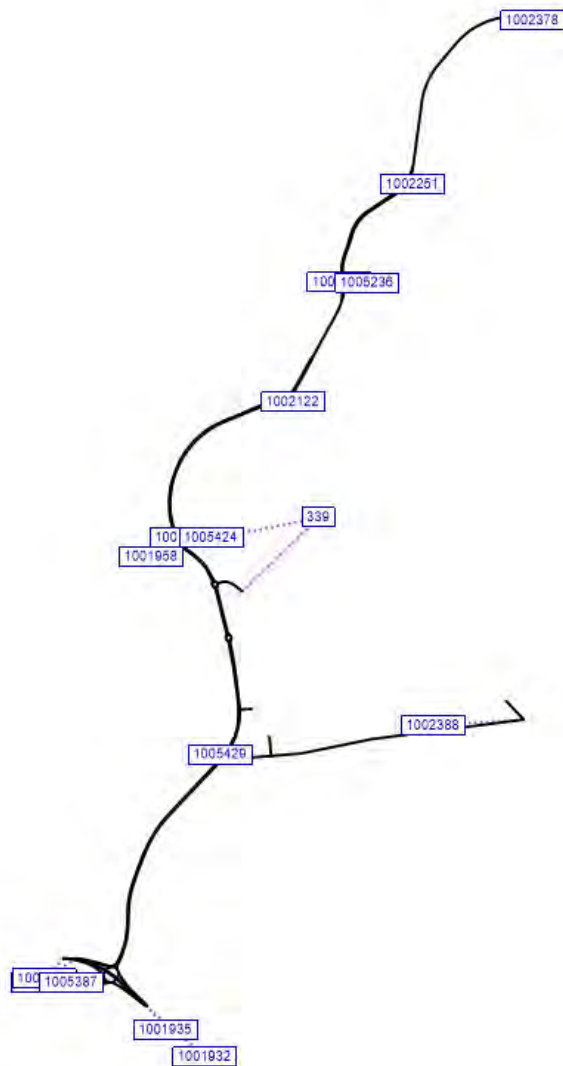


Figure 21 – VISUM subnetwork covering the VISSIM study area

VISSIM Matrices

- 4.1.9. The VISUM subnetworks have been used to isolate the growth being predicted by VISUM by subtracting the base VISUM flows from the forecast VISUM flows. The resulting growth flows are intended to be included in VISSIM alongside the base matrices to provide an estimate of the full forecast demand. As the VISUM subnetworks contain nineteen zones and the VISSIM model contains twenty-three zones (due to its enhanced level of detail) the growth flows must be disaggregated to a level suitable for VISSIM.
- 4.1.10. Figure 22 provides a summary of the process used to convert the VISUM growth into a set of forecast VISSIM matrices and further details are provided below.

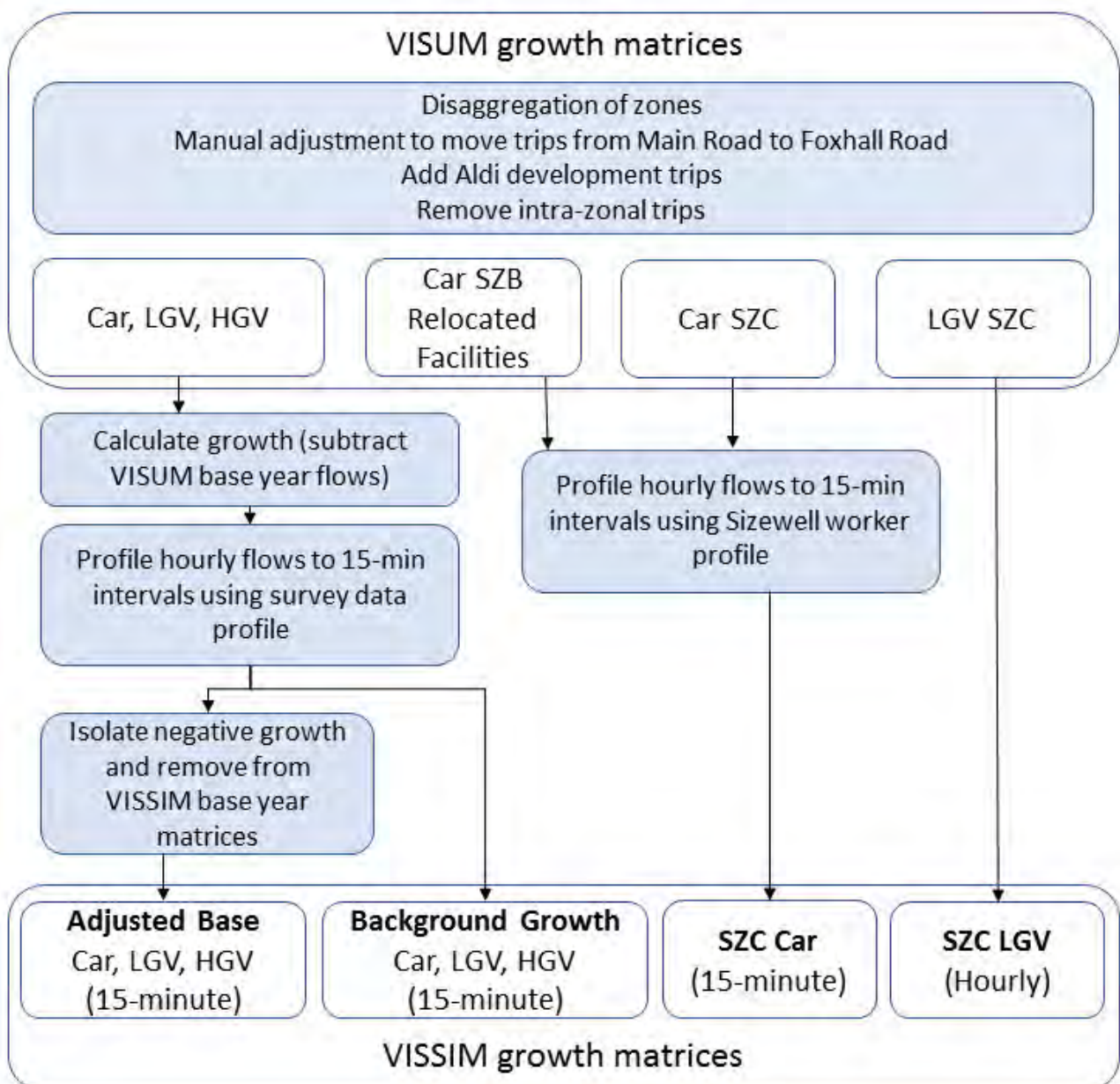


Figure 22 – Growth matrix development process

4.1.11. The following adjustments have been made to the VISUM subnetwork matrices to disaggregate and adjust the growth demand so that it is appropriate for use in VISSIM:

- Zone 339 (Eagle Way / Anson Rd / Barrack Sq / Main Road) – As this is a large VISUM zone, disaggregation of the predicted growth is necessary. No new trip generation is anticipated on Eagle Way which is fully built out so none of the growth from zone 339 will be allocated here in VISSIM. The growth from zone 339 was split across Anson Rd and Main Rd (East) based on the relative proportions in the survey data (Origins: 77% Anson Road, 23% Main Road East. Destinations: 83% Anson Road, 17% Main Road East).
- Zone 1101 (Brightwell Lakes) – distribution of the Brightwell Lakes growth across the three site access points (Newbourne Rd, New A12 access and Gloster Rd) is based on assumptions supplied by Suffolk County Council. (2023: 0% Gloster Road, 30% New

Access, 70% Newbourne Road and 2028: 0% Gloster Road, 65% New Access, 35% Newbourne Road.)

- It has been noted that delays are present on the A12 southbound at the Brightwell Lakes access junction (J22b) within the forecast VISUM models. This is thought to result in too many trips from the north using Main Road to access Ipswich instead of Foxhall Road. A manual adjustment has therefore been applied to redistribute trips from the north away from Main Road and onto Foxhall Road in line with the relative proportions observed in the base VISUM model. This proportion was estimated based on base model select link analysis of the A12 southbound just north of the A1214 for each hour.
- Martlesham Aldi opened on Gloster Road in Spring 2019 shortly after the traffic surveys were conducted in this area. Demand associated with the Aldi store was therefore not captured in the traffic surveys. It also was not explicitly included within VISUM so it is necessary to manually account for the Aldi demand. The trip generation for Aldi was estimated based on the TRICs trip rates and gross floor area presented within the Martlesham Aldi Transport Assessment (Transport Assessment, Proposed Aldi Store, Gloster Road, Martlesham Heath, December 2016, Exigo Project Solutions). The trip generation added on top of the VISSIM demand excluded the 30% pass-by trips which are assumed to be represented by trips already using Gloster Road. The 20% diverted trips were included by diverting existing A12 trips to Gloster Road and back onto the A12. The 50% primary (new) trips were added as a net increase in demand. Aldi trip distribution at the immediate A12 / Barrack Square junction was also based on the Transport Assessment whilst the wider distribution was based on observed turning proportions at subsequent junctions in line with general traffic in the area.
- A number of intrazonal trips were present within the VISUM subnetwork matrices, particularly within zones 339 and 341. Reference to the wider VISUM model confirmed that these trips take place within these zones or using network outside of the VISSIM network. The intrazonal trips have therefore been excluded from the growth demand to avoid the inclusion of u-turners.
- Adding VISUM growth (2015 to 2023 or 2015 to 2028) on top of the 2019 VISSIM base scenario will result in double counting of growth from 2015 to 2019. For the purposes of isolating growth, the subnetwork base VISUM flows that are subtracted to isolate growth were adjusted from 2015 to 2019. This will result in the growth being extracted from VISUM representing 2019 onwards (forecast demand minus 2019 estimate). To produce a 2019 estimate, reference has been made to the Department for Transport's Road Traffic Forecast (RTF) which suggests that from 2015 to 2023, 49% of growth will have occurred by 2019. 49% of the VISUM growth from 2015 to 2023 was therefore added to the 2015 VISUM demand to produce a 2019 estimate. This 2019 VISUM estimate will only be used for the purposes of subtracting a 2019 demand from the forecast demands to isolate the growth from 2019 onwards.

4.1.12. As the VISUM model does not separate base and background growth traffic in the forecast scenarios, the estimated 2019 VISUM flows have been subtracted from the forecast year flows to calculate the growth from 2019 to 2023. This resulted in a series of hourly origin-destination growth matrices which were converted into 15-minute matrices using the survey data origin profiles. The flows used in the Early Years VISSIM scenario are the same as the Reference Case flows with the exception of the SZC trips which are added on top i.e. background growth reassignment as a result

of Sizewell C demand is not accounted for in VISSIM. Demands in VISSIM therefore represent a worst case.

- 4.1.13. This method of calculating growth flows resulted in a small number of origin-destination (O-D) pairs where negative growth was forecast, i.e. the base flows were slightly higher than the forecast flows. These negative values have been subtracted from the relevant O-D pairs in the base year matrices, providing a set of adjusted base year flows for the forecast scenario. The adjusted base matrices from the reference case are also used in the Early Years scenario so that the only change in demand in the Early Years scenario are the Sizewell C trips.
- 4.1.14. The hourly Sizewell C worker flows have been converted to 15-minute flows using the shift pattern profile developed from entry and exit data gathered at Hinkley Power Station. Full details of this process are included in *TN01 - SZC Worker Profiling* which is included in **Appendix F**.
- 4.1.15. The Sizewell C LGV flows are associated with other service vehicles to and from the site. These are not expected to be subject to the Sizewell shift patterns so have been kept separate in the VISSIM model and are assigned in flat hourly profiles.
- 4.1.16. The VISUM growth provides two new layers of traffic demand which have been included within the forecast year VISSIM scenarios; 'Background growth traffic' and 'Sizewell C traffic'. The number of vehicle types in the model therefore increases from four in the base year to eleven in the 2023 and 2028 scenarios, as listed below:

Layer	Car	LGV	HGV	Bus
Base	Car (100)	LGV (700)	HGV (200)	Bus (300)
Background growth	Car Growth (101)	LGV Growth (701)	HGV Growth (201)	
Sizewell C	Car SZC (102)	LGV SZC (702)	HGV SZC (202)	Bus SZC (302)

4.1.17. Table 14 and

4.1.18.

4.1.19. Table 15 provide a summary of the total demand for the model by hourly time period for the Reference Case and Early Years scenarios respectively. **Note: the total demand tables below have been corrected to including rounding.**

Table 14 – 2023 Reference Case Total Demand (in vehicles per hour)

	6–7 am	7–8 am	8–9 am	3-4 pm	4-5 pm	5-6 pm
Adjusted Base	4464	8906	11113	10304	11093	10652
Background Growth	240	423	472	651	594	591
Sizewell C	-	-	-	-	-	-
Total	4704	9330	11585	10955	11686	11243
% Background Growth	5%	5%	4%	6%	5%	5%

Table 15 – 2023 Early Years Total Demand (in vehicles per hour)

	6–7 am	7–8 am	8–9 am	3-4 pm	4-5 pm	5-6 pm
Adjusted Base 2023	4464	8906	11113	10304	11093	10652
Background Growth	240	423	472	651	594	591
Sizewell C (Car+LGV)	111	265	55	27	42	198
Sizewell C (Bus)	-	-	-	-	-	-
Sizewell C (HGV)	0	30	37	40	31	24
Total	4816	9625	11677	11023	11759	11465
% Background Growth	5%	4%	4%	6%	5%	5%
% Sizewell C Growth	2%	3%	1%	1%	1%	2%

Sizewell C Bus services and HGV deliveries

- 4.1.20. There are no bus services associated with Sizewell C in 2023 that run through the A12 study area. No additional bus services are therefore included in the 2023 Early Years scenario.
- 4.1.21. In addition to the private worker traffic input as matrices in the model, there are HGVs delivering construction materials and plant movements to and from Sizewell C and the AD sites that are included in the A12 study area.
- 4.1.22. Table 16 gives a summary of the 2023 SZC HGV volumes that are included in the VISSIM model as well as the deliveries to the associated development sites for each hour. These HGVs were modelled as vehicle type “202: HGV SZC” and are assigned to Public Transport Lines with fixed routes and equally spaced departure times.

Table 16 – 2023 Early Years HGV deliveries

Delivery Route	Route in model	6-7 am	7-8 am	8-9 am	3-4 pm	4-5 pm	5-6 pm
Felixstowe - SZC	A14 (E) – A12 (N)	0	5	5	4	3	1
	A12 (N) – A14 (E)	0	1	2	3	3	3

Ipswich - SZC	A14 (W) – A12 (N)	0	3	3	3	2	1
	A12 (N) – A14 (W)	0	0	1	2	2	2
London/South of England - SZC	A14 (W) – A12 (N)	0	19	19	17	10	6
	A12 (N) – A14 (W)	0	2	7	11	12	11
Total		0	30	37	40	31	24

4.2. SCENARIO PERFORMANCE COMPARISON

4.2.1. This section presents the model results for the 2023 scenarios and also provides a comparison with the base scenario. The base scenario is labelled as “2019”, the 2023 Reference Case scenario is labelled as “2023 RC” and the 2023 Early Years scenario is labelled as “2023 EY” within the results analysis.

NETWORK-WIDE PERFORMANCE

4.2.2. Table 17 provides a number of network-wide statistics that were extracted from the three different VISSIM scenarios. **Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios so revised results are presented.**

Table 17 – Network Performance Model Results

Overall Network Statistics	AM (6-9am)			PM (3-6pm)		
	2019	2023 RC	2023 EY	2019	2023 RC	2023 EY
Total Time Taken (h)	2,390	2,524	2,637	3,154	3,387	3,441
Total Distance (km)	163,638	168,087	173,647	212,030	218,644	220,871
Total Vehicles	24,866	27,293	27,831	33,237	36,767	37,028
Total Delay (h)	403	476	522	563	698	725
Avg. Speed (mph)	43	43	42	42	40	40
Avg. Delay / Vehicle (s)	58	63	68	61	68	70

4.2.3. During the AM and PM peaks, the network-wide statistics show that time, distance and delay have a linear relationship with the number of vehicles in the network. The extra vehicles generated by Sizewell C do not cause a significant increase in the time, distance or delay per vehicle compared to the Reference Case scenario and the overall impact is therefore minimal in 2023.

4.2.4. Reviewing the relative statistics, it is possible to observe that there is little variation between the different scenarios. The VISSIM model predicts that the average driver will experience a slight increase in average delay of +5 seconds (+7.1%) in 2023 Early Years AM peak compared to the Reference Case which would not be considered significant. During the PM peak, there is very little difference in the Early Years and Reference Case delay values as 2s change is considered immaterial. The average speed in the network remains almost the same across all the scenarios which further demonstrates that there is very little effect observed following the inclusion of SZC traffic movements in the Early Years.

- 4.2.5. Overall the network-wide statistics show that the impact felt by the average driver as a result of the Sizewell C Early Years construction traffic is likely to be negligible in both the AM and PM periods. A full set of VISSIM results for 2023 are provided in Appendix C.

JOURNEY TIME RESULTS

- 4.2.6. Figure 23 and Figure 24 show distance-time plots for journey time routes along the A12 northbound (NB) and southbound (SB) respectively from 08:00-09:00. The equivalent graphs for 17:00-18:00 can also be seen in Figure 25 and

Figure 26. A full set of VISSIM results for 2023 are provided in Appendix C. The four graphs demonstrate that journey times along the A12 show very little change in either direction or time period between the 2023 RC and 2023 EY scenarios. **Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios so revised results are presented in figures 23-38 and in Appendix C.**

Figure 23 – 2023 AM - JT comparison along A12 northbound

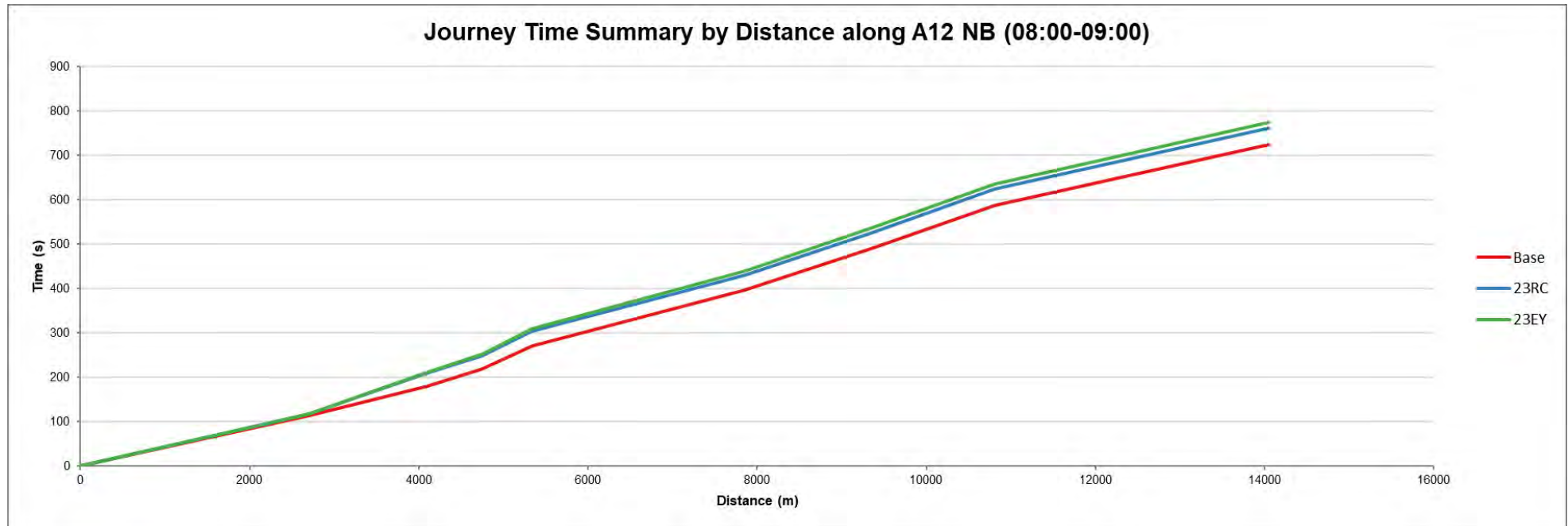


Figure 24 - 2023 AM - JT comparison along A12 southbound

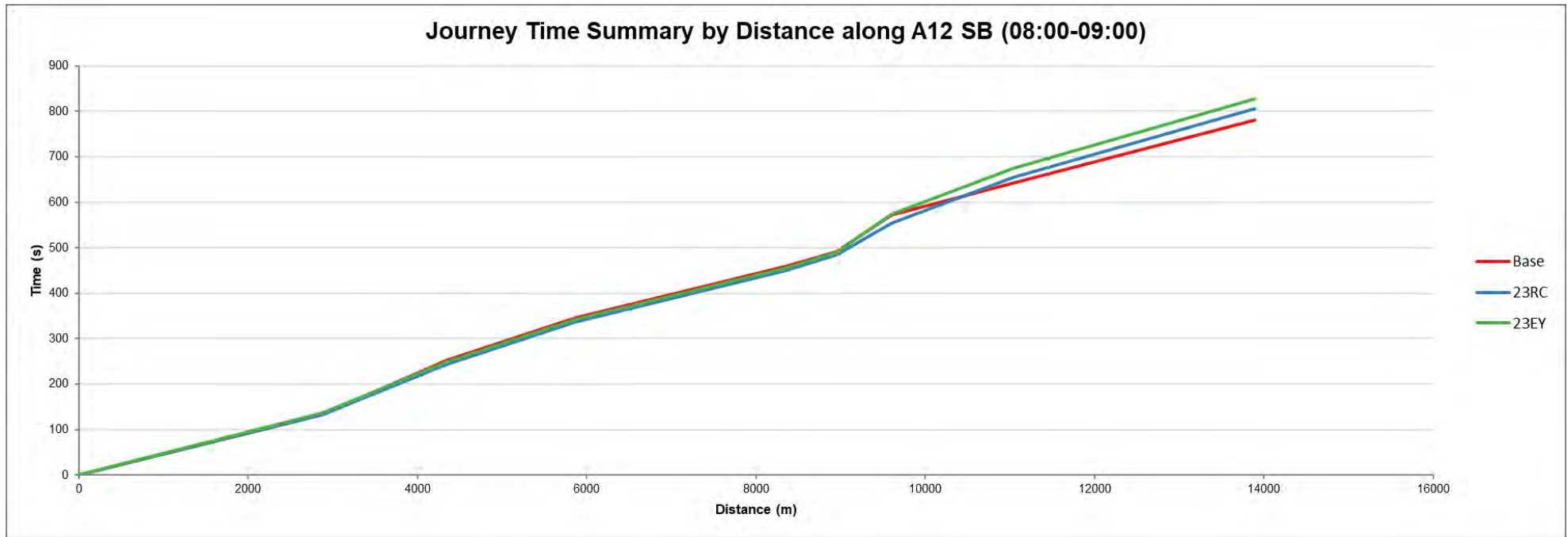


Figure 25 - 2023 PM JT comparison along A12 northbound

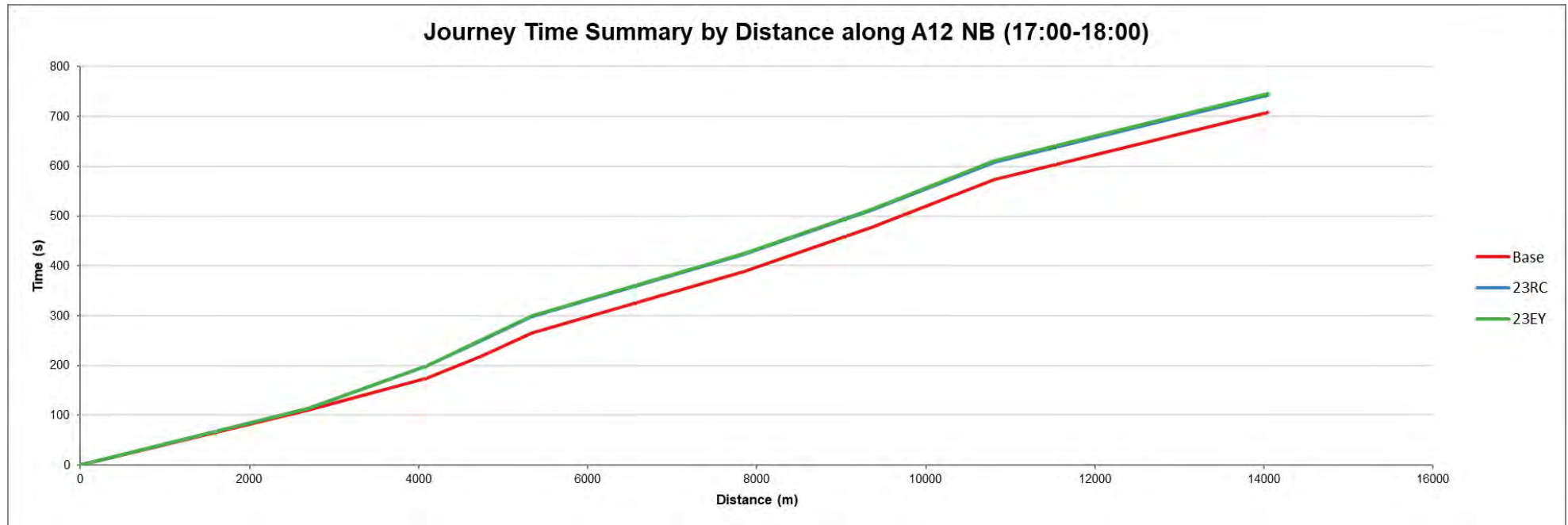
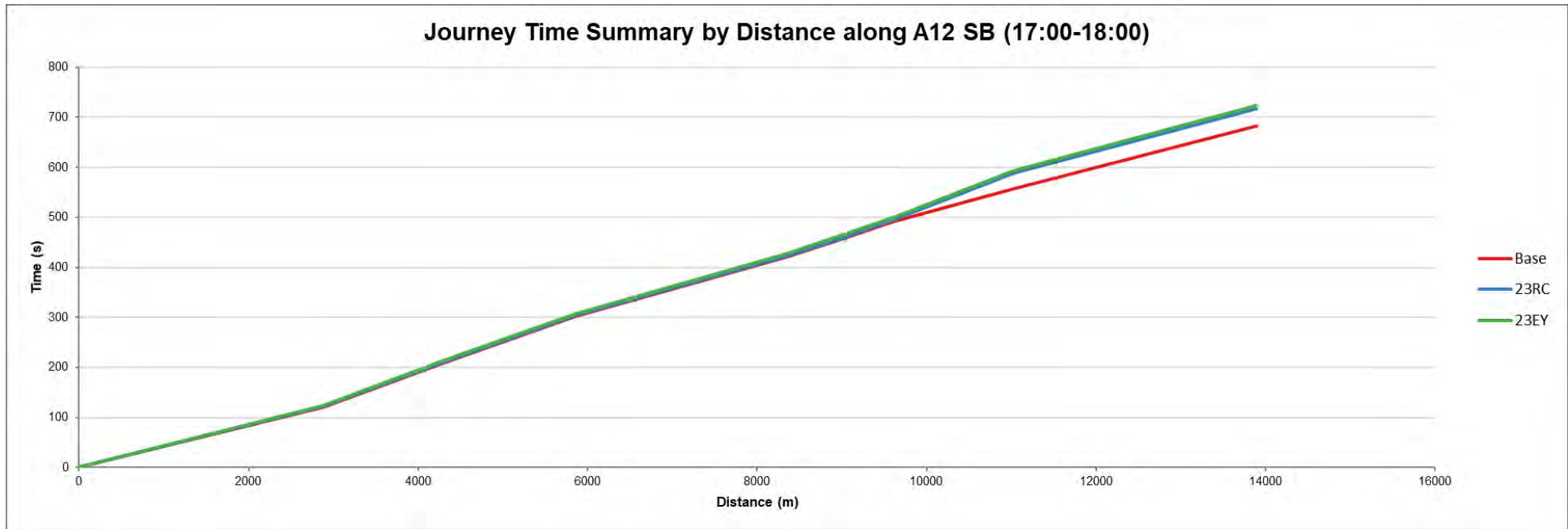


Figure 26 - 2023 PM JT comparison along A12 southbound



4.2.7. Further analysis has been conducted for the other (non-A12) routes which also show very little difference between the two 2023 scenarios with the exception of Foxhall Road (EB) in the morning and Gloster Road (SB) in the evening. The VISSIM model predicts that drivers travelling along Foxhall Road (EB) will experience a 23 second increase in journey time from 08:00-09:00 in the 2023 Early Years scenario. Similarly, in PM peak, the results show a 50 second increase in journey times for drivers on Gloster Road (SB) in the Early Years scenario. This comparison can be seen in **Error! Not a valid bookmark self-reference.** and Figure 28.

Figure 27 - 2023 AM JT comparison for side arms

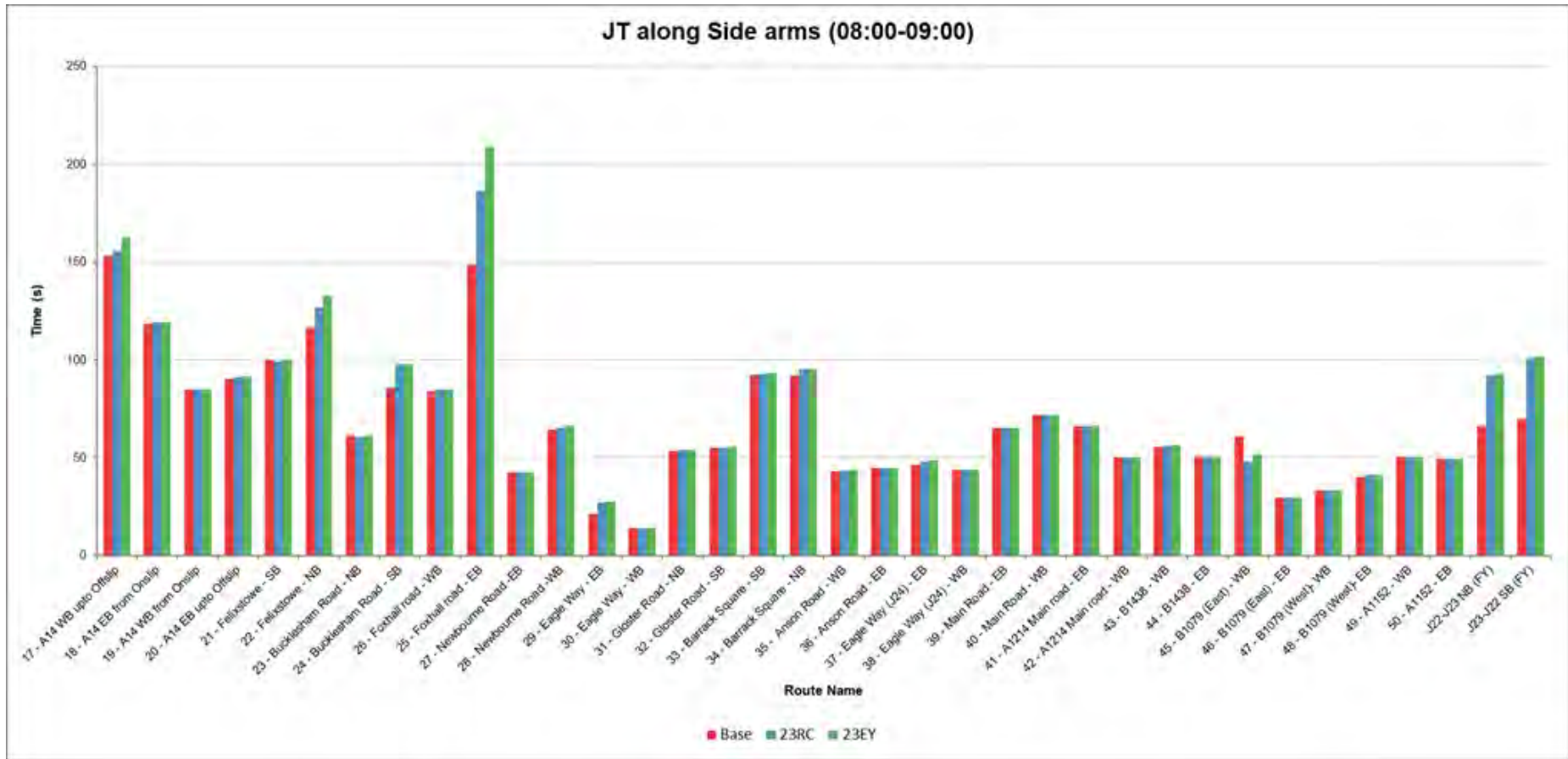
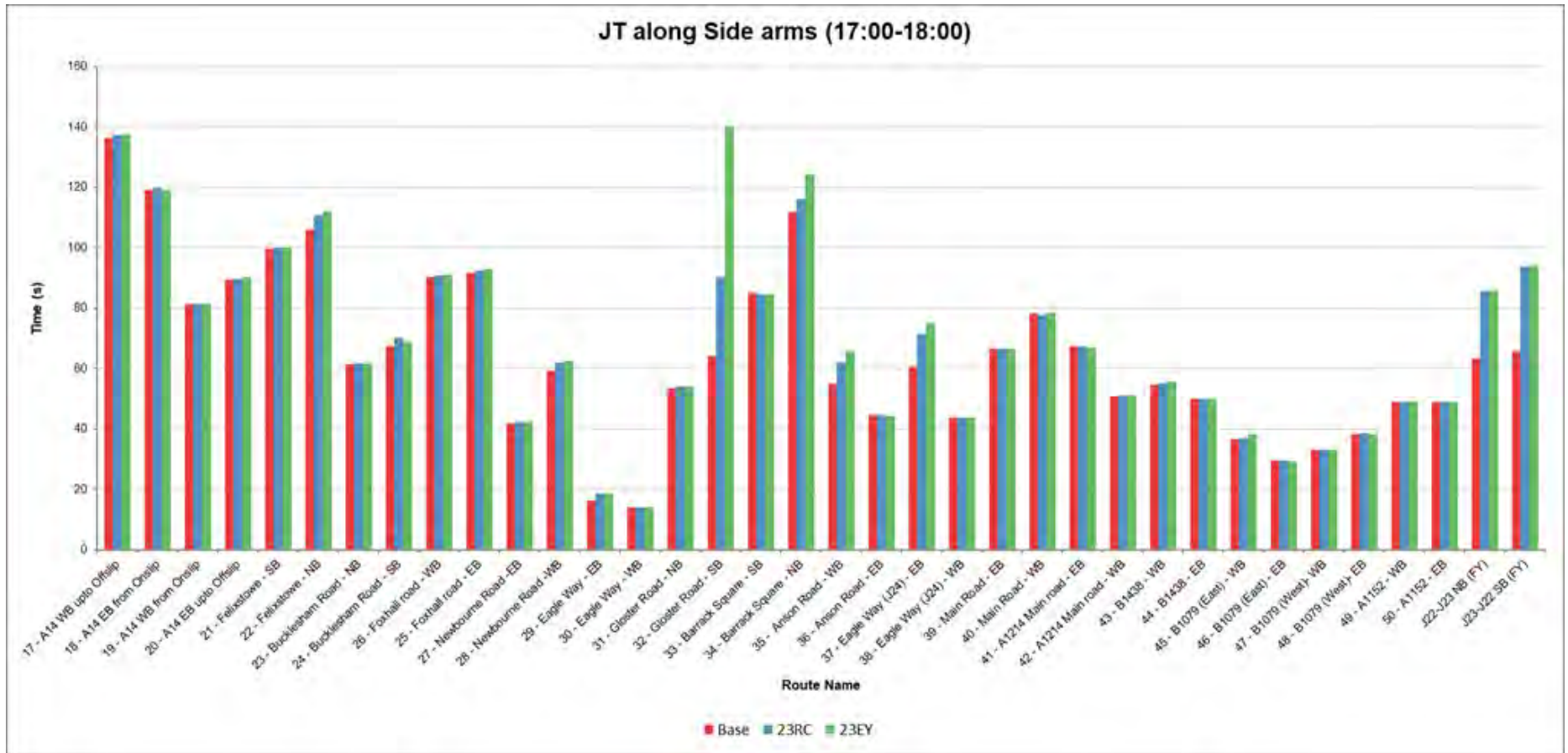




Figure 28 - 2023 PM JT comparison for side arms



QUEUE LENGTH RESULTS

- 4.2.8. Table 18 compares queue results from VISSIM between the 2023 Reference Case (RC) and 2023 Early Years (EY) scenarios for both peak hours. The base and 2023 Reference Case queue lengths are provided in absolute terms in PCUs whilst the increase in queue lengths is provided (relative to the Reference Case) for the 2023 Early Years scenario. The queues observed at the majority of queue counters were found to be similar between RC and EY in 2023. On the minor arms joining the A12, higher queues were observed on Foxhall Road from 08:00-09:00 and Barrack Square from 17:00-18:00 in the 2023 Early Years compared to 2023 Reference Case. The queue results show little difference between the 2023 Early Years and 2023 Reference Case scenarios. A full set of VISSIM results for 2023 are provided in Appendix C.
- 4.2.9. **Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios so revised results are presented.**

Table 18 - 2023 Queue Comparison Results

Queues (in PCUs)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Base (absolute)	2023 RC (absolute)	2023 EY (increase)	Base (absolute)	2023 RC (absolute)	2023 EY (increase)
J28-A12(N)	13	12	1	6	6	1
J28-A12(S)	8	8	2	6	6	0
J28-A1152(E)	8	8	0	5	5	1
J27-A12(N)	26	23	2	7	7	1
J27-B1079(W)	5	6	0	3	3	0
J27-A12(S)	12	12	2	7	7	0
J27-B1079(E)	10	8	1	3	4	0
J26-A12(N)	6	6	0	3	4	0
J26-A12(S)-Right turn	2	2	0	1	1	0
J26-A12(S)	12	13	3	11	13	1
J26-B1438(E)	4	4	0	4	4	0
J25-A12(N)	10	10	0	12	11	2
J25-Martlesham P&R (NW)- Left turn	0	0	0	1	1	0
J25-Martlesham P&R (NW)	1	1	0	1	1	0
Main Rd(W)	15	15	0	10	10	0
J25-A12(S)	14	17	2	13	14	0
J25-Main Rd(E)	2	2	0	3	3	0

Queues (in PCUs)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Base (absolute)	2023 RC (absolute)	2023 EY (increase)	Base (absolute)	2023 RC (absolute)	2023 EY (increase)
J24-A12(N)	6	8	0	7	7	1
J24-Eagle Way(W)	2	3	0	4	4	0
J24-A12(S)	8	9	1	13	19	1
J24-Anson Rd(E)	4	4	0	18	23	3
J23-A12(N)	24	22	5	6	8	0
J23-Eagle Way(W)	3	4	0	2	2	0
J23-A12(S)	5	13	0	5	12	0
J23-Barrack Square(E)	4	7	1	12	16	6
J22-A12(N)	9	17	0	7	17	0
J22-A12(S)	15	18	1	14	16	-1
J22-Newbourne Rd(E)	7	9	0	4	6	0
J22-Foxhall Rd(W)	22	32	5	5	5	0
J21-A12(N)	30	42	2	15	17	2
J21-A14(W)	1	1	0	1	1	0
J21-A1156(S)	10	14	1	5	7	1
J21-A14(E)	12	12	2	7	7	0
J21-Bucklesham Rd(NE)	4	4	0	1	1	0

5. FORECAST SCENARIO – 2028 PEAK CONSTRUCTION

5.1. SCENARIO ASSUMPTIONS

- 5.1.1. 2028 represents the peak construction year of Sizewell C. A total of 7,900 workers would be deployed at the Sizewell C construction site, with a further 600 associated development workers. From these, 2,400 workers will reside in the on-site campus, 600 will stay in the 400 caravans on LEEIE and the rest travel from other locations as predicted by the gravity model.
- 5.1.2. By 2028 the northern and southern park and ride sites will be fully operational and will have a high-frequency service connecting them to the Sizewell C construction site. In addition, direct bus services will be provided from Lowestoft and Ipswich via the A12. The two villages bypass and Sizewell Link Road are also expected to be operational as well as the Freight Management Facility.
- 5.1.3. As detailed in Table 2, four different Sizewell C HGV volumes have been tested in the peak construction scenario. Two of these HGV volumes relate to the Integrated Freight Strategy (as described in the Transport Assessment) which anticipates 650 two-way HGV movements per day typically but it could be up to 1,000 two-way HGV movements on the busiest day.
- 5.1.4. Since the submission of the DCO Application, SZC Co. has continued consultation with stakeholders and propose a number of changes to the Freight Management Strategy. The principal changes to the strategy are:
- increase in the frequency of freight train movements to facilitate bulk material imports by rail;
 - options for a new temporary beach landing facility (BLF) to import bulk material by sea; and
 - enhancements to the permanent BLF to increase the ability of the BLF to receive AILs.
- 5.1.5. The proposed changes to the Freight Management Strategy would result in reduced HGV volumes to 500 two-way HGV movements per typical day and up to 700 two-way HGV movements on the busiest day.
- 5.1.6. The proposed HGV delivery profile across the day is the same as that assumed in 2023, which is shown in Figure 20. All Sizewell C HGVs and buses are assumed to route via the A12, with those from the south using the proposed Sizewell Link Road to access the Sizewell C site. Those from the north would use the B1122 and join the Sizewell Link Road west of Middleton Moor.

TRANSPORT NETWORK ASSUMPTIONS - 2028

- 5.1.7. The 2028 peak construction scenario assumes four main changes in terms of the network within the VISSIM model. As in the 2023 scenario, the new Brightwell Lakes signalised access junction (J22b) is assumed to be open on the A12 just north of Newbourne Road.

In addition, by 2028 three further improvements associated with the Brightwell Lakes development are also assumed to have been implemented:

- A12 / A14 Seven Hills Interchange (J21)
 - A12 / Foxhall Road roundabout (J22)
 - A12 / Barrack Square roundabout (J23)
- 5.1.8. These improvements are shown in Appendix D. It was agreed with Suffolk County Council during development of the LinSig model for J21 that the following changes to the proposed layout should be assumed:

- A single lane on the A14 westbound on-slip instead of the two lanes on the drawing;
- Two lanes on the circulatory at A1156 approach rather than three lanes; and
- Retention of the existing approach arm lane allocations instead of the lane allocations marked on the drawings for the A14 westbound off-slip, A12 North and A1156 Felixstowe Road
- One lane on the circulatory at A14 westbound going forward to A14 westbound on-slip rather than two lane
- One lane on the circulatory at A14 eastbound going forward to A12 north rather than two lane

5.1.9. The following changes were also included in the VISSIM model which were not marked on the drawing but were felt to be necessary to rationalise the lane usage.

- Traffic from A12 North turning right onto Foxhall Road uses the inner lane rather than two lanes (Foxhall Road has a 1-lane exit).
- Inappropriate lane markings were ignored in the A12 / Barrack Square (J23) improvement drawing.

TRAFFIC DEMAND ASSUMPTIONS - 2028

VISSIM matrices

5.1.10. As in the 2023 forecast scenario, the base, growth and Sizewell C private vehicle traffic was included in the model as dynamically assigned matrices calculated from the VISUM model. The same method of extracting and calculating the matrices has been used for 2028 forecast years.

5.1.11. Table 19 and Table 20 show the breakdown of total input matrix flows for the whole network by hourly time period for the Reference Case and Early Years scenarios respectively. **Note: the total demand tables below have been corrected to including rounding.**

Table 19 – 2028 Reference Case Total Demand (in vehicles per hour)

	6–7 am	7–8 am	8–9 am	3-4 pm	4-5 pm	5-6 pm
Adjusted Base 2028	4347	8799	10986	10255	11092	10598
Background Growth	517	898	1142	1359	1156	1264
Sizewell C	-	-	-	-	-	-
Total	4864	9697	12128	11613	12248	11861
% Background Growth	11%	9%	9%	12%	9%	11%

5.1.12. In 2028, four Sizewell C HGVs volumes have been tested as followed:

- Integrated Freight Management Strategy busiest day with 1000 HGVs/day. (Labelled as Scenario 28 PC)
- Integrated Freight Management Strategy typical day with 650 HGVs/day. (Labelled as Scenario 28 PC_650)

- Adjusted Integrated Freight Management Strategy busiest day with 700 HGVs/day. (Labelled as Scenario 28 PC_700)
- Adjusted Integrated Freight Management Strategy busiest day with 500 HGVs/day. (Labelled as Scenario 28 PC_500).

Table 20 – 2028 Traffic Peak Construction Total Demand (in vehicles per hour)

	6–7 am	7–8 am	8–9 am	3-4 pm	4-5 pm	5-6 pm
Adjusted Base 2028	4347	8799	10986	10255	11092	10598
Background Growth	517	898	1142	1359	1156	1264
Sizewell C (Car + LGV)	202	147	70	140	107	104
SZC Bus	6	6	5	6	6	6
SZC HGV (1000)	78	112	103	92	65	51
SZC HGV (650)	50	73	67	60	42	33
SZC HGV (700)	54	79	72	65	45	36
SZC HGV (500)	38	56	52	46	32	25
Total (1000 HGVs)	5149	9963	12306	11852	12426	12022
Total (650 HGVs)	5122	9923	12270	11820	12404	12005
Total (700 HGVs)	5126	9929	12275	11824	12407	12007
Total (500 HGVs)	5110	9906	12255	11806	12394	11997
% Background Growth (1000 SZC HGVs)	10%	9%	9%	11%	9%	11%
% Background Growth (500 SZC HGVs)	10%	9%	9%	12%	9%	11%
% Sizewell C Growth (1000 SZC HGVs)	6%	3%	1%	2%	1%	1%
% Sizewell C Growth (500 SZC HGVs)	5%	2%	1%	2%	1%	1%

Sizewell C Bus services and HGV Deliveries

5.1.13. In addition to the Sizewell C car and LGV demands that have been input as matrices in the model, there are other vehicle movements associated with Sizewell C that pass through the A12 study area as follows.

Buses shuttling workers between:

- Ipswich and Sizewell C construction site;
- Woodbridge and Sizewell C construction site.

HGVs delivering construction materials and plant movements to and from Sizewell C construction site.

- 5.1.14. Table 21 shows the Sizewell C bus services included in the 2028 Peak Construction scenario. The bus services were modelled in VISSIM as “Public Transport Lines” with equal headways.

Table 21 – 2028 Sizewell C Bus services

Service	6-7am	7-8am	8-9am	3-4pm	4-5pm	5-6pm
Ipswich – SZC (Main Road (W) - A12 (N))	2	2	2	2	2	2
SZC – Ipswich (A12 (N) – Main Road (W))	2	2	1	2	2	2
SZC – Woodbridge – SZC (U-turn at J25 A12/A1214 roundabout)	2	2	2	2	2	2
Total	6	6	5	6	6	6

- 5.1.15. Table 22 shows the SZC HGV two-way movements for each modelled hour on the busiest day (1,000 two-way HGV movements per day), in the 2028 peak construction scenario. This table only considers the HGV movements that pass through the A12 VISSIM area. These HGVs were modelled as vehicle type “202: HGV SZC” and assigned to “Public Transport Lines” with fixed routes and equally spaced departure times.

Table 22 – 2028 Sizewell C HGV movements (1000 two-way HGVs/day) during peak

Delivery Route	Route in model	6-7am	7-8am	8-9am	3-4pm	4-5pm	5-6pm
Felixstowe – SZC	A14 (E) – FMF	8	11	6	3	0	2
	A12 (N) – A14 (E)	0	0	5	6	5	6
Ipswich – SZC	A14 (W) – FMF	8	6	3	2	2	0
	A12 (N) – A14 (W)	0	2	0	3	5	5
London/South England – SZC	A14 (W) – FMF	40	38	25	14	3	3
	A12 (N) – A14 (W)	0	2	9	22	26	23
Freight Management Facility - SZC	FMF – A12(N)	22	54	55	43	25	12
Total		78	112	103	92	65	51

- 5.1.16. Three other HGV volumes have been tested (700, 650 and 500 HGVs/day). For these scenarios a proportionate reduction in HGVs has been applied relative to the 1,000 two-way HGV movements per day scenario. All SZC HGVs are modelled with equally spaced departure times.

5.2. SCENARIO PERFORMANCE COMPARISON

5.2.1. This section presents the performance comparison between the Reference Case scenario for 2028 (“2028 RC”), the four 2028 Peak Construction scenarios (“2028 PC”) with Sizewell C construction traffic and four different HGV volumes.

NETWORK-WIDE PERFORMANCE

5.2.2. Table 23 to Table 26 present network-wide statistics for the AM (06:00-09:00) and PM (15:00-18:00) models respectively.

Table 23 – AM Network Performance Results – Freight Management Strategy

Year 2028	AM (06:00-09:00)		
	Reference Case	FMS ¹ Busiest Day (1000 HGVs)	FMS Typical Day (650 HGVs)
Total Time Taken (h)	2,693	2,877	2,845
Total Distance (km)	175,572	183,273	182,468
Total Vehicles	26,625	27,359	27,253
Total Delay (h)	559	647	627
Avg. Speed (mph)	41	40	40
Avg. Delay / Vehicle (s)	76	85	83

¹ FMS –Freight Management Strategy

Table 24 – AM Network Performance Results – Adjusted Integrated Freight Strategy

	AM (06:00-09:00)		
Year 2028	Reference Case	Updated FMS Busiest Day (700 HGVs)	Updated FMS Typical Day (500 HGVs)
Total Time Taken (h)	2,693	2,847	2,827
Total Distance (km)	175,572	182,676	182,069
Total Vehicles	26,625	27,272	27,206
Total Delay (h)	559	626	615
Avg. Speed (mph)	41	40	40
Avg. Delay / Vehicle (s)	76	83	81

Table 25 – PM Network Performance Results – Integrated Freight Strategy

	PM (15:00-18:00)		
Year 2028	Reference Case	FMS Busiest Day (1000 HGVs)	FMS Typical Day (650 HGVs)
Total Time Taken (h)	3,747	3,980	3,937
Total Distance (km)	231,152	237,519	236,695
Total Vehicles	36,460	36,995	36,937
Total Delay (h)	908	1,060	1,029
Avg. Speed (mph)	38	37	37
Avg. Delay / Vehicle (s)	90	103	100

Table 26 – PM Network Performance Results – Modified Integrated Freight Strategy

Year 2028	PM (15:00-18:00)		
	Reference Case	Updated FMS Busiest Day (700 HGVs)	Updated FMS Typical Day (500 HGVs)
Total Time Taken (h)	3,747	3,951	3,924
Total Distance (km)	231,152	236,824	236,295
Total Vehicles	36,460	36,953	36,904
Total Delay (h)	908	1,041	1,022
Avg. Speed (mph)	38	37	37
Avg. Delay / Vehicle (s)	90	101	100

- 5.2.3. During the AM and PM periods, the network-wide statistics show that time, distance and delay have a linear relationship with the number of vehicles in the network. This means that the addition of the Sizewell C vehicles results in little change to the distance and delay per vehicle when compared to the Reference Case and thus the Sizewell C impact is small.
- 5.2.4. Reviewing the relative statistics, it is possible to observe that the variation between the different scenarios is low. For example, the VISSIM model predicts that the average driver will experience a delay increase of 8 seconds (+10.5%) in the AM period of the 2028 peak construction busiest day scenario (1000 HGVs) compared to the 2028 Reference Case. During the PM peak, the average delay per vehicle is increased by 13 seconds (+14.4%) for the worst case 2028 peak construction busiest day scenario. The average speed in the network during the AM and PM remains almost the same across all scenarios.
- 5.2.5. The increased level of average delay is very low and hence does not have a significant impact in the network. However, the variation in number of HGVs per day also further reduces the average delay during both peak periods from the busiest day scenario, i.e. 1,000 HGVs per day. The average speed throughout the network only decreases by 1 mph in the AM and PM period in the Peak Construction scenario (regardless of the HGV volume) compared to the 2028 Reference Case.
- 5.2.6. A full set of VISSIM results for 2028 are provided in Appendix D.

JOURNEY TIME RESULTS

- 5.2.7. Figure 29 and Figure 30 show distance-time plots for journey times along the A12 northbound (NB) and southbound (SB) respectively from 08:00-09:00. The equivalent graphs for 17:00-18:00 can also be seen in Figure 31 and Figure 32.
- 5.2.8. The four graphs below demonstrate that journey times along the A12 show very little change in either direction or time period between the 2028 RC and 2028 PC scenarios.

Figure 29 – 2028 AM JT comparison along A12 NB



Figure 30 - 2028 AM JT comparison along A12 SB

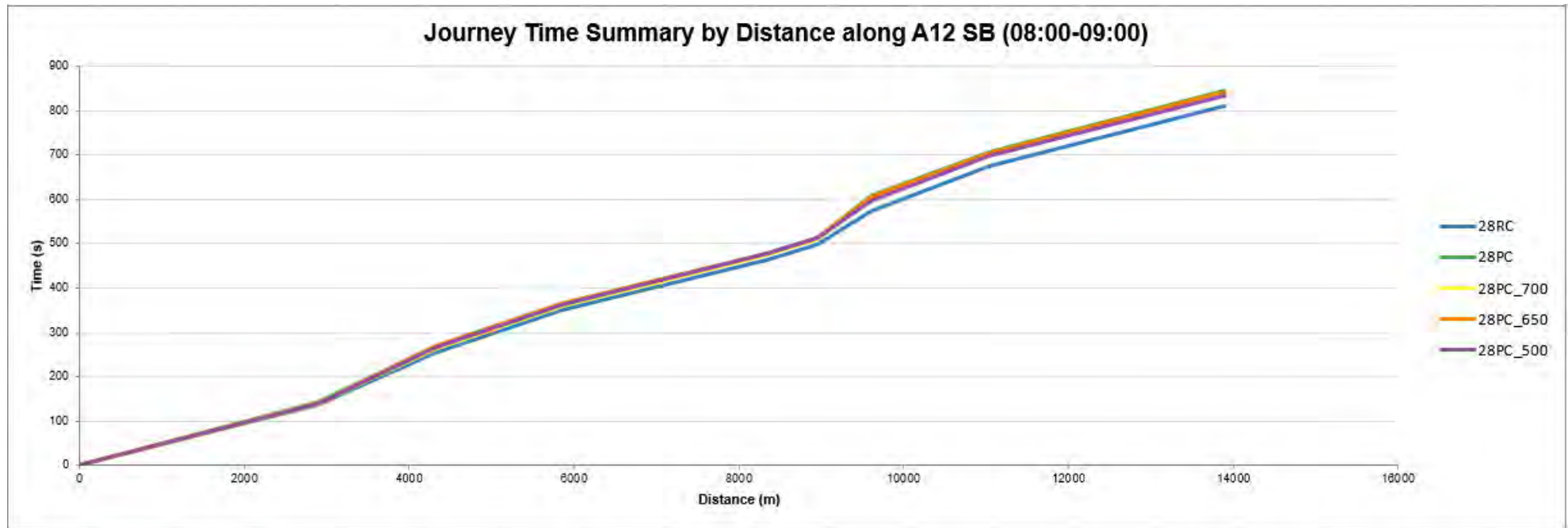


Figure 31 - 2028 PM JT comparison along A12 NB

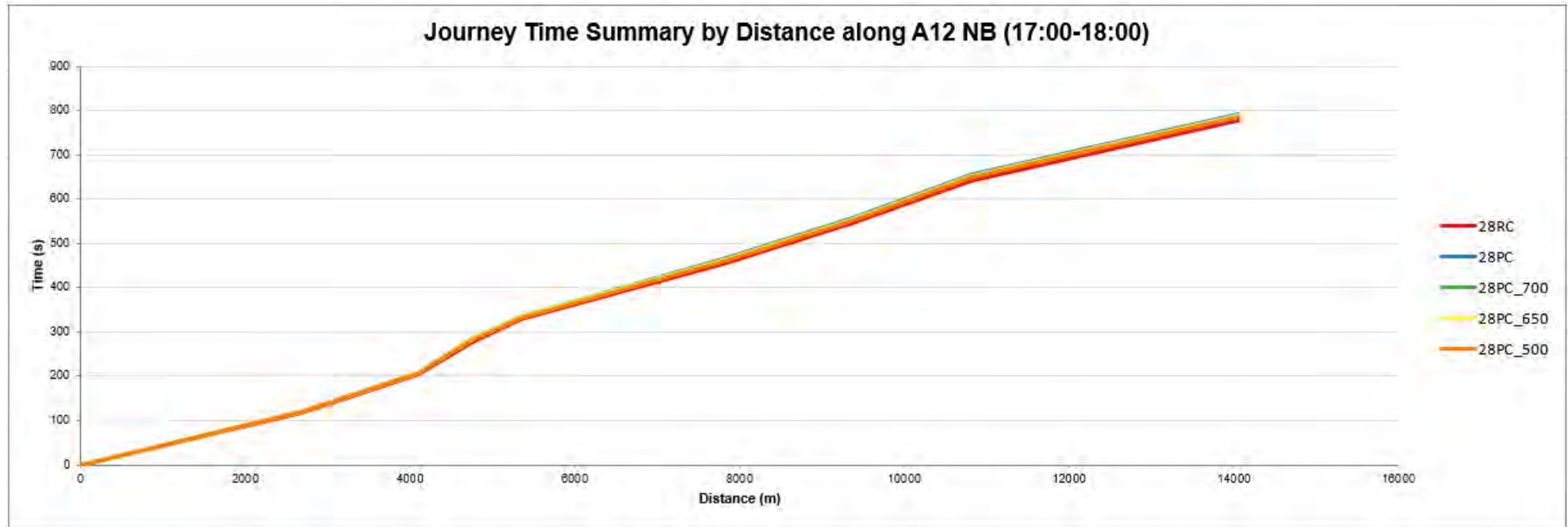
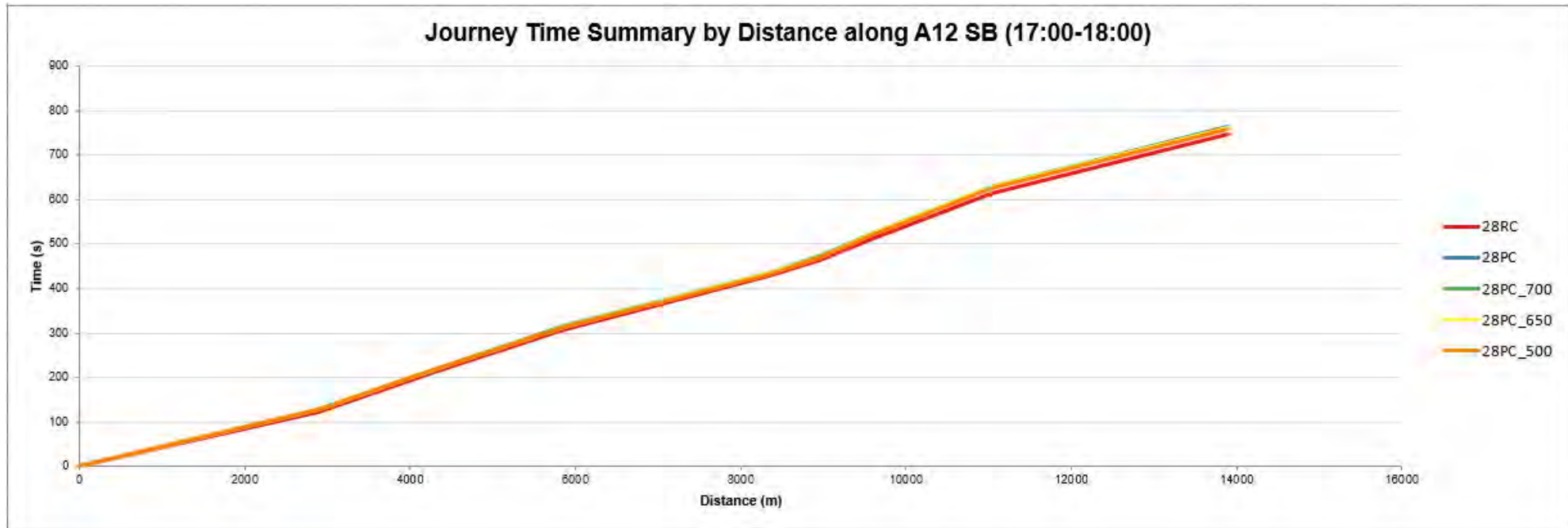


Figure 32 - 2028 PM JT comparison along A12 SB



- 5.2.9. In addition to the A12 mainline, journey times for all approach arms (non-A12) are compared in Figure 33 and Figure 34. During both AM and PM periods, the journey time results also show very little difference between the 2028 scenarios. Some small increases were present during the AM peak on Felixstowe Road (NB) which showed a journey time increase of 17 seconds from 08:00-09:00 in the 2028 Peak Construction scenario. This is due to the Sizewell C HGVs exiting the Freight Management Facility (FMF) which is located on Felixstowe Road, south of the Seven Hills Interchange. During the PM peak, the model predicted that trips on Anson Road (WB) and Eagle Way (EB) would experience an increase in journey time of 38 seconds and 15 seconds respectively due to the Sizewell C flows. These variations in journey times were observed to be lower for Peak Construction typical day scenario when fewer HGVs are present.
- 5.2.10. A full set of VISSIM results for 2028 are provided in Appendix D.

Figure 33 - 2028 AM JT comparison for side arms

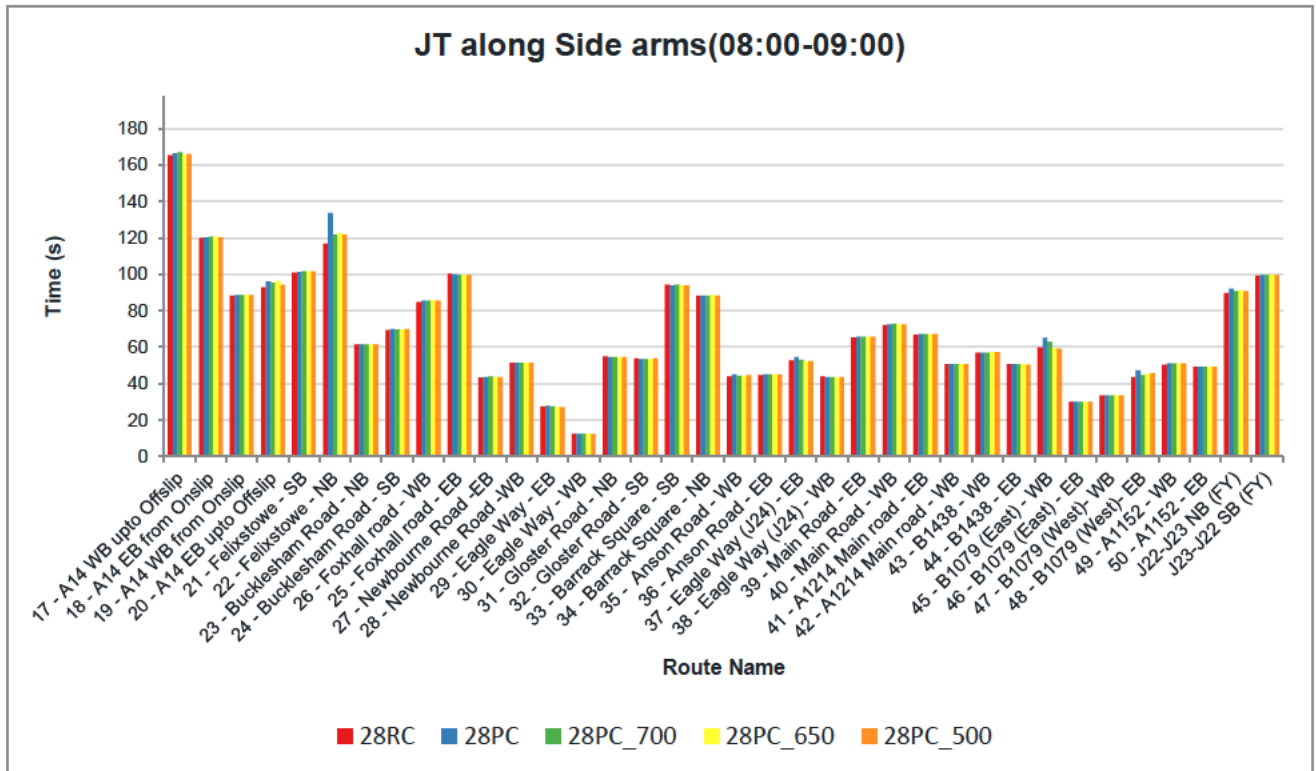
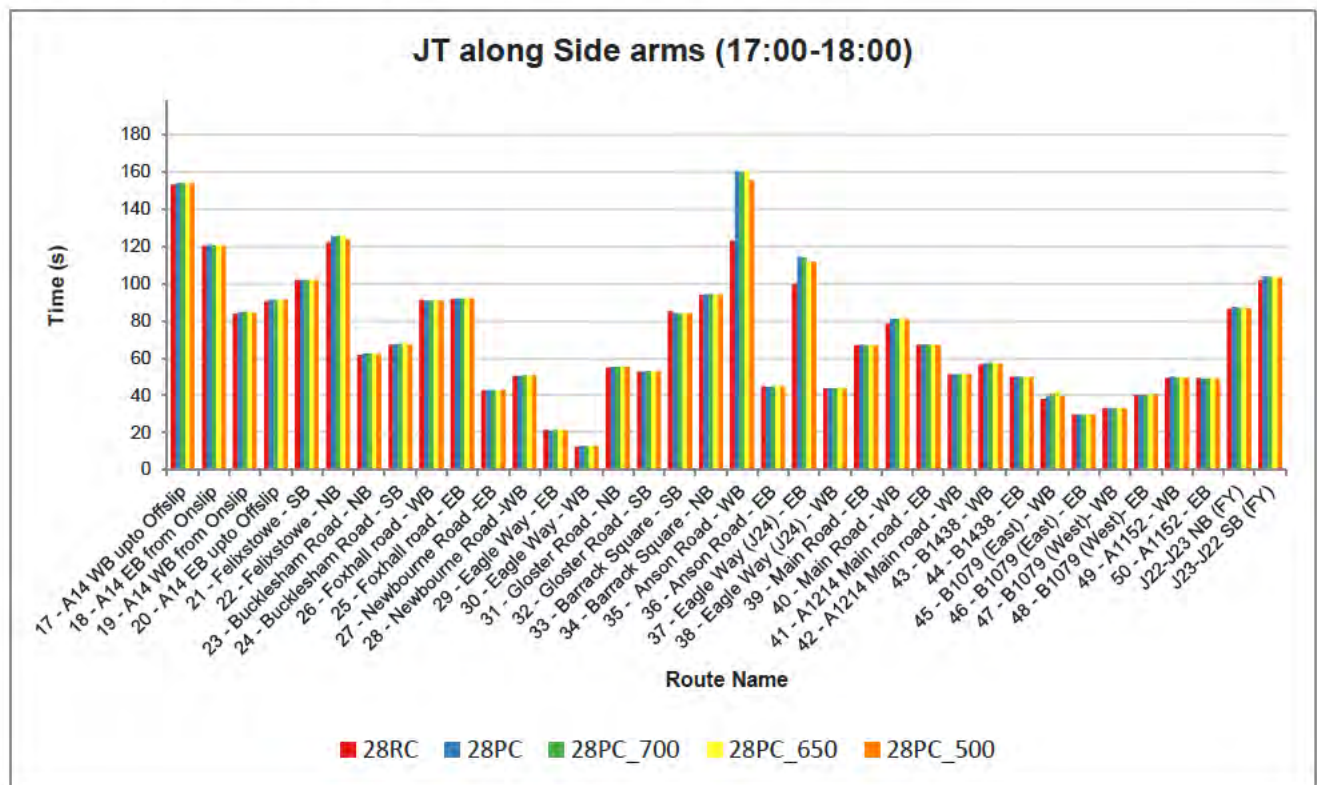


Figure 34 - 2028 PM JT comparison for side arms



QUEUE LENGTH RESULTS

5.2.11. Table 27 and Table 28 compares the 2028 Reference Case and 2028 Peak Construction modelled queue lengths for 08:00-09:00 and 17:00-18:00 respectively. The 2028 Reference Case queue lengths are provided in PCUs whilst the increase in queue lengths is provided (relative to the Reference Case) for the four Peak Construction scenarios. Throughout the modelled period, the queues show little variation between the 2028 Reference Case and 2028 Peak Construction scenario which implies impact due to Sizewell C traffic is limited in the corridor. A full set of VISSIM results for 2028 are provided in Appendix D.

Table 27 - 2028 AM Queue Comparison Results

Queues (in PCUs)	AM Peak (08:00-09:00)				
	28RC (absolute)	28PC_1000 (increase)	28PC_700 (increase)	28PC_650 (increase)	28PC_500 (increase)
J28-A12(N)	14	4	3	3	4
J28-A12(S)	9	3	2	2	1
J28-A1152(E)	8	1	1	0	1
J27-A12(N)	27	6	5	7	6

Queues (in PCUs)	AM Peak (08:00-09:00)				
	28RC (absolute)	28PC_1000 (increase)	28PC_700 (increase)	28PC_650 (increase)	28PC_500 (increase)
J27-B1079(W)	7	0	0	0	0
J27-A12(S)	16	13	6	15	10
J27-B1079(E)	11	0	0	0	-1
J26-A12(N)	6	0	1	0	0
J26-A12(S)-Right turn	2	0	0	0	0
J26-A12(S)	17	19	6	10	6
J26-B1438(E)	5	0	-1	0	0
J25-A12(N)	11	0	0	0	0
J25-Martlesham P&R(NW)- Left turn	0	0	0	0	0
J25-Martlesham P&R(NW)	1	0	0	0	0
Main Rd(W)	16	0	0	0	0
J25-A12(S)	22	14	9	8	6
J25-Main Rd(E)	2	0	0	0	0
J24-A12(N)	10	0	1	0	-1
J24-Eagle Way(W)	3	1	0	0	0
J24-A12(S)	17	2	1	0	0
J24-Anson Rd(E)	4	0	0	0	0
J23-A12(N)	23	6	6	6	3
J23-Eagle Way(W)	3	0	0	0	0
J23-A12(S)	14	0	-1	1	-1
J23-Barrack Square(E)	4	1	0	1	0
J22-A12(N)	18	0	0	0	0
J22-A12(S)	28	3	2	2	2
J22-Newbourne Rd(E)	5	0	0	0	0
J22-Foxhall Rd(W)	8	0	0	0	-1
J21-A12(N)	23	4	3	3	1
J21-A14(W)	1	1	1	1	1

Queues (in PCUs)	AM Peak (08:00-09:00)				
	28RC (absolute)	28PC_1000 (increase)	28PC_700 (increase)	28PC_650 (increase)	28PC_500 (increase)
J21-A1156(S)	10	7	3	3	2
J21-A14(E)	12	0	0	0	0
J21-Bucklesham Rd(NE)	2	0	0	0	0

Table 28 - 2028 PM Queue Comparison Results

Queues (in PCUs)	PM Peak (17:00-18:00)				
	28RC (absolute)	28PC_1000 (increase)	28PC_700 (increase)	28PC_650 (increase)	28PC_500 (increase)
J28-A12(N)	7	1	1	1	1
J28-A12(S)	7	1	1	1	1
J28-A1152(E)	6	0	0	0	1
J27-A12(N)	9	1	2	2	1
J27-B1079(W)	4	0	0	0	0
J27-A12(S)	7	1	0	0	0
J27-B1079(E)	4	0	0	0	0
J26-A12(N)	4	1	1	1	0
J26-A12(S)-Right turn	1	0	0	0	0
J26-A12(S)	16	5	2	3	0
J26-B1438(E)	5	0	0	0	0
J25-A12(N)	14	2	1	2	1
J25-Martlesham P&R(NW)- Left turn	1	0	0	0	0
J25-Martlesham P&R(NW)	1	0	0	0	0
Main Rd(W)	10	0	0	0	0
J25-A12(S)	16	0	0	0	0
J25-Main Rd(E)	3	1	1	1	1
J24-A12(N)	10	1	0	0	0
J24-Eagle Way(W)	6	1	0	1	0
J24-A12(S)	33	2	1	2	2

Queues (in PCUs)	PM Peak (17:00-18:00)				
	28RC (absolute)	28PC_1000 (increase)	28PC_700 (increase)	28PC_650 (increase)	28PC_500 (increase)
J24-Anson Rd(E)	83	51	51	48	48
J23-A12(N)	15	2	2	2	2
J23-Eagle Way(W)	2	0	0	0	0
J23-A12(S)	7	0	0	0	0
J23-Barrack Square(E)	7	0	0	0	0
J22-A12(N)	18	2	2	2	2
J22-A12(S)	18	1	1	1	1
J22-Newbourne Rd(E)	4	0	0	0	0
J22-Foxhall Rd(W)	5	0	0	0	0
J21-A12(N)	20	4	3	3	2
J21-A14(W)	1	0	0	0	0
J21-A1156(S)	10	1	1	1	0
J21-A14(E)	10	0	0	0	0
J21-Bucklesham Rd(NE)	1	0	0	0	0

- 5.2.12. Queue lengths do not increase significantly in any of the tested scenarios on any of the side arms, except for the traffic on Anson Road in the PM peak period. Traffic queue increases significantly between the Base Year and the 2028 Reference Case scenario from 18 to 83 PCUs, which is a significant raise, indicating that the junction is running at capacity even without the introduction of any Sizewell related traffic
- 5.2.13. While the average queue lengths on Anson Road increase by around 60% (from 83 to 130 PCUs) due to the introduction of Sizewell C flows, journey times show a less significant impact of 30-40 seconds (+31%). This suggests that while the traffic queue is longer, it is likely to be moving faster than in the Reference Case model.
- 5.2.14. Anson Road, Gloster Road and Barrack Square serve the Martlesham Heath commercial and industrial parks and therefore experience particularly heavy traffic in the PM peak period. As there are multiple access points, it is likely that traffic would re-route to select the best route at that moment in time rather than sit in a queue on one route whilst the other routes continue to operate well. This is a limitation of the VISSIM model as route choice is not permitted but in reality, drivers would optimise their route choice either using a sat nav or due to local knowledge. The queues predicted on Anson Road are therefore considered unlikely to materialise.

- 5.2.15. It should be noted that committed highway improvements are scheduled for the A12 / Anson Road junction but not until after 2034 so they have not been included in the VISSIM model but they would be expected to relieve congestion at this junction.

6. CONCLUSIONS

6.1.1. The VISSIM model provides a robust evidence base which has been used to assess the operational performance of the network in 2023 and 2028 with and without the Sizewell C construction traffic. Key conclusions from the study are set out below.

6.2. 2023 EARLY YEARS

6.2.1. **Note: the Seven Hills Interchange upgrade has been removed from the 2023 scenarios so revised results are presented but they do not change the overall conclusion.**

6.2.2. The addition of Sizewell C flows in the 2023 Early Years scenario during the AM and PM period does not have a significant impact on the study area. The overall network statistics reveal that, when compared to the Reference Case, average delays vary by 8 seconds or less which is well within acceptable tolerances as such a level of variation would occur regardless even without the inclusion of Sizewell C.

6.2.3. The only exception is Foxhall Road which is predicted to show an increase in queues (+5 PCUs) from 08:00-09:00 in the 2023 Early Years scenario. Journey times on Foxhall Road are also predicted to increase by 23 seconds during this time period.

6.2.4. A small increase in queueing (+6 PCUs) is also predicted on Barrack Square in the PM period which subsequently impacts journey times on Gloster Road.

6.3. 2028 PEAK CONSTRUCTION

6.3.1. The 2028 Peak Construction shows that journey times along the A12 are generally increased, but the increase is unlikely to be outside of daily variation on the majority of routes.

6.3.2. The overall network performance of the model has shown slight increases in average delay per vehicle of up to 13 seconds in the worst case 2028 Peak Construction scenario of 1,000 two-way HGV movements per day which is not significant.

6.3.3. The Felixstowe Road approach to the Seven Hills junction (J21) is predicted to experience an increase in journey times of up to 17 seconds from 08:00-09:00 in the 2028 Peak Construction busiest day scenario (1,000 two-way HGV movements per day). This is due to the Sizewell C HGVs exiting the Freight Management Facility (FMF) which is located south of Seven Hills Interchange. In the typical day scenarios (650 and 500 HGV movements per day), delays are only predicted to increase by 5-6 seconds which is immaterial.

6.3.4. During PM period, the journey time on Anson Road (WB) and Eagle Way J24 (EB) are predicted to increase by 38 seconds (+31%) and 15 seconds (+14%) respectively from 17:00-18:00. Anson Road serves the Martlesham Heath commercial and industrial park in tandem with Gloster Road, it is expected that some traffic will be routed to Gloster Road, reducing the impact on Anson Road.

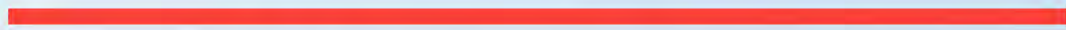
6.3.5. From 16:00-17:00, the travel time on the B1079 east approach to J27 is anticipated to increase by 37 seconds due to the Sizewell C flows on the A12 southbound. Impacts on the B1079 are not predicted in any other time periods or scenarios. In spite of these localised impacts, the changes in network wide delays of less than 15 seconds per vehicle across the modelled periods show that, on balance, any impacts are likely to be localised and the effects are not widespread and therefore general journeys through the network are not materially affected.

- 6.3.6. Some smaller impacts (travel time increases of 16-19s) are also predicted at J23 (08:00-0900 on the A12 north approach) and at J25 and J26 (08:00-09:00 on the A12 south approach). Sizewell C flows are not expected to increase travel times along the A12 corridor significantly with the largest increase of 62 seconds (+8%) predicted on the A12 northbound (A14 to A1152) from 08:00-09:00 for the 2028 peak construction busiest day scenario (i.e. 1,000 two-way HGVs per day). In all other hours the increase in journey time on the A12 corridor is between 1 and 36 seconds.
- 6.3.7. All of the above inferences are based on comparison of 2028 Reference Case and 2028 Peak Construction busiest day (1,000 HGVs/day) scenario for the Integrated Freight Strategy. On a typical day for the Integrated Freight Strategy (650 HGVs/day) the impact is predicted to be less, with an increase in journey time of up to 37 seconds on the A12 northbound from 08:00-09:00. In all other hours the increase in journey time on the A12 corridor is between 0 and 28 seconds.
- 6.3.8. The proposed changes to the Freight Management Strategy would result in less impact still (i.e. 0-32 second increase in journey time for the typical day scenario). The model predicts that the impacts reduce in a manner that is roughly linear with the scale of reduction in Sizewell C HGVs.

7. LIMITATIONS

- 7.1.1. The VISSIM modelling carried out for this assessment is based on traffic count and queue length data collected on a single day. It aims to represent a typical Monday AM and Friday PM through its validation against observed data. It does not reflect unusual or periodic fluctuations in traffic demand or traffic conditions.
- 7.1.2. The VISSIM model has been developed for the purposes of assessing the impacts of additional traffic demand generated by the Sizewell C project, as well as associated proposed highway improvements. The level of detail within the model is proportionate to its purpose.

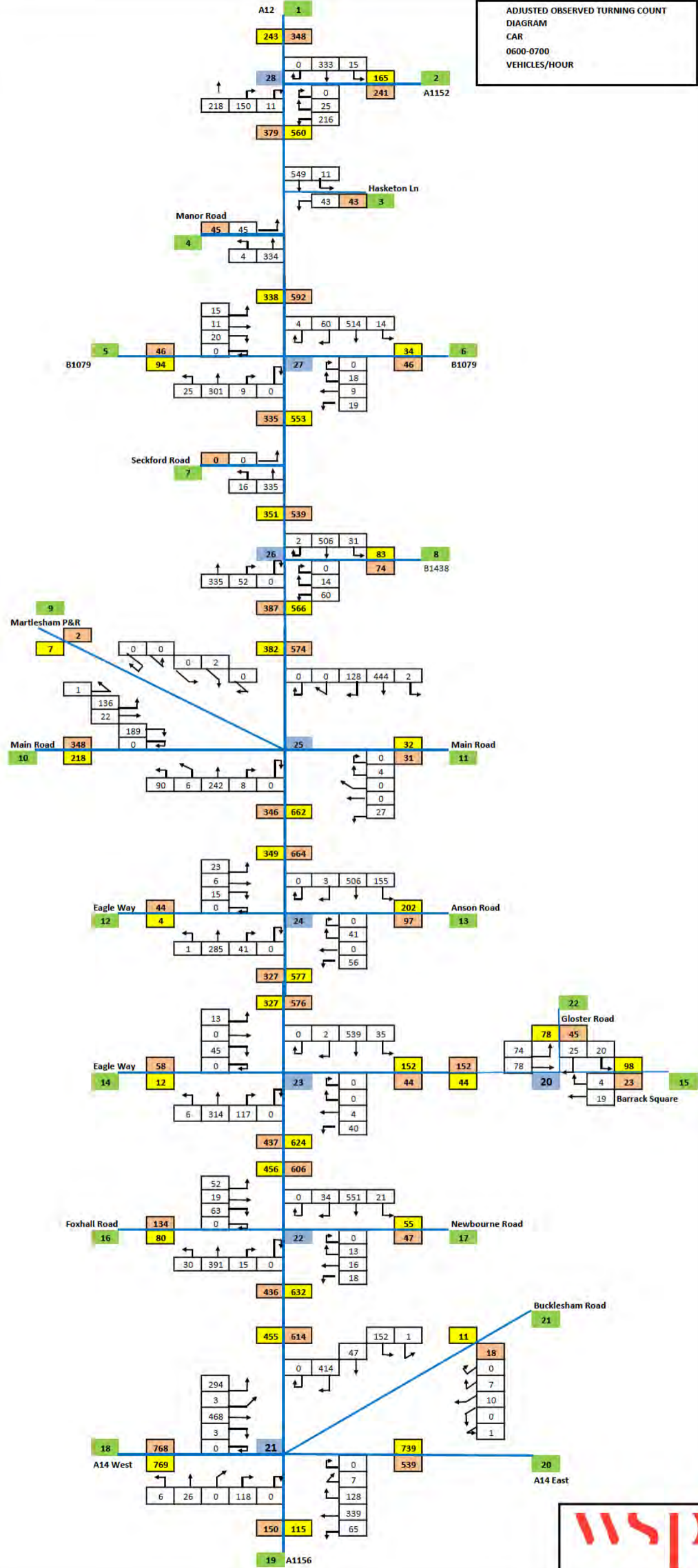
Appendix A



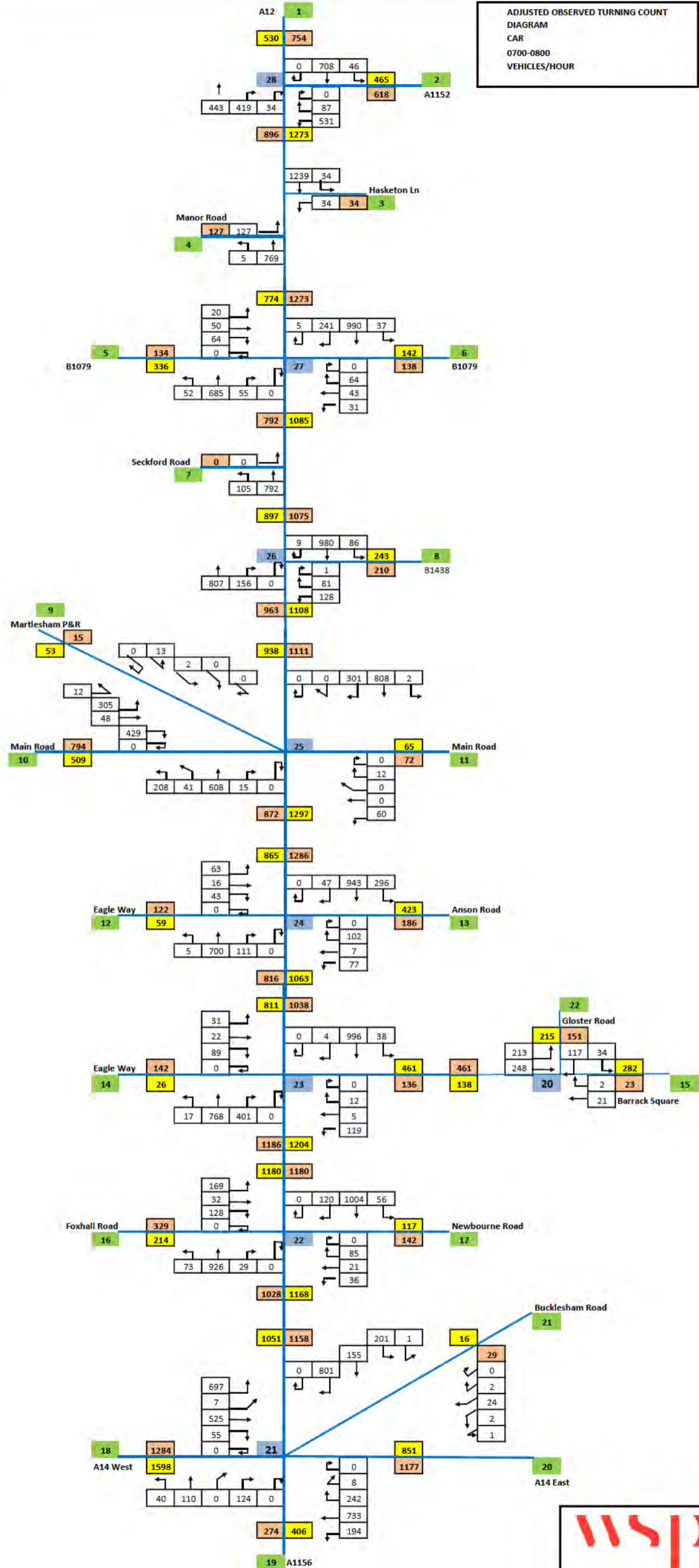
NETWORK TRAFFIC FLOW DIAGRAMS

5:25:00 PM	40	12	29	63	23	29	12	6	12	167	23	121	6	6	92	104	23	6	12	69	150	29	17	29	52	6	46	12	40	12	35	63	6	35		
5:30:00 PM	35	6	29	17	23	40	12	29	0	173	40	92	0	0	63	86	23	12	6	75	155	29	12	23	75	23	23	23	52	6	17	63	0	23		
5:35:00 PM	17	6	17	40	23	29	17	12	12	29	17	63	17	12	58	121	23	17	12	98	144	17	12	58	46	12	29	23	29	6	17	46	6	23		
5:40:00 PM	29	46	17	23	17	40	12	17	17	115	17	63	6	12	52	86	29	12	6	46	69	40	12	17	63	6	46	17	75	12	17	29	0	35		
5:45:00 PM	29	40	29	35	12	75	12	12	12	23	6	58	12	6	52	75	23	12	12	46	52	17	12	35	23	6	12	12	23	12	12	29	6	17		
5:50:00 PM	35	6	58	52	40	40	17	17	0	17	12	69	0	0	40	46	35	0	12	23	69	23	17	35	46	12	6	12	40	6	17	29	6	23		
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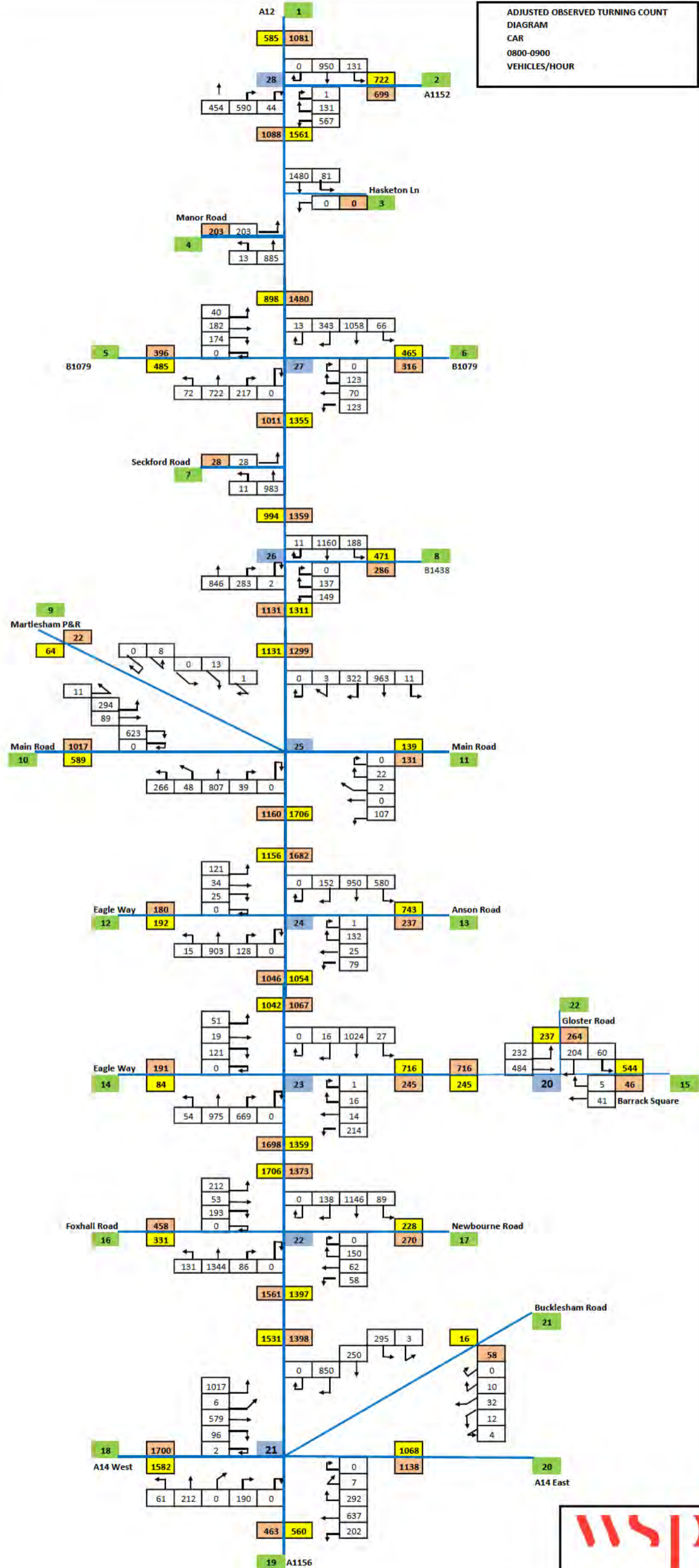
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 DIAGRAM
 CAR
 0600-0700
 VEHICLES/HOUR



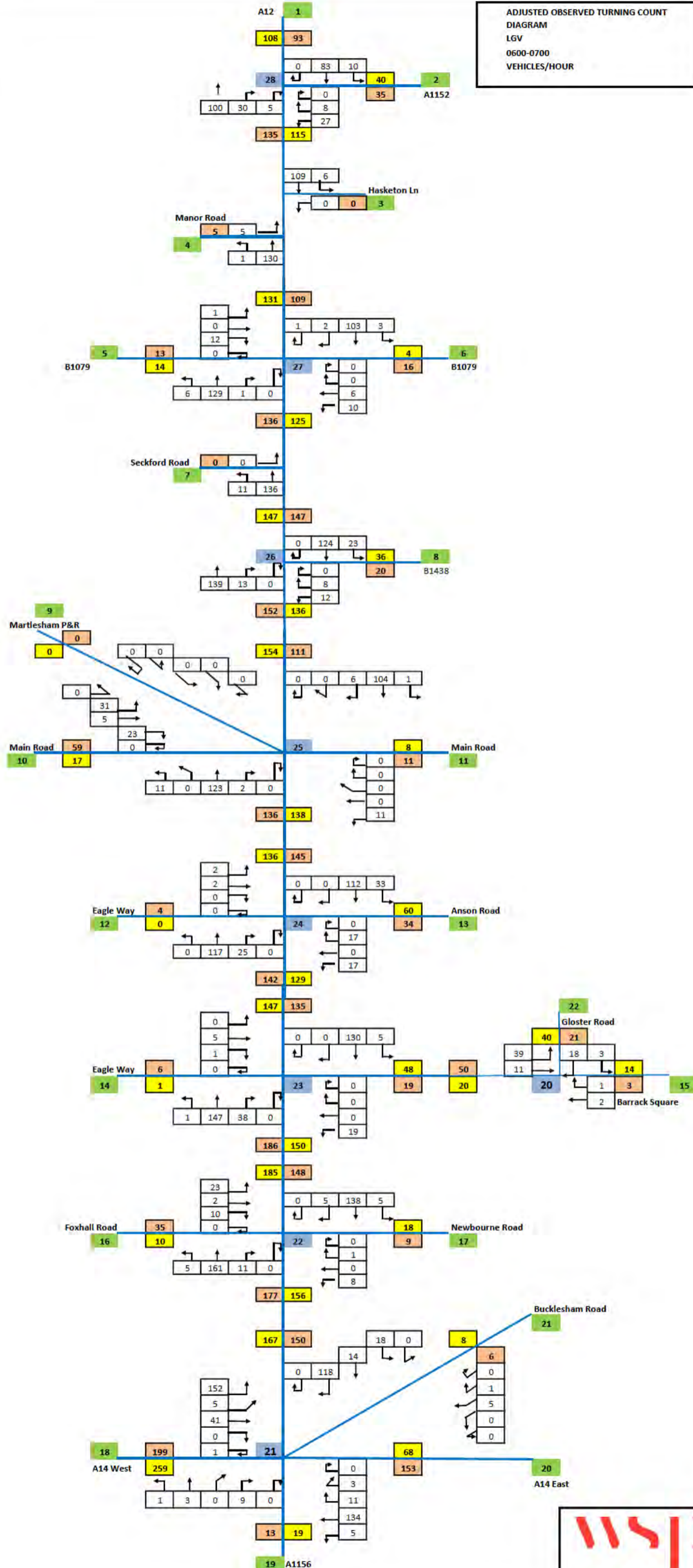
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 DIAGRAM
 CAR
 0700-0800
 VEHICLES/HOUR



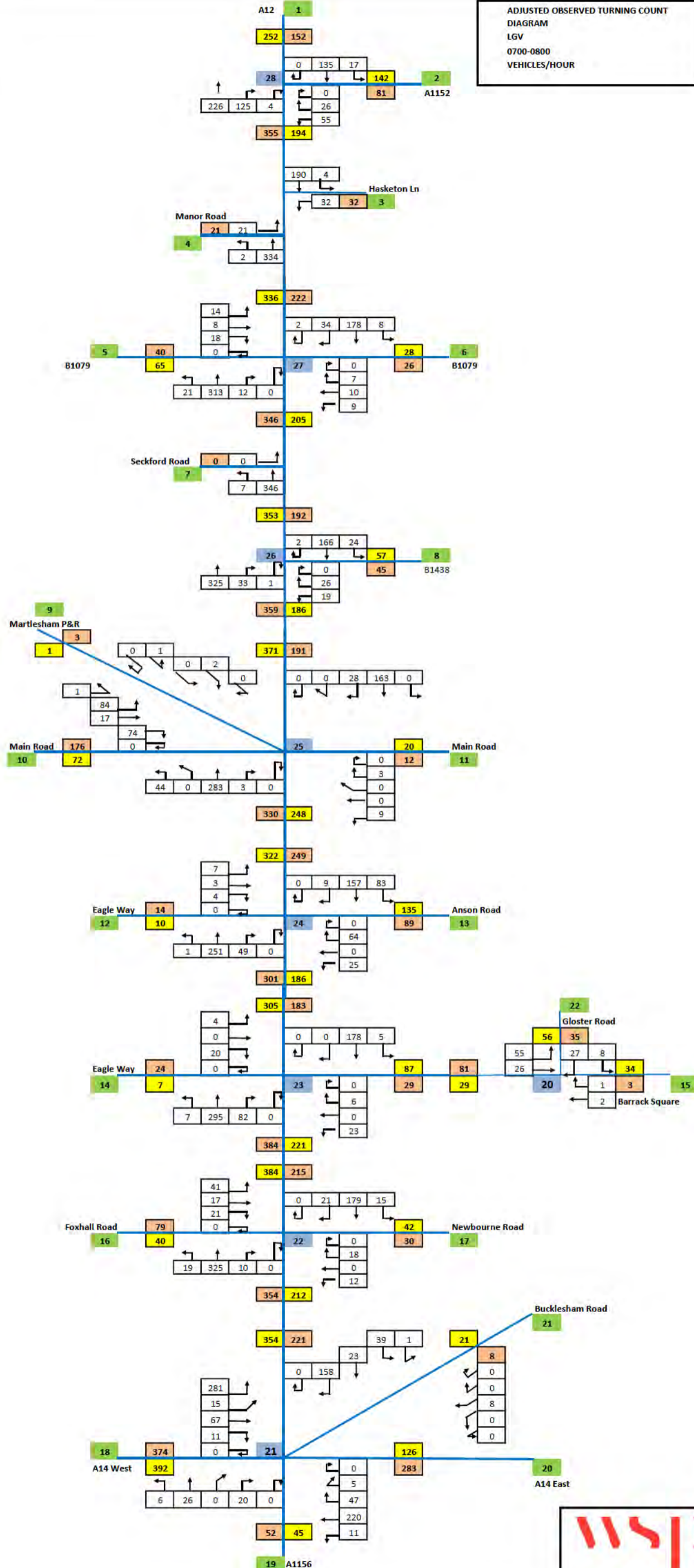
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 DIAGRAM
 CAR
 0800-0900
 VEHICLES/HOUR



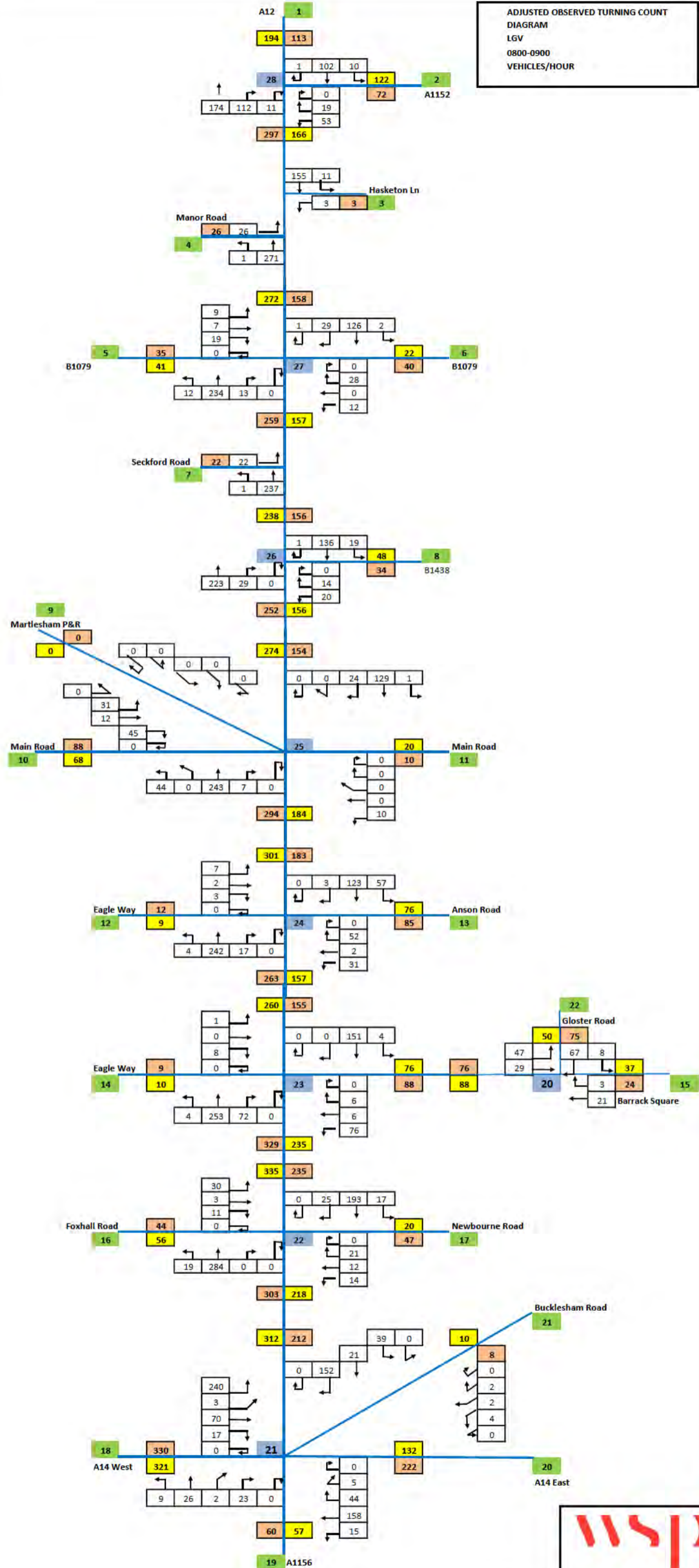
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 DIAGRAM
 LGV
 0600-0700
 VEHICLES/HOUR



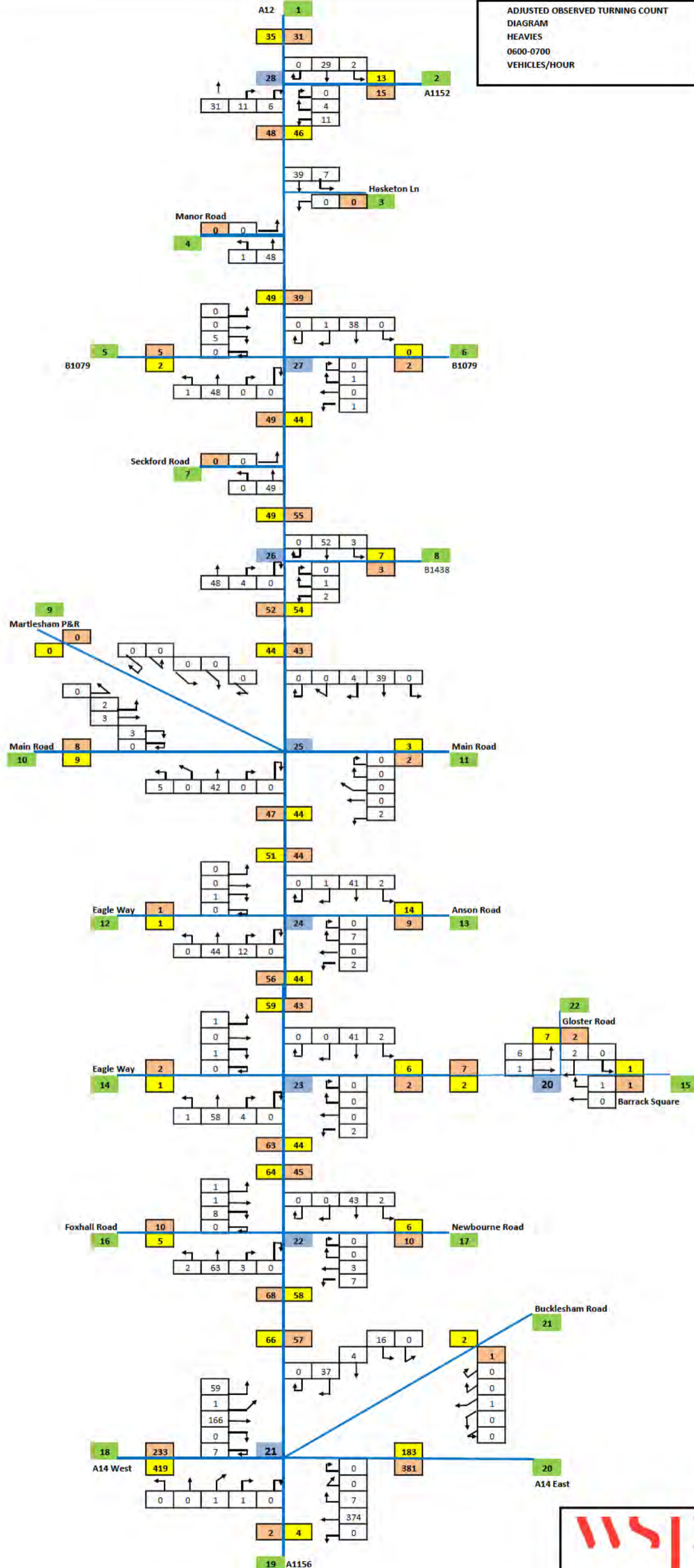
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 DIAGRAM
 LGV
 0700-0800
 VEHICLES/HOUR



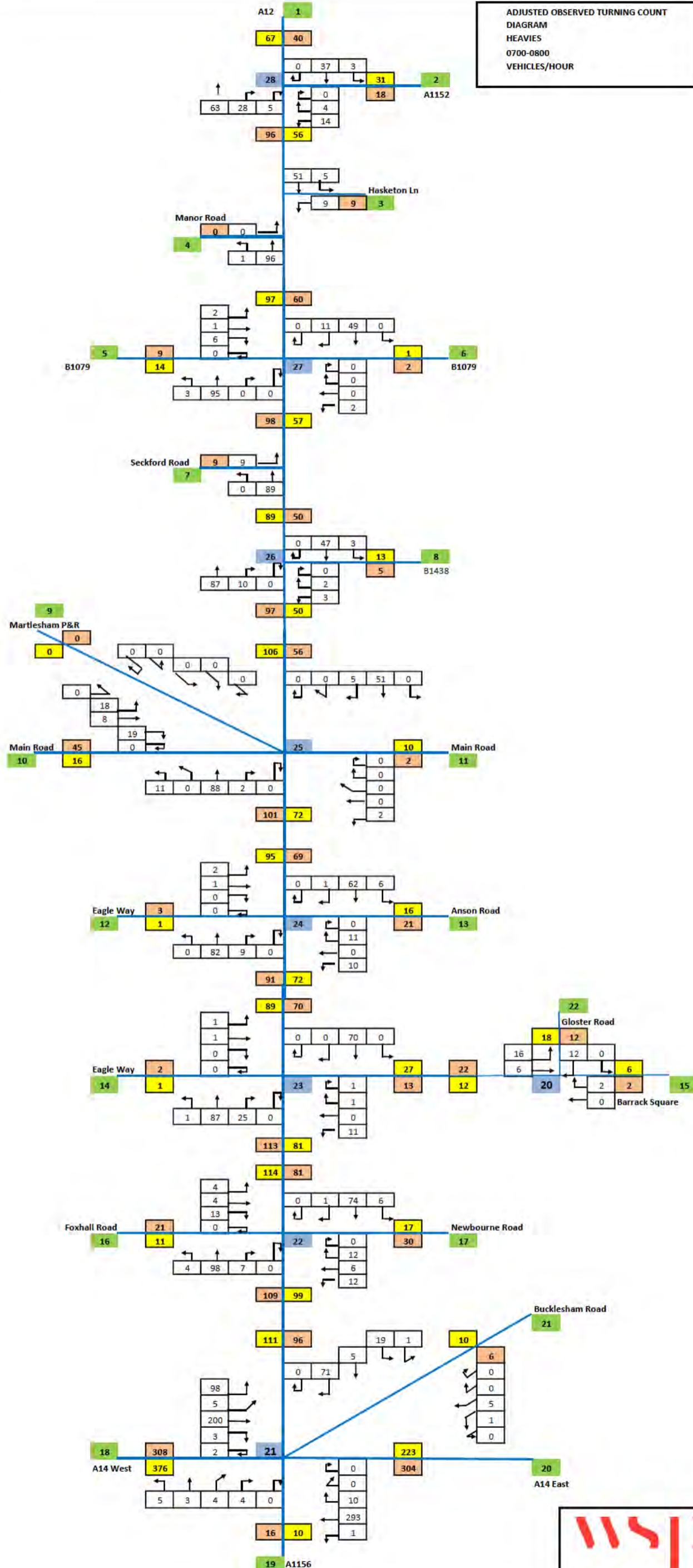
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 DIAGRAM
 LGV
 0800-0900
 VEHICLES/HOUR



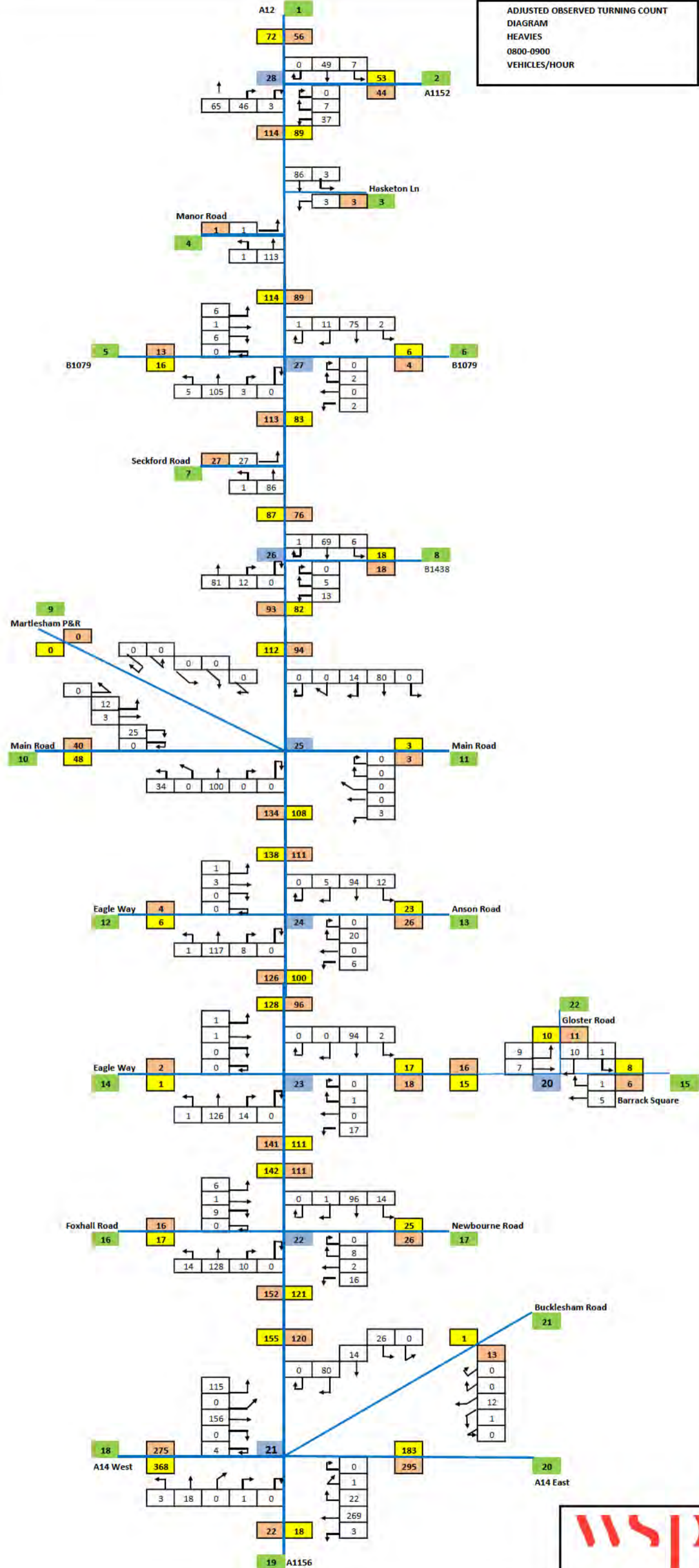
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 DIAGRAM
 HEAVIES
 0600-0700
 VEHICLES/HOUR



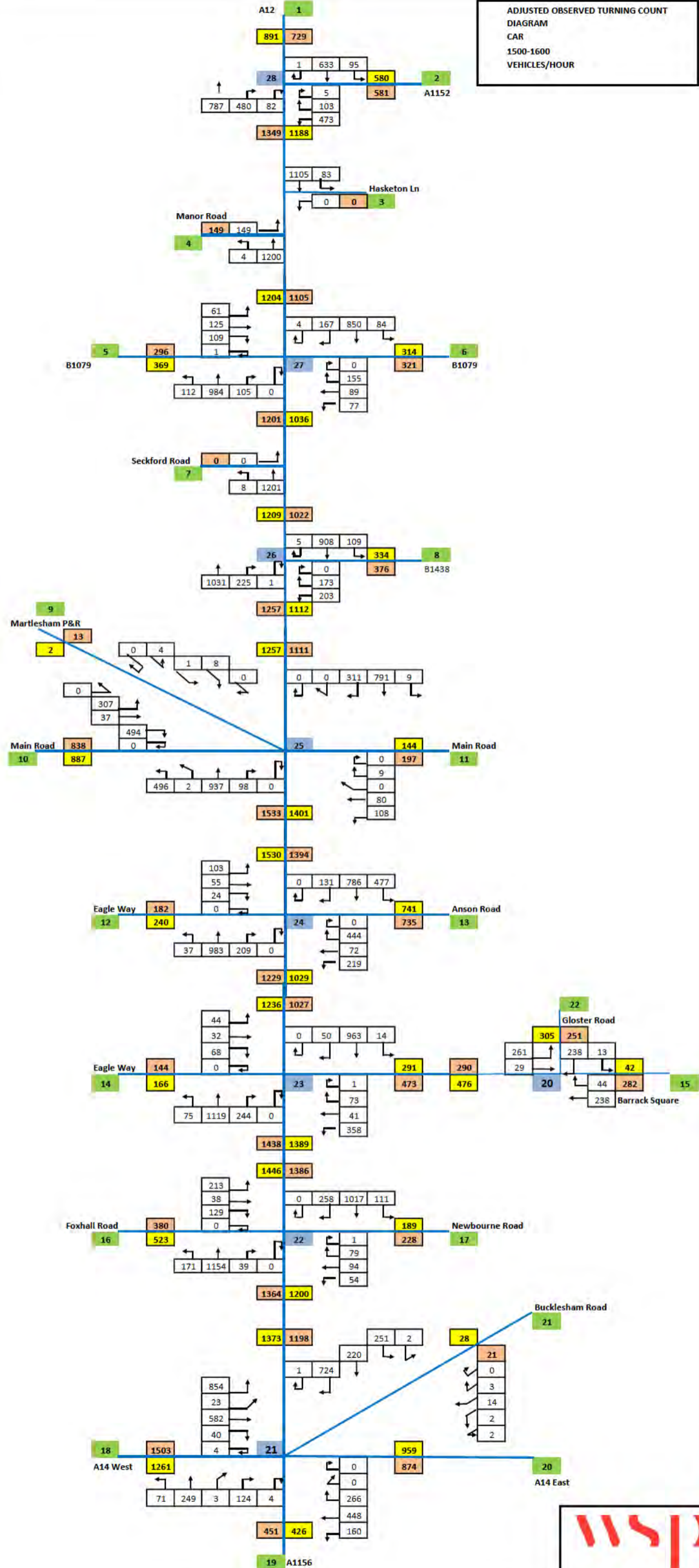
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 DIAGRAM
 HEAVIES
 0700-0800
 VEHICLES/HOUR



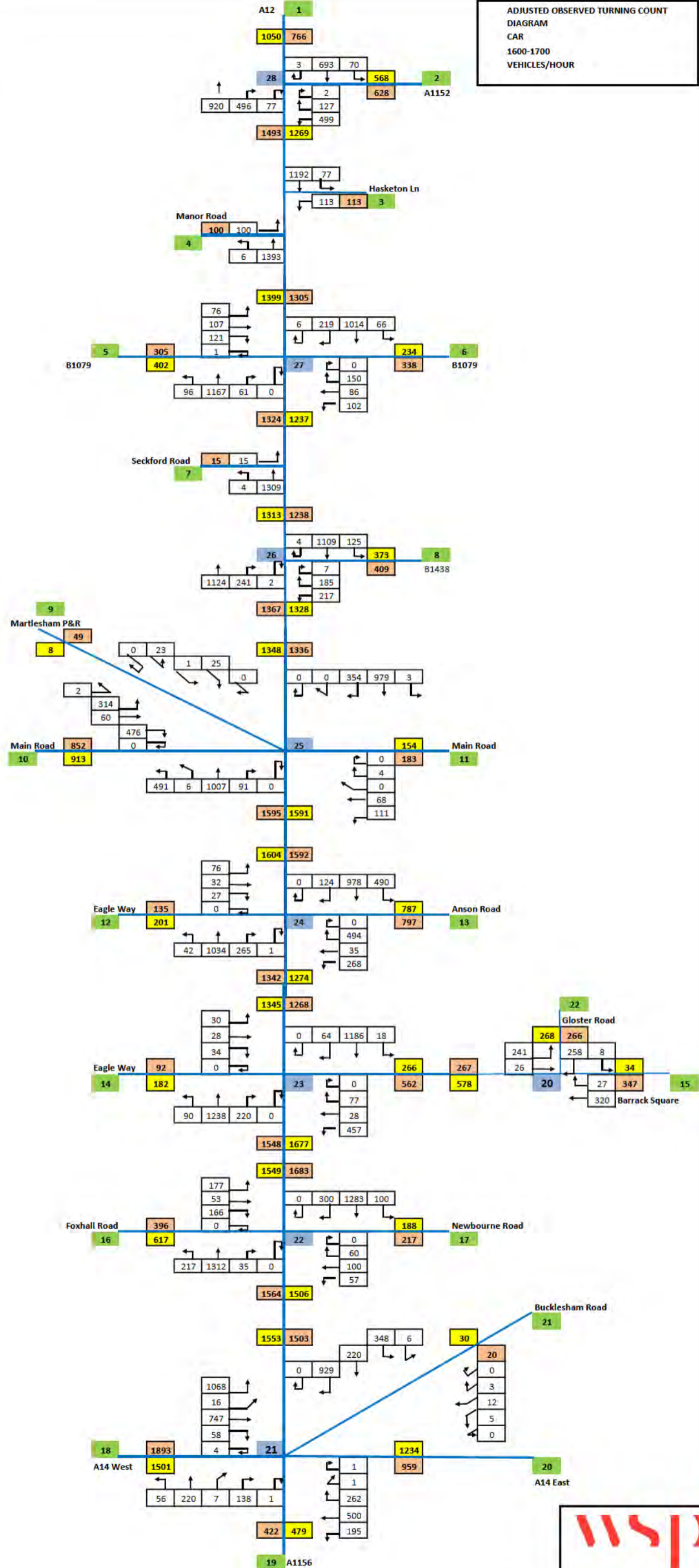
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 DIAGRAM
 HEAVIES
 0800-0900
 VEHICLES/HOUR



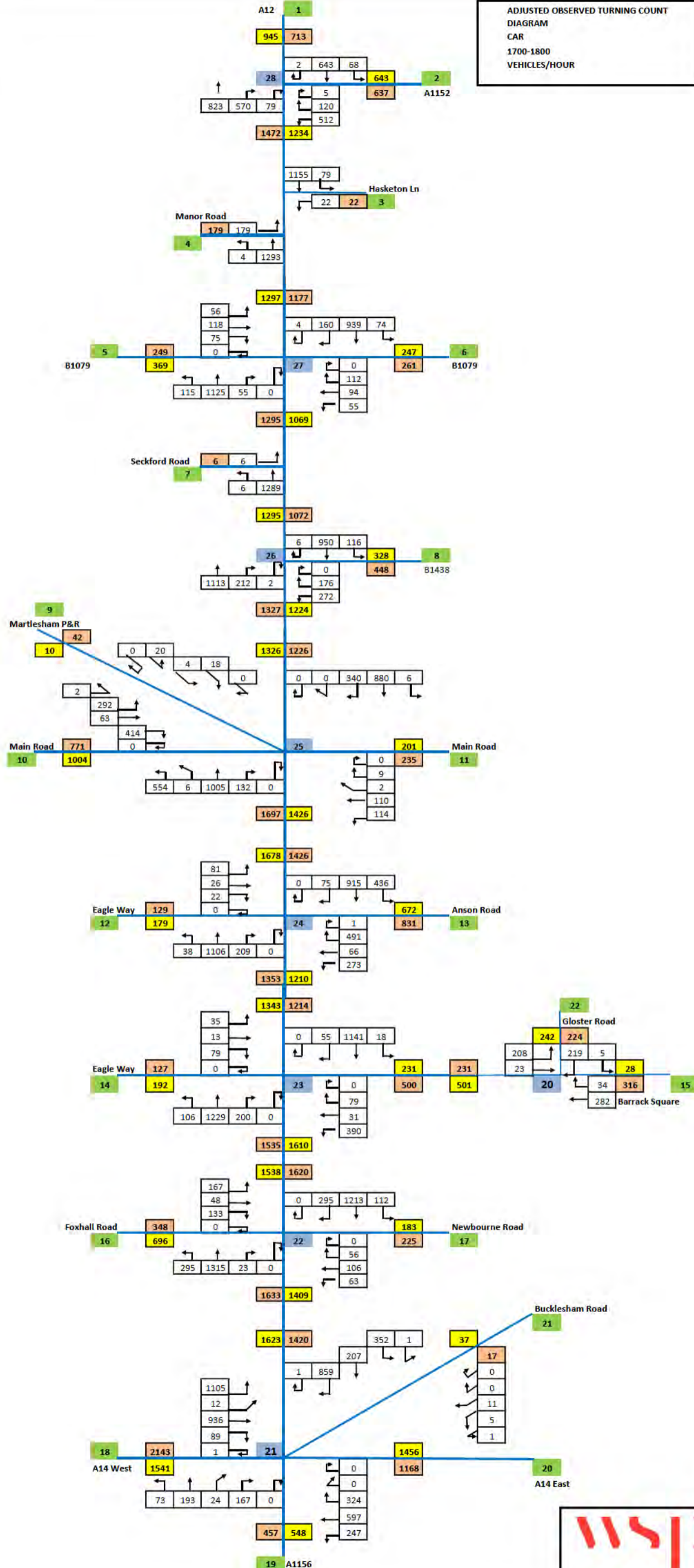
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 DIAGRAM
 CAR
 1500-1600
 VEHICLES/HOUR



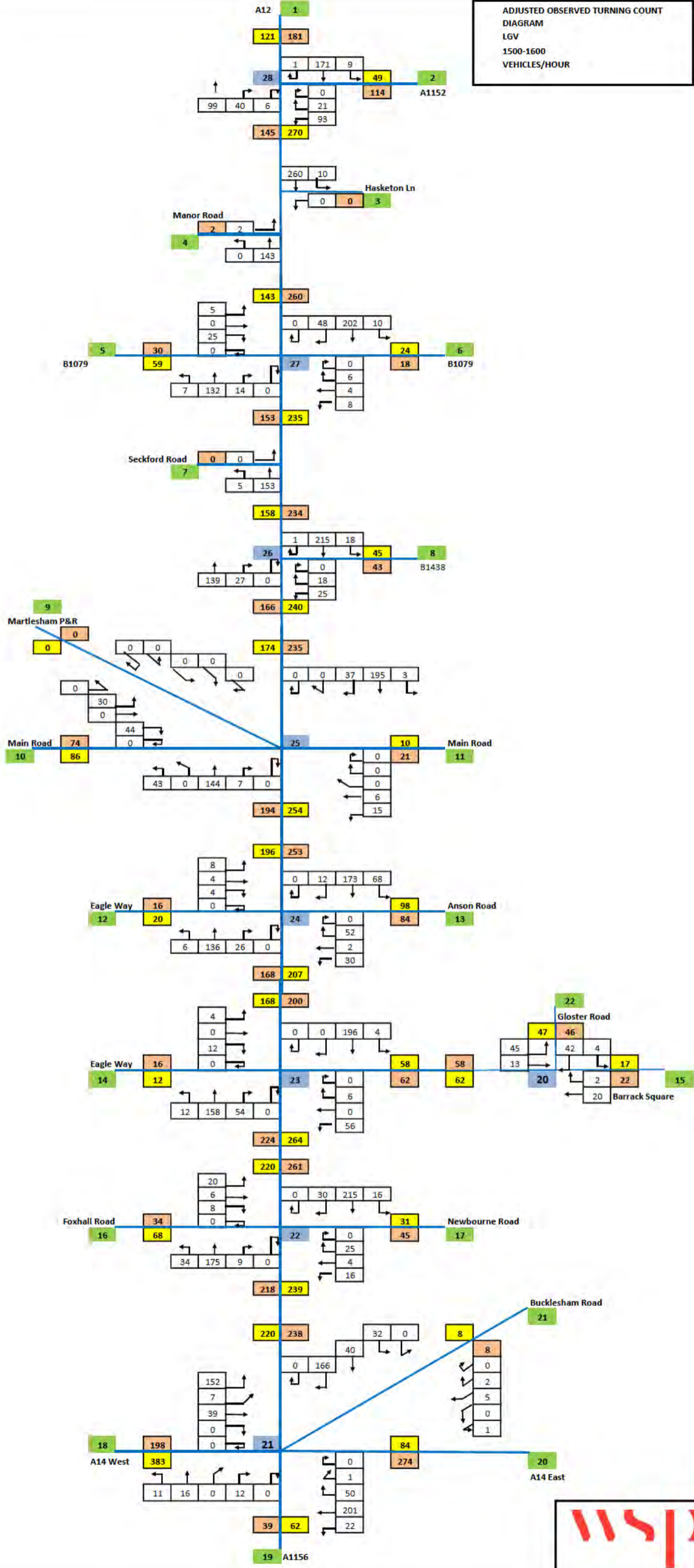
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 DIAGRAM
 CAR
 1600-1700
 VEHICLES/HOUR



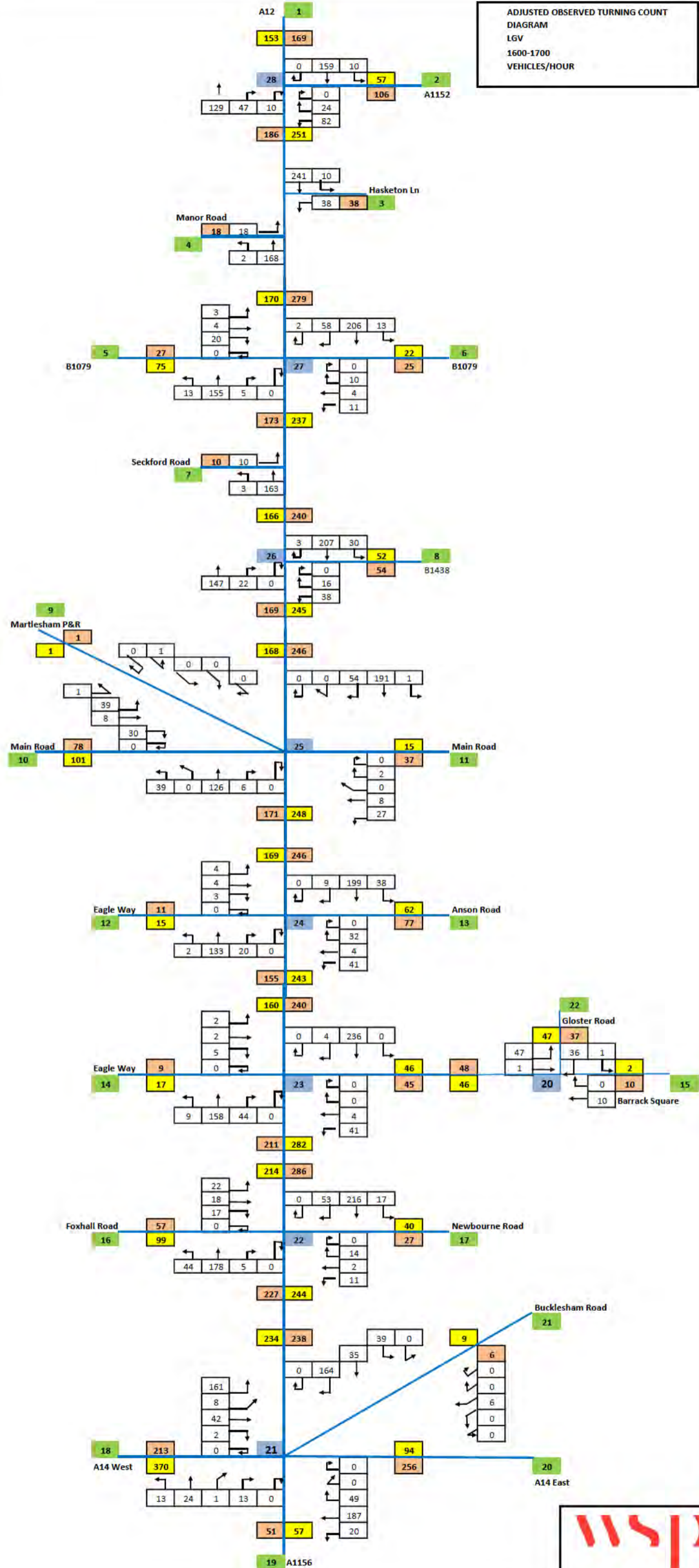
ADJUSTED OBSERVED TURNING COUNT
 DIAGRAM
 CAR
 1700-1800
 VEHICLES/HOUR



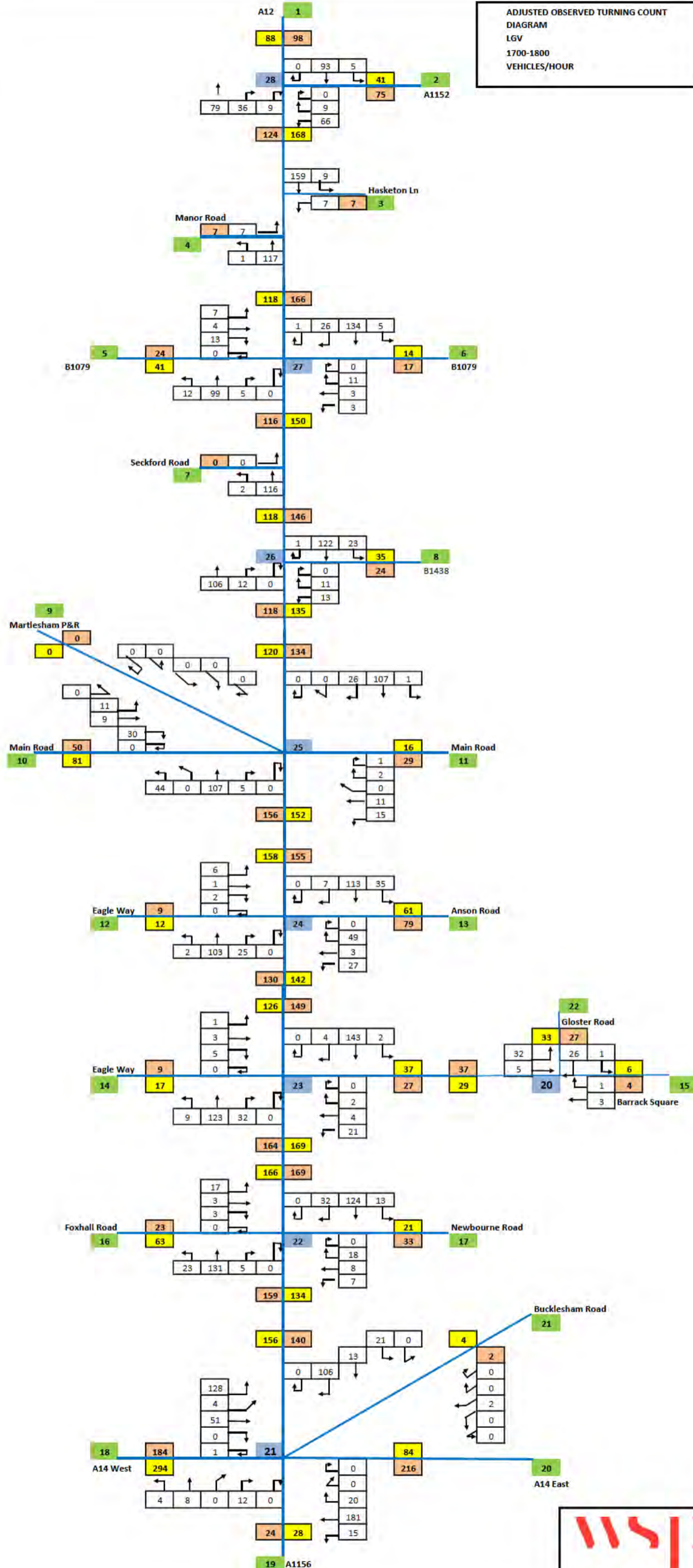
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 DIAGRAM
 LGV
 1500-1600
 VEHICLES/HOUR



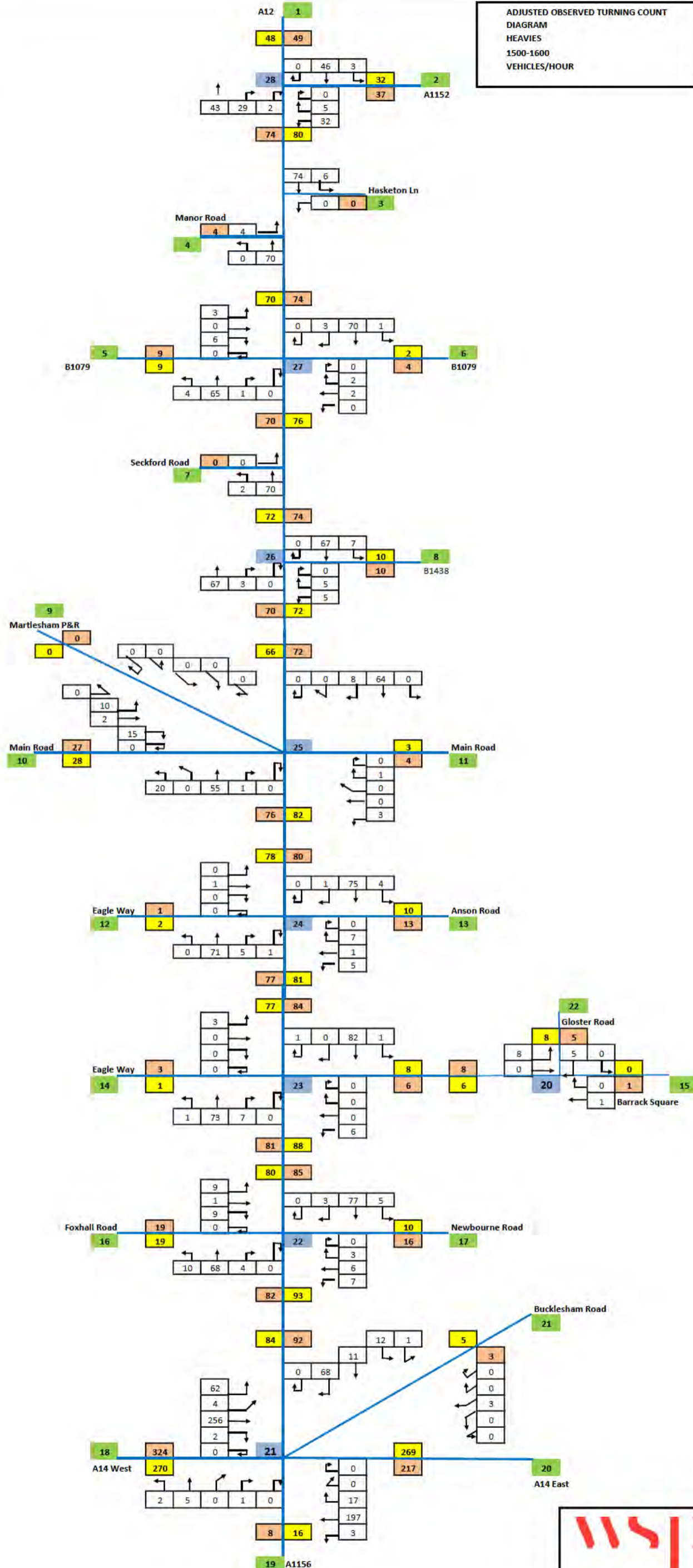
ADJUSTED OBSERVED TURNING COUNT
 DIAGRAM
 LGV
 1600-1700
 VEHICLES/HOUR



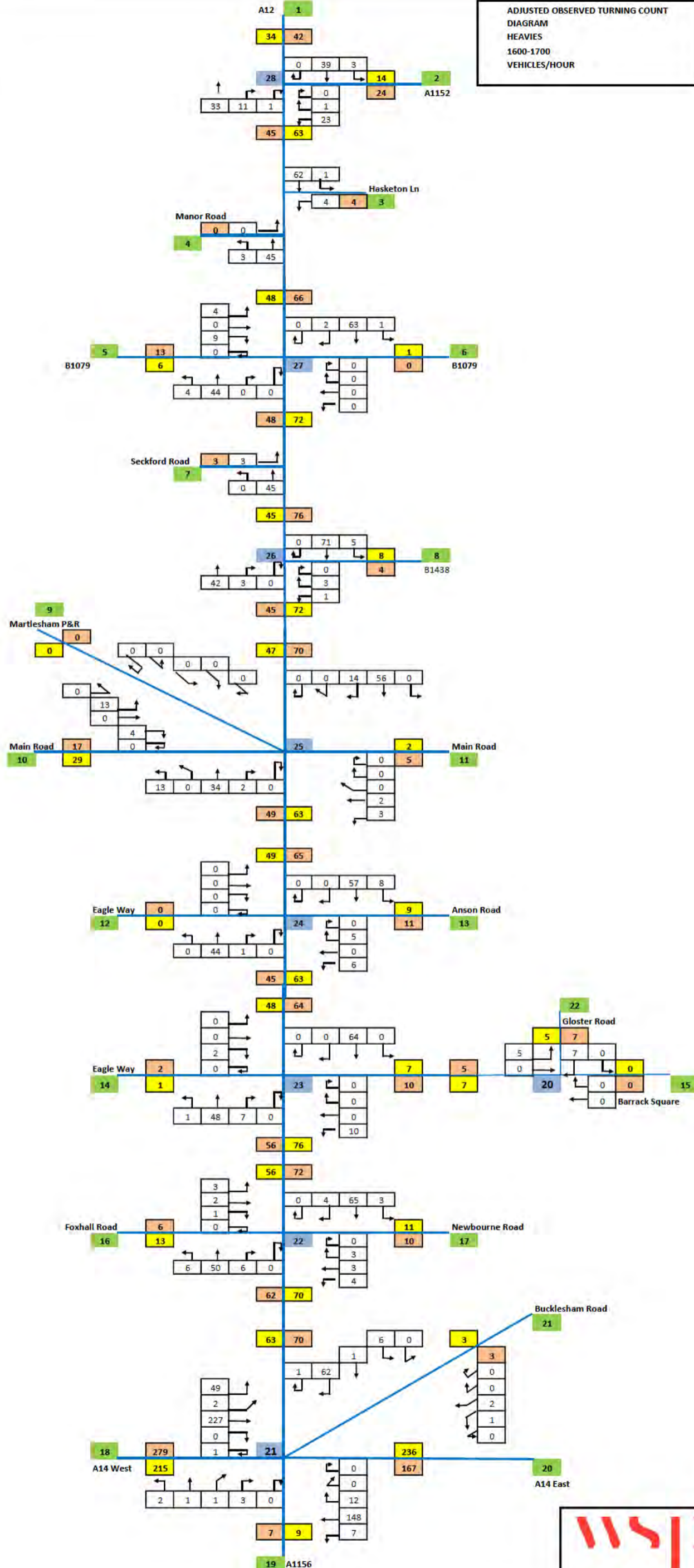
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 DIAGRAM
 LGV
 1700-1800
 VEHICLES/HOUR



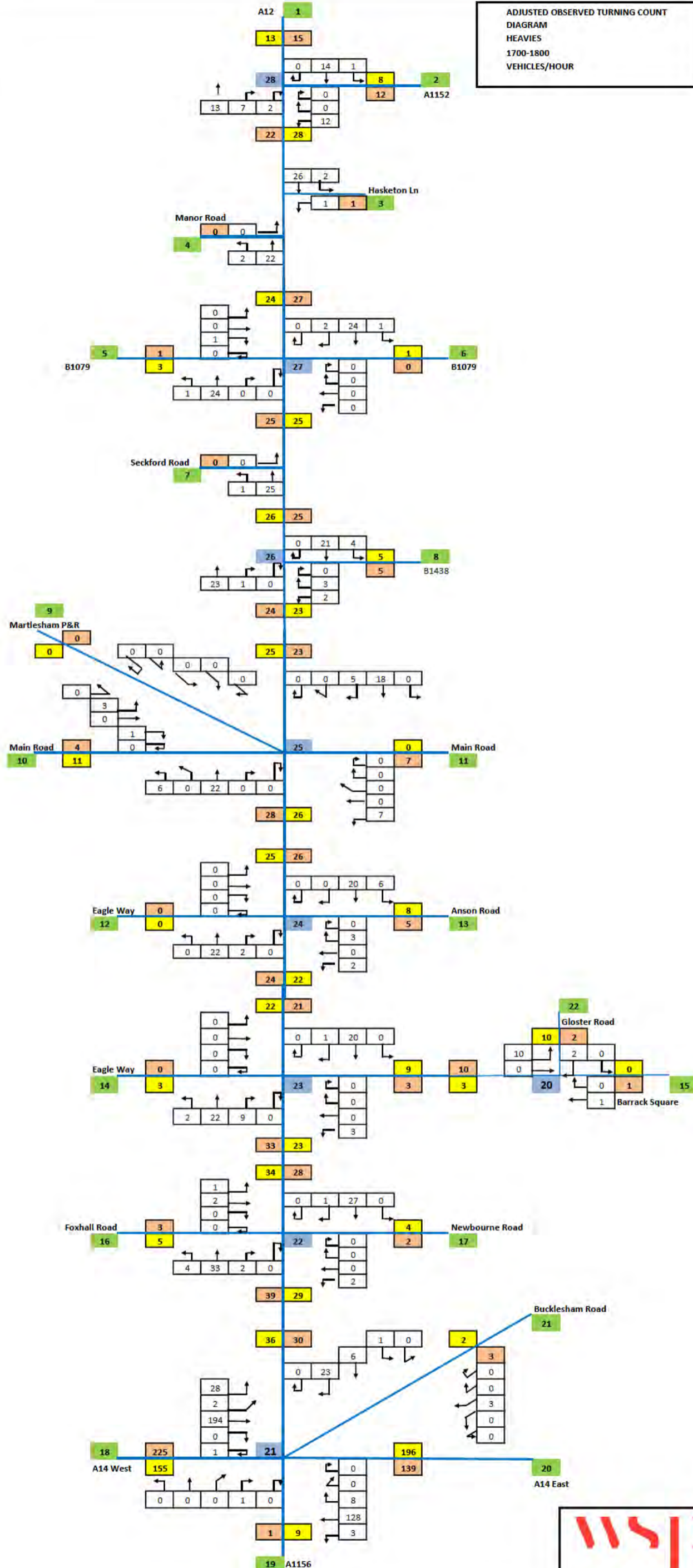
ADJUSTED OBSERVED TURNING COUNT
 DIAGRAM
 HEAVIES
 1500-1600
 VEHICLES/HOUR



ADJUSTED OBSERVED TURNING COUNT
 DIAGRAM
 HEAVIES
 1600-1700
 VEHICLES/HOUR



ADJUSTED OBSERVED TURNING COUNT
 DIAGRAM
 HEAVIES
 1700-1800
 VEHICLES/HOUR



Appendix B

BASE MODEL VALIDATION FIGURES





Vehicle Flow Information
Calibration Statistics
All Vehicles
AM Peak (06:00 -07:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	37	34	-3	-7.0%	0.4	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	14312	13086	-1226	-8.6%	1.5



Vehicle Flow Information
Calibration Statistics
Car Vehicles
AM Peak (06:00 -07:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	25	32	7	29.6%	1.4	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	10068	9410	-658	-6.5%	1.1



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
AM Peak (06:00 -07:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	4	1	-3	-75.0%	1.9	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	1436	1280	-156	-10.8%	0.9



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
AM Peak (06:00 -07:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	8	1	-7	-87.5%	3.3	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	2808	2396	-412	-14.7%	1.0



Vehicle Flow Information
Calibration Statistics
All Vehicles
AM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	311	287	-24	-7.8%	0.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	1	0	-1	-100.0%	0.8	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	79269	75580	-3689	-4.7%	1.2



Vehicle Flow Information
Calibration Statistics
Car Vehicles
AM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	243	238	-5	-2.2%	0.2	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	1	0	-1	-100.0%	0.8	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	60217	57863	-2354	-3.9%	0.9



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
AM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	15	7	-8	-53.3%	1.4	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	5982	5385	-597	-10.0%	0.8



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
AM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	53	42	-11	-20.9%	0.9	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	13070	12331	-739	-5.7%	0.8



Vehicle Flow Information
Calibration Statistics
All Vehicles
AM Peak (07:00 -08:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	117	106	-12	-9.8%	1.1	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	29480	27594	-1886	-6.4%	1.4



Vehicle Flow Information
Calibration Statistics
Car Vehicles
AM Peak (07:00 -08:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	87	80	-7	-8.0%	0.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	21873	20447	-1426	-6.5%	1.2



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
AM Peak (07:00 -08:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	4	2	-2	-52.5%	1.2	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	2068	1866	-202	-9.8%	0.8



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
AM Peak (07:00 -08:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	26	24	-2	-9.2%	0.5	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	5539	5280	-259	-4.7%	0.7



Vehicle Flow Information
Calibration Statistics
All Vehicles
AM Peak (08:00 -09:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	157	147	-10	-6.6%	0.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	1	0	-1	-100.0%	1.4	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	35477	34900	-577	-1.6%	1.1



Vehicle Flow Information
Calibration Statistics
Car Vehicles
AM Peak (08:00 -09:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	131	125	-6	-4.4%	0.5	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	1	0	-1	-100.0%	1.4	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	28276	28006	-270	-1.0%	0.8



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
AM Peak (08:00 -09:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	7	4	-3	-41.4%	1.2	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	2478	2239	-240	-9.7%	0.9



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
AM Peak (08:00 -09:00)

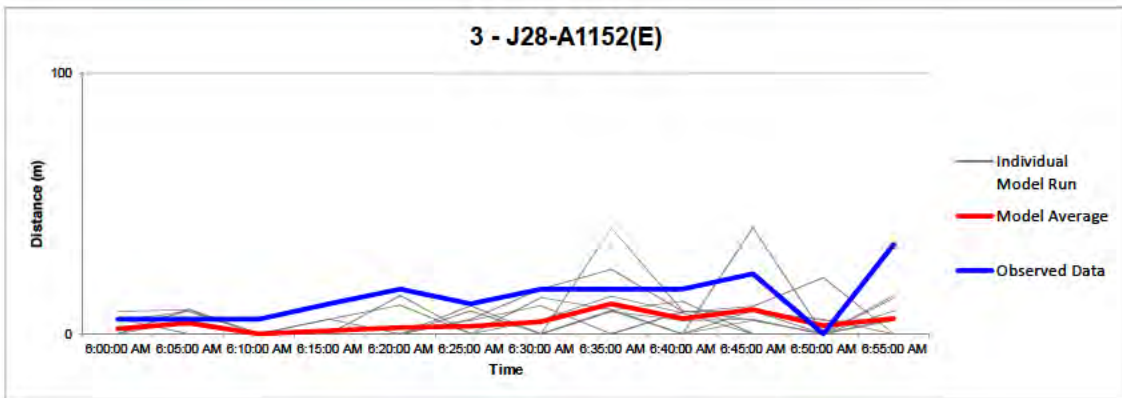
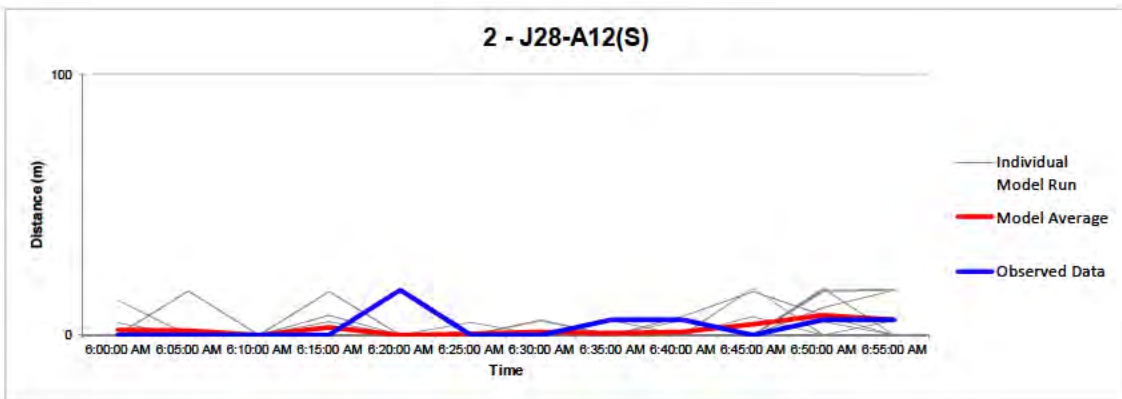
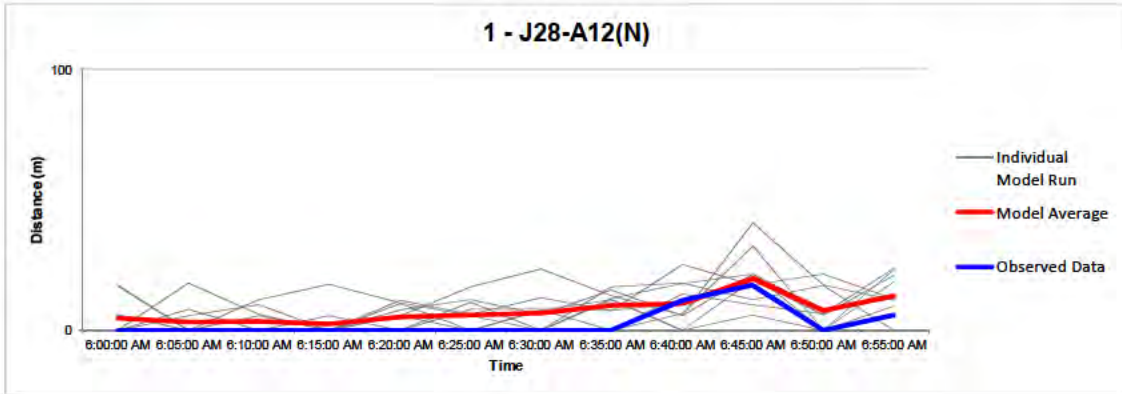
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140	Site 28	Junction 28	A1152	A12 North	28::119::17	19	17	-2	-8.9%	0.4	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	4723	4655	-68	-1.4%	0.9



Queue Graphs

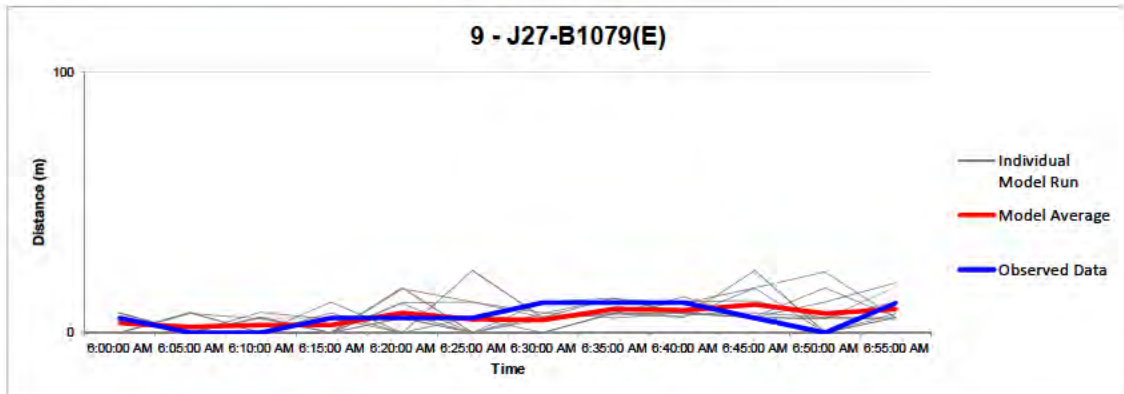
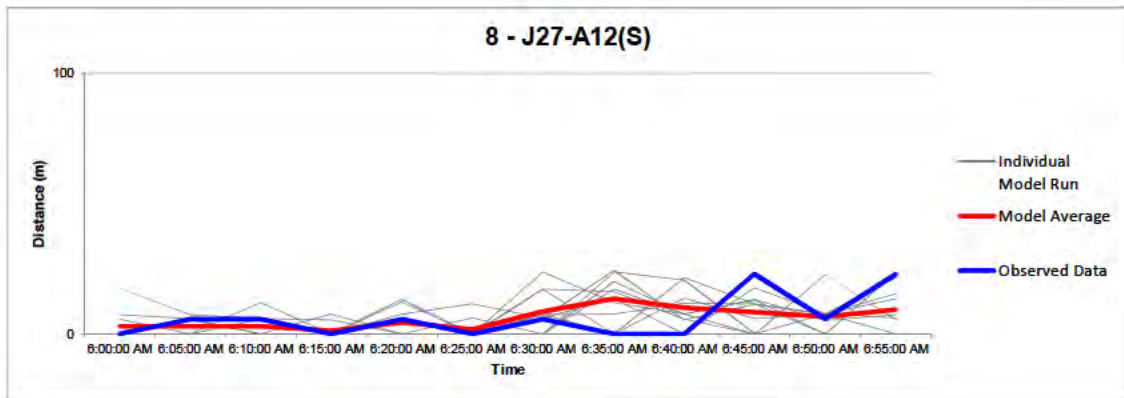
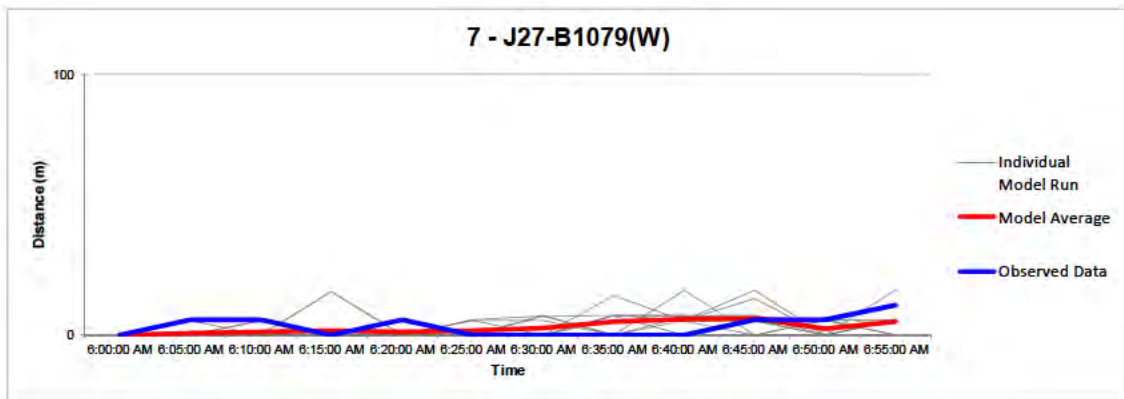
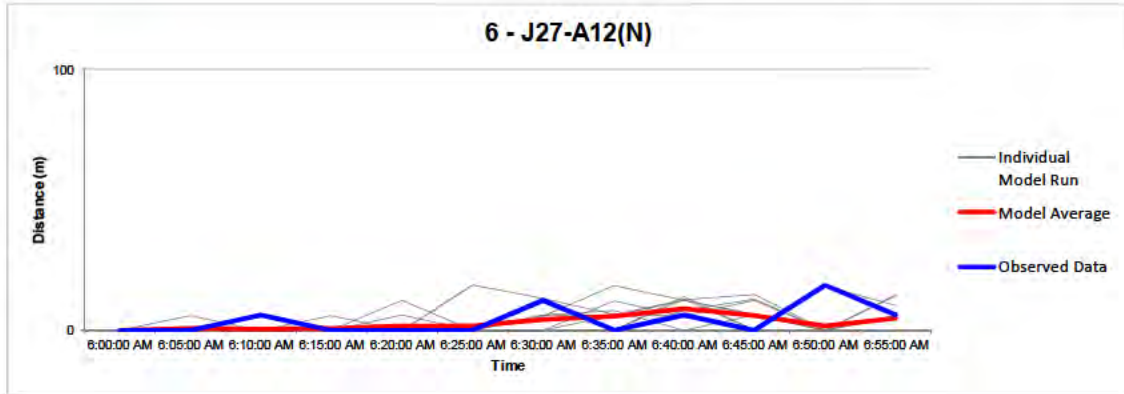
Junction Number 1
AM Peak (06:00 -07:00)





Queue Graphs

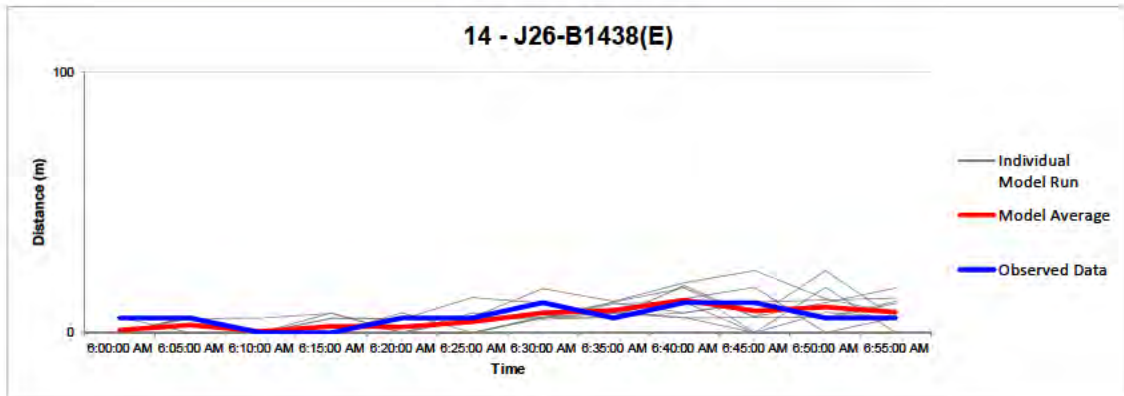
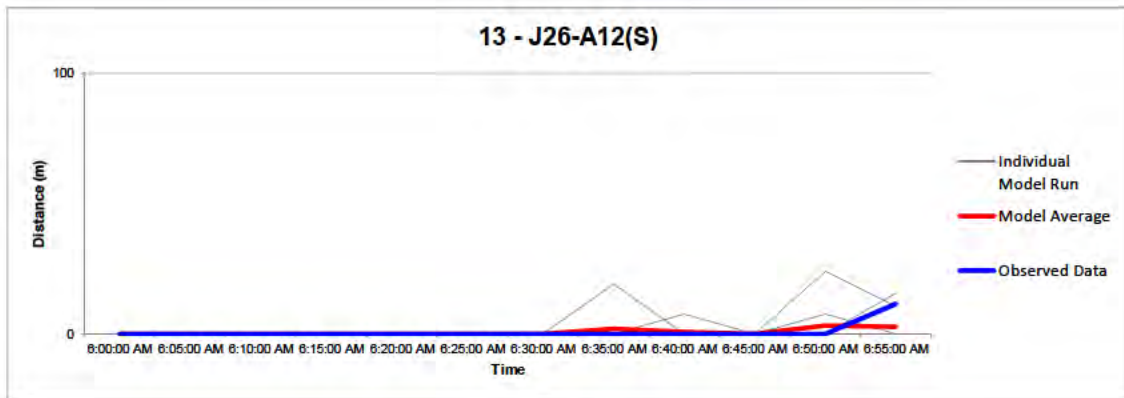
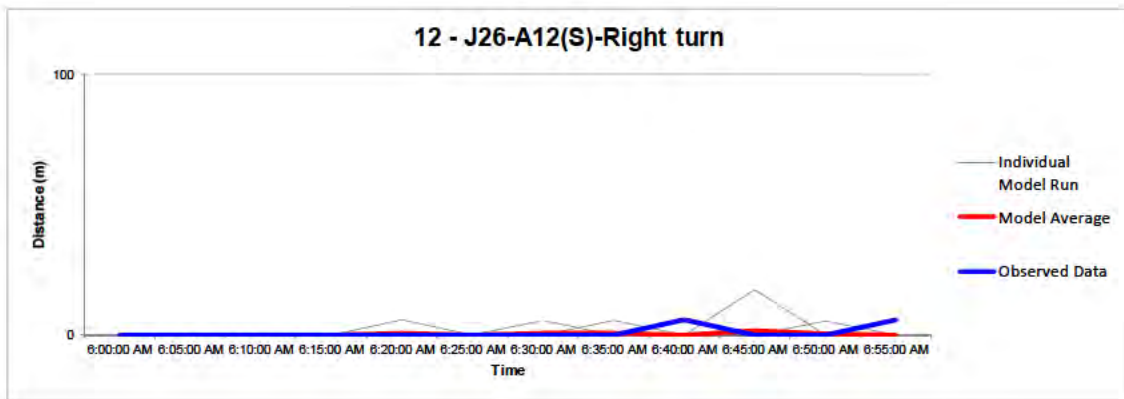
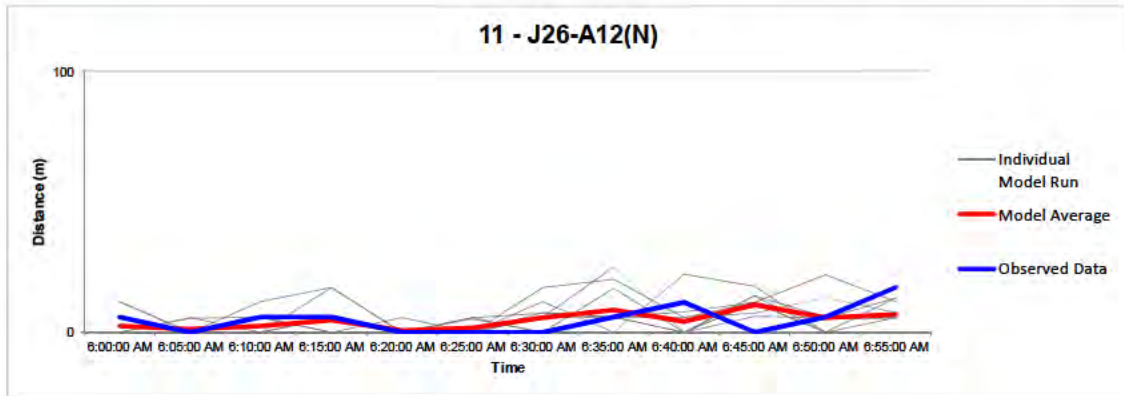
Junction Number 2
AM Peak (06:00 -07:00)





Queue Graphs

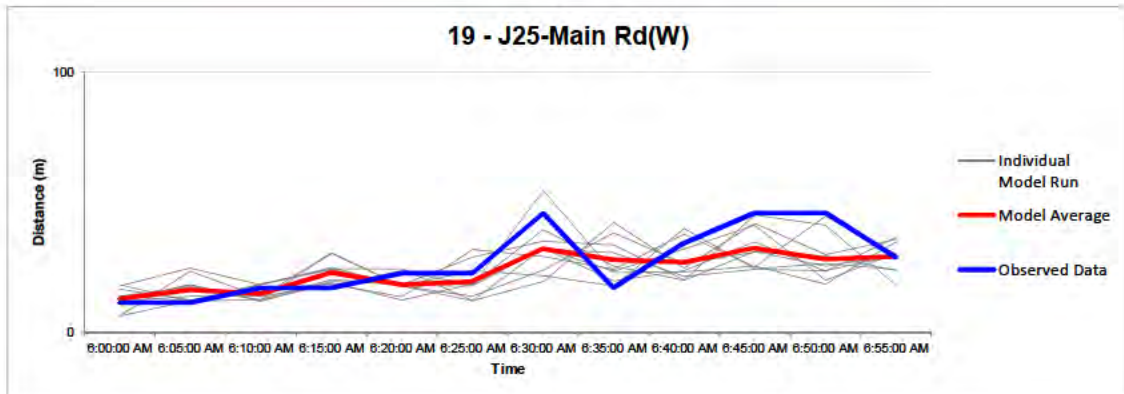
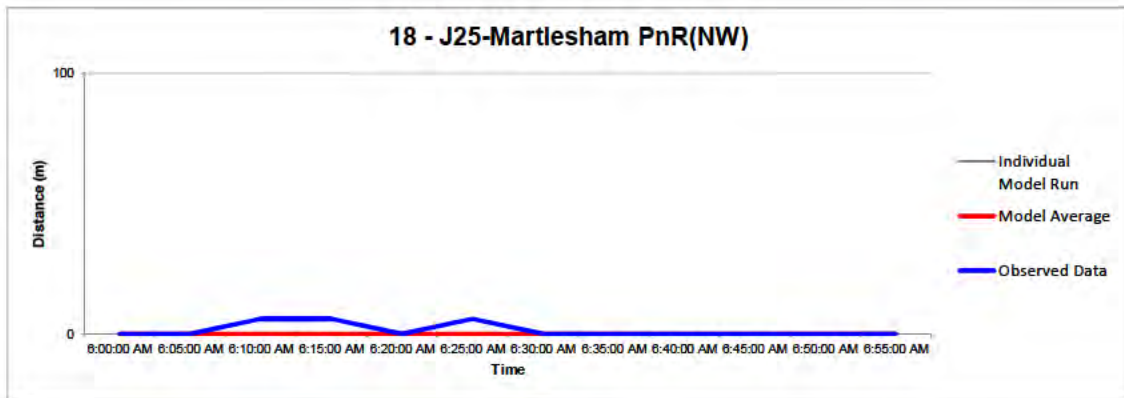
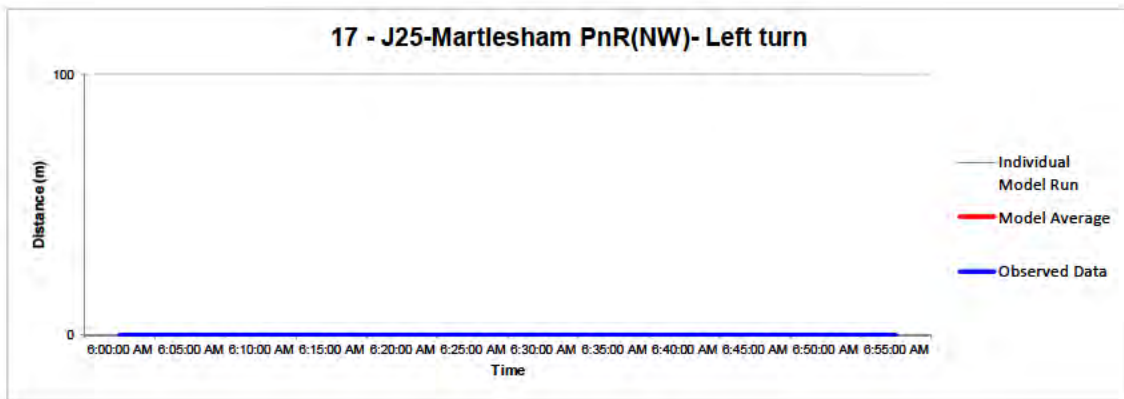
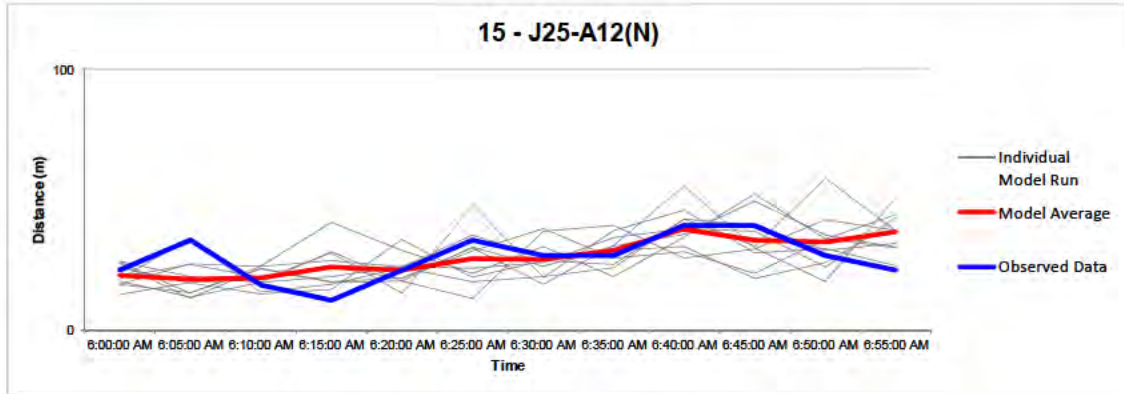
Junction Number 3
AM Peak (06:00 -07:00)





Queue Graphs

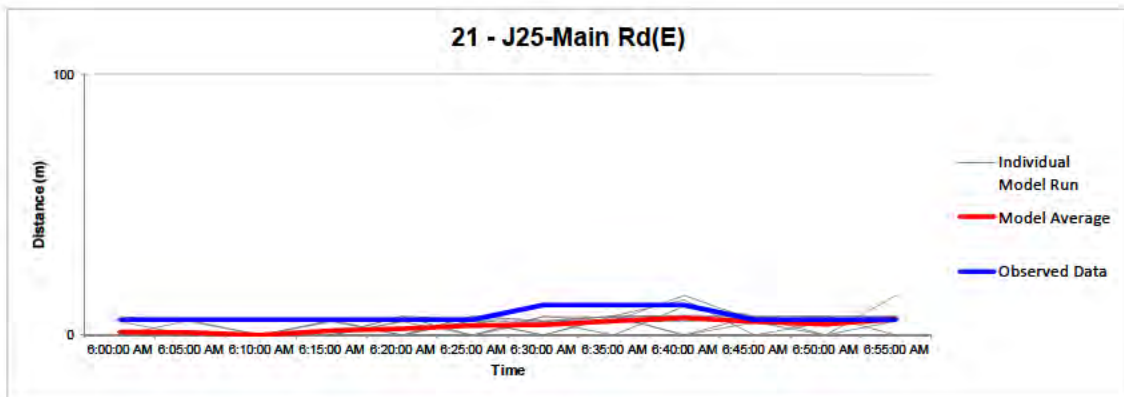
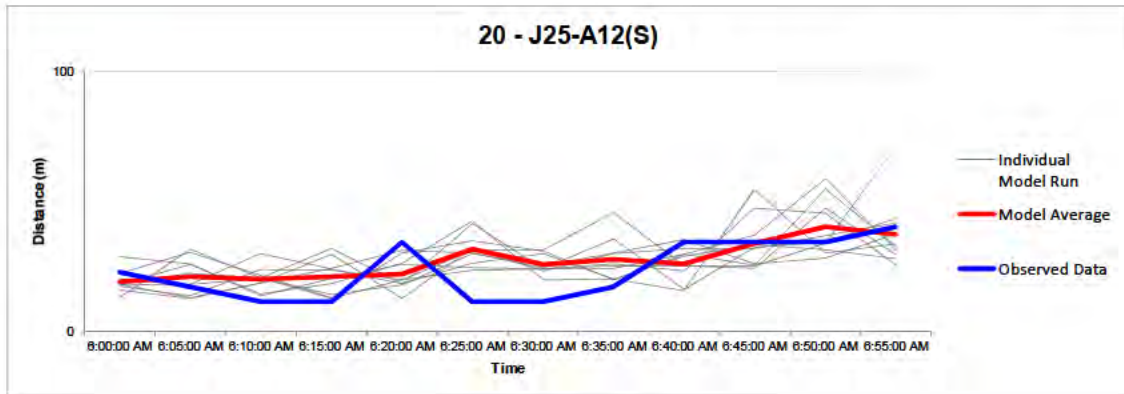
Junction Number 4
AM Peak (06:00 -07:00)





Queue Graphs

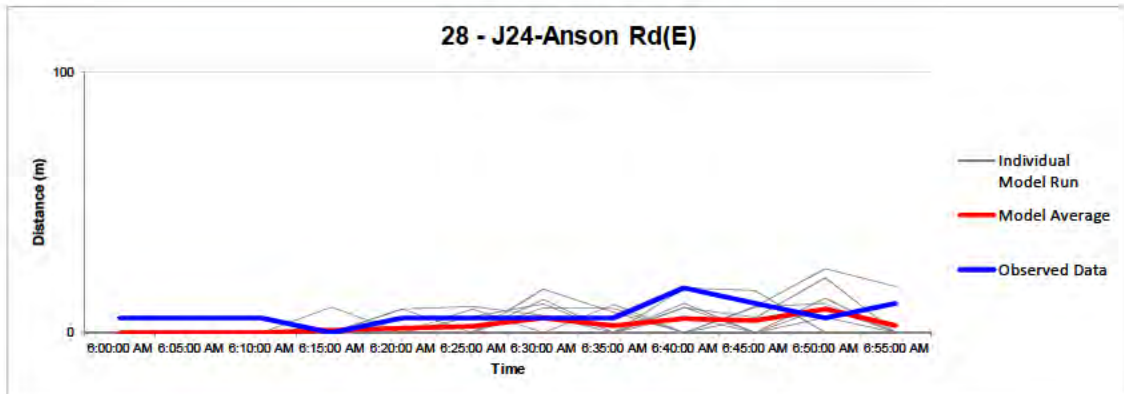
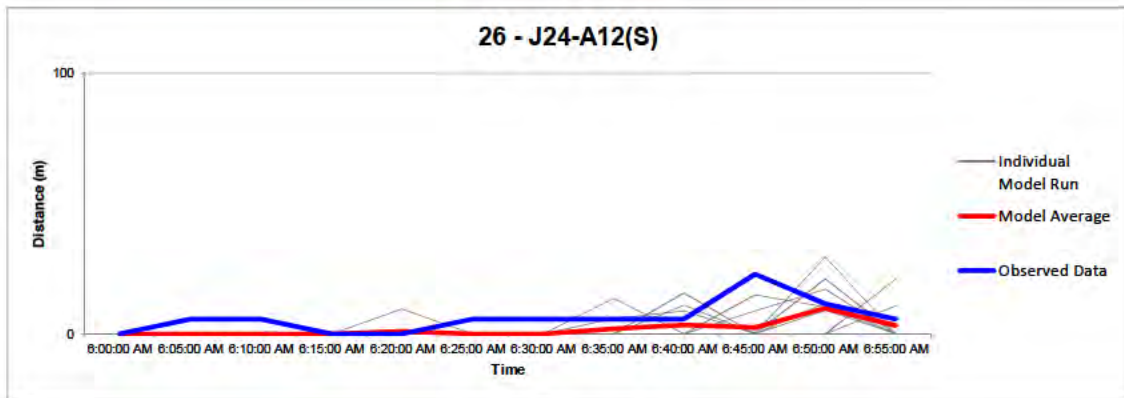
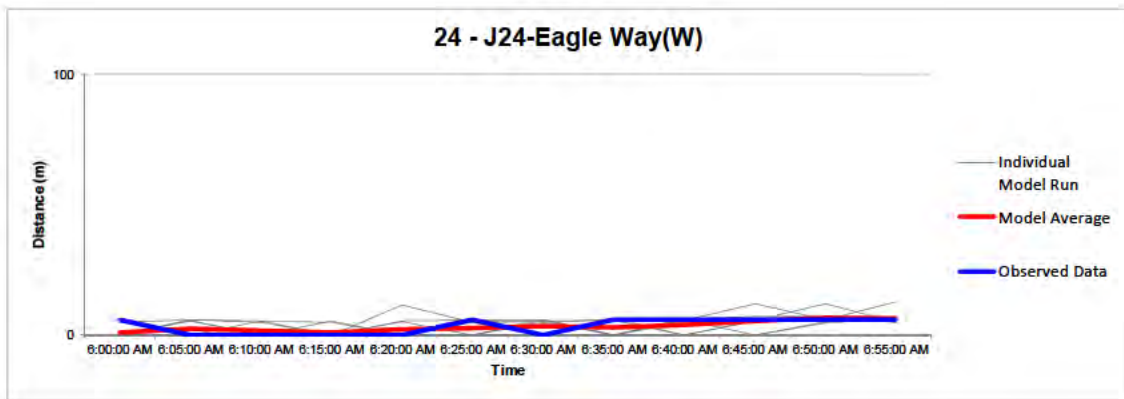
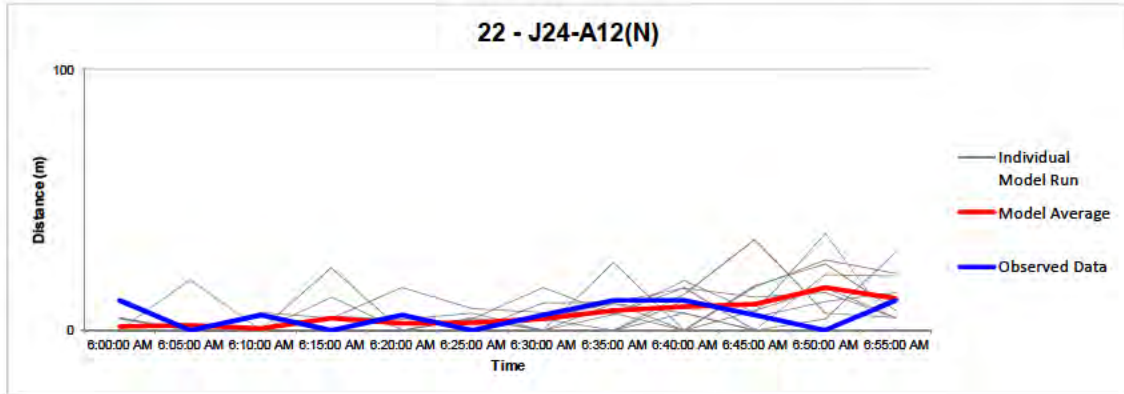
Junction Number 4
AM Peak (06:00 -07:00)





Queue Graphs

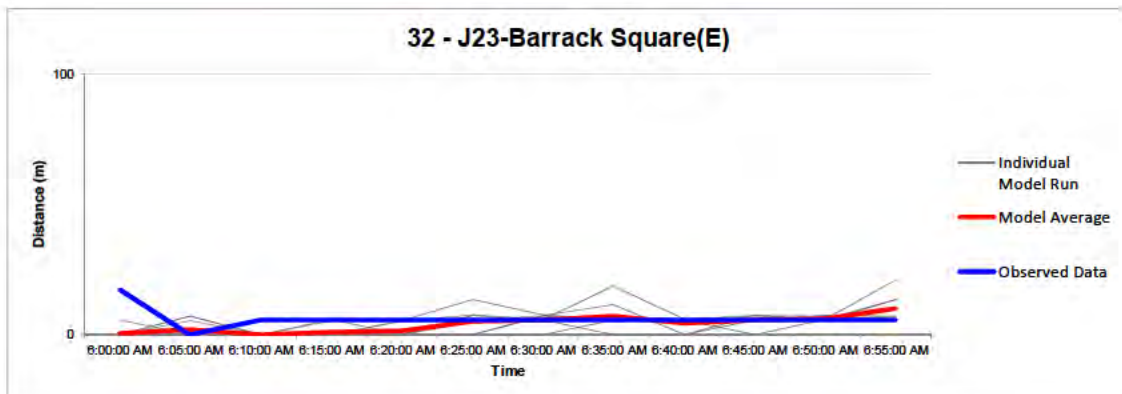
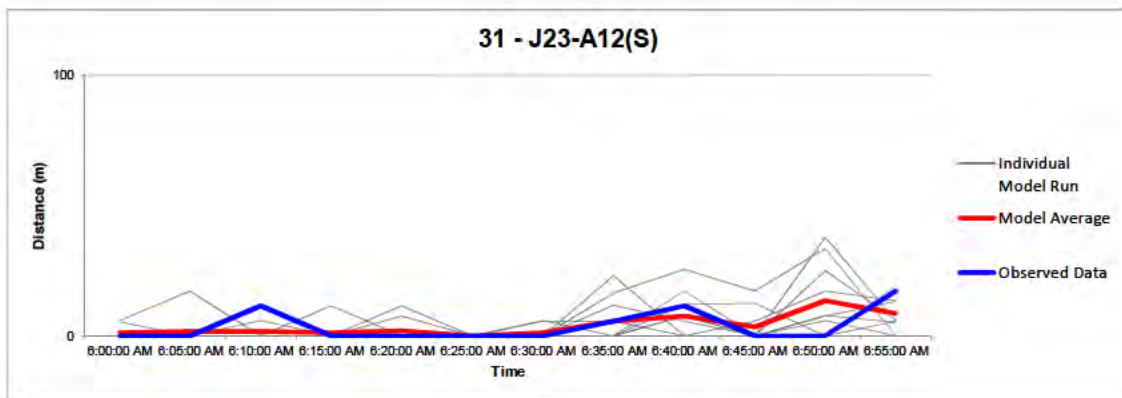
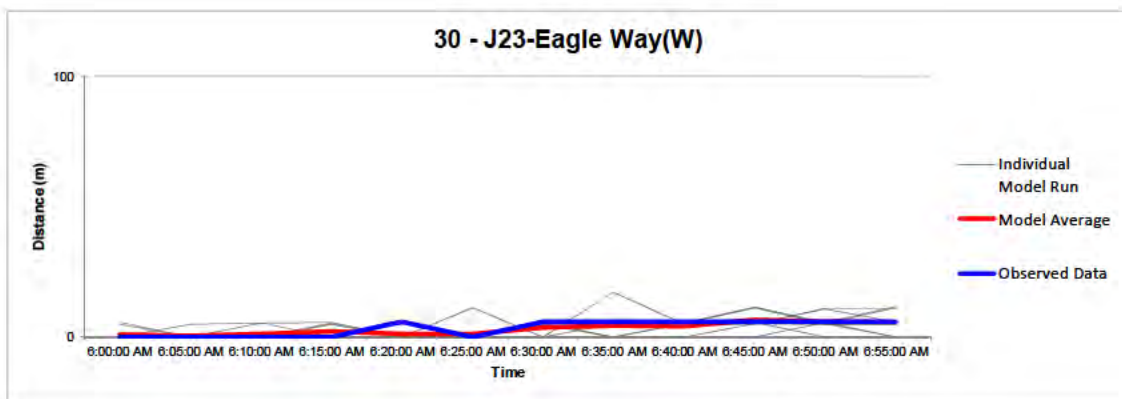
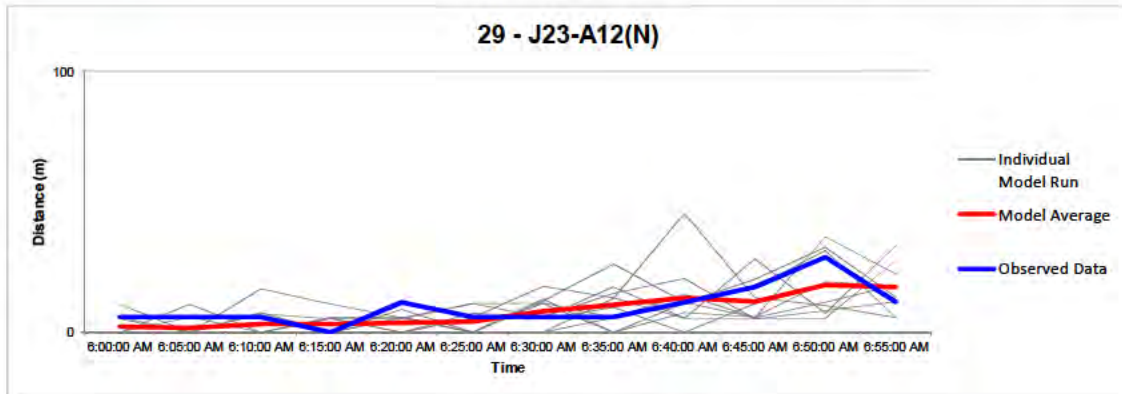
Junction Number 5
AM Peak (06:00 -07:00)





Queue Graphs

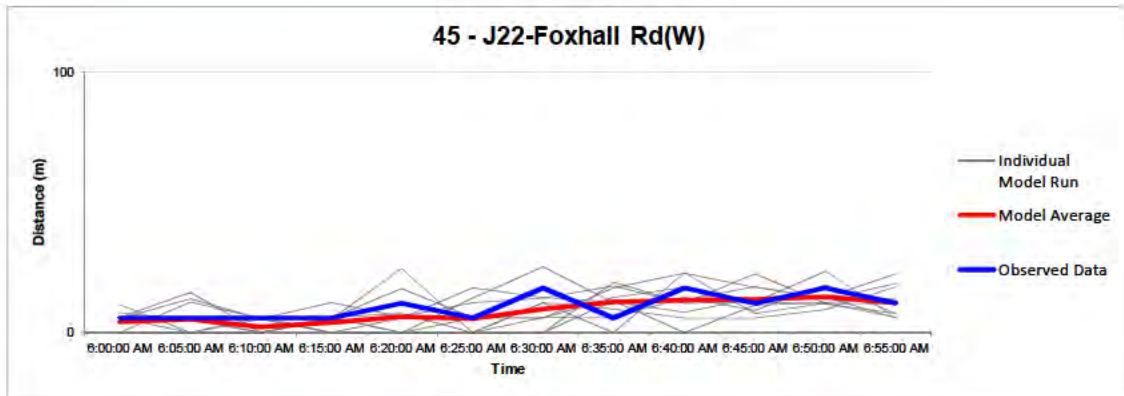
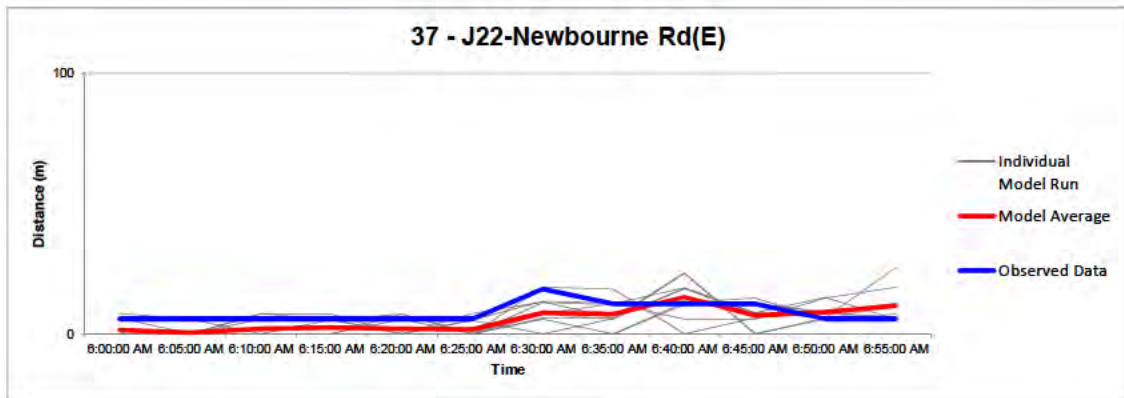
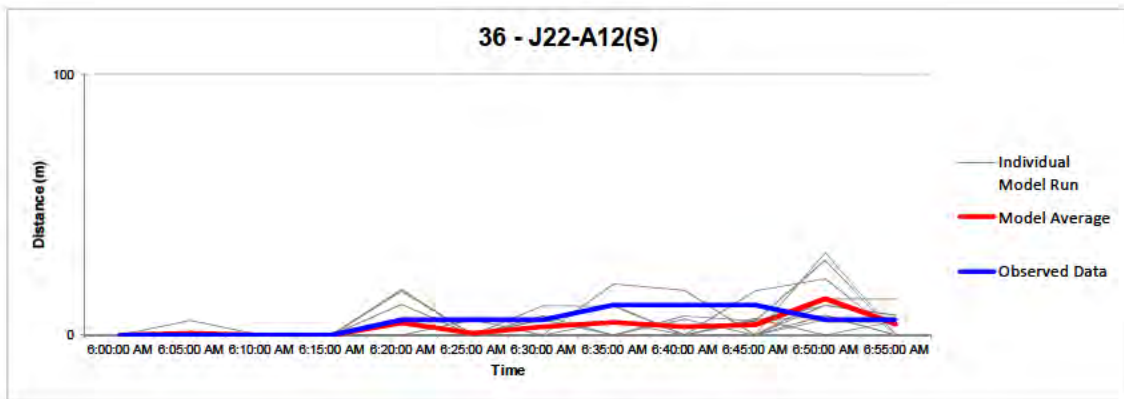
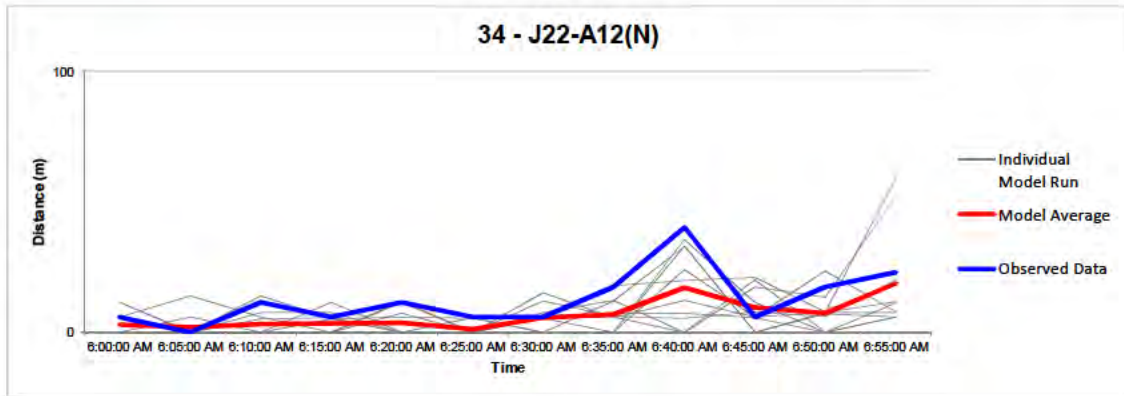
Junction Number 6
AM Peak (06:00 -07:00)





Queue Graphs

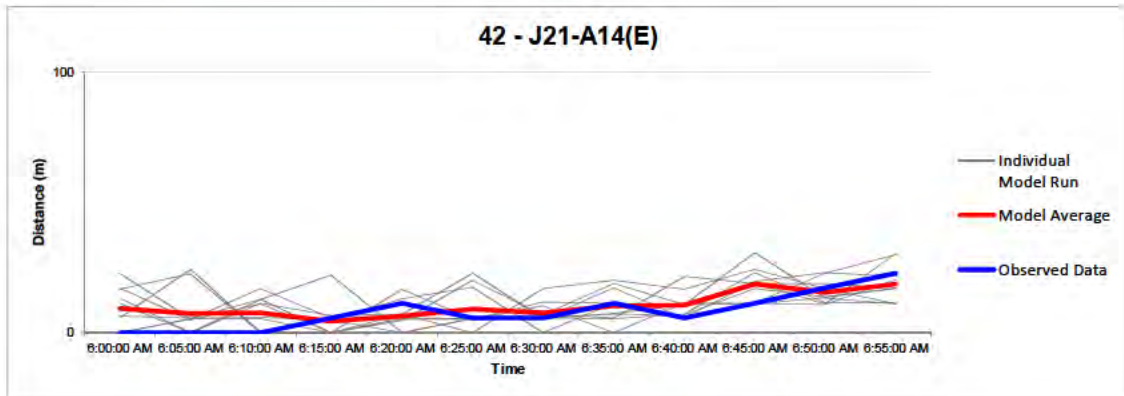
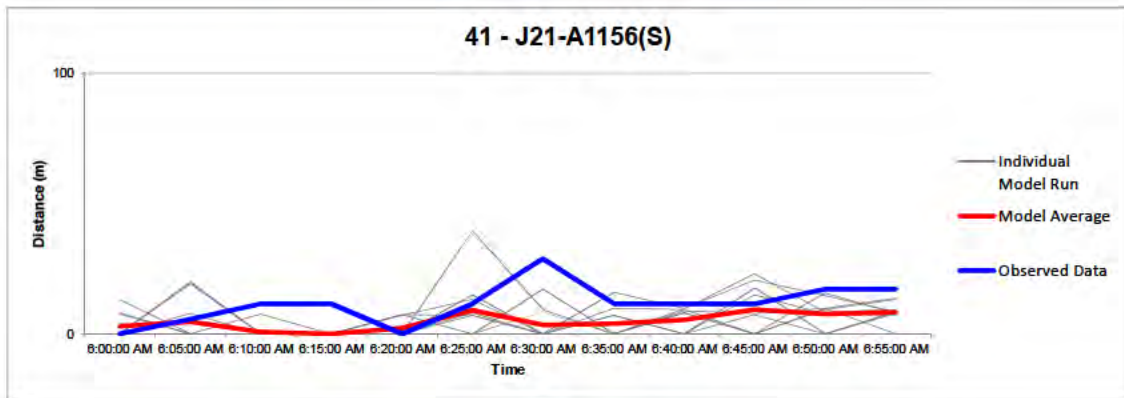
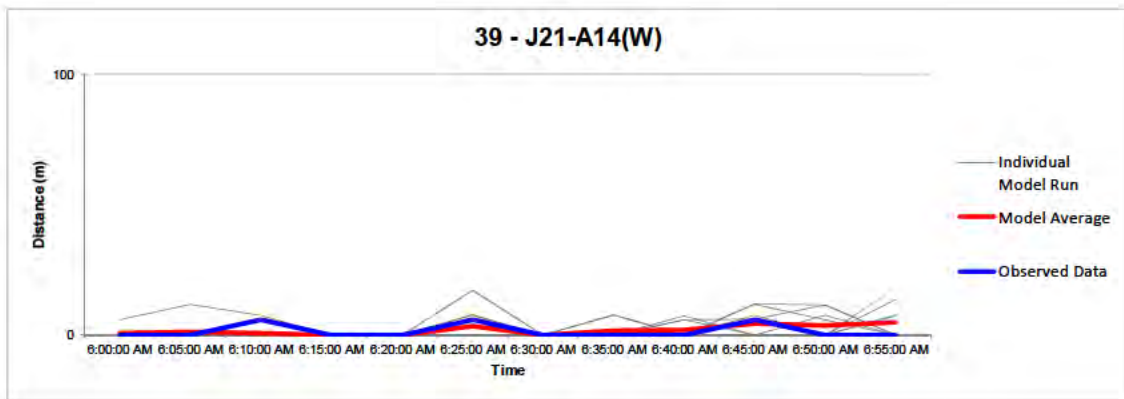
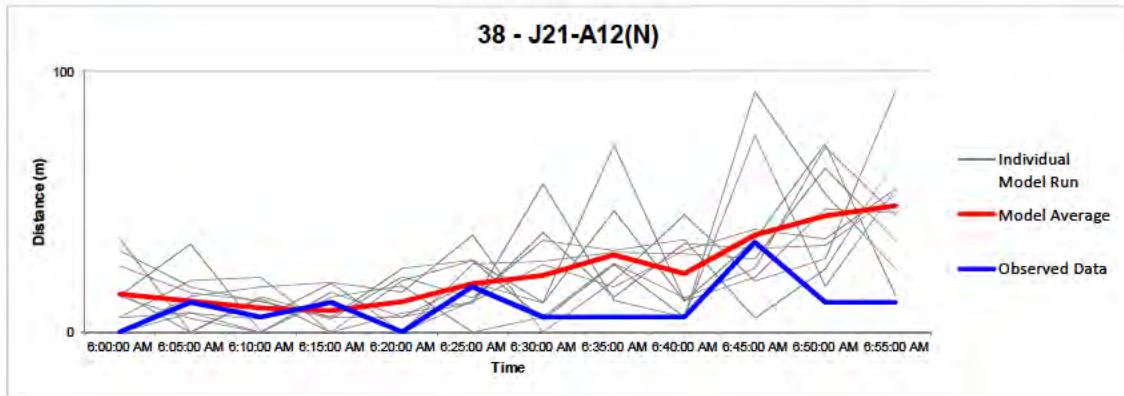
Junction Number 7
AM Peak (06:00 -07:00)





Queue Graphs

Junction Number 8
AM Peak (06:00 -07:00)

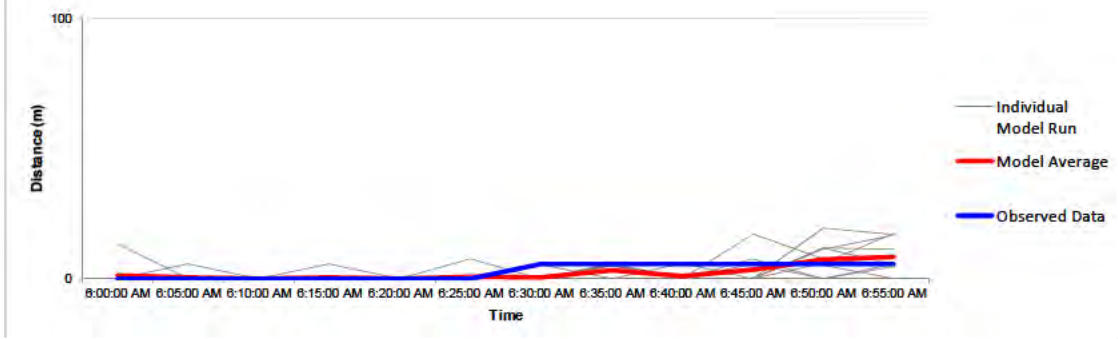




Queue Graphs

Junction Number 8
AM Peak (06:00 -07:00)

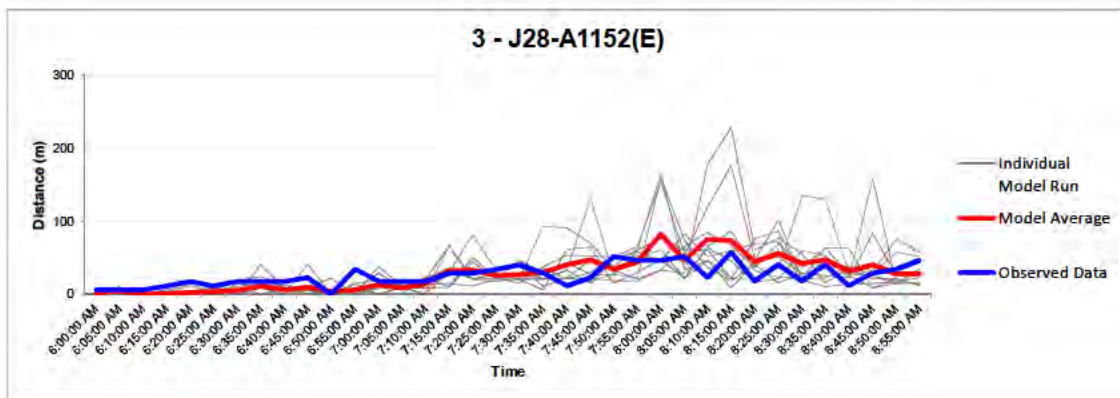
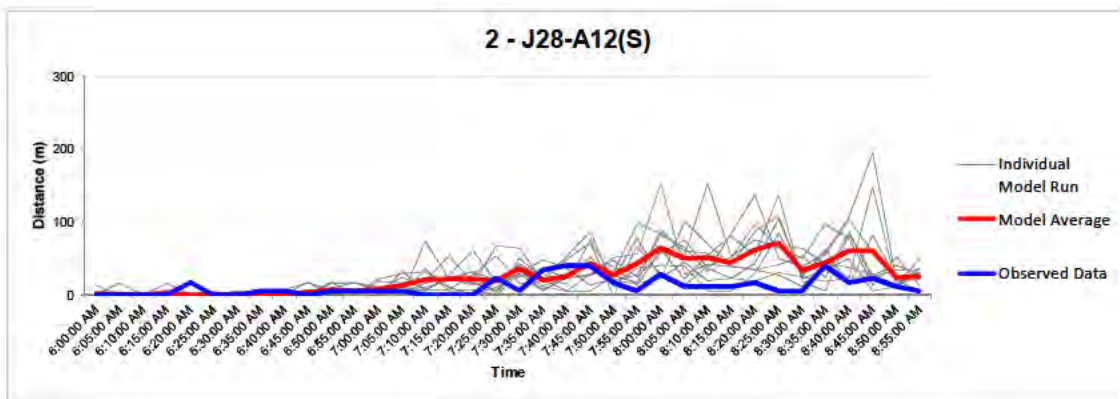
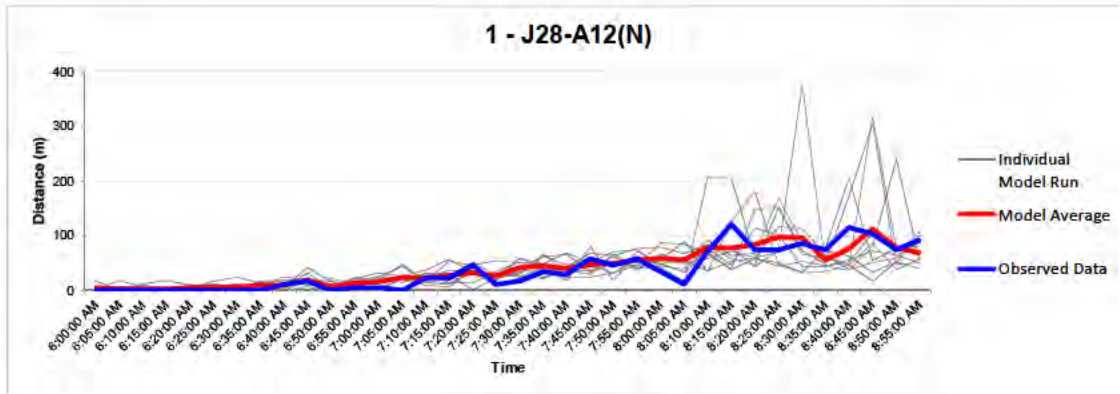
44 - J21-Bucklesham Rd(NE)





Queue Graphs

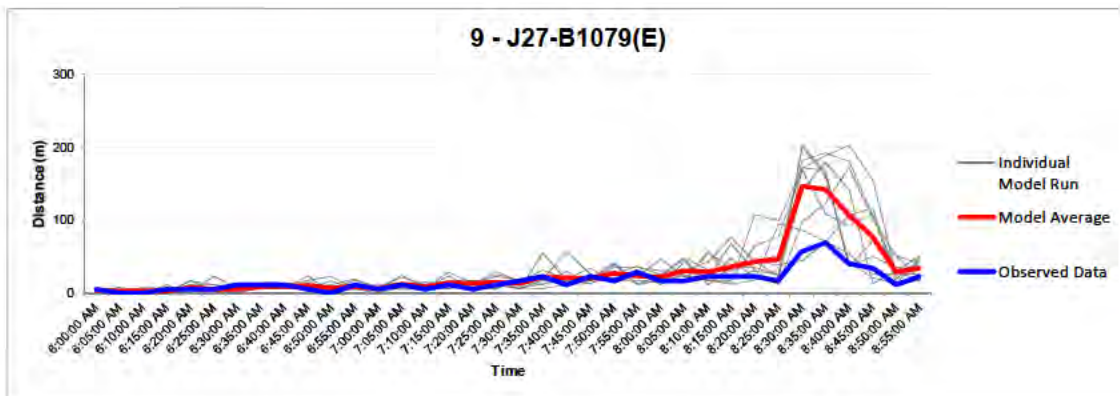
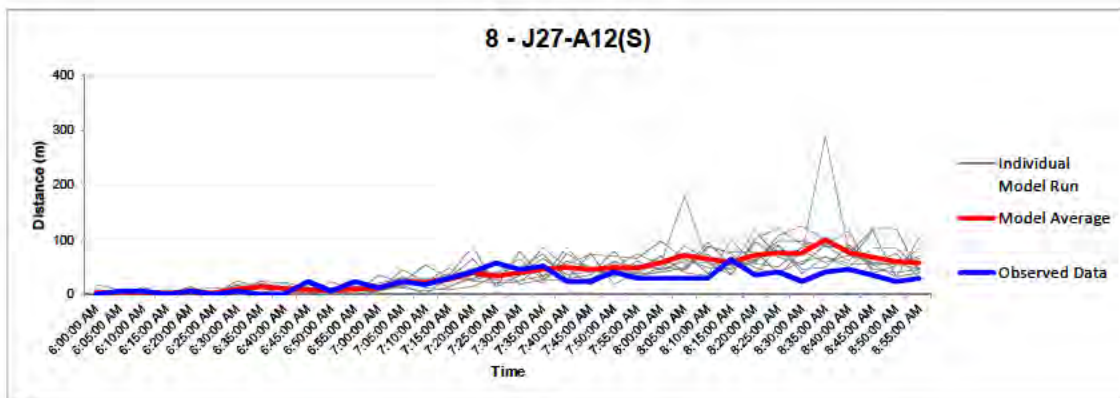
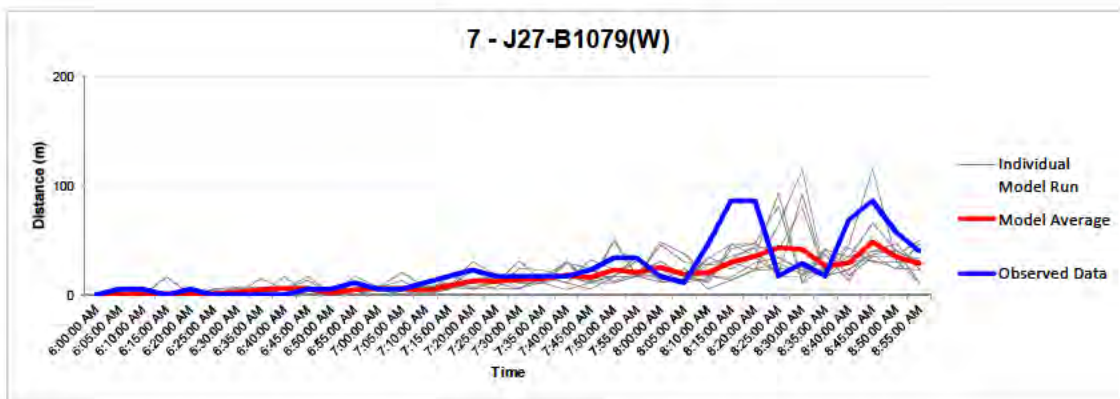
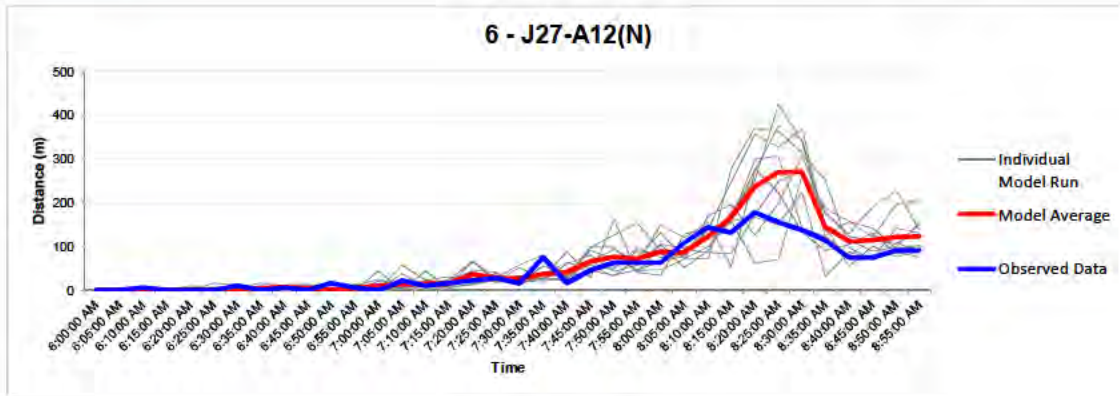
Junction Number 1
AM Period





Queue Graphs

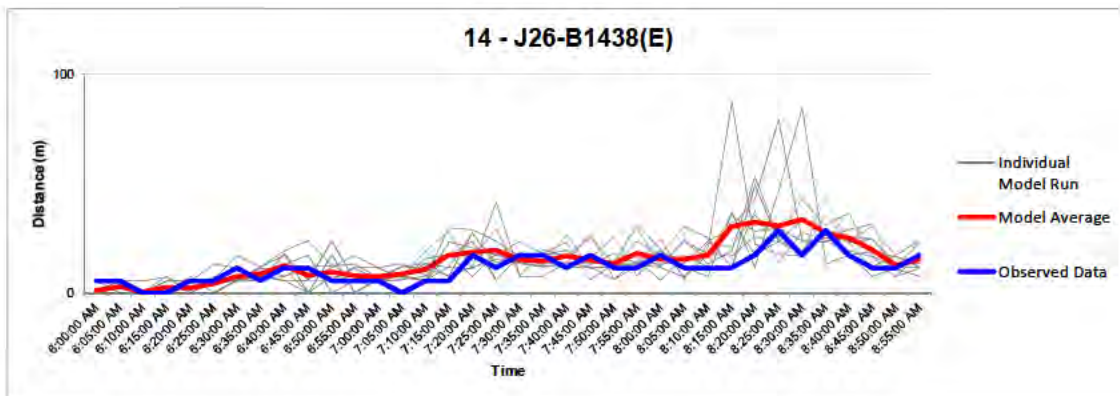
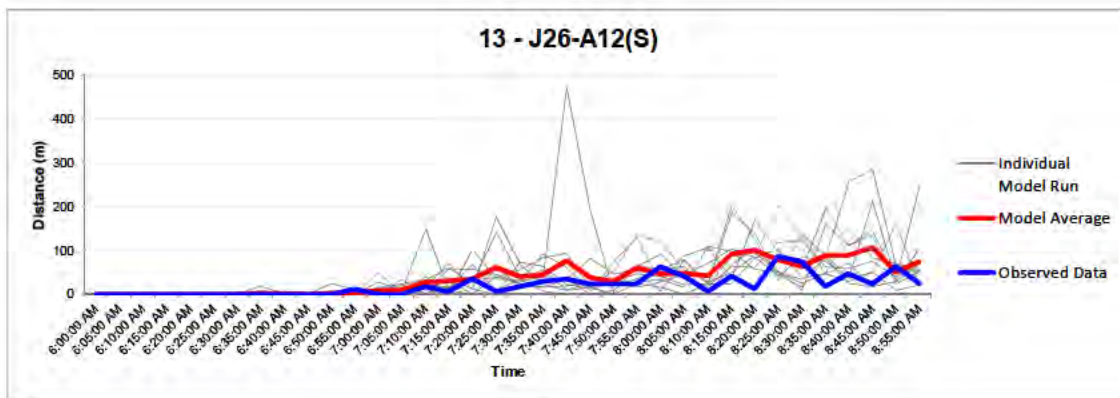
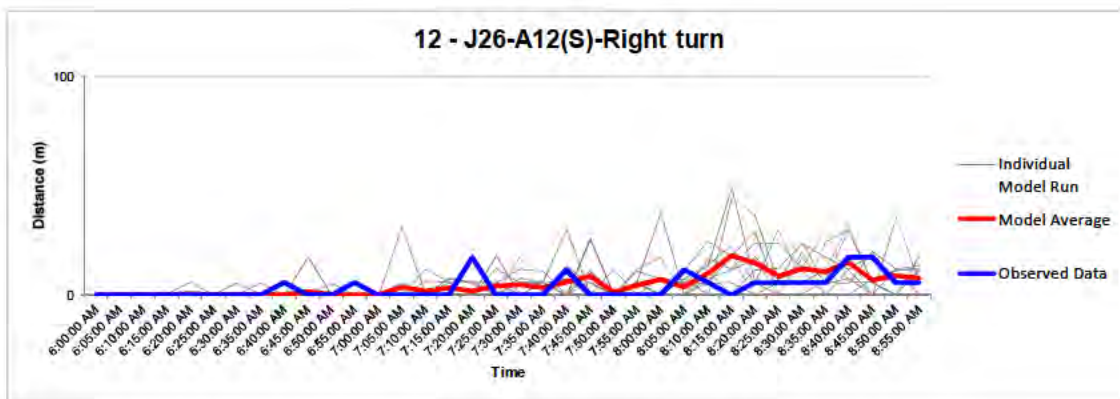
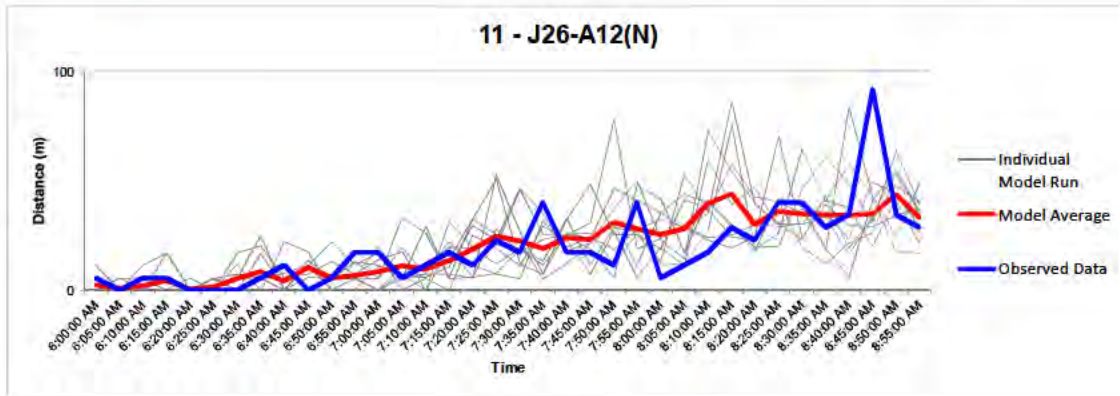
Junction Number 2
AM Period





Queue Graphs

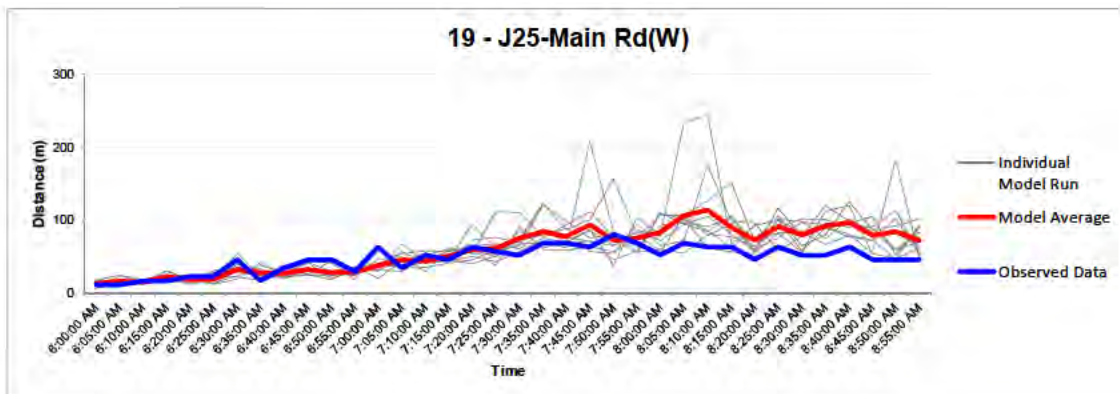
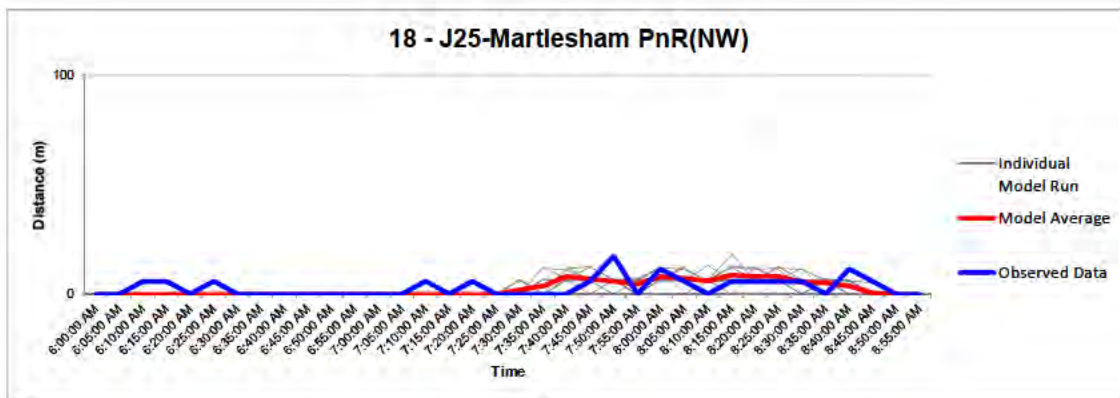
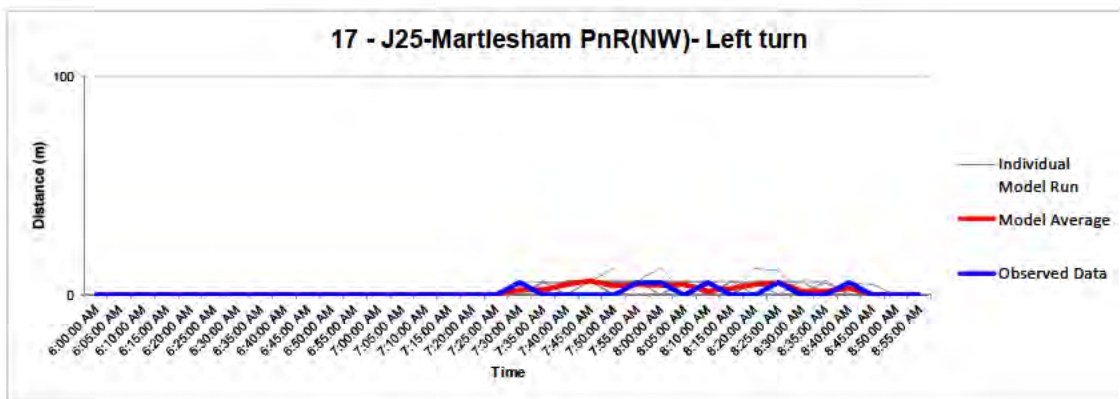
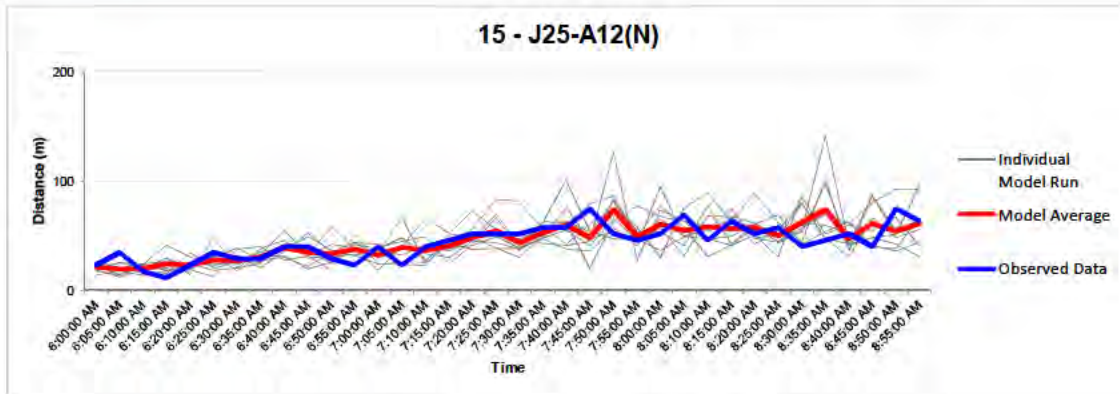
Junction Number 3
AM Period





Queue Graphs

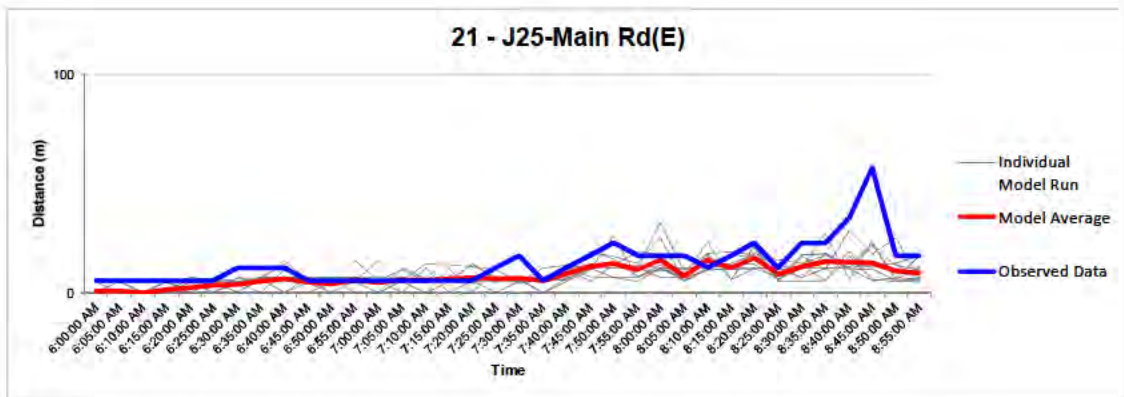
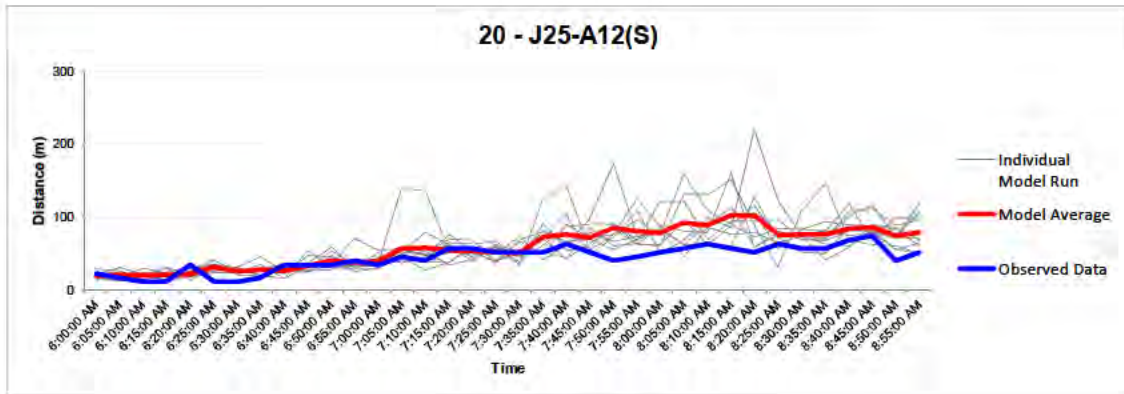
Junction Number 4
AM Period





Queue Graphs

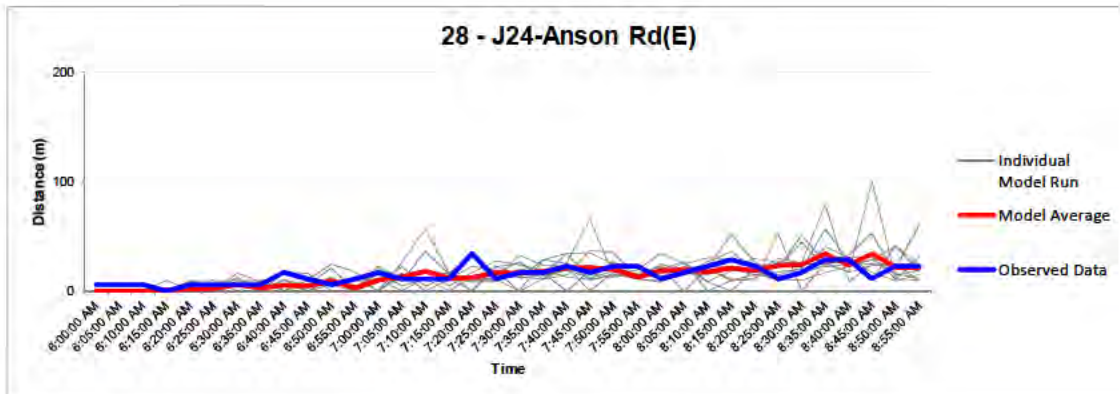
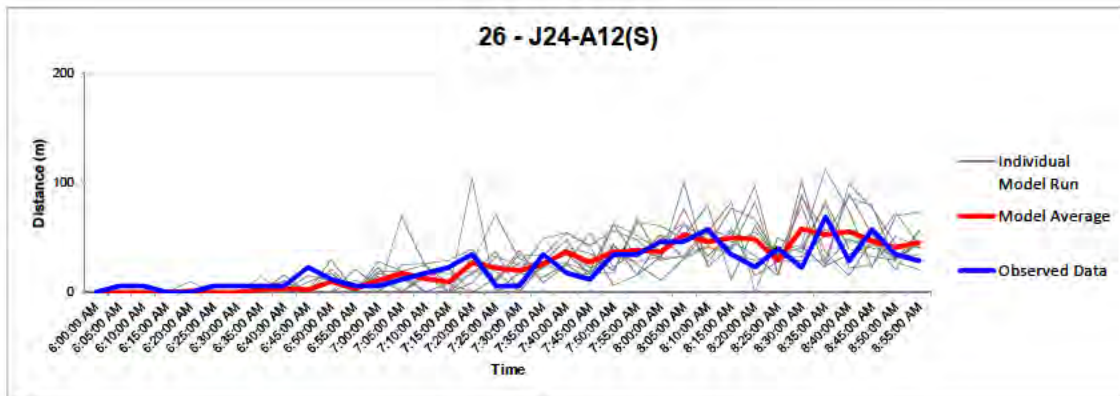
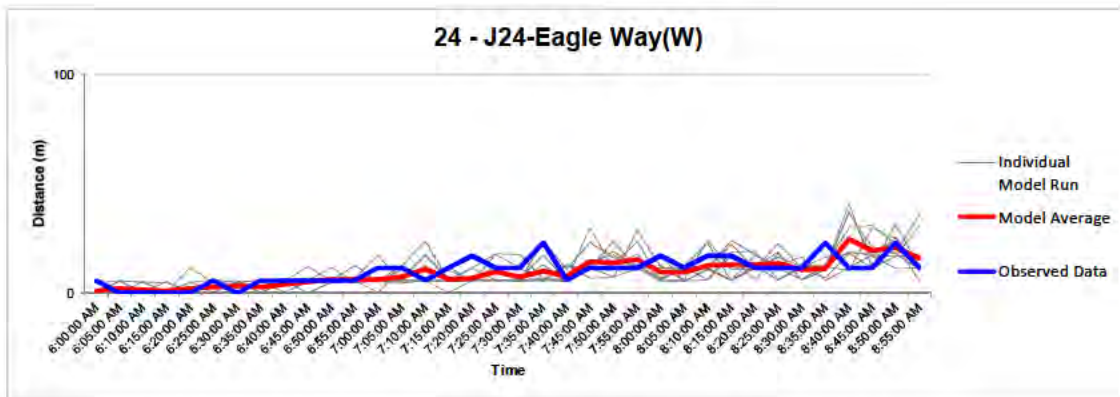
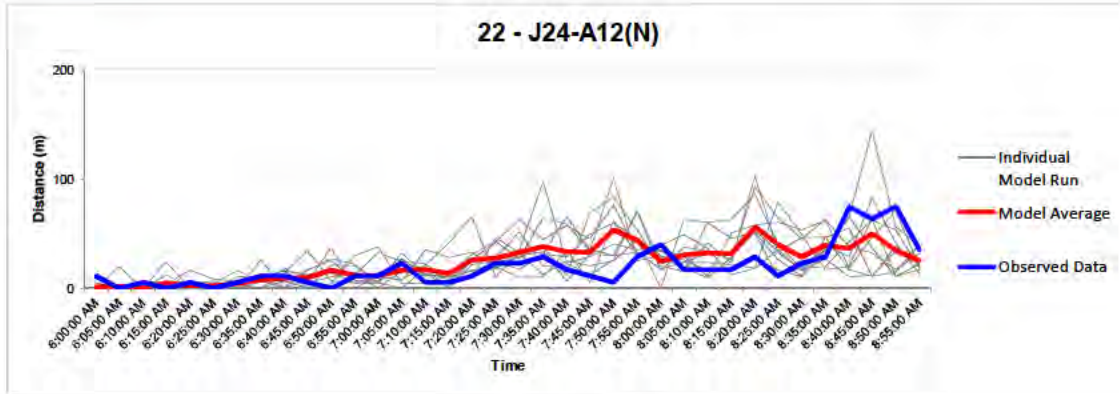
Junction Number 4
AM Period





Queue Graphs

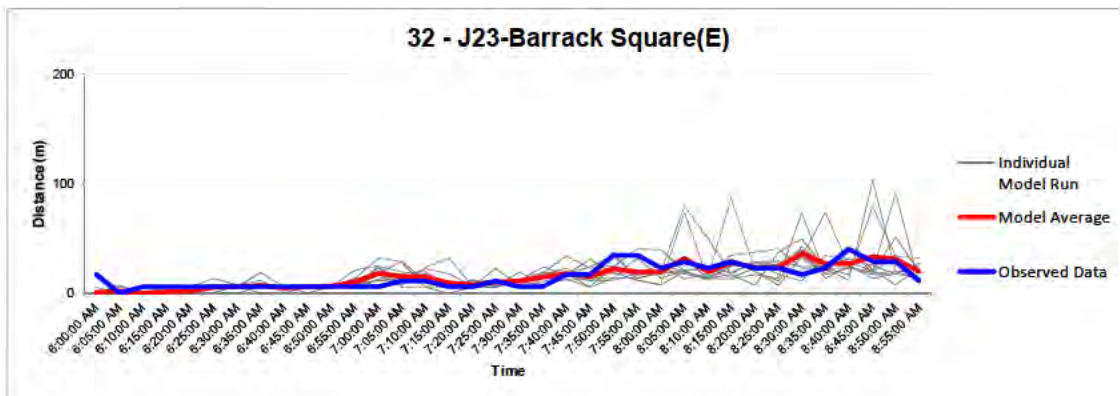
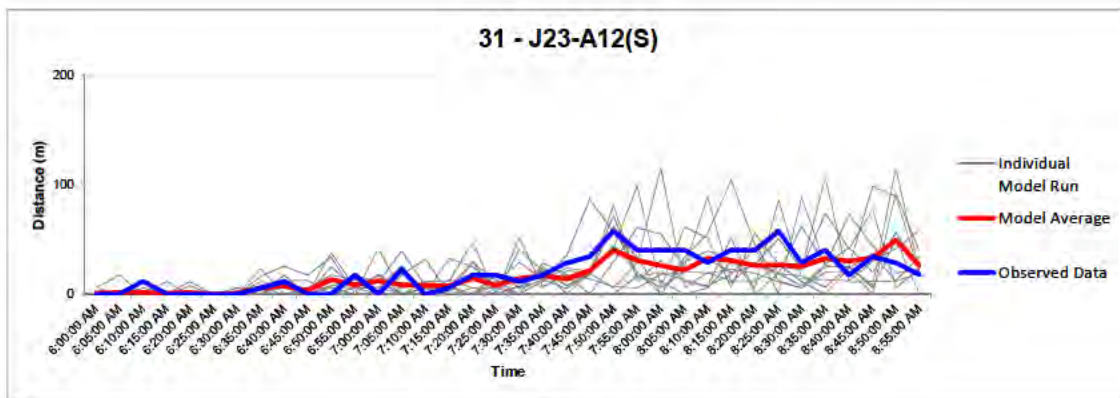
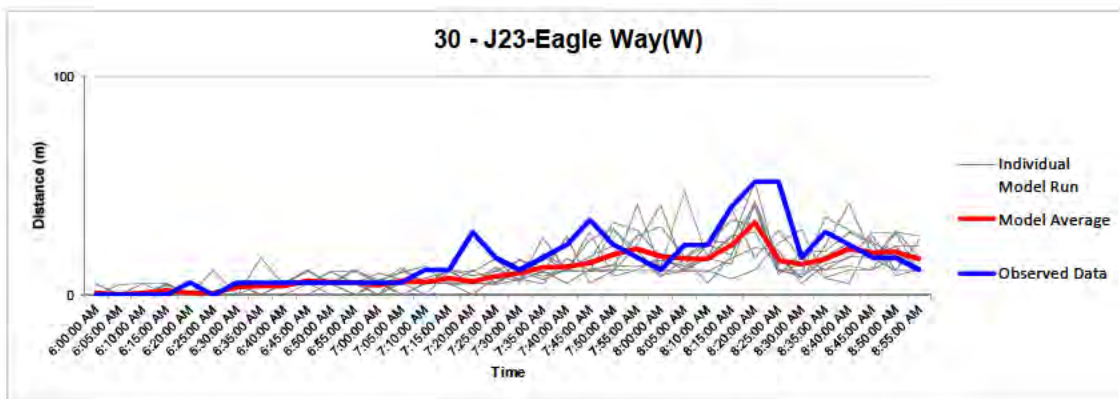
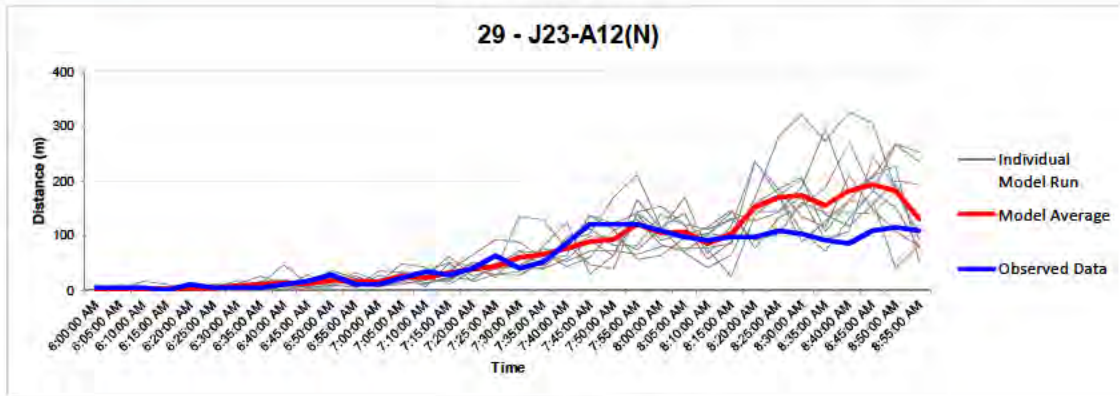
Junction Number 5
AM Period





Queue Graphs

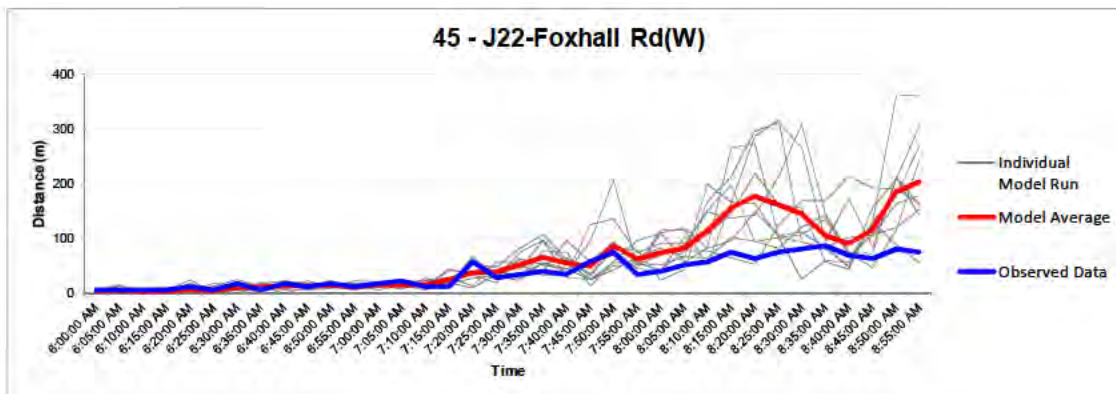
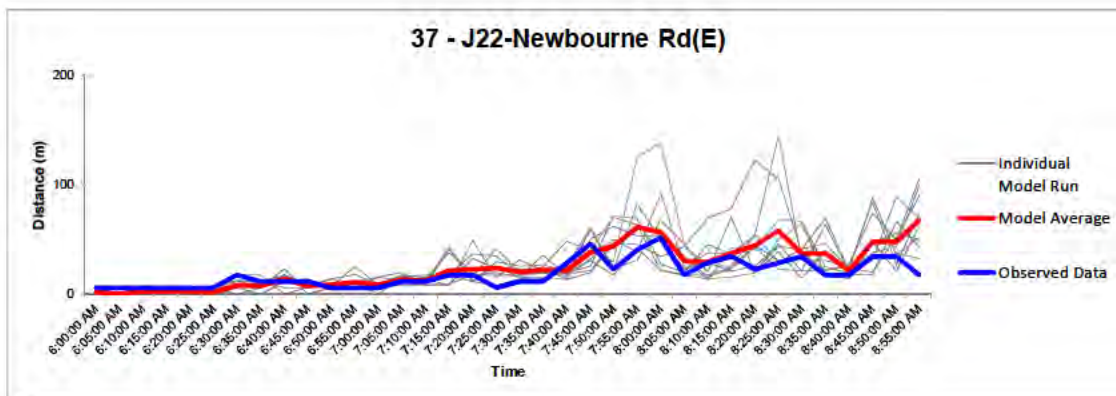
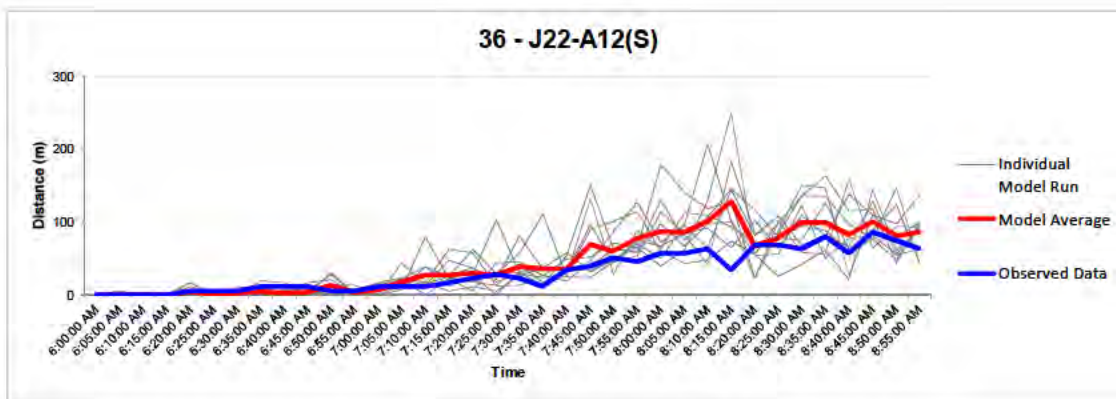
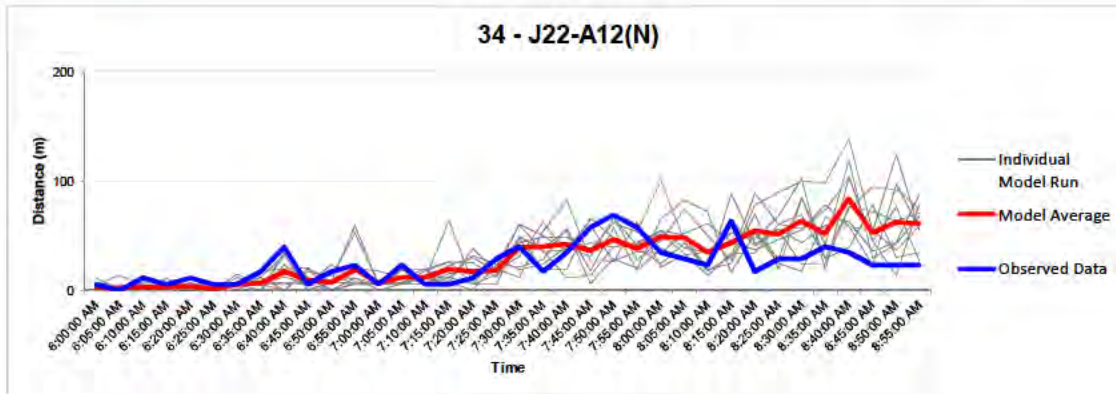
Junction Number 6
AM Period





Queue Graphs

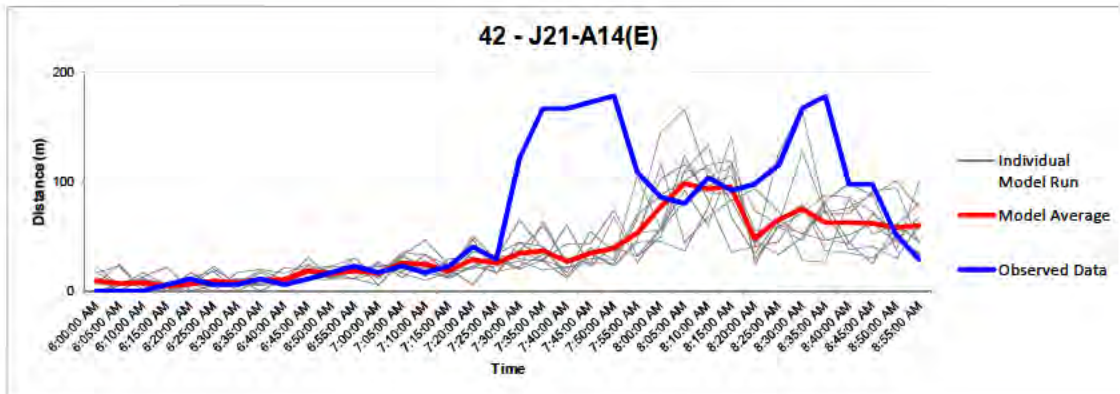
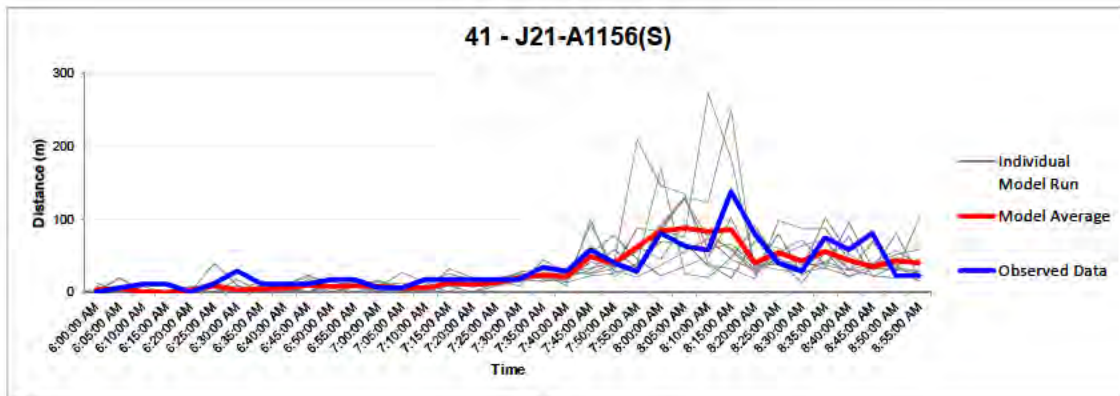
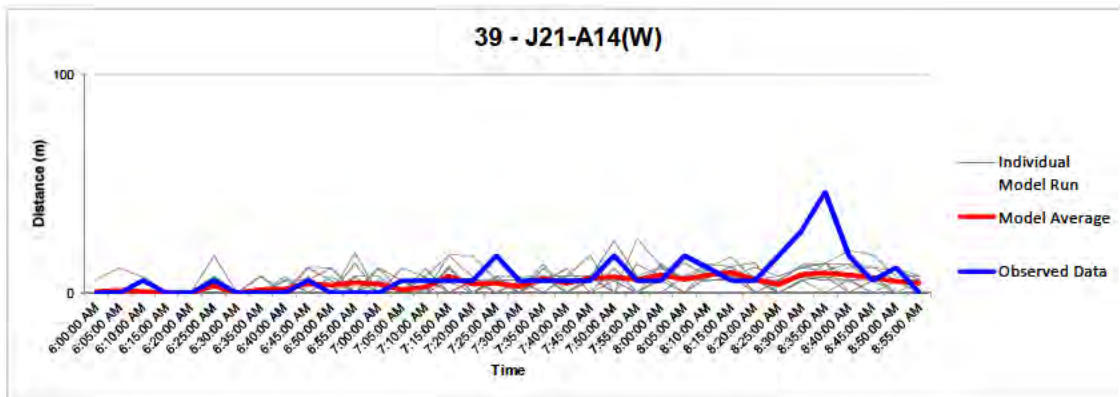
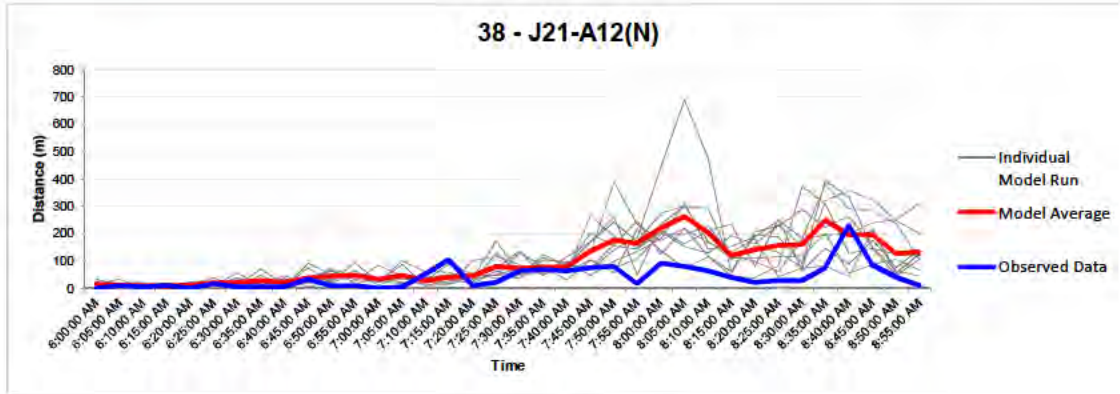
Junction Number 7
AM Period





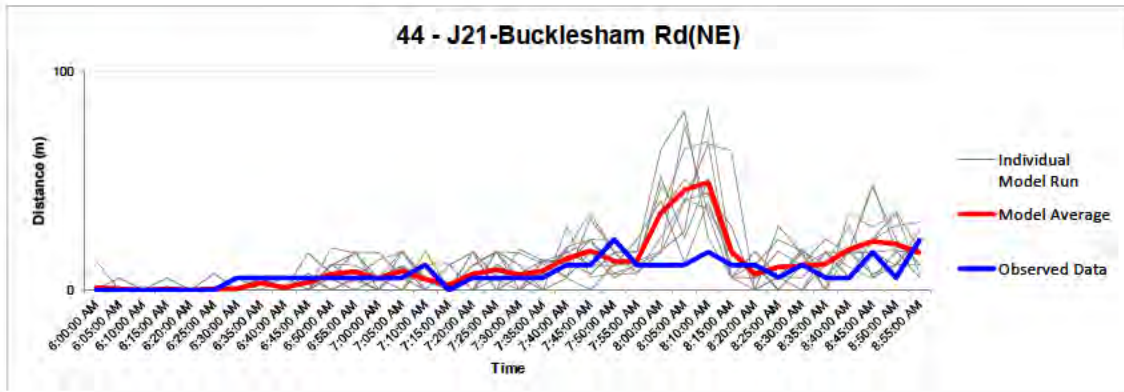
Queue Graphs

Junction Number 8
AM Period





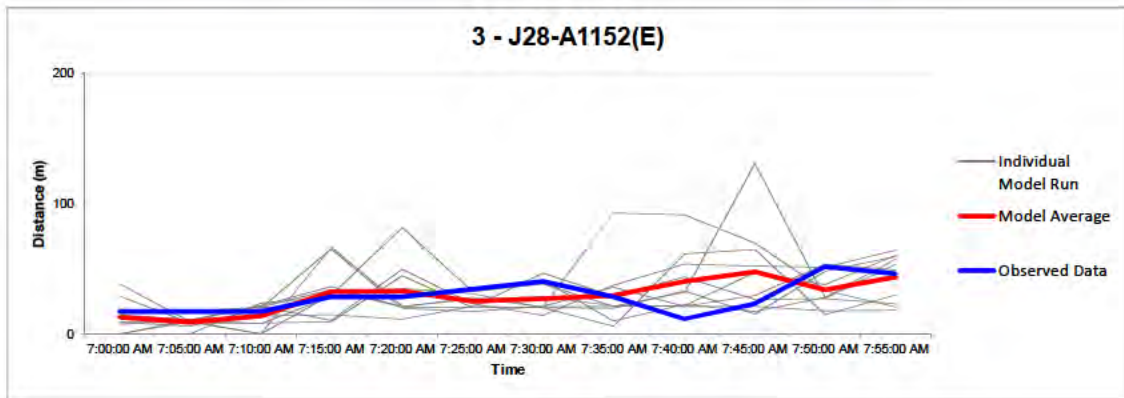
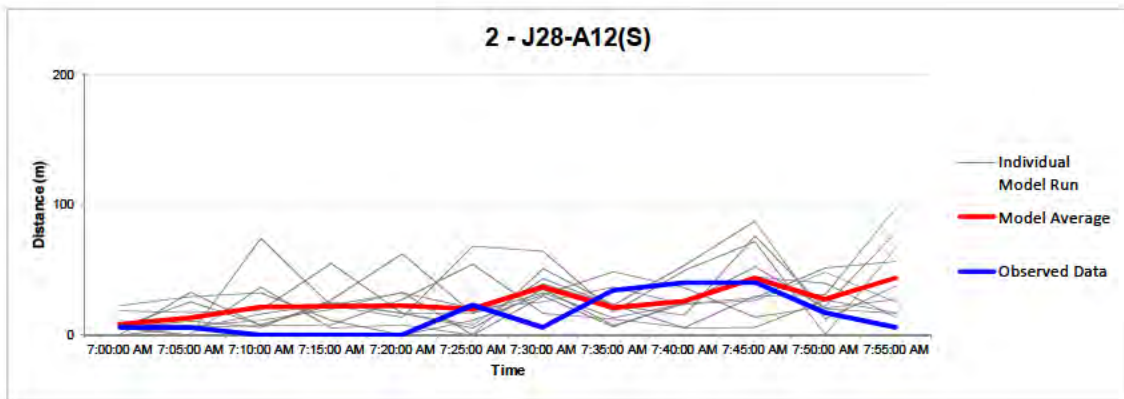
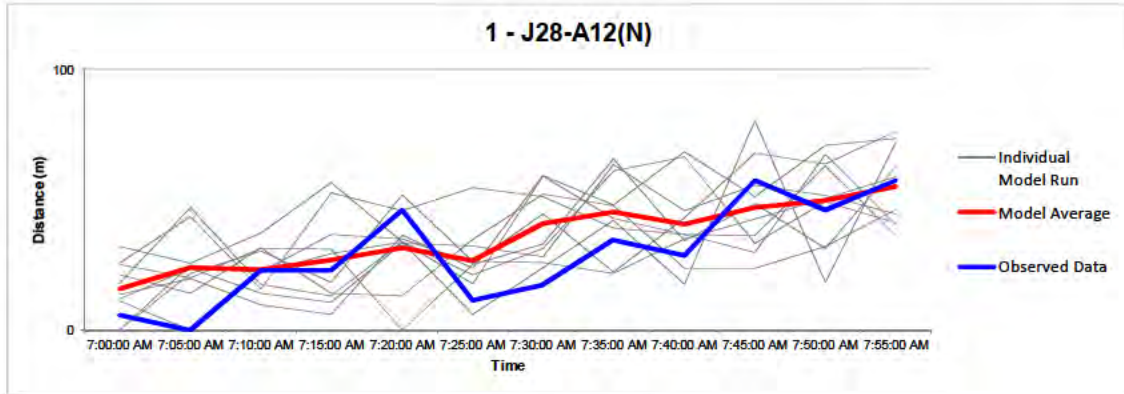
Queue Graphs
Junction Number 8
AM Period





Queue Graphs

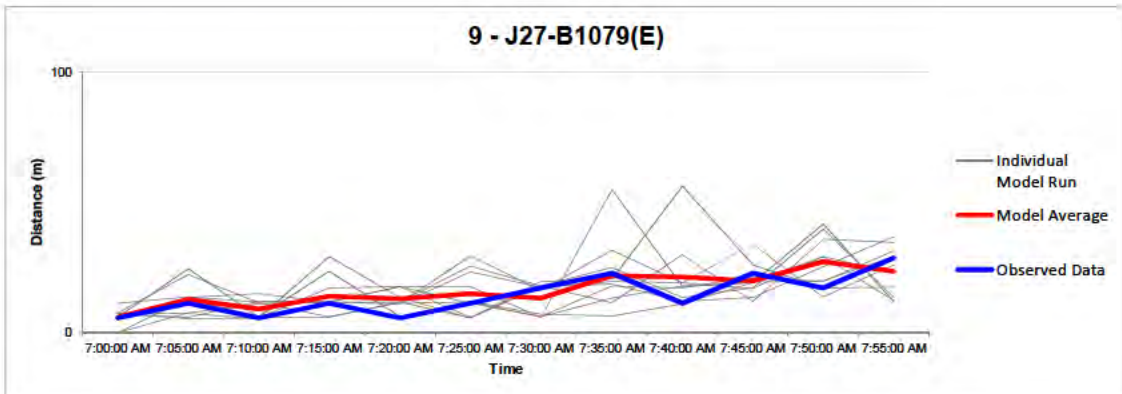
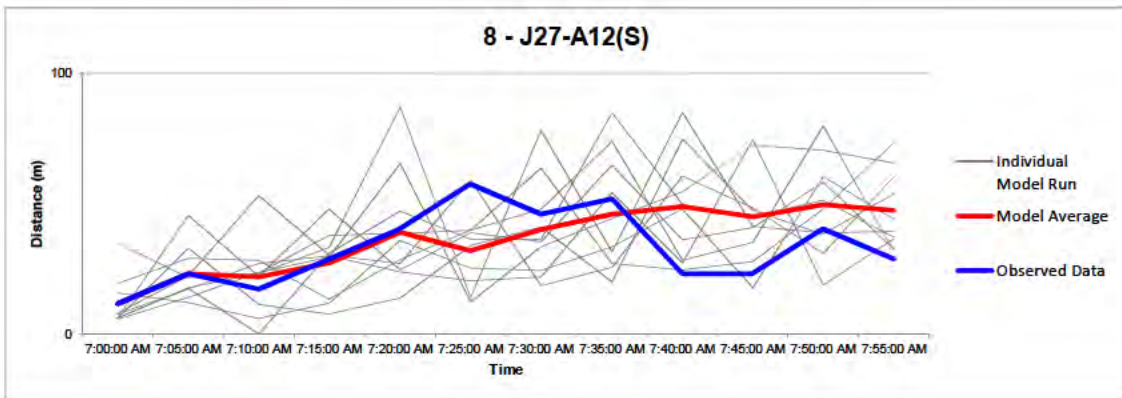
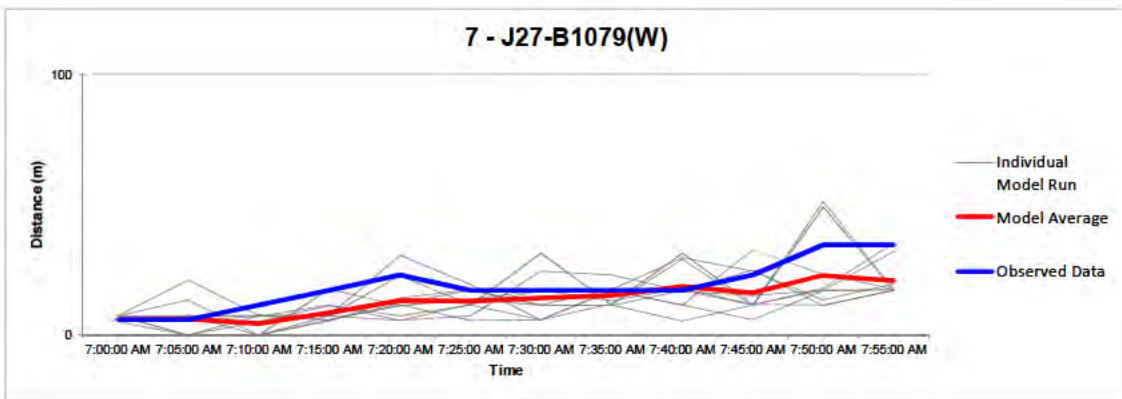
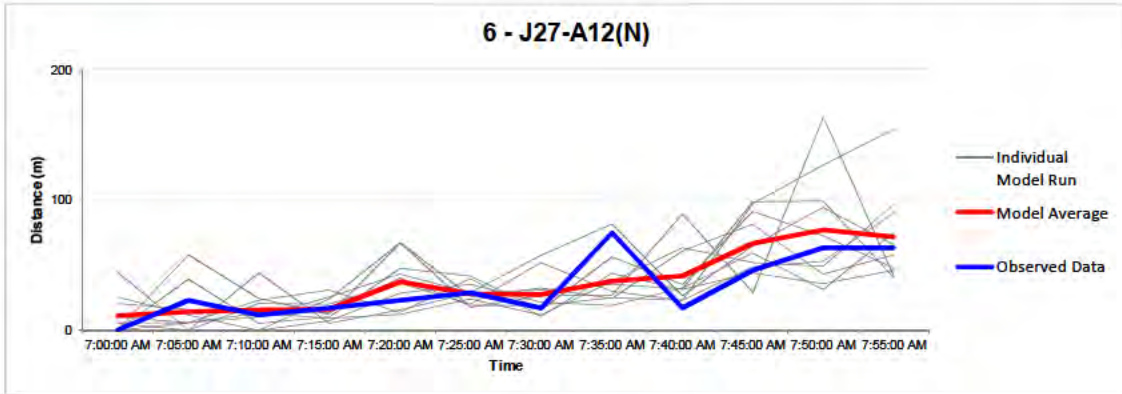
Junction Number 1
AM Peak (07:00 -08:00)





Queue Graphs

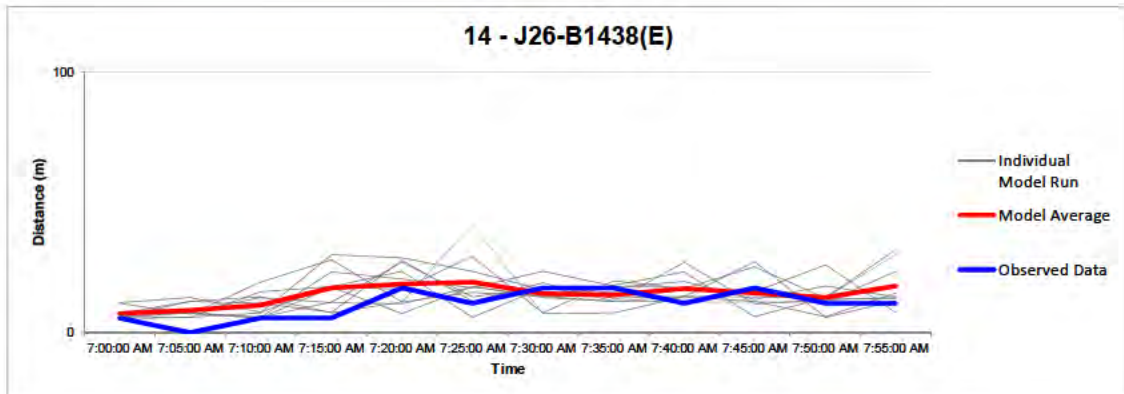
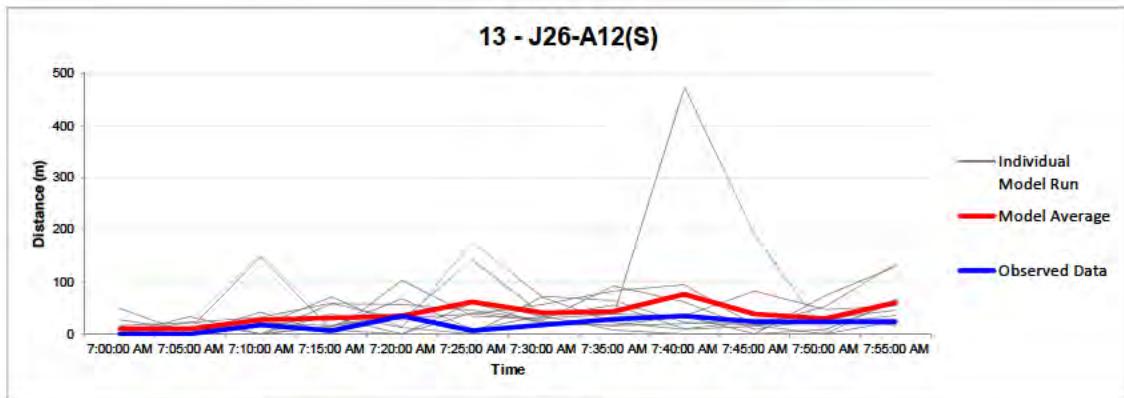
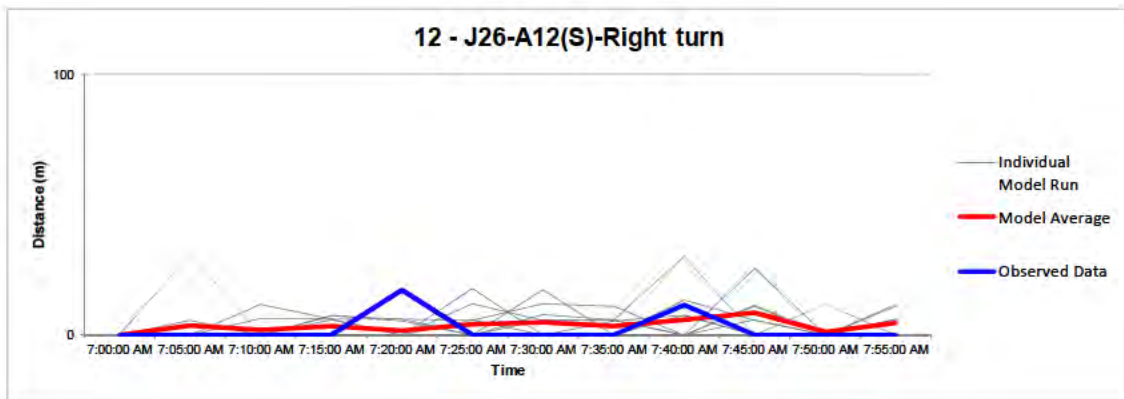
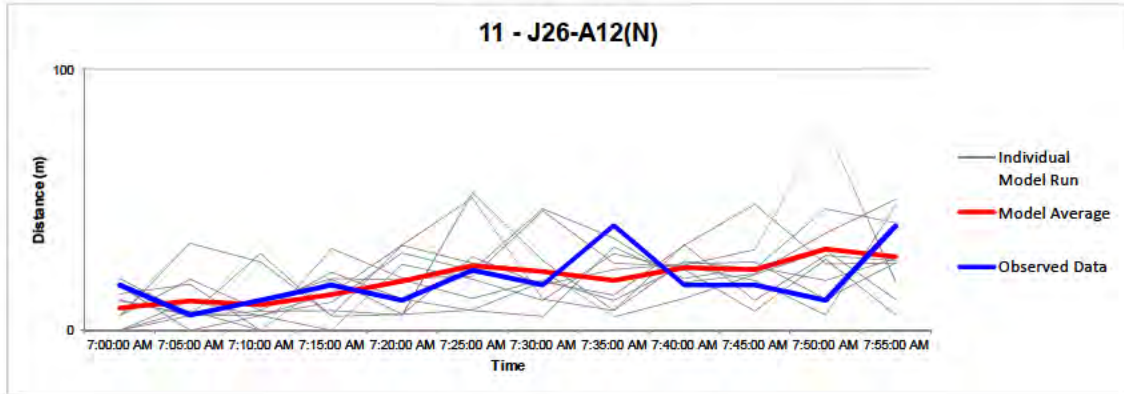
Junction Number 2
AM Peak (07:00 -08:00)





Queue Graphs

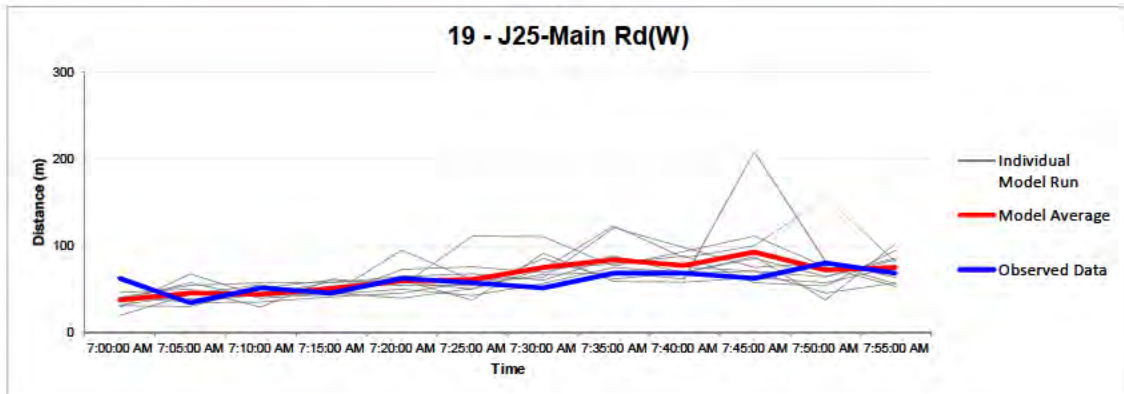
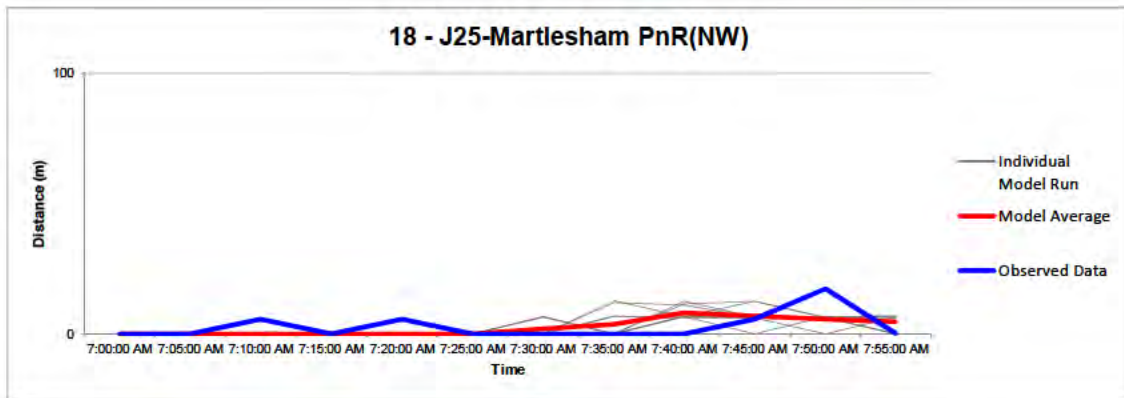
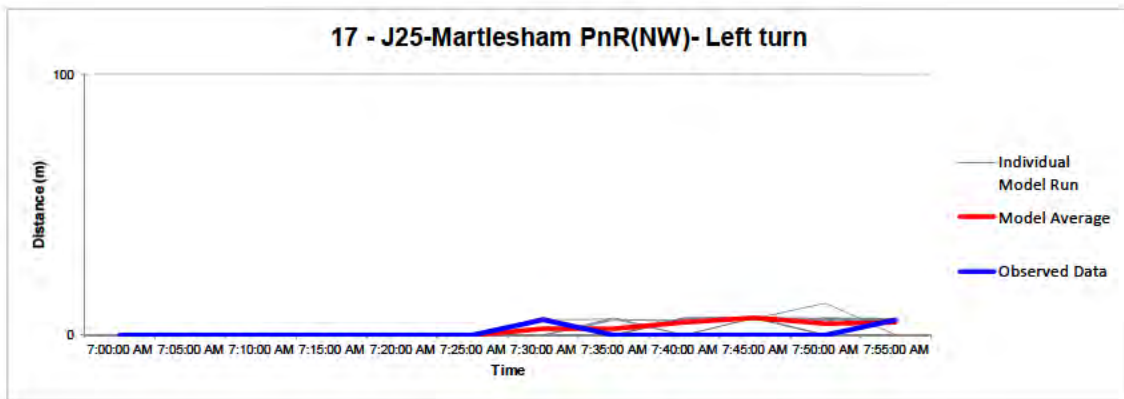
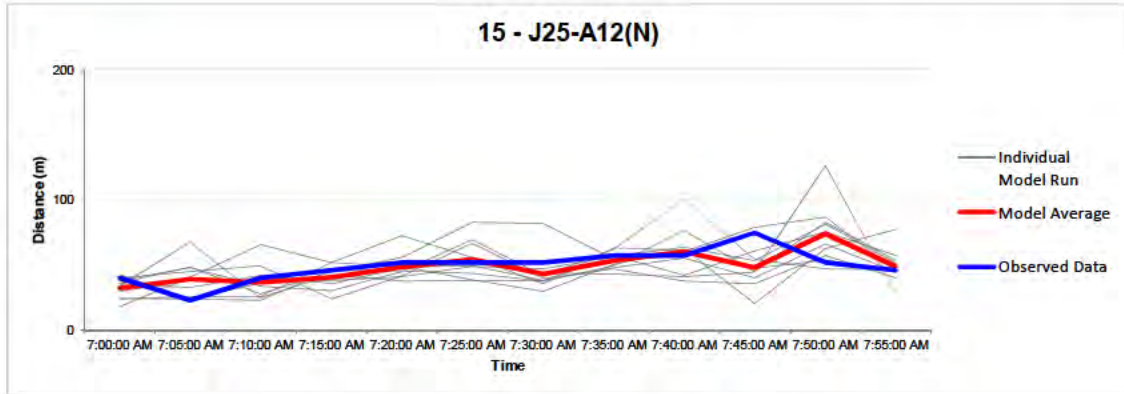
Junction Number 3
AM Peak (07:00 -08:00)





Queue Graphs

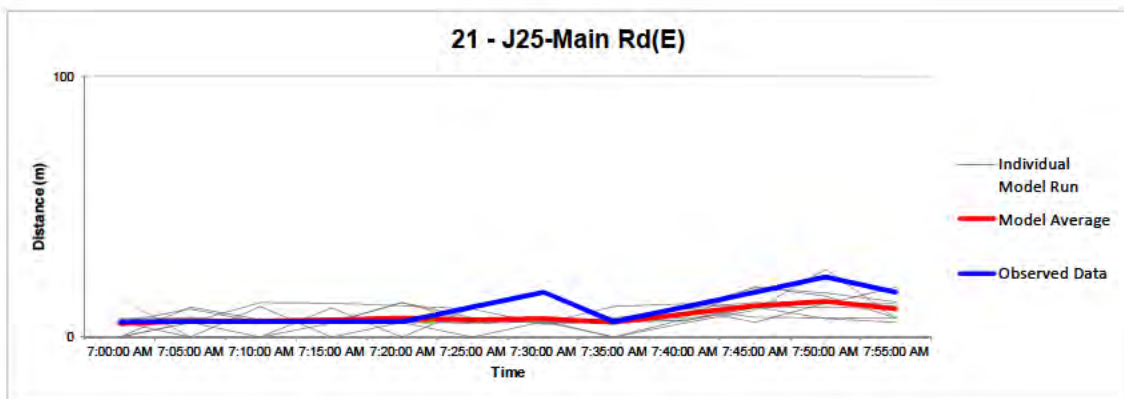
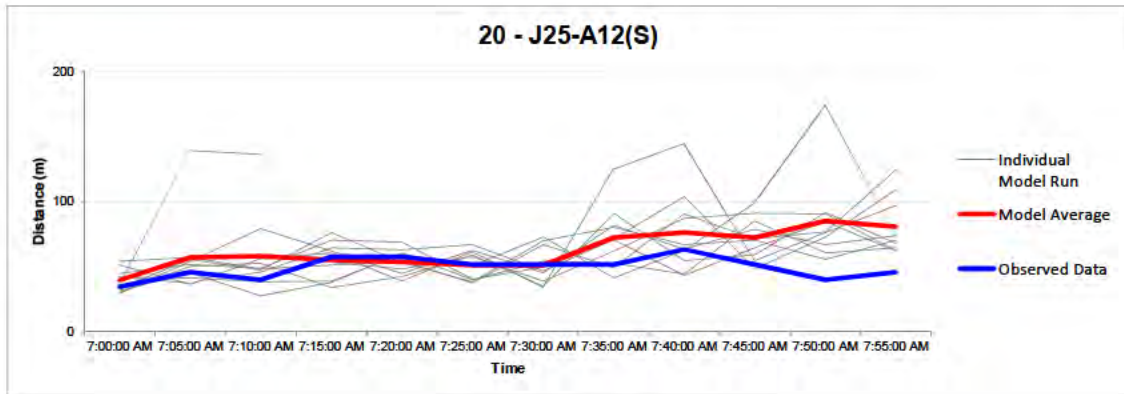
Junction Number 4
AM Peak (07:00 -08:00)





Queue Graphs

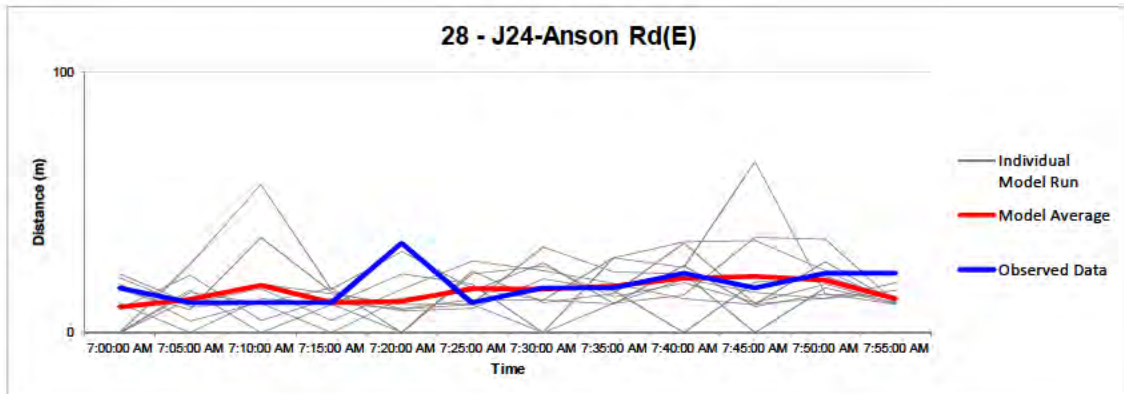
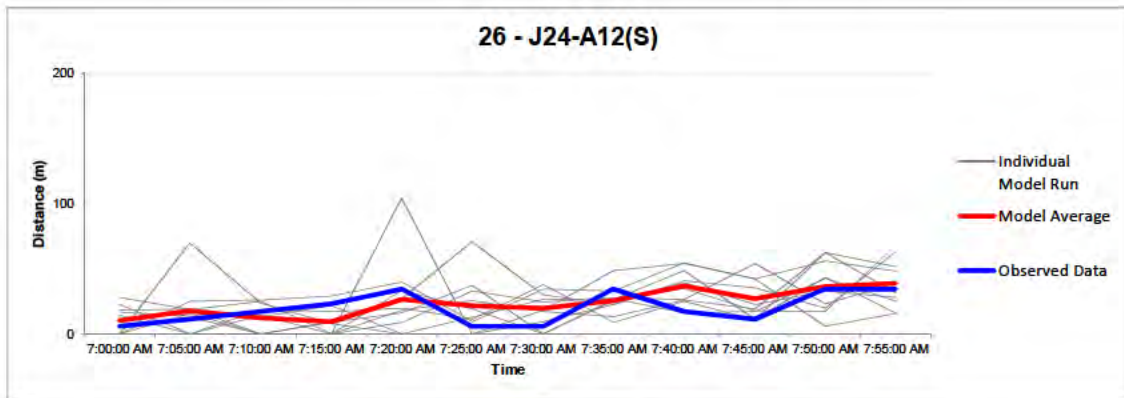
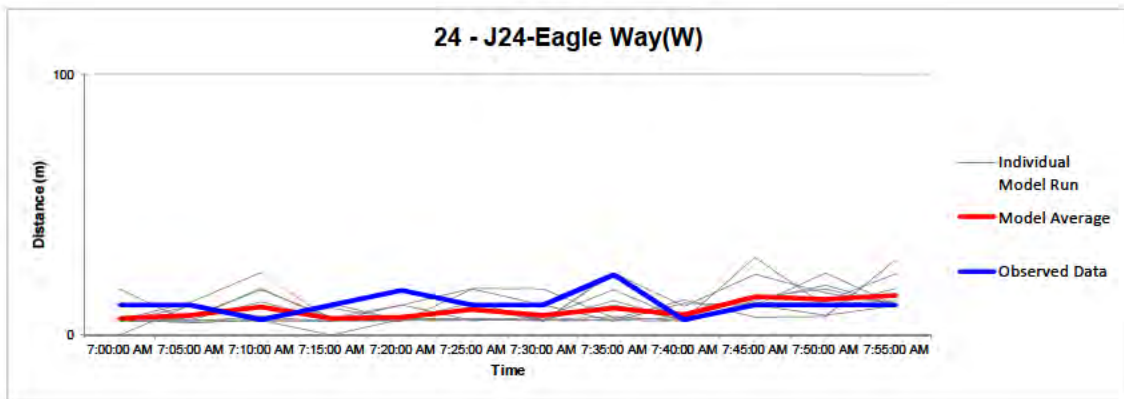
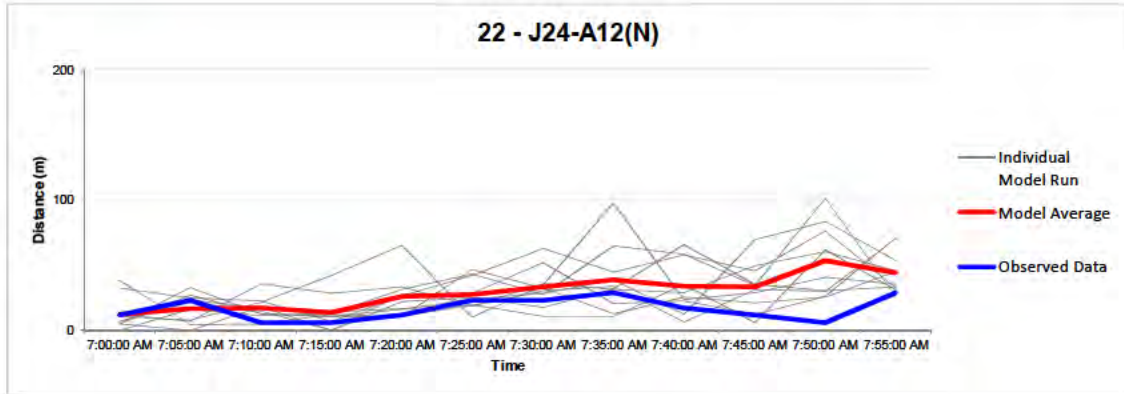
Junction Number 4
AM Peak (07:00 -08:00)





Queue Graphs

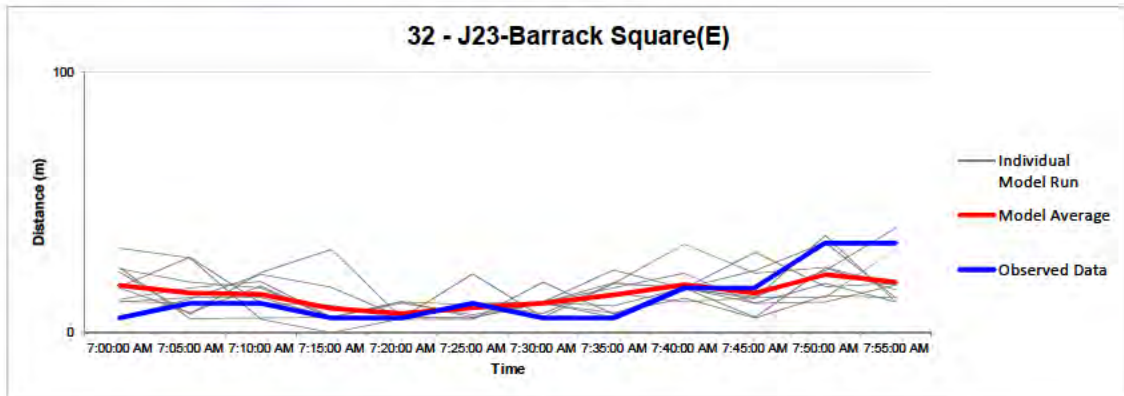
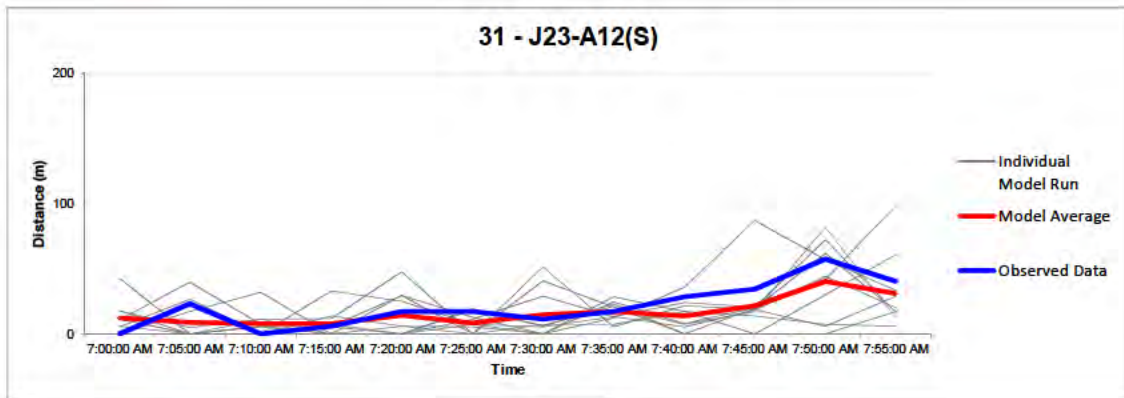
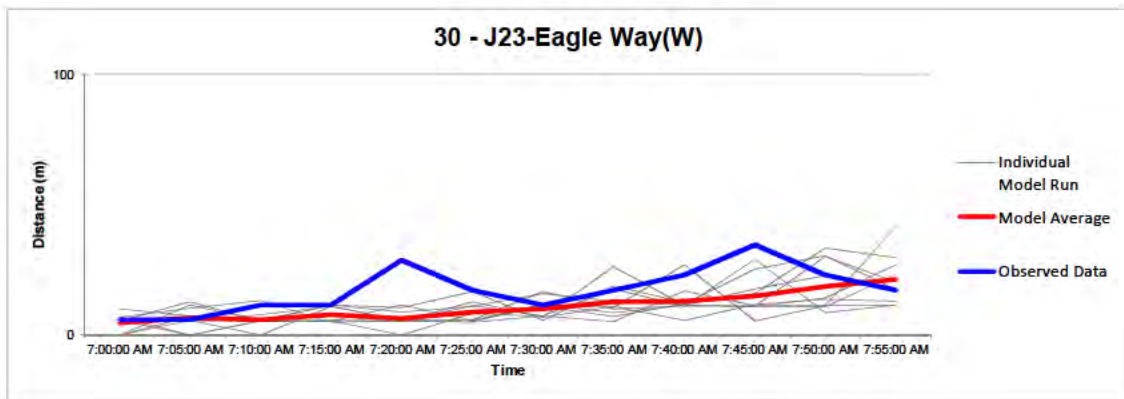
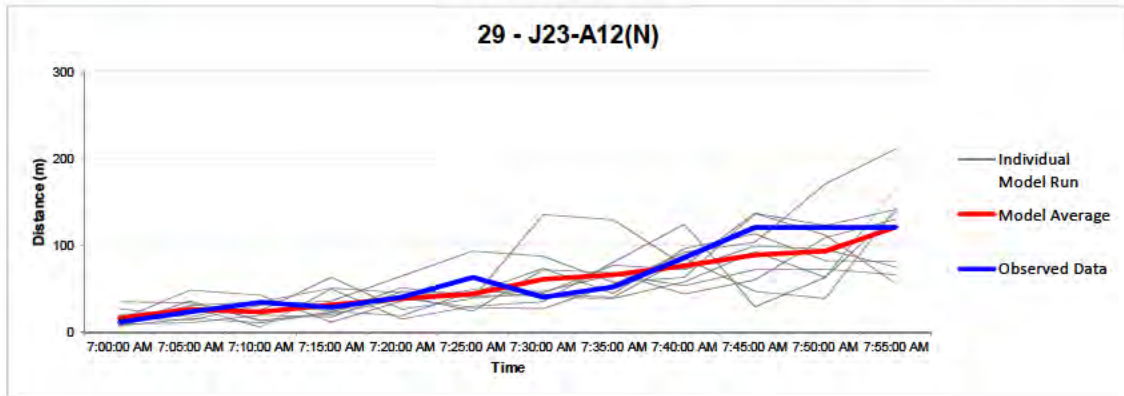
Junction Number 5
AM Peak (07:00 -08:00)





Queue Graphs

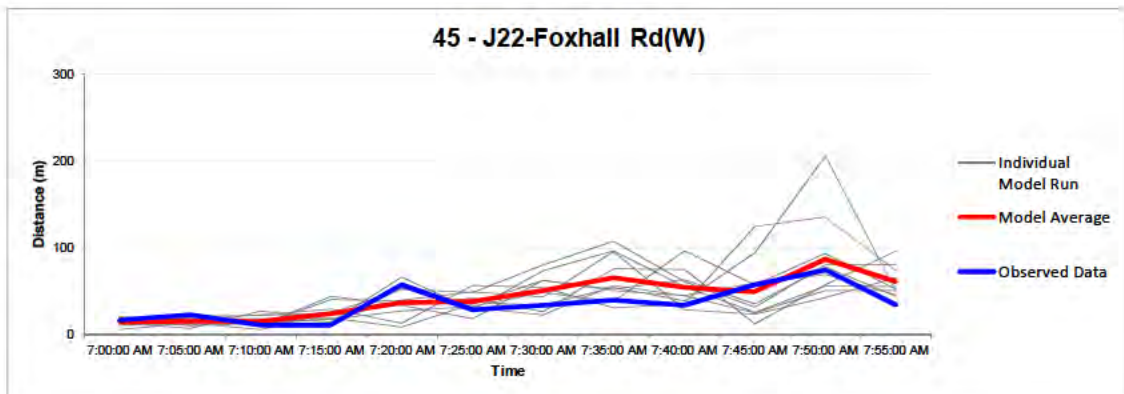
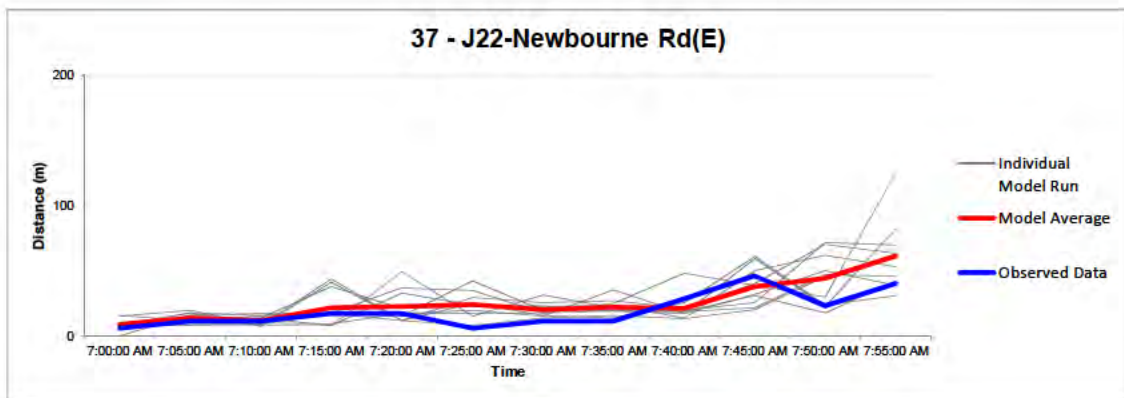
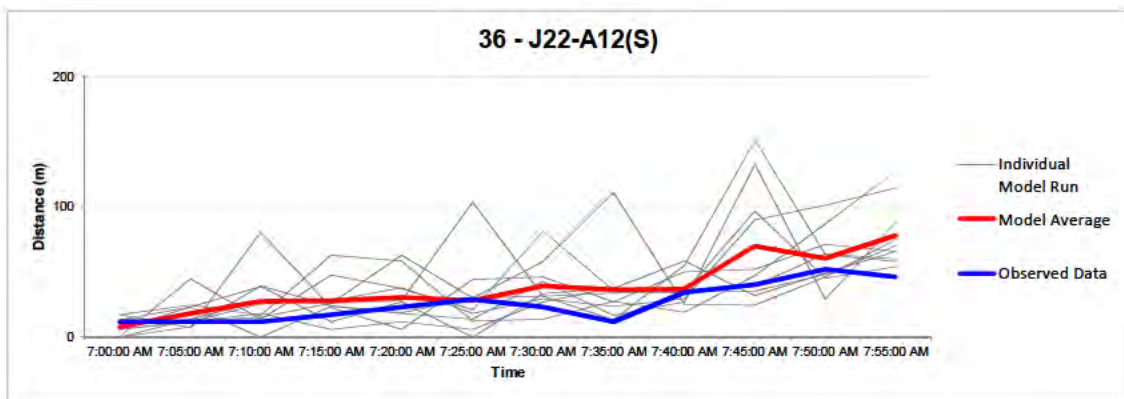
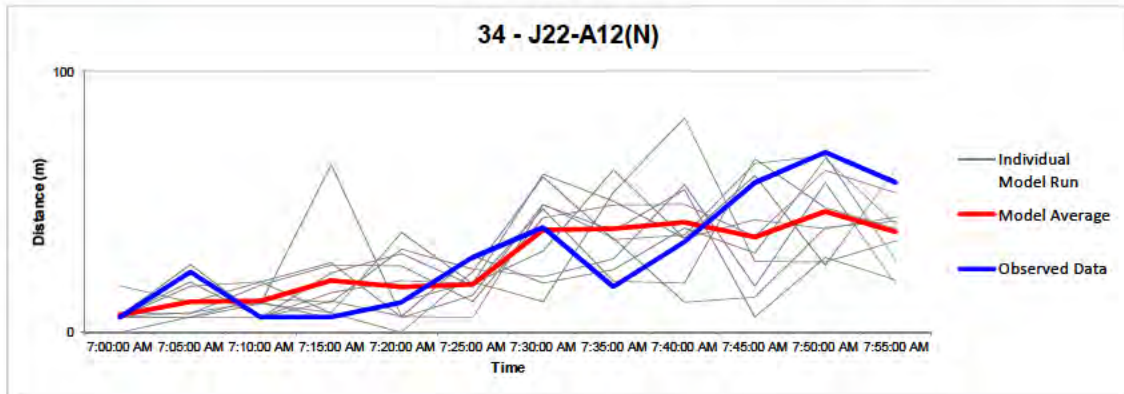
Junction Number 6
AM Peak (07:00 -08:00)





Queue Graphs

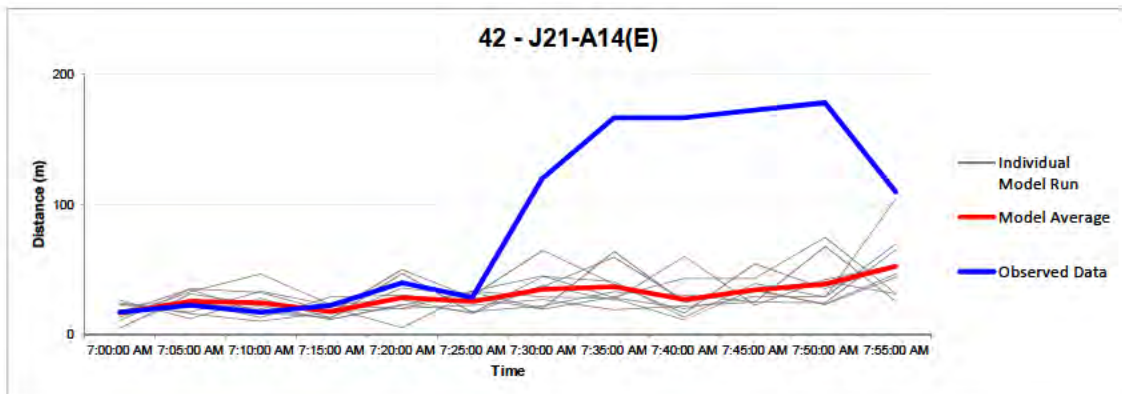
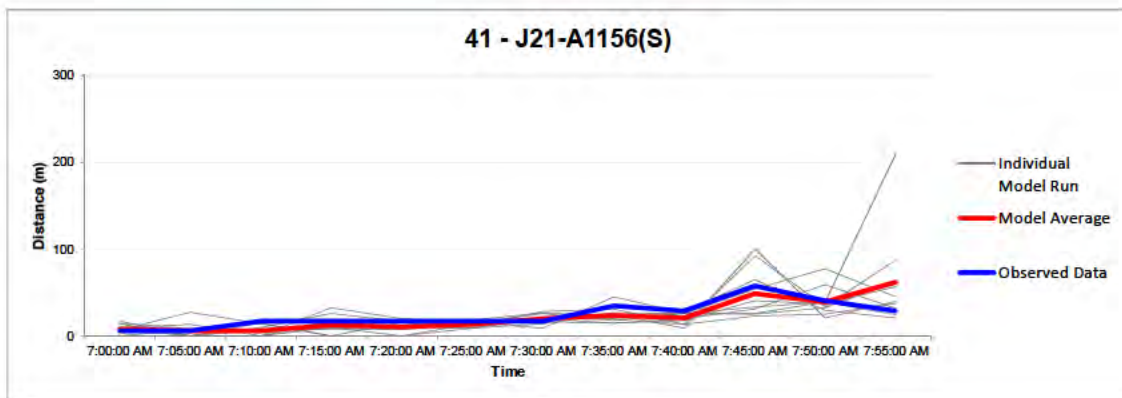
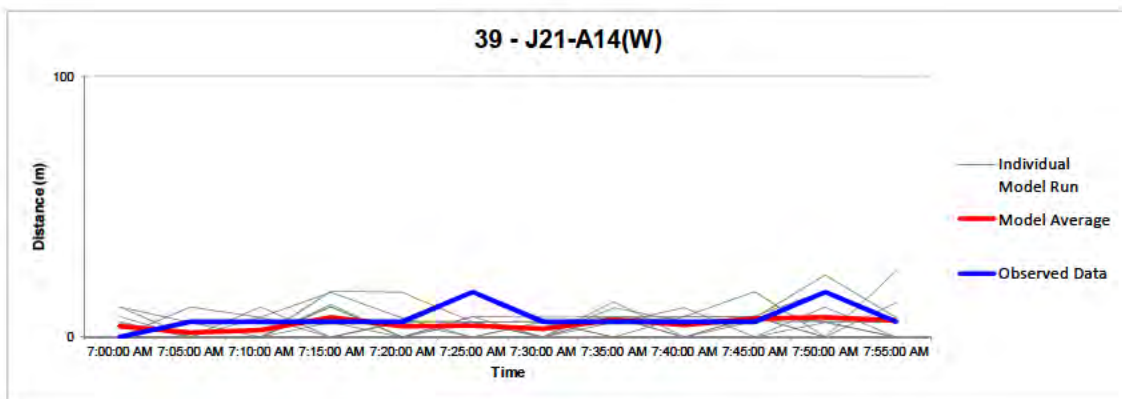
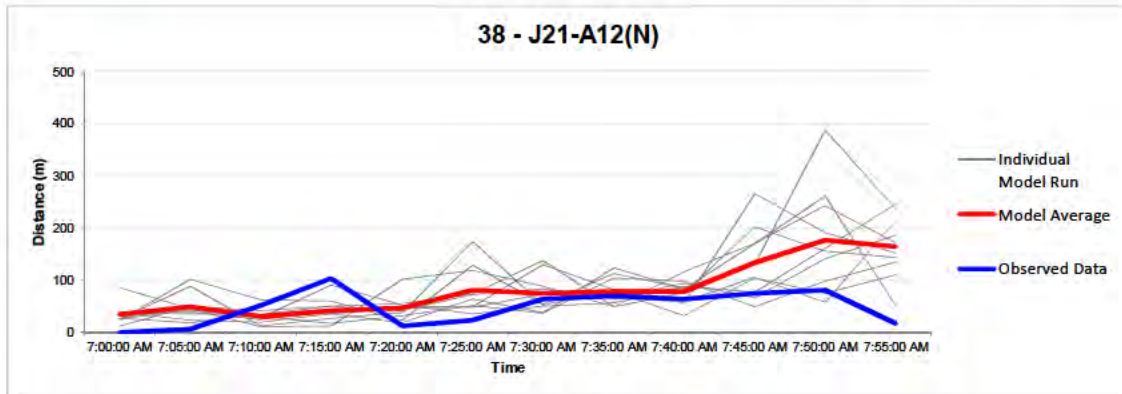
Junction Number 7
AM Peak (07:00 -08:00)





Queue Graphs

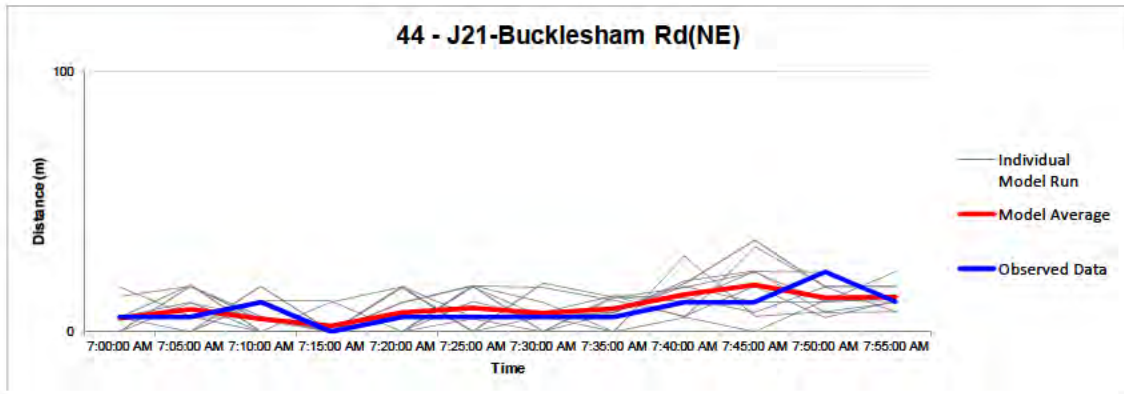
Junction Number 8
AM Peak (07:00 -08:00)





Queue Graphs

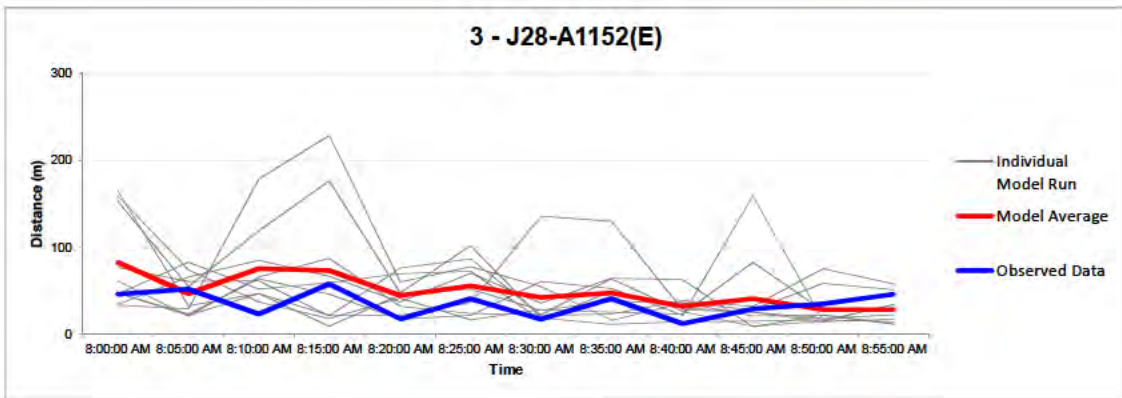
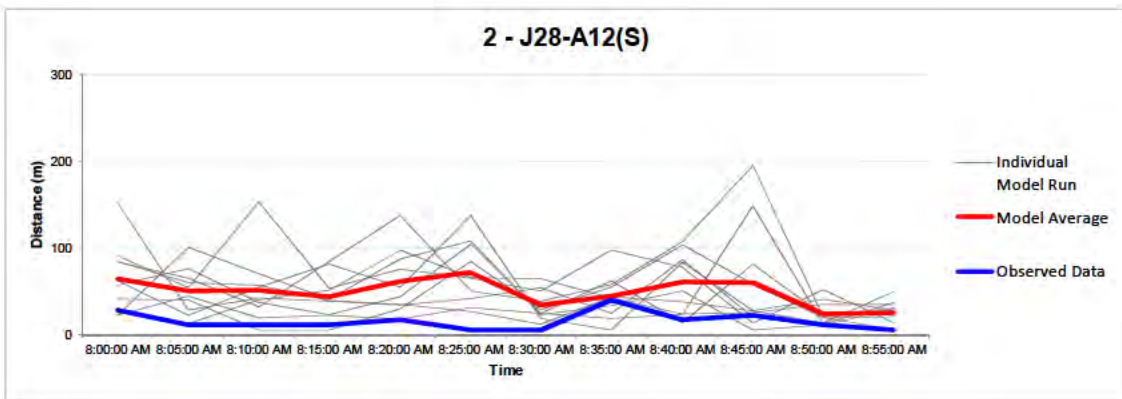
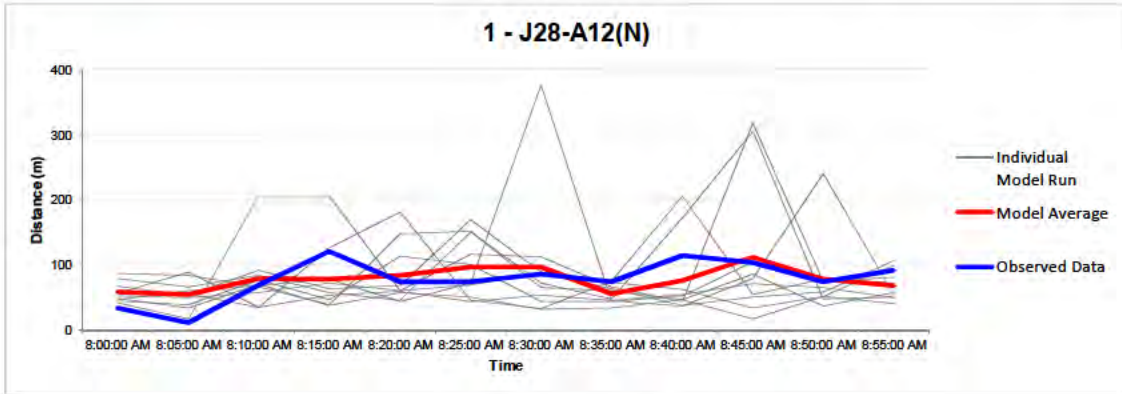
Junction Number 8
AM Peak (07:00 -08:00)





Queue Graphs

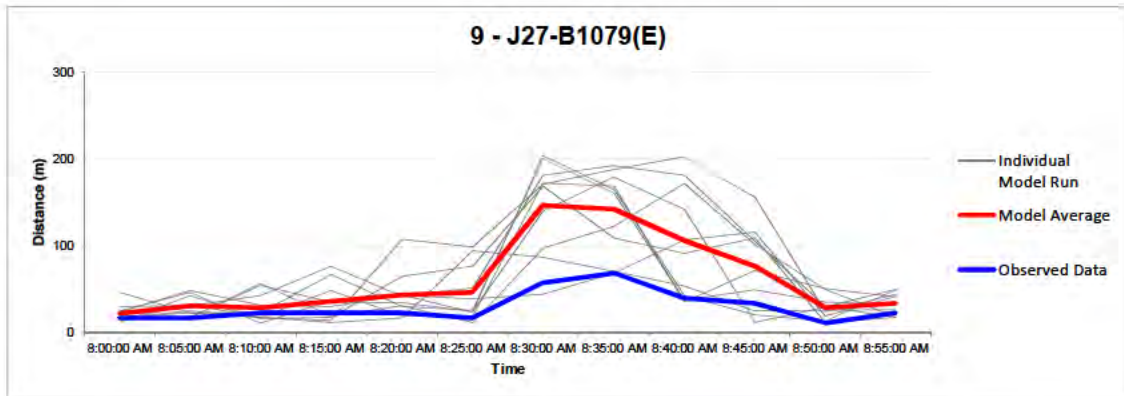
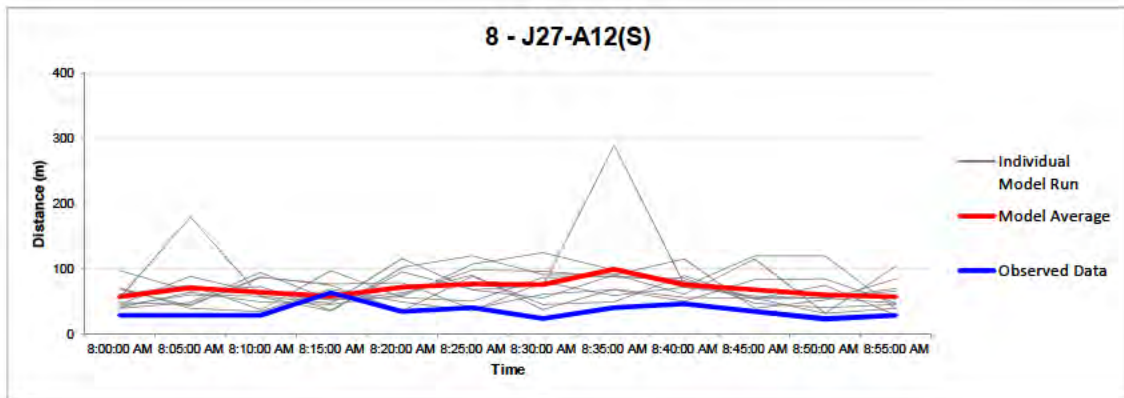
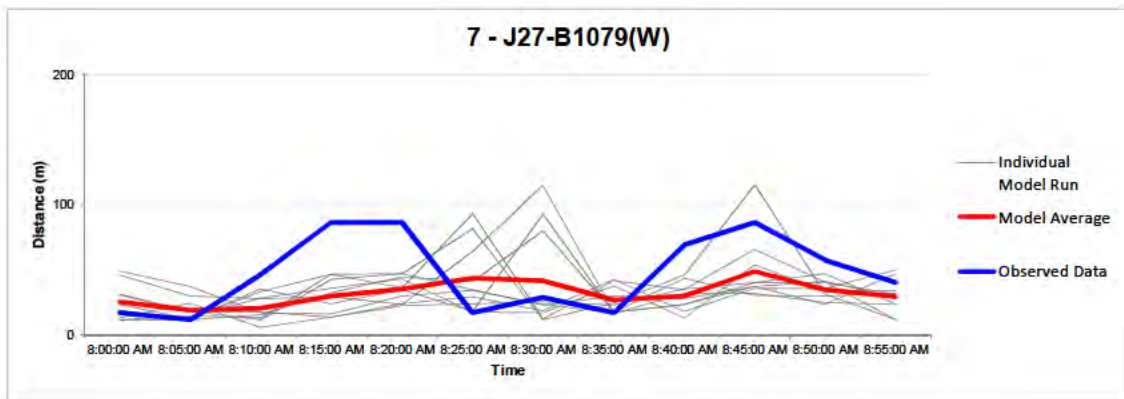
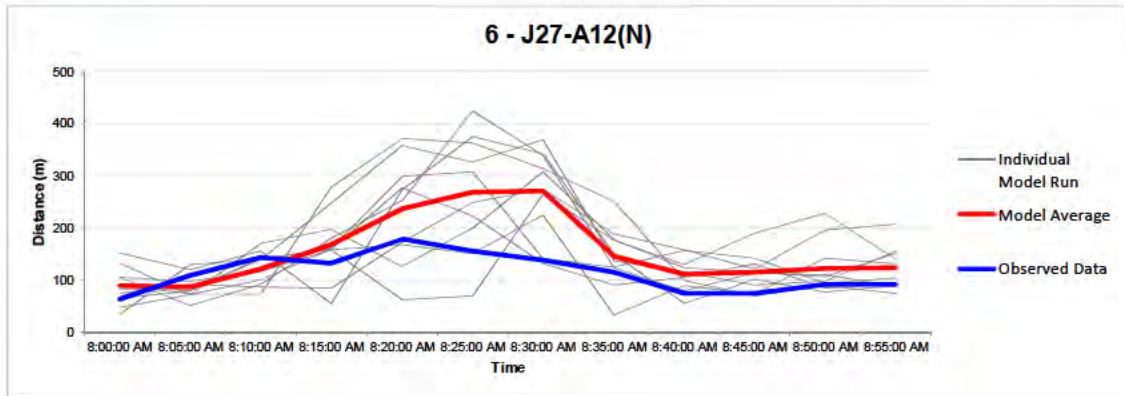
Junction Number 1
AM Peak (08:00 -09:00)





Queue Graphs

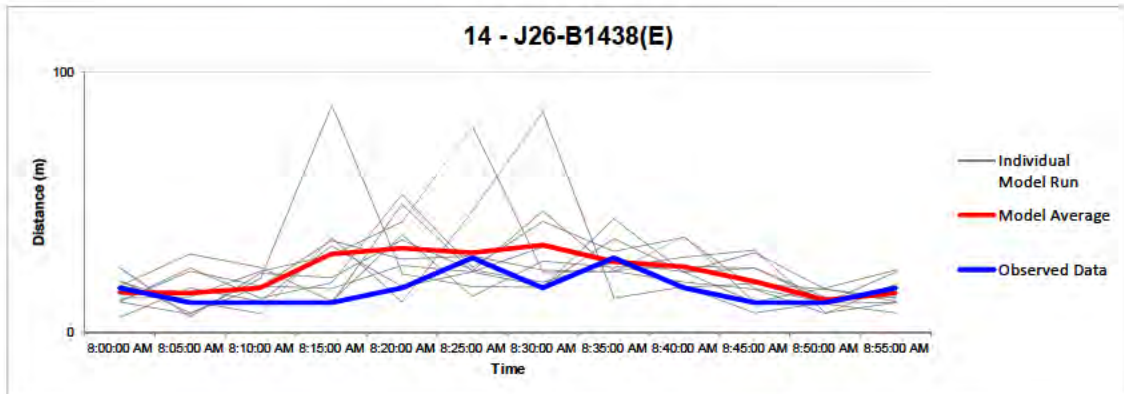
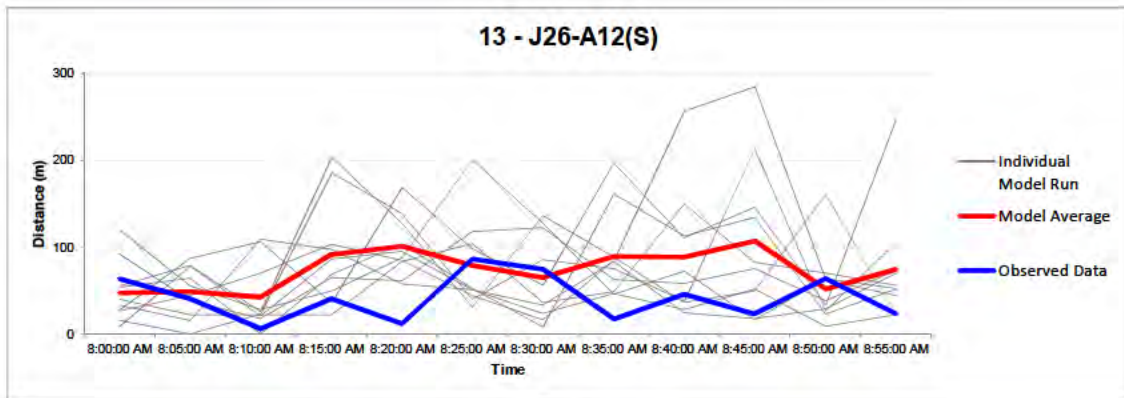
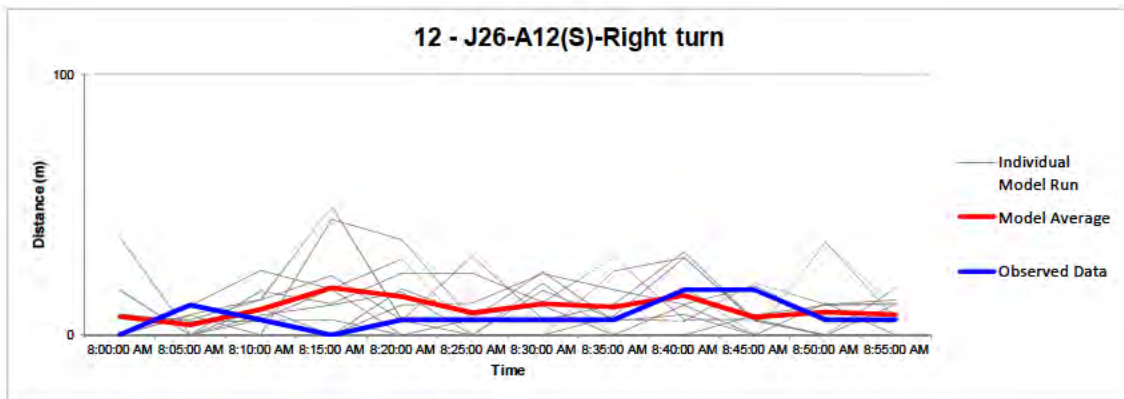
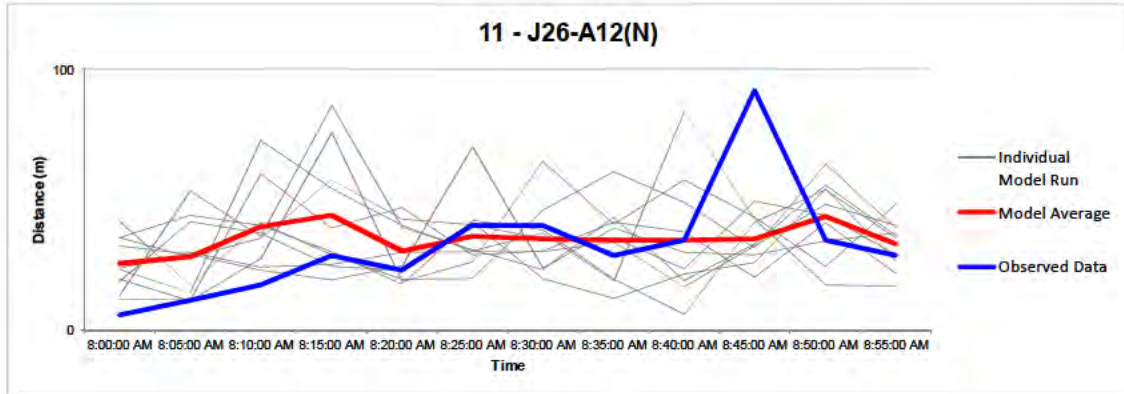
Junction Number 2
AM Peak (08:00 -09:00)





Queue Graphs

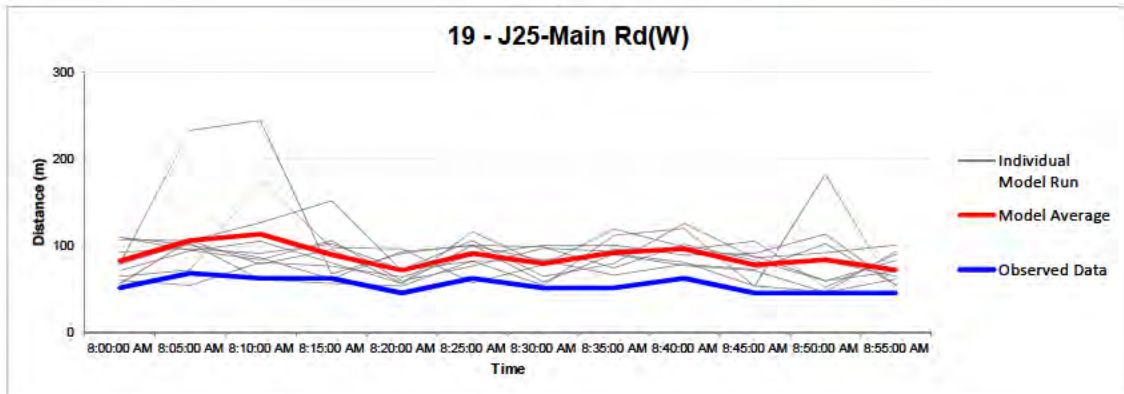
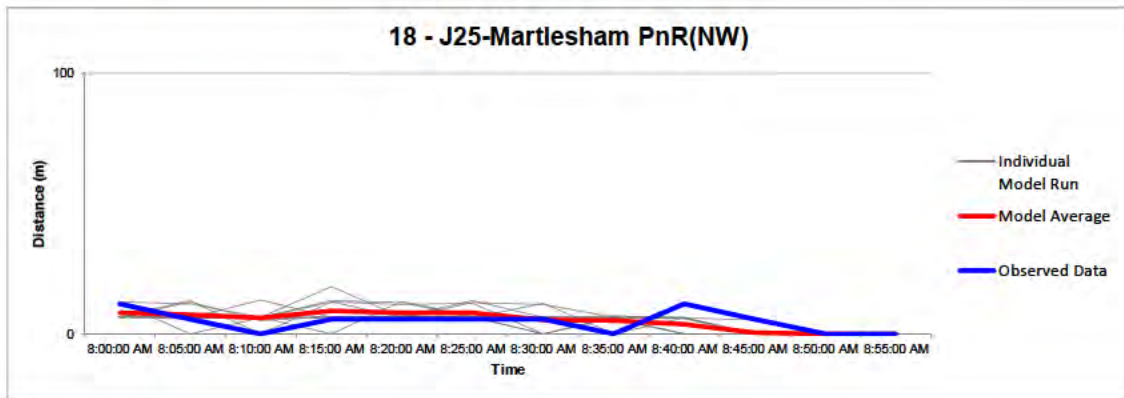
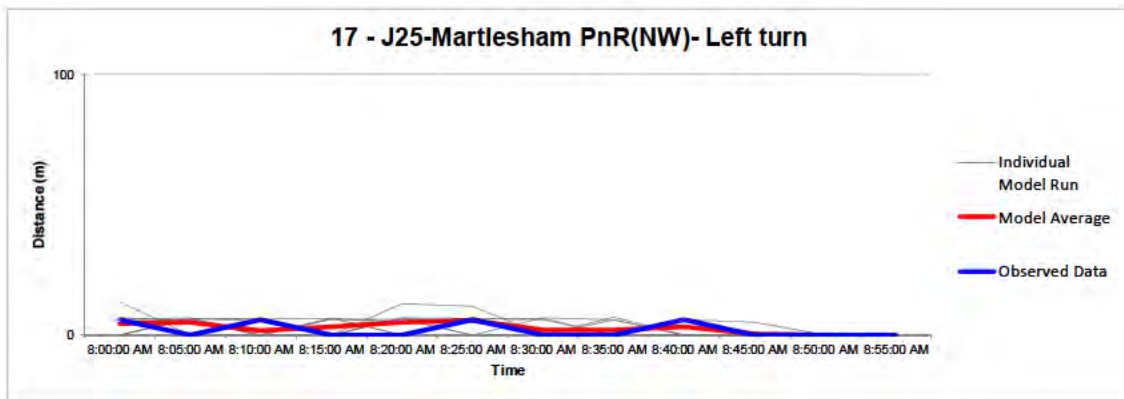
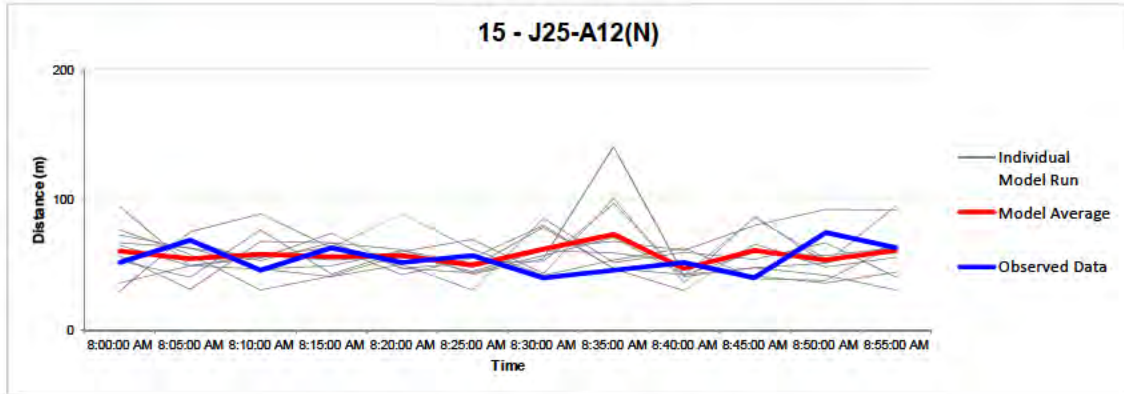
Junction Number 3
AM Peak (08:00 -09:00)





Queue Graphs

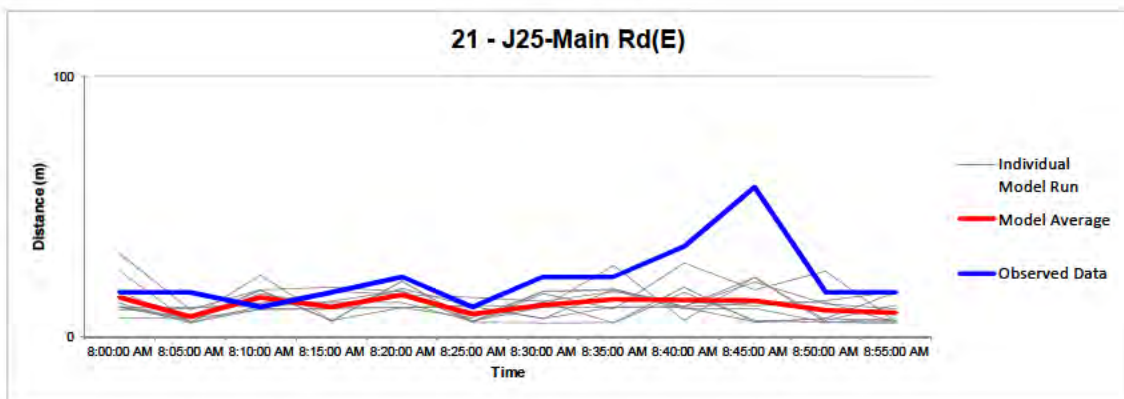
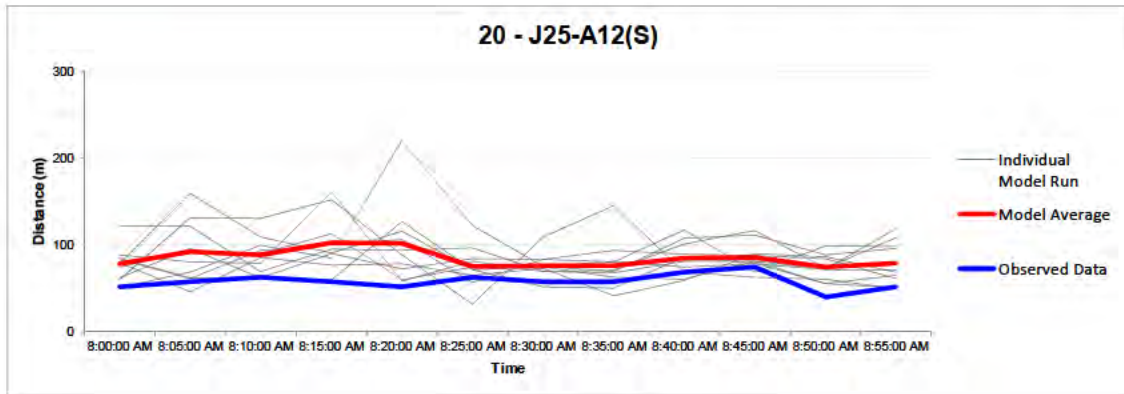
Junction Number 4
AM Peak (08:00 -09:00)





Queue Graphs

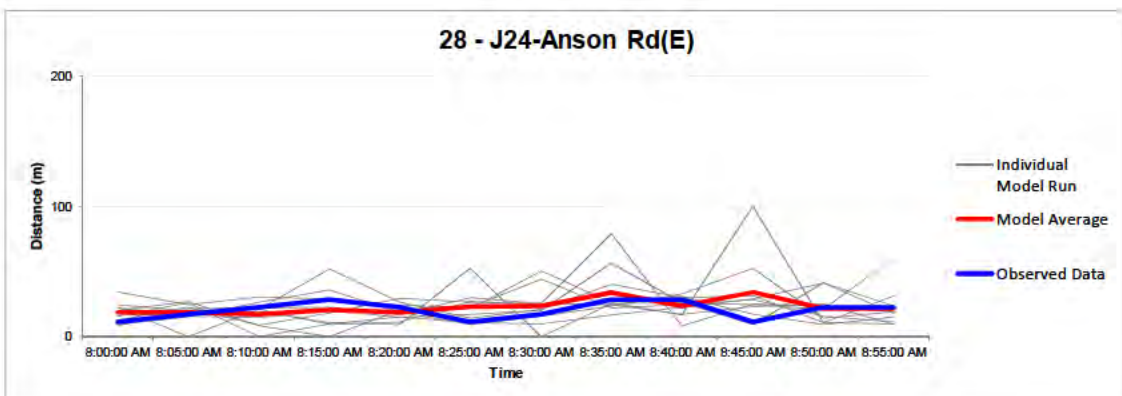
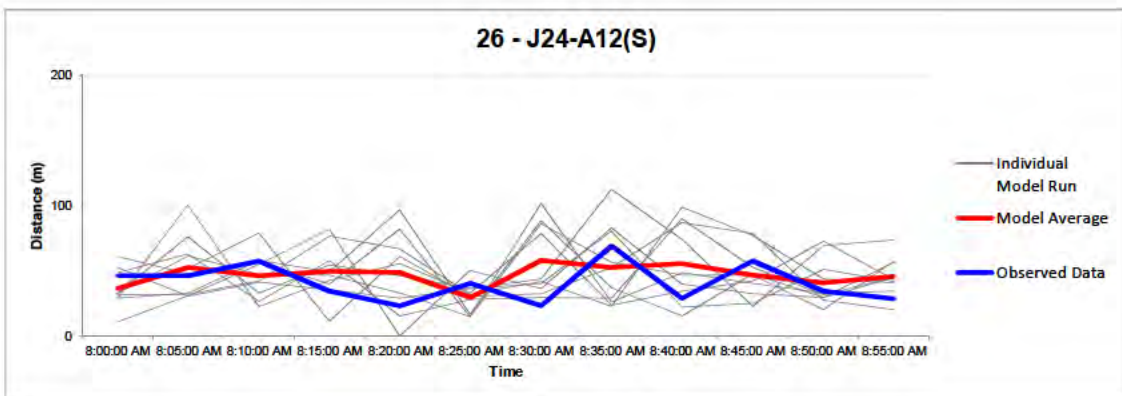
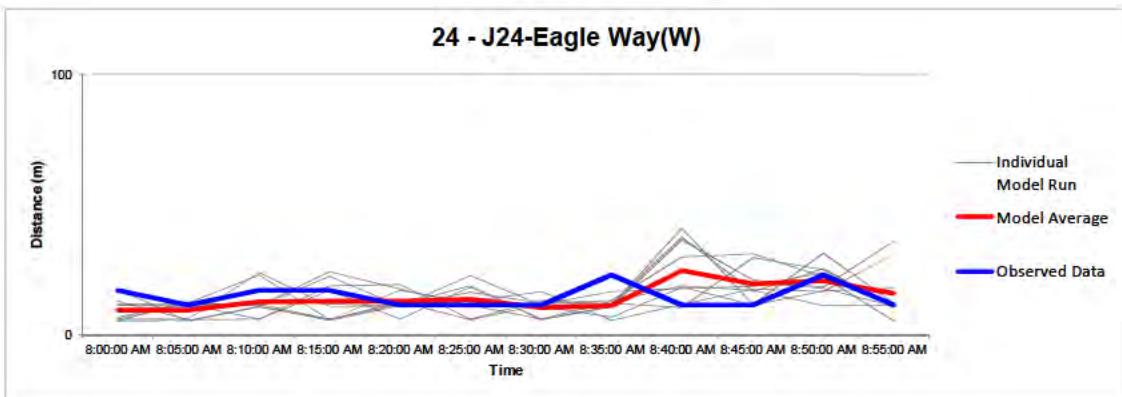
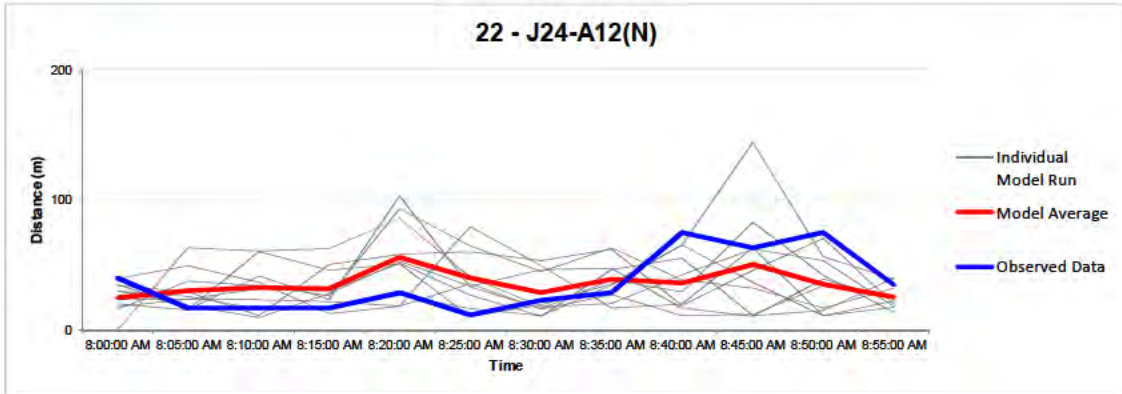
Junction Number 4
AM Peak (08:00 -09:00)





Queue Graphs

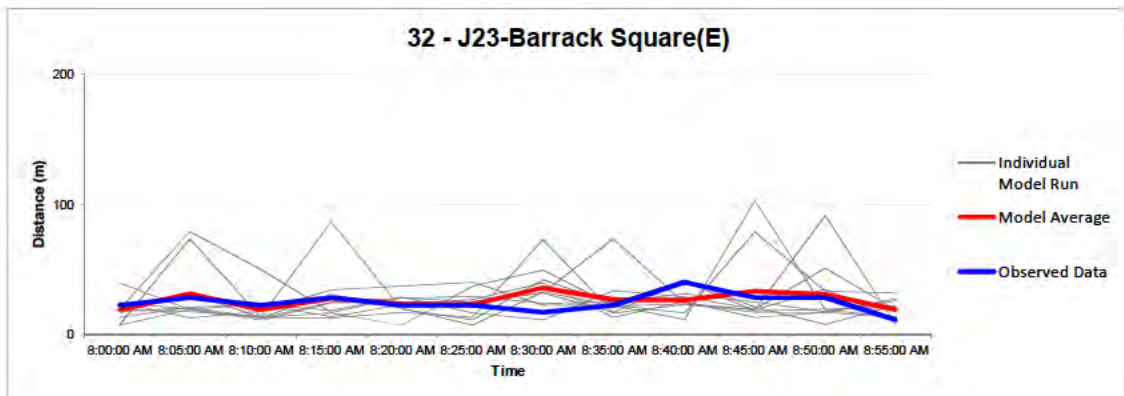
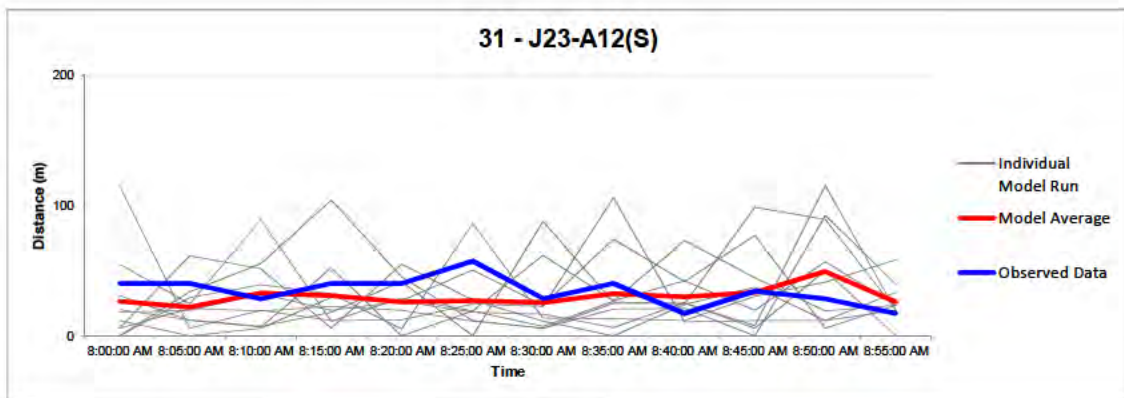
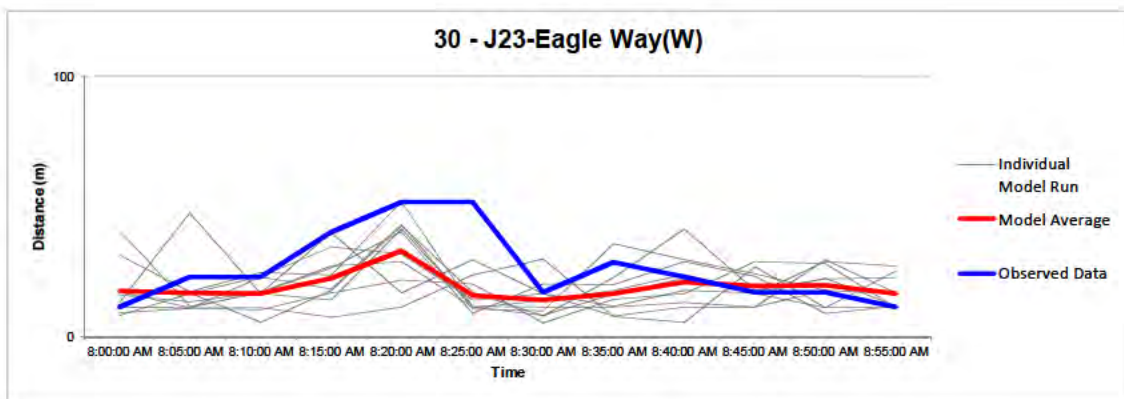
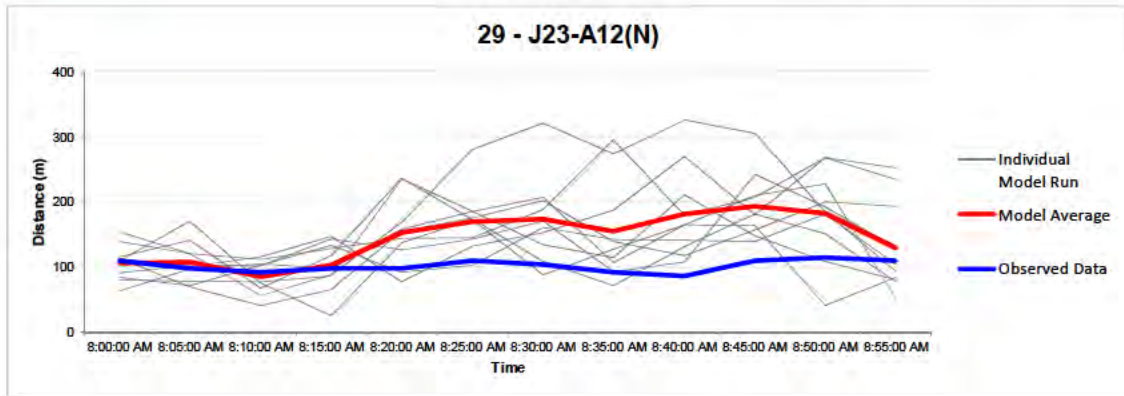
Junction Number 5
AM Peak (08:00 -09:00)





Queue Graphs

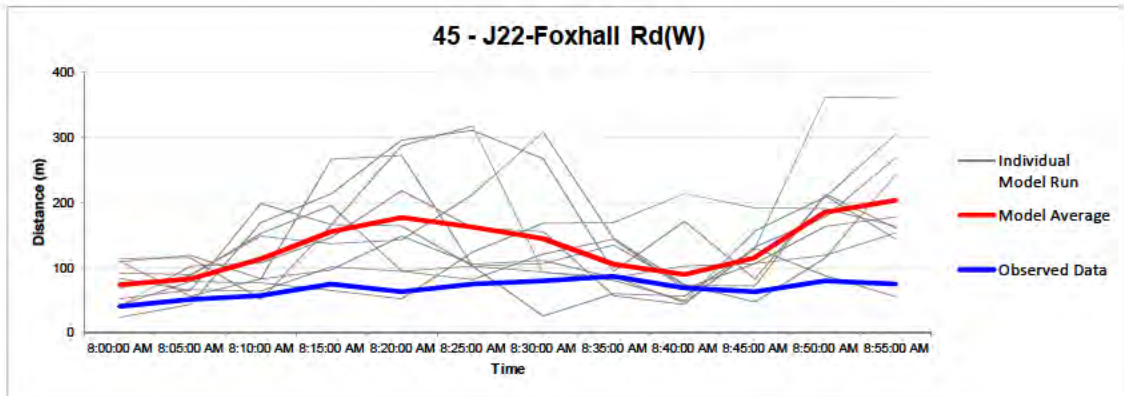
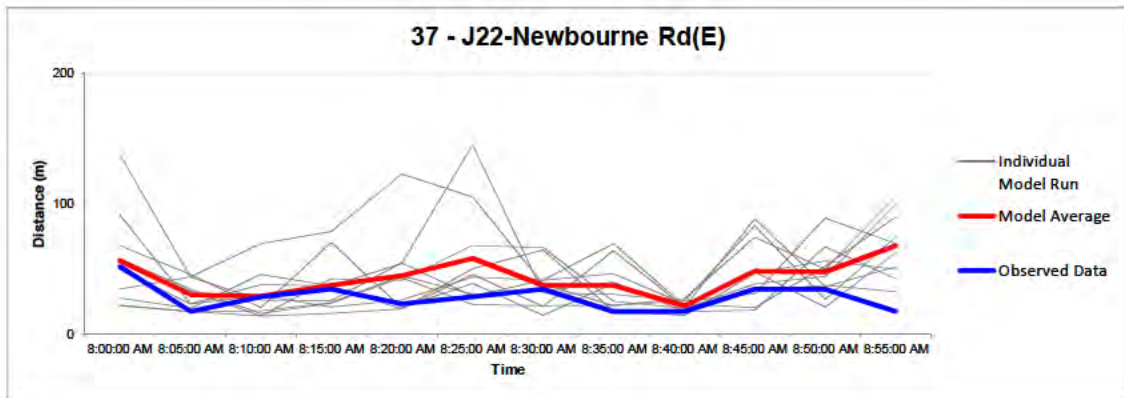
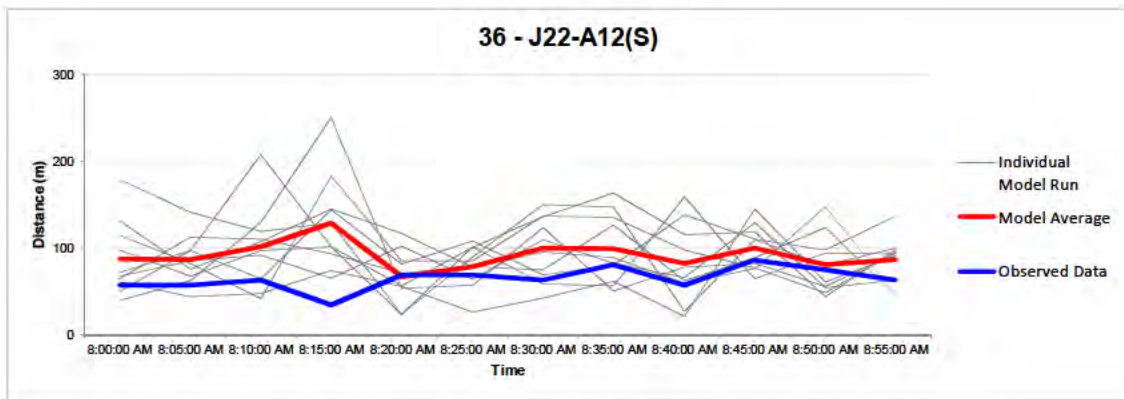
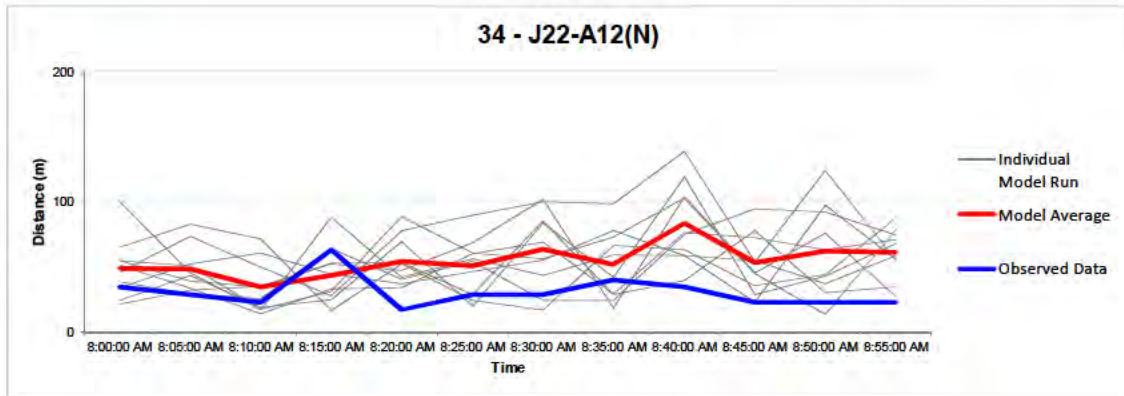
Junction Number 6
AM Peak (08:00 -09:00)





Queue Graphs

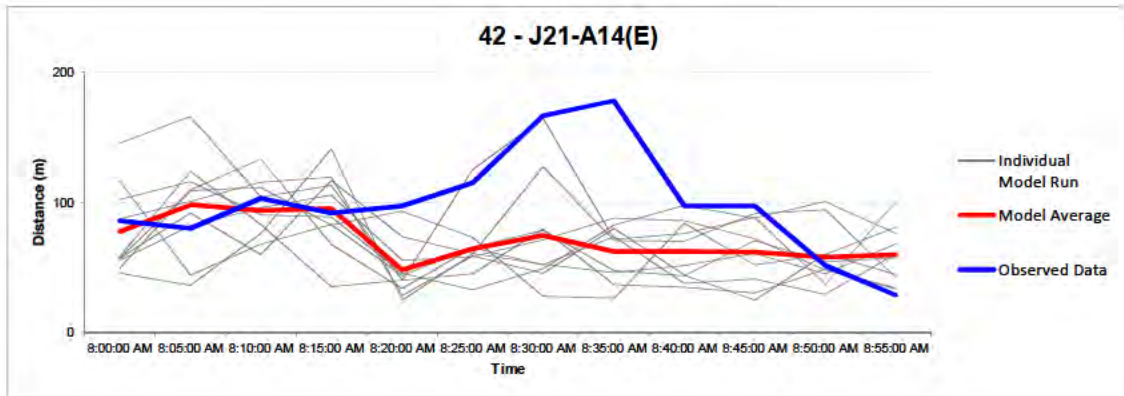
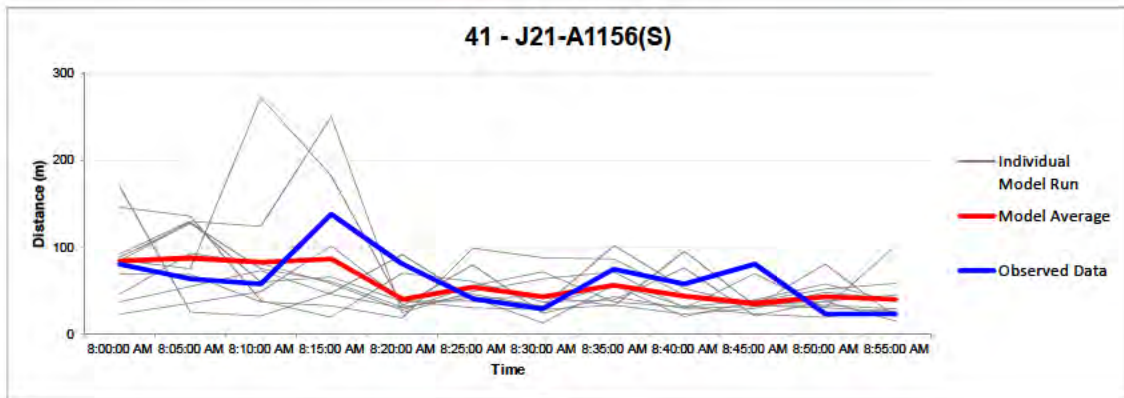
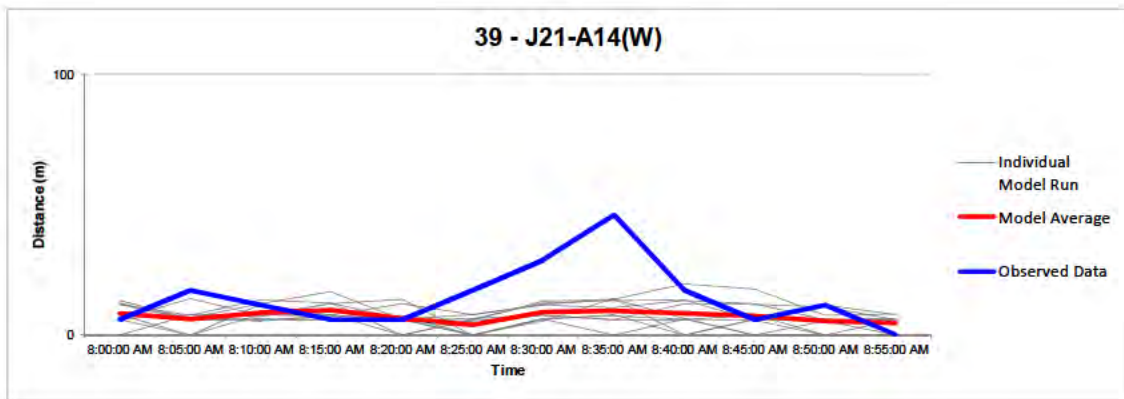
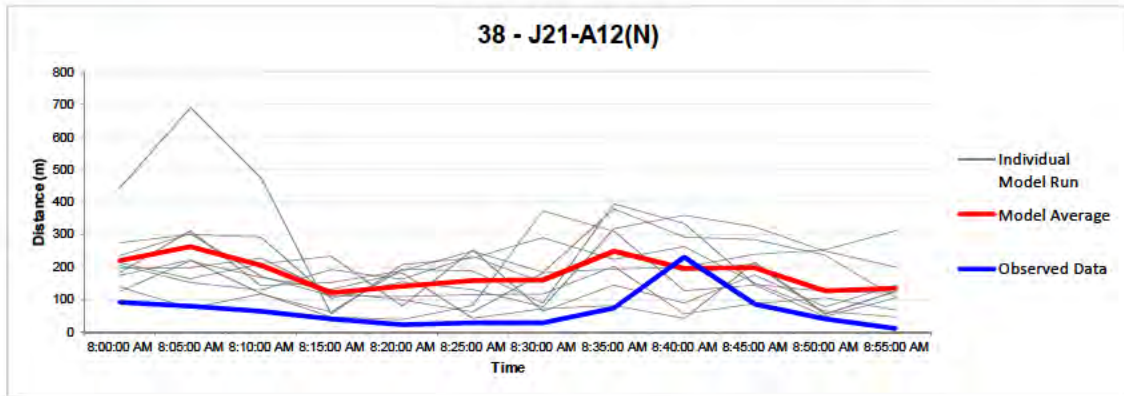
Junction Number 7
AM Peak (08:00 -09:00)





Queue Graphs

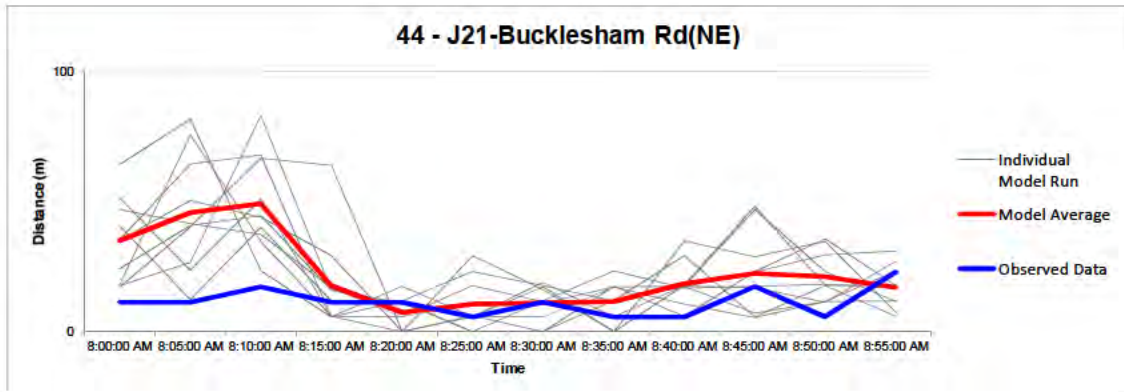
Junction Number 8
AM Peak (08:00 -09:00)





Queue Graphs

Junction Number 8
AM Peak (08:00 -09:00)





Journey Times
Validation Statistics

AM Peak (06:00 -07:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	101	101	0	TRUE	-0.5%	0	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	66	61	0	TRUE	-6.8%	-4	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	38	35	0	TRUE	-6.8%	-3	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	37	45	0	TRUE	21.3%	8	FALSE	FALSE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	104	107	0	TRUE	2.5%	3	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	74	79	1	TRUE	6.0%	4	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	79	89	0	TRUE	11.8%	9	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	135	130	1	TRUE	-4.2%	-6	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	118	114	0	TRUE	-3.9%	-5	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	82	84	0	TRUE	3.1%	3	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	70	85	1	TRUE	20.4%	14	FALSE	FALSE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	99	109	0	TRUE	9.7%	10	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	34	30	0	TRUE	-12.3%	-4	FALSE	TRUE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	37	36	0	TRUE	-4.1%	-2	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	66	63	0	TRUE	-5.2%	-3	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	108	116	1	TRUE	7.1%	8	FALSE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	129	131	1	TRUE	2.0%	3	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	121	115	0	TRUE	-4.7%	-6	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	81	0	TRUE	4.3%	3	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	79	85	1	TRUE	7.2%	6	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	83	91	1	TRUE	9.3%	8	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	82	91	1	TRUE	10.2%	8	FALSE	TRUE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	59	62	0	TRUE	3.5%	2	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	64	61	0	TRUE	-4.2%	-3	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	77	81	1	TRUE	5.4%	4	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	77	78	1	TRUE	1.6%	1	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road -EB	Full	15	47	42	0	TRUE	-11.1%	-5	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	51	45	1	TRUE	-11.6%	-6	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	13	14	0	TRUE	7.7%	1	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	12	14	0	TRUE	18.8%	2	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	39	52	1	TRUE	33.9%	13	FALSE	FALSE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	42	50	1	TRUE	18.7%	8	FALSE	FALSE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	55	86	0	TRUE	55.5%	31	FALSE	FALSE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	81	85	2	TRUE	5.6%	5	FALSE	TRUE	TRUE	TRUE	544
35 - Anson Road - WB	Full	23	47	37	0	TRUE	-21.8%	-10	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	50	42	0	TRUE	-14.9%	-7	FALSE	TRUE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	46	42	1	TRUE	-9.1%	-4	FALSE	TRUE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	41	43	0	TRUE	6.5%	3	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	67	64	0	TRUE	-4.2%	-3	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	61	68	0	TRUE	11.3%	7	FALSE	TRUE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	47	60	0	TRUE	26.8%	13	FALSE	FALSE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	46	49	0	TRUE	6.2%	3	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	49	50	0	TRUE	1.2%	1	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	45	49	0	TRUE	9.9%	4	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	33	30	0	TRUE	-8.7%	-3	FALSE	TRUE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	31	29	0	TRUE	-4.6%	-1	FALSE	TRUE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	34	33	0	TRUE	-2.8%	-1	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	38	34	0	TRUE	-10.7%	-4	FALSE	TRUE	TRUE	TRUE	564



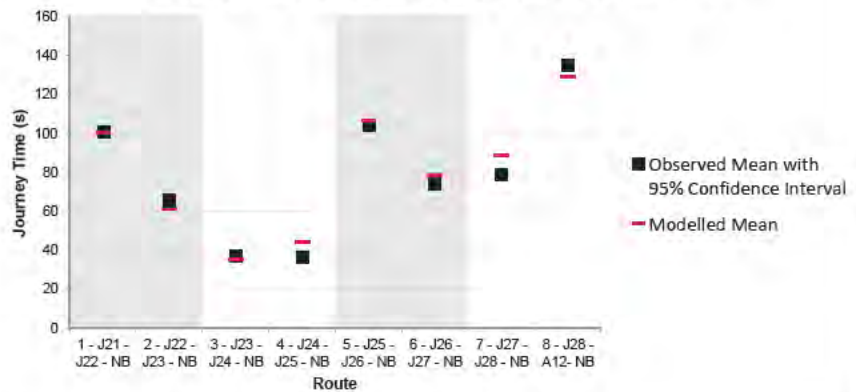
**Journey Times
Validation Statistics**

AM Peak (06:00 -07:00)

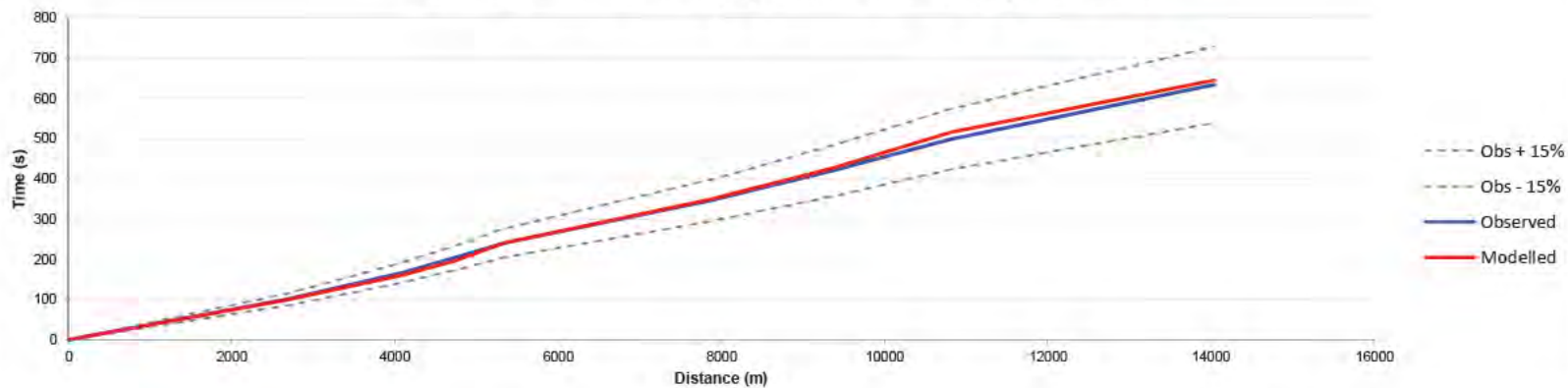
49 - A1152 - WB	Full	37	41	46	0	TRUE	12.6%	5	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	39	48	0	TRUE	22.0%	9	FALSE	FALSE	TRUE	TRUE	593
51 - A12 NB	Full	2	634	648	3	TRUE	2.2%	14	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	615	636	2	TRUE	3.3%	21	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

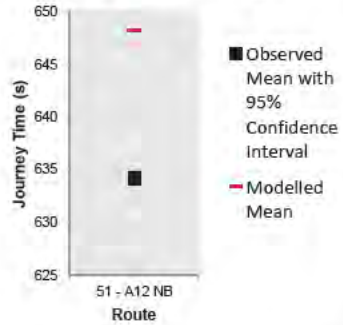


Journey Time Summary by Distance for Group Number 1

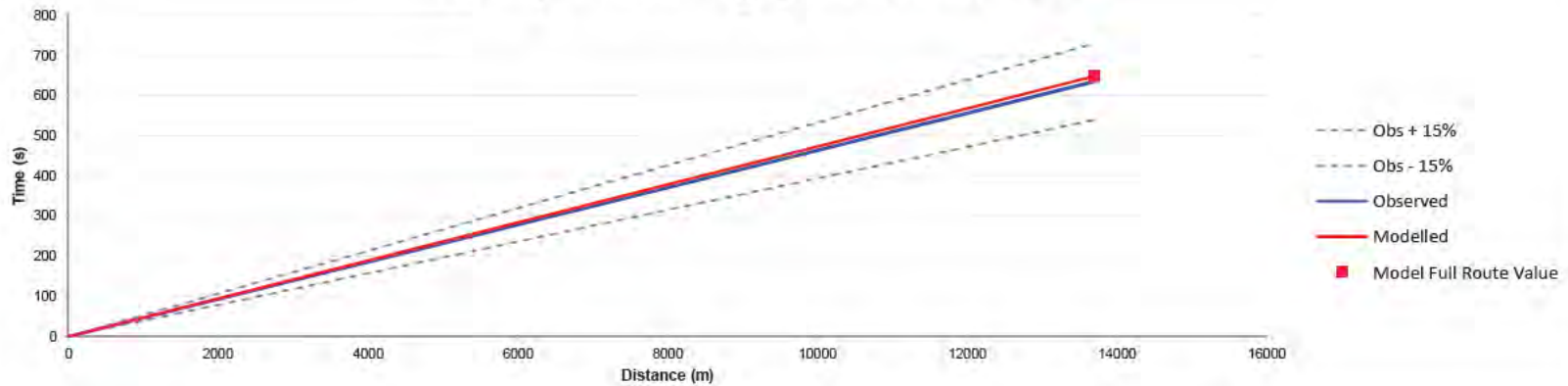




Journey Time Summary for 51 - A12 NB

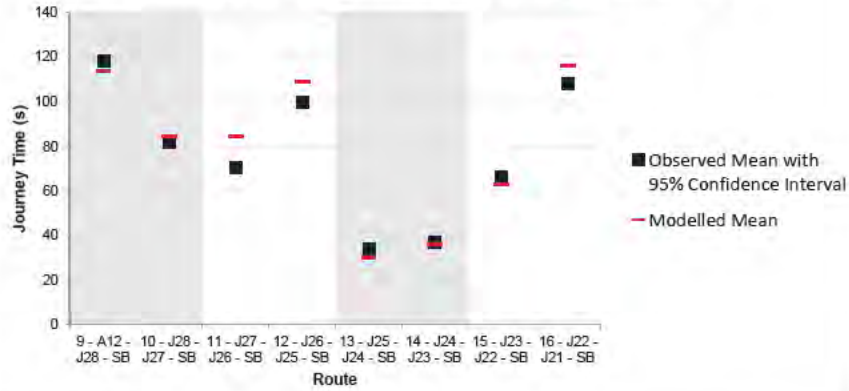


Journey Time Summary by Distance for 51 - A12 NB

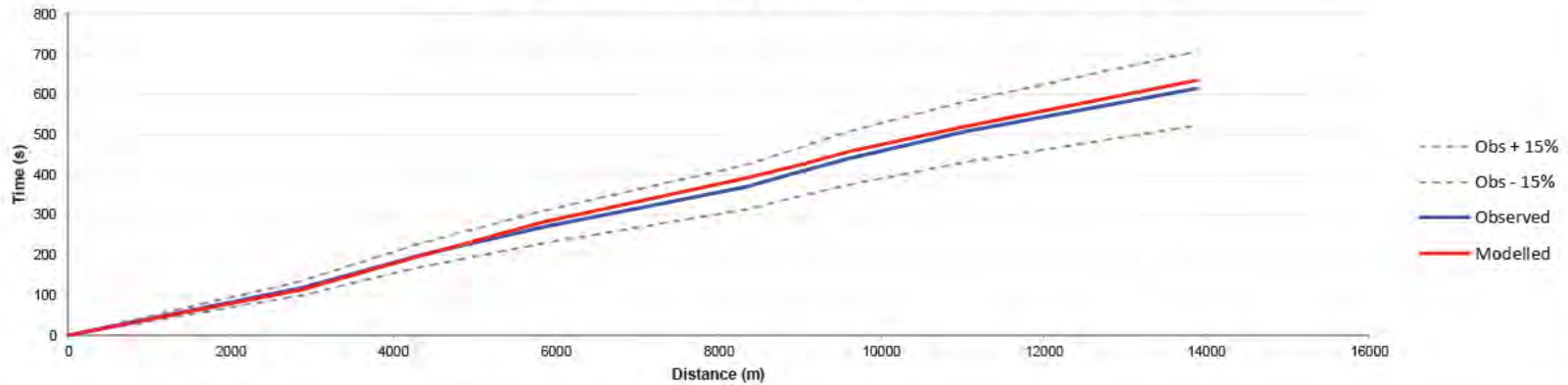




Journey Time Summary for Group Number 3

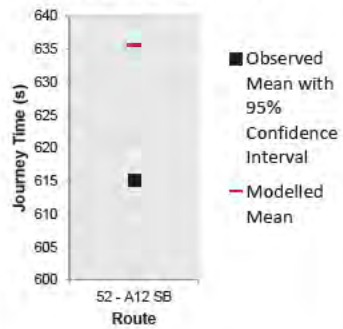


Journey Time Summary by Distance for Group Number 3

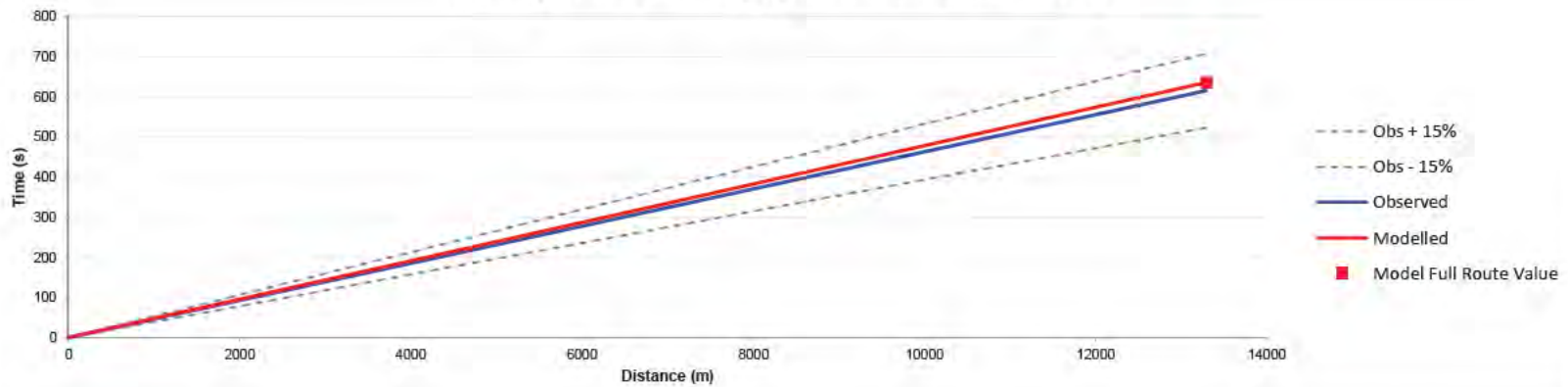




Journey Time Summary for 52 - A12 SB

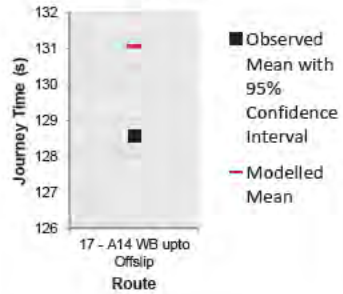


Journey Time Summary by Distance for 52 - A12 SB

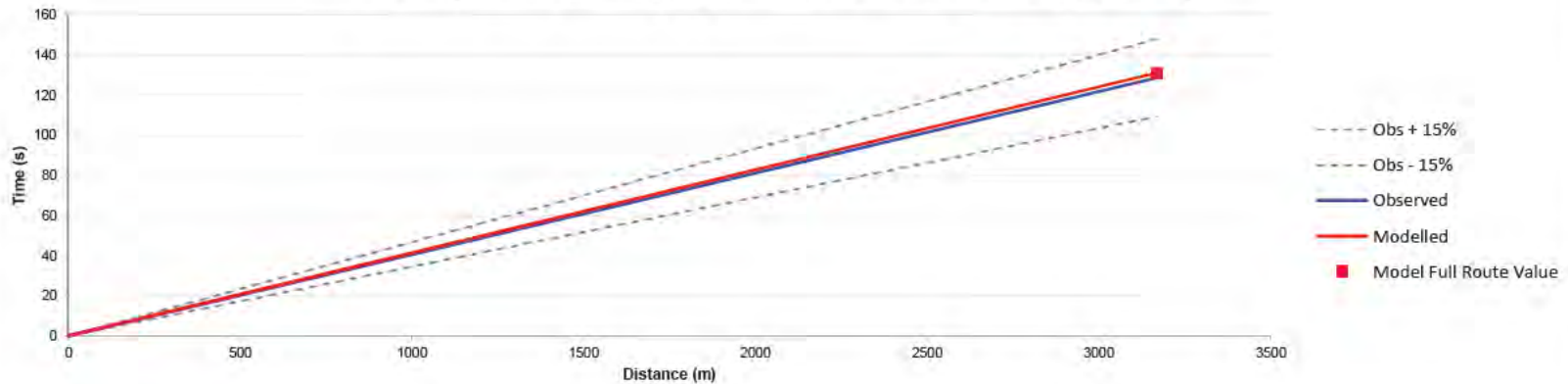




Journey Time Summary for 17 - A14 WB upto Offslip

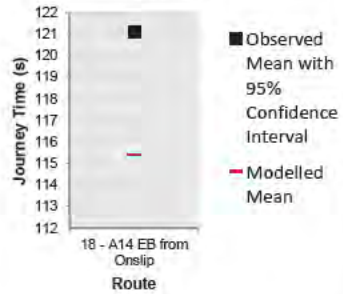


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

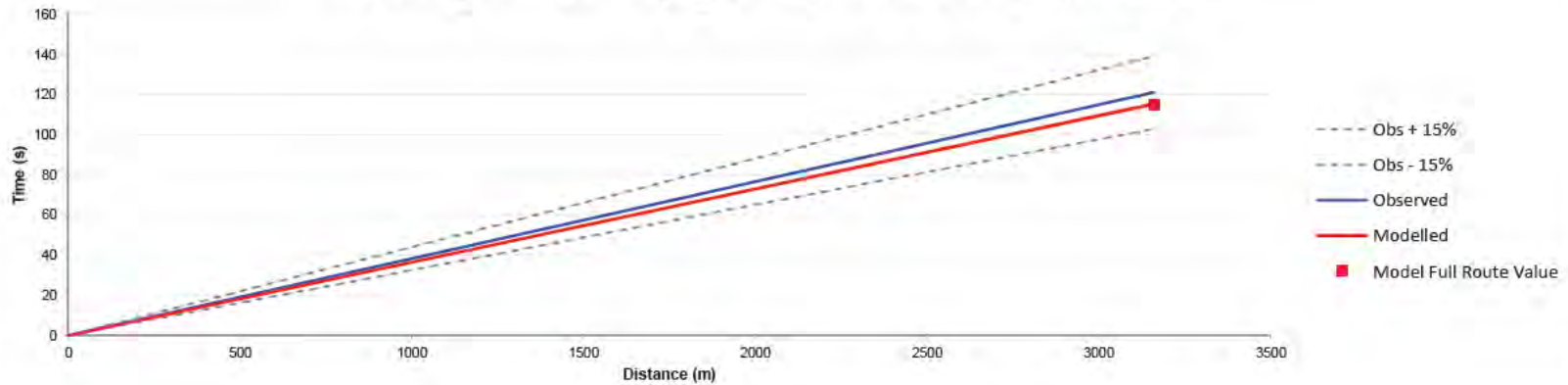




Journey Time Summary for 18 - A14 EB from Onslip

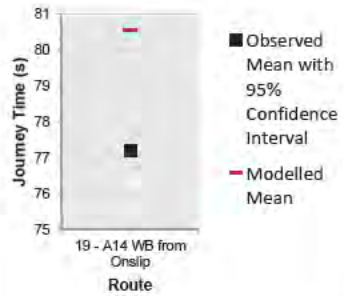


Journey Time Summary by Distance for 18 - A14 EB from Onslip

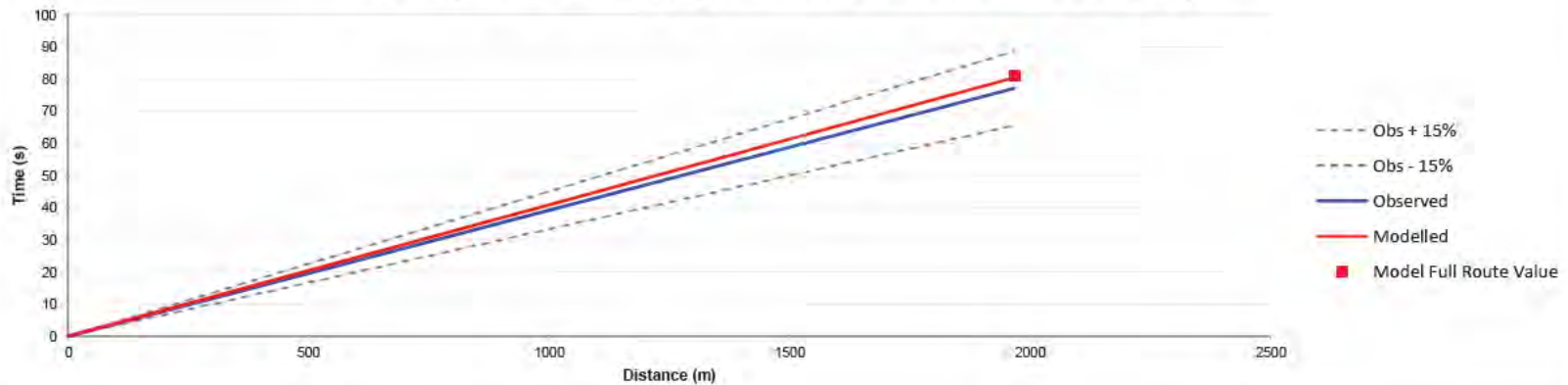




Journey Time Summary for 19 - A14 WB from Onslip

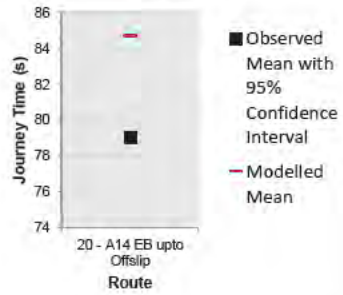


Journey Time Summary by Distance for 19 - A14 WB from Onslip

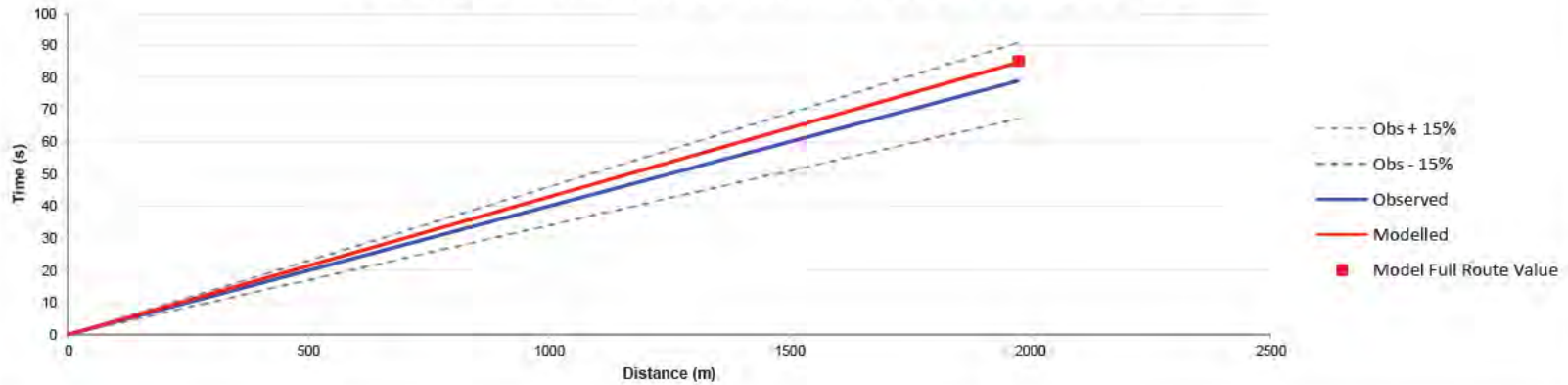




Journey Time Summary for 20 - A14 EB upto Offslip

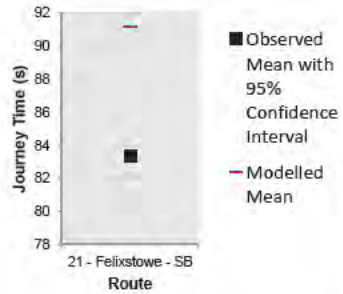


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

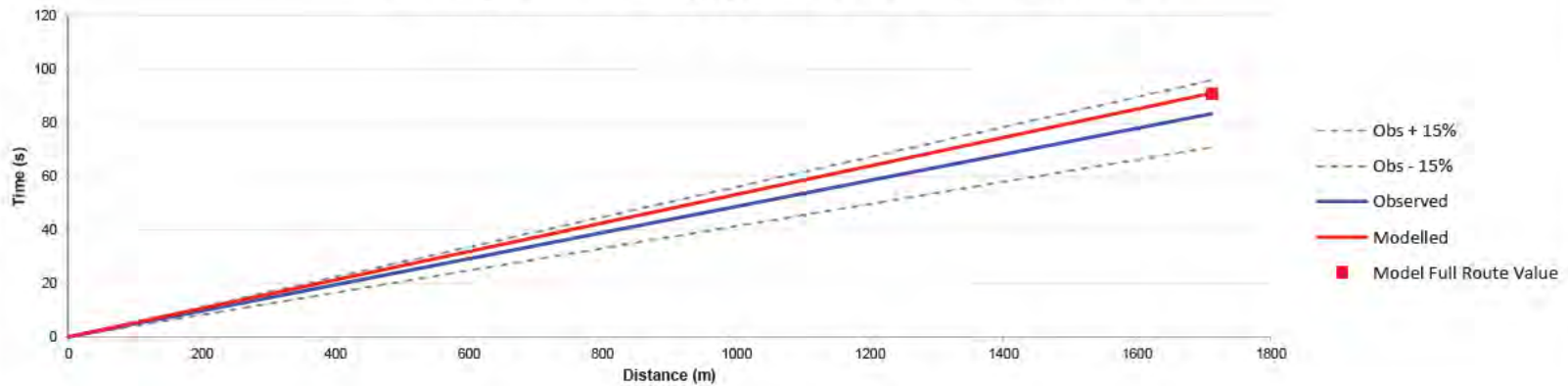




Journey Time Summary for 21 - Felixstowe - SB

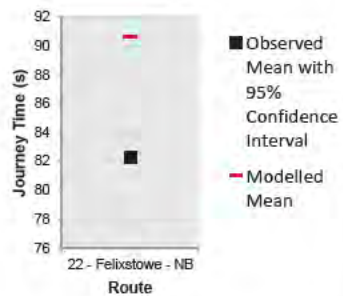


Journey Time Summary by Distance for 21 - Felixstowe - SB

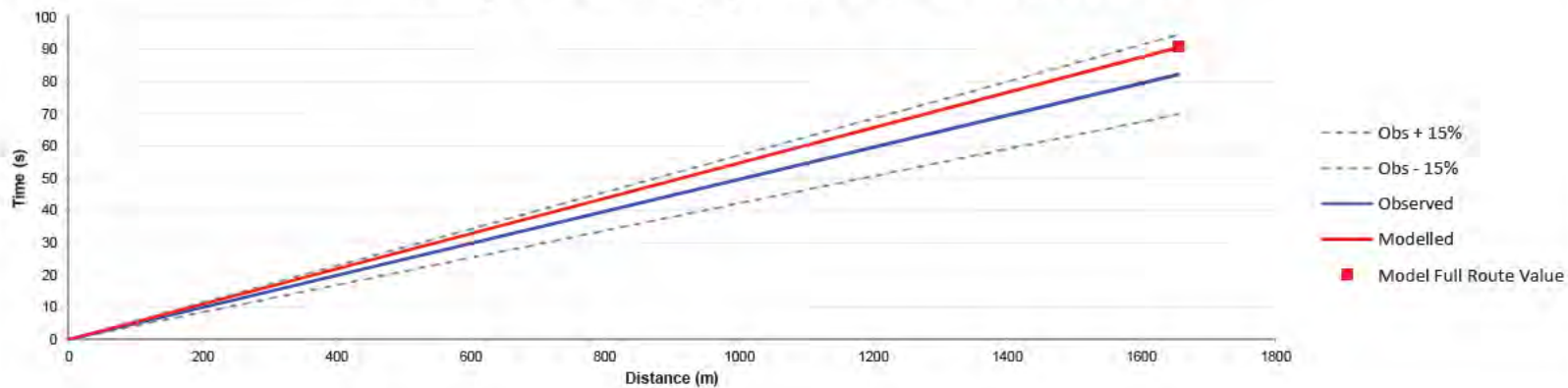




Journey Time Summary for 22 - Felixstowe - NB

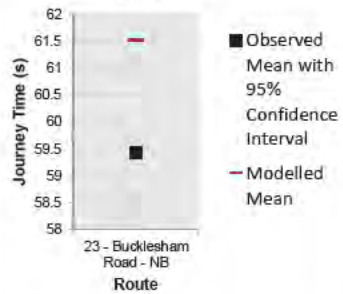


Journey Time Summary by Distance for 22 - Felixstowe - NB

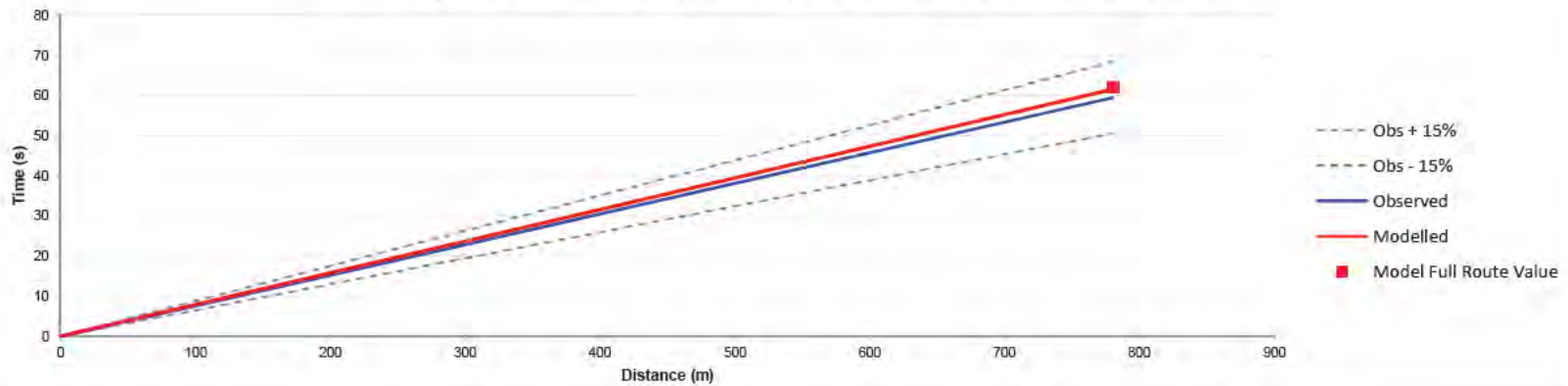




Journey Time Summary for 23 - Bucklesham Road - NB

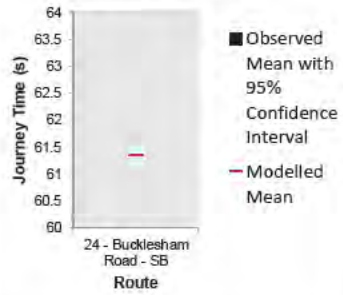


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

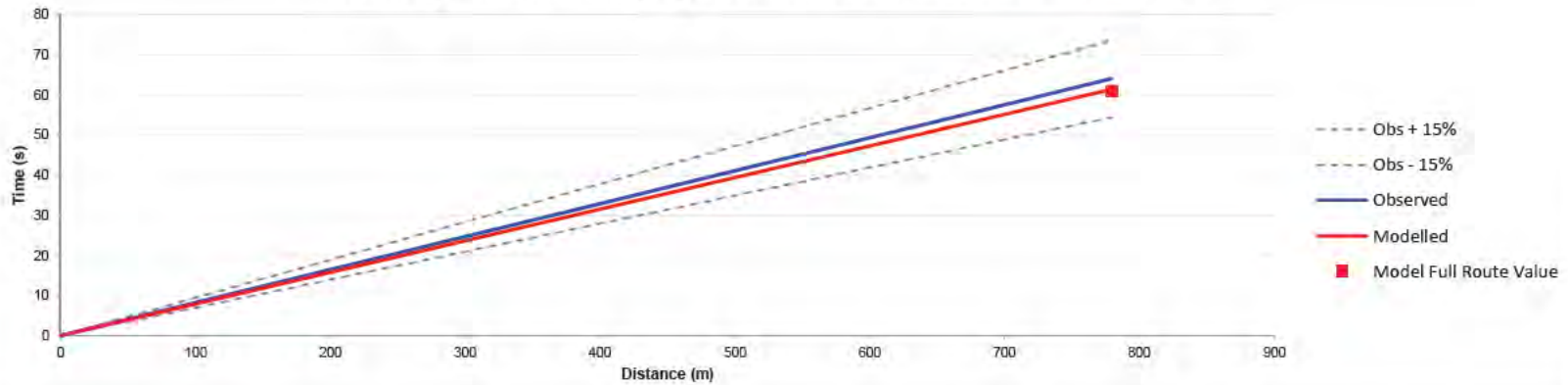




Journey Time Summary for 24 - Bucklesham Road - SB

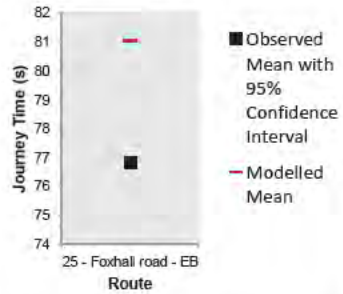


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

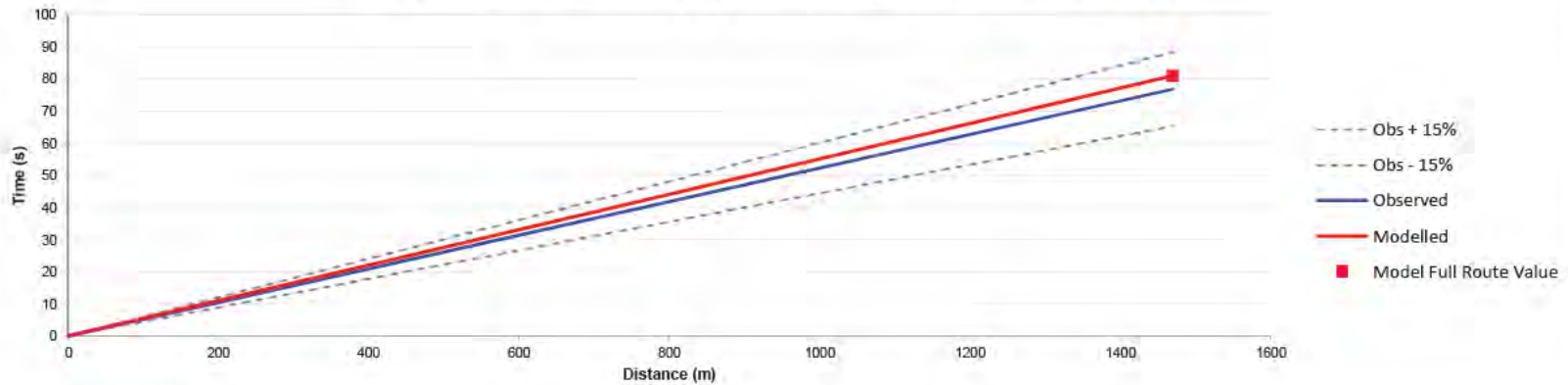




Journey Time Summary for 25 - Foxhall road - EB

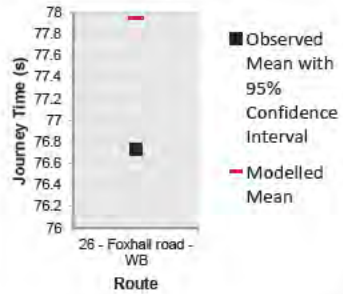


Journey Time Summary by Distance for 25 - Foxhall road - EB

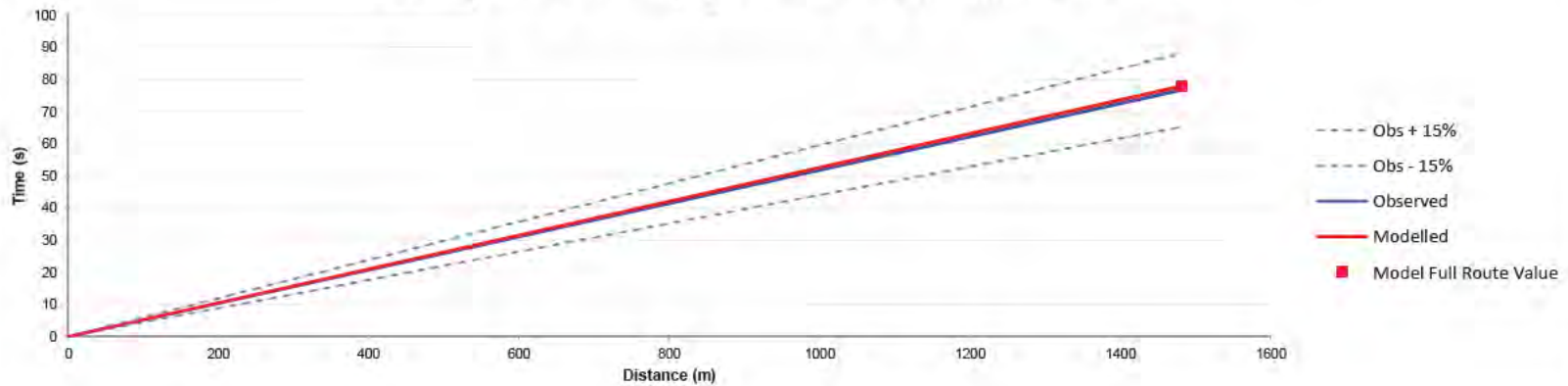




Journey Time Summary for 26 - Foxhall road - WB

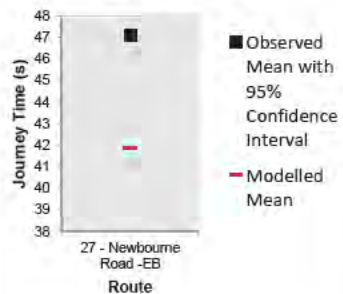


Journey Time Summary by Distance for 26 - Foxhall road - WB

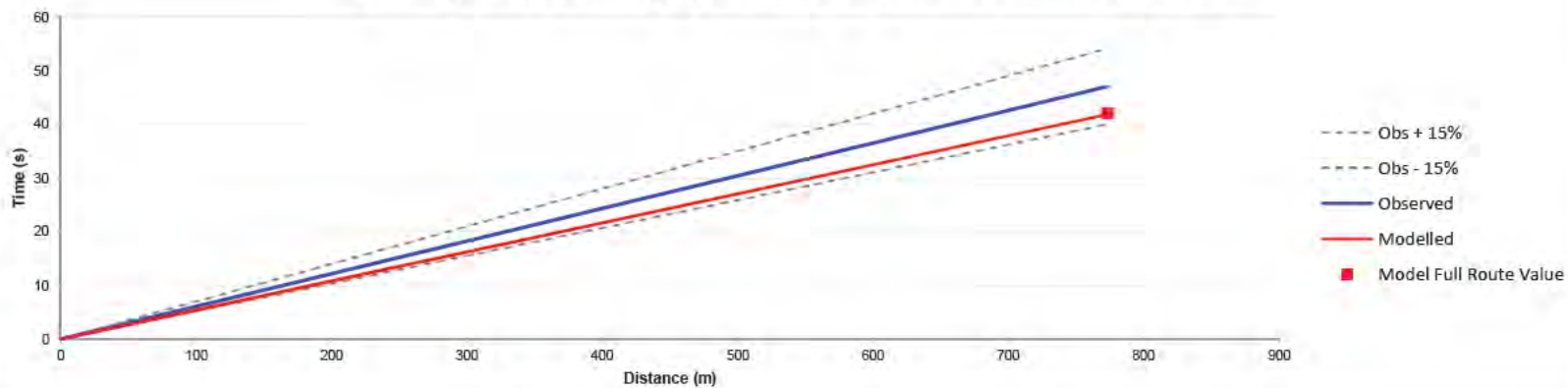




Journey Time Summary for 27 - Newbourne Road -EB

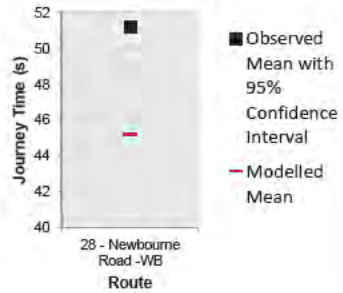


Journey Time Summary by Distance for 27 - Newbourne Road -EB

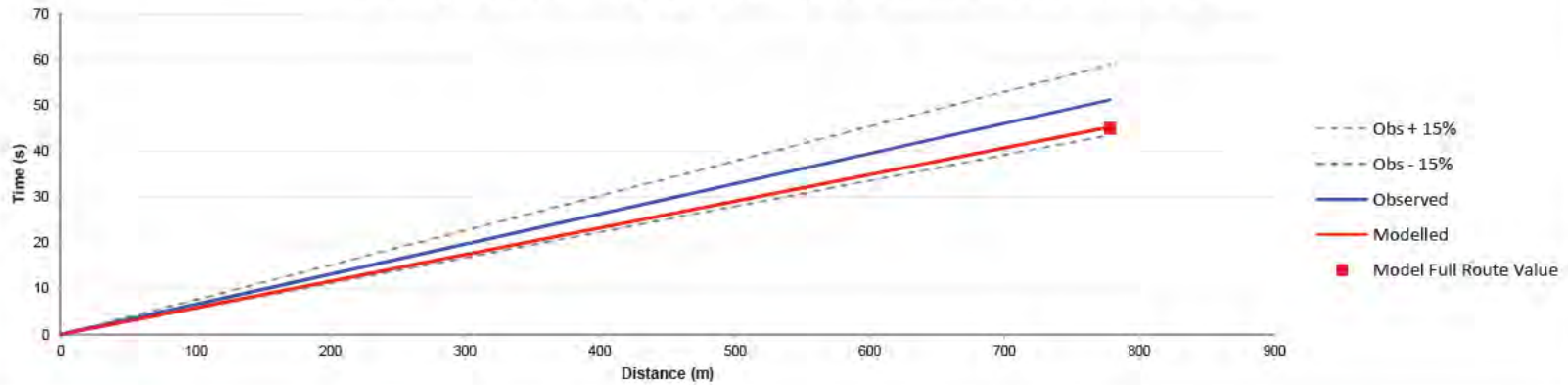




Journey Time Summary for 28 - Newbourne Road -WB

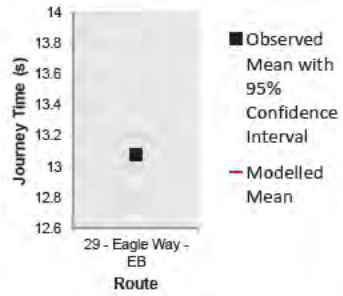


Journey Time Summary by Distance for 28 - Newbourne Road -WB

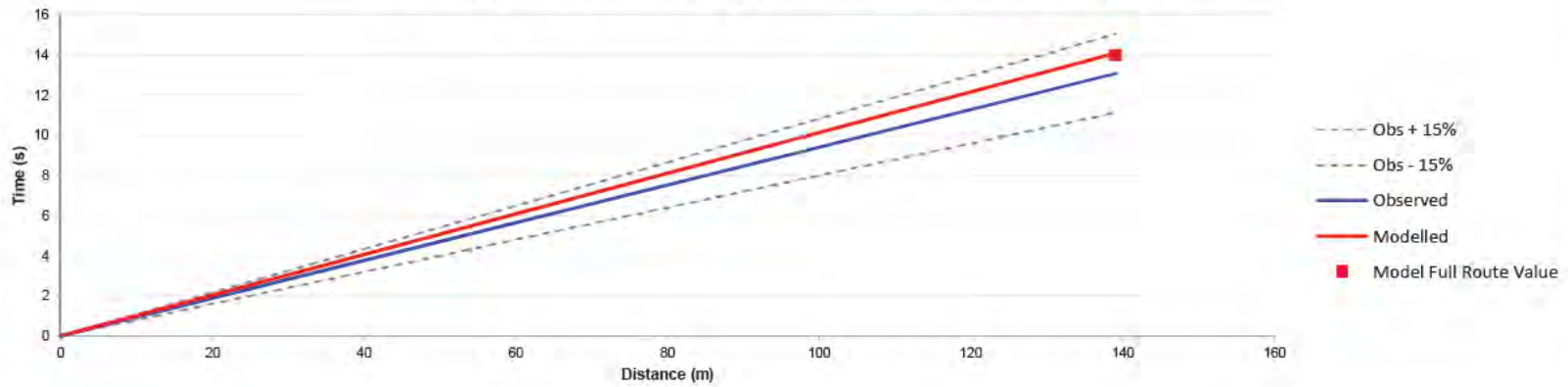




Journey Time Summary for 29 - Eagle Way - EB

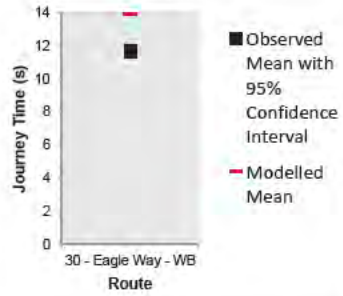


Journey Time Summary by Distance for 29 - Eagle Way - EB

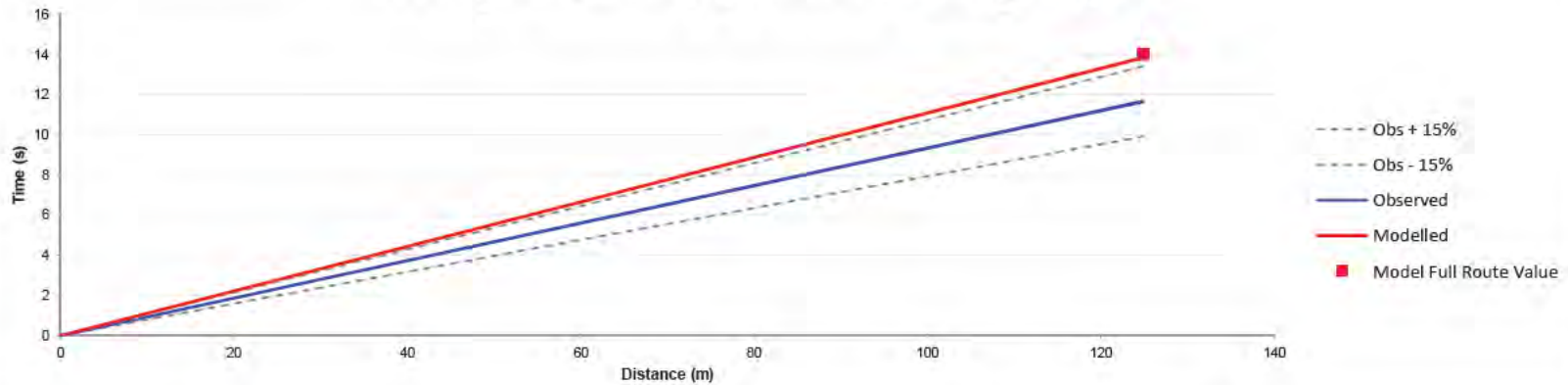




Journey Time Summary for 30 - Eagle Way - WB

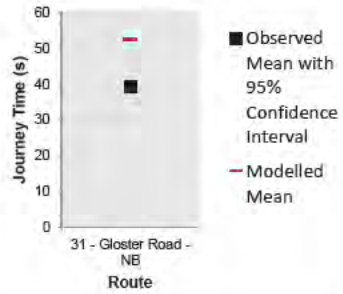


Journey Time Summary by Distance for 30 - Eagle Way - WB

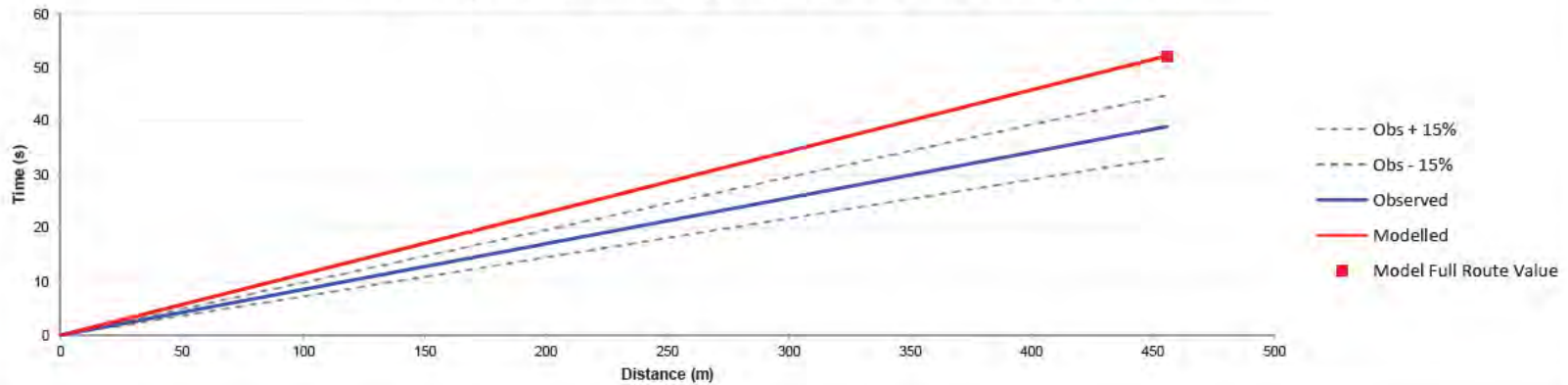




Journey Time Summary for 31 - Gloster Road - NB

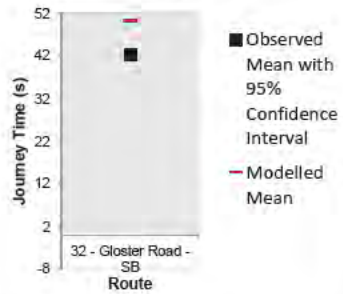


Journey Time Summary by Distance for 31 - Gloster Road - NB

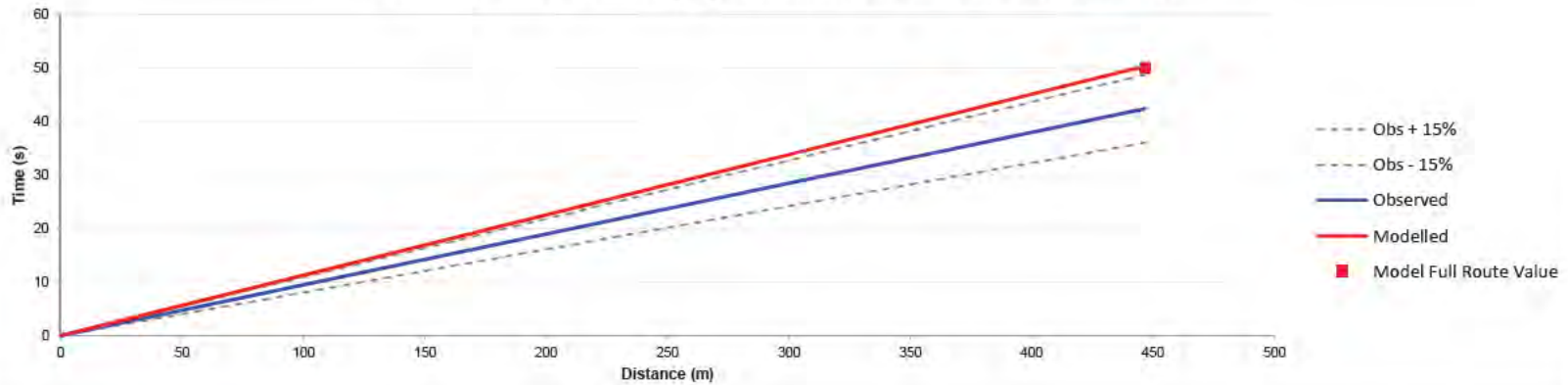




Journey Time Summary for 32 - Gloster Road - SB

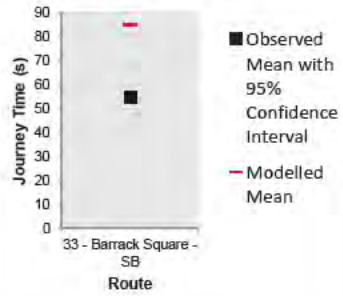


Journey Time Summary by Distance for 32 - Gloster Road - SB

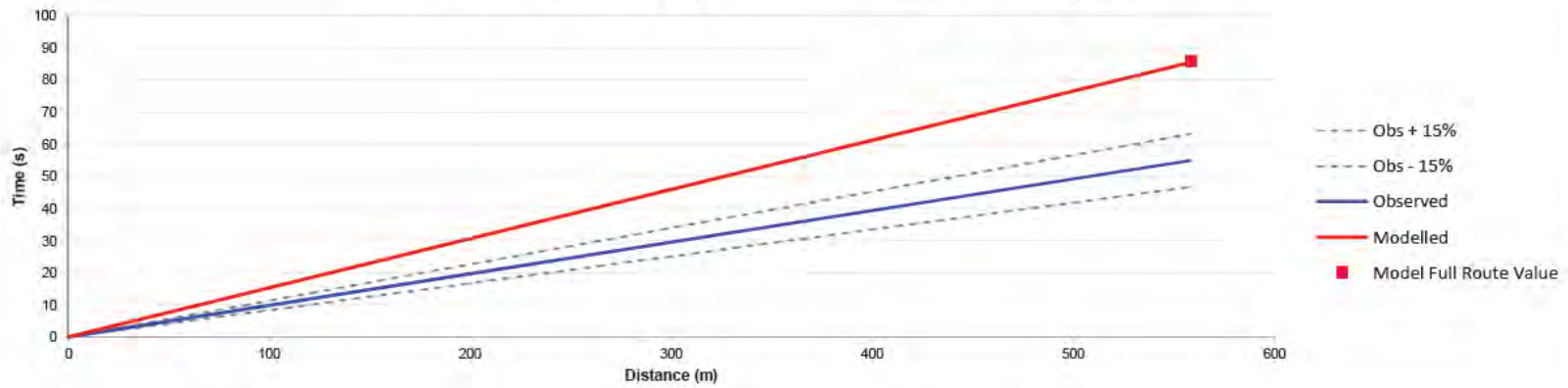




Journey Time Summary for 33 - Barrack Square - SB

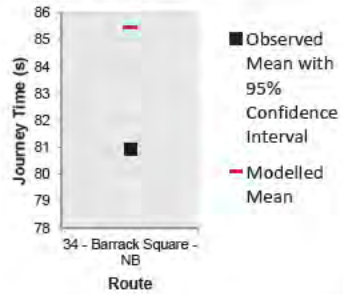


Journey Time Summary by Distance for 33 - Barrack Square - SB

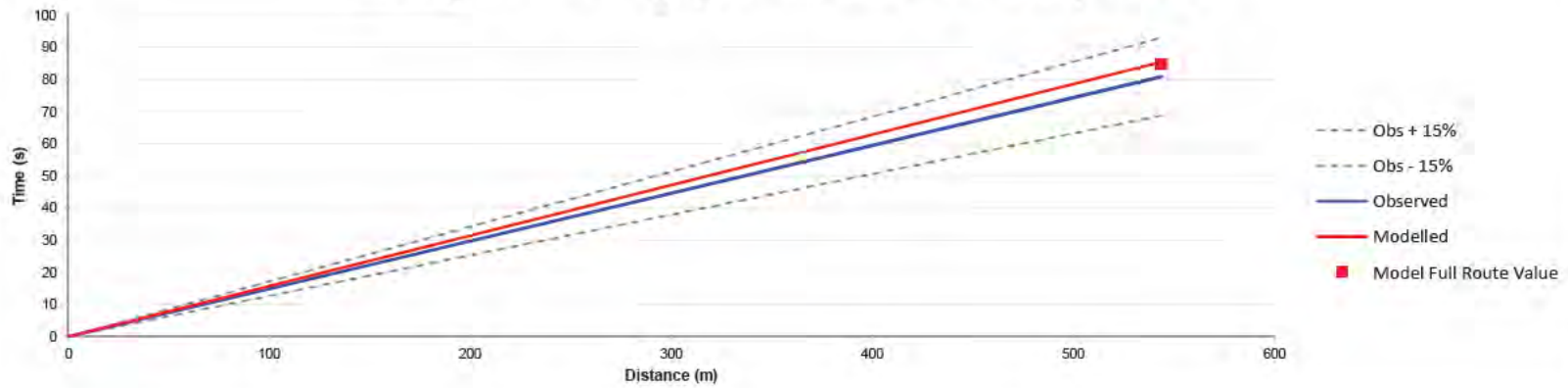




Journey Time Summary for 34 - Barrack Square - NB

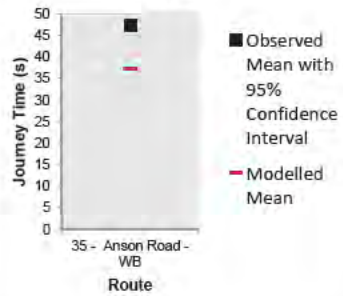


Journey Time Summary by Distance for 34 - Barrack Square - NB

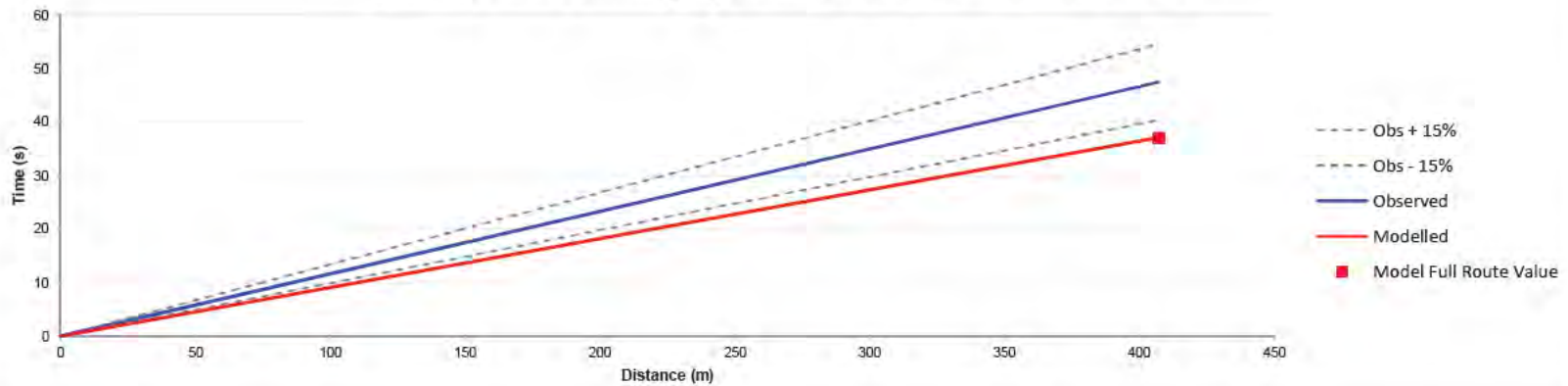




Journey Time Summary for 35 - Anson Road - WB

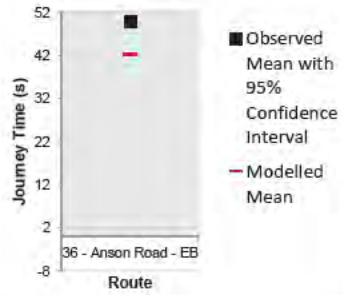


Journey Time Summary by Distance for 35 - Anson Road - WB

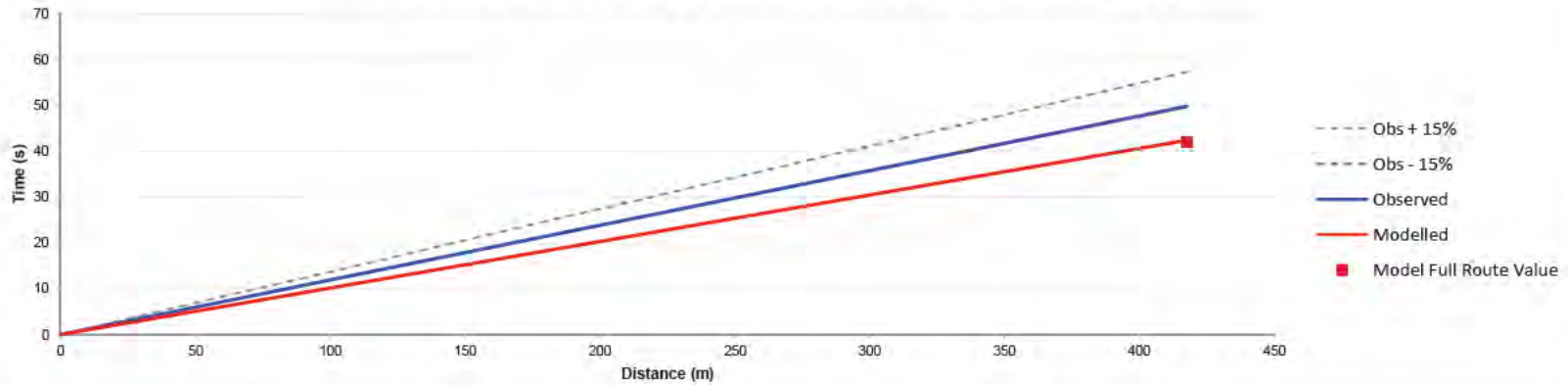




Journey Time Summary for 36 - Anson Road - EB

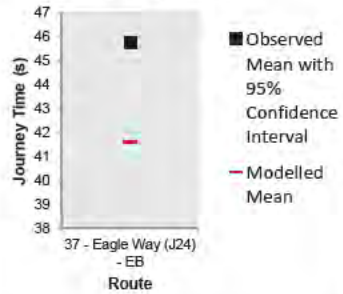


Journey Time Summary by Distance for 36 - Anson Road - EB

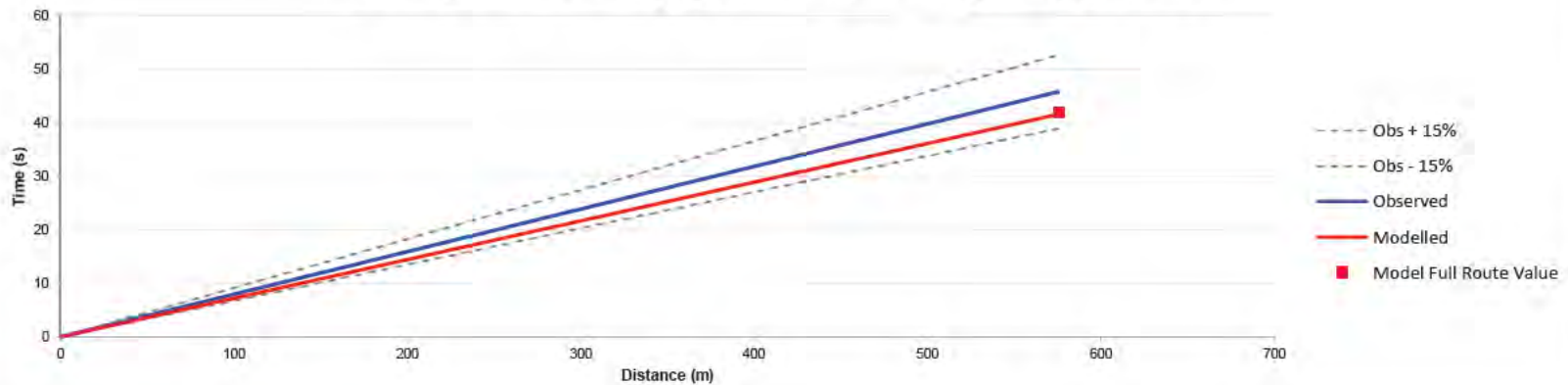




Journey Time Summary for 37 - Eagle Way (J24) - EB

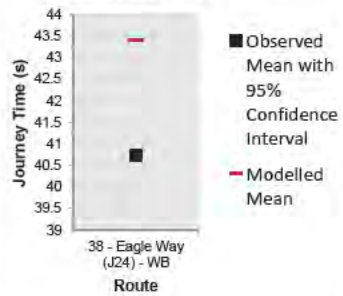


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

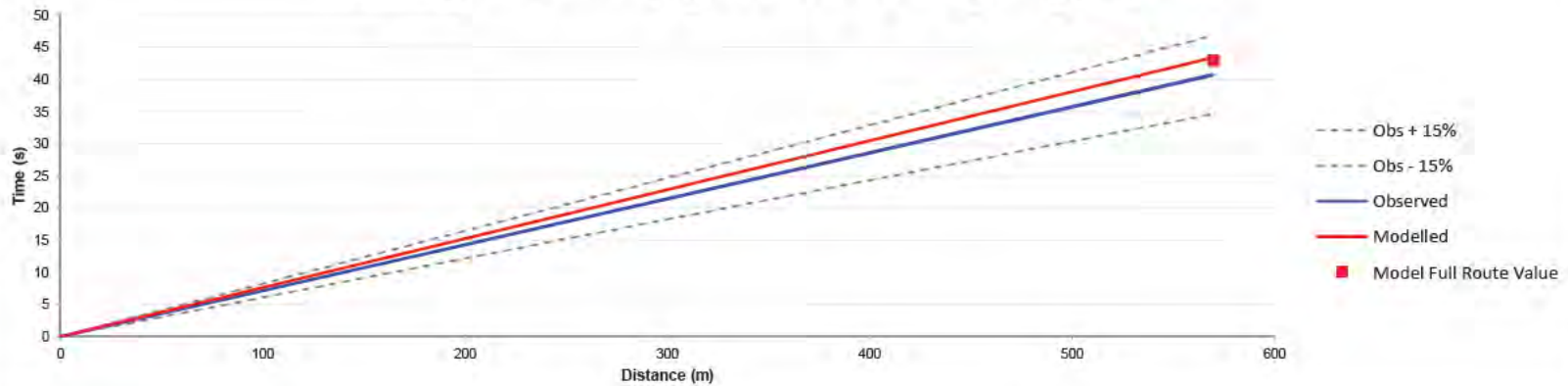




Journey Time Summary for 38 - Eagle Way (J24) - WB

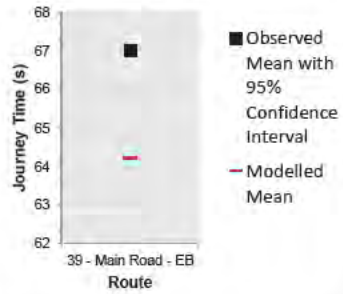


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

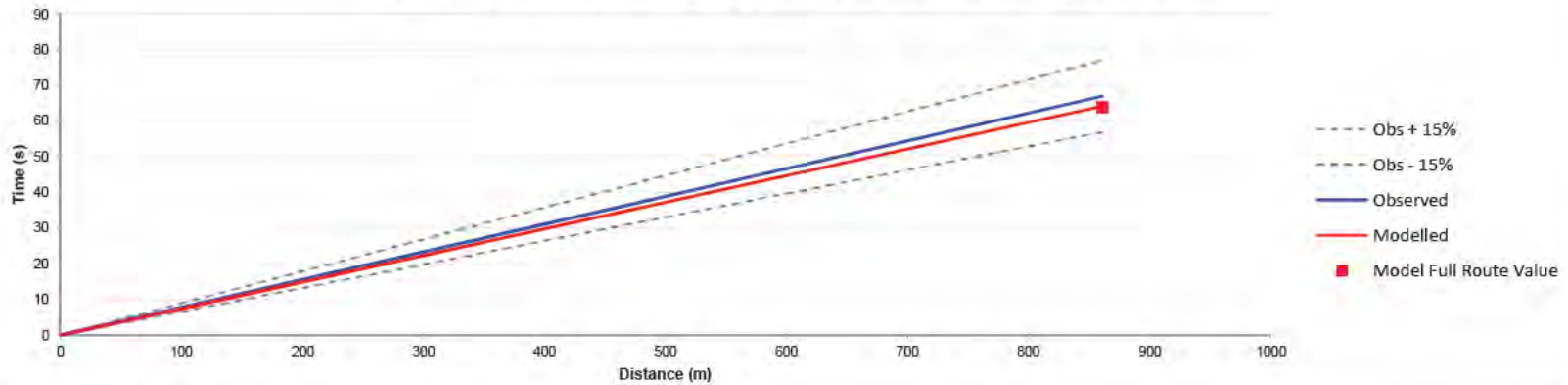




Journey Time Summary for 39 - Main Road - EB

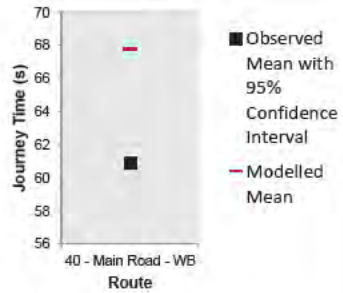


Journey Time Summary by Distance for 39 - Main Road - EB

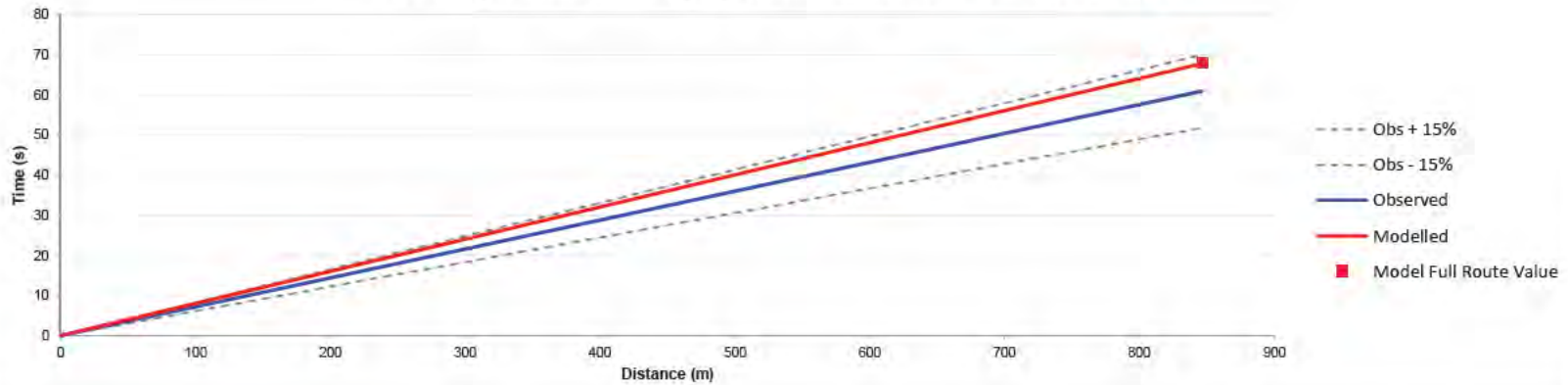




Journey Time Summary for 40 - Main Road - WB

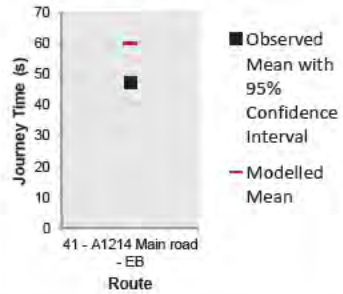


Journey Time Summary by Distance for 40 - Main Road - WB

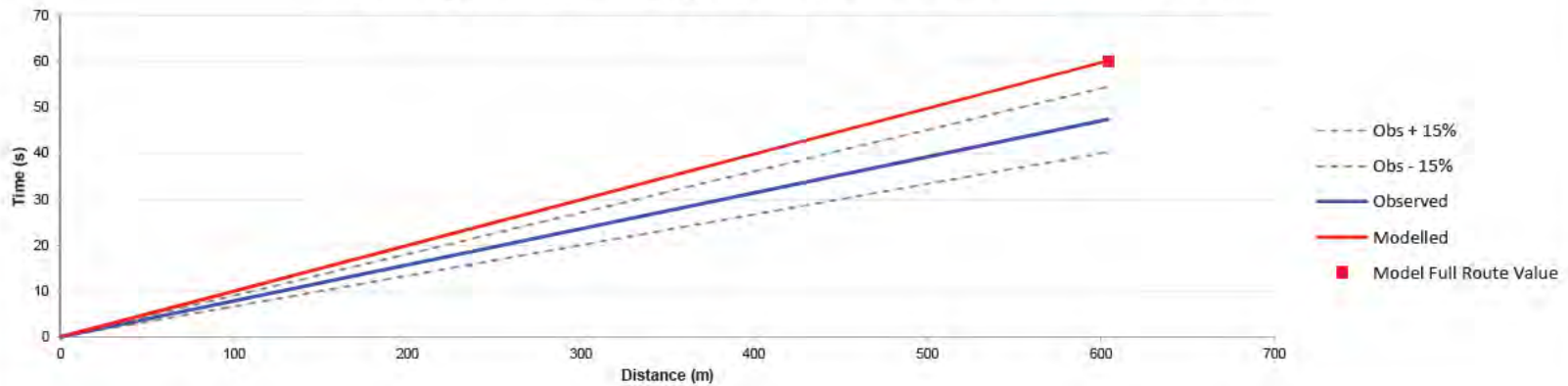




Journey Time Summary for 41 - A1214 Main road road - EB

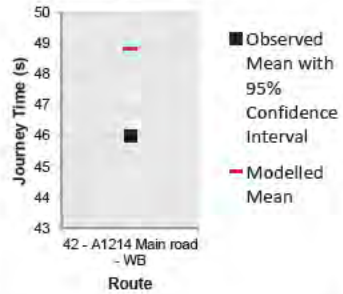


Journey Time Summary by Distance for 41 - A1214 Main road - EB

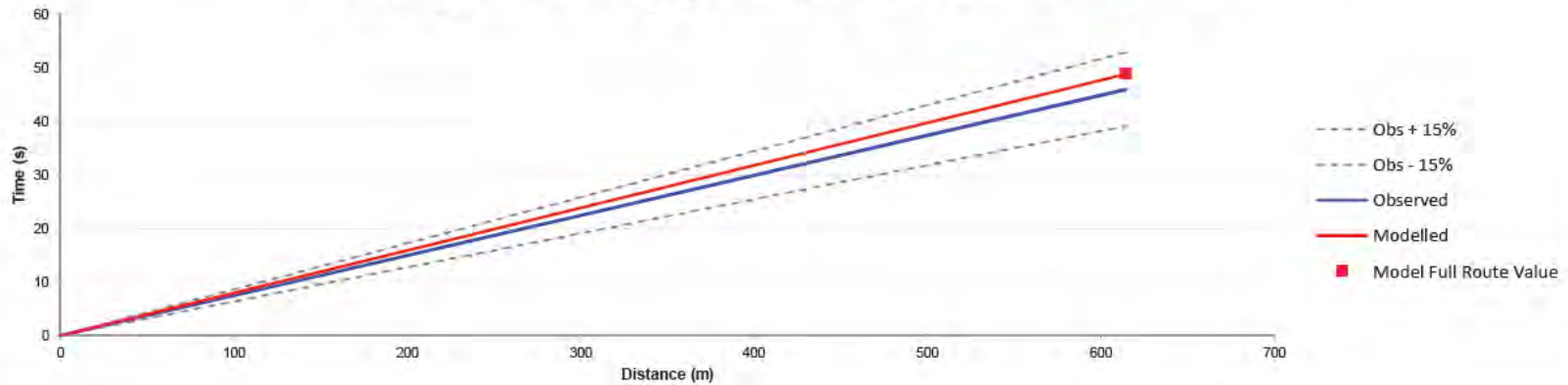




Journey Time Summary for 42 - A1214 Main road road - WB

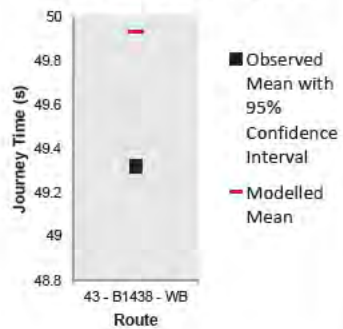


Journey Time Summary by Distance for 42 - A1214 Main road - WB

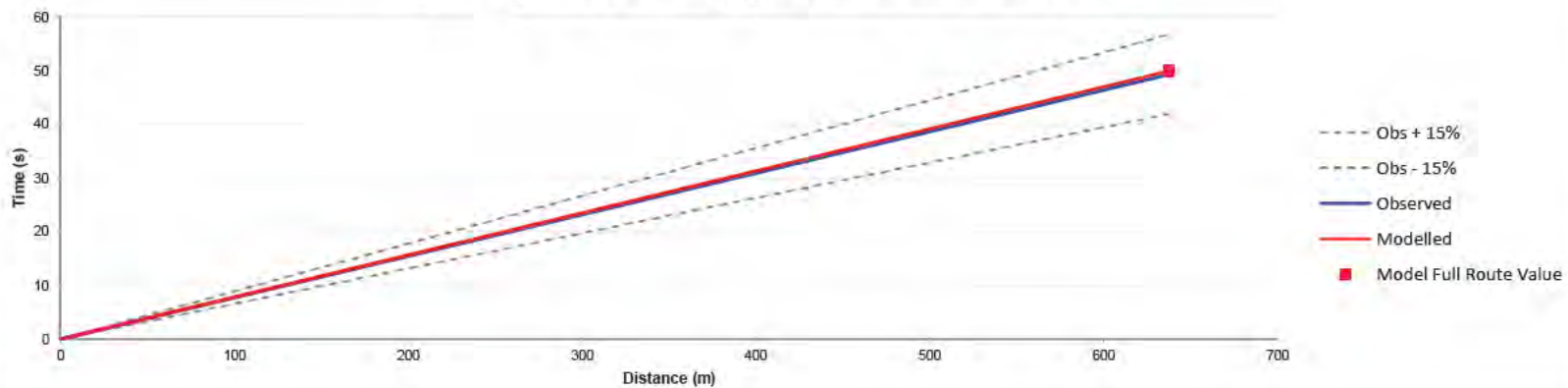




Journey Time Summary for 43 - B1438 - WB

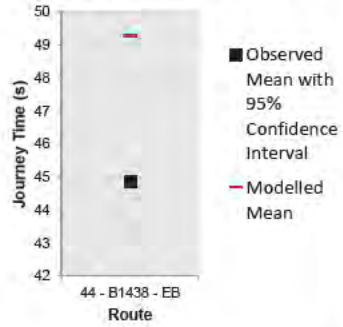


Journey Time Summary by Distance for 43 - B1438 - WB

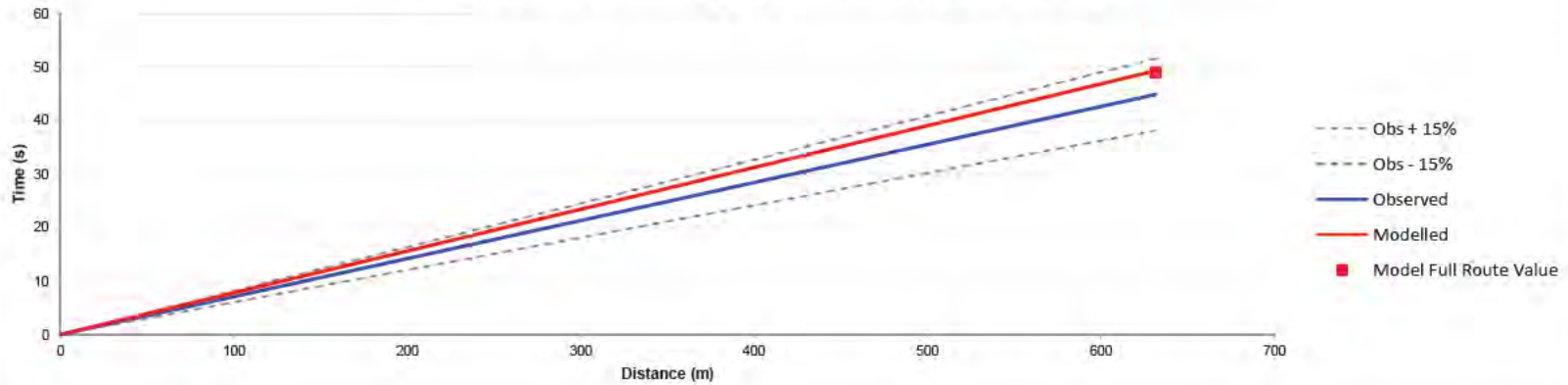




Journey Time Summary for 44 - B1438 - EB

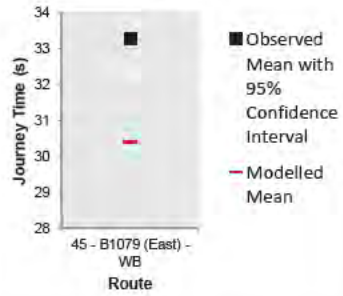


Journey Time Summary by Distance for 44 - B1438 - EB

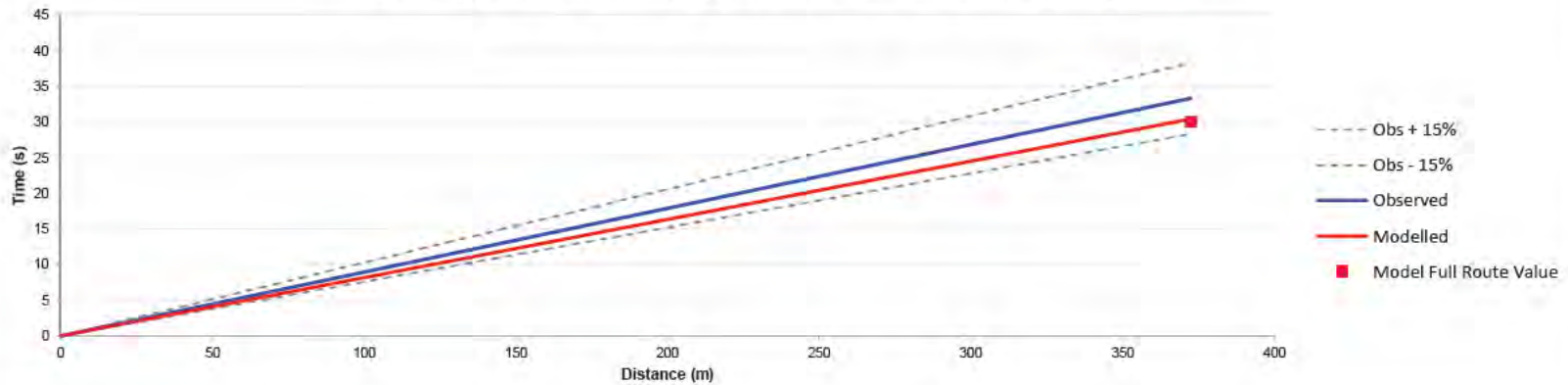




Journey Time Summary for 45 - B1079 (East) - WB

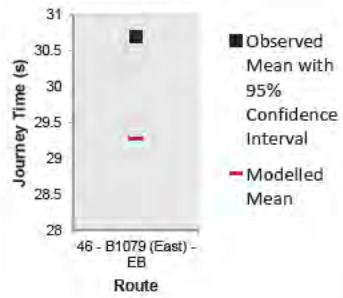


Journey Time Summary by Distance for 45 - B1079 (East) - WB

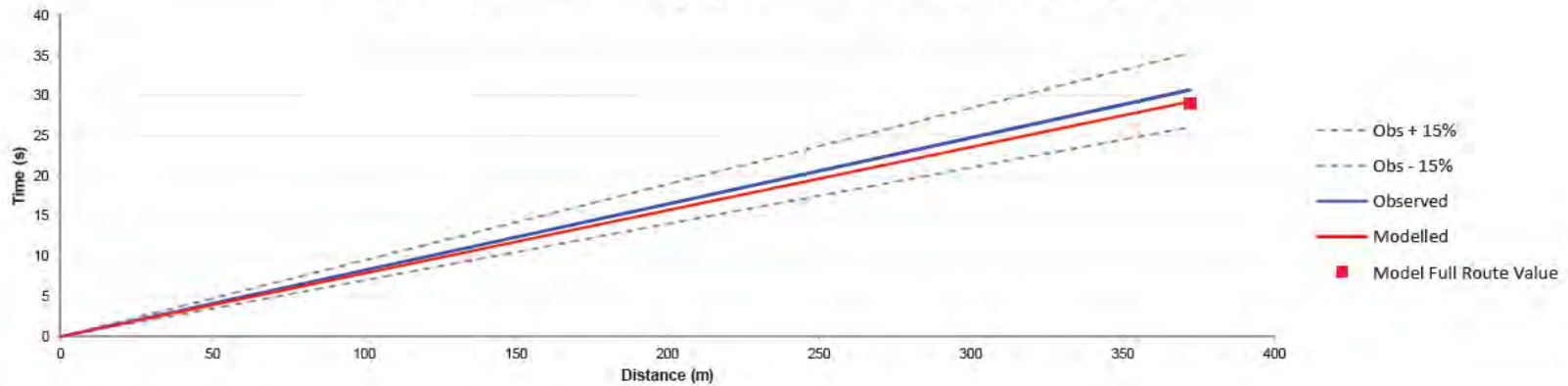




Journey Time Summary for 46 - B1079 (East) - EB

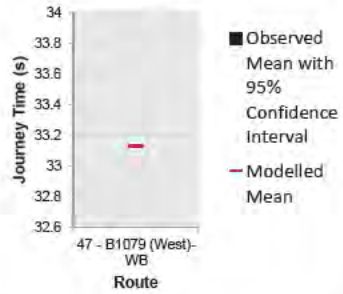


Journey Time Summary by Distance for 46 - B1079 (East) - EB

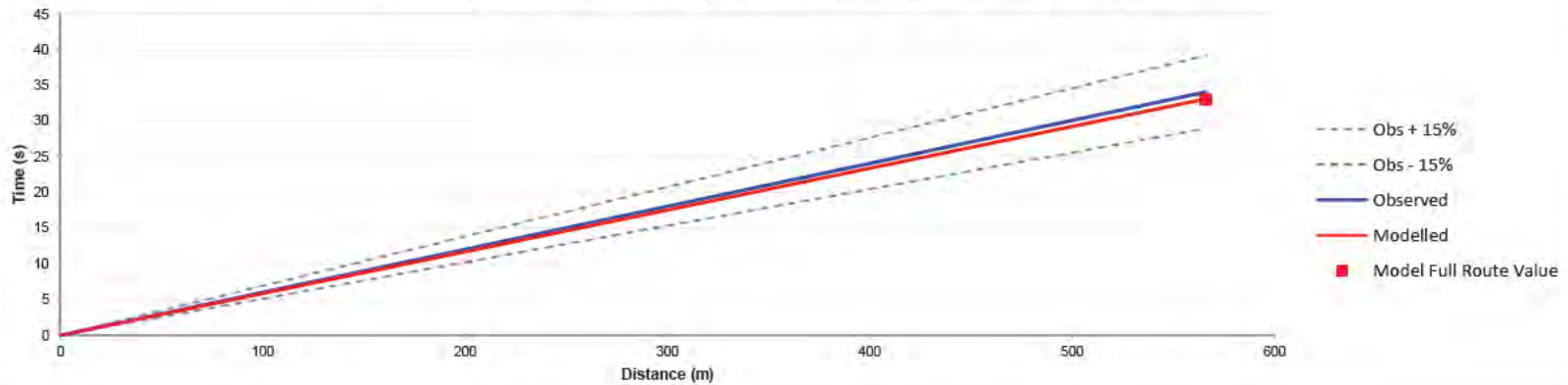




Journey Time Summary for 47 - B1079 (West)- WB

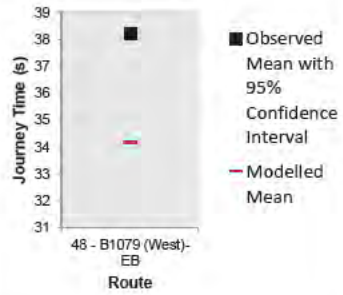


Journey Time Summary by Distance for 47 - B1079 (West)- WB

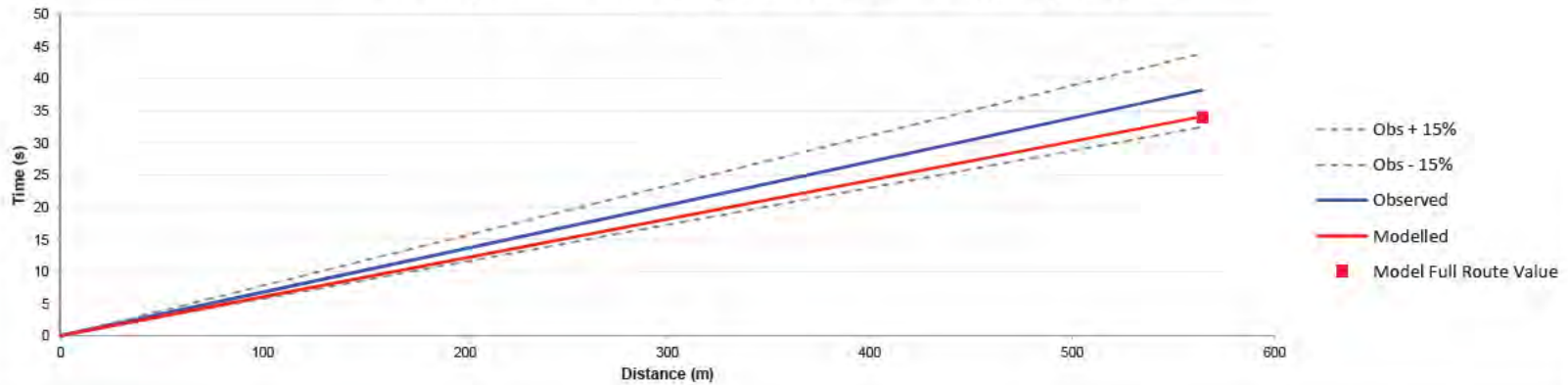




Journey Time Summary for 48 - B1079 (West)- EB

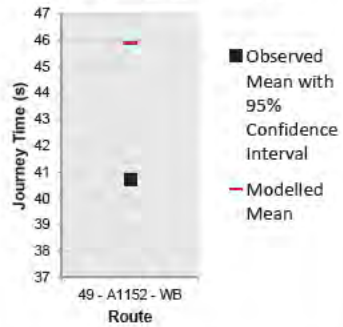


Journey Time Summary by Distance for 48 - B1079 (West)- EB

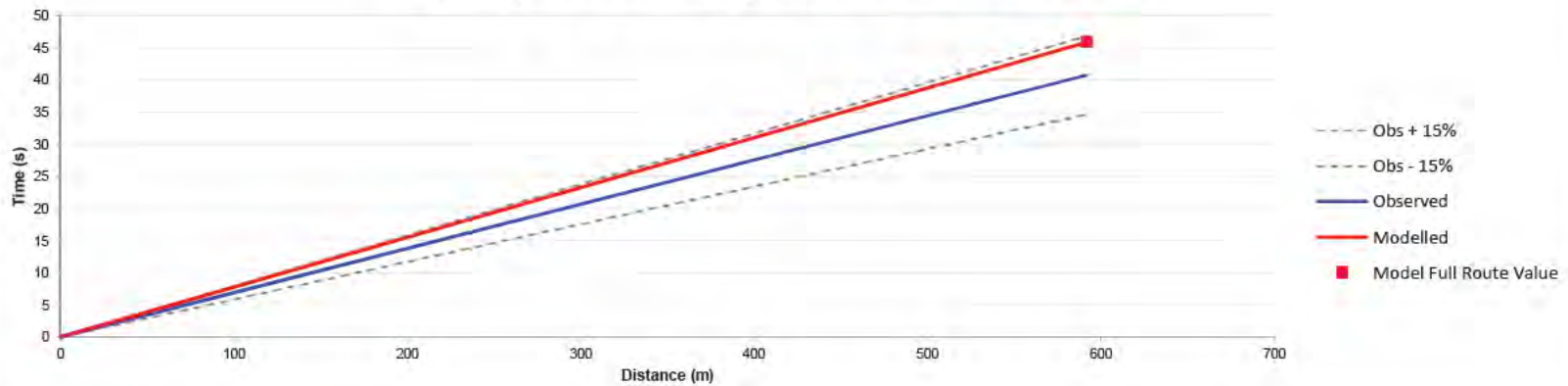




Journey Time Summary for 49 - A1152 - WB

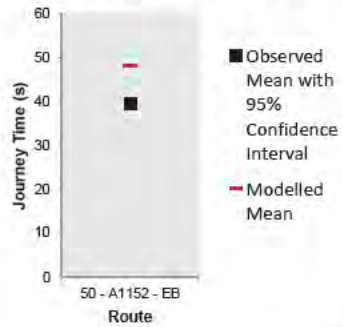


Journey Time Summary by Distance for 49 - A1152 - WB

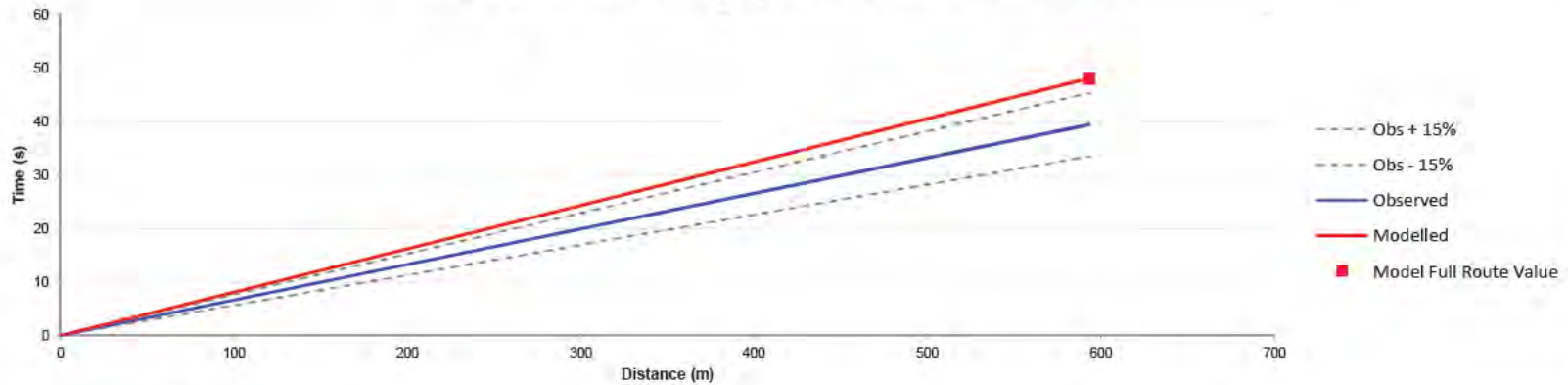




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





**Journey Times
Validation Statistics**

AM Period

Route:	Segment	Graph Group	Observed		Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	95% Conf	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	106	6	109	1	TRUE	2.7%	3	TRUE	TRUE	TRUE	2695	
2 - J22 - J23 - NB	Partial - B	1	69	4	65	0	TRUE	-6.8%	-5	FALSE	TRUE	TRUE	1406	
3 - J23 - J24 - NB	Partial - C	1	39	2	38	0	TRUE	-4.3%	-2	TRUE	TRUE	TRUE	646	
4 - J24 - J25 - NB	Partial - D	1	39	2	49	0	TRUE	26.1%	10	FALSE	FALSE	TRUE	598	
5 - J25 - J26 - NB	Partial - E	1	108	4	120	0	TRUE	11.3%	12	FALSE	TRUE	TRUE	2509	
6 - J26 - J27 - NB	Partial - F	1	82	8	90	1	TRUE	9.2%	8	TRUE	TRUE	TRUE	1513	
7 - J27 - J28 - NB	Partial - G	1	84	5	94	0	TRUE	12.7%	11	FALSE	TRUE	TRUE	1444	
8 - J28 - A12- NB	Partial - H	1	139	4	136	0	TRUE	-2.5%	-3	TRUE	TRUE	TRUE	3240	
9 - A12 - J28 - SB	Partial - A	3	129	14	127	1	TRUE	-1.9%	-2	TRUE	TRUE	TRUE	2885	
10 - J28 - J27 - SB	Partial - B	3	93	16	102	2	TRUE	8.8%	8	TRUE	TRUE	TRUE	1455	
11 - J27 - J26 - SB	Partial - C	3	77	7	91	0	TRUE	19.1%	15	FALSE	FALSE	TRUE	1518	
12 - J26 - J25 - SB	Partial - D	3	104	5	111	0	TRUE	7.6%	8	FALSE	TRUE	TRUE	2490	
13 - J25 - J24 - SB	Partial - E	3	38	5	32	0	TRUE	-16.5%	-6	FALSE	FALSE	TRUE	597	
14 - J24 - J23 - SB	Partial - F	3	60	35	57	3	TRUE	-3.8%	-2	TRUE	TRUE	TRUE	659	
15 - J23 - J22 - SB	Partial - G	3	70	4	67	0	TRUE	-3.8%	-3	TRUE	TRUE	TRUE	1429	
16 - J22 - J21 - SB	Partial - H	3	114	6	129	2	TRUE	13.6%	15	FALSE	TRUE	TRUE	2859	
17 - A14 WB upto Offslip	Full	5	124	5	144	1	TRUE	15.5%	19	FALSE	FALSE	TRUE	3168	
18 - A14 EB from Onslip	Full	6	115	6	117	0	TRUE	2.2%	3	TRUE	TRUE	TRUE	3161	
19 - A14 WB from Onslip	Full	7	77		84	0	TRUE	9.3%	7	FALSE	TRUE	TRUE	1968	
20 - A14 EB upto Offslip	Full	8	80	1	89	0	TRUE	11.3%	9	FALSE	TRUE	TRUE	1976	
21 - Felixstowe - SB	Full	9	89	6	98	1	TRUE	9.8%	9	FALSE	TRUE	TRUE	1712	
22 - Felixstowe - NB	Full	10	89	7	108	2	TRUE	21.1%	19	FALSE	FALSE	TRUE	1656	
23 - Bucklesham Road - NB	Full	11	62	2	62	0	TRUE	-0.1%	0	TRUE	TRUE	TRUE	780	
24 - Bucklesham Road - SB	Full	12	65	3	75	1	TRUE	15.1%	10	FALSE	FALSE	TRUE	780	
25 - Foxhall road - EB	Full	13	115	51	119	6	TRUE	4.2%	5	TRUE	TRUE	TRUE	1470	
26 - Foxhall road - WB	Full	14	80	4	83	1	TRUE	3.8%	3	TRUE	TRUE	TRUE	1481	
27 - Newbourne Road -EB	Full	15	46	1	42	0	TRUE	-8.3%	-4	FALSE	TRUE	TRUE	774	
28 - Newbourne Road -WB	Full	16	58	6	60	2	TRUE	4.4%	3	TRUE	TRUE	TRUE	778	
29 - Eagle Way - EB	Full	17	17	4	18	1	TRUE	6.8%	1	TRUE	TRUE	TRUE	139	
30 - Eagle Way - WB	Full	18	12	1	14	0	TRUE	20.8%	2	FALSE	FALSE	TRUE	125	
31 - Gloster Road - NB	Full	19	45	6	53	0	TRUE	17.7%	8	FALSE	FALSE	TRUE	456	
32 - Gloster Road - SB	Full	20	47	7	54	0	TRUE	14.6%	7	TRUE	TRUE	TRUE	447	
33 - Barrack Square - SB	Full	21	79	27	91	0	TRUE	15.8%	12	TRUE	FALSE	TRUE	559	
34 - Barrack Square - NB	Full	22	89	12	90	1	TRUE	1.4%	1	TRUE	TRUE	TRUE	544	
35 - Anson Road - WB	Full	23	51	5	41	0	TRUE	-19.0%	-10	FALSE	FALSE	TRUE	407	
36 - Anson Road - EB	Full	24	47	3	44	0	TRUE	-6.3%	-3	TRUE	TRUE	TRUE	418	
37 - Eagle Way (J24) - EB	Full	25	45	1	45	0	TRUE	0.3%	0	TRUE	TRUE	TRUE	576	
38 - Eagle Way (J24) - WB	Full	26	41		44	0	TRUE	7.1%	3	FALSE	TRUE	TRUE	570	
39 - Main Road - EB	Full	27	66	1	65	0	TRUE	-2.4%	-2	FALSE	TRUE	TRUE	861	
40 - Main Road - WB	Full	28	63	2	71	0	TRUE	12.8%	8	FALSE	TRUE	TRUE	847	
41 - A1214 Main road - EB	Full	29	59	15	64	0	TRUE	8.4%	5	TRUE	TRUE	TRUE	604	
42 - A1214 Main road - WB	Full	30	50	5	50	0	TRUE	-1.2%	-1	TRUE	TRUE	TRUE	614	
43 - B1438 - WB	Full	31	53	4	54	0	TRUE	2.3%	1	TRUE	TRUE	TRUE	637	
44 - B1438 - EB	Full	32	48	3	50	0	TRUE	4.8%	2	TRUE	TRUE	TRUE	632	
45 - B1079 (East) - WB	Full	33	37	6	51	3	FALSE	37.5%	14	FALSE	FALSE	TRUE	373	
46 - B1079 (East) - EB	Full	34	35	6	30	0	TRUE	-15.4%	-5	TRUE	FALSE	TRUE	372	
47 - B1079 (West)- WB	Full	35	36	2	33	0	TRUE	-6.9%	-2	FALSE	TRUE	TRUE	566	
48 - B1079 (West)- EB	Full	36	44	7	39	0	TRUE	-11.0%	-5	TRUE	TRUE	TRUE	564	



**Journey Times
Validation Statistics**

AM Period

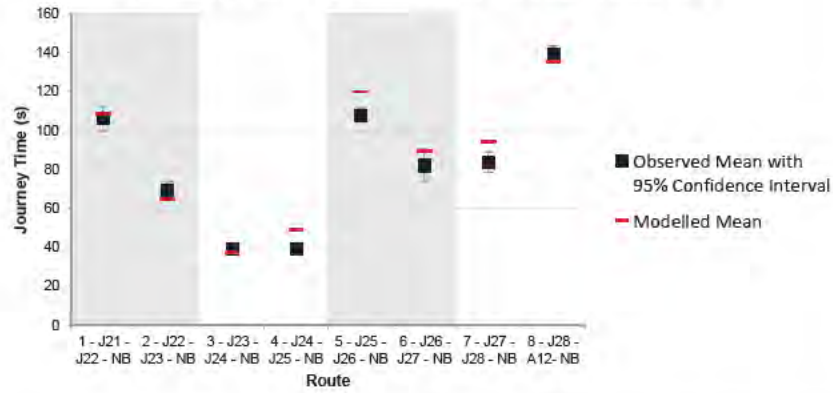
49 - A1152 - WB	Full	37	46	6	49	0	TRUE	6.3%	3	TRUE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	43	4	49	0	TRUE	15.3%	6	FALSE	FALSE	TRUE	TRUE	593
51 - A12 NB	Full	2	666	34	700	1	TRUE	5.1%	34	TRUE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	685	90	707	4	TRUE	3.3%	22	TRUE	TRUE	TRUE	TRUE	13295



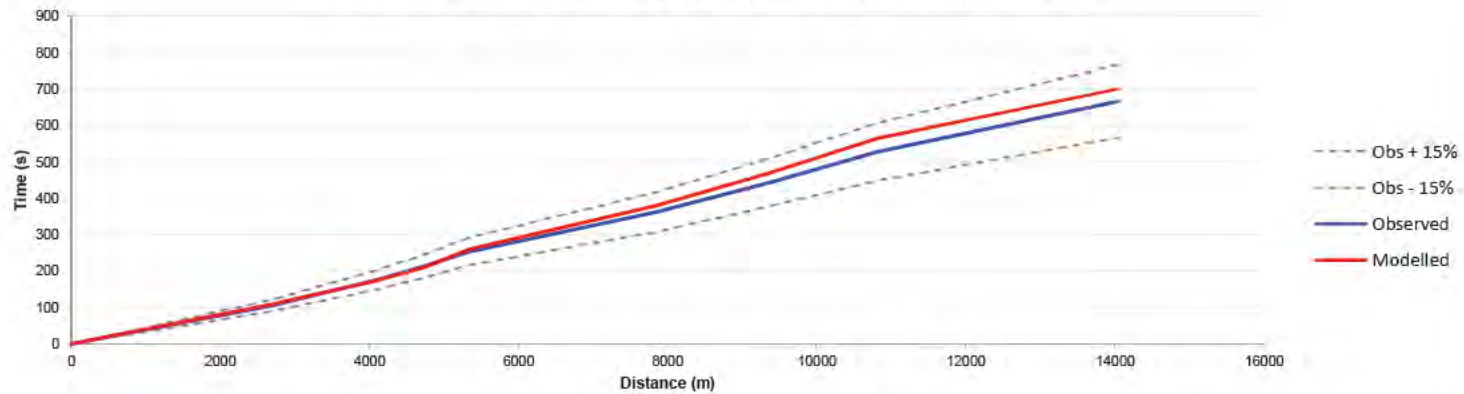
Journey Times Validation Statistics

AM Period

Journey Time Summary for Group Number 1

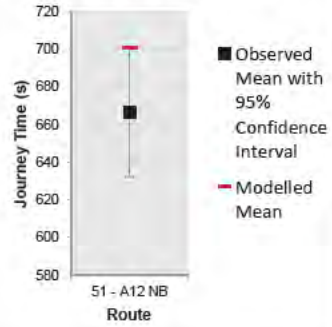


Journey Time Summary by Distance for Group Number 1

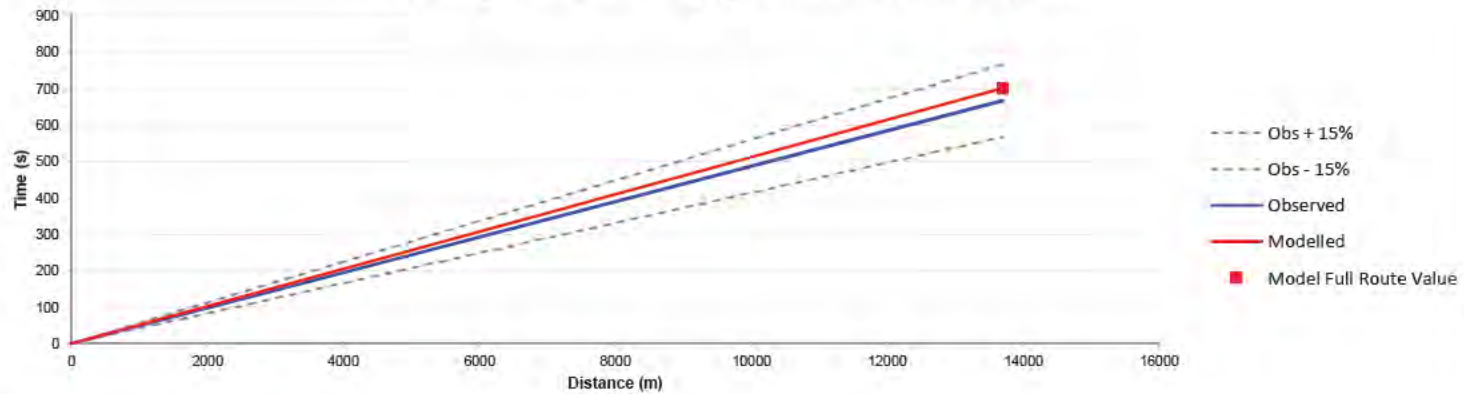




Journey Time Summary for 51 - A12 NB

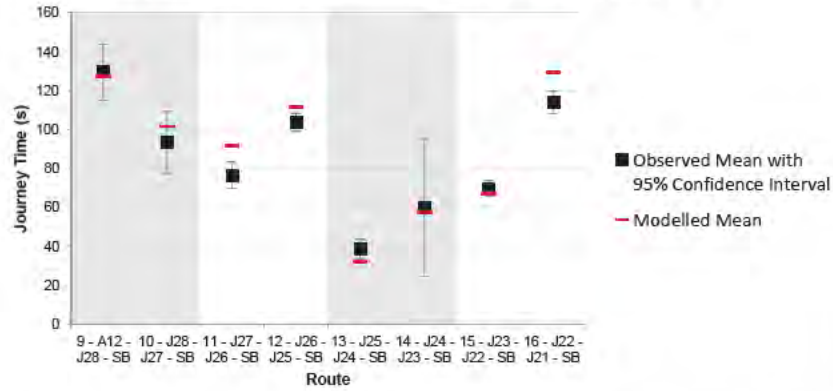


Journey Time Summary by Distance for 51 - A12 NB

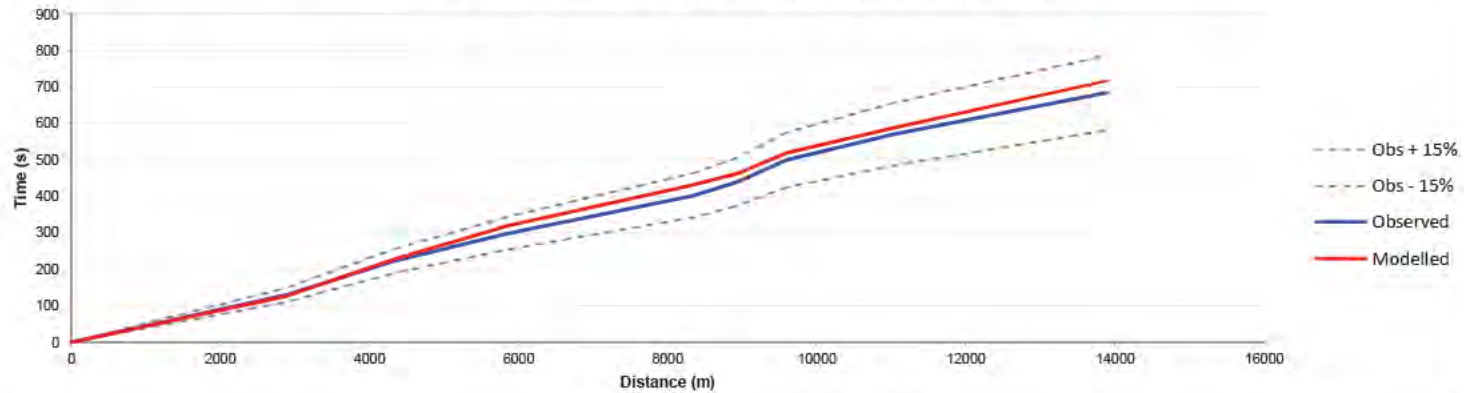




Journey Time Summary for Group Number 3

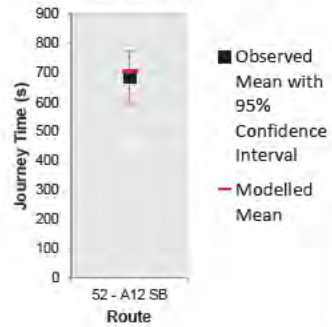


Journey Time Summary by Distance for Group Number 3

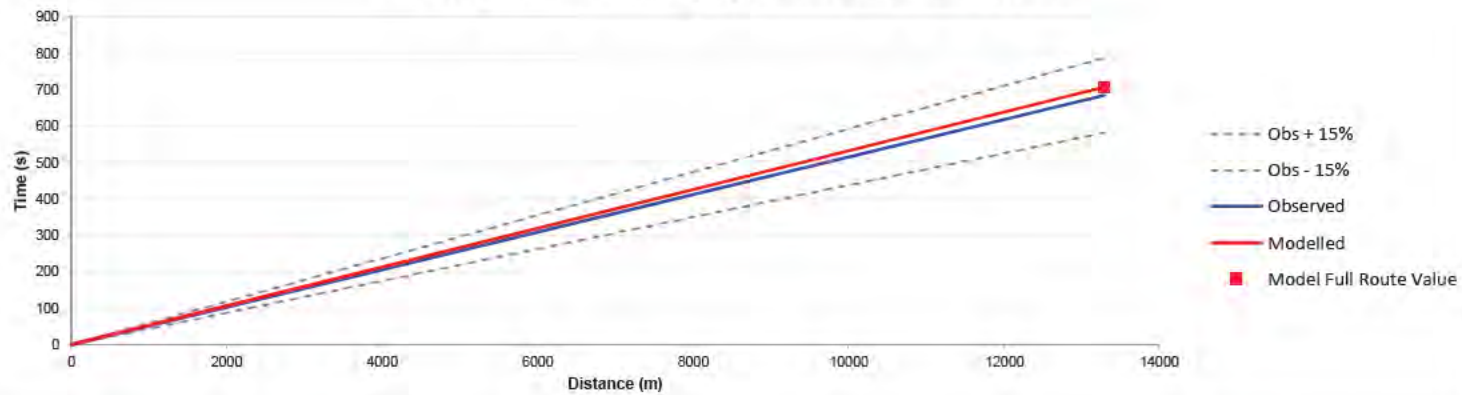




Journey Time Summary for 52 - A12 SB

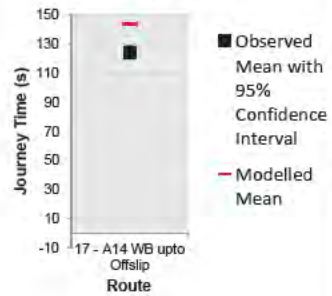


Journey Time Summary by Distance for 52 - A12 SB

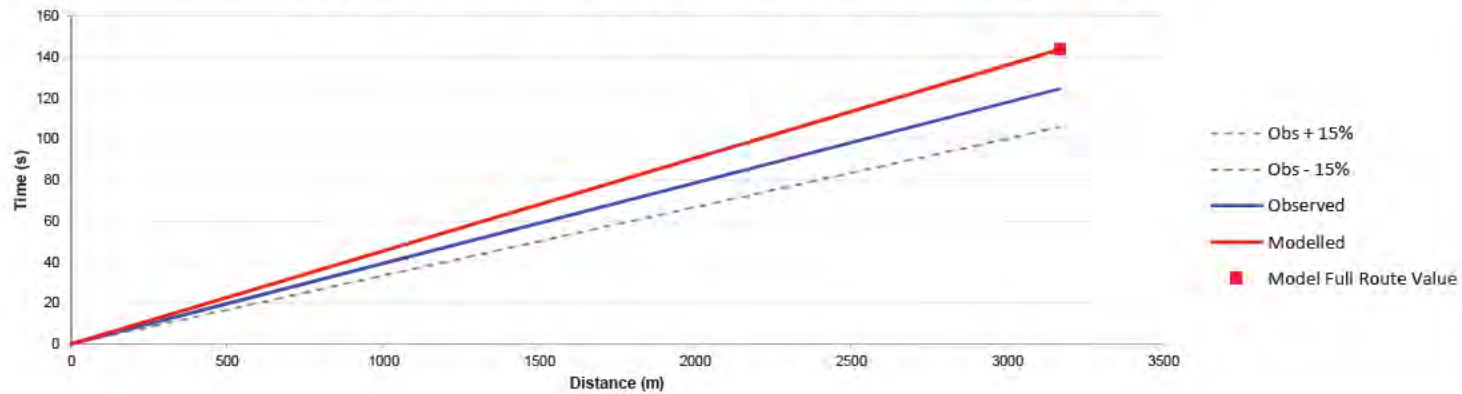




Journey Time Summary for 17 - A14 WB upto Offslip

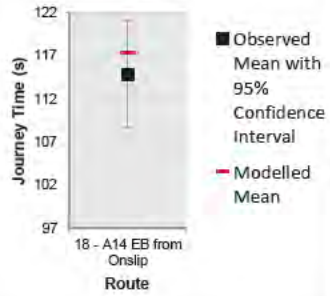


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

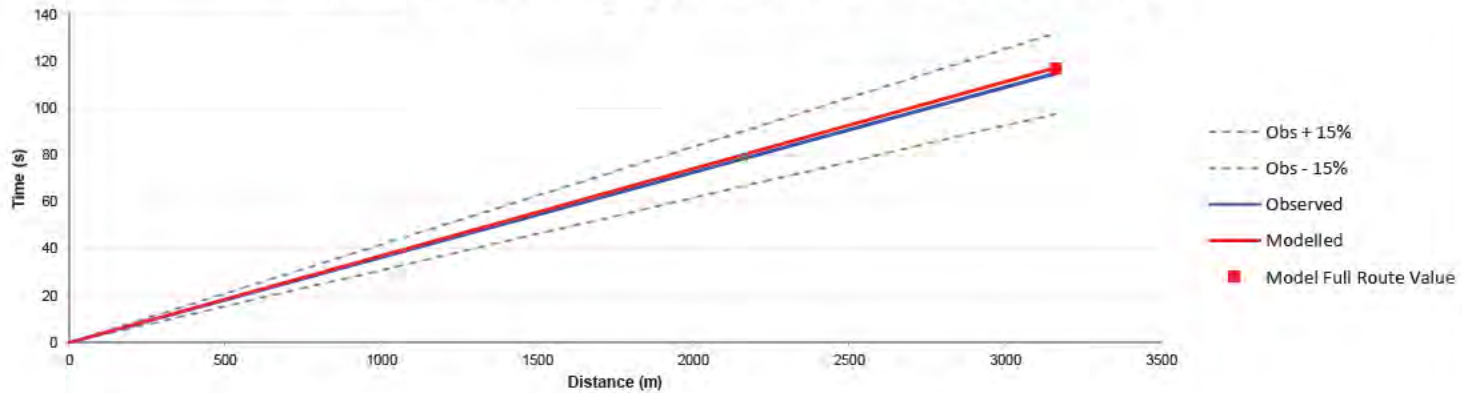




Journey Time Summary for 18 - A14 EB from Onslip

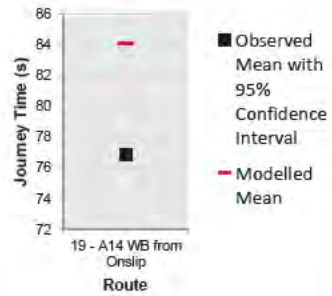


Journey Time Summary by Distance for 18 - A14 EB from Onslip

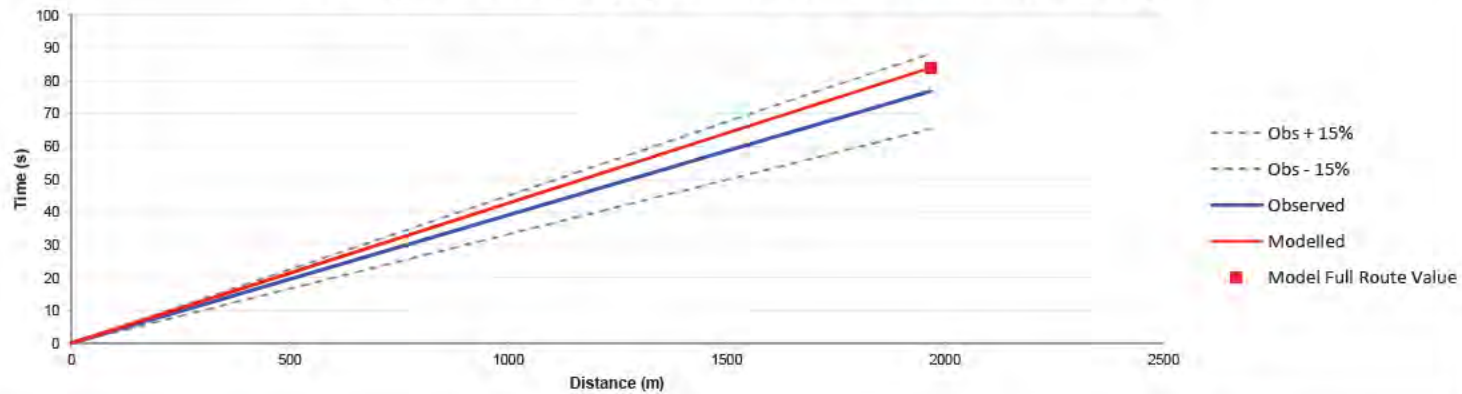




Journey Time Summary for 19 - A14 WB from Onslip

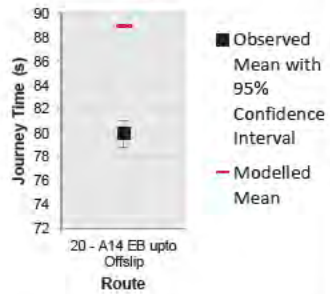


Journey Time Summary by Distance for 19 - A14 WB from Onslip

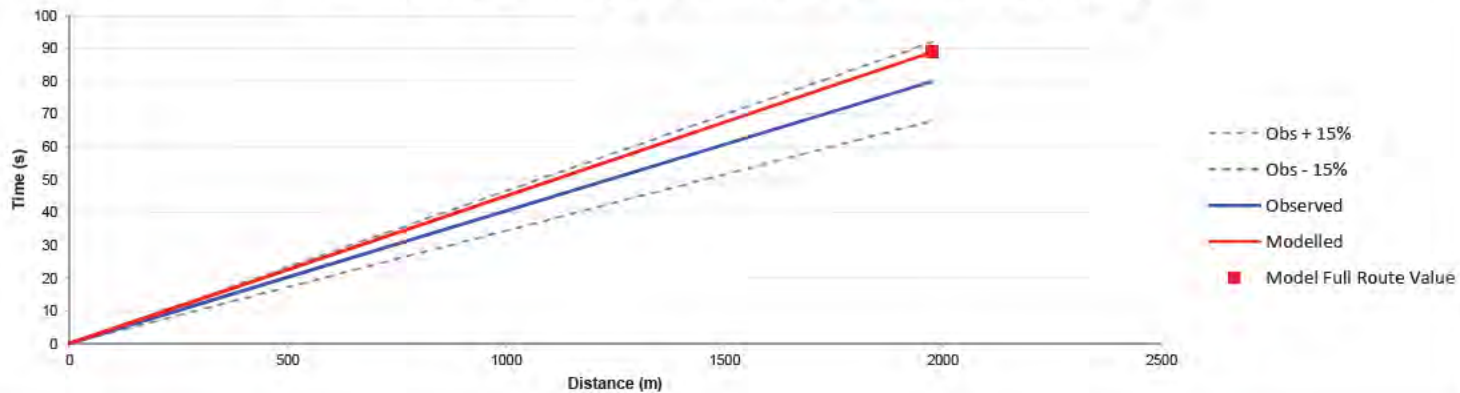




Journey Time Summary for 20 - A14 EB upto Offslip

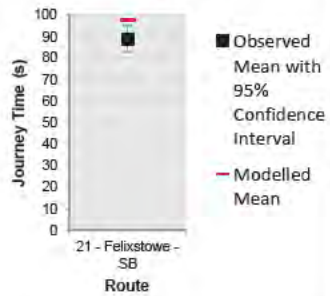


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

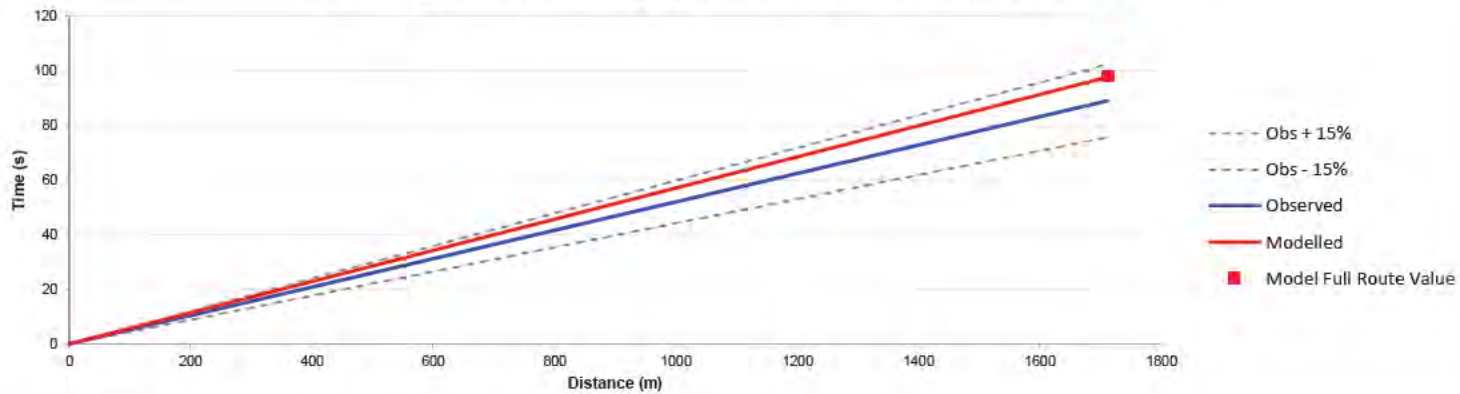




Journey Time Summary for 21 - Felixstowe - SB

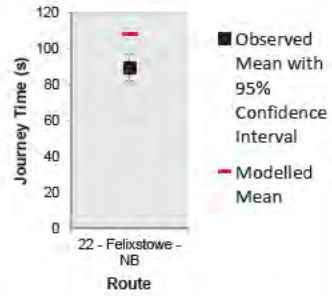


Journey Time Summary by Distance for 21 - Felixstowe - SB

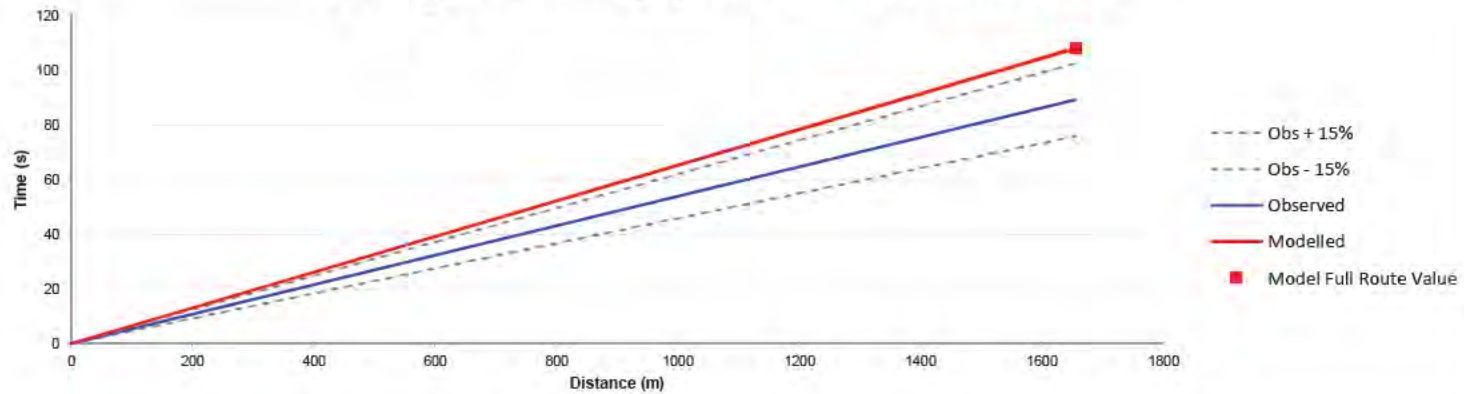




Journey Time Summary for 22 - Felixstowe - NB

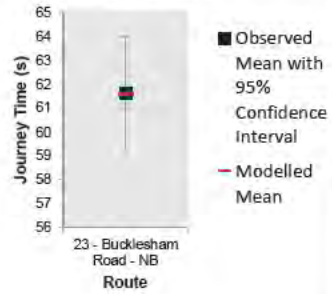


Journey Time Summary by Distance for 22 - Felixstowe - NB

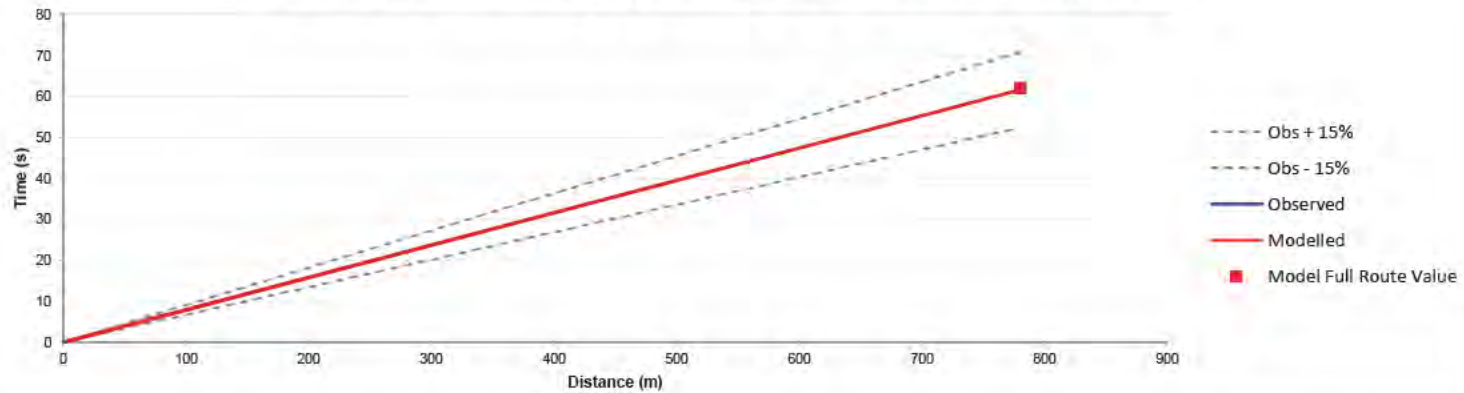




Journey Time Summary for 23 - Bucklesham Road - NB

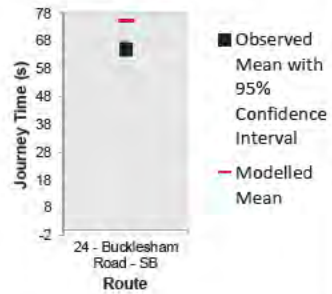


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

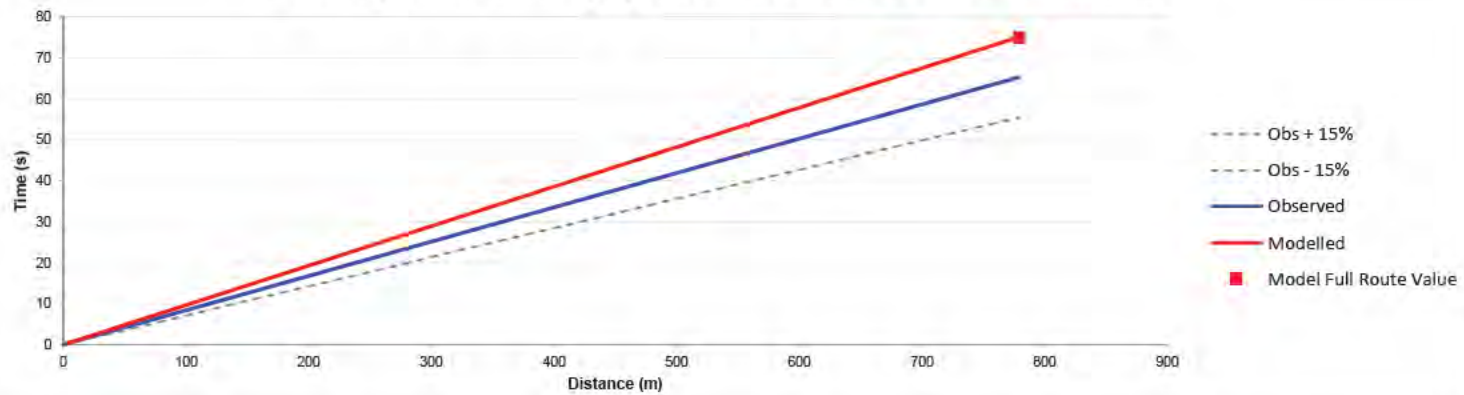




Journey Time Summary for 24 - Bucklesham Road - SB

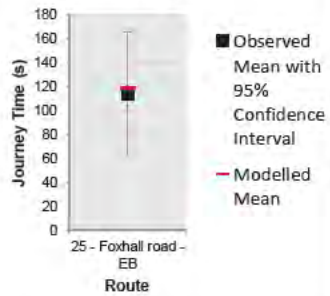


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

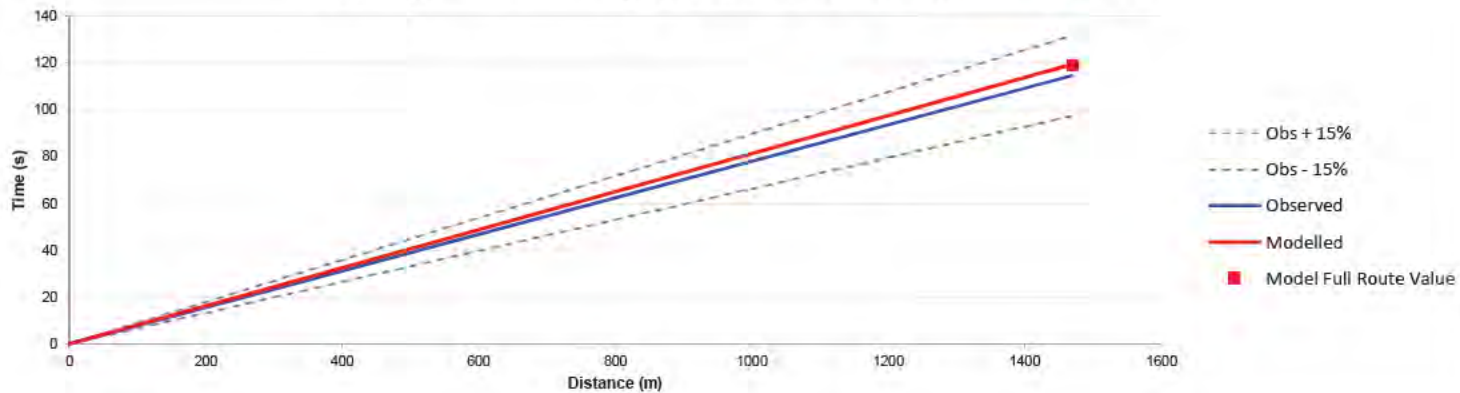




Journey Time Summary for 25 - Foxhall road - EB

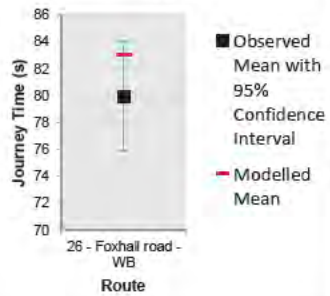


Journey Time Summary by Distance for 25 - Foxhall road - EB

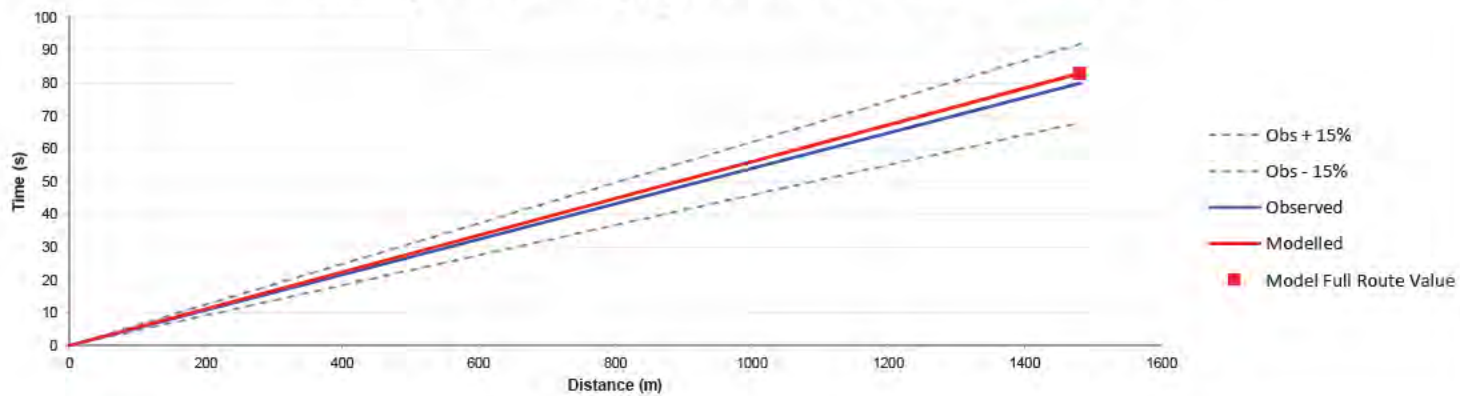




Journey Time Summary for 26 - Foxhall road - WB

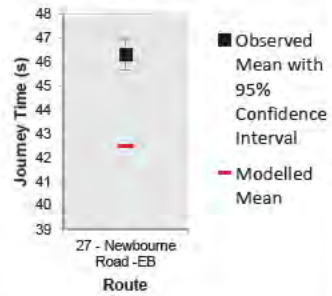


Journey Time Summary by Distance for 26 - Foxhall road - WB

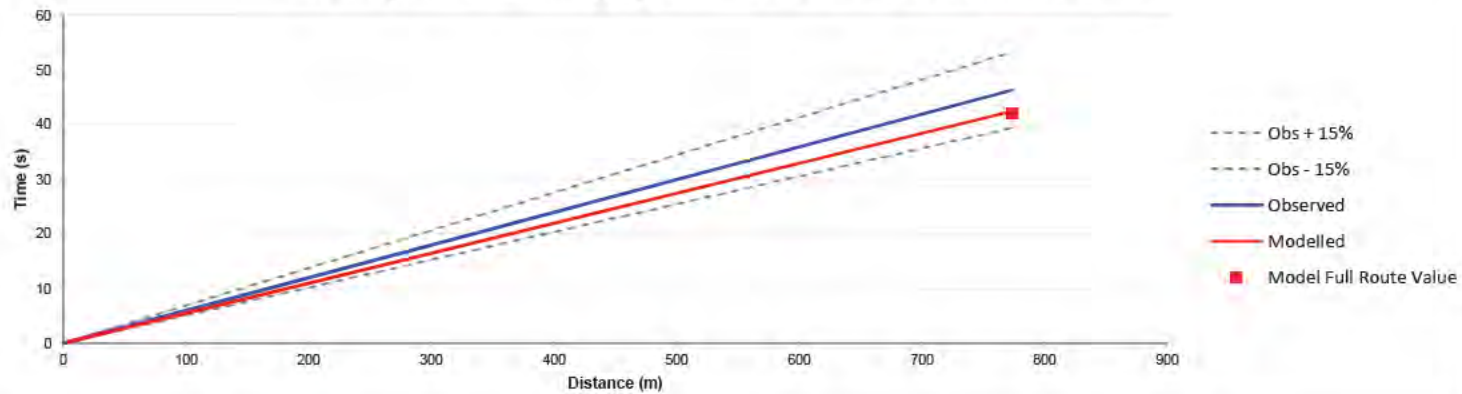




Journey Time Summary for 27 - Newbourne Road -EB

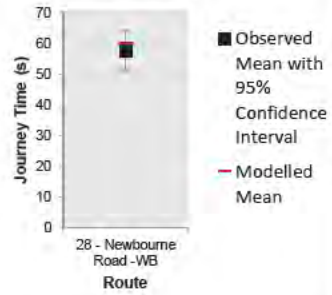


Journey Time Summary by Distance for 27 - Newbourne Road -EB

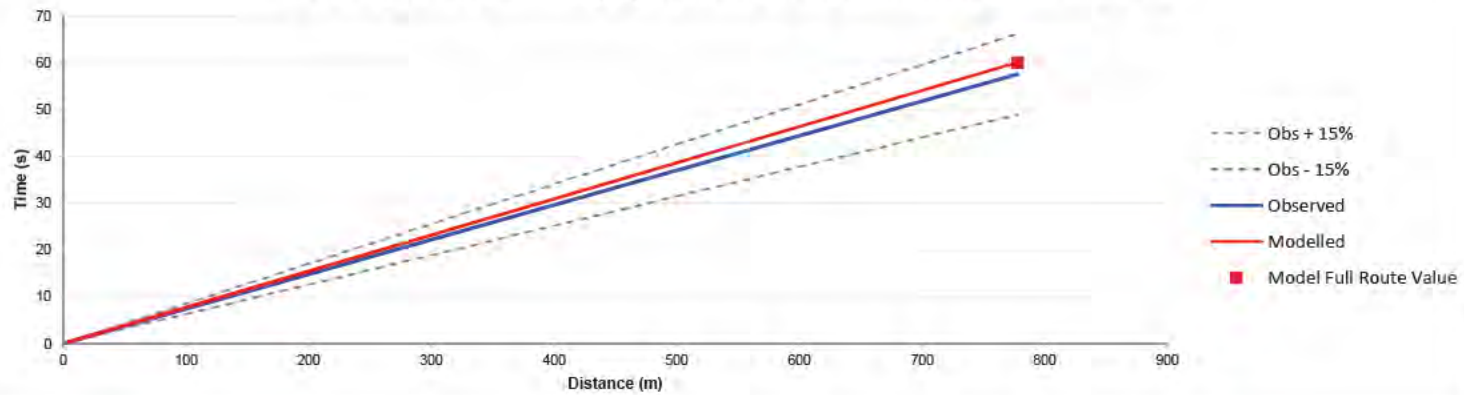




Journey Time Summary for 28 - Newbourne Road -WB

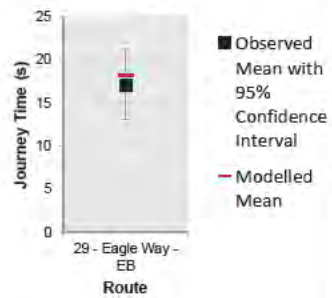


Journey Time Summary by Distance for 28 - Newbourne Road -WB

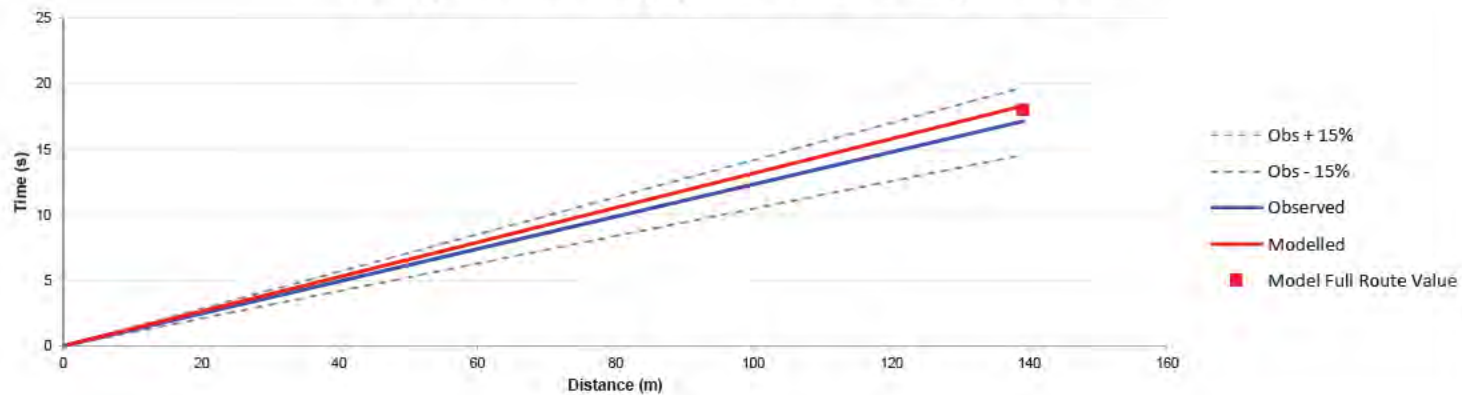




Journey Time Summary for 29 - Eagle Way - EB

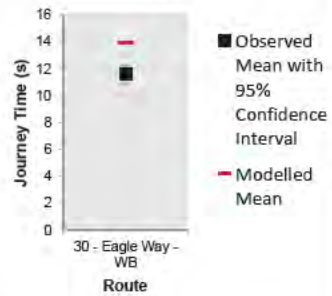


Journey Time Summary by Distance for 29 - Eagle Way - EB

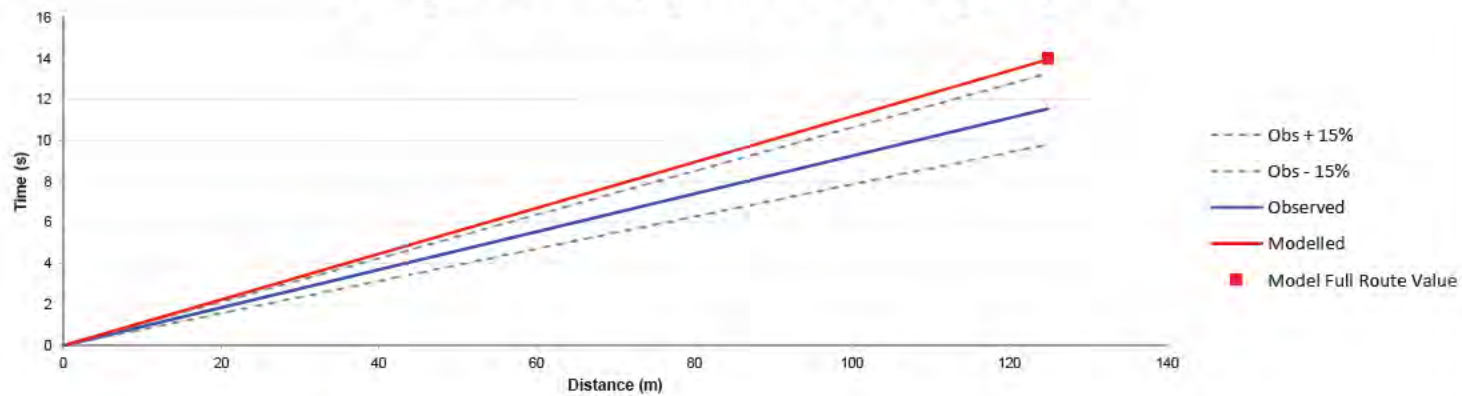




Journey Time Summary for 30 - Eagle Way - WB

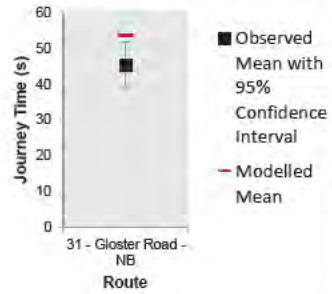


Journey Time Summary by Distance for 30 - Eagle Way - WB

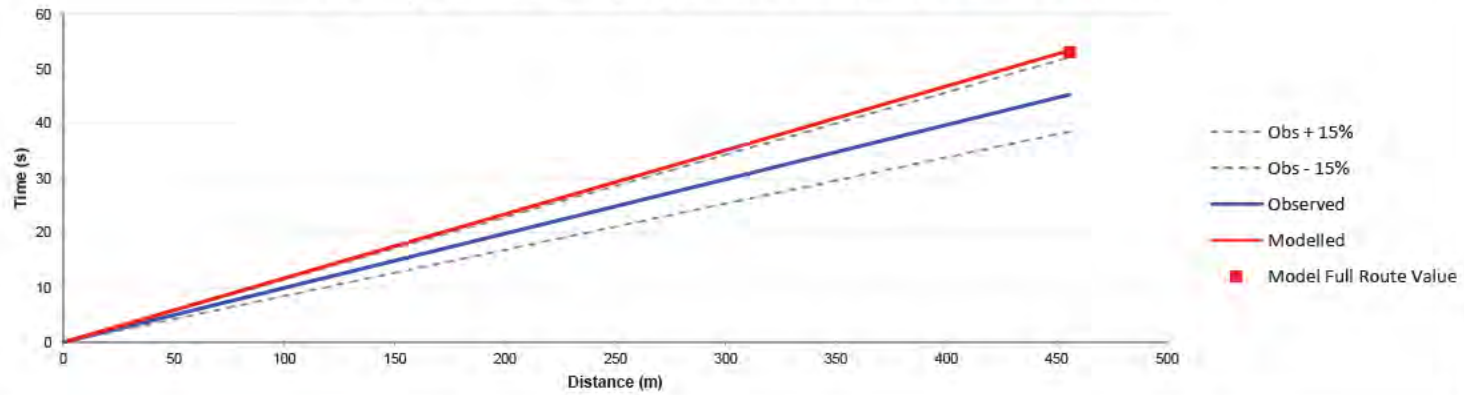




Journey Time Summary for 31 - Gloster Road - NB

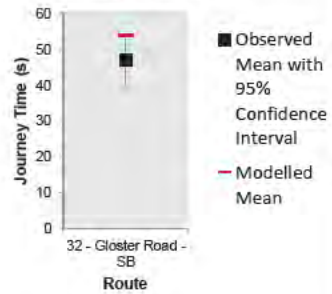


Journey Time Summary by Distance for 31 - Gloster Road - NB

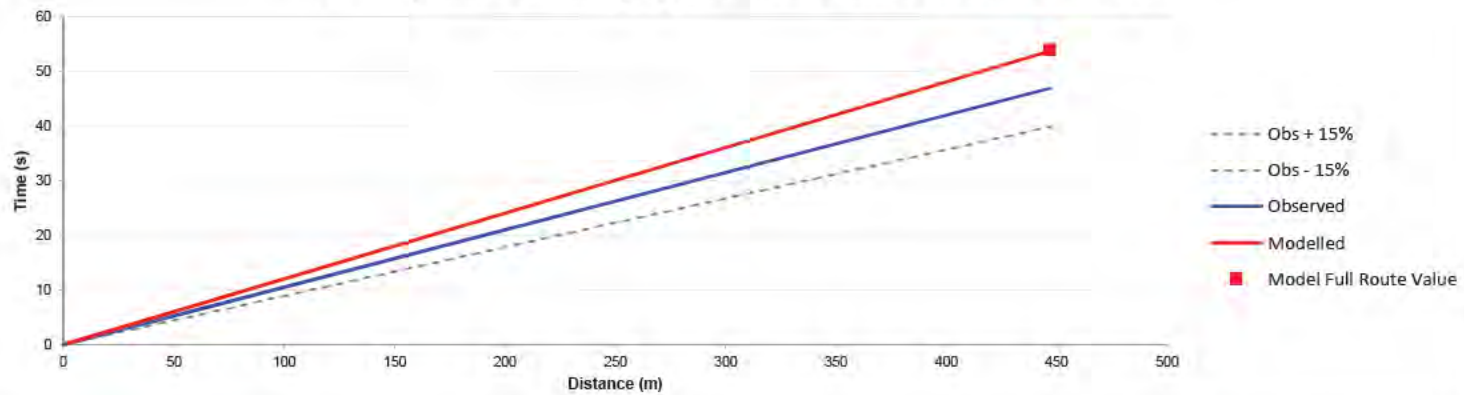




Journey Time Summary for 32 - Gloster Road - SB

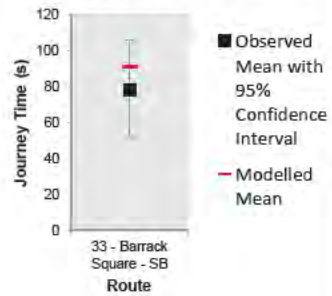


Journey Time Summary by Distance for 32 - Gloster Road - SB

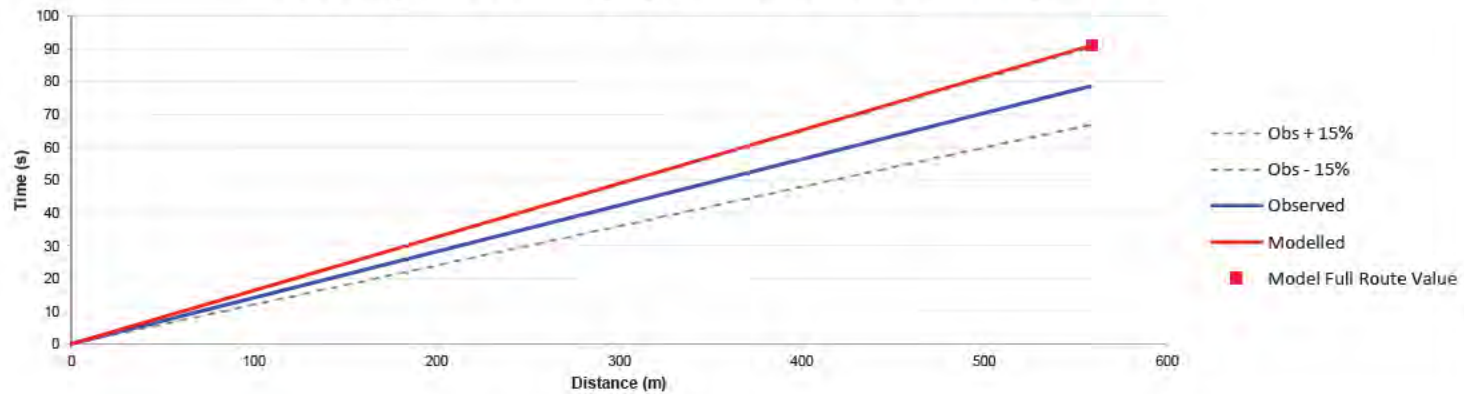




Journey Time Summary for 33 - Barrack Square - SB

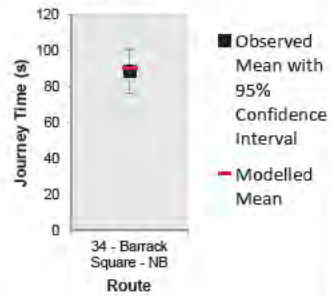


Journey Time Summary by Distance for 33 - Barrack Square - SB

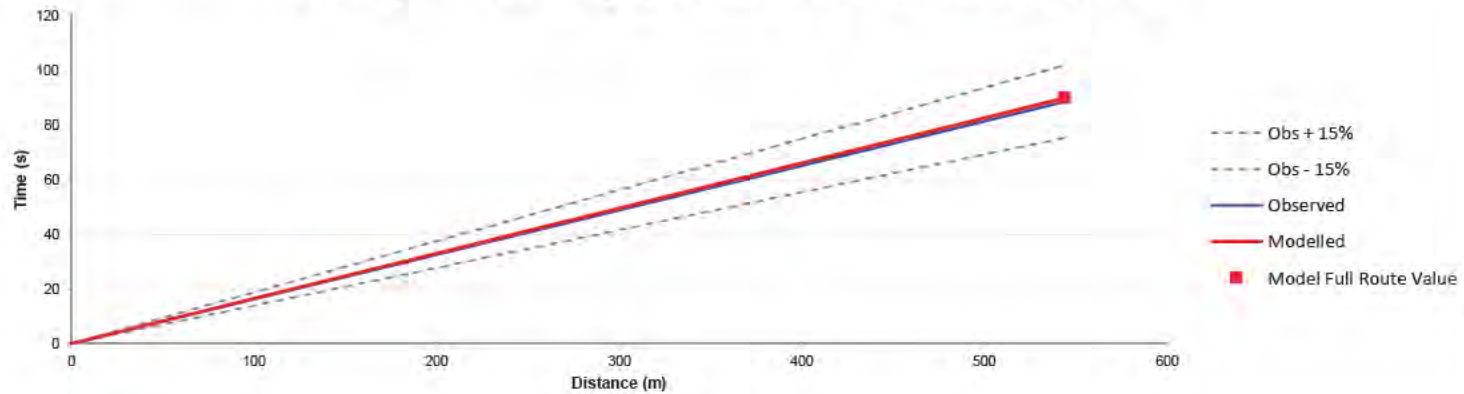




Journey Time Summary for 34 - Barrack Square - NB

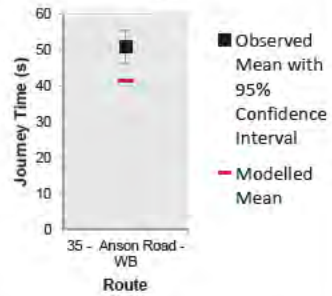


Journey Time Summary by Distance for 34 - Barrack Square - NB

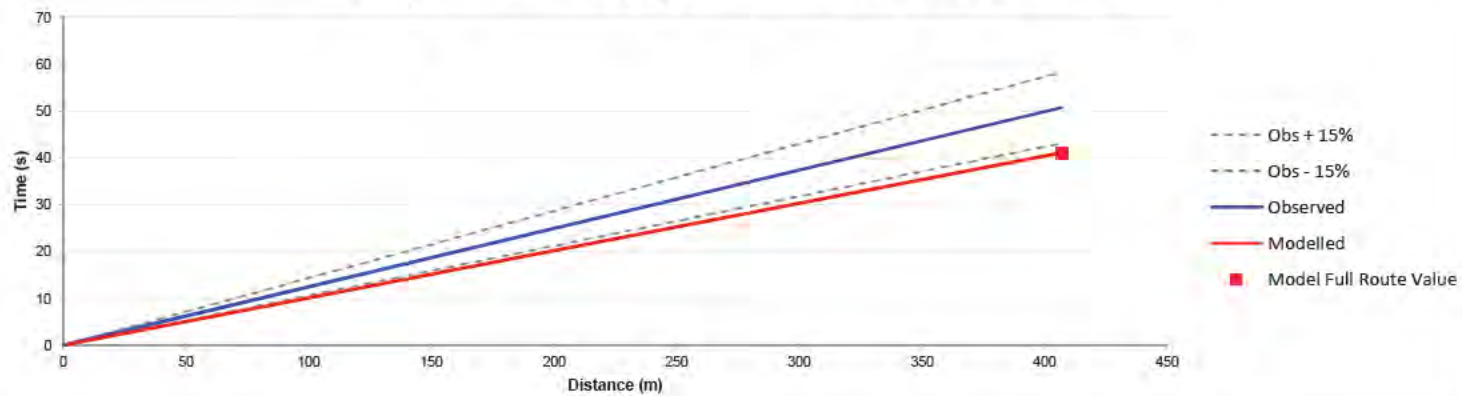




Journey Time Summary for 35 - Anson Road - WB

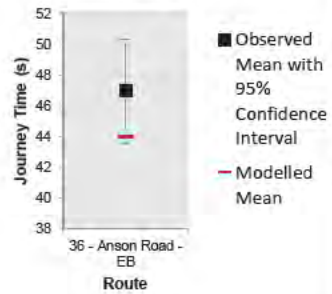


Journey Time Summary by Distance for 35 - Anson Road - WB

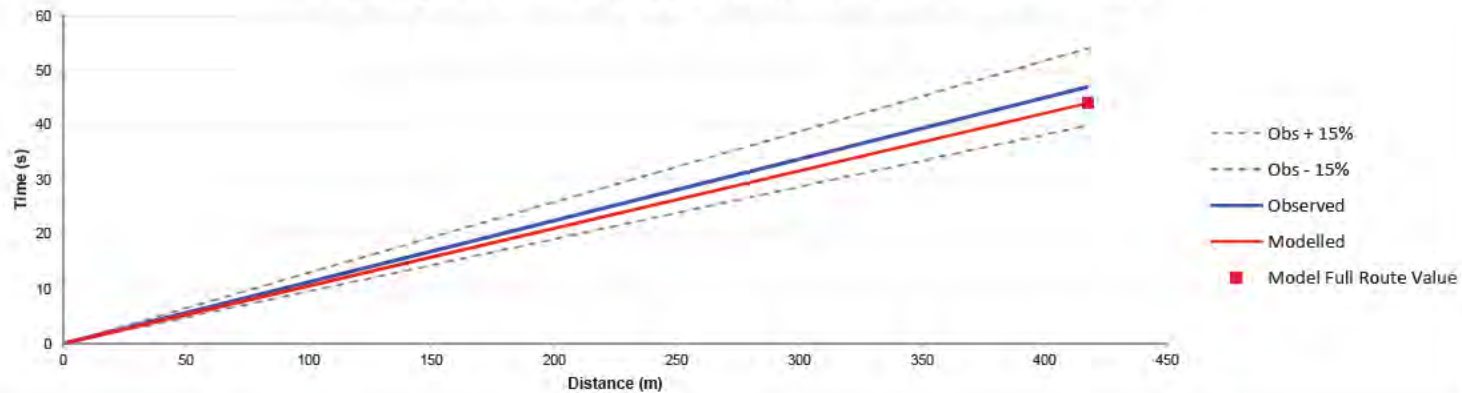




Journey Time Summary for 36 - Anson Road - EB

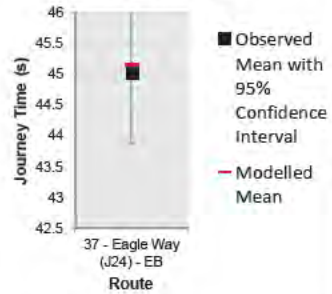


Journey Time Summary by Distance for 36 - Anson Road - EB

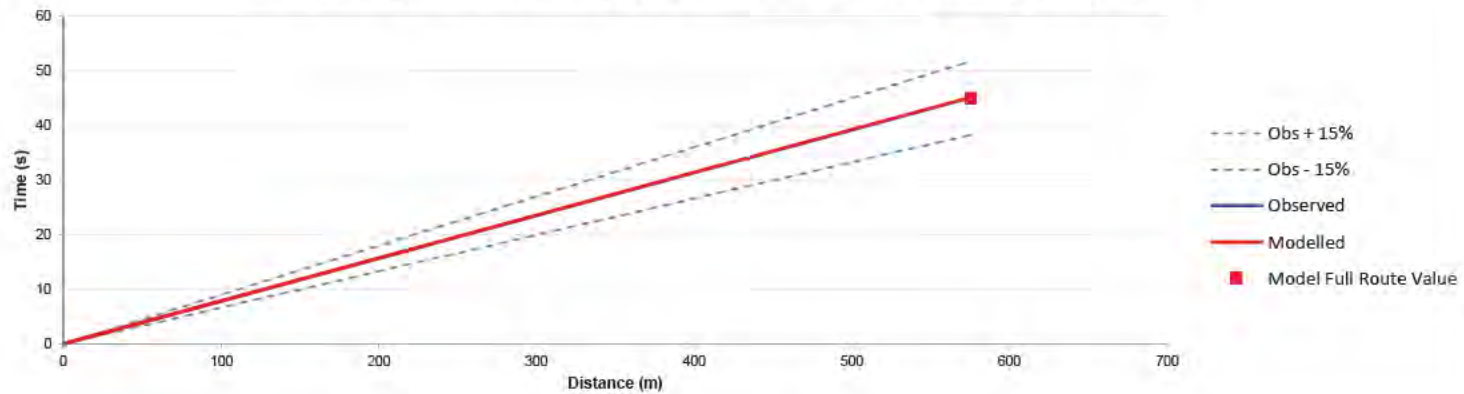




Journey Time Summary for 37 - Eagle Way (J24) - EB

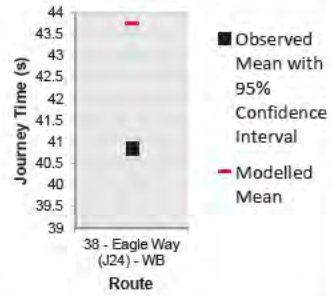


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

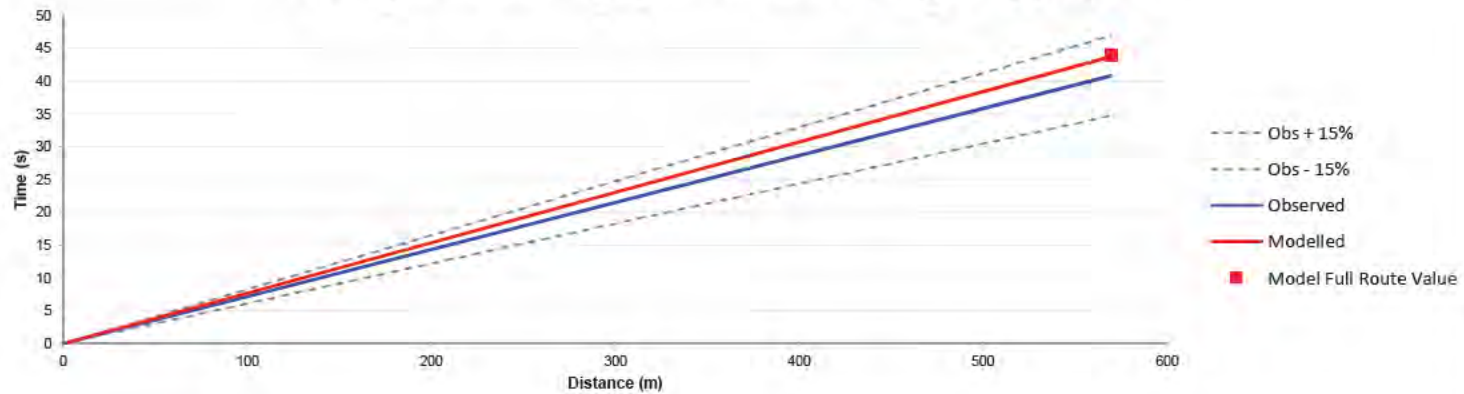




Journey Time Summary for 38 - Eagle Way (J24) - WB

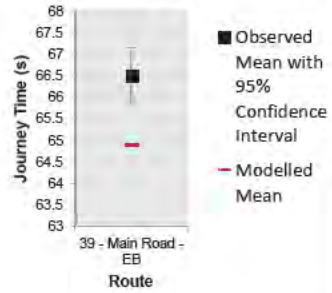


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

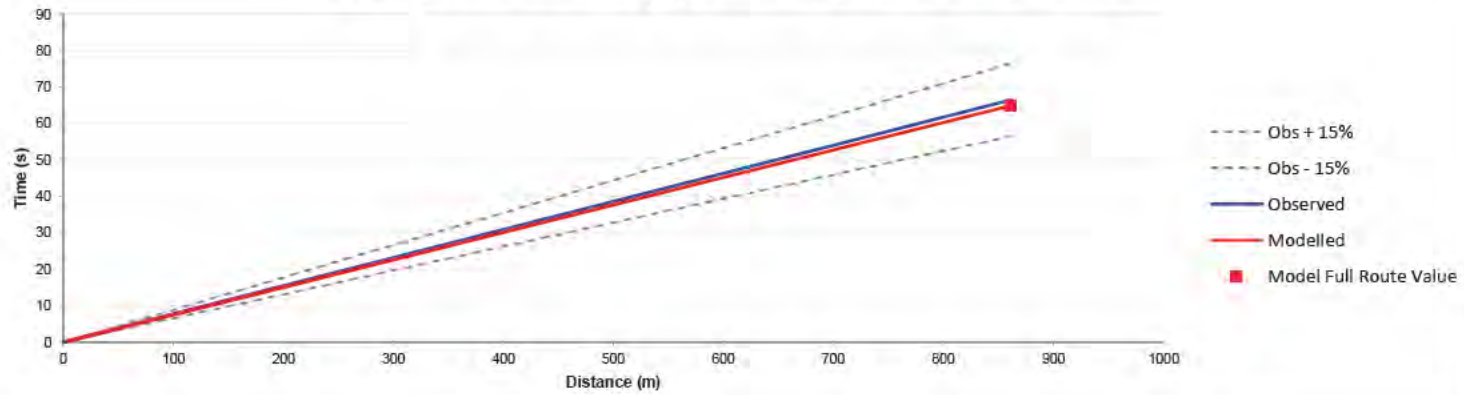




Journey Time Summary for 39 - Main Road - EB

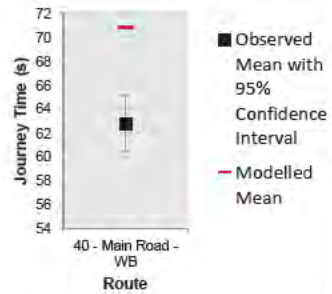


Journey Time Summary by Distance for 39 - Main Road - EB

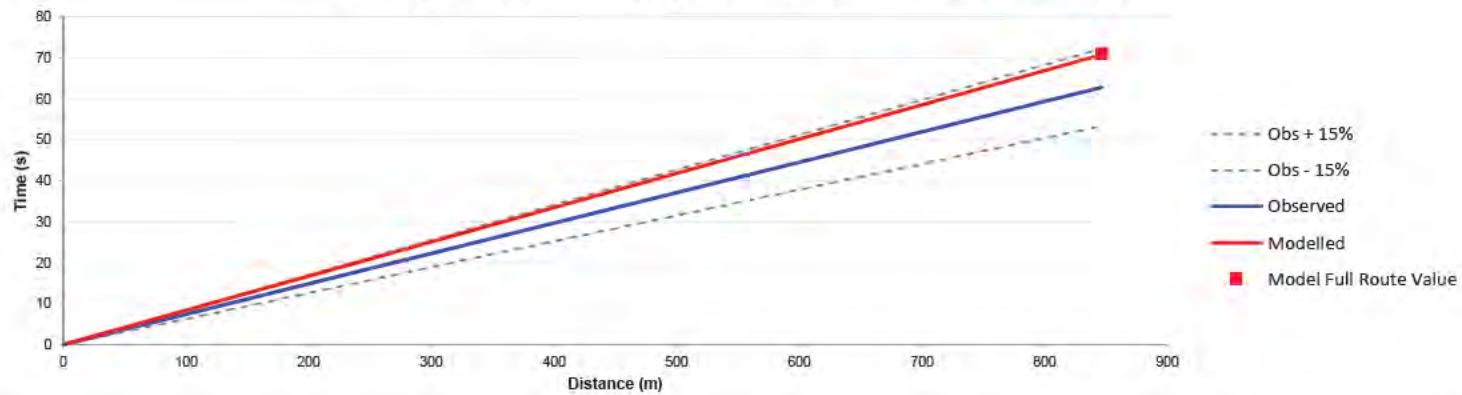




Journey Time Summary for 40 - Main Road - WB

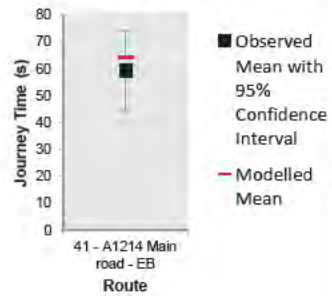


Journey Time Summary by Distance for 40 - Main Road - WB

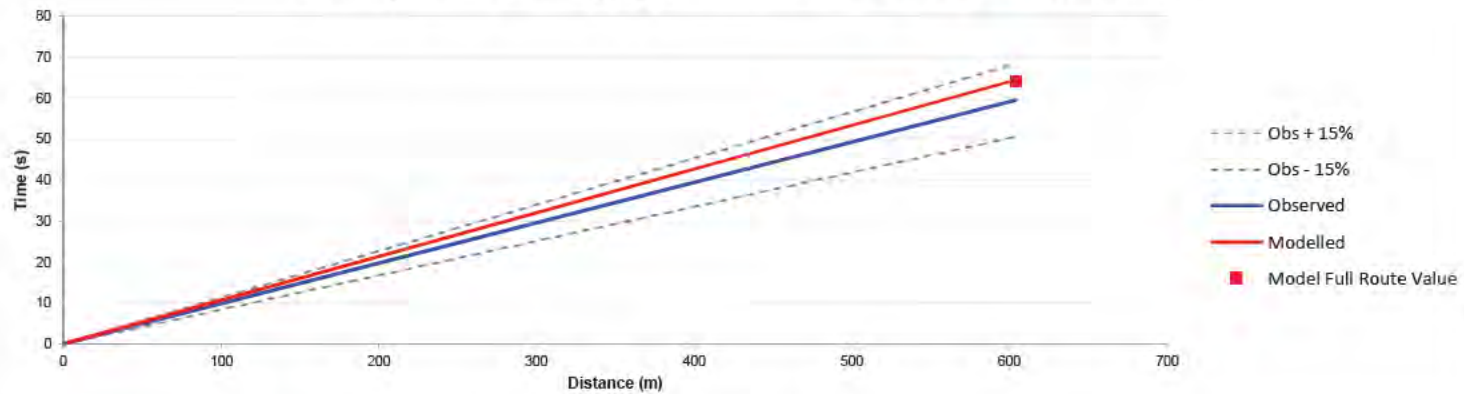




Journey Time Summary for 41 - A1214 Main road - EB

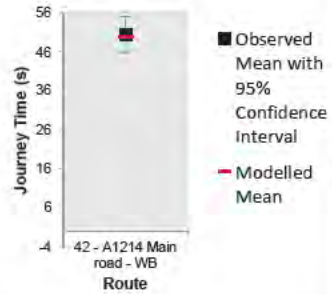


Journey Time Summary by Distance for 41 - A1214 Main road - EB

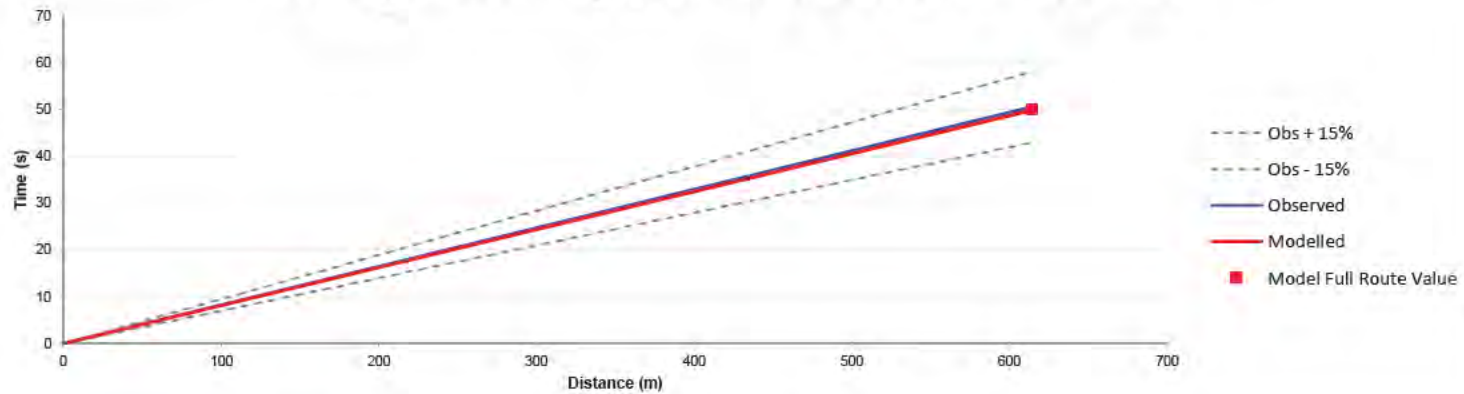




Journey Time Summary for 42 - A1214 Main road - WB

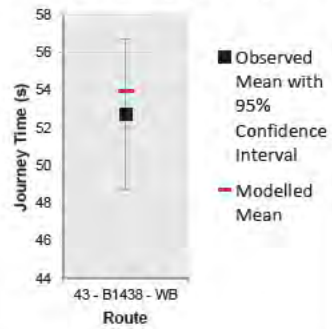


Journey Time Summary by Distance for 42 - A1214 Main road - WB

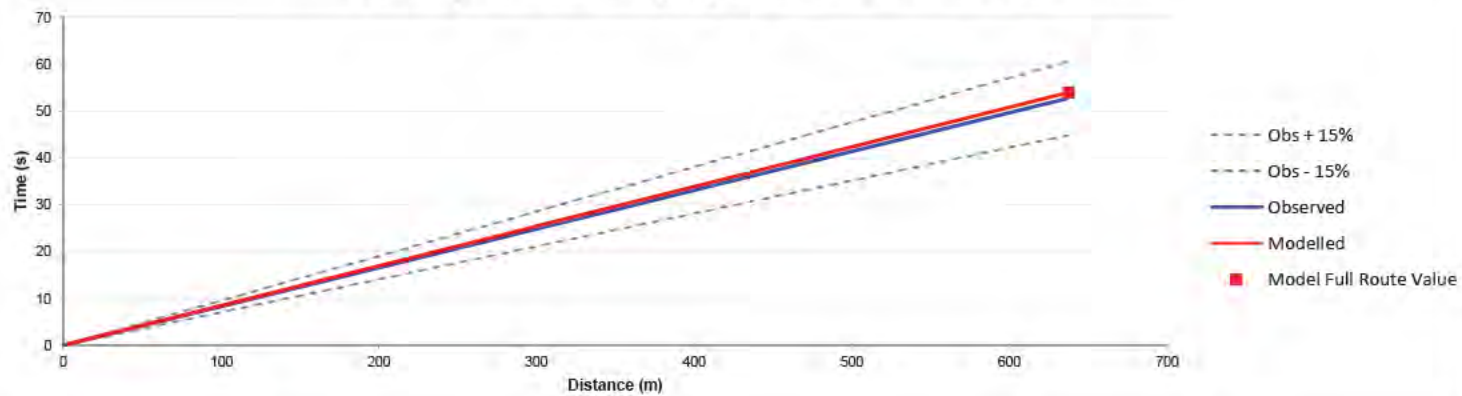




Journey Time Summary for 43 - B1438 - WB

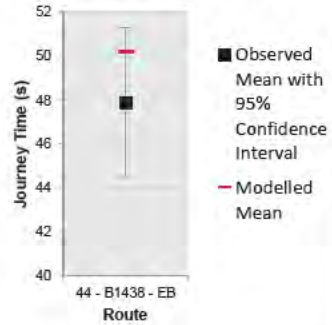


Journey Time Summary by Distance for 43 - B1438 - WB

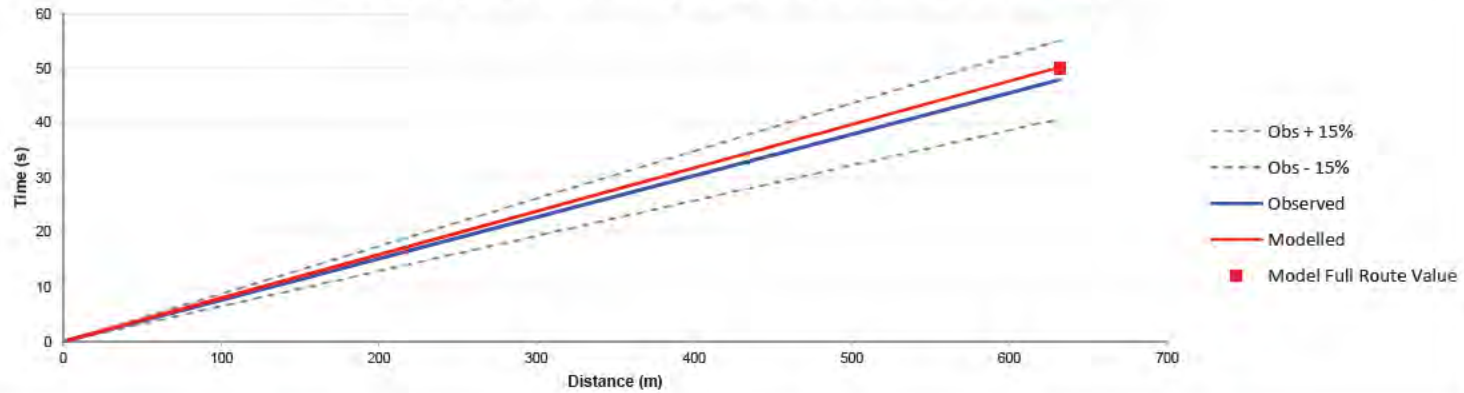




Journey Time Summary for 44 - B1438 - EB

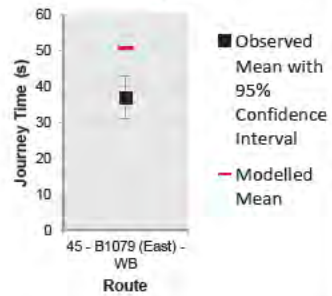


Journey Time Summary by Distance for 44 - B1438 - EB

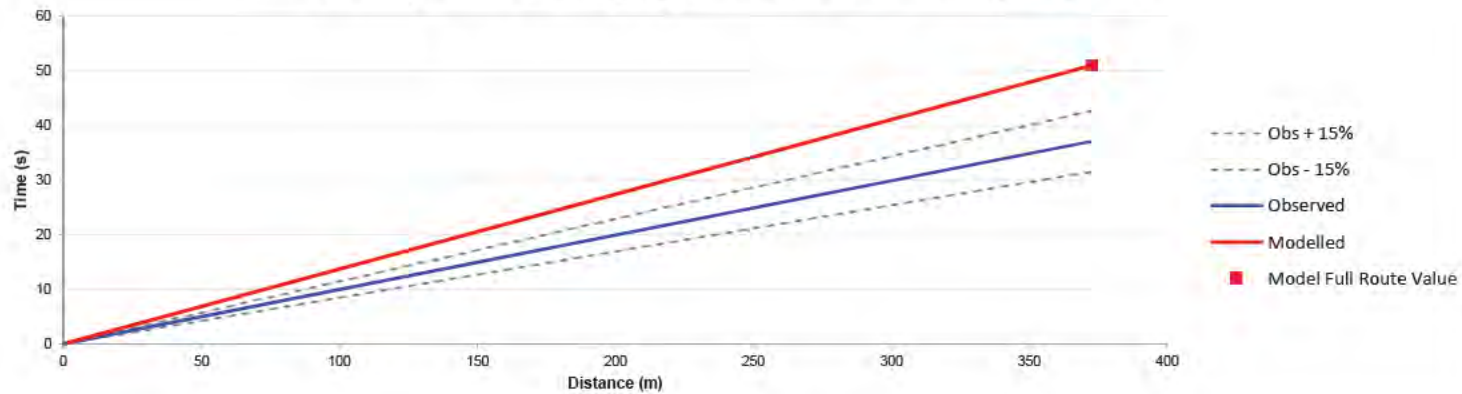




Journey Time Summary for 45 - B1079 (East) - WB

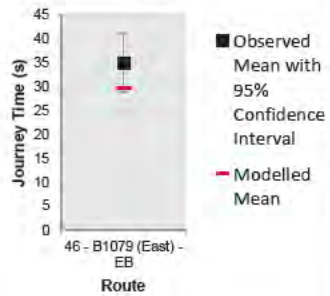


Journey Time Summary by Distance for 45 - B1079 (East) - WB

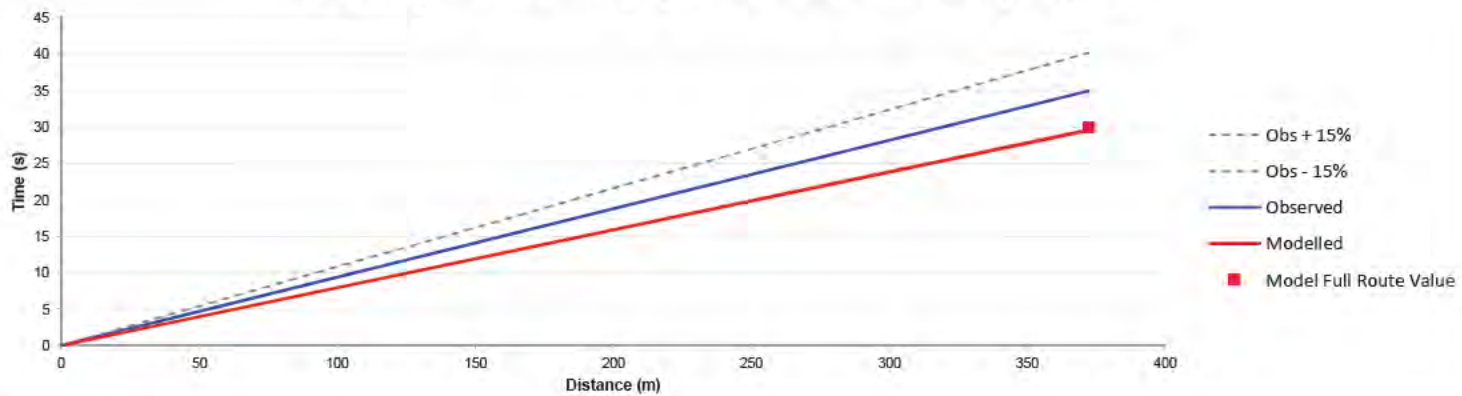




Journey Time Summary for 46 - B1079 (East) - EB

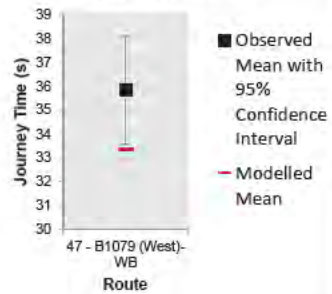


Journey Time Summary by Distance for 46 - B1079 (East) - EB

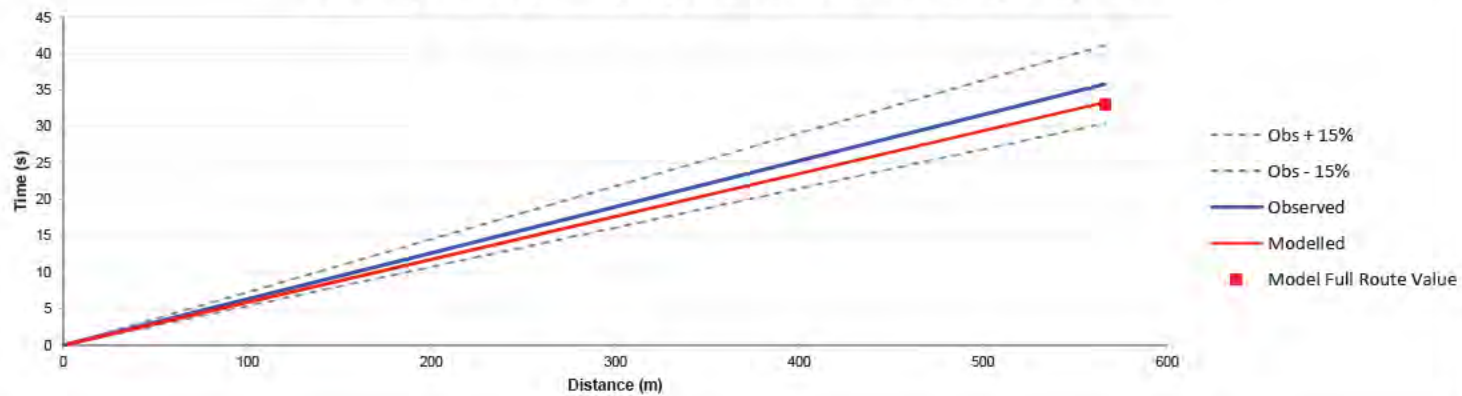




Journey Time Summary for 47 - B1079 (West)- WB

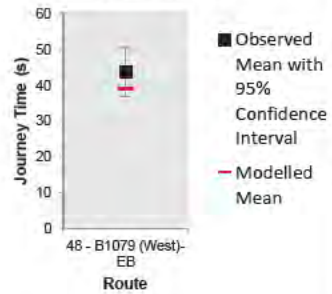


Journey Time Summary by Distance for 47 - B1079 (West)- WB

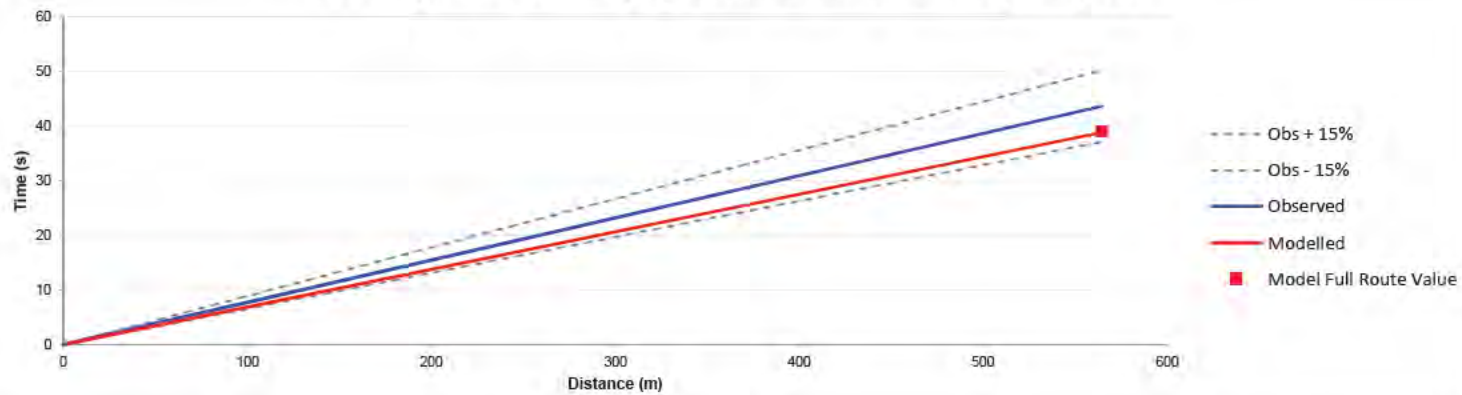




Journey Time Summary for 48 - B1079 (West)- EB

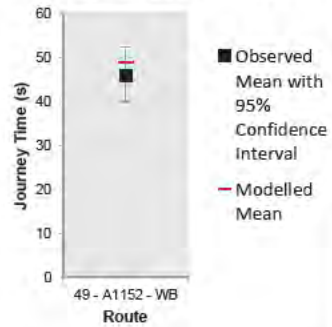


Journey Time Summary by Distance for 48 - B1079 (West)- EB

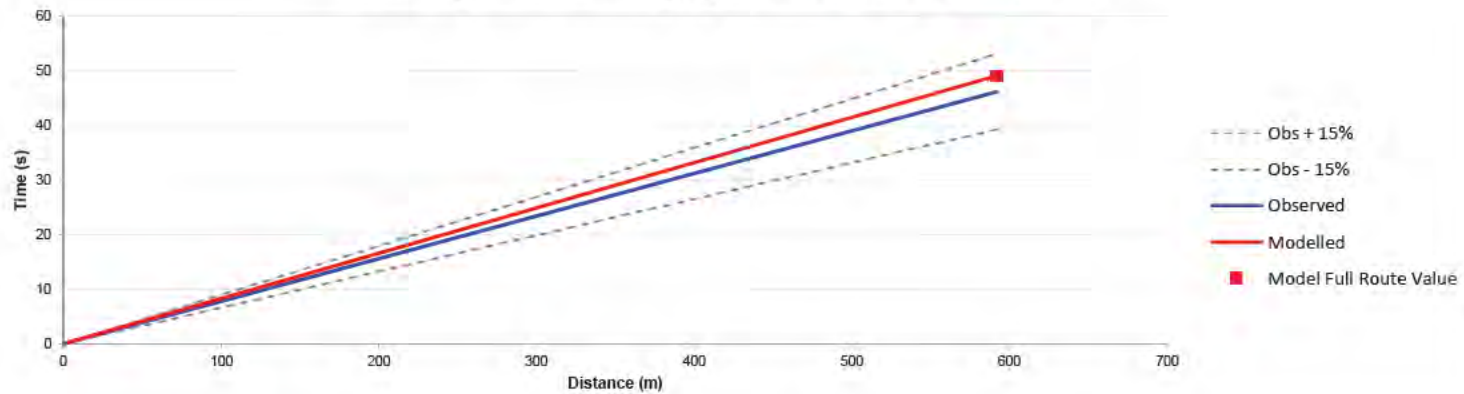




Journey Time Summary for 49 - A1152 - WB

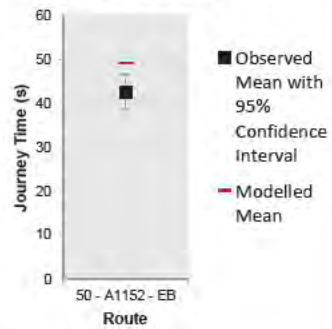


Journey Time Summary by Distance for 49 - A1152 - WB

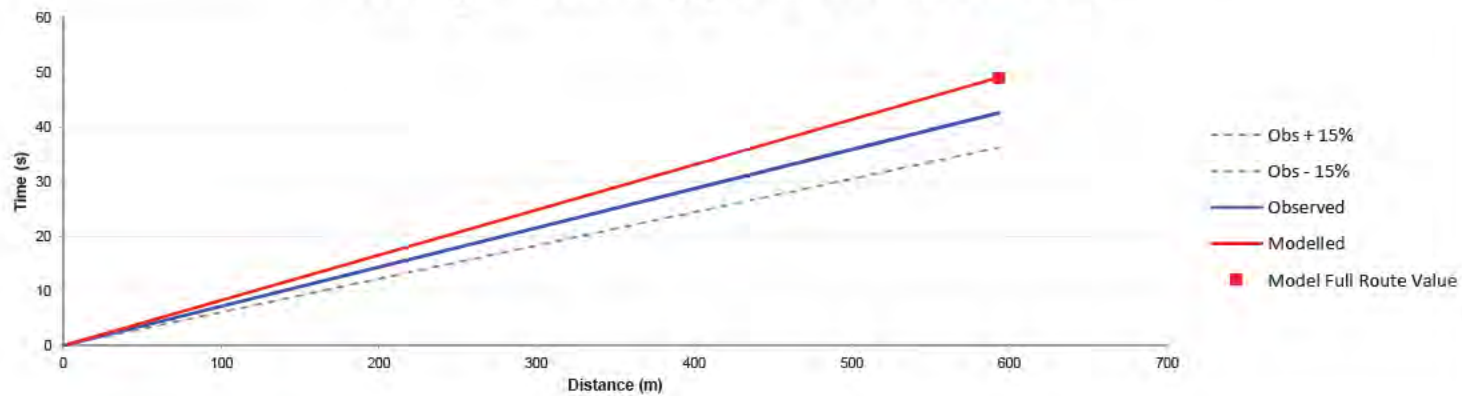




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Journey Times
Validation Statistics
AM Peak (07:00 -08:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	106	106	0	TRUE	0.5%	1	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	70	64	0	TRUE	-8.0%	-6	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	39	37	0	TRUE	-6.2%	-2	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	39	48	1	TRUE	21.9%	9	FALSE	FALSE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	109	119	1	TRUE	8.9%	10	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	84	88	0	TRUE	5.0%	4	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	84	94	1	TRUE	11.7%	10	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	140	136	1	TRUE	-2.7%	-4	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	127	124	0	TRUE	-2.9%	-4	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	90	90	1	TRUE	0.5%	0	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	77	91	1	TRUE	18.5%	14	FALSE	FALSE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	104	111	0	TRUE	7.0%	7	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	39	32	0	TRUE	-16.9%	-7	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	47	45	1	TRUE	-4.1%	-2	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	70	66	0	TRUE	-5.1%	-4	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	115	126	1	TRUE	9.3%	11	FALSE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	121	138	1	TRUE	14.2%	17	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	112	117	1	TRUE	4.8%	5	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	85	0	TRUE	10.8%	8	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	80	88	1	TRUE	10.0%	8	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	91	97	1	TRUE	6.3%	6	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	90	104	2	TRUE	15.2%	14	FALSE	FALSE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	63	62	0	TRUE	-2.3%	-1	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	64	68	2	TRUE	6.8%	4	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	102	97	2	TRUE	-4.4%	-4	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	79	83	1	TRUE	5.0%	4	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road -EB	Full	15	46	42	0	TRUE	-8.0%	-4	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	59	56	1	TRUE	-4.5%	-3	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	18	16	1	TRUE	-11.9%	-2	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	11	14	0	TRUE	23.2%	3	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	47	54	0	TRUE	14.8%	7	FALSE	TRUE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	44	52	0	TRUE	17.1%	8	FALSE	FALSE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	78	90	1	TRUE	14.7%	12	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	83	88	1	TRUE	6.3%	5	FALSE	TRUE	TRUE	TRUE	544
35 - Anson Road - WB	Full	23	50	41	0	TRUE	-18.8%	-9	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	44	44	0	TRUE	-1.0%	0	FALSE	TRUE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	44	45	1	TRUE	1.7%	1	FALSE	TRUE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	41	44	0	TRUE	7.1%	3	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	66	65	0	TRUE	-2.8%	-2	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	62	70	1	TRUE	12.7%	8	FALSE	TRUE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	58	64	0	TRUE	10.8%	6	FALSE	TRUE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	51	50	0	TRUE	-2.6%	-1	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	53	53	0	TRUE	0.8%	0	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	48	50	0	TRUE	3.4%	2	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	35	38	1	TRUE	7.7%	3	FALSE	TRUE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	33	29	0	TRUE	-10.8%	-4	FALSE	TRUE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	36	33	0	TRUE	-6.7%	-2	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	43	37	0	TRUE	-14.4%	-6	FALSE	TRUE	TRUE	TRUE	564



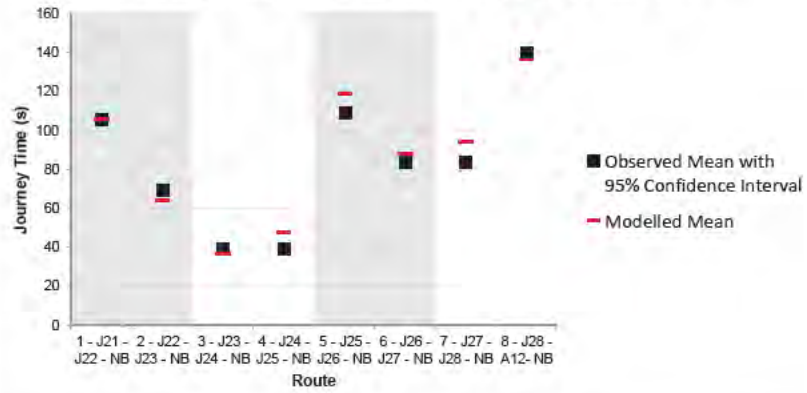
**Journey Times
Validation Statistics**

AM Peak (07:00 -08:00)

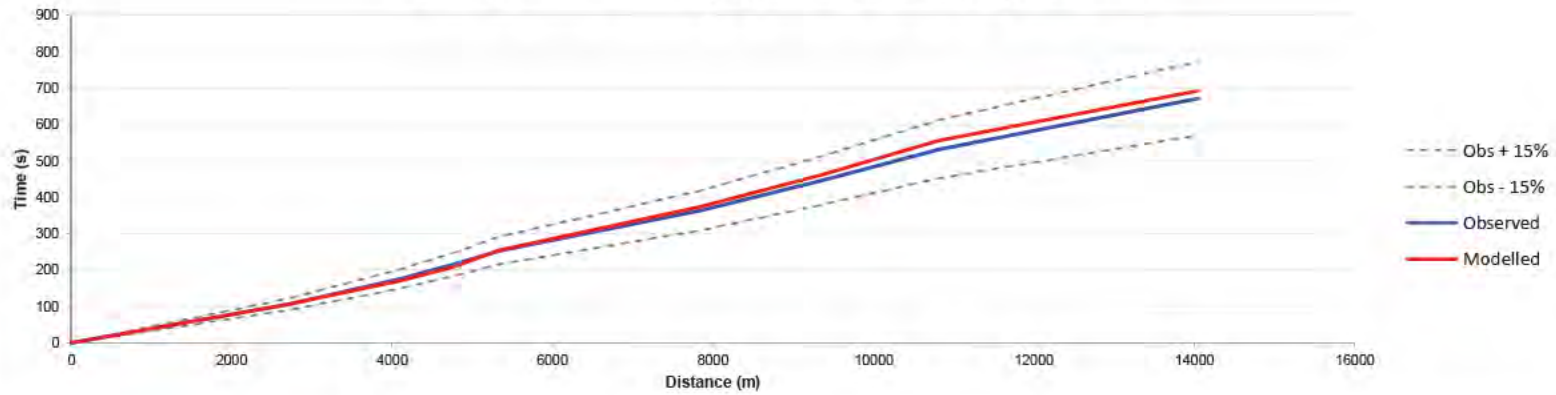
49 - A1152 - WB	Full	37	46	49	0	TRUE	6.6%	3	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	43	49	0	TRUE	14.6%	6	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	671	691	2	TRUE	2.9%	20	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	668	679	3	TRUE	1.7%	11	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

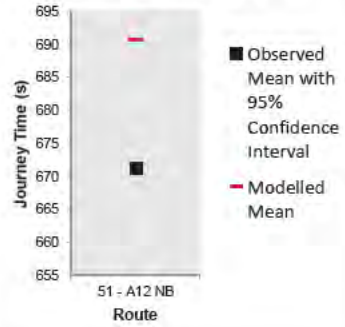


Journey Time Summary by Distance for Group Number 1

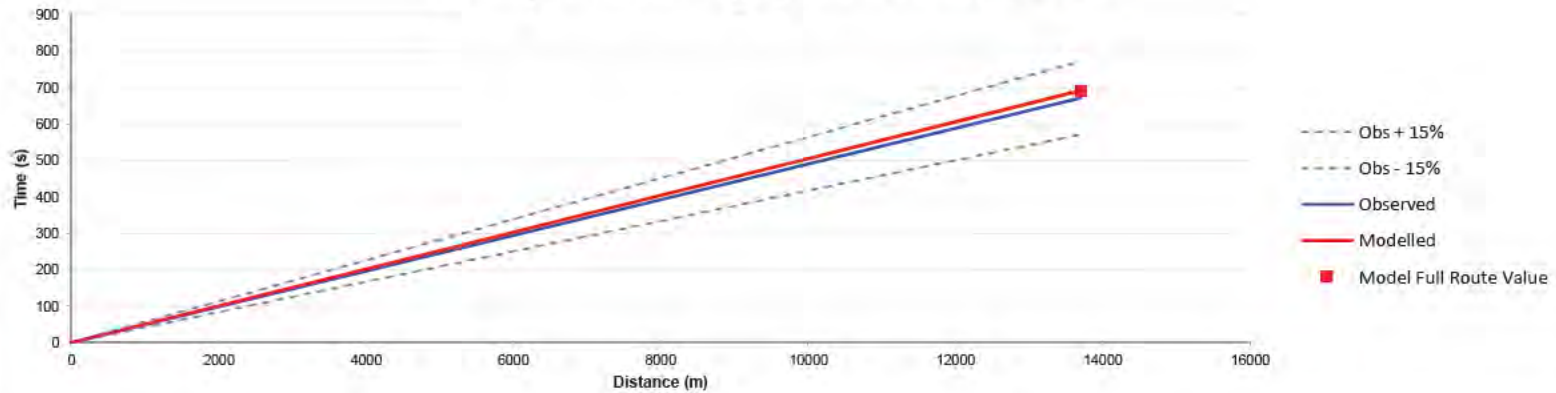




Journey Time Summary for 51 - A12 NB

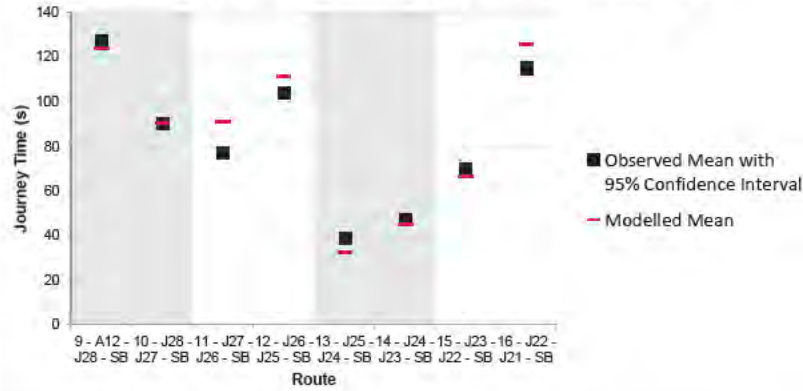


Journey Time Summary by Distance for 51 - A12 NB

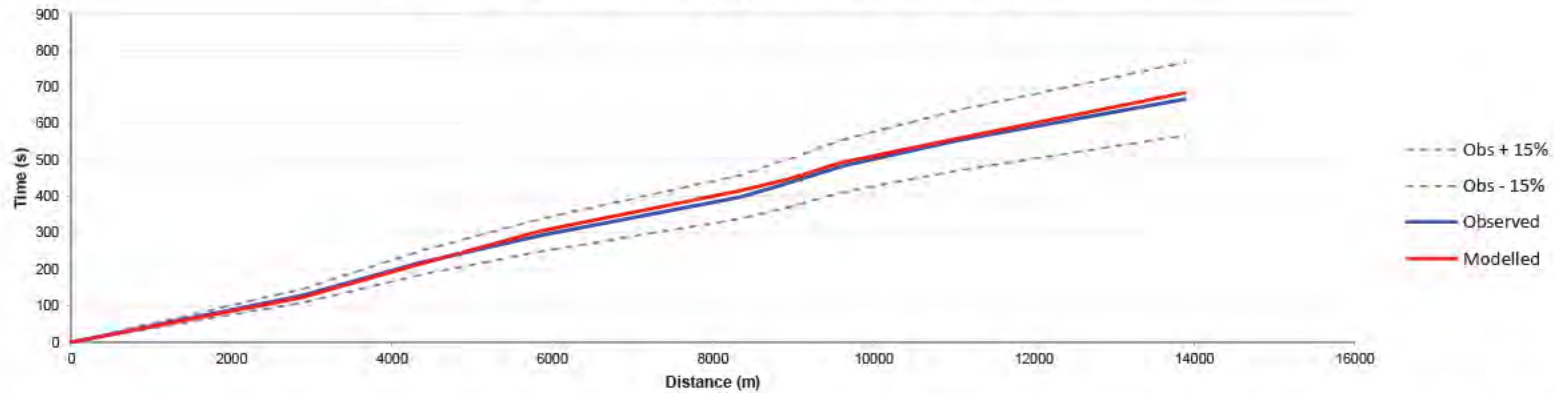




Journey Time Summary for Group Number 3

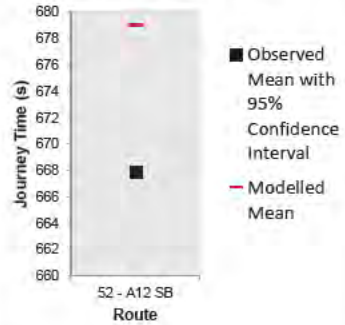


Journey Time Summary by Distance for Group Number 3

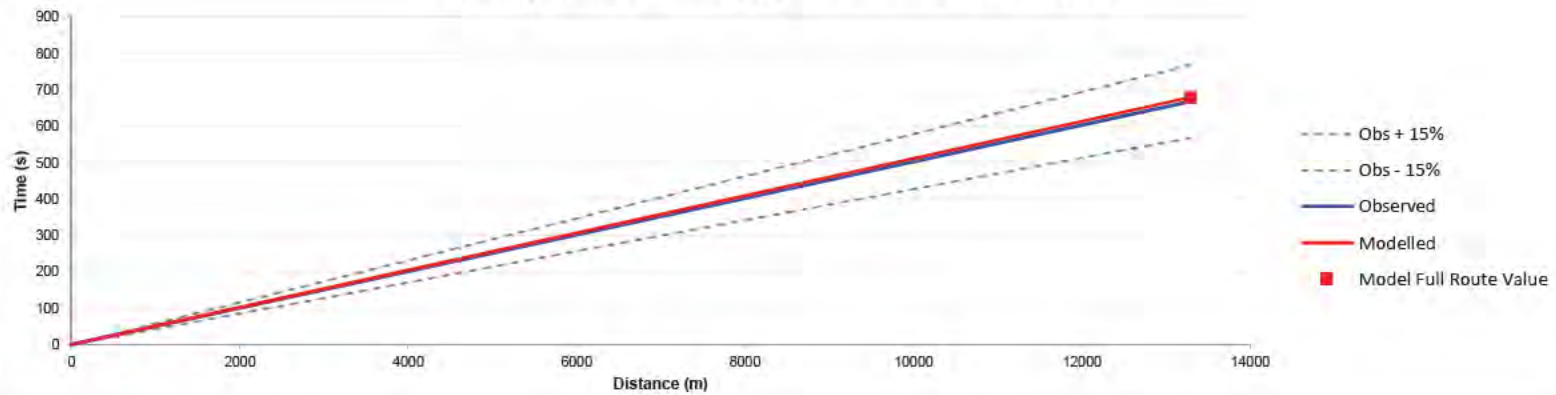




Journey Time Summary for 52 - A12 SB

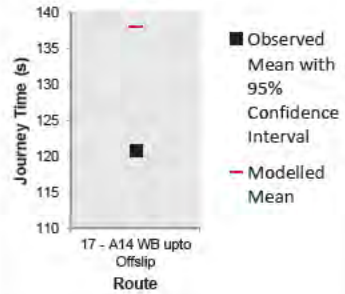


Journey Time Summary by Distance for 52 - A12 SB

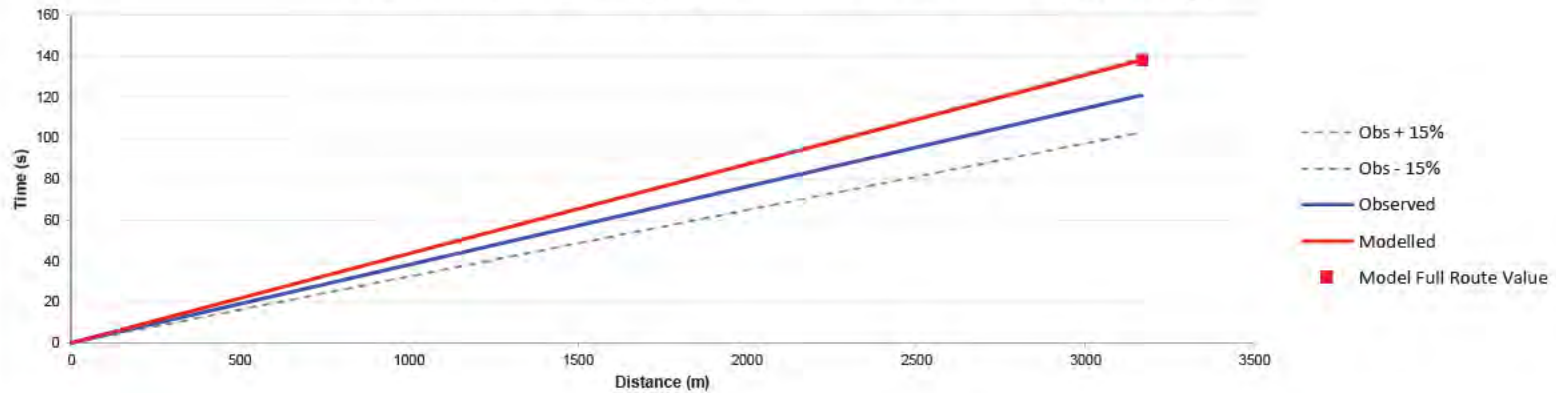




Journey Time Summary for 17 - A14 WB upto Offslip

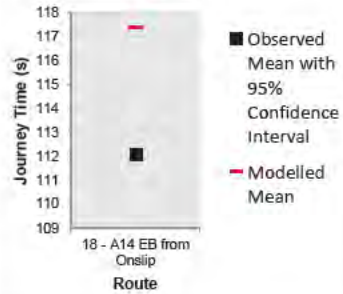


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

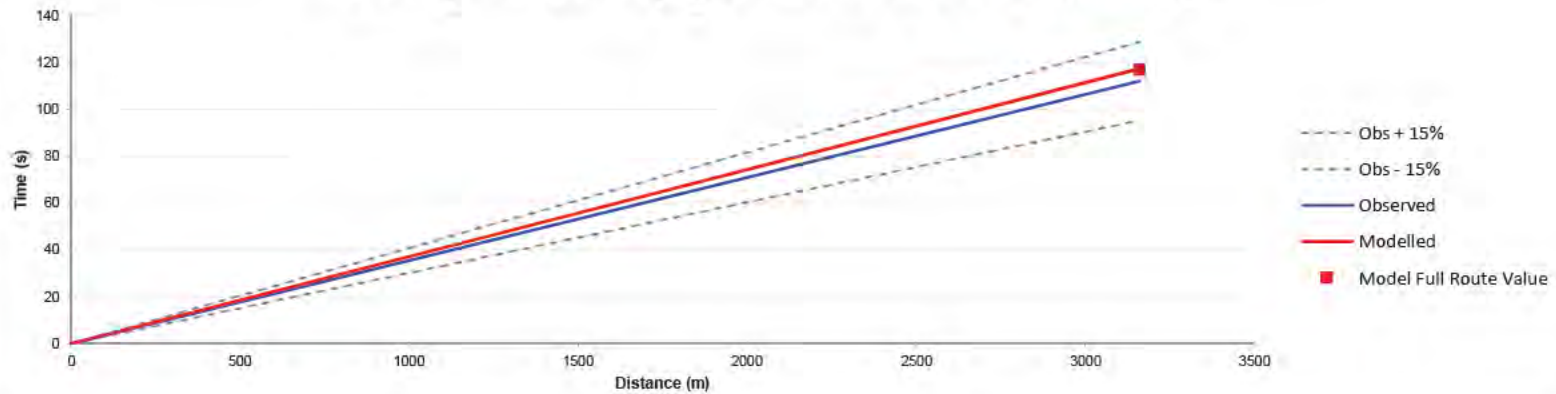




Journey Time Summary for 18 - A14 EB from Onslip

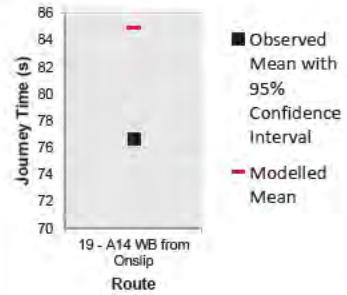


Journey Time Summary by Distance for 18 - A14 EB from Onslip

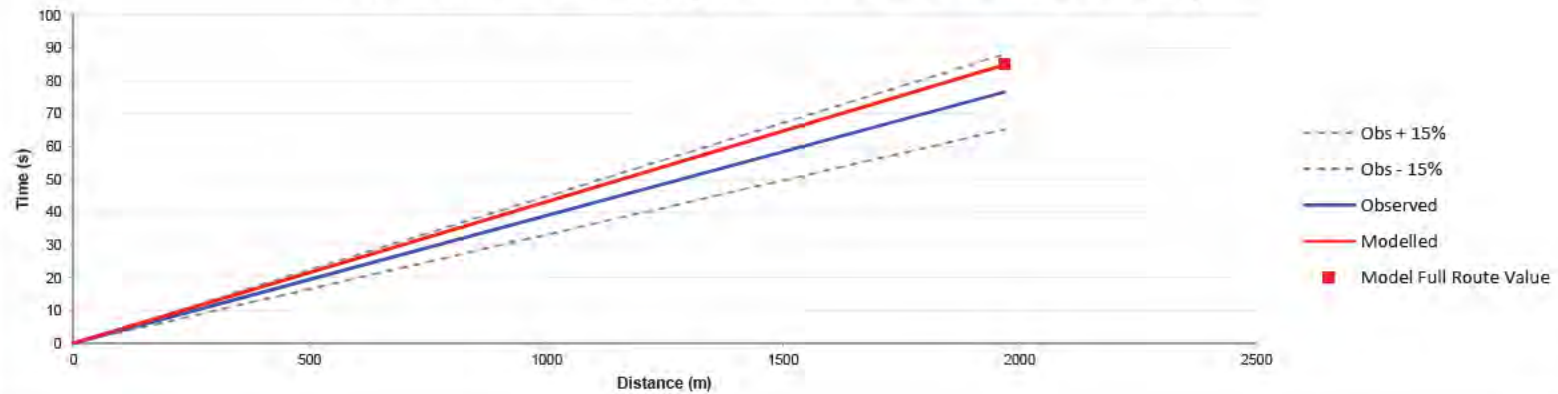




Journey Time Summary for 19 - A14 WB from Onslip

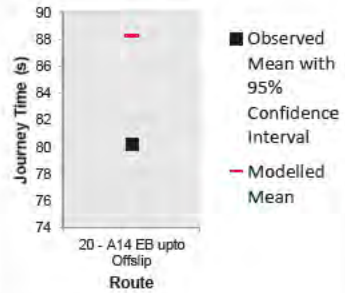


Journey Time Summary by Distance for 19 - A14 WB from Onslip

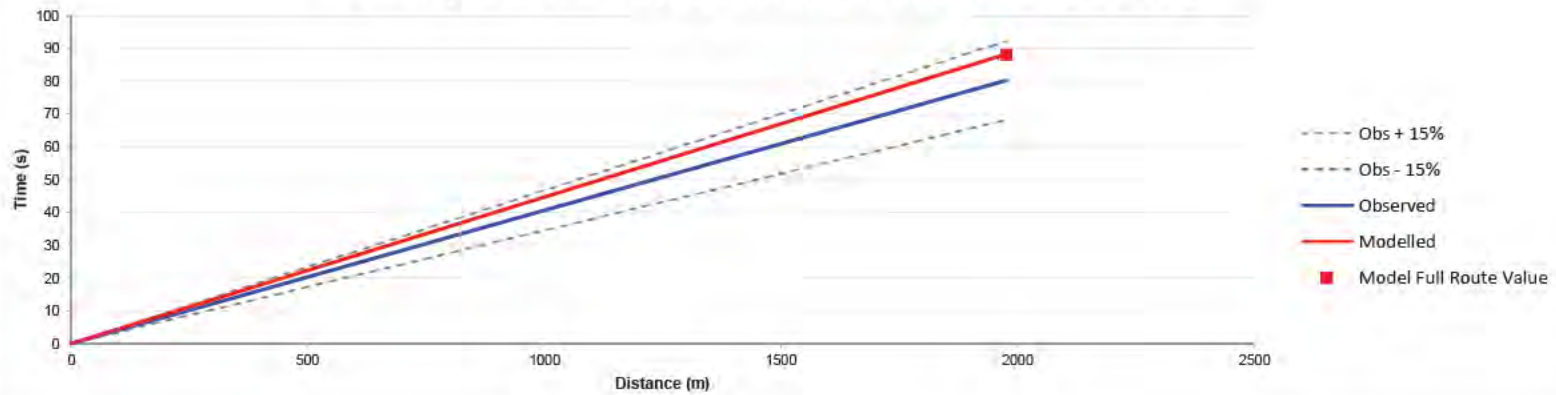




Journey Time Summary for 20 - A14 EB upto Offslip

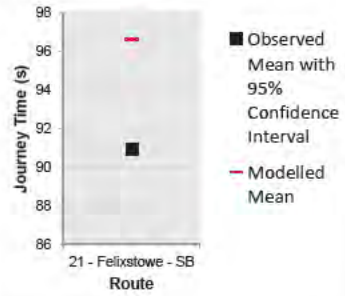


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

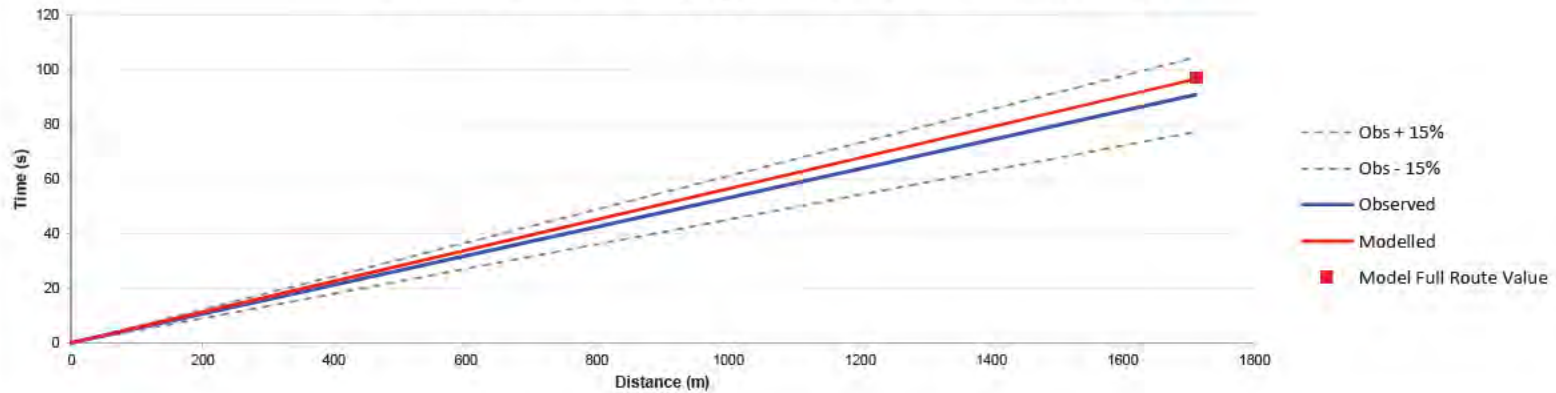




Journey Time Summary for 21 - Felixstowe - SB

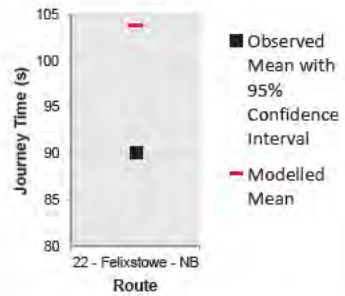


Journey Time Summary by Distance for 21 - Felixstowe - SB

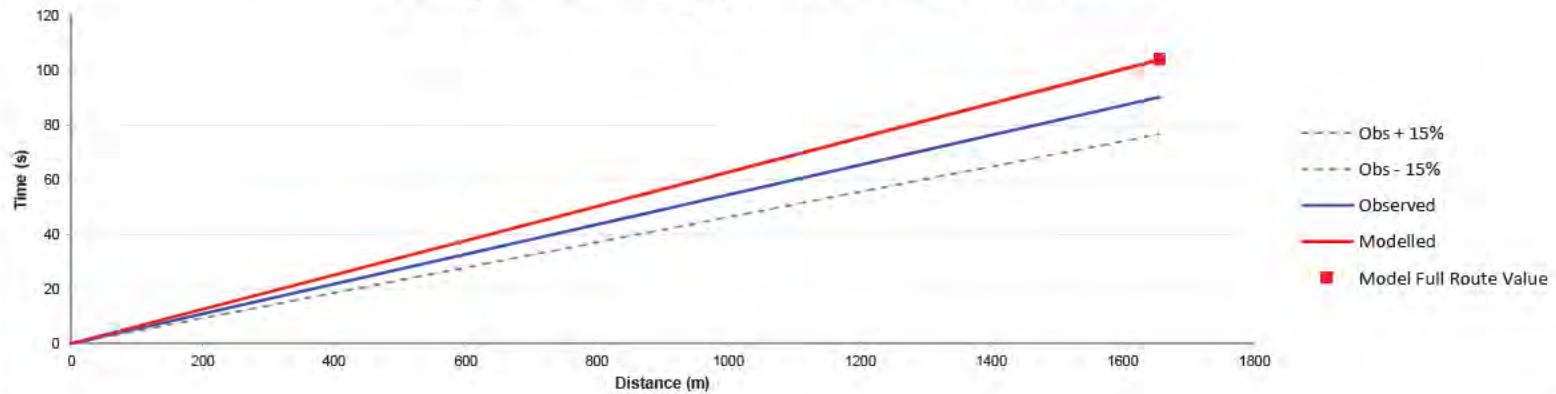




Journey Time Summary for 22 - Felixstowe - NB

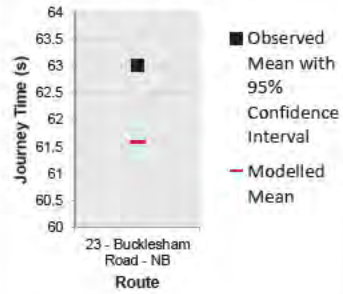


Journey Time Summary by Distance for 22 - Felixstowe - NB

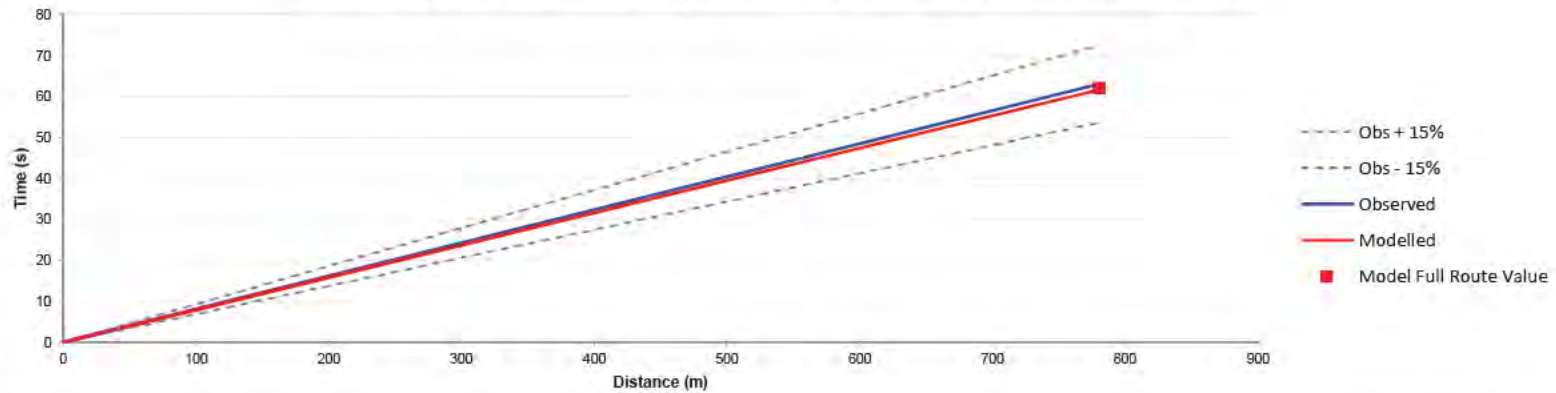




Journey Time Summary for 23 - Bucklesham Road - NB

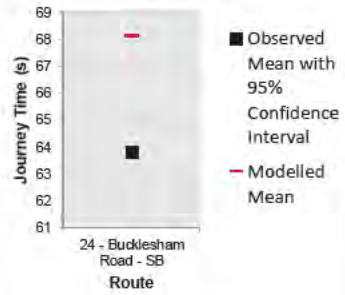


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

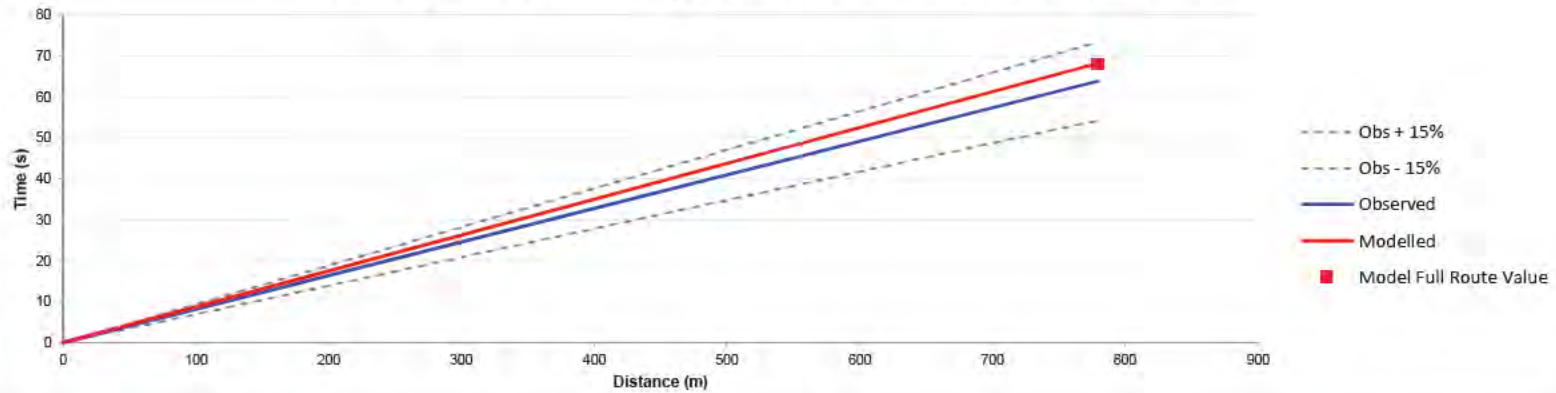




Journey Time Summary for 24 - Bucklesham Road - SB

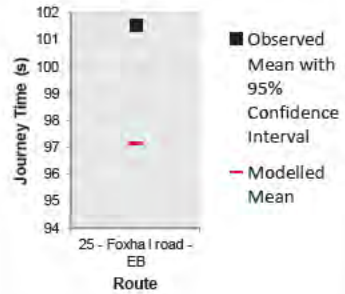


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

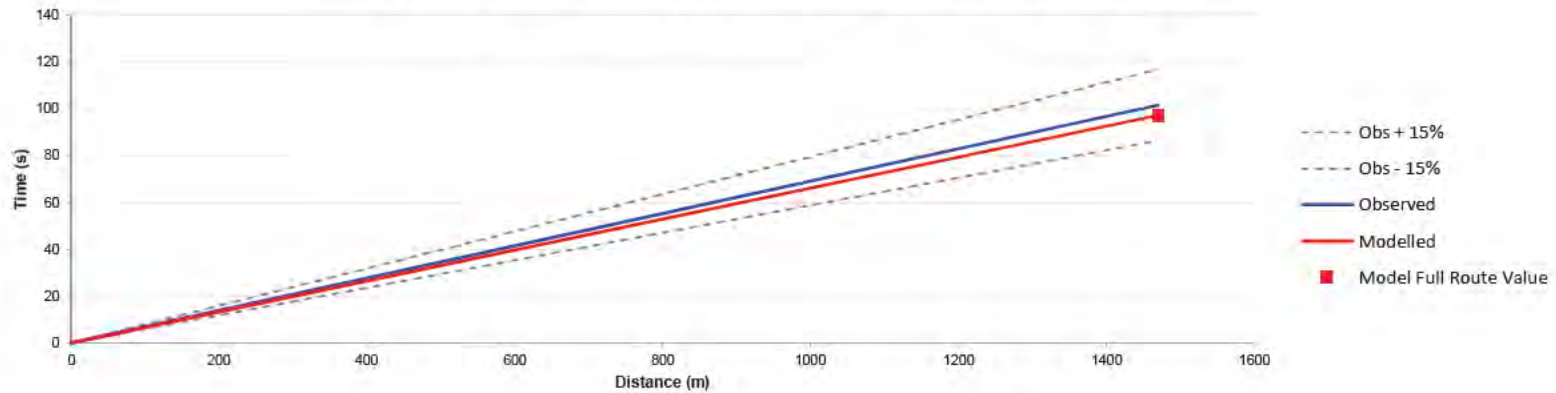




Journey Time Summary for 25 - Foxhall road - EB

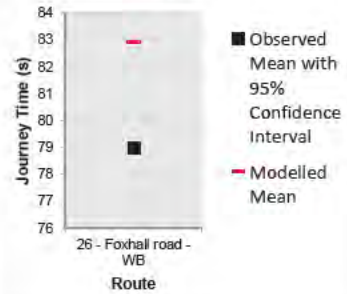


Journey Time Summary by Distance for 25 - Foxhall road - EB

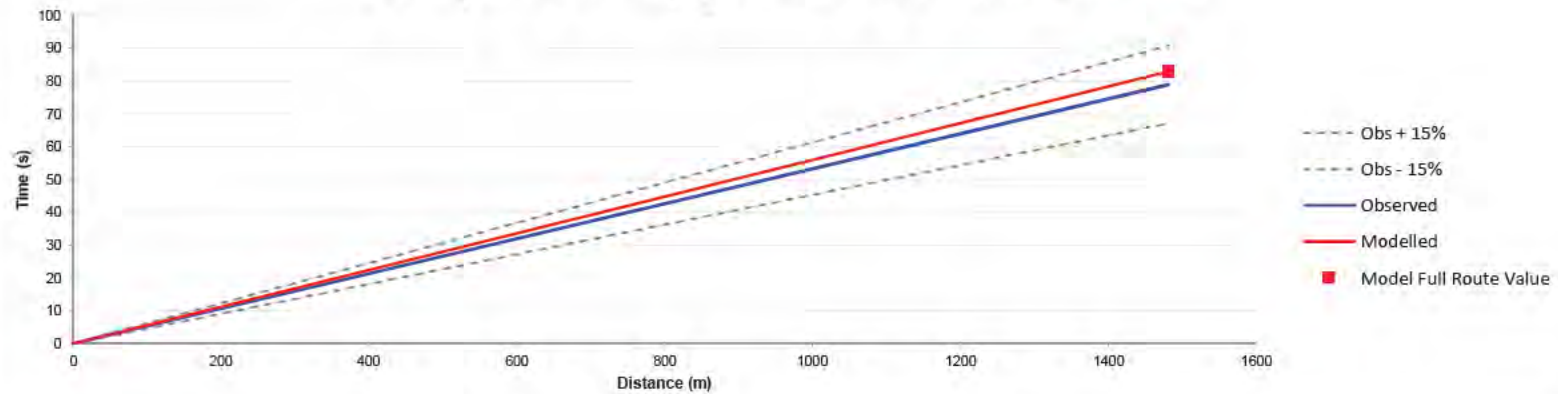




Journey Time Summary for 26 - Foxhall road - WB

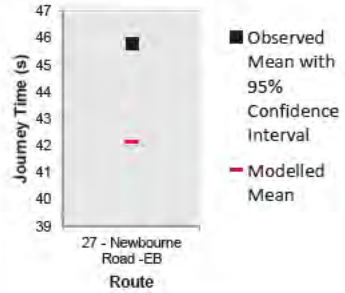


Journey Time Summary by Distance for 26 - Foxhall road - WB

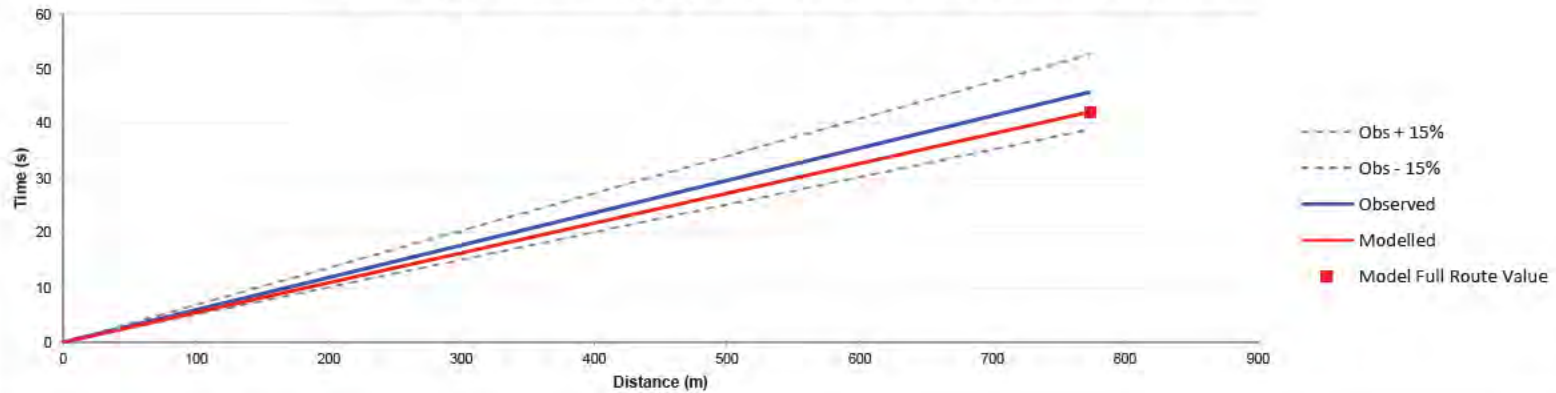




Journey Time Summary for 27 - Newbourne Road -EB

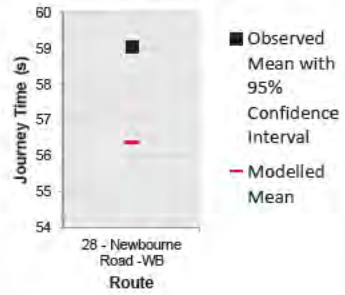


Journey Time Summary by Distance for 27 - Newbourne Road -EB

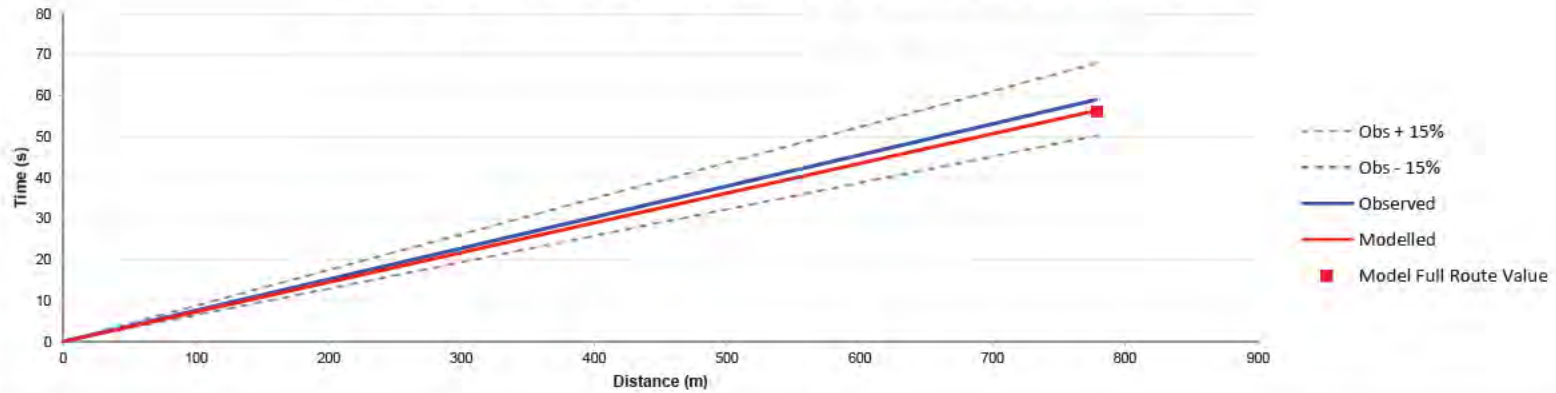




Journey Time Summary for 28 - Newbourne Road -WB

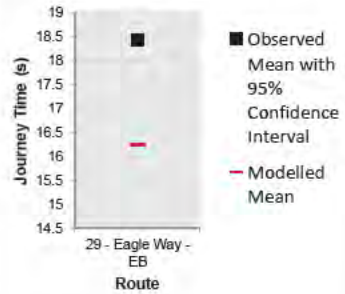


Journey Time Summary by Distance for 28 - Newbourne Road -WB

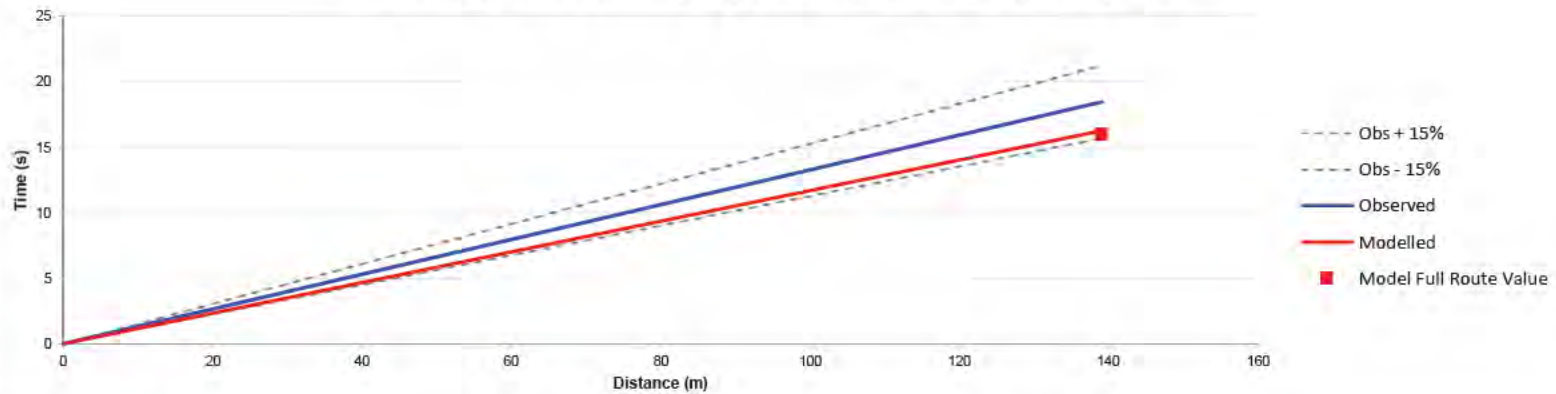




Journey Time Summary for 29 - Eagle Way - EB

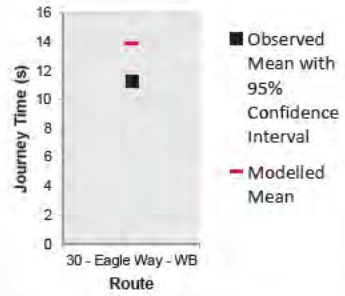


Journey Time Summary by Distance for 29 - Eagle Way - EB

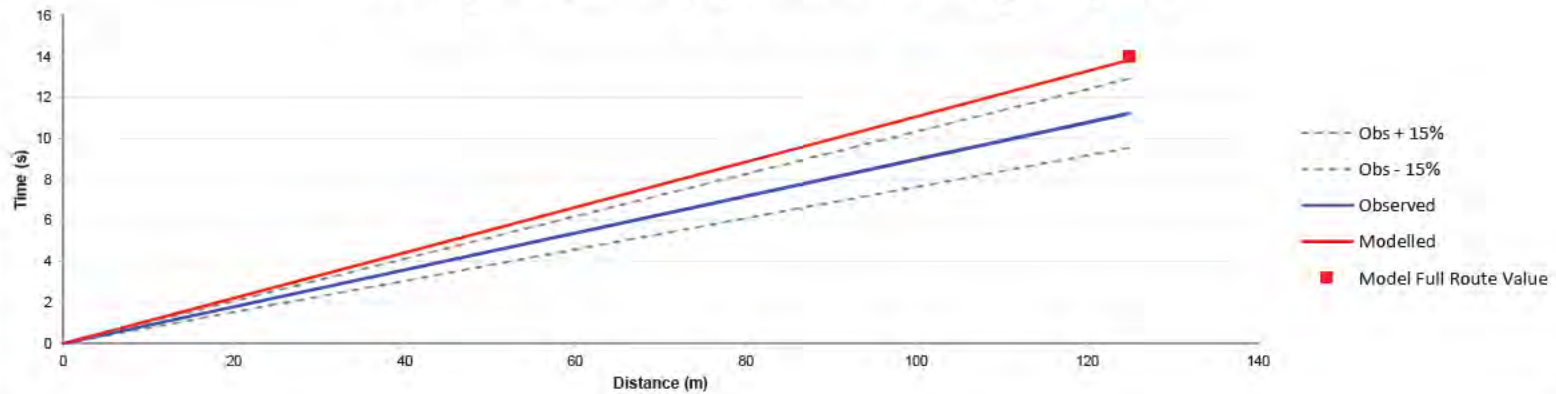




Journey Time Summary for 30 - Eagle Way - WB

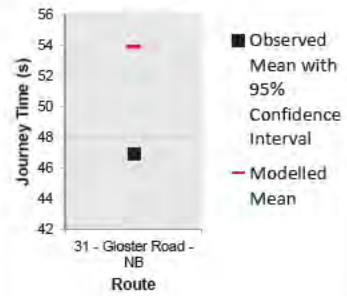


Journey Time Summary by Distance for 30 - Eagle Way - WB

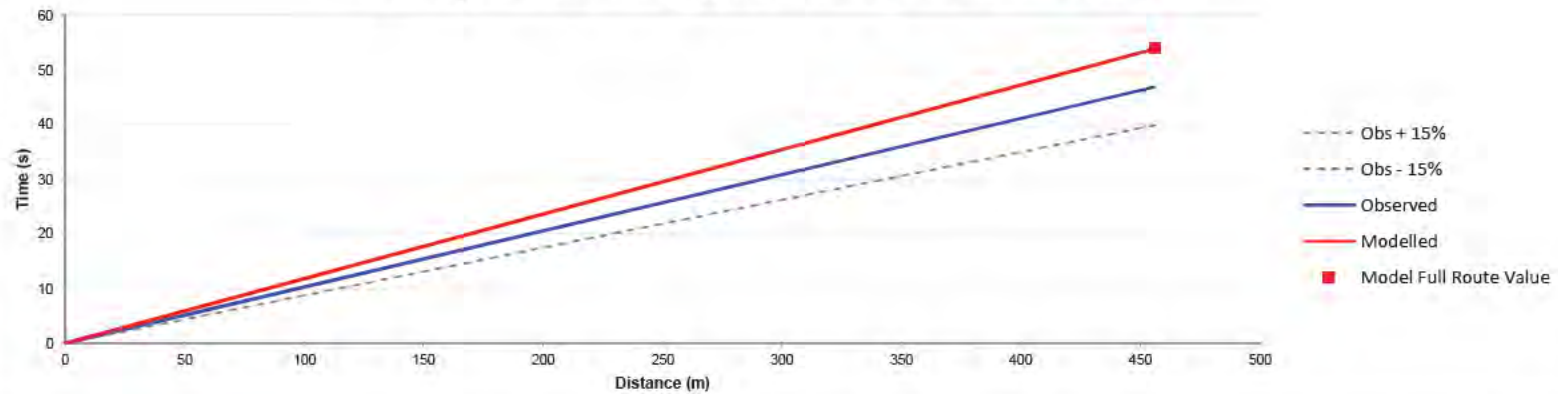




Journey Time Summary for 31 - Gloster Road - NB

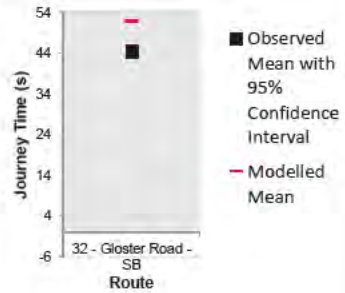


Journey Time Summary by Distance for 31 - Gloster Road - NB

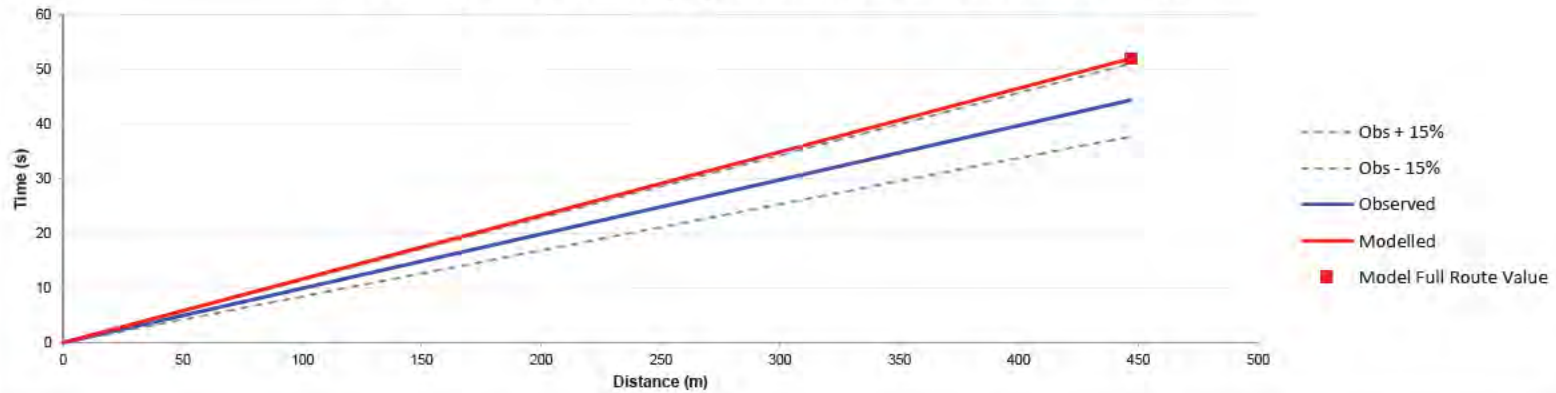




Journey Time Summary for 32 - Gloster Road - SB

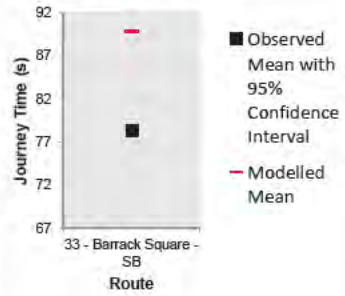


Journey Time Summary by Distance for 32 - Gloster Road - SB

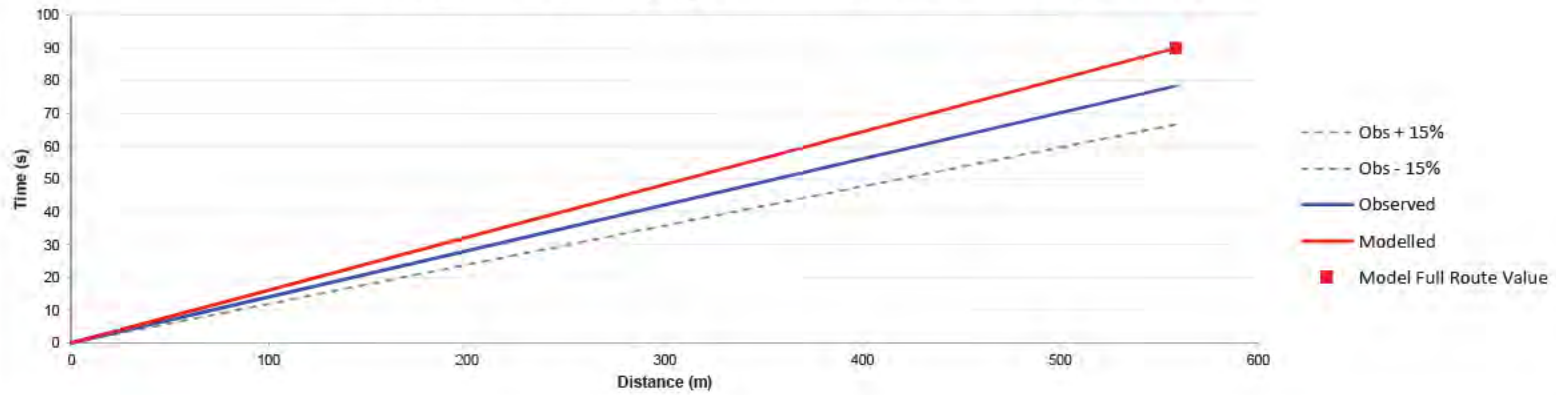




Journey Time Summary for 33 - Barrack Square - SB

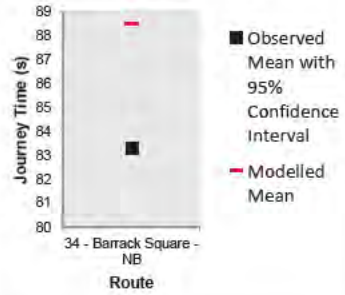


Journey Time Summary by Distance for 33 - Barrack Square - SB

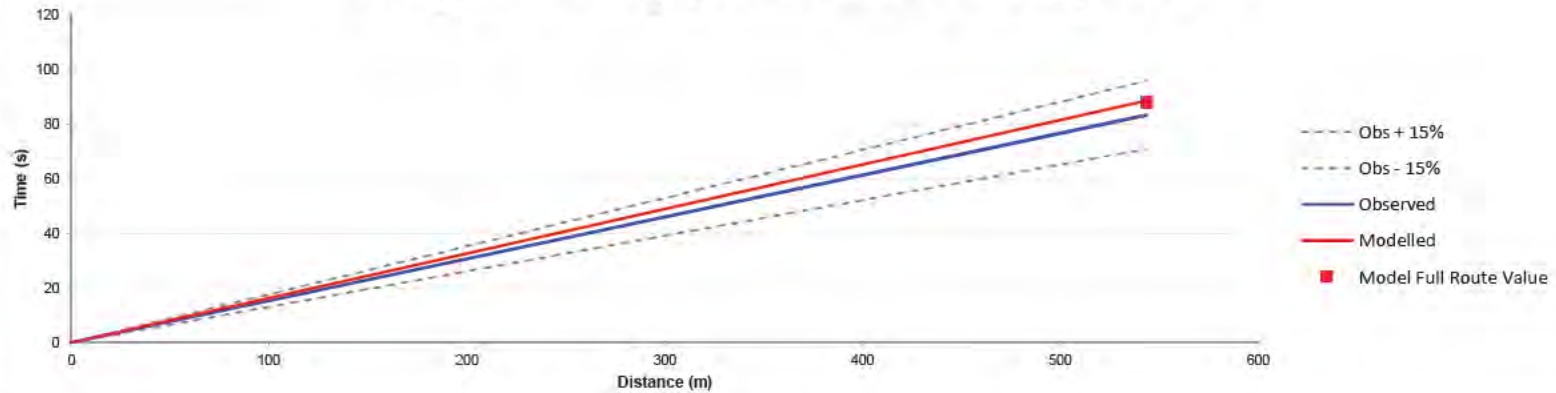




Journey Time Summary for 34 - Barrack Square - NB

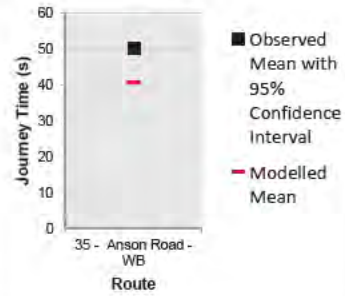


Journey Time Summary by Distance for 34 - Barrack Square - NB

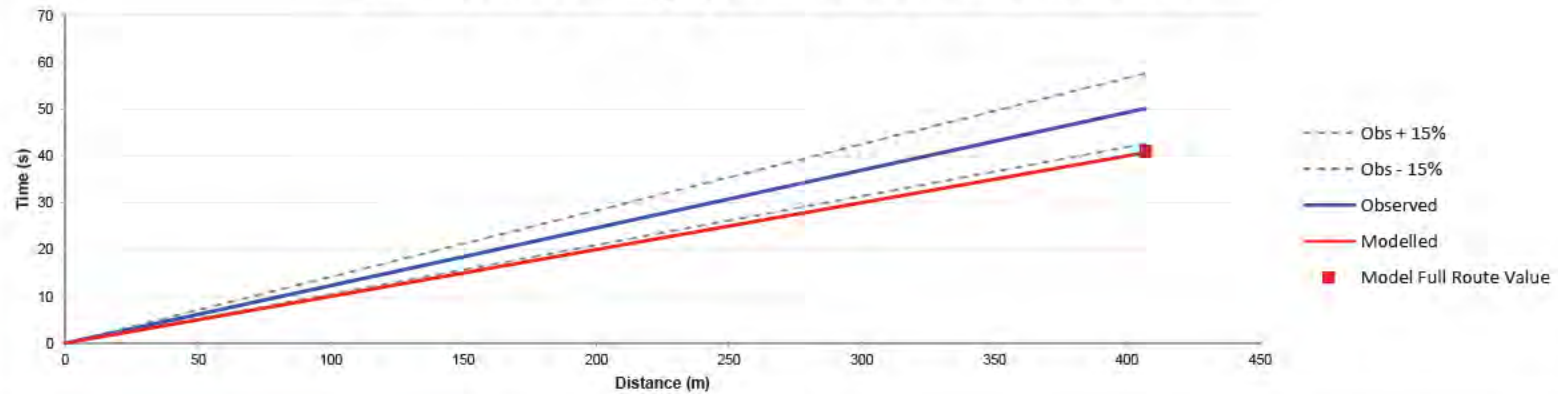




Journey Time Summary for 35 - Anson Road - WB

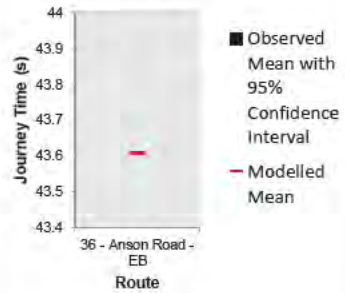


Journey Time Summary by Distance for 35 - Anson Road - WB

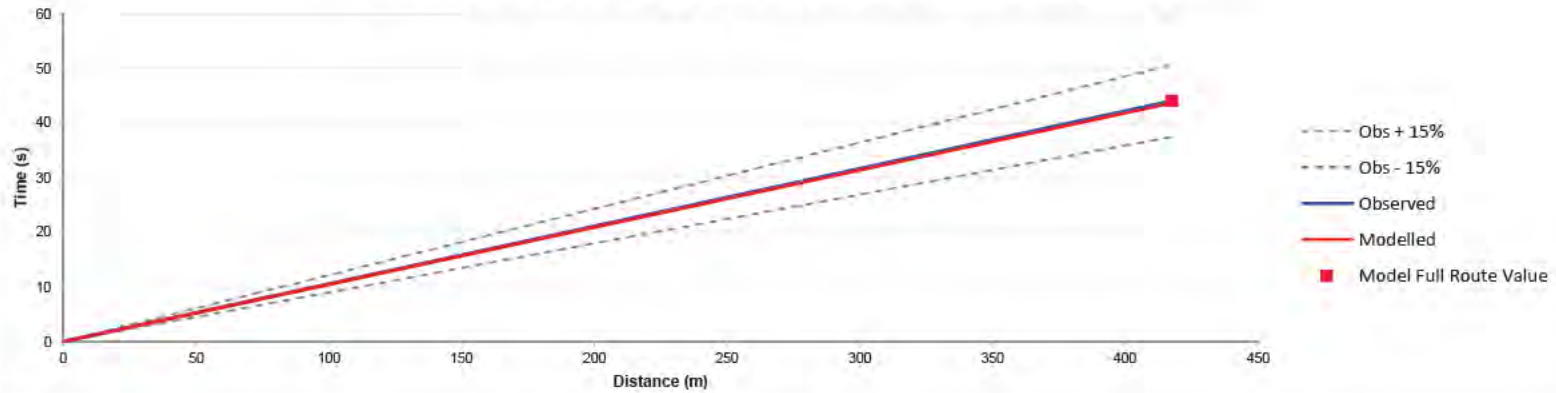




Journey Time Summary for 36 - Anson Road - EB

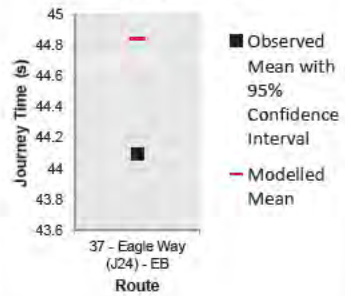


Journey Time Summary by Distance for 36 - Anson Road - EB

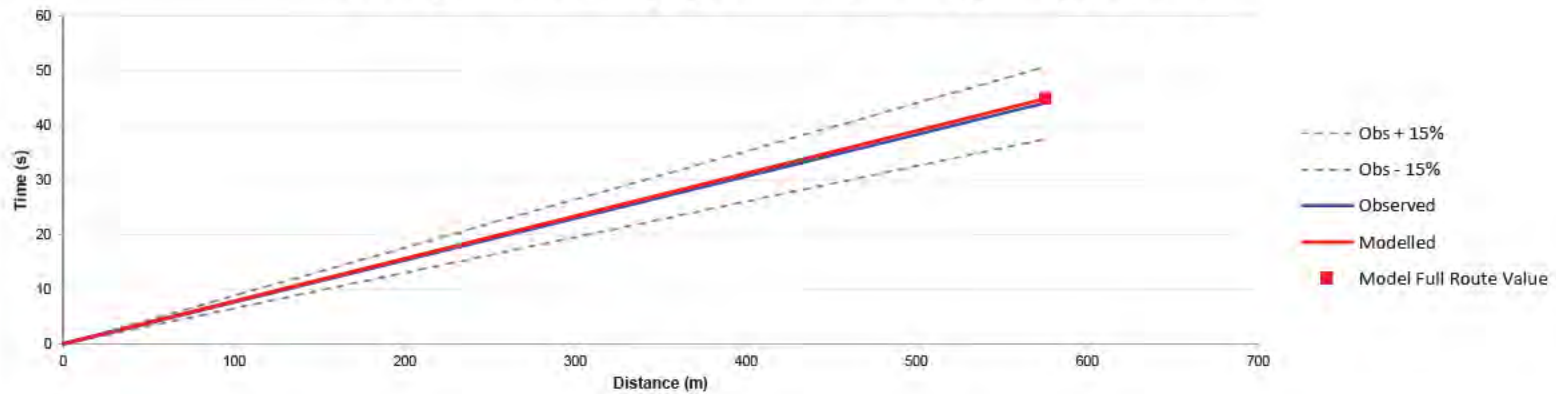




Journey Time Summary for 37 - Eagle Way (J24) - EB

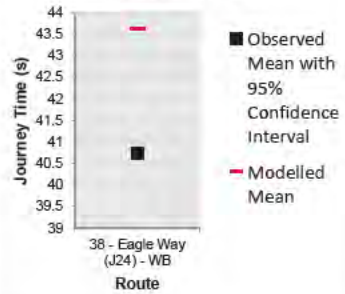


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

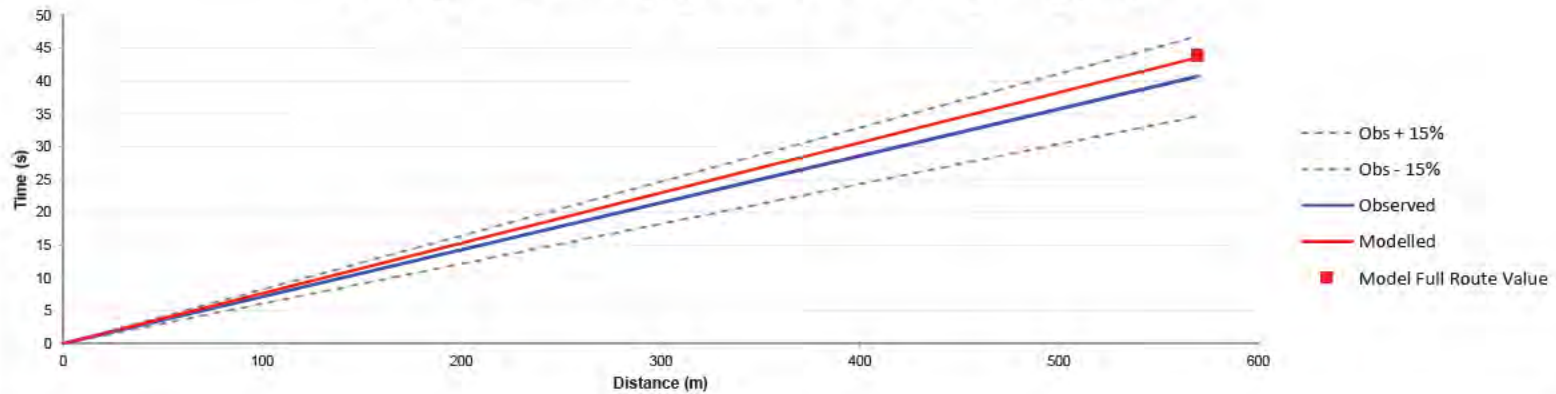




Journey Time Summary for 38 - Eagle Way (J24) - WB

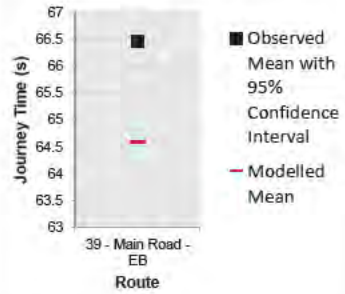


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

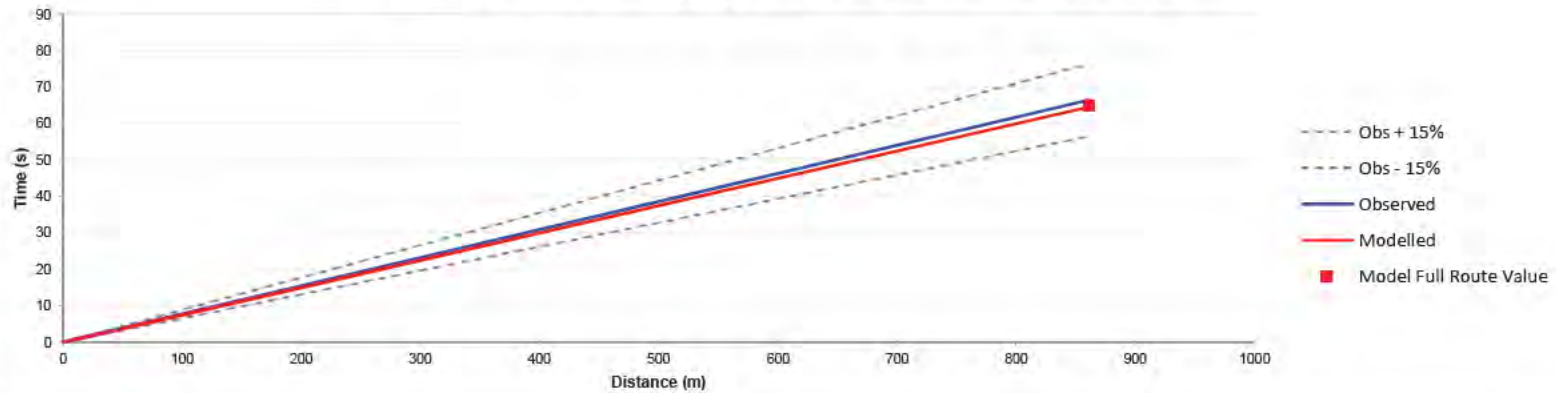




Journey Time Summary for 39 - Main Road - EB

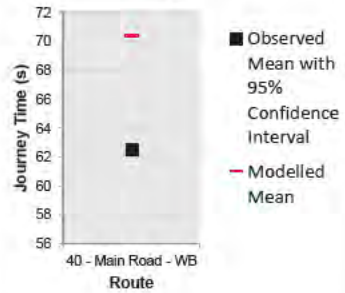


Journey Time Summary by Distance for 39 - Main Road - EB

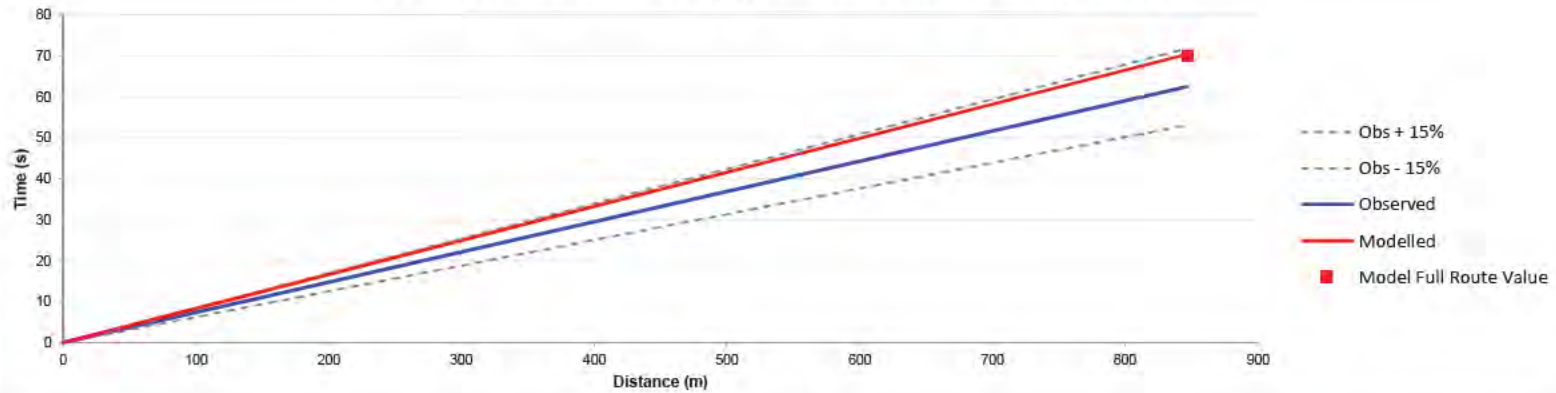




Journey Time Summary for 40 - Main Road - WB

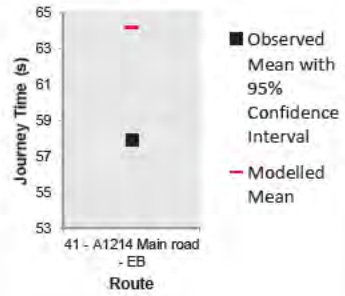


Journey Time Summary by Distance for 40 - Main Road - WB

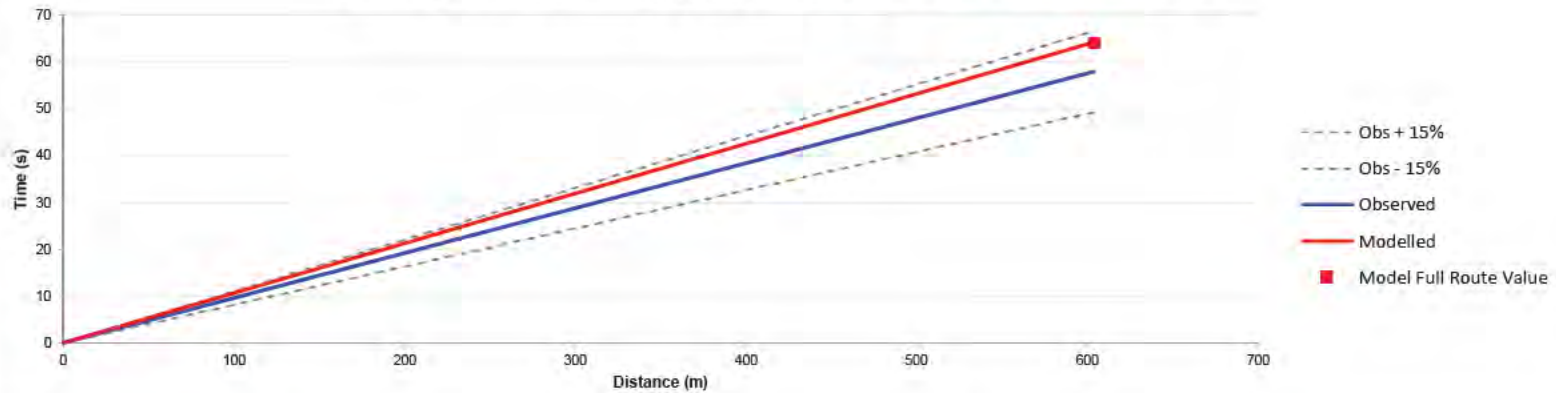




Journey Time Summary for 41 - A1214 Main road road - EB

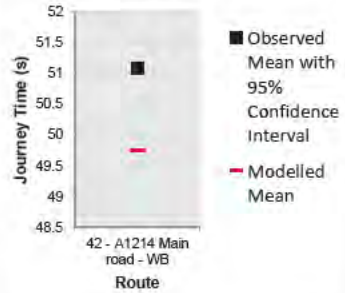


Journey Time Summary by Distance for 41 - A1214 Main road - EB

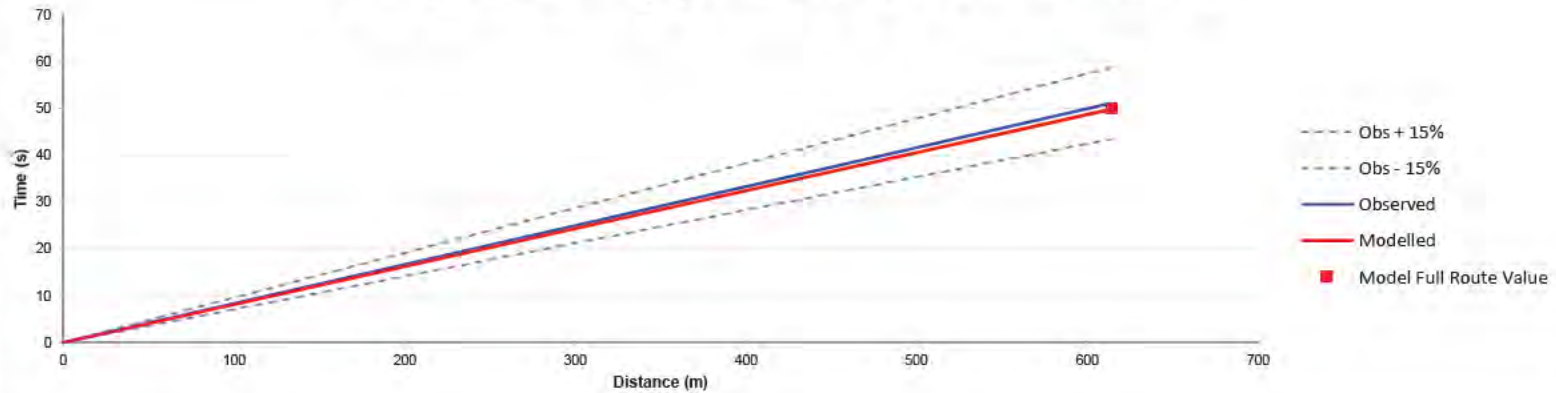




Journey Time Summary for 42 - A1214 Main road - WB

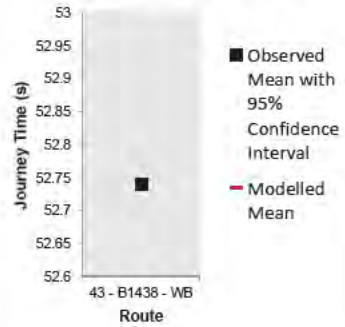


Journey Time Summary by Distance for 42 - A1214 Main road - WB

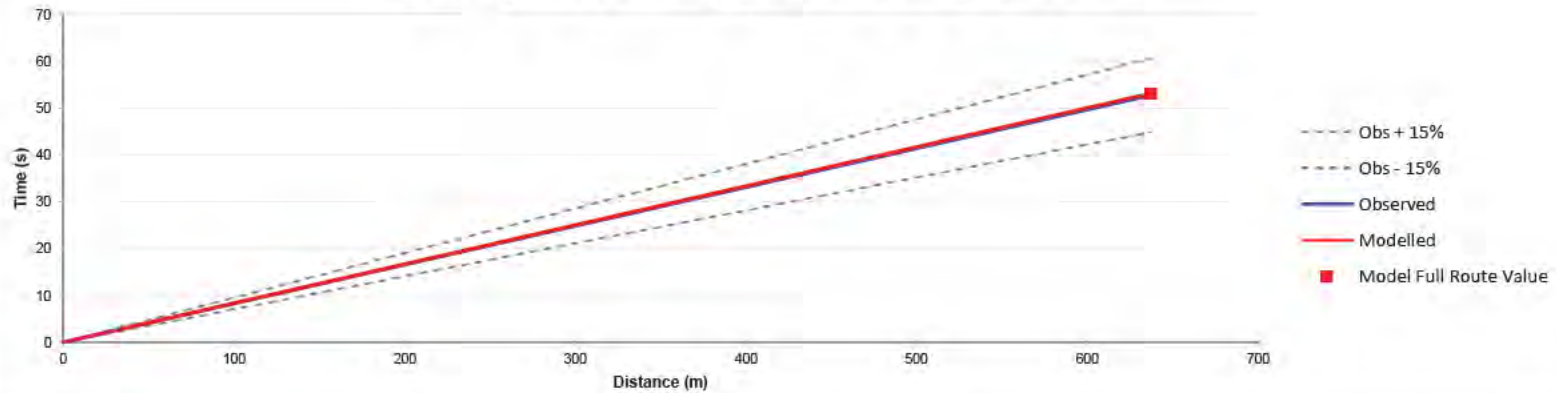




Journey Time Summary for 43 - B1438 - WB

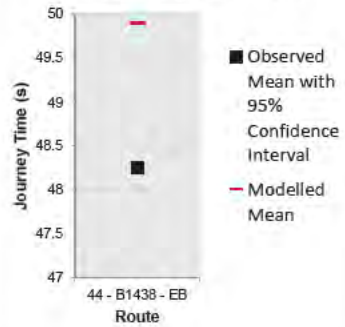


Journey Time Summary by Distance for 43 - B1438 - WB

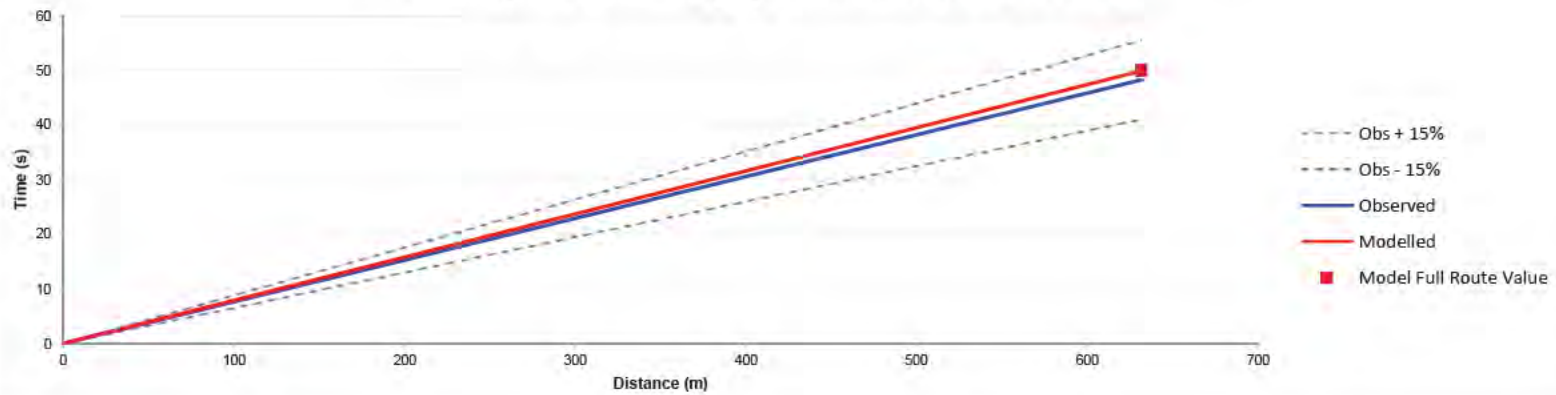




Journey Time Summary for 44 - B1438 - EB

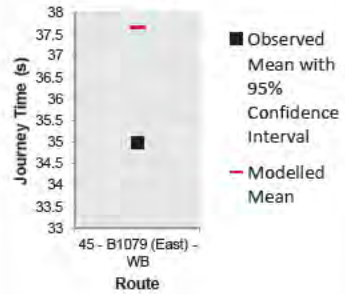


Journey Time Summary by Distance for 44 - B1438 - EB

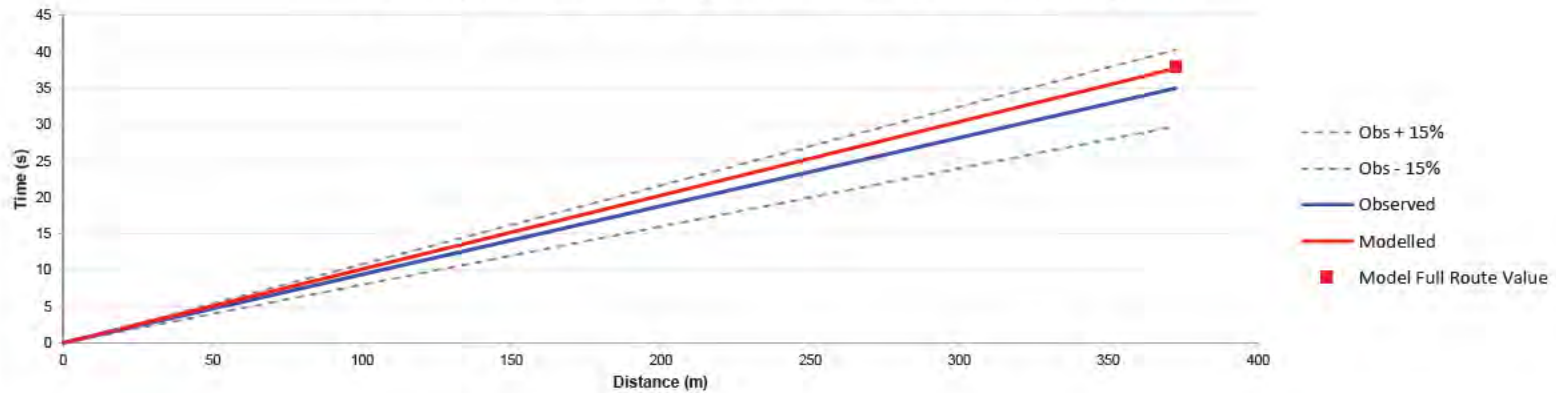




Journey Time Summary for 45 - B1079 (East) - WB

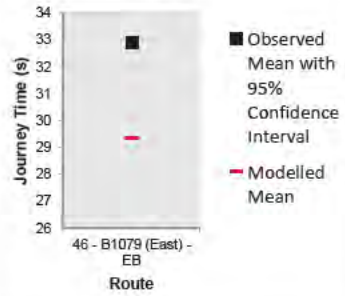


Journey Time Summary by Distance for 45 - B1079 (East) - WB

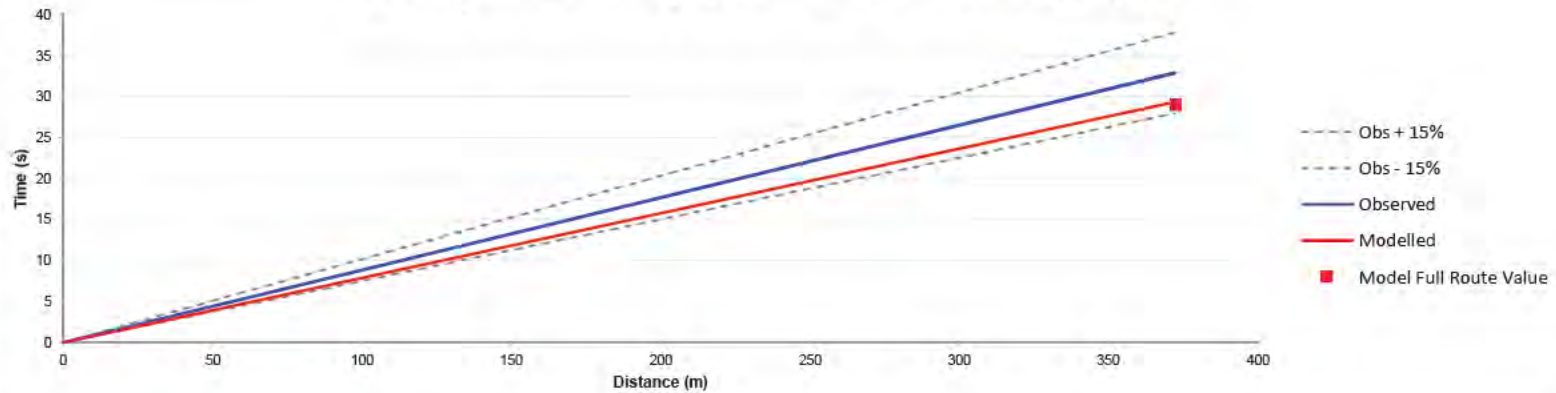




Journey Time Summary for 46 - B1079 (East) - EB

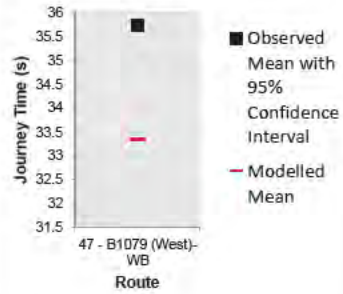


Journey Time Summary by Distance for 46 - B1079 (East) - EB

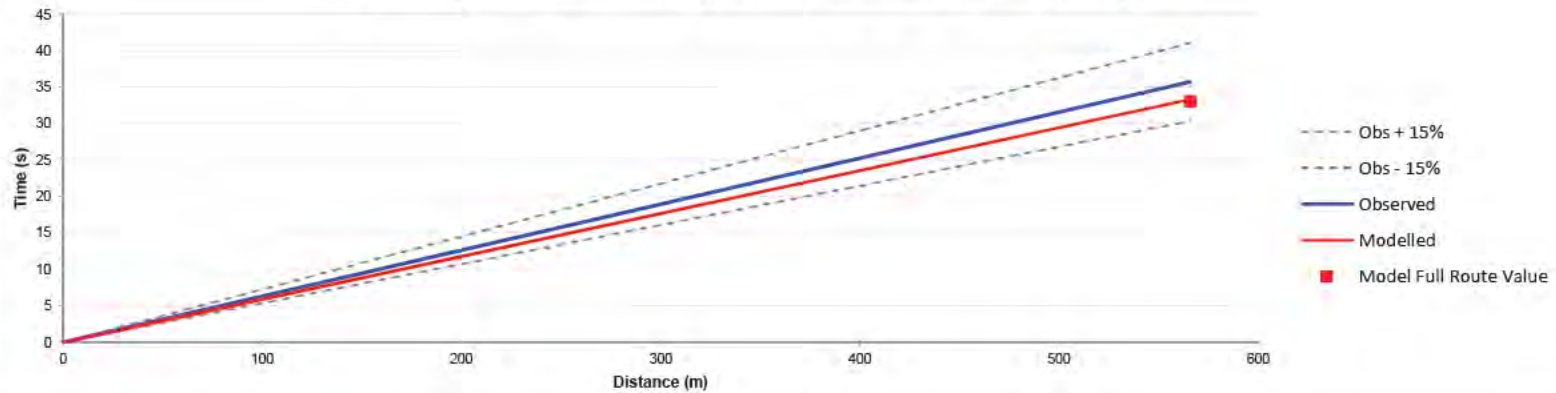




Journey Time Summary for 47 - B1079 (West)- WB

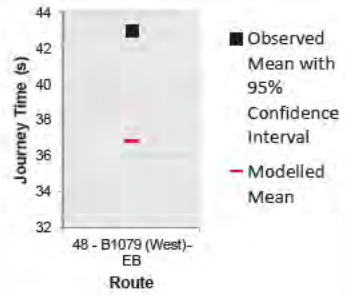


Journey Time Summary by Distance for 47 - B1079 (West)- WB

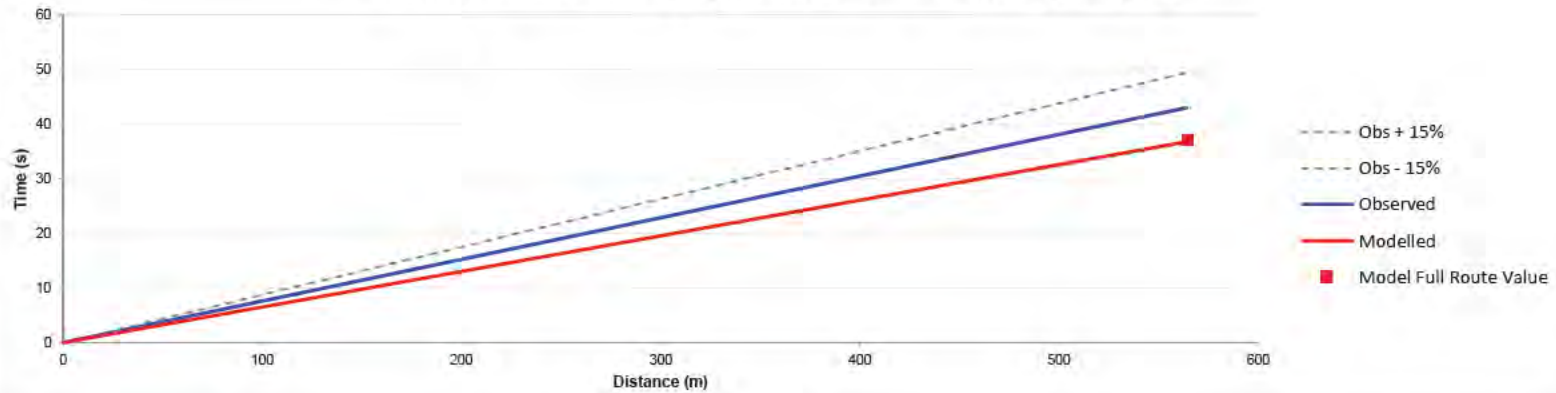




Journey Time Summary for 48 - B1079 (West)- EB

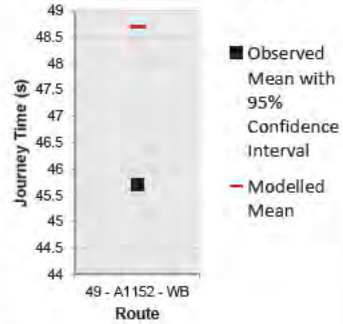


Journey Time Summary by Distance for 48 - B1079 (West)- EB

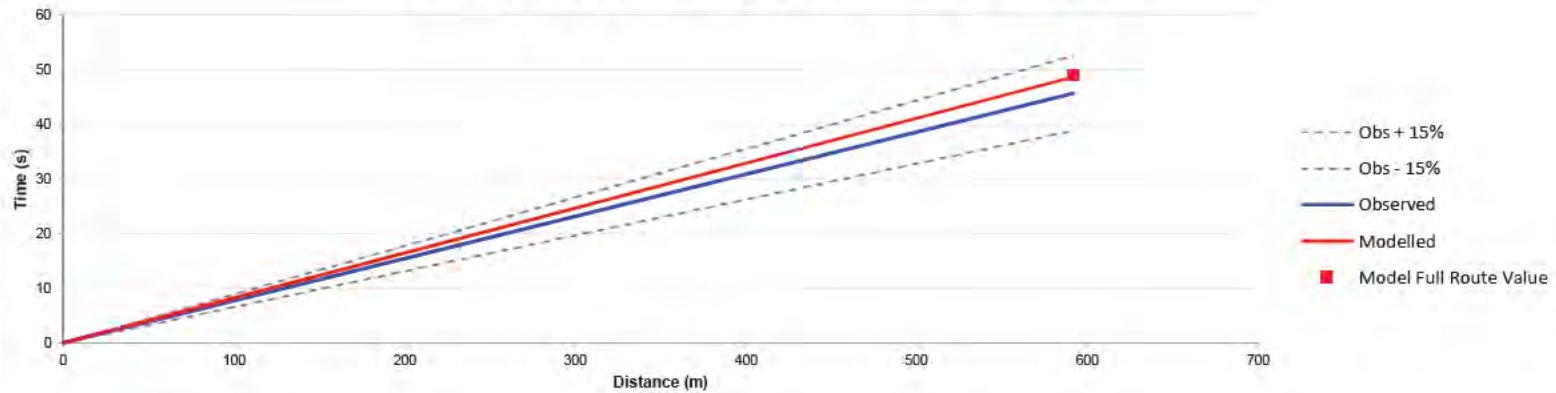




Journey Time Summary for 49 - A1152 - WB

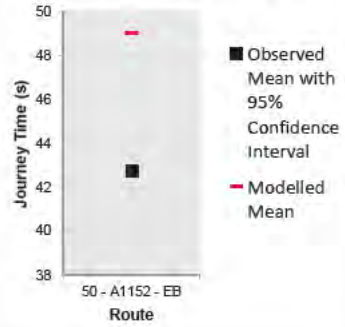


Journey Time Summary by Distance for 49 - A1152 - WB

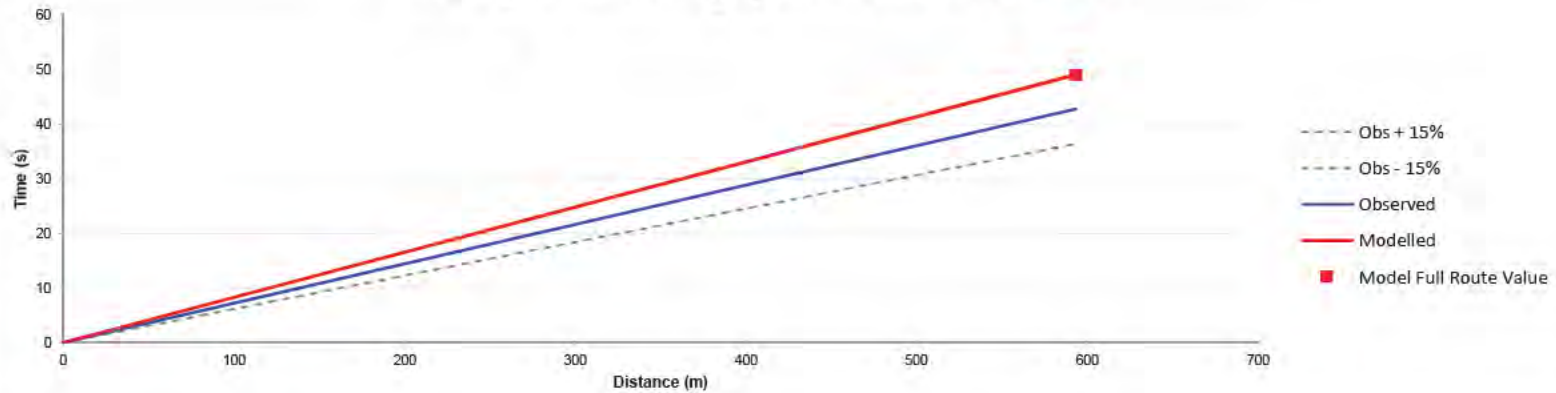




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Journey Times
Validation Statistics
AM Peak (08:00 -09:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	112	114	1	TRUE	1.9%	2	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	73	66	0	TRUE	-9.1%	-7	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	41	39	0	TRUE	-4.4%	-2	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	41	52	1	TRUE	25.9%	11	FALSE	FALSE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	110	125	1	TRUE	13.9%	15	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	88	95	1	TRUE	7.7%	7	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	88	97	0	TRUE	10.3%	9	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	142	137	1	TRUE	-3.2%	-4	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	143	134	2	TRUE	-5.8%	-8	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	109	117	4	TRUE	8.0%	9	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	82	94	0	TRUE	14.6%	12	FALSE	TRUE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	107	113	0	TRUE	5.1%	5	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	43	33	0	TRUE	-22.2%	-9	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	95	80	7	FALSE	-16.4%	-16	FALSE	FALSE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	73	70	0	TRUE	-4.6%	-3	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	118	138	4	TRUE	16.9%	20	FALSE	FALSE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	124	153	3	TRUE	23.7%	29	FALSE	FALSE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	111	118	0	TRUE	6.3%	7	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	85	0	TRUE	10.5%	8	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	81	90	1	TRUE	12.1%	10	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	93	100	1	TRUE	7.8%	7	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	95	116	3	TRUE	21.8%	21	FALSE	FALSE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	62	62	1	TRUE	-1.2%	-1	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	68	86	2	TRUE	26.2%	18	FALSE	FALSE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	165	149	11	FALSE	-10.2%	-17	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	84	84	1	TRUE	-0.3%	0	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road -EB	Full	15	46	43	0	TRUE	-7.0%	-3	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	62	64	3	TRUE	3.4%	2	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	20	21	1	FALSE	7.6%	2	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	12	14	0	TRUE	19.6%	2	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	50	53	0	TRUE	6.5%	3	FALSE	TRUE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	54	55	1	TRUE	2.4%	1	FALSE	TRUE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	103	93	0	TRUE	-9.8%	-10	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	101	92	1	TRUE	-9.0%	-9	FALSE	TRUE	TRUE	TRUE	544
35 - Anson Road - WB	Full	23	55	43	0	TRUE	-21.3%	-12	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	47	45	0	TRUE	-5.0%	-2	FALSE	TRUE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	45	46	1	TRUE	2.5%	1	FALSE	TRUE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	41	44	0	TRUE	6.8%	3	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	66	65	0	TRUE	-1.1%	-1	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	65	72	0	TRUE	10.5%	7	FALSE	TRUE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	73	66	0	TRUE	-9.4%	-7	FALSE	TRUE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	54	50	0	TRUE	-7.5%	-4	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	56	56	0	TRUE	-1.0%	-1	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	51	51	0	TRUE	0.0%	0	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	43	61	6	FALSE	42.7%	18	FALSE	FALSE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	41	30	0	TRUE	-28.0%	-12	FALSE	FALSE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	38	33	0	TRUE	-11.3%	-4	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	50	40	0	TRUE	-19.4%	-10	FALSE	FALSE	TRUE	TRUE	564



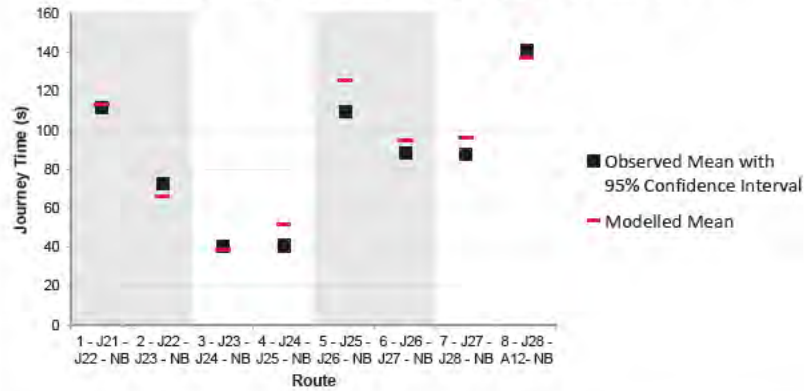
**Journey Times
Validation Statistics**

AM Peak (08:00 -09:00)

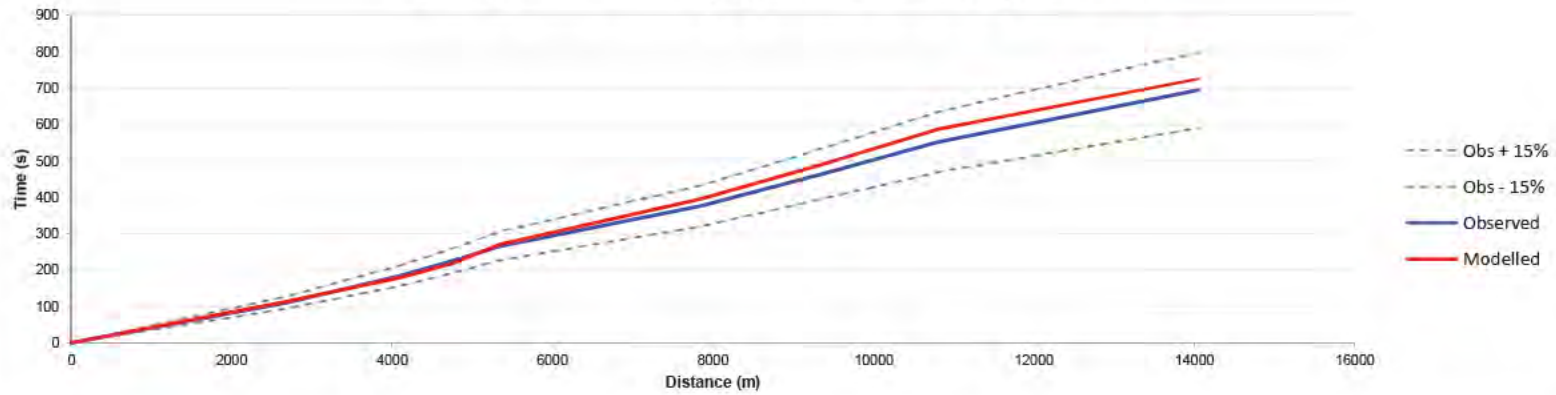
49 - A1152 - WB	Full	37	52	51	0	TRUE	-3.0%	-2	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	46	49	0	TRUE	8.2%	4	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	694	732	3	TRUE	5.4%	38	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	771	776	7	TRUE	0.7%	5	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

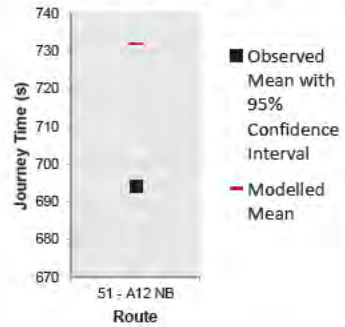


Journey Time Summary by Distance for Group Number 1

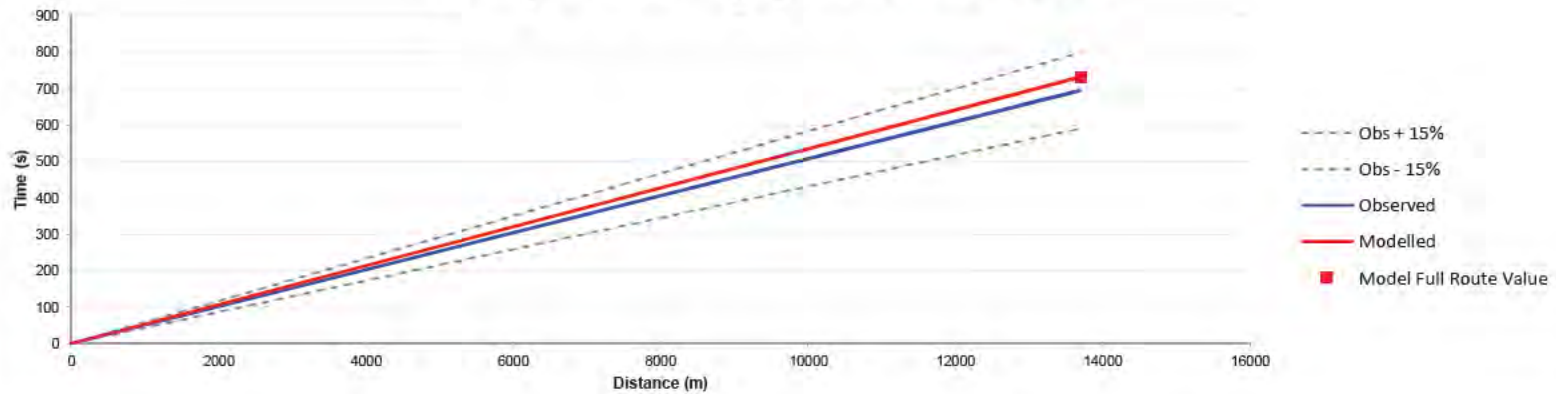




Journey Time Summary for 51 - A12 NB

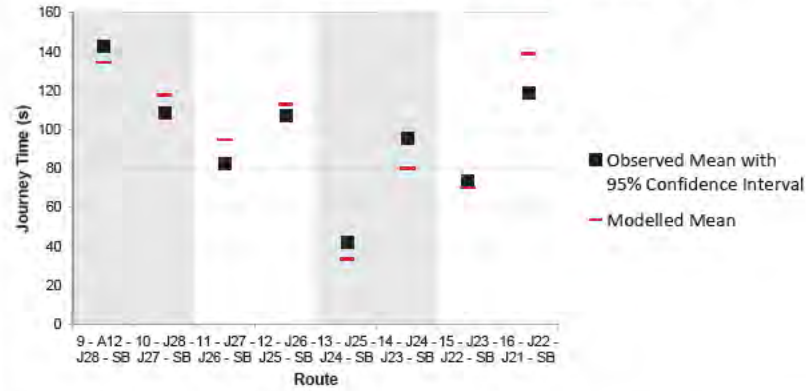


Journey Time Summary by Distance for 51 - A12 NB

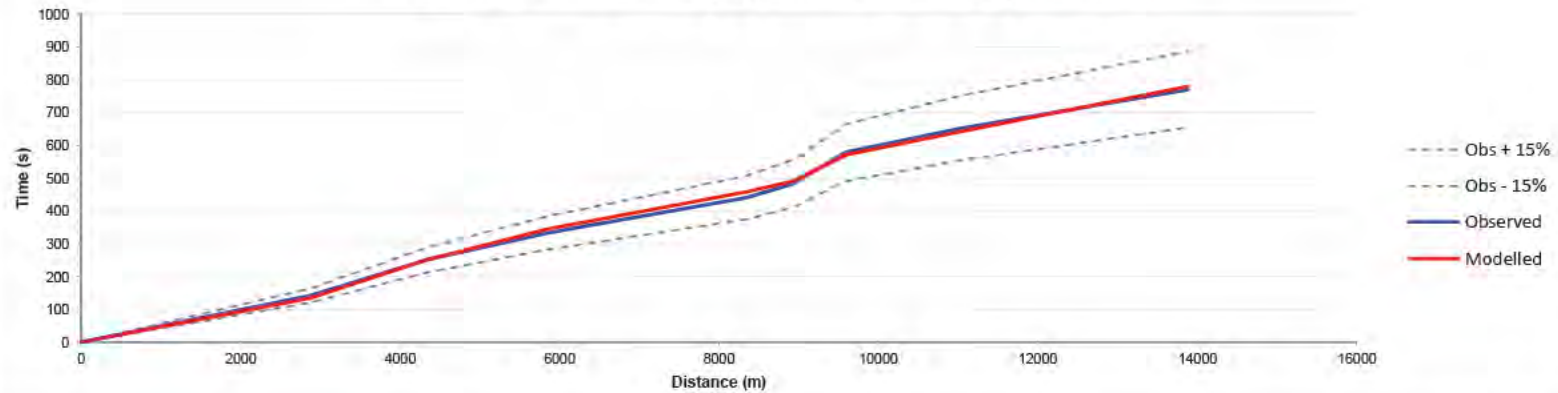




Journey Time Summary for Group Number 3

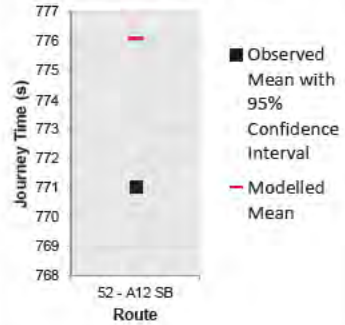


Journey Time Summary by Distance for Group Number 3

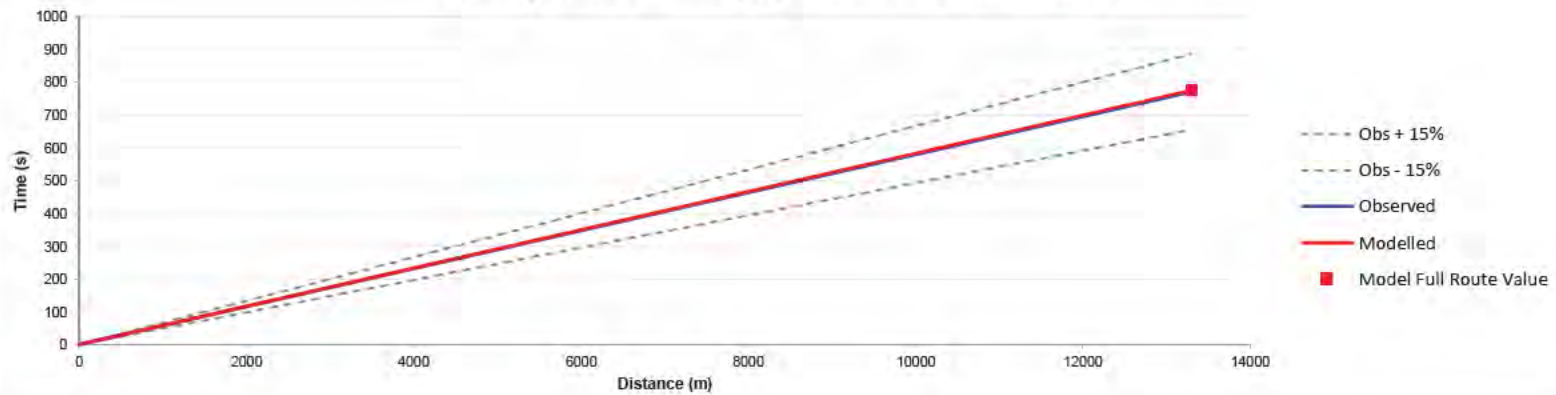




Journey Time Summary for 52 - A12 SB

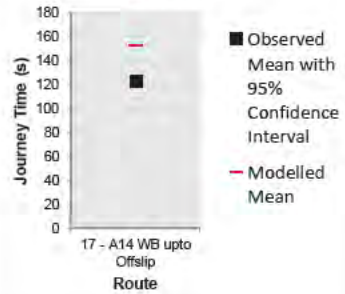


Journey Time Summary by Distance for 52 - A12 SB

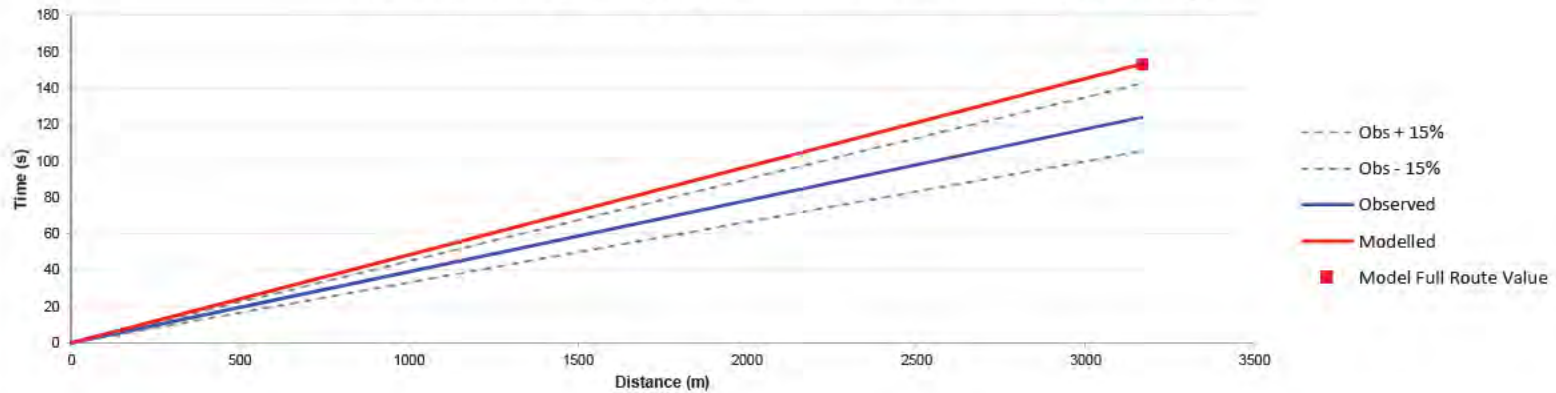




Journey Time Summary for 17 - A14 WB upto Offslip

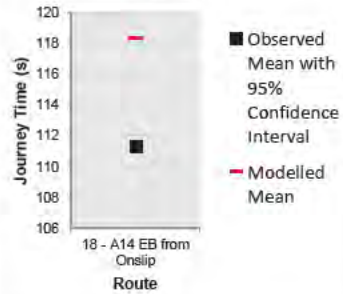


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

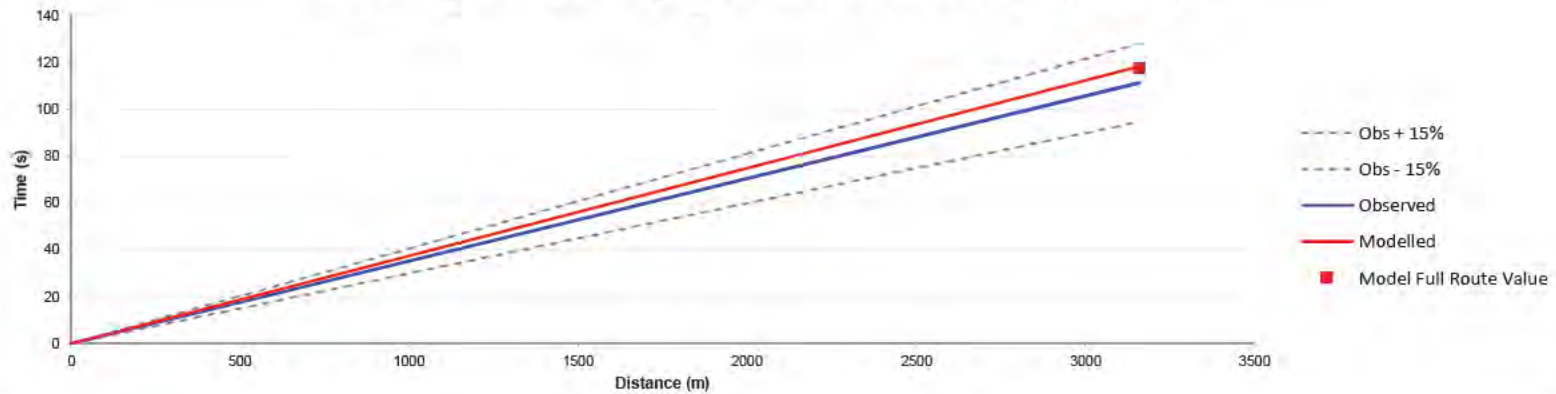




Journey Time Summary for 18 - A14 EB from Onslip

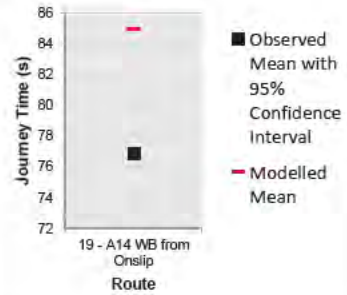


Journey Time Summary by Distance for 18 - A14 EB from Onslip

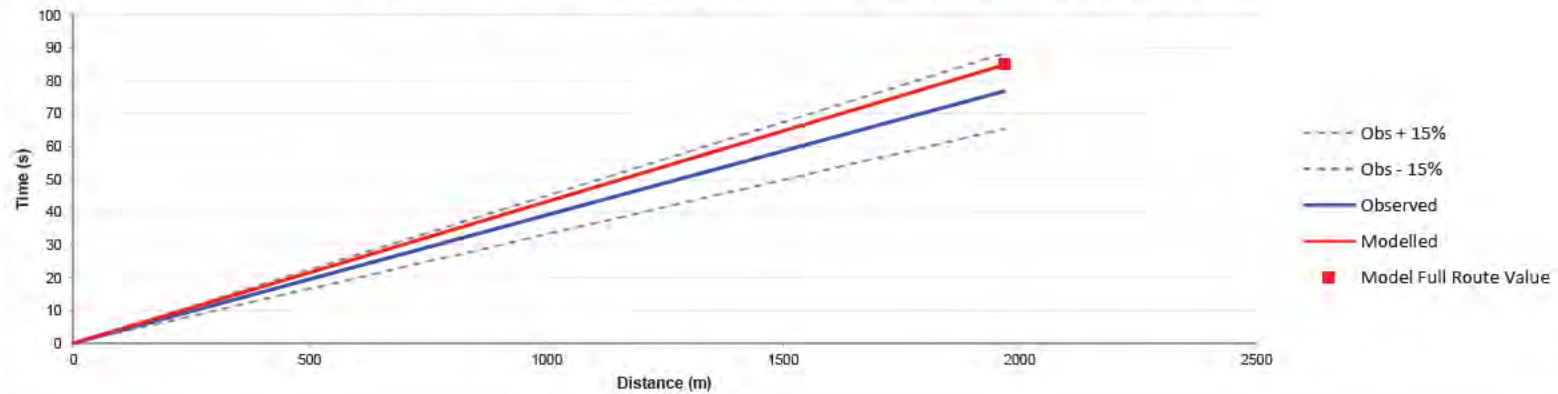




Journey Time Summary for 19 - A14 WB from Onslip

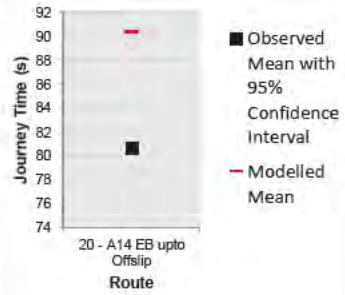


Journey Time Summary by Distance for 19 - A14 WB from Onslip

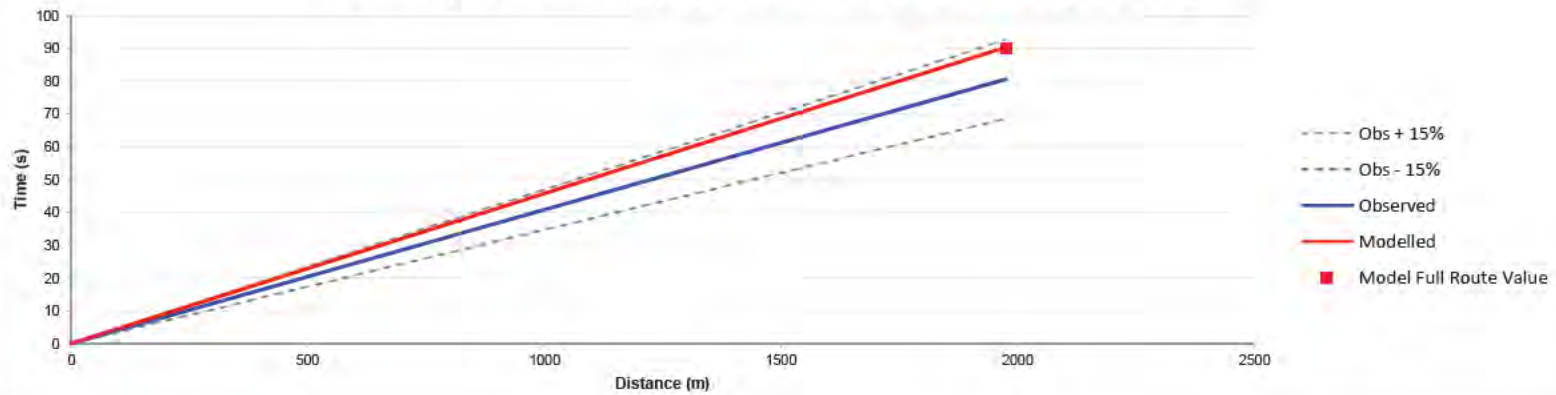




Journey Time Summary for 20 - A14 EB upto Offslip

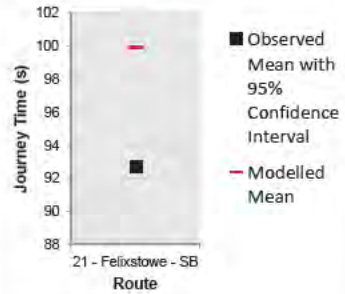


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

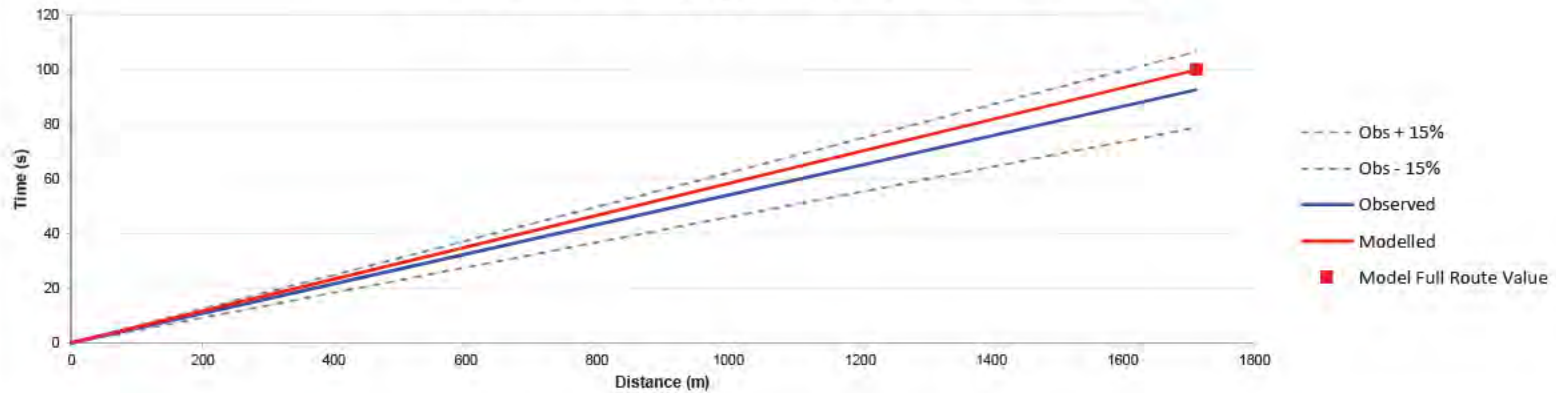




Journey Time Summary for 21 - Felixstowe - SB

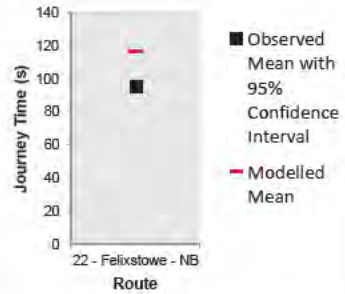


Journey Time Summary by Distance for 21 - Felixstowe - SB

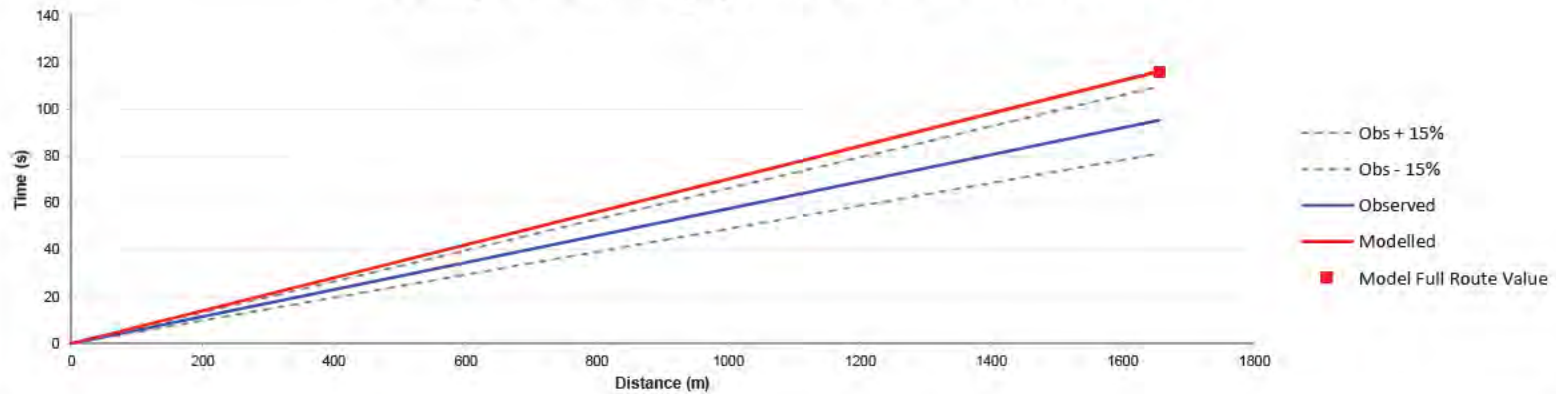




Journey Time Summary for 22 - Felixstowe - NB

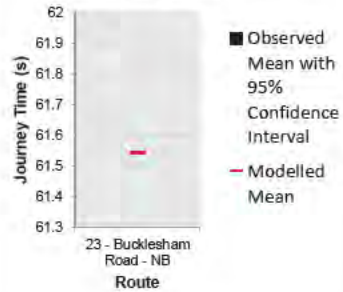


Journey Time Summary by Distance for 22 - Felixstowe - NB

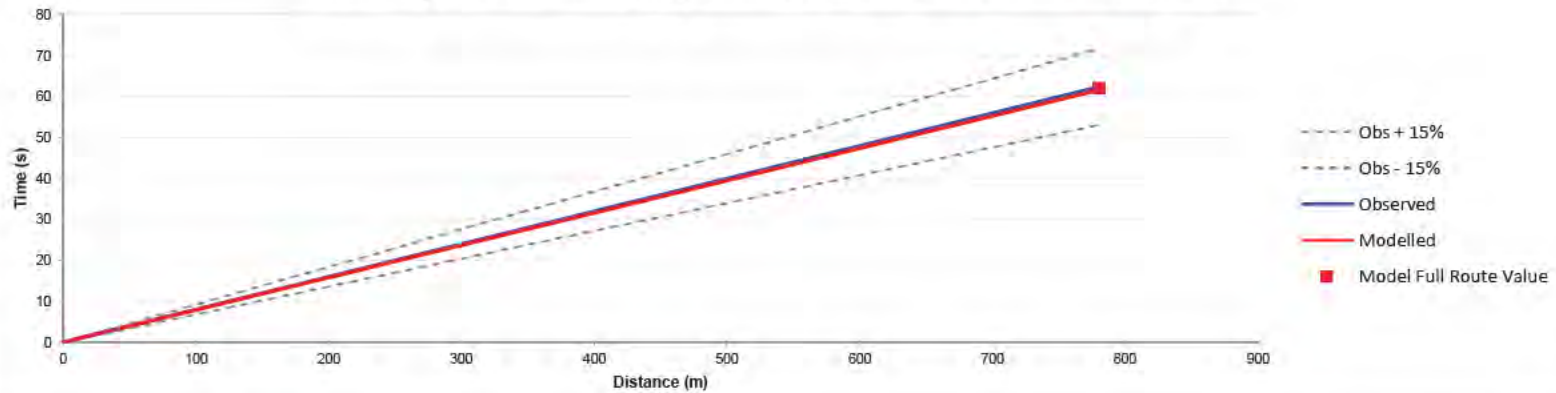




Journey Time Summary for 23 - Bucklesham Road - NB

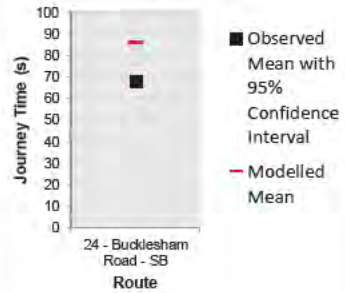


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

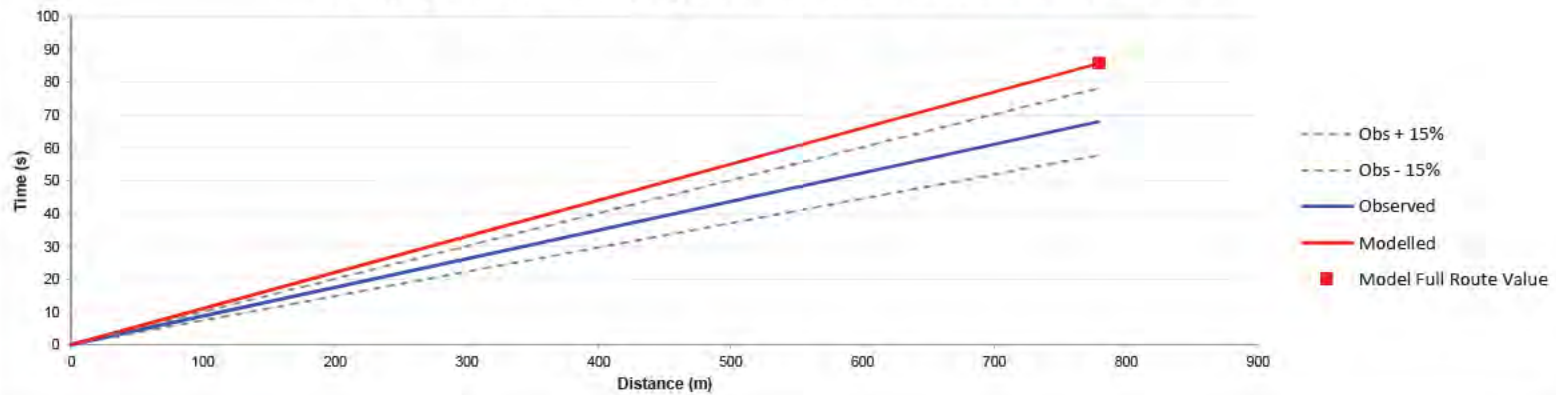




Journey Time Summary for 24 - Bucklesham Road - SB

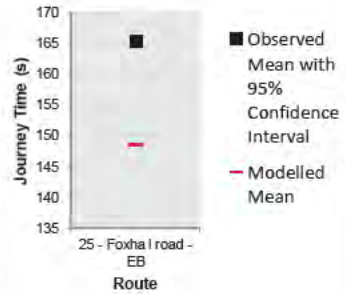


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

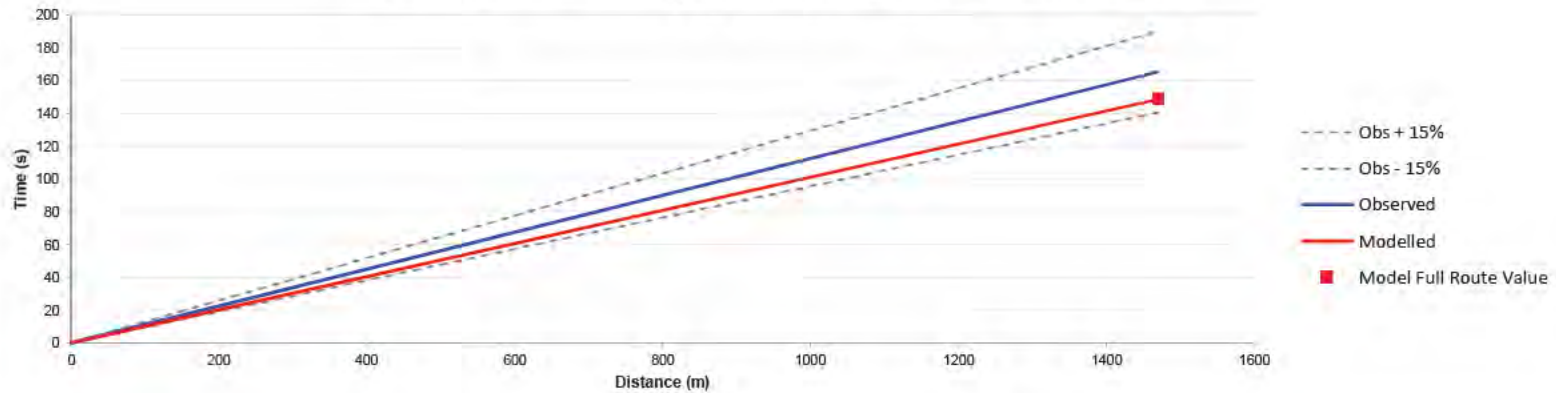




Journey Time Summary for 25 - Foxhall road - EB

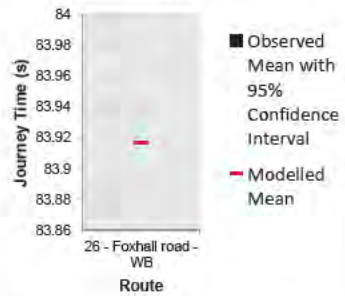


Journey Time Summary by Distance for 25 - Foxhall road - EB

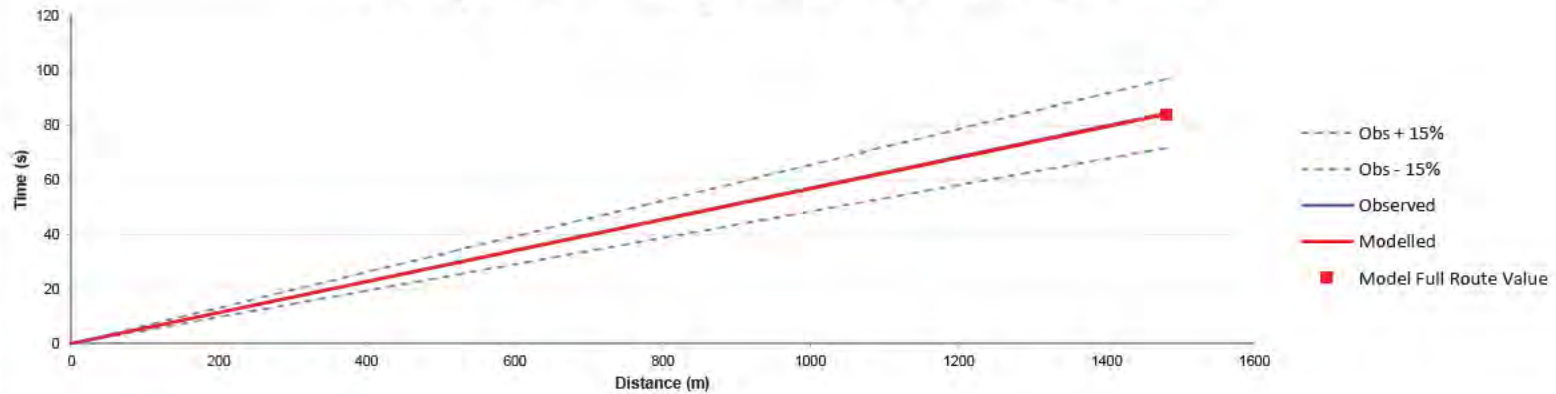




Journey Time Summary for 26 - Foxhall road - WB

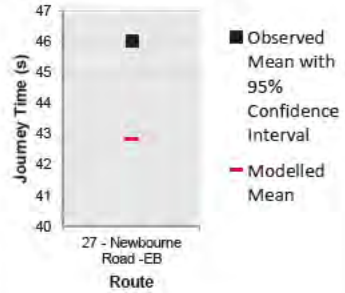


Journey Time Summary by Distance for 26 - Foxhall road - WB

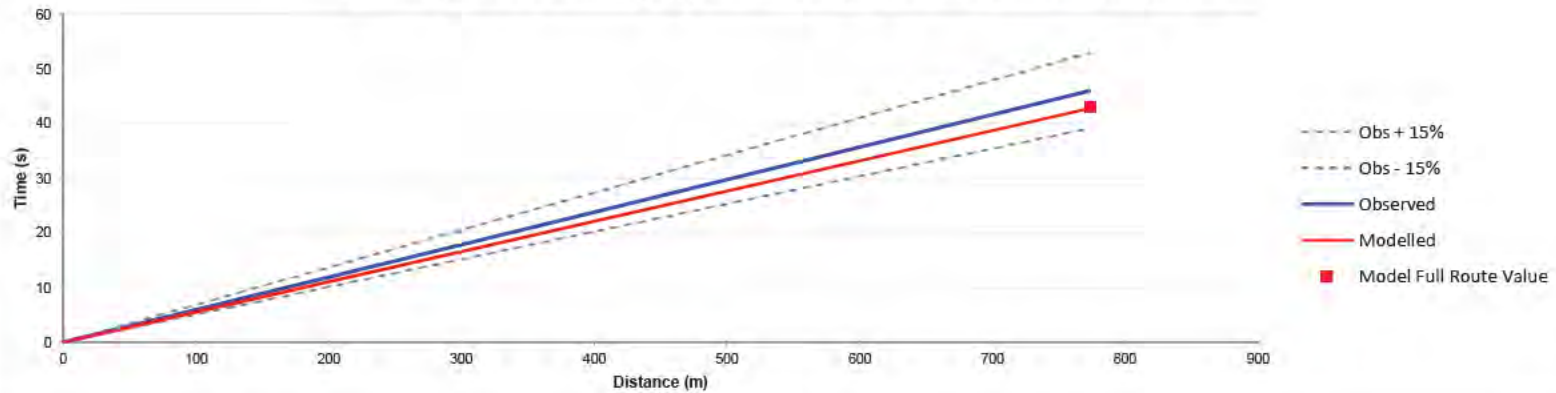




Journey Time Summary for 27 - Newbourne Road -EB

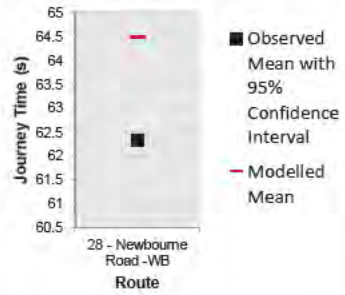


Journey Time Summary by Distance for 27 - Newbourne Road -EB

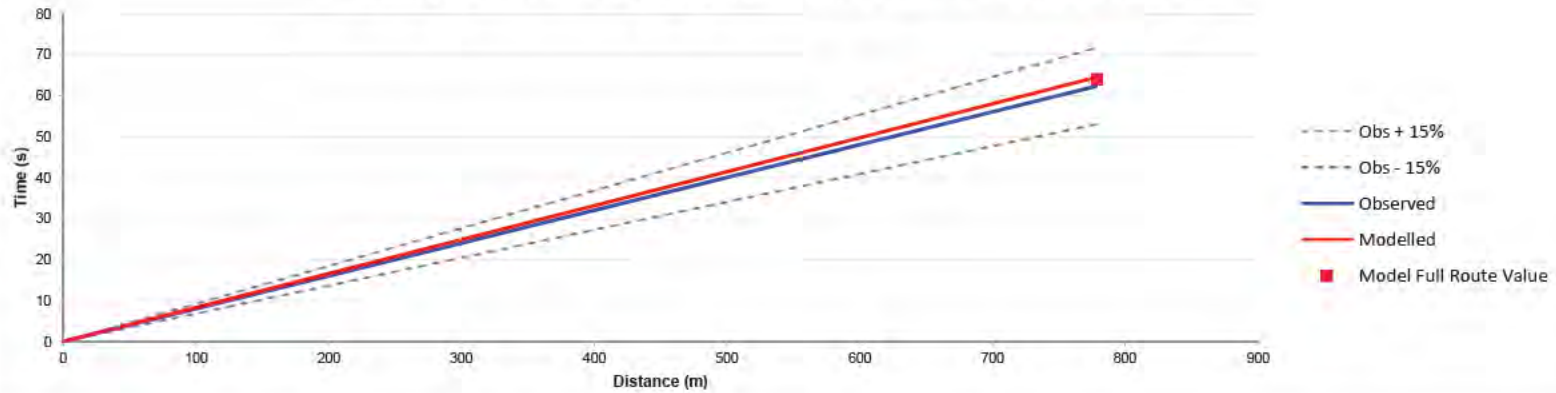




Journey Time Summary for 28 - Newbourne Road -WB

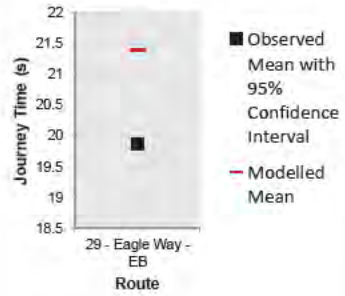


Journey Time Summary by Distance for 28 - Newbourne Road -WB

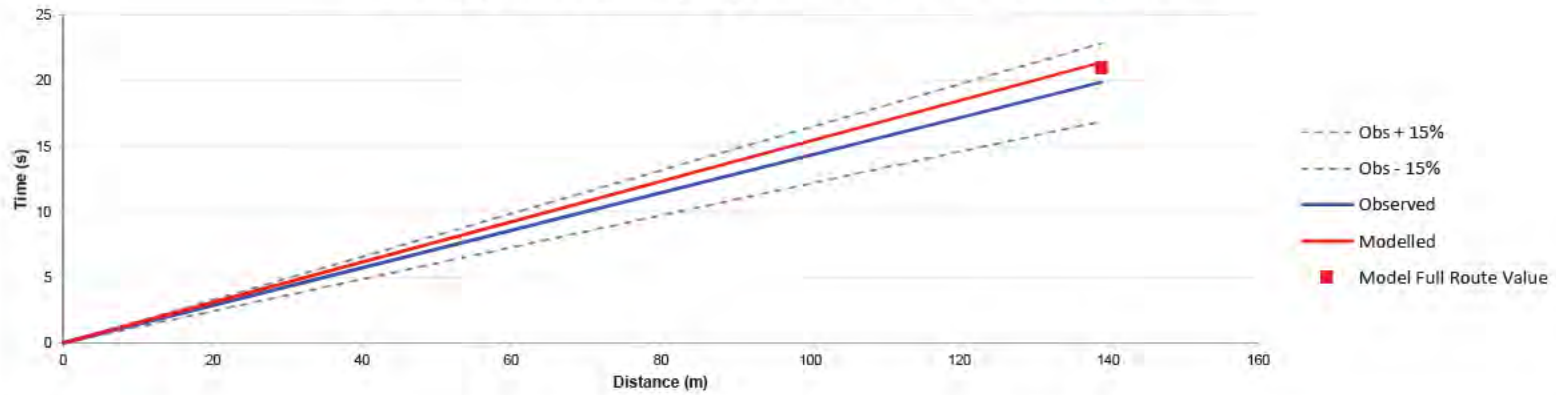




Journey Time Summary for 29 - Eagle Way - EB

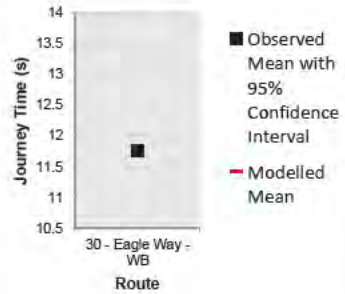


Journey Time Summary by Distance for 29 - Eagle Way - EB

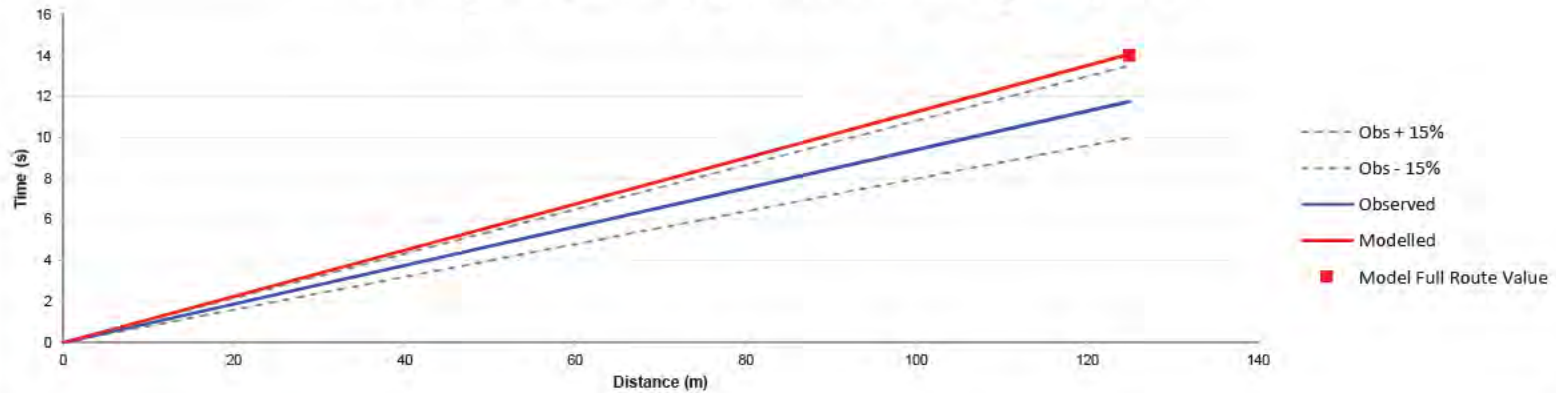




Journey Time Summary for 30 - Eagle Way - WB

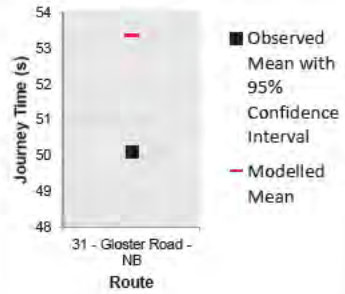


Journey Time Summary by Distance for 30 - Eagle Way - WB

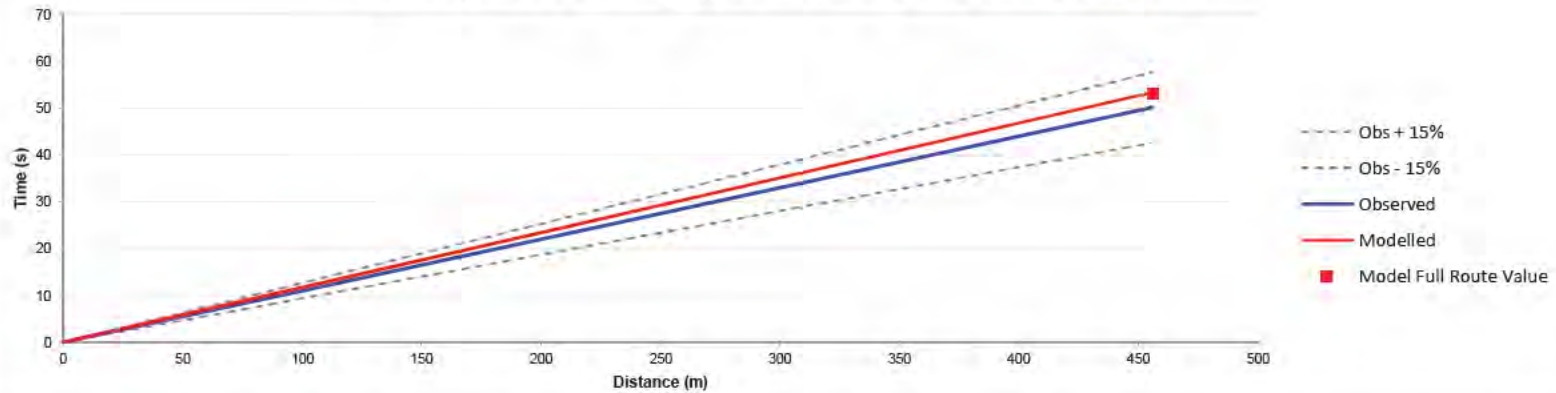




Journey Time Summary for 31 - Gloster Road - NB

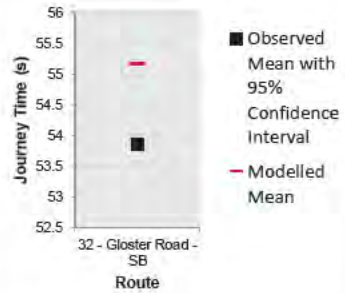


Journey Time Summary by Distance for 31 - Gloster Road - NB

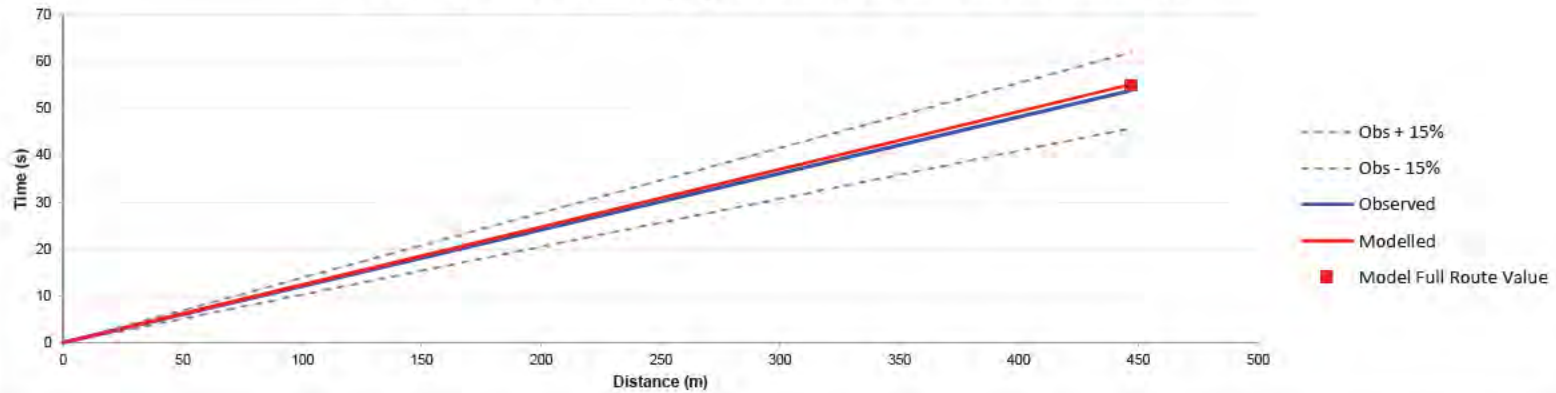




Journey Time Summary for 32 - Gloster Road - SB

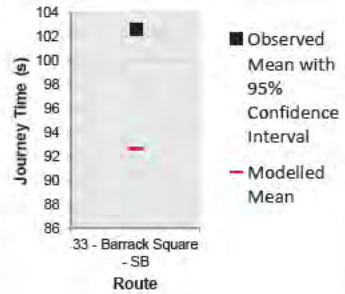


Journey Time Summary by Distance for 32 - Gloster Road - SB

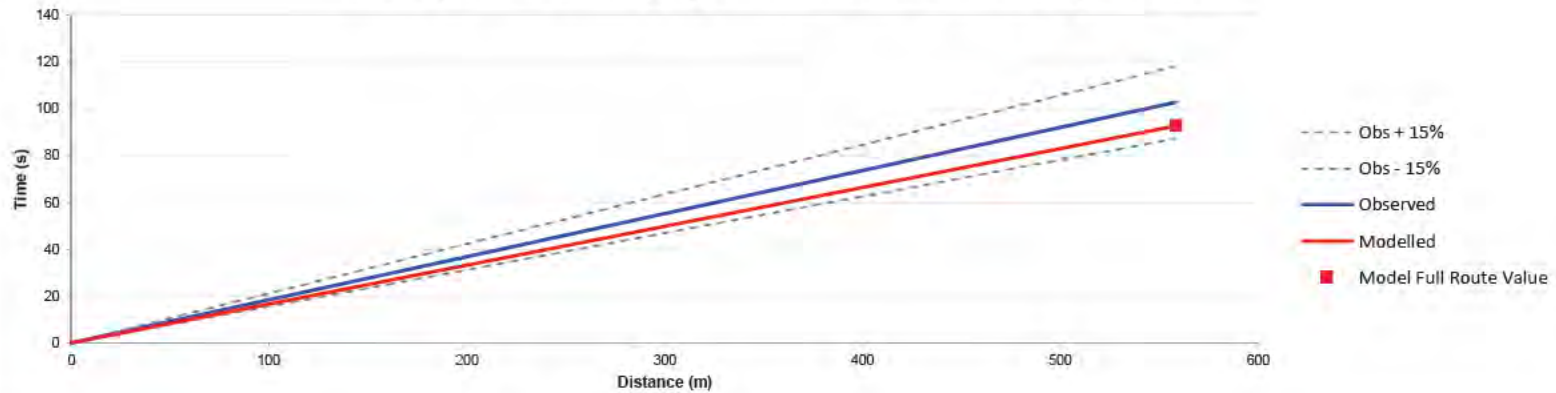




Journey Time Summary for 33 - Barrack Square - SB

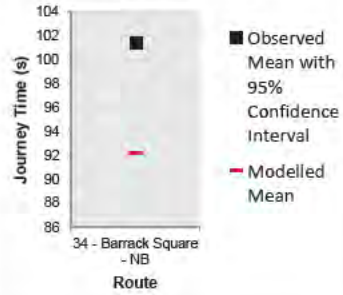


Journey Time Summary by Distance for 33 - Barrack Square - SB

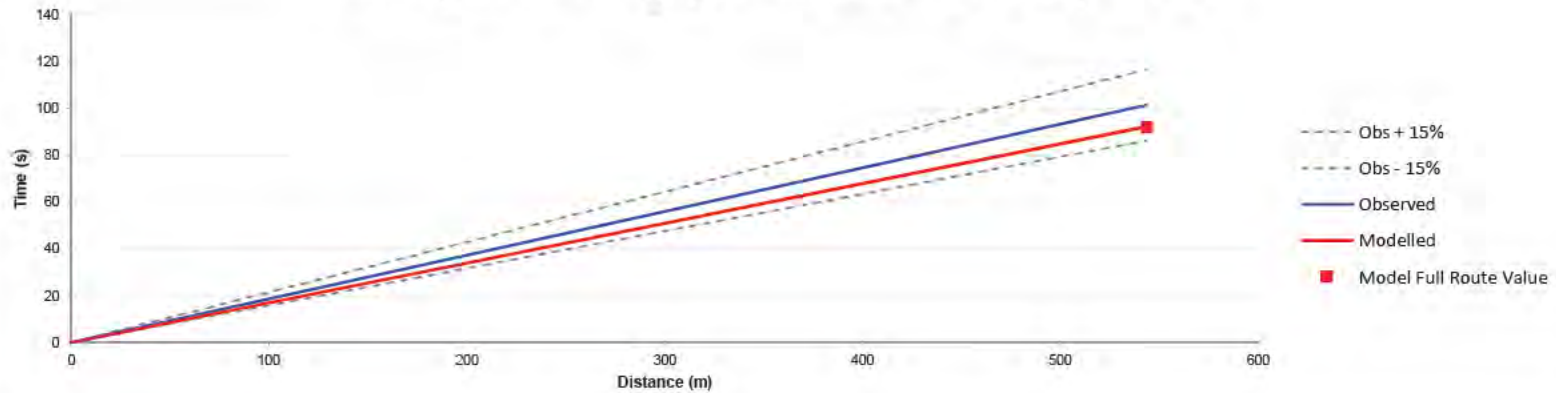




Journey Time Summary for 34 - Barrack Square - NB

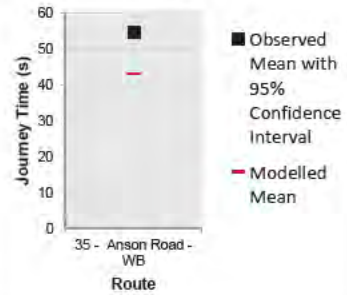


Journey Time Summary by Distance for 34 - Barrack Square - NB

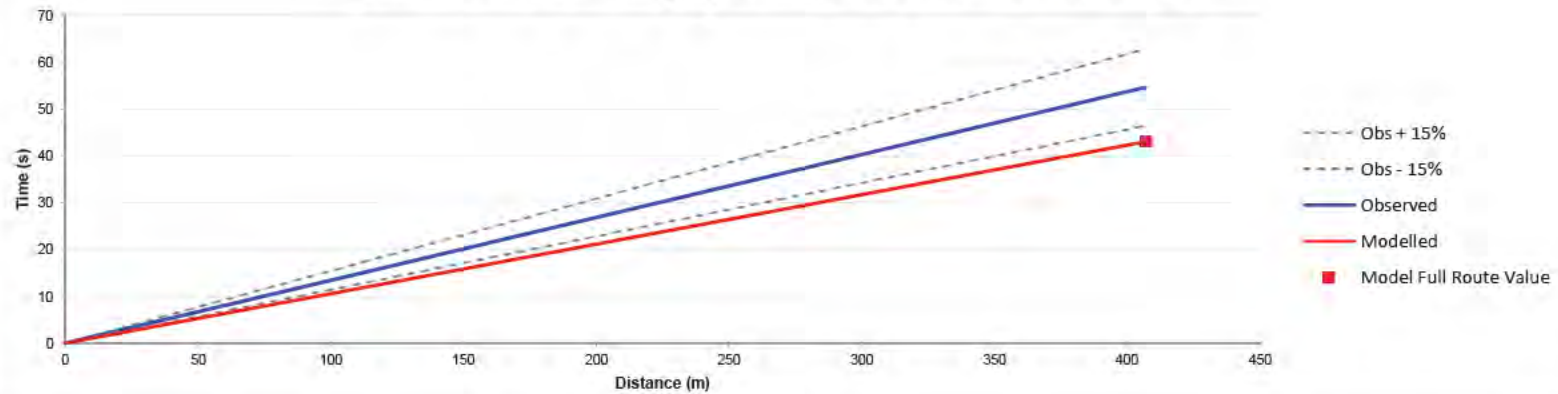




Journey Time Summary for 35 - Anson Road - WB

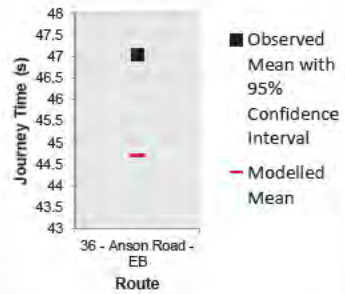


Journey Time Summary by Distance for 35 - Anson Road - WB

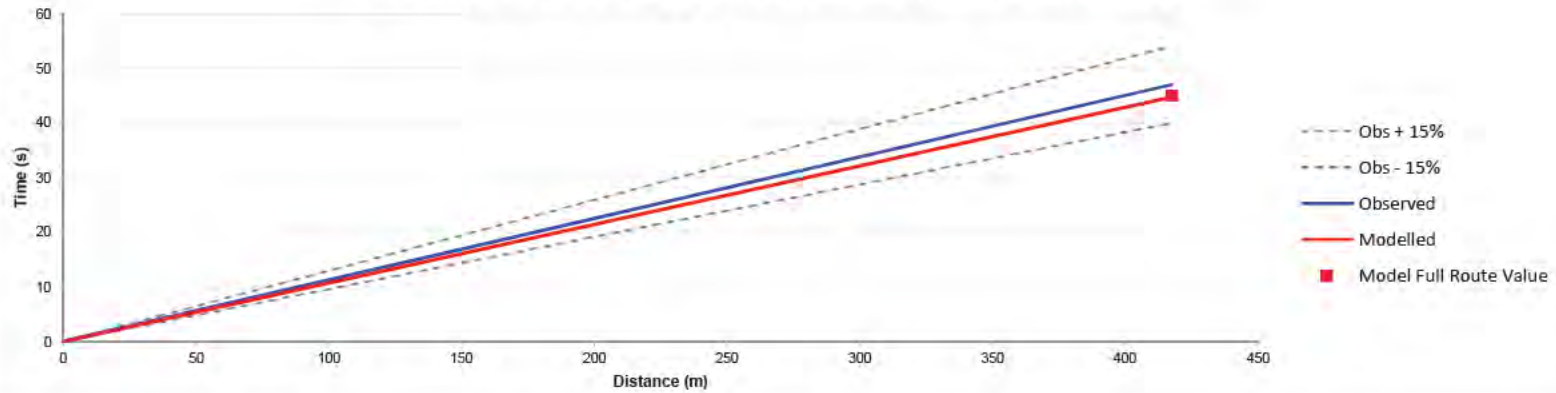




Journey Time Summary for 36 - Anson Road - EB

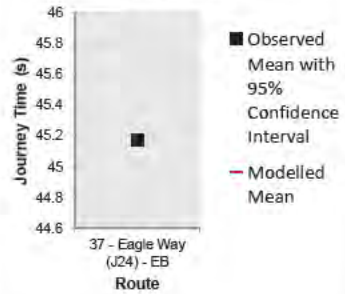


Journey Time Summary by Distance for 36 - Anson Road - EB

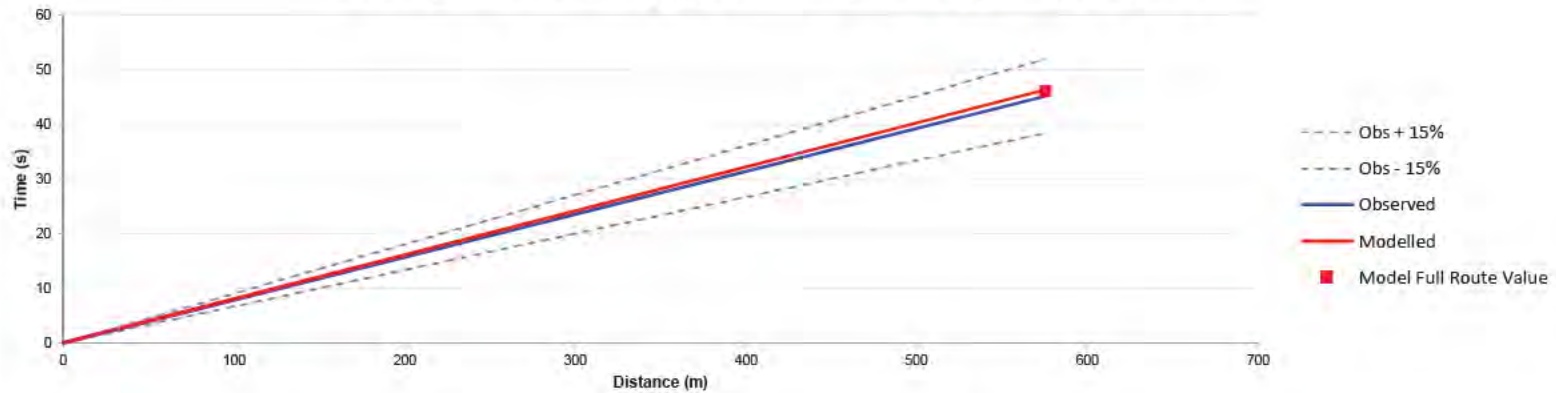




Journey Time Summary for 37 - Eagle Way (J24) - EB

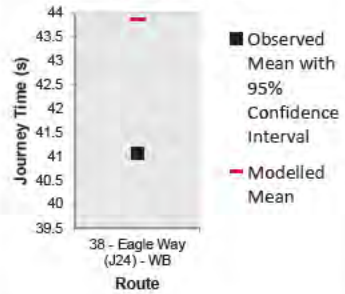


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

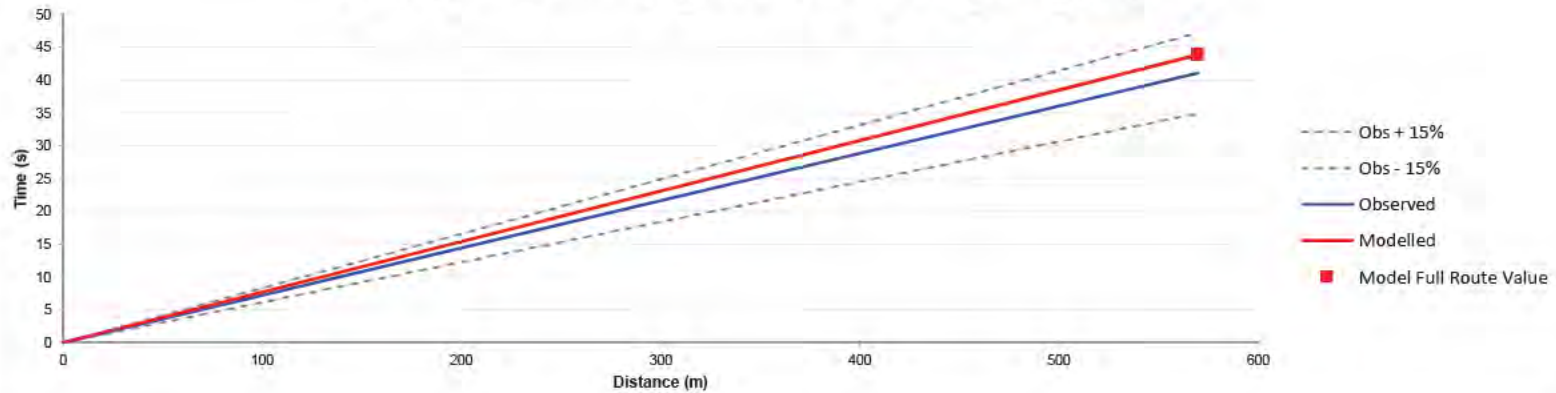




Journey Time Summary for 38 - Eagle Way (J24) - WB

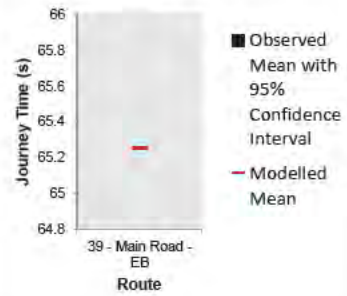


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

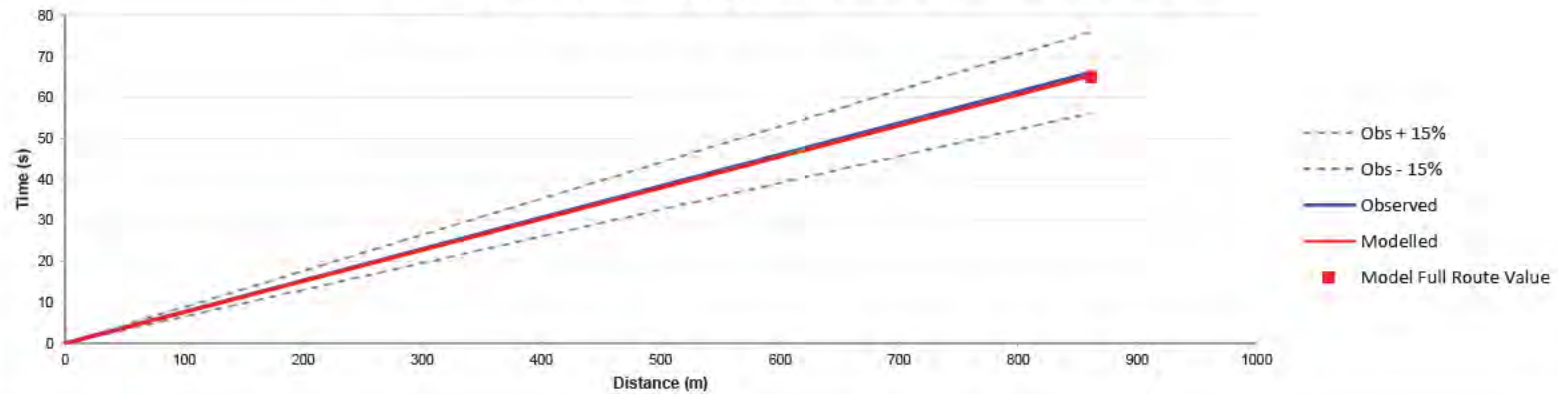




Journey Time Summary for 39 - Main Road - EB

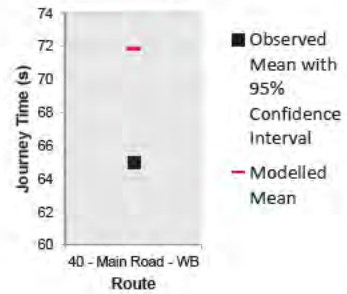


Journey Time Summary by Distance for 39 - Main Road - EB

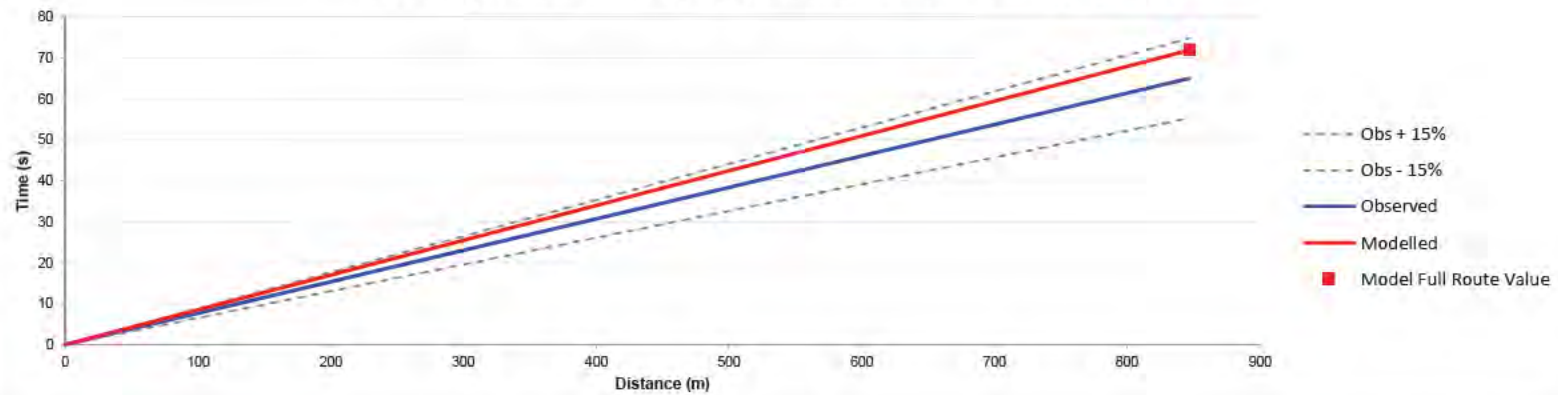




Journey Time Summary for 40 - Main Road - WB

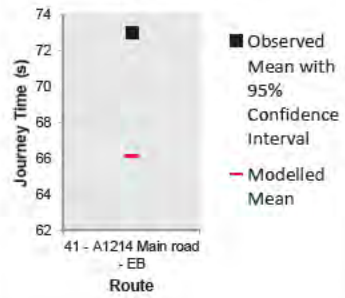


Journey Time Summary by Distance for 40 - Main Road - WB

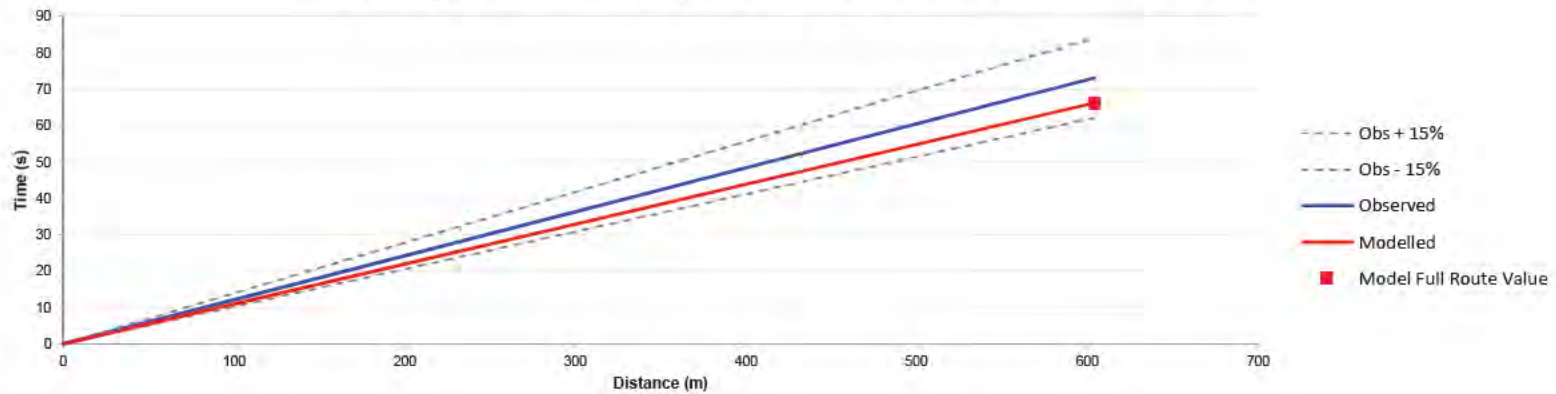




Journey Time Summary for 41 - A1214 Main road road - EB

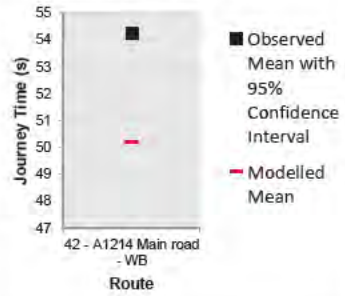


Journey Time Summary by Distance for 41 - A1214 Main road - EB

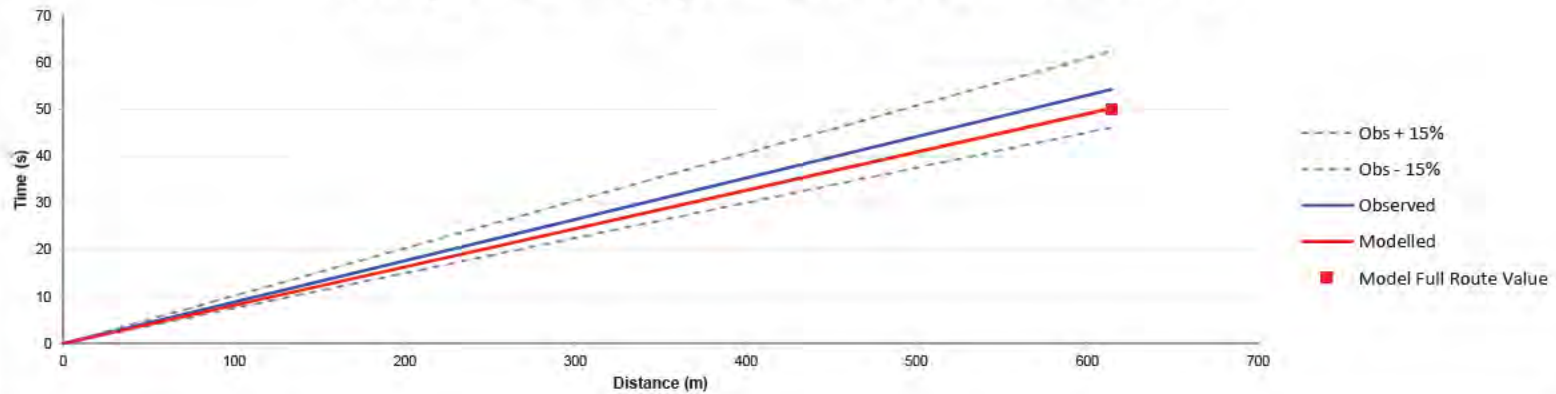




Journey Time Summary for 42 - A1214 Main road road - WB

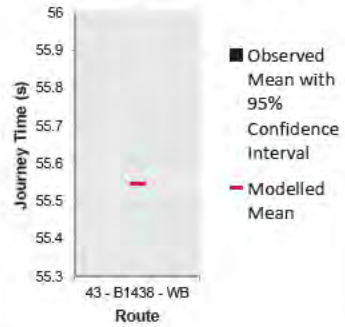


Journey Time Summary by Distance for 42 - A1214 Main road - WB

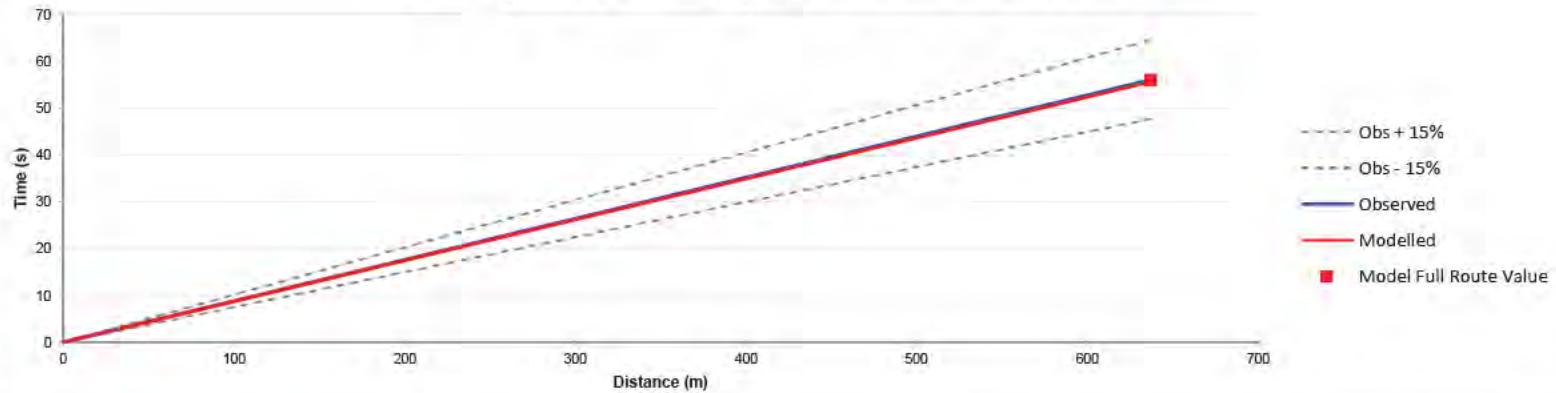




Journey Time Summary for 43 - B1438 - WB

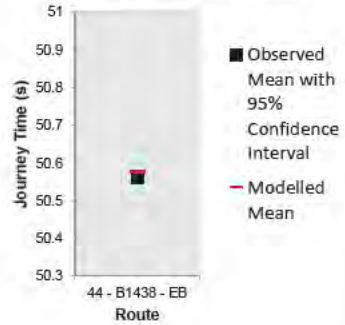


Journey Time Summary by Distance for 43 - B1438 - WB

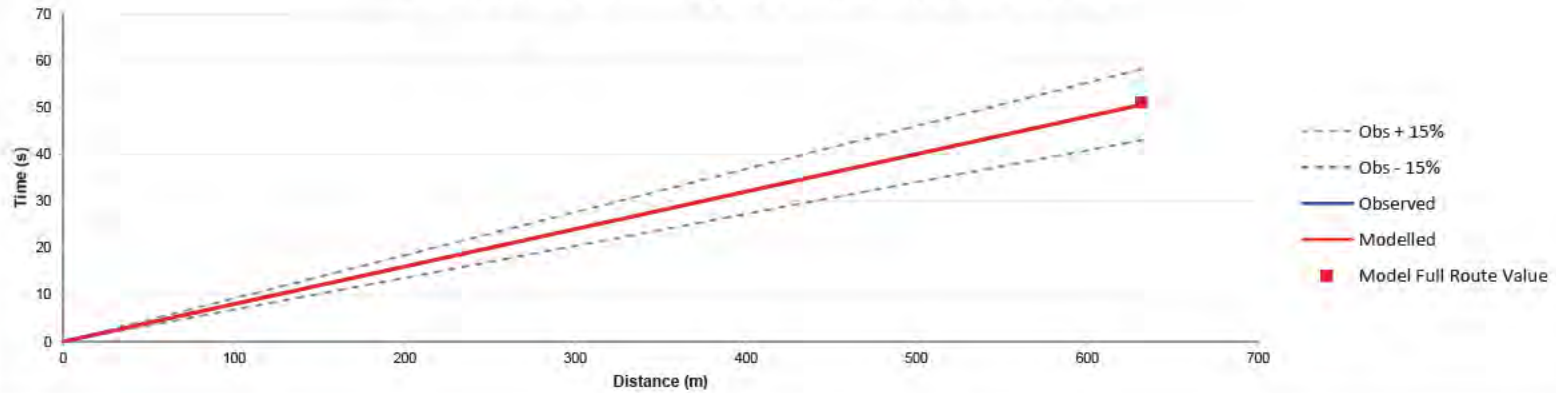




Journey Time Summary for 44 - B1438 - EB

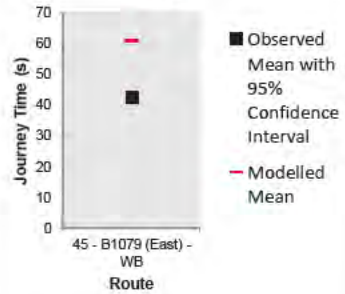


Journey Time Summary by Distance for 44 - B1438 - EB

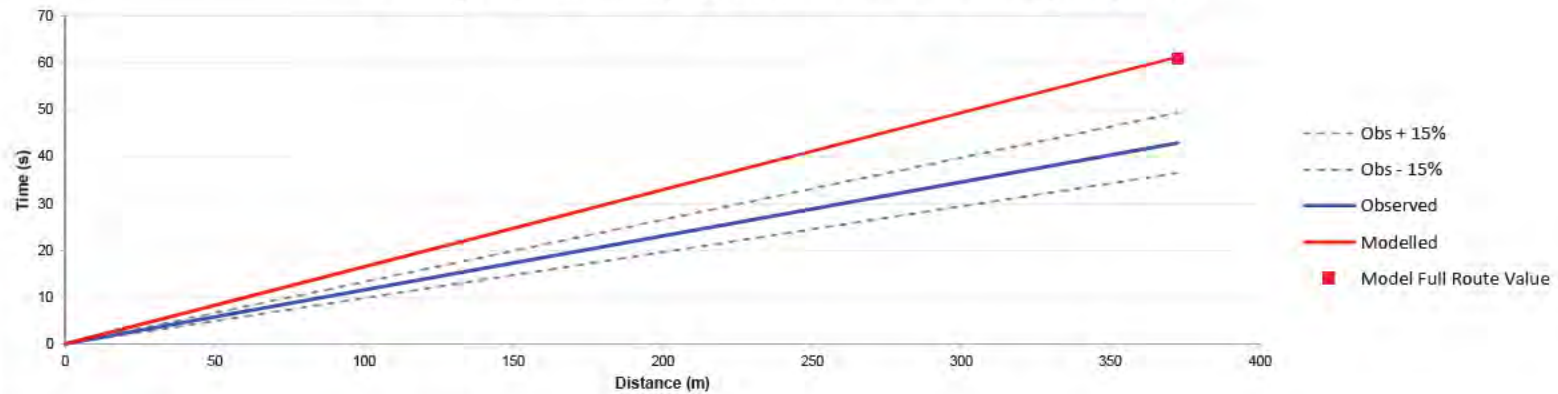




Journey Time Summary for 45 - B1079 (East) - WB

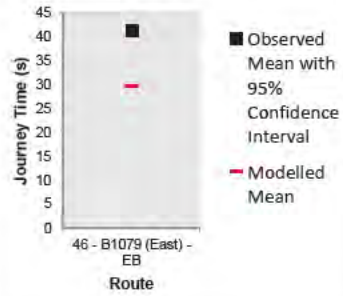


Journey Time Summary by Distance for 45 - B1079 (East) - WB

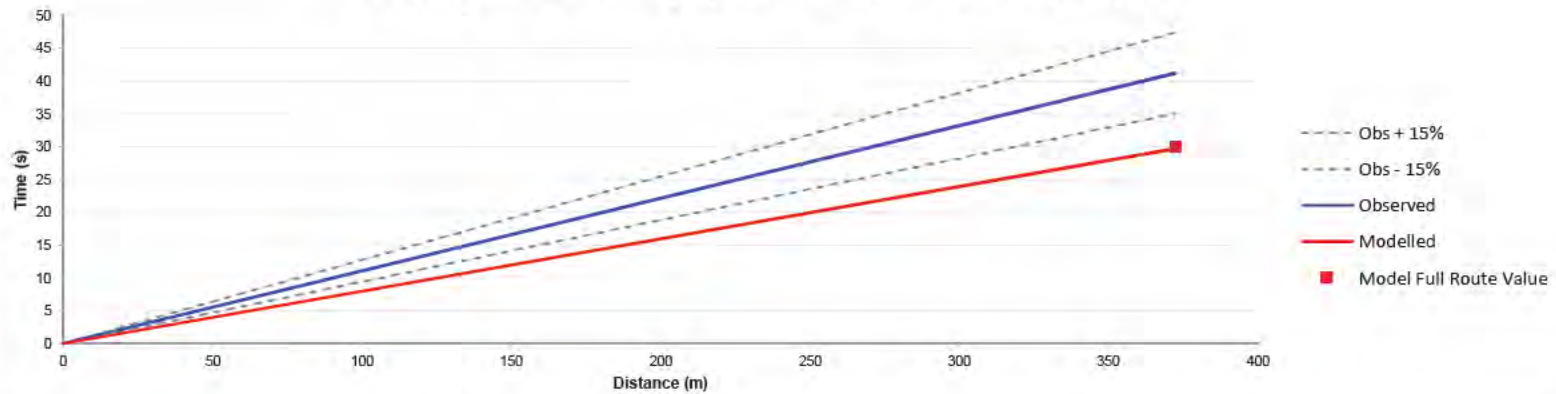




Journey Time Summary for 46 - B1079 (East) - EB

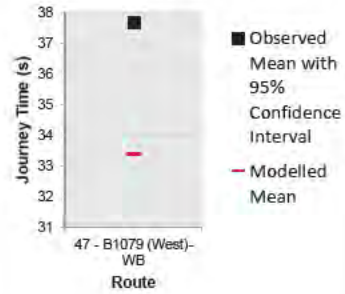


Journey Time Summary by Distance for 46 - B1079 (East) - EB

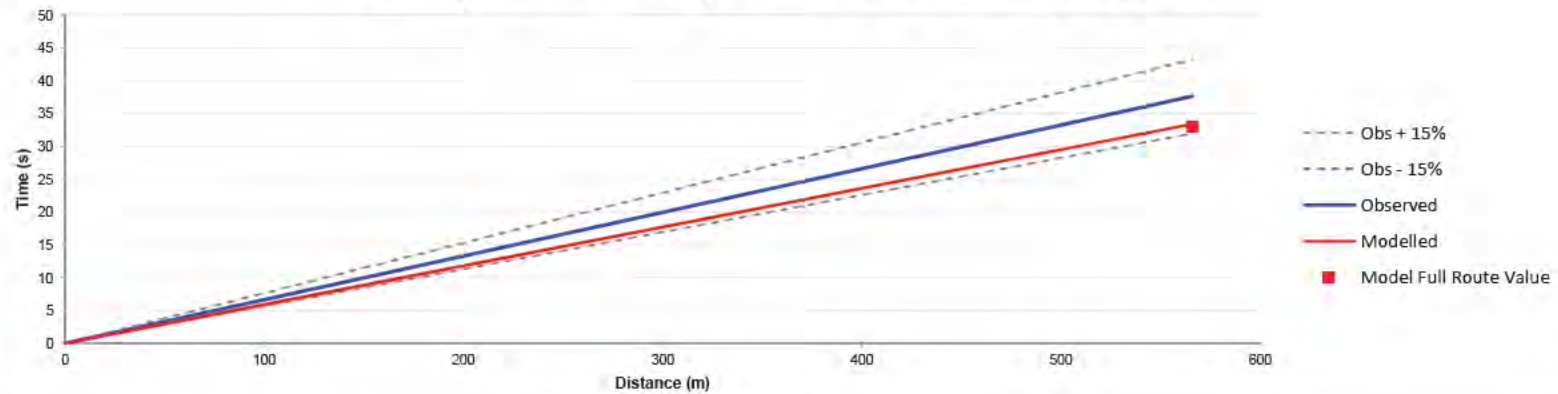




Journey Time Summary for 47 - B1079 (West)- WB

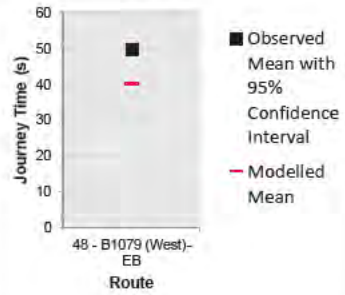


Journey Time Summary by Distance for 47 - B1079 (West)- WB

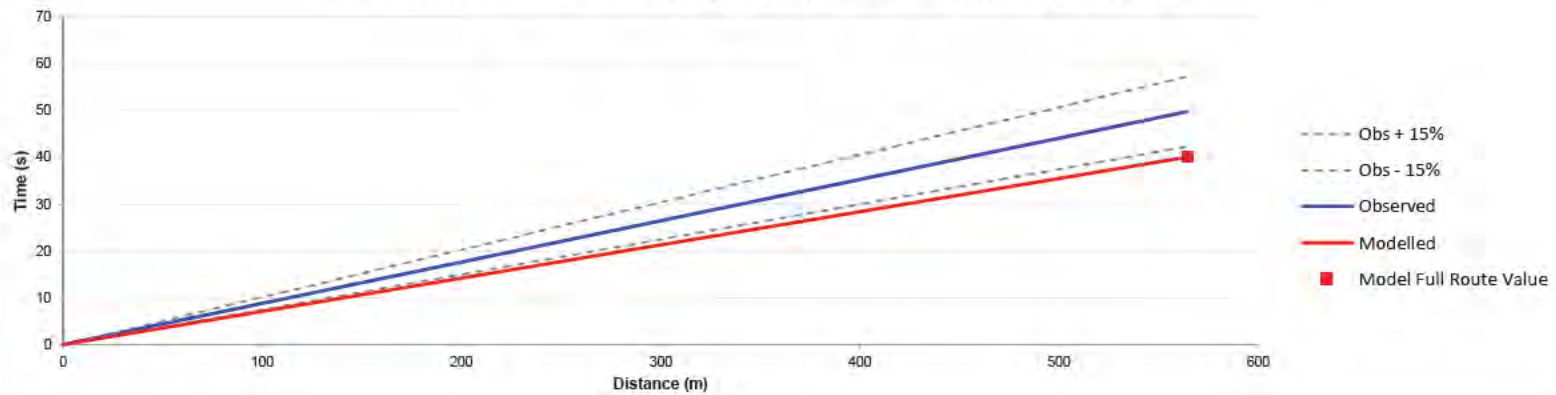




Journey Time Summary for 48 - B1079 (West)- EB

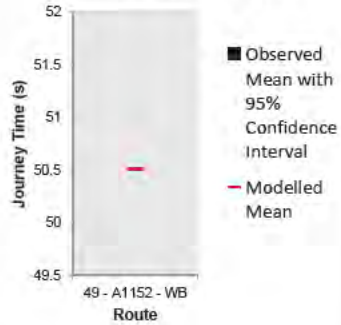


Journey Time Summary by Distance for 48 - B1079 (West)- EB

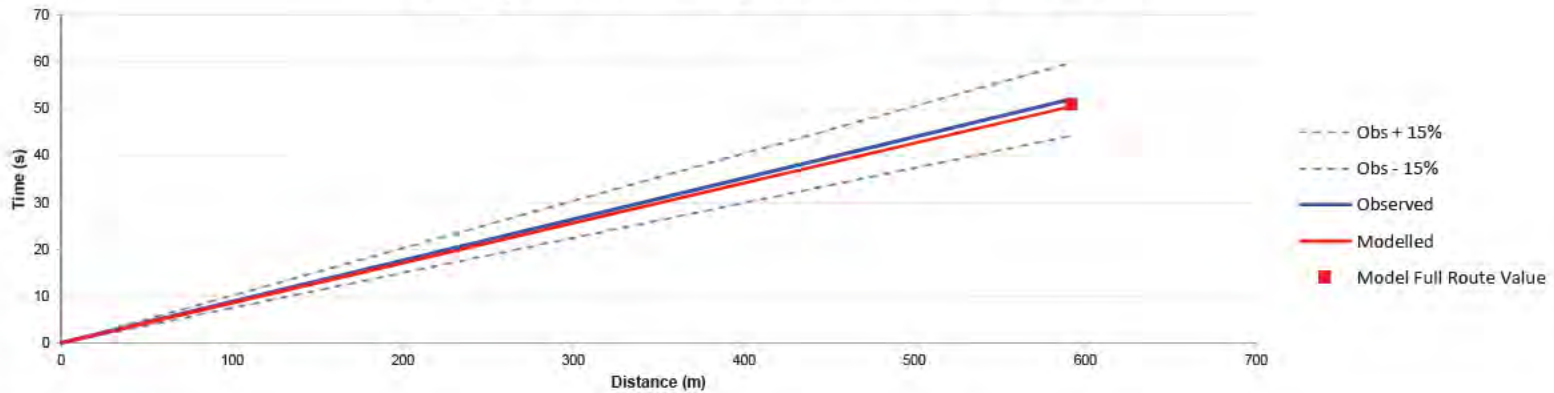




Journey Time Summary for 49 - A1152 - WB

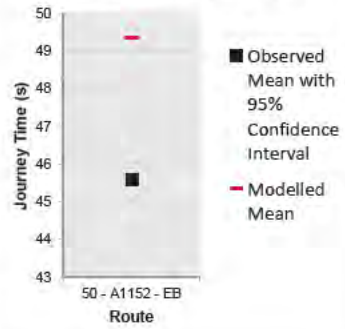


Journey Time Summary by Distance for 49 - A1152 - WB

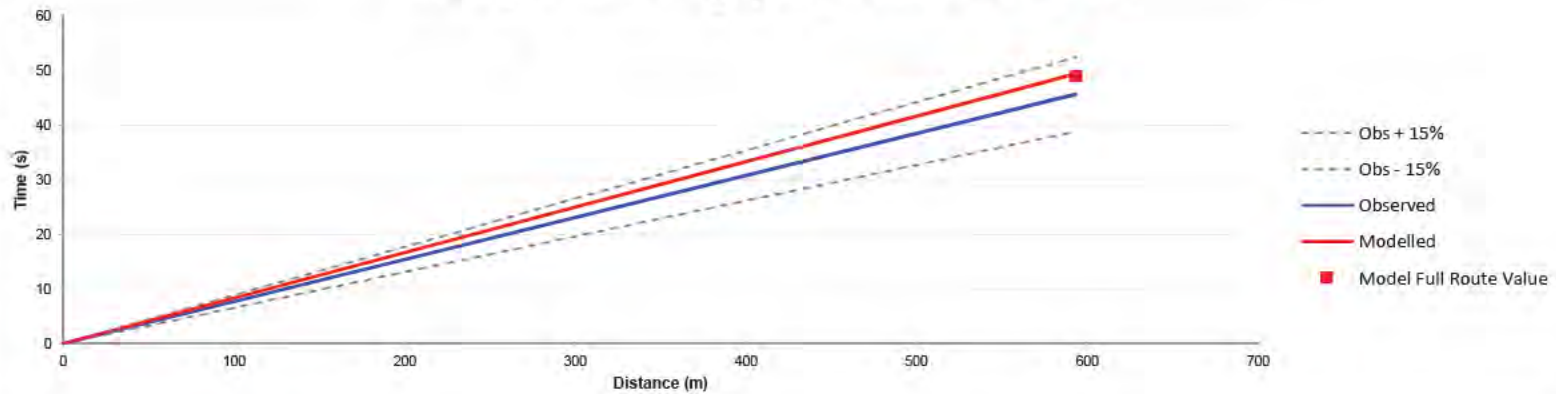




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Vehicle Flow Information
Calibration Statistics
All Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	129	112	-17	-13.2%	1.5	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	5	0	-5	-100.0%	3.2	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	32981	32435	-546	-1.7%	1.1



Vehicle Flow Information
Calibration Statistics
Car Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	103	100	-3	-2.9%	0.3	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	5	0	-5	-100.0%	3.2	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	26794	26799	5	0.0%	0.9



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
1	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(W)	20:69:117	5	2	-3	-62.0%	1.7	Pass
2	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(E)	20:69:65	0	0	0		0.0	Pass
3	Site 20	Gloster rd and Barrack Square	Gloster Rd	Gloster Rd	20:69:68	0					
4	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Gloster Rd	20:117:68	0	0	0		0.0	Pass
5	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(W)	20:117:117	1	2	1	130.0%	1.0	Pass
6	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(E)	20:117:65	0					
7	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(E)	20:65:65	0	0	0		0.0	Pass
8	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Gloster Rd	20:65:68	8	4	-4	-50.0%	1.6	Pass
9	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(W)	20:65:117	0					
10	Site 21	Junction 21	A12 North	Bucklesham Rd	21:35:143	1	0	-1	-100.0%	1.4	Pass
11	Site 21	Junction 21	A12 North	A14 East	21:35:42	12	8	-4	-35.0%	1.3	Pass
12	Site 21	Junction 21	A12 North	A1156	21:35:48	11	7	-4	-34.5%	1.3	Pass
13	Site 21	Junction 21	A12 North	A14 West	21:35:38	68	64	-4	-6.5%	0.5	Pass
14	Site 21	Junction 21	A12 North	A12 North	21:35:149	0	0	0		0.0	Pass
15	Site 21	Junction 21	A14 West	A12 North	21:41:149	62	53	-9	-14.5%	1.2	Pass
16	Site 21	Junction 21	A14 West	Bucklesham Rd	21:41:143	4	4	0	-2.5%	0.1	Pass
17	Site 21	Junction 21	A14 West	A14 East	21:182:182	256	255	-1	-0.2%	0.0	Pass
18	Site 21	Junction 21	A14 West	A1156	21:41:48	2	0	-2	-100.0%	2.0	Pass
19	Site 21	Junction 21	A14 West	A14 West	21:41:38	0	0	0		0.0	Pass
20	Site 21	Junction 21	A1156	A14 West	21:46:38	2	2	0	0.0%	0.0	Pass
21	Site 21	Junction 21	A1156	A12 North	21:46:149	5	2	-3	-56.0%	1.5	Pass
22	Site 21	Junction 21	A1156	Bucklesham Rd	21:46:143	0	0	0		0.0	Pass
23	Site 21	Junction 21	A1156	A14 East	21:46:42	1	2	1	120.0%	0.9	Pass
24	Site 21	Junction 21	A1156	A1156	21:46:48	0	0	0		0.0	Pass
25	Site 21	Junction 21	A14 East	A1156	21:135:48	3	4	1	30.0%	0.5	Pass
26	Site 21	Junction 21	A14 East	A14 West	21:186:186	197	193	-4	-2.0%	0.3	Pass
27	Site 21	Junction 21	A14 East	A12 North	21:135:149	17	12	-5	-30.6%	1.4	Pass
28	Site 21	Junction 21	A14 East	Bucklesham Rd	21:135:143	0	0	0		0.0	Pass
29	Site 21	Junction 21	A14 East	A14 East	21:135:42	0	0	0		0.0	Pass
30	Site 21	Junction 21	Bucklesham Rd	A14 East	21:51:42	0	0	0		0.0	Pass
31	Site 21	Junction 21	Bucklesham Rd	A1156	21:51:48	0	0	0		0.0	Pass
32	Site 21	Junction 21	Bucklesham Rd	A14 West	21:51:38	3	3	0	0.0%	0.0	Pass
33	Site 21	Junction 21	Bucklesham Rd	A12 North	21:51:149	0	9	9		4.3	Pass
34	Site 21	Junction 21	Bucklesham Rd	Bucklesham Rd	21:51:143	0	0	0		0.0	Pass
35	Site 22	Junction 22	A12 North	Newbourne Rd	22:34:137	5	1	-4	-80.0%	2.3	Pass
36	Site 22	Junction 22	A12 North	A12 South	22:34:35	77	69	-8	-10.1%	0.9	Pass
37	Site 22	Junction 22	A12 North	Foxhal Rd	22:34:53	3	3	0	-3.3%	0.1	Pass
38	Site 22	Junction 22	A12 North	A12 North	22:34:2	0	0	0		0.0	Pass
39	Site 22	Junction 22	Foxhal Rd	A12 North	22:52:2	9	3	-6	-64.4%	2.3	Pass
40	Site 22	Junction 22	Foxhal Rd	Newbourne Rd	22:52:137	1	3	2	220.0%	1.5	Pass
41	Site 22	Junction 22	Foxhal Rd	A12 South	22:52:35	9	3	-6	-64.4%	2.3	Pass
42	Site 22	Junction 22	Foxhal Rd	Foxhal Rd	22:52:53	0	0	0		0.0	Pass
43	Site 22	Junction 22	A12 South	Foxhal Rd	22:149:53	10	9	-1	-13.0%	0.4	Pass
44	Site 22	Junction 22	A12 South	A12 North	22:149:2	68	61	-7	-10.0%	0.8	Pass
45	Site 22	Junction 22	A12 South	Newbourne Rd	22:149:137	4	5	1	30.0%	0.6	Pass
46	Site 22	Junction 22	A12 South	A12 South	22:149:35	0	0	0		0.0	Pass
47	Site 22	Junction 22	Newbourne Rd	A12 South	22:57:35	7	6	-1	-8.6%	0.2	Pass
48	Site 22	Junction 22	Newbourne Rd	Foxhal Rd	22:57:53	6	6	0	1.7%	0.0	Pass
49	Site 22	Junction 22	Newbourne Rd	A12 North	22:57:2	3	0	-3	-100.0%	2.4	Pass
50	Site 22	Junction 22	Newbourne Rd	Newbourne Rd	22:57:137	0	0	0		0.0	Pass
51	Site 23	Junction 23	A12 North	Barrack Square	23:33:65	1	0	-1	-100.0%	1.4	Pass
52	Site 23	Junction 23	A12 North	A12 South	23:33:34	82	71	-11	-13.0%	1.2	Pass
53	Site 23	Junction 23	A12 North	Eagle Way	23:33:63	0	0	0		0.0	Pass
54	Site 23	Junction 23	A12 North	A12 North	23:33:3	1	0	-1	-100.0%	1.4	Pass
55	Site 23	Junction 23	Eagle Way	A12 North	23:60:3	3	2	-1	-33.3%	0.6	Pass
56	Site 23	Junction 23	Eagle Way	Barrack Square	23:60:65	0	0	0		0.0	Pass
57	Site 23	Junction 23	Eagle Way	A12 South	23:60:34	0	0	0		0.0	Pass
58	Site 23	Junction 23	Eagle Way	Eagle Way	23:60:63	0	0	0		0.0	Pass
59	Site 23	Junction 23	A12 South	Eagle Way	23:2:63	1	0	-1	-100.0%	1.4	Pass
60	Site 23	Junction 23	A12 South	A12 North	23:2:3	73	61	-12	-16.3%	1.5	Pass
61	Site 23	Junction 23	A12 South	Barrack Square	23:2:65	7	4	-3	-42.9%	1.3	Pass
62	Site 23	Junction 23	A12 South	A12 South	23:2:34	0	0	0		0.0	Pass
63	Site 23	Junction 23	Barrack Square	A12 South	23:117:34	6	2	-4	-66.7%	2.0	Pass
64	Site 23	Junction 23	Barrack Square	Eagle Way	23:117:63	0	0	0		0.0	Pass
65	Site 23	Junction 23	Barrack Square	A12 North	23:117:3	0	2	2		2.1	Pass
66	Site 23	Junction 23	Barrack Square	Barrack Square	23:117:65	0	0	0		0.0	Pass
67	Site 24	Junction 24	A12 North	Anson Rd	24:31:76	4	3	-1	-22.5%	0.5	Pass
68	Site 24	Junction 24	A12 North	A12 South	24:31:33	75	66	-9	-11.6%	1.0	Pass
69	Site 24	Junction 24	A12 North	Eagle Way	24:31:73	1	0	-1	-100.0%	1.4	Pass



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	5	3	-2	-38.0%	0.9	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	1855	1655	-200	-10.8%	0.8



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
1	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(W)	20:69:117	42	32	-10	-24.5%	1.7	Pass
2	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(E)	20:69:65	4	0	-4	-100.0%	2.8	Pass
3	Site 20	Gloster rd and Barrack Square	Gloster Rd	Gloster Rd	20:69:68	0					
4	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Gloster Rd	20:117:68	2	0	-2	-100.0%	2.0	Pass
5	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(W)	20:117:117	20	15	-5	-24.5%	1.2	Pass
6	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(E)	20:117:65	0					
7	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(E)	20:65:65	13	3	-10	-76.9%	3.5	Pass
8	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Gloster Rd	20:65:68	45	42	-3	-7.3%	0.5	Pass
9	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(W)	20:65:117	0					
10	Site 21	Junction 21	A12 North	Bucklesham Rd	21:35:143	0	3	3		2.3	Pass
11	Site 21	Junction 21	A12 North	A14 East	21:35:42	32	27	-5	-15.6%	0.9	Pass
12	Site 21	Junction 21	A12 North	A1156	21:35:48	40	27	-13	-32.3%	2.2	Pass
13	Site 21	Junction 21	A12 North	A14 West	21:35:38	166	154	-12	-7.3%	1.0	Pass
14	Site 21	Junction 21	A12 North	A12 North	21:35:149	0	0	0		0.0	Pass
15	Site 21	Junction 21	A14 West	A12 North	21:41:149	152	151	-1	-0.7%	0.1	Pass
16	Site 21	Junction 21	A14 West	Bucklesham Rd	21:41:143	7	10	3	47.1%	1.1	Pass
17	Site 21	Junction 21	A14 West	A14 East	21:182:182	39	39	0	0.5%	0.0	Pass
18	Site 21	Junction 21	A14 West	A1156	21:41:48	0	3	3		2.4	Pass
19	Site 21	Junction 21	A14 West	A14 West	21:41:38	0	0	0		0.0	Pass
20	Site 21	Junction 21	A1156	A14 West	21:46:38	11	2	-9	-83.6%	3.6	Pass
21	Site 21	Junction 21	A1156	A12 North	21:46:149	16	19	3	16.9%	0.6	Pass
22	Site 21	Junction 21	A1156	Bucklesham Rd	21:46:143	0	0	0		0.0	Pass
23	Site 21	Junction 21	A1156	A14 East	21:46:42	12	7	-5	-45.0%	1.8	Pass
24	Site 21	Junction 21	A1156	A1156	21:46:48	0	0	0		0.0	Pass
25	Site 21	Junction 21	A14 East	A1156	21:135:48	22	23	1	2.3%	0.1	Pass
26	Site 21	Junction 21	A14 East	A14 West	21:186:186	201	183	-18	-8.8%	1.3	Pass
27	Site 21	Junction 21	A14 East	A12 North	21:135:149	50	48	-2	-4.8%	0.3	Pass
28	Site 21	Junction 21	A14 East	Bucklesham Rd	21:135:143	1	0	-1	-100.0%	1.4	Pass
29	Site 21	Junction 21	A14 East	A14 East	21:135:42	0	0	0		0.0	Pass
30	Site 21	Junction 21	Bucklesham Rd	A14 East	21:51:42	1	0	-1	-100.0%	1.4	Pass
31	Site 21	Junction 21	Bucklesham Rd	A1156	21:51:48	0	0	0		0.0	Pass
32	Site 21	Junction 21	Bucklesham Rd	A14 West	21:51:38	5	5	0	0.0%	0.0	Pass
33	Site 21	Junction 21	Bucklesham Rd	A12 North	21:51:149	2	0	-2	-100.0%	2.0	Pass
34	Site 21	Junction 21	Bucklesham Rd	Bucklesham Rd	21:51:143	0	0	0		0.0	Pass
35	Site 22	Junction 22	A12 North	Newbourne Rd	22:34:137	16	12	-4	-25.6%	1.1	Pass
36	Site 22	Junction 22	A12 North	A12 South	22:34:35	215	194	-21	-9.6%	1.4	Pass
37	Site 22	Junction 22	A12 North	Foxhal Rd	22:34:53	30	22	-8	-26.7%	1.6	Pass
38	Site 22	Junction 22	A12 North	A12 North	22:34:2	0	0	0		0.0	Pass
39	Site 22	Junction 22	Foxhal Rd	A12 North	22:52:2	20	8	-12	-61.0%	3.3	Pass
40	Site 22	Junction 22	Foxhal Rd	Newbourne Rd	22:52:137	6	10	4	60.0%	1.3	Pass
41	Site 22	Junction 22	Foxhal Rd	A12 South	22:52:35	8	7	-1	-13.8%	0.4	Pass
42	Site 22	Junction 22	Foxhal Rd	Foxhal Rd	22:52:53	0	0	0		0.0	Pass
43	Site 22	Junction 22	A12 South	Foxhal Rd	22:149:53	34	34	0	0.9%	0.1	Pass
44	Site 22	Junction 22	A12 South	A12 North	22:149:2	175	170	-5	-2.7%	0.4	Pass
45	Site 22	Junction 22	A12 South	Newbourne Rd	22:149:137	9	13	4	44.4%	1.2	Pass
46	Site 22	Junction 22	A12 South	A12 South	22:149:35	0	0	0		0.0	Pass
47	Site 22	Junction 22	Newbourne Rd	A12 South	22:57:35	16	11	-5	-30.6%	1.3	Pass
48	Site 22	Junction 22	Newbourne Rd	Foxhal Rd	22:57:53	4	9	5	120.0%	1.9	Pass
49	Site 22	Junction 22	Newbourne Rd	A12 North	22:57:2	25	12	-13	-51.2%	3.0	Pass
50	Site 22	Junction 22	Newbourne Rd	Newbourne Rd	22:57:137	0	0	0		0.0	Pass
51	Site 23	Junction 23	A12 North	Barrack Square	23:33:65	4	2	-2	-45.0%	1.0	Pass
52	Site 23	Junction 23	A12 North	A12 South	23:33:34	196	181	-15	-7.6%	1.1	Pass
53	Site 23	Junction 23	A12 North	Eagle Way	23:33:63	0	2	2		2.1	Pass
54	Site 23	Junction 23	A12 North	A12 North	23:33:3	0	0	0		0.0	Pass
55	Site 23	Junction 23	Eagle Way	A12 North	23:60:3	4	3	-1	-22.5%	0.5	Pass
56	Site 23	Junction 23	Eagle Way	Barrack Square	23:60:65	0	0	0		0.0	Pass
57	Site 23	Junction 23	Eagle Way	A12 South	23:60:34	12	7	-5	-40.0%	1.5	Pass
58	Site 23	Junction 23	Eagle Way	Eagle Way	23:60:63	0	0	0		0.0	Pass
59	Site 23	Junction 23	A12 South	Eagle Way	23:2:63	12	6	-7	-54.2%	2.2	Pass
60	Site 23	Junction 23	A12 South	A12 North	23:2:3	158	142	-16	-10.3%	1.3	Pass
61	Site 23	Junction 23	A12 South	Barrack Square	23:2:65	54	43	-11	-21.1%	1.6	Pass
62	Site 23	Junction 23	A12 South	A12 South	23:2:34	0	0	0		0.0	Pass
63	Site 23	Junction 23	Barrack Square	A12 South	23:117:34	56	41	-15	-27.0%	2.2	Pass
64	Site 23	Junction 23	Barrack Square	Eagle Way	23:117:63	0	0	0		0.0	Pass
65	Site 23	Junction 23	Barrack Square	A12 North	23:117:3	6	6	0	-5.0%	0.1	Pass
66	Site 23	Junction 23	Barrack Square	Barrack Square	23:117:65	0	0	0		0.0	Pass
67	Site 24	Junction 24	A12 North	Anson Rd	24:31:76	68	60	-8	-11.3%	1.0	Pass
68	Site 24	Junction 24	A12 North	A12 South	24:31:33	173	166	-7	-3.8%	0.5	Pass
69	Site 24	Junction 24	A12 North	Eagle Way	24:31:73	12	7	-5	-40.0%	1.5	Pass



Vehicle Flow Information
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PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
70	Site 24	Junction 24	A12 North	A12 North	24:31:6	0	0	0		0.0	Pass
71	Site 24	Junction 24	Eagle Way	A12 North	24:70:6	8	7	-1	-11.3%	0.3	Pass
72	Site 24	Junction 24	Eagle Way	Anson Rd	24:70:76	4	4	0	2.5%	0.0	Pass
73	Site 24	Junction 24	Eagle Way	A12 South	24:70:33	4	3	-1	-25.0%	0.5	Pass
74	Site 24	Junction 24	Eagle Way	Eagle Way	24:70:73	0	0	0		0.0	Pass
75	Site 24	Junction 24	A12 South	Eagle Way	24:3:73	6	0	-6	-100.0%	3.5	Pass
76	Site 24	Junction 24	A12 South	A12 North	24:3:6	136	137	1	0.7%	0.1	Pass
77	Site 24	Junction 24	A12 South	Anson Rd	24:3:76	26	14	-13	-48.1%	2.8	Pass
78	Site 24	Junction 24	A12 South	A12 South	24:3:33	0	0	0		0.0	Pass
79	Site 24	Junction 24	Anson Rd	A12 South	24:77:33	30	19	-11	-36.3%	2.2	Pass
80	Site 24	Junction 24	Anson Rd	Eagle Way	24:77:73	2	0	-2	-100.0%	2.0	Pass
81	Site 24	Junction 24	Anson Rd	A12 North	24:77:6	52	45	-7	-12.7%	0.9	Pass
82	Site 24	Junction 24	Anson Rd	Anson Rd	24:77:76	0	0	0		0.0	Pass
83	Site 25	Junction 25	A12 North	Main Rd (E)	25:27:88	3	0	-3	-100.0%	2.4	Pass
84	Site 25	Junction 25	A12 North	A12 South	25:27:31	195	179	-16	-8.4%	1.2	Pass
85	Site 25	Junction 25	A12 North	Main Rd (W)	25:27:79	37	43	6	15.4%	0.9	Pass
86	Site 25	Junction 25	A12 North	Martlesham PnR	25:27:126	0	0	0		0.0	Pass
87	Site 25	Junction 25	A12 North	A12 North	25:27:8	0	0	0		0.0	Pass
88	Site 25	Junction 25	Martlesham PnR	A12 North	25:127:8	0	0	0		0.0	Pass
89	Site 25	Junction 25	Martlesham PnR	Main Rd (E)	25:128:88	0	0	0		0.0	Pass
90	Site 25	Junction 25	Martlesham PnR	A12 South	25:128:31	0	0	0		0.0	Pass
91	Site 25	Junction 25	Martlesham PnR	Main Rd (W)	25:128:79	0	0	0		0.0	Pass
92	Site 25	Junction 25	Martlesham PnR	Martlesham PnR	25:128:126	0	0	0		0.0	Pass
93	Site 25	Junction 25	Main Rd (W)	Martlesham PnR	25:32:126	0	0	0		0.0	Pass
94	Site 25	Junction 25	Main Rd (W)	A12 North	25:32:8	30	33	3	9.3%	0.5	Pass
95	Site 25	Junction 25	Main Rd (W)	Main Rd (E)	25:32:88	0	1	1		1.4	Pass
96	Site 25	Junction 25	Main Rd (W)	A12 South	25:32:31	44	46	2	3.9%	0.3	Pass
97	Site 25	Junction 25	Main Rd (W)	Main Rd (W)	25:32:79	0	0	0		0.0	Pass
98	Site 25	Junction 25	A12 South	Main Rd (W)	25:6:79	43	45	2	4.7%	0.3	Pass
99	Site 25	Junction 25	A12 South	Martlesham PnR	25:6:126	0	0	0		0.0	Pass
100	Site 25	Junction 25	A12 South	A12 North	25:6:8	144	133	-11	-7.8%	1.0	Pass
101	Site 25	Junction 25	A12 South	Main Rd (E)	25:6:88	7	9	2	28.6%	0.7	Pass
102	Site 25	Junction 25	A12 South	A12 South	25:6:31	0	0	0		0.0	Pass
103	Site 25	Junction 25	Main Rd (E)	A12 South	25:86:31	15	8	-7	-46.0%	2.0	Pass
104	Site 25	Junction 25	Main Rd (E)	Main Rd (W)	25:86:79	6	6	0	3.3%	0.1	Pass
105	Site 25	Junction 25	Main Rd (E)	Martlesham PnR	25:86:126	0	0	0		0.0	Pass
106	Site 25	Junction 25	Main Rd (E)	A12 North	25:86:8	0	0	0		0.0	Pass
107	Site 25	Junction 25	Main Rd (E)	Main Rd (E)	25:86:88	0	0	0		0.0	Pass
108	Site 26	Junction 26	A12 North	B1438	26:24:93	18	11	-7	-40.6%	1.9	Pass
109	Site 26	Junction 26	A12 North	A12 South	26:24:27	215	208	-7	-3.3%	0.5	Pass
110	Site 26	Junction 26	A12 North	A12 North	26:24:75	1	0	-1	-100.0%	1.4	Pass
111	Site 26	Junction 26	A12 South	A12 North	26:166:75	139	141	2	1.4%	0.2	Pass
112	Site 26	Junction 26	A12 South	B1438	26:165:93	27	25	-2	-6.3%	0.3	Pass
113	Site 26	Junction 26	A12 South	A12 South	26:165:27	0	0	0		0.0	Pass
114	Site 26	Junction 26	B1438	A12 South	26:90:27	25	19	-6	-24.4%	1.3	Pass
115	Site 26	Junction 26	B1438	A12 North	26:90:75	18	15	-3	-17.2%	0.8	Pass
116	Site 26	Junction 26	B1438	B1438	26:90:93	0	0	0		0.0	Pass
117	Site 27	Junction 27	A12 North	B1079 (E)	27:21:105	10	10	0	-2.0%	0.1	Pass
118	Site 27	Junction 27	A12 North	A12 south	27:21:22	202	190	-12	-6.0%	0.9	Pass
119	Site 27	Junction 27	A12 North	B1079 (W)	27:21:100	48	47	-1	-2.5%	0.2	Pass
120	Site 27	Junction 27	A12 North	A12 North	27:21:15	0	0	0		0.0	Pass
121	Site 27	Junction 27	B1079 (W)	A12 North	27:99:15	5	6	1	20.0%	0.4	Pass
122	Site 27	Junction 27	B1079 (W)	B1079 (E)	27:99:105	0	5	5		3.1	Pass
123	Site 27	Junction 27	B1079 (W)	A12 south	27:99:22	25	21	-4	-15.2%	0.8	Pass
124	Site 27	Junction 27	B1079 (W)	B1079 (W)	27:99:100	0	0	0		0.0	Pass
125	Site 27	Junction 27	A12 south	B1079 (W)	27:14:100	7	10	3	45.7%	1.1	Pass
126	Site 27	Junction 27	A12 south	A12 North	27:14:15	132	131	-1	-0.5%	0.1	Pass
127	Site 27	Junction 27	A12 south	B1079 (E)	27:14:105	14	14	0	1.4%	0.1	Pass
128	Site 27	Junction 27	A12 south	A12 south	27:14:22	0	0	0		0.0	Pass
129	Site 27	Junction 27	B1079 (E)	A12 south	27:102:22	8	9	1	13.8%	0.4	Pass
130	Site 27	Junction 27	B1079 (E)	B1079 (W)	27:102:100	4	5	1	22.5%	0.4	Pass
131	Site 27	Junction 27	B1079 (E)	A12 North	27:102:15	6	4	-2	-31.7%	0.8	Pass
132	Site 27	Junction 27	B1079 (E)	B1079 (E)	27:102:105	0	0	0		0.0	Pass
133	Site 28	Junction 28	A1152	A1152	28:18:113	9	4	-5	-53.3%	1.9	Pass
134	Site 28	Junction 28	A12 North	A12 South	28:18:19	171	168	-3	-2.0%	0.3	Pass
135	Site 28	Junction 28	A12 North	A12 North	28:18:17	1	0	-1	-100.0%	1.4	Pass
136	Site 28	Junction 28	A12 South	A12 North	28:15:17	99	102	3	3.0%	0.3	Pass
137	Site 28	Junction 28	A12 South	A1152	28:15:113	40	47	7	16.8%	1.0	Pass
138	Site 28	Junction 28	A12 South	A12 South	28:15:19	6	0	-6	-100.0%	3.5	Pass
139	Site 28	Junction 28	A1152	A12 South	28:119:19	93	89	-4	-4.4%	0.4	Pass



Vehicle Flow Information
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LGV Vehicles
PM Peak (15:00-16:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	21	9	-12	-57.6%	3.1	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	4332	3980	-352	-8.1%	0.9



Vehicle Flow Information
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All Vehicles
PM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	410	372	-38	-9.3%	1.1	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	12	0	-12	-100.0%	2.8	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	102255	101860	-395	-0.4%	1.0



Vehicle Flow Information
Calibration Statistics
Car Vehicles
PM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	350	345	-5	-1.5%	0.2	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	12	0	-12	-100.0%	2.8	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	86391	86992	601	0.7%	0.8



**Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Period**

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
1	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(W)	20:69:117	14	5	-9	-64.3%	1.7	Pass
2	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(E)	20:69:65	0	0	0		0.0	Pass
3	Site 20	Gloster rd and Barrack Square	Gloster Rd	Gloster Rd	20:69:68	0					
4	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Gloster Rd	20:117:68	0	0	0		0.0	Pass
5	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(W)	20:117:117	2	3	1	60.0%	0.4	Pass
6	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(E)	20:117:65	0					
7	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(E)	20:65:65	0	0	0		0.0	Pass
8	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Gloster Rd	20:65:68	23	12	-11	-47.4%	1.5	Pass
9	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(W)	20:65:117	0					
10	Site 21	Junction 21	A12 North	Bucklesham Rd	21:35:143	1	0	-1	-100.0%	0.8	Pass
11	Site 21	Junction 21	A12 North	A14 East	21:35:42	19	10	-9	-48.4%	1.4	Pass
12	Site 21	Junction 21	A12 North	A1156	21:35:48	18	9	-9	-50.6%	1.4	Pass
13	Site 21	Junction 21	A12 North	A14 West	21:35:38	153	150	-3	-1.7%	0.1	Pass
14	Site 21	Junction 21	A12 North	A12 North	21:35:149	1	0	-1	-100.0%	0.8	Pass
15	Site 21	Junction 21	A14 West	A12 North	21:41:149	139	123	-16	-11.7%	0.8	Pass
16	Site 21	Junction 21	A14 West	Bucklesham Rd	21:41:143	8	7	-1	-12.5%	0.2	Pass
17	Site 21	Junction 21	A14 West	A14 East	21:182:182	677	673	-4	-0.5%	0.1	Pass
18	Site 21	Junction 21	A14 West	A1156	21:41:48	2	0	-2	-100.0%	1.2	Pass
19	Site 21	Junction 21	A14 West	A14 West	21:41:38	2	0	-2	-100.0%	1.2	Pass
20	Site 21	Junction 21	A1156	A14 West	21:46:38	4	4	0	0.0%	0.0	Pass
21	Site 21	Junction 21	A1156	A12 North	21:46:149	6	3	-3	-46.7%	0.8	Pass
22	Site 21	Junction 21	A1156	Bucklesham Rd	21:46:143	1	0	-1	-100.0%	0.8	Pass
23	Site 21	Junction 21	A1156	A14 East	21:46:42	5	9	4	84.0%	0.9	Pass
24	Site 21	Junction 21	A1156	A1156	21:46:48	0	0	0		0.0	Pass
25	Site 21	Junction 21	A14 East	A1156	21:135:48	13	16	3	22.3%	0.4	Pass
26	Site 21	Junction 21	A14 East	A14 West	21:186:186	473	471	-2	-0.3%	0.0	Pass
27	Site 21	Junction 21	A14 East	A12 North	21:135:149	37	17	-20	-55.1%	2.3	Pass
28	Site 21	Junction 21	A14 East	Bucklesham Rd	21:135:143	0	0	0		0.0	Pass
29	Site 21	Junction 21	A14 East	A14 East	21:135:42	0	0	0		0.0	Pass
30	Site 21	Junction 21	Bucklesham Rd	A14 East	21:51:42	0	0	0		0.0	Pass
31	Site 21	Junction 21	Bucklesham Rd	A1156	21:51:48	1	0	-1	-100.0%	0.8	Pass
32	Site 21	Junction 21	Bucklesham Rd	A14 West	21:51:38	8	6	-2	-23.8%	0.4	Pass
33	Site 21	Junction 21	Bucklesham Rd	A12 North	21:51:149	0	15	15		3.2	Pass
34	Site 21	Junction 21	Bucklesham Rd	Bucklesham Rd	21:51:143	0	0	0		0.0	Pass
35	Site 22	Junction 22	A12 North	Newbourne Rd	22:34:137	8	1	-7	-87.5%	1.9	Pass
36	Site 22	Junction 22	A12 North	A12 South	22:34:35	169	152	-17	-9.9%	0.8	Pass
37	Site 22	Junction 22	A12 North	Foxhal Rd	22:34:53	8	4	-4	-55.0%	1.1	Pass
38	Site 22	Junction 22	A12 North	A12 North	22:34:2	2	0	-2	-100.0%	1.2	Pass
39	Site 22	Junction 22	Foxhal Rd	A12 North	22:52:2	13	3	-10	-75.4%	2.0	Pass
40	Site 22	Junction 22	Foxhal Rd	Newbourne Rd	22:52:137	5	9	4	84.0%	0.9	Pass
41	Site 22	Junction 22	Foxhal Rd	A12 South	22:52:35	10	3	-7	-68.0%	1.5	Pass
42	Site 22	Junction 22	Foxhal Rd	Foxhal Rd	22:52:53	0	0	0		0.0	Pass
43	Site 22	Junction 22	A12 South	Foxhal Rd	22:149:53	20	16	-5	-22.5%	0.6	Pass
44	Site 22	Junction 22	A12 South	A12 North	22:149:2	151	134	-18	-11.6%	0.8	Pass
45	Site 22	Junction 22	A12 South	Newbourne Rd	22:149:137	12	10	-2	-14.2%	0.3	Pass
46	Site 22	Junction 22	A12 South	A12 South	22:149:35	0	0	0		0.0	Pass
47	Site 22	Junction 22	Newbourne Rd	A12 South	22:57:35	13	10	-3	-20.0%	0.4	Pass
48	Site 22	Junction 22	Newbourne Rd	Foxhal Rd	22:57:53	9	12	3	36.7%	0.6	Pass
49	Site 22	Junction 22	Newbourne Rd	A12 North	22:57:2	6	0	-6	-100.0%	2.0	Pass
50	Site 22	Junction 22	Newbourne Rd	Newbourne Rd	22:57:137	0	0	0		0.0	Pass
51	Site 23	Junction 23	A12 North	Barrack Square	23:33:65	1	0	-1	-100.0%	0.8	Pass
52	Site 23	Junction 23	A12 North	A12 South	23:33:34	166	150	-16	-9.8%	0.7	Pass
53	Site 23	Junction 23	A12 North	Eagle Way	23:33:63	1	0	-1	-100.0%	0.8	Pass
54	Site 23	Junction 23	A12 North	A12 North	23:33:3	1	0	-1	-100.0%	0.8	Pass
55	Site 23	Junction 23	Eagle Way	A12 North	23:60:3	3	2	-1	-33.3%	0.4	Pass
56	Site 23	Junction 23	Eagle Way	Barrack Square	23:60:65	0	0	0		0.0	Pass
57	Site 23	Junction 23	Eagle Way	A12 South	23:60:34	2	0	-2	-100.0%	1.2	Pass
58	Site 23	Junction 23	Eagle Way	Eagle Way	23:60:63	0	0	0		0.0	Pass
59	Site 23	Junction 23	A12 South	Eagle Way	23:2:63	4	0	-4	-100.0%	1.6	Pass
60	Site 23	Junction 23	A12 South	A12 North	23:2:3	143	126	-17	-12.0%	0.9	Pass
61	Site 23	Junction 23	A12 South	Barrack Square	23:2:65	23	12	-11	-47.4%	1.5	Pass
62	Site 23	Junction 23	A12 South	A12 South	23:2:34	0	0	0		0.0	Pass
63	Site 23	Junction 23	Barrack Square	A12 South	23:117:34	19	6	-13	-68.4%	2.1	Pass
64	Site 23	Junction 23	Barrack Square	Eagle Way	23:117:63	0	0	0		0.0	Pass
65	Site 23	Junction 23	Barrack Square	A12 North	23:117:3	0	2	2		1.2	Pass
66	Site 23	Junction 23	Barrack Square	Barrack Square	23:117:65	0	0	0		0.0	Pass
67	Site 24	Junction 24	A12 North	Anson Rd	24:31:76	18	7	-11	-60.6%	1.8	Pass
68	Site 24	Junction 24	A12 North	A12 South	24:31:33	152	141	-11	-7.2%	0.5	Pass
69	Site 24	Junction 24	A12 North	Eagle Way	24:31:73	1	0	-1	-100.0%	0.8	Pass



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	6	3	-3	-48.3%	0.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	4115	3772	-343	-8.3%	0.7



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
PM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
1	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(W)	20:69:117	104	80	-24	-23.1%	1.4	Pass
2	Site 20	Gloster rd and Barrack Square	Gloster Rd	Barrack Square(E)	20:69:65	6	0	-6	-100.0%	2.0	Pass
3	Site 20	Gloster rd and Barrack Square	Gloster Rd	Gloster Rd	20:69:68	0					
4	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Gloster Rd	20:117:68	3	0	-3	-100.0%	1.4	Pass
5	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(W)	20:117:117	33	28	-5	-14.5%	0.5	Pass
6	Site 20	Gloster rd and Barrack Square	Barrack Square(E)	Barrack Square(E)	20:117:65	0					
7	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(E)	20:65:65	19	8	-11	-56.8%	1.7	Pass
8	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Gloster Rd	20:65:68	124	103	-21	-17.2%	1.2	Pass
9	Site 20	Gloster rd and Barrack Square	Barrack Square(W)	Barrack Square(W)	20:65:117	0					
10	Site 21	Junction 21	A12 North	Bucklesham Rd	21:35:143	0	7	7		2.2	Pass
11	Site 21	Junction 21	A12 North	A14 East	21:35:42	92	88	-4	-4.9%	0.3	Pass
12	Site 21	Junction 21	A12 North	A1156	21:35:48	88	63	-25	-28.1%	1.6	Pass
13	Site 21	Junction 21	A12 North	A14 West	21:35:38	436	432	-4	-1.0%	0.1	Pass
14	Site 21	Junction 21	A12 North	A12 North	21:35:149	0	0	0		0.0	Pass
15	Site 21	Junction 21	A14 West	A12 North	21:41:149	441	423	-18	-4.1%	0.5	Pass
16	Site 21	Junction 21	A14 West	Bucklesham Rd	21:41:143	19	28	9	49.5%	1.1	Pass
17	Site 21	Junction 21	A14 West	A14 East	21:182:182	132	129	-4	-2.7%	0.2	Pass
18	Site 21	Junction 21	A14 West	A1156	21:41:48	2	9	7	350.0%	1.7	Pass
19	Site 21	Junction 21	A14 West	A14 West	21:41:38	1	0	-1	-100.0%	0.8	Pass
20	Site 21	Junction 21	A1156	A14 West	21:46:38	28	10	-18	-64.3%	2.4	Pass
21	Site 21	Junction 21	A1156	A12 North	21:46:149	48	34	-14	-28.5%	1.2	Pass
22	Site 21	Junction 21	A1156	Bucklesham Rd	21:46:143	1	0	-1	-100.0%	0.8	Pass
23	Site 21	Junction 21	A1156	A14 East	21:46:42	37	32	-5	-14.1%	0.5	Pass
24	Site 21	Junction 21	A1156	A1156	21:46:48	0	0	0		0.0	Pass
25	Site 21	Junction 21	A14 East	A1156	21:135:48	57	59	2	3.3%	0.1	Pass
26	Site 21	Junction 21	A14 East	A14 West	21:186:186	569	514	-55	-9.7%	1.4	Pass
27	Site 21	Junction 21	A14 East	A12 North	21:135:149	119	121	2	1.9%	0.1	Pass
28	Site 21	Junction 21	A14 East	Bucklesham Rd	21:135:143	1	0	-1	-100.0%	0.8	Pass
29	Site 21	Junction 21	A14 East	A14 East	21:135:42	0	0	0		0.0	Pass
30	Site 21	Junction 21	Bucklesham Rd	A14 East	21:51:42	1	0	-1	-100.0%	0.8	Pass
31	Site 21	Junction 21	Bucklesham Rd	A1156	21:51:48	0	0	0		0.0	Pass
32	Site 21	Junction 21	Bucklesham Rd	A14 West	21:51:38	13	13	0	0.8%	0.0	Pass
33	Site 21	Junction 21	Bucklesham Rd	A12 North	21:51:149	2	0	-2	-100.0%	1.2	Pass
34	Site 21	Junction 21	Bucklesham Rd	Bucklesham Rd	21:51:143	0	0	0		0.0	Pass
35	Site 22	Junction 22	A12 North	Newbourne Rd	22:34:137	46	34	-13	-27.2%	1.1	Pass
36	Site 22	Junction 22	A12 North	A12 South	22:34:35	555	538	-17	-3.0%	0.4	Pass
37	Site 22	Junction 22	A12 North	Foxhal Rd	22:34:53	115	88	-27	-23.4%	1.5	Pass
38	Site 22	Junction 22	A12 North	A12 North	22:34:2	1	0	-1	-100.0%	0.8	Pass
39	Site 22	Junction 22	Foxhal Rd	A12 North	22:52:2	59	37	-22	-37.5%	1.8	Pass
40	Site 22	Junction 22	Foxhal Rd	Newbourne Rd	22:52:137	13	26	13	100.8%	1.7	Pass
41	Site 22	Junction 22	Foxhal Rd	A12 South	22:52:35	28	25	-3	-10.7%	0.3	Pass
42	Site 22	Junction 22	Foxhal Rd	Foxhal Rd	22:52:53	0	0	0		0.0	Pass
43	Site 22	Junction 22	A12 South	Foxhal Rd	22:149:53	101	96	-5	-4.8%	0.3	Pass
44	Site 22	Junction 22	A12 South	A12 North	22:149:2	484	453	-31	-6.4%	0.8	Pass
45	Site 22	Junction 22	A12 South	Newbourne Rd	22:149:137	19	35	16	82.1%	1.7	Pass
46	Site 22	Junction 22	A12 South	A12 South	22:149:35	1	0	-1	-100.0%	0.8	Pass
47	Site 22	Junction 22	Newbourne Rd	A12 South	22:57:35	34	23	-11	-31.8%	1.2	Pass
48	Site 22	Junction 22	Newbourne Rd	Foxhal Rd	22:57:53	14	31	17	120.0%	2.0	Pass
49	Site 22	Junction 22	Newbourne Rd	A12 North	22:57:2	57	15	-42	-73.2%	4.0	Pass
50	Site 22	Junction 22	Newbourne Rd	Newbourne Rd	22:57:137	0	0	0		0.0	Pass
51	Site 23	Junction 23	A12 North	Barrack Square	23:33:65	6	13	7	118.3%	1.3	Pass
52	Site 23	Junction 23	A12 North	A12 South	23:33:34	575	553	-22	-3.8%	0.5	Pass
53	Site 23	Junction 23	A12 North	Eagle Way	23:33:63	8	2	-6	-71.3%	1.5	Pass
54	Site 23	Junction 23	A12 North	A12 North	23:33:3	0	0	0		0.0	Pass
55	Site 23	Junction 23	Eagle Way	A12 North	23:60:3	7	5	-2	-27.1%	0.4	Pass
56	Site 23	Junction 23	Eagle Way	Barrack Square	23:60:65	5	3	-2	-42.0%	0.6	Pass
57	Site 23	Junction 23	Eagle Way	A12 South	23:60:34	22	13	-9	-40.5%	1.2	Pass
58	Site 23	Junction 23	Eagle Way	Eagle Way	23:60:63	0	0	0		0.0	Pass
59	Site 23	Junction 23	A12 South	Eagle Way	23:2:63	30	7	-23	-75.7%	3.0	Pass
60	Site 23	Junction 23	A12 South	A12 North	23:2:3	439	405	-35	-7.9%	1.0	Pass
61	Site 23	Junction 23	A12 South	Barrack Square	23:2:65	130	95	-35	-27.0%	1.9	Pass
62	Site 23	Junction 23	A12 South	A12 South	23:2:34	1	0	-1	-100.0%	0.8	Pass
63	Site 23	Junction 23	Barrack Square	A12 South	23:117:34	118	92	-26	-21.8%	1.4	Pass
64	Site 23	Junction 23	Barrack Square	Eagle Way	23:117:63	8	1	-7	-87.5%	1.9	Pass
65	Site 23	Junction 23	Barrack Square	A12 North	23:117:3	8	15	7	83.8%	1.1	Pass
66	Site 23	Junction 23	Barrack Square	Barrack Square	23:117:65	0	0	0		0.0	Pass
67	Site 24	Junction 24	A12 North	Anson Rd	24:31:76	141	122	-19	-13.5%	1.0	Pass
68	Site 24	Junction 24	A12 North	A12 South	24:31:33	485	483	-3	-0.5%	0.1	Pass
69	Site 24	Junction 24	A12 North	Eagle Way	24:31:73	28	18	-10	-34.6%	1.2	Pass



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
PM Period

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	54	24	-30	-55.9%	2.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	11749	11096	-654	-5.6%	0.8



Vehicle Flow Information
Calibration Statistics
All Vehicles
PM Peak (16:00-17:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	152	139	-13	-8.5%	1.1	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	2	0	-2	-100.0%	2.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	35898	35834	-64	-0.2%	1.0



Vehicle Flow Information
Calibration Statistics
Car Vehicles
PM Peak (16:00-17:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	127	127	0	0.0%	0.0	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	2	0	-2	-100.0%	2.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	30053	30327	274	0.9%	0.8



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Peak (16:00-17:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	1	0	-1	-100.0%	1.4	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	1446	1349	-97	-6.7%	0.7



Vehicle Flow Information
Calibration Statistics
LGV Vehicles
PM Peak (16:00-17:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	24	12	-12	-49.6%	2.8	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	4399	4158	-241	-5.5%	0.9



Vehicle Flow Information
Calibration Statistics
All Vehicles
PM Peak (17:00-18:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	129	121	-8	-6.4%	0.7	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	5	0	-5	-100.0%	3.2	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	33376	33590	214	0.6%	1.0



Vehicle Flow Information
Calibration Statistics
Car Vehicles
PM Peak (17:00-18:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	120	118	-2	-1.8%	0.2	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	5	0	-5	-100.0%	3.2	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	29544	29865	321	1.1%	0.8



Vehicle Flow Information
Calibration Statistics
HGV Vehicles
PM Peak (17:00-18:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	0	0	0		0.0	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	814	768	-46	-5.7%	0.6



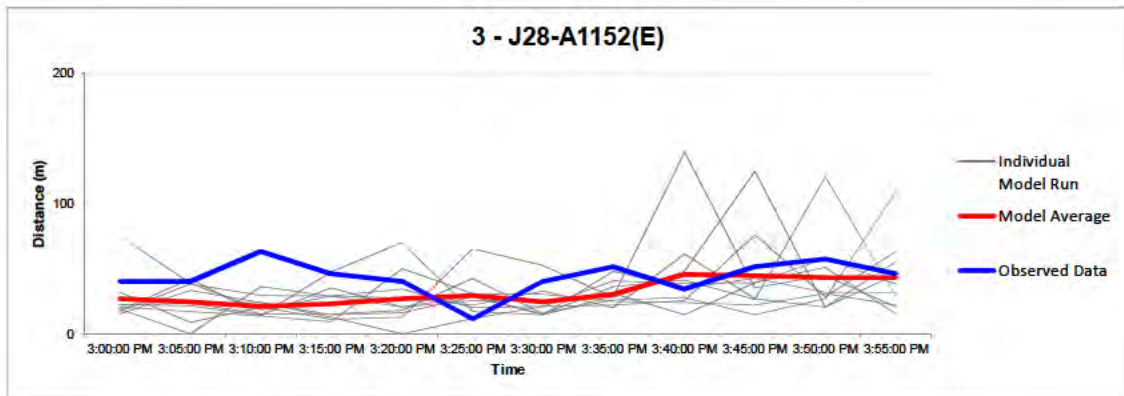
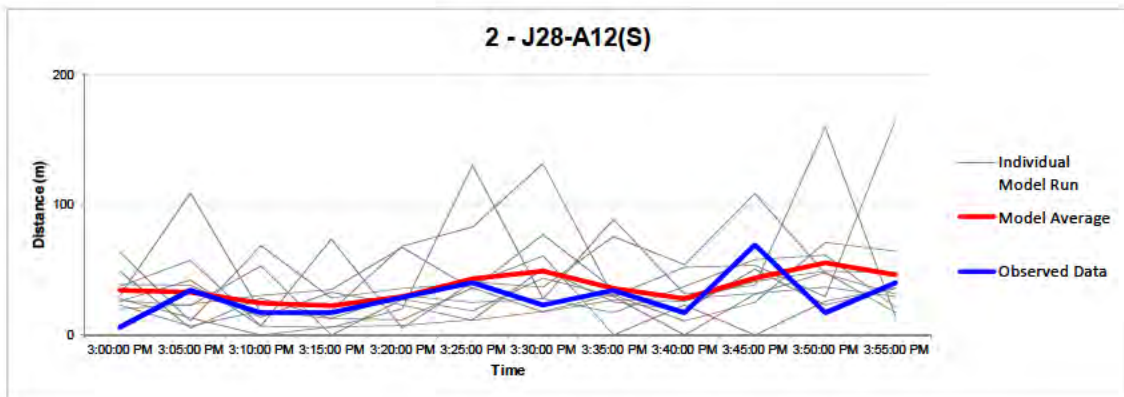
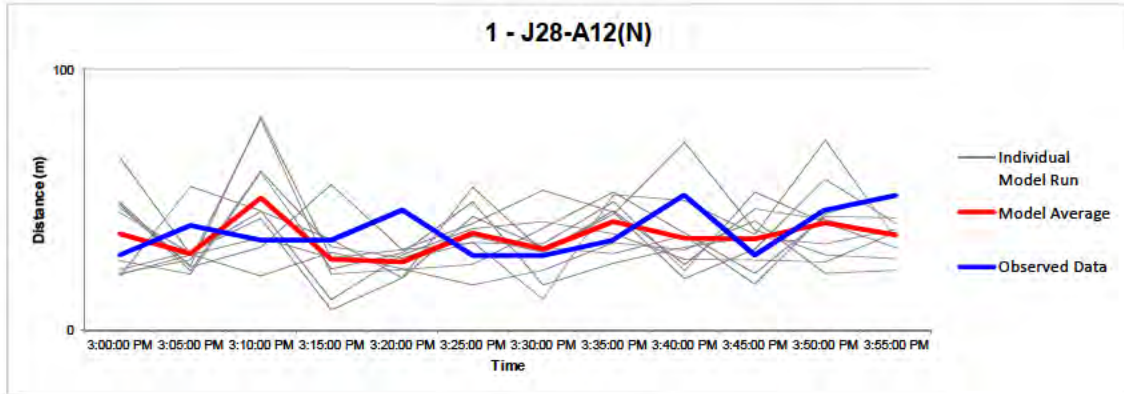
Vehicle Flow Information
Calibration Statistics
LGV Vehicles
PM Peak (17:00-18:00)

Index	Junction	Name	Origin	Destination	Reference	Observed Flow	Modelled Flow	Difference	% Difference	G.E.H. Value (using hourly flows)	Flow Test (using hourly flows)
140	Site 28	Junction 28	A1152	A12 North	28::119::17	9	3	-6	-68.9%	2.6	Pass
141	Site 28	Junction 28	A1152	A1152	28::119::113	0	0	0		0.0	Pass

	Sum Obs.	Sum Mod.	Diff	% Diff	Ave. GEH
Overall Stats	3018	2957	-61	-2.0%	0.8



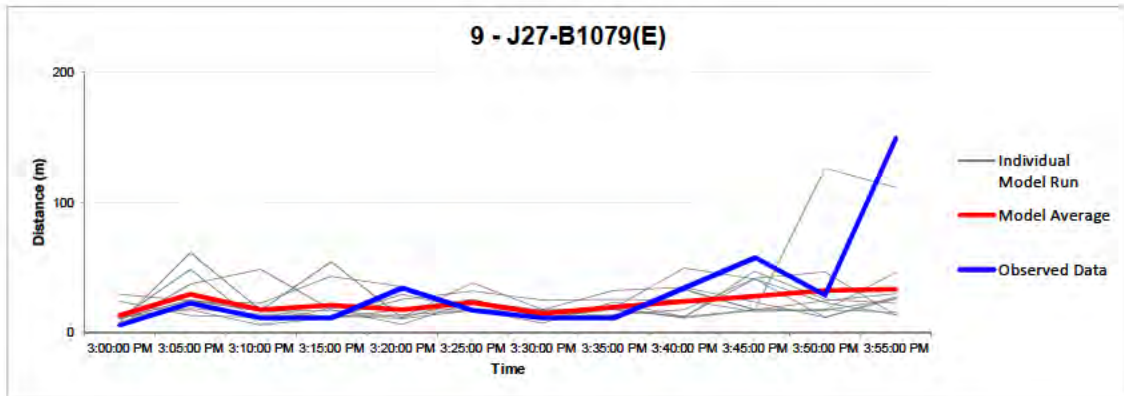
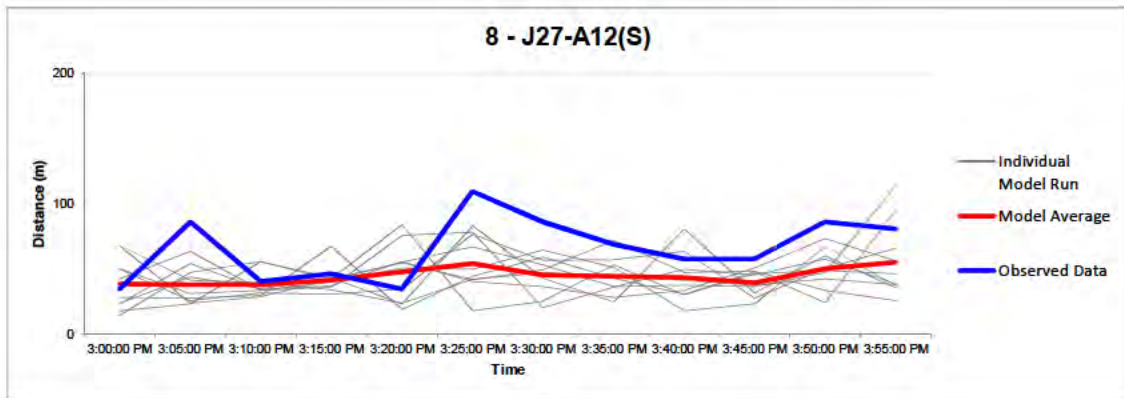
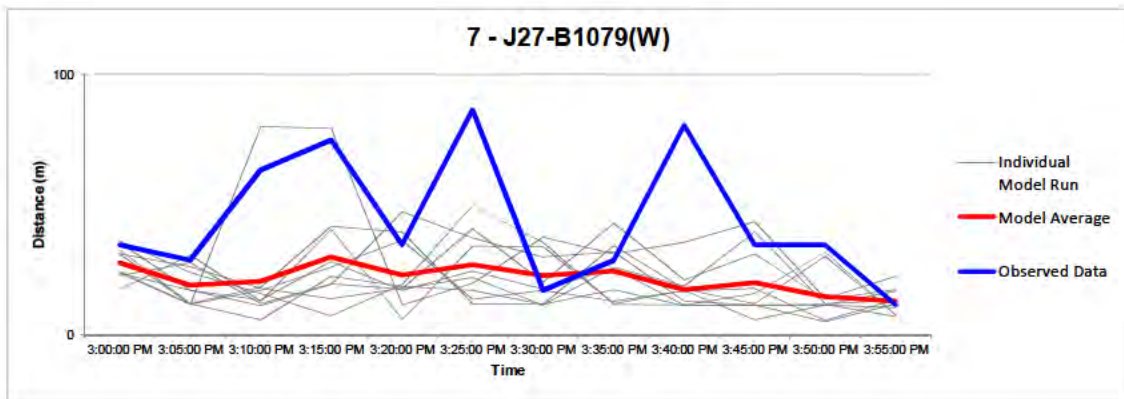
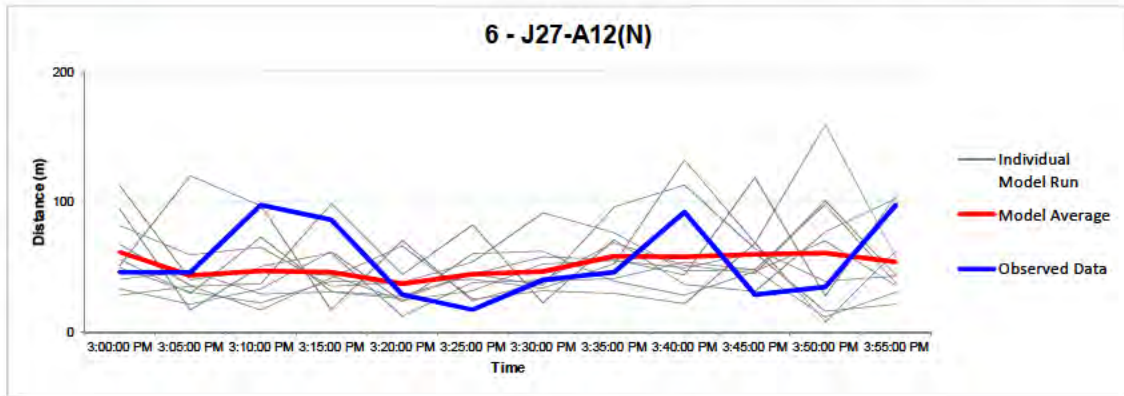
Queue Graphs
Junction Number 1
PM Peak (15:00-16:00)





Queue Graphs

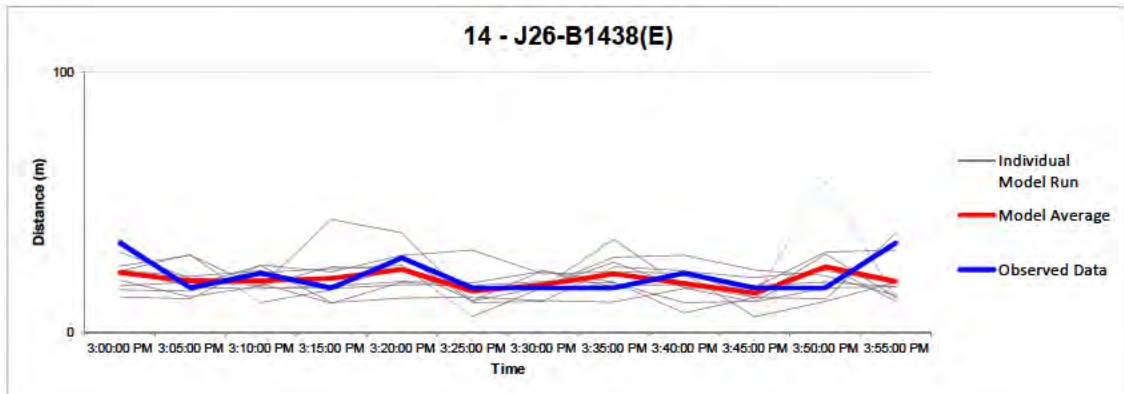
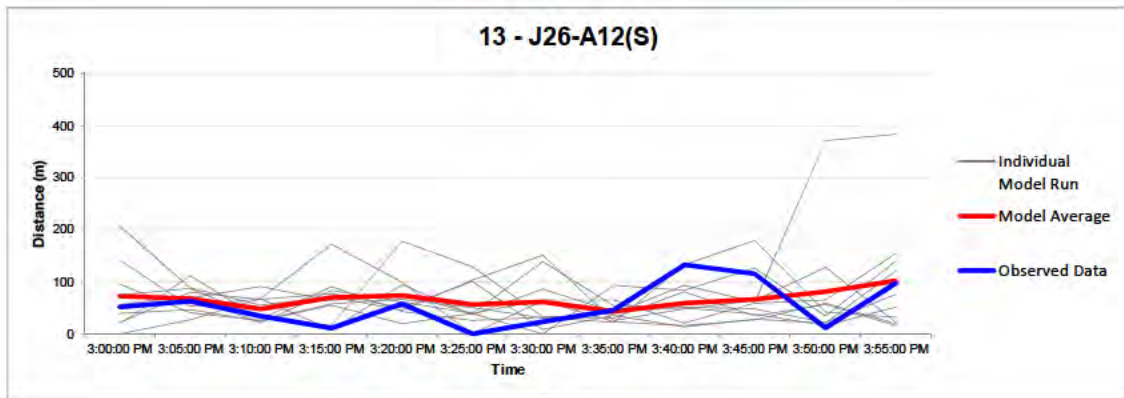
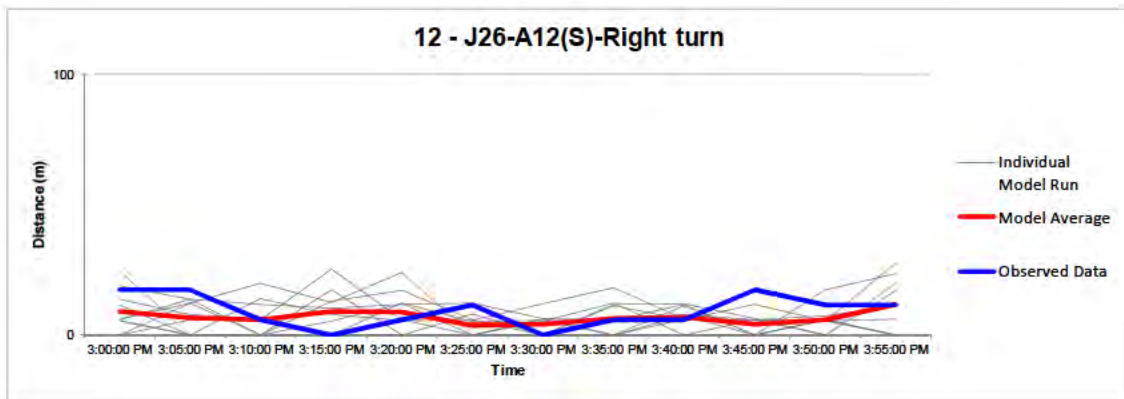
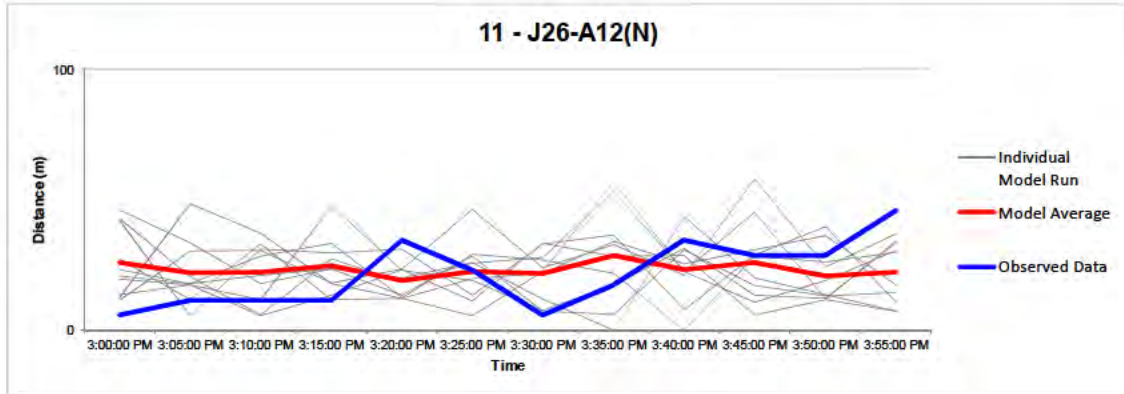
Junction Number 2
PM Peak (15:00-16:00)





Queue Graphs

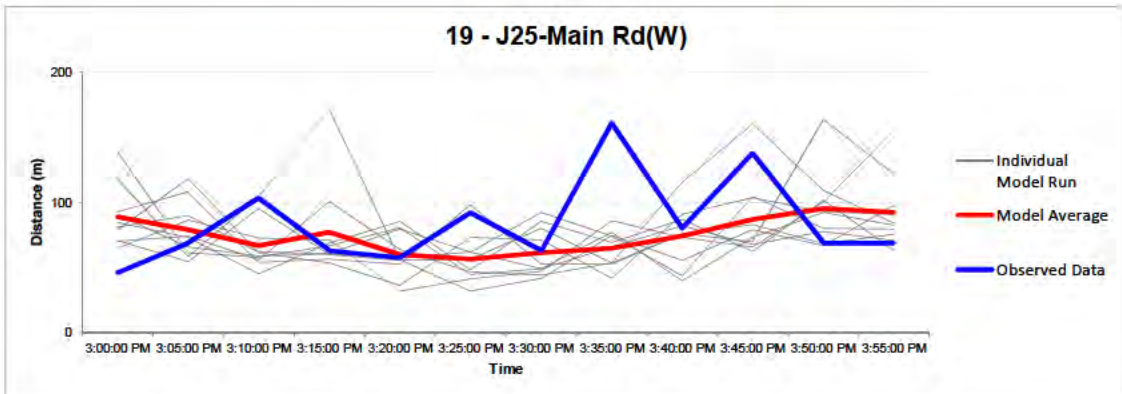
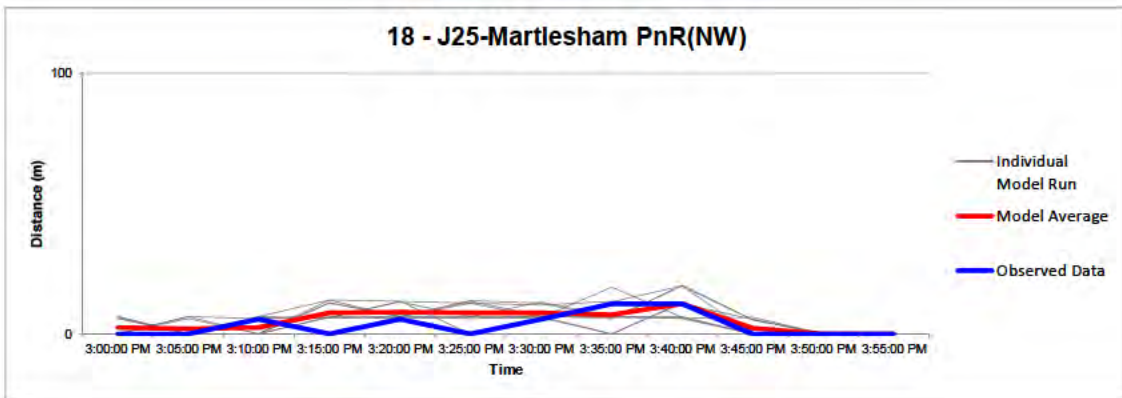
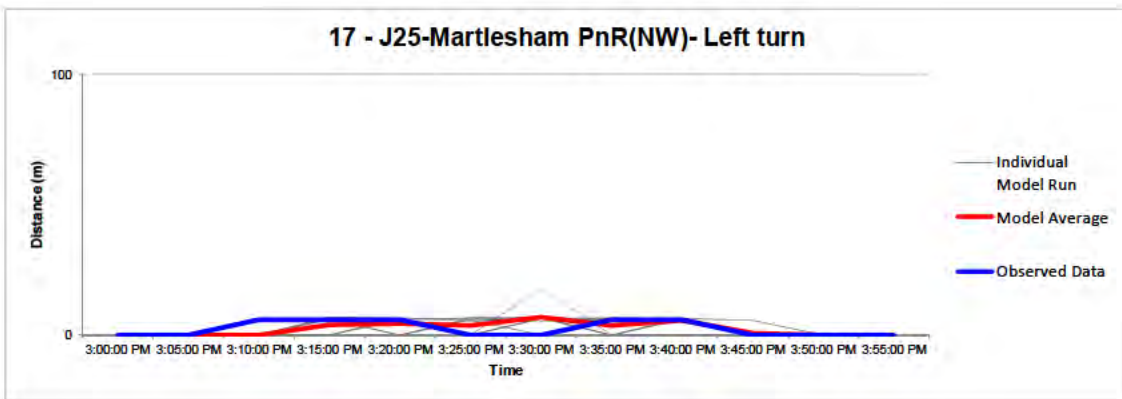
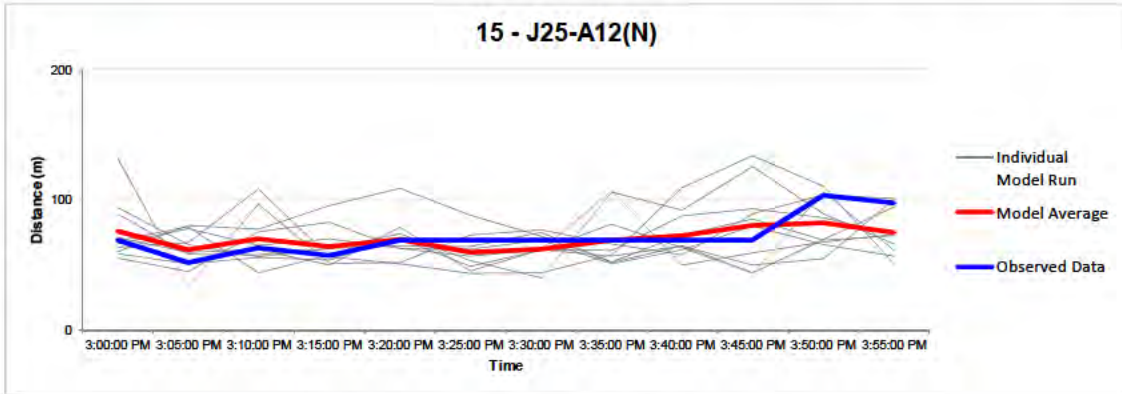
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PM Peak (15:00-16:00)





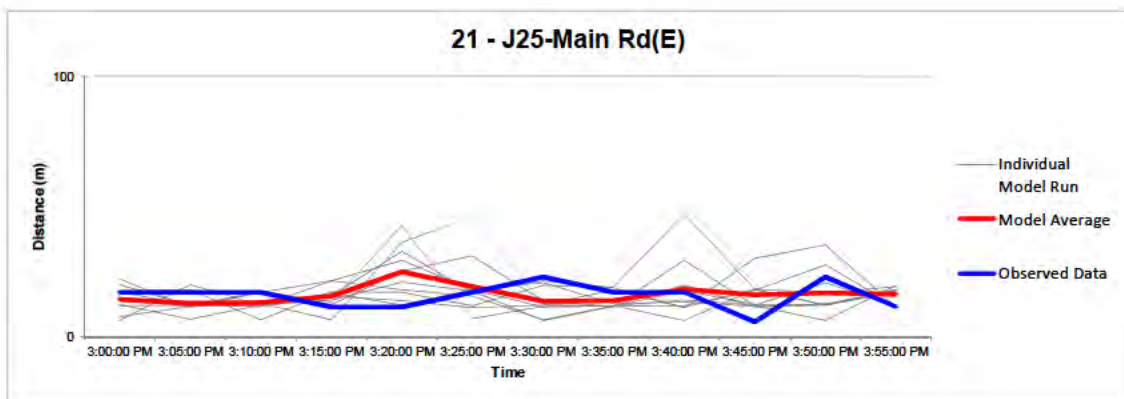
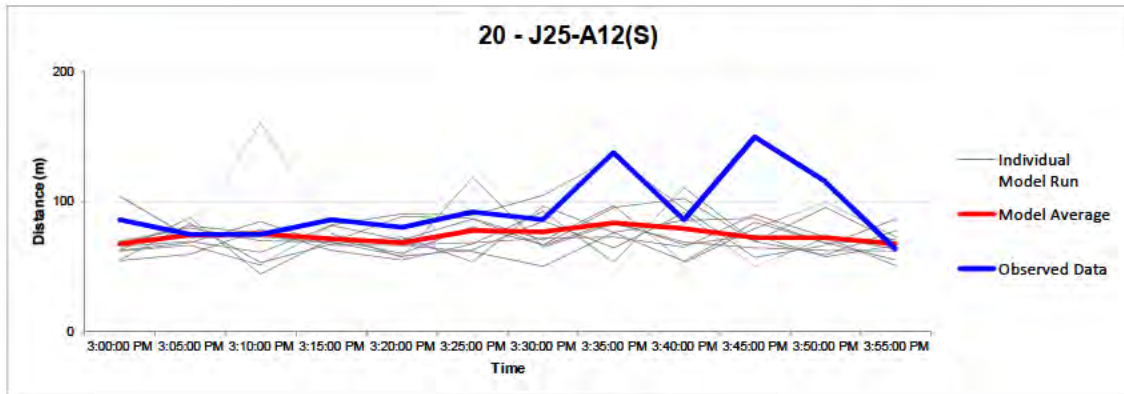
Queue Graphs

Junction Number 4
PM Peak (15:00-16:00)





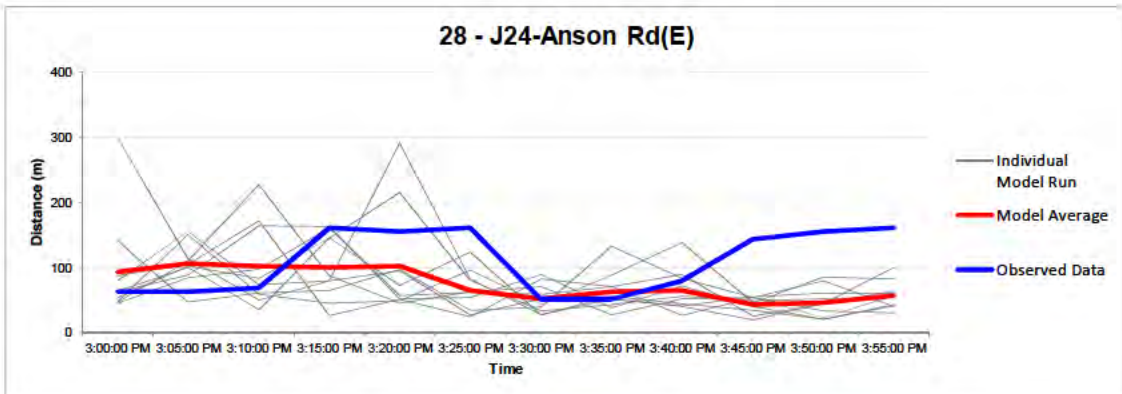
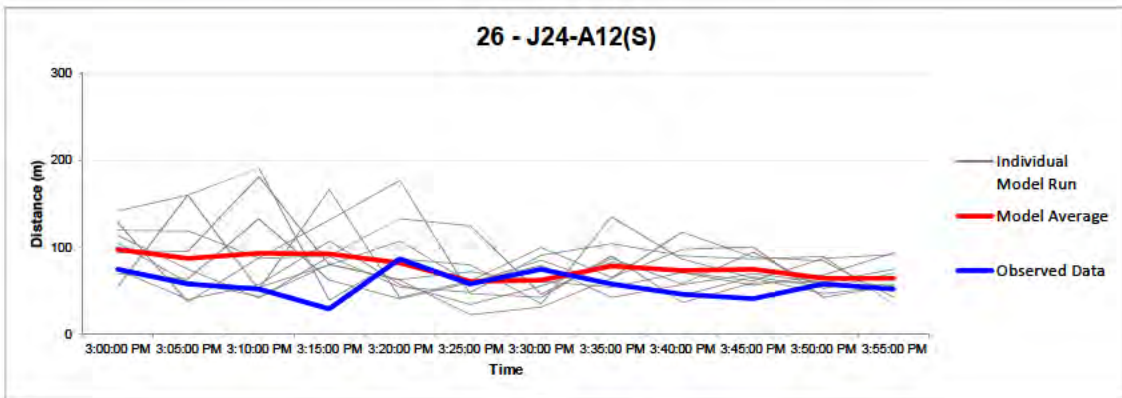
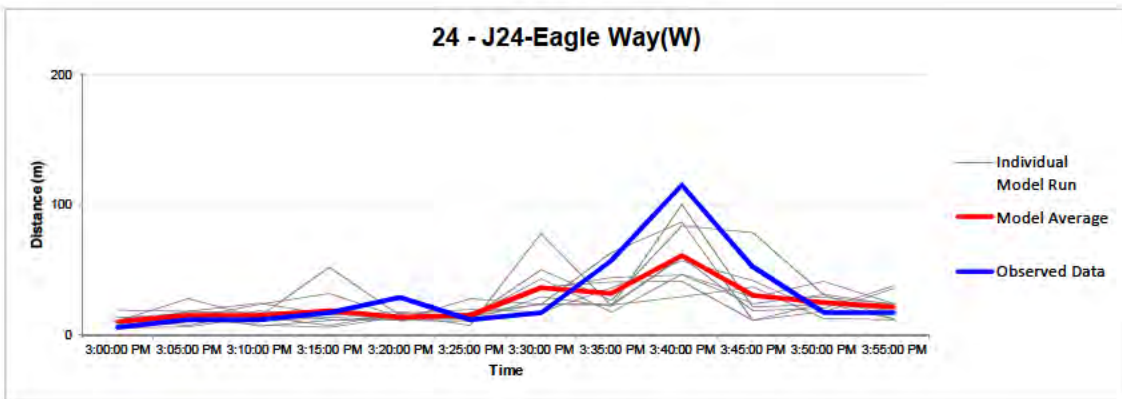
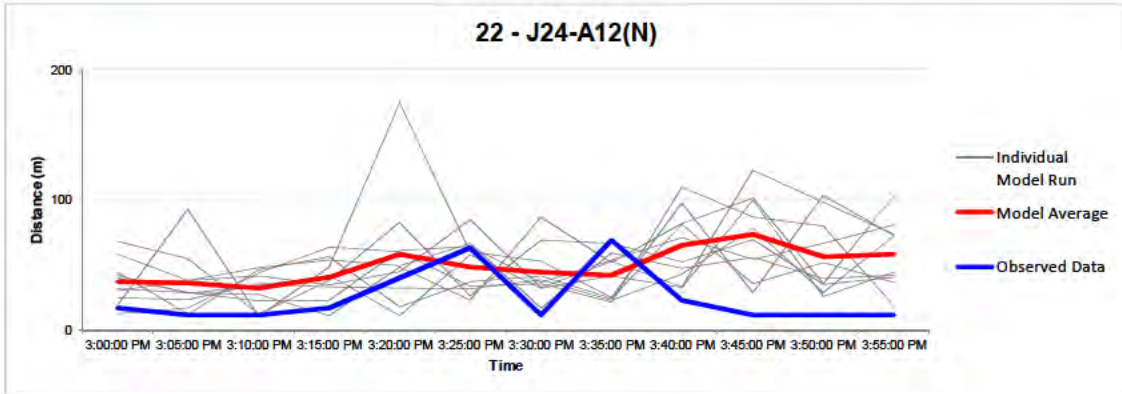
Queue Graphs
Junction Number 4
PM Peak (15:00-16:00)





Queue Graphs

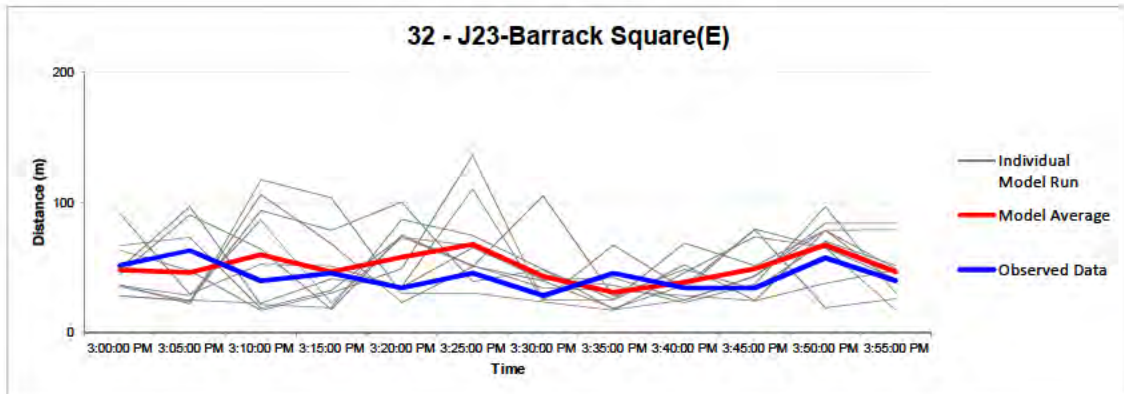
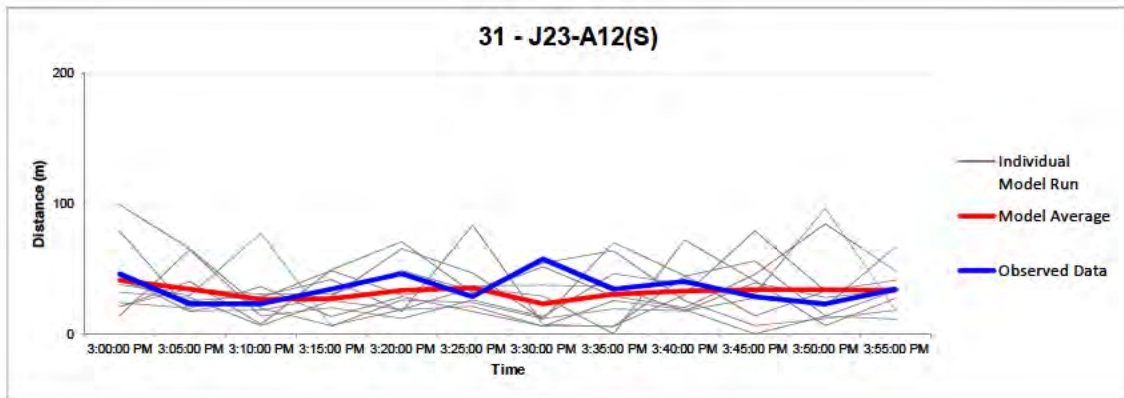
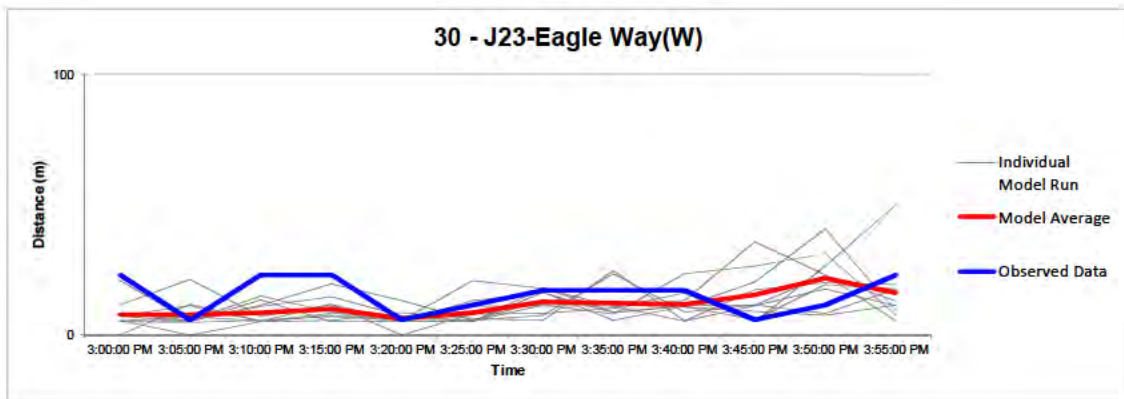
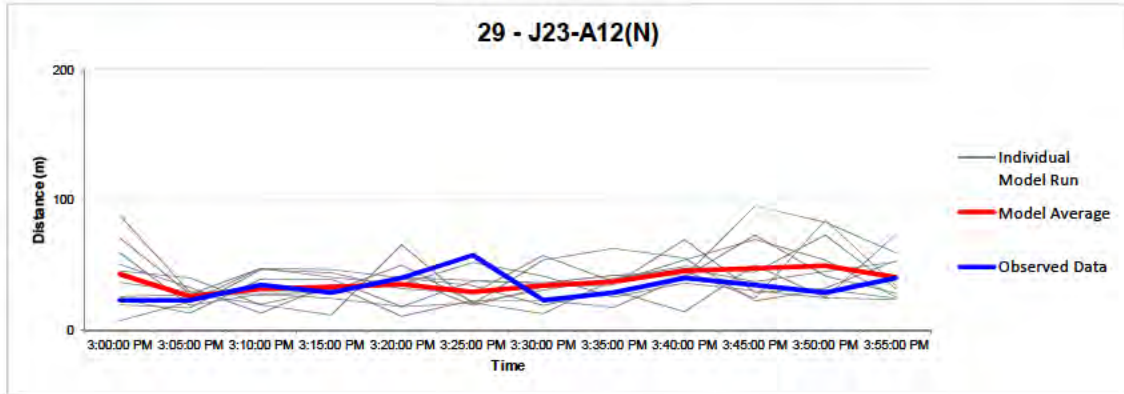
Junction Number 5
PM Peak (15:00-16:00)





Queue Graphs

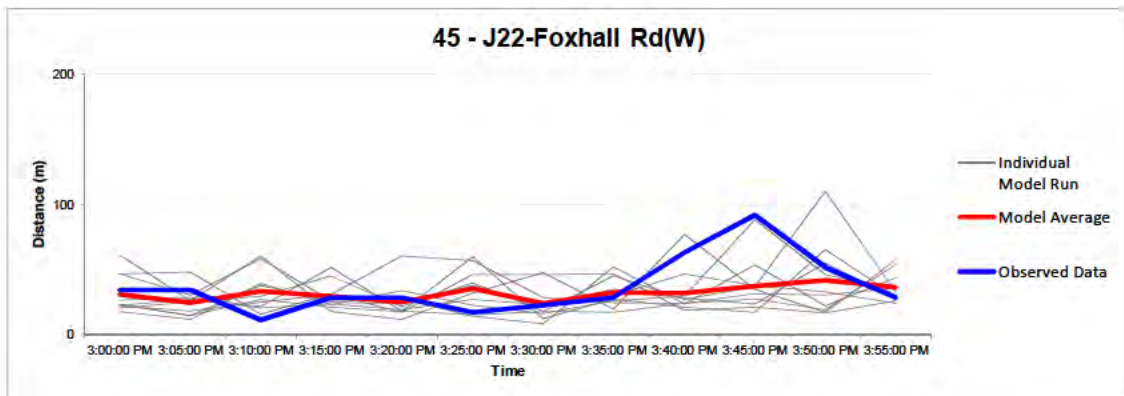
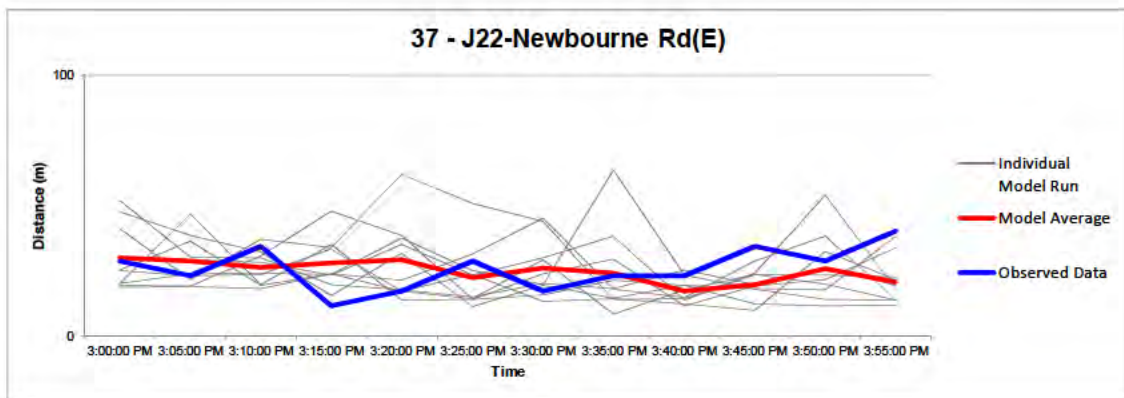
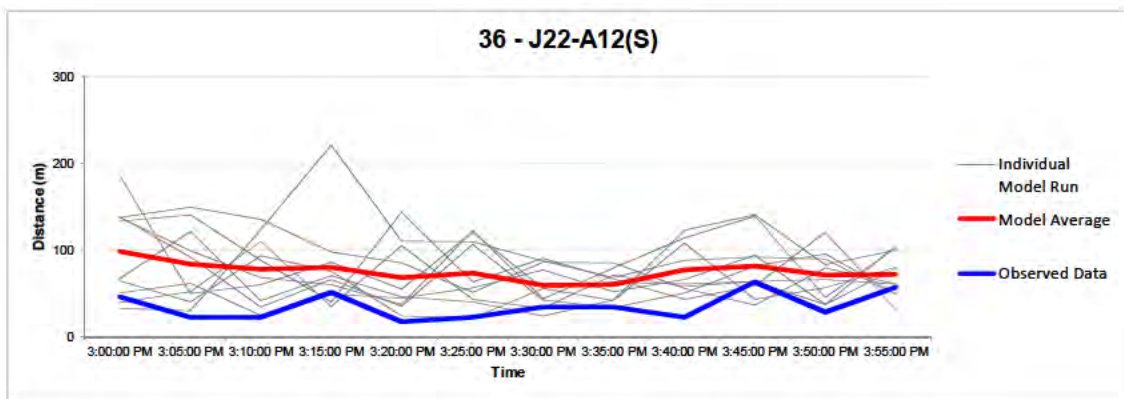
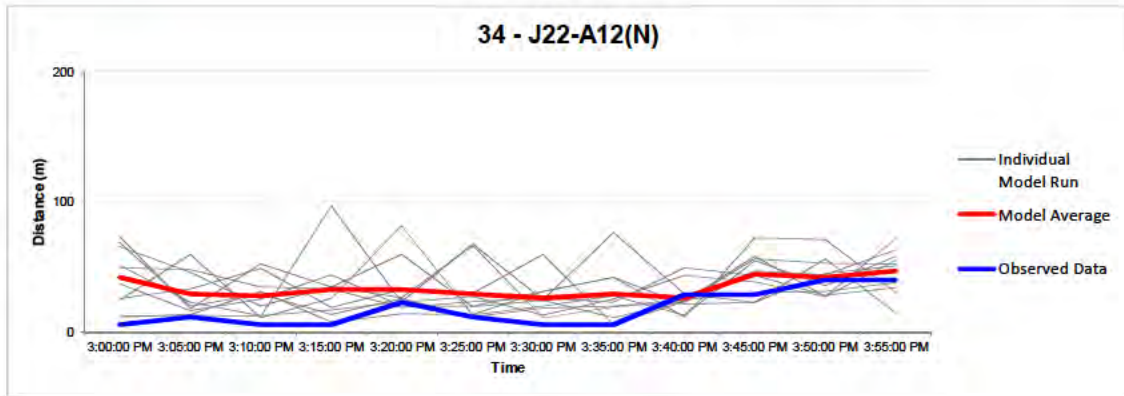
Junction Number 6
PM Peak (15:00-16:00)





Queue Graphs

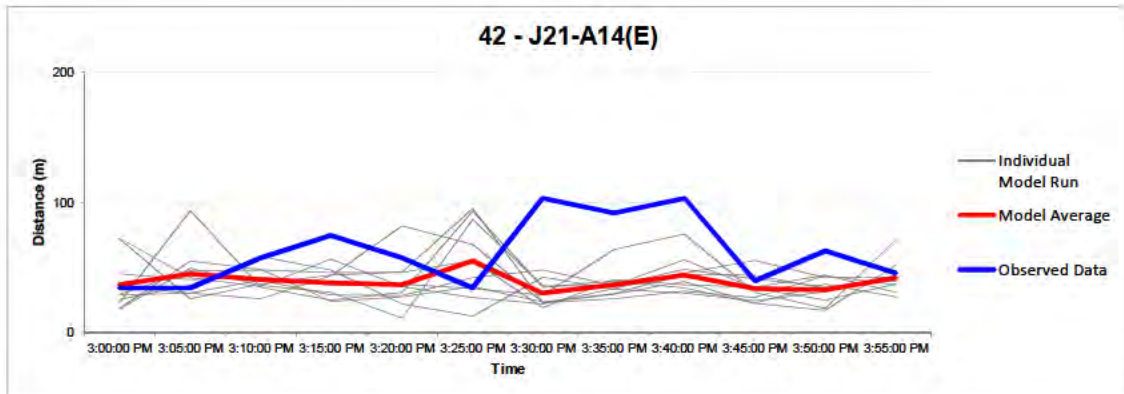
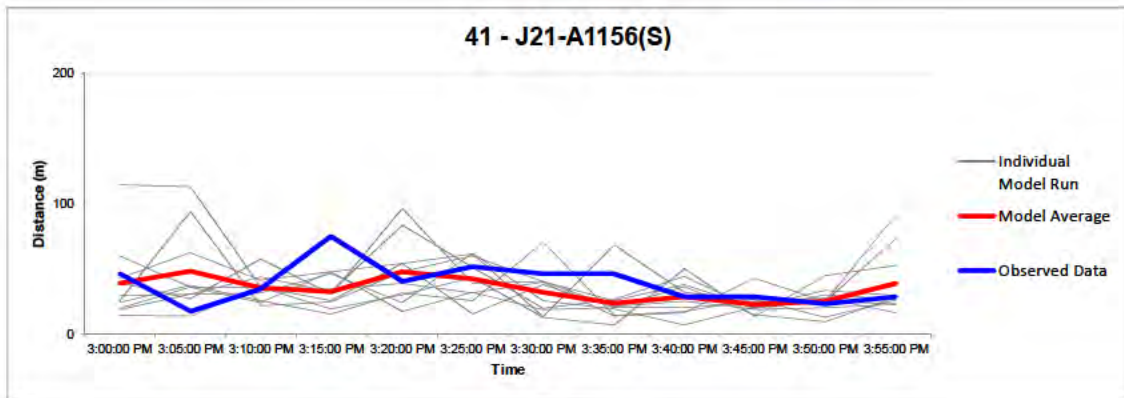
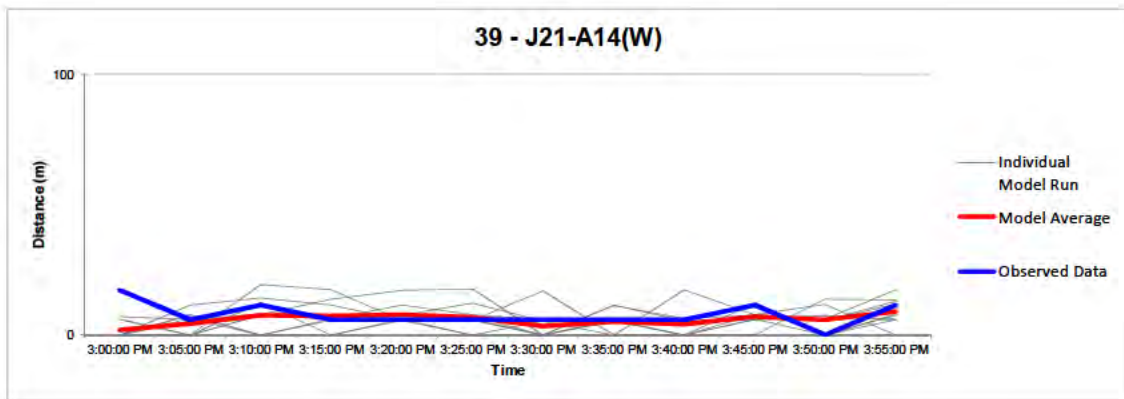
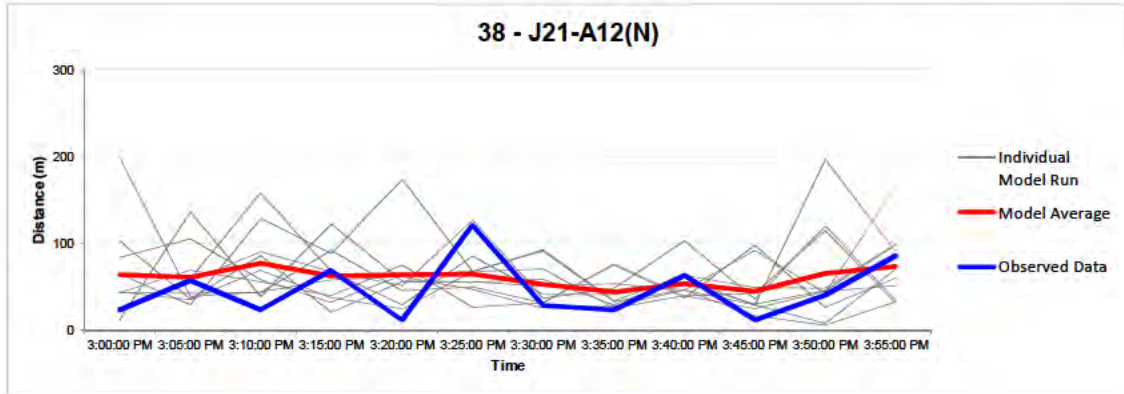
Junction Number 7
PM Peak (15:00-16:00)





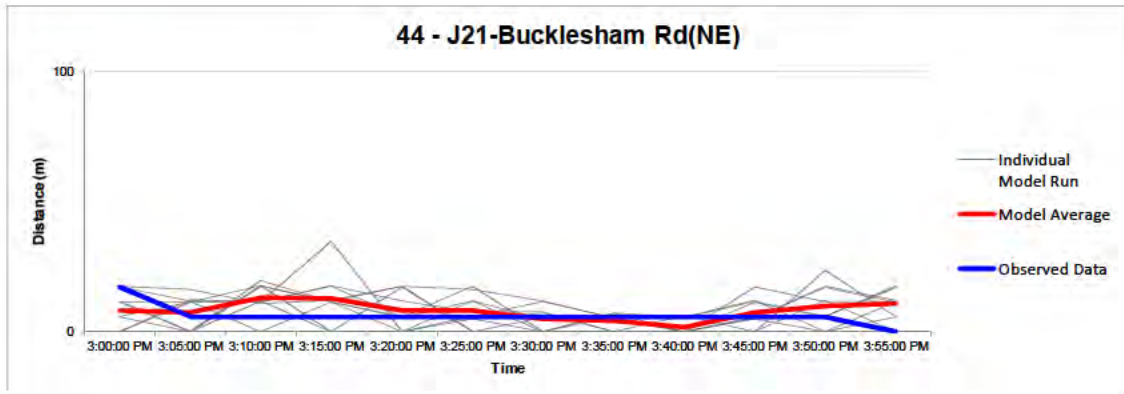
Queue Graphs

Junction Number 8
PM Peak (15:00-16:00)





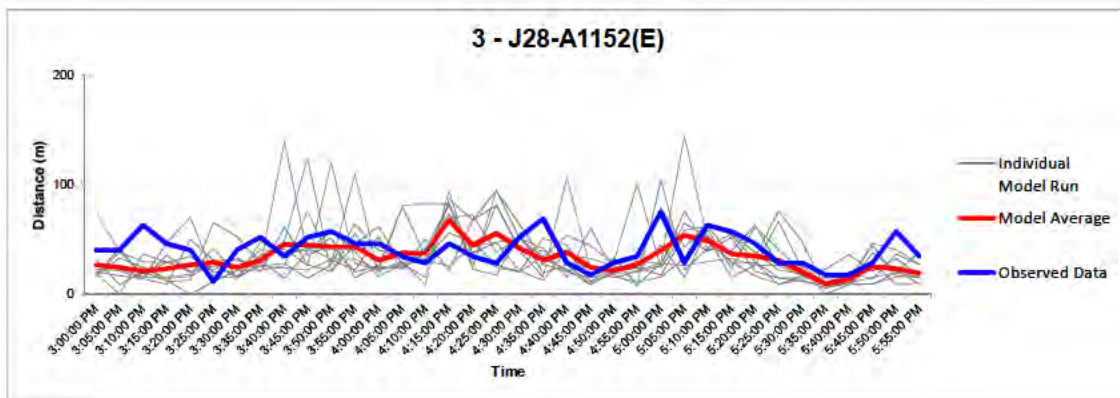
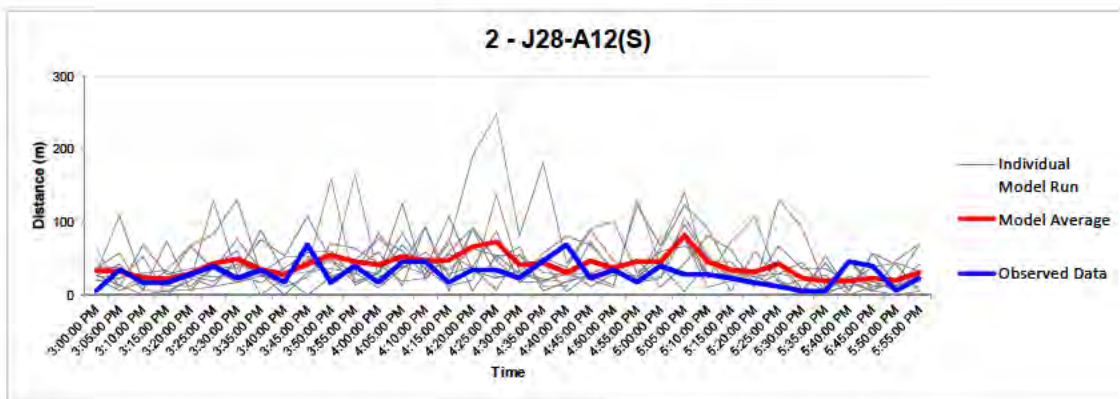
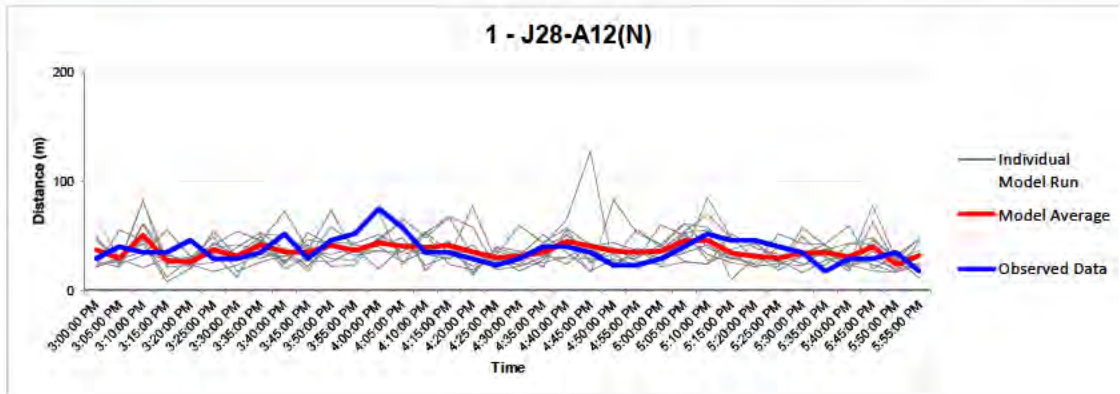
Queue Graphs
Junction Number 8
PM Peak (15:00-16:00)





Queue Graphs

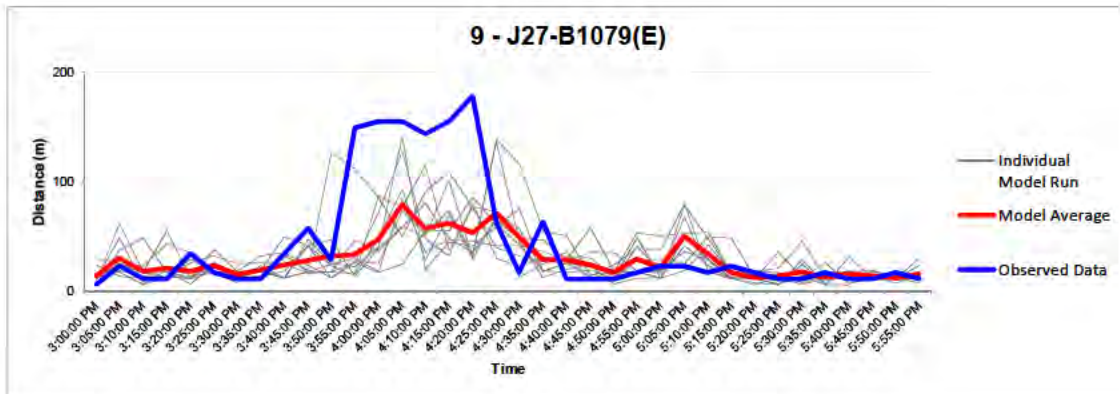
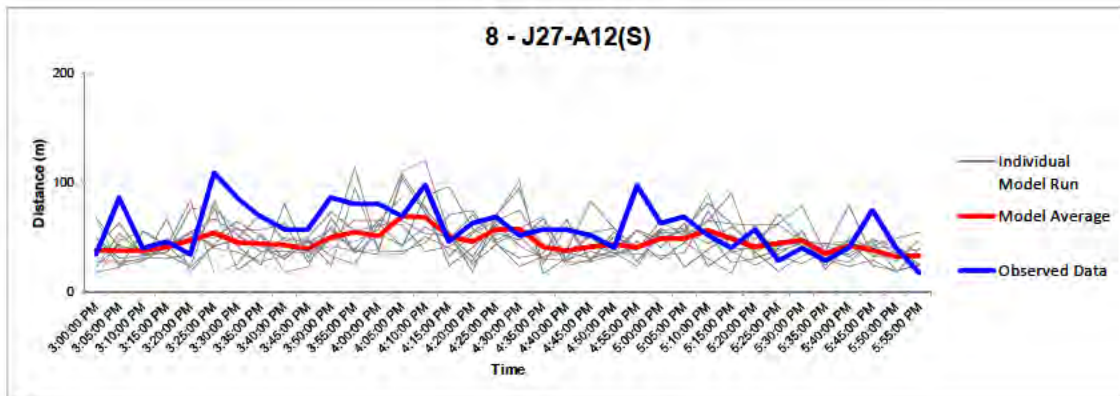
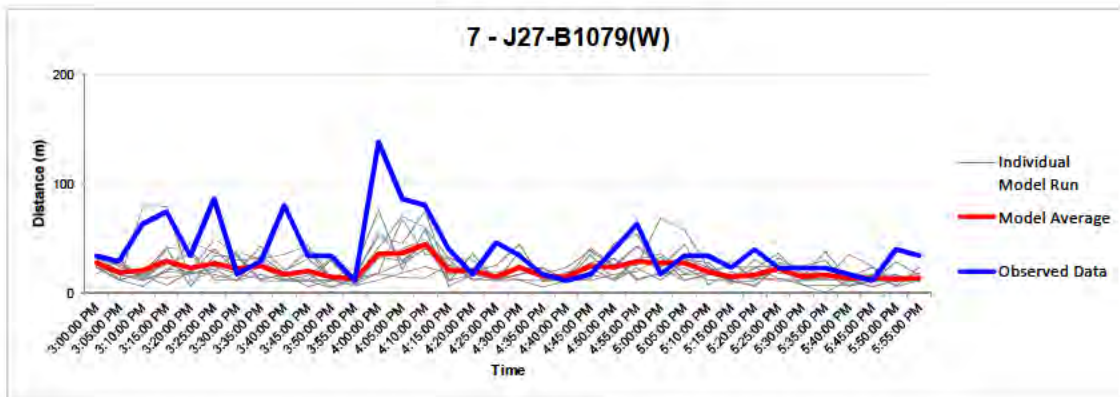
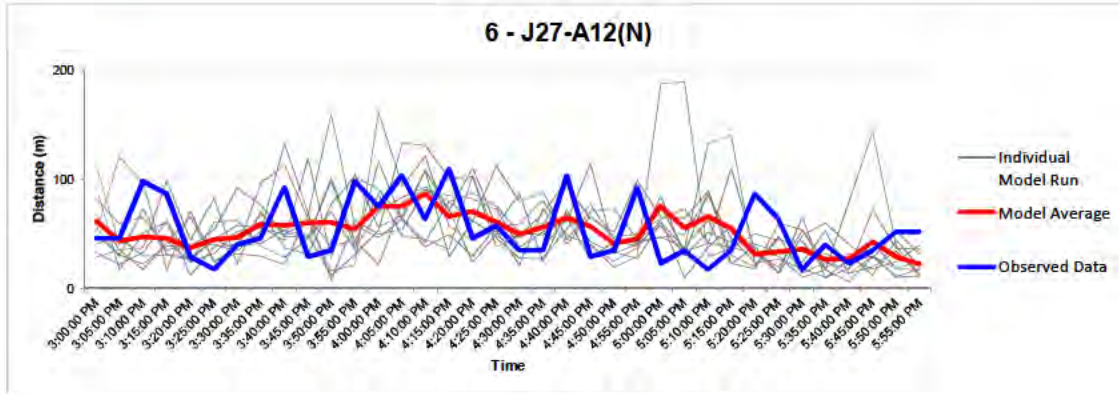
Junction Number 1
PM Period





Queue Graphs

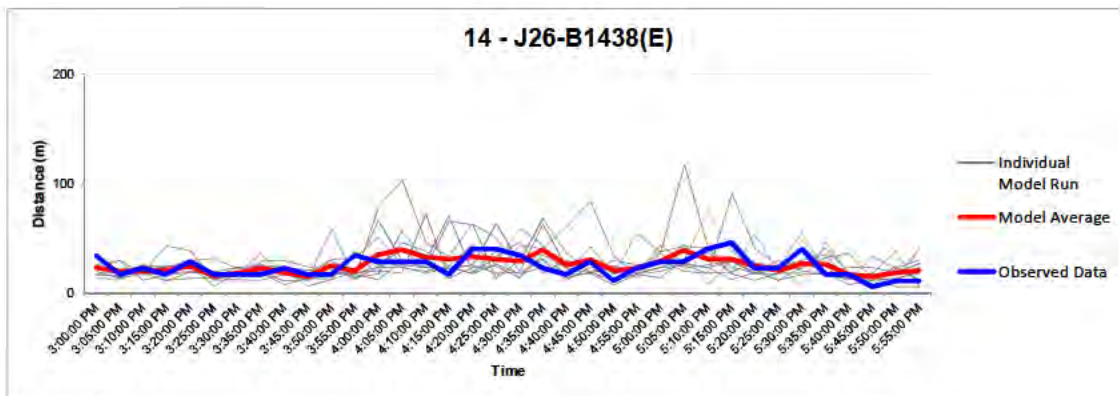
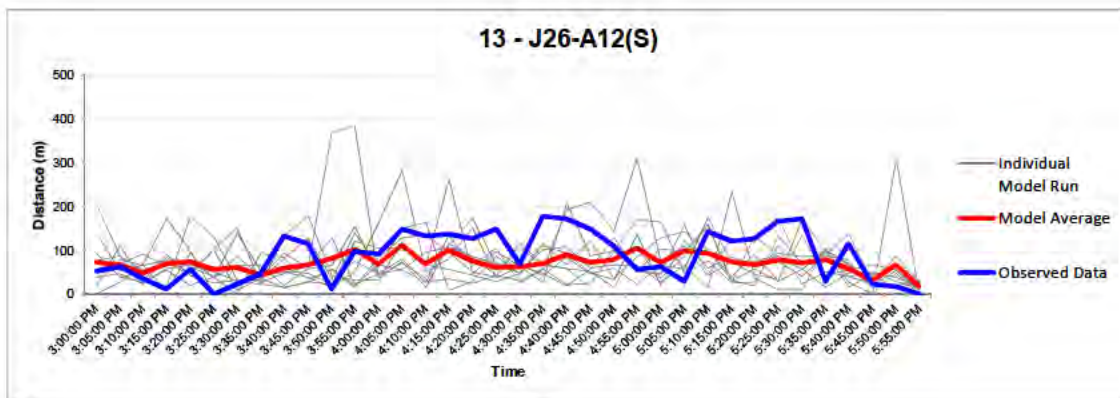
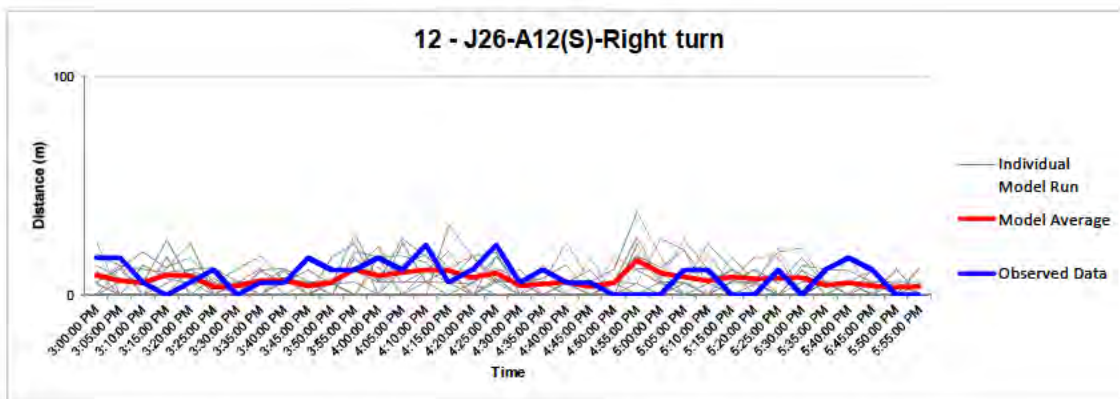
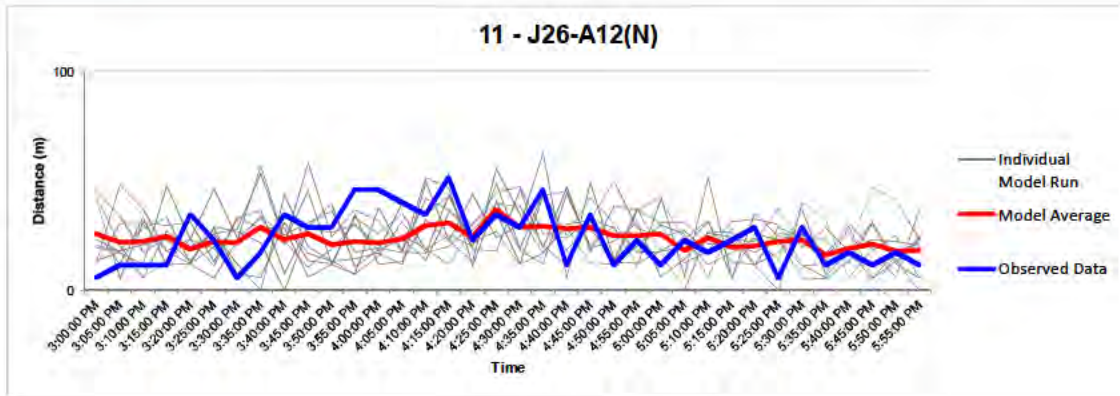
Junction Number 2
PM Period





Queue Graphs

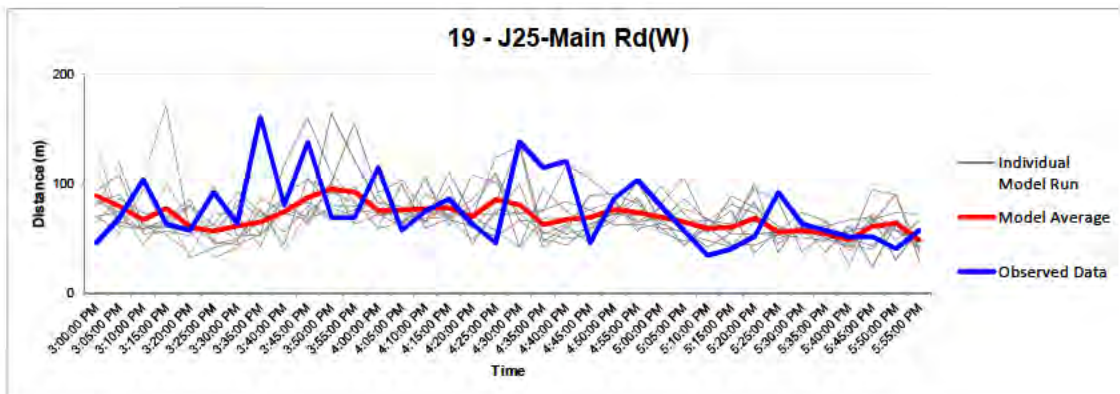
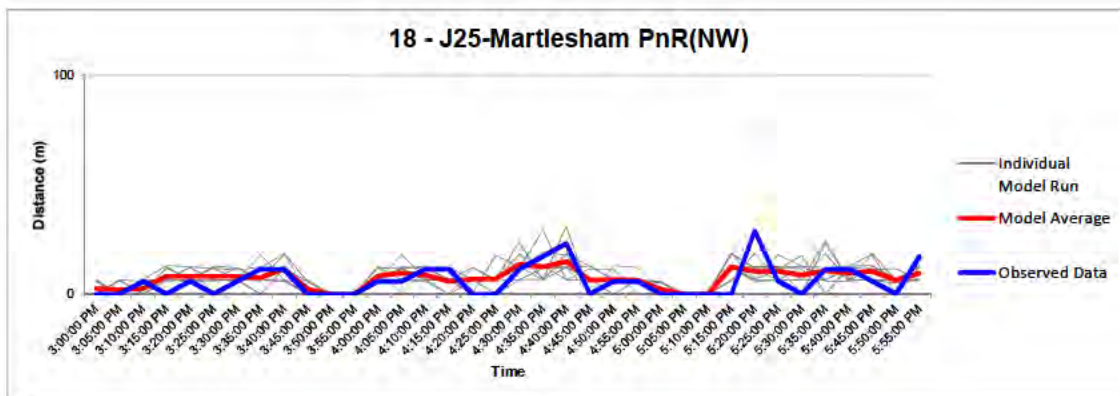
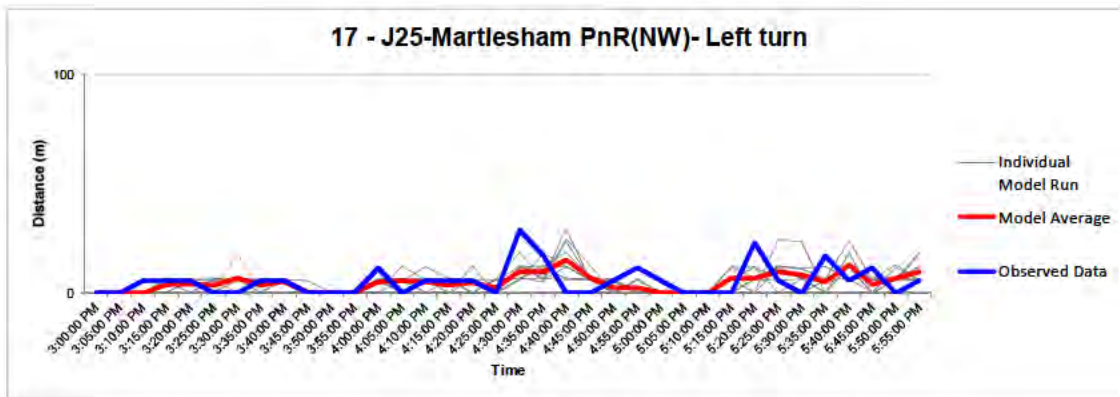
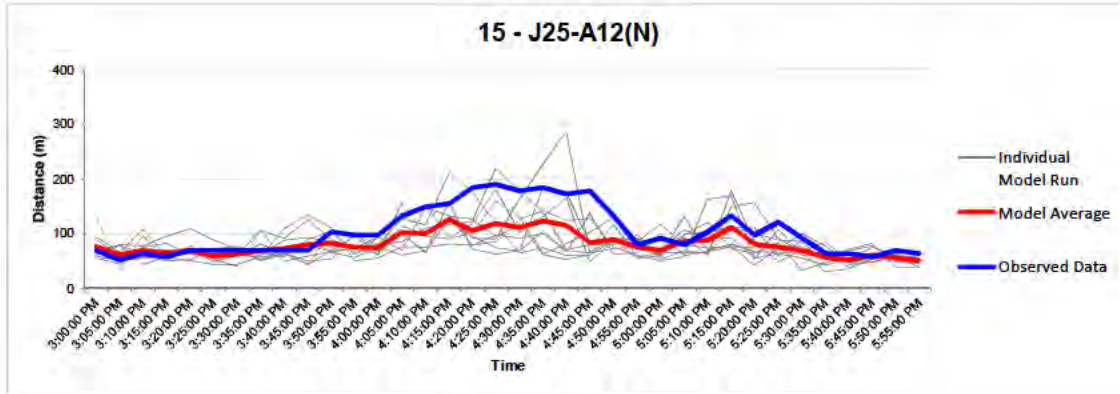
Junction Number 3
PM Period





Queue Graphs

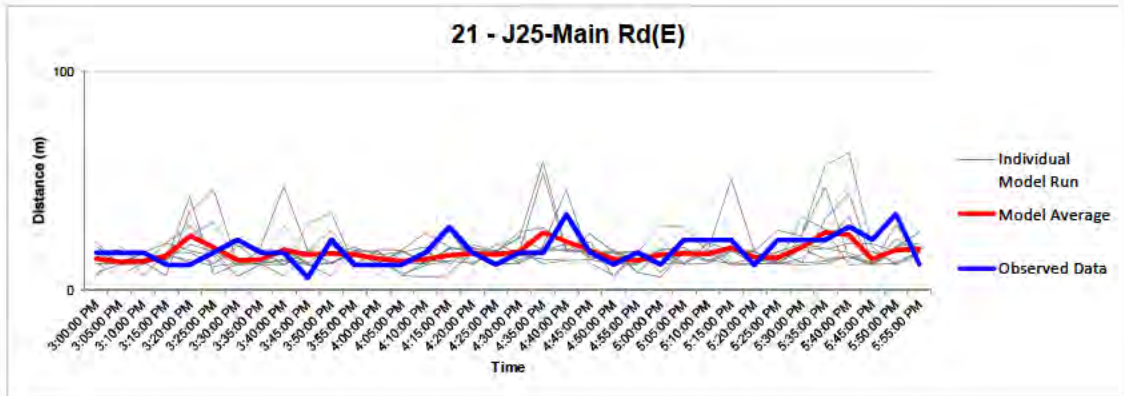
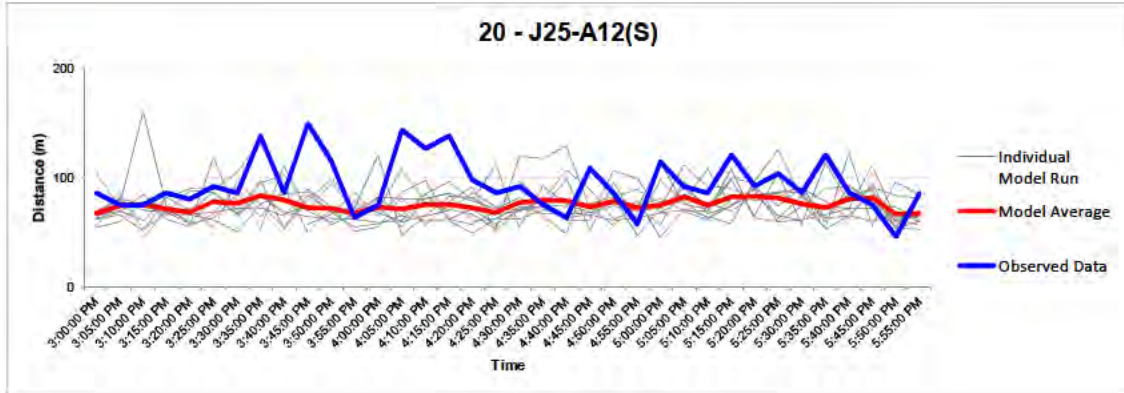
Junction Number 4
PM Period





Queue Graphs

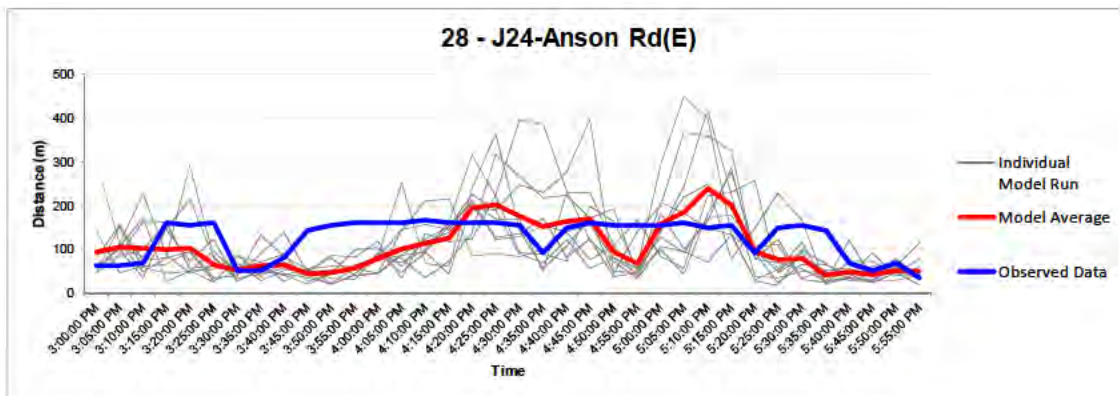
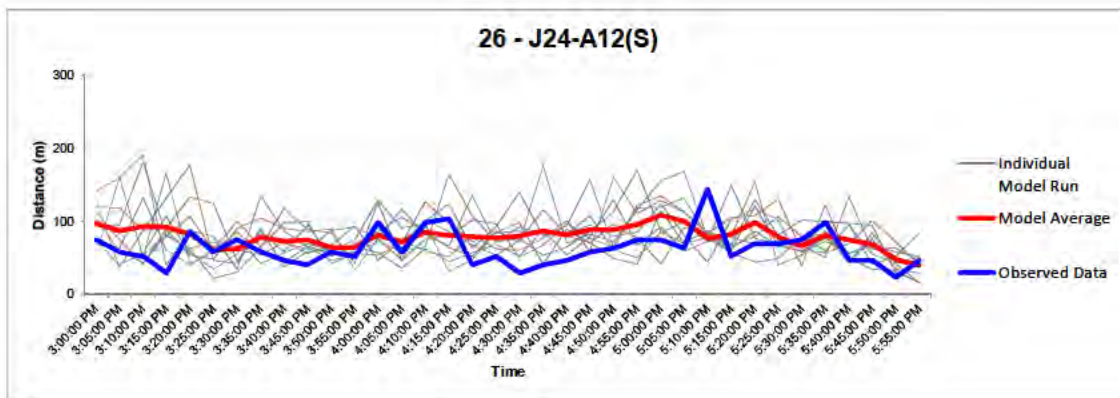
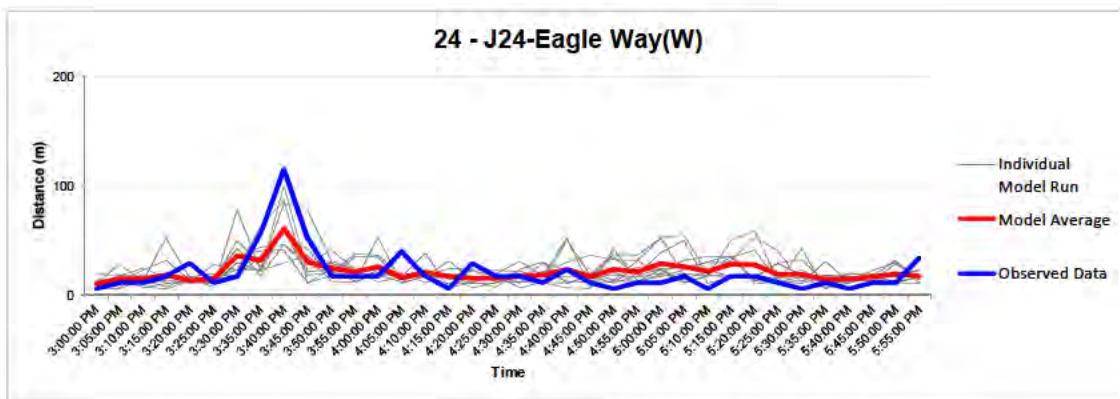
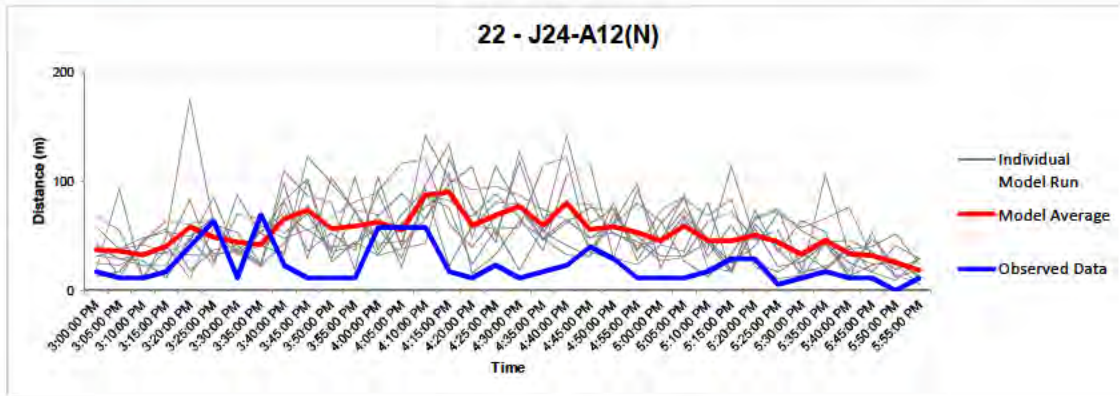
Junction Number 4
PM Period





Queue Graphs

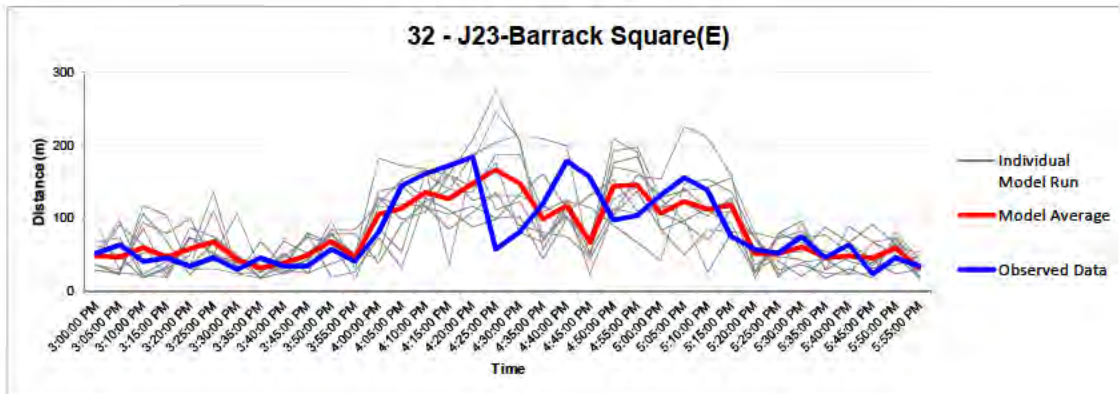
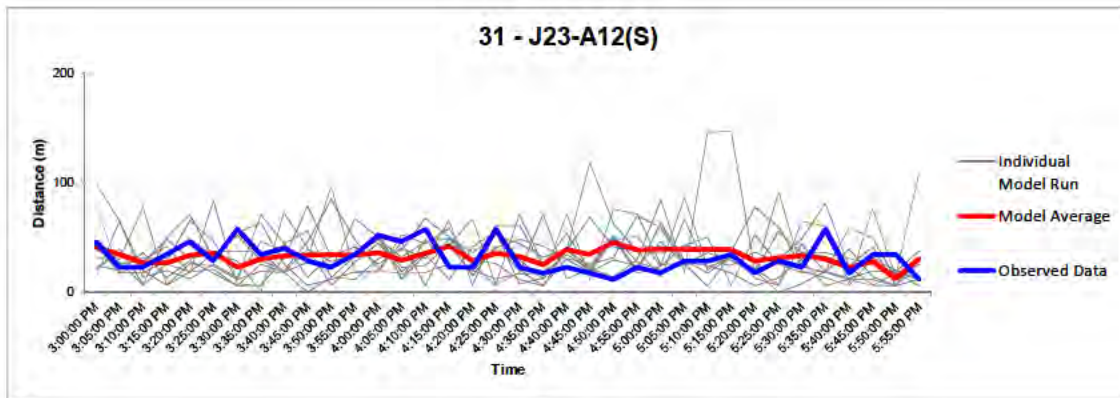
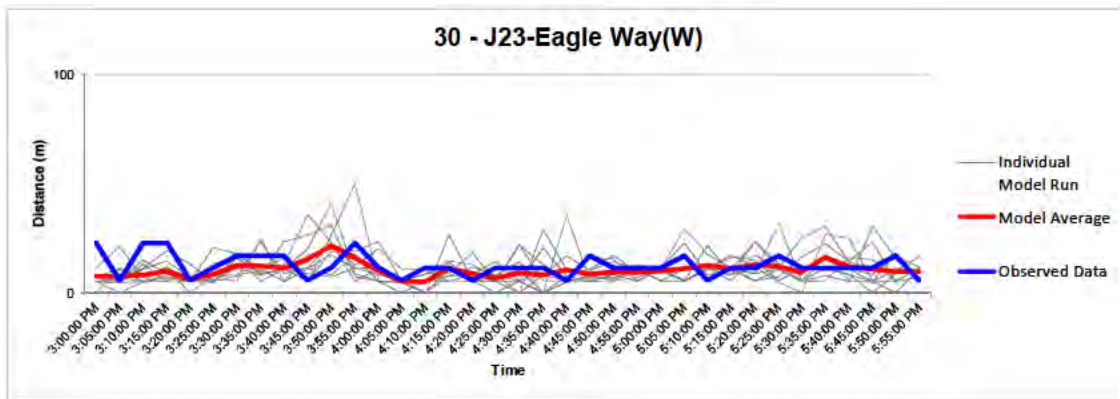
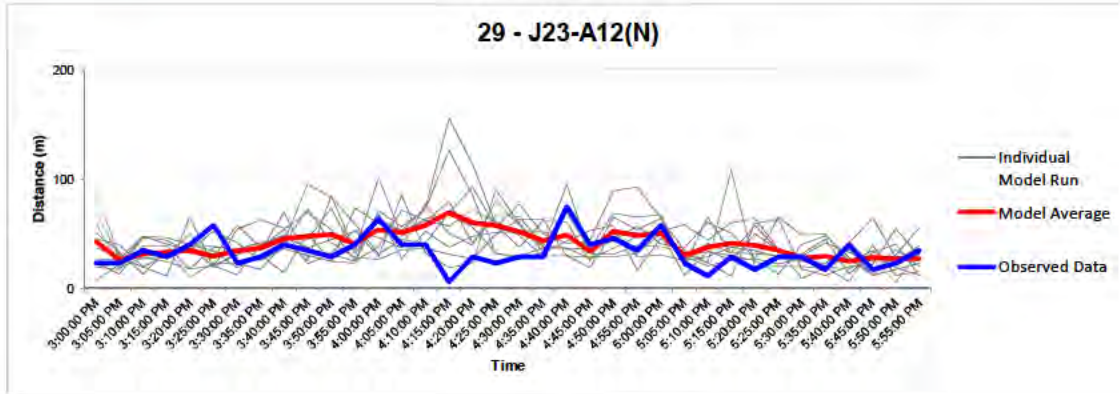
Junction Number 5
PM Period





Queue Graphs

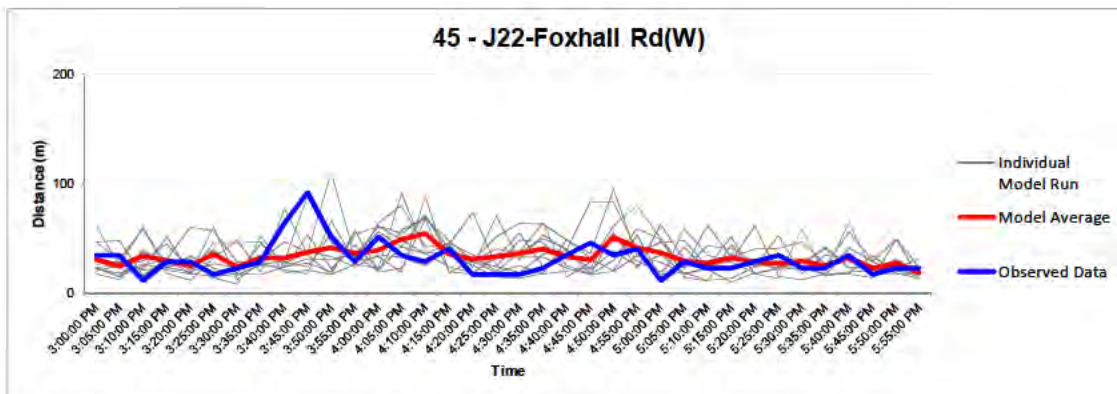
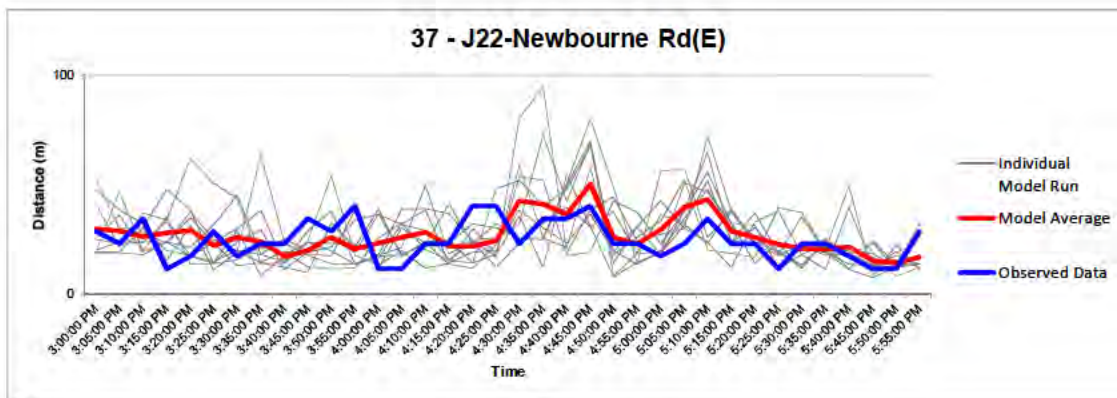
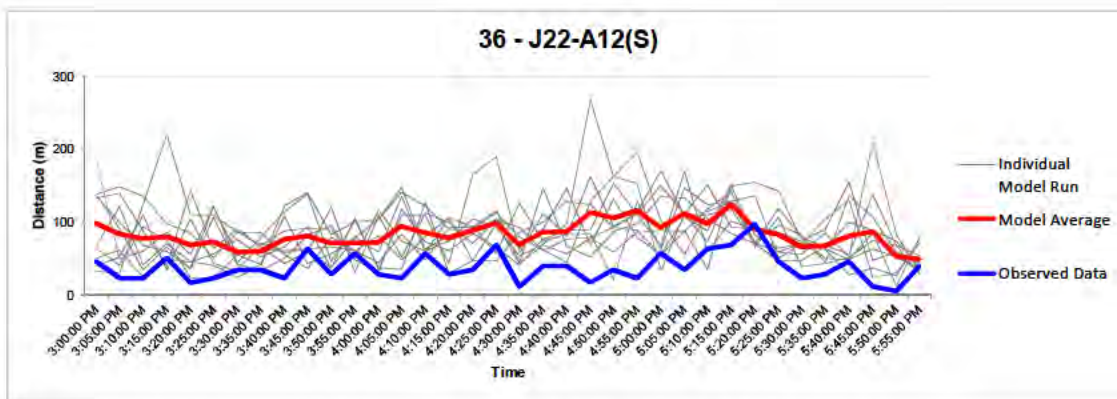
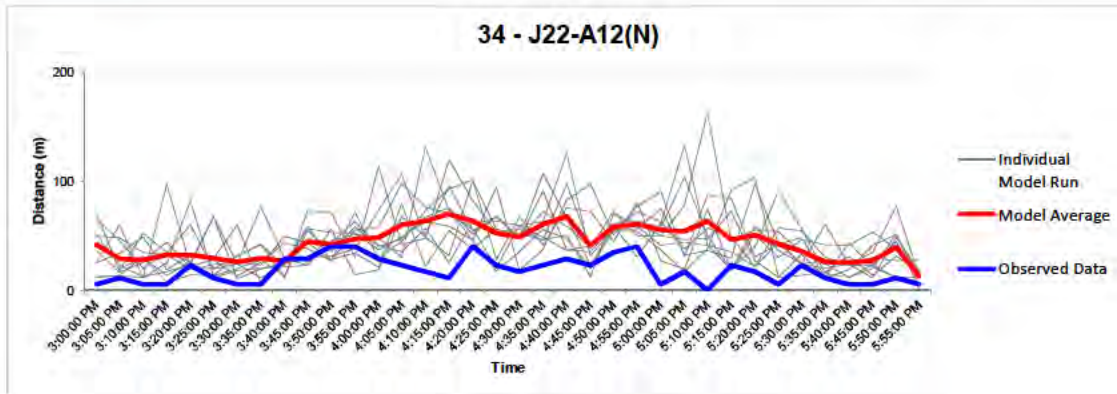
Junction Number 6
PM Period





Queue Graphs

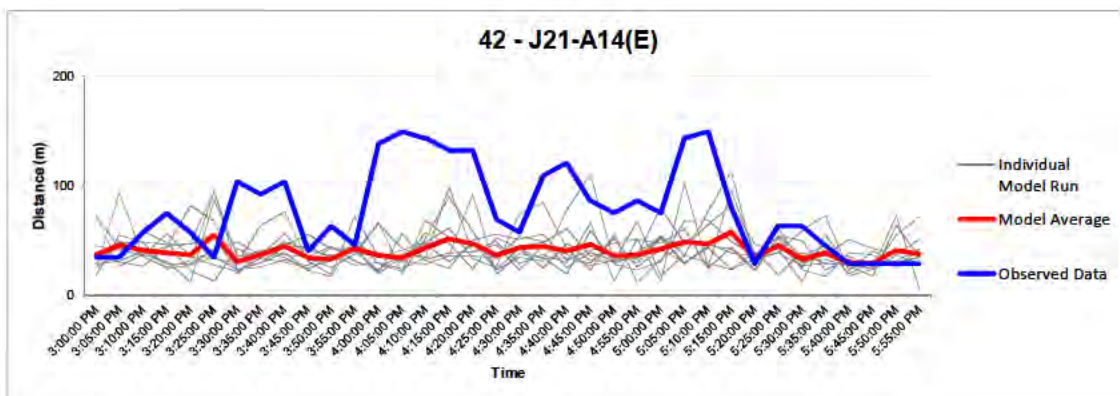
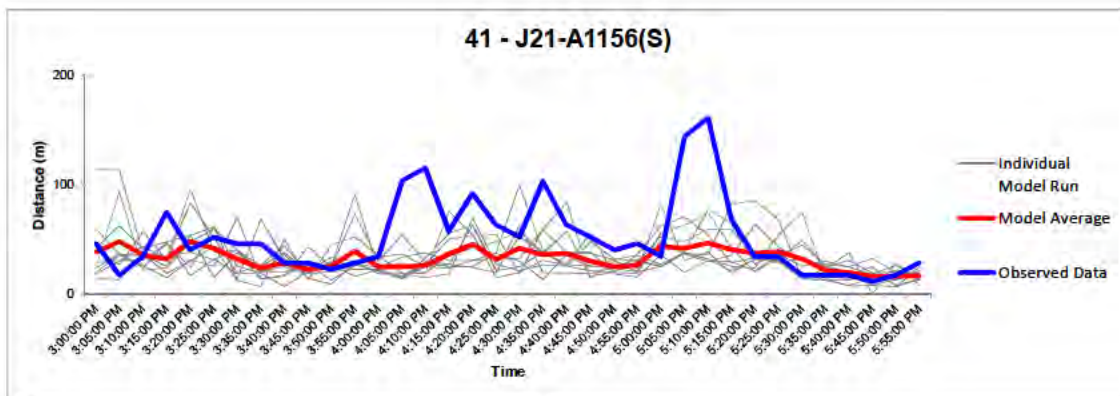
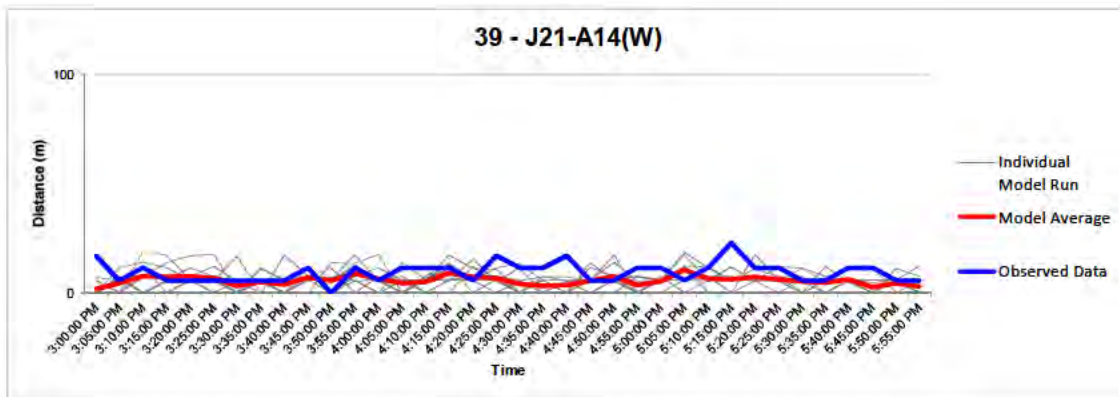
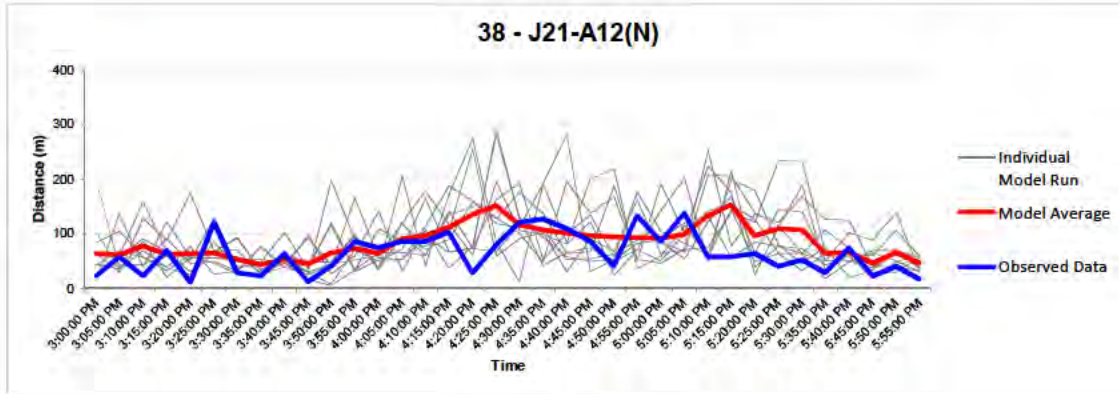
Junction Number 7
PM Period





Queue Graphs

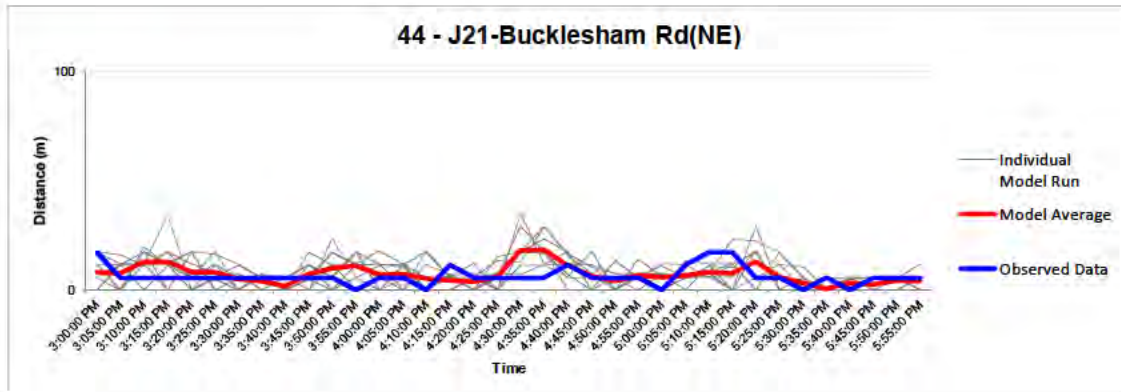
Junction Number 8
PM Period





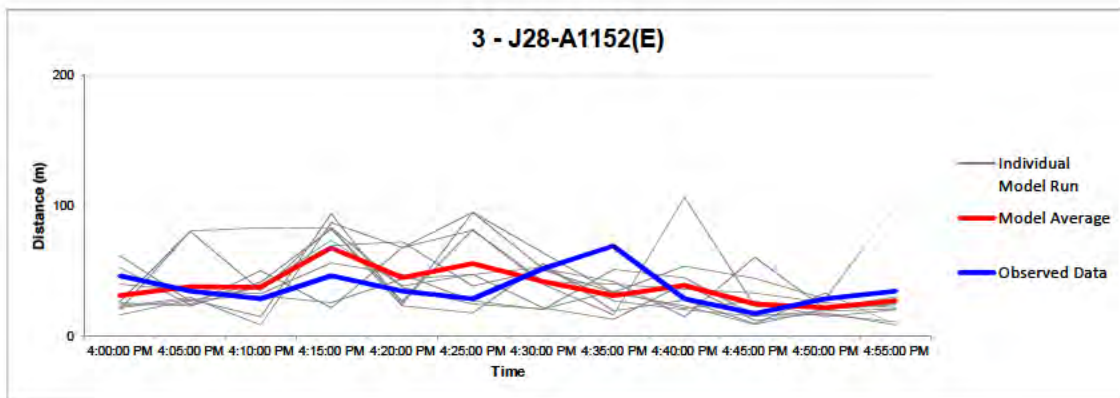
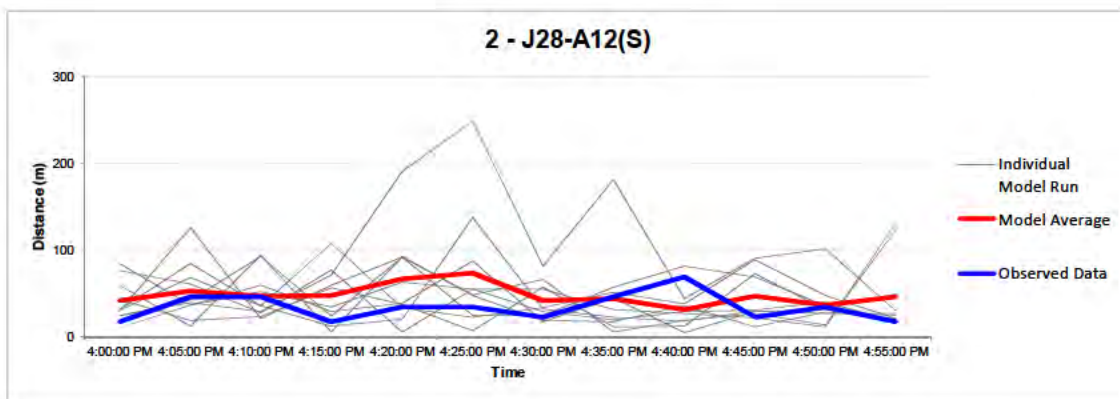
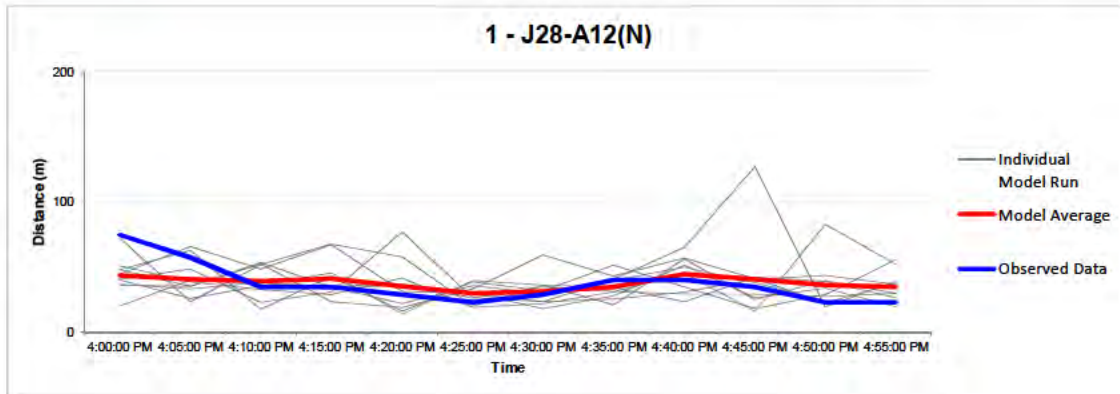
Queue Graphs

Junction Number 8
PM Period





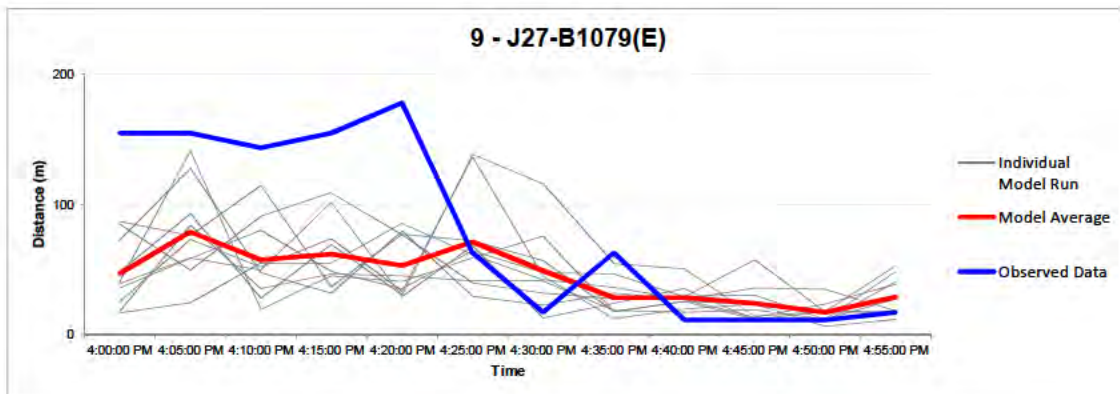
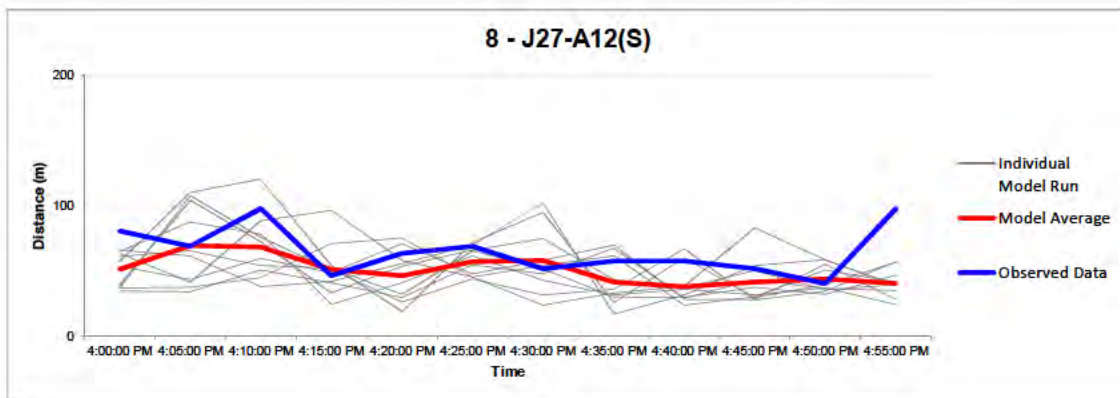
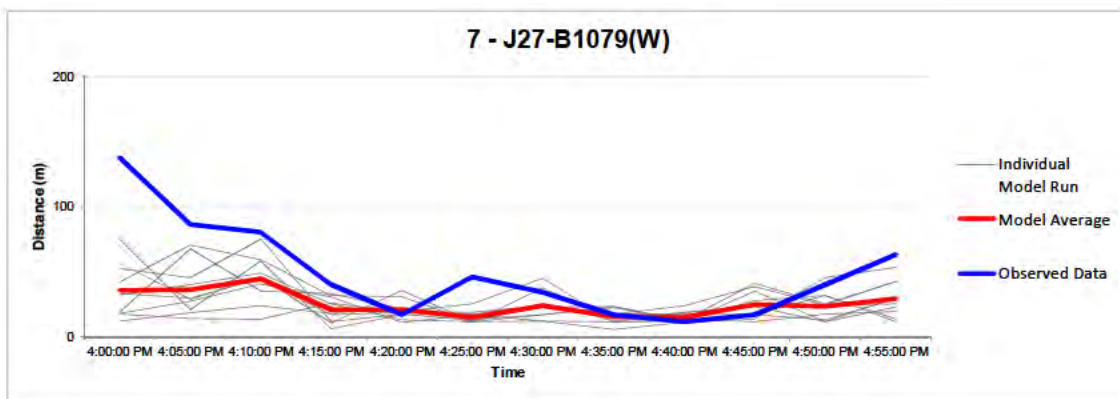
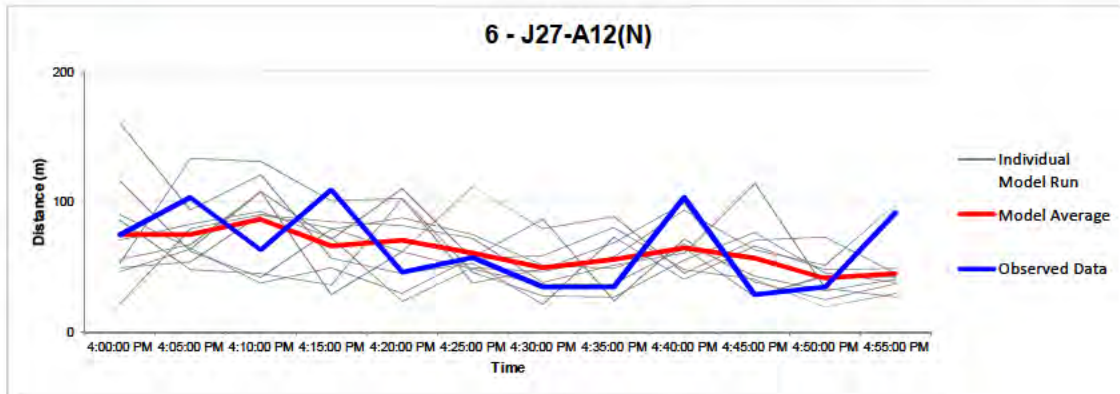
Queue Graphs
Junction Number 1
PM Peak (16:00-17:00)





Queue Graphs

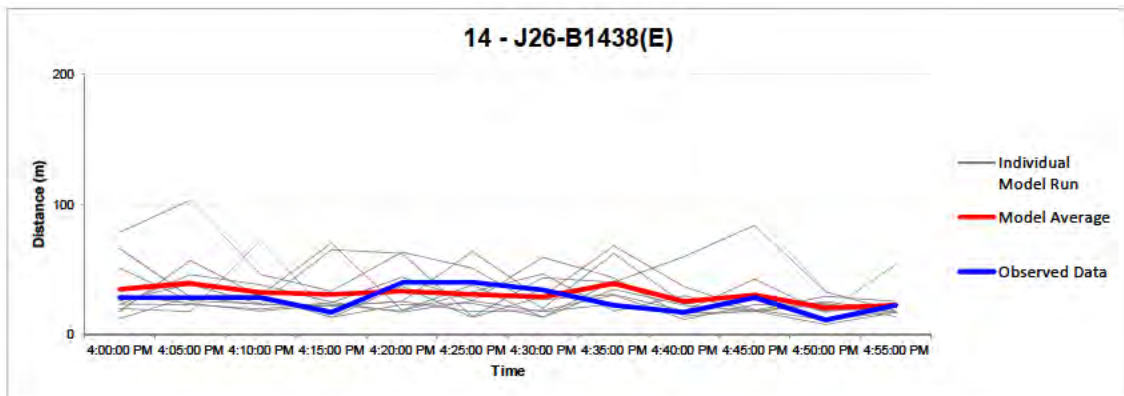
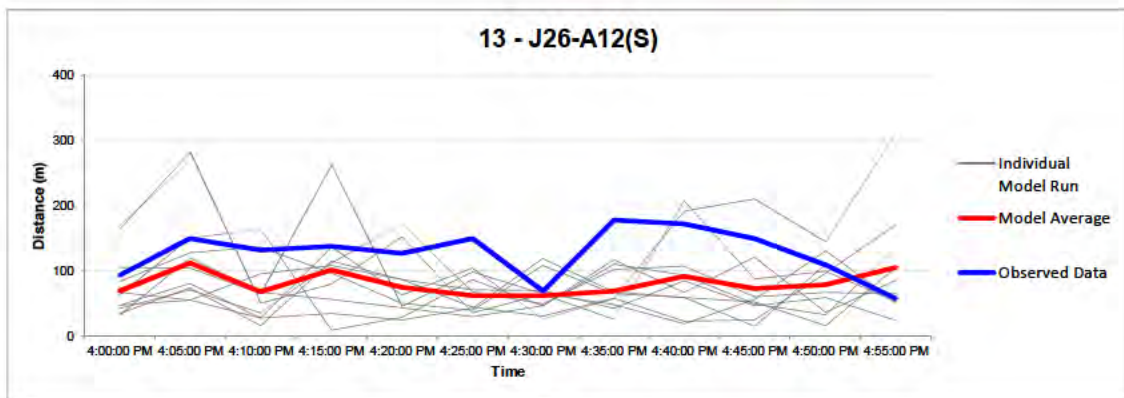
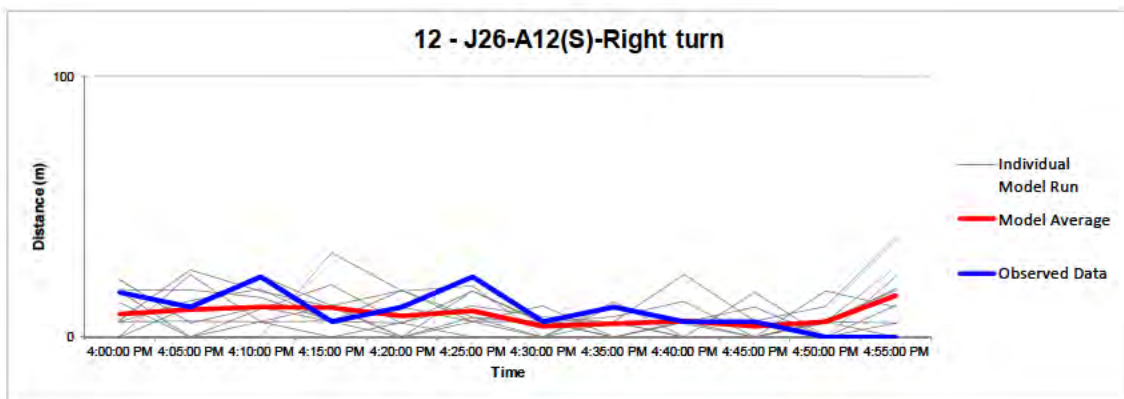
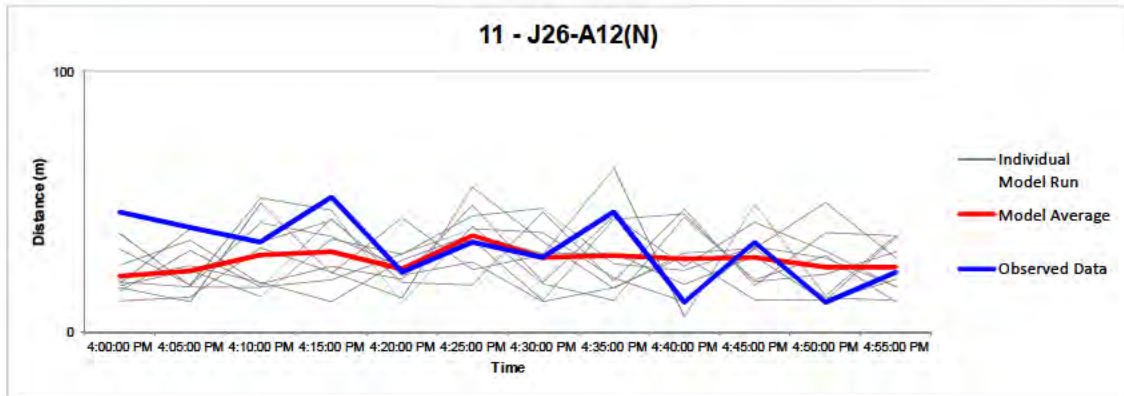
Junction Number 2
PM Peak (16:00-17:00)





Queue Graphs

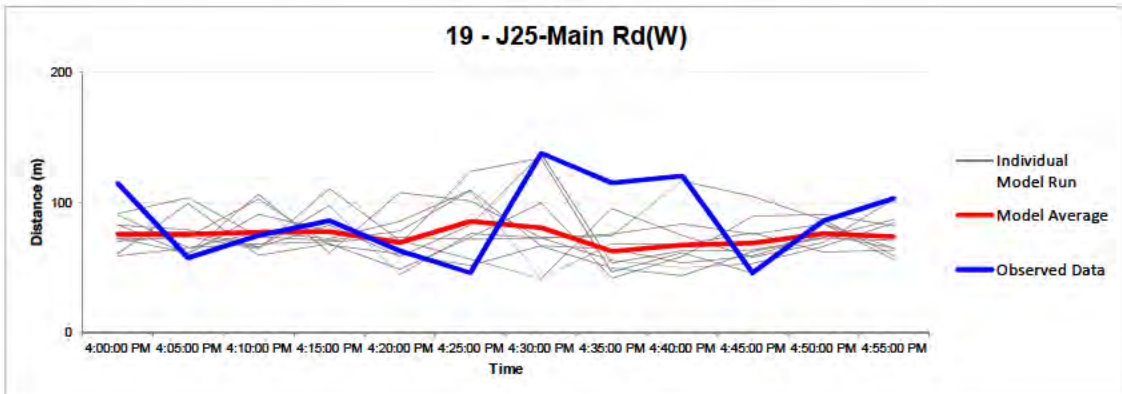
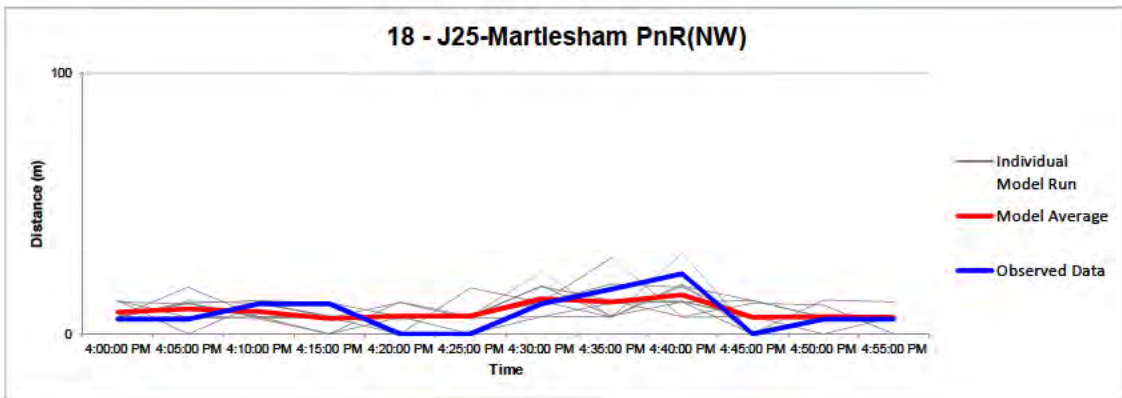
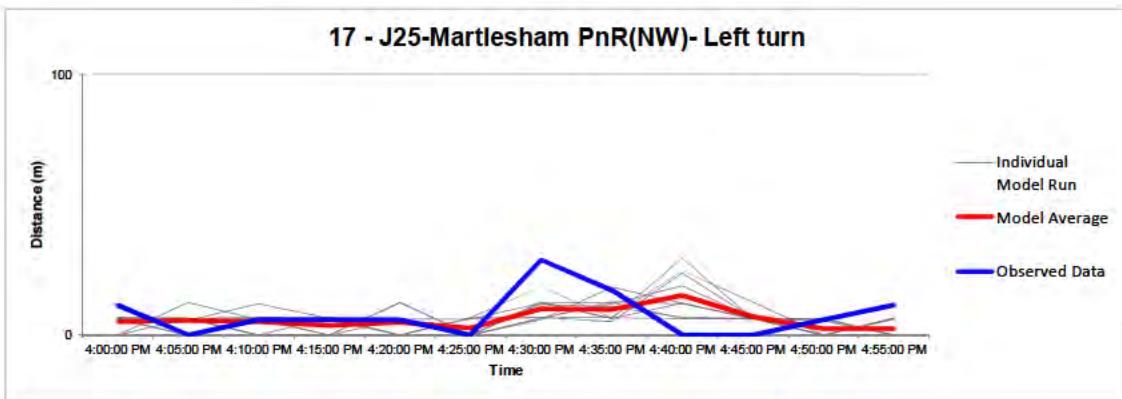
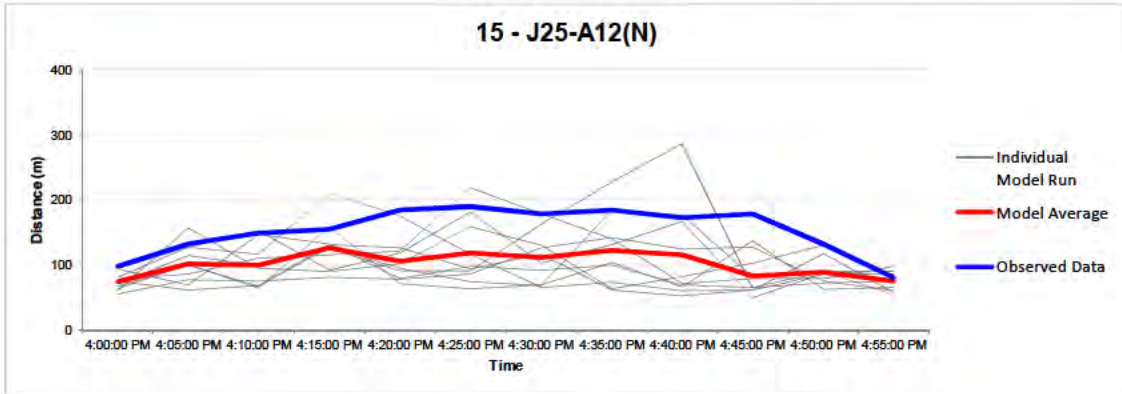
Junction Number 3
PM Peak (16:00-17:00)





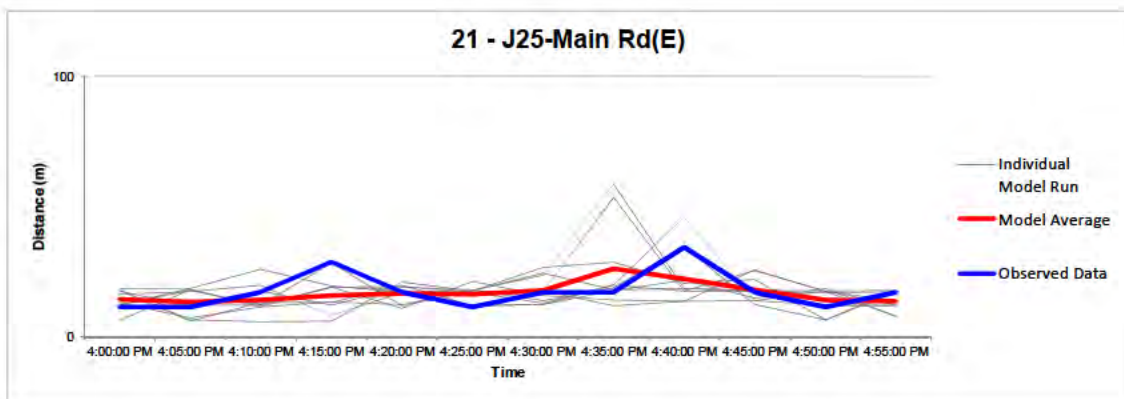
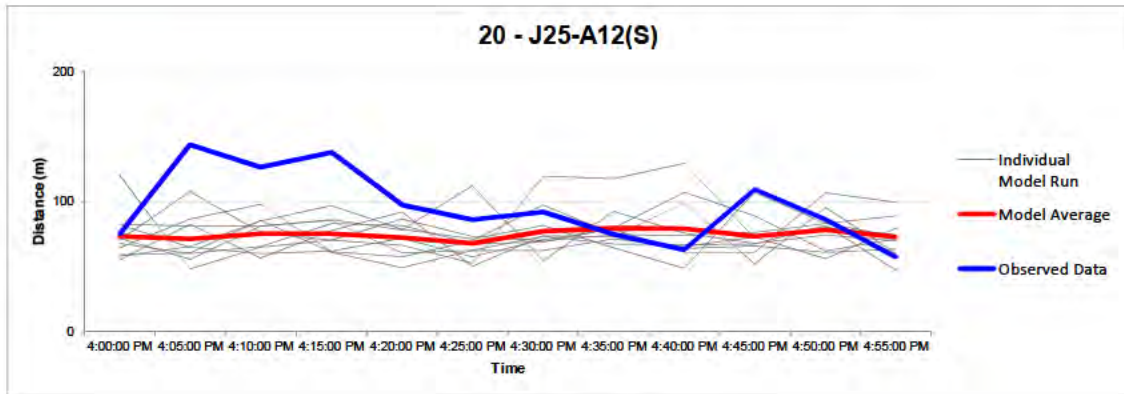
Queue Graphs

Junction Number 4
PM Peak (16:00-17:00)





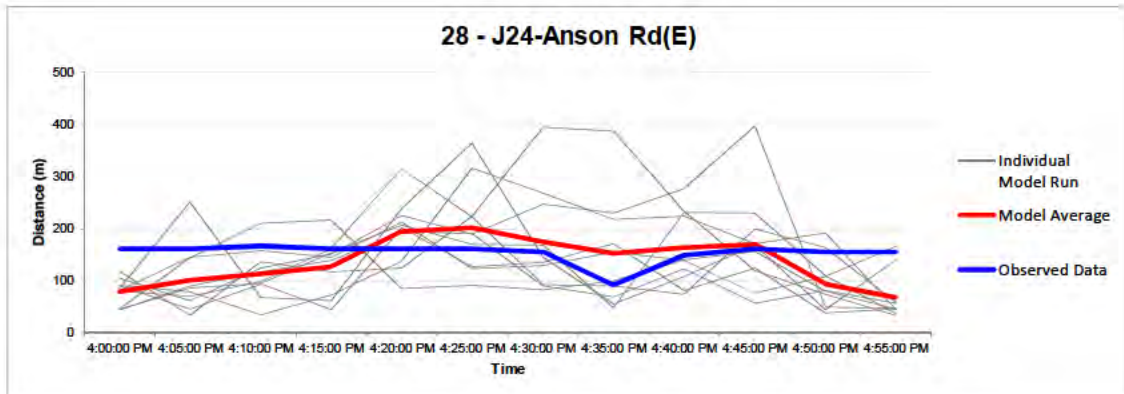
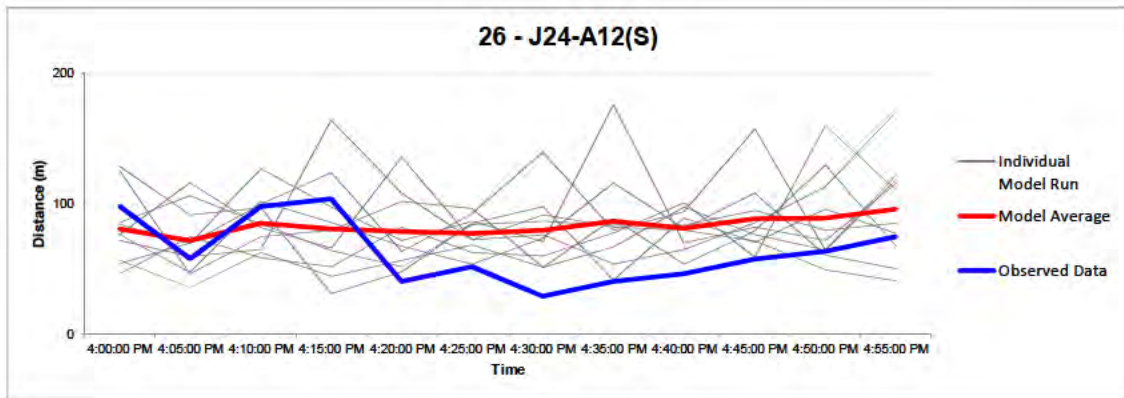
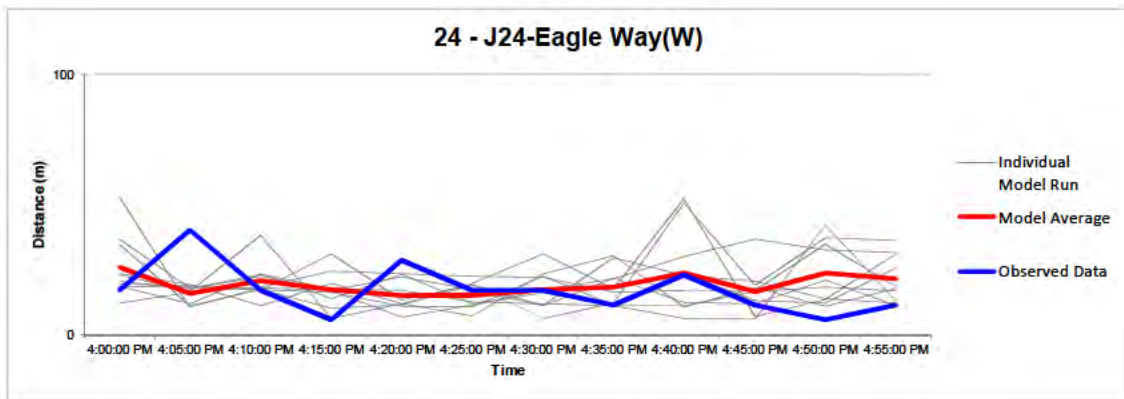
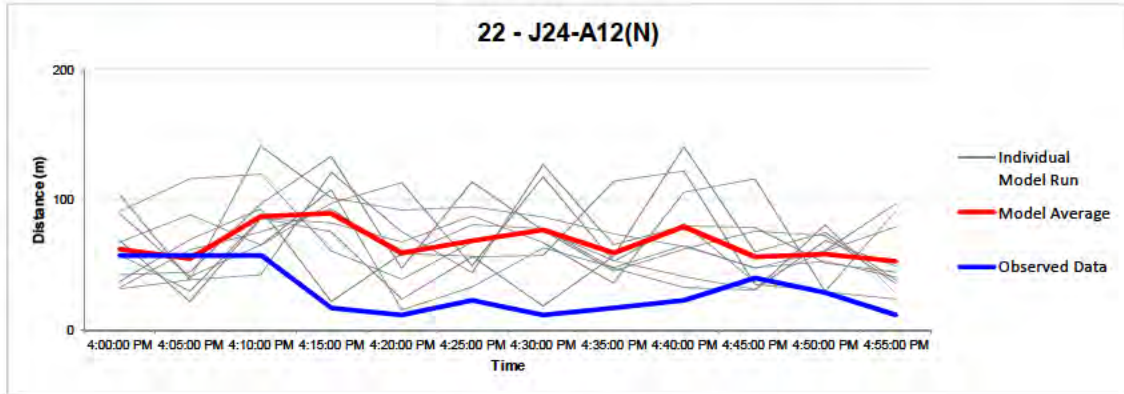
Queue Graphs
Junction Number 4
PM Peak (16:00-17:00)





Queue Graphs

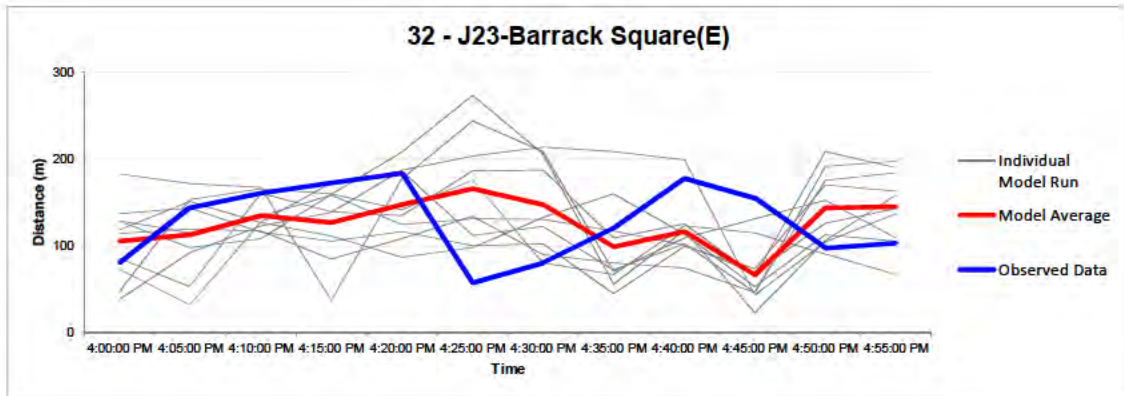
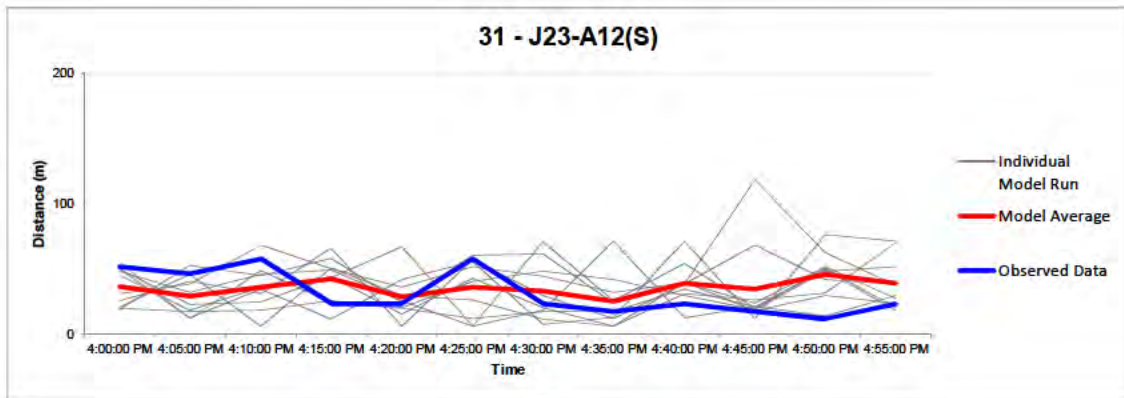
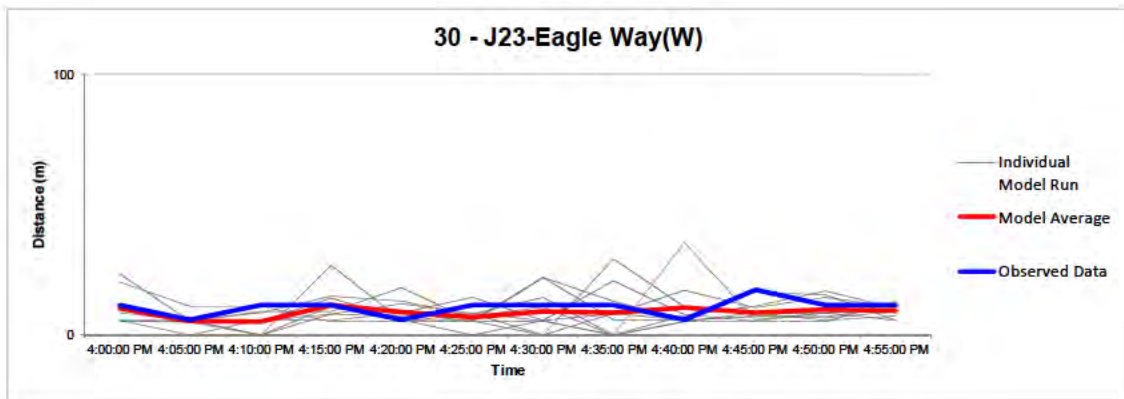
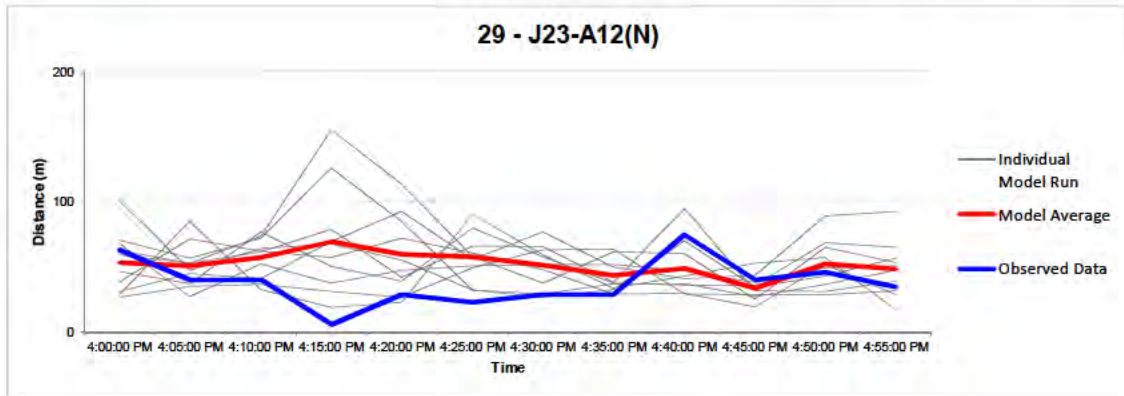
Junction Number 5
PM Peak (16:00-17:00)





Queue Graphs

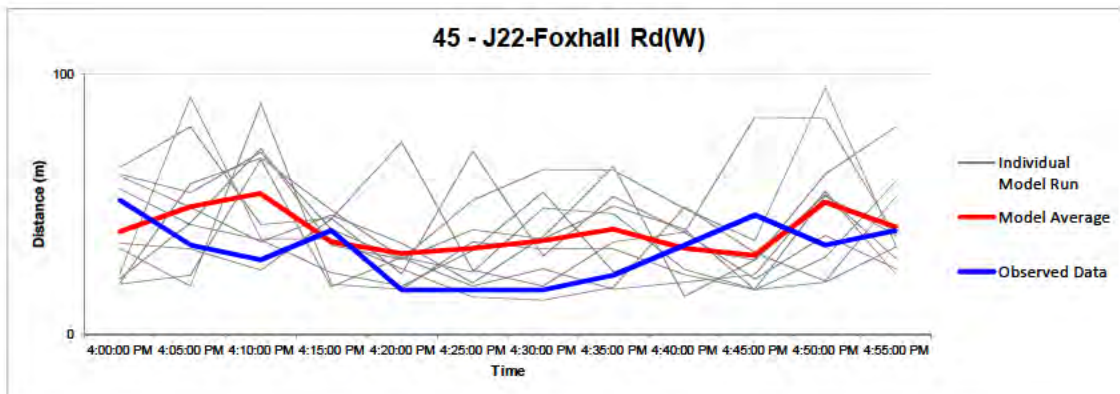
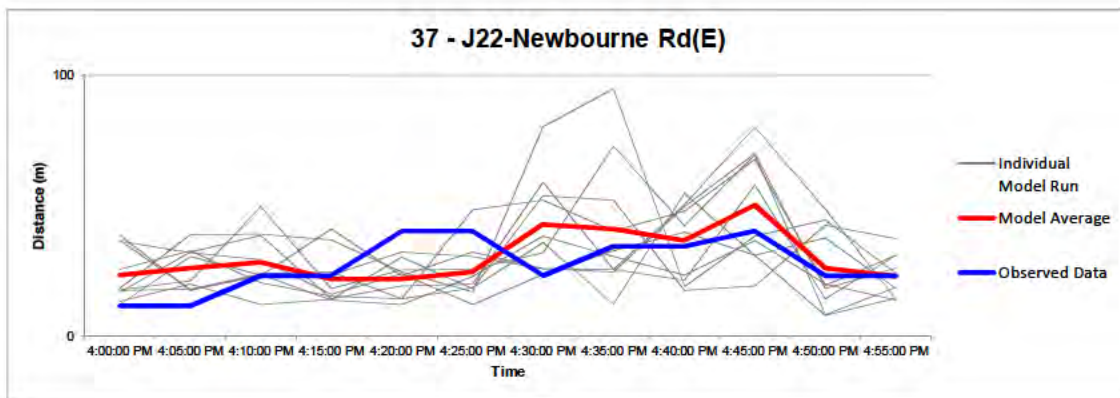
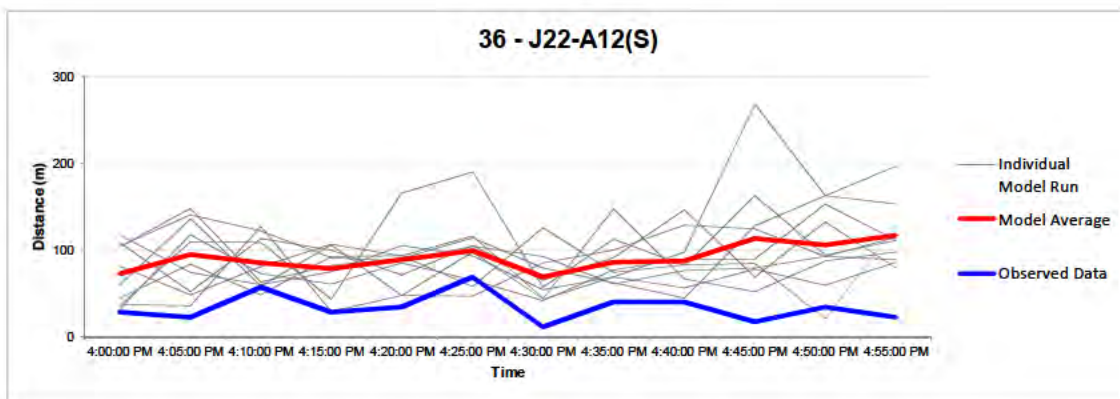
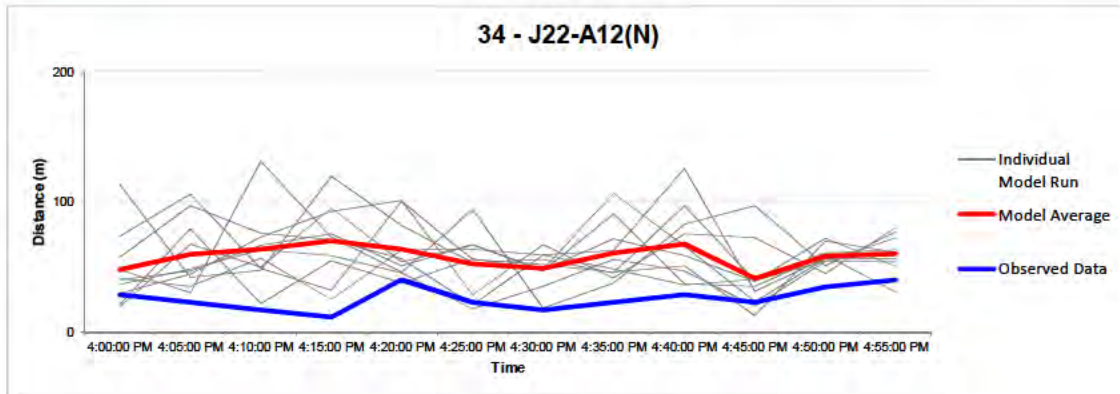
Junction Number 6
PM Peak (16:00-17:00)





Queue Graphs

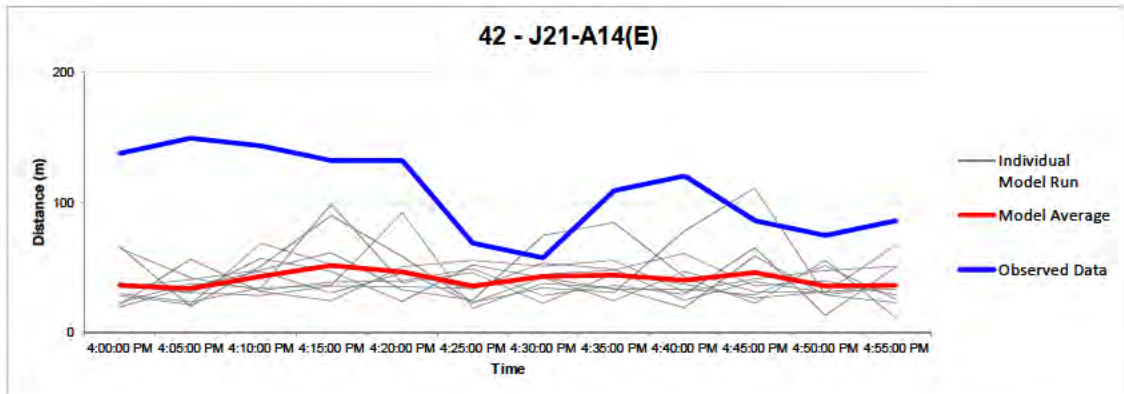
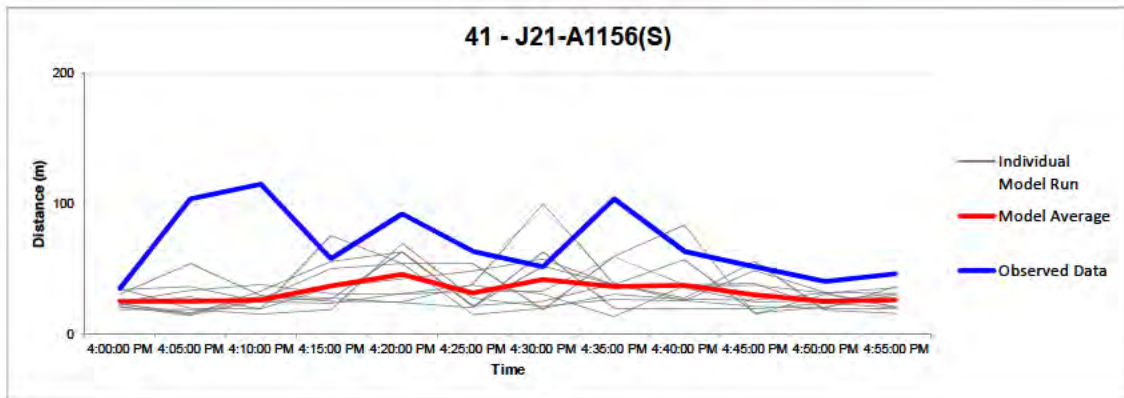
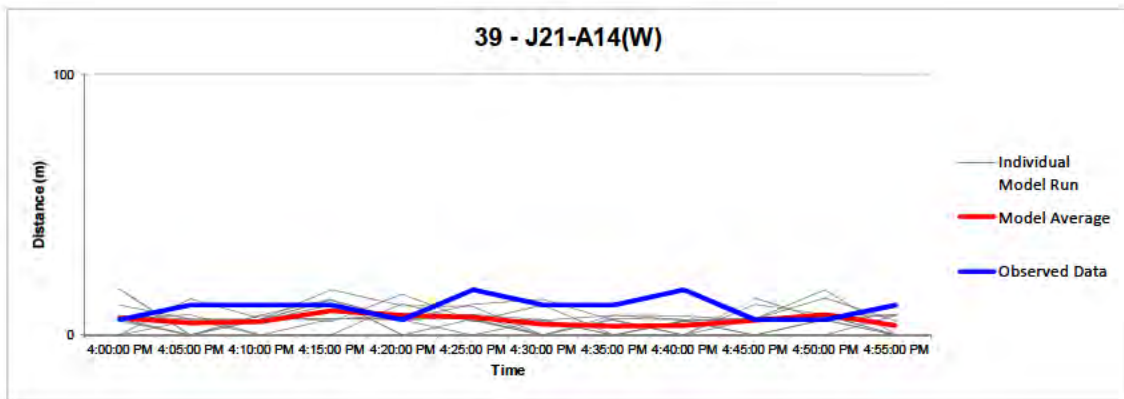
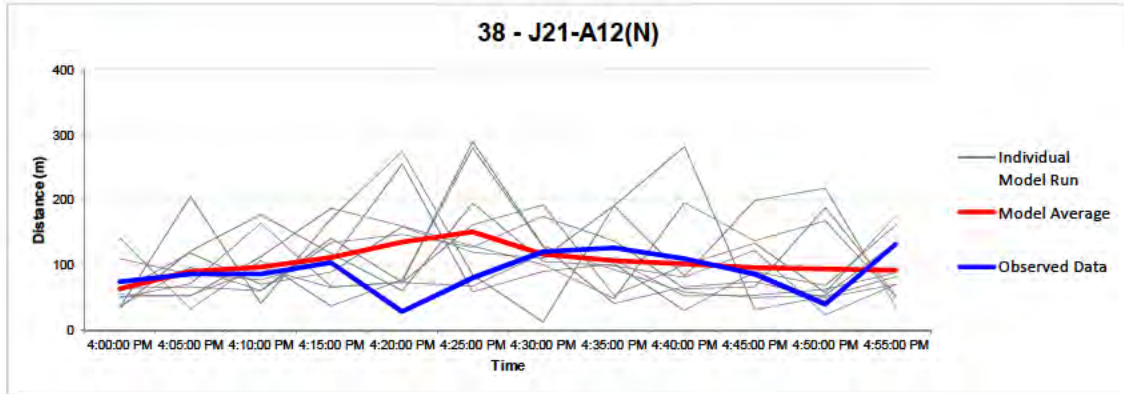
Junction Number 7
PM Peak (16:00-17:00)





Queue Graphs

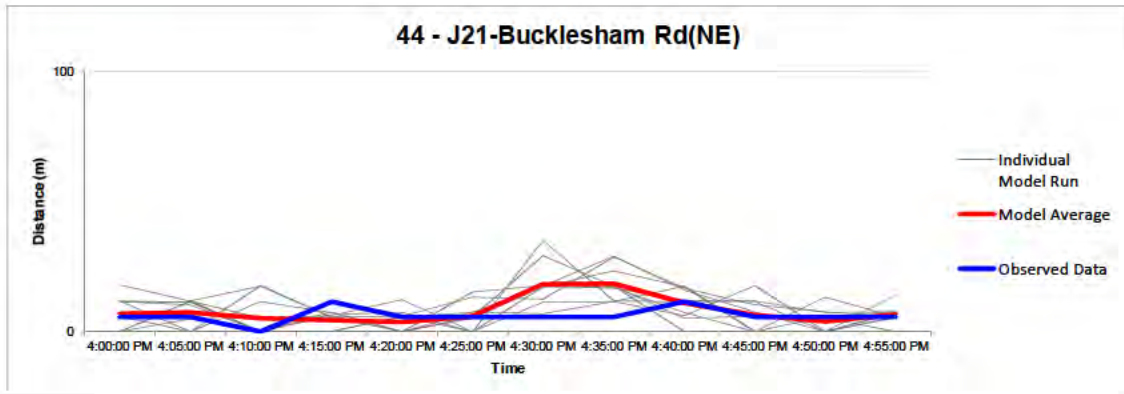
Junction Number 8
PM Peak (16:00-17:00)





Queue Graphs

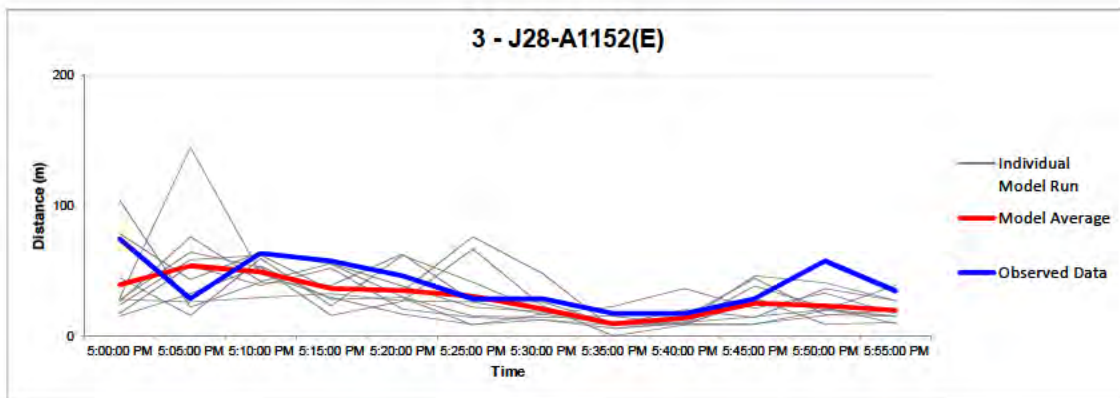
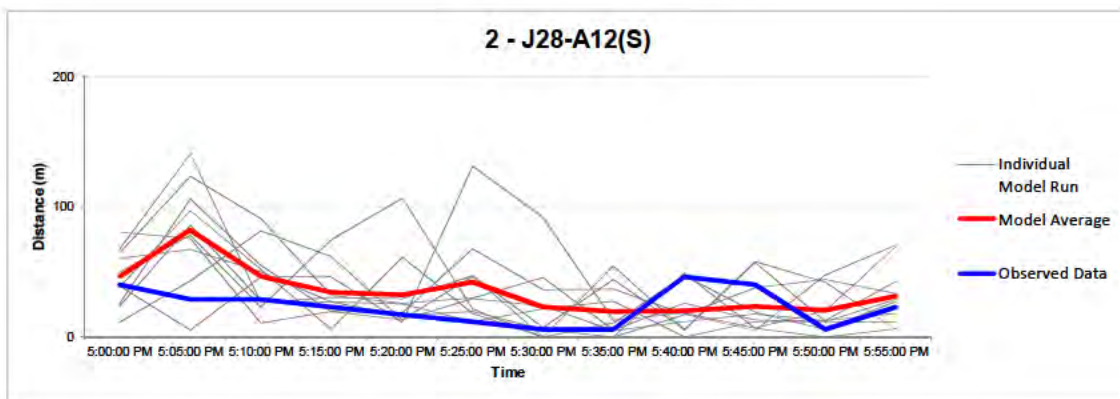
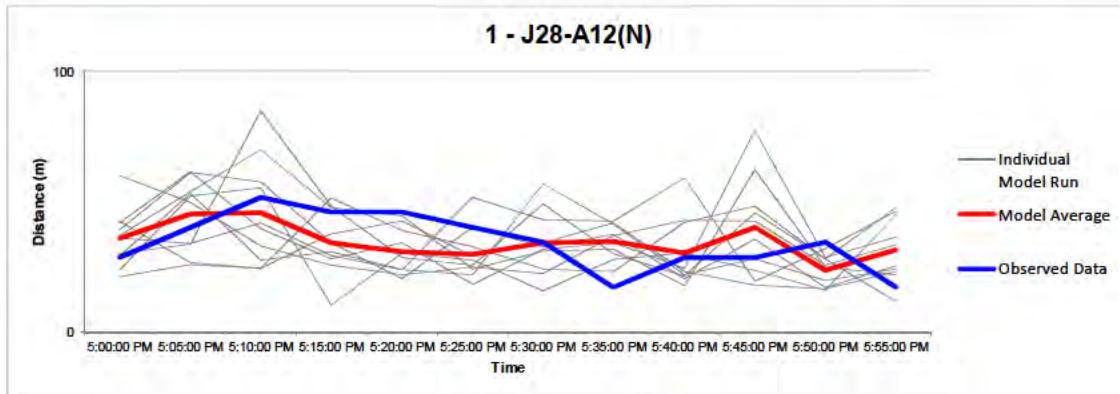
Junction Number 8
PM Peak (16:00-17:00)





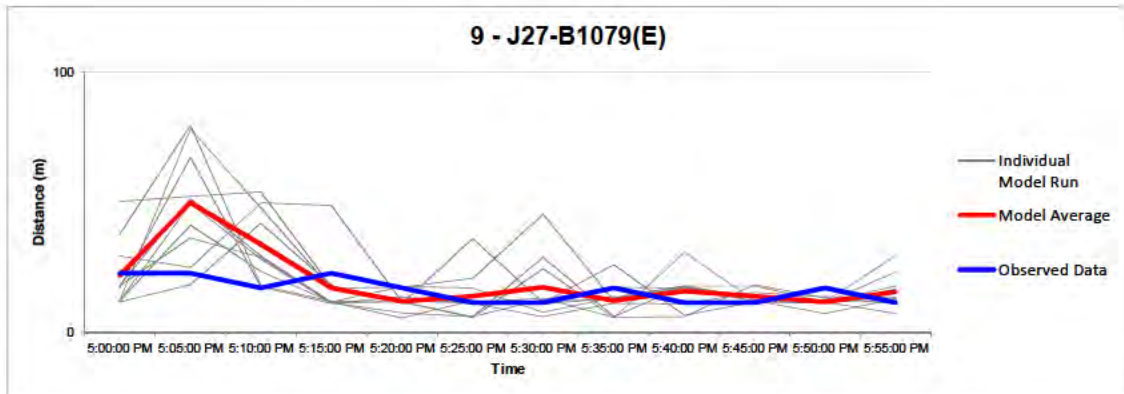
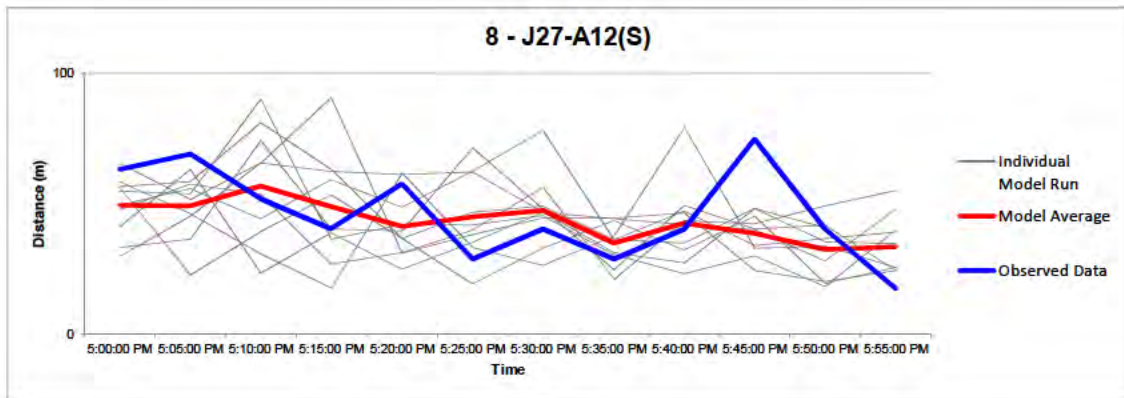
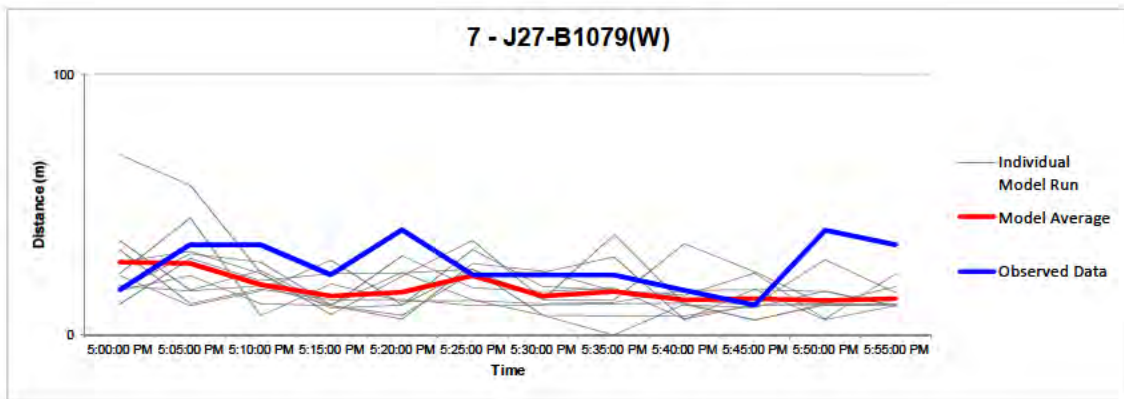
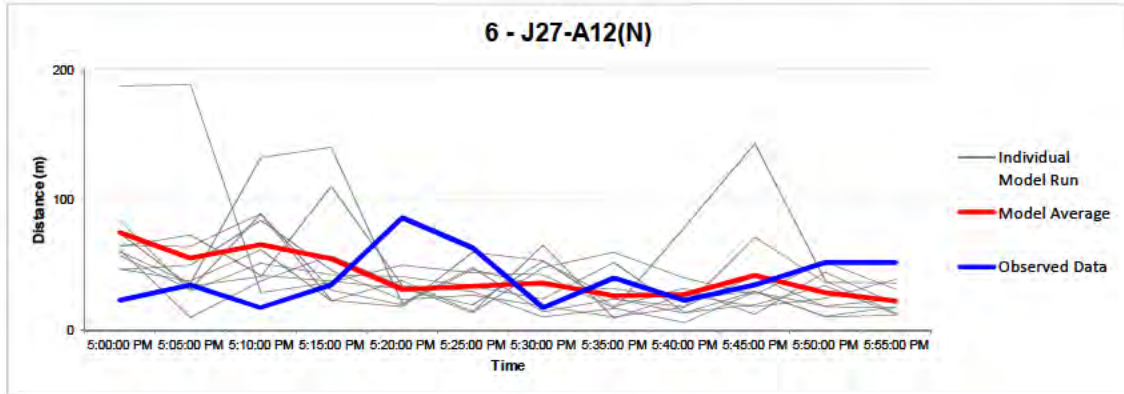
Queue Graphs

Junction Number 1
PM Peak (17:00-18:00)





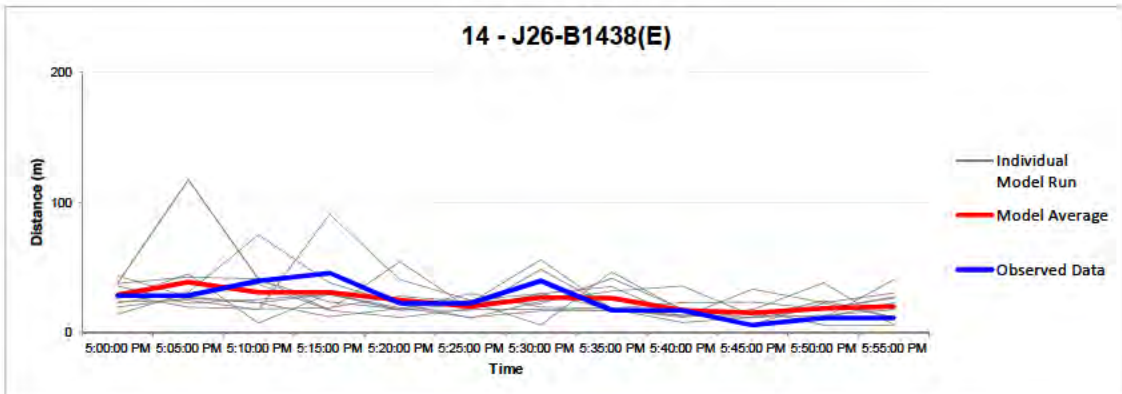
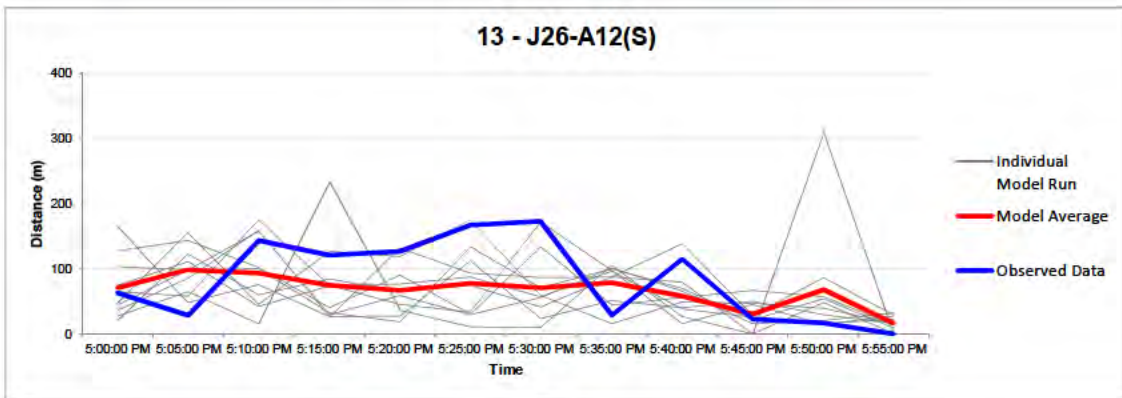
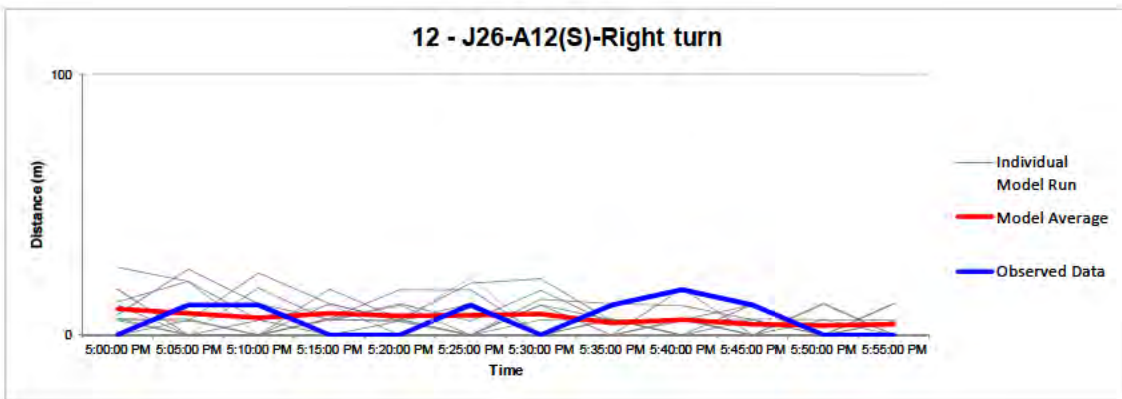
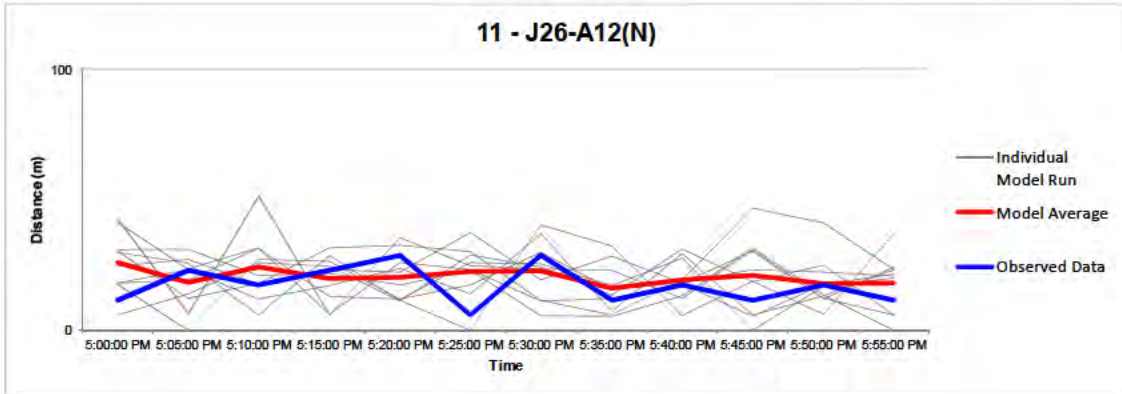
Queue Graphs
Junction Number 2
PM Peak (17:00-18:00)





Queue Graphs

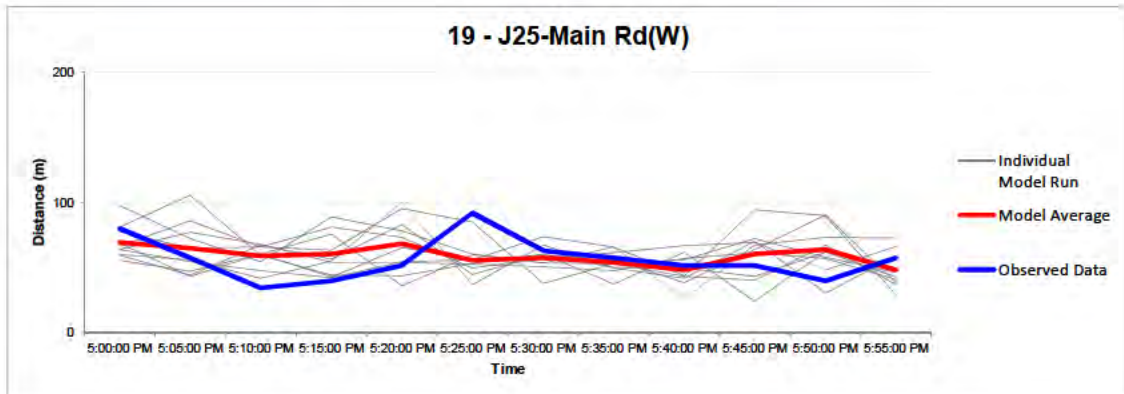
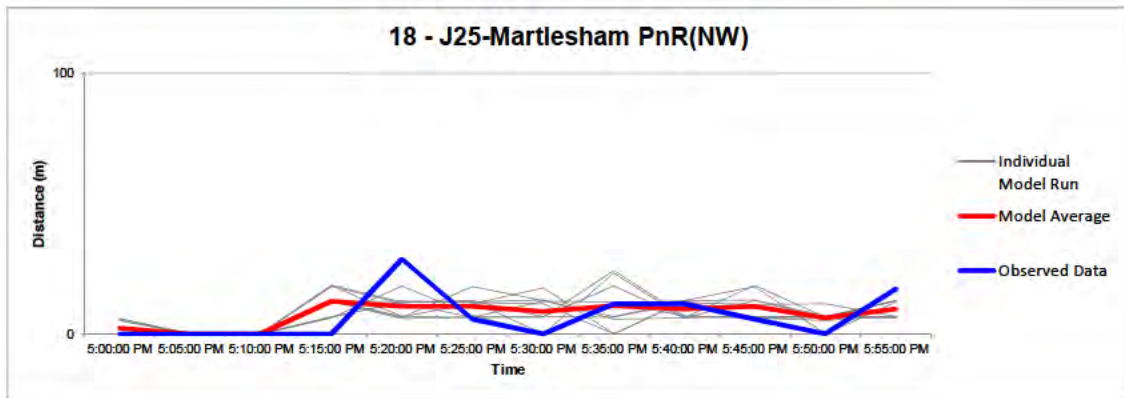
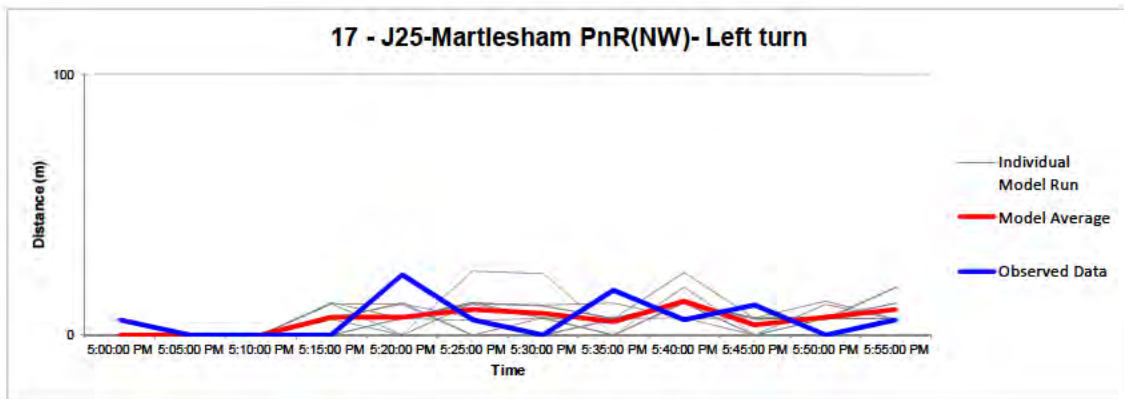
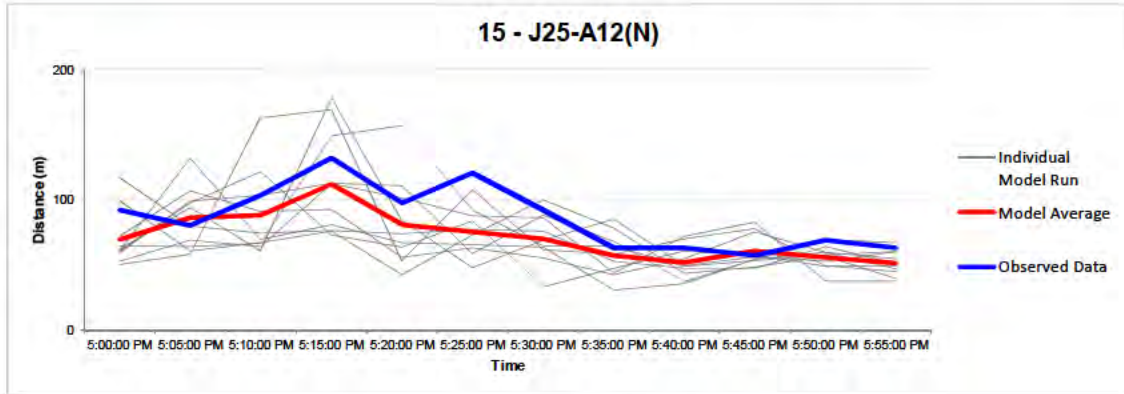
Junction Number 3
PM Peak (17:00-18:00)





Queue Graphs

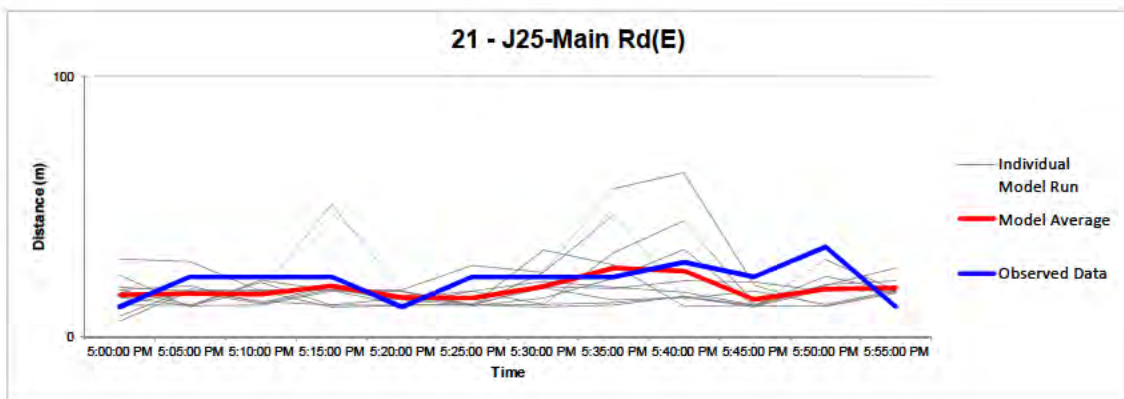
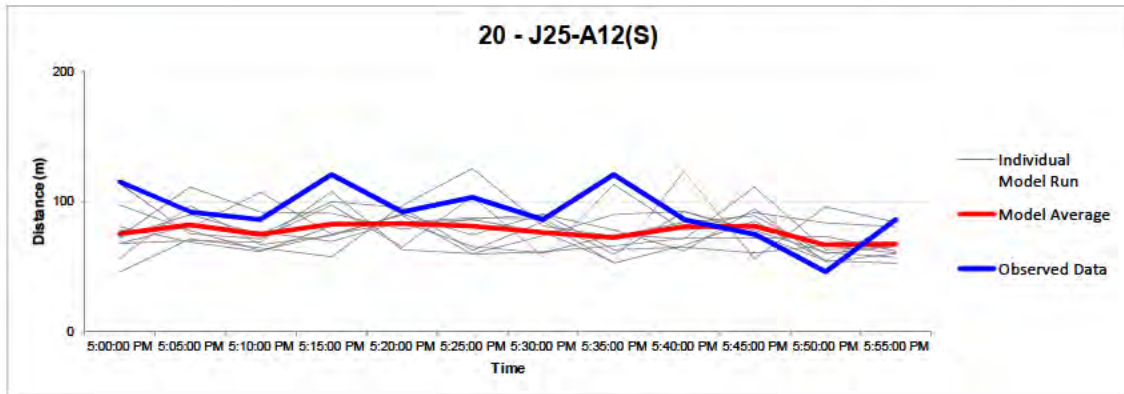
Junction Number 4
PM Peak (17:00-18:00)





Queue Graphs

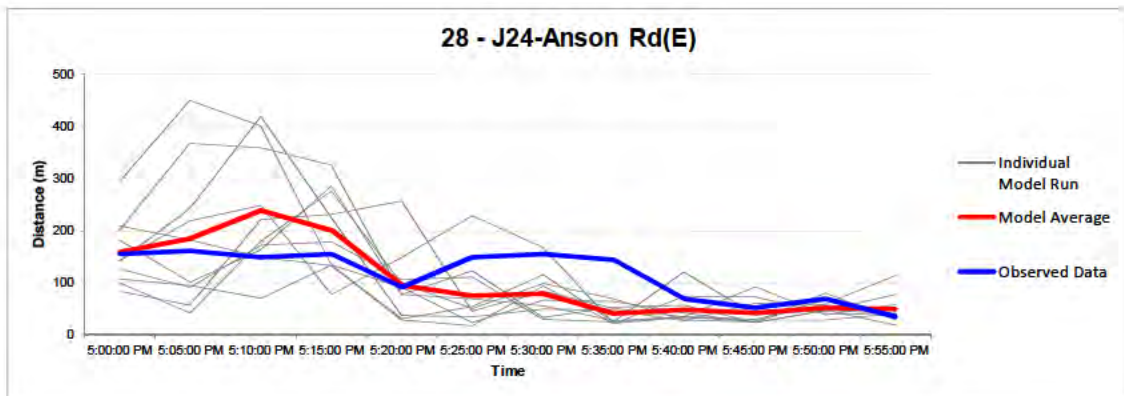
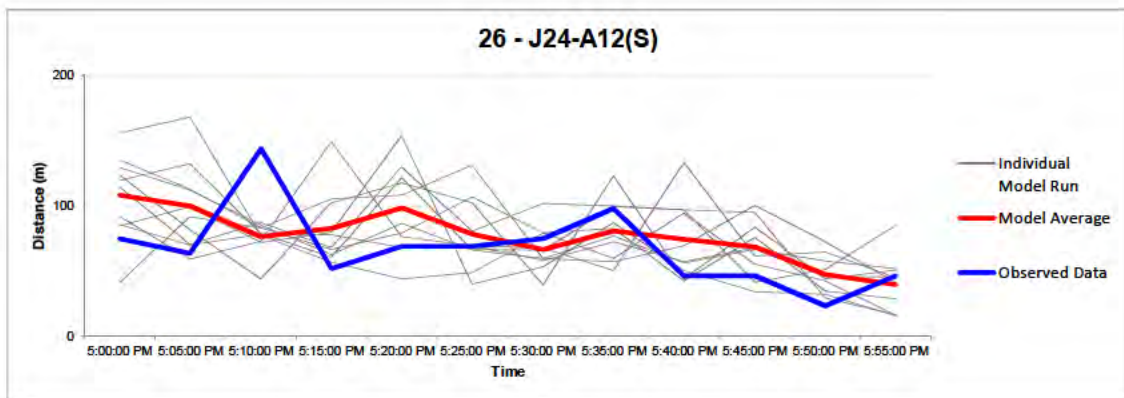
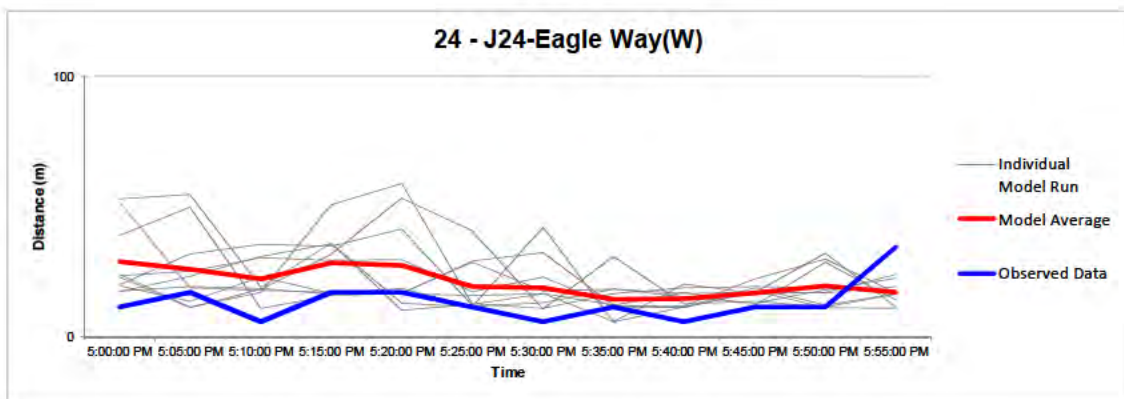
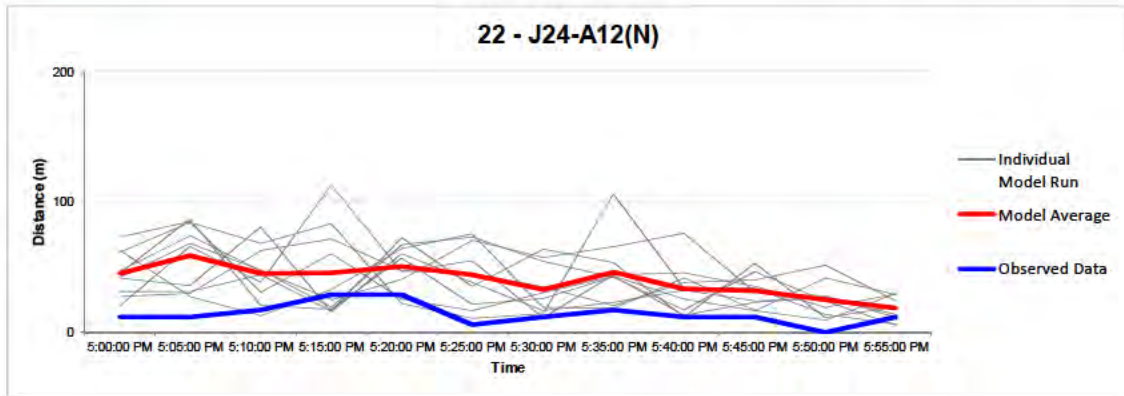
Junction Number 4
PM Peak (17:00-18:00)





Queue Graphs

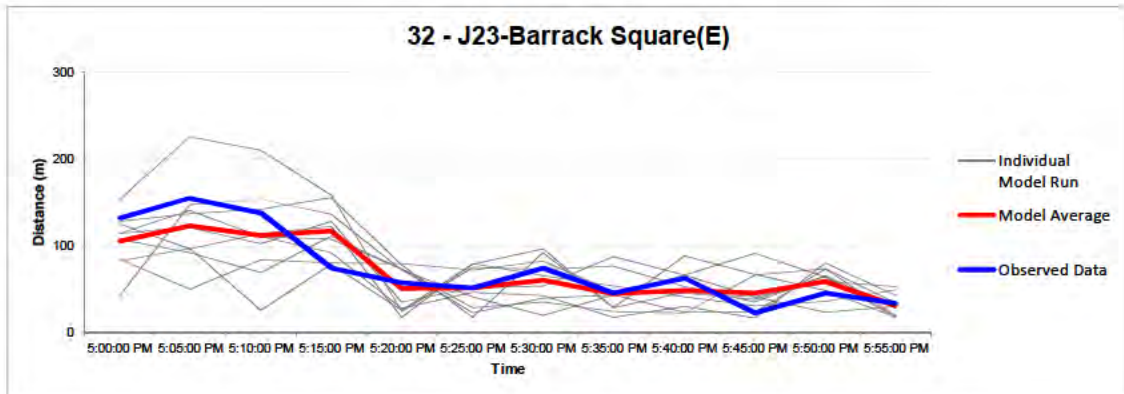
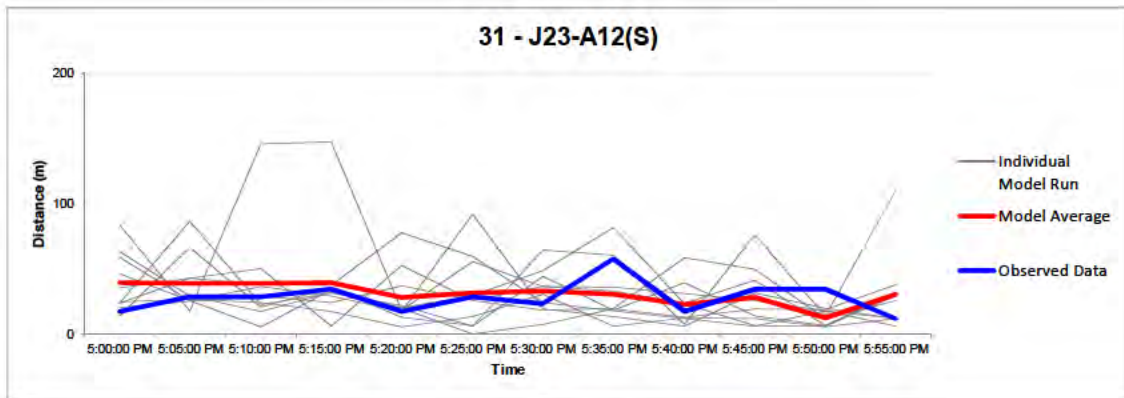
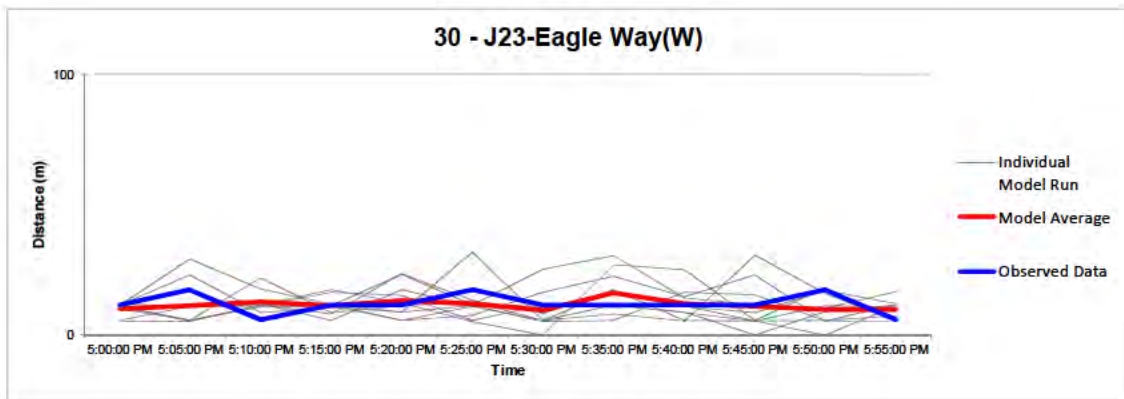
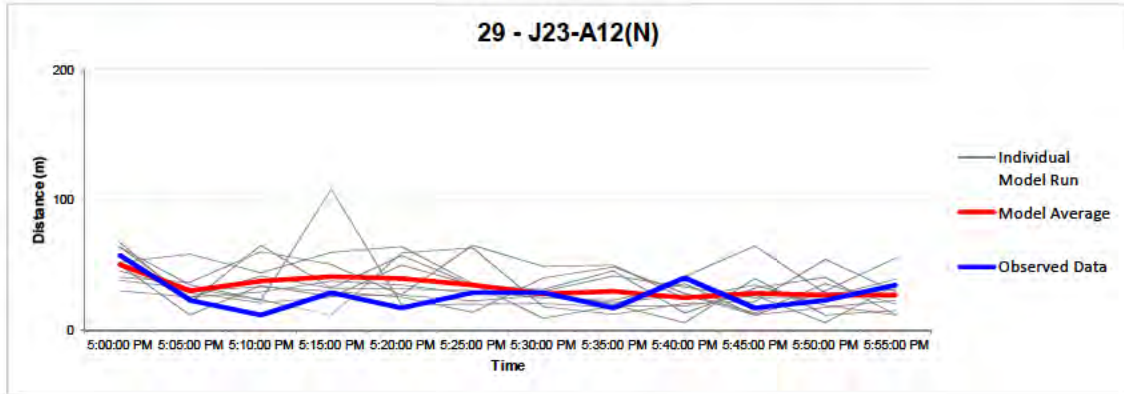
Junction Number 5
PM Peak (17:00-18:00)





Queue Graphs

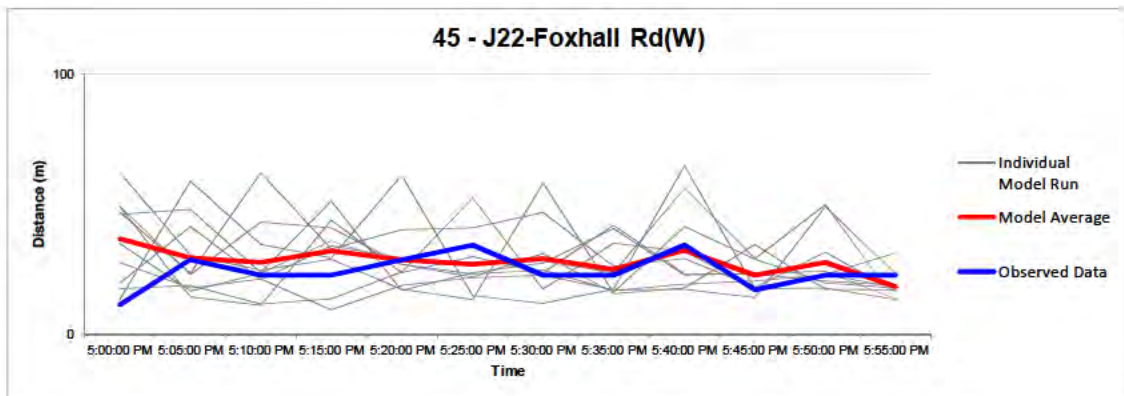
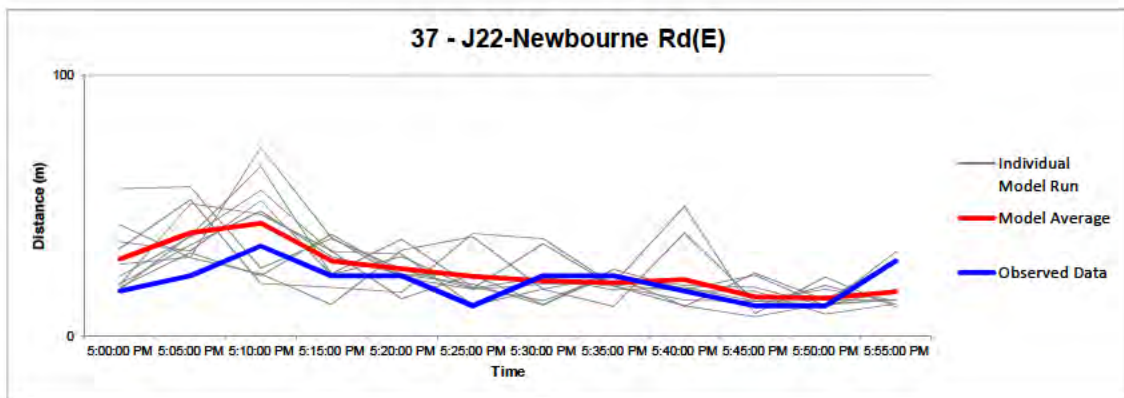
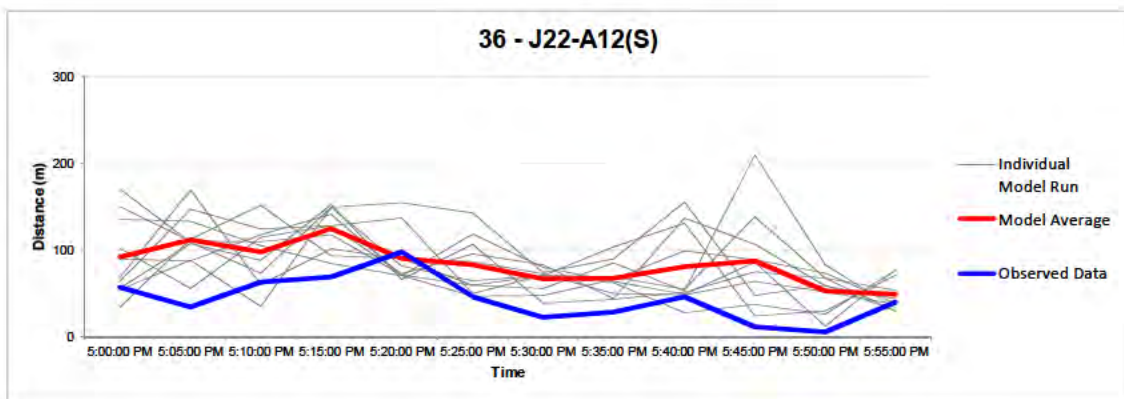
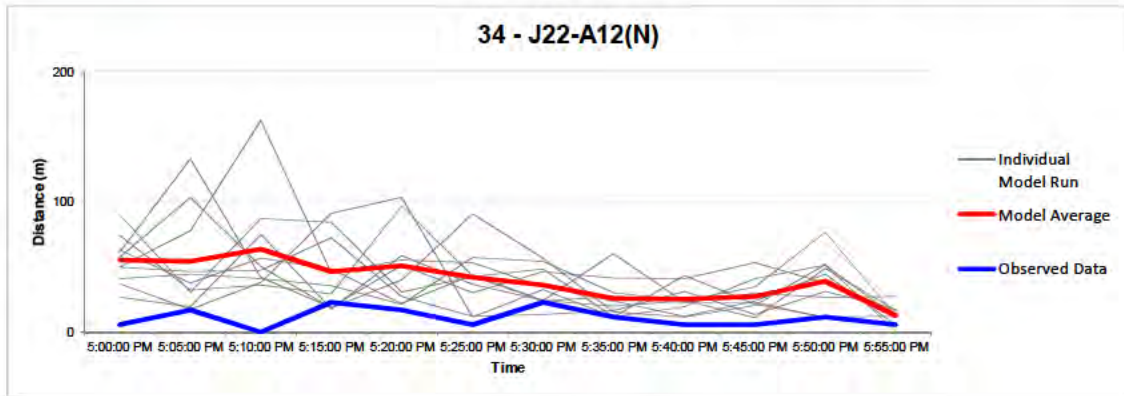
Junction Number 6
PM Peak (17:00-18:00)





Queue Graphs

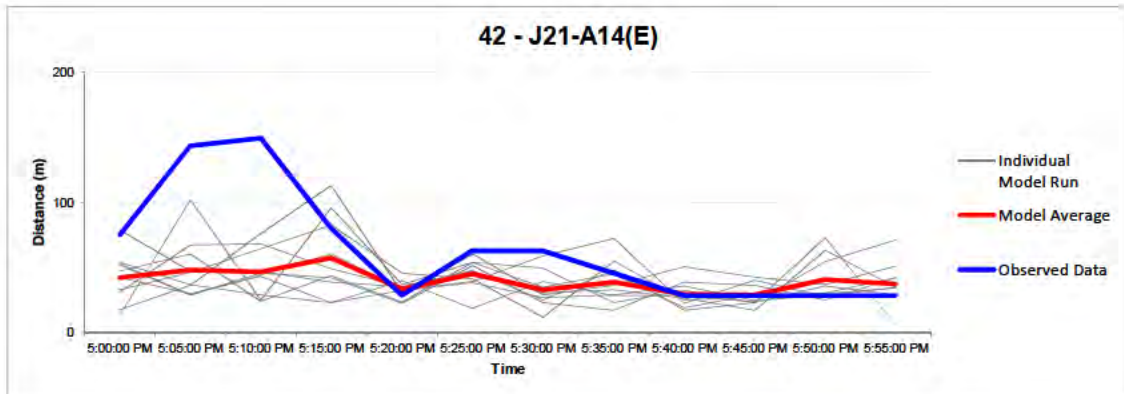
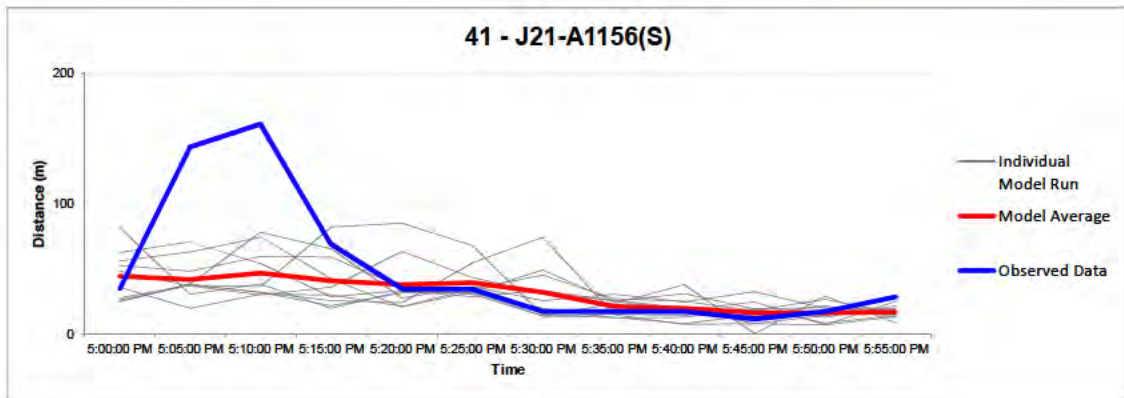
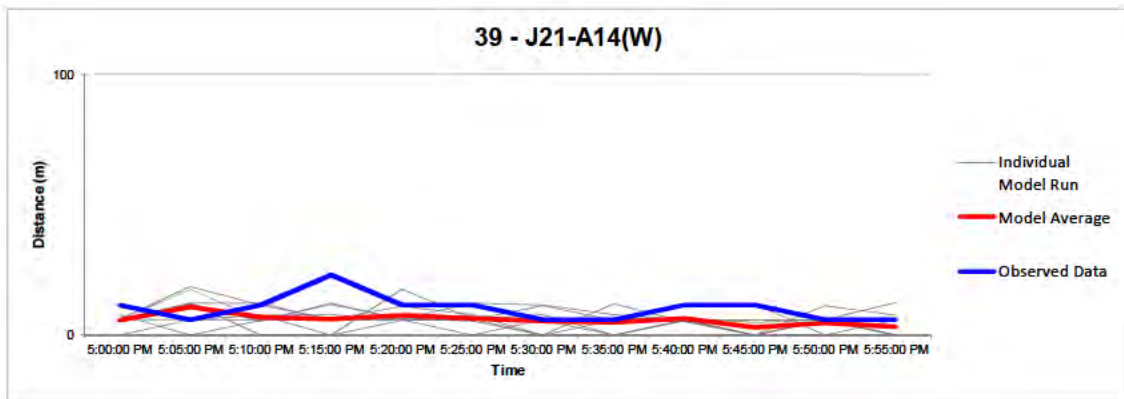
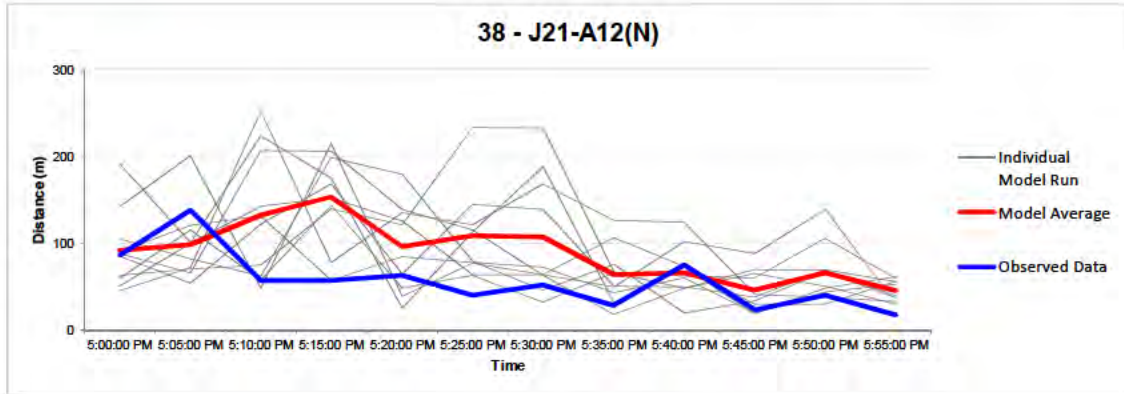
Junction Number 7
PM Peak (17:00-18:00)





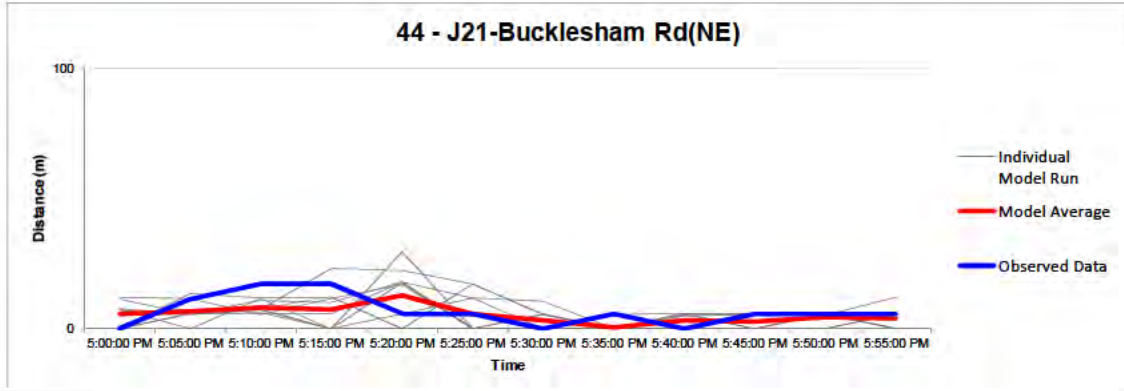
Queue Graphs

Junction Number 8
PM Peak (17:00-18:00)





Queue Graphs
Junction Number 8
PM Peak (17:00-18:00)





Journey Times
Validation Statistics
PM Peak (15:00-16:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	110	111	1	TRUE	0.8%	1	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	73	64	0	TRUE	-12.0%	-9	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	49	46	1	TRUE	-7.6%	-4	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	50	46	0	TRUE	-6.8%	-3	FALSE	TRUE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	115	122	1	TRUE	6.0%	7	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	97	90	0	TRUE	-7.4%	-7	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	88	96	0	TRUE	9.4%	8	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	142	136	1	TRUE	-3.9%	-6	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	133	123	1	TRUE	-7.2%	-10	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	97	92	1	TRUE	-5.0%	-5	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	82	91	0	TRUE	10.7%	9	FALSE	TRUE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	126	118	0	TRUE	-6.3%	-8	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	44	34	0	TRUE	-21.3%	-9	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	43	39	0	TRUE	-9.1%	-4	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	75	66	0	TRUE	-11.4%	-9	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	120	122	0	TRUE	2.3%	3	FALSE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	126	136	1	TRUE	7.7%	10	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	120	119	0	TRUE	-1.2%	-1	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	83	0	TRUE	7.3%	6	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	82	88	1	TRUE	8.2%	7	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	94	97	1	TRUE	3.3%	3	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	98	104	1	TRUE	6.5%	6	FALSE	TRUE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	58	61	1	TRUE	5.6%	3	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	71	66	1	TRUE	-7.0%	-5	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	98	93	1	TRUE	-4.8%	-5	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	88	88	1	TRUE	0.2%	0	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road - EB	Full	15	49	43	0	TRUE	-13.4%	-7	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	65	55	1	TRUE	-15.0%	-10	FALSE	FALSE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	18	16	1	TRUE	-9.3%	-2	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	12	14	0	TRUE	20.9%	2	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	45	54	0	TRUE	20.6%	9	FALSE	FALSE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	60	54	1	TRUE	-10.2%	-6	FALSE	TRUE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	87	84	1	TRUE	-3.4%	-3	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	109	101	1	TRUE	-6.9%	-8	FALSE	TRUE	TRUE	TRUE	544
35 - Anson Road - WB	Full	23	74	49	1	TRUE	-33.9%	-25	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	55	45	0	TRUE	-17.9%	-10	FALSE	FALSE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	46	60	3	FALSE	30.7%	14	FALSE	FALSE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	43	44	0	TRUE	2.2%	1	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	65	66	0	TRUE	1.3%	1	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	65	76	1	TRUE	17.3%	11	FALSE	FALSE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	56	70	1	TRUE	25.0%	14	FALSE	FALSE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	57	51	0	TRUE	-10.1%	-6	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	58	54	0	TRUE	-7.0%	-4	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	51	50	0	TRUE	-1.6%	-1	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	45	37	1	TRUE	-17.5%	-8	FALSE	FALSE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	38	30	0	TRUE	-22.7%	-9	FALSE	FALSE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	39	33	0	TRUE	-14.1%	-5	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	49	39	1	TRUE	-21.1%	-10	FALSE	FALSE	TRUE	TRUE	564



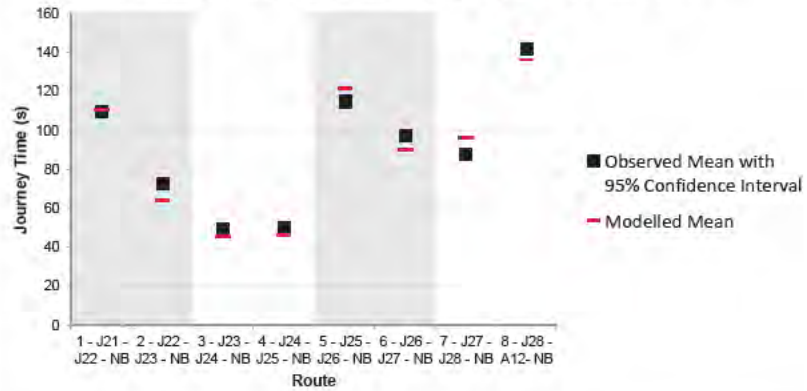
**Journey Times
Validation Statistics**

PM Peak (15:00-16:00)

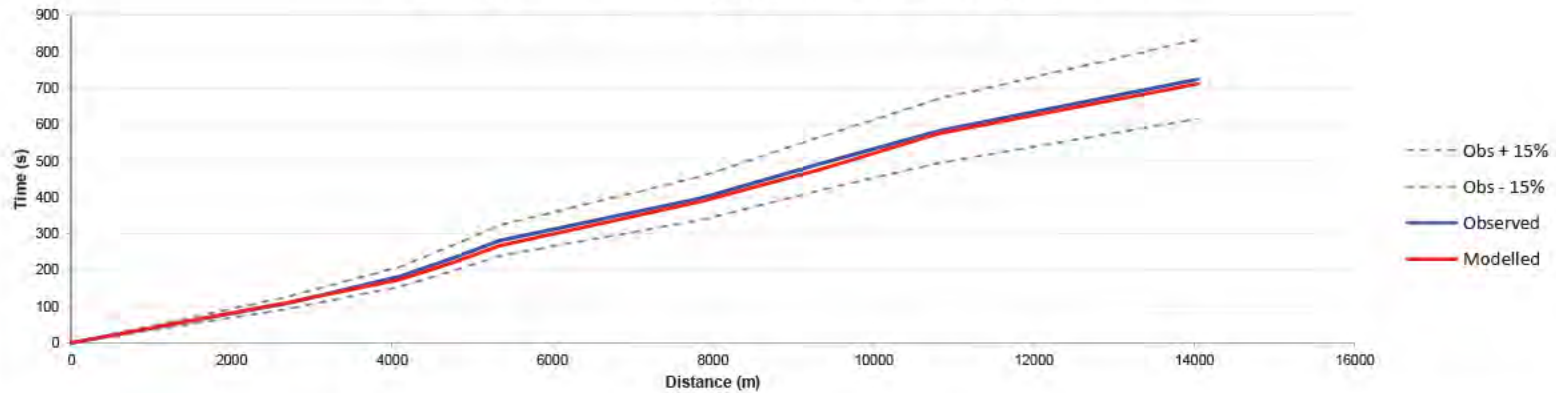
49 - A1152 - WB	Full	37	50	49	0	TRUE	-1.9%	-1	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	44	49	0	TRUE	11.0%	5	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	724	714	3	TRUE	-1.4%	-10	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	720	687	1	TRUE	-4.5%	-33	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

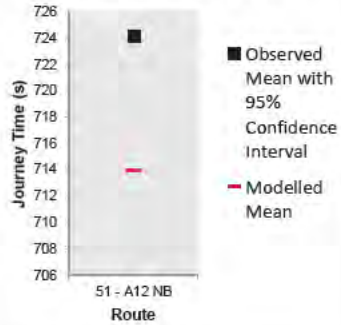


Journey Time Summary by Distance for Group Number 1

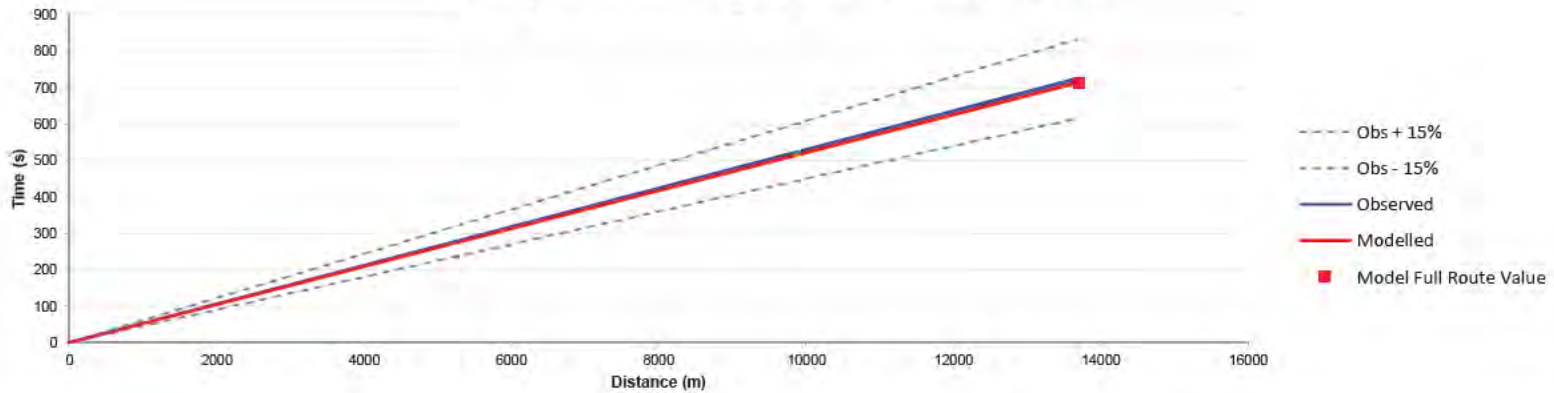




Journey Time Summary for 51 - A12 NB

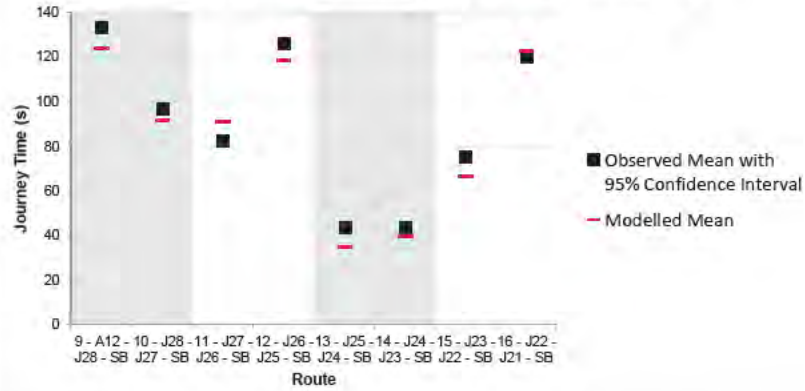


Journey Time Summary by Distance for 51 - A12 NB

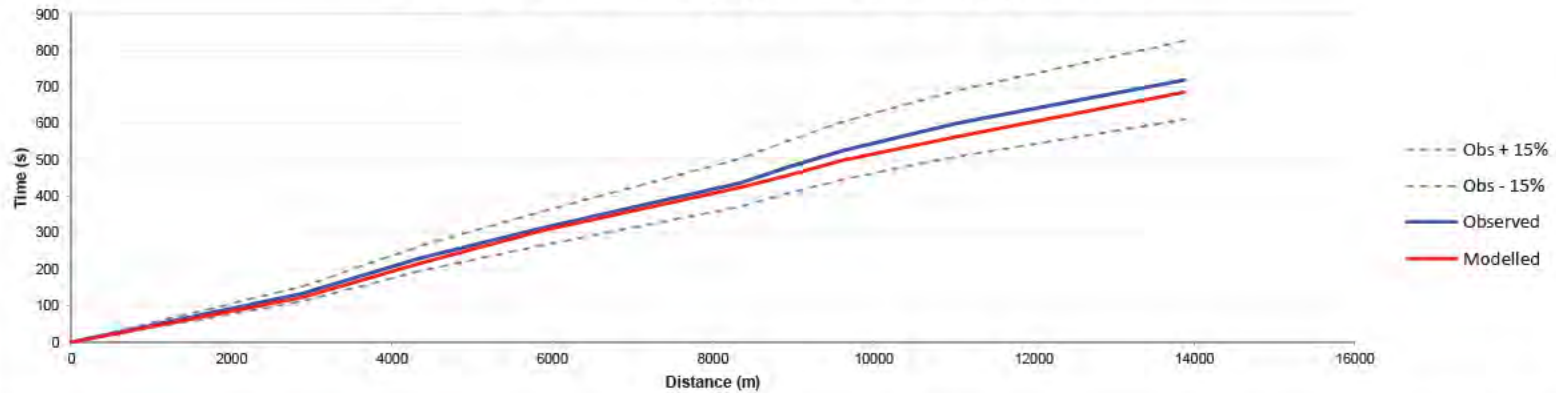




Journey Time Summary for Group Number 3

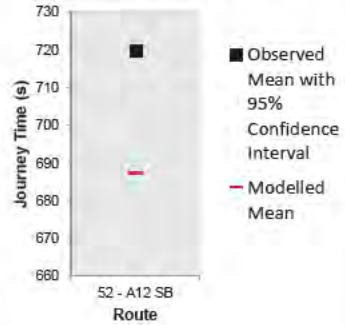


Journey Time Summary by Distance for Group Number 3

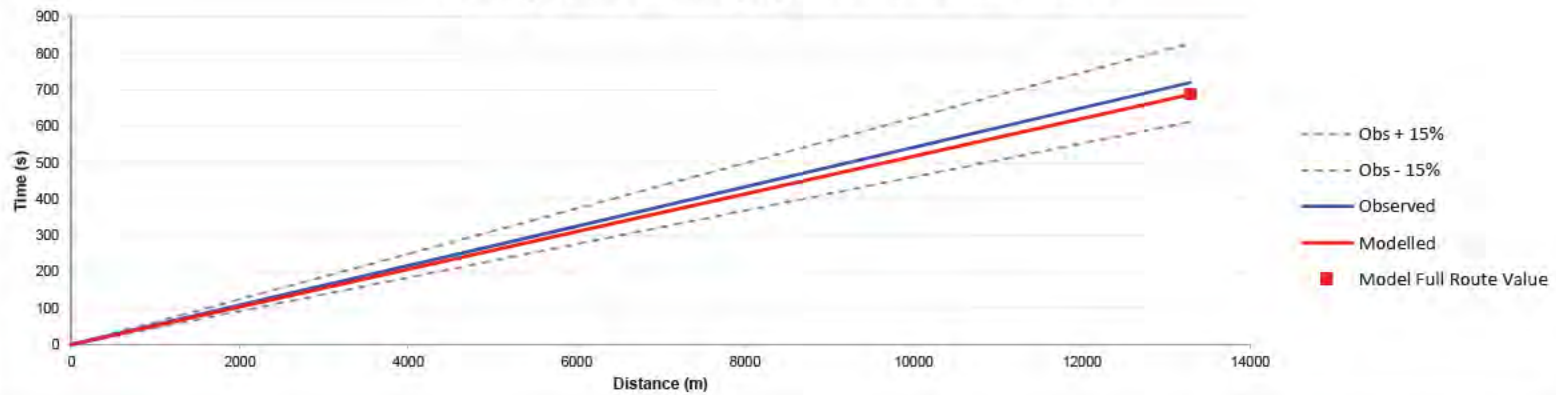




Journey Time Summary for 52 - A12 SB

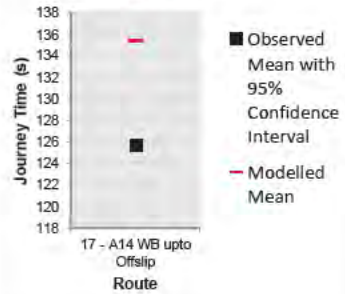


Journey Time Summary by Distance for 52 - A12 SB

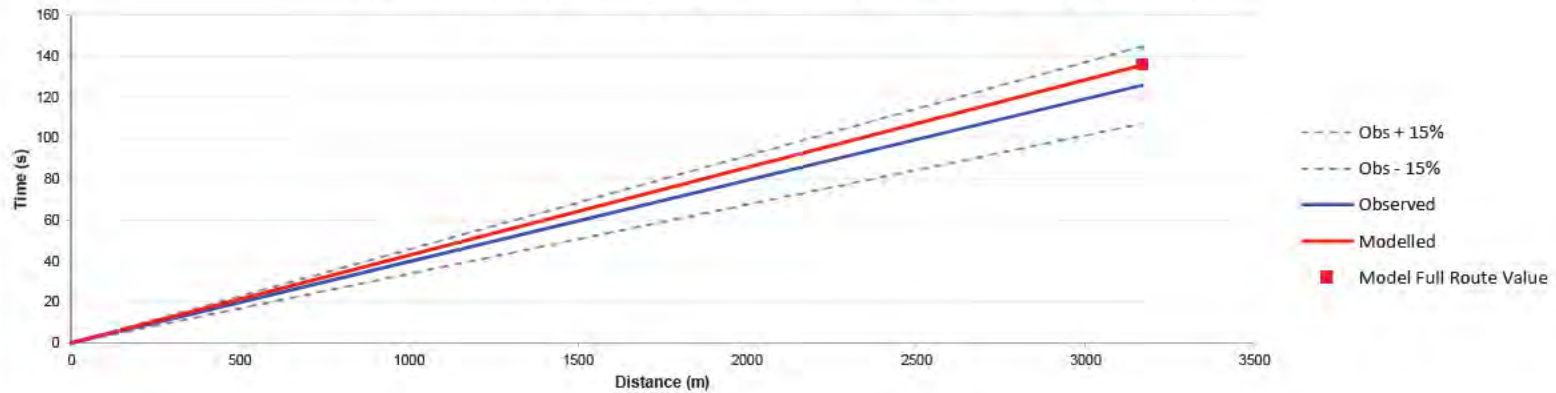




Journey Time Summary for 17 - A14 WB upto Offslip

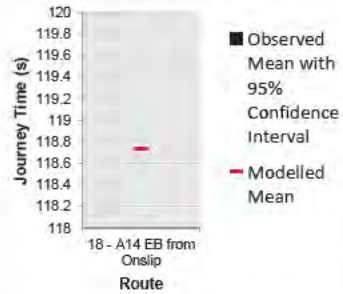


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

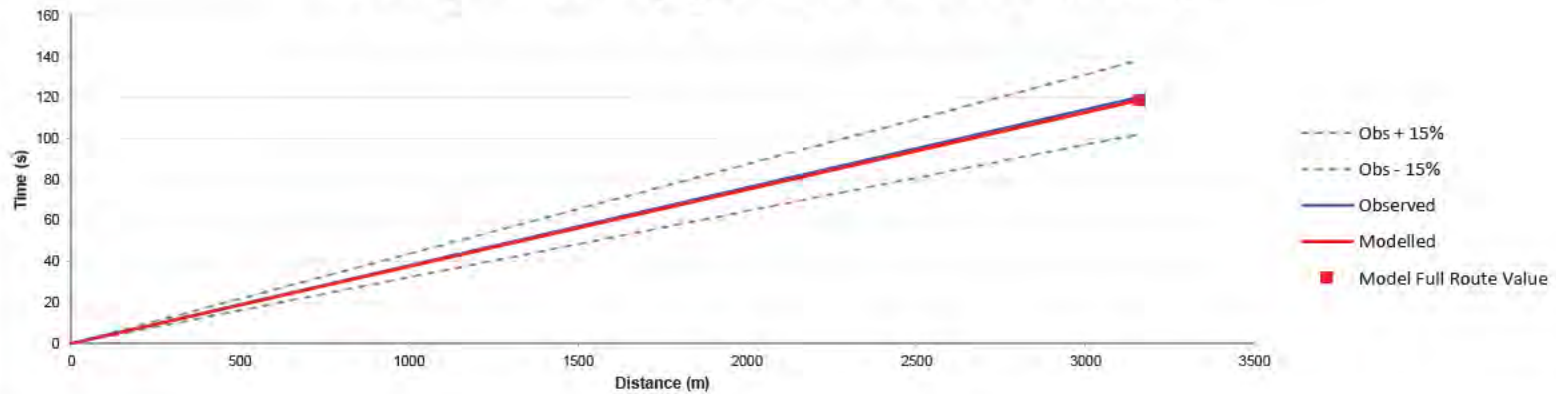




Journey Time Summary for 18 - A14 EB from Onslip

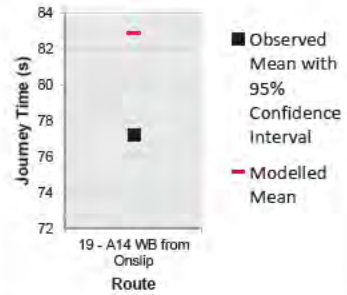


Journey Time Summary by Distance for 18 - A14 EB from Onslip

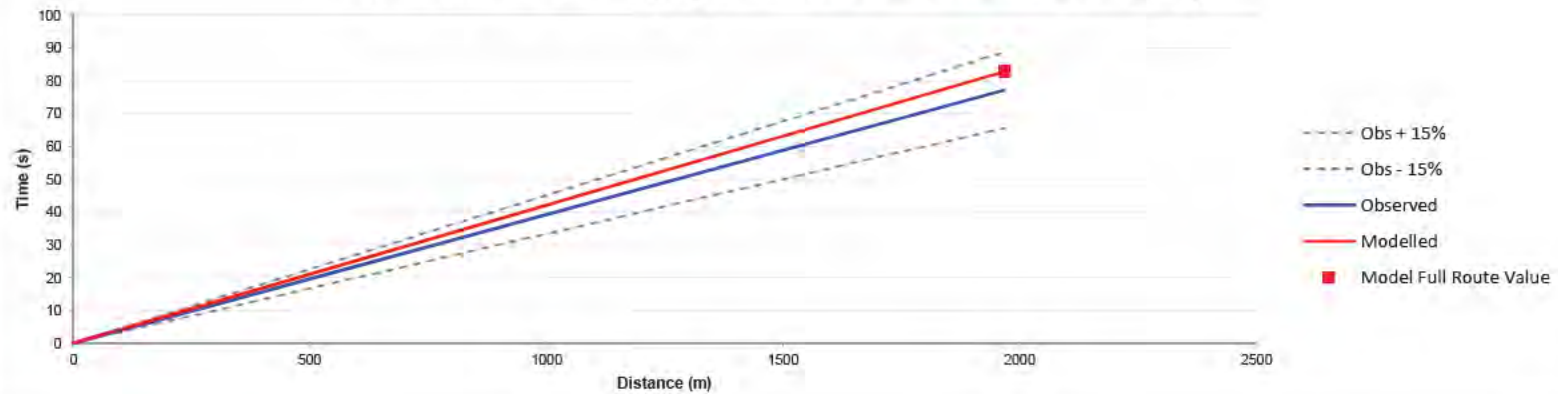




Journey Time Summary for 19 - A14 WB from Onslip

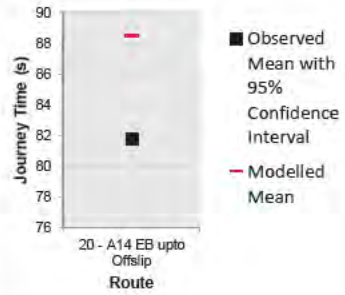


Journey Time Summary by Distance for 19 - A14 WB from Onslip

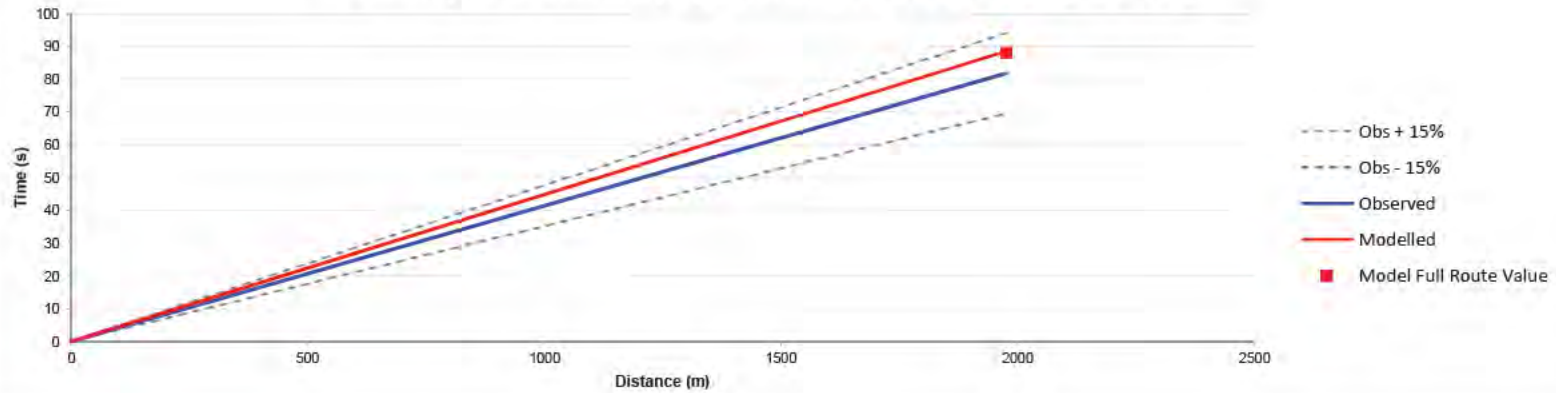




Journey Time Summary for 20 - A14 EB upto Offslip

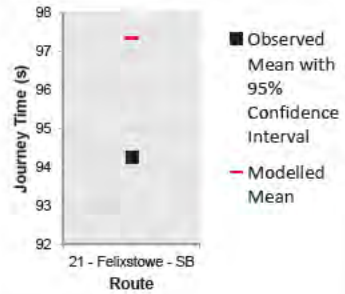


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

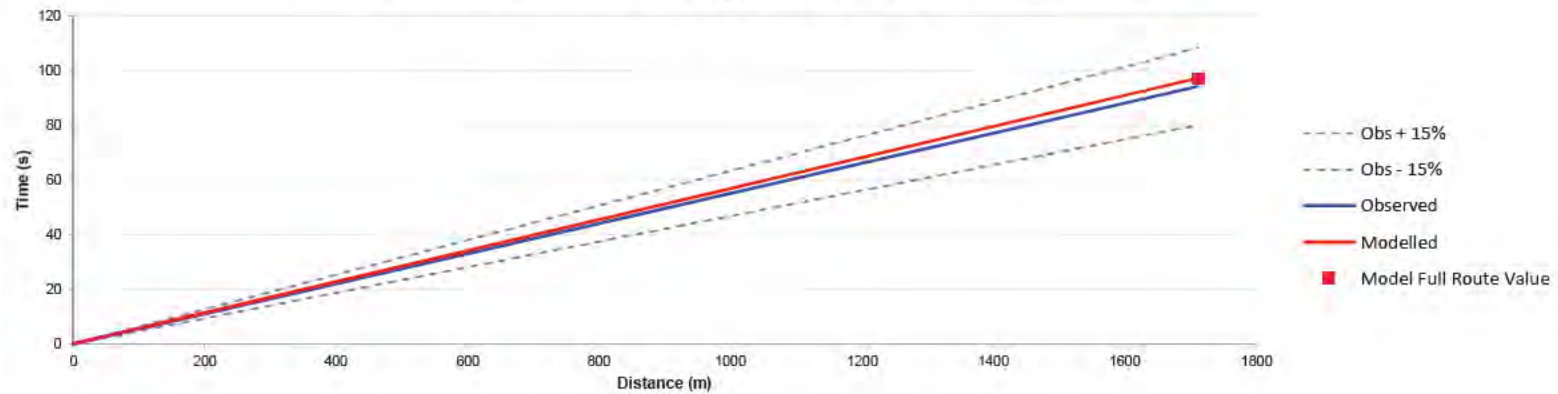




Journey Time Summary for 21 - Felixstowe - SB

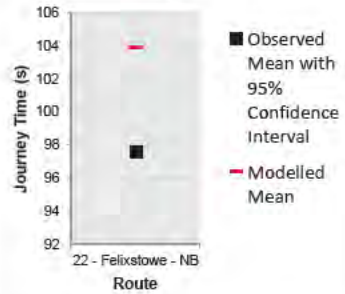


Journey Time Summary by Distance for 21 - Felixstowe - SB

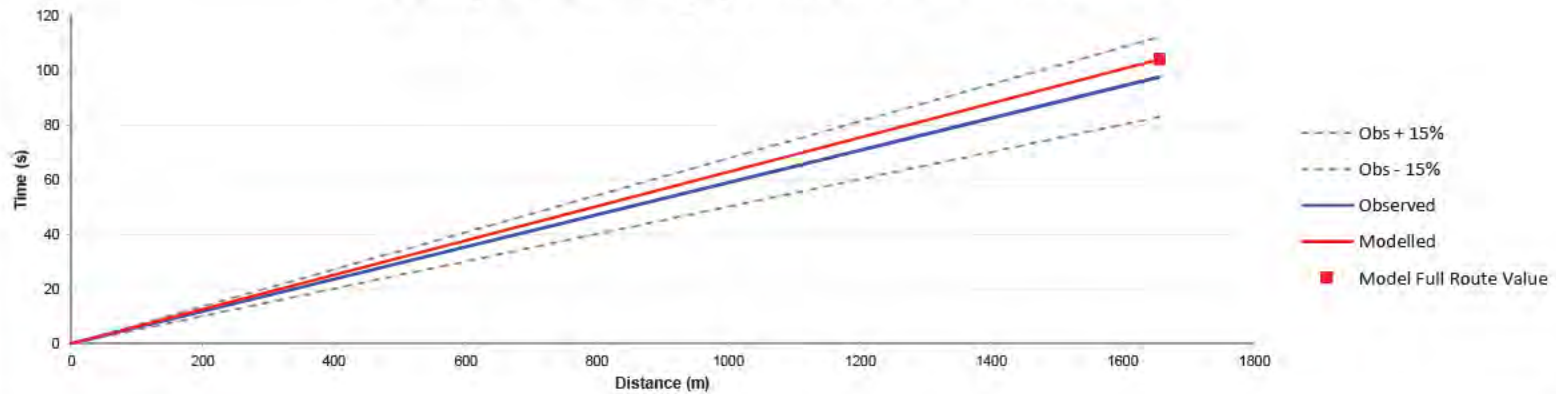




Journey Time Summary for 22 - Felixstowe - NB

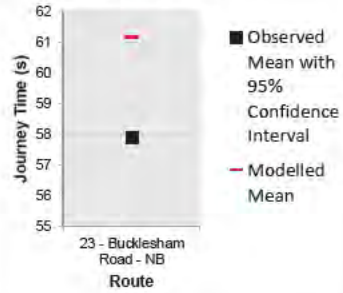


Journey Time Summary by Distance for 22 - Felixstowe - NB

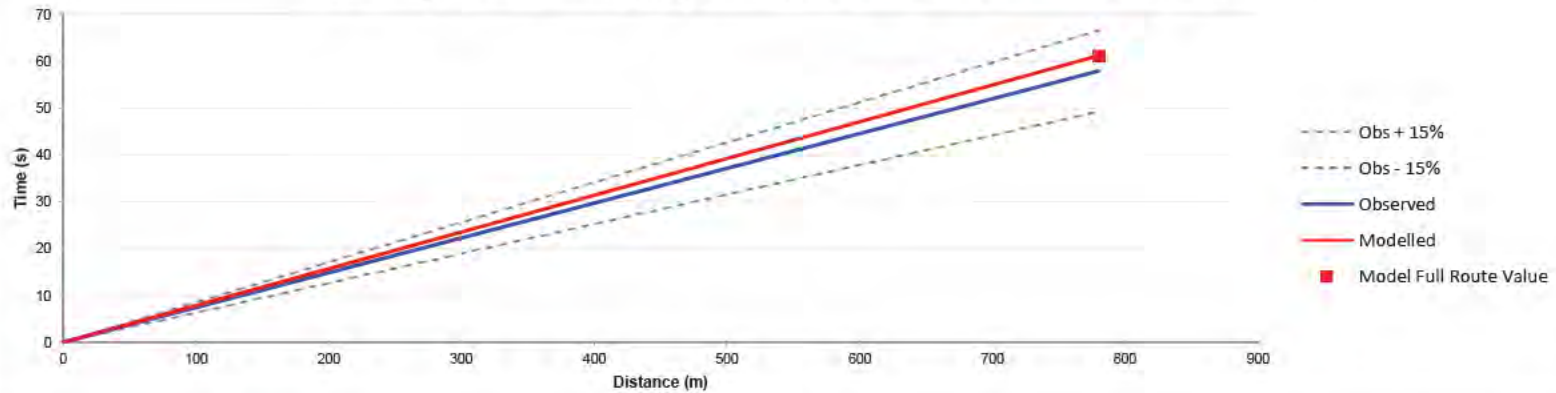




Journey Time Summary for 23 - Bucklesham Road - NB

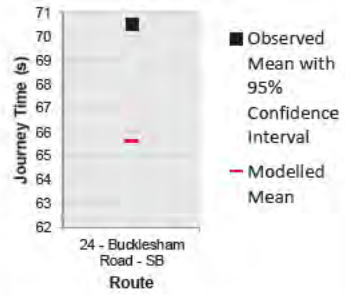


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

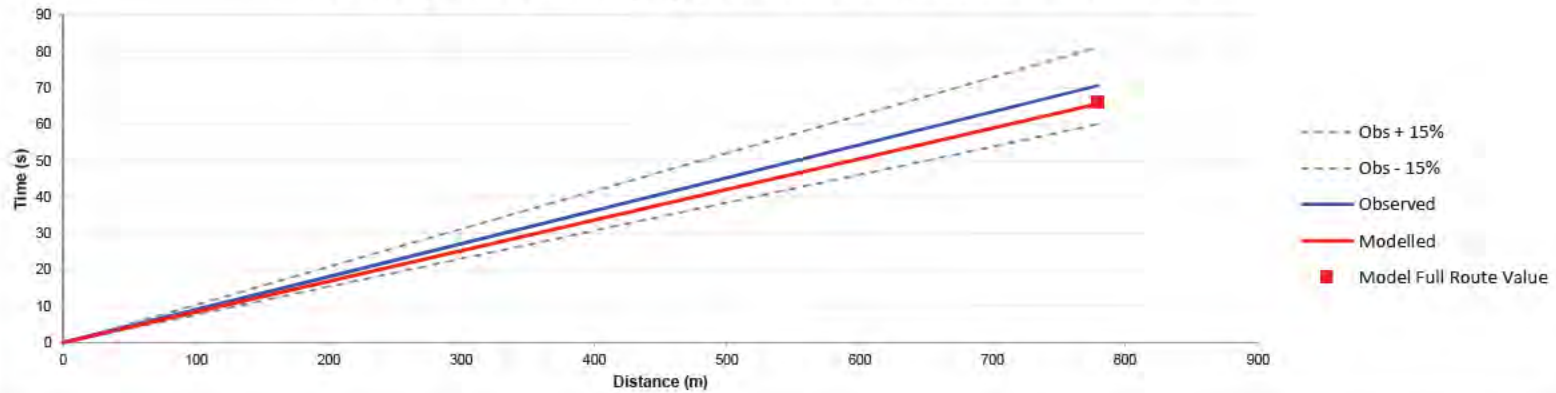




Journey Time Summary for 24 - Bucklesham Road - SB

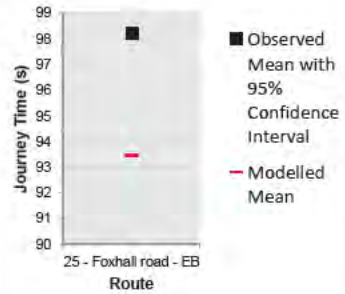


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

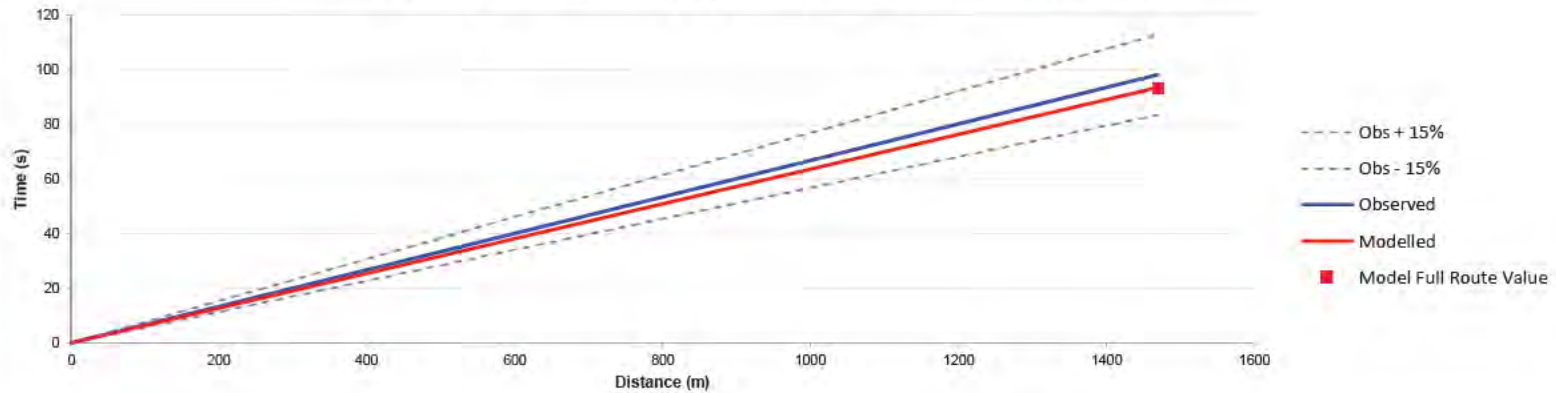




Journey Time Summary for 25 - Foxhall road - EB

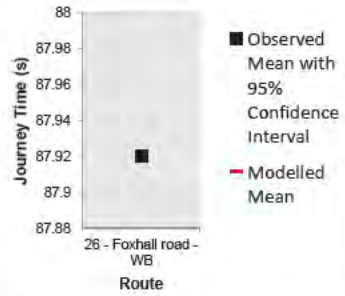


Journey Time Summary by Distance for 25 - Foxhall road - EB

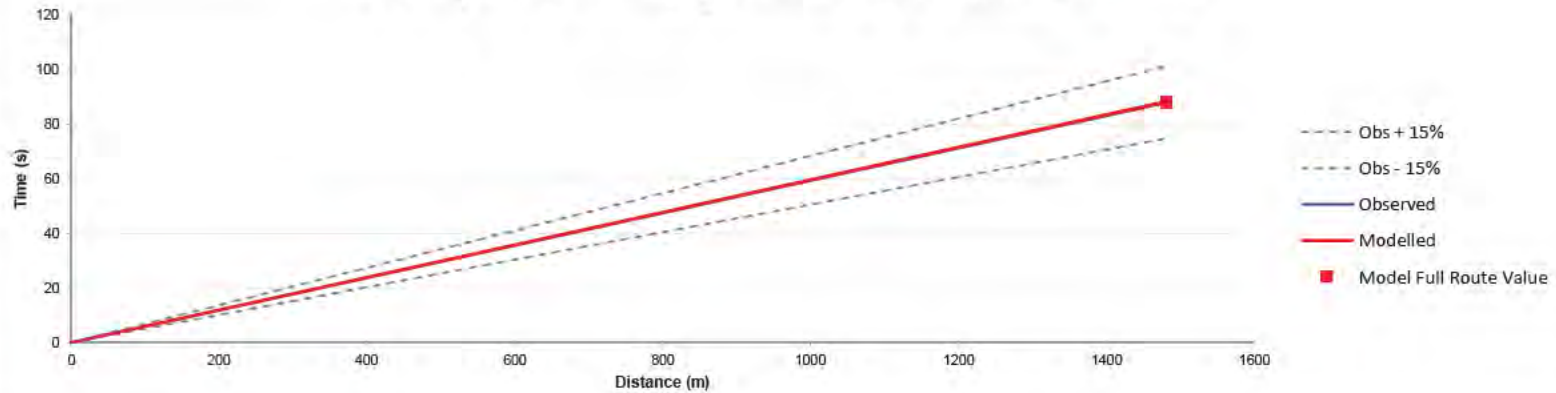




Journey Time Summary for 26 - Foxhall road - WB

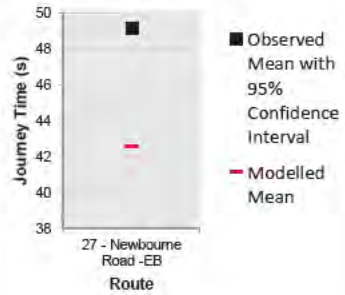


Journey Time Summary by Distance for 26 - Foxhall road - WB

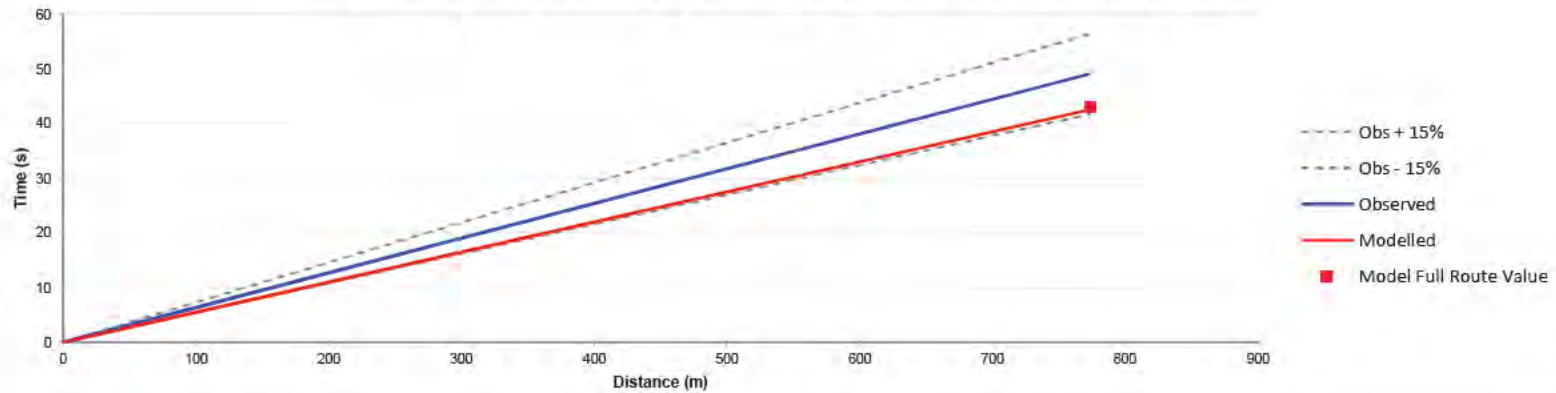




Journey Time Summary for 27 - Newbourne Road -EB

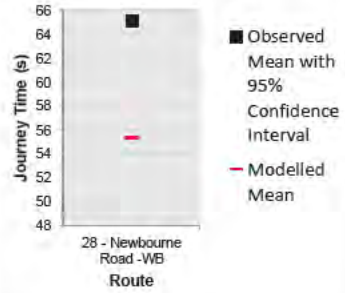


Journey Time Summary by Distance for 27 - Newbourne Road -EB

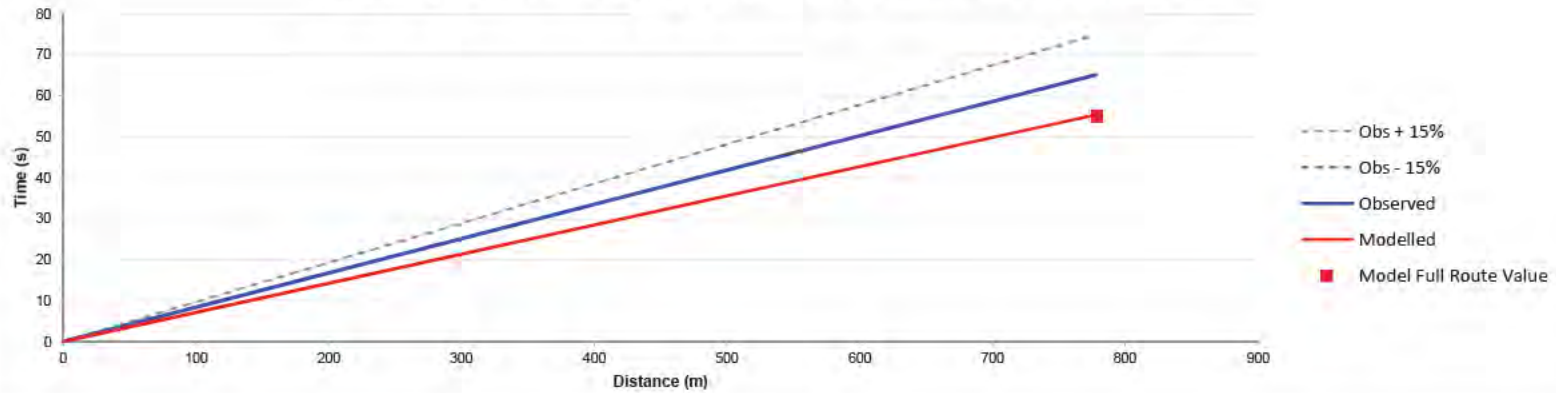




Journey Time Summary for 28 - Newbourne Road -WB

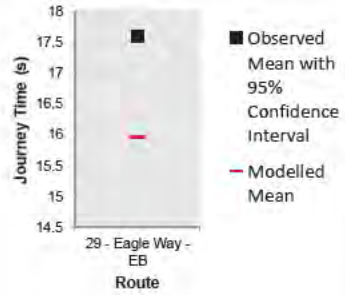


Journey Time Summary by Distance for 28 - Newbourne Road -WB

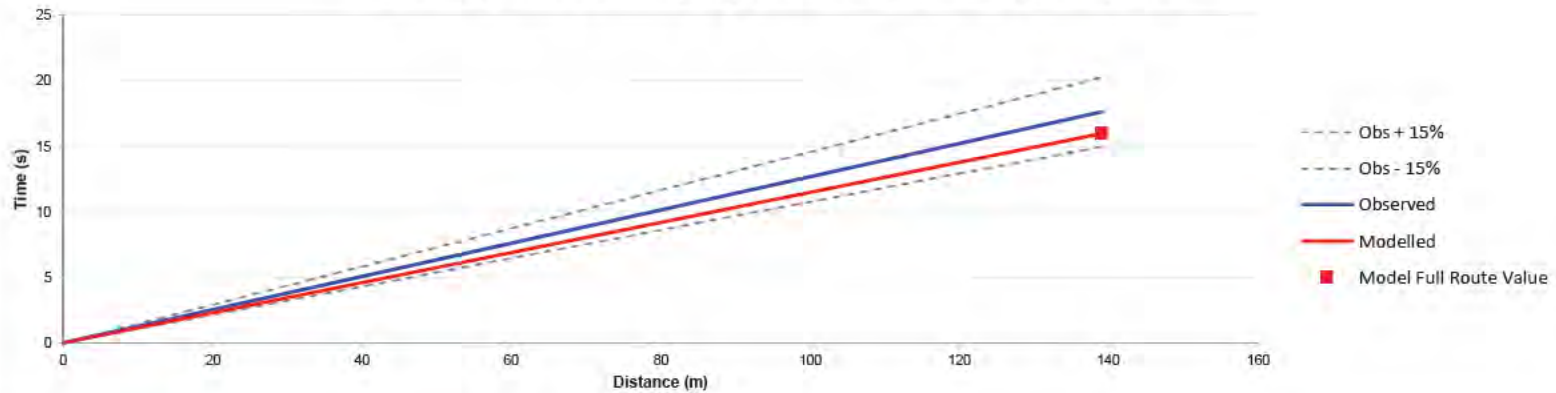




Journey Time Summary for 29 - Eagle Way - EB

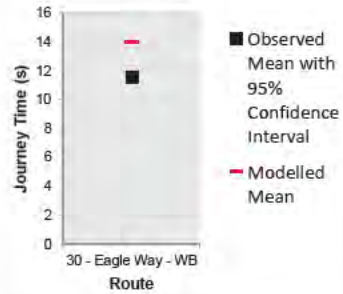


Journey Time Summary by Distance for 29 - Eagle Way - EB

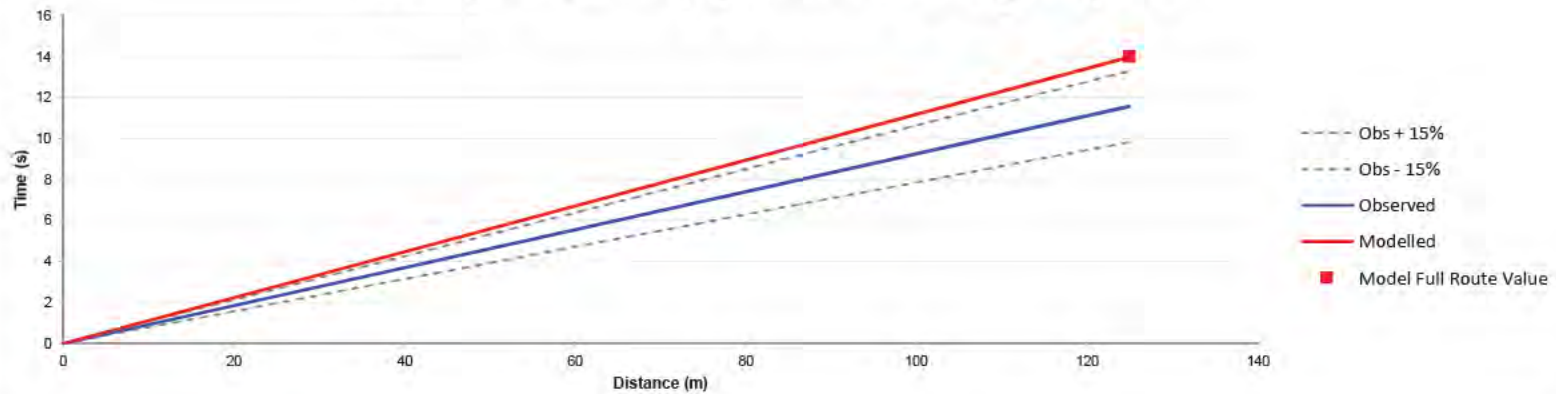




Journey Time Summary for 30 - Eagle Way - WB

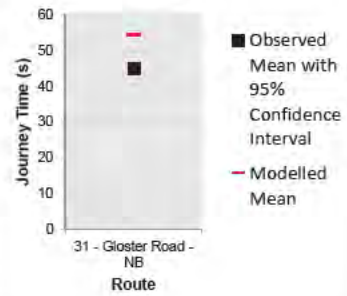


Journey Time Summary by Distance for 30 - Eagle Way - WB

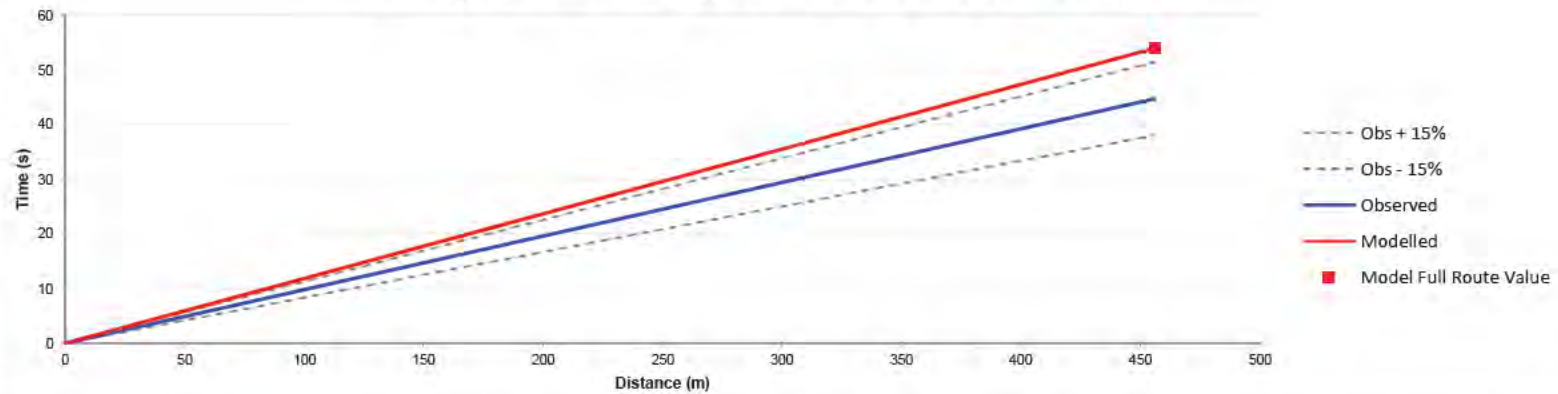




Journey Time Summary for 31 - Gloster Road - NB

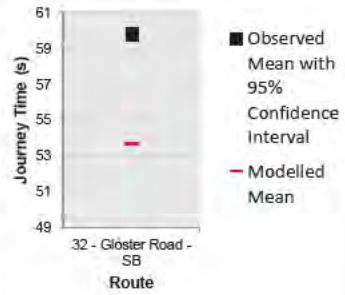


Journey Time Summary by Distance for 31 - Gloster Road - NB

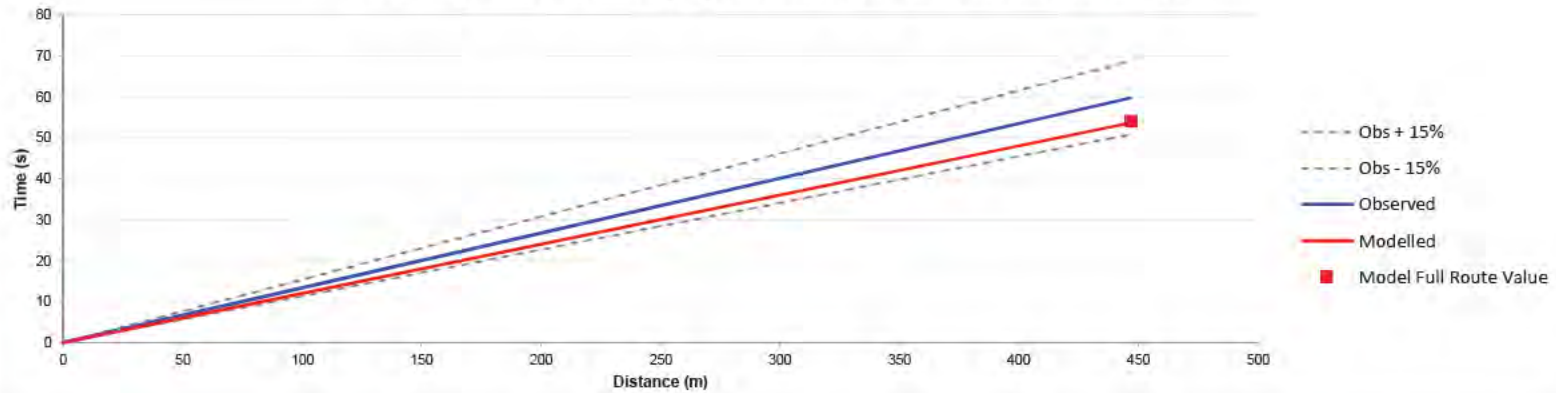




Journey Time Summary for 32 - Gloster Road - SB

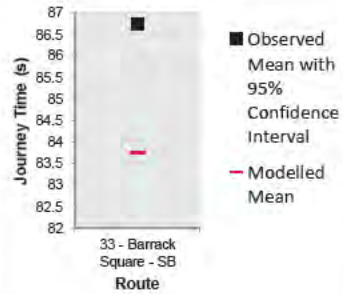


Journey Time Summary by Distance for 32 - Gloster Road - SB

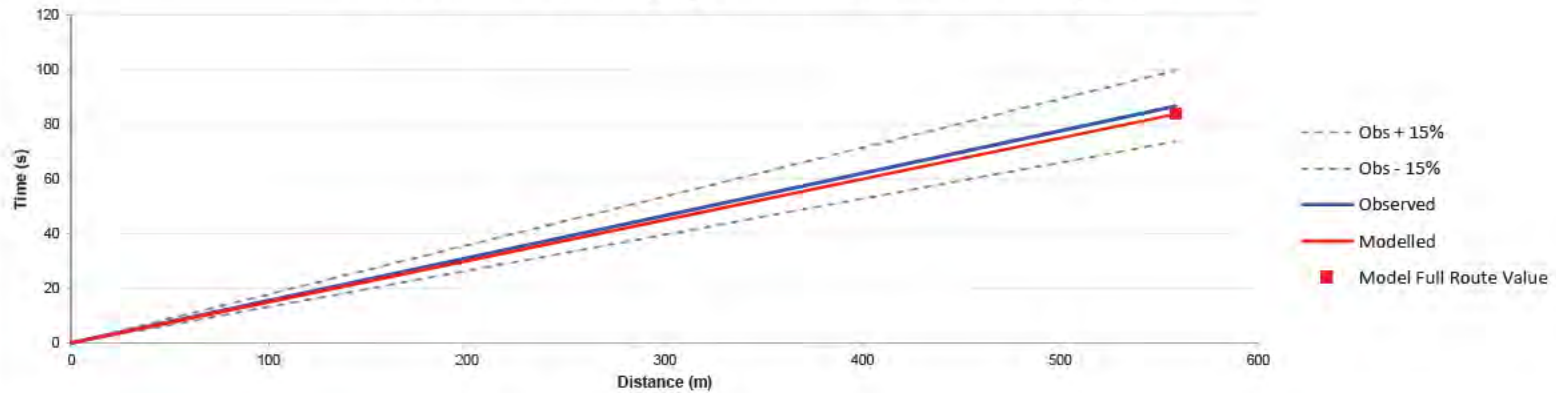




Journey Time Summary for 33 - Barrack Square - SB

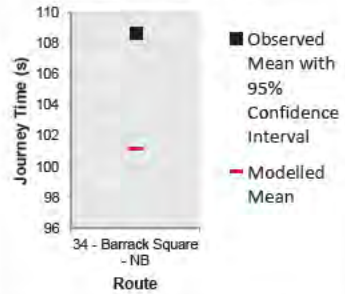


Journey Time Summary by Distance for 33 - Barrack Square - SB

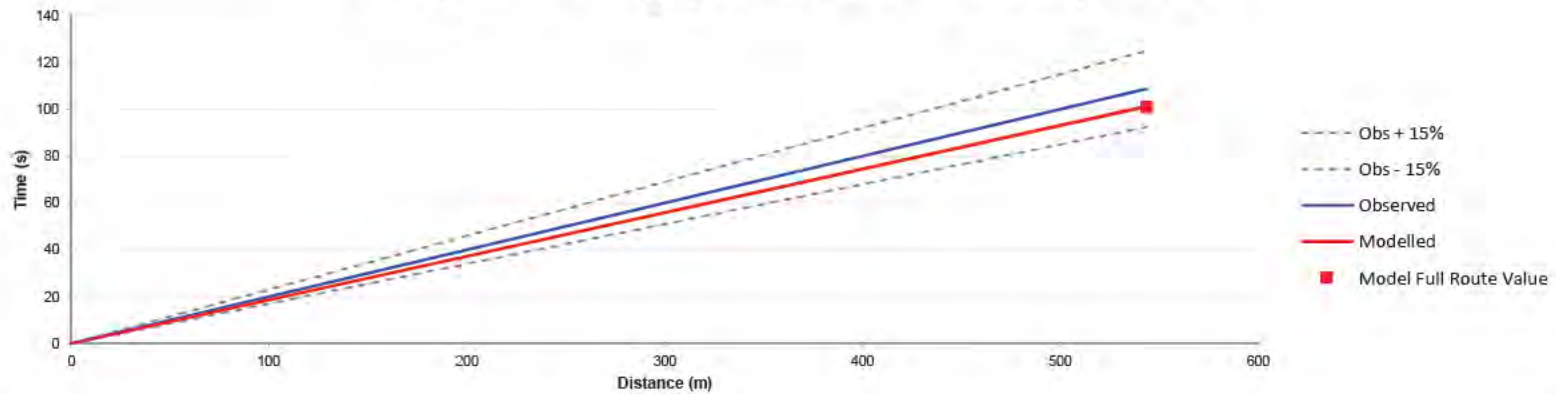




Journey Time Summary for 34 - Barrack Square - NB

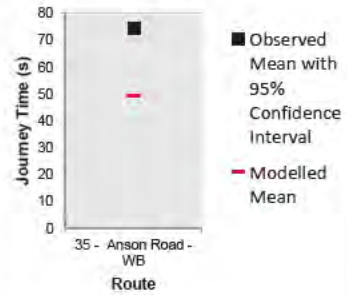


Journey Time Summary by Distance for 34 - Barrack Square - NB

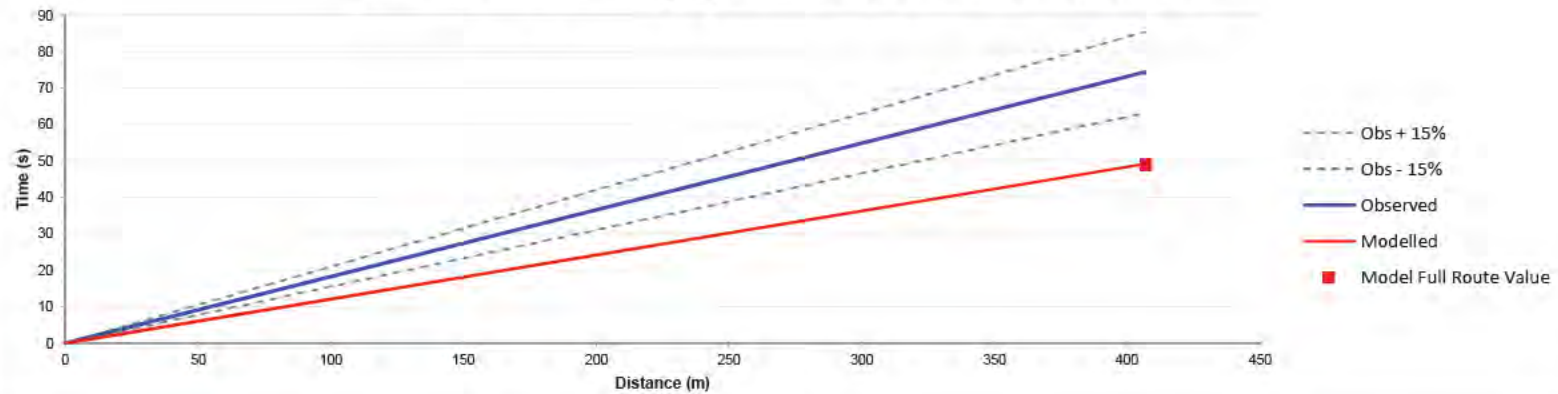




Journey Time Summary for 35 - Anson Road - WB

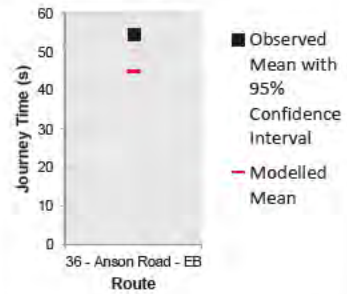


Journey Time Summary by Distance for 35 - Anson Road - WB

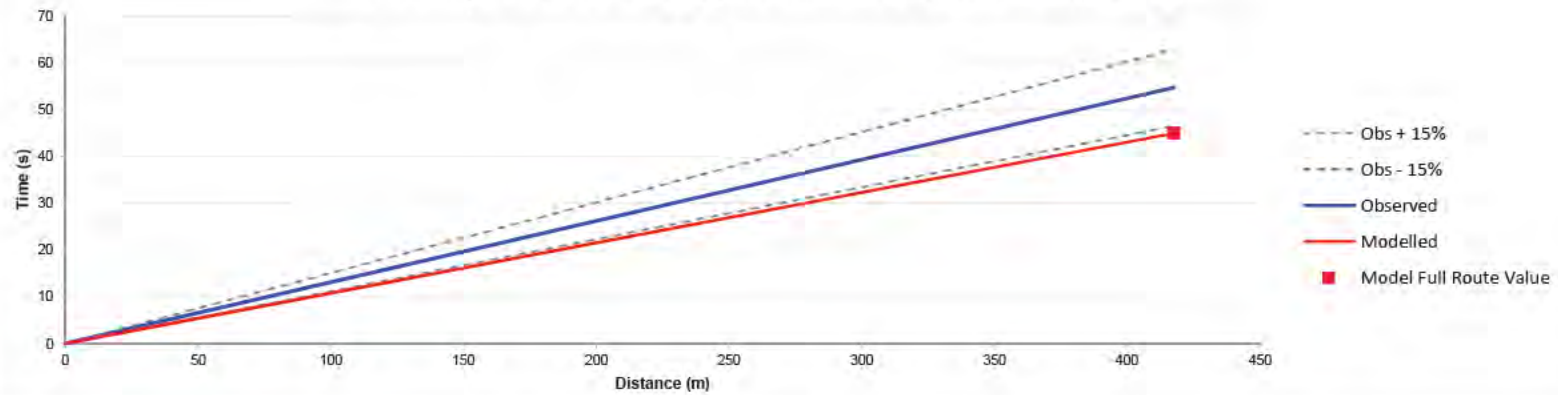




Journey Time Summary for 36 - Anson Road - EB

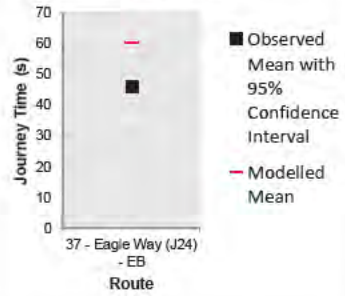


Journey Time Summary by Distance for 36 - Anson Road - EB

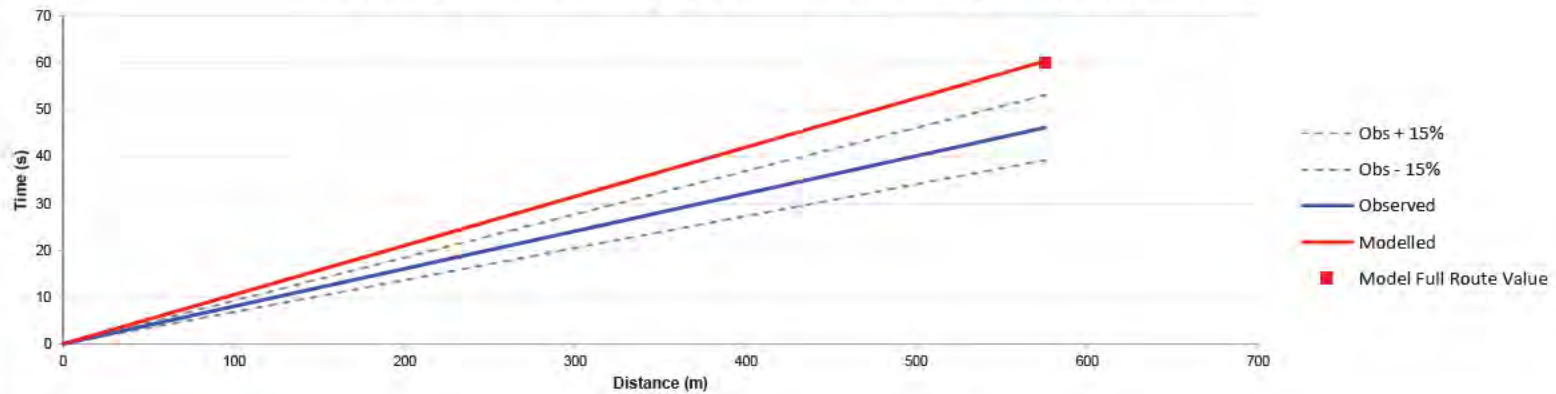




Journey Time Summary for 37 - Eagle Way (J24) - EB

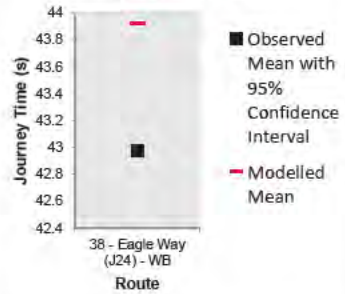


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

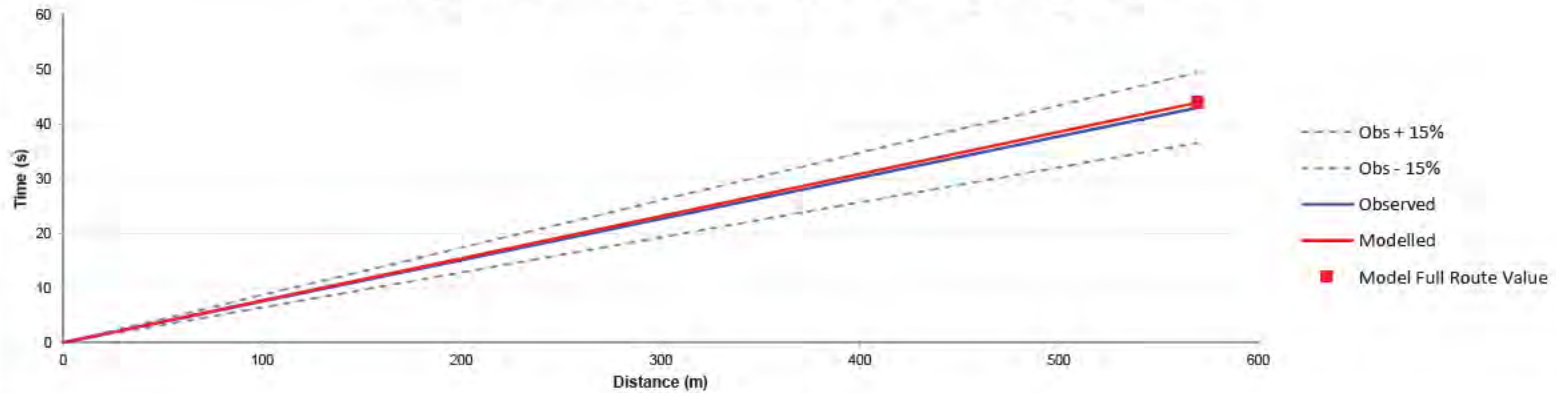




Journey Time Summary for 38 - Eagle Way (J24) - WB

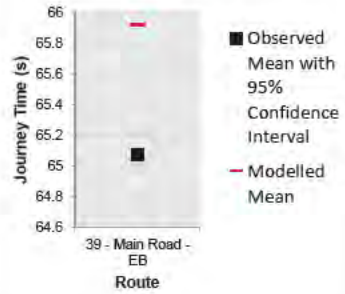


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

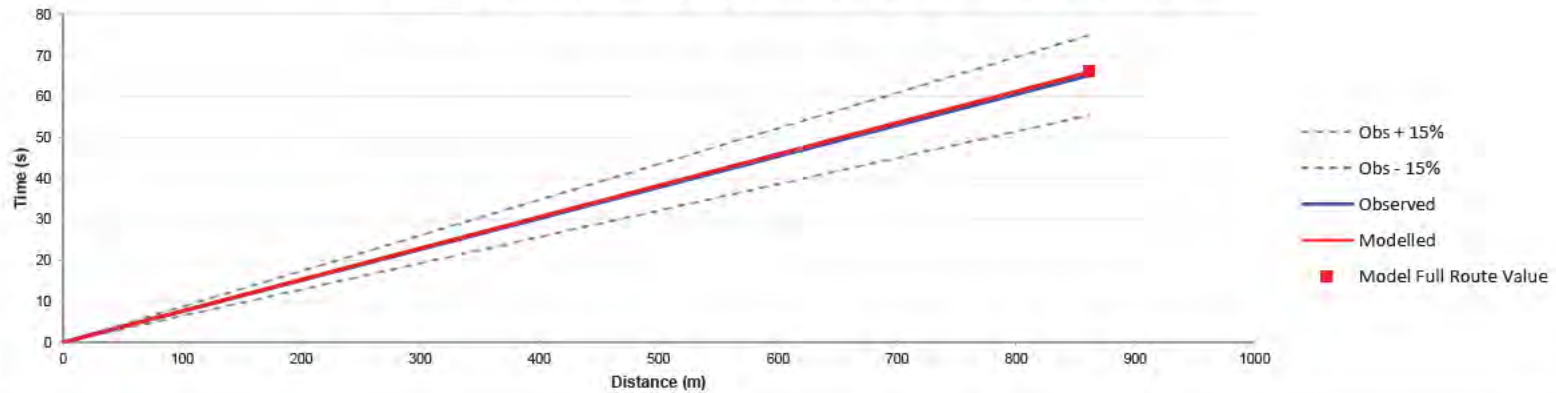




Journey Time Summary for 39 - Main Road - EB

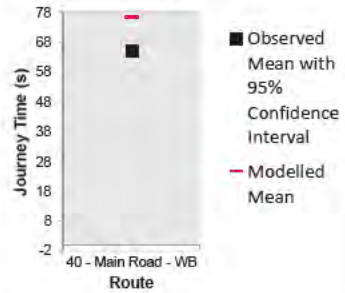


Journey Time Summary by Distance for 39 - Main Road - EB

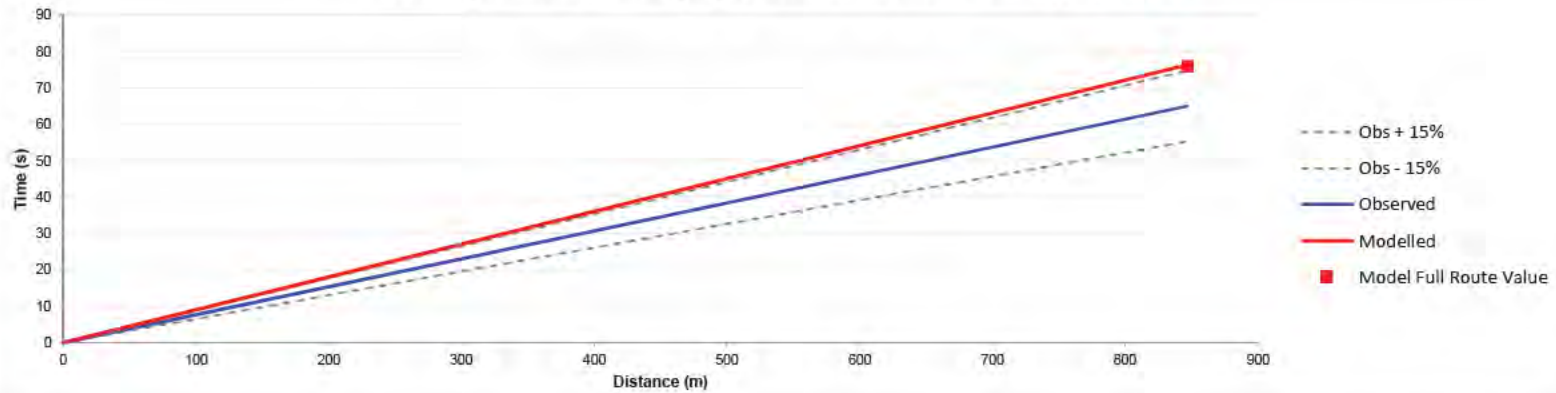




Journey Time Summary for 40 - Main Road - WB

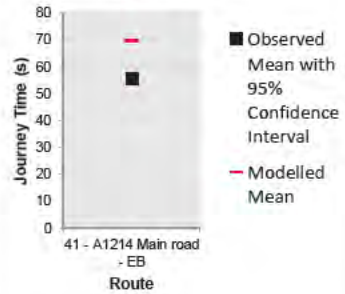


Journey Time Summary by Distance for 40 - Main Road - WB

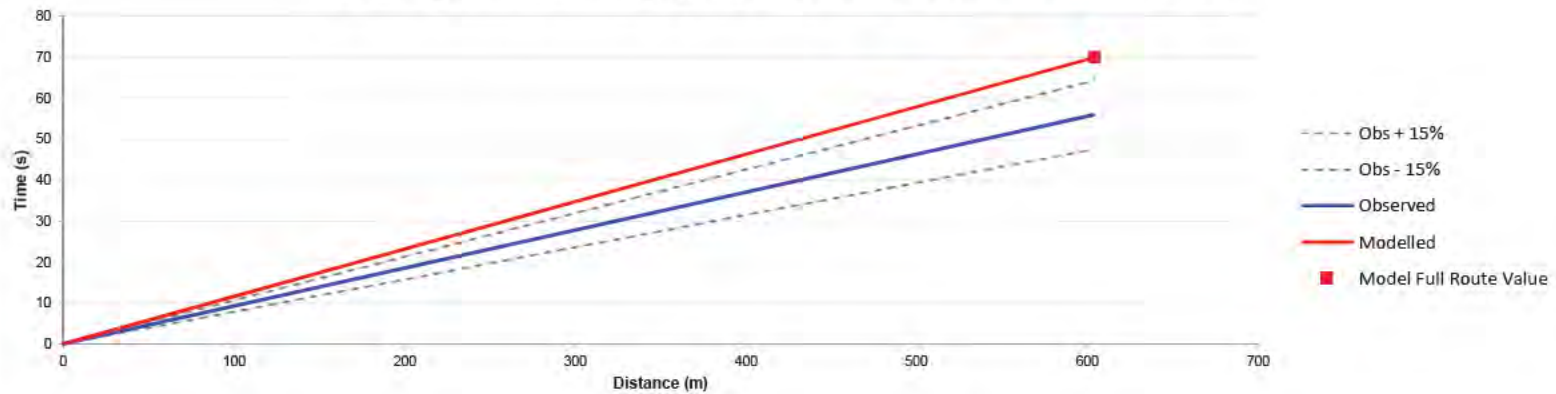




Journey Time Summary for 41 - A1214 Main road road - EB

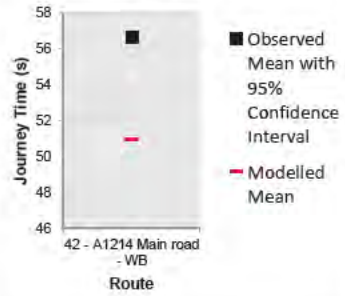


Journey Time Summary by Distance for 41 - A1214 Main road - EB

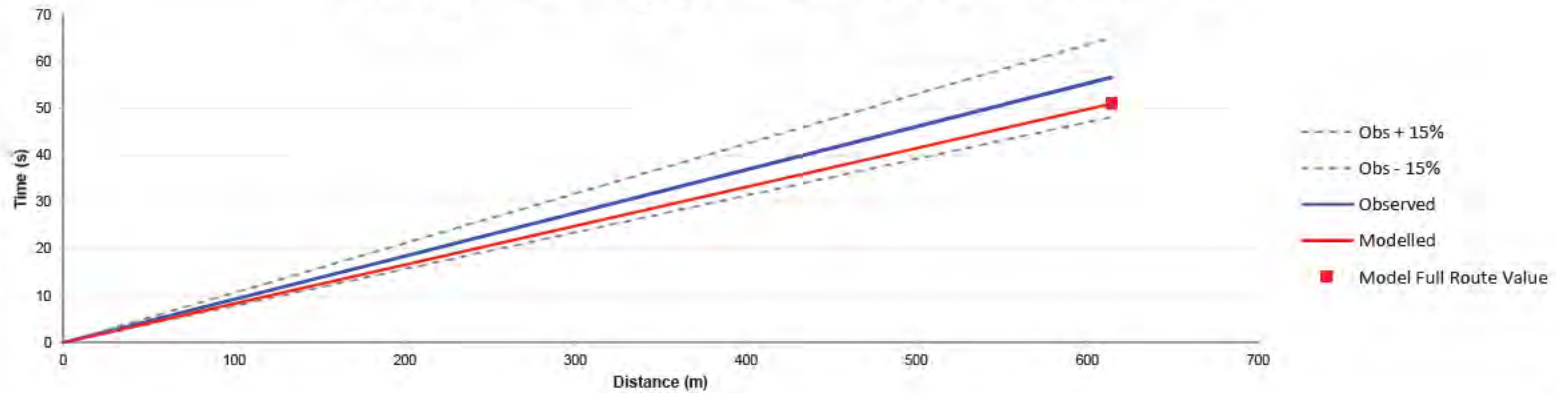




Journey Time Summary for 42 - A1214 Main road road - WB

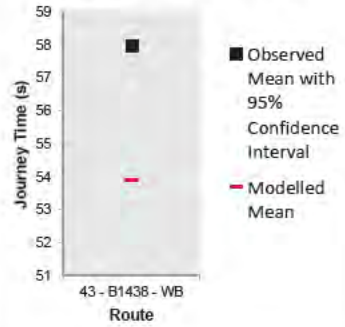


Journey Time Summary by Distance for 42 - A1214 Main road - WB

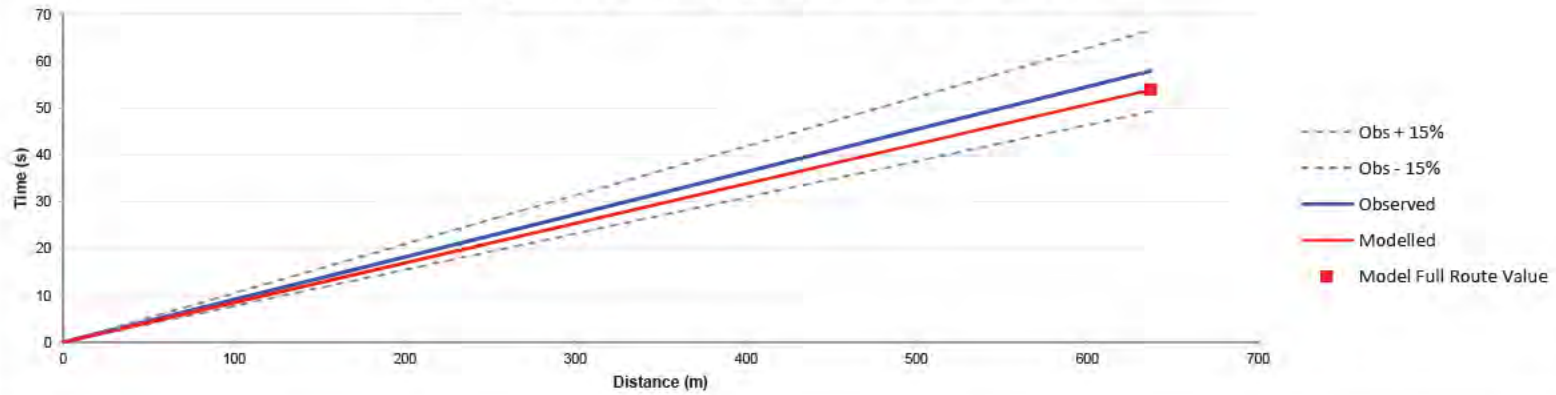




Journey Time Summary for 43 - B1438 - WB

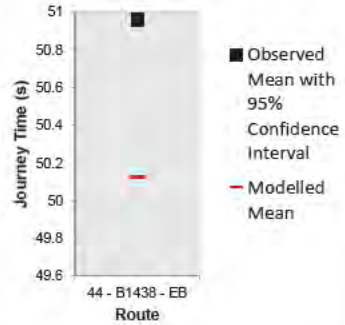


Journey Time Summary by Distance for 43 - B1438 - WB

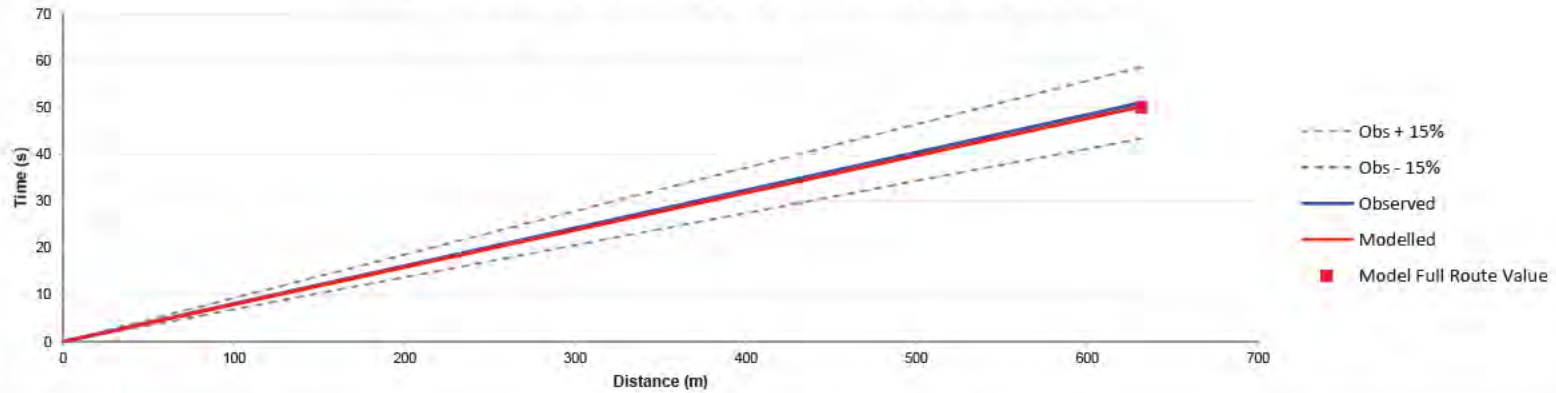




Journey Time Summary for 44 - B1438 - EB

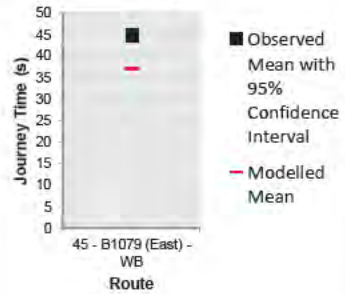


Journey Time Summary by Distance for 44 - B1438 - EB

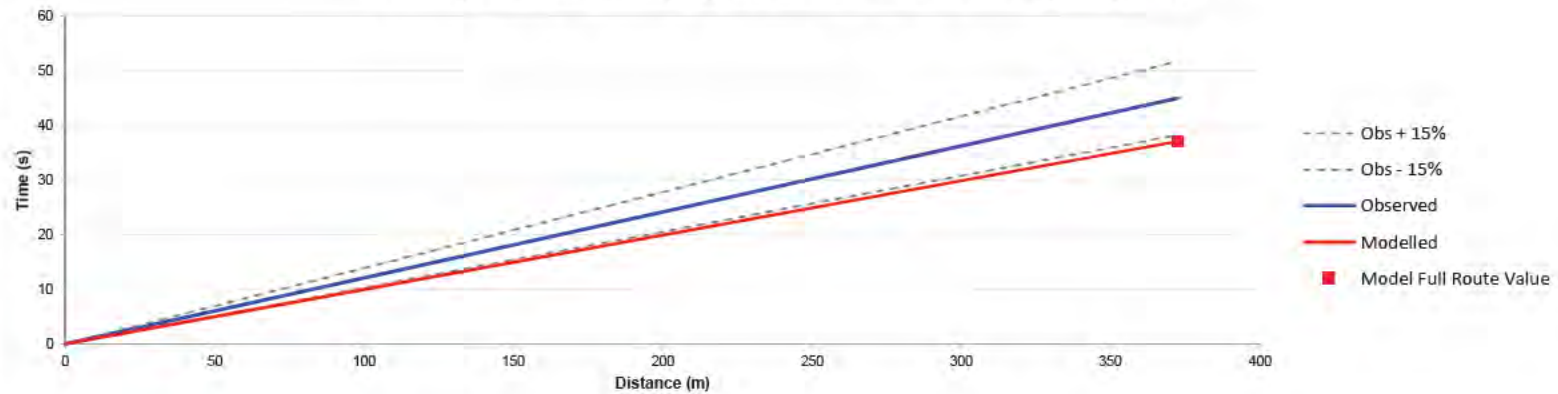




Journey Time Summary for 45 - B1079 (East) - WB

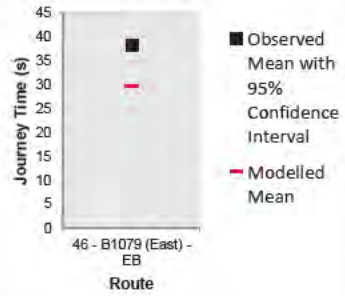


Journey Time Summary by Distance for 45 - B1079 (East) - WB

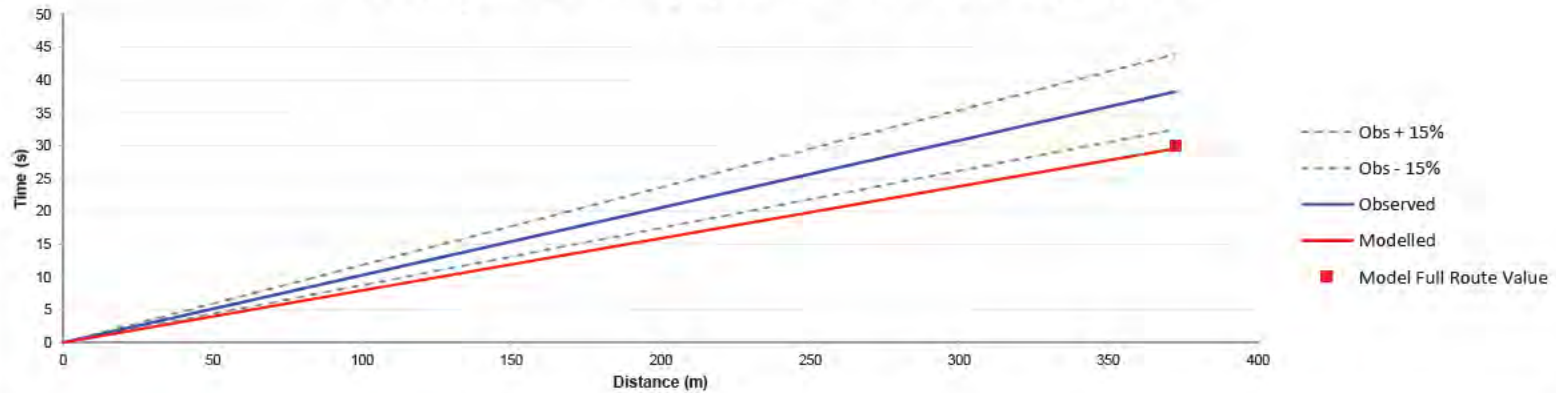




Journey Time Summary for 46 - B1079 (East) - EB

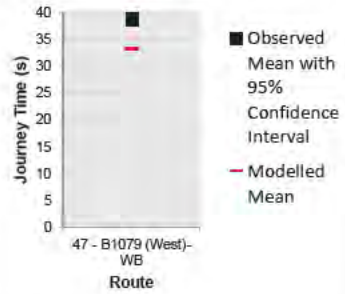


Journey Time Summary by Distance for 46 - B1079 (East) - EB

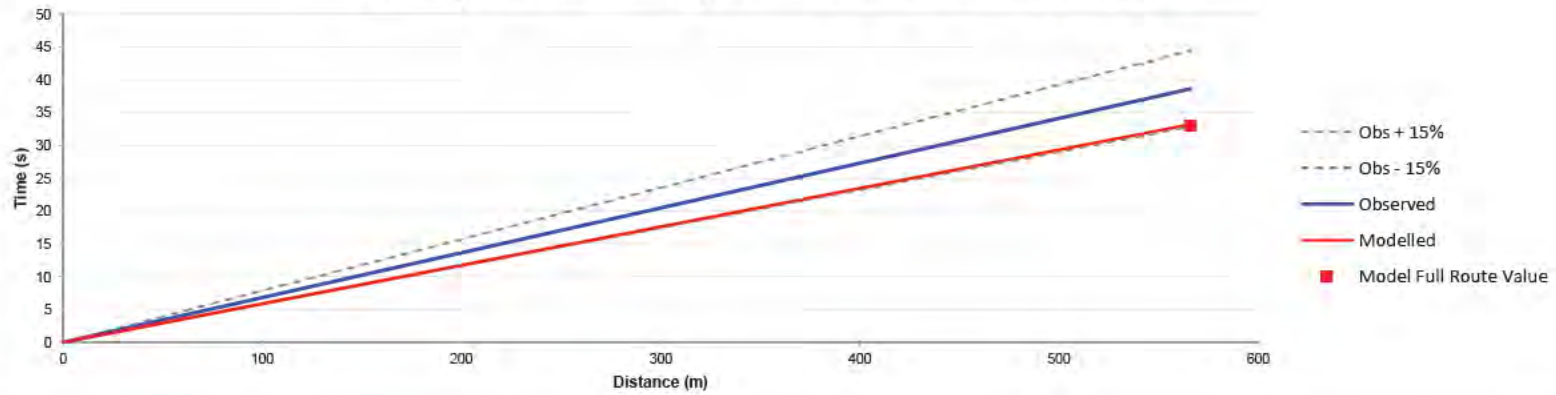




Journey Time Summary for 47 - B1079 (West)- WB

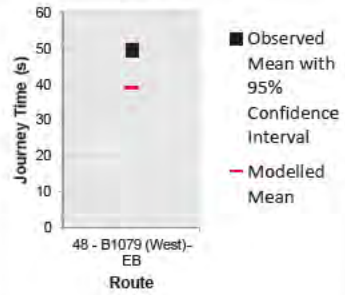


Journey Time Summary by Distance for 47 - B1079 (West)- WB

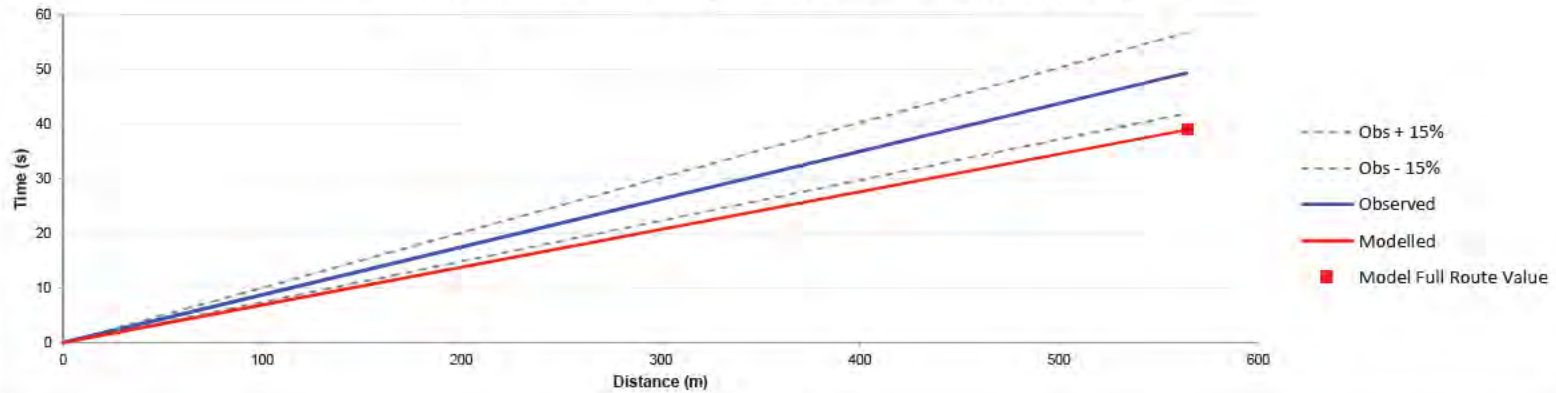




Journey Time Summary for 48 - B1079 (West)- EB

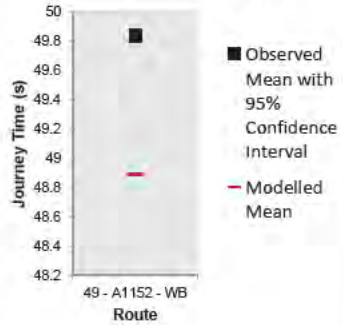


Journey Time Summary by Distance for 48 - B1079 (West)- EB

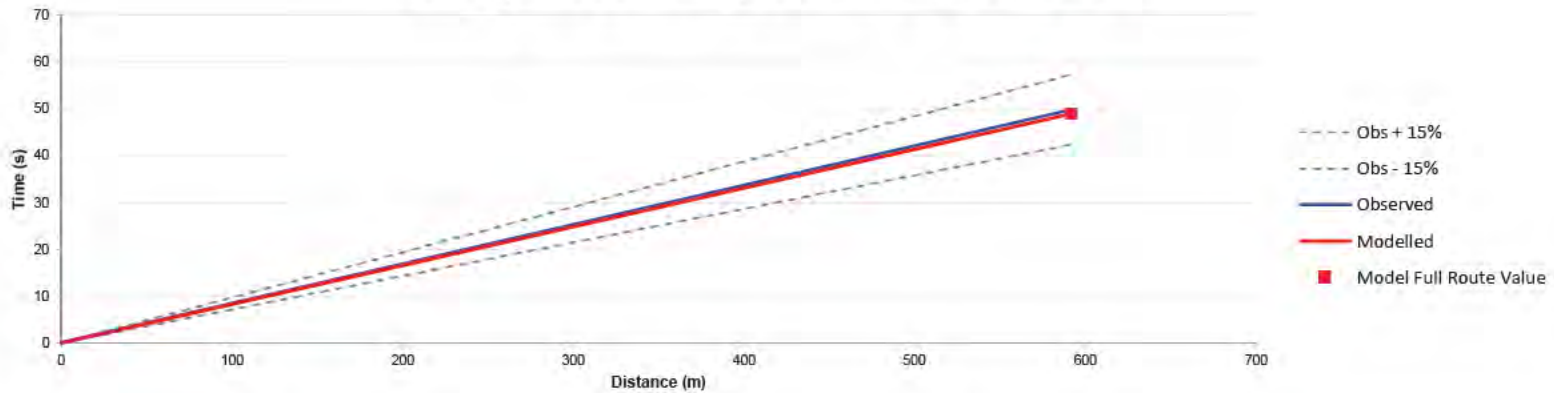




Journey Time Summary for 49 - A1152 - WB

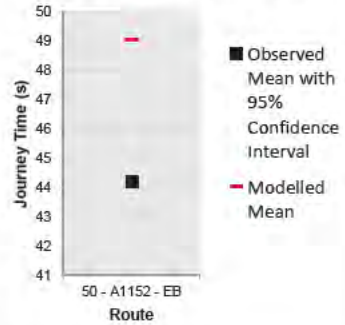


Journey Time Summary by Distance for 49 - A1152 - WB

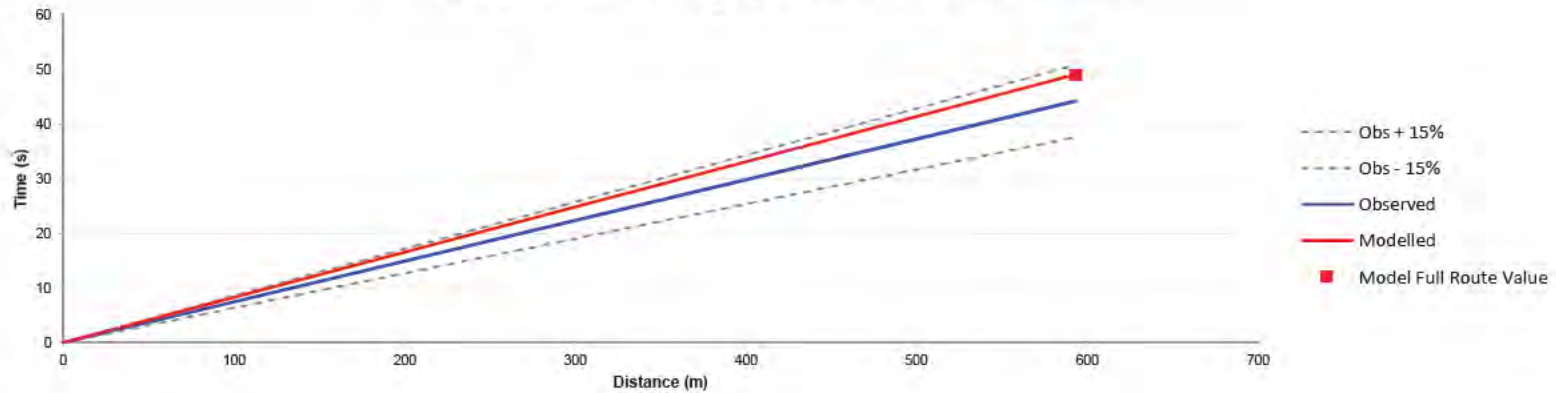




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Journey Times
Validation Statistics

PM Period

Route:	Segment	Graph Group	Observed		Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	95% Conf	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	115	7	112	1	TRUE	-2.9%	-3	TRUE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	73		64	0	TRUE	-12.0%	-9	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	49	3	45	1	TRUE	-8.3%	-4	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	50	2	47	0	TRUE	-5.4%	-3	FALSE	TRUE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	116	3	124	0	TRUE	7.6%	9	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	103	13	90	0	TRUE	-12.8%	-13	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	88	1	96	0	TRUE	10.0%	9	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12- NB	Partial - H	1	141	2	136	0	TRUE	-3.7%	-5	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	132	2	123	0	TRUE	-6.7%	-9	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	95	4	92	0	TRUE	-3.9%	-4	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	83	4	92	0	TRUE	10.9%	9	FALSE	TRUE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	128	8	121	1	TRUE	-5.7%	-7	TRUE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	43	1	35	0	TRUE	-19.9%	-9	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	43	1	39	0	TRUE	-9.5%	-4	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	76	2	67	0	TRUE	-11.6%	-9	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	122	3	125	0	TRUE	2.0%	3	TRUE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	126	3	136	1	TRUE	8.0%	10	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	116	5	119	0	TRUE	2.5%	3	TRUE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	1	82	0	TRUE	7.6%	6	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	81	1	89	0	TRUE	10.2%	8	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	94		99	0	TRUE	4.8%	5	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	97	1	105	0	TRUE	7.9%	8	FALSE	TRUE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	58	1	61	0	TRUE	5.3%	3	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	72	3	69	1	TRUE	-4.6%	-3	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	94	5	93	1	TRUE	-0.8%	-1	TRUE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	86	2	89	0	TRUE	3.7%	3	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road -EB	Full	15	48	1	42	0	TRUE	-12.4%	-6	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	65	3	60	1	TRUE	-7.5%	-5	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	17	1	16	0	TRUE	-6.9%	-1	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	12	1	14	0	TRUE	21.9%	3	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	47	3	54	0	TRUE	14.5%	7	FALSE	TRUE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	124	79	71	5	FALSE	-42.3%	-52	TRUE	FALSE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	87	1	84	0	TRUE	-3.1%	-3	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	174	67	116	2	TRUE	-33.1%	-57	TRUE	FALSE	TRUE	TRUE	544
35 - Anson Road - WB	Full	23	82	11	57	1	TRUE	-31.0%	-25	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	55	1	45	0	TRUE	-17.9%	-10	FALSE	FALSE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	46		60	2	TRUE	30.6%	14	FALSE	FALSE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	43	1	44	0	TRUE	2.6%	1	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	65	1	66	0	TRUE	2.6%	2	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	65		77	1	TRUE	19.5%	13	FALSE	FALSE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	55	2	69	0	TRUE	25.3%	14	FALSE	FALSE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	59	2	51	0	TRUE	-13.1%	-8	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	58	1	55	0	TRUE	-5.0%	-3	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	52	1	50	0	TRUE	-2.7%	-1	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	47	8	41	1	TRUE	-11.8%	-6	TRUE	TRUE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	37	1	29	0	TRUE	-20.9%	-8	FALSE	FALSE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	38	1	33	0	TRUE	-13.4%	-5	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	49	3	39	0	TRUE	-20.3%	-10	FALSE	FALSE	TRUE	TRUE	564



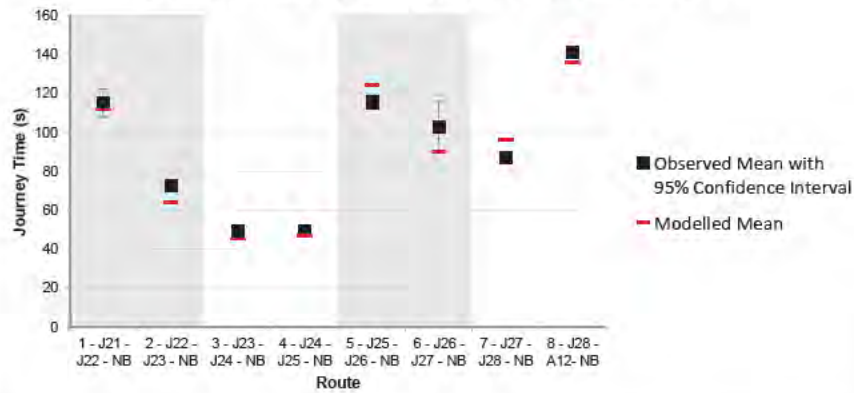
**Journey Times
Validation Statistics**

PM Period

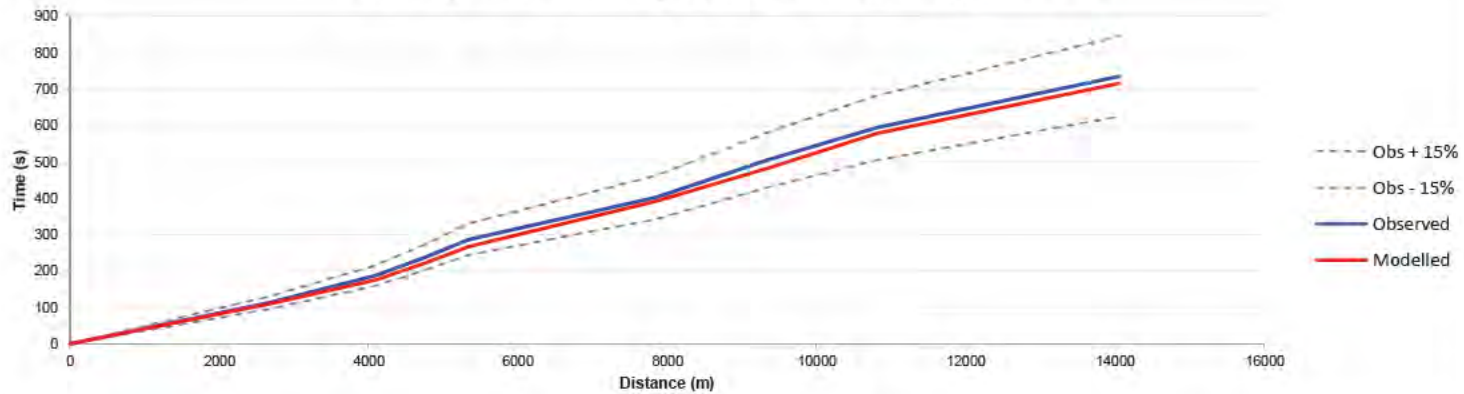
49 - A1152 - WB	Full	37	50	2	49	0	TRUE	-0.8%	0	TRUE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	44	1	49	0	TRUE	11.3%	5	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	735	13	719	2	TRUE	-2.2%	-16	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	722	22	692	1	TRUE	-4.2%	-30	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

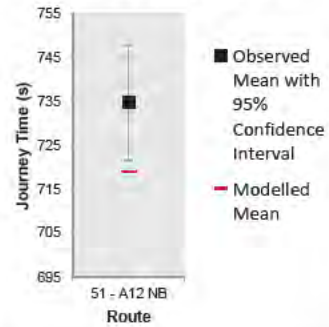


Journey Time Summary by Distance for Group Number 1

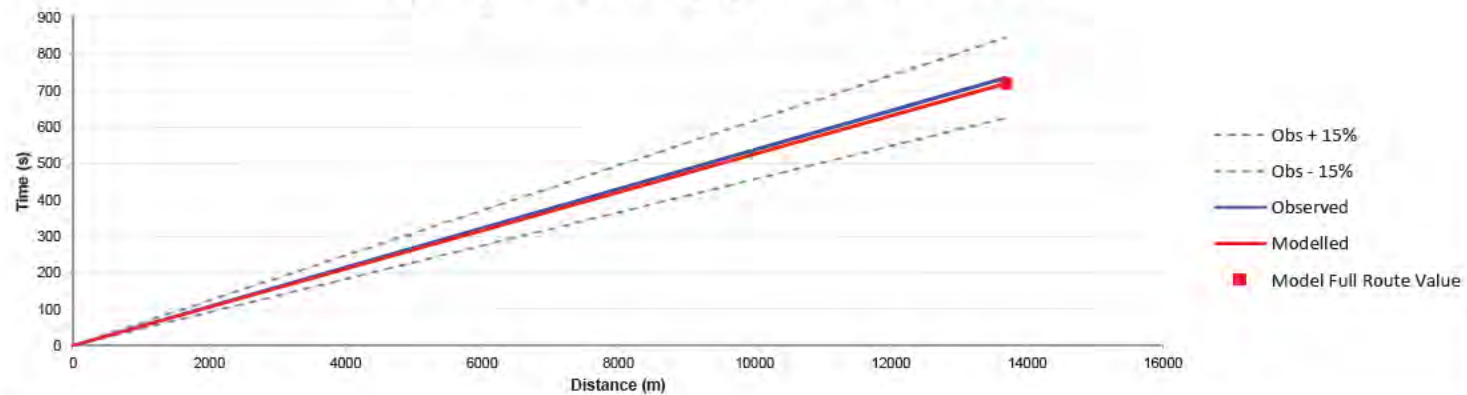




Journey Time Summary for 51 - A12 NB

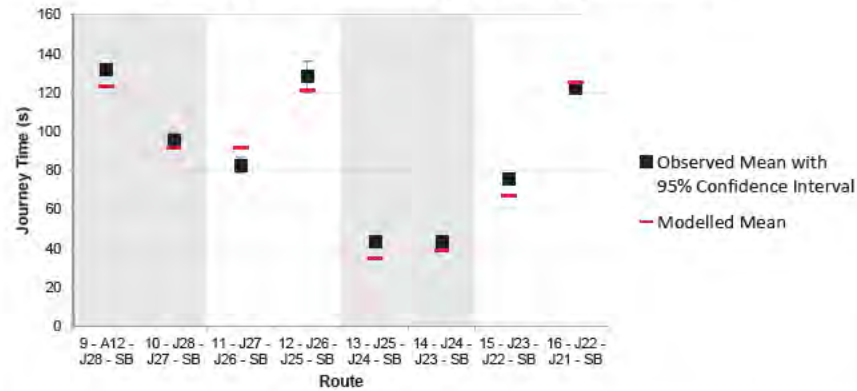


Journey Time Summary by Distance for 51 - A12 NB

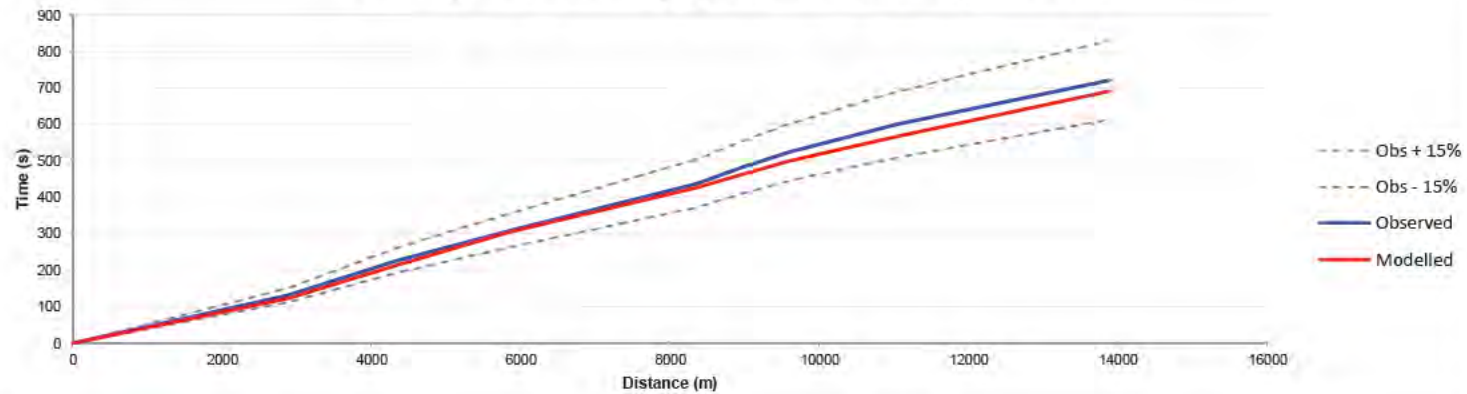




Journey Time Summary for Group Number 3

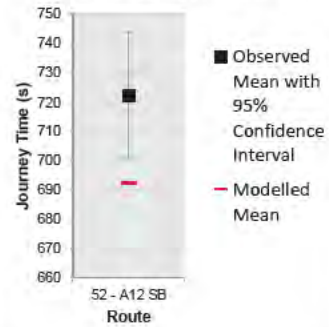


Journey Time Summary by Distance for Group Number 3

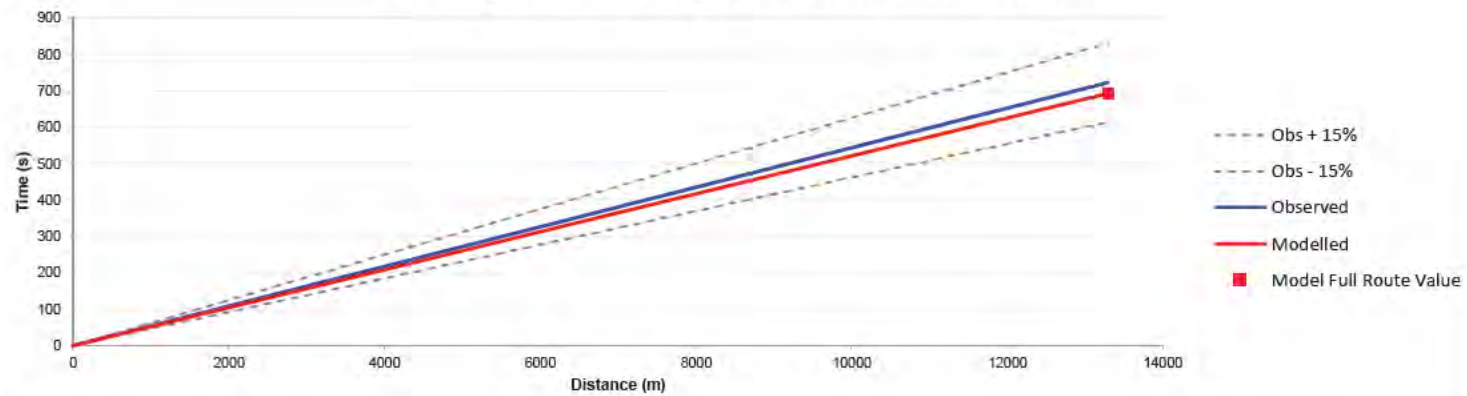




Journey Time Summary for 52 - A12 SB

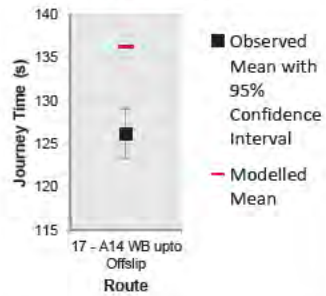


Journey Time Summary by Distance for 52 - A12 SB

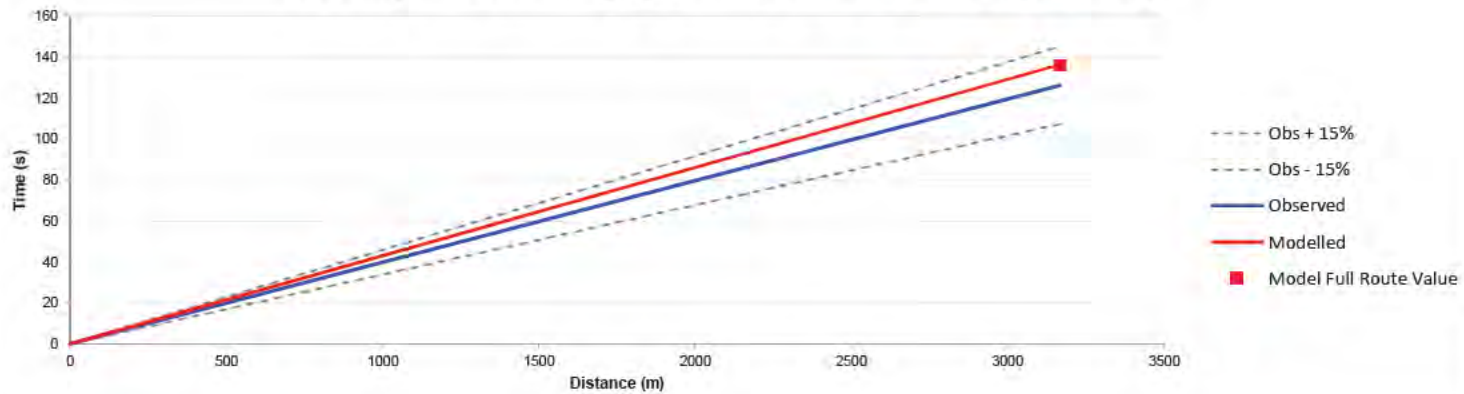




Journey Time Summary for 17 - A14 WB upto Offslip

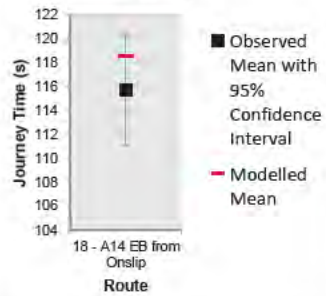


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

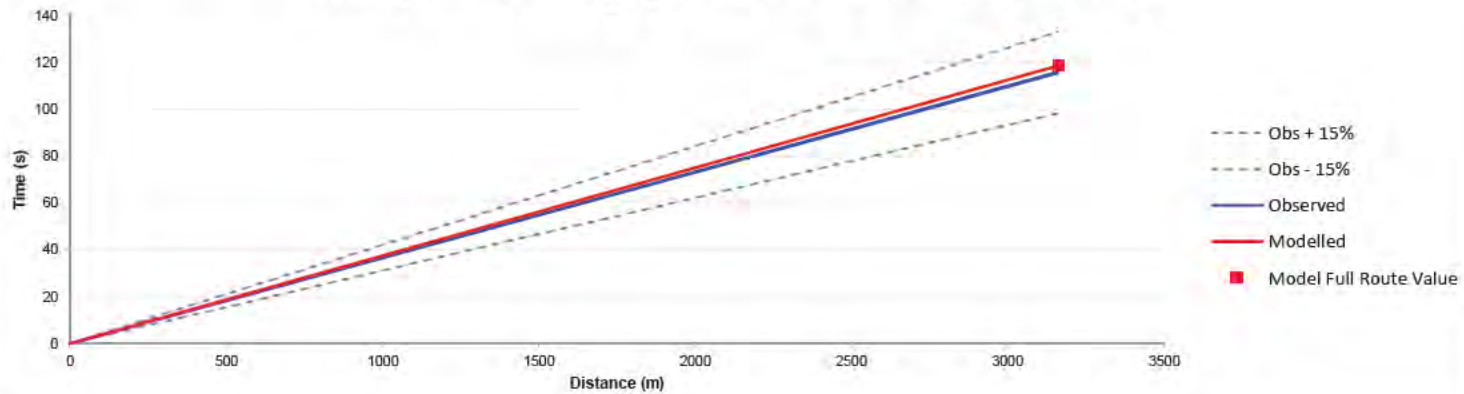




Journey Time Summary for 18 - A14 EB from Onslip

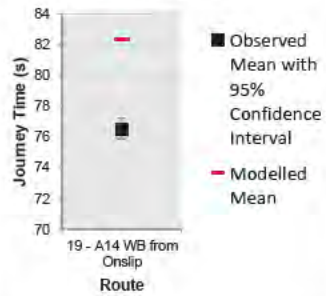


Journey Time Summary by Distance for 18 - A14 EB from Onslip

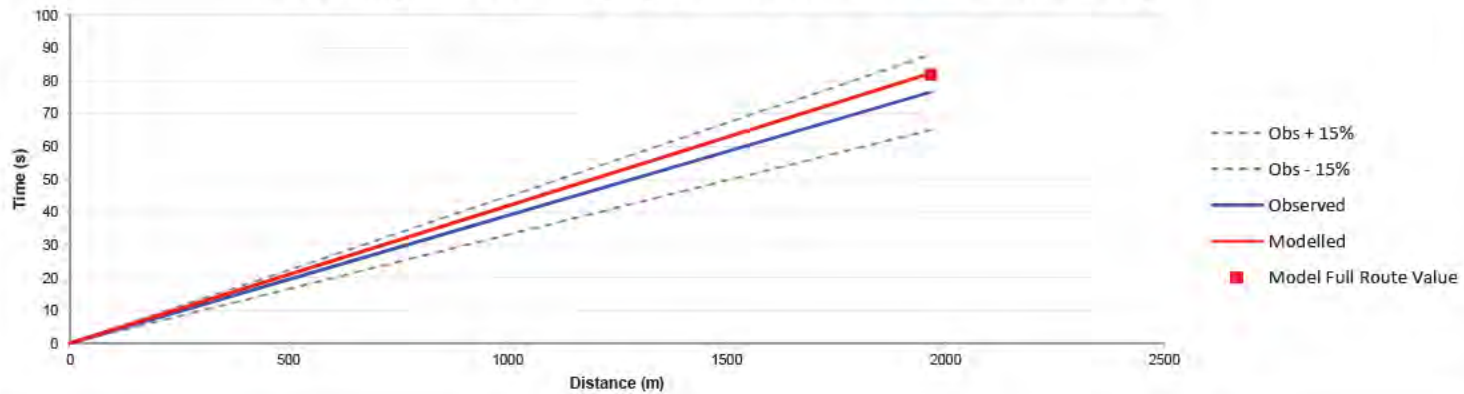




Journey Time Summary for 19 - A14 WB from Onslip

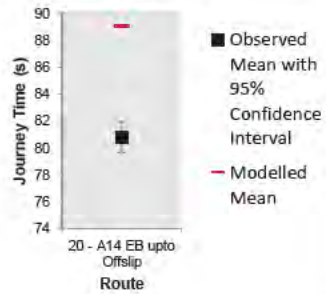


Journey Time Summary by Distance for 19 - A14 WB from Onslip

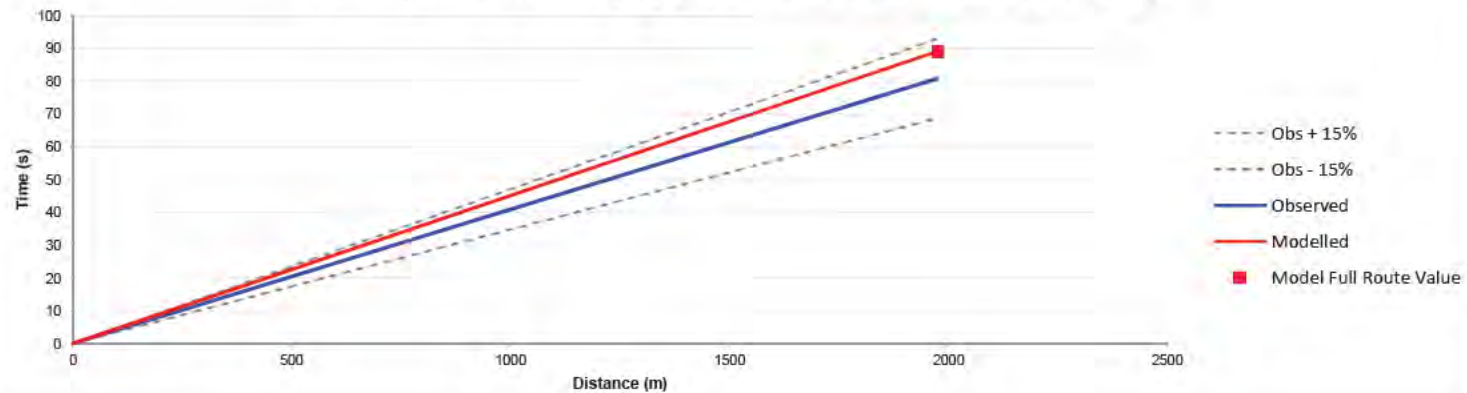




Journey Time Summary for 20 - A14 EB upto Offslip

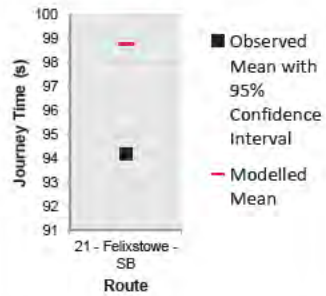


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

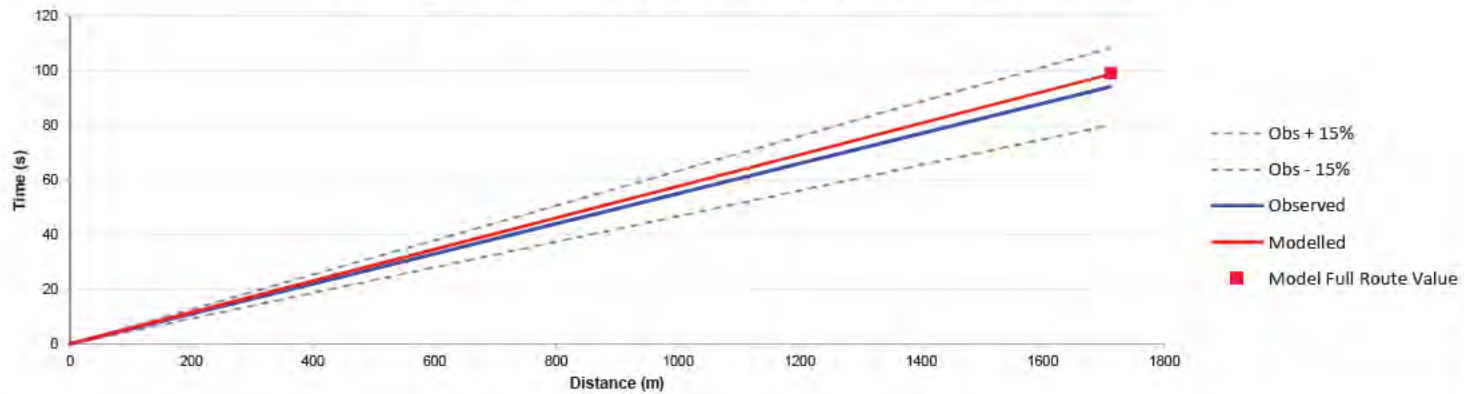




Journey Time Summary for 21 - Felixstowe - SB

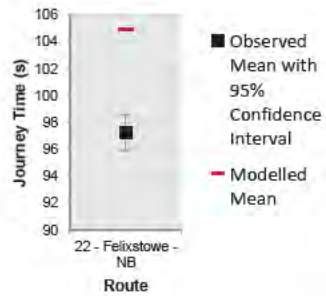


Journey Time Summary by Distance for 21 - Felixstowe - SB

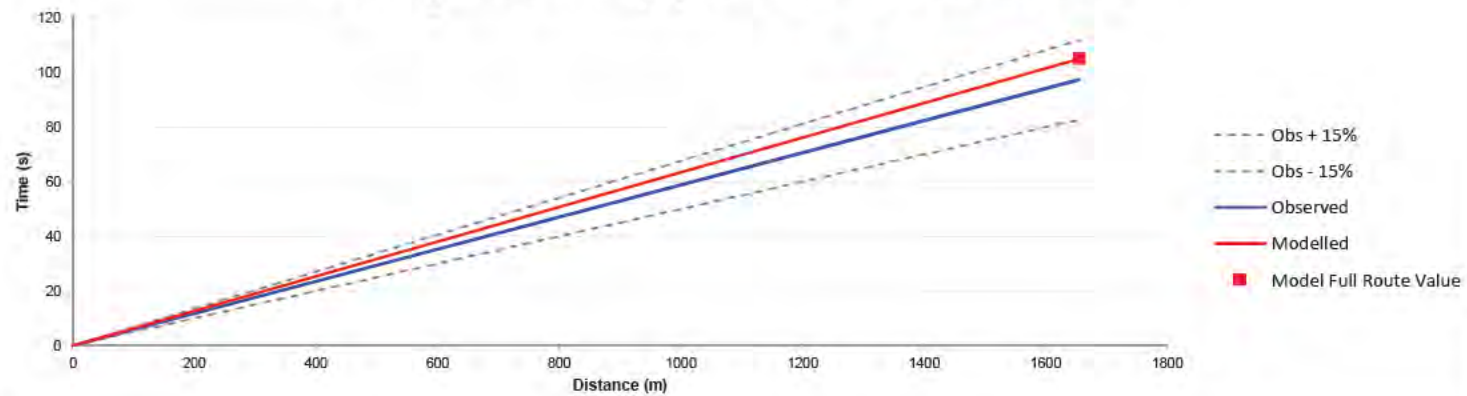




Journey Time Summary for 22 - Felixstowe - NB

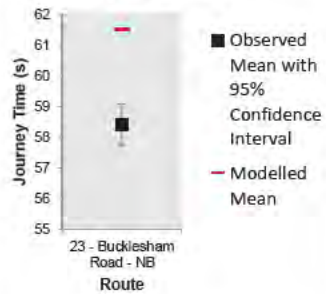


Journey Time Summary by Distance for 22 - Felixstowe - NB

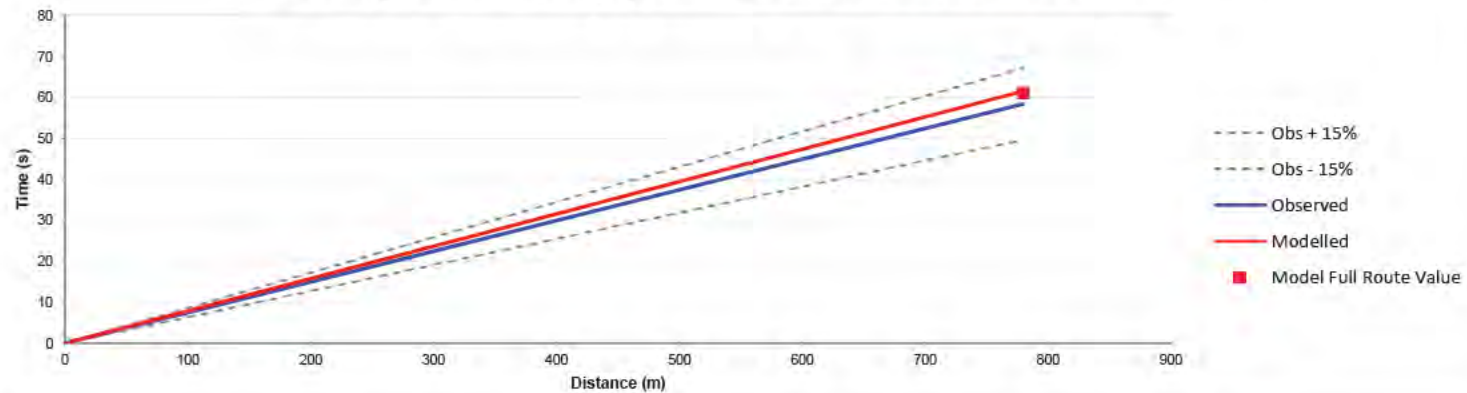




Journey Time Summary for 23 - Bucklesham Road - NB

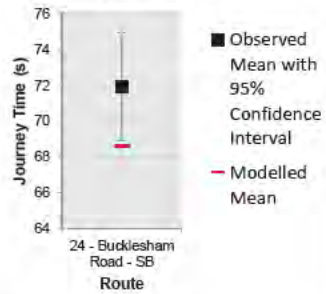


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

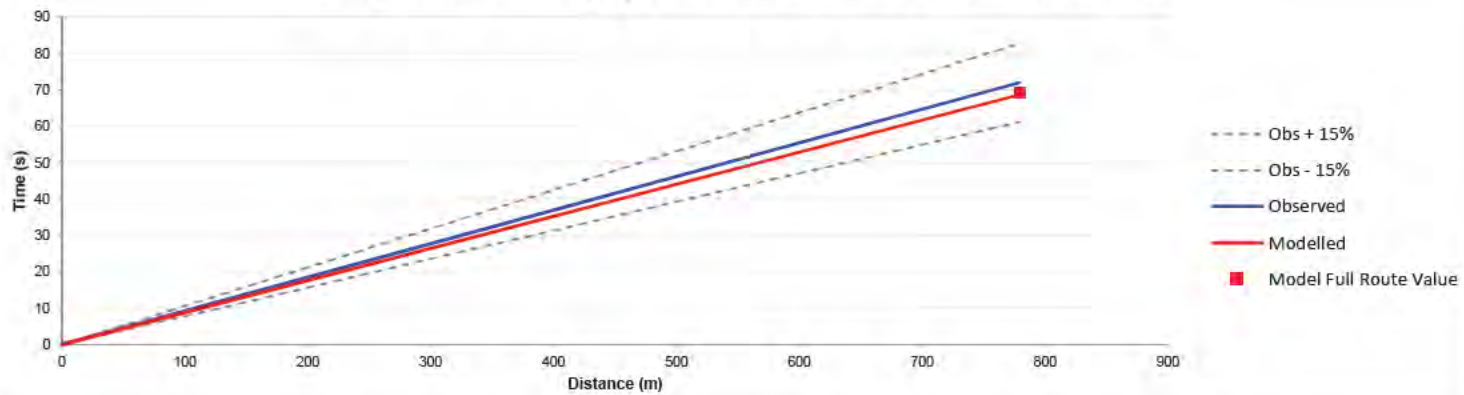




Journey Time Summary for 24 - Bucklesham Road - SB

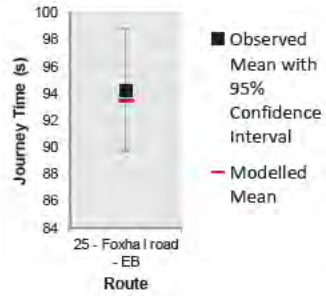


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

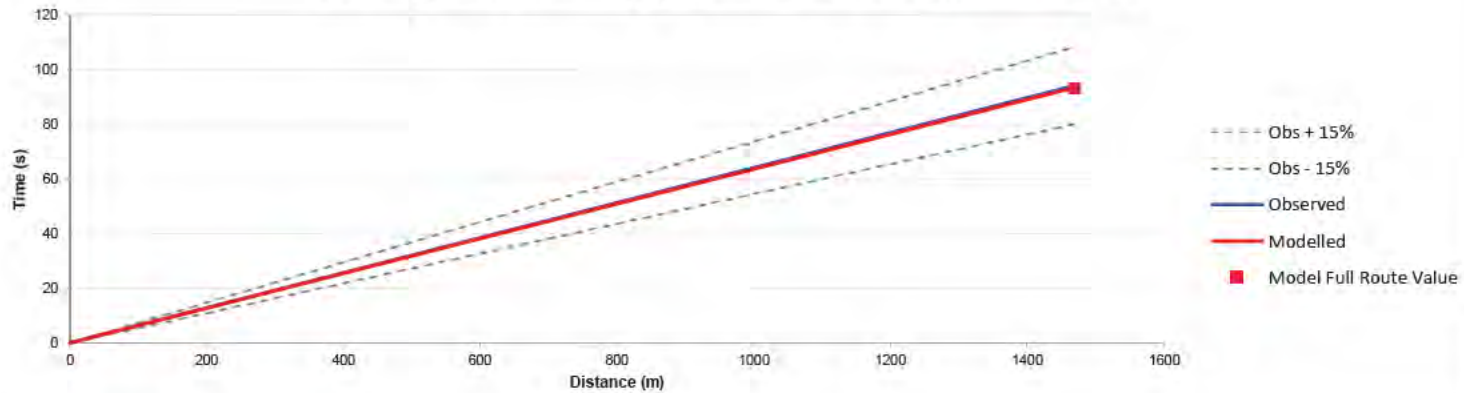




Journey Time Summary for 25 - Foxhall road - EB

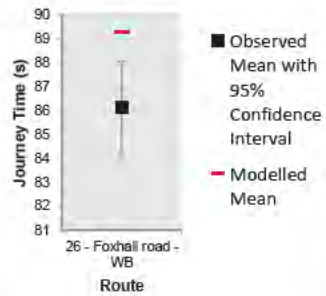


Journey Time Summary by Distance for 25 - Foxhall road - EB

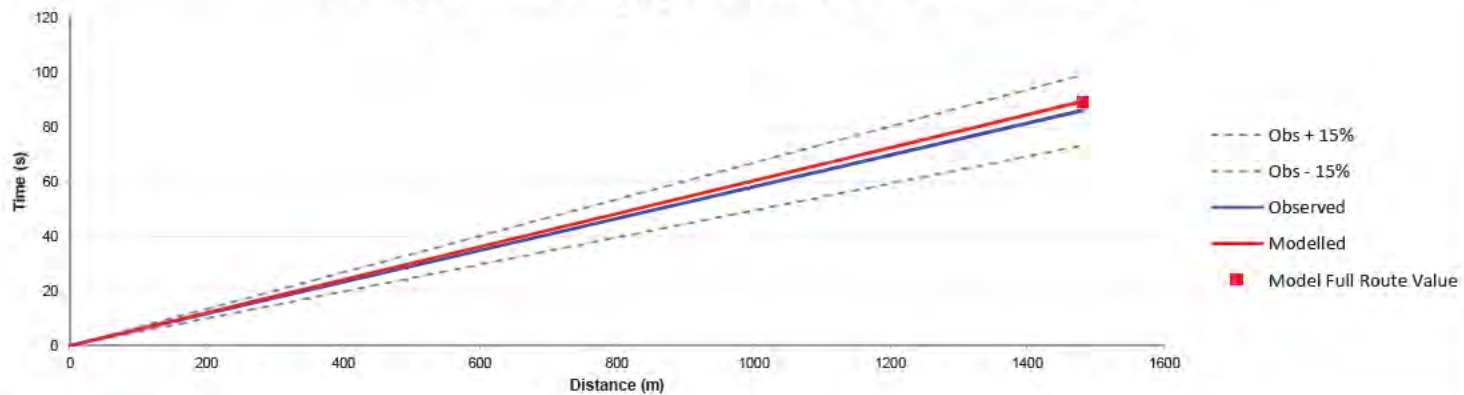




Journey Time Summary for 26 - Foxhall road - WB

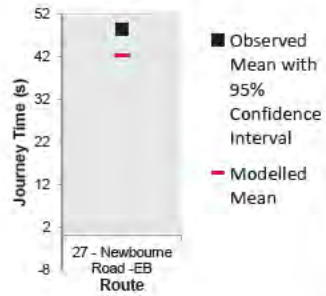


Journey Time Summary by Distance for 26 - Foxhall road - WB

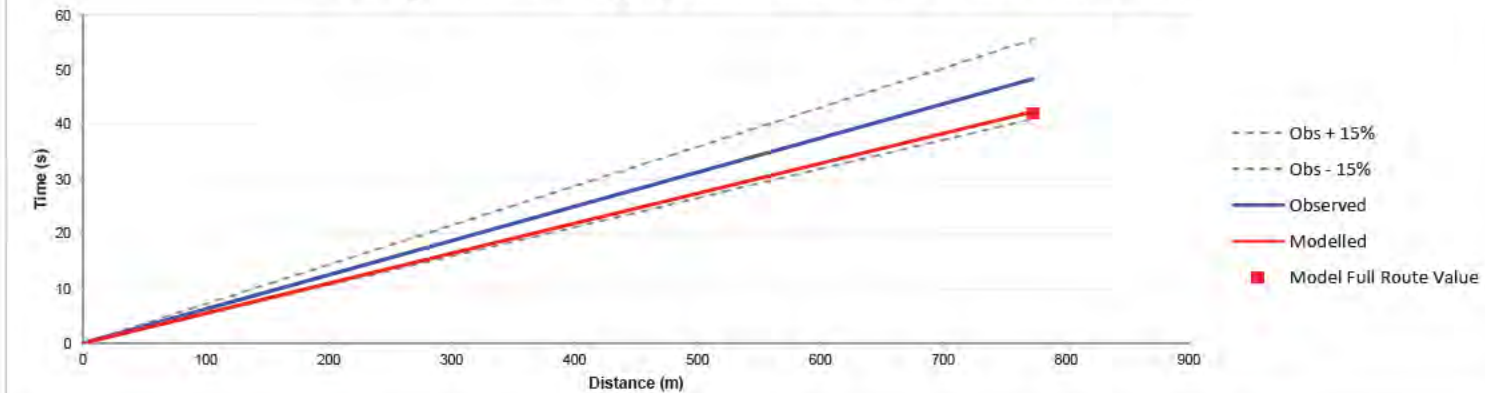




Journey Time Summary for 27 - Newbourne Road -EB

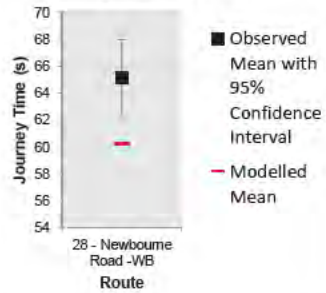


Journey Time Summary by Distance for 27 - Newbourne Road -EB

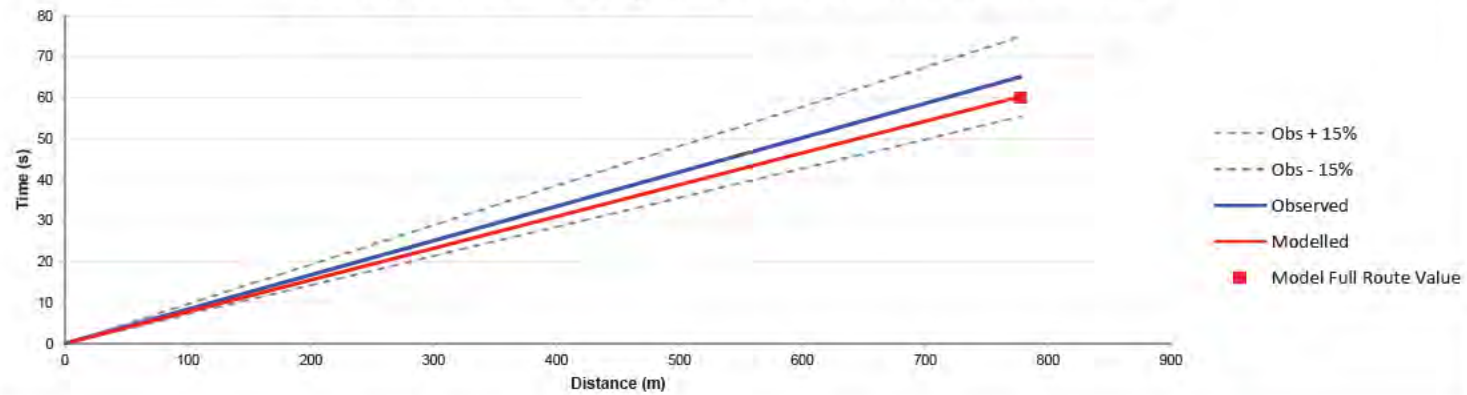




Journey Time Summary for 28 - Newbourne Road -WB

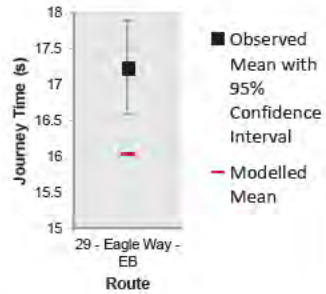


Journey Time Summary by Distance for 28 - Newbourne Road -WB

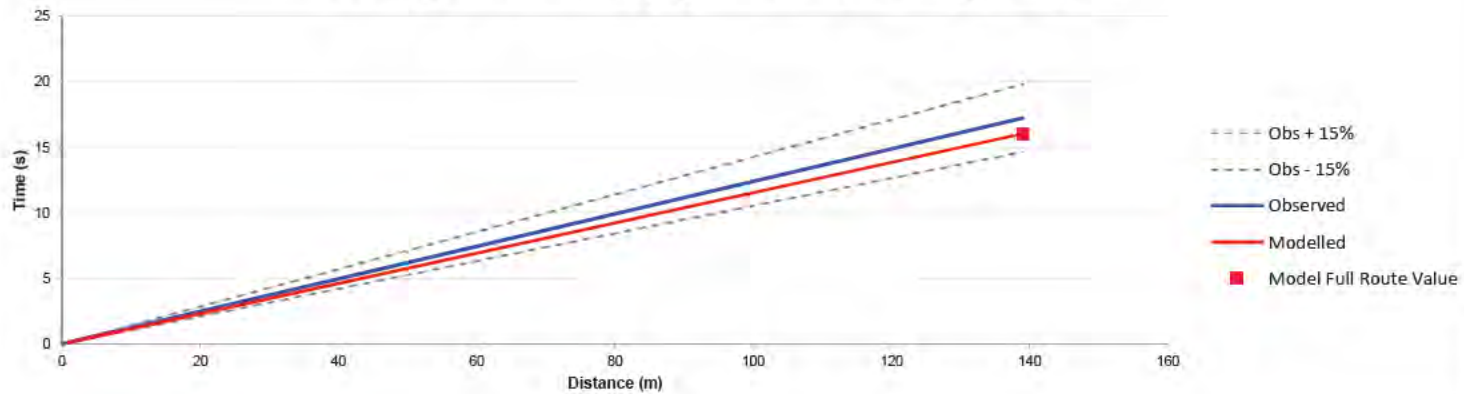




Journey Time Summary for 29 - Eagle Way - EB

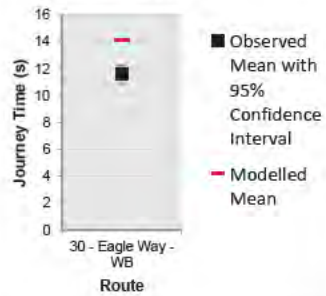


Journey Time Summary by Distance for 29 - Eagle Way - EB

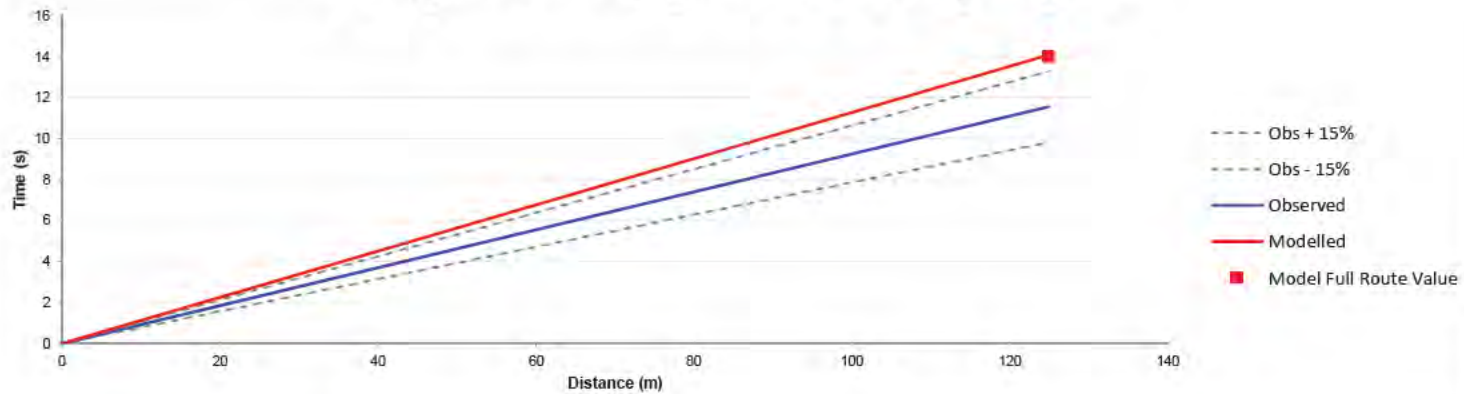




Journey Time Summary for 30 - Eagle Way - WB

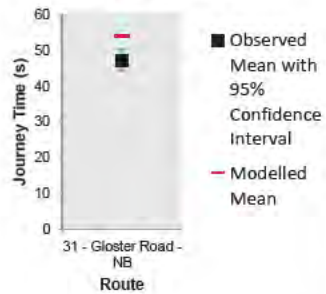


Journey Time Summary by Distance for 30 - Eagle Way - WB

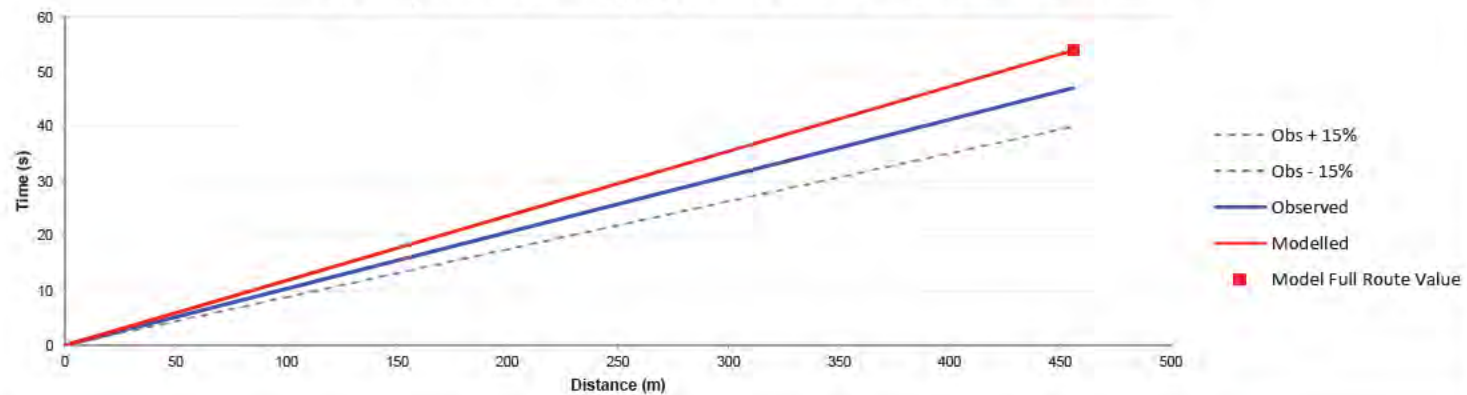




Journey Time Summary for 31 - Gloster Road - NB

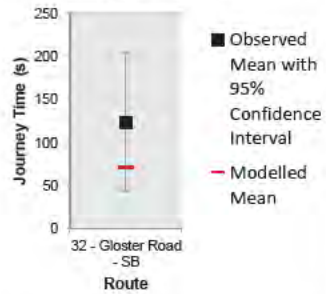


Journey Time Summary by Distance for 31 - Gloster Road - NB

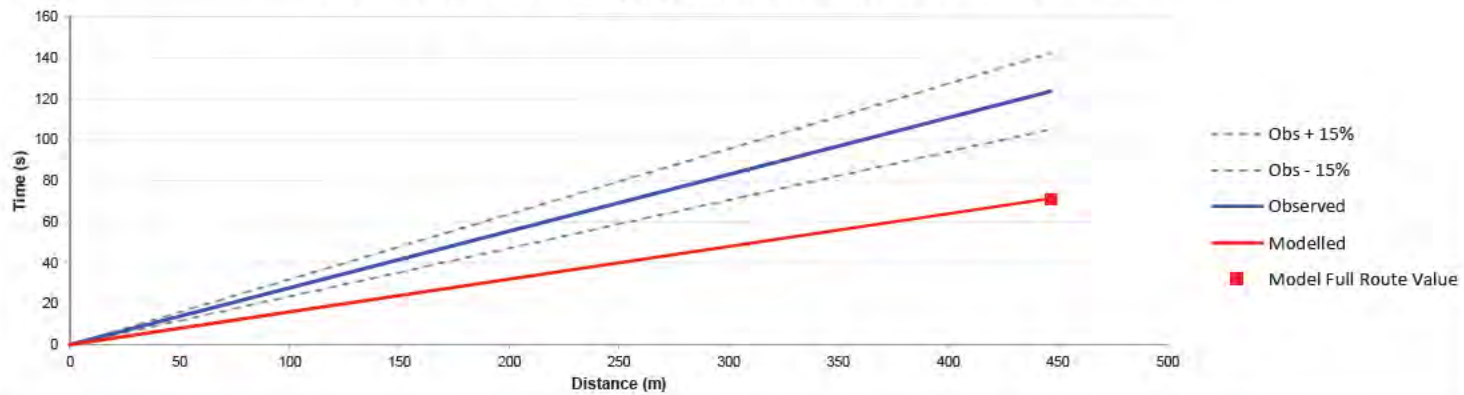




Journey Time Summary for 32 - Gloster Road - SB

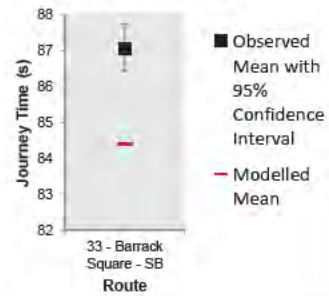


Journey Time Summary by Distance for 32 - Gloster Road - SB

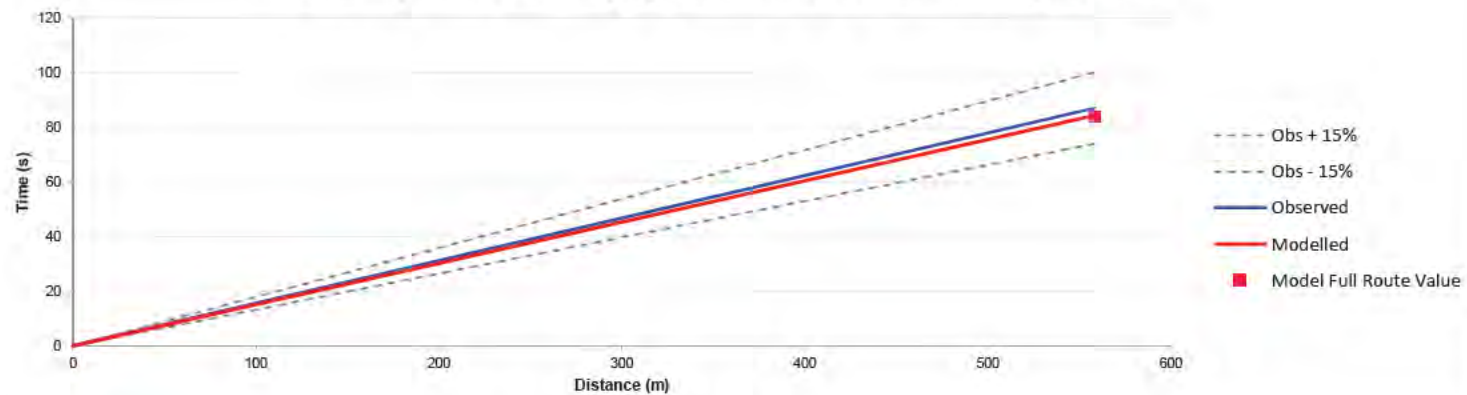




Journey Time Summary for 33 - Barrack Square - SB

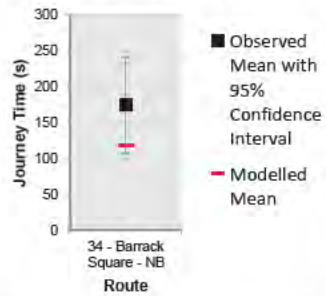


Journey Time Summary by Distance for 33 - Barrack Square - SB

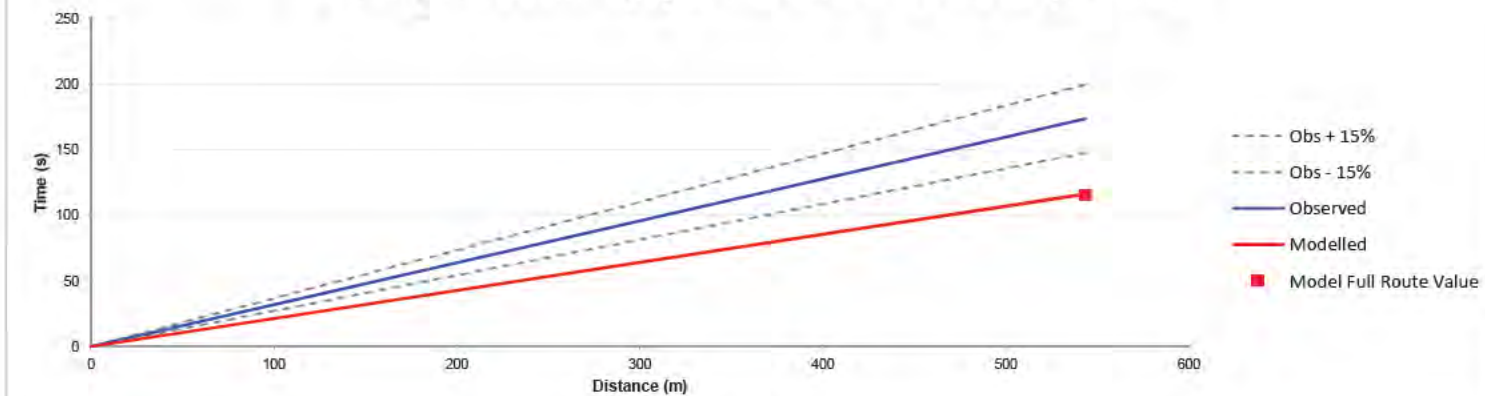




Journey Time Summary for 34 - Barrack Square - NB

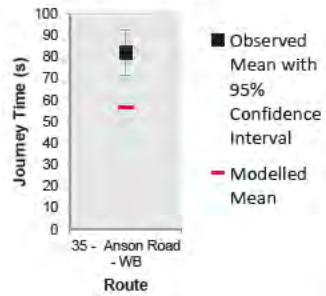


Journey Time Summary by Distance for 34 - Barrack Square - NB

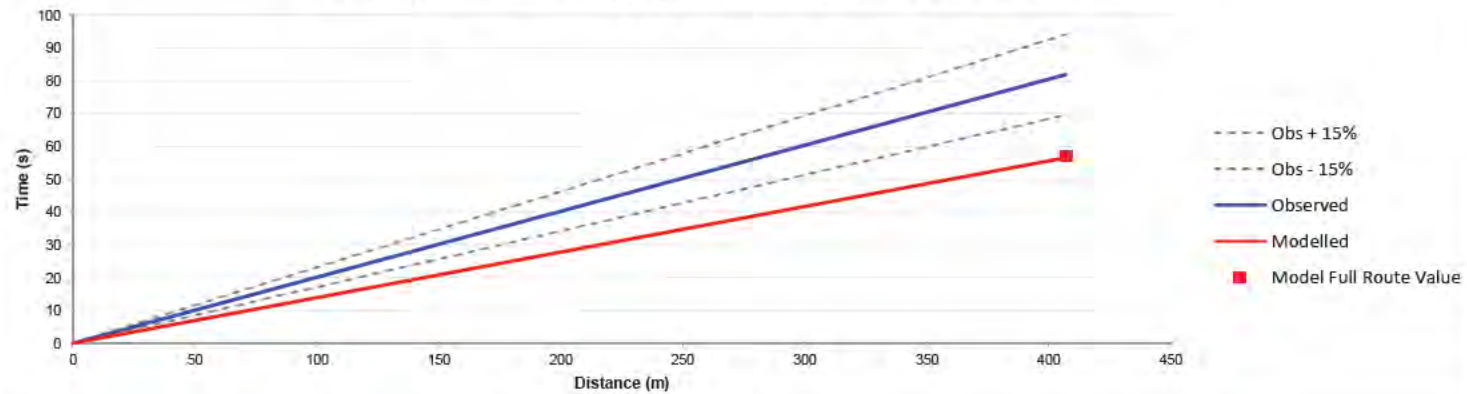




Journey Time Summary for 35 - Anson Road - WB

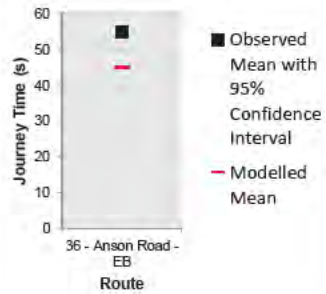


Journey Time Summary by Distance for 35 - Anson Road - WB

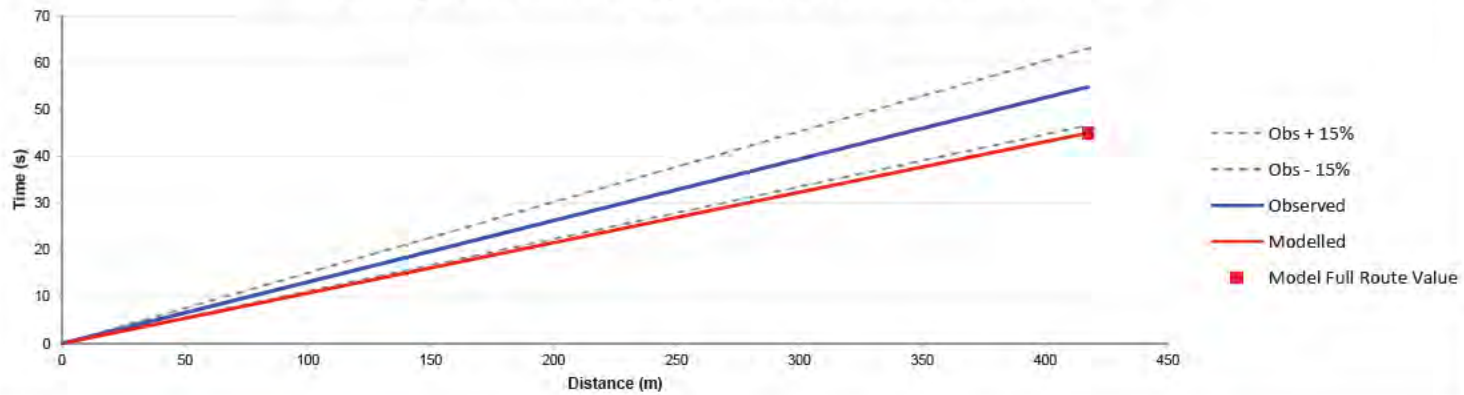




Journey Time Summary for 36 - Anson Road - EB

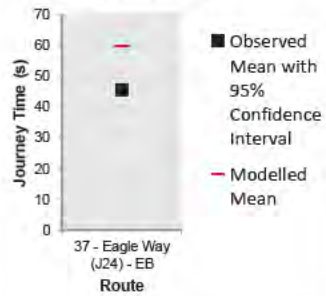


Journey Time Summary by Distance for 36 - Anson Road - EB

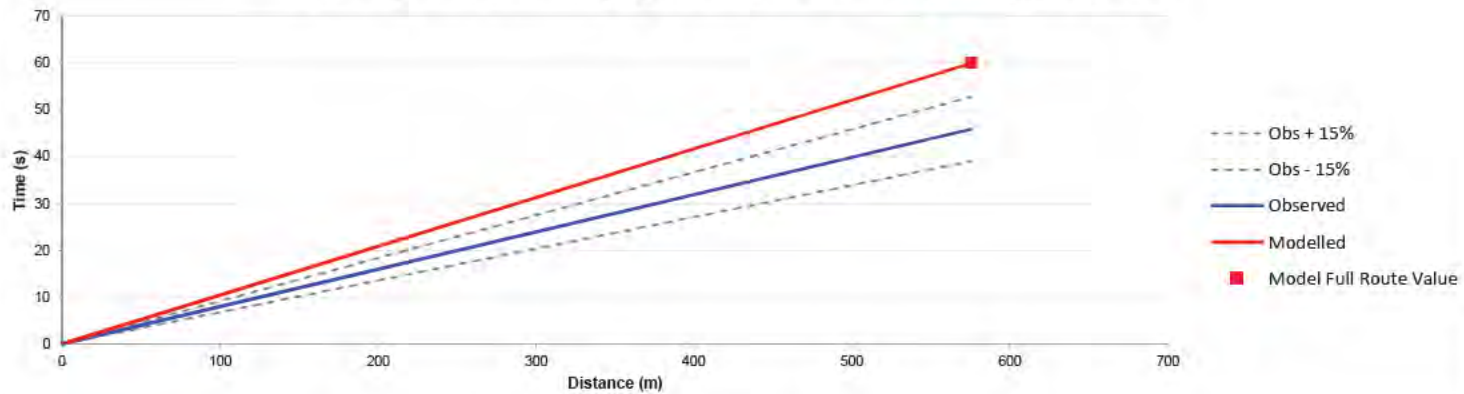




Journey Time Summary for 37 - Eagle Way (J24) - EB

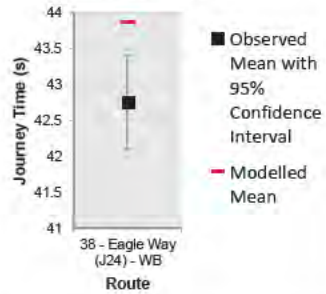


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

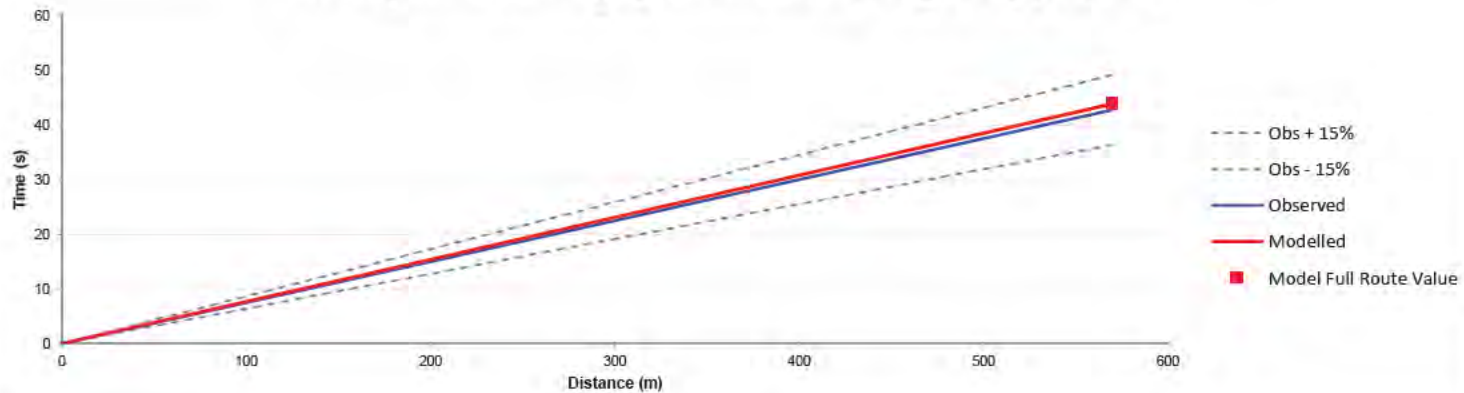




Journey Time Summary for 38 - Eagle Way (J24) - WB

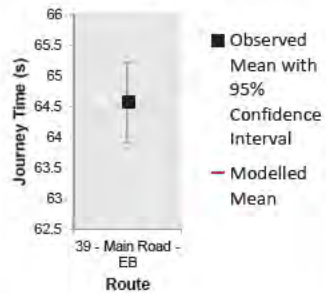


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

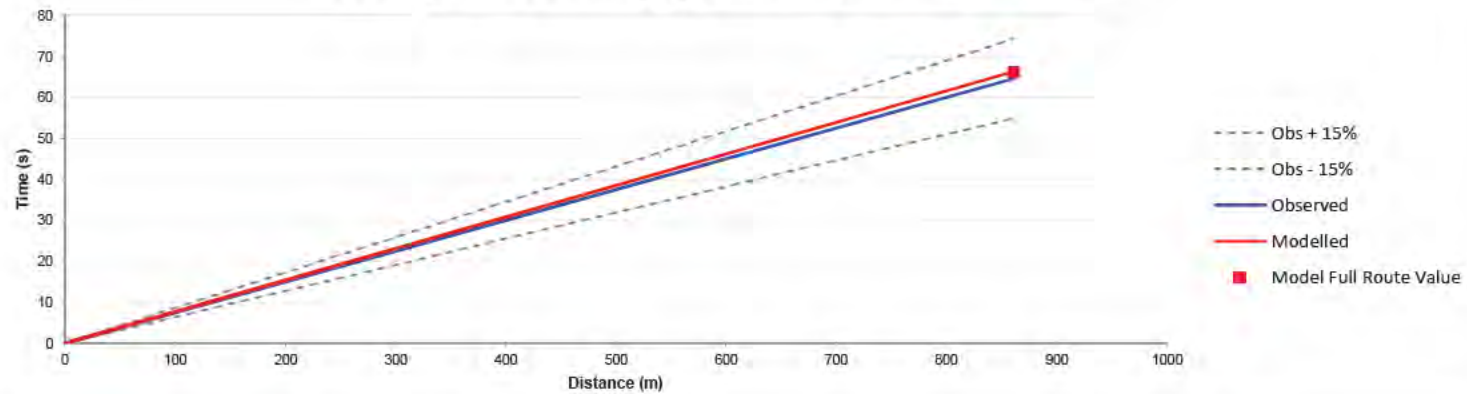




Journey Time Summary for 39 - Main Road - EB

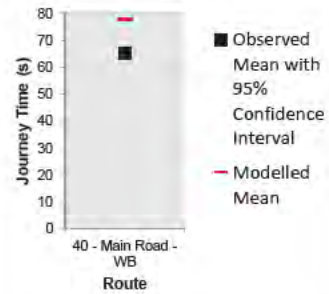


Journey Time Summary by Distance for 39 - Main Road - EB

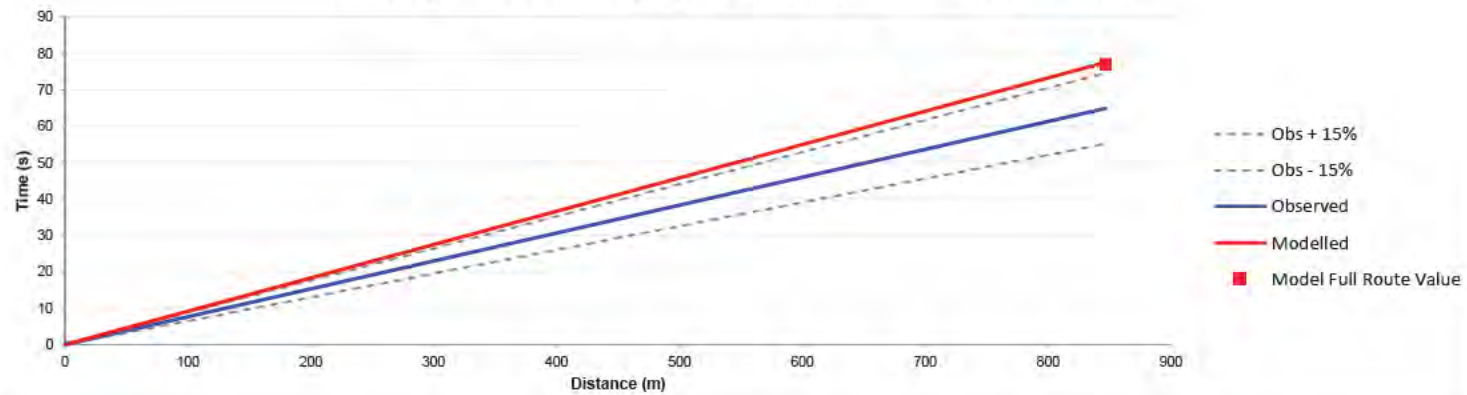




Journey Time Summary for 40 - Main Road - WB

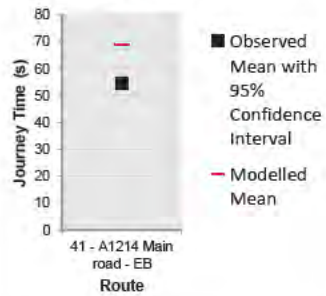


Journey Time Summary by Distance for 40 - Main Road - WB

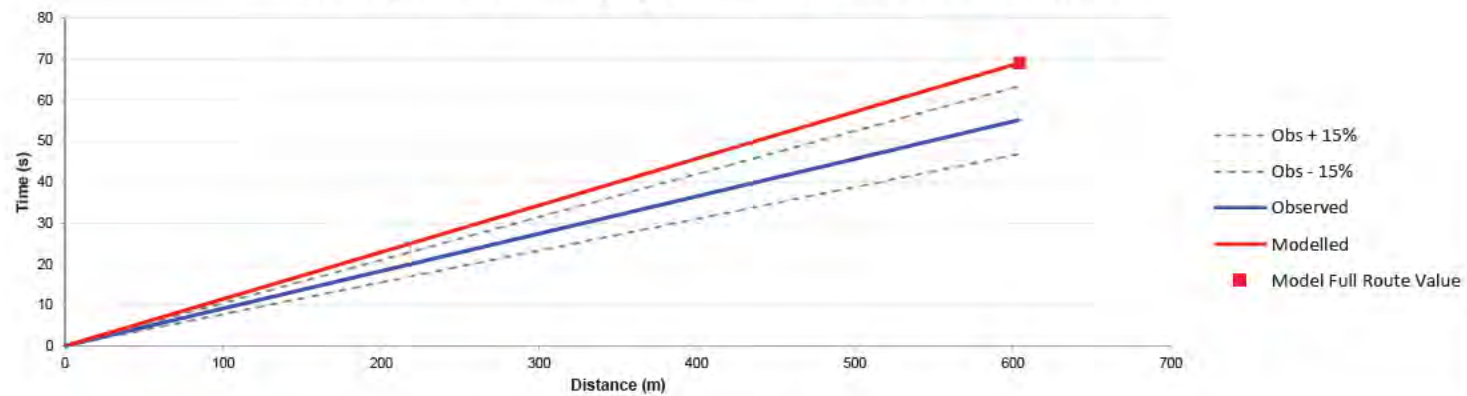




Journey Time Summary for 41 - A1214 Main road - EB

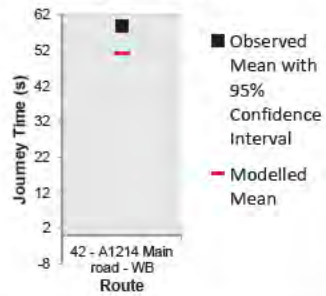


Journey Time Summary by Distance for 41 - A1214 Main road - EB

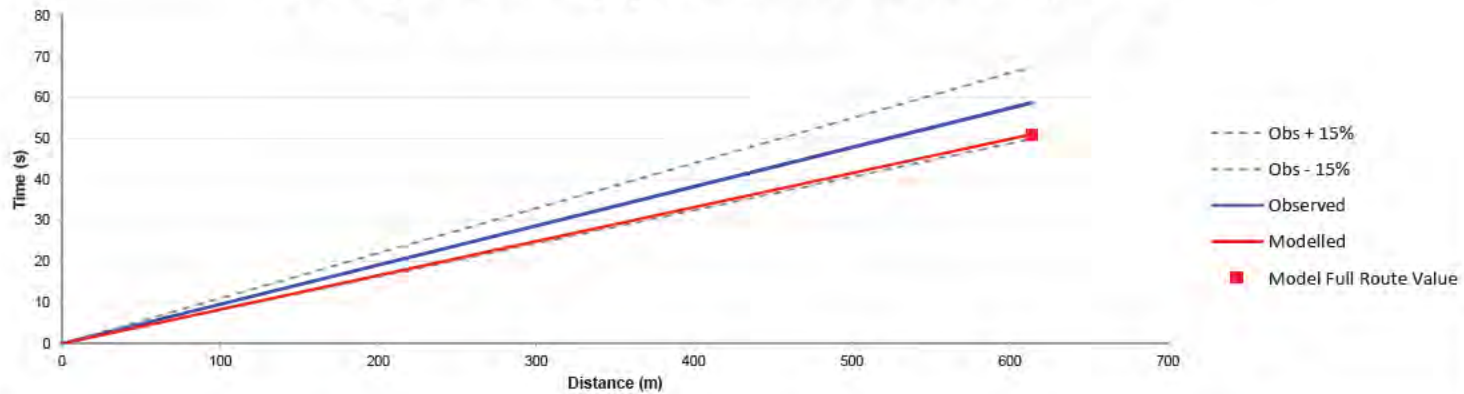




Journey Time Summary for 42 - A1214 Main road - WB

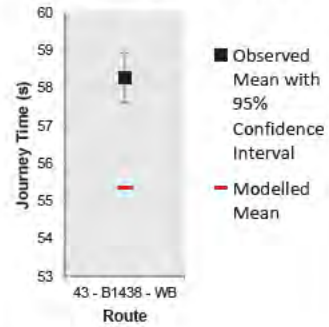


Journey Time Summary by Distance for 42 - A1214 Main road - WB

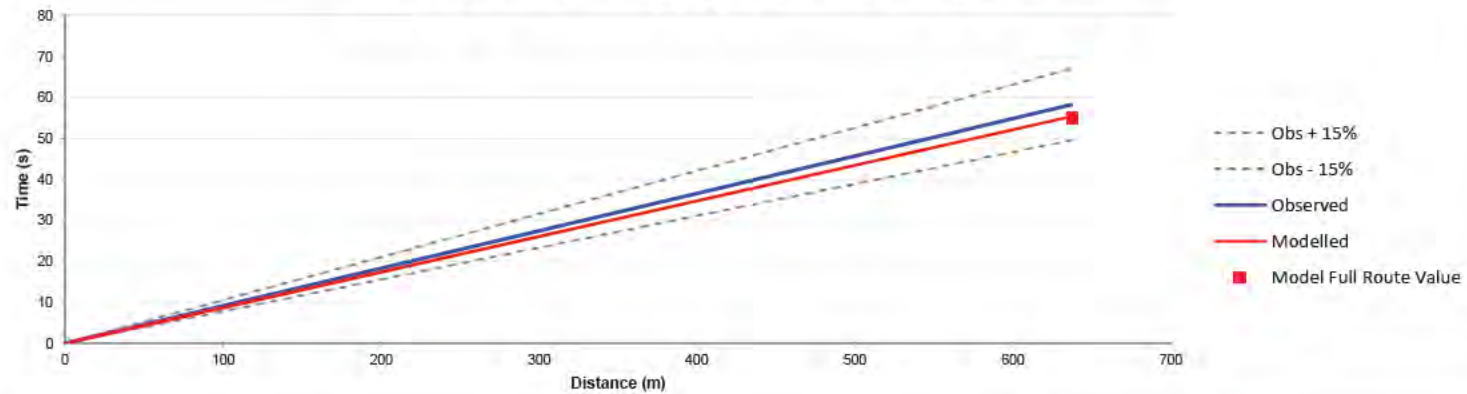




Journey Time Summary for 43 - B1438 - WB

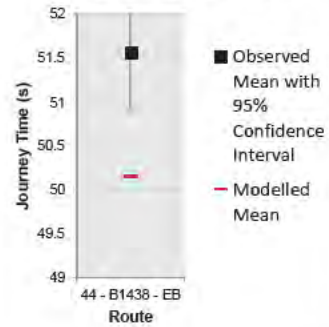


Journey Time Summary by Distance for 43 - B1438 - WB

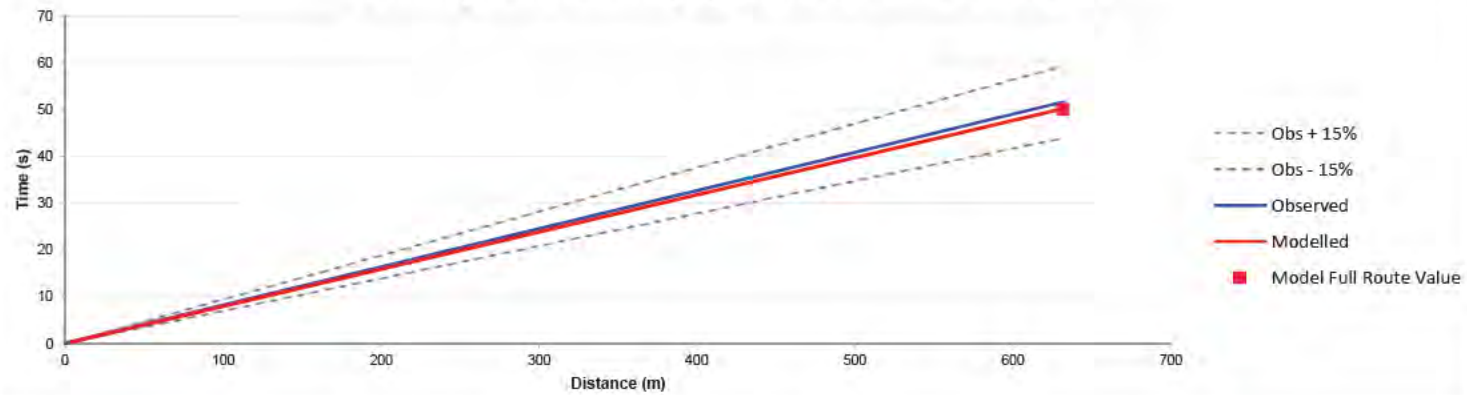




Journey Time Summary for 44 - B1438 - EB

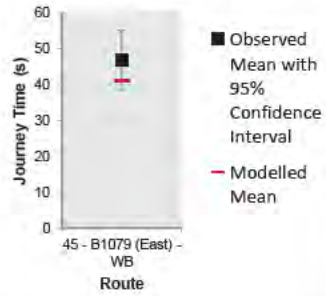


Journey Time Summary by Distance for 44 - B1438 - EB

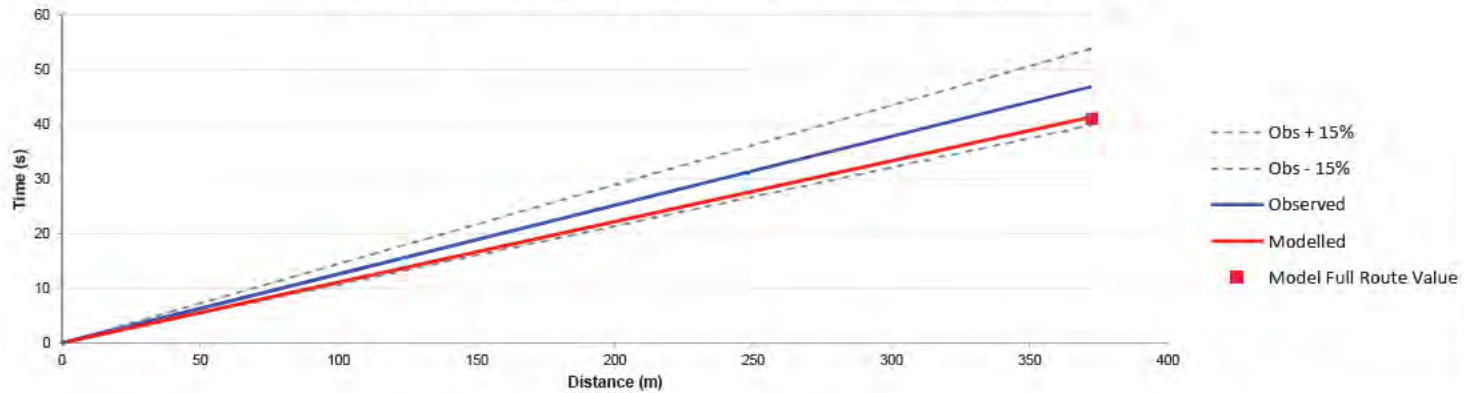




Journey Time Summary for 45 - B1079 (East) - WB

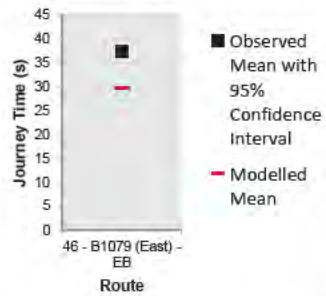


Journey Time Summary by Distance for 45 - B1079 (East) - WB

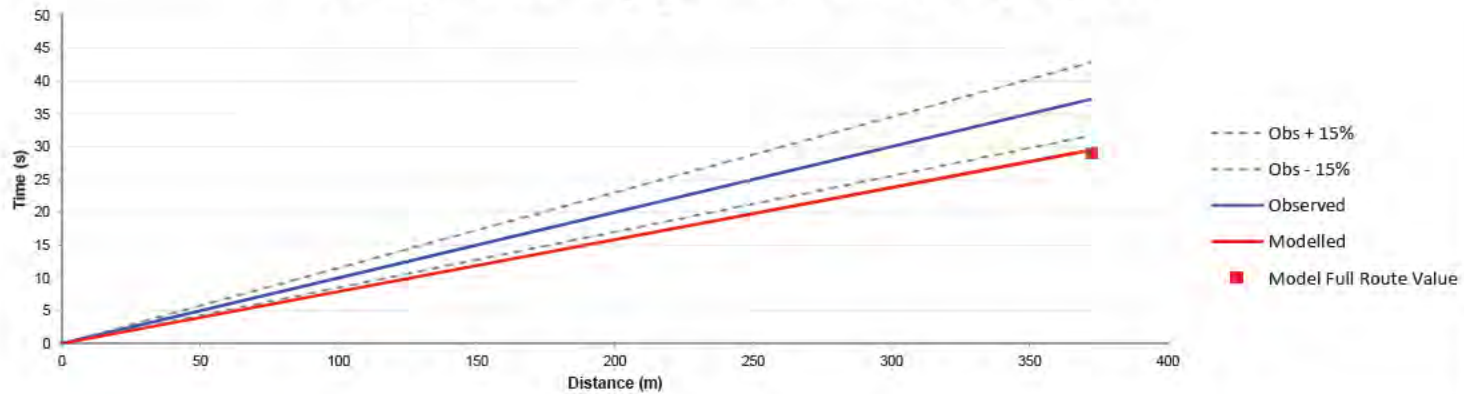




Journey Time Summary for 46 - B1079 (East) - EB

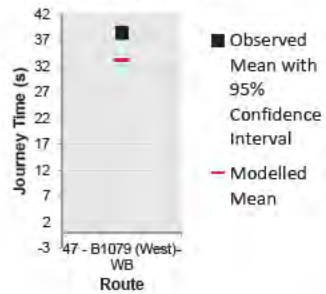


Journey Time Summary by Distance for 46 - B1079 (East) - EB

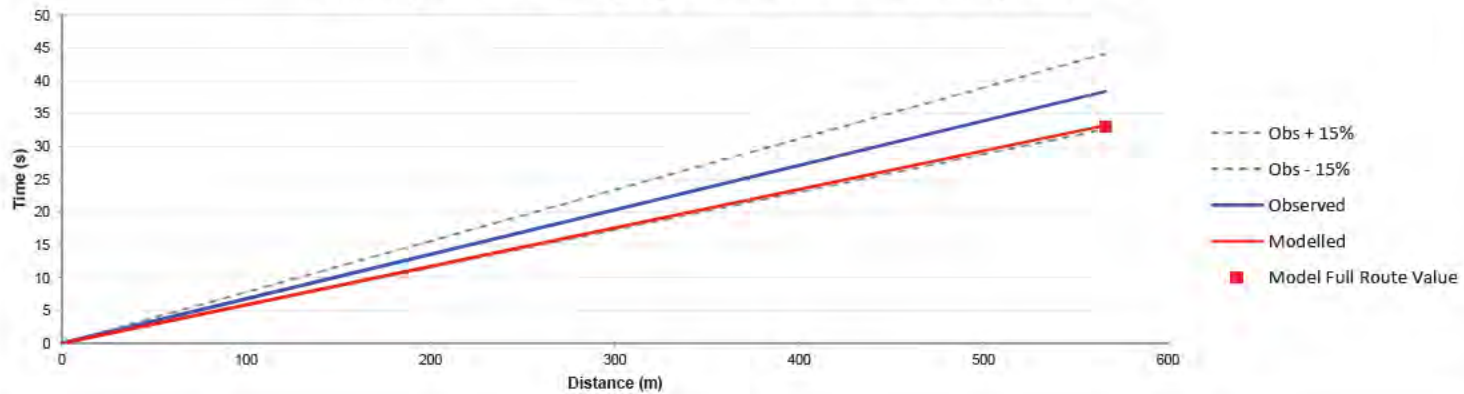




Journey Time Summary for 47 - B1079 (West)- WB

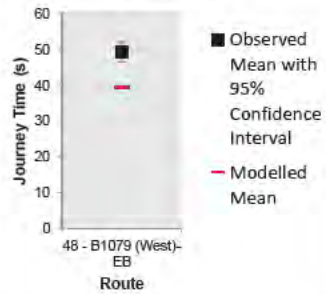


Journey Time Summary by Distance for 47 - B1079 (West)- WB

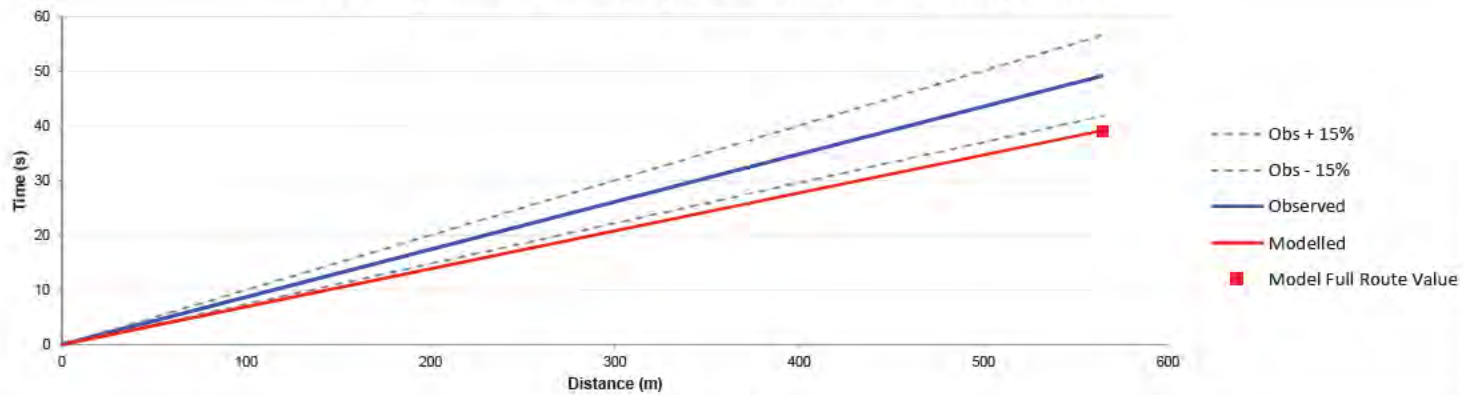




Journey Time Summary for 48 - B1079 (West)- EB

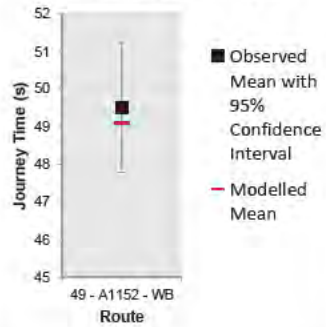


Journey Time Summary by Distance for 48 - B1079 (West)- EB

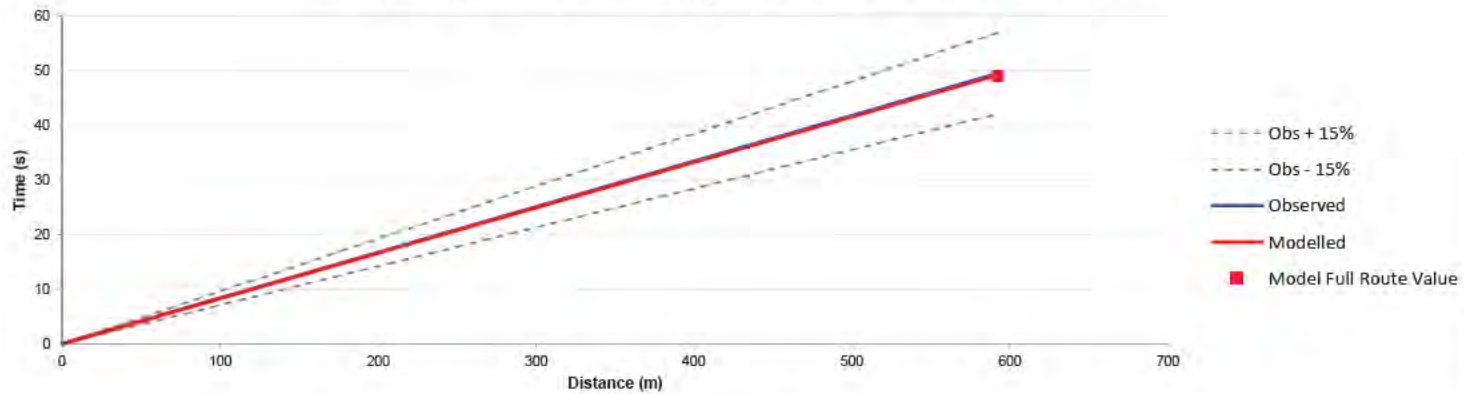




Journey Time Summary for 49 - A1152 - WB

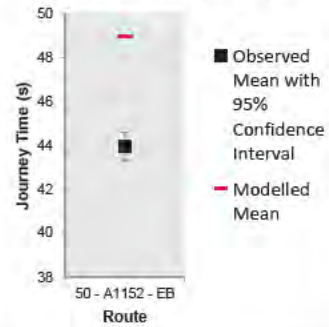


Journey Time Summary by Distance for 49 - A1152 - WB

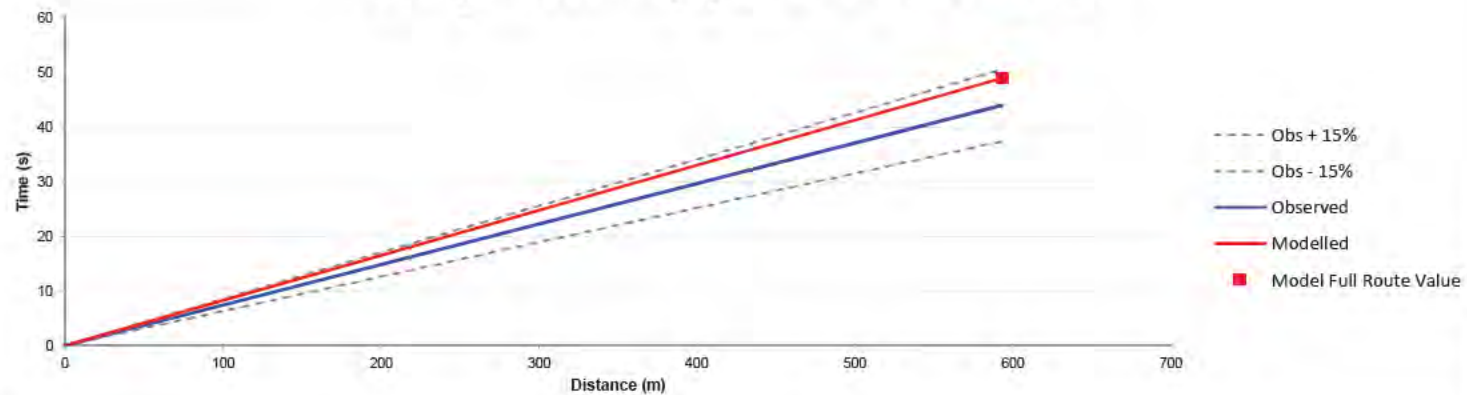




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Journey Times
Validation Statistics
PM Peak (16:00-17:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	113	113	1	TRUE	-0.1%	0	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	73	64	0	TRUE	-11.4%	-8	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	47	46	1	TRUE	-1.2%	-1	FALSE	TRUE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	48	48	1	TRUE	-0.9%	0	FALSE	TRUE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	119	128	1	TRUE	7.5%	9	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	116	91	1	TRUE	-21.6%	-25	FALSE	FALSE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	88	97	0	TRUE	10.0%	9	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	143	136	0	TRUE	-4.5%	-6	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	133	123	1	TRUE	-6.9%	-9	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	98	93	1	TRUE	-5.1%	-5	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	86	94	1	TRUE	8.3%	7	FALSE	TRUE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	136	124	1	TRUE	-8.4%	-11	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	44	36	0	TRUE	-17.8%	-8	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	44	40	0	TRUE	-8.8%	-4	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	78	68	0	TRUE	-12.3%	-10	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	125	127	1	TRUE	2.4%	3	FALSE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	129	137	1	TRUE	6.8%	9	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	115	118	1	TRUE	2.4%	3	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	77	83	0	TRUE	7.7%	6	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	81	89	0	TRUE	10.0%	8	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	94	99	0	TRUE	5.0%	5	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	96	105	1	TRUE	8.8%	9	FALSE	TRUE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	58	62	1	TRUE	5.7%	3	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	70	73	2	TRUE	5.0%	3	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	94	95	2	TRUE	1.1%	1	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	85	89	1	TRUE	4.7%	4	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road - EB	Full	15	49	43	0	TRUE	-12.7%	-6	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road -WB	Full	16	68	67	3	TRUE	-1.4%	-1	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	18	16	1	TRUE	-9.5%	-2	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	12	14	0	TRUE	21.1%	2	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	50	54	0	TRUE	7.4%	4	FALSE	TRUE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	199	94	11	FALSE	-52.8%	-105	FALSE	FALSE	FALSE	FALSE	447
33 - Barrack Square - SB	Full	21	88	84	1	TRUE	-3.6%	-3	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	226	132	3	TRUE	-41.6%	-94	FALSE	FALSE	FALSE	FALSE	544
35 - Anson Road - WB	Full	23	92	65	4	FALSE	-29.6%	-27	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	56	45	0	TRUE	-18.6%	-10	FALSE	FALSE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	46	59	2	TRUE	28.1%	13	FALSE	FALSE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	43	44	0	TRUE	3.4%	1	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	64	66	0	TRUE	2.9%	2	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	65	78	1	TRUE	20.0%	13	FALSE	FALSE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	56	70	0	TRUE	24.3%	14	FALSE	FALSE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	59	51	0	TRUE	-13.6%	-8	FALSE	TRUE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	59	57	1	TRUE	-3.1%	-2	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	52	50	0	TRUE	-4.1%	-2	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	55	49	1	TRUE	-9.6%	-5	FALSE	TRUE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	38	29	0	TRUE	-22.6%	-9	FALSE	FALSE	TRUE	TRUE	372
47 - B1079 (West)- WB	Full	35	39	33	0	TRUE	-14.7%	-6	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West)- EB	Full	36	52	40	1	TRUE	-22.4%	-12	FALSE	FALSE	TRUE	TRUE	564



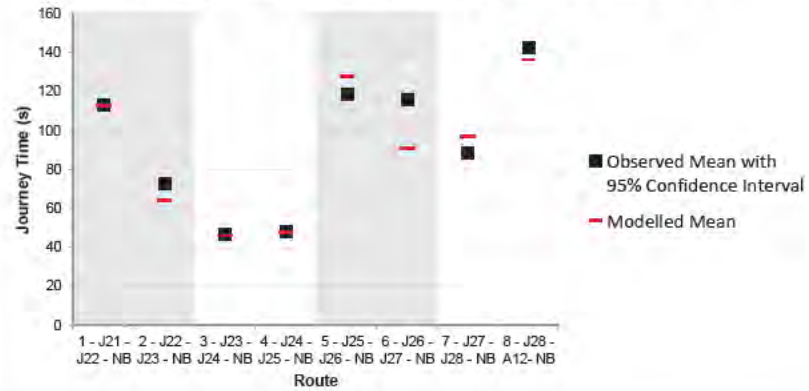
**Journey Times
Validation Statistics**

PM Peak (16:00-17:00)

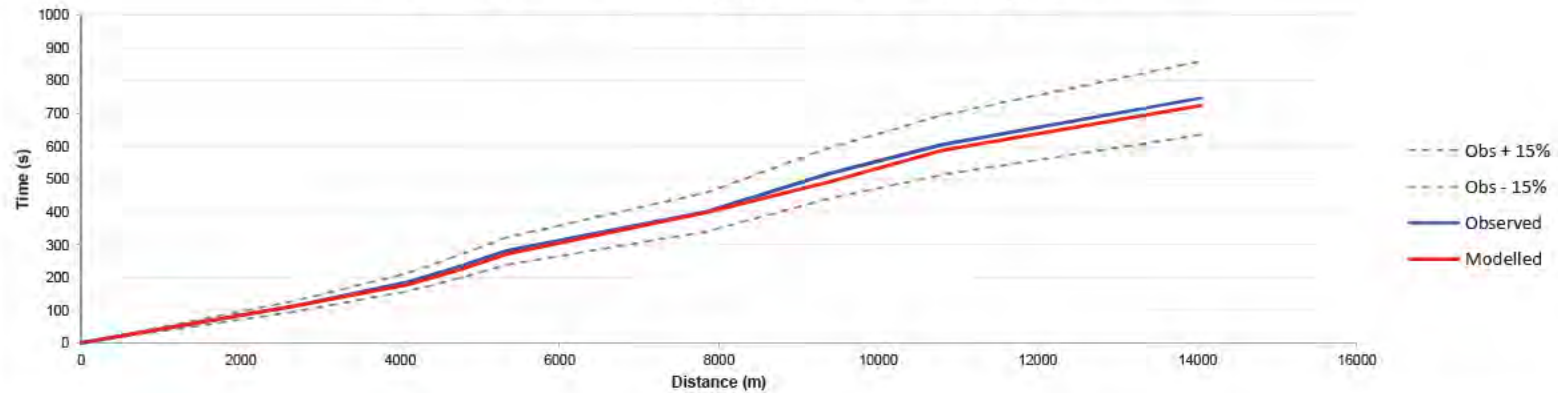
49 - A1152 - WB	Full	37	51	50	0	TRUE	-2.5%	-1	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	44	49	0	TRUE	10.2%	5	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	747	725	3	TRUE	-3.0%	-22	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	743	706	2	TRUE	-5.0%	-37	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

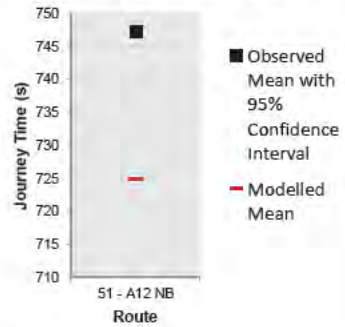


Journey Time Summary by Distance for Group Number 1

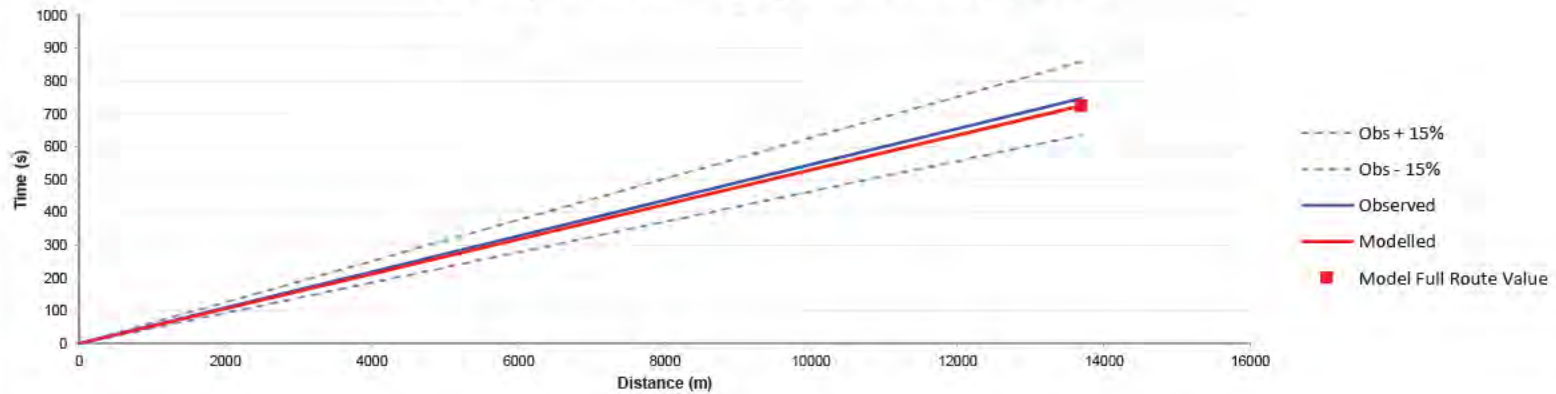




Journey Time Summary for 51 - A12 NB

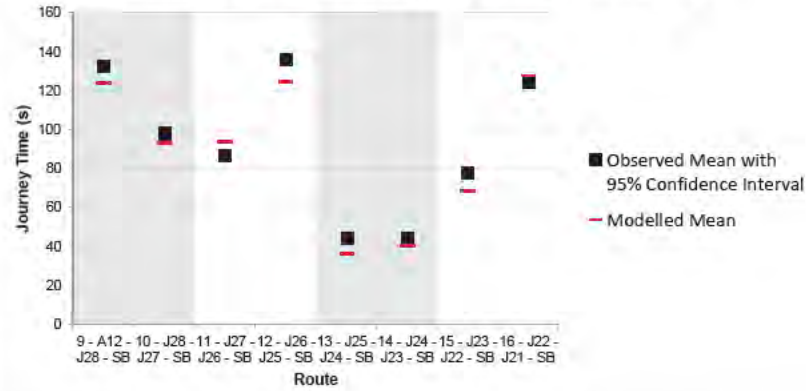


Journey Time Summary by Distance for 51 - A12 NB

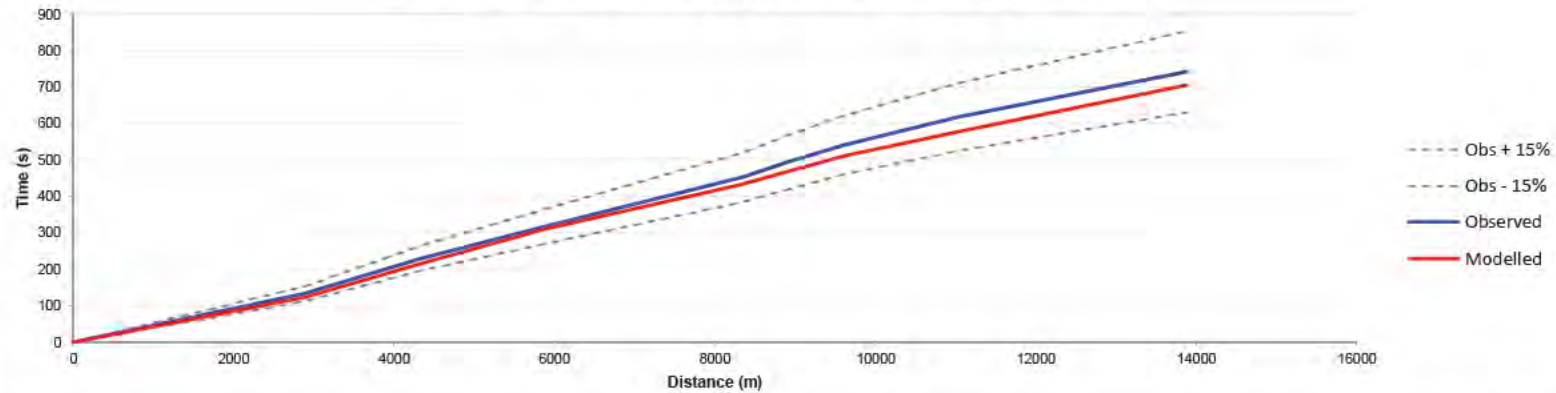




Journey Time Summary for Group Number 3

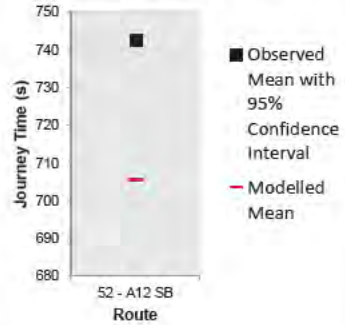


Journey Time Summary by Distance for Group Number 3

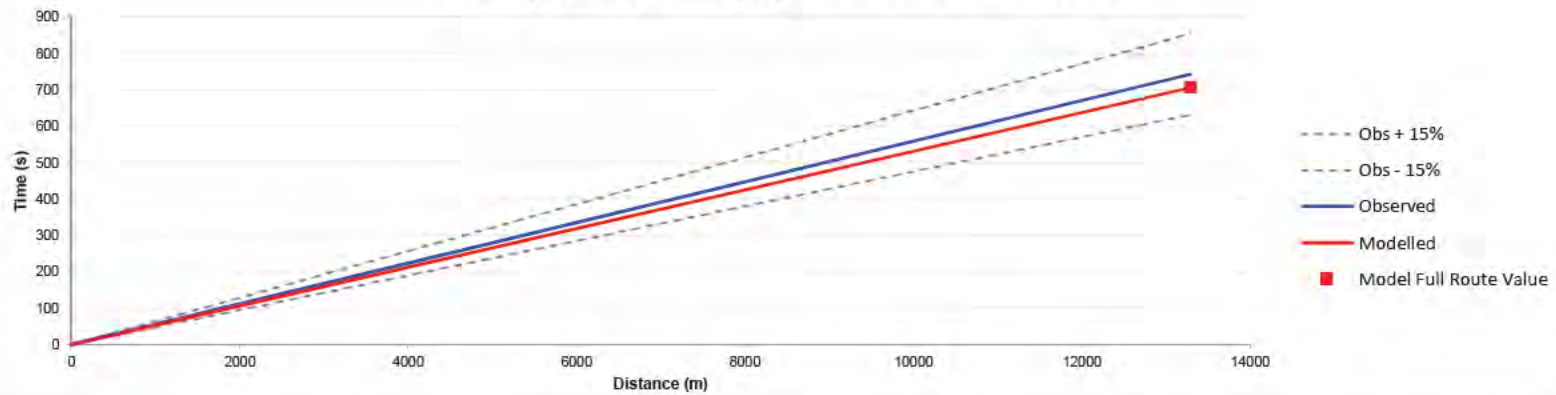




Journey Time Summary for 52 - A12 SB

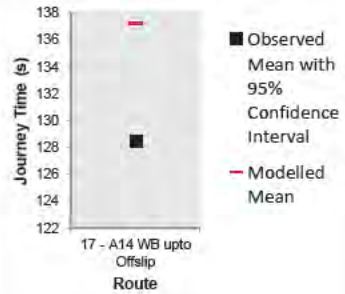


Journey Time Summary by Distance for 52 - A12 SB

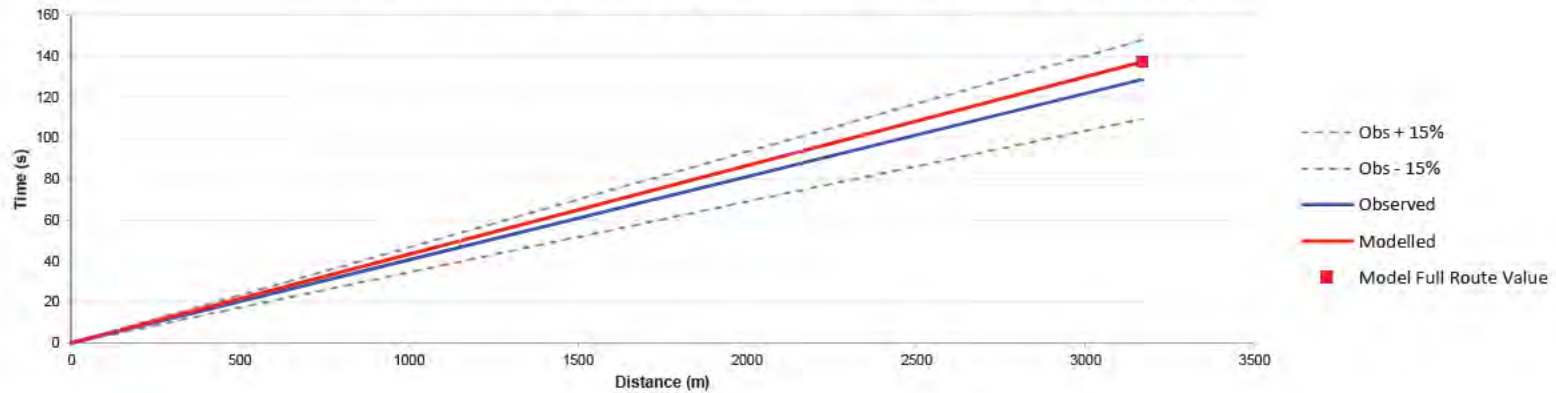




Journey Time Summary for 17 - A14 WB upto Offslip

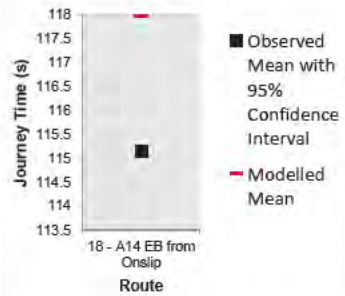


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

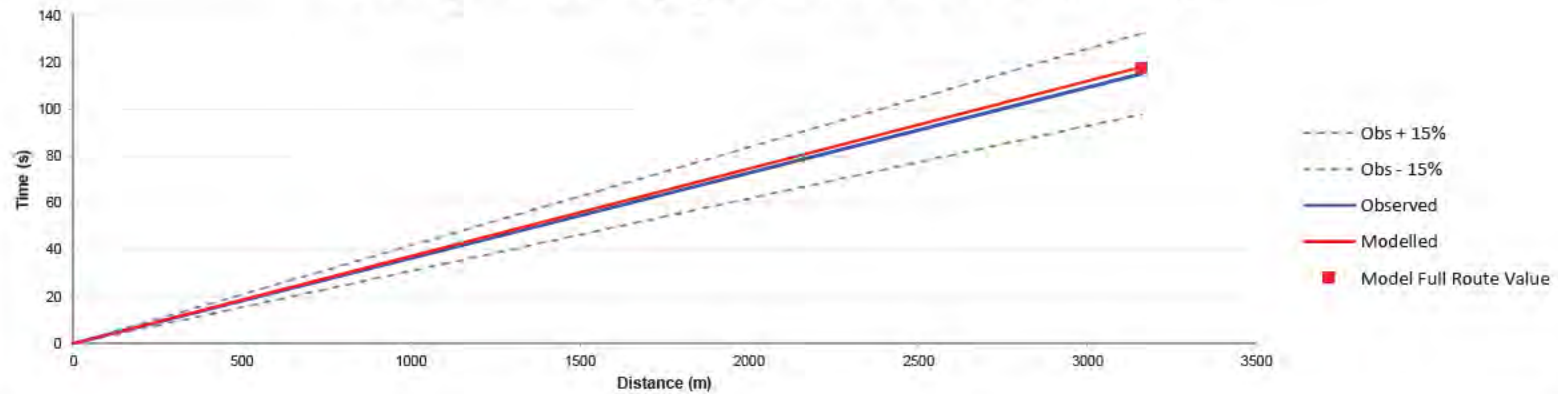




Journey Time Summary for 18 - A14 EB from Onslip

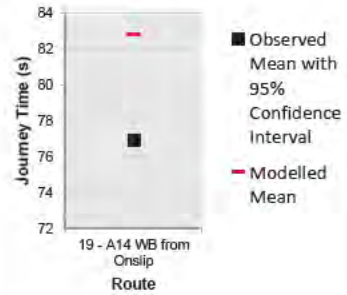


Journey Time Summary by Distance for 18 - A14 EB from Onslip

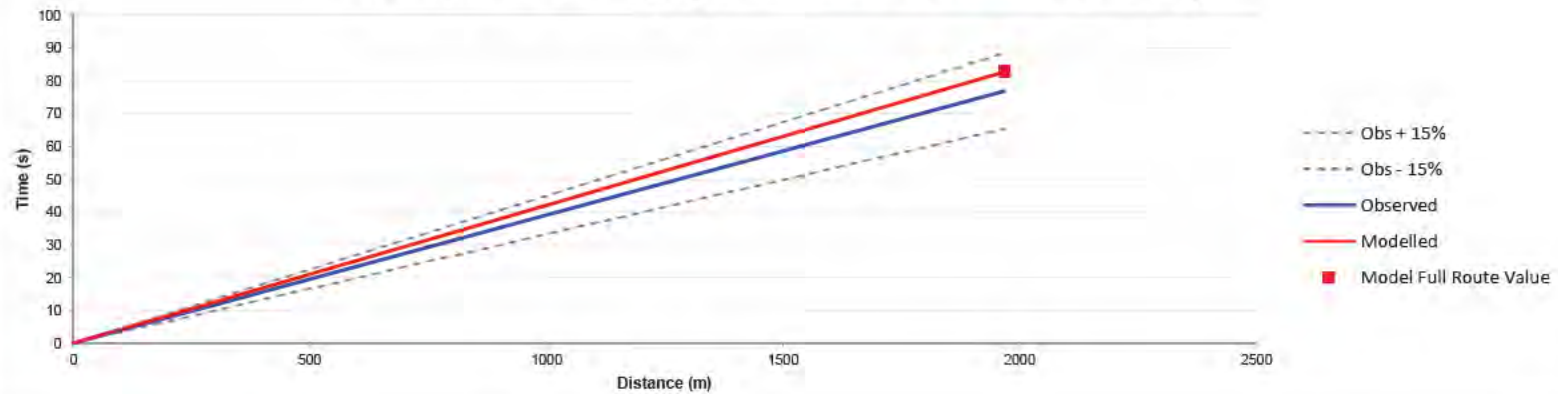




Journey Time Summary for 19 - A14 WB from Onslip

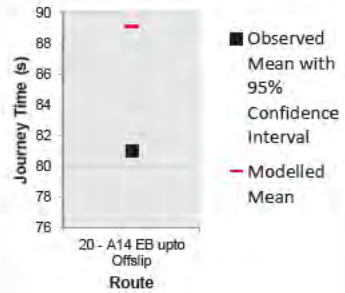


Journey Time Summary by Distance for 19 - A14 WB from Onslip

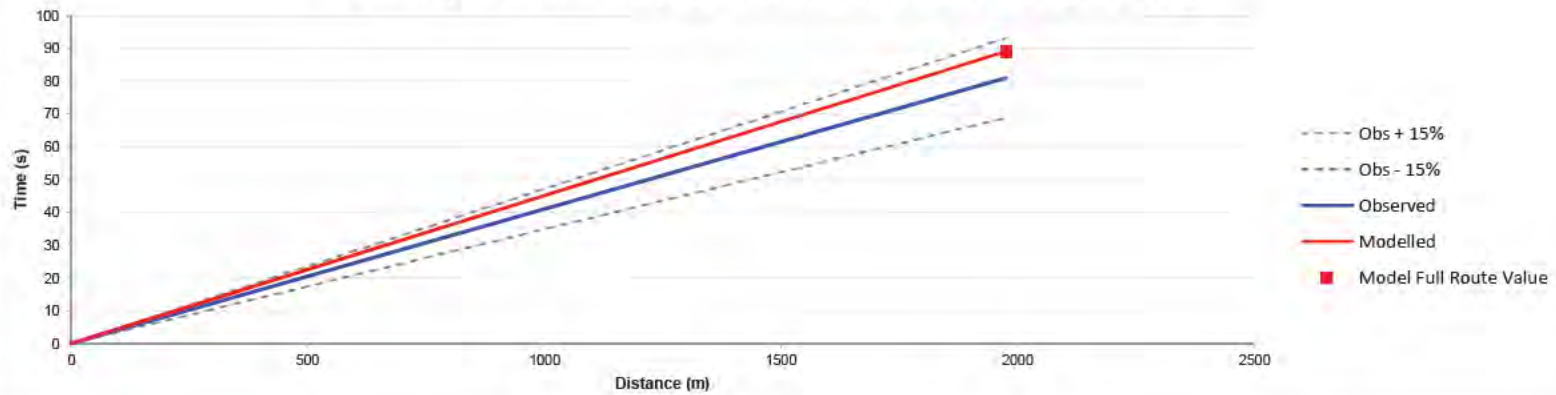




Journey Time Summary for 20 - A14 EB upto Offslip

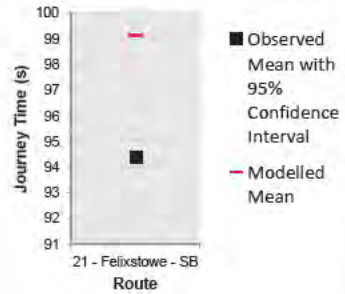


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

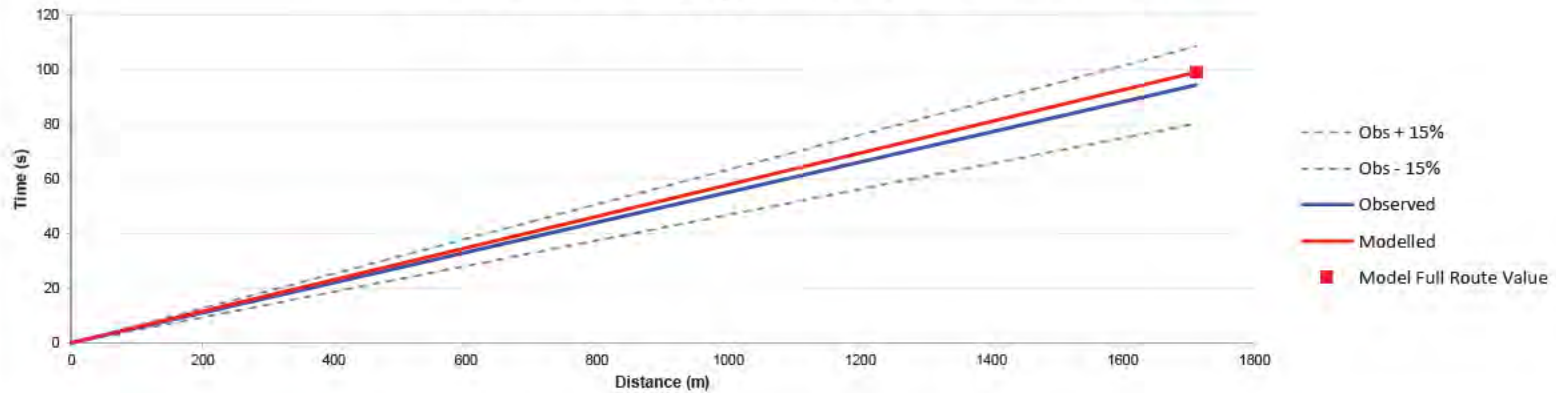




Journey Time Summary for 21 - Felixstowe - SB

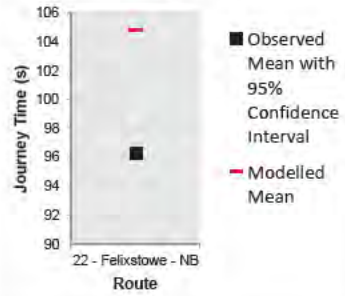


Journey Time Summary by Distance for 21 - Felixstowe - SB

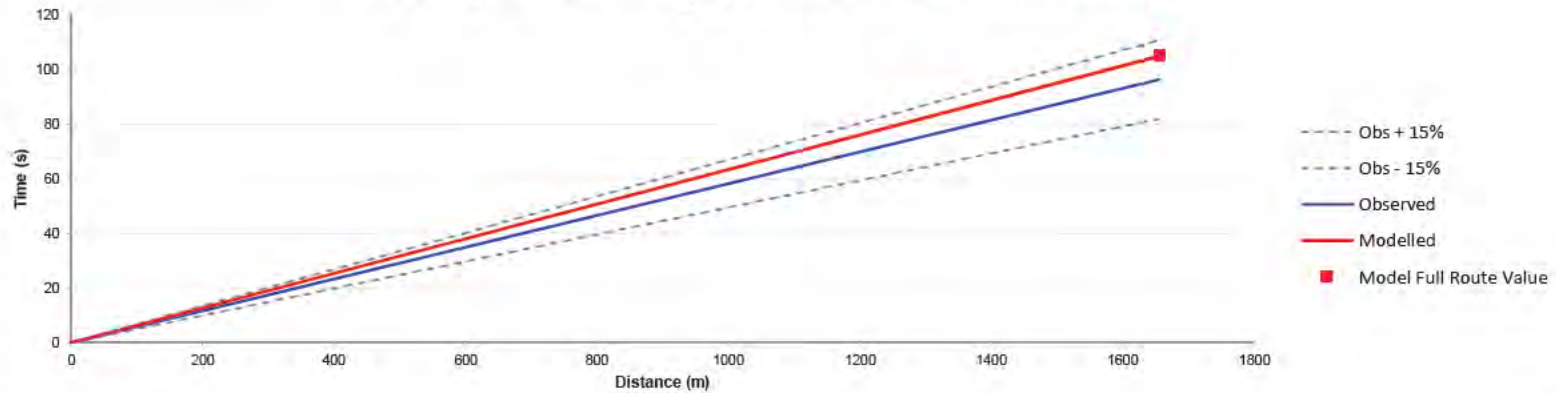




Journey Time Summary for 22 - Felixstowe - NB

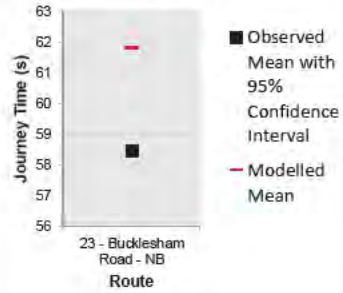


Journey Time Summary by Distance for 22 - Felixstowe - NB

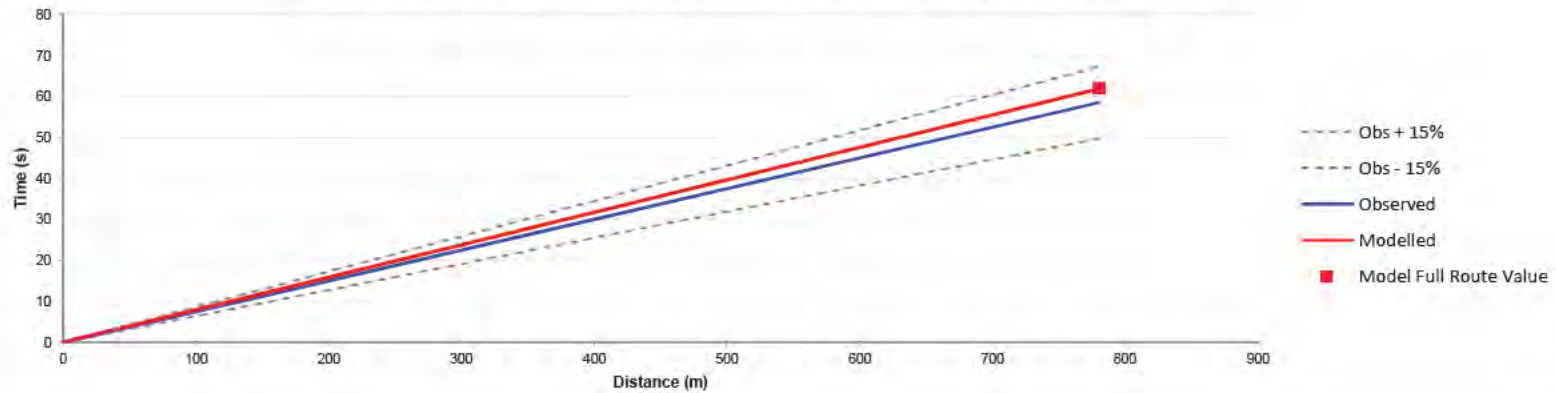




Journey Time Summary for 23 - Bucklesham Road - NB

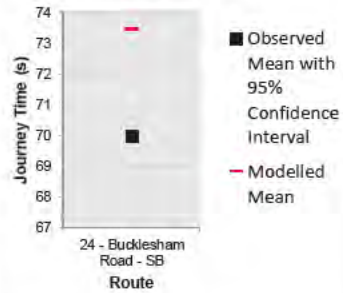


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

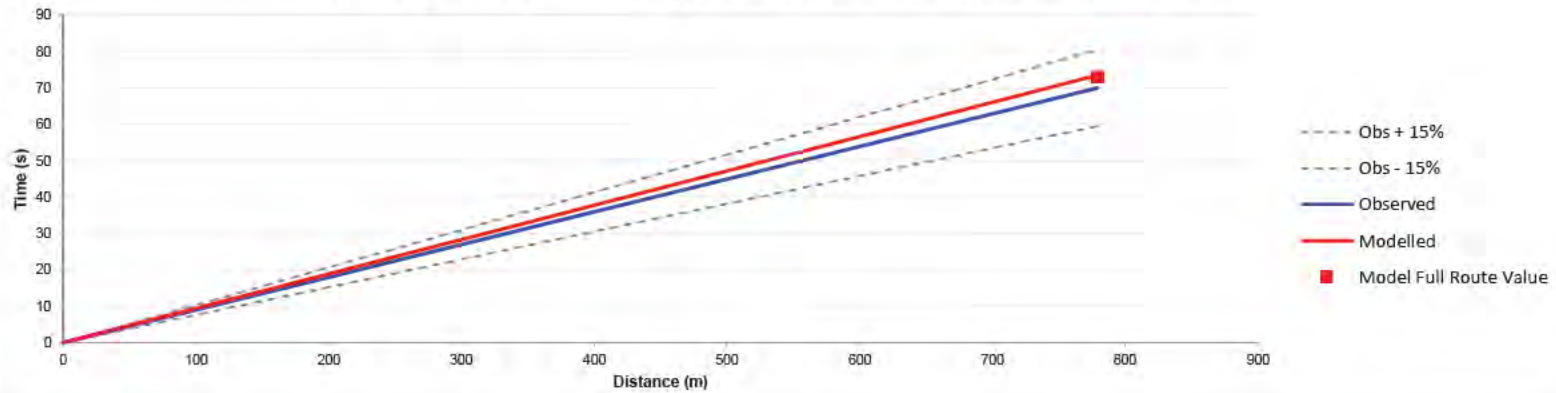




Journey Time Summary for 24 - Bucklesham Road - SB

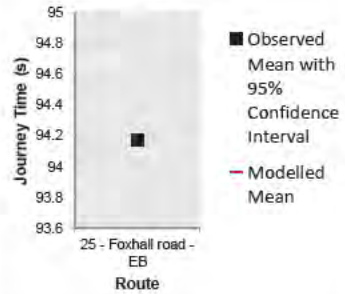


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

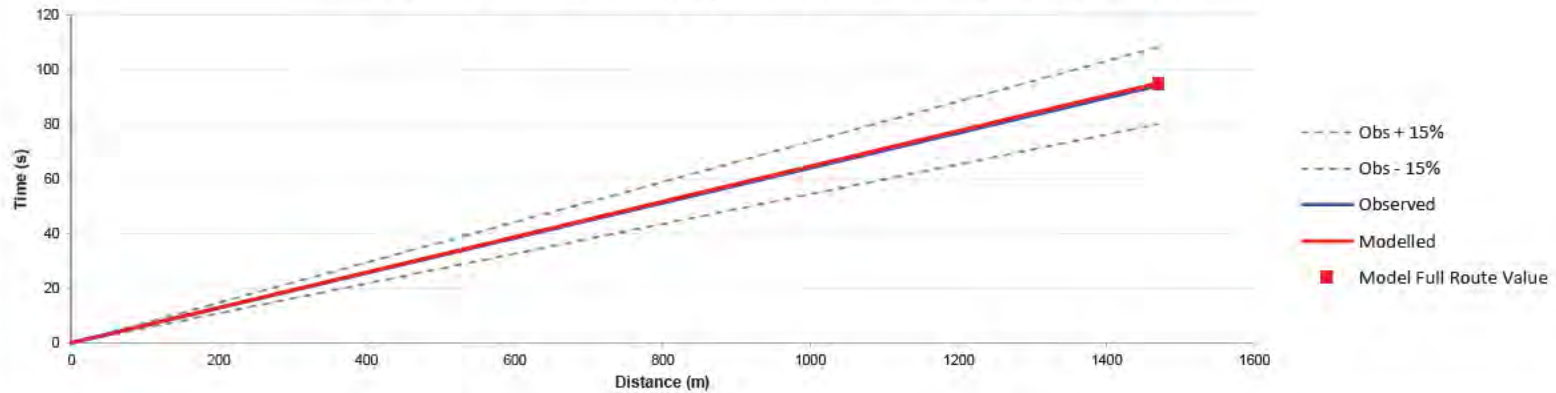




Journey Time Summary for 25 - Foxhall road - EB

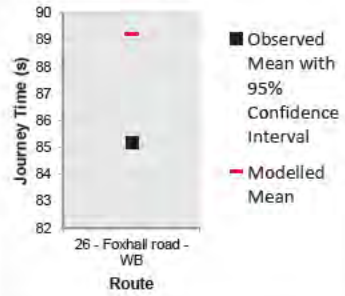


Journey Time Summary by Distance for 25 - Foxhall road - EB

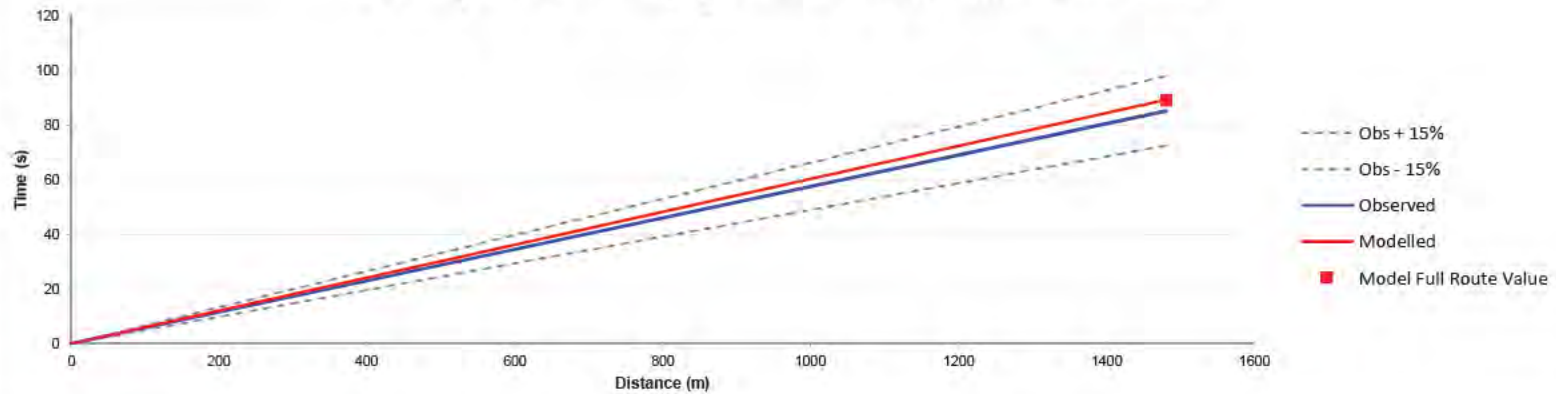




Journey Time Summary for 26 - Foxhall road - WB

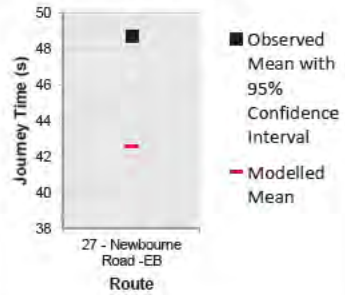


Journey Time Summary by Distance for 26 - Foxhall road - WB

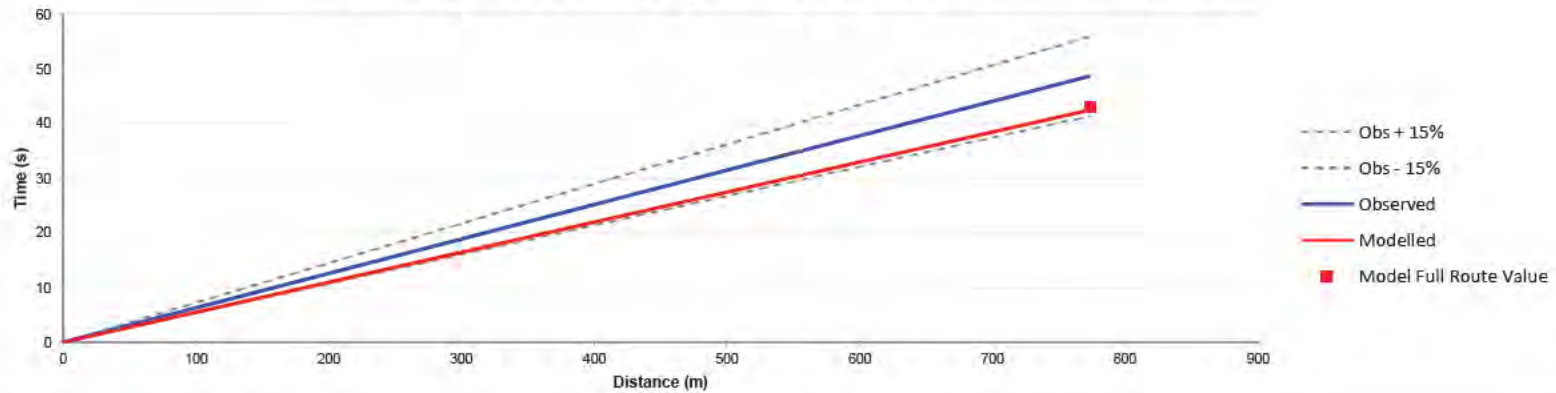




Journey Time Summary for 27 - Newbourne Road -EB

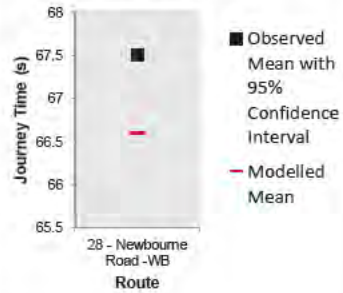


Journey Time Summary by Distance for 27 - Newbourne Road -EB

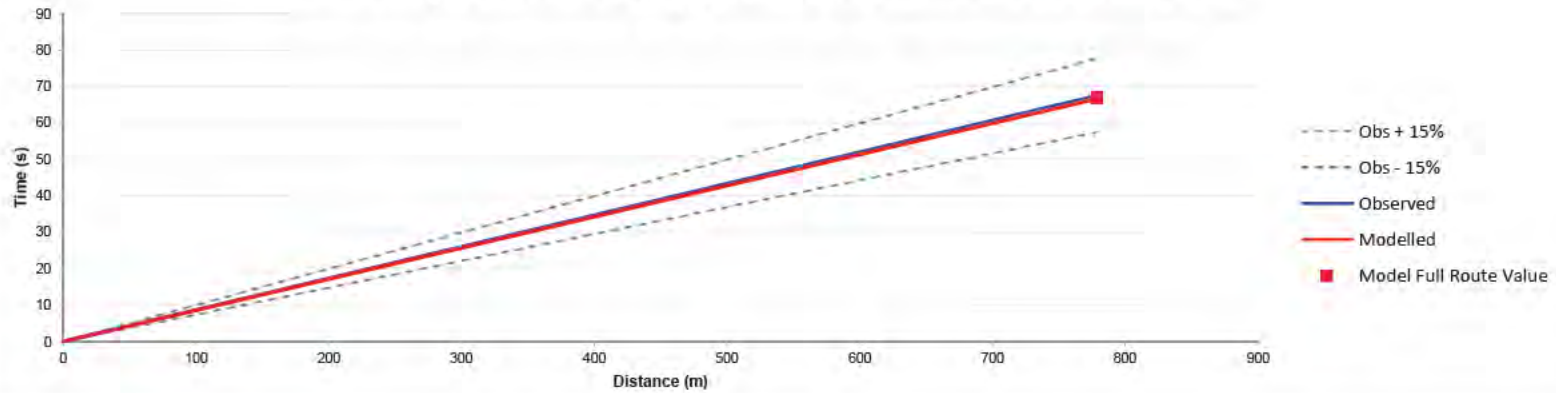




Journey Time Summary for 28 - Newbourne Road -WB

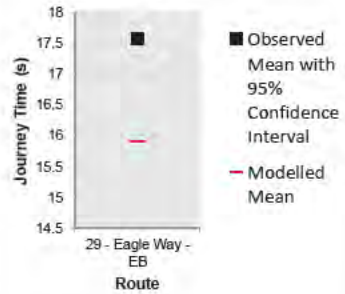


Journey Time Summary by Distance for 28 - Newbourne Road -WB

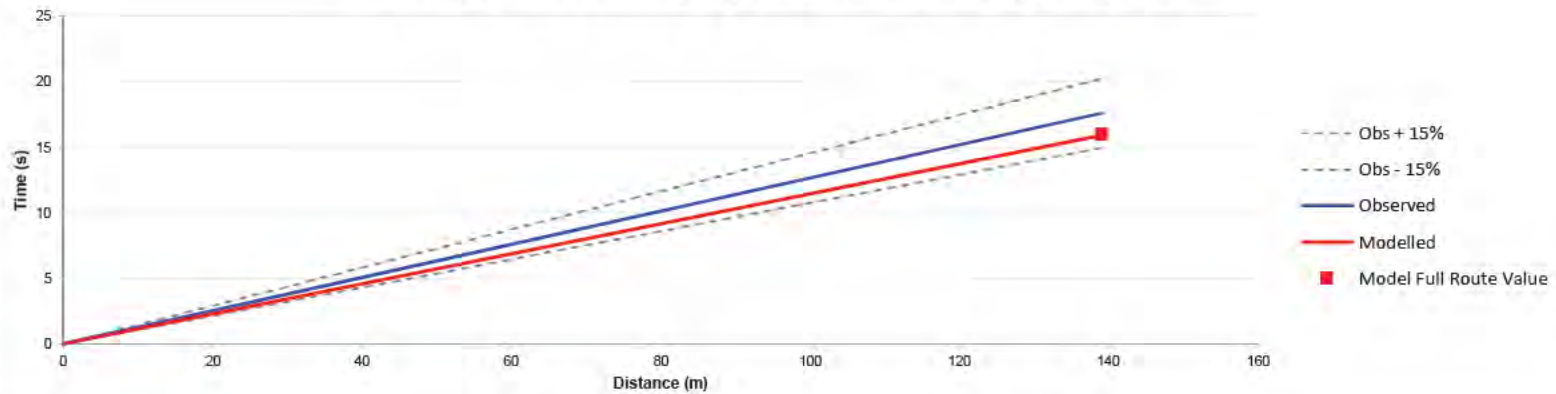




Journey Time Summary for 29 - Eagle Way - EB

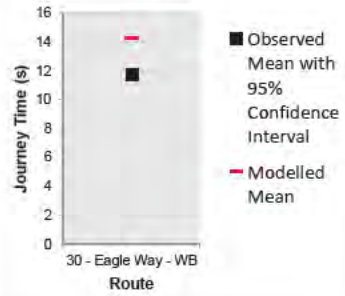


Journey Time Summary by Distance for 29 - Eagle Way - EB

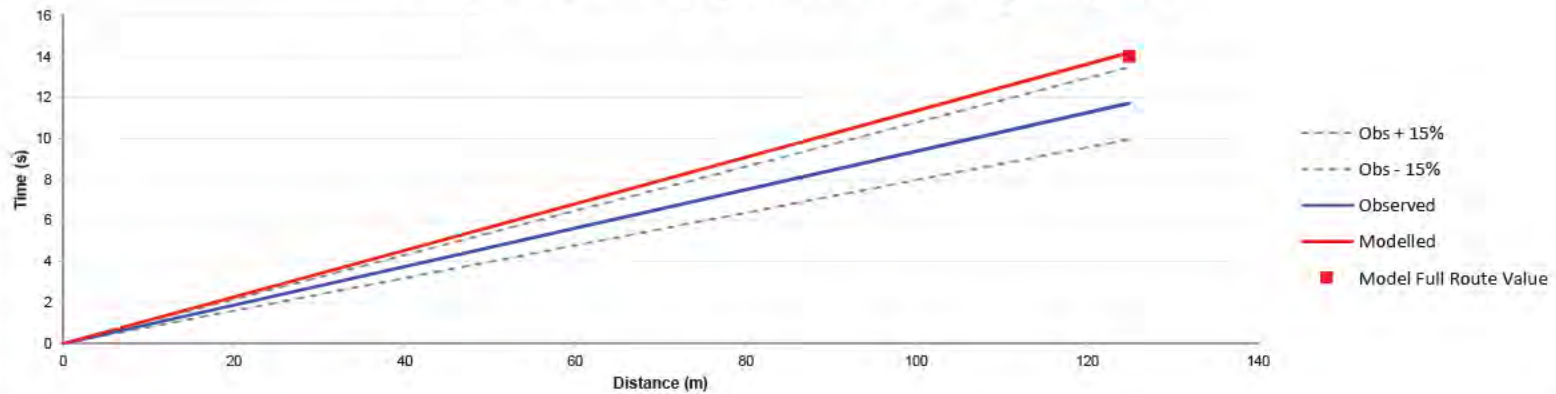




Journey Time Summary for 30 - Eagle Way - WB

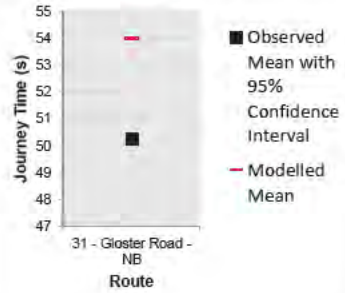


Journey Time Summary by Distance for 30 - Eagle Way - WB

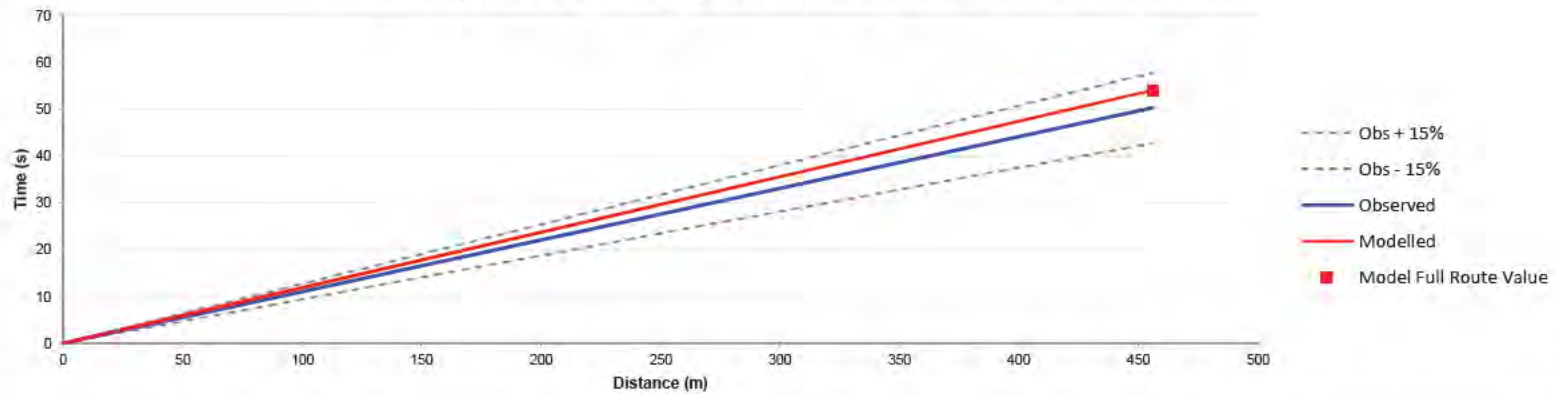




Journey Time Summary for 31 - Gloster Road - NB

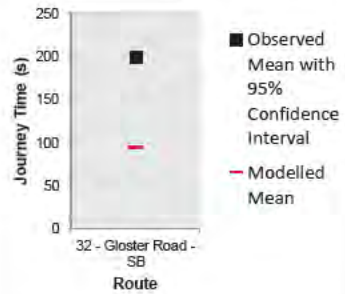


Journey Time Summary by Distance for 31 - Gloster Road - NB

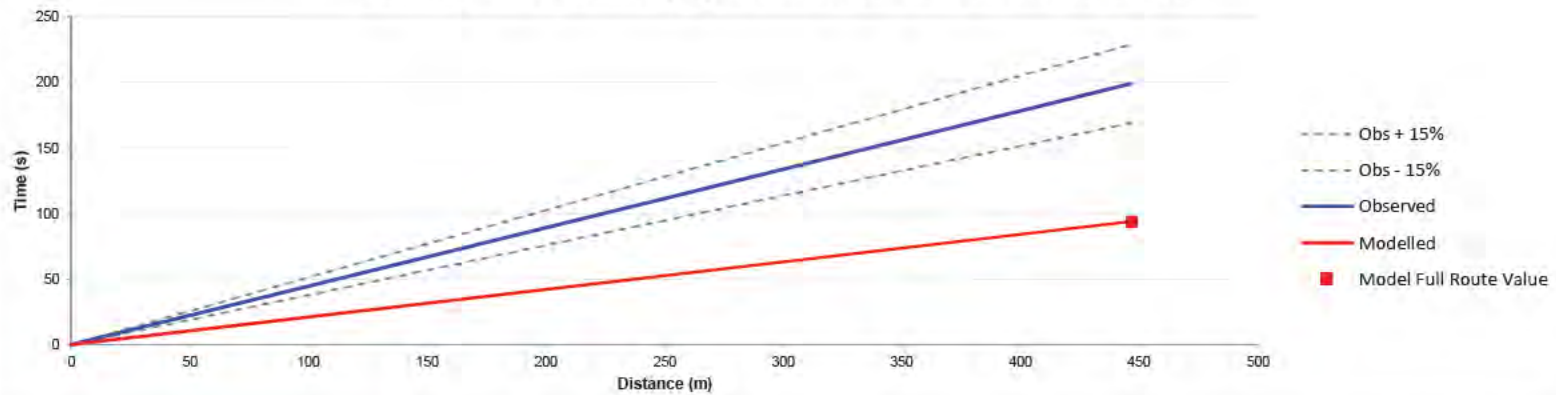




Journey Time Summary for 32 - Gloster Road - SB

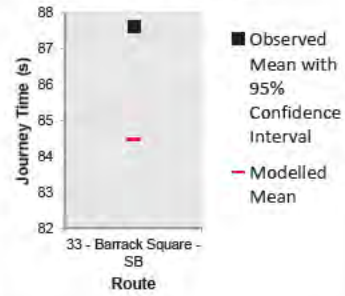


Journey Time Summary by Distance for 32 - Gloster Road - SB

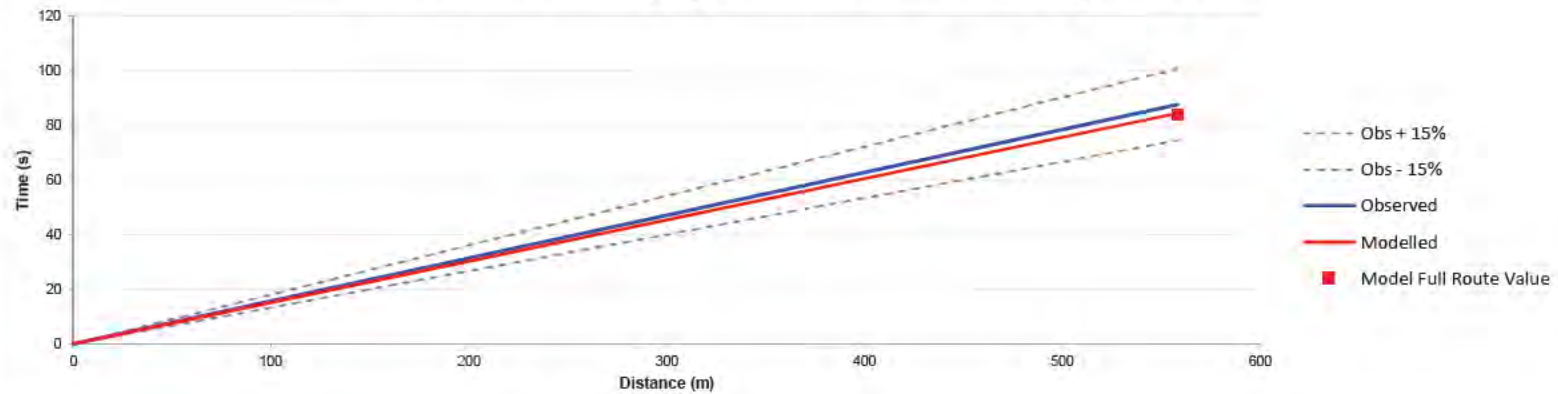




Journey Time Summary for 33 - Barrack Square - SB

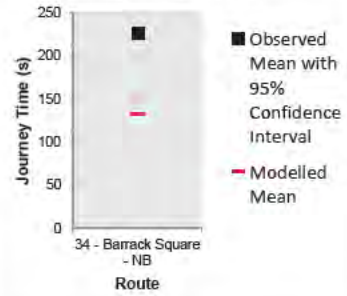


Journey Time Summary by Distance for 33 - Barrack Square - SB

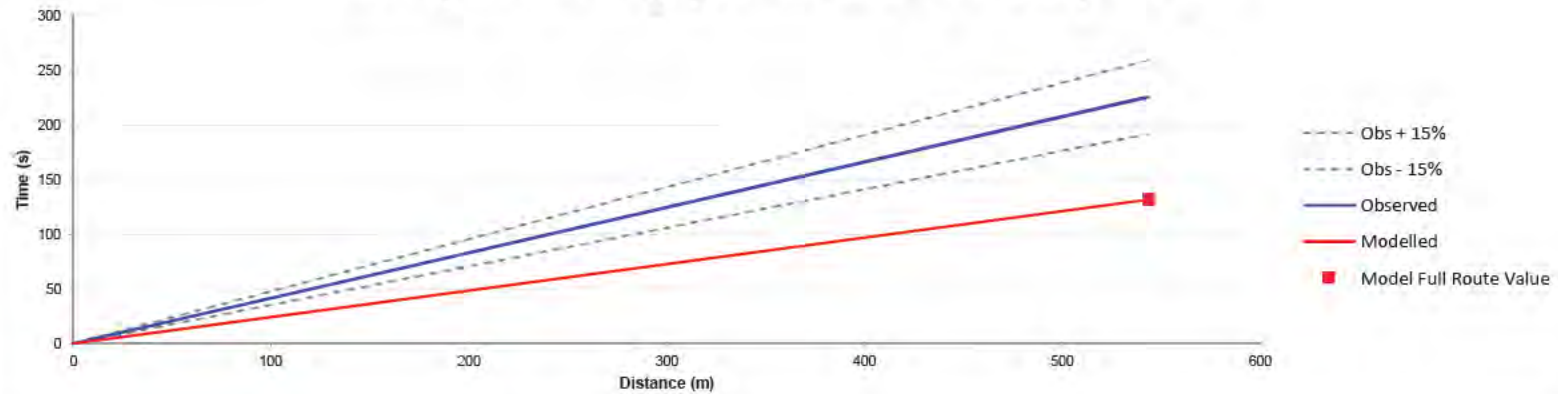




Journey Time Summary for 34 - Barrack Square - NB

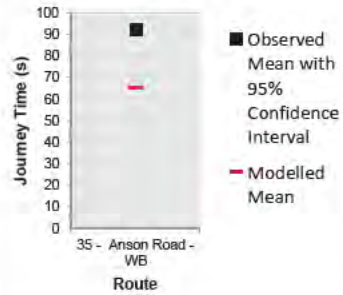


Journey Time Summary by Distance for 34 - Barrack Square - NB

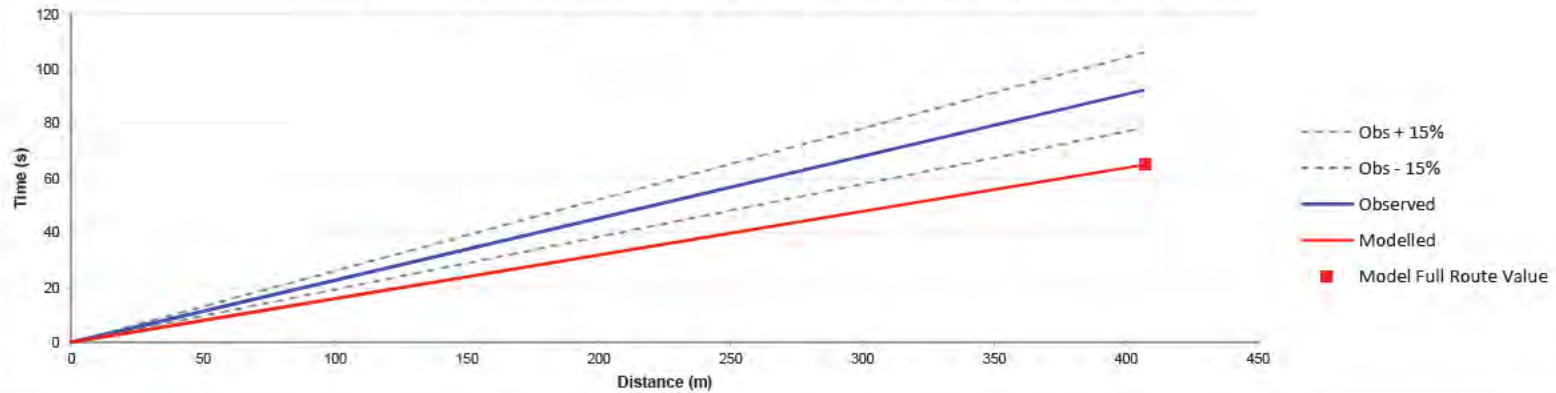




Journey Time Summary for 35 - Anson Road - WB

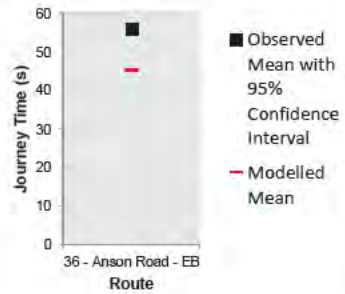


Journey Time Summary by Distance for 35 - Anson Road - WB

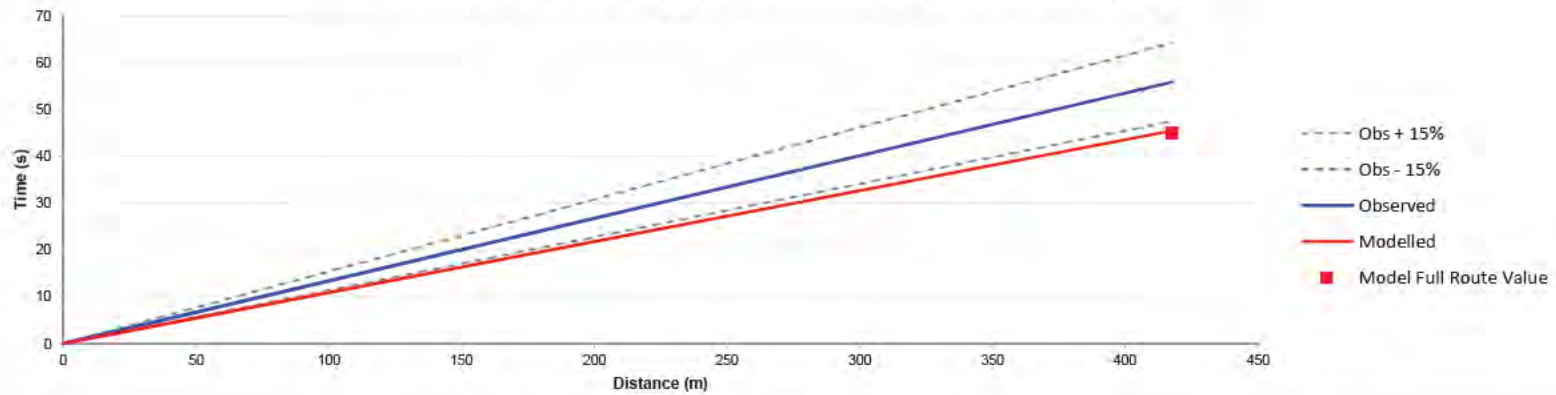




Journey Time Summary for 36 - Anson Road - EB

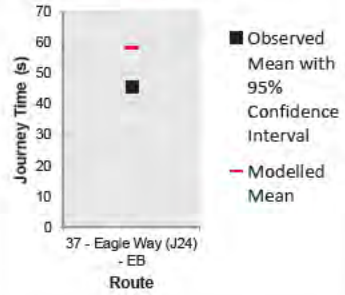


Journey Time Summary by Distance for 36 - Anson Road - EB

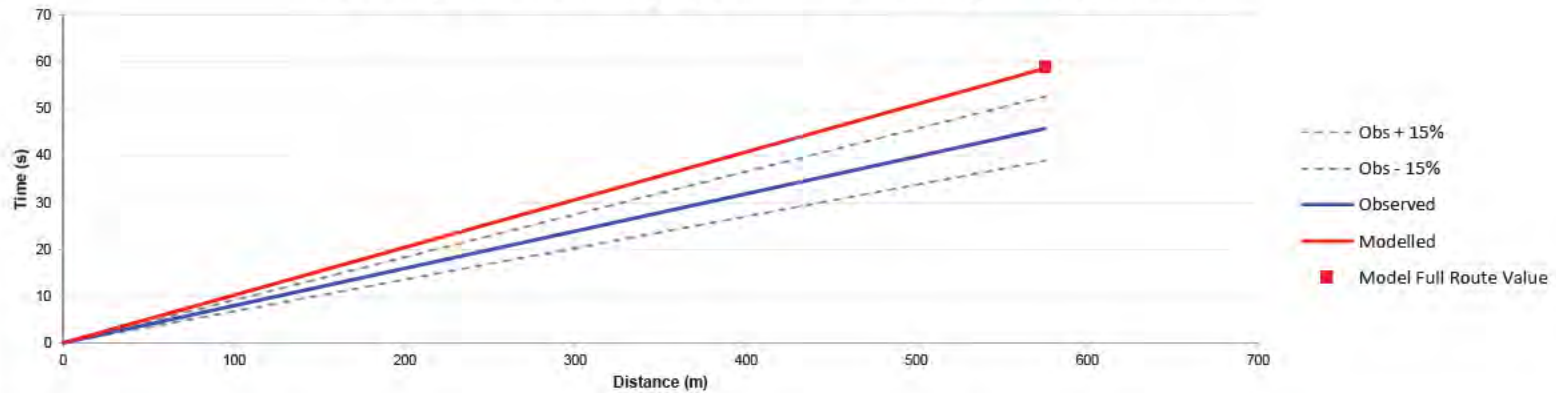




Journey Time Summary for 37 - Eagle Way (J24) - EB

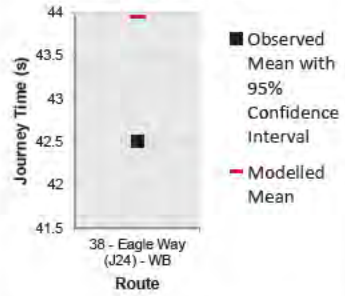


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

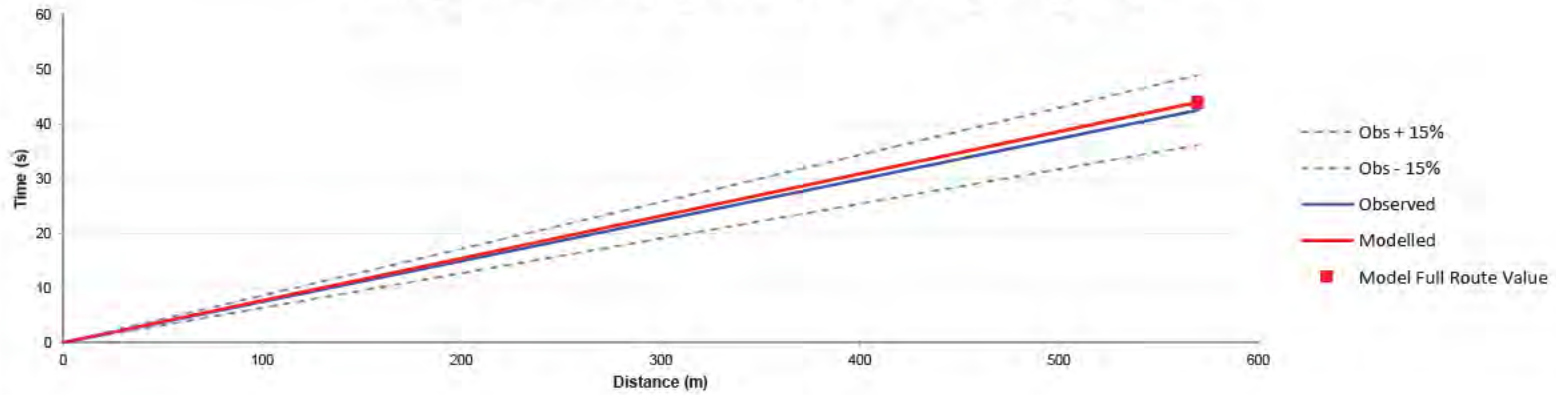




Journey Time Summary for 38 - Eagle Way (J24) - WB

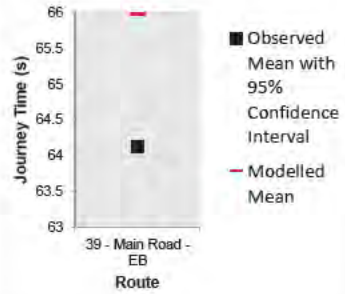


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

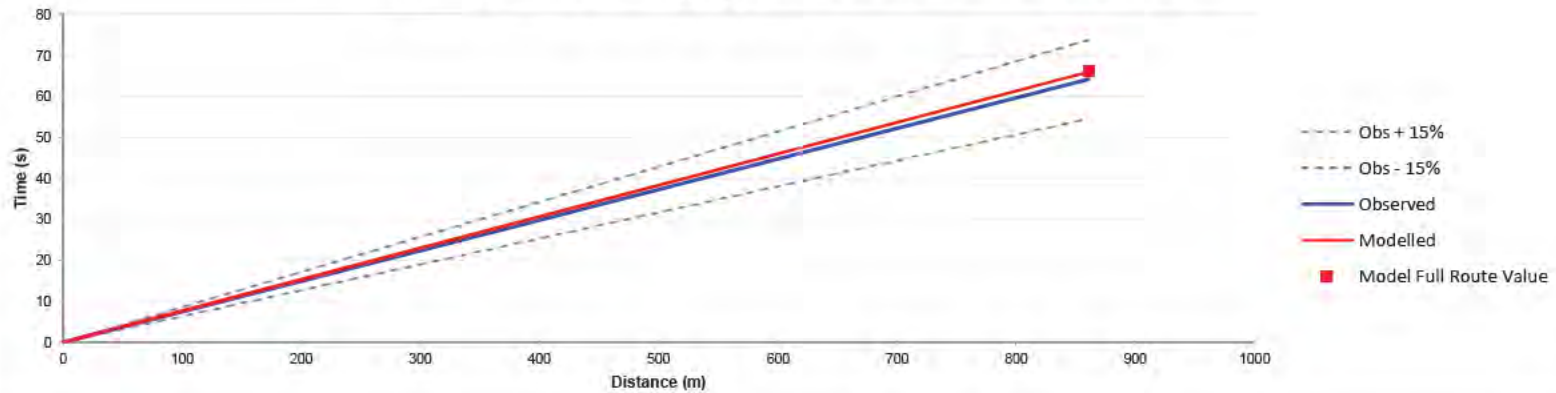




Journey Time Summary for 39 - Main Road - EB

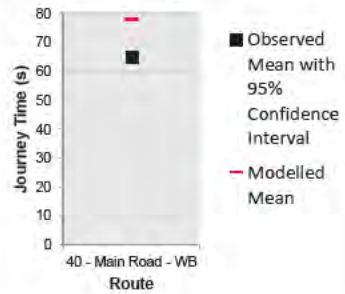


Journey Time Summary by Distance for 39 - Main Road - EB

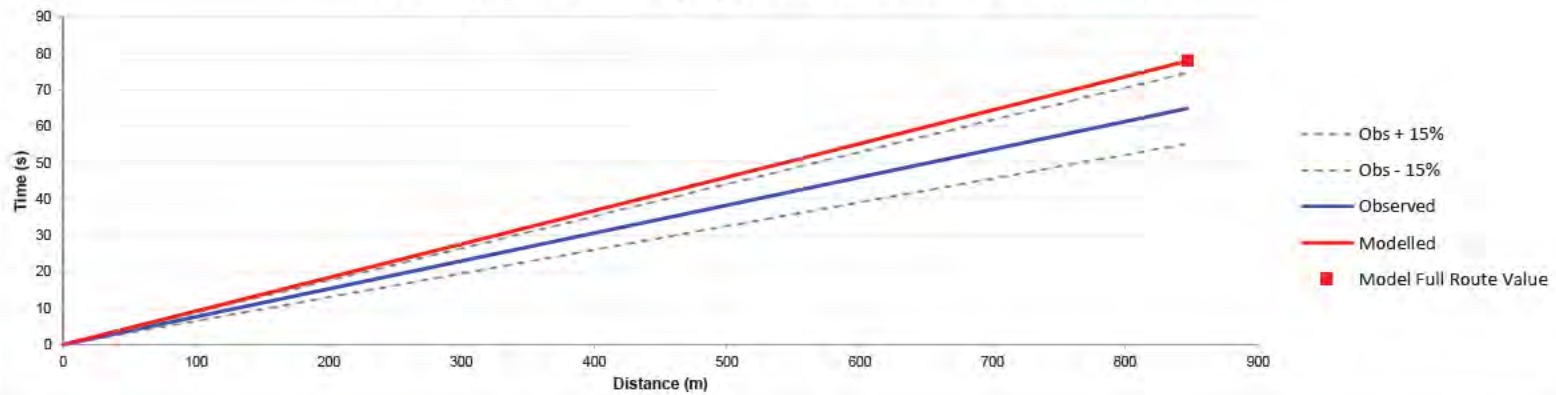




Journey Time Summary for 40 - Main Road - WB

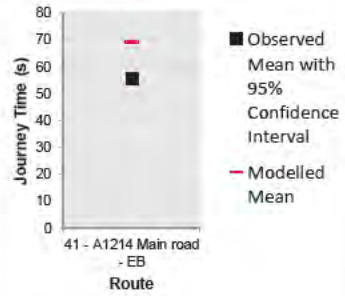


Journey Time Summary by Distance for 40 - Main Road - WB

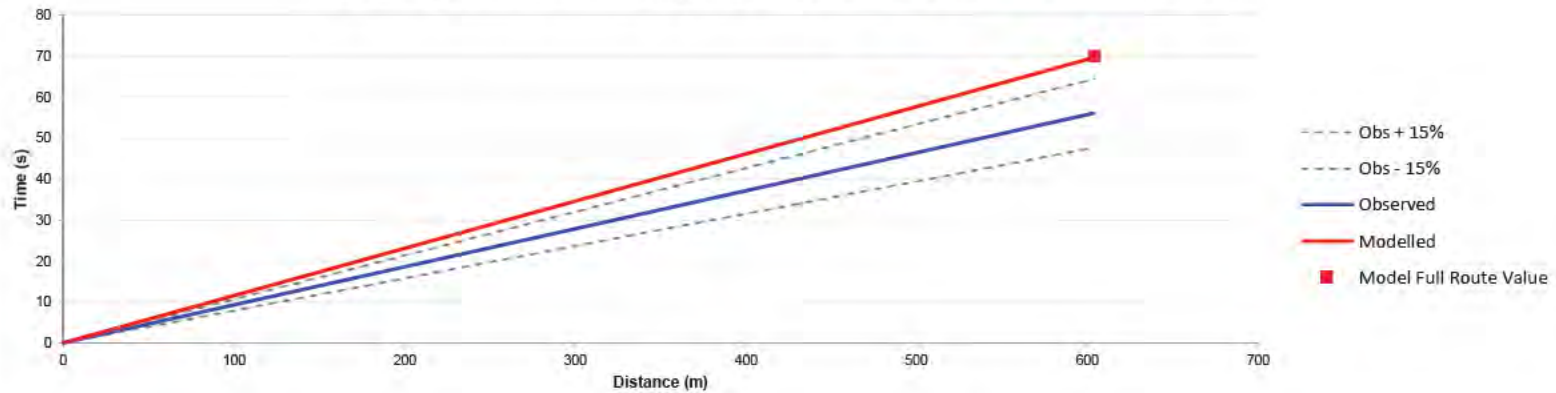




Journey Time Summary for 41 - A1214 Main road road - EB

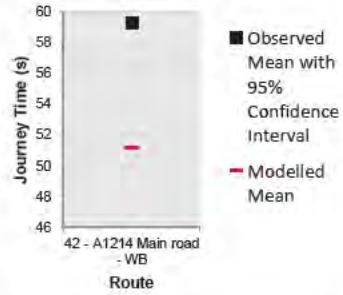


Journey Time Summary by Distance for 41 - A1214 Main road - EB

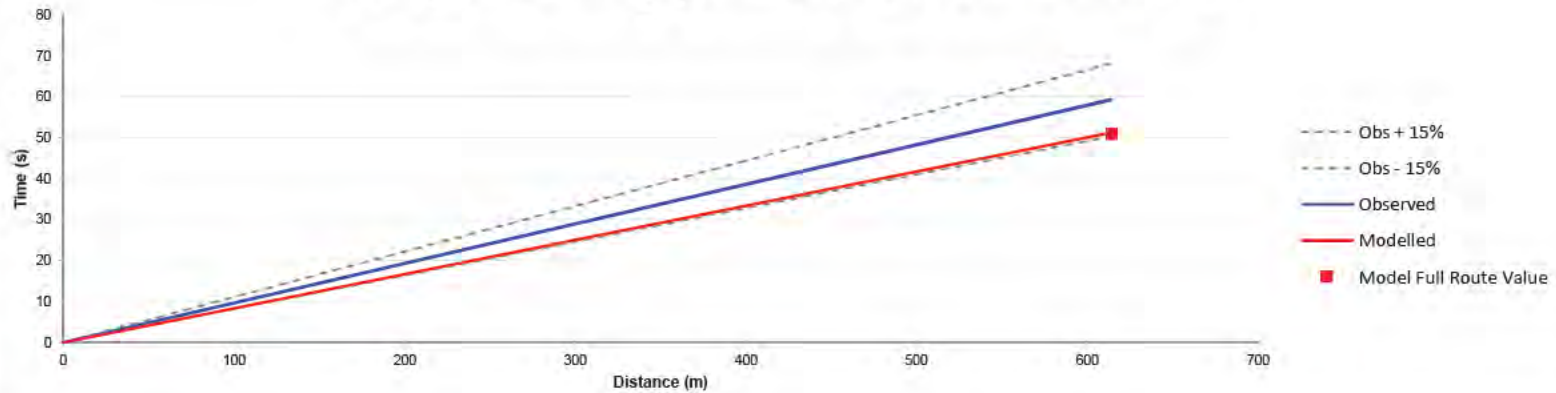




Journey Time Summary for 42 - A1214 Main road road - WB

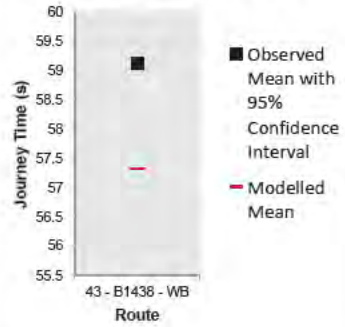


Journey Time Summary by Distance for 42 - A1214 Main road - WB

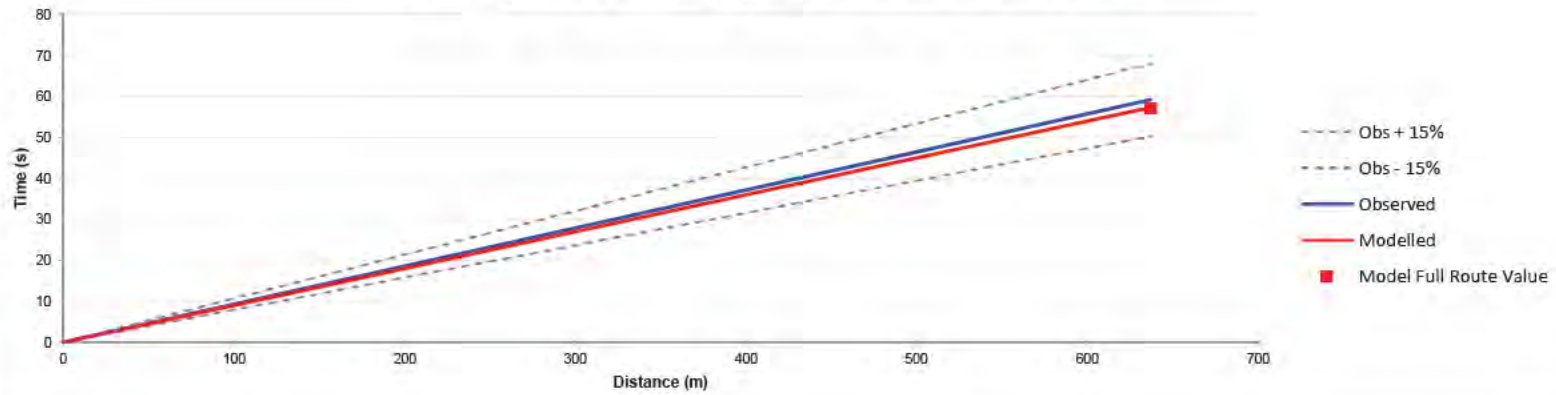




Journey Time Summary for 43 - B1438 - WB

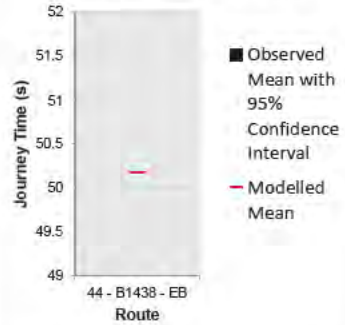


Journey Time Summary by Distance for 43 - B1438 - WB

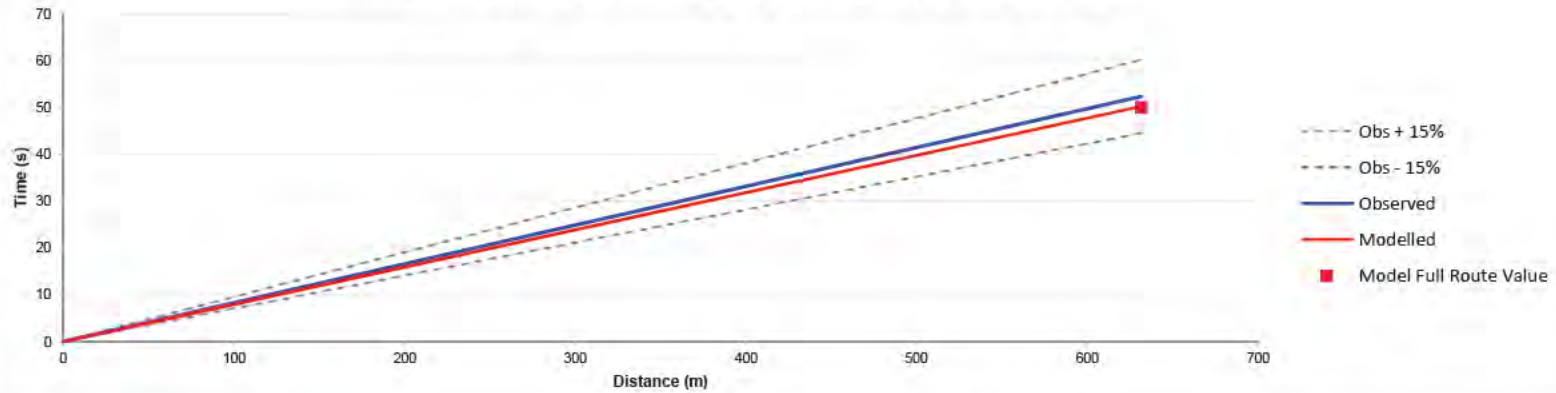




Journey Time Summary for 44 - B1438 - EB

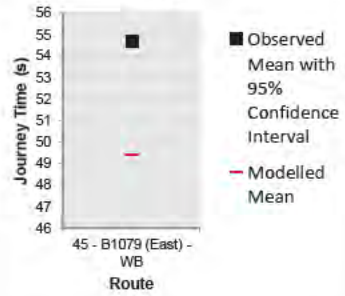


Journey Time Summary by Distance for 44 - B1438 - EB

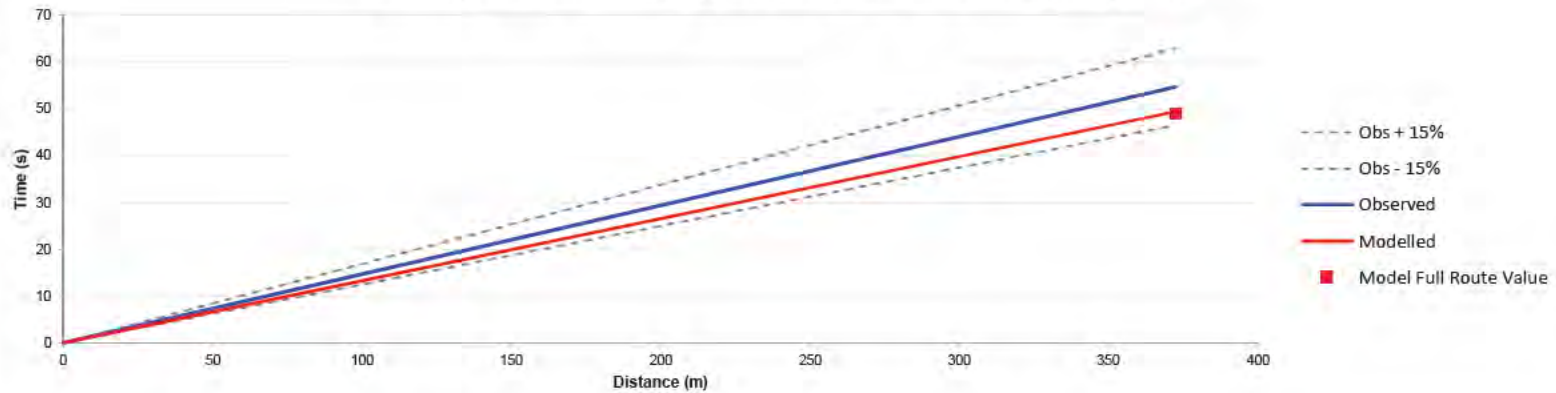




Journey Time Summary for 45 - B1079 (East) - WB

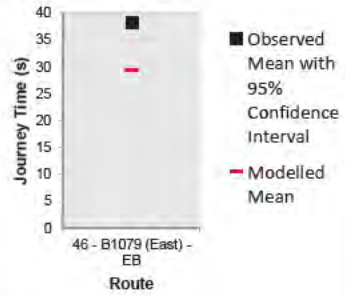


Journey Time Summary by Distance for 45 - B1079 (East) - WB

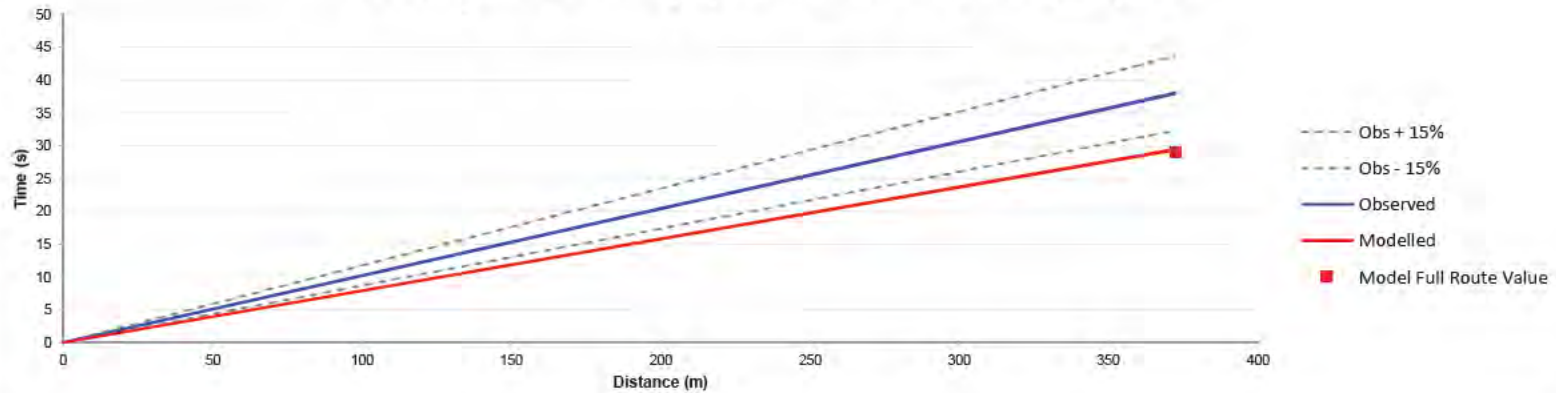




Journey Time Summary for 46 - B1079 (East) - EB

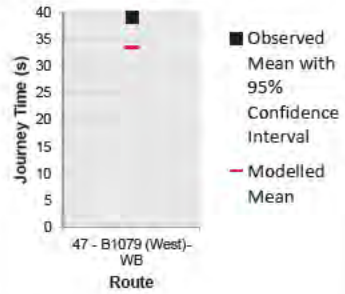


Journey Time Summary by Distance for 46 - B1079 (East) - EB

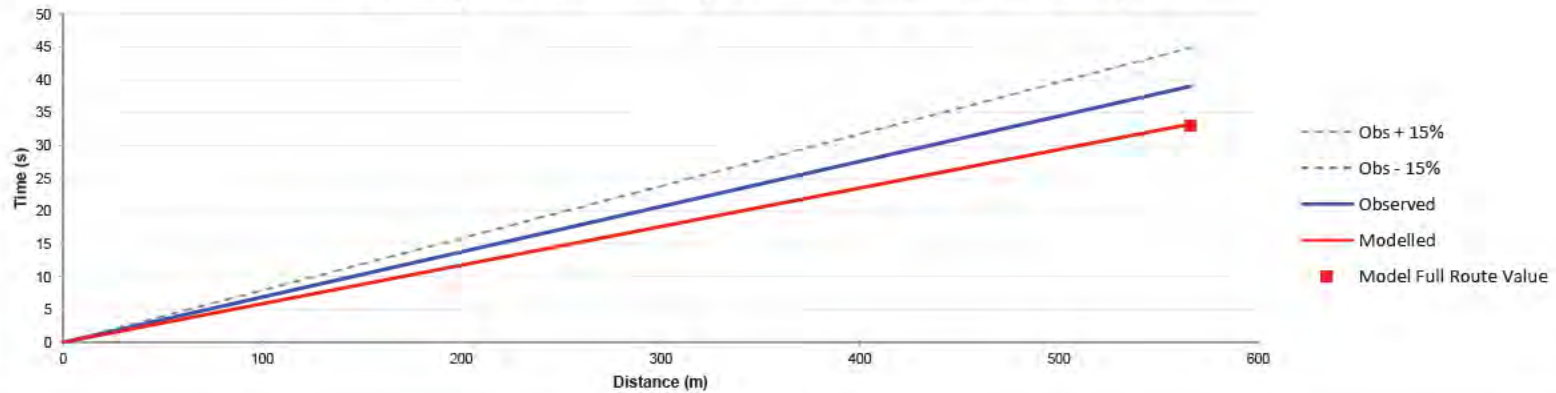




Journey Time Summary for 47 - B1079 (West)- WB

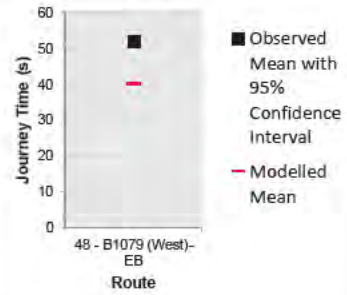


Journey Time Summary by Distance for 47 - B1079 (West)- WB

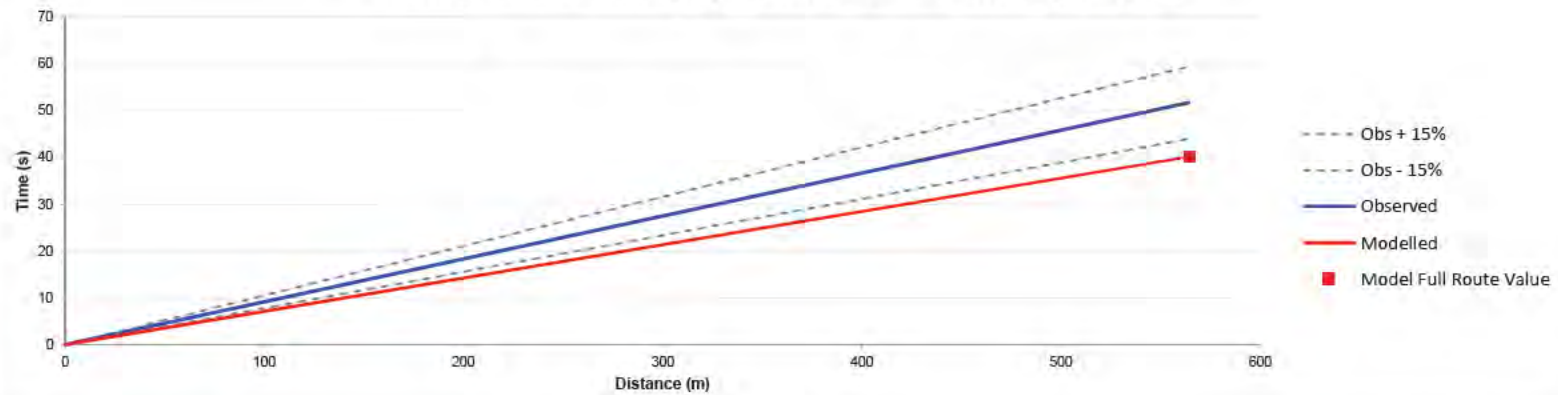




Journey Time Summary for 48 - B1079 (West)- EB

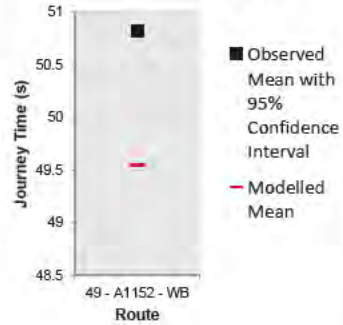


Journey Time Summary by Distance for 48 - B1079 (West)- EB

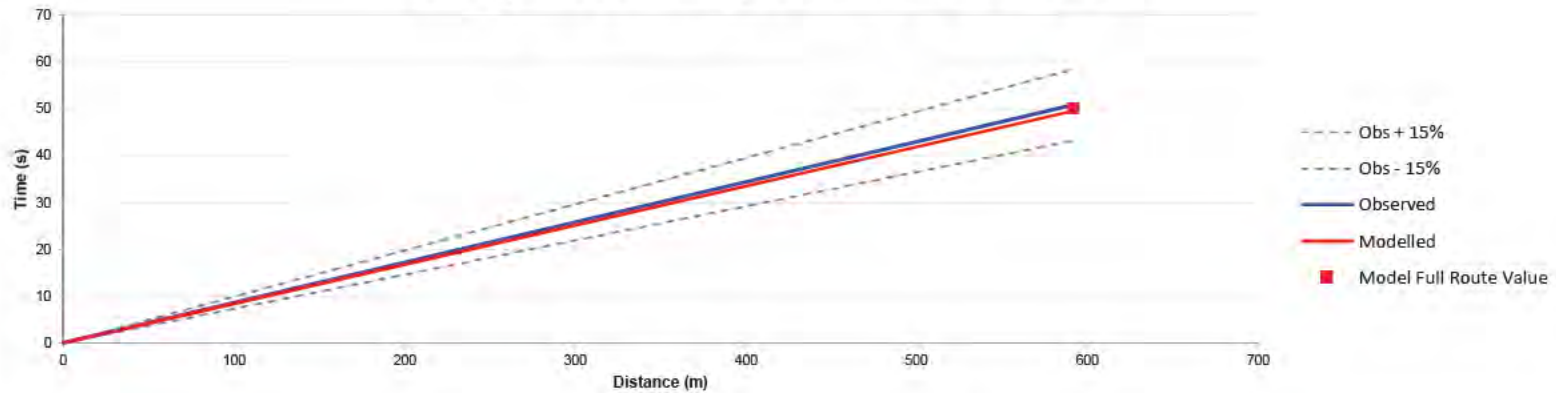




Journey Time Summary for 49 - A1152 - WB

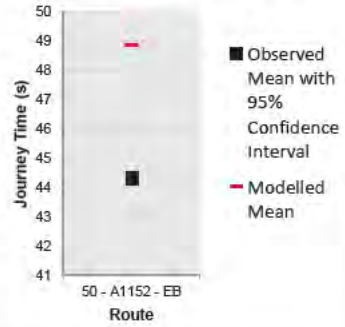


Journey Time Summary by Distance for 49 - A1152 - WB

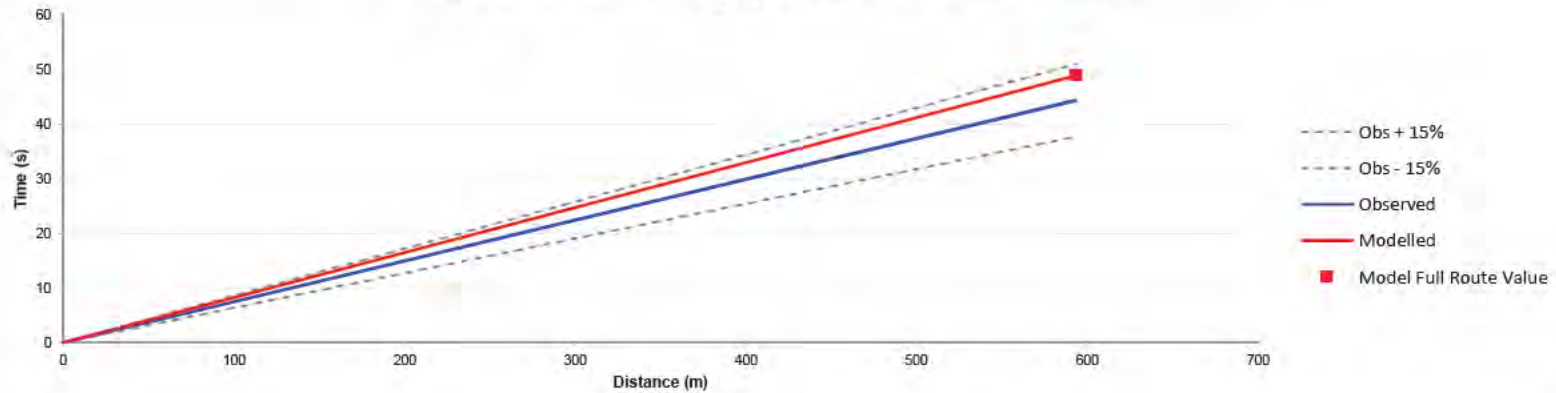




Journey Time Summary for 50 - A1152 - EB



Journey Time Summary by Distance for 50 - A1152 - EB





Journey Times
Validation Statistics
PM Peak (17:00-18:00)

Route:	Segment	Graph Group	Observed	Modelled			% Diff	Diff	Conf?	15%	60s	WebTAG	Distance (m)
			Average	Average	95% Conf	Var Chk							
1 - J21 - J22 - NB	Partial - A	1	122	111	1	TRUE	-8.9%	-11	FALSE	TRUE	TRUE	TRUE	2695
2 - J22 - J23 - NB	Partial - B	1	73	63	0	TRUE	-12.6%	-9	FALSE	TRUE	TRUE	TRUE	1406
3 - J23 - J24 - NB	Partial - C	1	52	44	0	TRUE	-15.2%	-8	FALSE	FALSE	TRUE	TRUE	646
4 - J24 - J25 - NB	Partial - D	1	51	47	0	TRUE	-8.3%	-4	FALSE	TRUE	TRUE	TRUE	598
5 - J25 - J26 - NB	Partial - E	1	113	123	1	TRUE	9.3%	10	FALSE	TRUE	TRUE	TRUE	2509
6 - J26 - J27 - NB	Partial - F	1	96	89	0	TRUE	-7.7%	-7	FALSE	TRUE	TRUE	TRUE	1513
7 - J27 - J28 - NB	Partial - G	1	86	95	0	TRUE	10.6%	9	FALSE	TRUE	TRUE	TRUE	1444
8 - J28 - A12 - NB	Partial - H	1	139	136	1	TRUE	-2.7%	-4	FALSE	TRUE	TRUE	TRUE	3240
9 - A12 - J28 - SB	Partial - A	3	130	122	1	TRUE	-6.3%	-8	FALSE	TRUE	TRUE	TRUE	2885
10 - J28 - J27 - SB	Partial - B	3	92	90	1	TRUE	-1.7%	-2	FALSE	TRUE	TRUE	TRUE	1455
11 - J27 - J26 - SB	Partial - C	3	79	90	0	TRUE	13.6%	11	FALSE	TRUE	TRUE	TRUE	1518
12 - J26 - J25 - SB	Partial - D	3	122	119	1	TRUE	-2.7%	-3	FALSE	TRUE	TRUE	TRUE	2490
13 - J25 - J24 - SB	Partial - E	3	42	33	0	TRUE	-21.4%	-9	FALSE	FALSE	TRUE	TRUE	597
14 - J24 - J23 - SB	Partial - F	3	43	38	0	TRUE	-11.1%	-5	FALSE	TRUE	TRUE	TRUE	659
15 - J23 - J22 - SB	Partial - G	3	74	66	0	TRUE	-11.2%	-8	FALSE	TRUE	TRUE	TRUE	1429
16 - J22 - J21 - SB	Partial - H	3	123	124	1	TRUE	1.1%	1	FALSE	TRUE	TRUE	TRUE	2859
17 - A14 WB upto Offslip	Full	5	124	136	1	TRUE	9.6%	12	FALSE	TRUE	TRUE	TRUE	3168
18 - A14 EB from Onslip	Full	6	112	119	0	TRUE	6.5%	7	FALSE	TRUE	TRUE	TRUE	3161
19 - A14 WB from Onslip	Full	7	76	81	0	TRUE	7.8%	6	FALSE	TRUE	TRUE	TRUE	1968
20 - A14 EB upto Offslip	Full	8	80	89	1	TRUE	12.2%	10	FALSE	TRUE	TRUE	TRUE	1976
21 - Felixstowe - SB	Full	9	94	100	1	TRUE	6.0%	6	FALSE	TRUE	TRUE	TRUE	1712
22 - Felixstowe - NB	Full	10	98	106	1	TRUE	8.3%	8	FALSE	TRUE	TRUE	TRUE	1656
23 - Bucklesham Road - NB	Full	11	59	62	0	TRUE	4.5%	3	FALSE	TRUE	TRUE	TRUE	780
24 - Bucklesham Road - SB	Full	12	75	68	2	TRUE	-10.2%	-8	FALSE	TRUE	TRUE	TRUE	780
25 - Foxhall road - EB	Full	13	90	92	1	TRUE	1.3%	1	FALSE	TRUE	TRUE	TRUE	1470
26 - Foxhall road - WB	Full	14	85	90	1	TRUE	6.0%	5	FALSE	TRUE	TRUE	TRUE	1481
27 - Newbourne Road - EB	Full	15	47	42	0	TRUE	-11.1%	-5	FALSE	TRUE	TRUE	TRUE	774
28 - Newbourne Road - WB	Full	16	63	59	1	TRUE	-5.7%	-4	FALSE	TRUE	TRUE	TRUE	778
29 - Eagle Way - EB	Full	17	17	16	1	TRUE	-1.8%	0	FALSE	TRUE	TRUE	TRUE	139
30 - Eagle Way - WB	Full	18	11	14	0	TRUE	23.6%	3	FALSE	FALSE	TRUE	TRUE	125
31 - Gloster Road - NB	Full	19	46	54	0	TRUE	16.1%	7	FALSE	FALSE	TRUE	TRUE	456
32 - Gloster Road - SB	Full	20	112	64	7	FALSE	-42.6%	-48	FALSE	FALSE	TRUE	TRUE	447
33 - Barrack Square - SB	Full	21	87	85	1	TRUE	-2.1%	-2	FALSE	TRUE	TRUE	TRUE	559
34 - Barrack Square - NB	Full	22	187	112	2	TRUE	-40.2%	-75	FALSE	FALSE	FALSE	FALSE	544
35 - Anson Road - WB	Full	23	79	55	3	FALSE	-30.5%	-24	FALSE	FALSE	TRUE	TRUE	407
36 - Anson Road - EB	Full	24	54	45	0	TRUE	-17.4%	-9	FALSE	FALSE	TRUE	TRUE	418
37 - Eagle Way (J24) - EB	Full	25	46	61	2	TRUE	32.8%	15	FALSE	FALSE	TRUE	TRUE	576
38 - Eagle Way (J24) - WB	Full	26	43	44	0	TRUE	2.1%	1	FALSE	TRUE	TRUE	TRUE	570
39 - Main Road - EB	Full	27	65	67	0	TRUE	3.5%	2	FALSE	TRUE	TRUE	TRUE	861
40 - Main Road - WB	Full	28	65	78	1	TRUE	21.1%	14	FALSE	FALSE	TRUE	TRUE	847
41 - A1214 Main road - EB	Full	29	53	67	0	TRUE	26.4%	14	FALSE	FALSE	TRUE	TRUE	604
42 - A1214 Main road - WB	Full	30	60	51	0	TRUE	-15.5%	-9	FALSE	FALSE	TRUE	TRUE	614
43 - B1438 - WB	Full	31	58	55	0	TRUE	-5.3%	-3	FALSE	TRUE	TRUE	TRUE	637
44 - B1438 - EB	Full	32	51	50	0	TRUE	-2.4%	-1	FALSE	TRUE	TRUE	TRUE	632
45 - B1079 (East) - WB	Full	33	41	37	1	TRUE	-10.4%	-4	FALSE	TRUE	TRUE	TRUE	373
46 - B1079 (East) - EB	Full	34	36	30	0	TRUE	-17.1%	-6	FALSE	FALSE	TRUE	TRUE	372
47 - B1079 (West) - WB	Full	35	37	33	0	TRUE	-11.4%	-4	FALSE	TRUE	TRUE	TRUE	566
48 - B1079 (West) - EB	Full	36	47	38	1	TRUE	-17.5%	-8	FALSE	FALSE	TRUE	TRUE	564



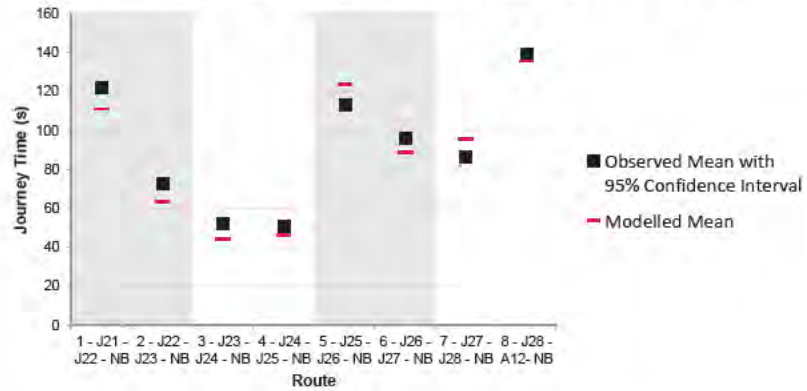
**Journey Times
Validation Statistics**

PM Peak (17:00-18:00)

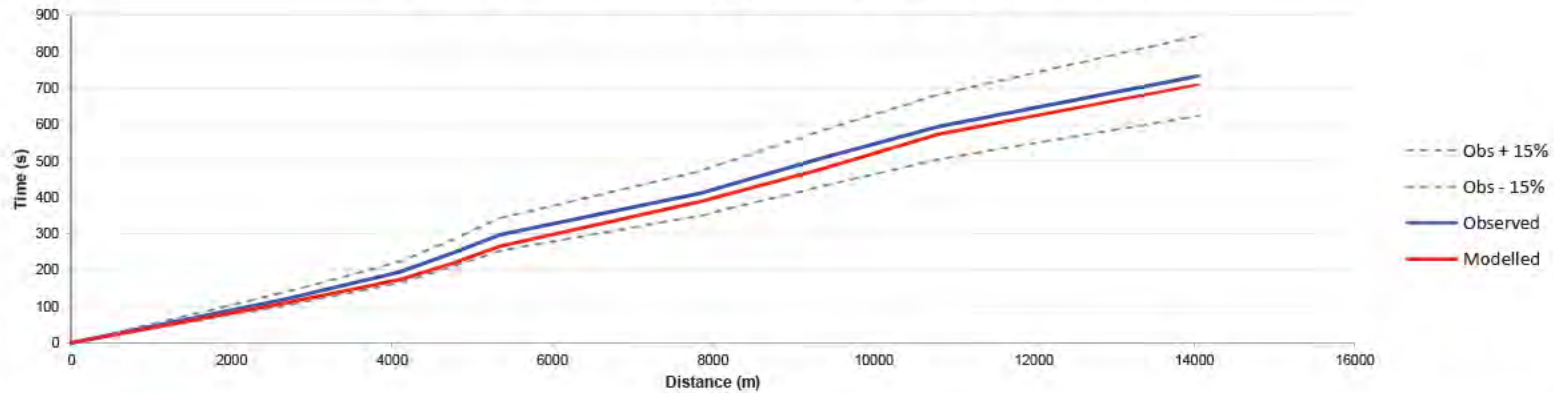
49 - A1152 - WB	Full	37	48	49	0	TRUE	2.1%	1	FALSE	TRUE	TRUE	TRUE	592
50 - A1152 - EB	Full	38	43	49	0	TRUE	12.8%	6	FALSE	TRUE	TRUE	TRUE	593
51 - A12 NB	Full	2	733	717	2	TRUE	-2.1%	-16	FALSE	TRUE	TRUE	TRUE	13695
52 - A12 SB	Full	4	705	682	2	TRUE	-3.2%	-22	FALSE	TRUE	TRUE	TRUE	13295



Journey Time Summary for Group Number 1

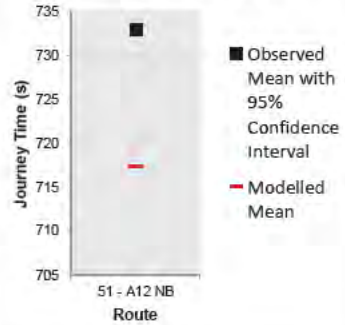


Journey Time Summary by Distance for Group Number 1

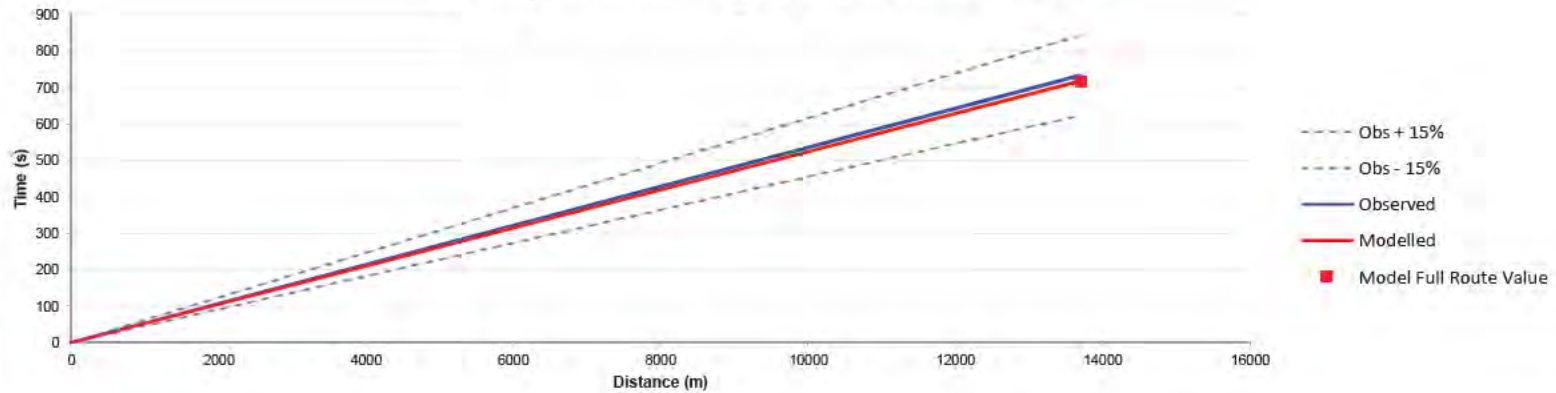




Journey Time Summary for 51 - A12 NB

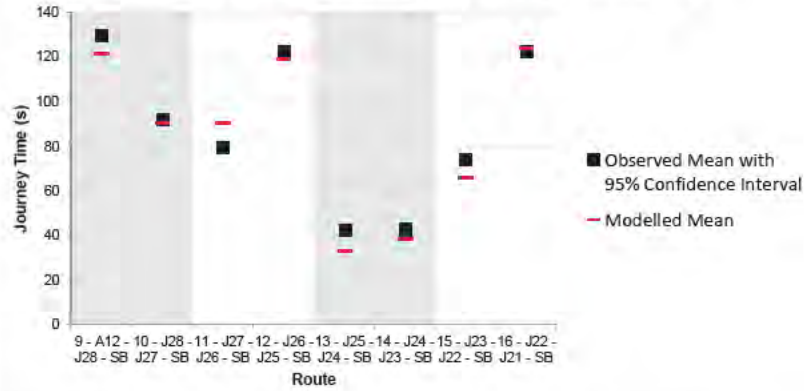


Journey Time Summary by Distance for 51 - A12 NB

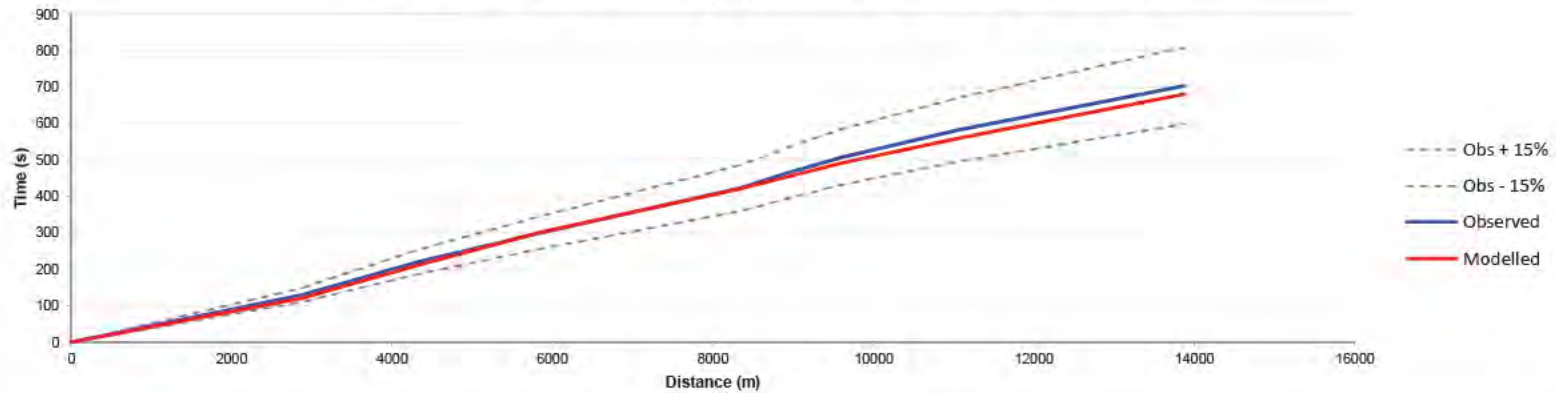




Journey Time Summary for Group Number 3

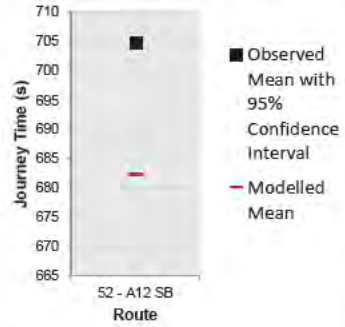


Journey Time Summary by Distance for Group Number 3

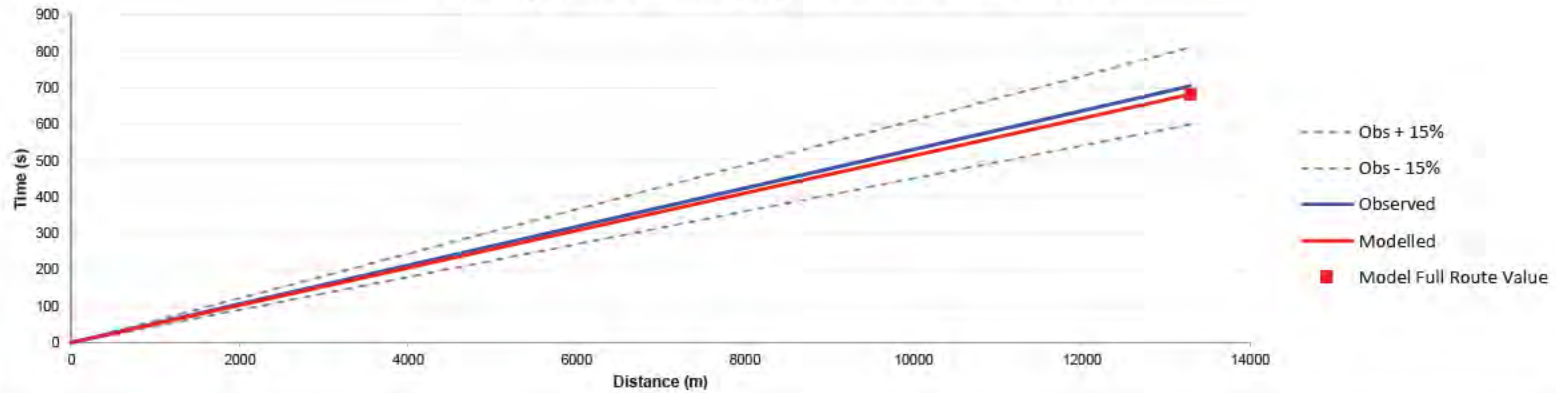




Journey Time Summary for 52 - A12 SB

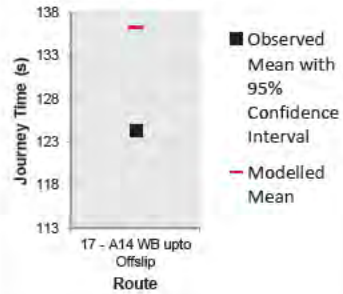


Journey Time Summary by Distance for 52 - A12 SB

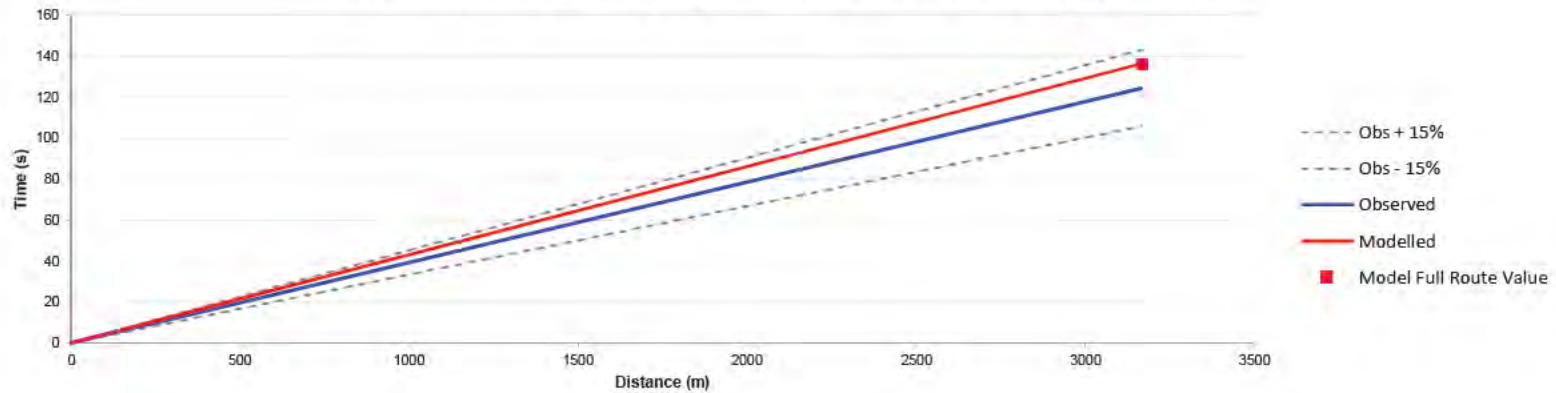




Journey Time Summary for 17 - A14 WB upto Offslip

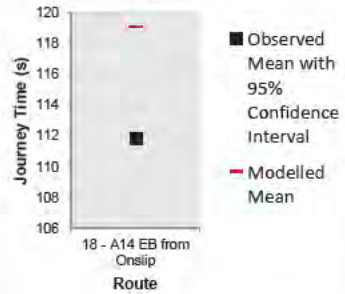


Journey Time Summary by Distance for 17 - A14 WB upto Offslip

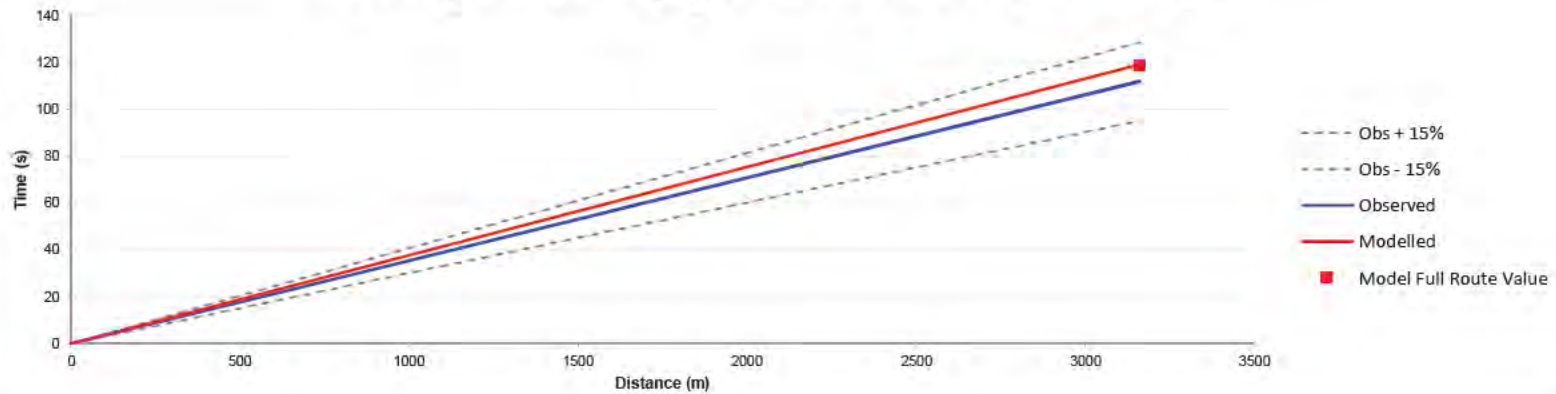




Journey Time Summary for 18 - A14 EB from Onslip

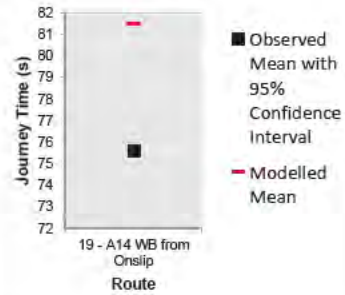


Journey Time Summary by Distance for 18 - A14 EB from Onslip

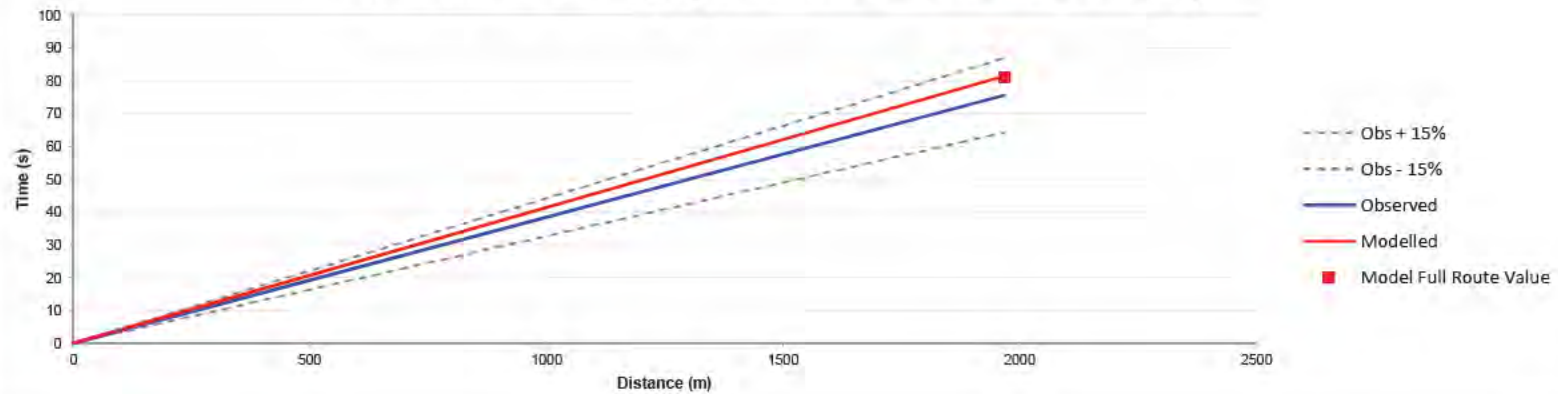




Journey Time Summary for 19 - A14 WB from Onslip

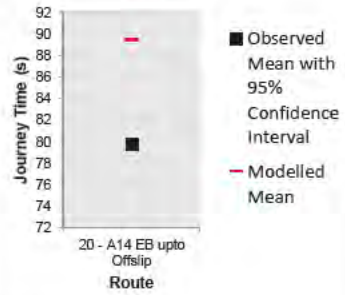


Journey Time Summary by Distance for 19 - A14 WB from Onslip

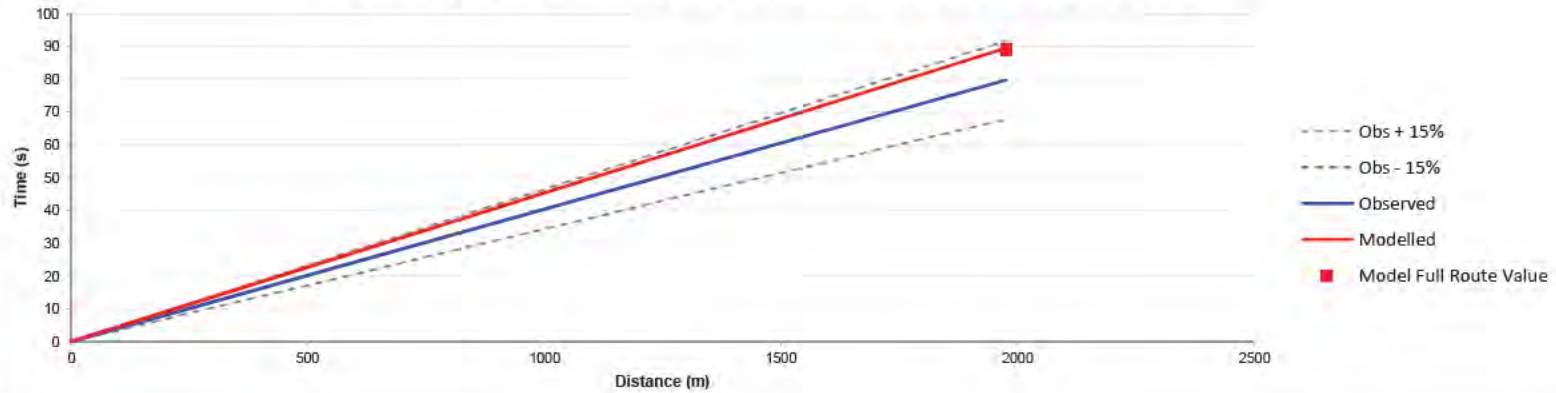




Journey Time Summary for 20 - A14 EB upto Offslip

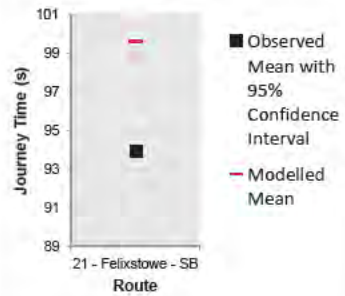


Journey Time Summary by Distance for 20 - A14 EB upto Offslip

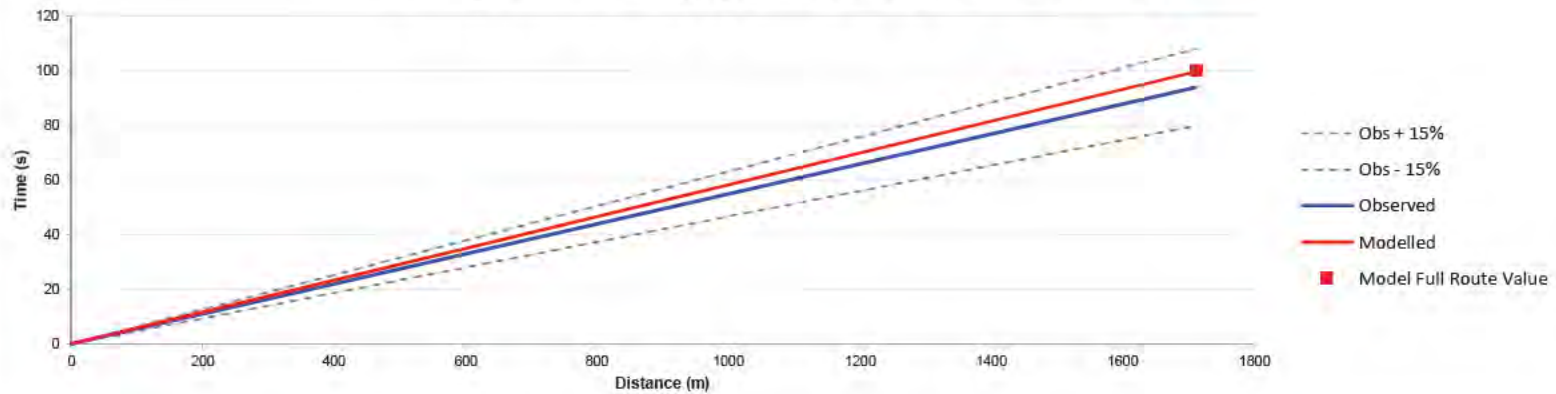




Journey Time Summary for 21 - Felixstowe - SB

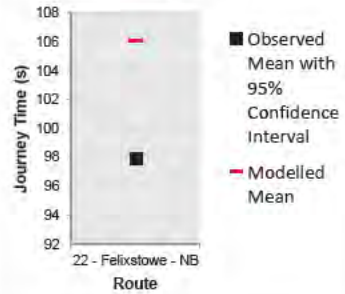


Journey Time Summary by Distance for 21 - Felixstowe - SB

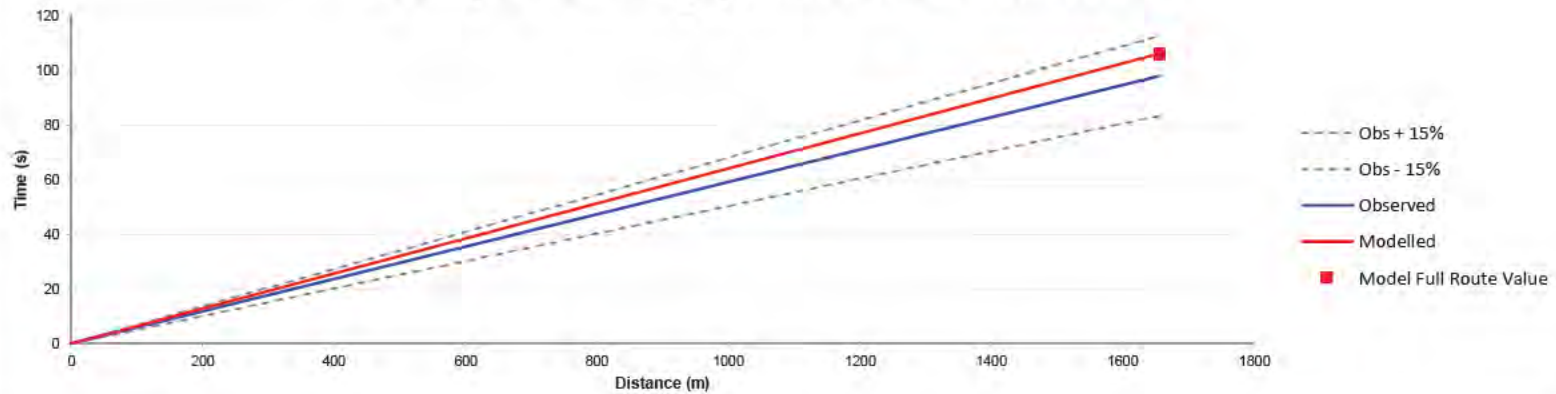




Journey Time Summary for 22 - Felixstowe - NB

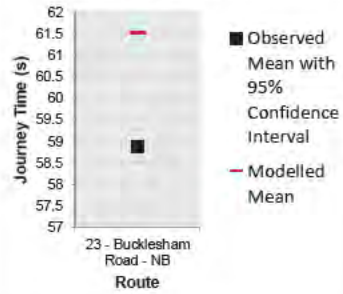


Journey Time Summary by Distance for 22 - Felixstowe - NB

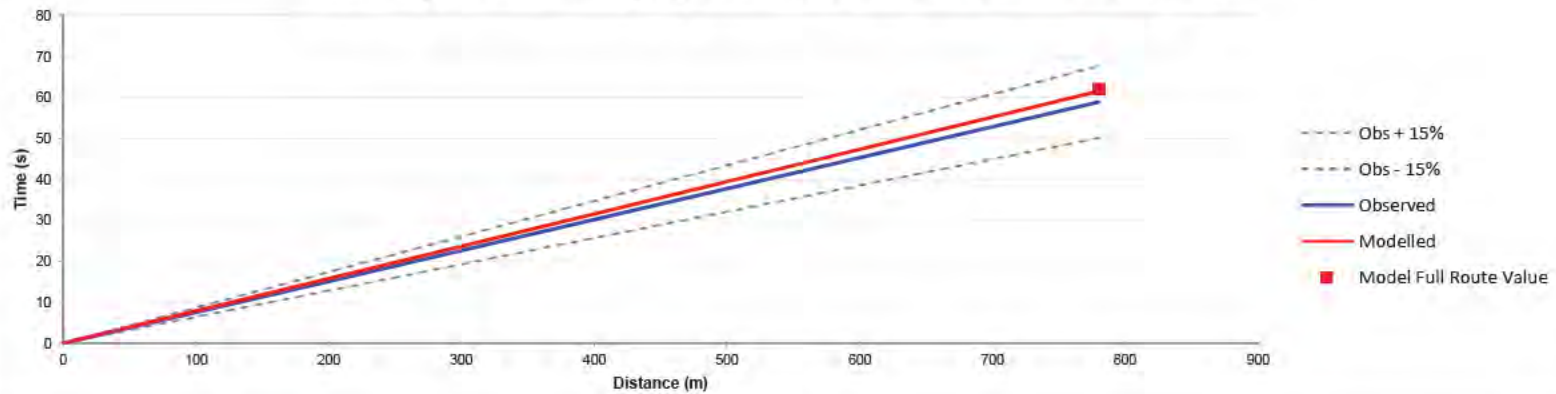




Journey Time Summary for 23 - Bucklesham Road - NB

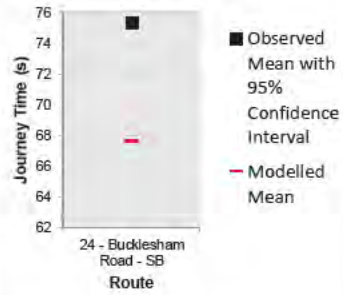


Journey Time Summary by Distance for 23 - Bucklesham Road - NB

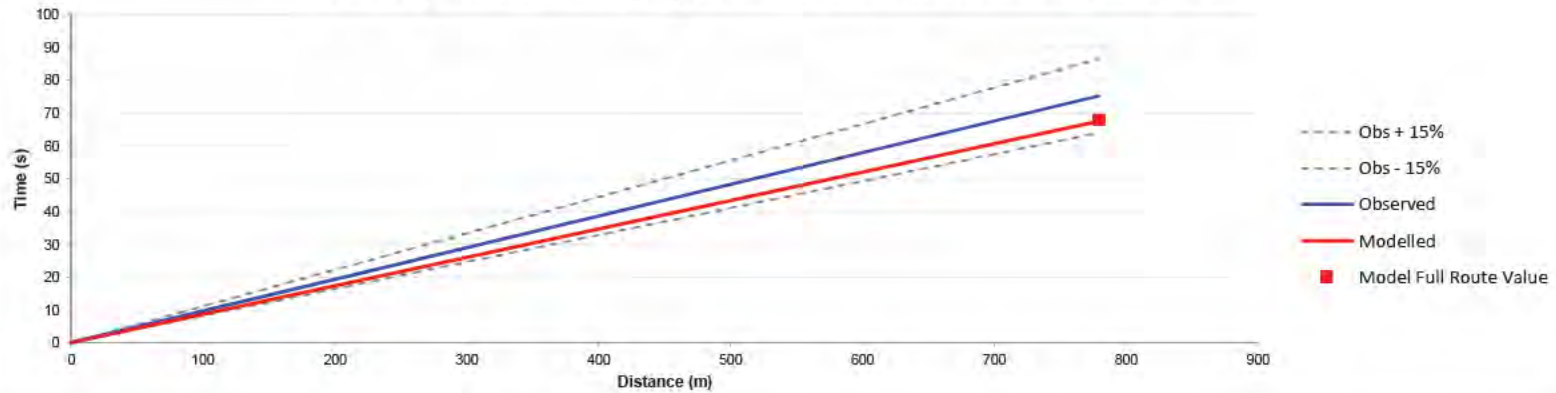




Journey Time Summary for 24 - Bucklesham Road - SB

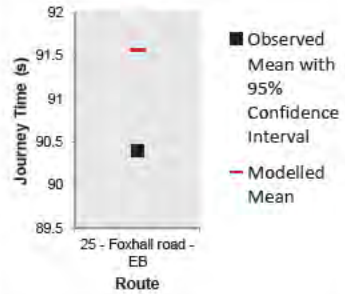


Journey Time Summary by Distance for 24 - Bucklesham Road - SB

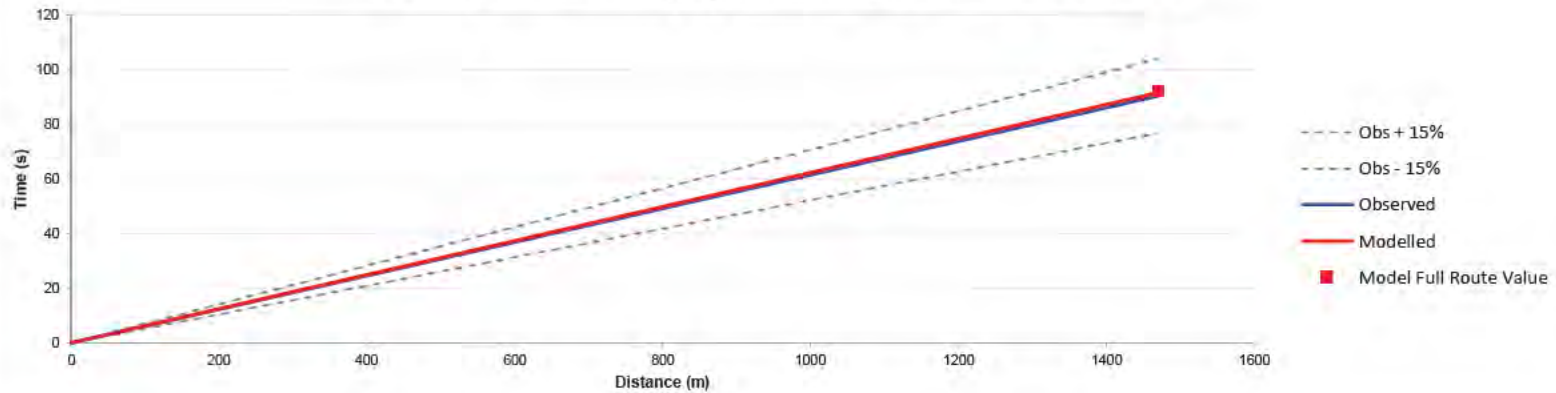




Journey Time Summary for 25 - Foxhall road - EB

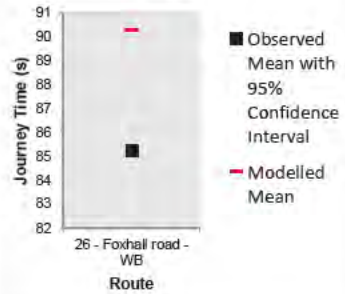


Journey Time Summary by Distance for 25 - Foxhall road - EB

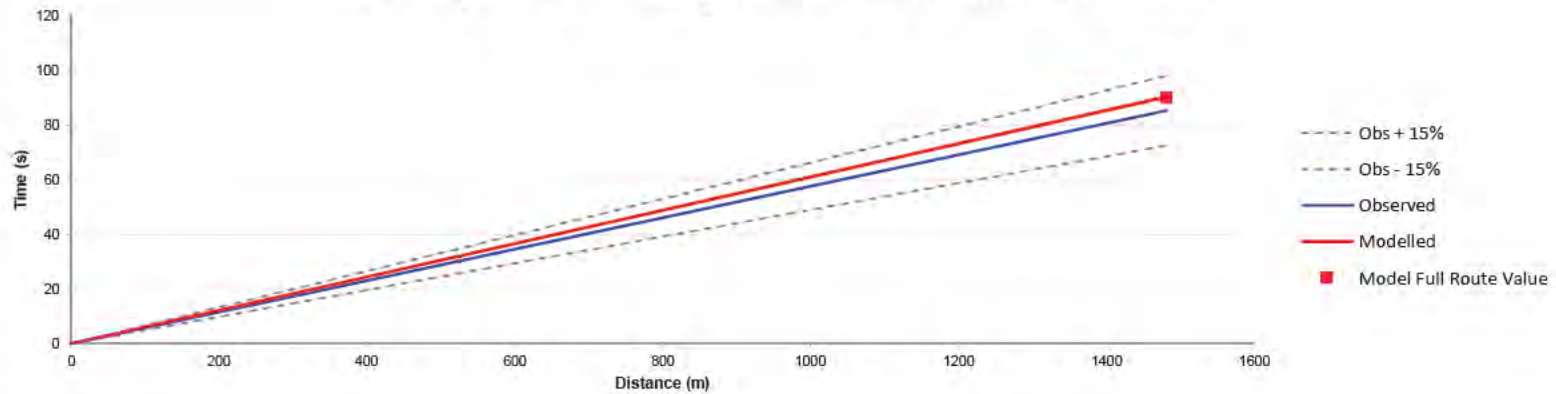




Journey Time Summary for 26 - Foxhall road - WB

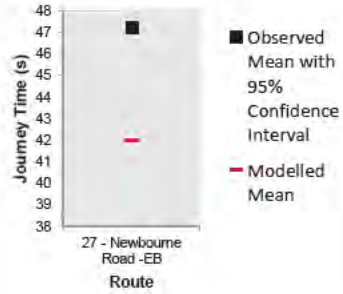


Journey Time Summary by Distance for 26 - Foxhall road - WB

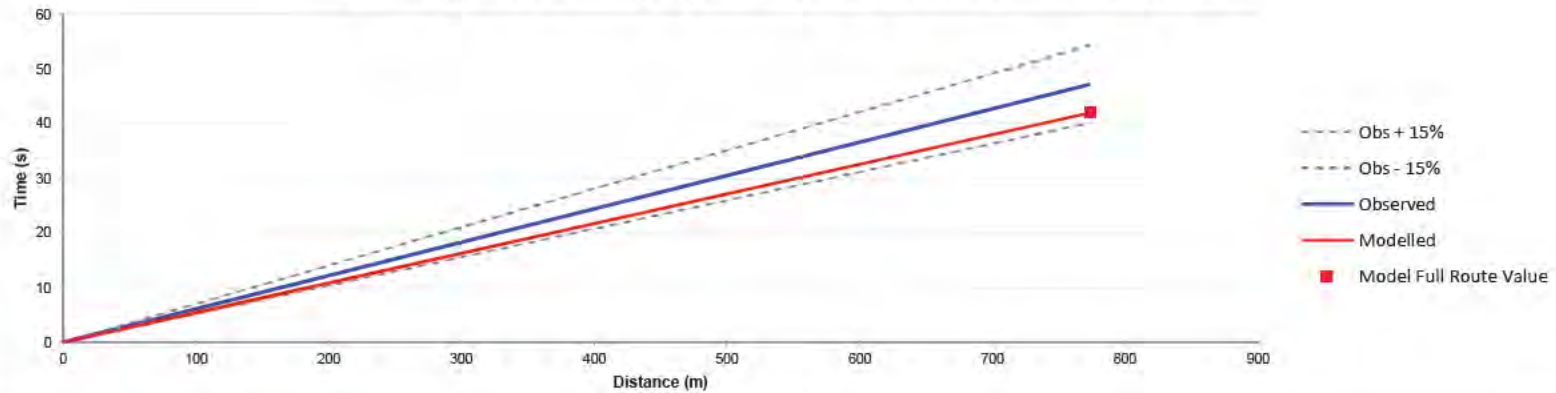




Journey Time Summary for 27 - Newbourne Road -EB

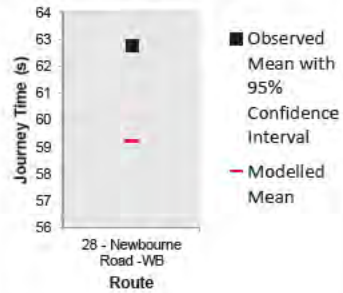


Journey Time Summary by Distance for 27 - Newbourne Road -EB

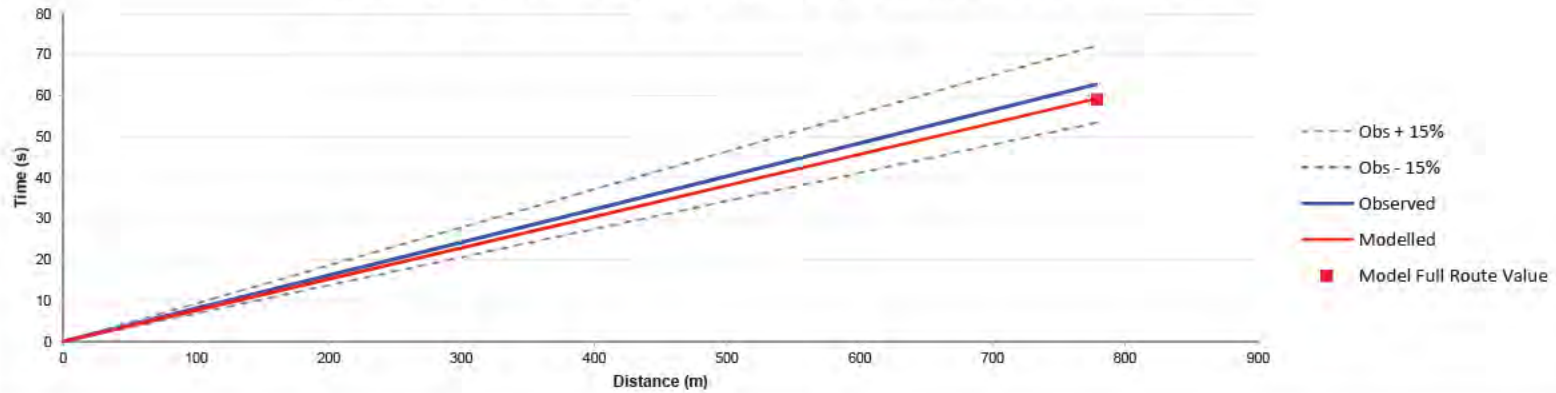




Journey Time Summary for 28 - Newbourne Road -WB

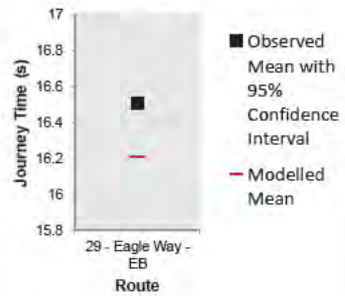


Journey Time Summary by Distance for 28 - Newbourne Road -WB

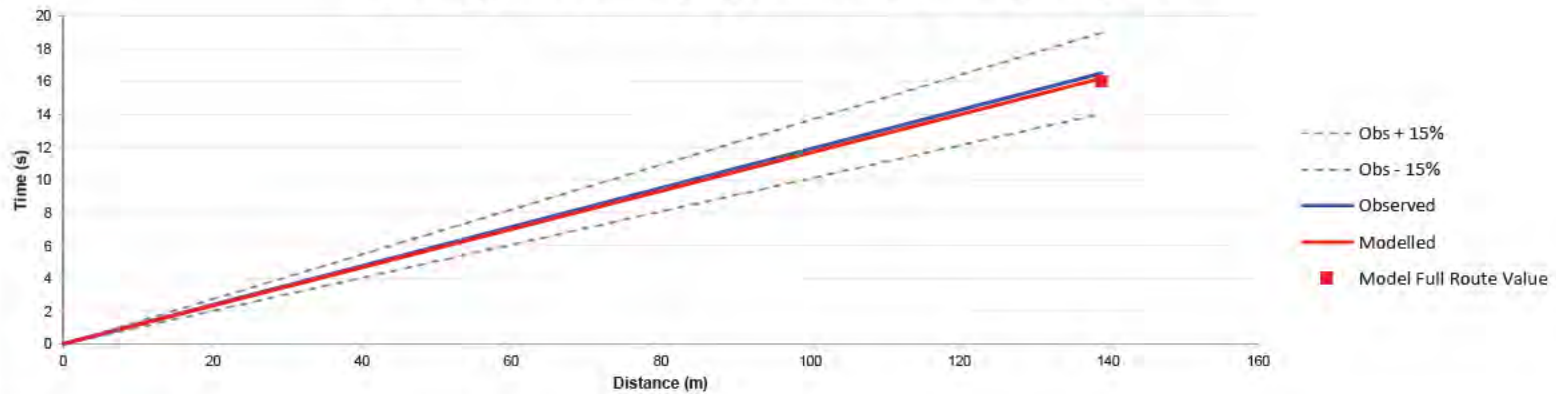




Journey Time Summary for 29 - Eagle Way - EB

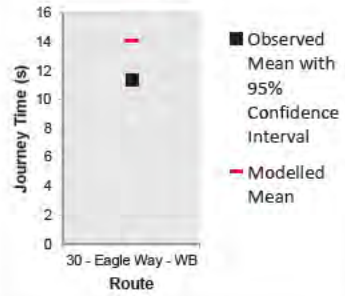


Journey Time Summary by Distance for 29 - Eagle Way - EB

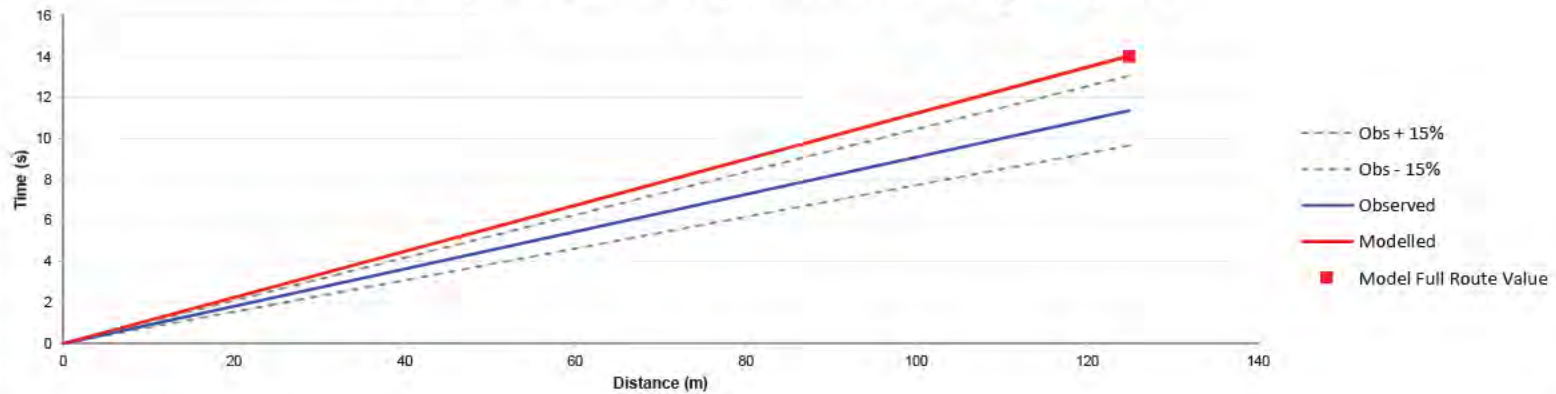




Journey Time Summary for 30 - Eagle Way - WB

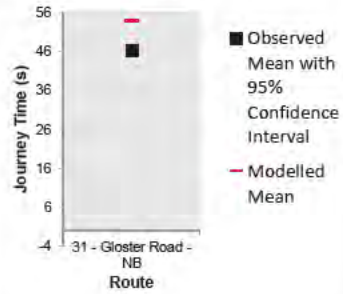


Journey Time Summary by Distance for 30 - Eagle Way - WB

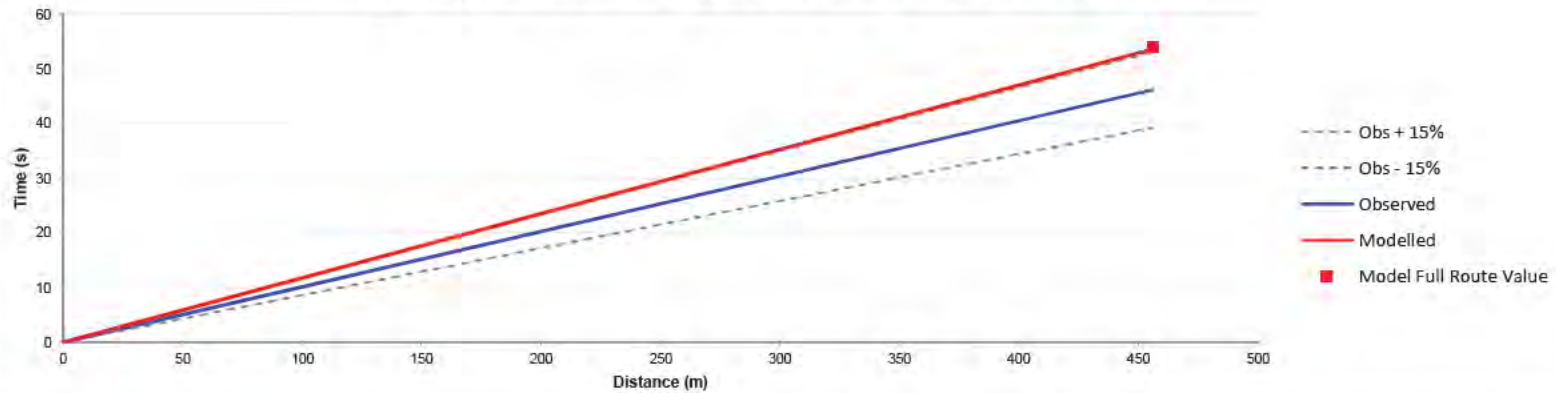




Journey Time Summary for 31 - Gloster Road - NB

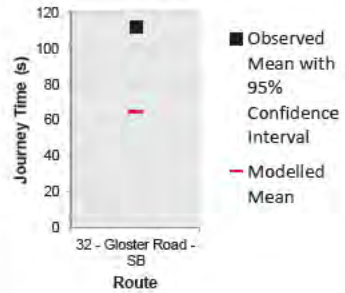


Journey Time Summary by Distance for 31 - Gloster Road - NB

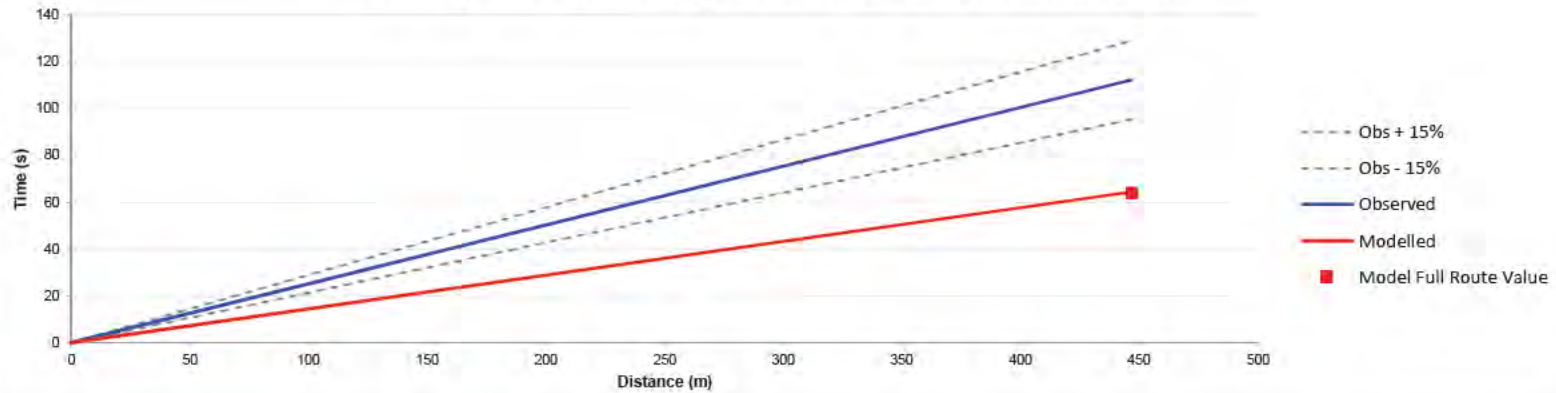




Journey Time Summary for 32 - Gloster Road - SB

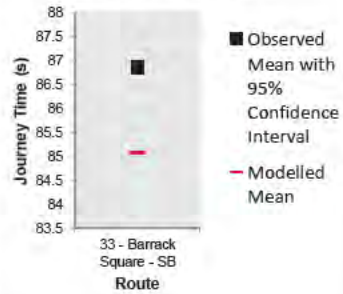


Journey Time Summary by Distance for 32 - Gloster Road - SB

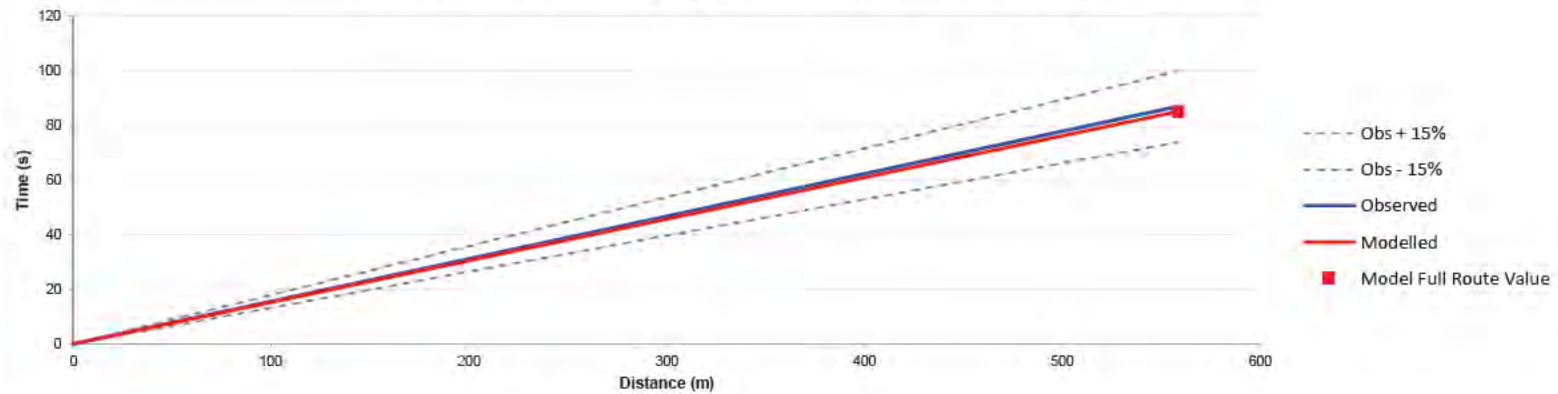




Journey Time Summary for 33 - Barrack Square - SB

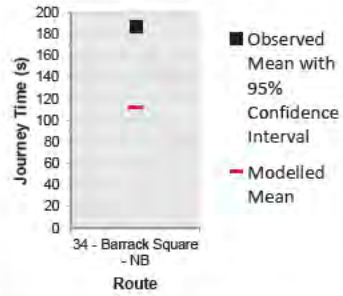


Journey Time Summary by Distance for 33 - Barrack Square - SB

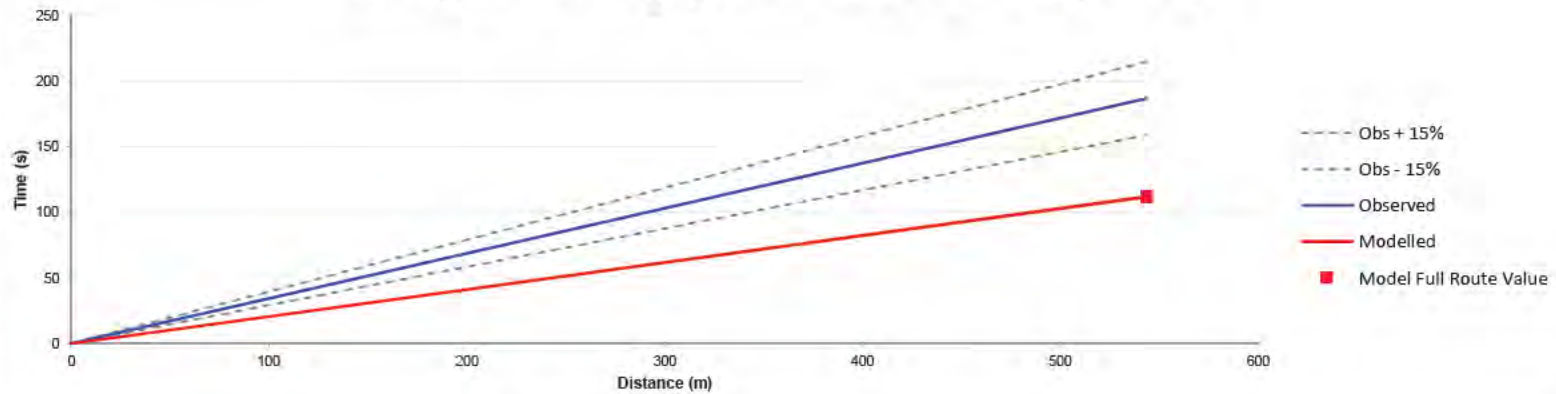




Journey Time Summary for 34 - Barrack Square - NB

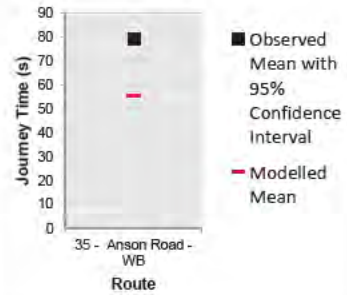


Journey Time Summary by Distance for 34 - Barrack Square - NB

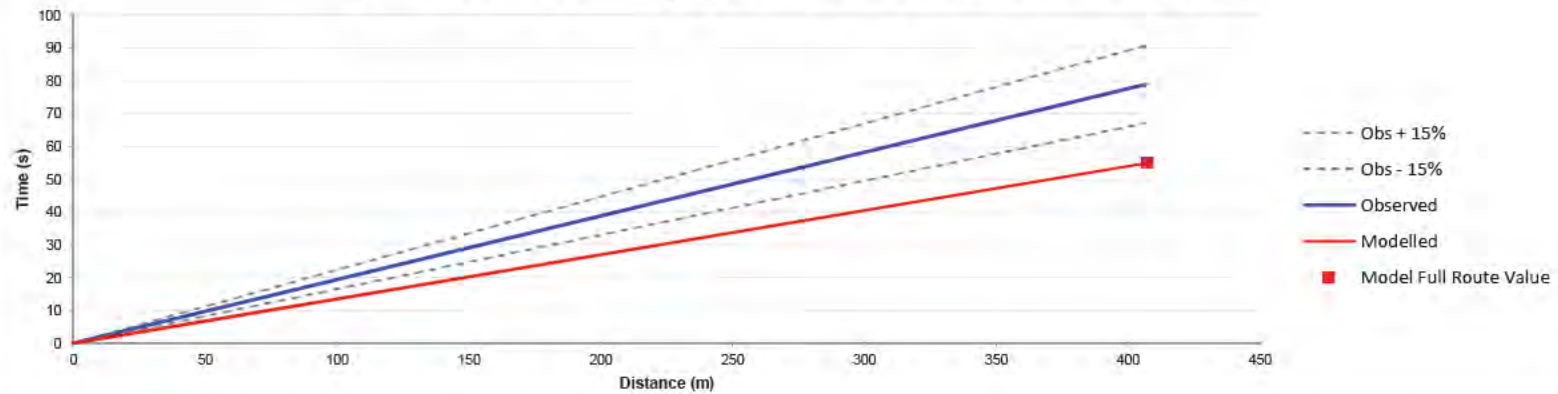




Journey Time Summary for 35 - Anson Road - WB

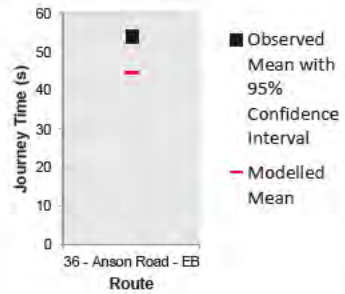


Journey Time Summary by Distance for 35 - Anson Road - WB

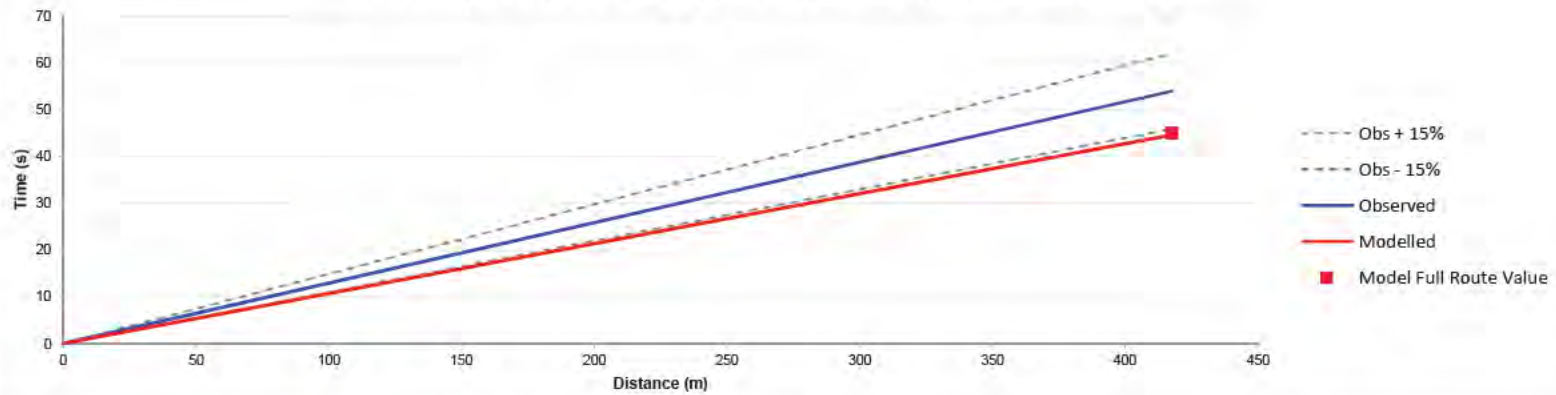




Journey Time Summary for 36 - Anson Road - EB

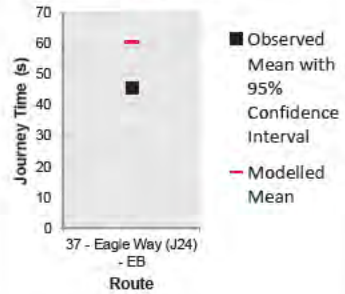


Journey Time Summary by Distance for 36 - Anson Road - EB

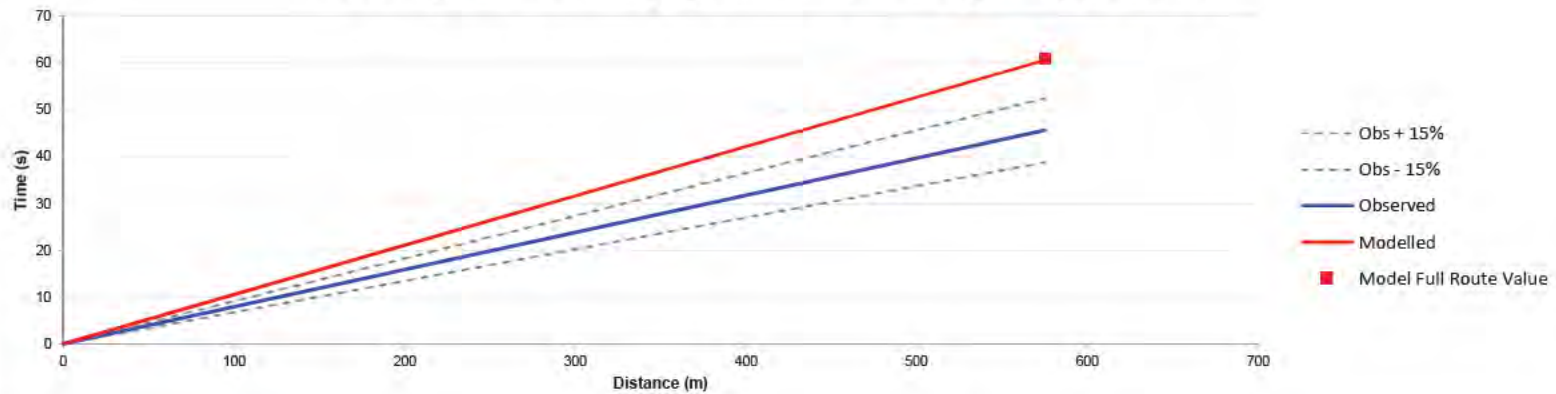




Journey Time Summary for 37 - Eagle Way (J24) - EB

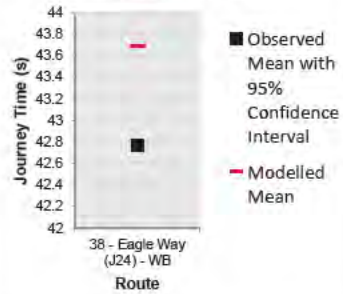


Journey Time Summary by Distance for 37 - Eagle Way (J24) - EB

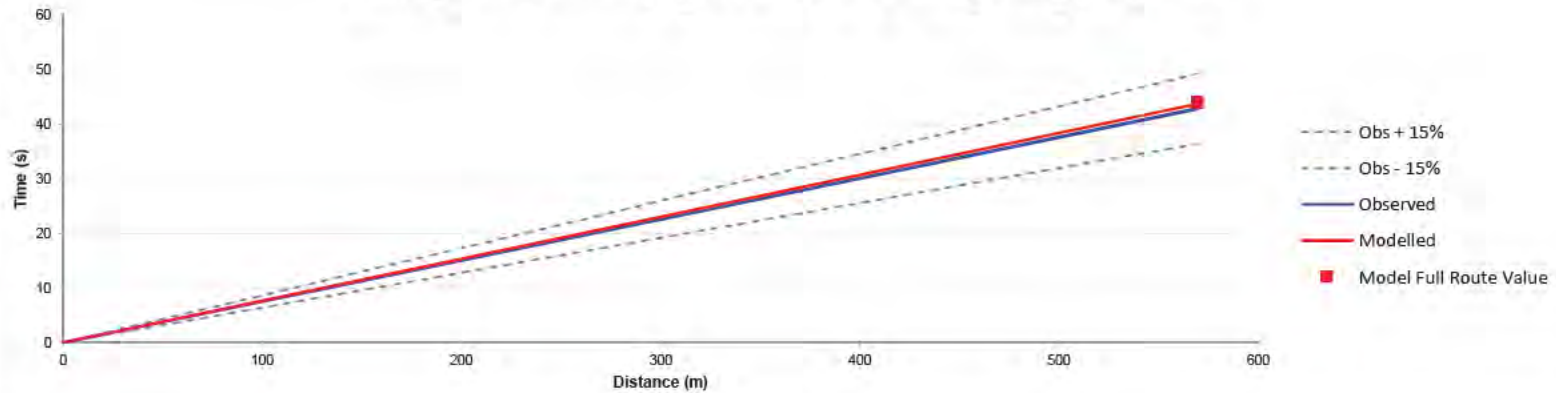




Journey Time Summary for 38 - Eagle Way (J24) - WB

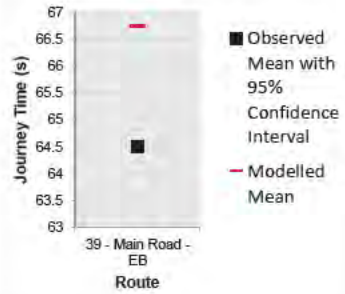


Journey Time Summary by Distance for 38 - Eagle Way (J24) - WB

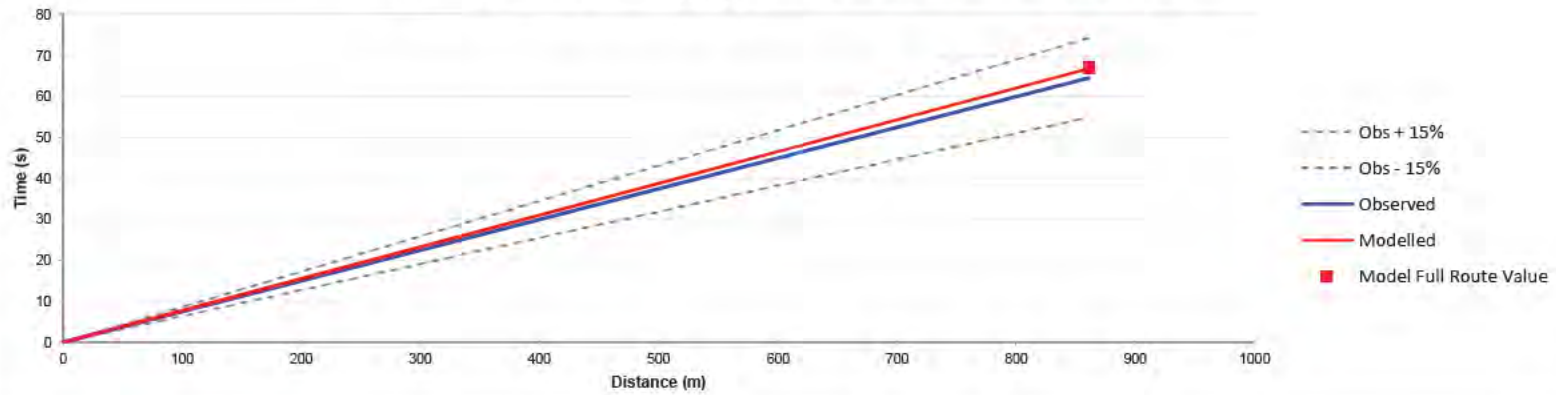




Journey Time Summary for 39 - Main Road - EB

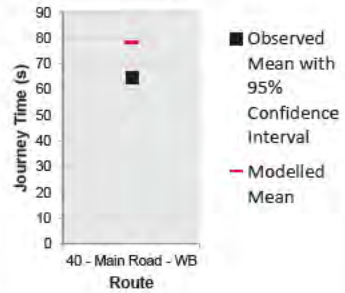


Journey Time Summary by Distance for 39 - Main Road - EB

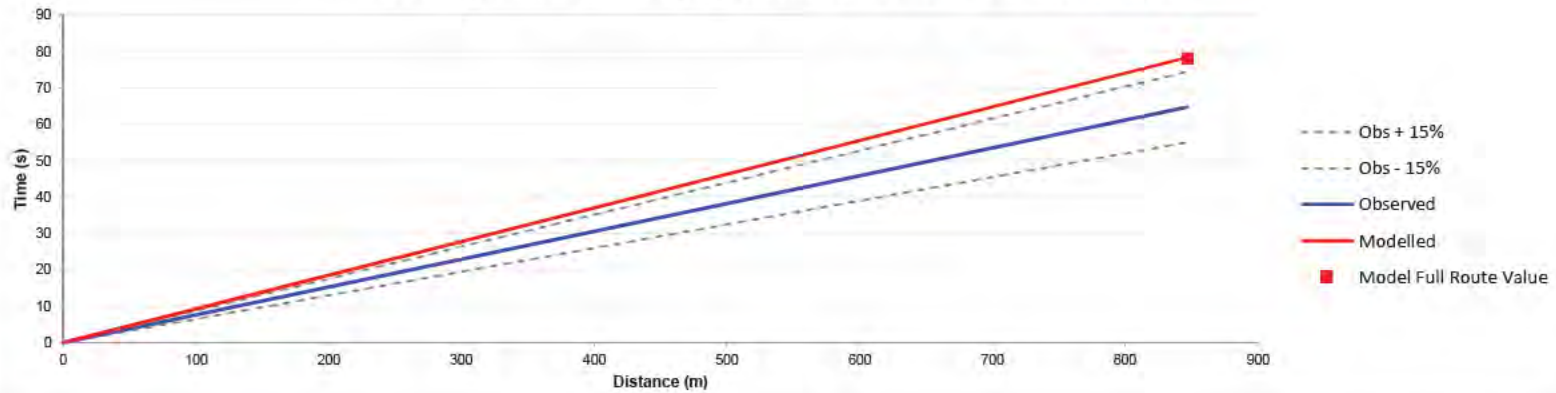




Journey Time Summary for 40 - Main Road - WB

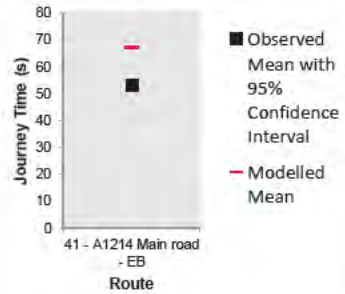


Journey Time Summary by Distance for 40 - Main Road - WB

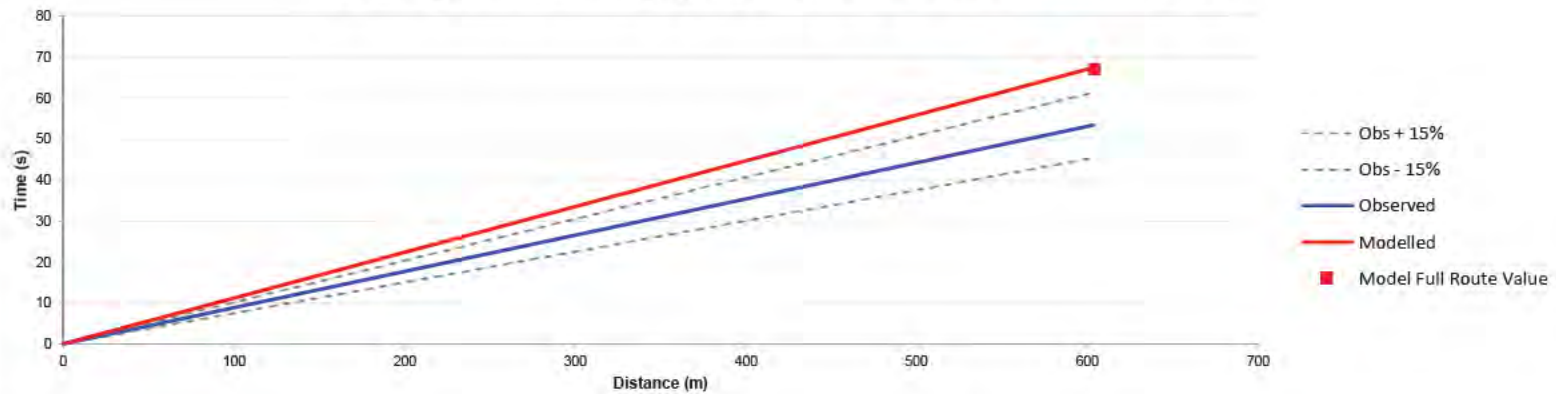




Journey Time Summary for 41 - A1214 Main road road - EB

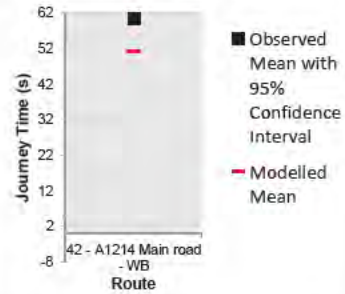


Journey Time Summary by Distance for 41 - A1214 Main road - EB

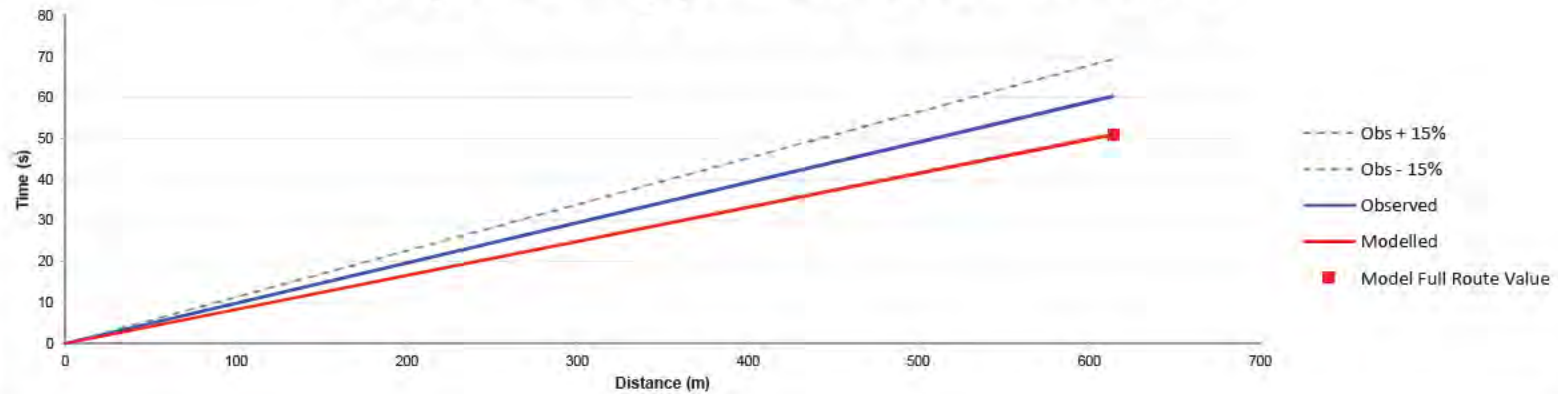




Journey Time Summary for 42 - A1214 Main road road - WB

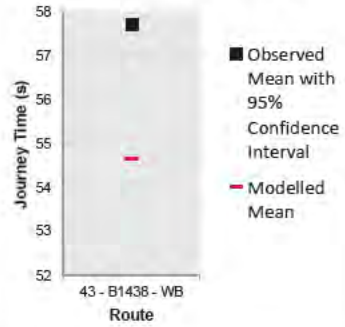


Journey Time Summary by Distance for 42 - A1214 Main road - WB

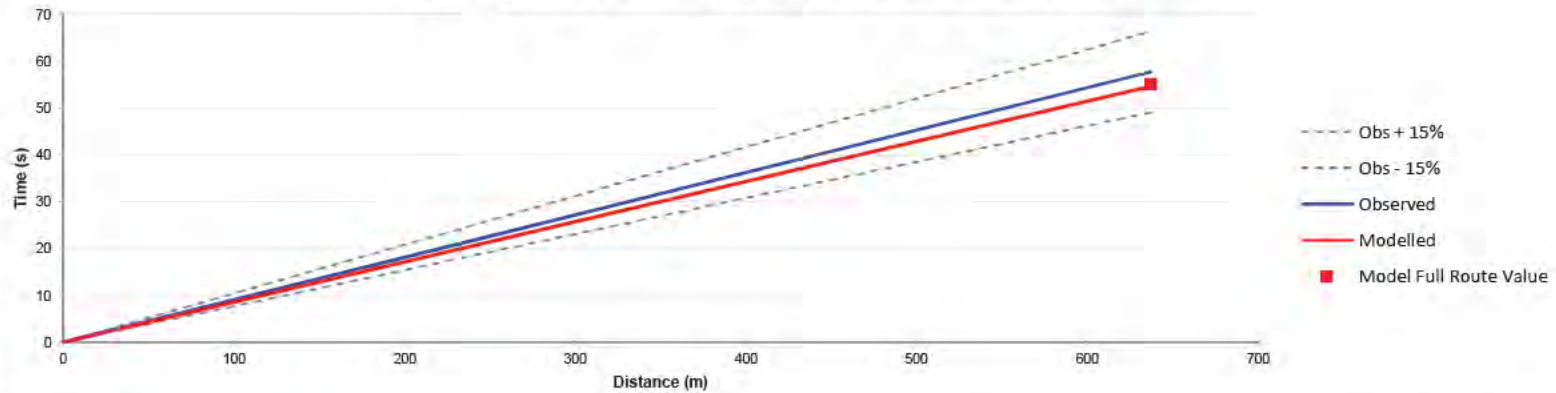




Journey Time Summary for 43 - B1438 - WB

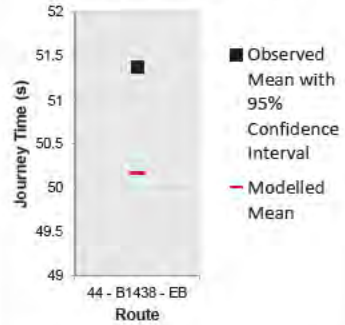


Journey Time Summary by Distance for 43 - B1438 - WB

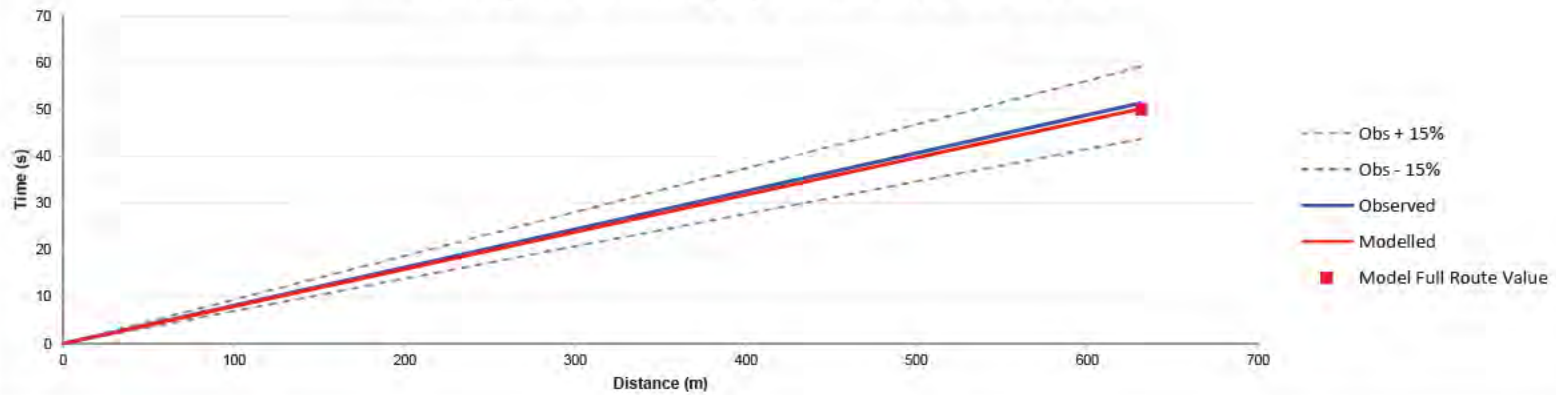




Journey Time Summary for 44 - B1438 - EB

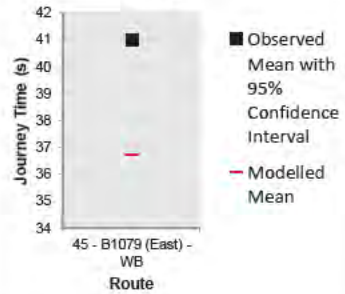


Journey Time Summary by Distance for 44 - B1438 - EB

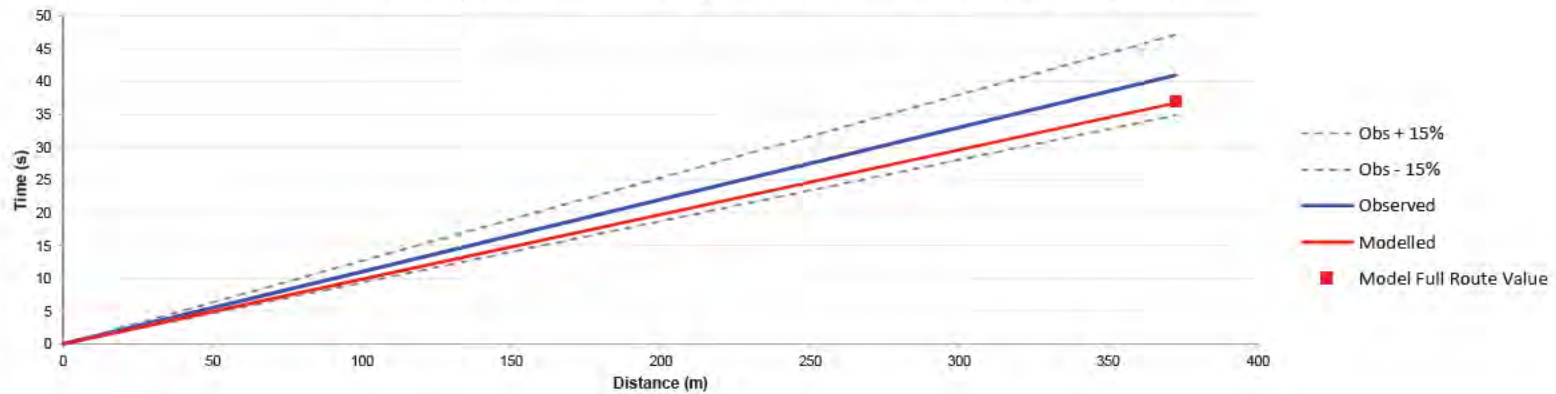




Journey Time Summary for 45 - B1079 (East) - WB

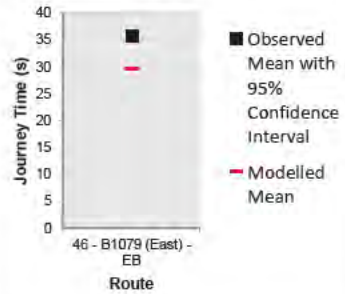


Journey Time Summary by Distance for 45 - B1079 (East) - WB

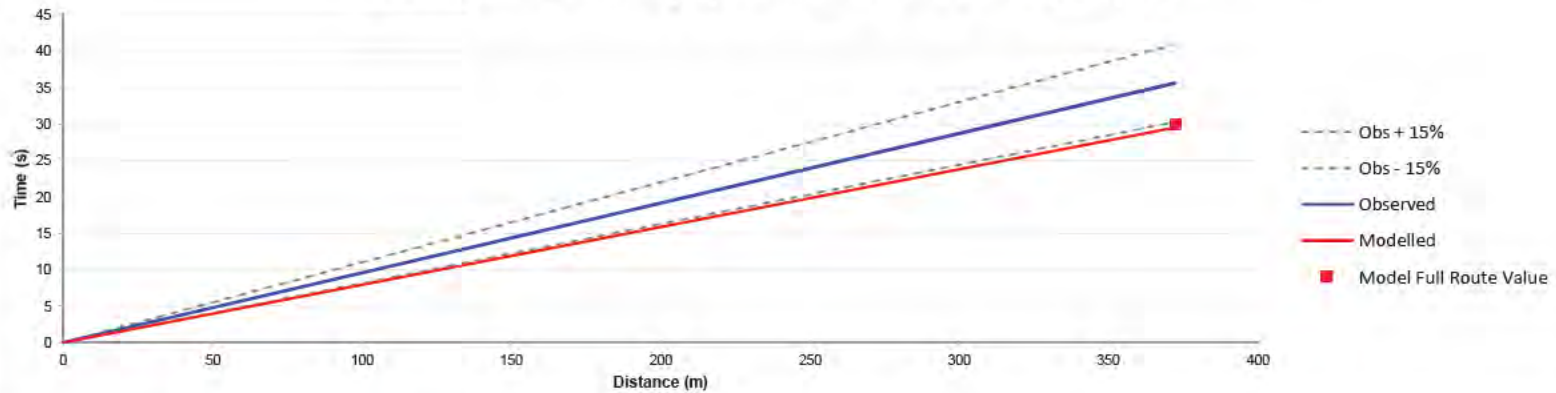




Journey Time Summary for 46 - B1079 (East) - EB

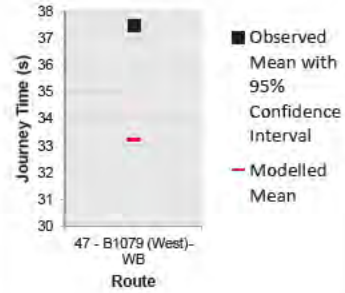


Journey Time Summary by Distance for 46 - B1079 (East) - EB

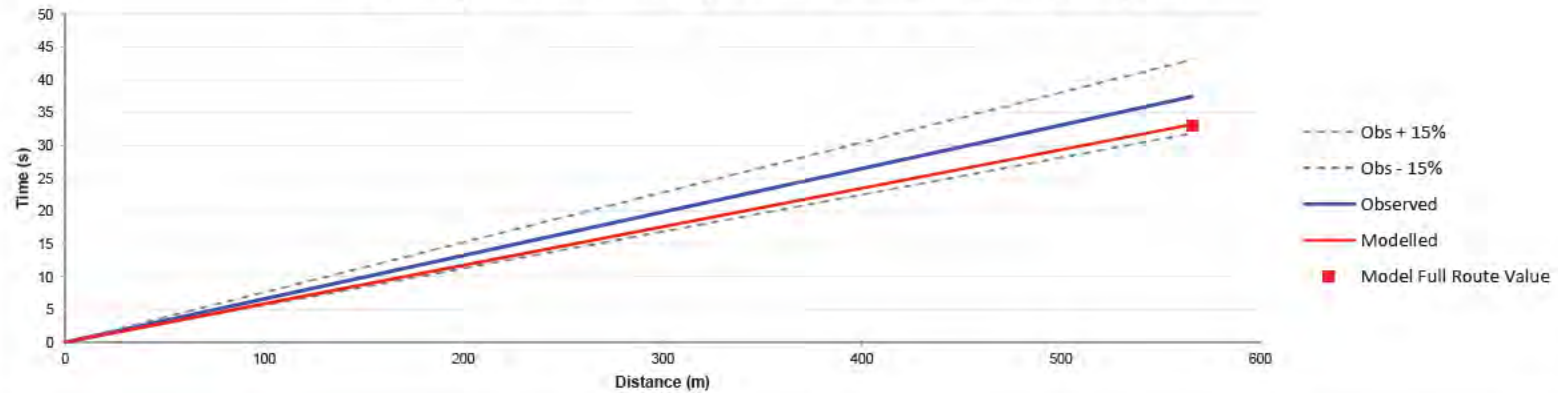




Journey Time Summary for 47 - B1079 (West)- WB

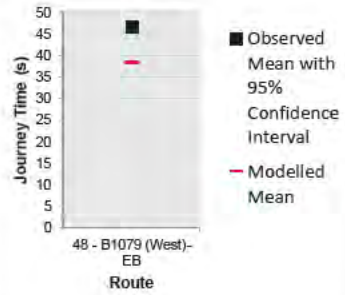


Journey Time Summary by Distance for 47 - B1079 (West)- WB

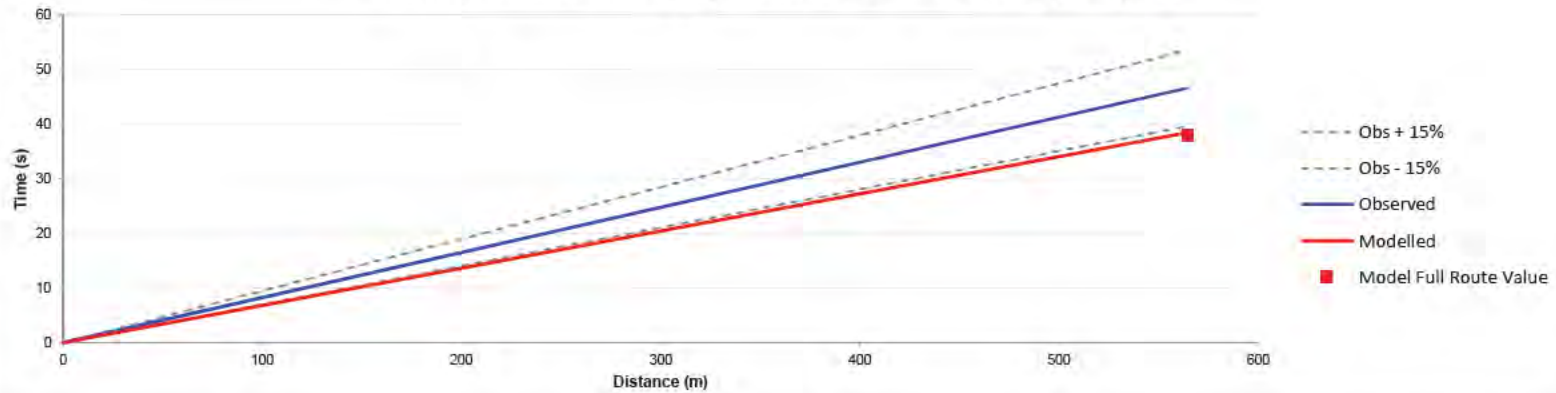




Journey Time Summary for 48 - B1079 (West)- EB

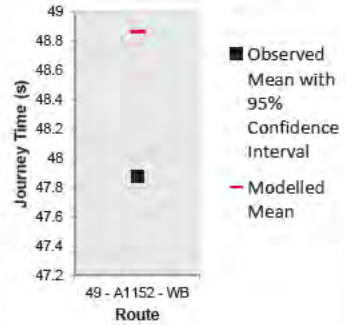


Journey Time Summary by Distance for 48 - B1079 (West)- EB

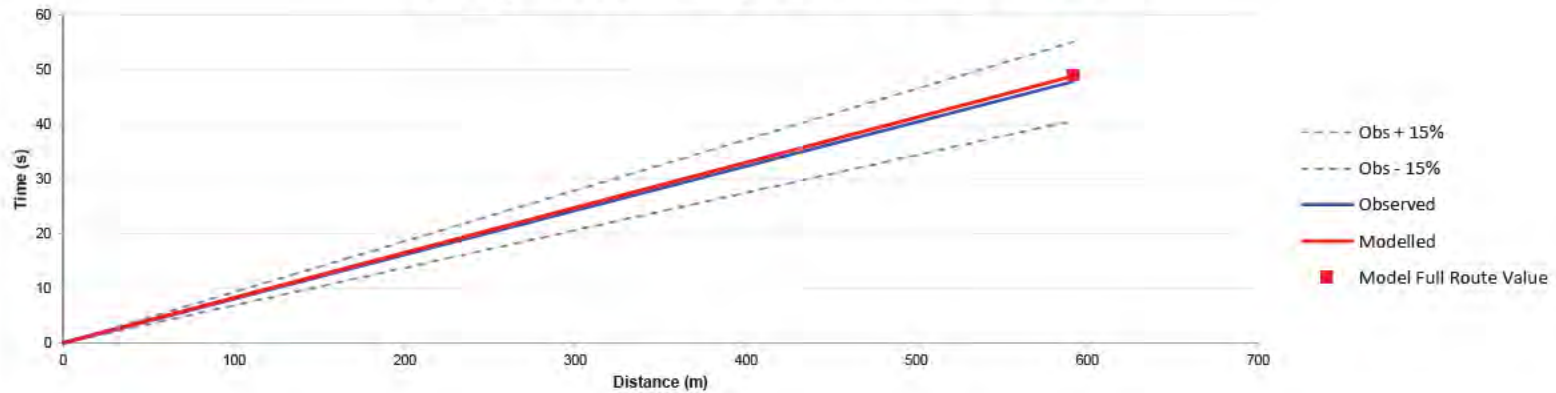




Journey Time Summary for 49 - A1152 - WB

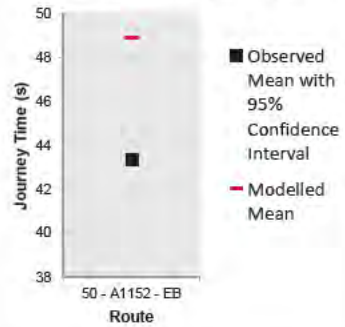


Journey Time Summary by Distance for 49 - A1152 - WB

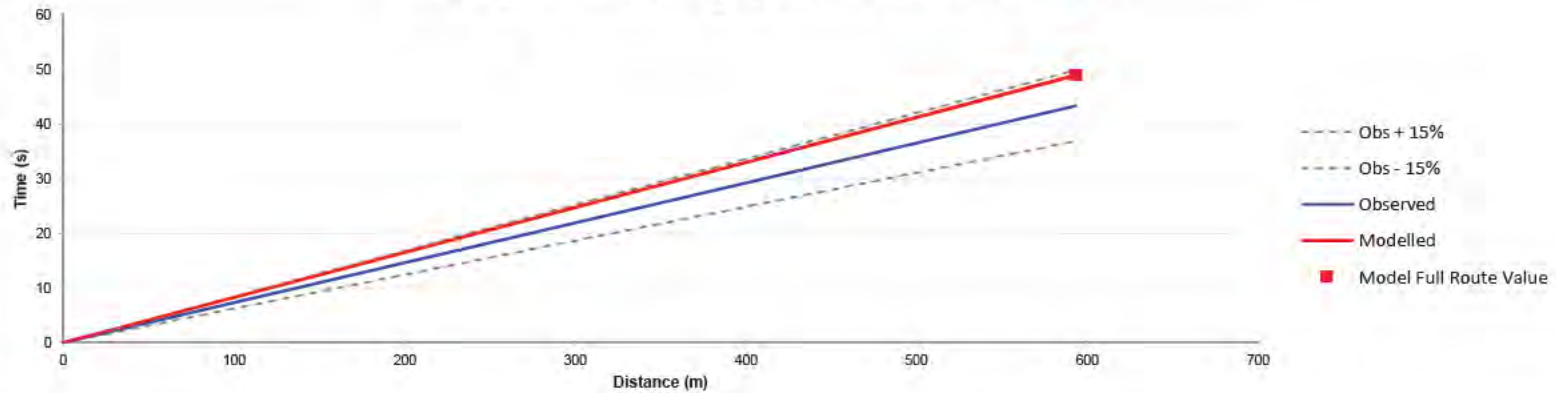




Journey Time Summary for 50 - A1152 - EB

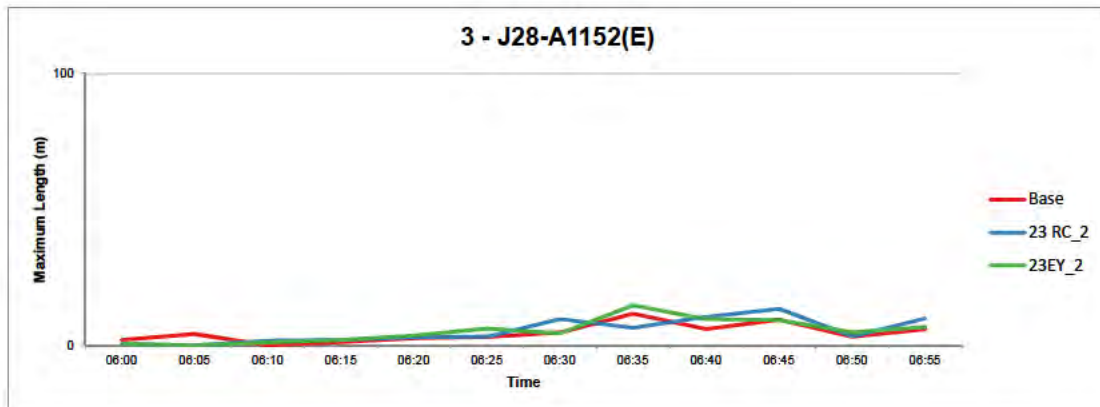
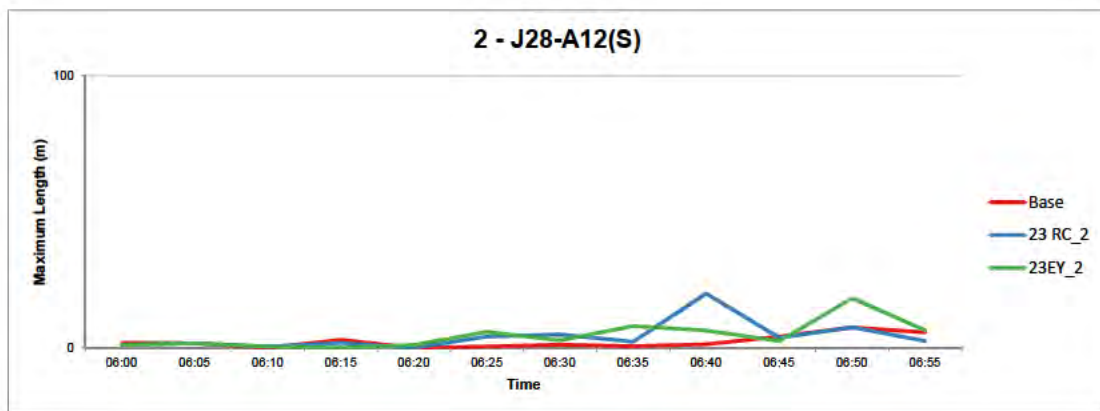
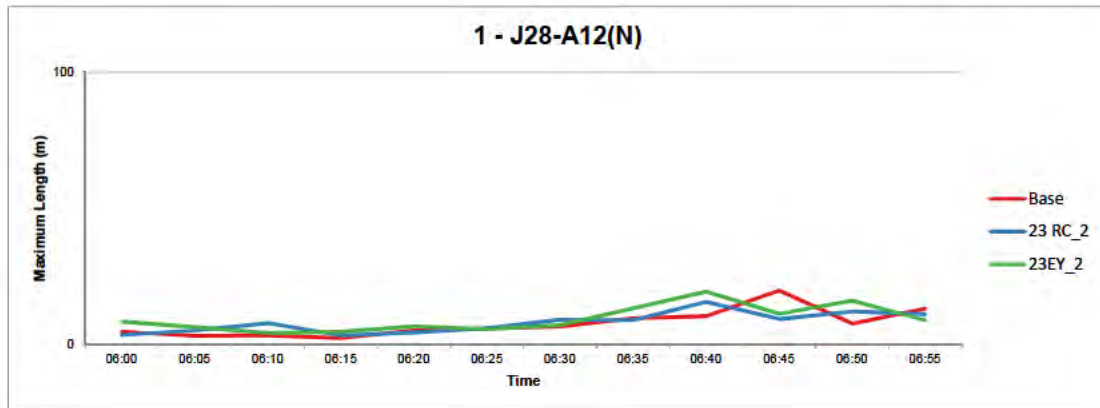


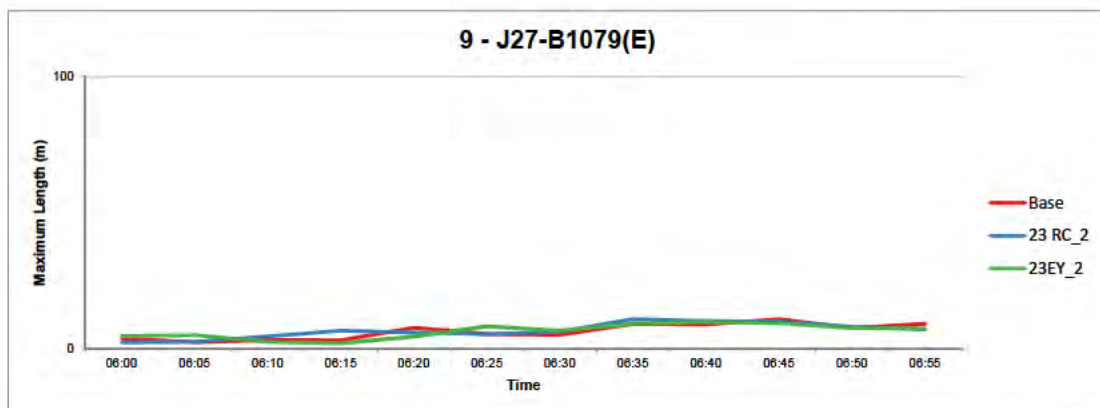
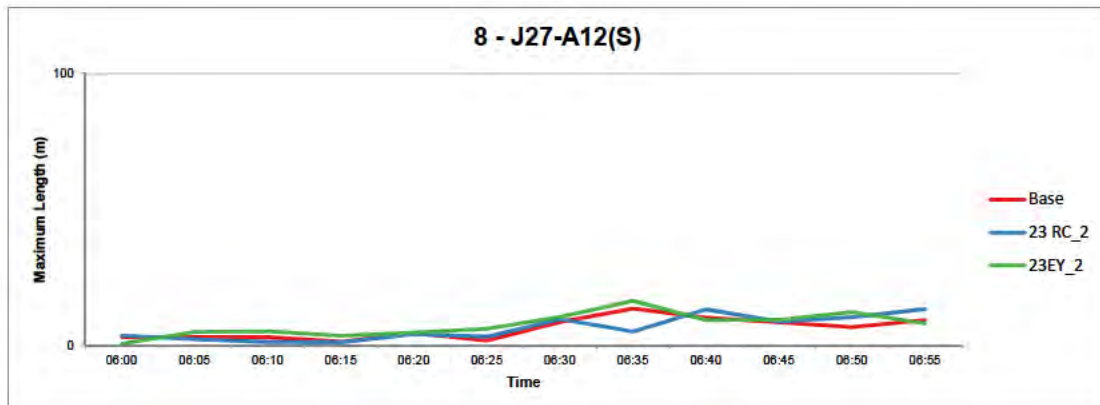
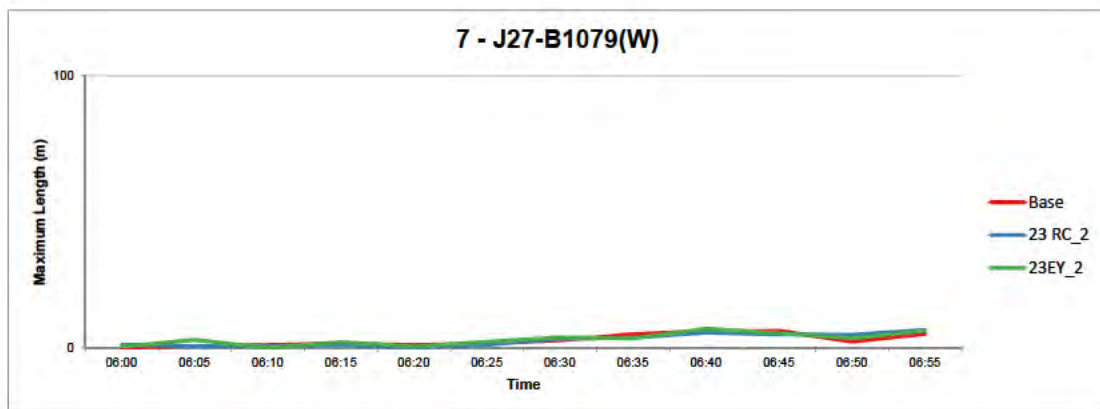
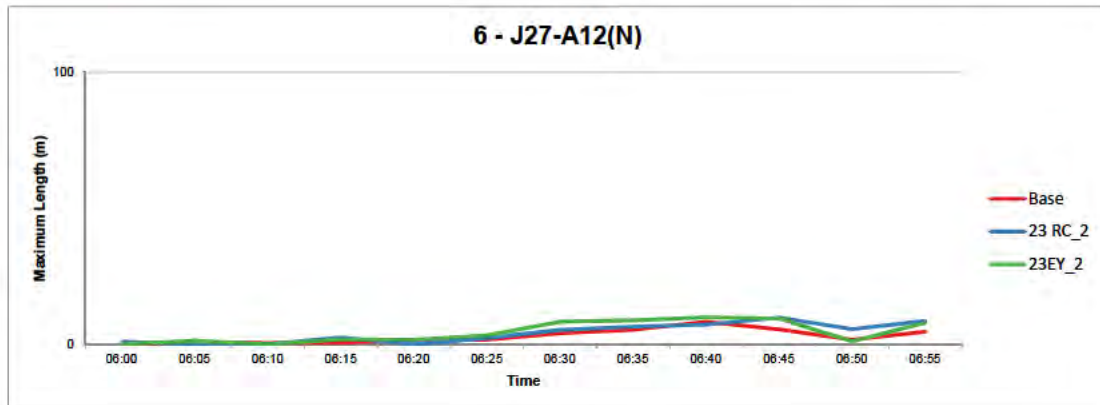
Journey Time Summary by Distance for 50 - A1152 - EB

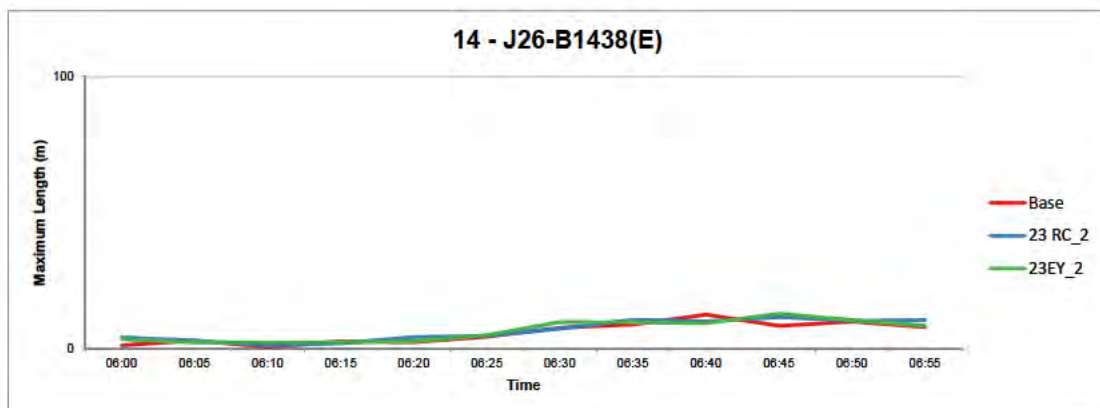
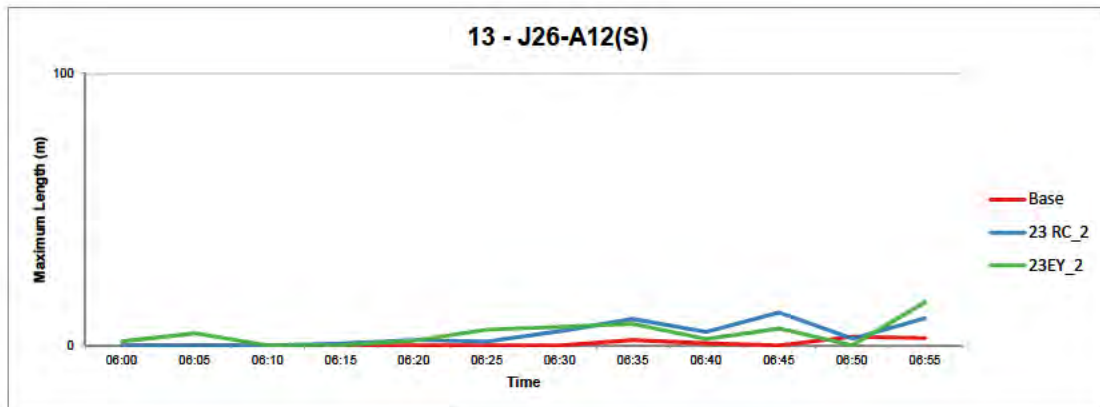
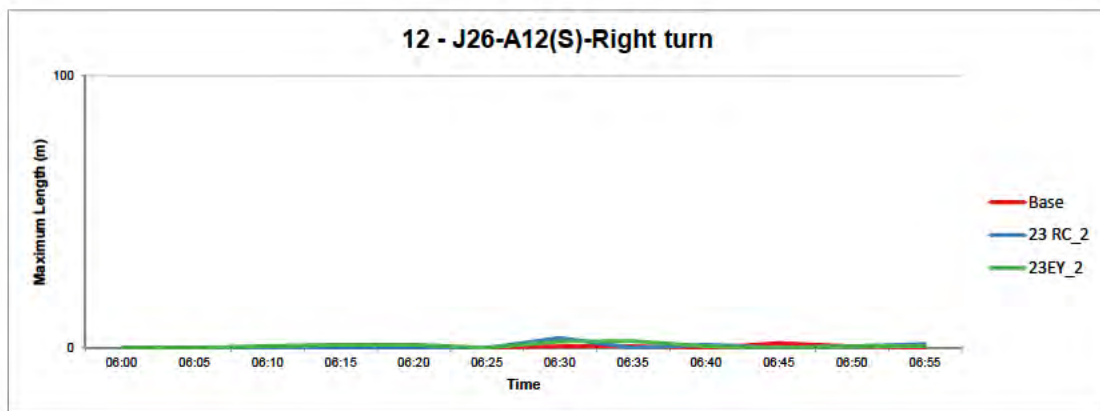
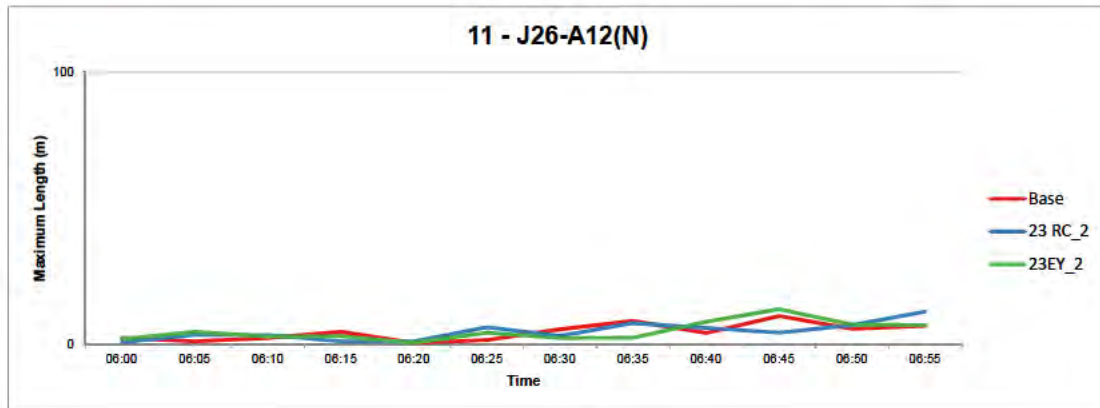


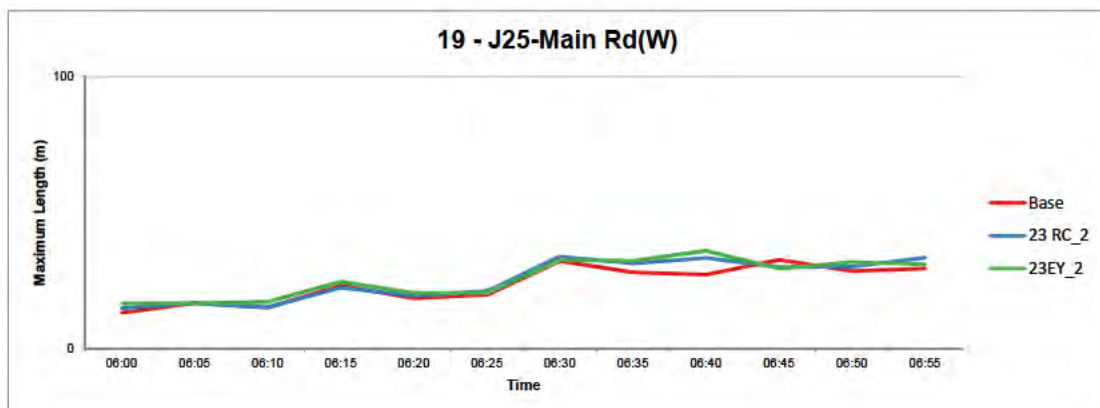
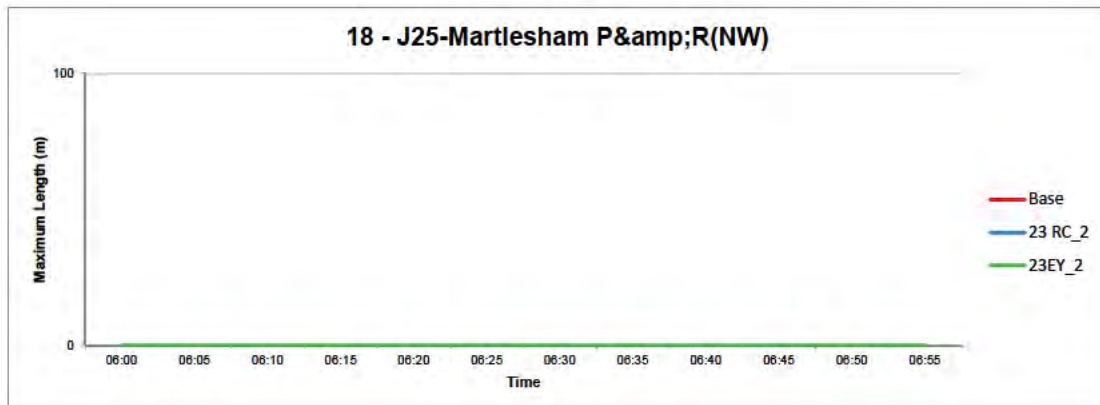
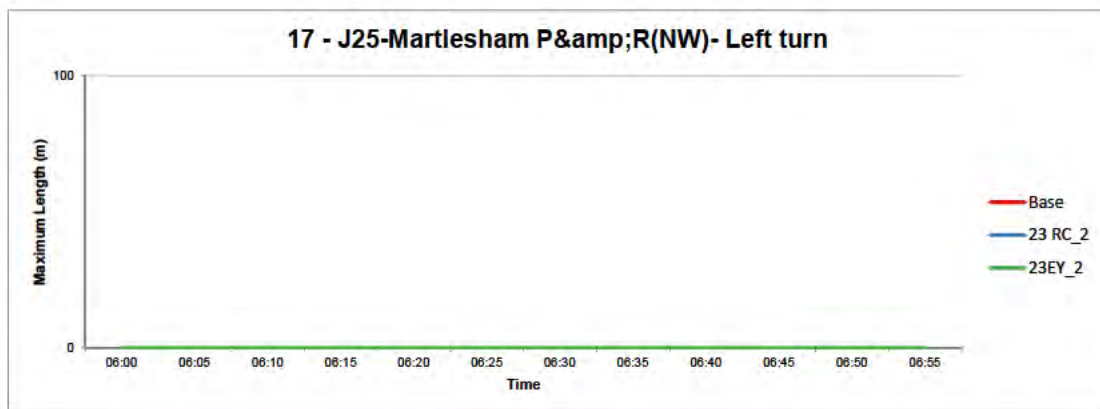
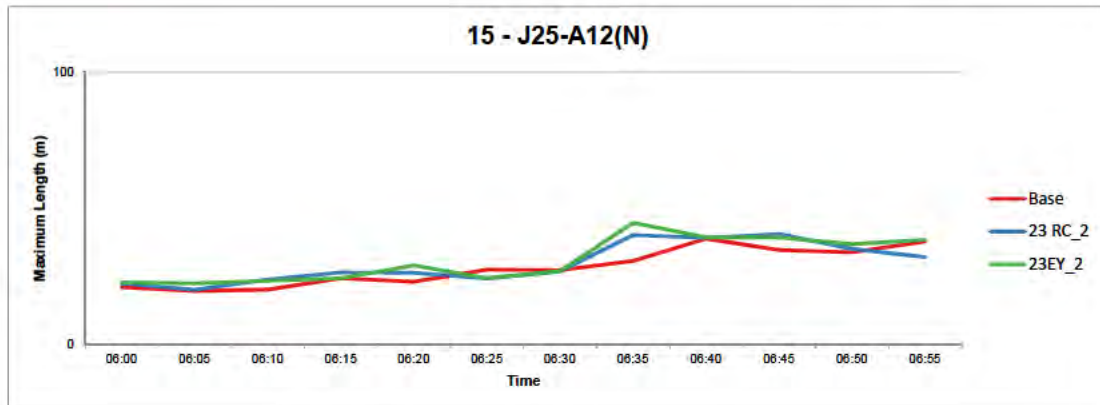
Appendix C

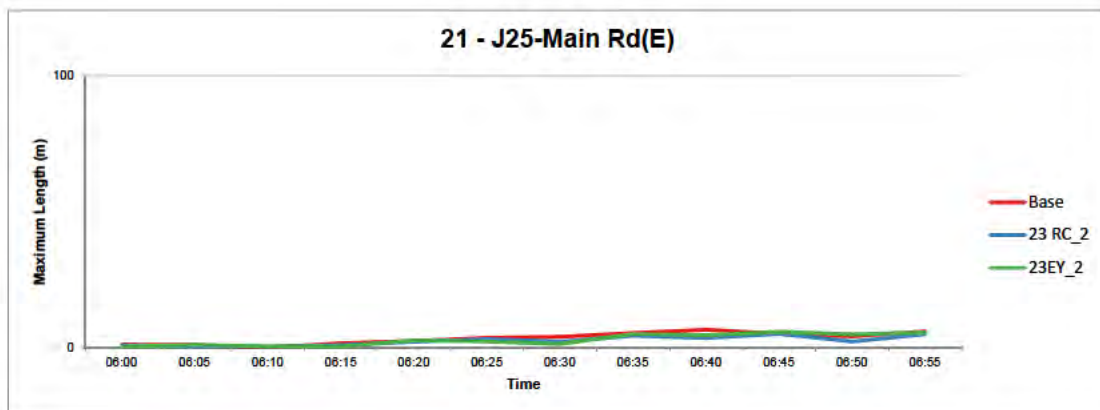
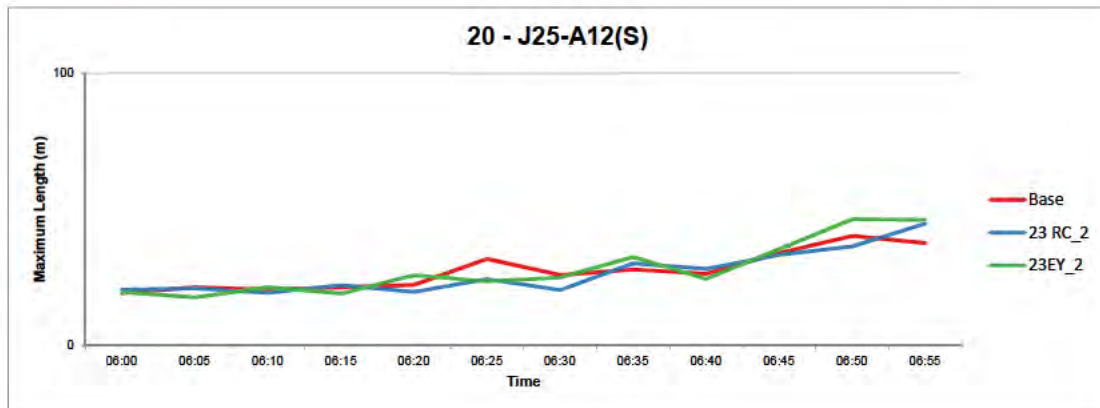
WSP
2023 FORECAST MODEL RESULTS

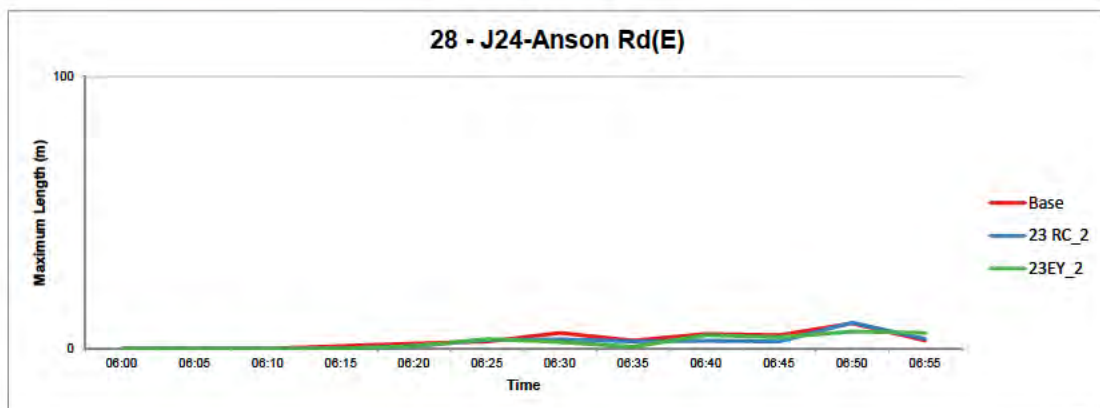
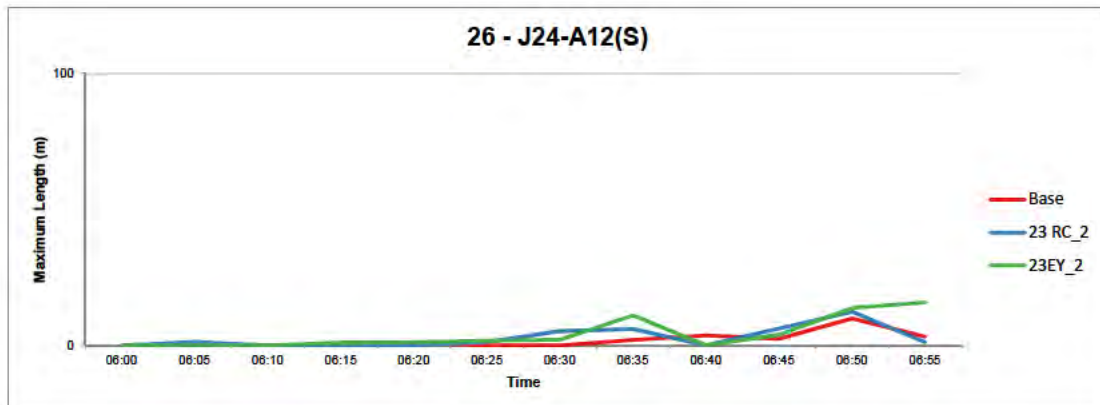
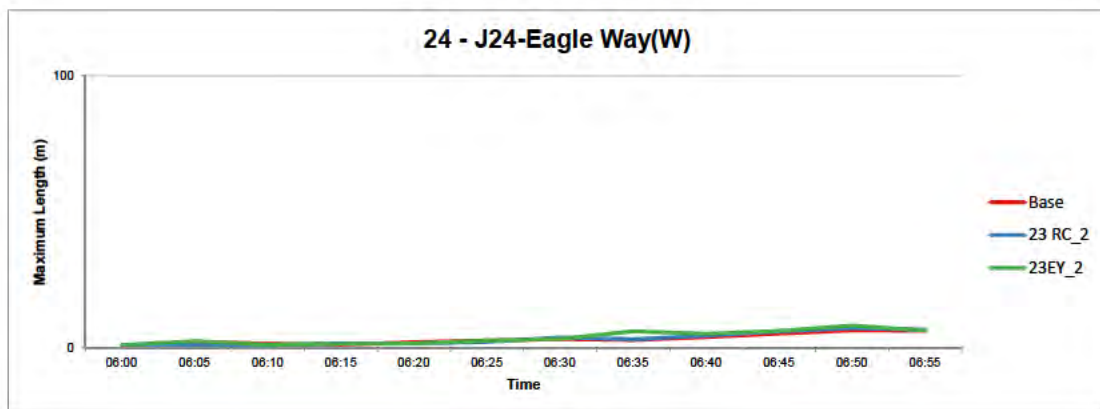
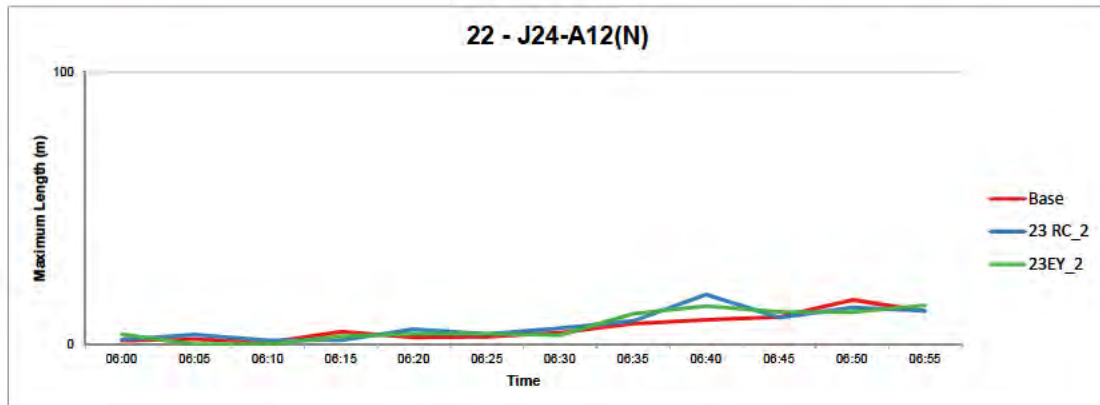


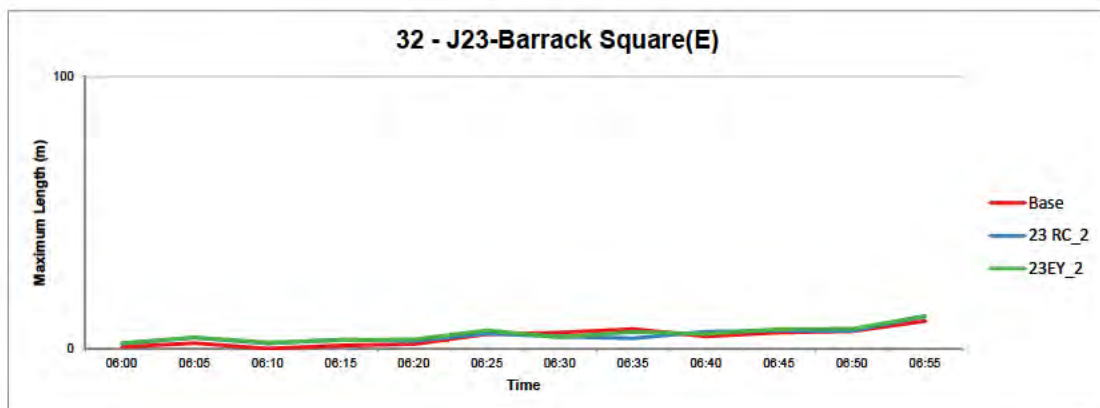
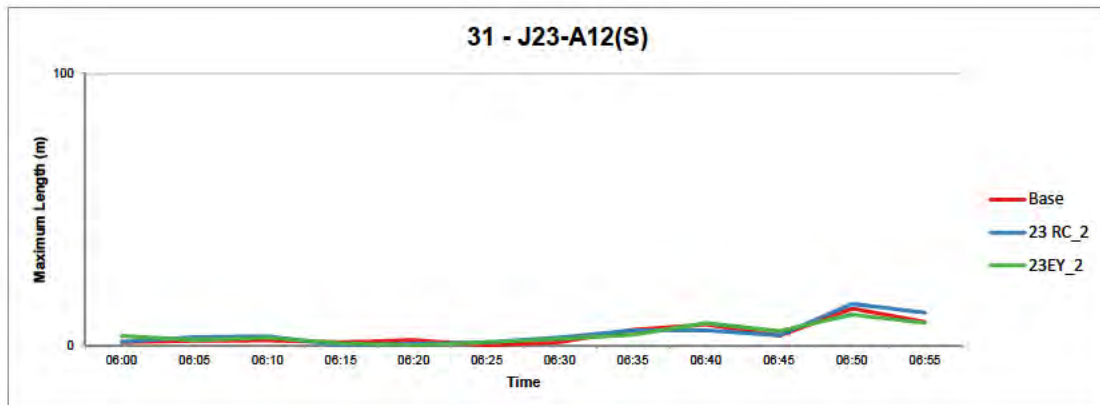
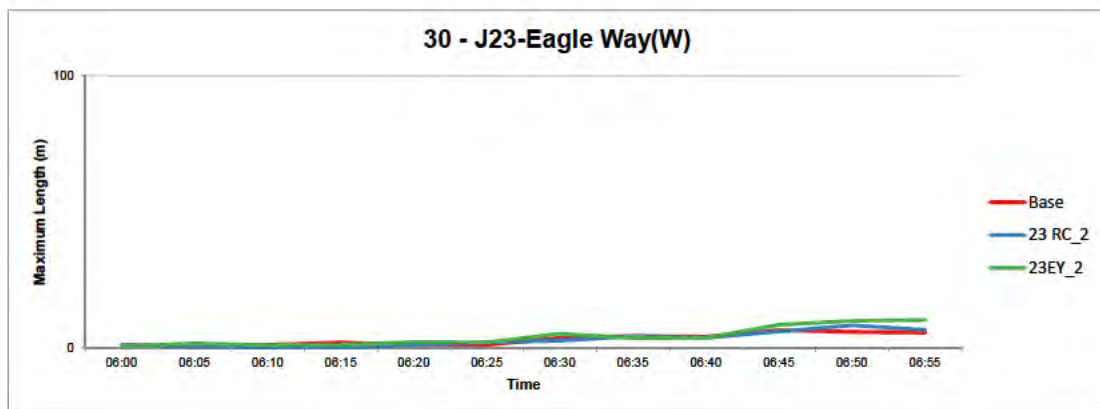
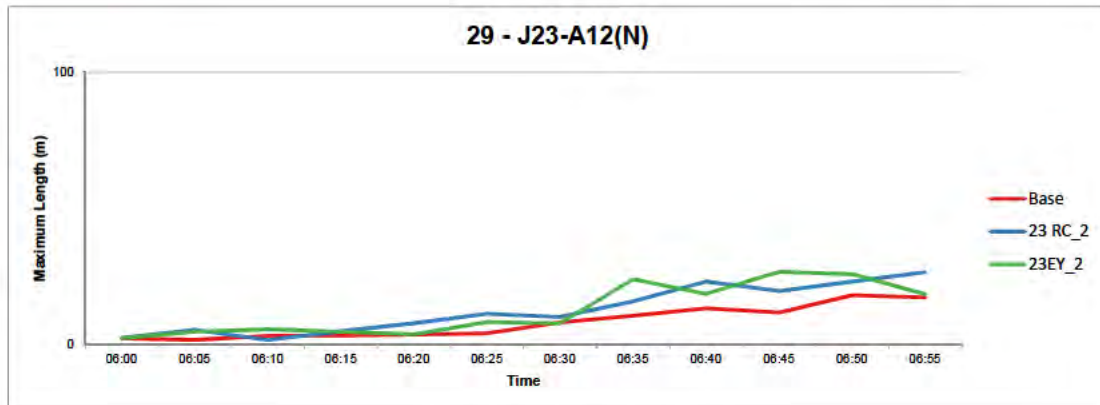


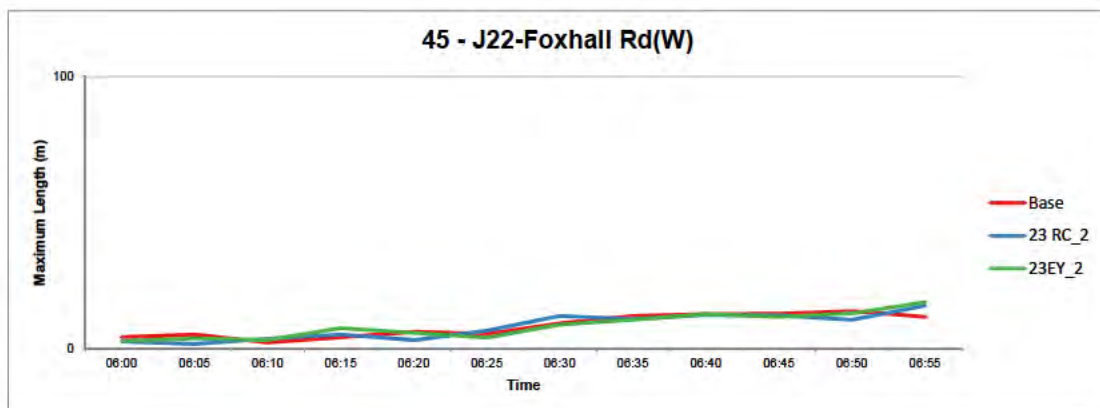
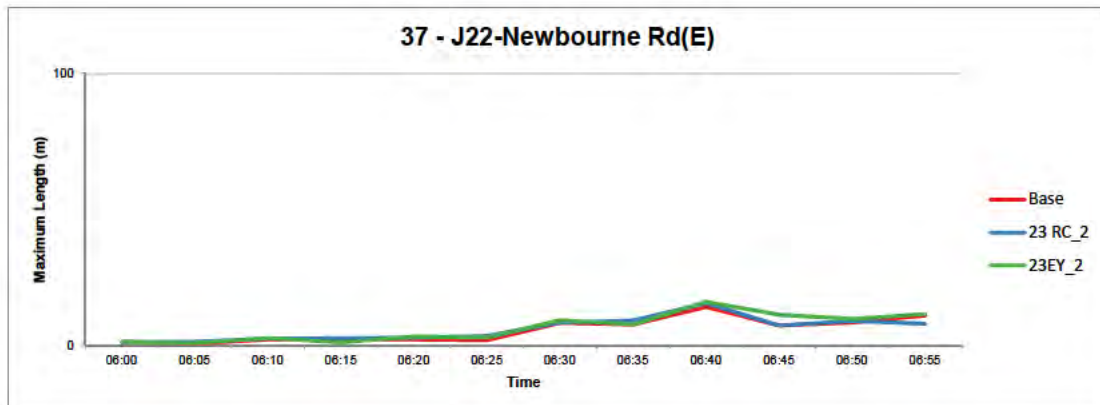
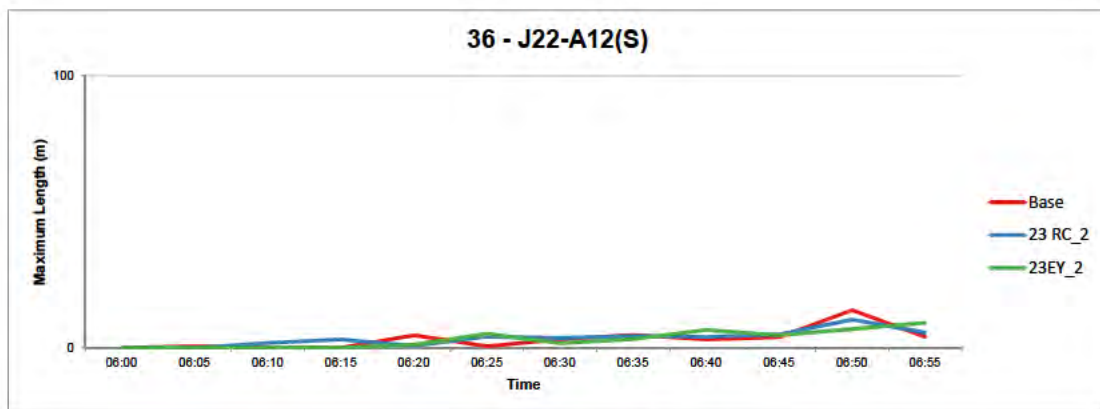
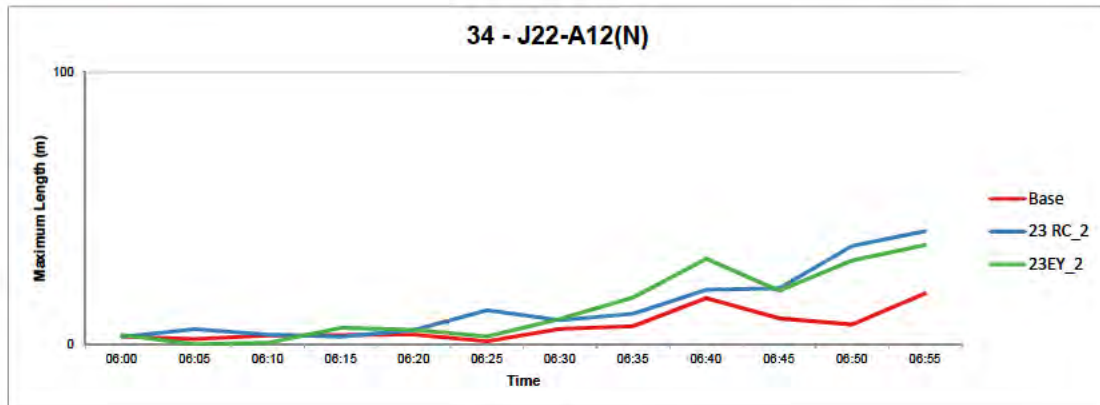


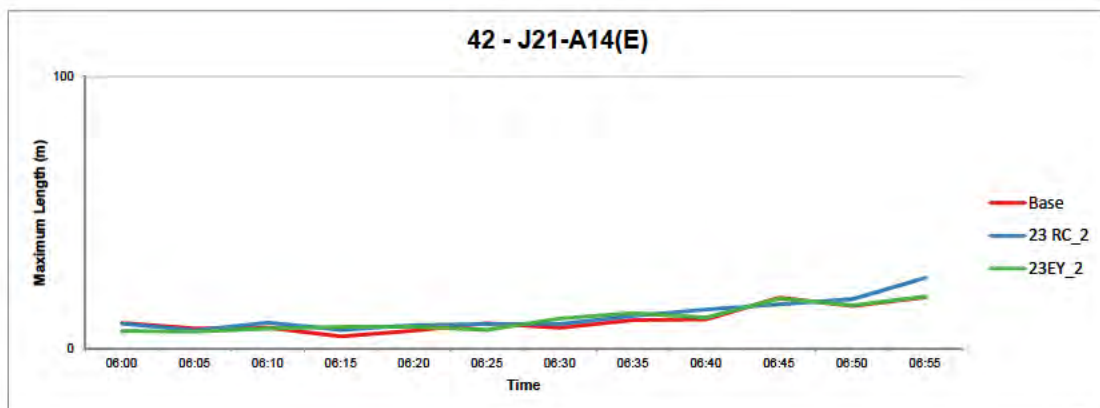
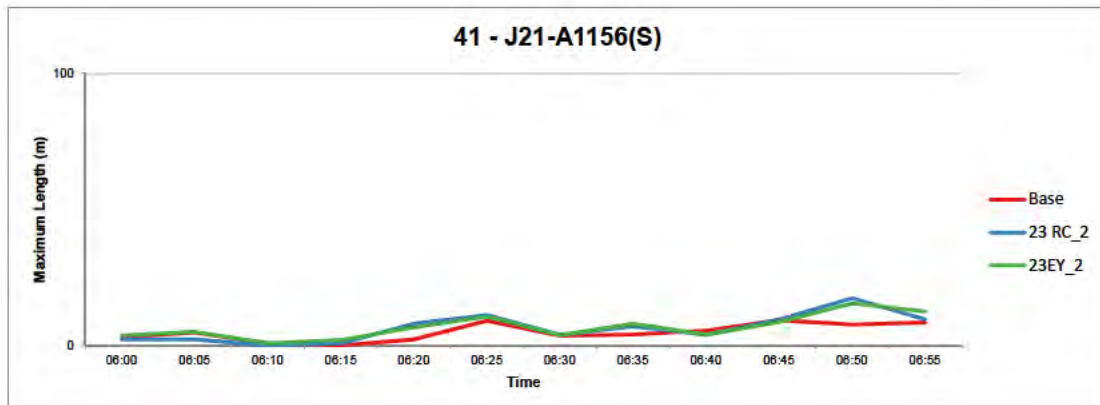
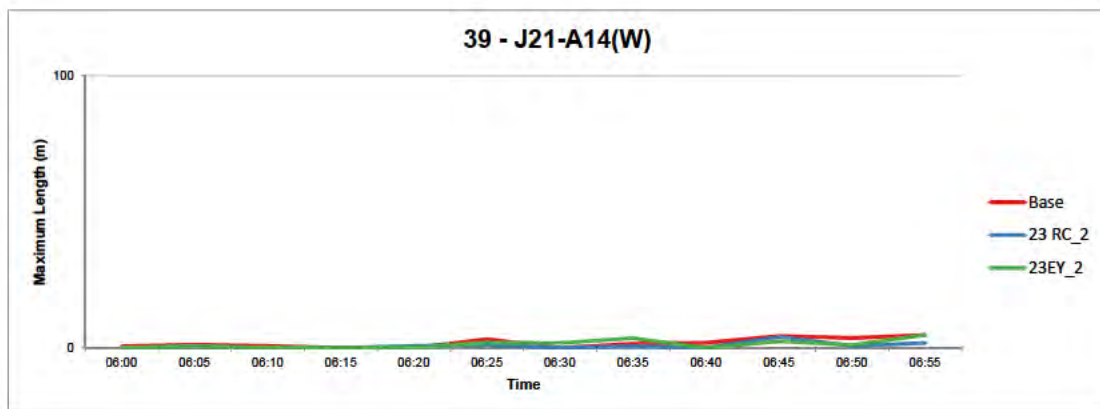
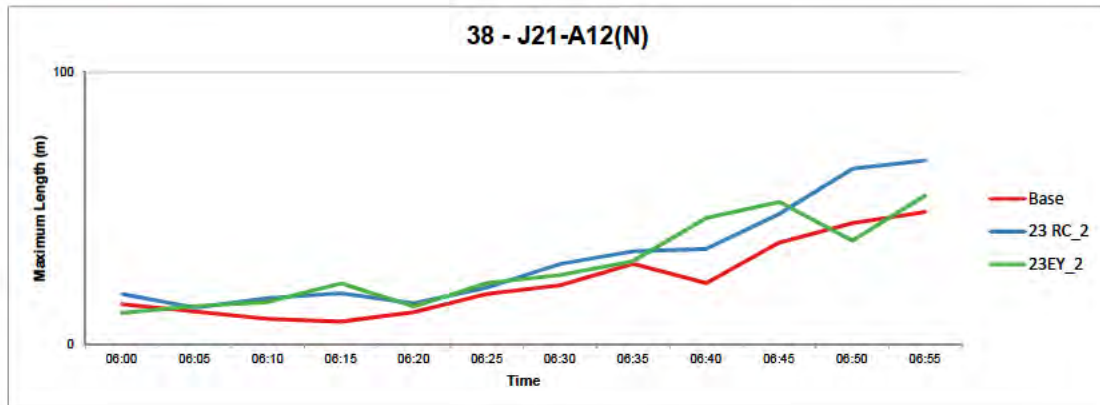






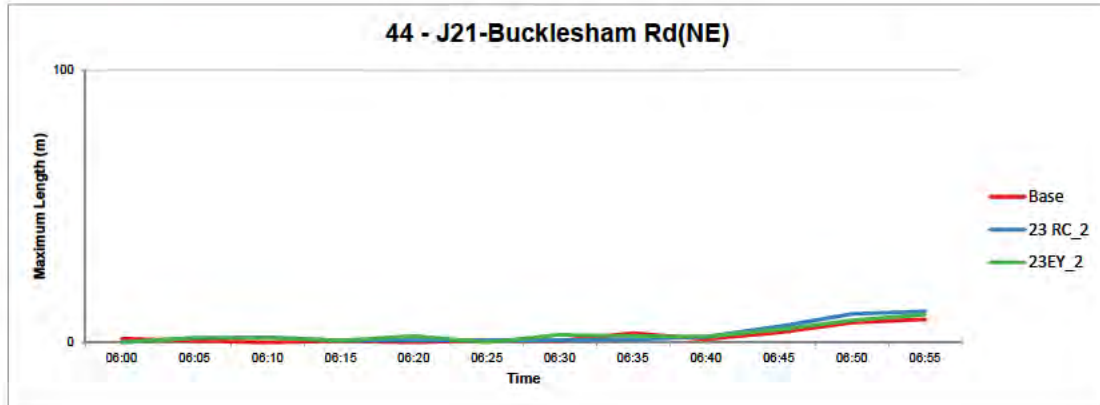








44 - J21-Bucklesham Rd(NE)





Queue Comparison
06:00-07:00
Maximum Length Summary
Maximum Length (m)

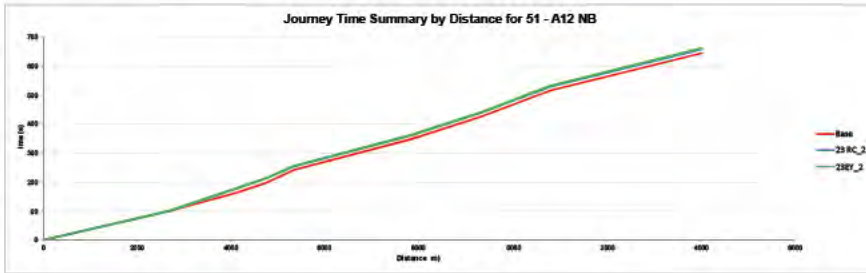
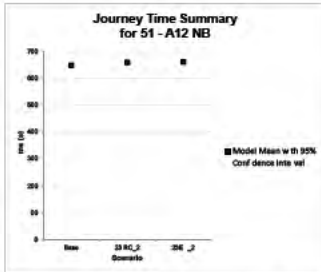
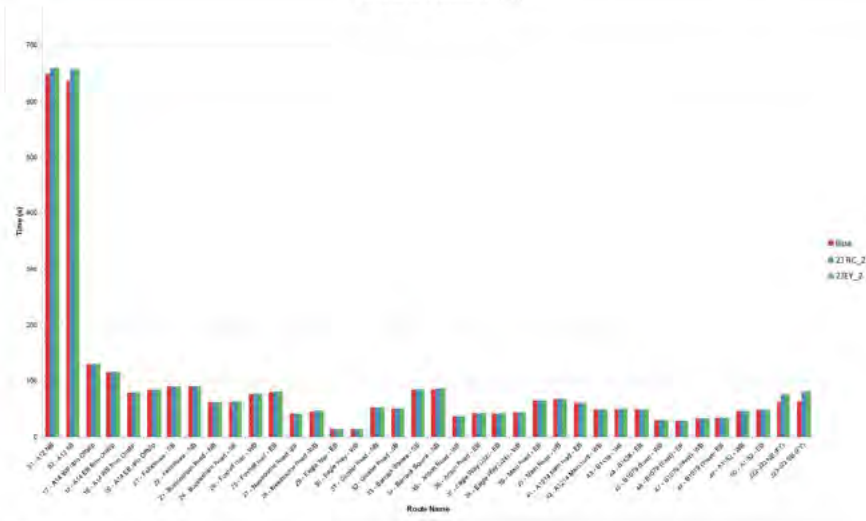
	Base	23 RC 2	23EY_2
1 - J28-A12(N)	19.8	15.5	19.4
2 - J28-A12(S)	7.5	20.0	18.3
3 - J28-A1152(E)	11.6	13.4	14.7
6 - J27-A12(N)	8.3	9.8	9.9
7 - J27-B1079(W)	6.2	6.6	7.0
8 - J27-A12(S)	13.5	13.3	16.4
9 - J27-B1079(E)	10.8	10.8	9.8
11 - J26-A12(N)	10.5	12.0	12.9
12 - J26-A12(S)-Right turn	1.7	3.6	2.5
13 - J26-A12(S)	3.1	12.0	15.9
14 - J26-B1438(E)	12.5	11.5	12.8
15 - J25-A12(N)	38.8	40.5	44.6
17 - J25-Martlesham P&R(N)	0.0	0.0	0.0
18 - J25-Martlesham P&R(N)	0.0	0.0	0.0
19 - J25-Main Rd(W)	32.6	33.8	35.9
20 - J25-A12(S)	40.3	44.7	46.4
21 - J25-Main Rd(E)	6.6	5.1	5.9
22 - J24-A12(N)	16.3	18.3	14.2
24 - J24-Eagle Way(W)	6.4	7.3	8.2
26 - J24-A12(S)	9.9	12.3	15.7
28 - J24-Anson Rd(E)	9.2	9.5	6.3
29 - J23-A12(N)	18.1	26.5	26.6
30 - J23-Eagle Way(W)	6.5	8.3	10.2
31 - J23-A12(S)	13.5	15.2	11.3
32 - J23-Barrack Square(E)	10.1	11.9	11.8
34 - J22-A12(N)	18.7	41.6	36.5
36 - J22-A12(S)	13.9	10.3	9.2
37 - J22-Newbourne Rd(E)	14.1	15.5	16.0
45 - J22-Foxhall Rd(W)	13.7	15.8	17.0
38 - J21-A12(N)	48.6	67.6	54.7
39 - J21-A14(W)	4.7	4.0	4.7
41 - J21-A1156(S)	9.2	17.3	15.4
42 - J21-A14(E)	18.8	25.9	19.1
44 - J21-Bucklesham Rd(NE)	8.5	11.4	10.2

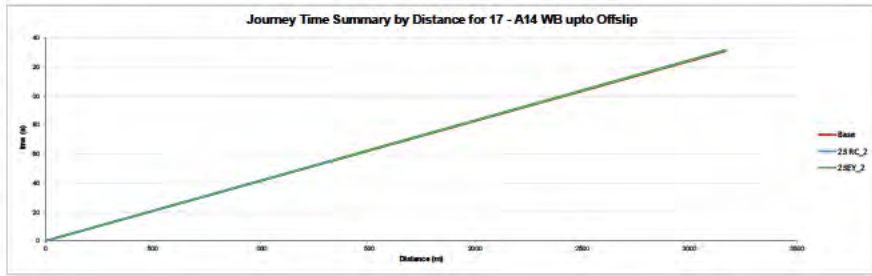
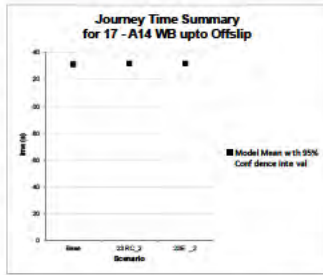
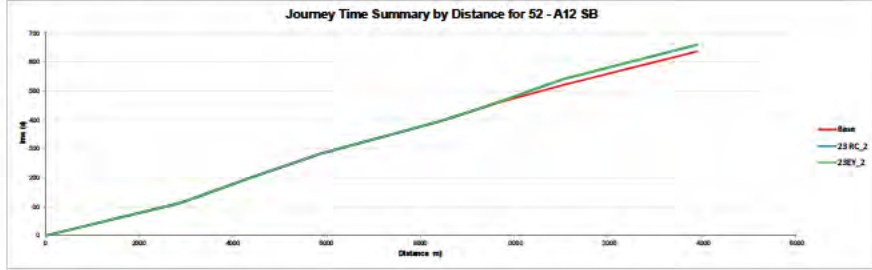
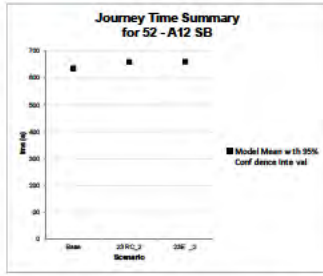


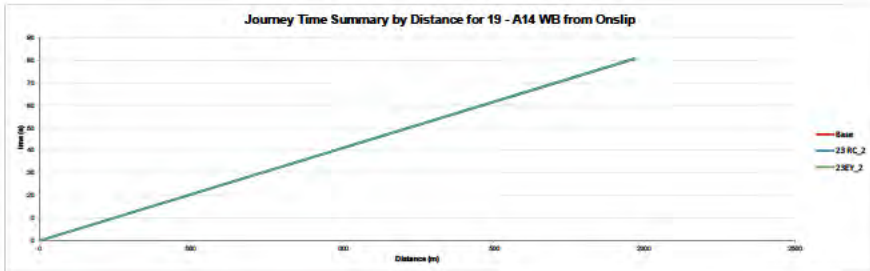
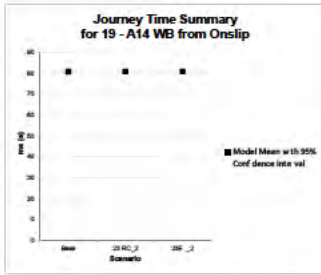
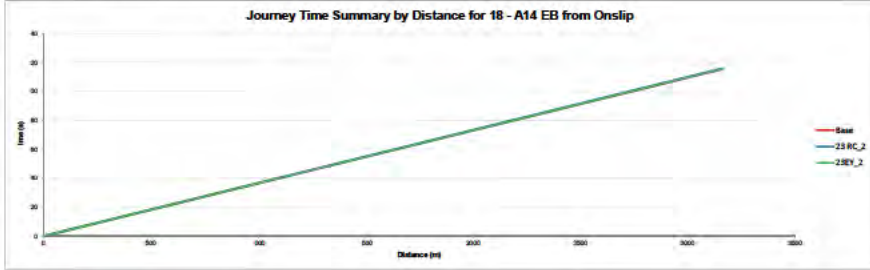
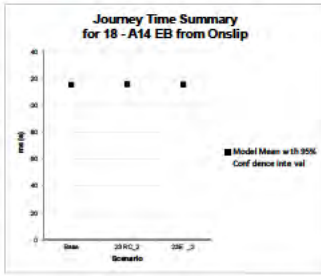
Queue Comparison
06:00-07:00
Average Length Summary
Maximum Length (m)

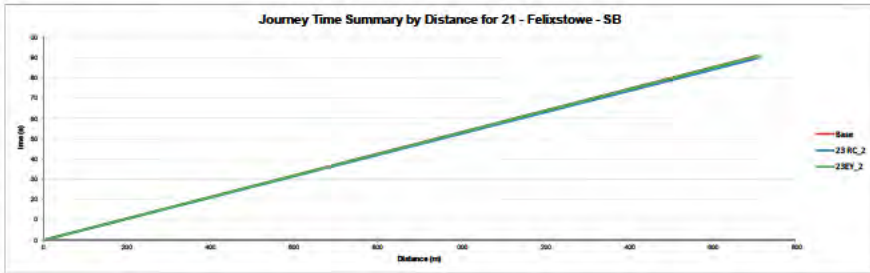
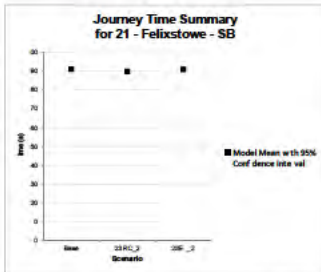
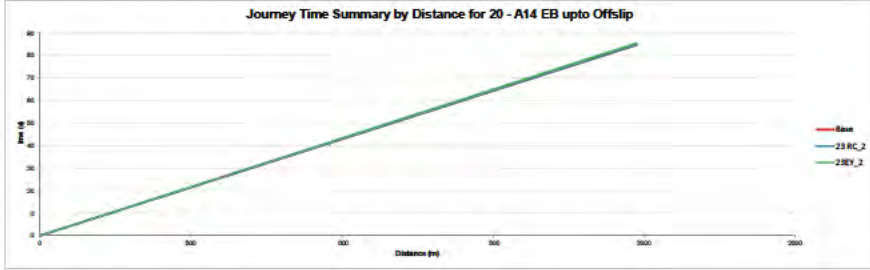
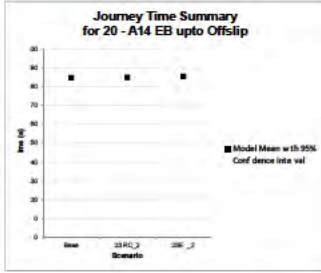
	Base	23 RC 2	23EY 2
1 - J28-A12(N)	7.6	8.0	9.3
2 - J28-A12(S)	2.3	4.2	4.6
3 - J28-A1152(E)	4.5	5.3	5.2
6 - J27-A12(N)	2.9	4.1	4.5
7 - J27-B1079(W)	2.8	2.8	3.1
8 - J27-A12(S)	6.1	6.3	7.5
9 - J27-B1079(E)	6.3	6.6	6.3
11 - J26-A12(N)	4.5	4.7	4.8
12 - J26-A12(S)-Right turn	0.3	0.6	0.8
13 - J26-A12(S)	0.7	4.0	4.4
14 - J26-B1438(E)	5.8	6.6	6.5
15 - J25-A12(N)	28.2	29.7	31.0
17 - J25-Martlesham P&R(N)	0.0	0.0	0.0
18 - J25-Martlesham P&R(N)	0.0	0.0	0.0
19 - J25-Main Rd(W)	23.7	25.1	25.7
20 - J25-A12(S)	27.3	26.6	28.0
21 - J25-Main Rd(E)	3.5	2.6	2.9
22 - J24-A12(N)	6.1	7.2	6.8
24 - J24-Eagle Way(W)	3.2	3.3	3.8
26 - J24-A12(S)	1.8	2.8	4.2
28 - J24-Anson Rd(E)	3.0	2.4	2.4
29 - J23-A12(N)	8.1	12.6	12.5
30 - J23-Eagle Way(W)	3.1	3.0	4.1
31 - J23-A12(S)	4.0	4.5	4.1
32 - J23-Barrack Square(E)	4.2	4.9	5.3
34 - J22-A12(N)	6.8	14.3	13.6
36 - J22-A12(S)	3.2	3.6	3.2
37 - J22-Newbourne Rd(E)	5.6	5.9	6.4
45 - J22-Foxhall Rd(W)	8.3	8.0	8.4
38 - J21-A12(N)	23.3	31.9	29.0
39 - J21-A14(W)	1.8	0.8	1.3
41 - J21-A1156(S)	4.8	6.3	6.7
42 - J21-A14(E)	10.6	12.1	11.0
44 - J21-Bucklesham Rd(NE)	2.3	3.1	3.0

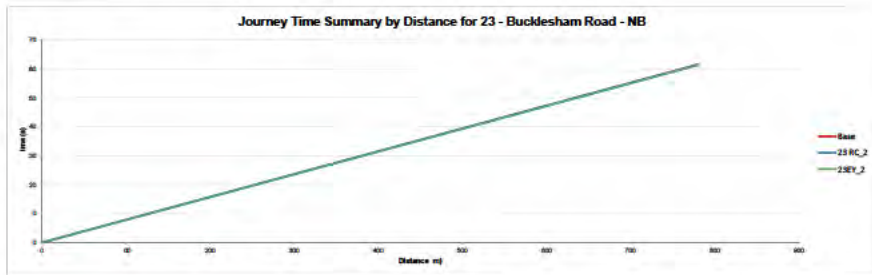
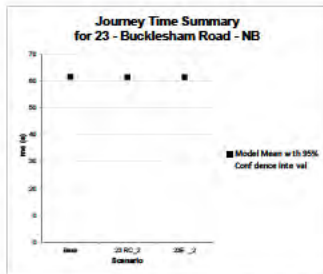
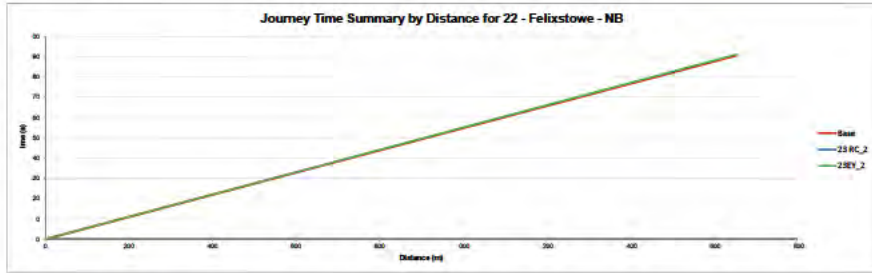
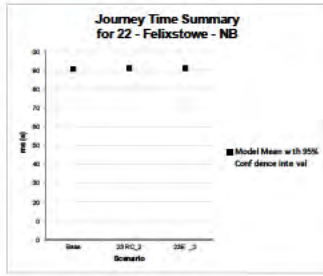
Full Routes Summary (AM)

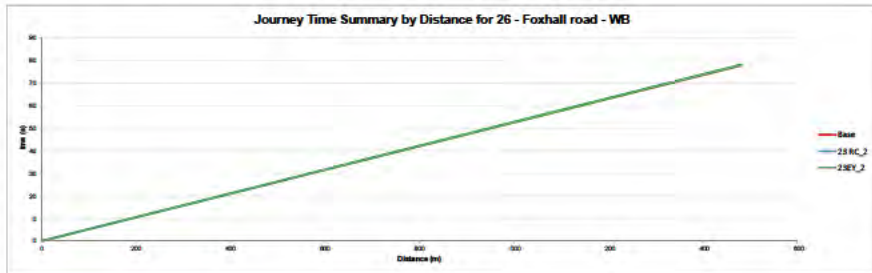
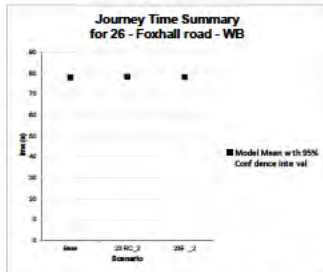
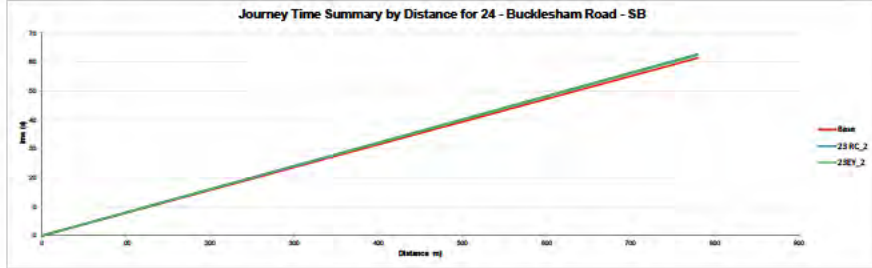
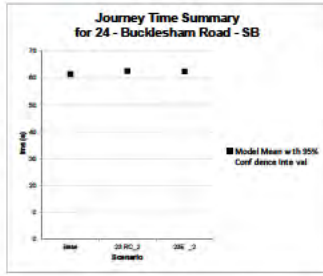


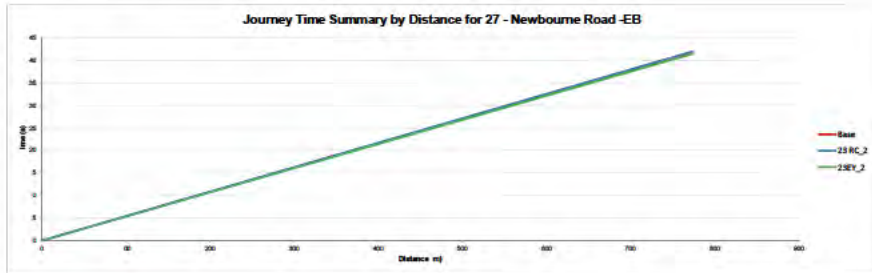
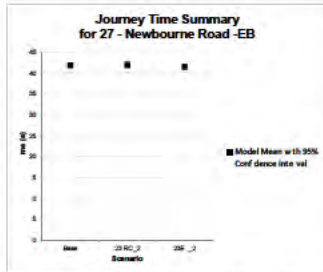
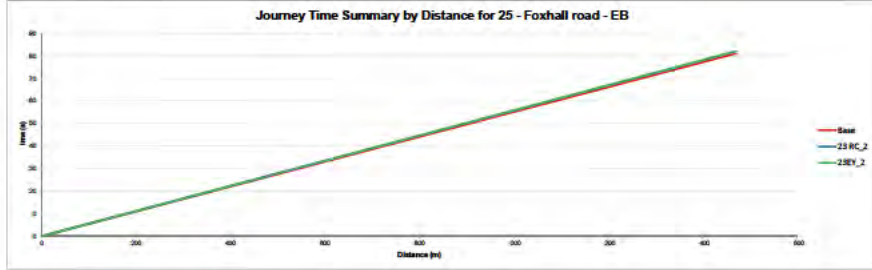
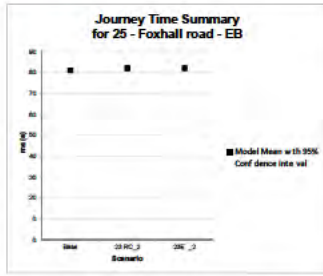


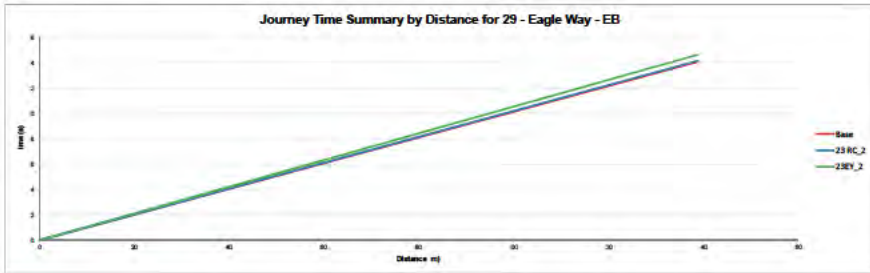
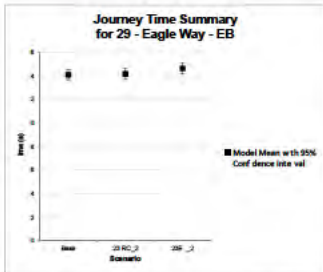
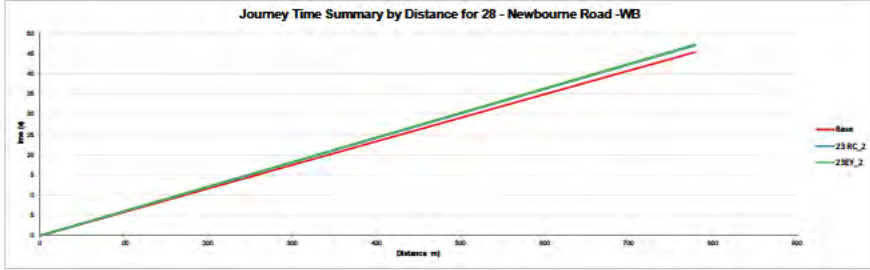
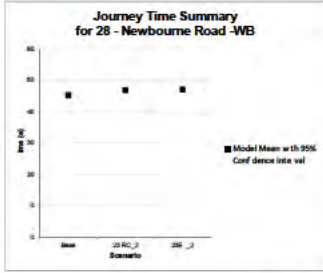


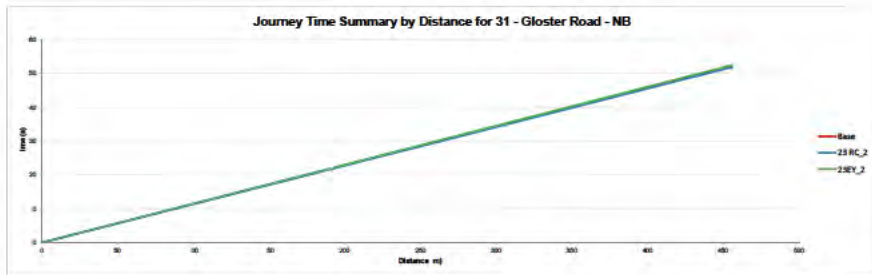
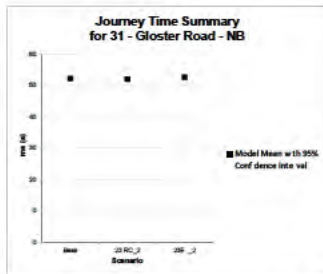
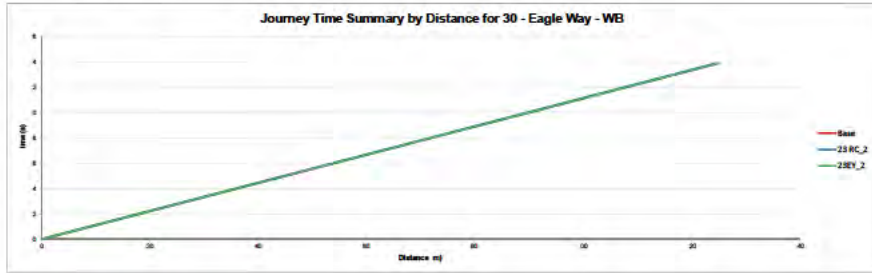
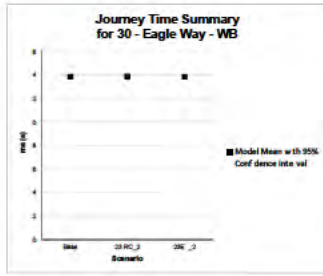


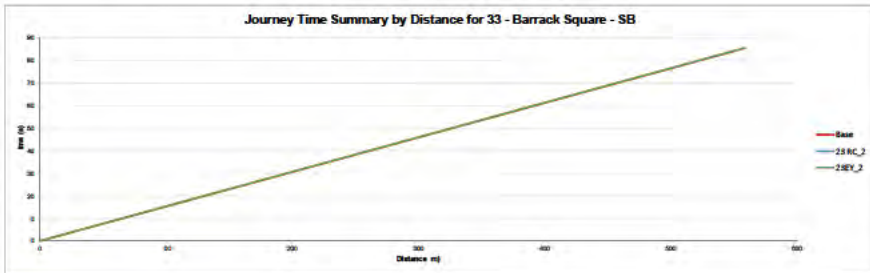
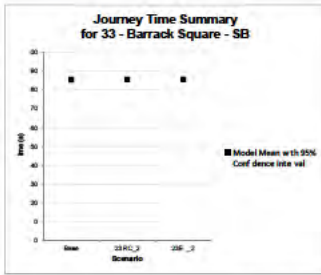
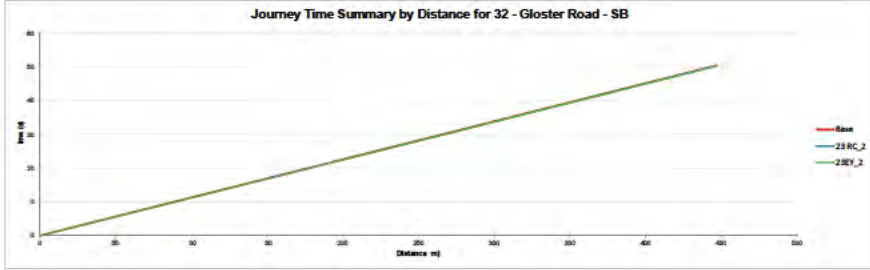
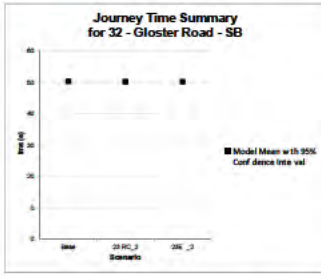


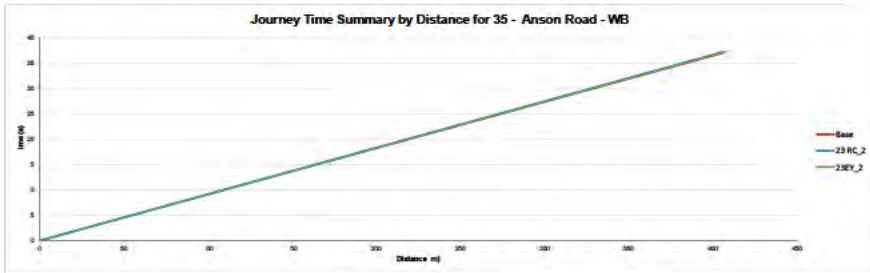
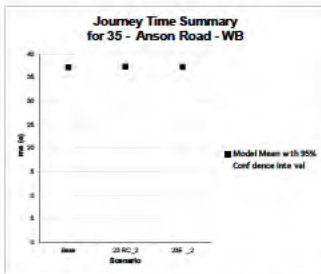
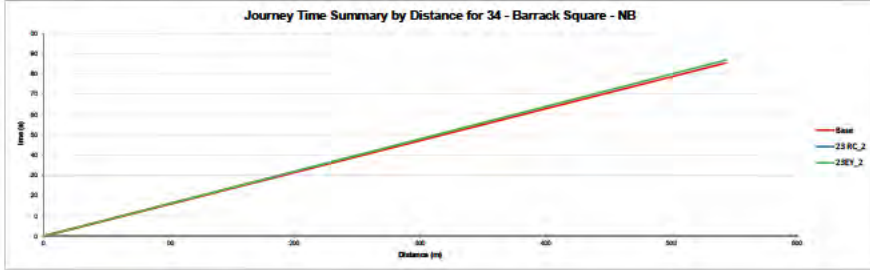
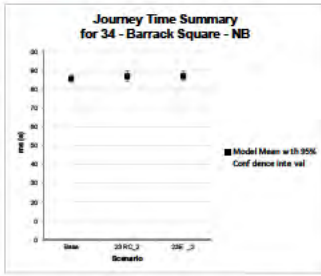


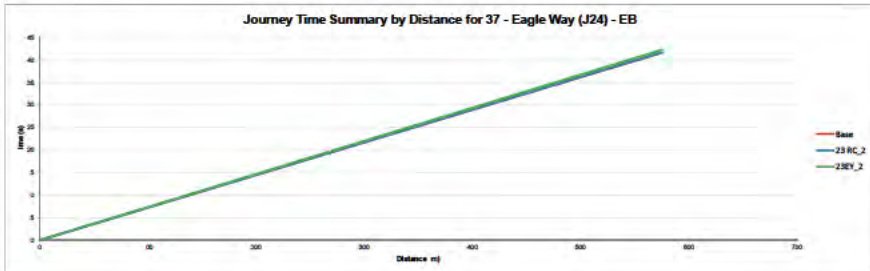
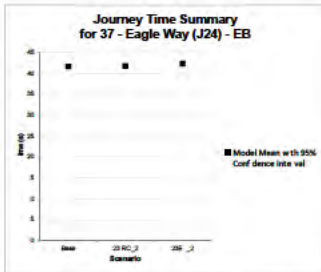
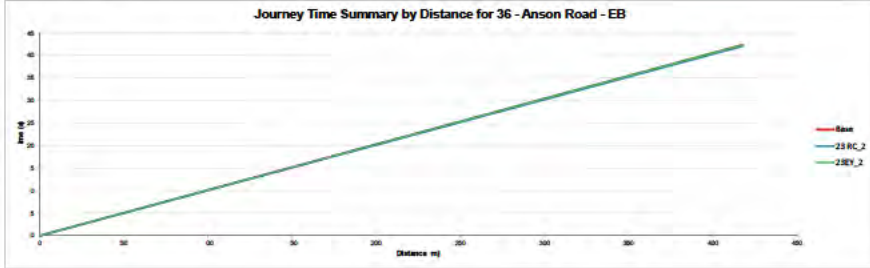
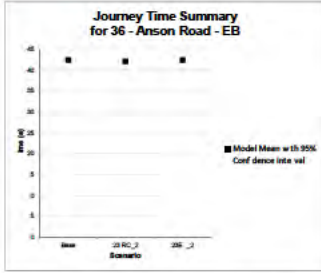


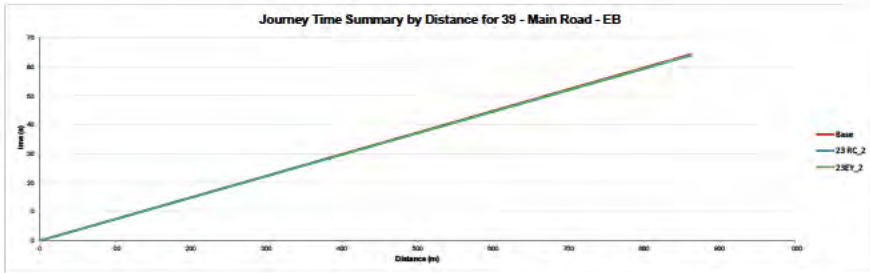
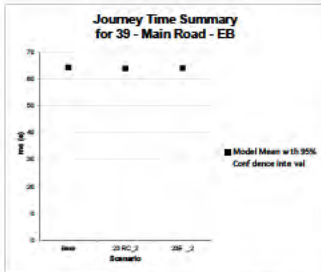
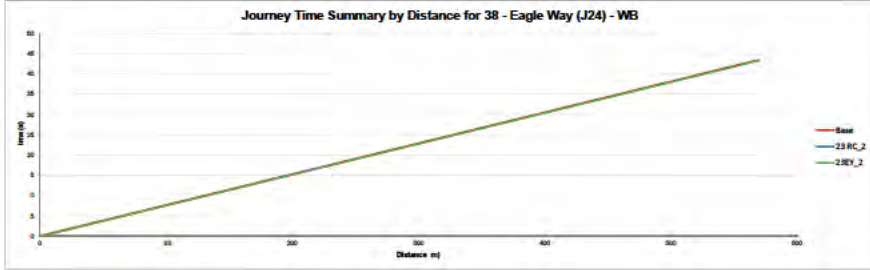
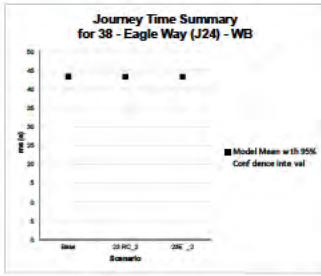


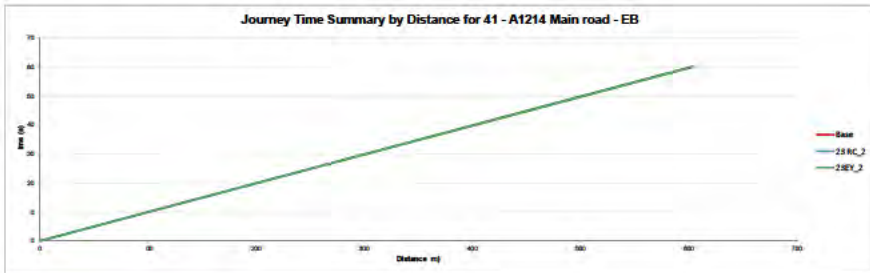
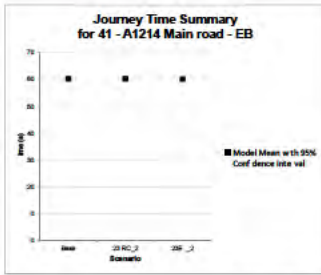
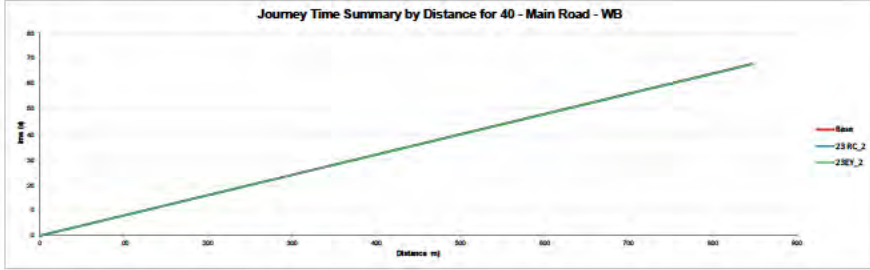
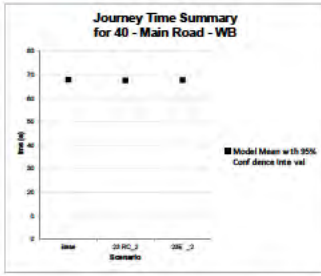


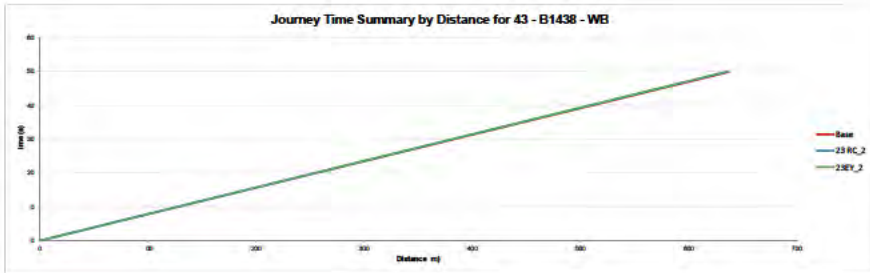
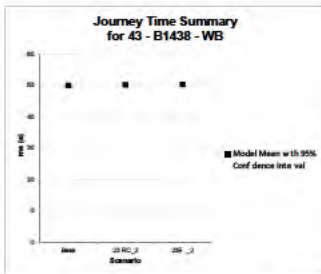
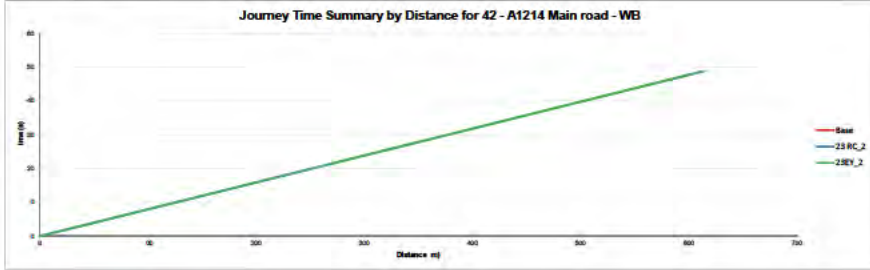
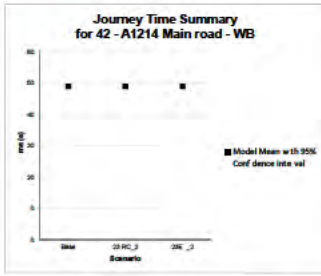


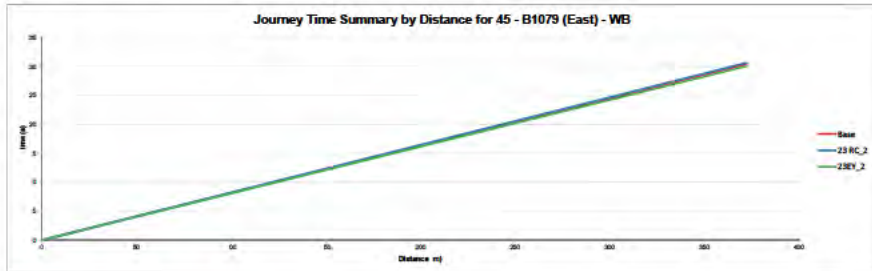
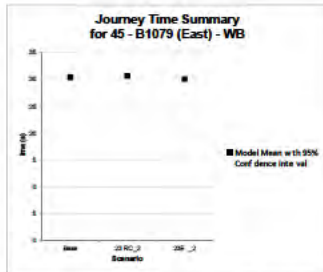
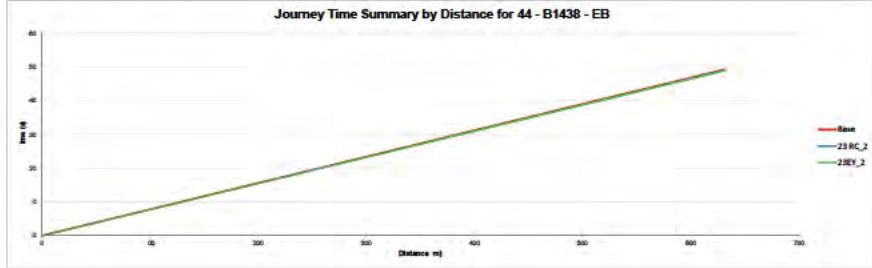
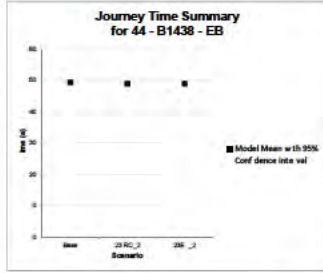


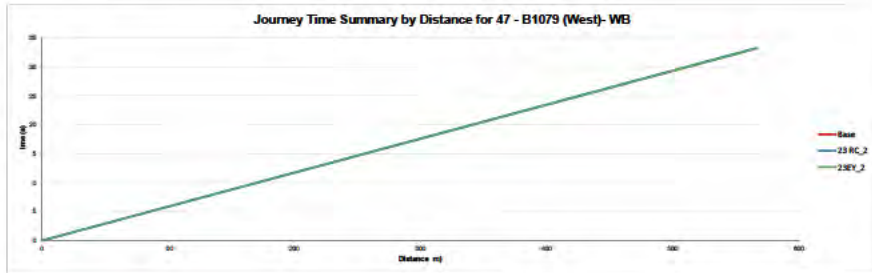
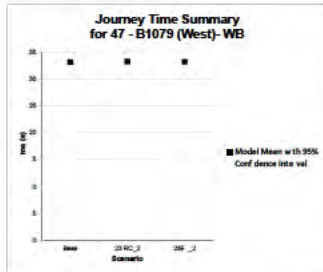
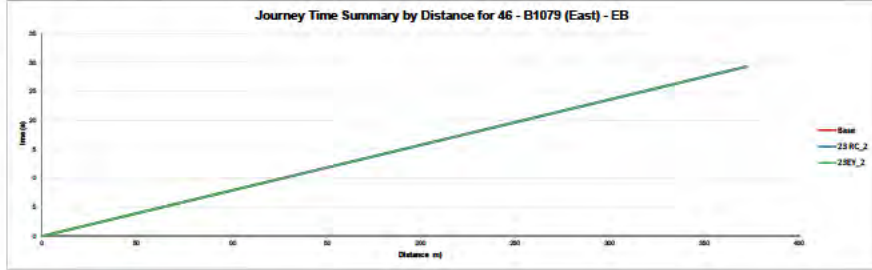
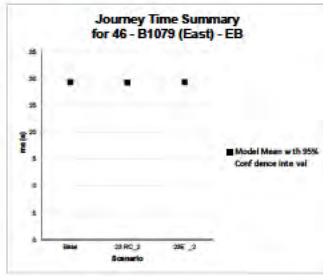


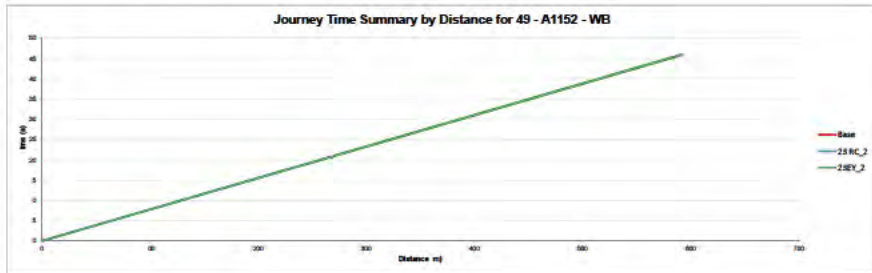
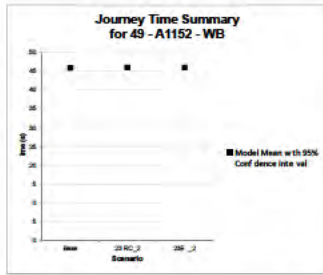
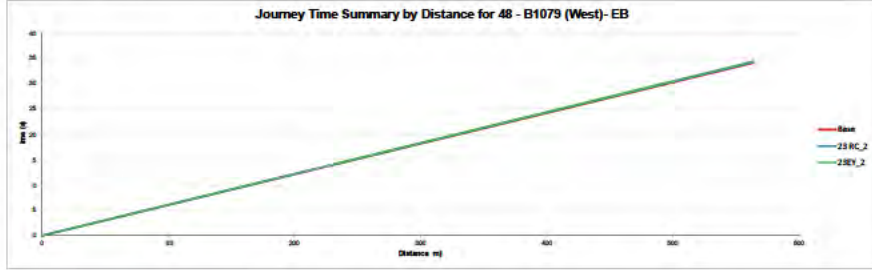
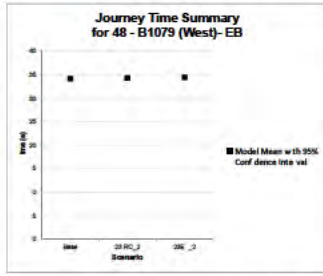


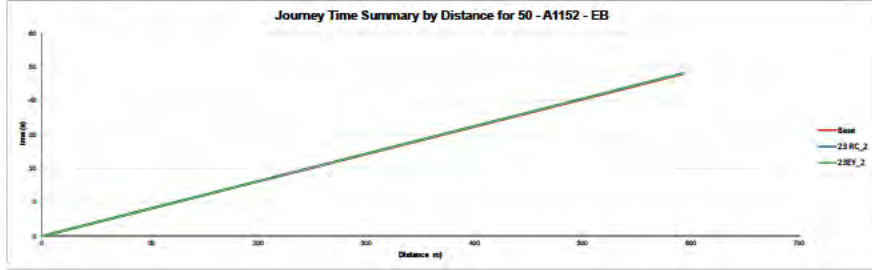
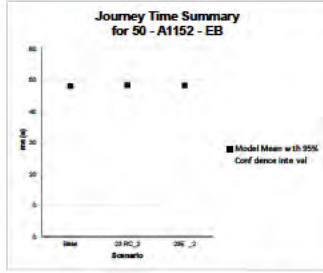




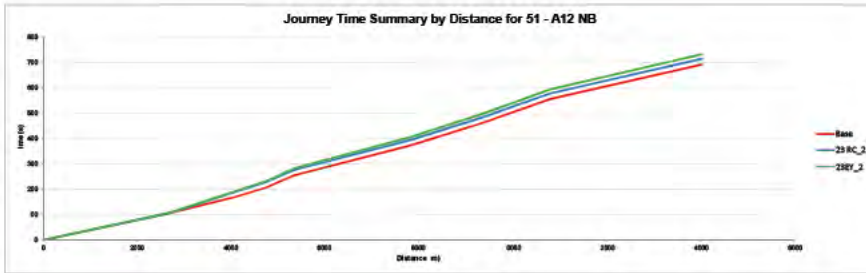
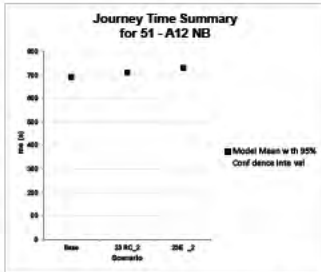
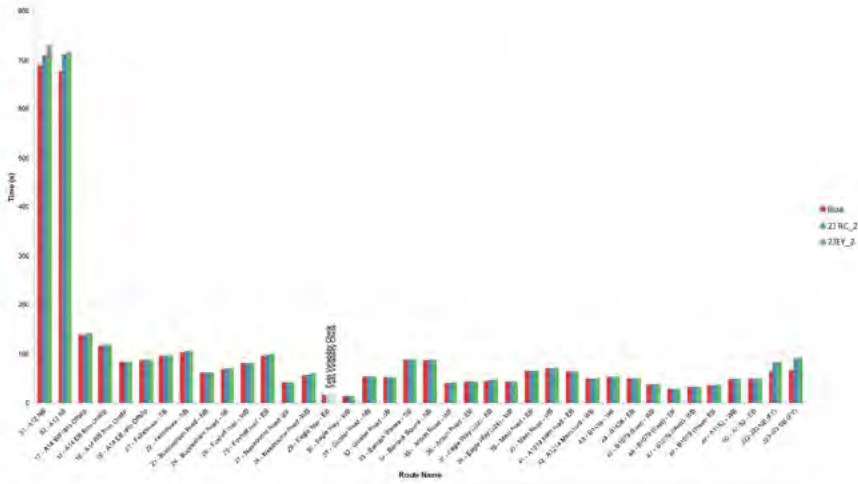


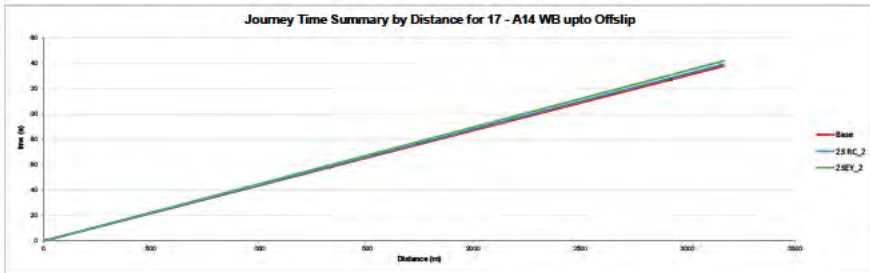
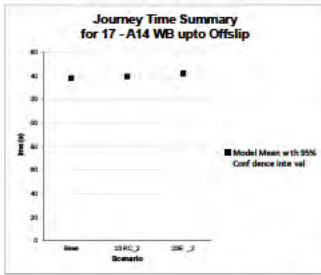
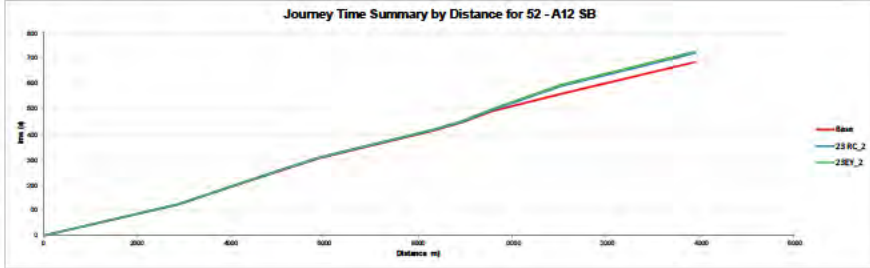
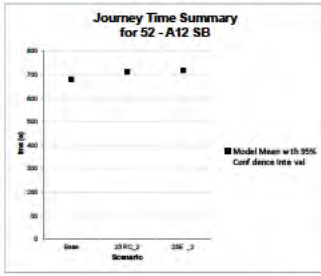


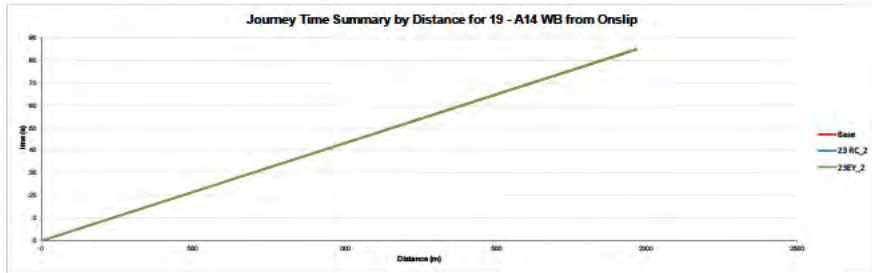
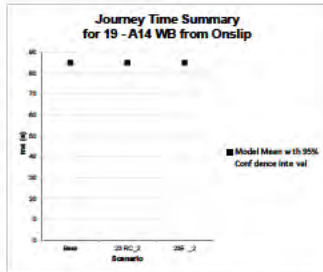
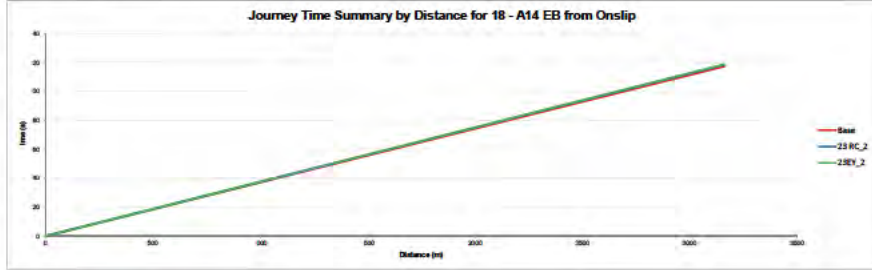
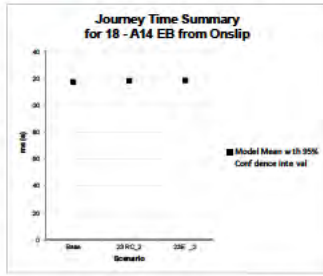


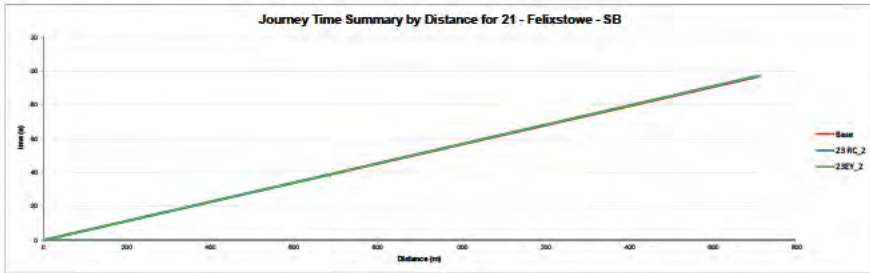
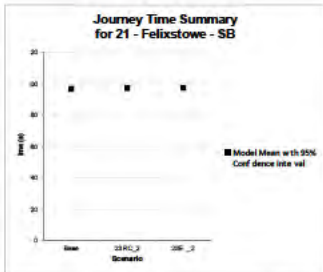
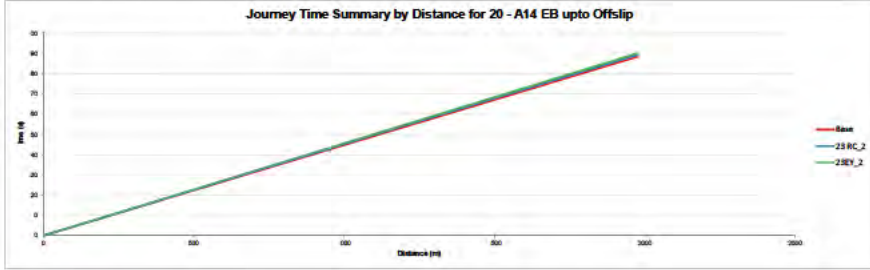
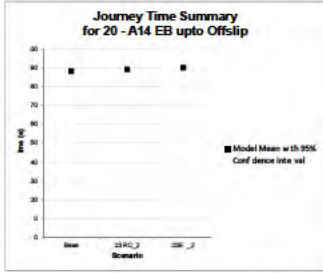


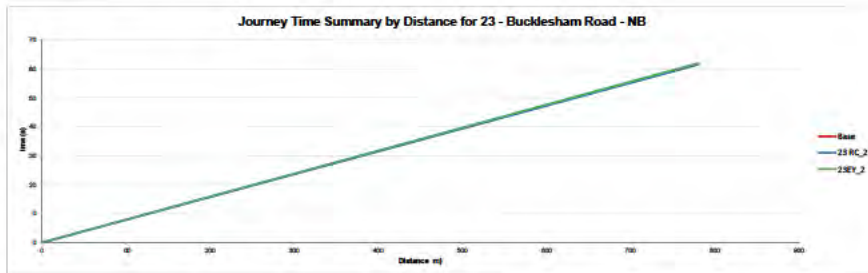
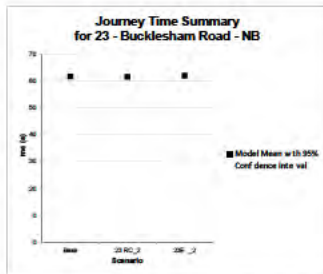
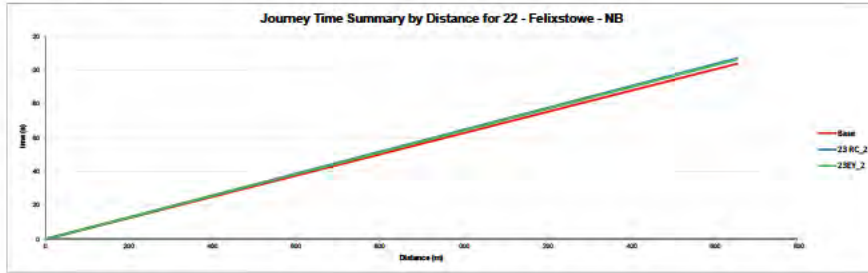
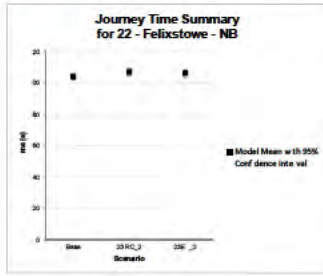
Full Routes Summary (IP)

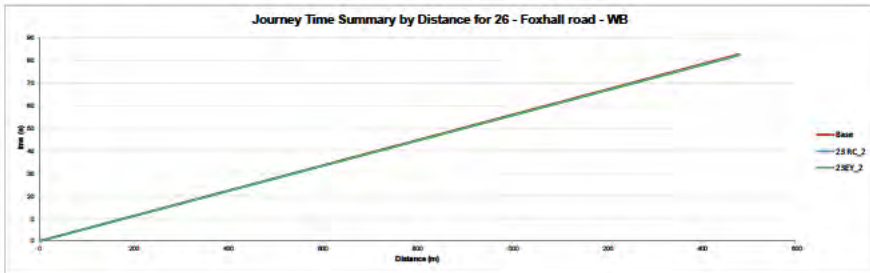
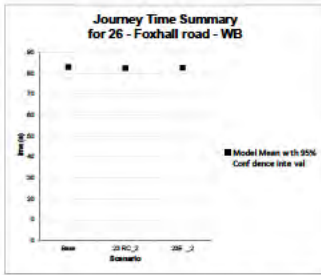
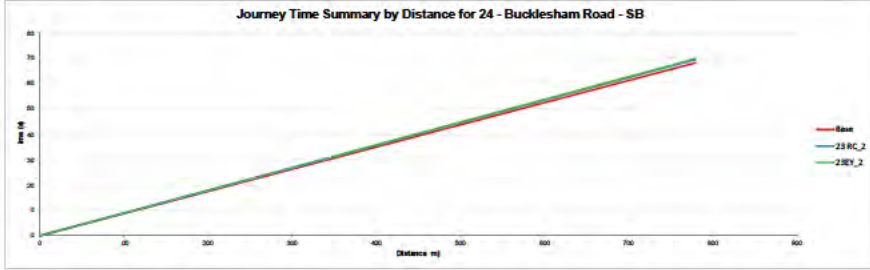
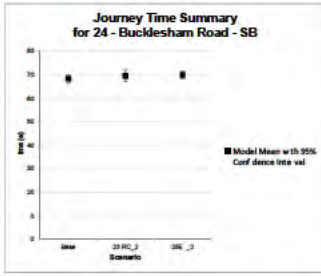


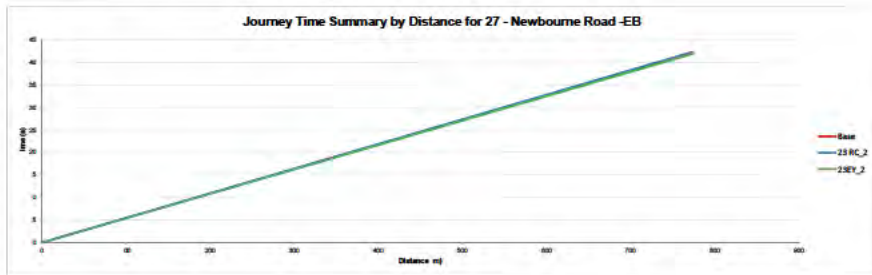
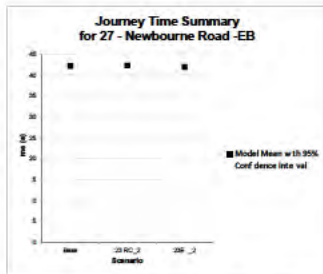
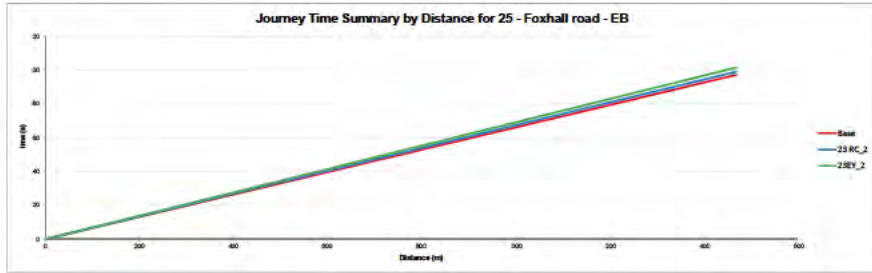
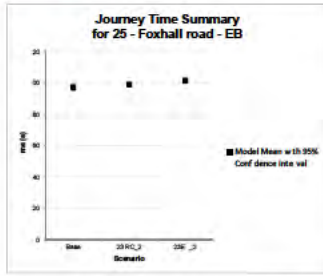


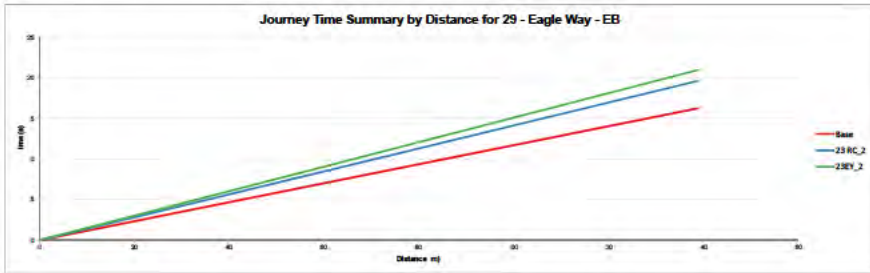
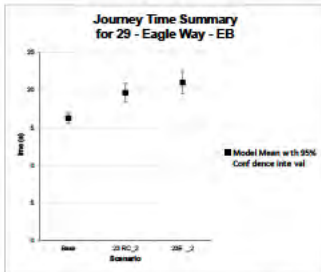
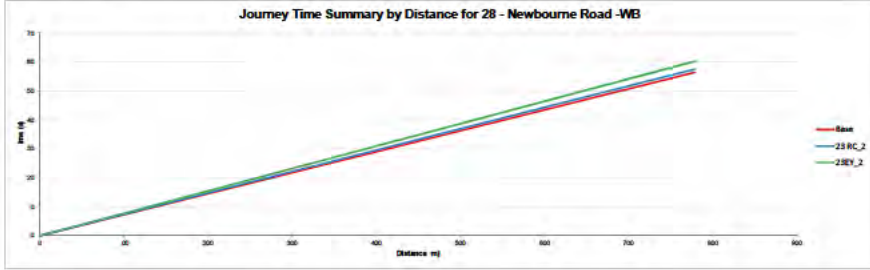
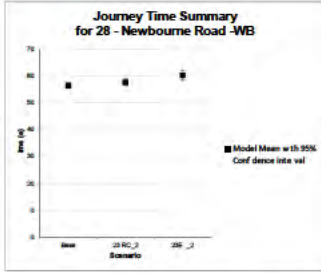


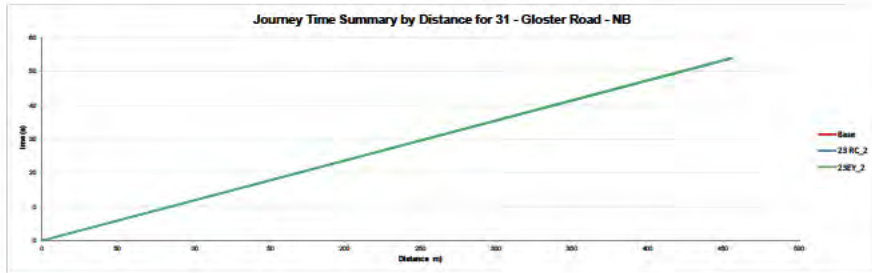
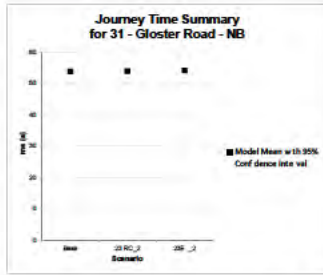
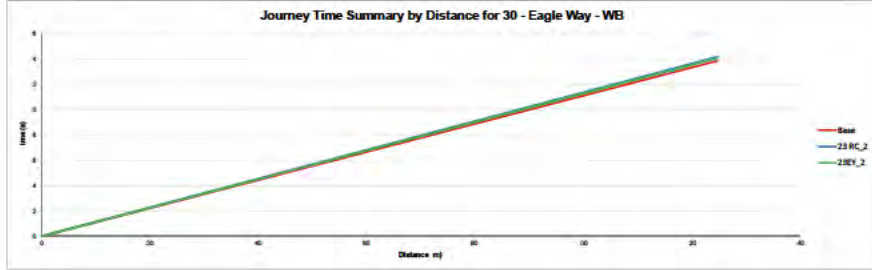
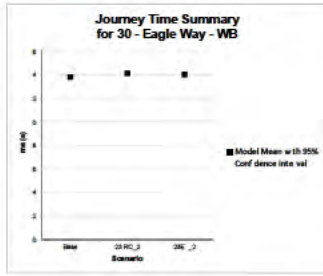


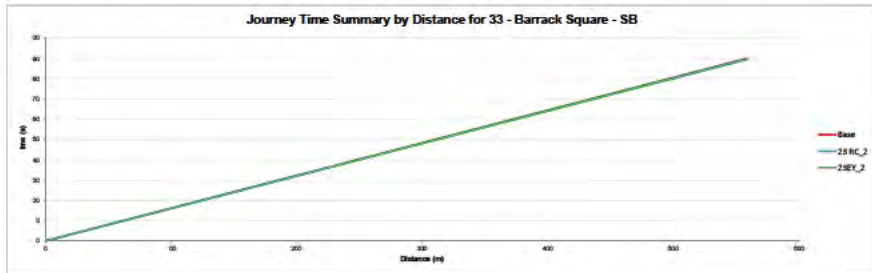
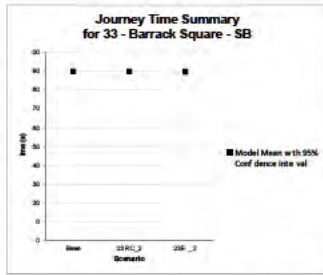
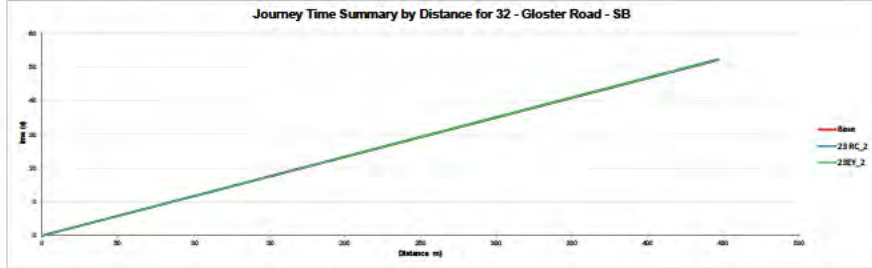
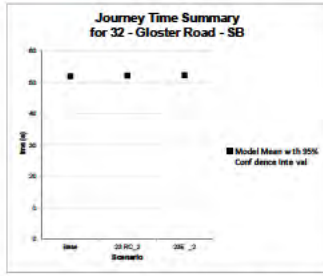


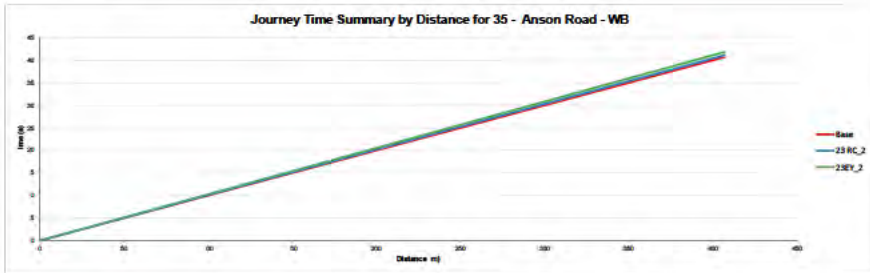
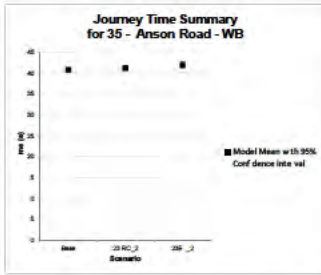
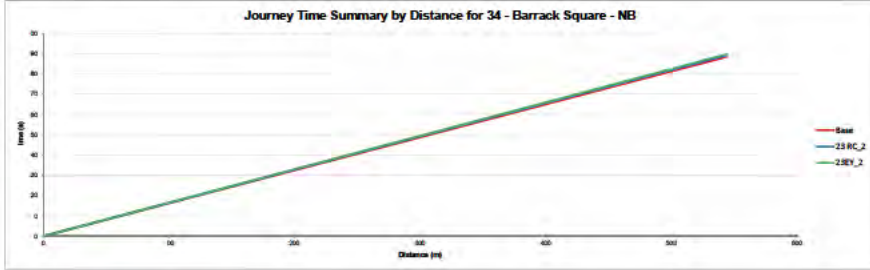
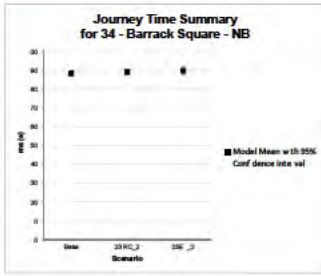


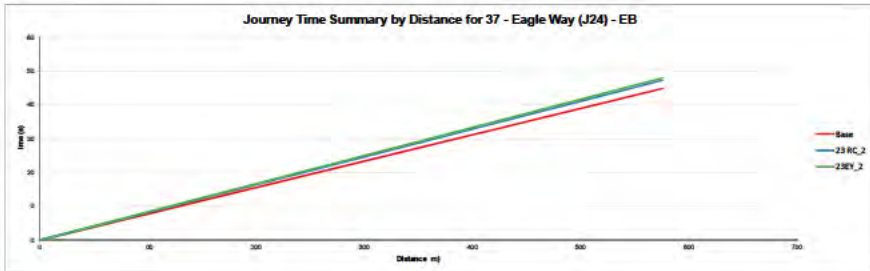
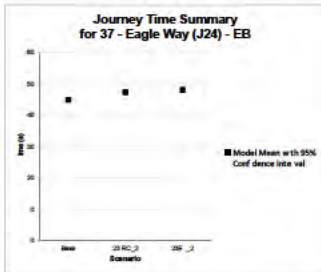
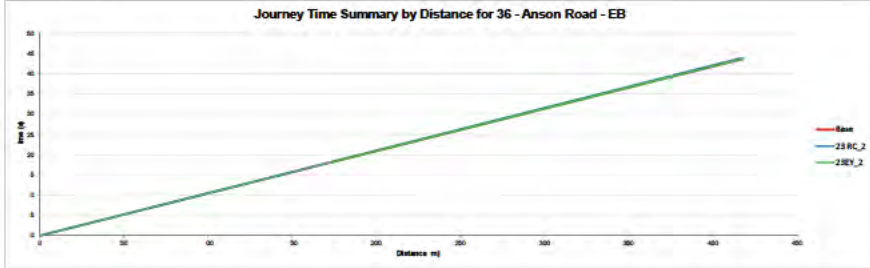
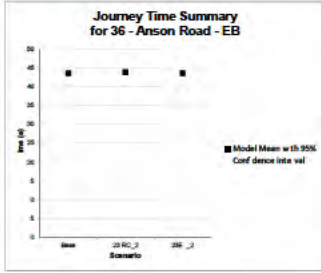


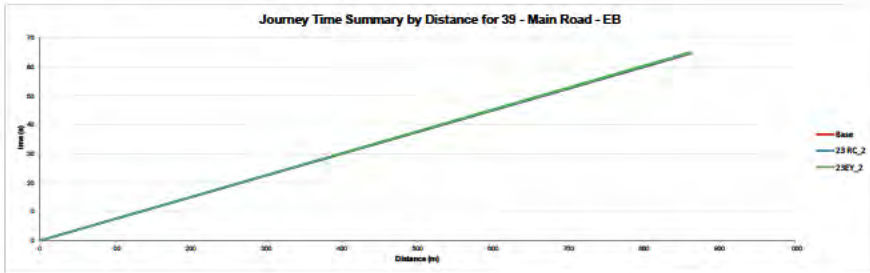
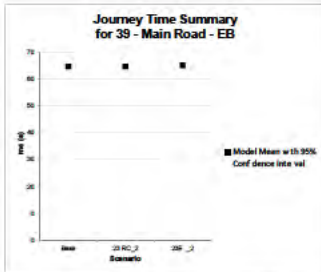
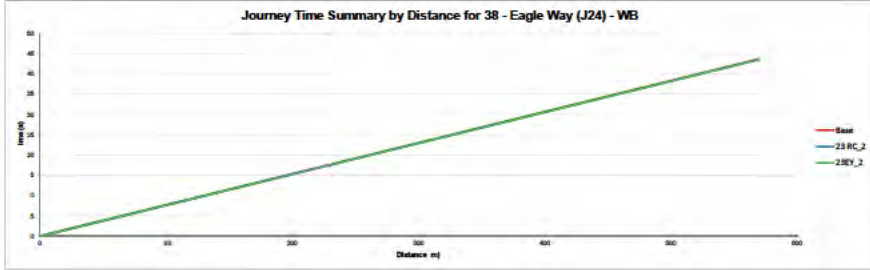
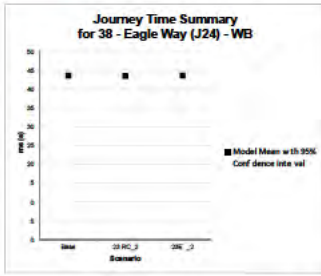


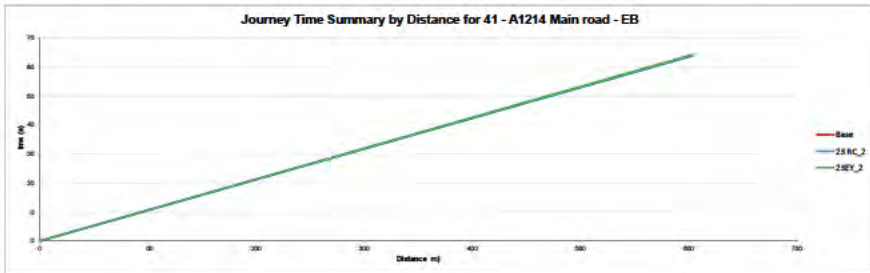
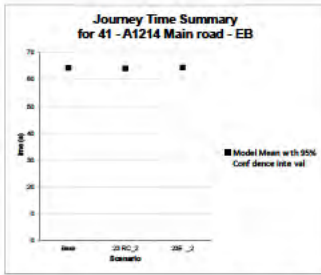
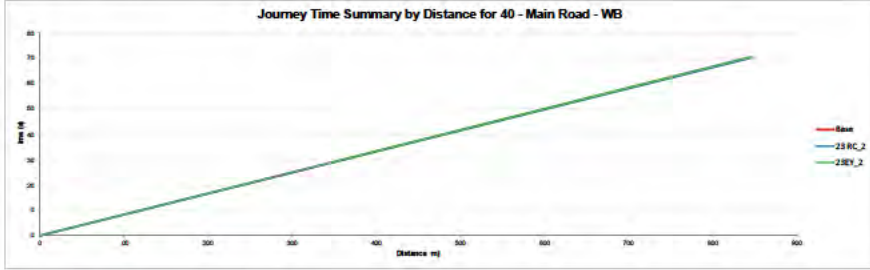
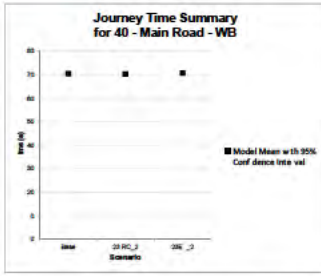


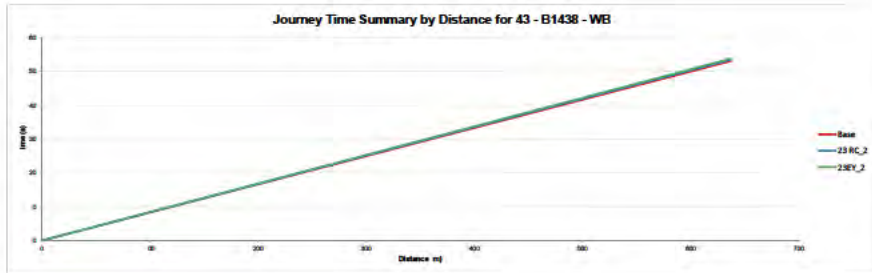
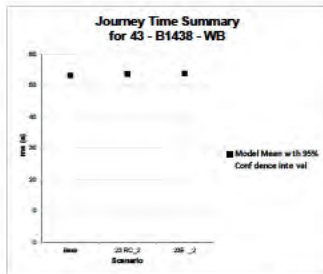
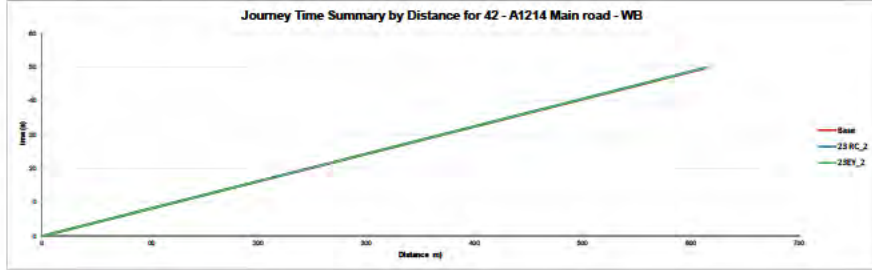
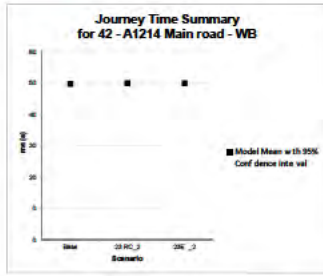


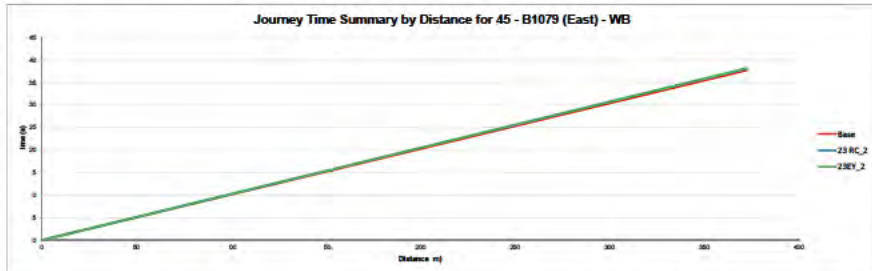
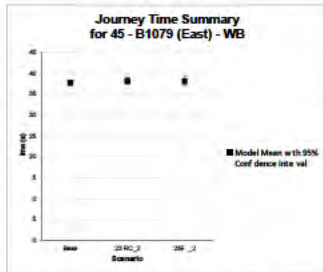
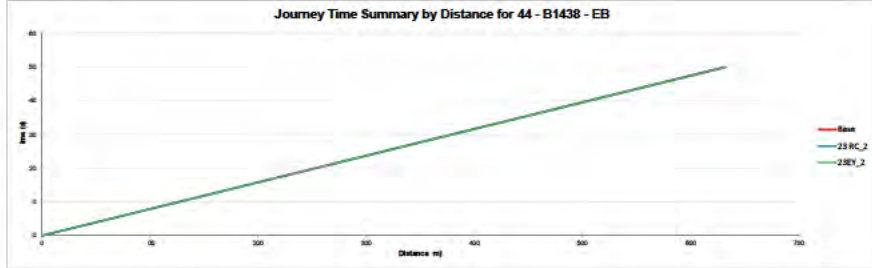
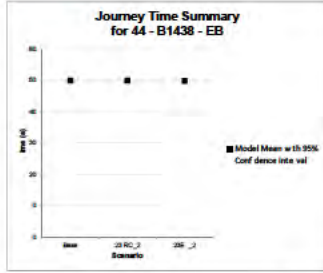


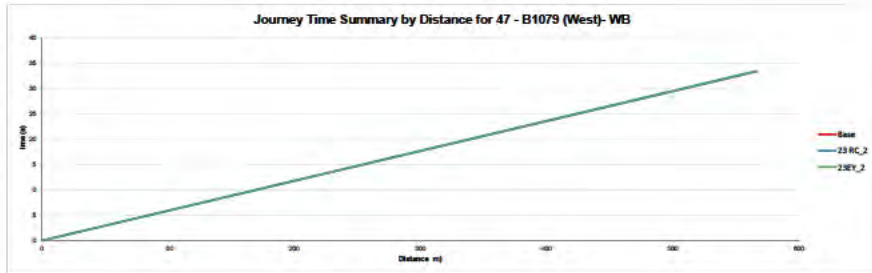
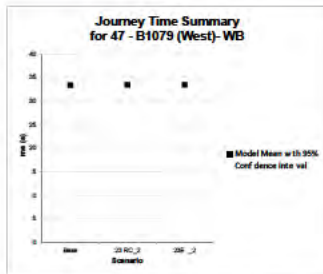
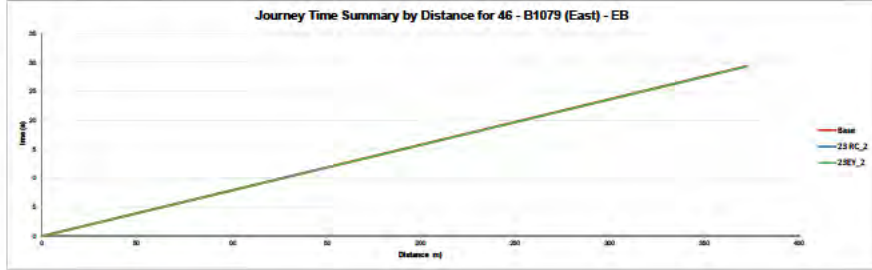
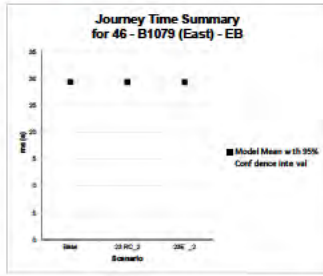


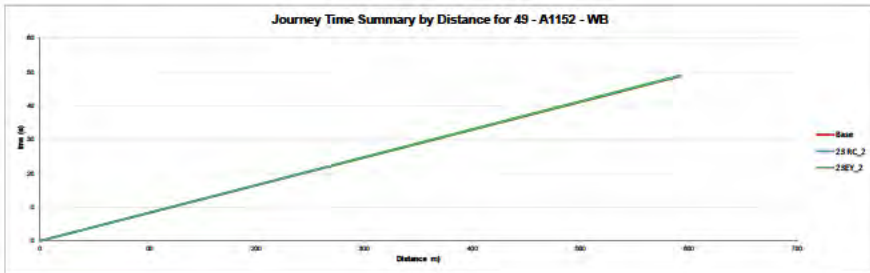
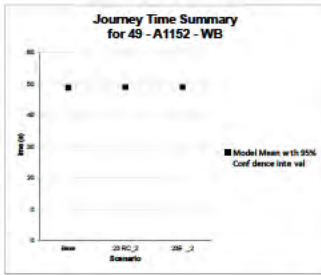
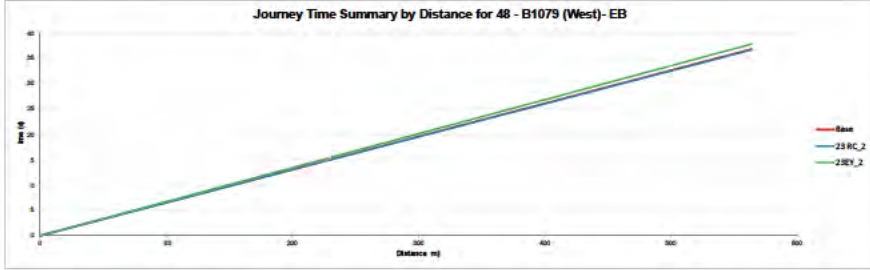
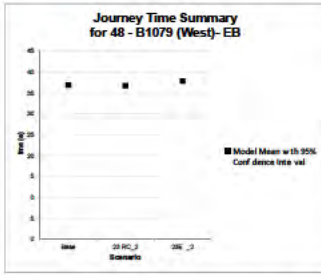


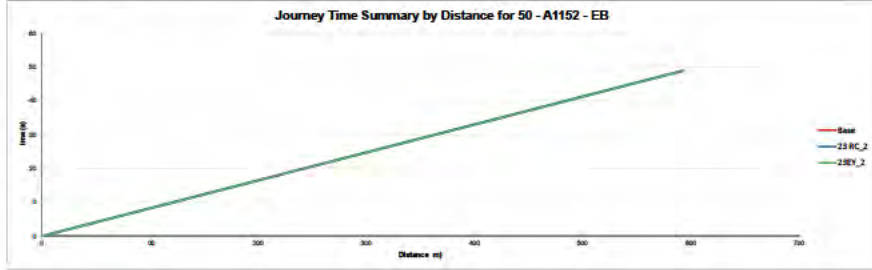
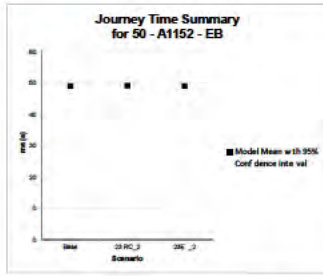




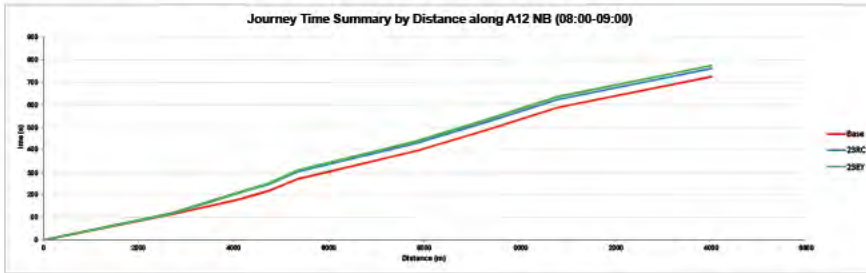
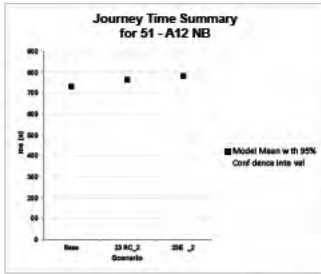
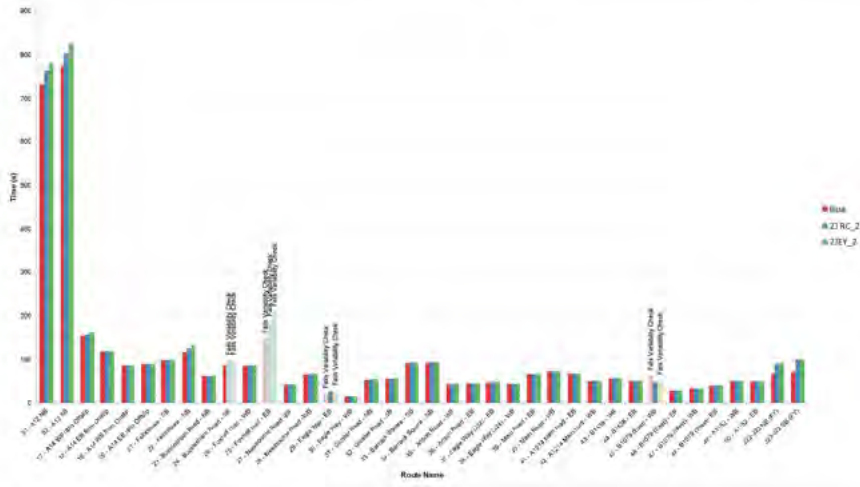


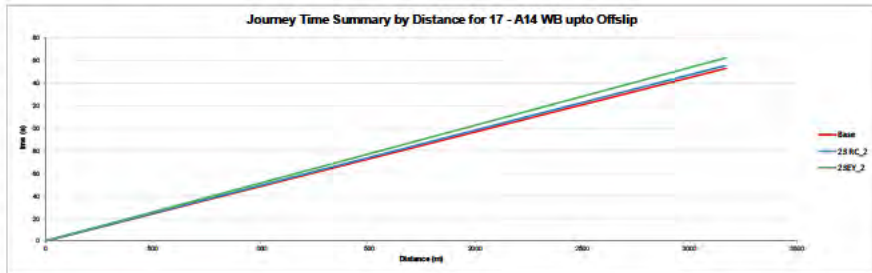
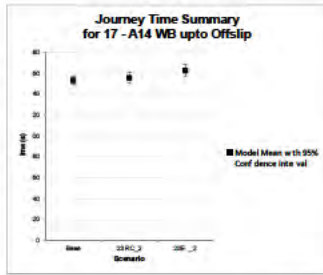
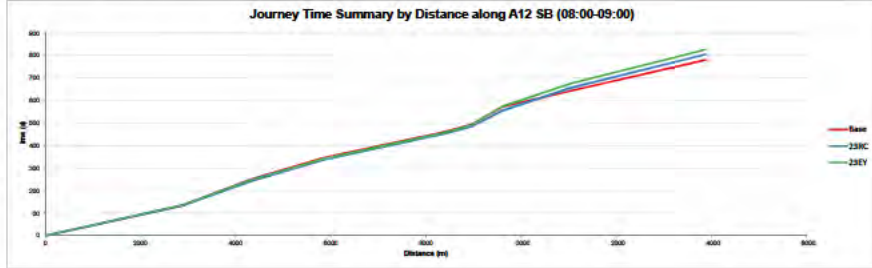
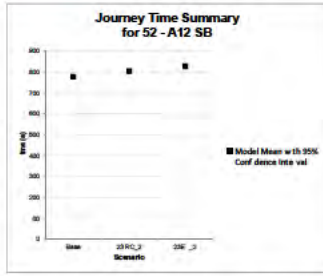


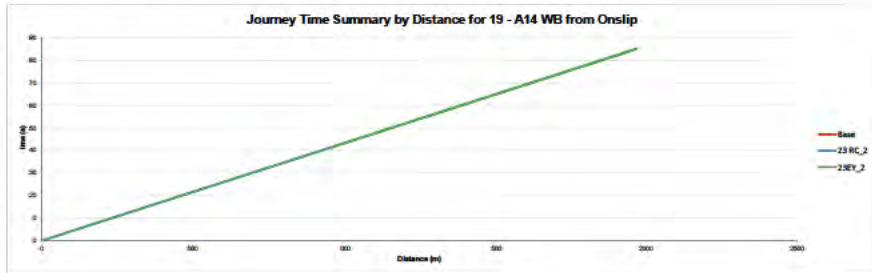
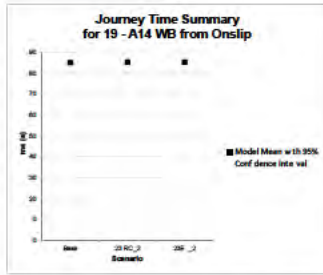
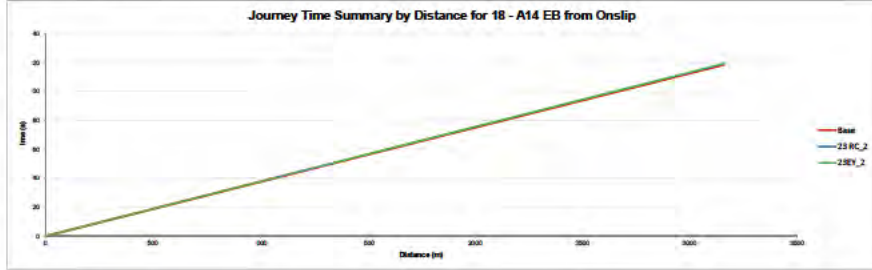
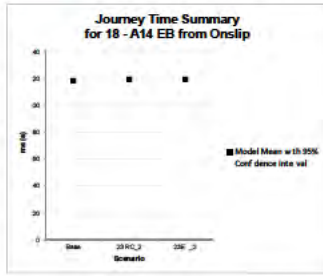


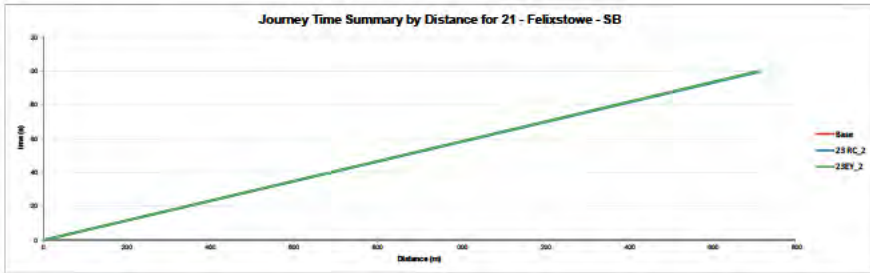
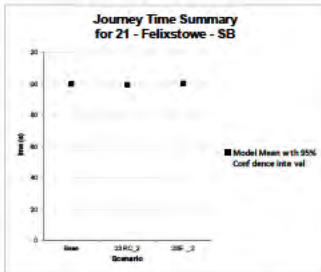
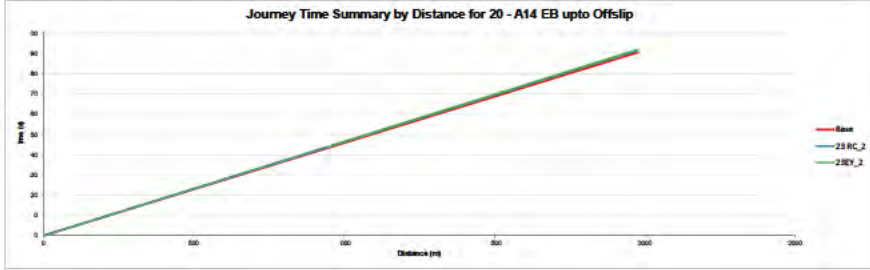
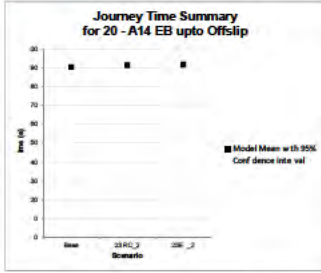


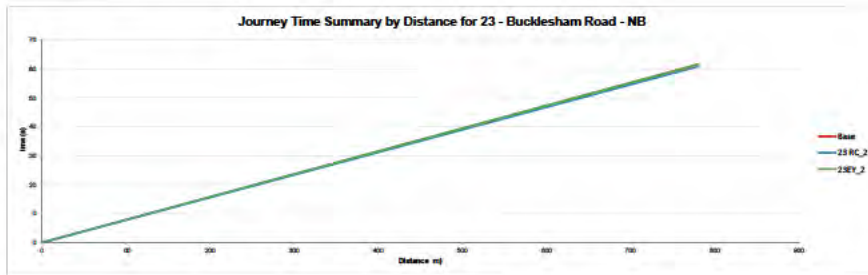
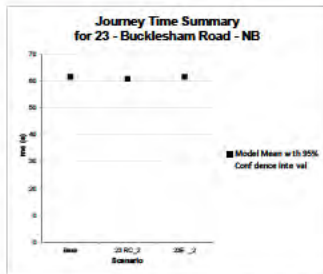
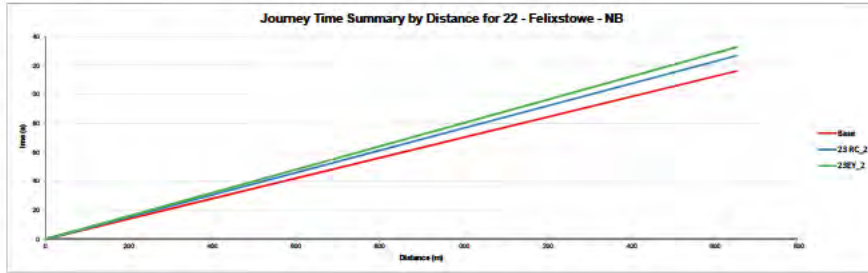
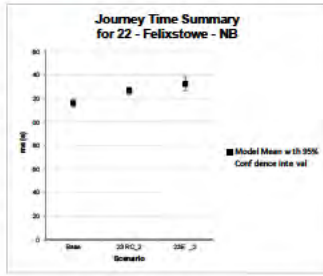
Full Routes Summary (PM)

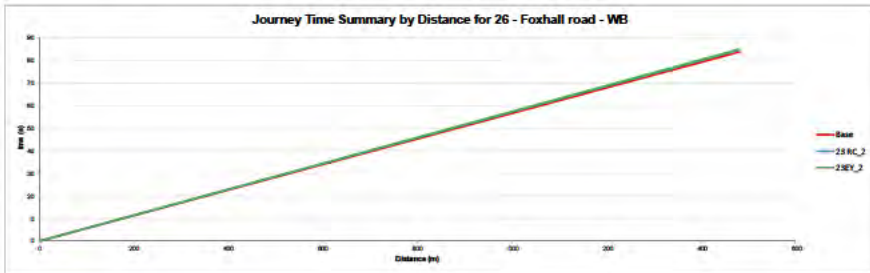
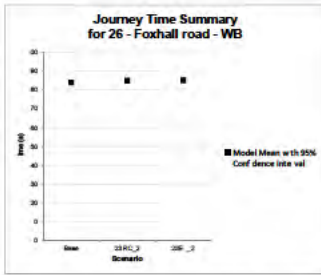
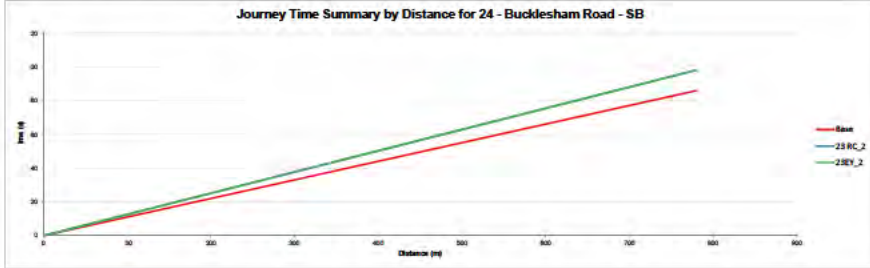
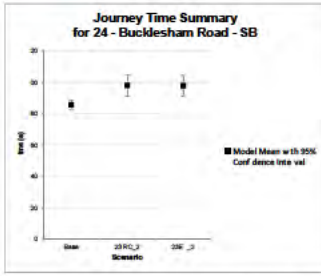


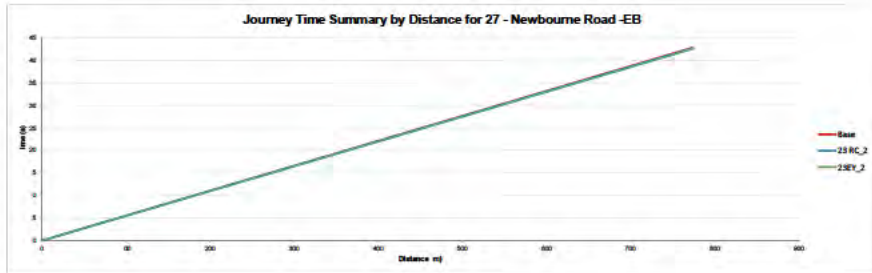
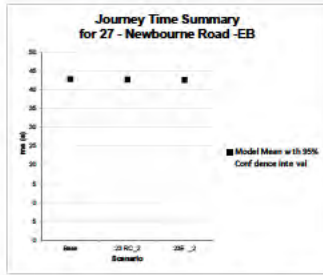
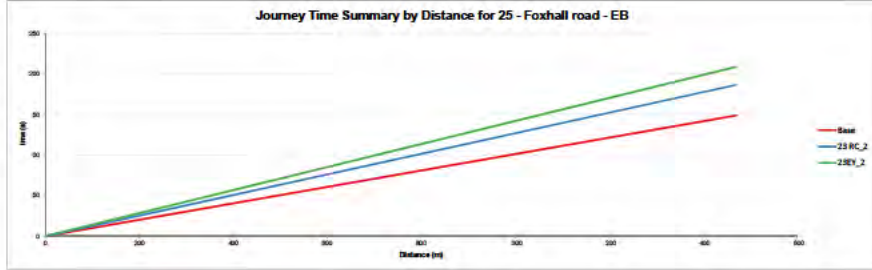
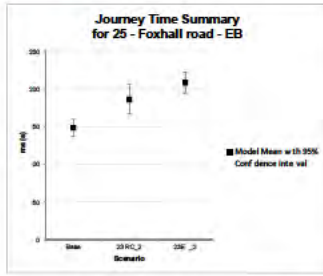


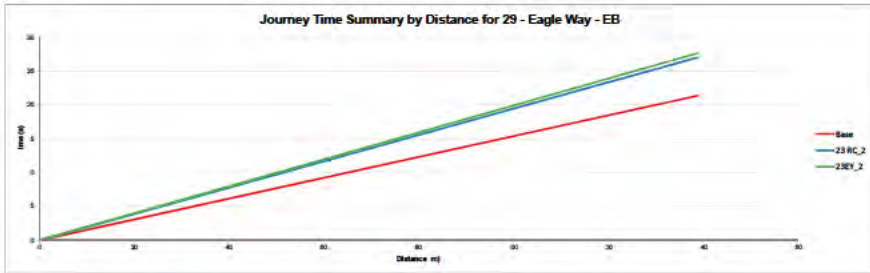
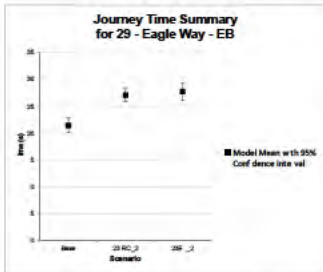
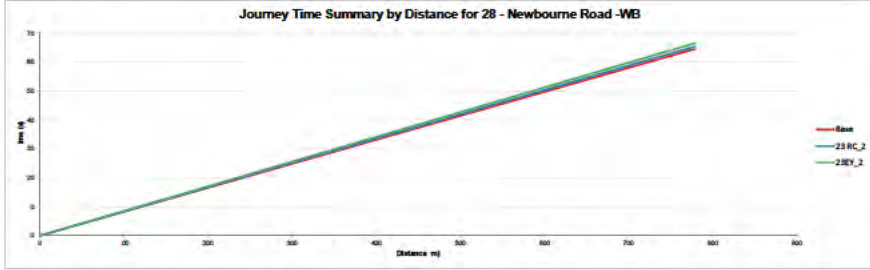
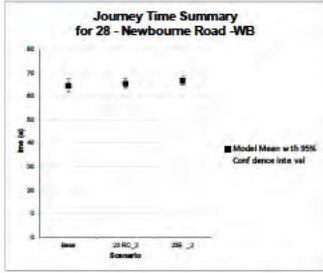


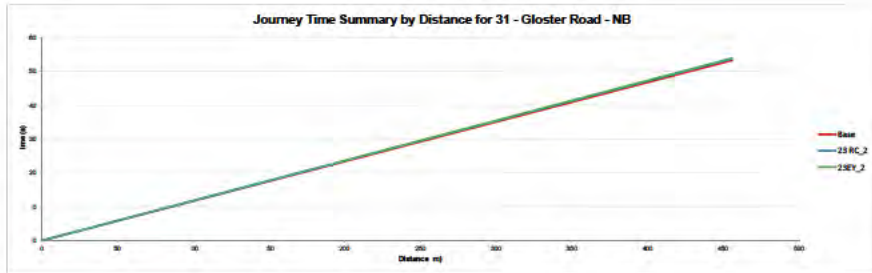
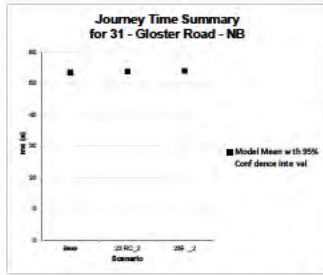
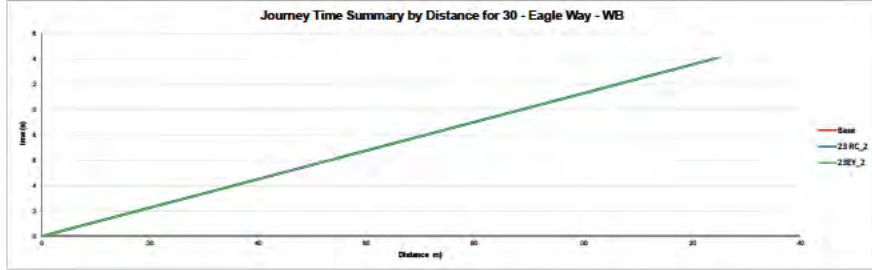
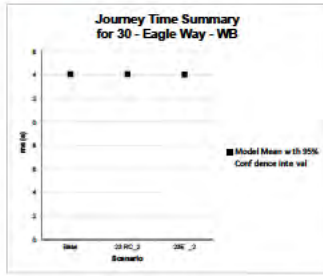


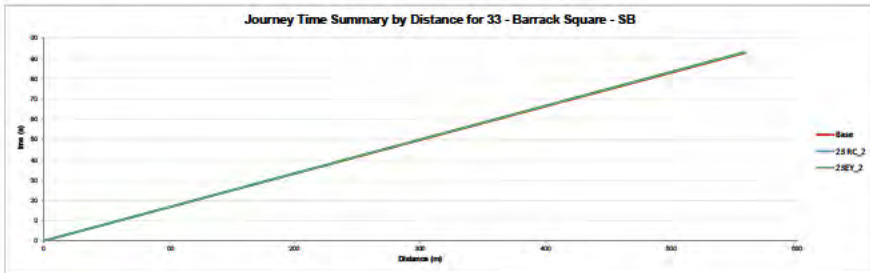
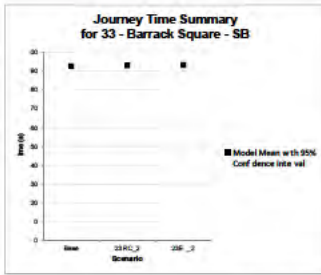
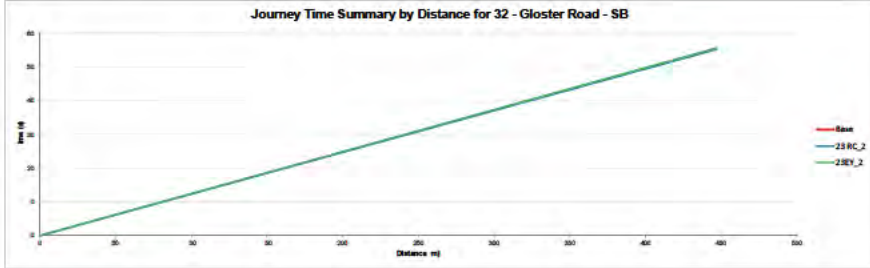
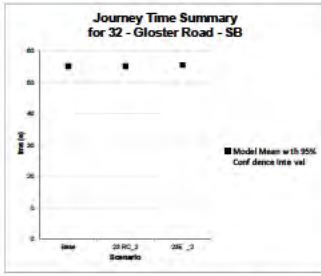


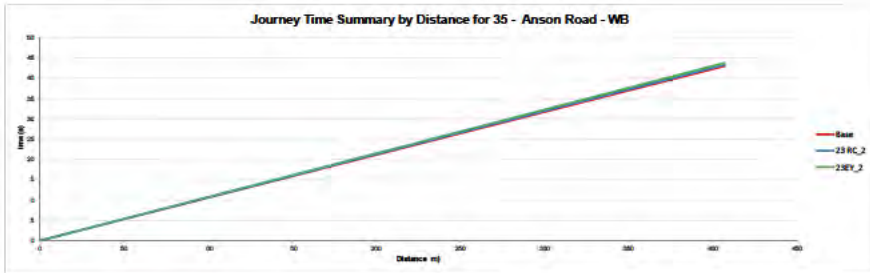
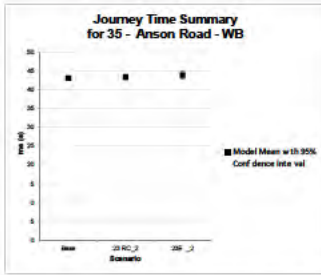
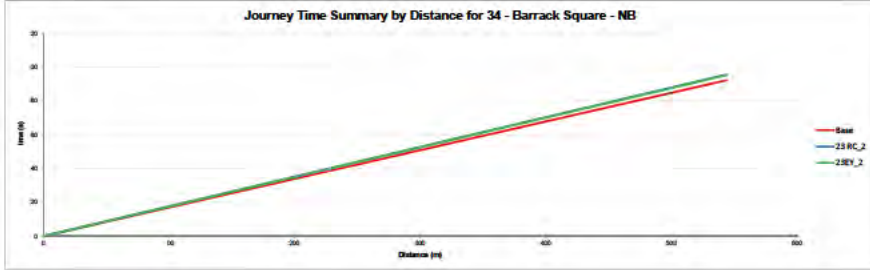
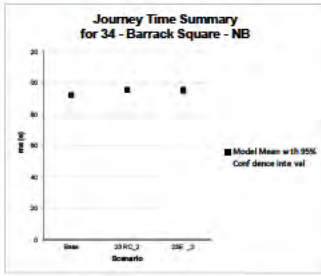


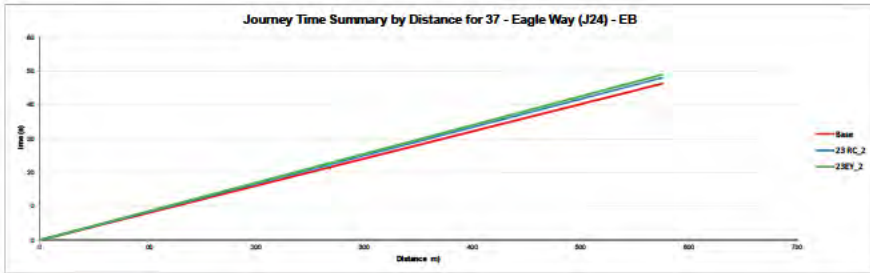
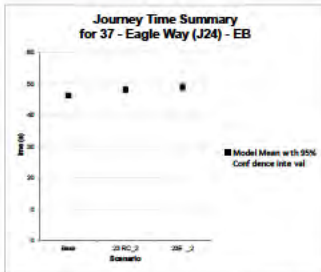
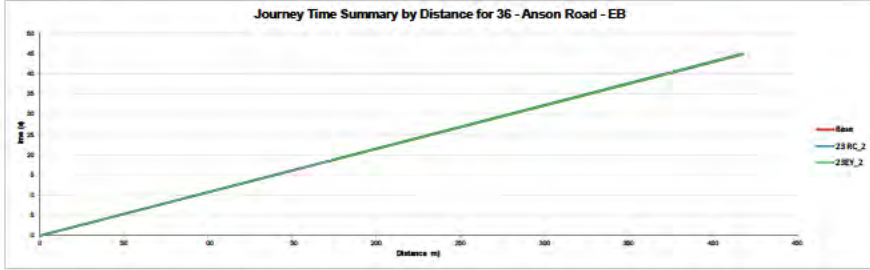
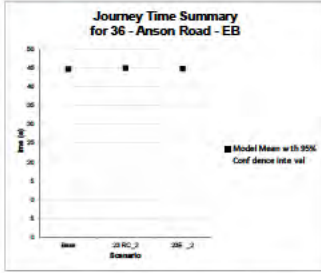


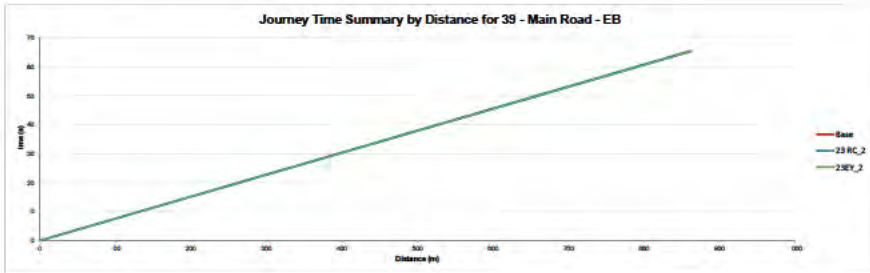
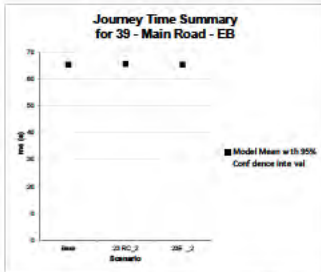
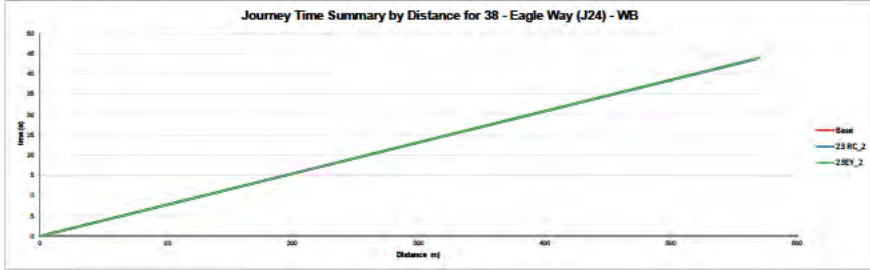
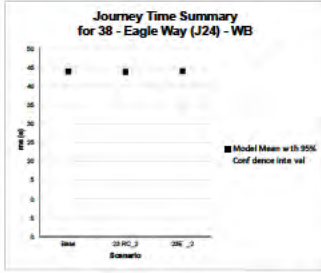


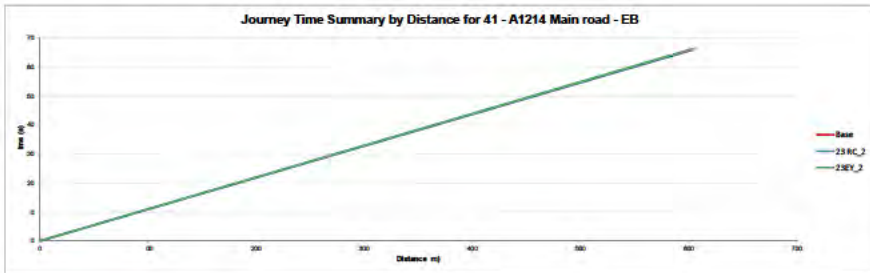
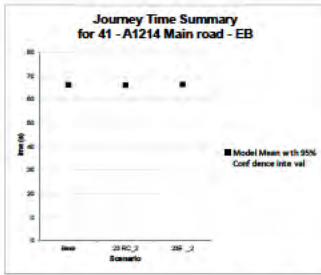
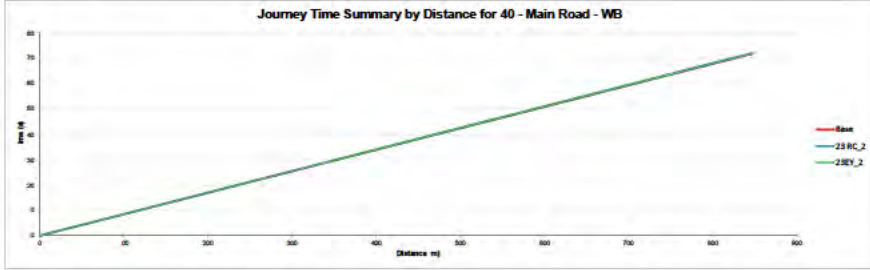
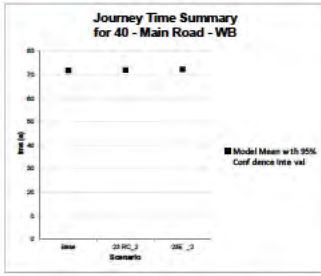


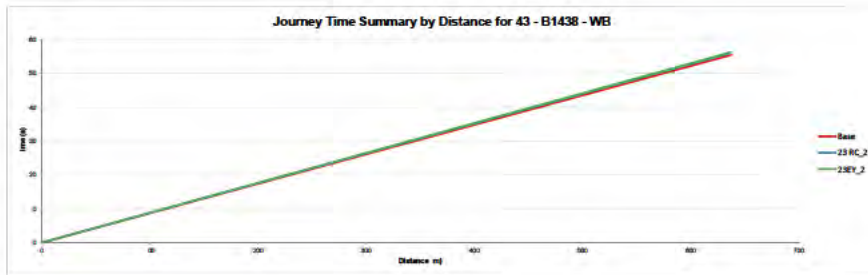
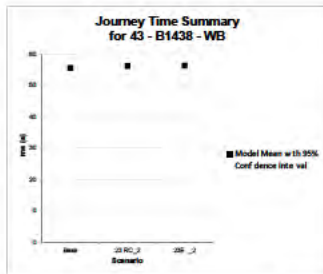
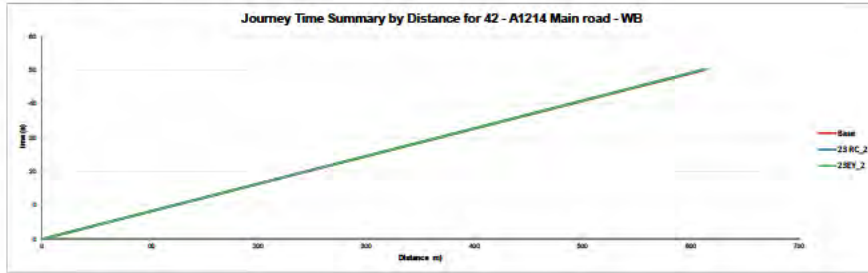
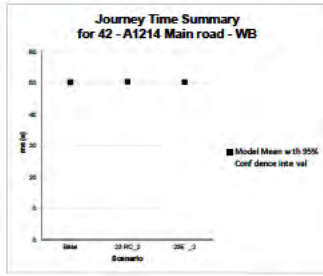


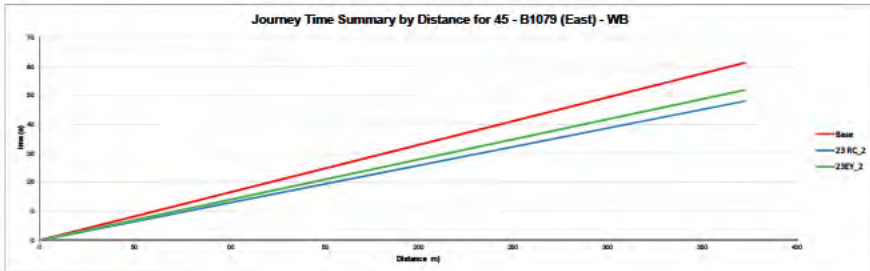
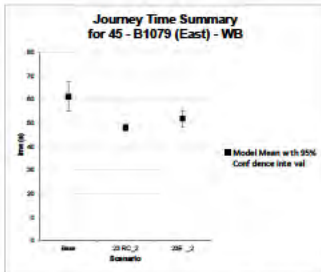
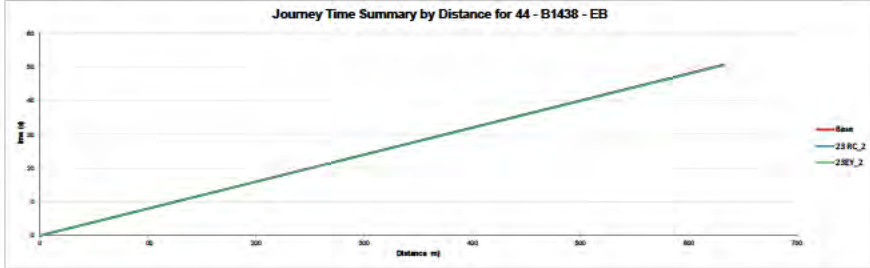
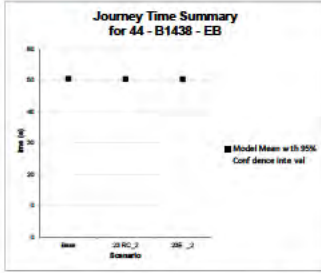


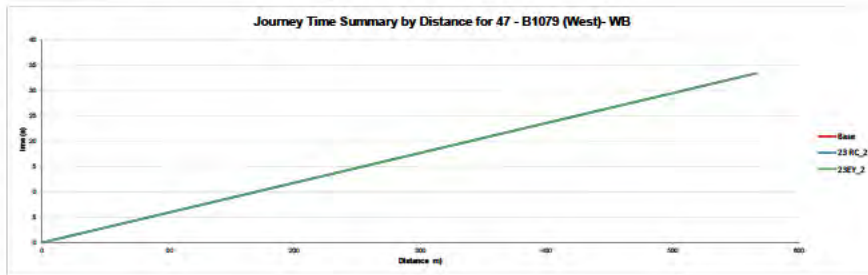
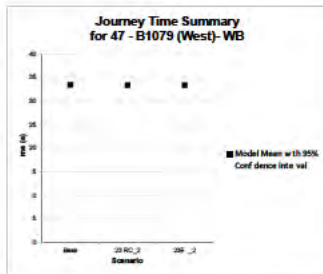
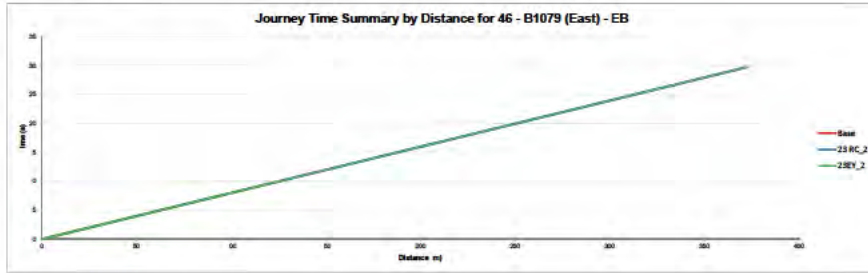
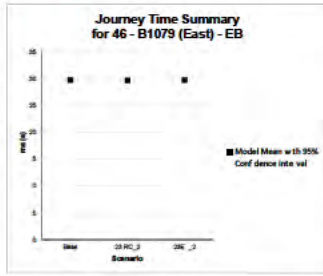


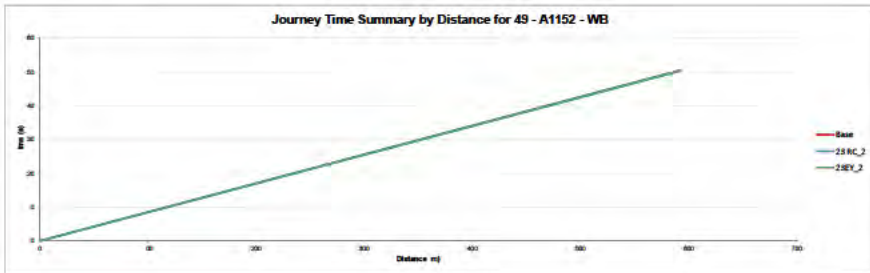
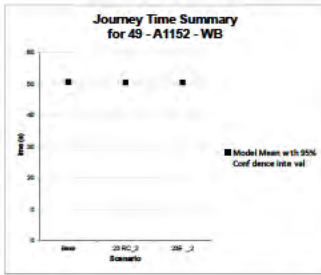
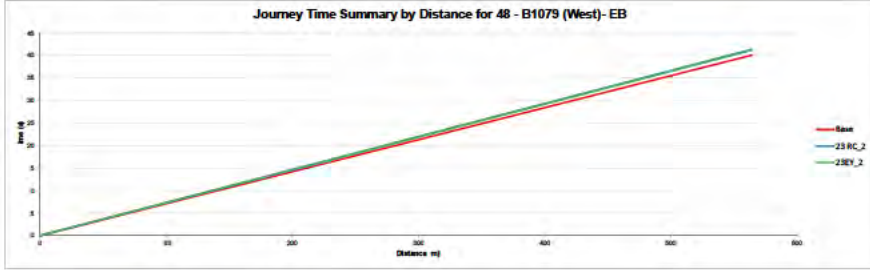
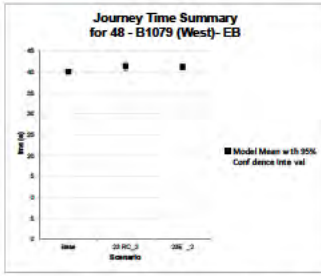


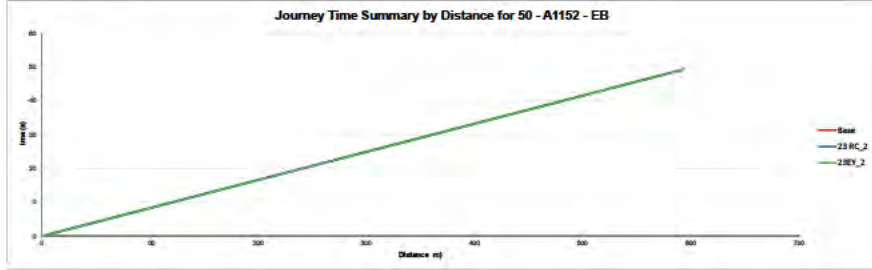
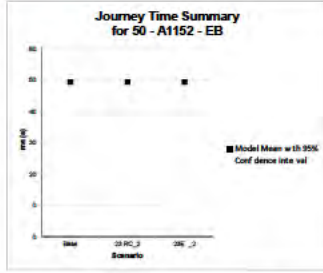






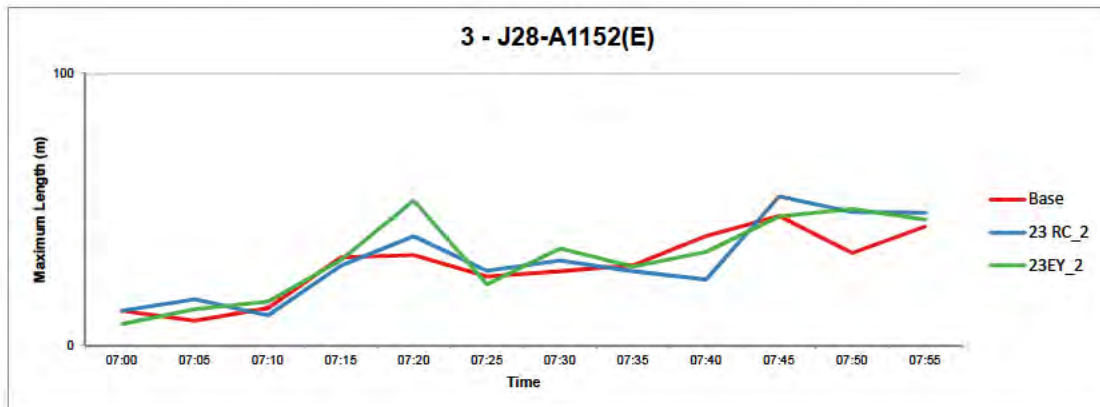
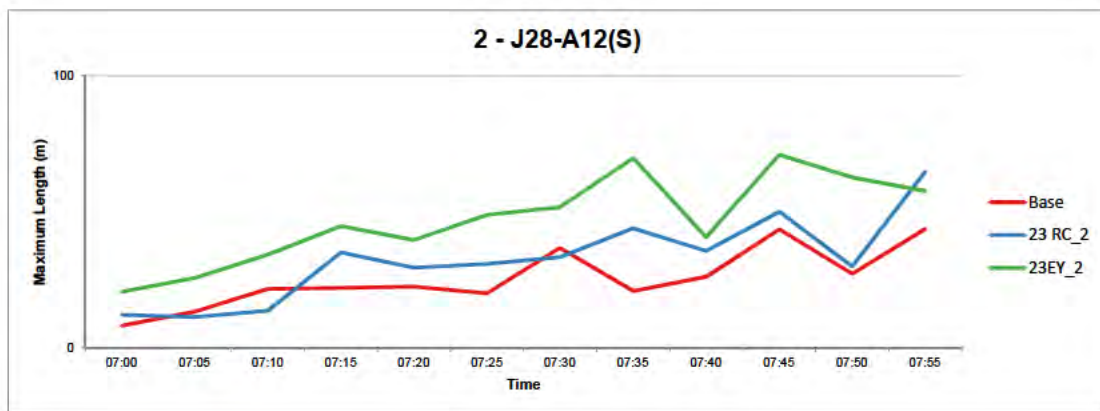
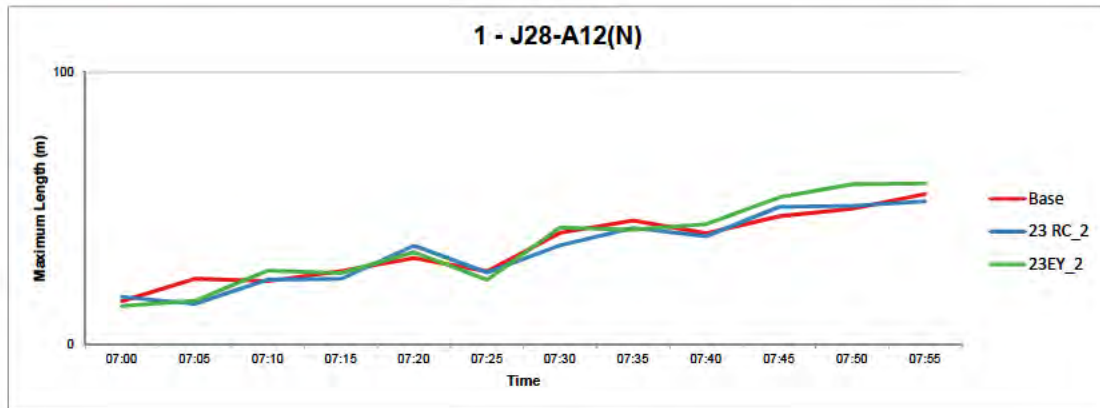


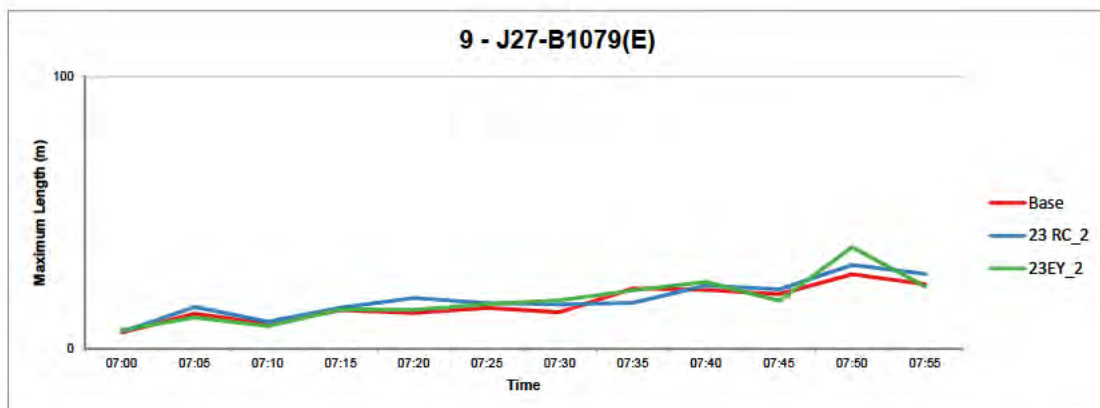
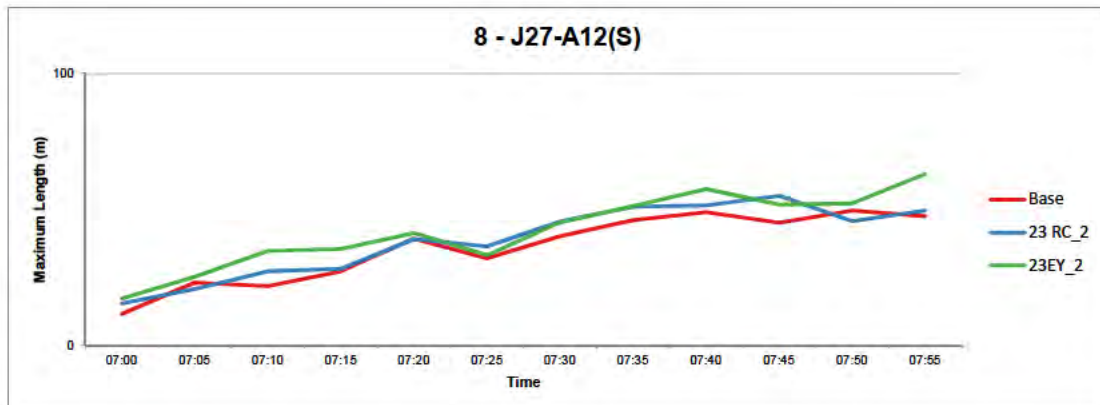
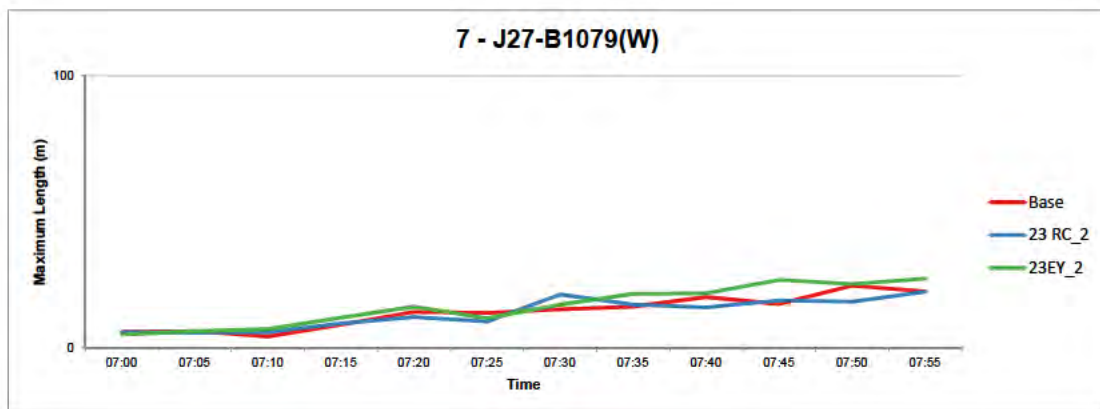
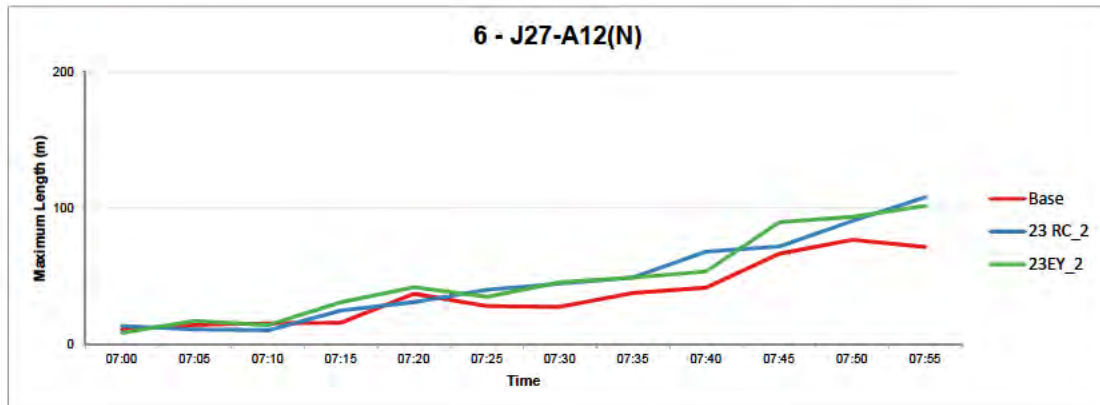


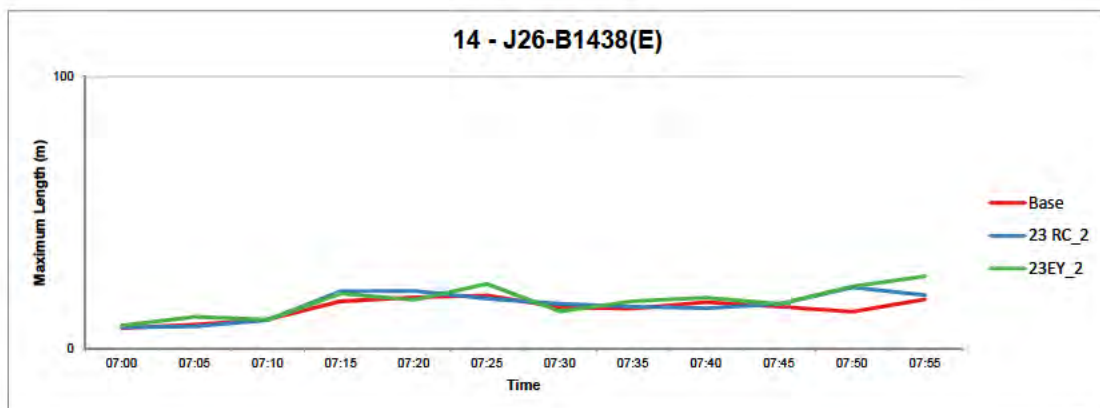
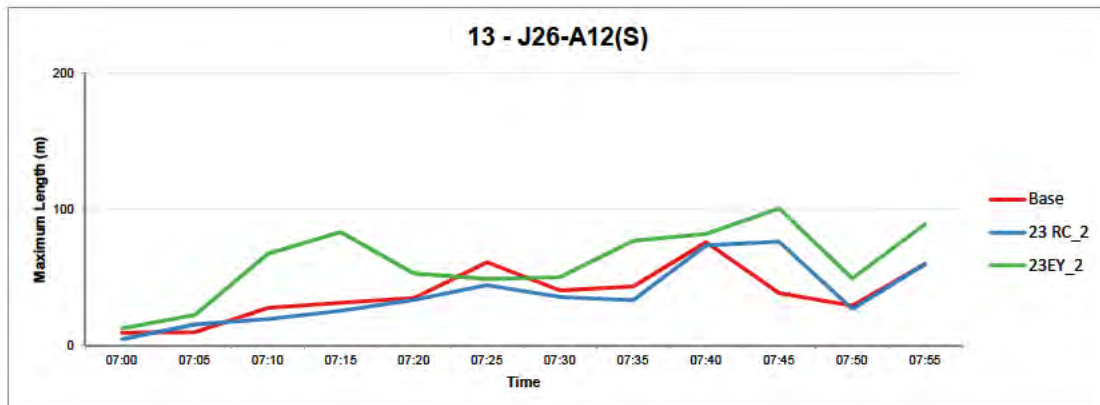
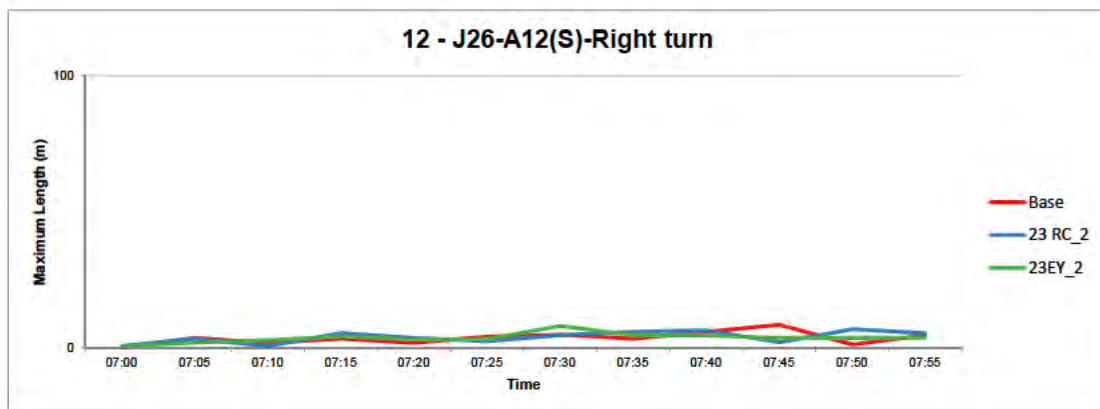
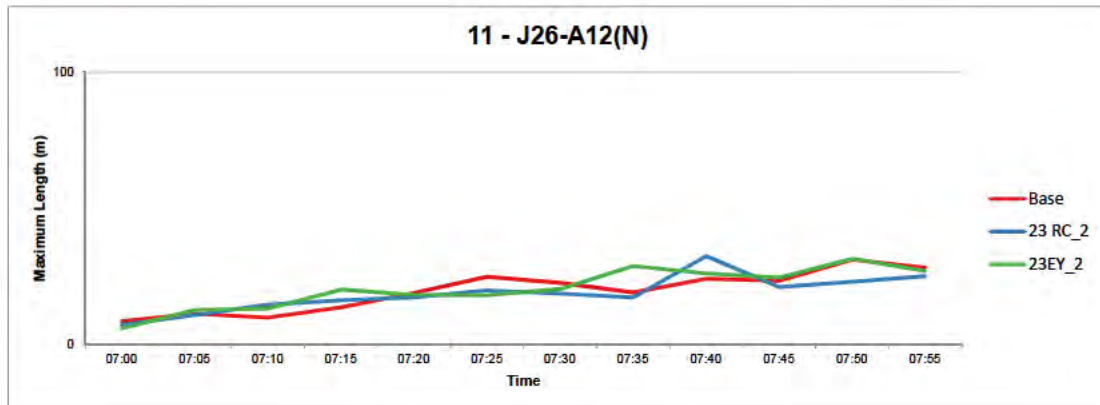


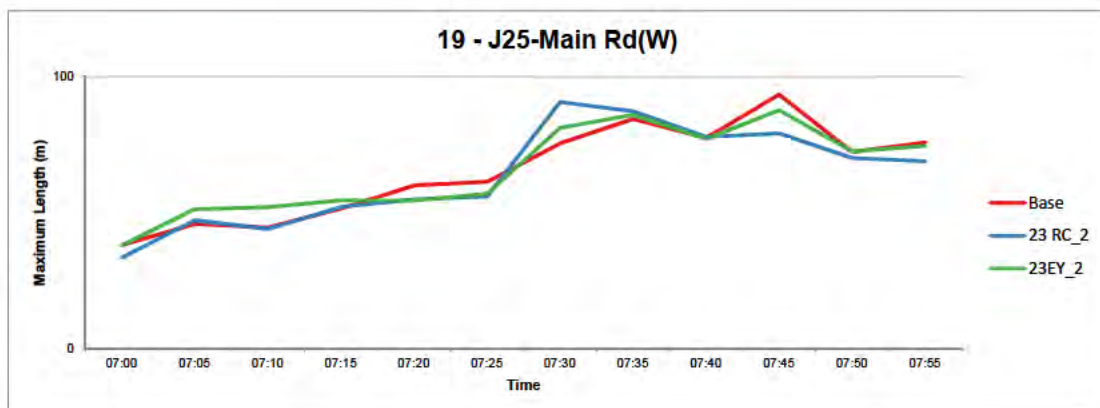
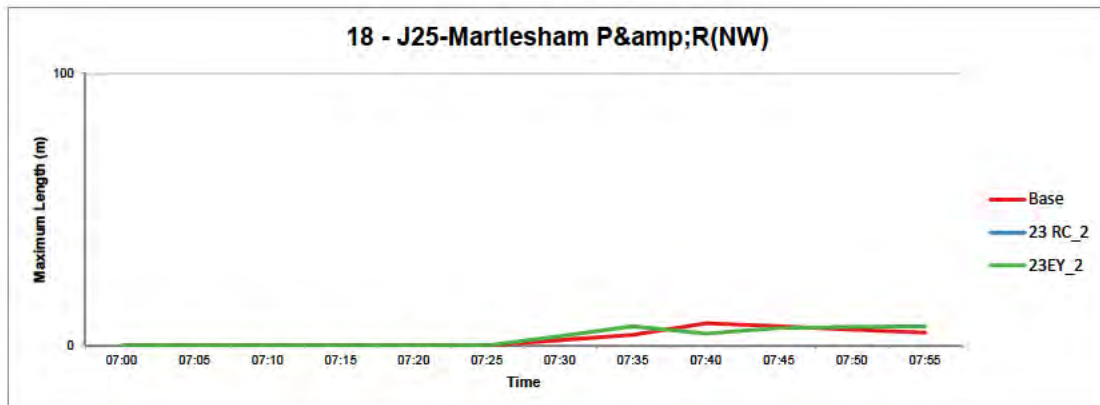
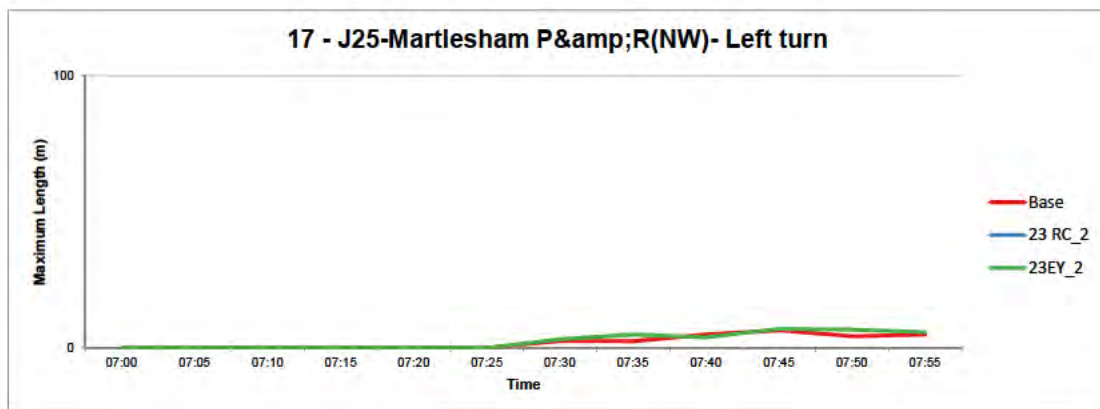
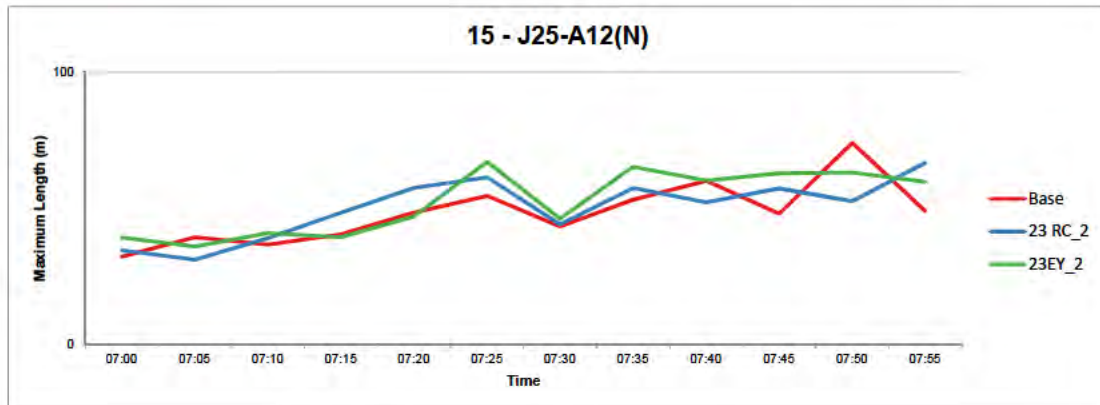


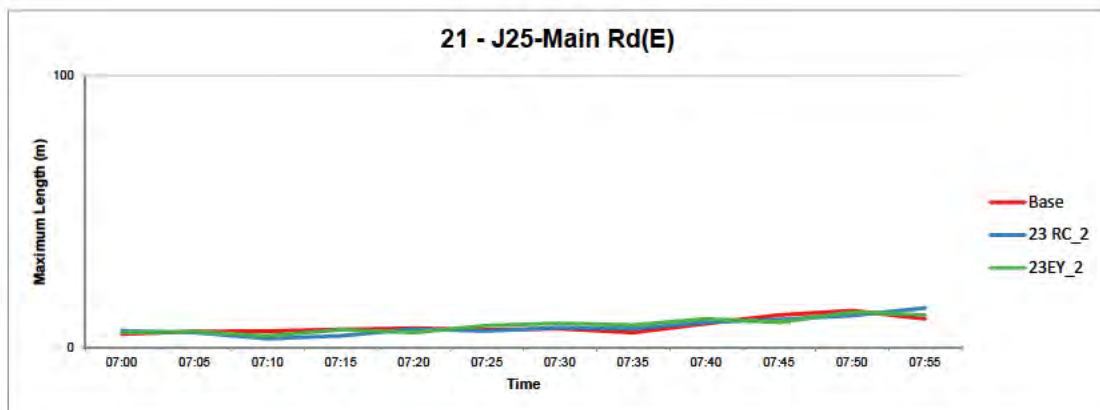
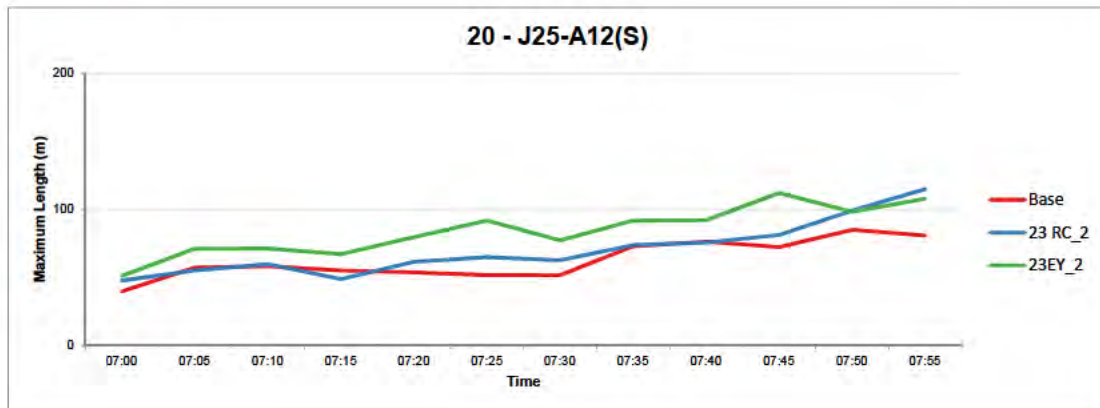
Route Names	Base	23 RC 2	23EY 2
1 - J21 - J22 - NB	101	100	101
2 - J22 - J23 - NB	61	77	77
3 - J23 - J24 - NB	35	36	36
4 - J24 - J25 - NB	45	42	42
5 - J25 - J26 - NB	107	107	108
6 - J26 - J27 - NB	79	79	80
7 - J27 - J28 - NB	89	89	90
8 - J28 - A12 - NB	130	129	130
51 - A12 NB	648	659	661
9 - A12 - J28 - SB	114	114	114
10 - J28 - J27 - SB	84	84	85
11 - J27 - J26 - SB	85	85	85
12 - J26 - J25 - SB	109	109	109
13 - J25 - J24 - SB	30	30	30
14 - J24 - J23 - SB	36	36	36
15 - J23 - J22 - SB	63	82	82
16 - J22 - J21 - SB	116	119	119
52 - A12 SB	636	659	660
17 - A14 WB upto Offslip	131	132	132
18 - A14 EB from Onslip	115	116	116
19 - A14 WB from Onslip	81	81	81
20 - A14 EB upto Offslip	85	85	85
21 - Felixstowe - SB	91	90	91
22 - Felixstowe - NB	91	91	91
23 - Bucklesham Road - NB	62	61	61
24 - Bucklesham Road - SB	61	63	62
26 - Foxhall road - WB	78	78	78
25 - Foxhall road - EB	81	82	82
27 - Newbourne Road -EB	42	42	41
28 - Newbourne Road -WB	45	47	47
29 - Eagle Way - EB	14	14	15
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	52	52	53
32 - Gloster Road - SB	50	50	50
33 - Barrack Square - SB	86	86	86
34 - Barrack Square - NB	86	87	87
35 - Anson Road - WB	37	37	37
36 - Anson Road - EB	42	42	42
37 - Eagle Way (J24) - EB	42	42	42
38 - Eagle Way (J24) - WB	43	43	43
39 - Main Road - EB	64	64	64
40 - Main Road - WB	68	68	68
41 - A1214 Main road - EB	60	60	60
42 - A1214 Main road - WB	49	49	49
43 - B1438 - WB	50	50	50
44 - B1438 - EB	49	49	49
45 - B1079 (East) - WB	30	31	30
46 - B1079 (East) - EB	29	29	29
47 - B1079 (West) - WB	33	33	33
48 - B1079 (West) - EB	34	34	34
49 - A1152 - WB	46	46	46
50 - A1152 - EB	48	48	48
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	61	77	77
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	63	82	82

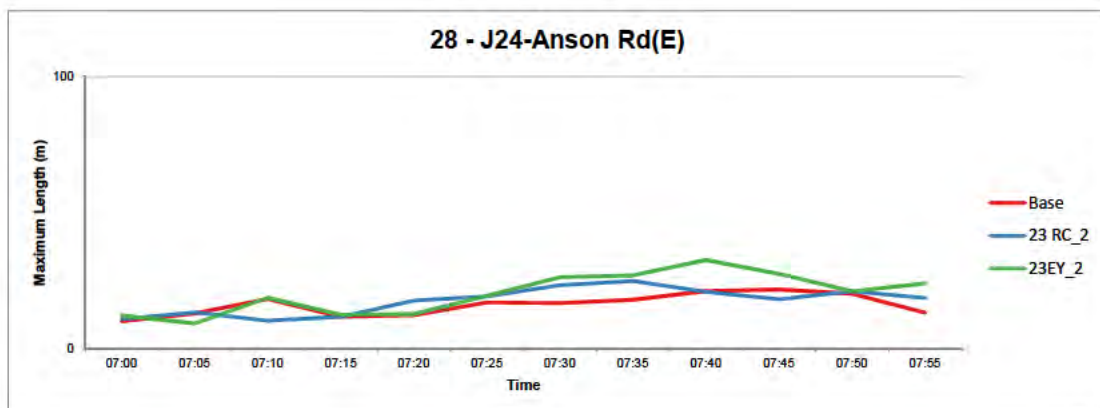
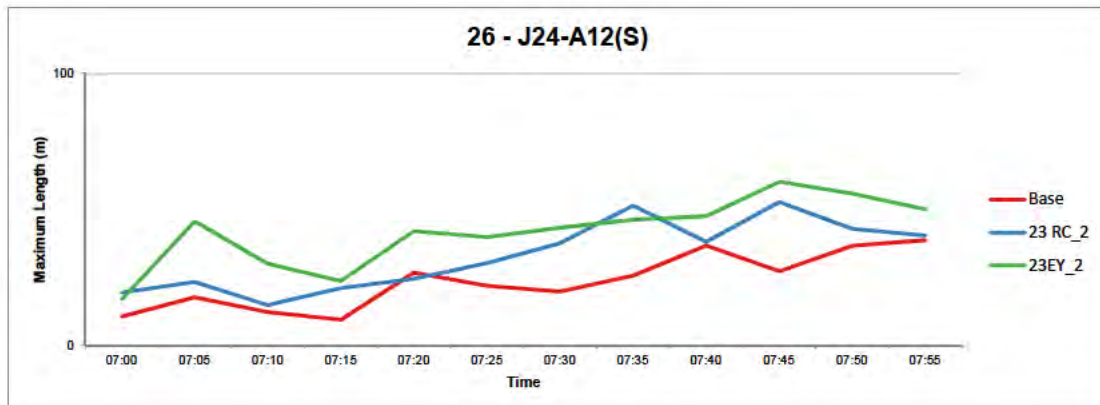
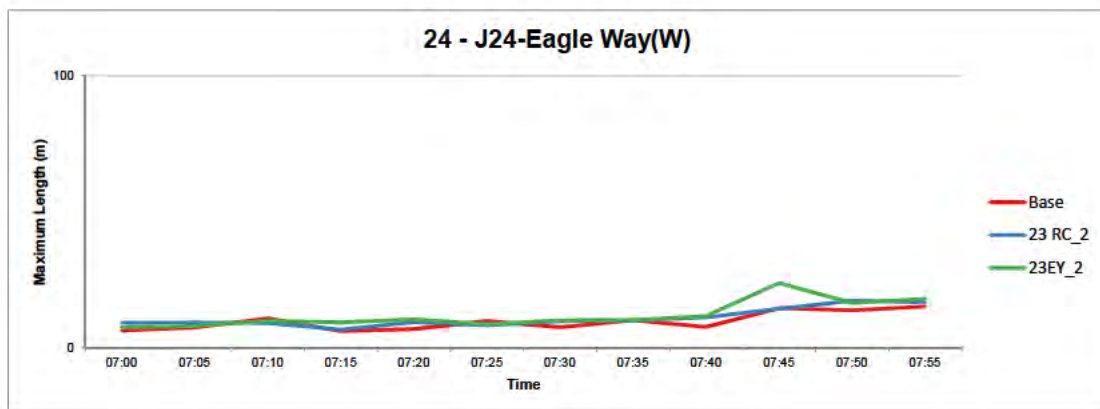
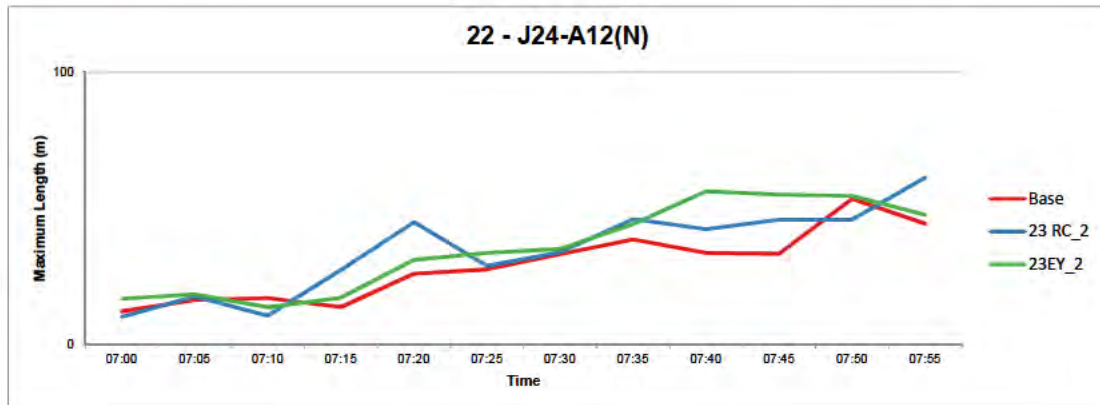


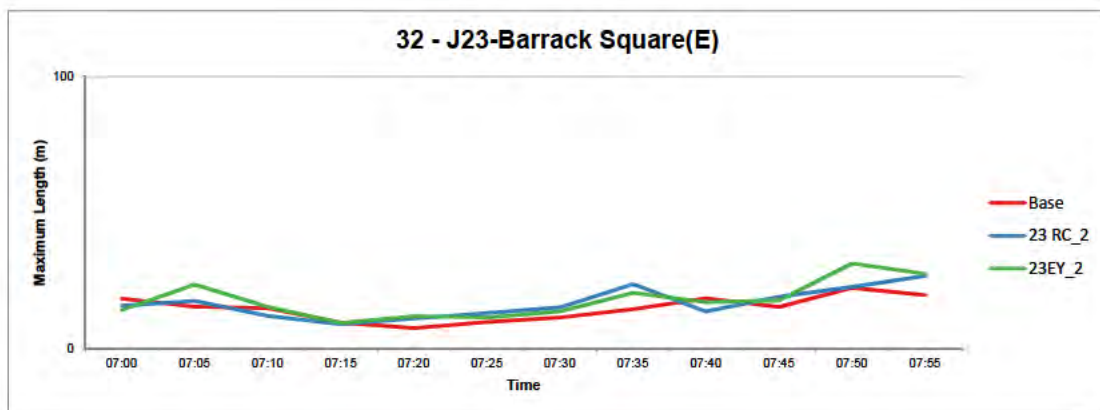
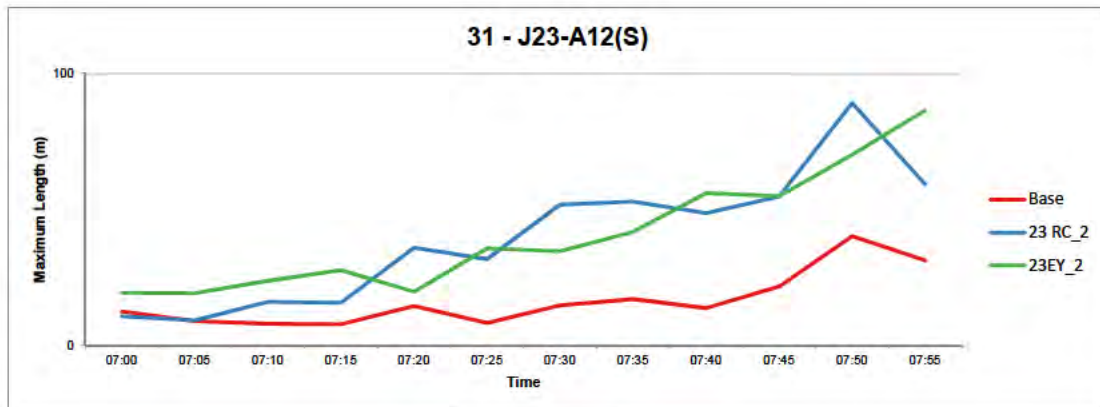
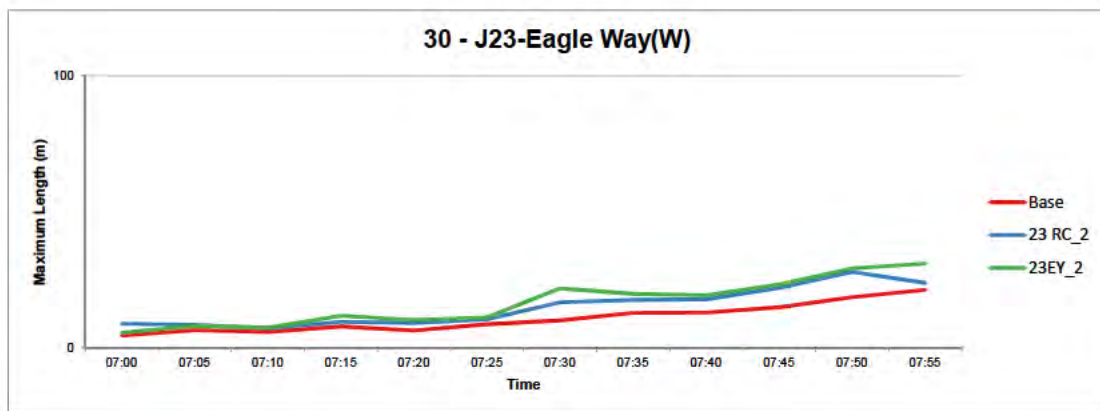
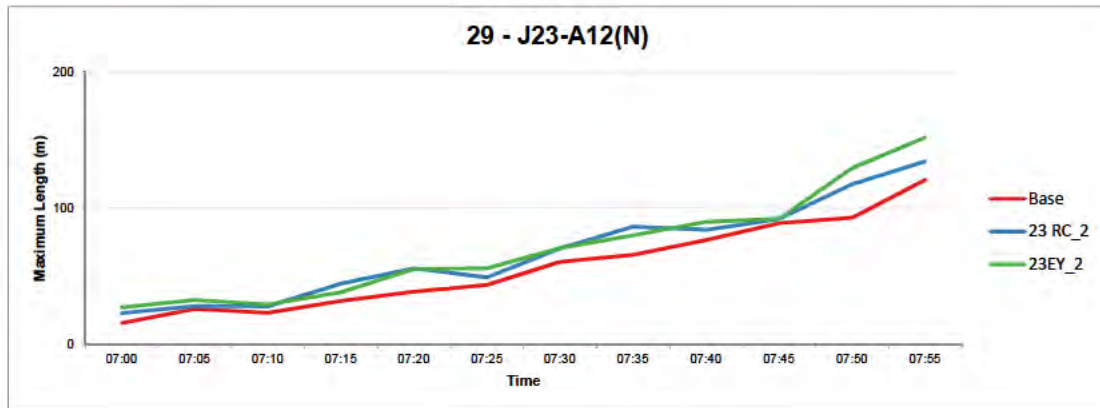


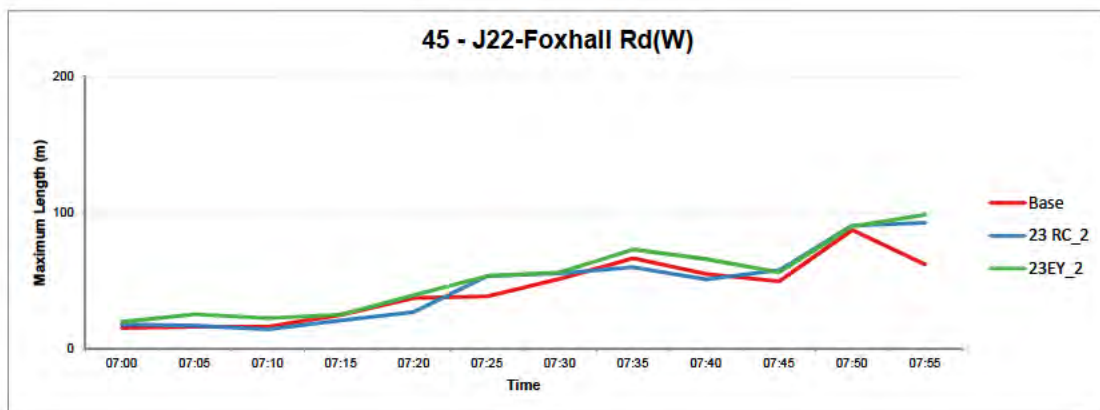
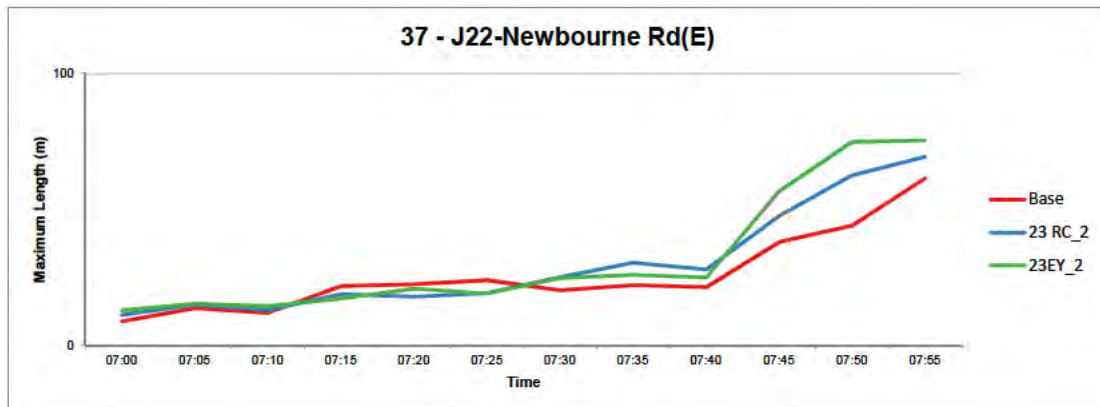
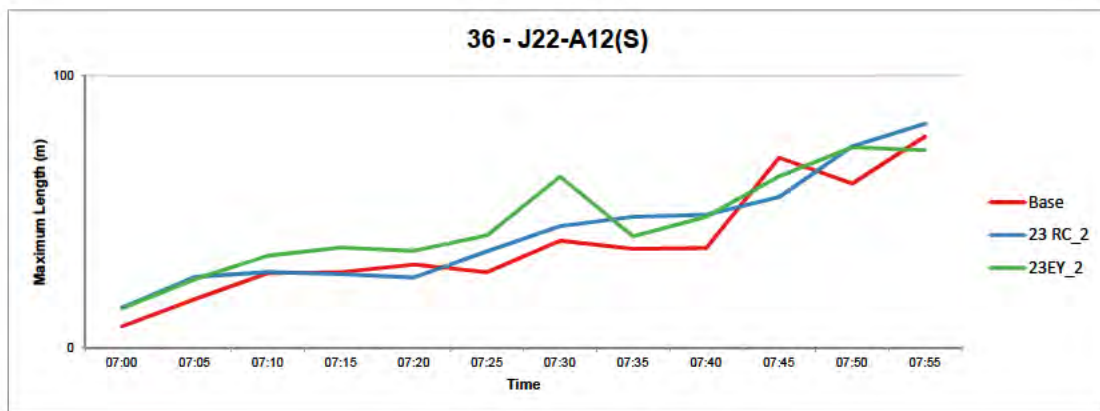
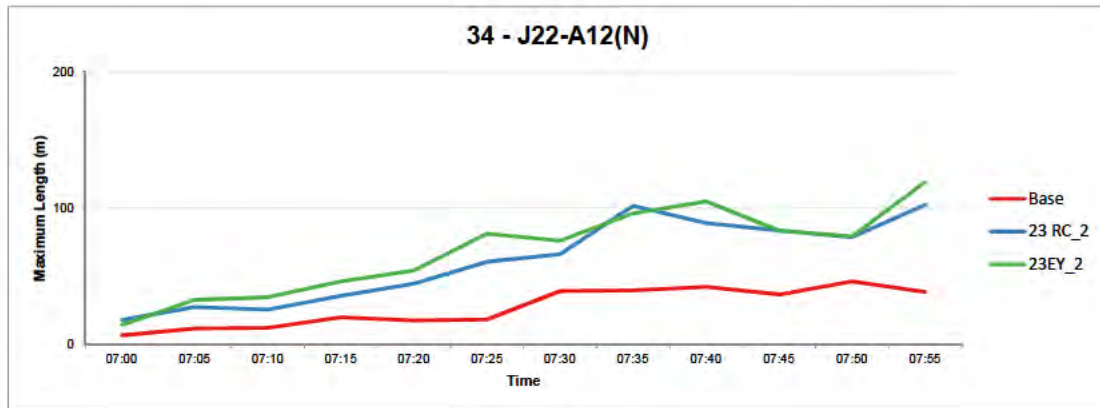


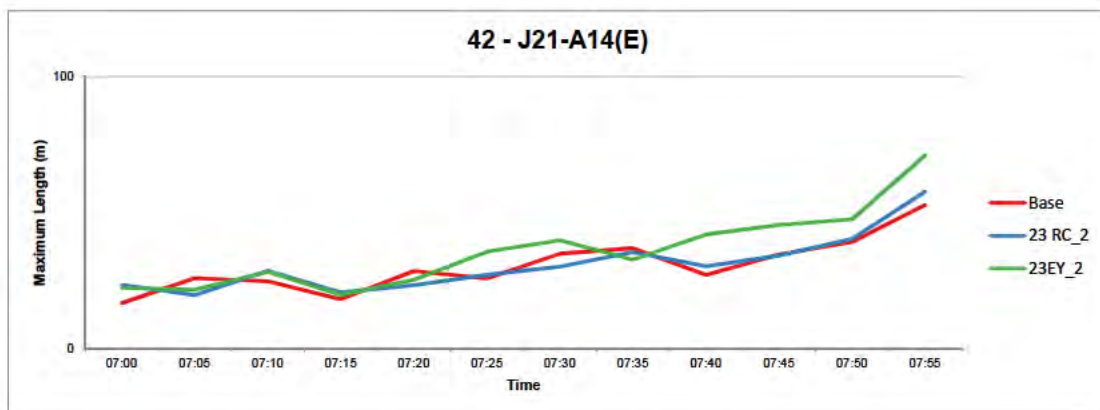
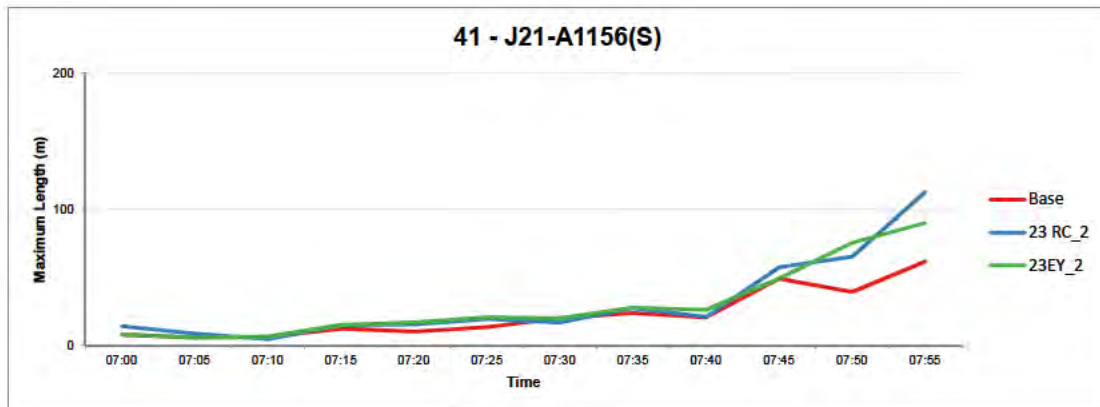
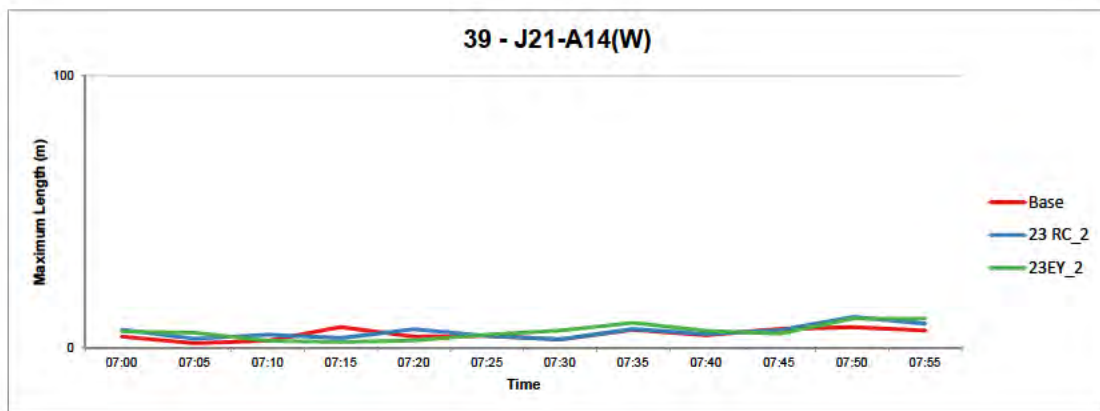
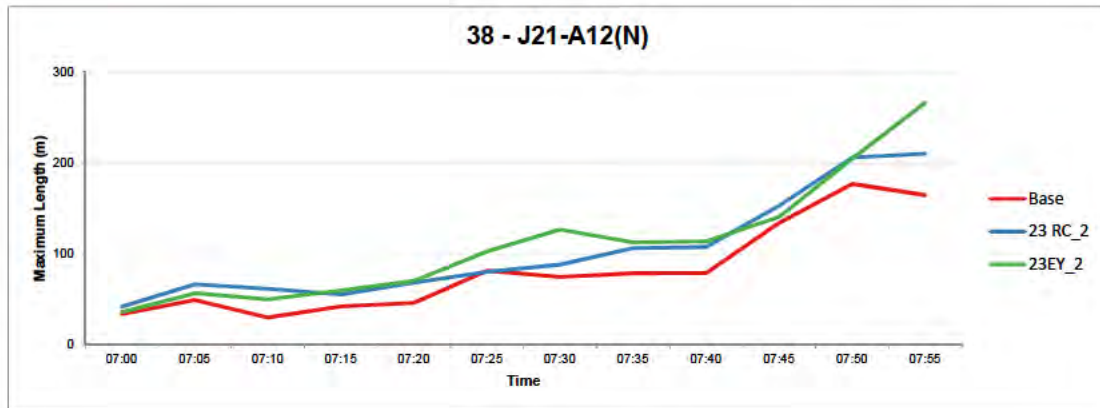






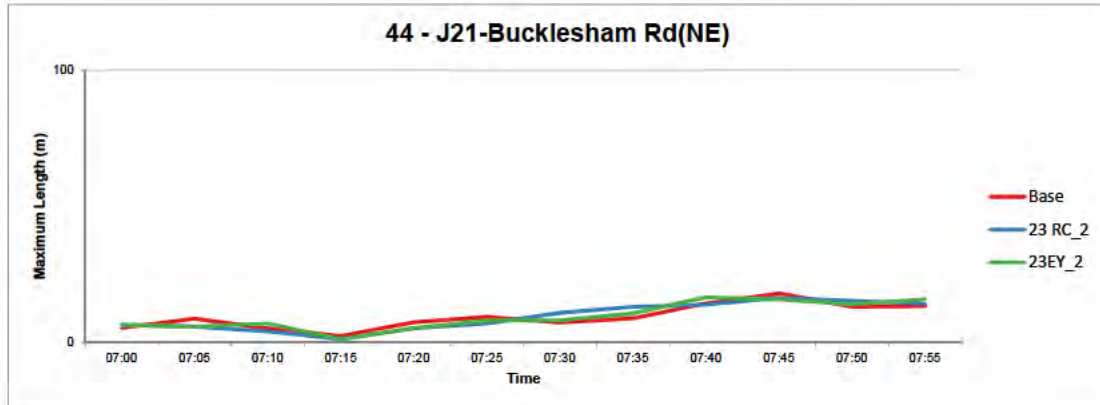








44 - J21-Bucklesham Rd(NE)





Queue Comparison
07:00-08:00
Maximum Length Summary
Maximum Length (m)

	Base	23 RC 2	23EY 2
1 - J28-A12(N)	55.3	52.5	59.1
2 - J28-A12(S)	43.8	64.7	71.0
3 - J28-A1152(E)	47.5	54.7	53.2
6 - J27-A12(N)	76.8	108.1	101.8
7 - J27-B1079(W)	22.9	20.6	25.5
8 - J27-A12(S)	49.5	54.9	63.0
9 - J27-B1079(E)	27.3	30.7	37.3
11 - J26-A12(N)	31.1	32.4	31.4
12 - J26-A12(S)-Right turn	8.5	6.8	8.0
13 - J26-A12(S)	75.8	76.1	100.6
14 - J26-B1438(E)	19.6	22.4	26.5
15 - J25-A12(N)	74.0	66.7	67.0
17 - J25-Martlesham P&R(N)	6.4	7.0	7.0
18 - J25-Martlesham P&R(N)	8.1	7.0	7.0
19 - J25-Main Rd(W)	93.3	90.6	87.6
20 - J25-A12(S)	85.0	114.8	112.0
21 - J25-Main Rd(E)	13.6	14.6	13.1
22 - J24-A12(N)	53.5	61.2	56.2
24 - J24-Eagle Way(W)	15.2	17.4	23.8
26 - J24-A12(S)	38.6	52.6	60.1
28 - J24-Anson Rd(E)	21.7	24.8	32.5
29 - J23-A12(N)	120.9	134.5	152.0
30 - J23-Eagle Way(W)	21.3	27.9	30.9
31 - J23-A12(S)	40.1	89.0	86.4
32 - J23-Barrack Square(E)	22.3	26.7	31.3
34 - J22-A12(N)	46.3	102.5	119.5
36 - J22-A12(S)	77.7	82.4	73.7
37 - J22-Newbourne Rd(E)	61.4	69.3	75.3
45 - J22-Foxhall Rd(W)	87.1	92.4	98.3
38 - J21-A12(N)	176.8	210.3	266.3
39 - J21-A14(W)	7.6	11.4	10.8
41 - J21-A1156(S)	61.6	112.6	90.0
42 - J21-A14(E)	52.8	57.7	71.1
44 - J21-Bucklesham Rd(NE)	17.9	16.3	16.6

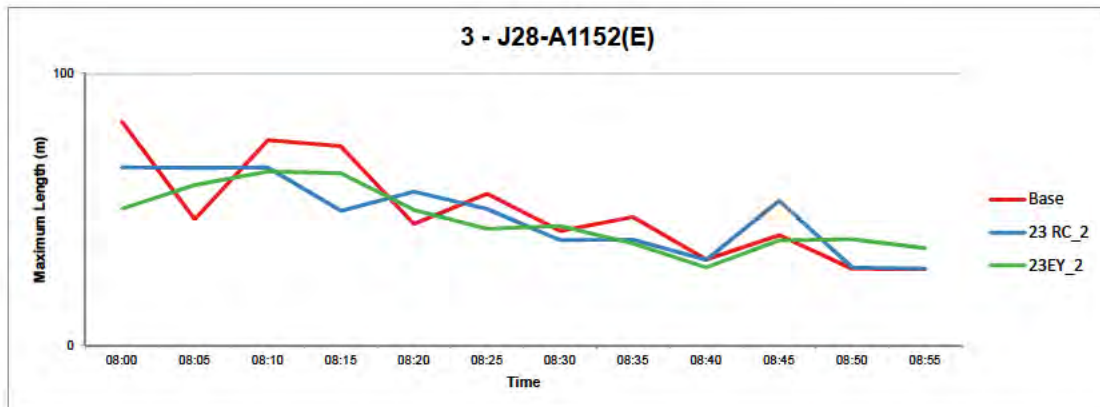
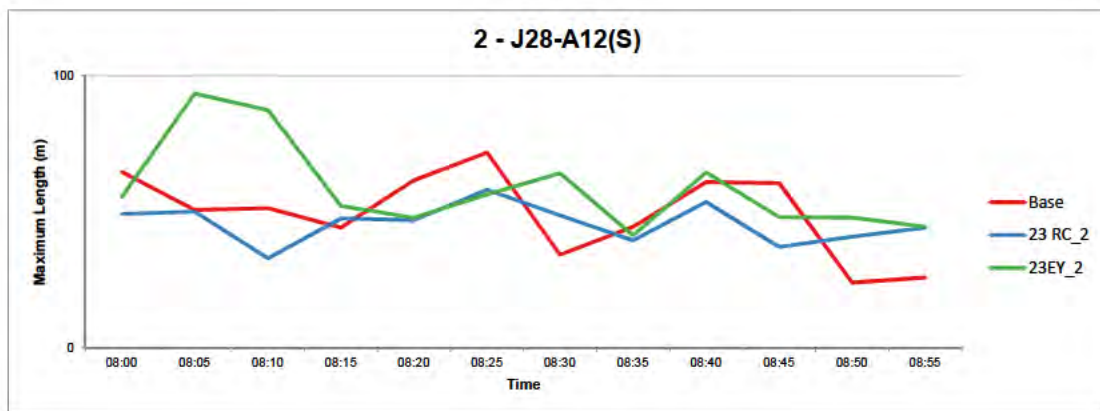
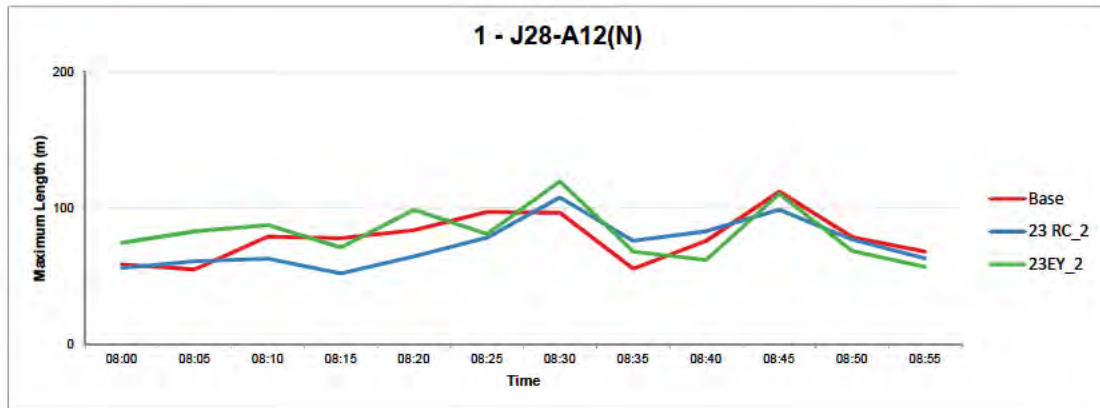


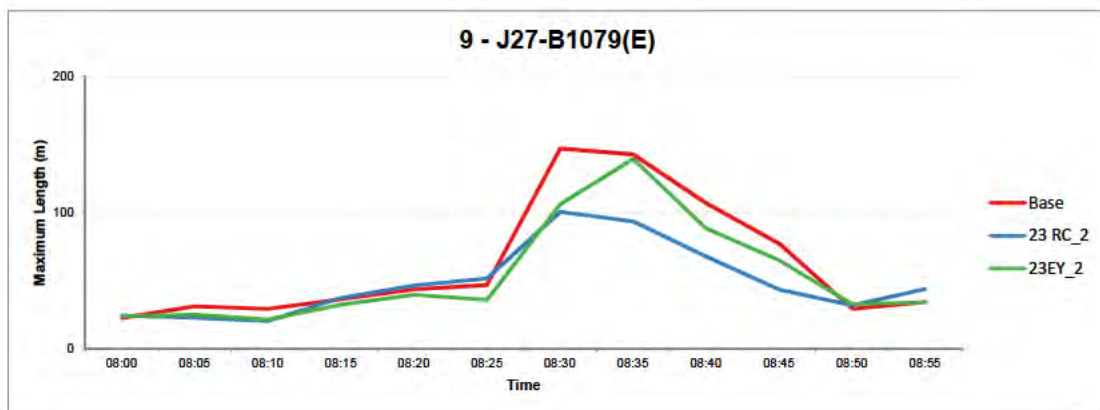
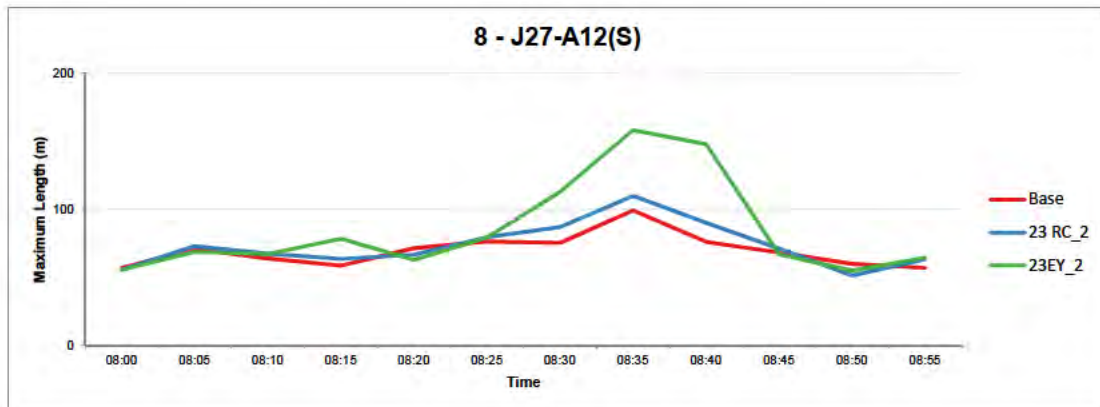
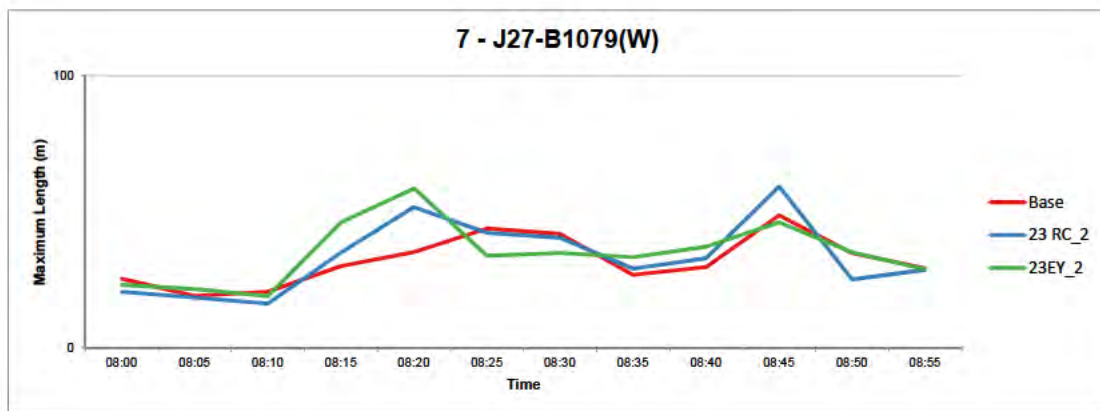
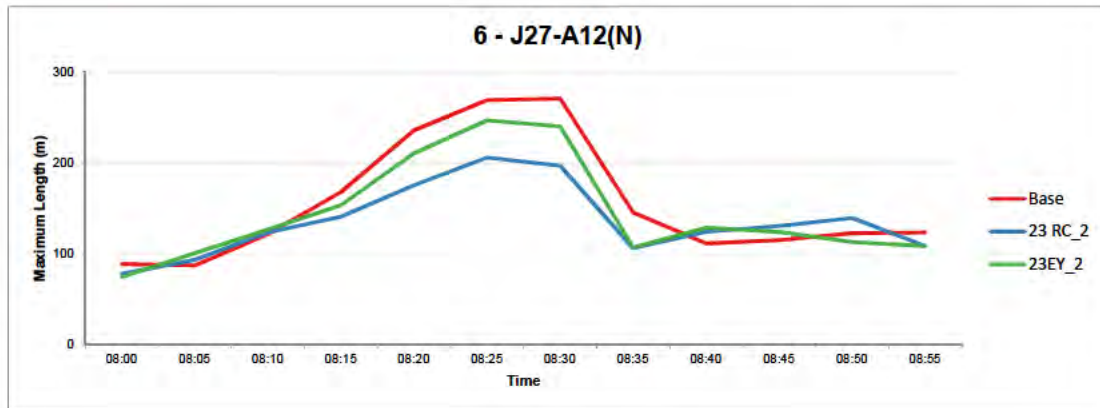
Queue Comparison
07:00-08:00
Average Length Summary
Maximum Length (m)

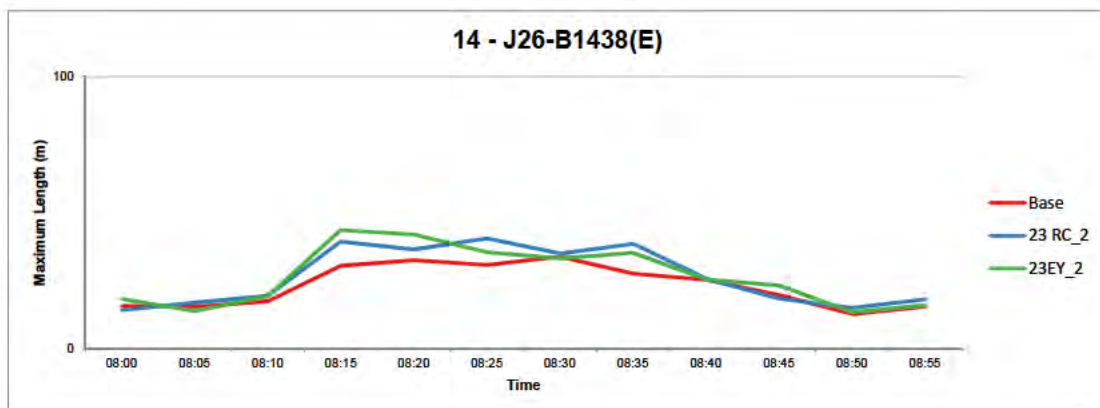
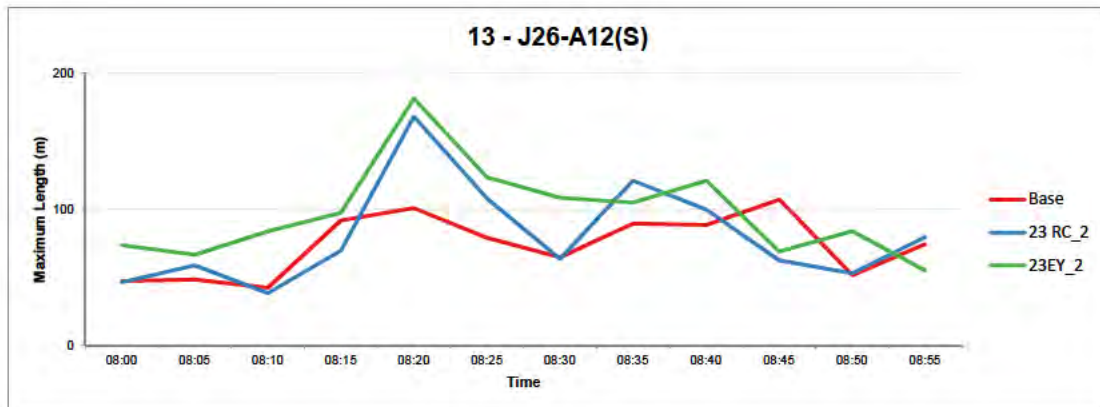
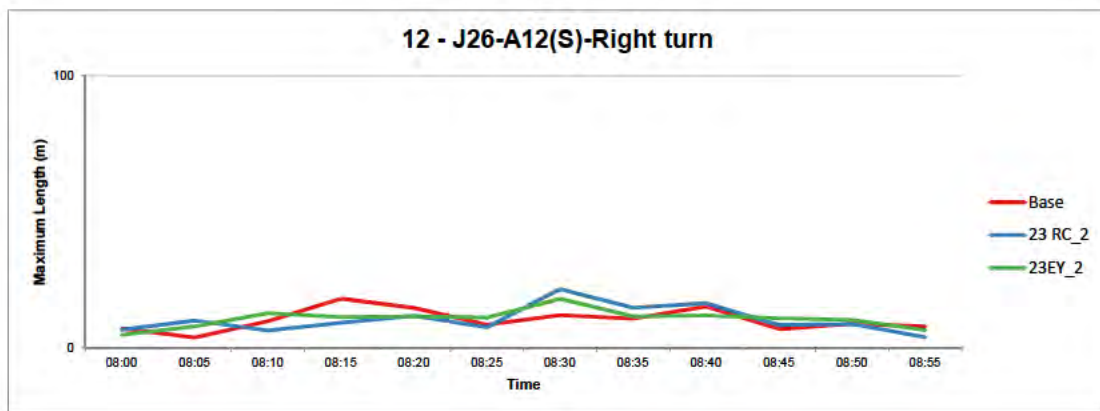
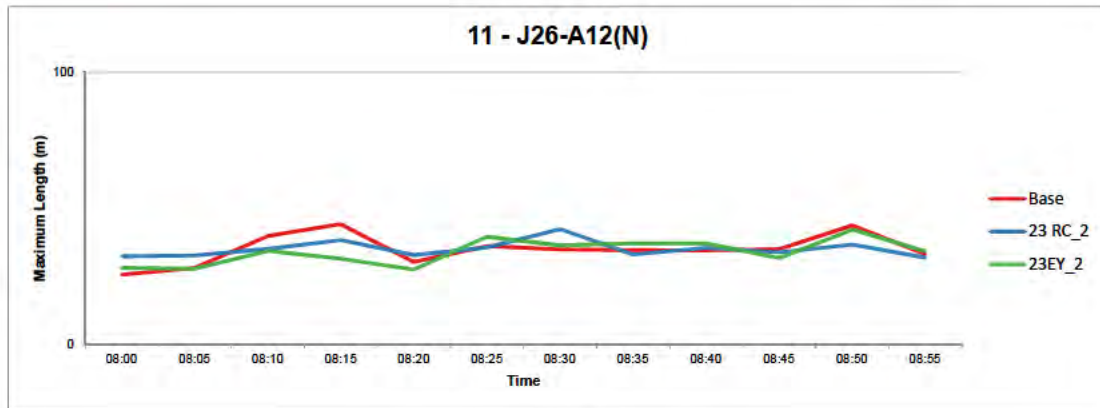
	Base	23 RC 2	23EY 2
1 - J28-A12(N)	35.7	34.6	36.9
2 - J28-A12(S)	25.5	32.5	47.3
3 - J28-A1152(E)	29.0	31.0	32.2
6 - J27-A12(N)	37.0	46.9	48.4
7 - J27-B1079(W)	13.2	12.7	15.4
8 - J27-A12(S)	36.0	38.7	42.3
9 - J27-B1079(E)	16.5	18.1	17.7
11 - J26-A12(N)	19.6	18.6	20.5
12 - J26-A12(S)-Right turn	3.6	3.9	3.7
13 - J26-A12(S)	38.3	37.2	61.2
14 - J26-B1438(E)	14.7	16.0	17.3
15 - J25-A12(N)	48.3	50.2	52.2
17 - J25-Martlesham P&R(N)	2.1	2.6	2.6
18 - J25-Martlesham P&R(N)	2.6	2.9	2.9
19 - J25-Main Rd(W)	64.9	63.4	65.4
20 - J25-A12(S)	62.8	70.3	84.1
21 - J25-Main Rd(E)	8.0	7.8	8.3
22 - J24-A12(N)	29.1	34.5	35.3
24 - J24-Eagle Way(W)	9.7	11.0	12.0
26 - J24-A12(S)	23.6	33.0	41.7
28 - J24-Anson Rd(E)	16.0	17.4	20.2
29 - J23-A12(N)	57.1	67.9	71.0
30 - J23-Eagle Way(W)	10.9	15.0	16.6
31 - J23-A12(S)	16.5	39.6	40.7
32 - J23-Barrack Square(E)	14.7	16.6	17.7
34 - J22-A12(N)	27.4	61.1	68.6
36 - J22-A12(S)	38.3	42.5	45.7
37 - J22-Newbourne Rd(E)	25.8	29.8	31.8
45 - J22-Foxhall Rd(W)	43.2	46.3	51.9
38 - J21-A12(N)	82.3	103.5	111.5
39 - J21-A14(W)	5.0	6.0	6.0
41 - J21-A1156(S)	22.4	31.4	30.0
42 - J21-A14(E)	30.4	30.9	35.9
44 - J21-Bucklesham Rd(NE)	9.4	9.4	9.5

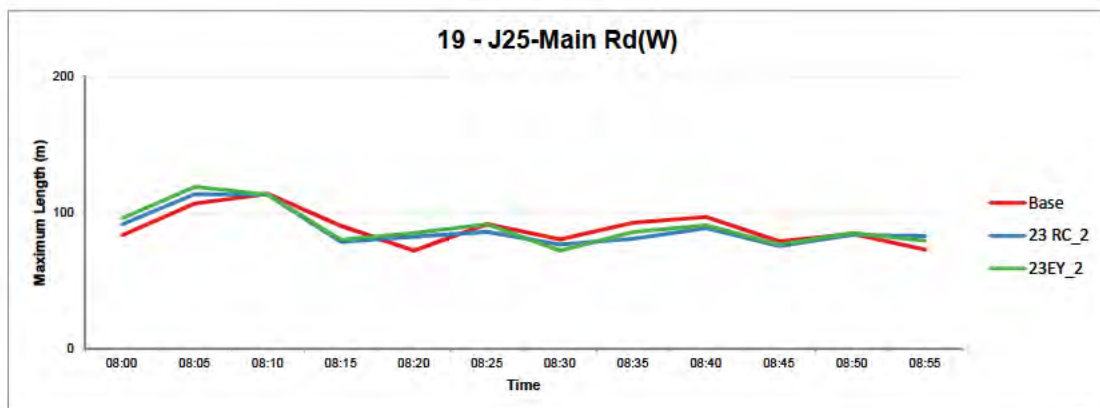
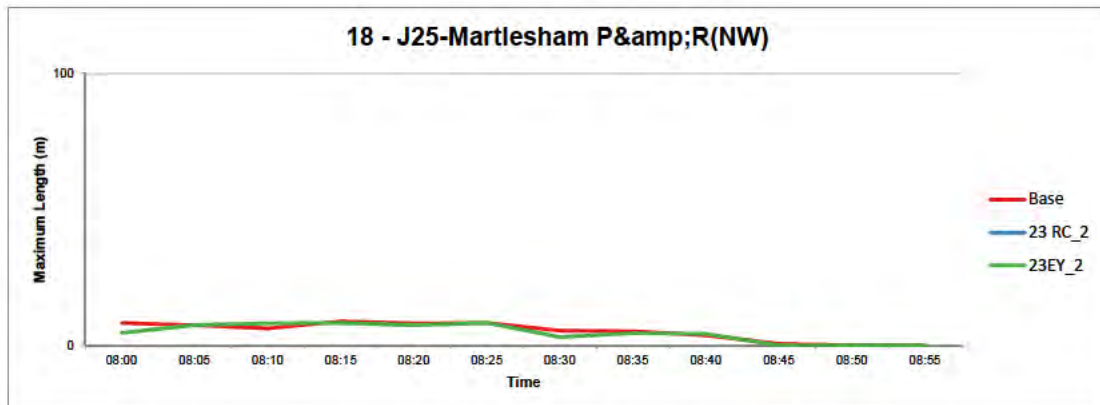
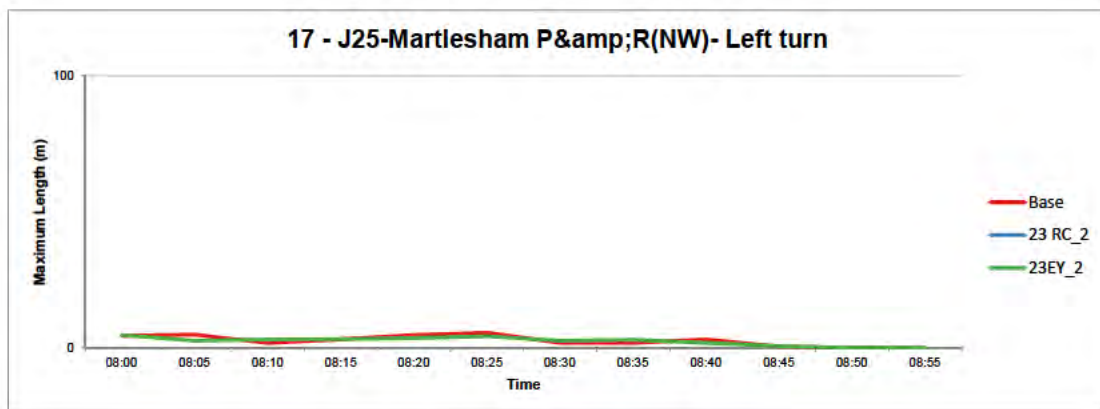
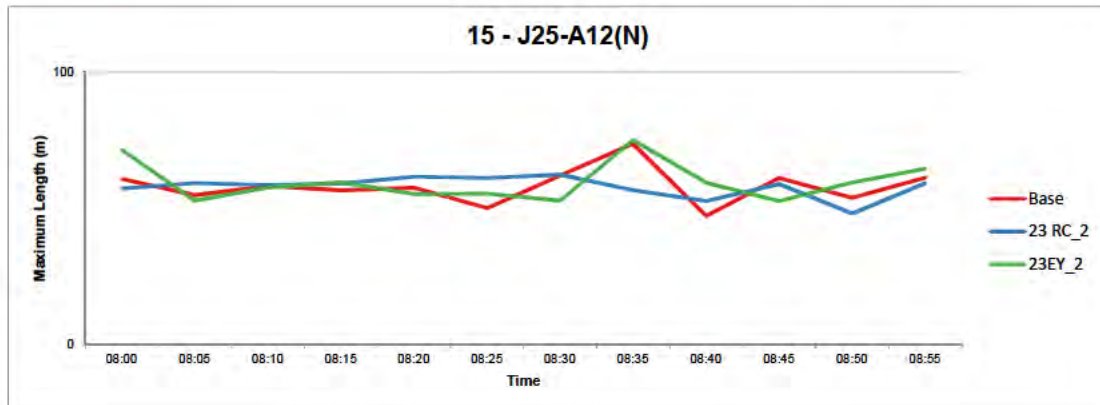


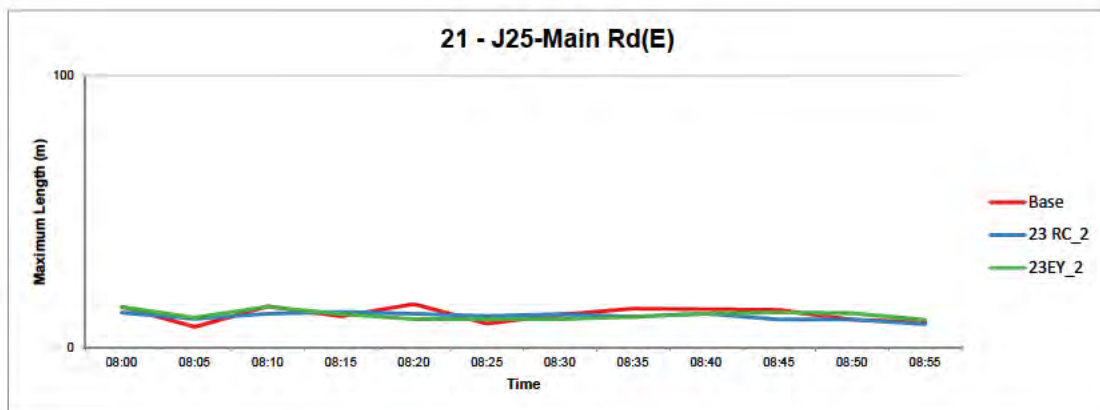
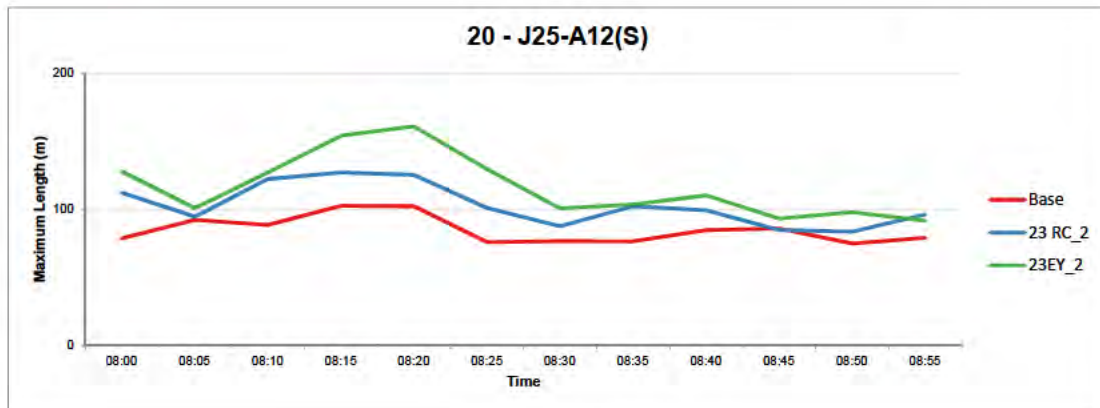
Route Names	Base	23 RC 2	23EY 2
1 - J21 - J22 - NB	106	107	108
2 - J22 - J23 - NB	64	84	85
3 - J23 - J24 - NB	37	38	39
4 - J24 - J25 - NB	48	48	51
5 - J25 - J26 - NB	119	119	124
6 - J26 - J27 - NB	88	88	91
7 - J27 - J28 - NB	94	95	96
8 - J28 - A12 - NB	136	136	139
51 - A12 NB	691	711	730
9 - A12 - J28 - SB	124	124	125
10 - J28 - J27 - SB	90	91	92
11 - J27 - J26 - SB	91	91	92
12 - J26 - J25 - SB	111	112	112
13 - J25 - J24 - SB	32	33	33
14 - J24 - J23 - SB	45	47	47
15 - J23 - J22 - SB	66	92	93
16 - J22 - J21 - SB	126	130	131
52 - A12 SB	679	713	718
17 - A14 WB upto Offslip	138	139	142
18 - A14 EB from Onslip	117	118	119
19 - A14 WB from Onslip	85	85	85
20 - A14 EB upto Offslip	88	89	90
21 - Felixstowe - SB	97	97	97
22 - Felixstowe - NB	104	107	106
23 - Bucklesham Road - NB	62	61	62
24 - Bucklesham Road - SB	68	69	70
26 - Foxhall road - WB	83	82	83
25 - Foxhall road - EB	97	99	102
27 - Newbourne Road -EB	42	42	42
28 - Newbourne Road -WB	56	57	60
29 - Eagle Way - EB	16	20	21
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	54	54	54
32 - Gloster Road - SB	52	52	52
33 - Barrack Square - SB	90	90	90
34 - Barrack Square - NB	88	89	90
35 - Anson Road - WB	41	41	42
36 - Anson Road - EB	44	44	44
37 - Eagle Way (J24) - EB	45	47	48
38 - Eagle Way (J24) - WB	44	44	44
39 - Main Road - EB	65	65	65
40 - Main Road - WB	70	70	71
41 - A1214 Main road - EB	64	64	64
42 - A1214 Main road - WB	50	50	50
43 - B1438 - WB	53	54	54
44 - B1438 - EB	50	50	50
45 - B1079 (East) - WB	38	38	38
46 - B1079 (East) - EB	29	29	29
47 - B1079 (West)- WB	33	33	33
48 - B1079 (West)- EB	37	37	38
49 - A1152 - WB	49	49	49
50 - A1152 - EB	49	49	49
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	64	84	85
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	66	92	93

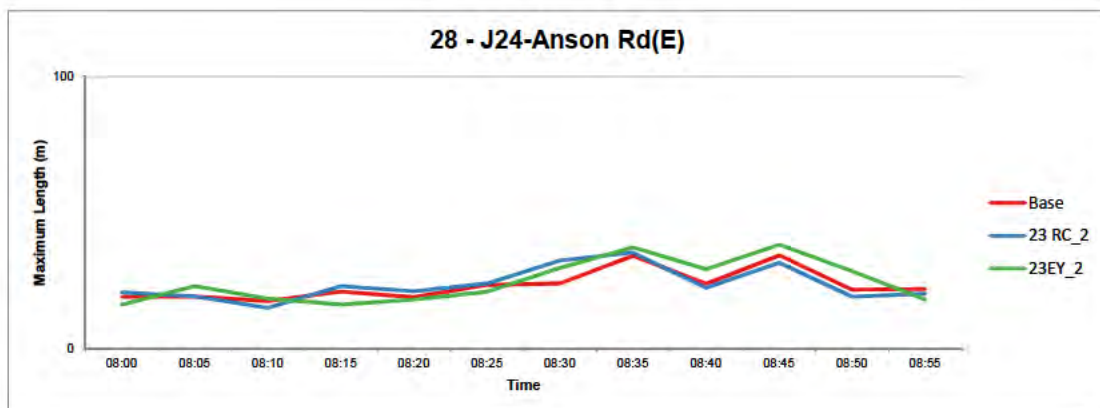
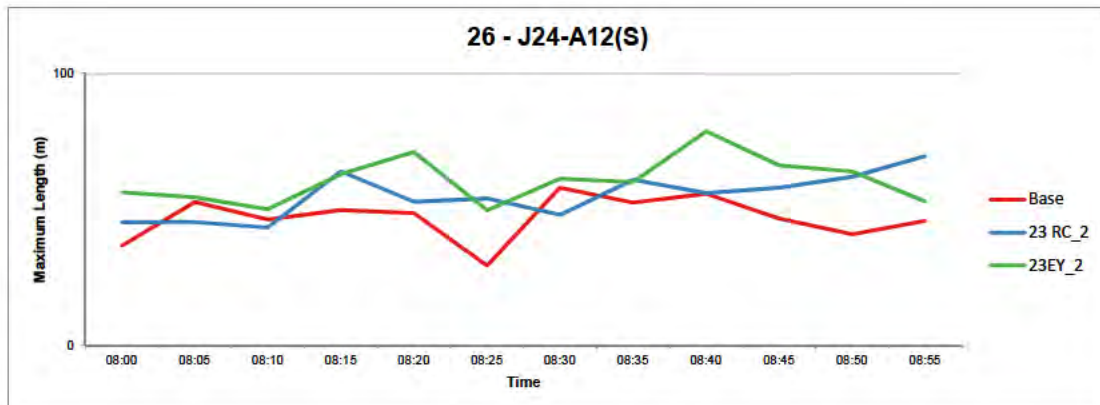
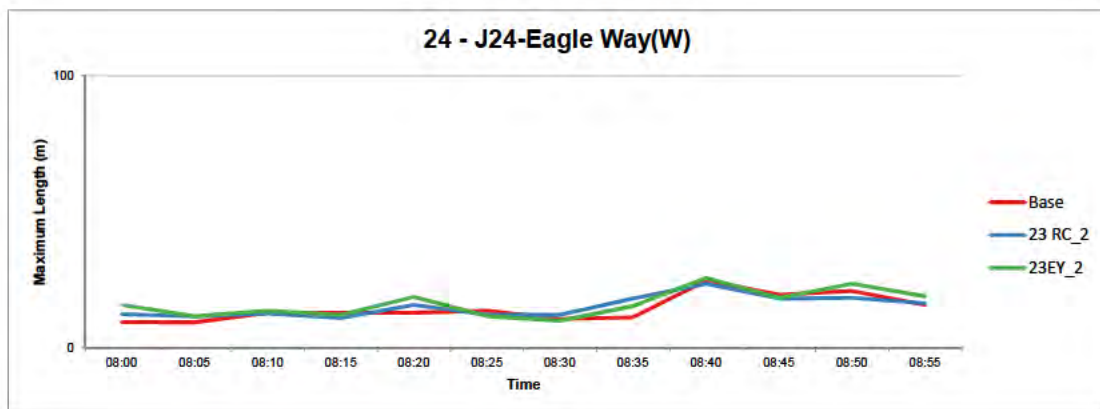
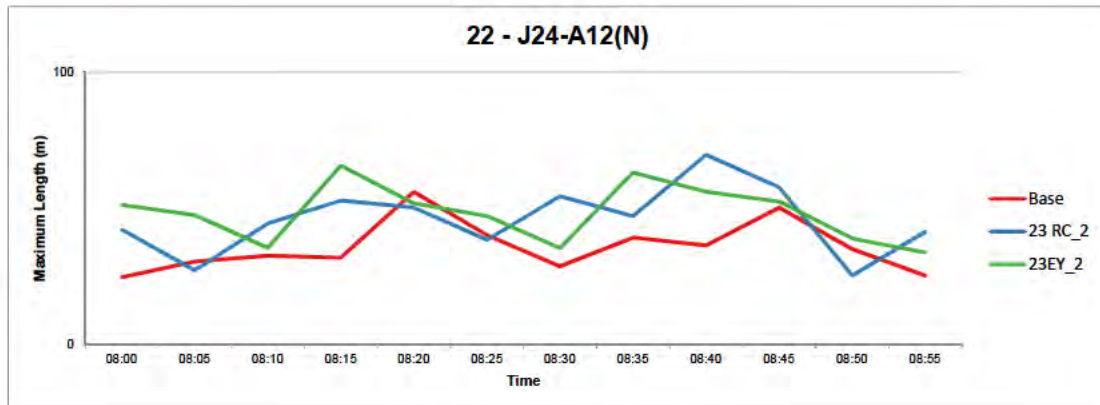


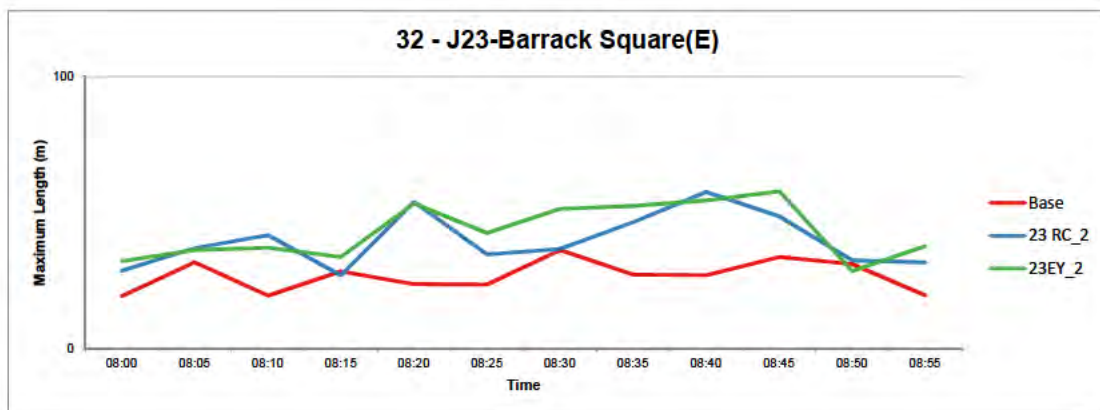
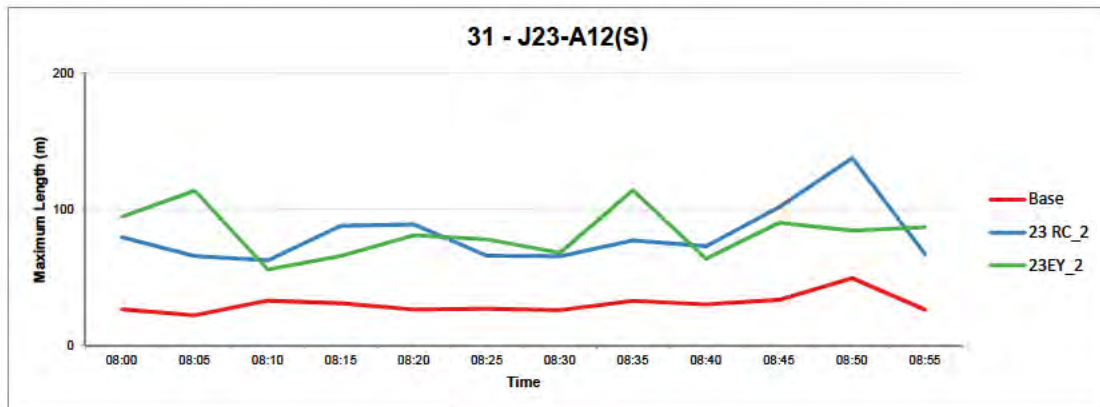
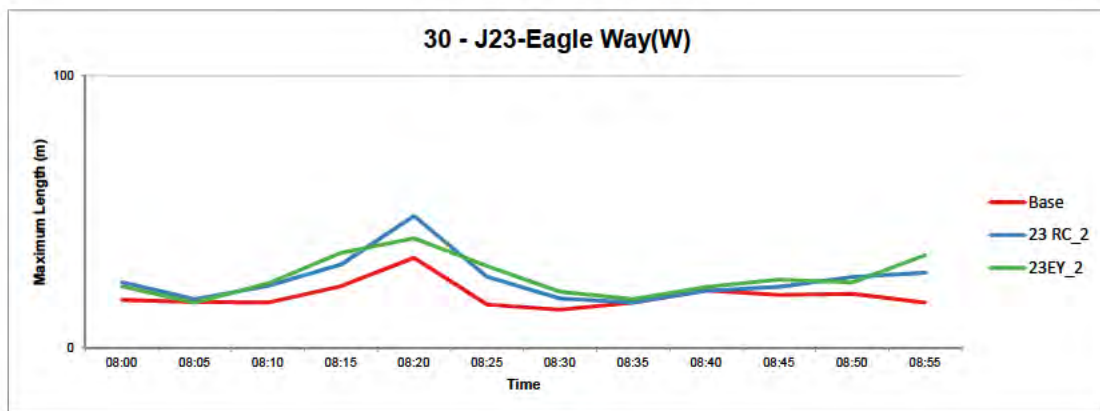
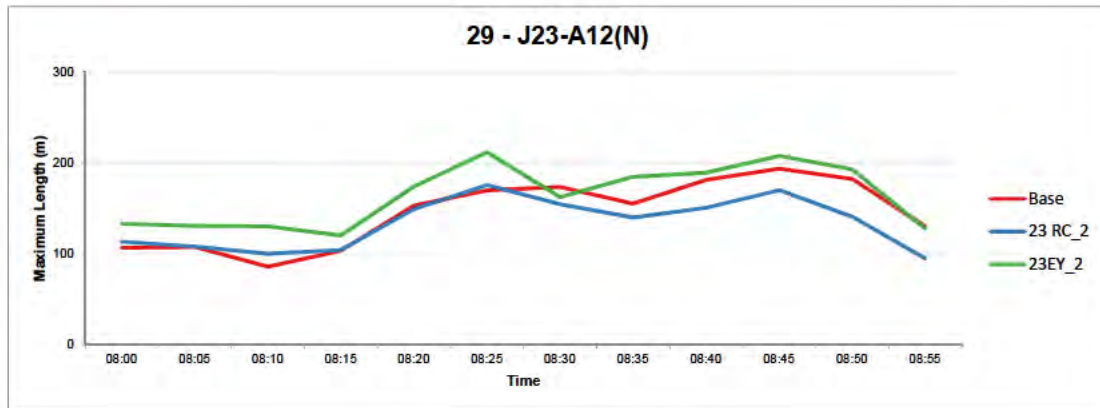


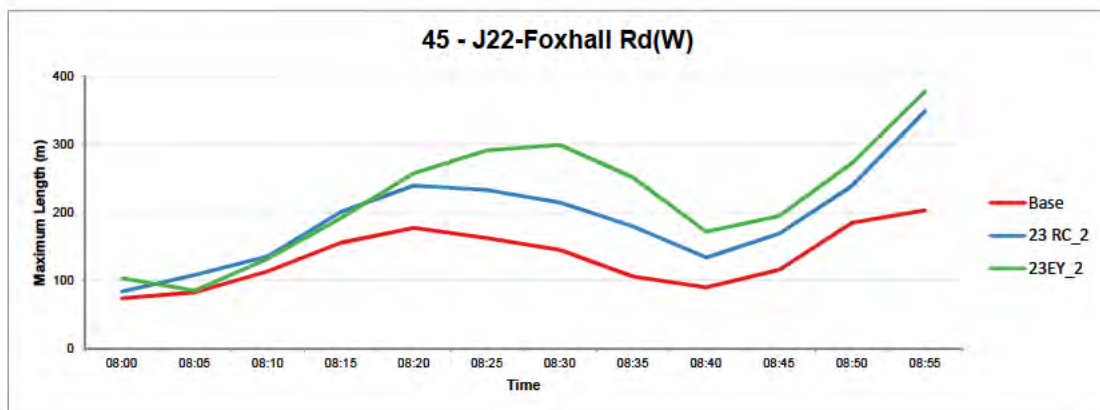
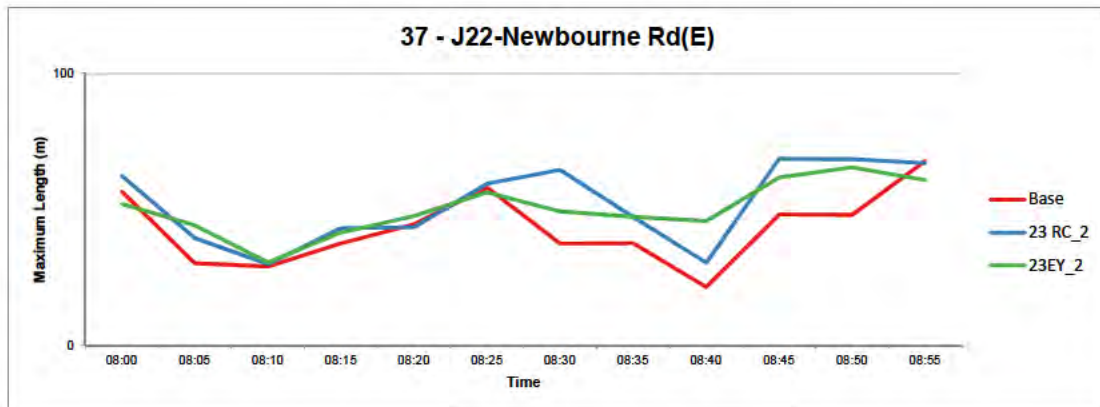
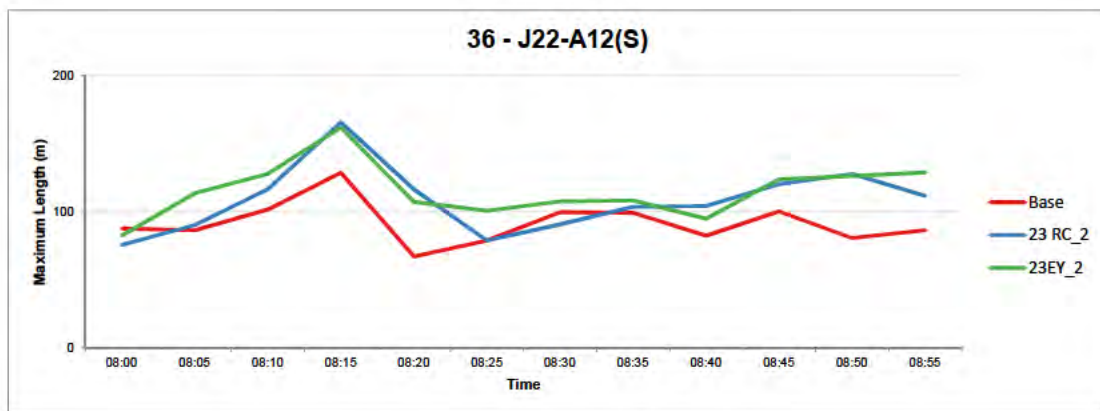
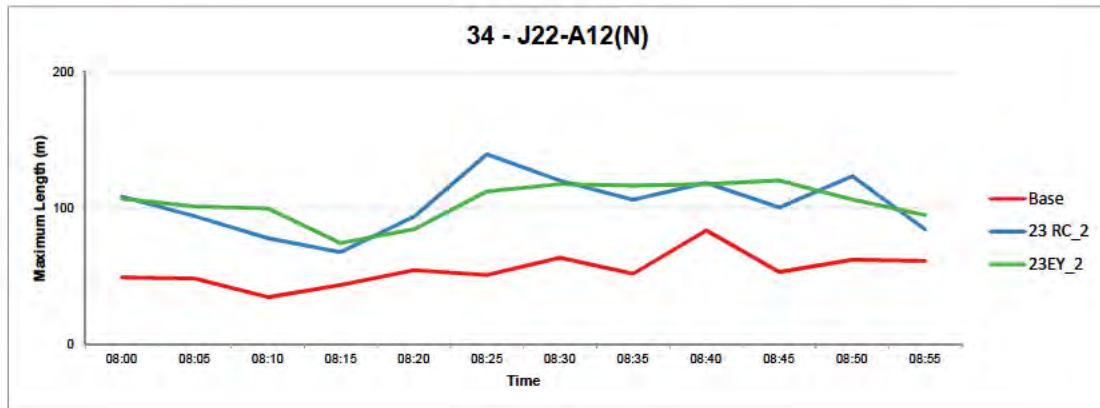


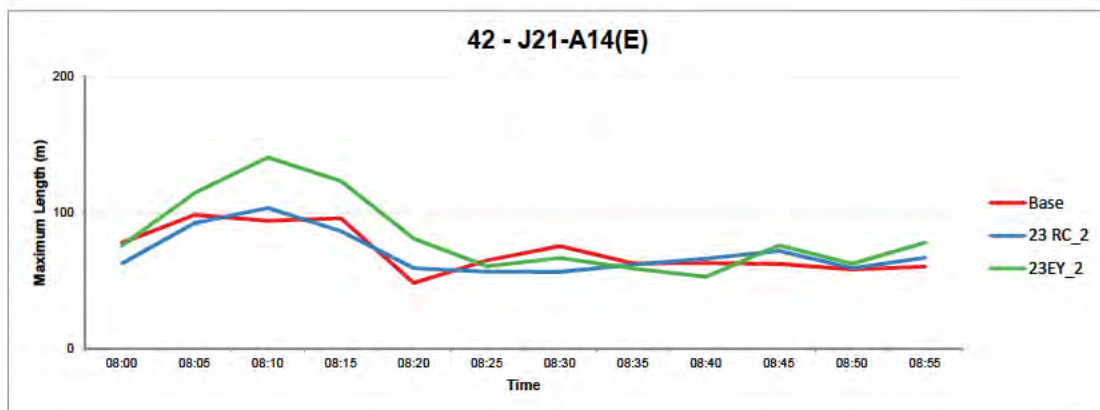
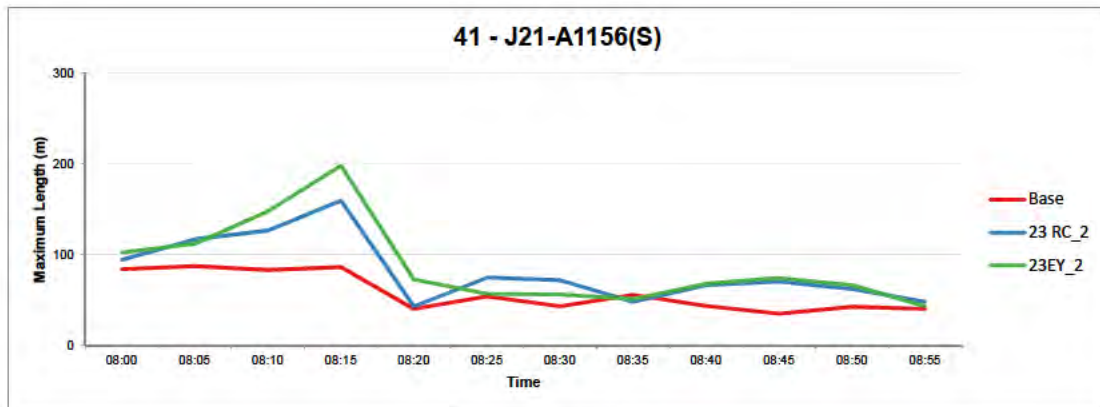
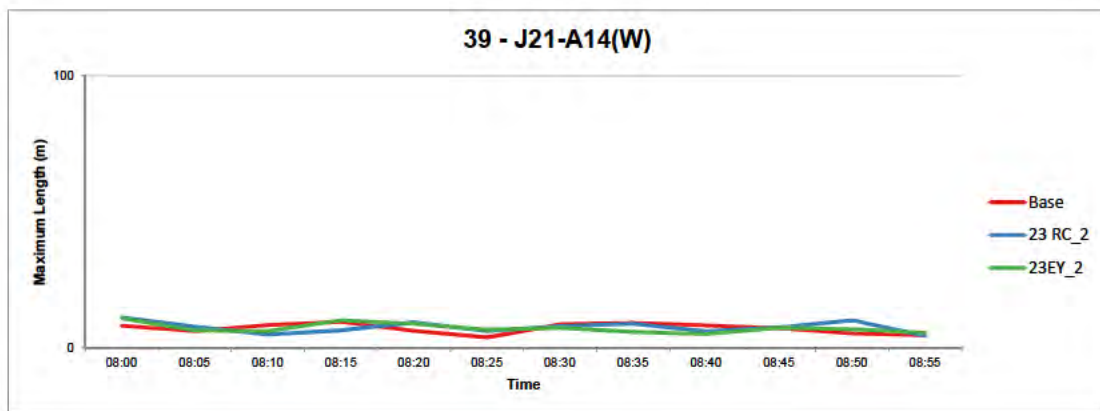
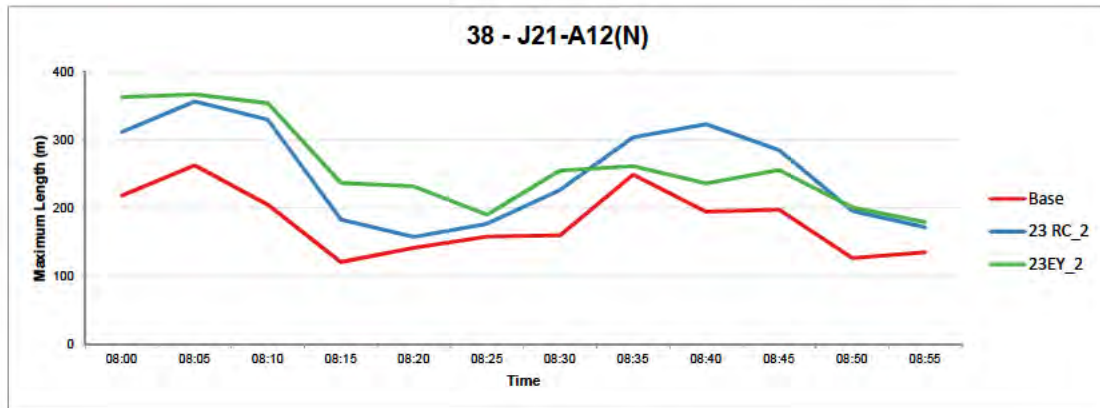






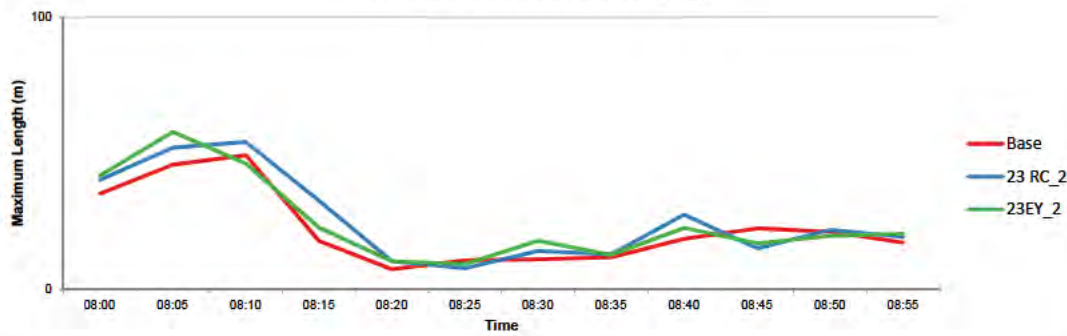








44 - J21-Bucklesham Rd(NE)





Queue Comparison
08:00-09:00
Maximum Length Summary
Maximum Length (m)

	Base	23 RC 2	23EY 2
1 - J28-A12(N)	112.2	107.9	119.8
2 - J28-A12(S)	71.7	58.1	93.4
3 - J28-A1152(E)	82.4	65.4	63.9
6 - J27-A12(N)	270.9	205.8	246.8
7 - J27-B1079(W)	48.7	59.3	58.6
8 - J27-A12(S)	99.1	109.8	158.2
9 - J27-B1079(E)	146.9	100.5	139.4
11 - J26-A12(N)	44.2	42.3	42.1
12 - J26-A12(S)-Right turn	18.1	21.6	18.0
13 - J26-A12(S)	107.1	168.0	181.4
14 - J26-B1438(E)	33.7	40.5	43.6
15 - J25-A12(N)	73.7	62.4	75.1
17 - J25-Martlesham P&R(N)	5.6	4.7	4.7
18 - J25-Martlesham P&R(N)	8.8	8.2	8.2
19 - J25-Main Rd(W)	113.7	113.5	118.8
20 - J25-A12(S)	102.5	127.0	160.9
21 - J25-Main Rd(E)	16.0	13.2	15.1
22 - J24-A12(N)	56.0	69.6	65.6
24 - J24-Eagle Way(W)	24.7	23.6	25.7
26 - J24-A12(S)	57.9	69.5	78.6
28 - J24-Anson Rd(E)	34.2	35.3	38.2
29 - J23-A12(N)	193.5	175.5	211.8
30 - J23-Eagle Way(W)	33.1	48.5	40.2
31 - J23-A12(S)	49.4	137.5	114.0
32 - J23-Barrack Square(E)	36.2	57.5	57.8
34 - J22-A12(N)	83.7	139.6	120.5
36 - J22-A12(S)	128.6	165.7	161.9
37 - J22-Newbourne Rd(E)	67.8	68.5	65.4
45 - J22-Foxhall Rd(W)	203.4	349.5	378.0
38 - J21-A12(N)	263.0	356.9	367.4
39 - J21-A14(W)	9.5	11.2	10.8
41 - J21-A1156(S)	87.3	159.5	198.0
42 - J21-A14(E)	98.2	103.3	140.4
44 - J21-Bucklesham Rd(NE)	49.3	54.2	57.9

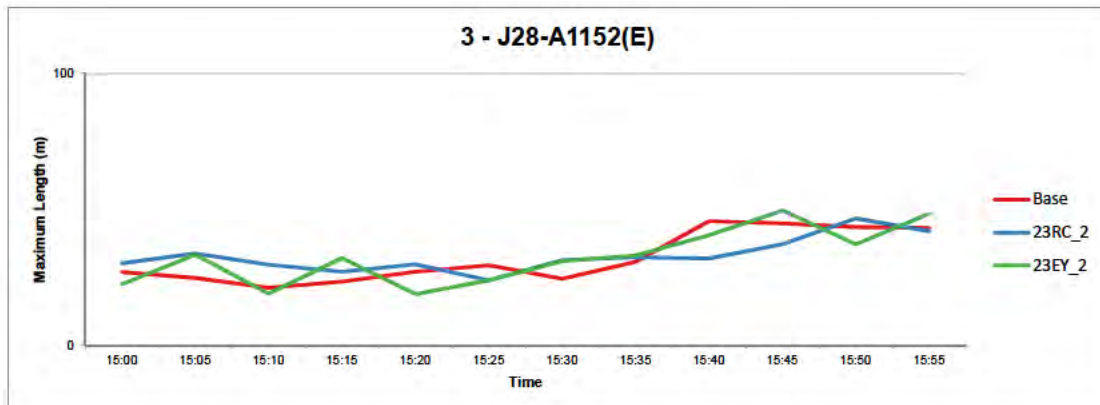
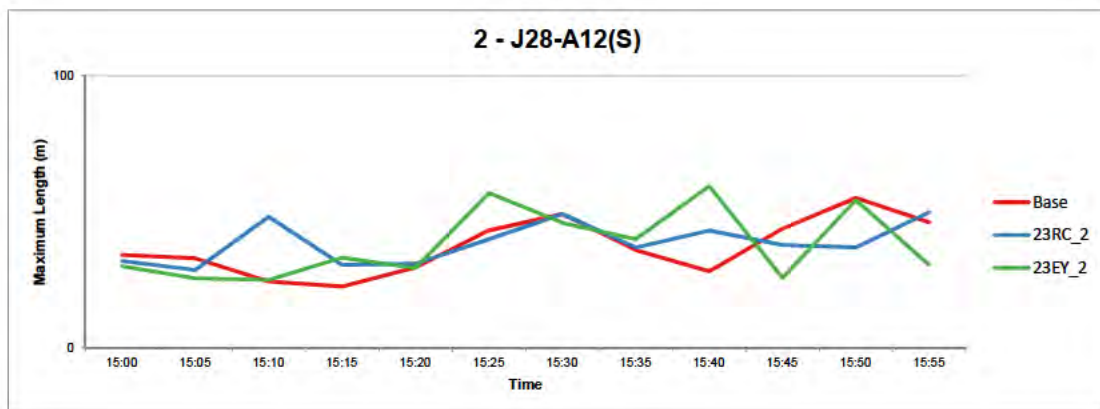
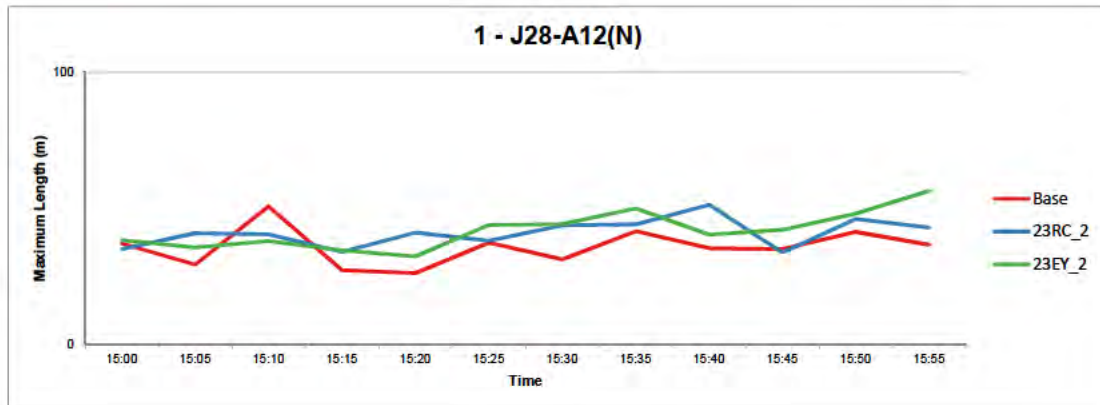


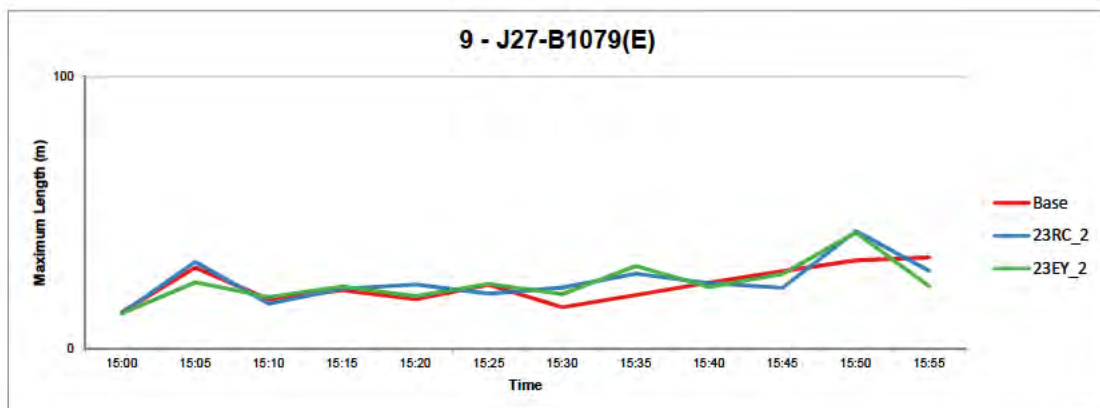
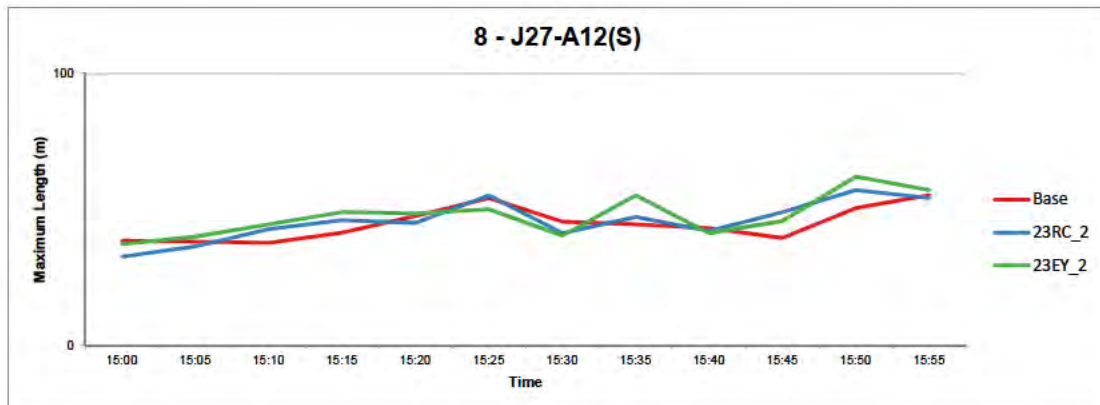
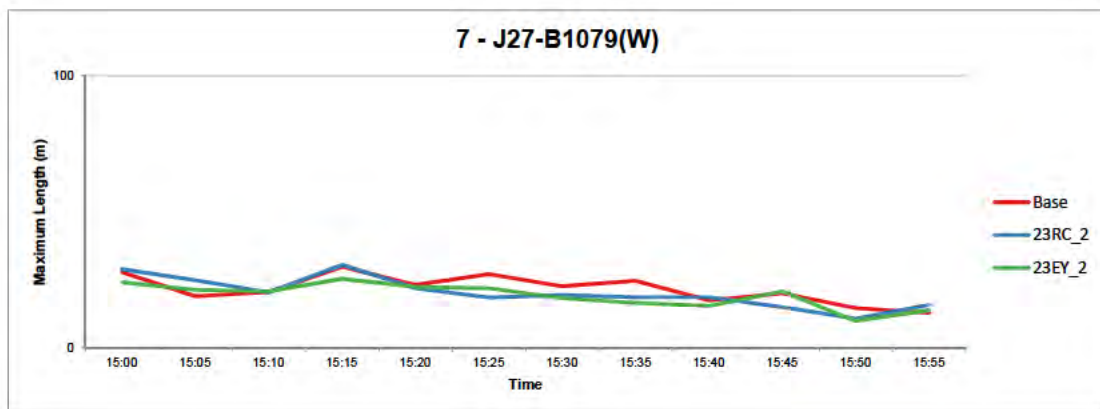
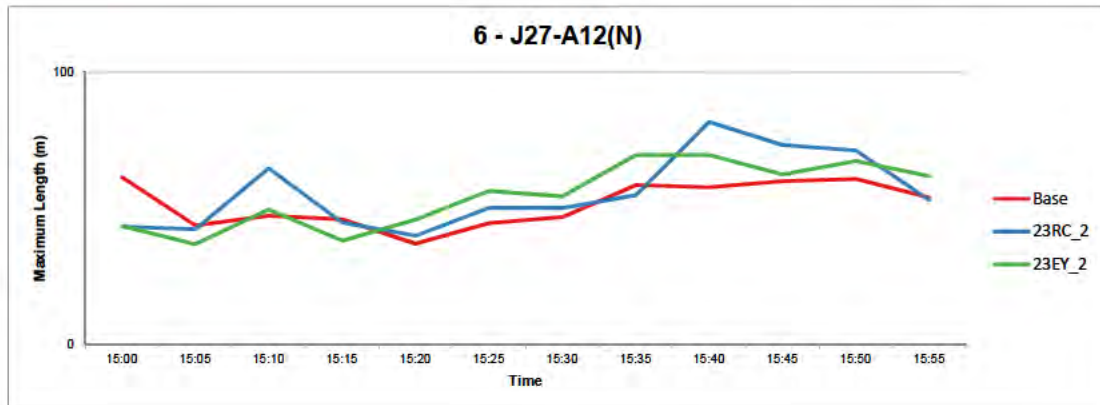
Queue Comparison
08:00-09:00
Average Length Summary
Maximum Length (m)

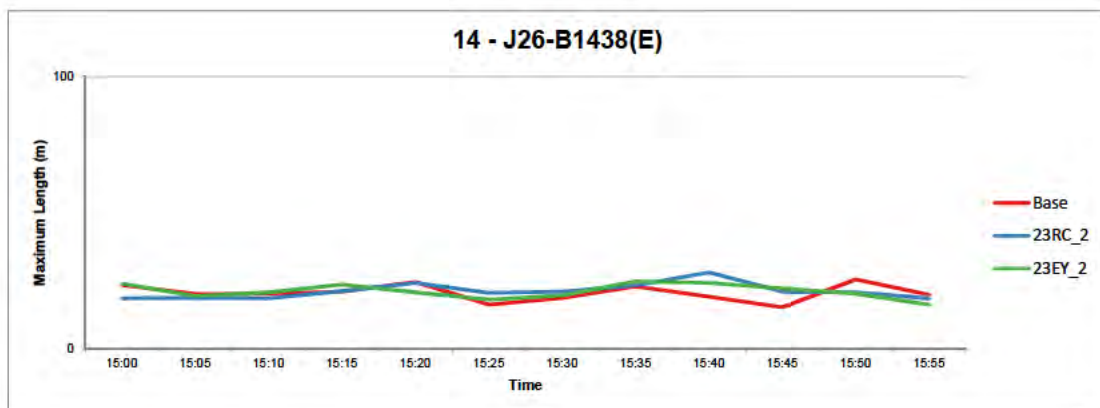
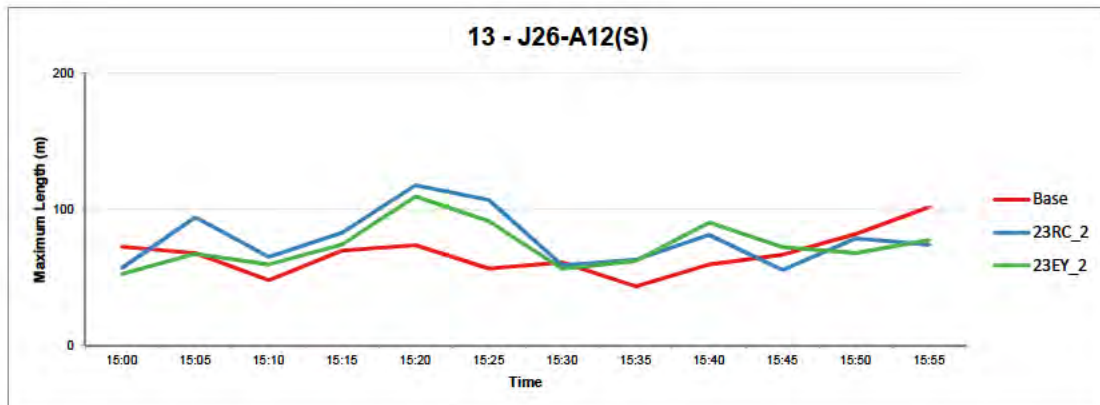
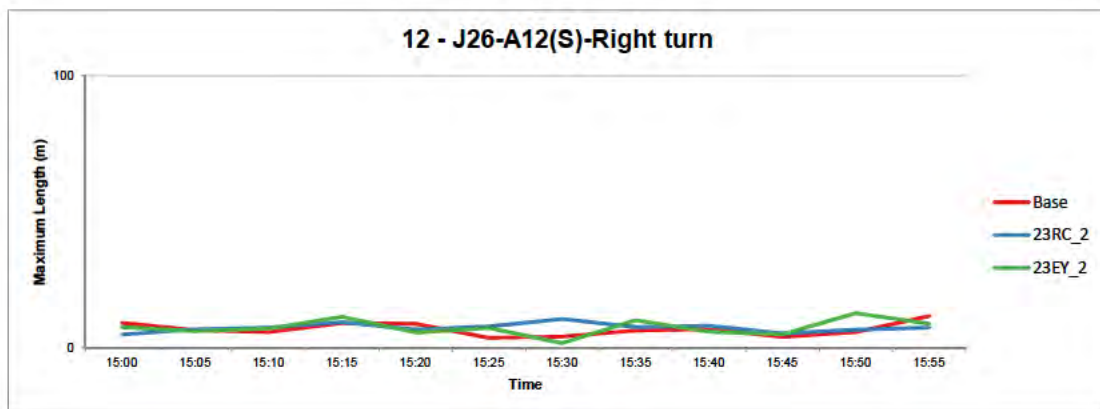
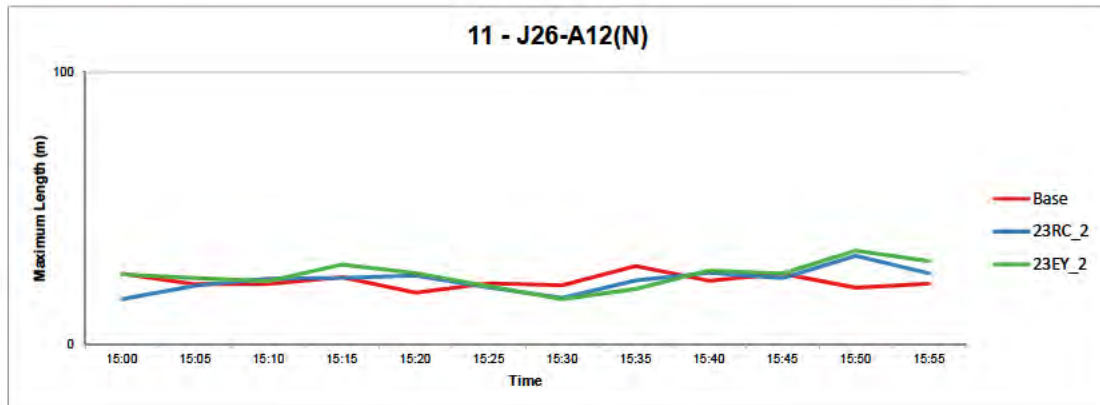
	Base	23 RC 2	23EY 2
1 - J28-A12(N)	78.3	73.4	81.9
2 - J28-A12(S)	49.5	45.7	58.5
3 - J28-A1152(E)	49.6	47.5	46.0
6 - J27-A12(N)	154.9	135.1	144.4
7 - J27-B1079(W)	32.1	33.3	34.8
8 - J27-A12(S)	69.4	73.2	84.7
9 - J27-B1079(E)	62.2	48.5	53.5
11 - J26-A12(N)	35.0	35.0	33.9
12 - J26-A12(S)-Right turn	10.3	10.5	10.7
13 - J26-A12(S)	73.7	80.7	97.4
14 - J26-B1438(E)	23.0	26.4	26.5
15 - J25-A12(N)	58.1	57.9	59.7
17 - J25-Martlesham P&R(N)	2.7	2.5	2.5
18 - J25-Martlesham P&R(N)	5.1	4.6	4.6
19 - J25-Main Rd(W)	88.4	87.6	89.4
20 - J25-A12(S)	84.8	103.0	116.4
21 - J25-Main Rd(E)	12.4	11.6	12.1
22 - J24-A12(N)	35.8	45.9	48.2
24 - J24-Eagle Way(W)	14.5	15.2	16.3
26 - J24-A12(S)	46.8	54.9	60.6
28 - J24-Anson Rd(E)	23.2	23.6	24.4
29 - J23-A12(N)	145.0	133.2	163.6
30 - J23-Eagle Way(W)	19.2	25.1	26.0
31 - J23-A12(S)	30.2	80.9	82.9
32 - J23-Barrack Square(E)	26.7	39.6	43.0
34 - J22-A12(N)	54.7	103.0	104.4
36 - J22-A12(S)	91.6	108.5	115.3
37 - J22-Newbourne Rd(E)	43.0	51.9	50.1
45 - J22-Foxhall Rd(W)	134.2	190.5	219.1
38 - J21-A12(N)	181.1	252.2	261.3
39 - J21-A14(W)	7.1	7.6	7.2
41 - J21-A1156(S)	57.9	81.7	87.3
42 - J21-A14(E)	71.6	70.1	82.4
44 - J21-Bucklesham Rd(NE)	22.3	25.7	24.9

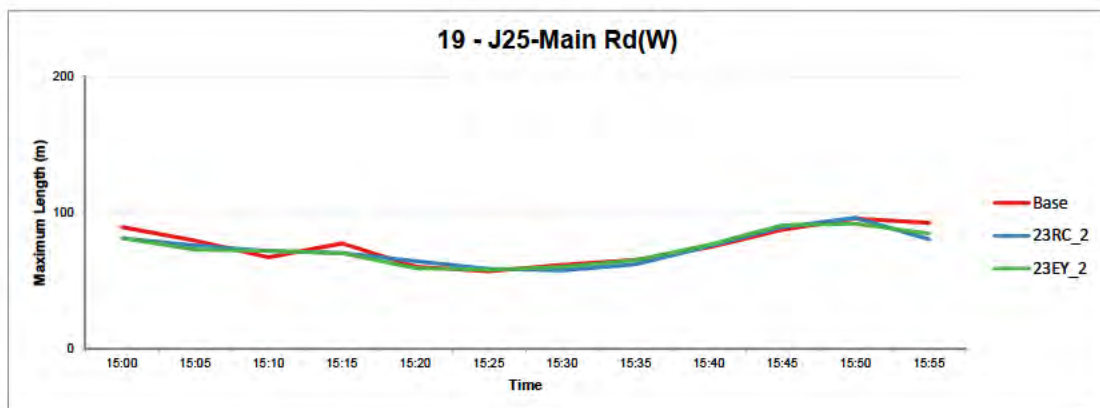
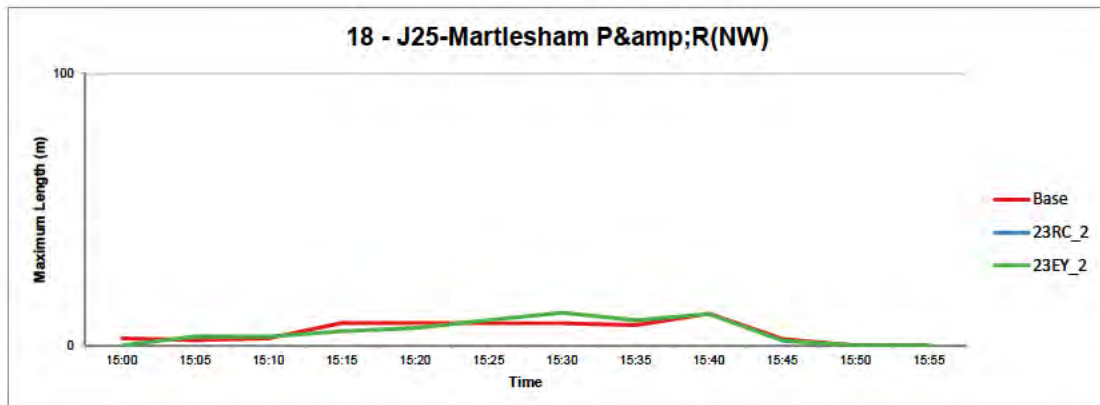
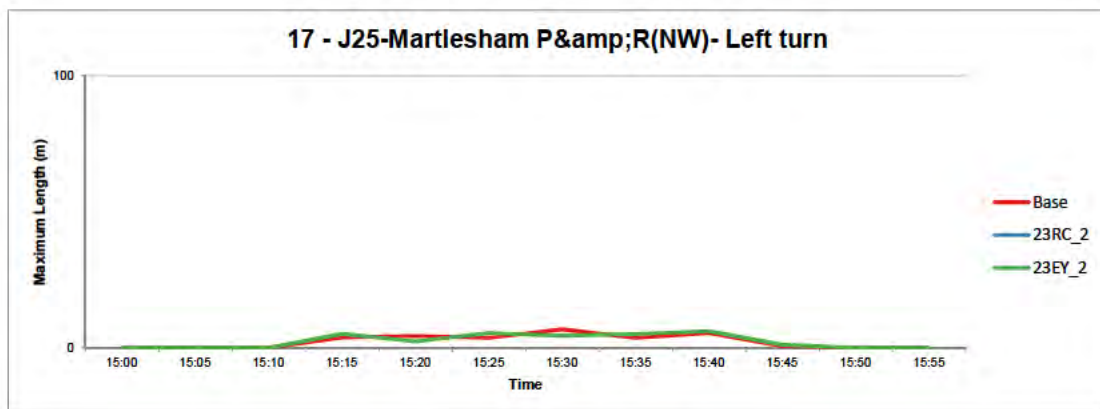
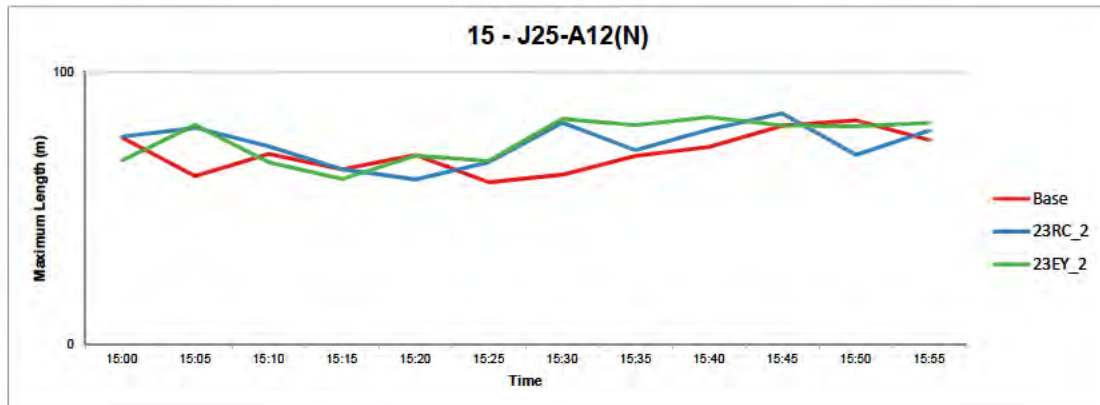


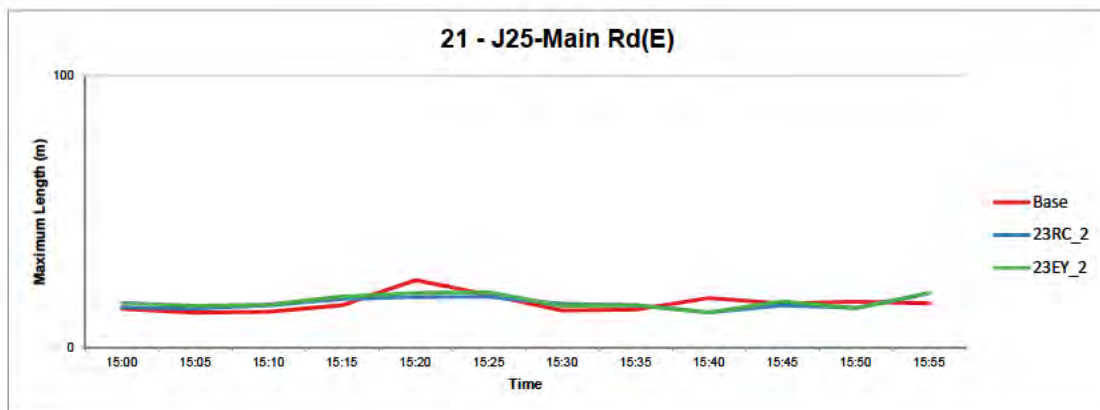
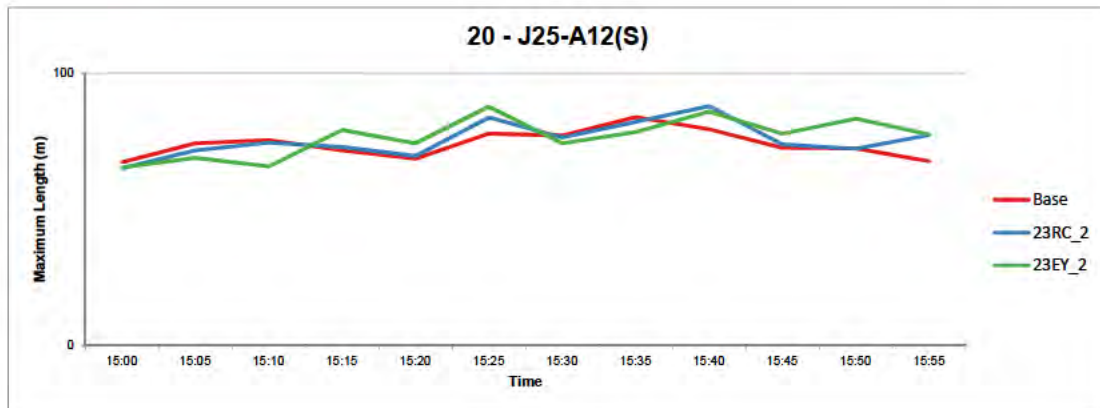
Route Names	Base	23 RC 2	23EY 2
1 - J21 - J22 - NB	114	117	118
2 - J22 - J23 - NB	66	92	93
3 - J23 - J24 - NB	39	40	41
4 - J24 - J25 - NB	52	55	58
5 - J25 - J26 - NB	125	127	129
6 - J26 - J27 - NB	95	96	98
7 - J27 - J28 - NB	97	96	97
8 - J28 - A12 - NB	137	138	139
51 - A12 NB	732	765	781
9 - A12 - J28 - SB	134	134	136
10 - J28 - J27 - SB	117	109	112
11 - J27 - J26 - SB	94	94	94
12 - J26 - J25 - SB	113	113	113
13 - J25 - J24 - SB	33	33	34
14 - J24 - J23 - SB	80	71	83
15 - J23 - J22 - SB	70	101	102
16 - J22 - J21 - SB	138	150	152
52 - A12 SB	776	803	826
17 - A14 WB upto Offslip	153	156	163
18 - A14 EB from Onslip	118	119	119
19 - A14 WB from Onslip	85	85	85
20 - A14 EB upto Offslip	90	91	92
21 - Felixstowe - SB	100	99	100
22 - Felixstowe - NB	116	127	133
23 - Bucklesham Road - NB	62	61	61
24 - Bucklesham Road - SB	86	98	98
26 - Foxhall road - WB	84	85	85
25 - Foxhall road - EB	149	186	209
27 - Newbourne Road -EB	43	43	43
28 - Newbourne Road -WB	64	65	66
29 - Eagle Way - EB	21	27	28
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	53	54	54
32 - Gloster Road - SB	55	55	56
33 - Barrack Square - SB	93	93	93
34 - Barrack Square - NB	92	96	95
35 - Anson Road - WB	43	43	44
36 - Anson Road - EB	45	45	45
37 - Eagle Way (J24) - EB	46	48	49
38 - Eagle Way (J24) - WB	44	44	44
39 - Main Road - EB	65	65	65
40 - Main Road - WB	72	72	72
41 - A1214 Main road - EB	66	66	66
42 - A1214 Main road - WB	50	50	50
43 - B1438 - WB	56	56	56
44 - B1438 - EB	51	50	50
45 - B1079 (East) - WB	61	48	52
46 - B1079 (East) - EB	30	30	30
47 - B1079 (West)- WB	33	33	33
48 - B1079 (West)- EB	40	41	41
49 - A1152 - WB	51	50	50
50 - A1152 - EB	49	49	49
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	66	92	93
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	70	101	102

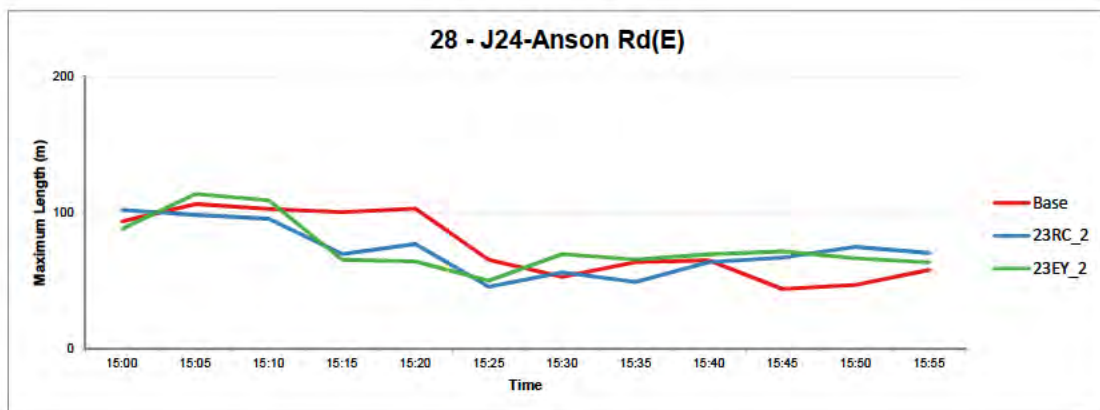
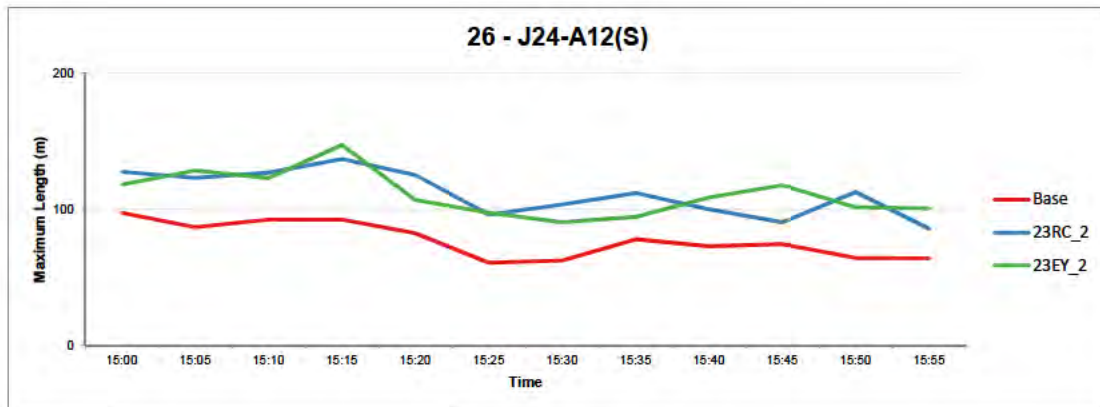
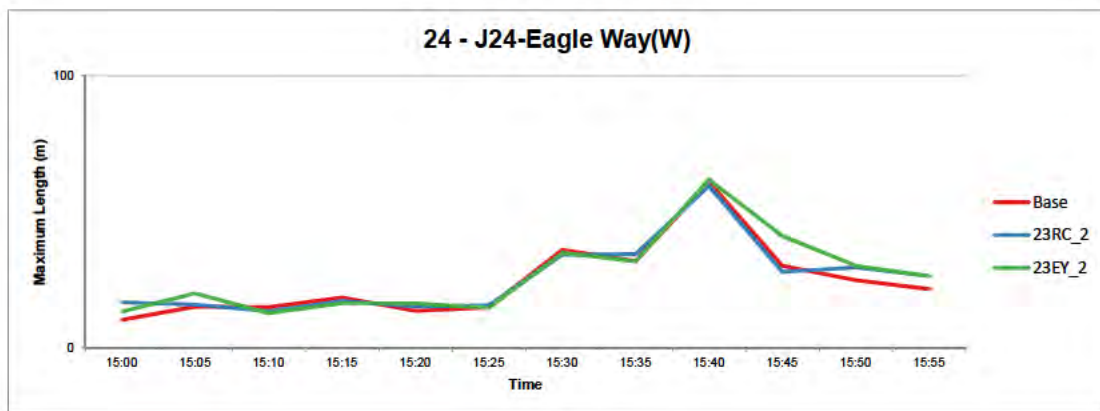
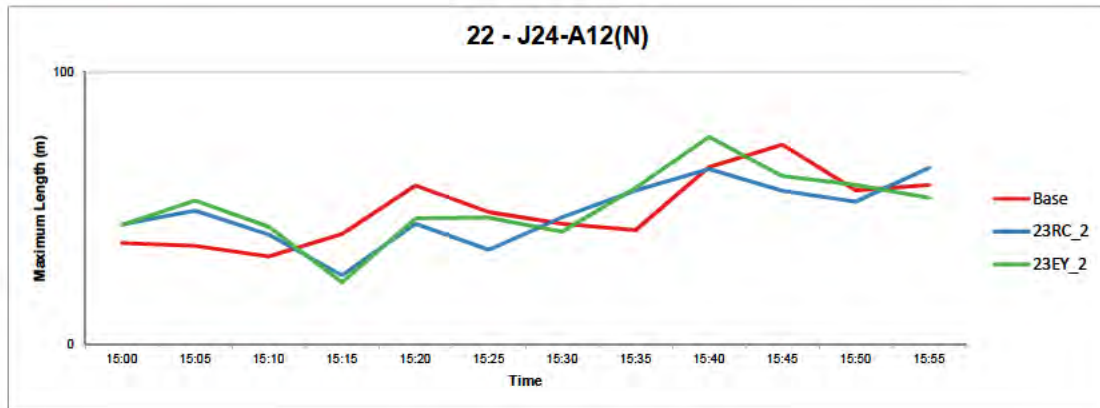


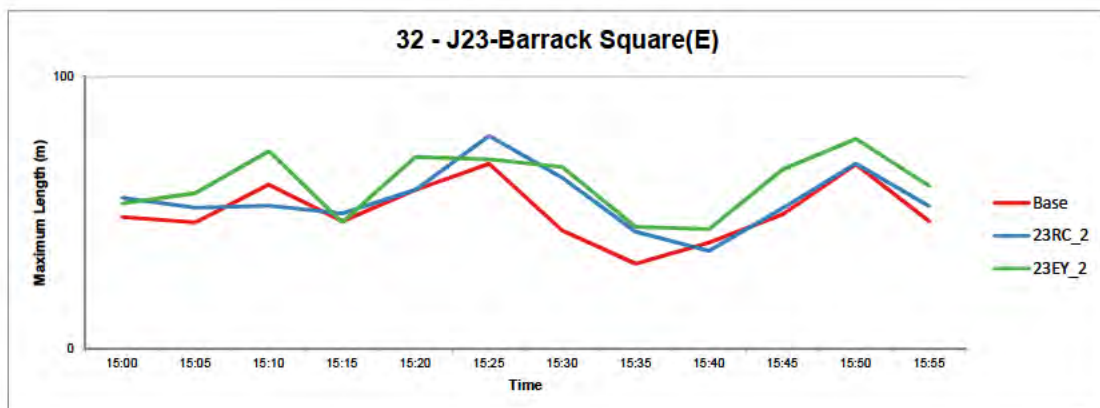
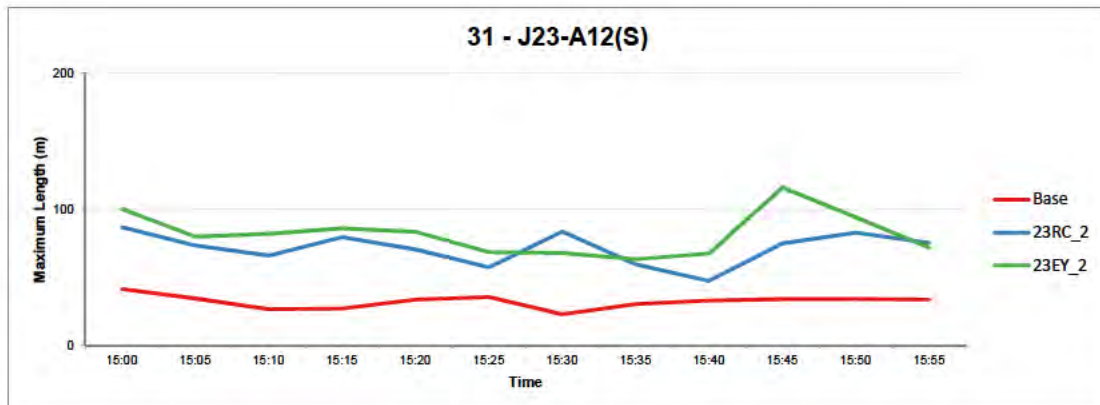
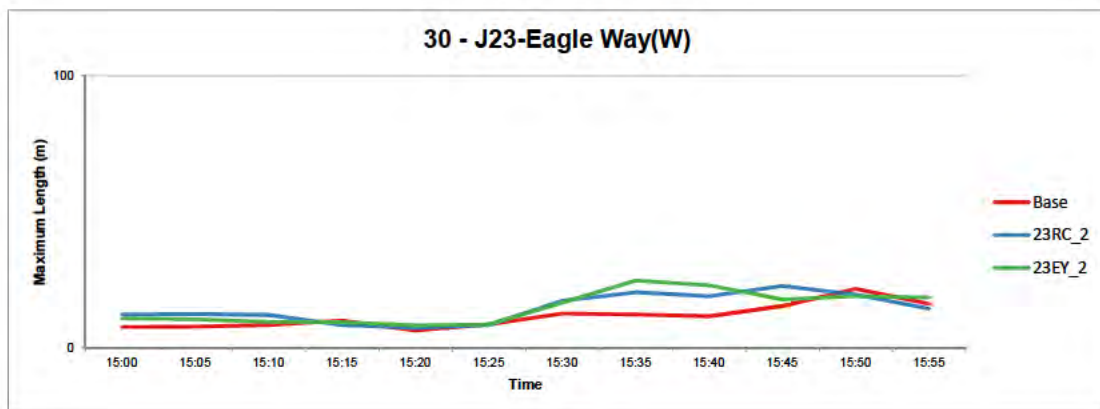
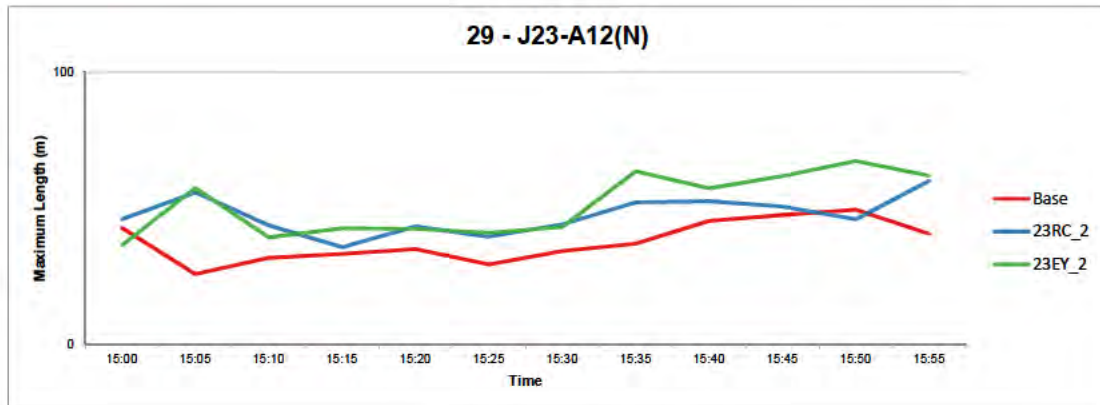


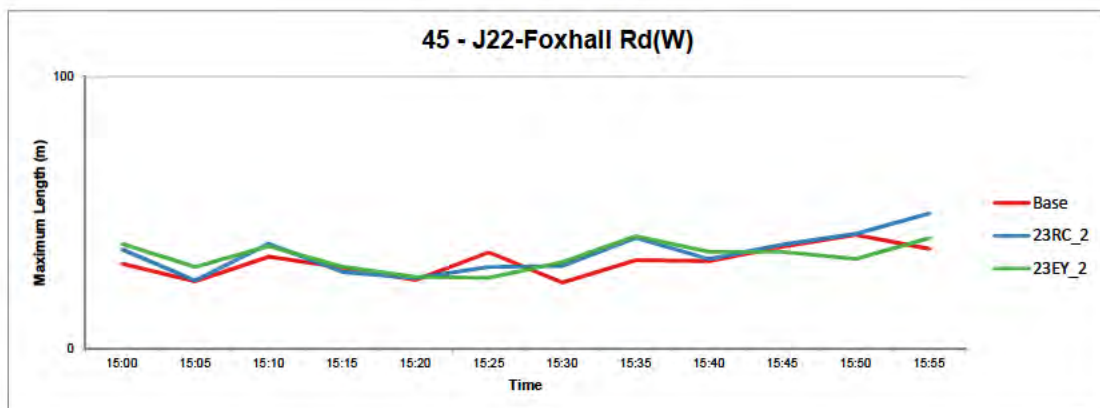
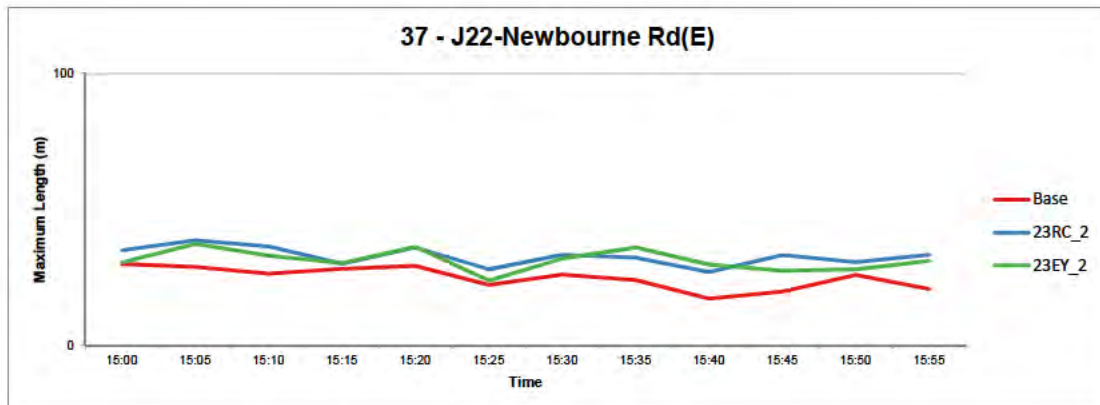
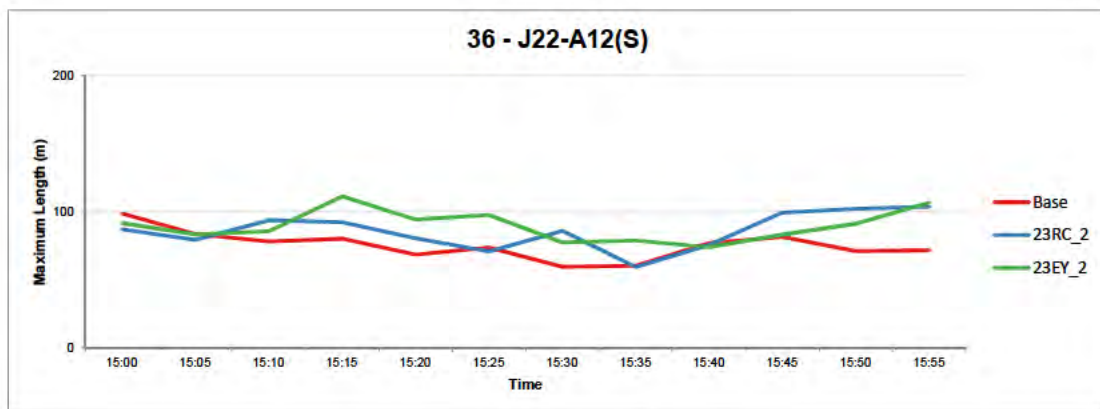
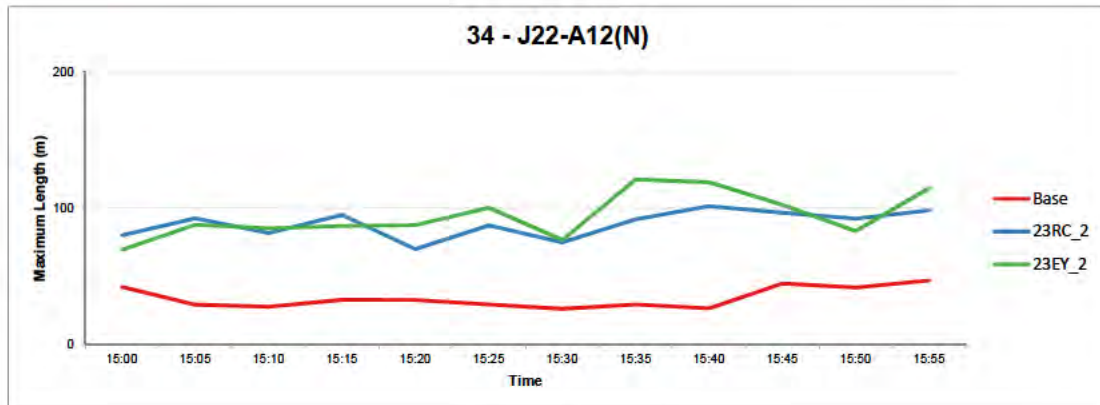


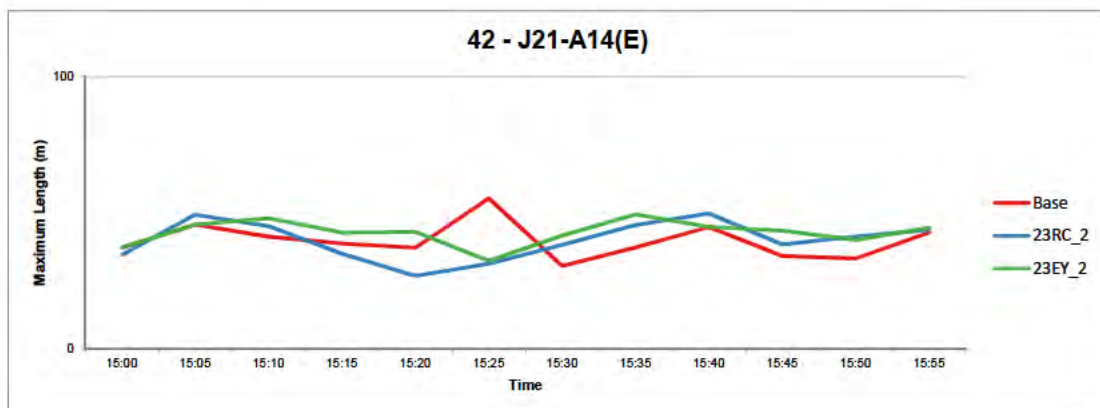
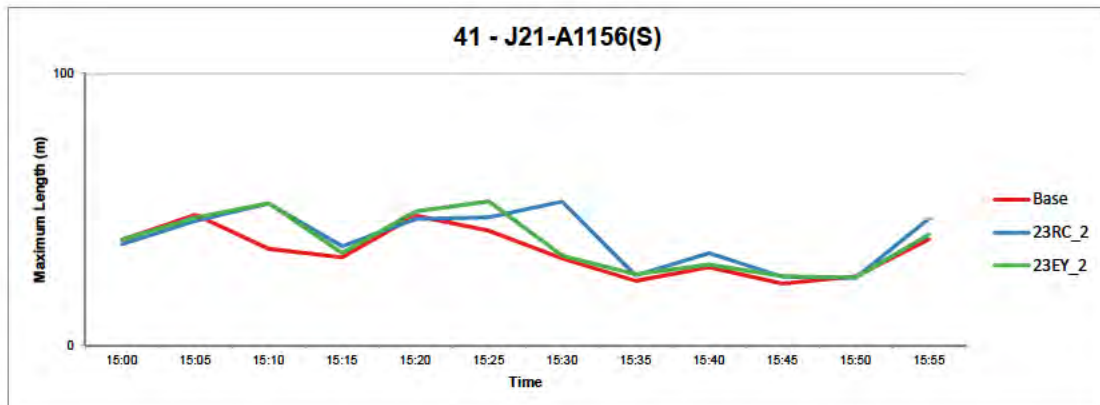
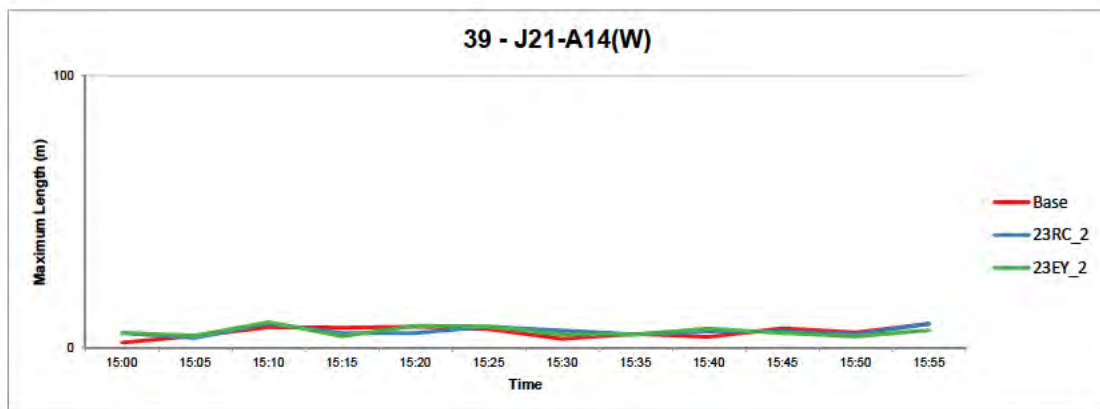
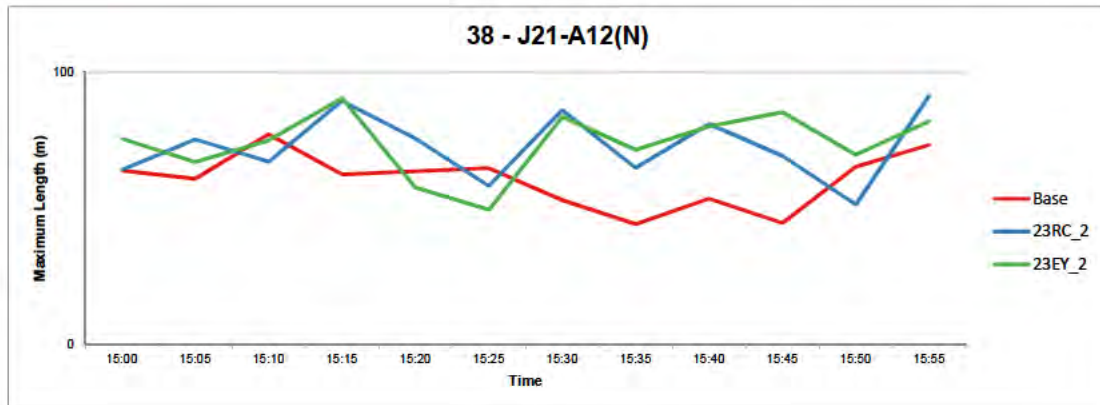






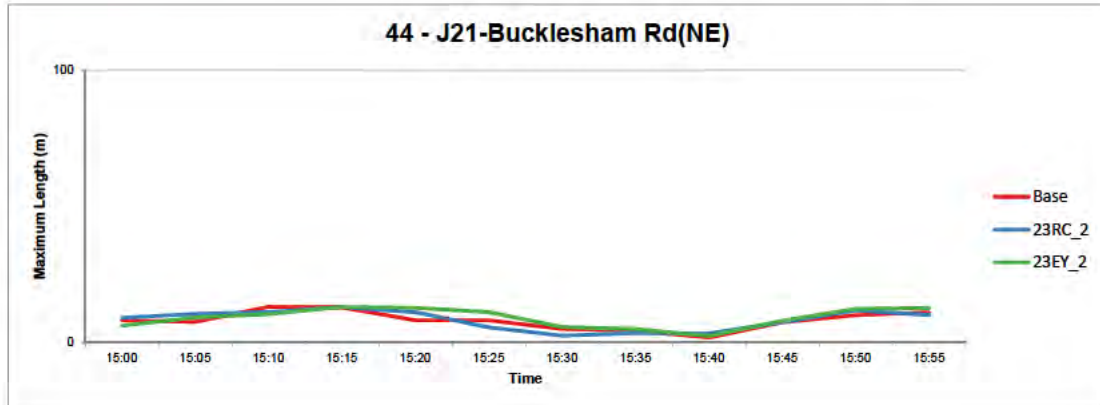








44 - J21-Bucklesham Rd(NE)





Queue Comparison
15:00-16:00
Maximum Length Summary
Maximum Length (m)

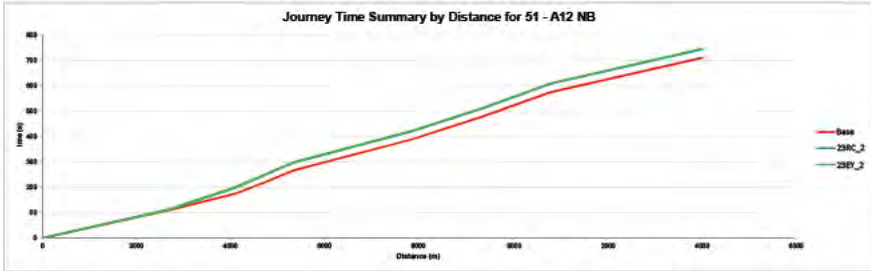
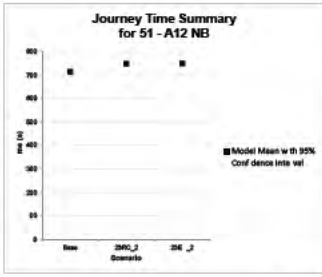
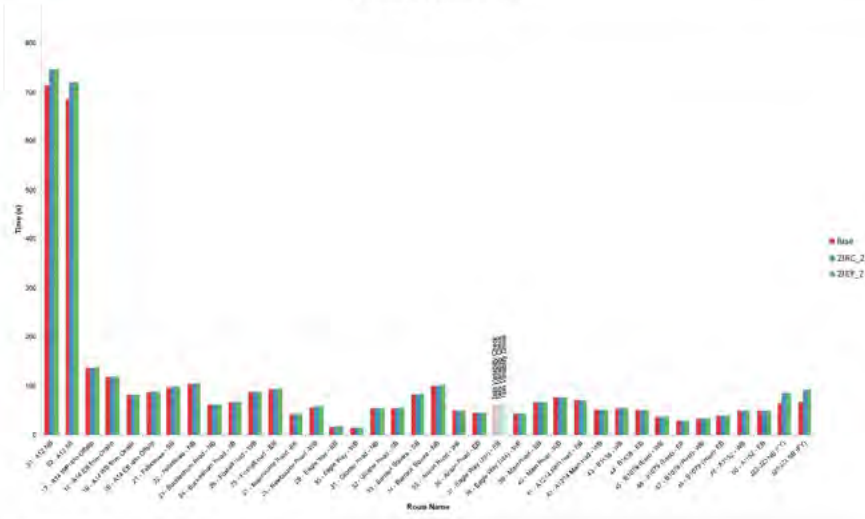
	Base	23RC_2	23EY_2
1 - J28-A12(N)	50.7	51.3	56.5
2 - J28-A12(S)	55.1	49.8	59.5
3 - J28-A1152(E)	45.6	46.6	49.5
6 - J27-A12(N)	61.5	81.7	69.6
7 - J27-B1079(W)	29.8	30.5	25.4
8 - J27-A12(S)	55.2	57.0	62.0
9 - J27-B1079(E)	33.5	43.2	42.6
11 - J26-A12(N)	28.7	32.6	34.4
12 - J26-A12(S)-Right turn	11.7	10.6	12.7
13 - J26-A12(S)	101.7	117.6	109.4
14 - J26-B1438(E)	25.4	28.0	24.7
15 - J25-A12(N)	82.3	84.9	83.5
17 - J25-Martlesham P&R(N)	6.8	6.1	6.1
18 - J25-Martlesham P&R(N)	11.6	12.0	12.0
19 - J25-Main Rd(W)	95.5	96.1	91.7
20 - J25-A12(S)	83.8	87.9	87.7
21 - J25-Main Rd(E)	24.9	20.1	20.4
22 - J24-A12(N)	73.4	64.9	76.2
24 - J24-Eagle Way(W)	61.0	59.5	61.8
26 - J24-A12(S)	97.4	136.9	147.3
28 - J24-Anson Rd(E)	106.2	101.9	113.6
29 - J23-A12(N)	49.5	60.1	67.3
30 - J23-Eagle Way(W)	21.7	22.7	24.7
31 - J23-A12(S)	41.3	86.8	116.0
32 - J23-Barrack Square(E)	67.9	78.2	77.1
34 - J22-A12(N)	46.9	101.5	121.1
36 - J22-A12(S)	98.8	103.7	111.3
37 - J22-Newbourne Rd(E)	29.9	38.6	37.2
45 - J22-Foxhall Rd(W)	41.8	49.6	41.3
38 - J21-A12(N)	77.2	91.3	90.4
39 - J21-A14(W)	8.9	8.9	9.4
41 - J21-A1156(S)	48.0	52.8	52.9
42 - J21-A14(E)	55.2	49.7	49.3
44 - J21-Bucklesham Rd(NE)	13.0	12.9	13.1

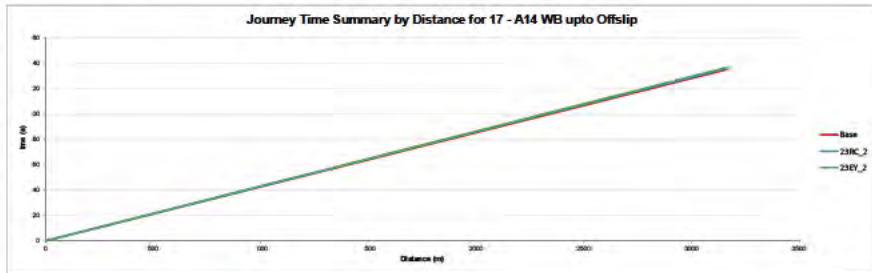
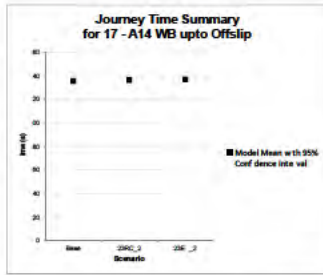
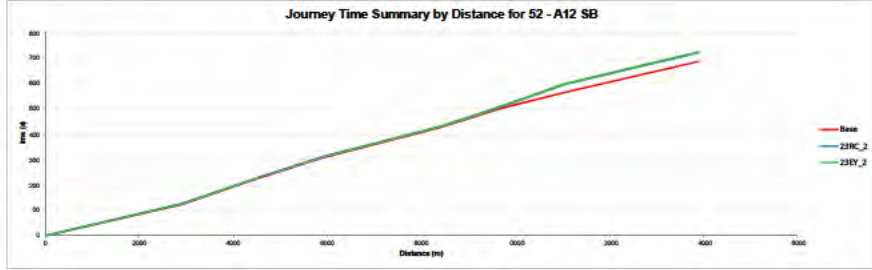
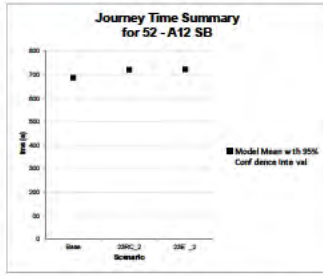


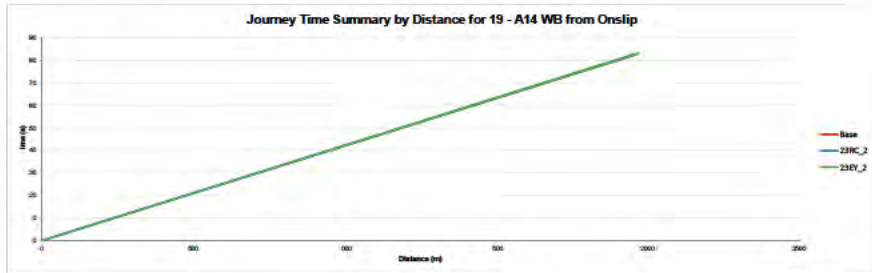
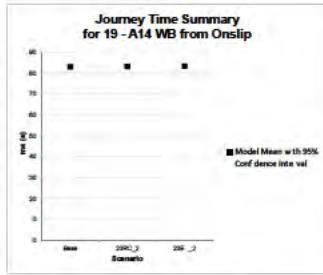
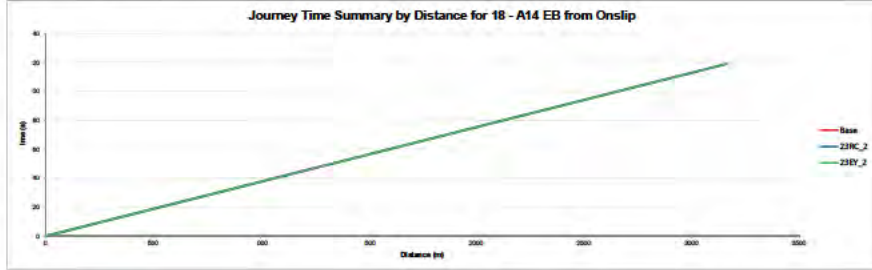
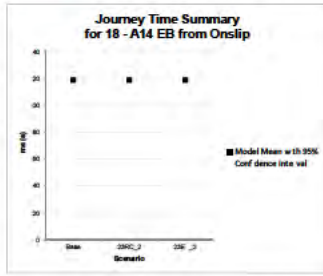
Queue Comparison
15:00-16:00
Average Length Summary
Maximum Length (m)

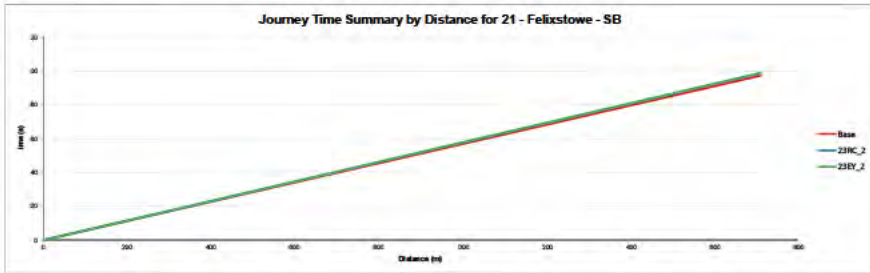
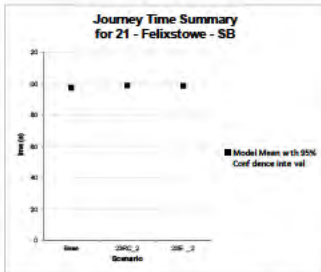
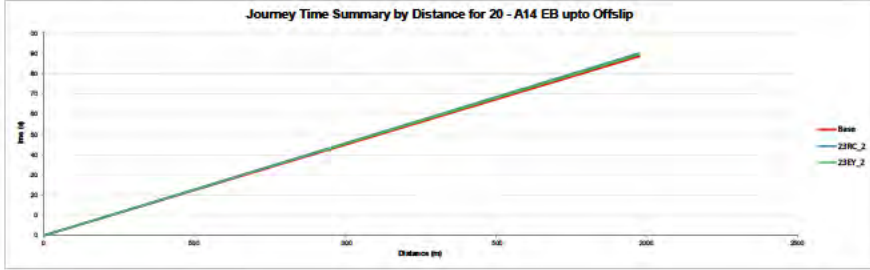
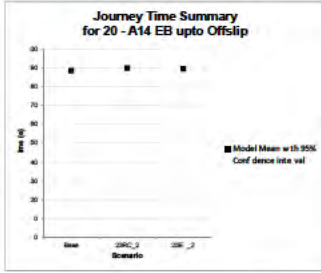
	Base	23RC_2	23EY_2
1 - J28-A12(N)	35.7	40.9	41.9
2 - J28-A12(S)	37.1	38.7	38.0
3 - J28-A1152(E)	32.1	33.0	32.4
6 - J27-A12(N)	51.5	55.7	54.6
7 - J27-B1079(W)	21.6	20.3	19.2
8 - J27-A12(S)	44.6	45.7	47.5
9 - J27-B1079(E)	23.1	24.6	24.0
11 - J26-A12(N)	23.3	23.6	25.4
12 - J26-A12(S)-Right turn	6.8	7.4	7.5
13 - J26-A12(S)	66.8	77.8	73.3
14 - J26-B1438(E)	20.5	21.1	21.0
15 - J25-A12(N)	70.2	73.8	75.1
17 - J25-Martlesham P&R(N)	2.4	2.5	2.5
18 - J25-Martlesham P&R(N)	5.1	5.1	5.1
19 - J25-Main Rd(W)	75.5	73.5	73.4
20 - J25-A12(S)	74.0	75.6	76.5
21 - J25-Main Rd(E)	16.4	16.3	16.9
22 - J24-A12(N)	49.4	48.3	50.4
24 - J24-Eagle Way(W)	24.4	25.5	26.6
26 - J24-A12(S)	77.3	111.7	111.2
28 - J24-Anson Rd(E)	75.0	72.3	74.5
29 - J23-A12(N)	37.7	47.5	51.2
30 - J23-Eagle Way(W)	11.5	14.5	14.7
31 - J23-A12(S)	32.2	71.4	81.7
32 - J23-Barrack Square(E)	50.4	54.9	60.6
34 - J22-A12(N)	34.1	88.6	94.6
36 - J22-A12(S)	75.3	85.9	89.6
37 - J22-Newbourne Rd(E)	24.8	32.8	31.2
45 - J22-Foxhall Rd(W)	32.1	34.8	33.9
38 - J21-A12(N)	60.5	72.8	73.9
39 - J21-A14(W)	5.8	6.1	6.1
41 - J21-A1156(S)	34.6	39.5	37.8
42 - J21-A14(E)	39.7	39.8	42.6
44 - J21-Bucklesham Rd(NE)	8.1	8.2	9.0

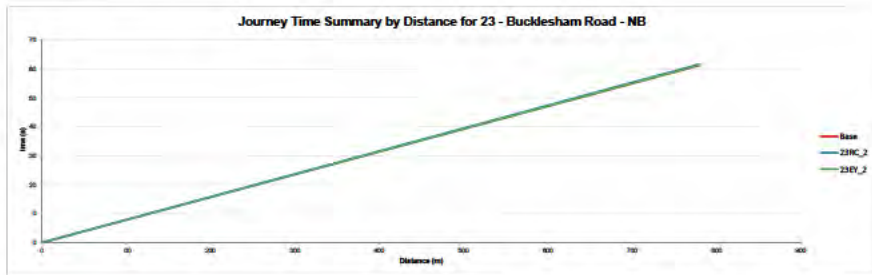
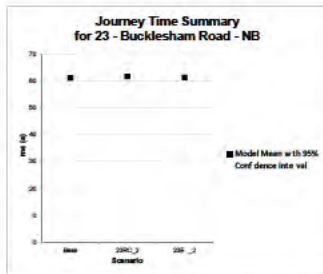
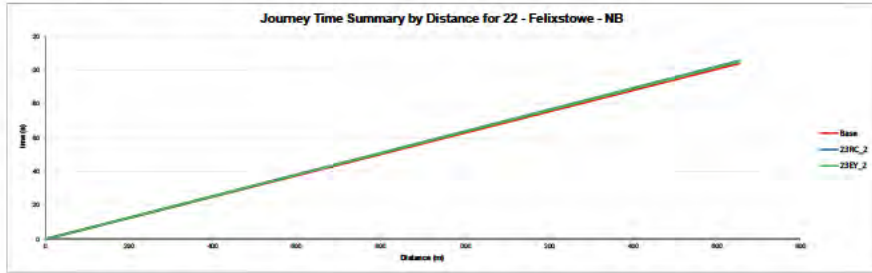
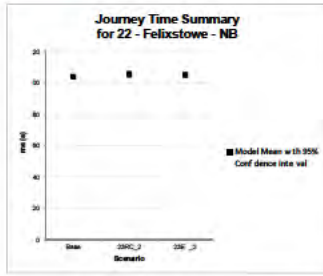
Full Routes Summary (AM)

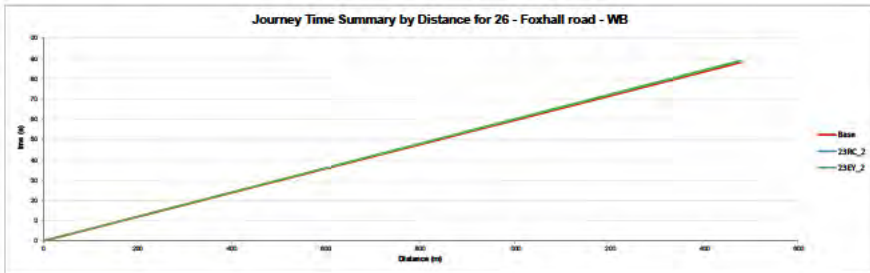
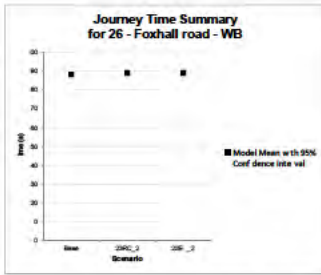
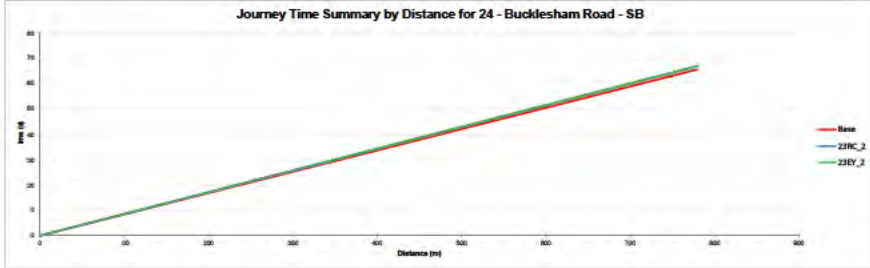
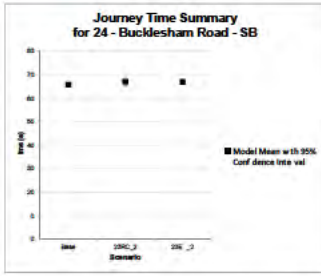


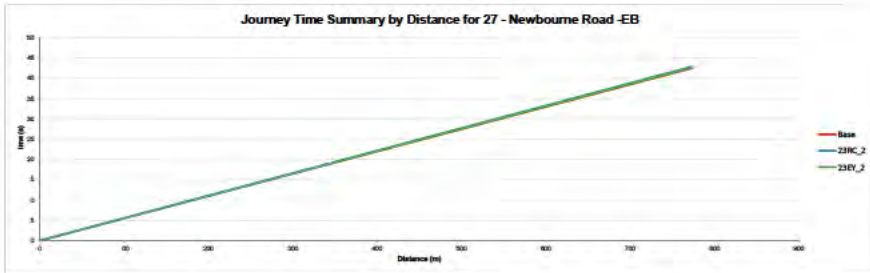
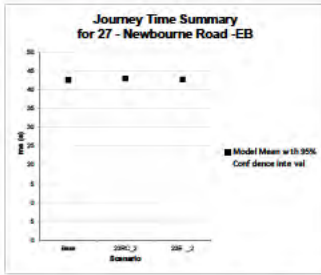
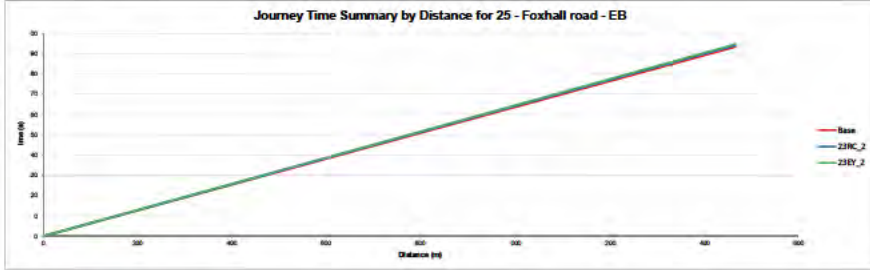
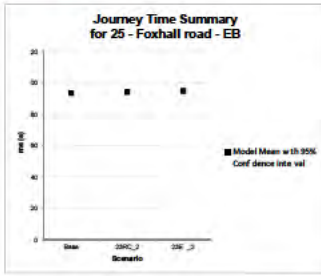


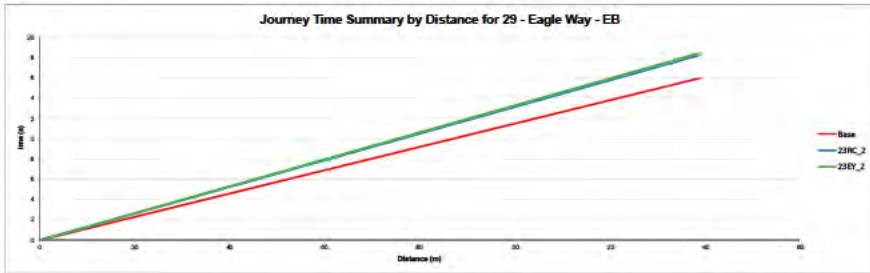
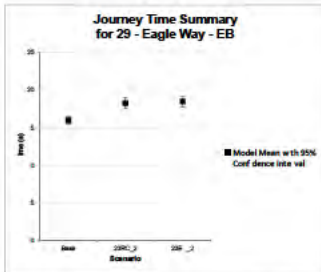
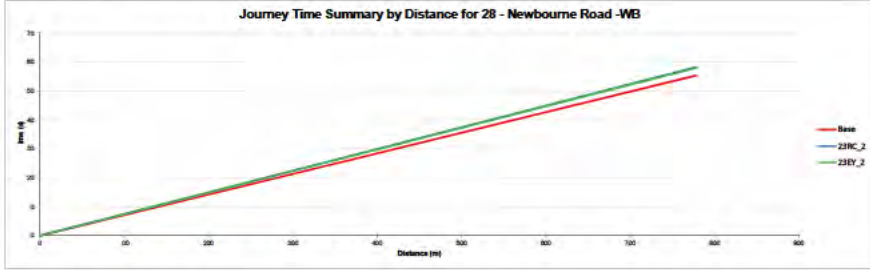
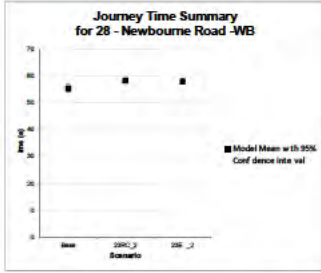


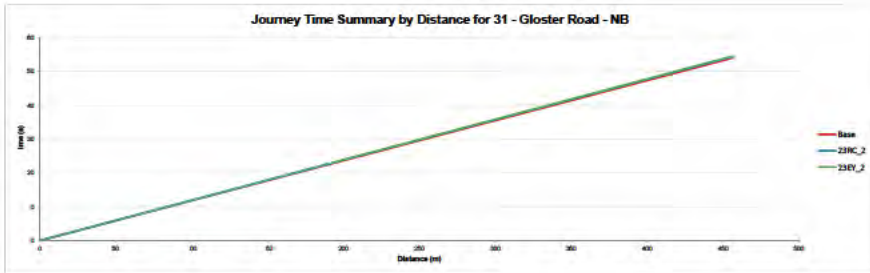
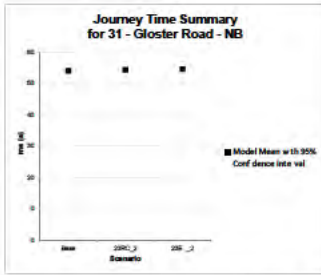
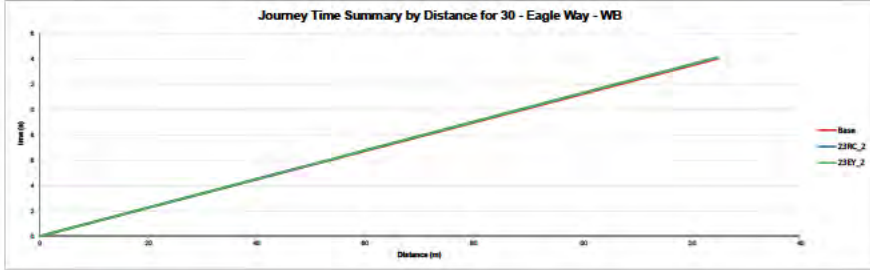
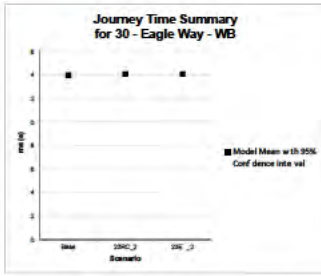


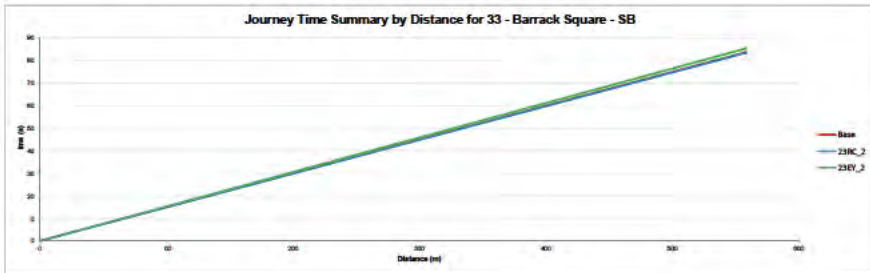
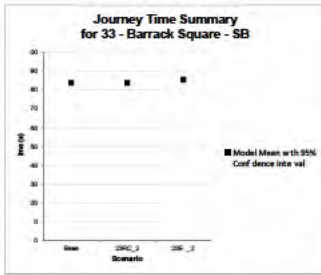
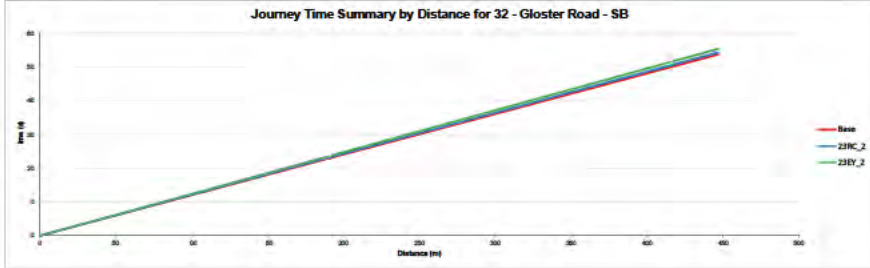
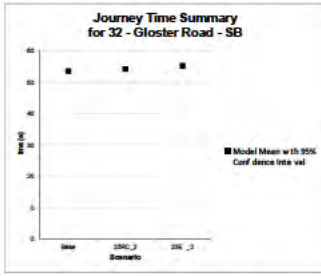


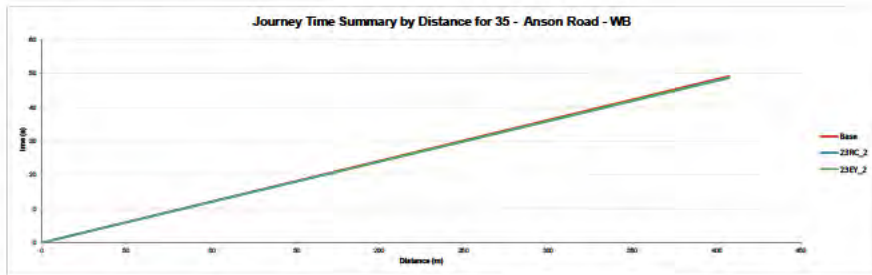
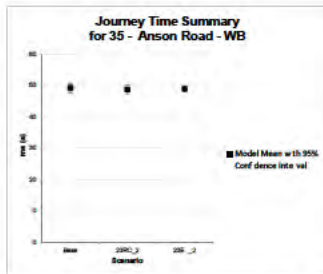
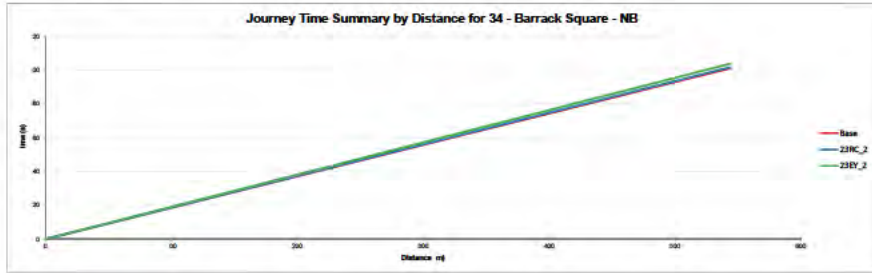
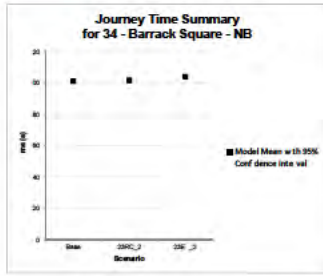


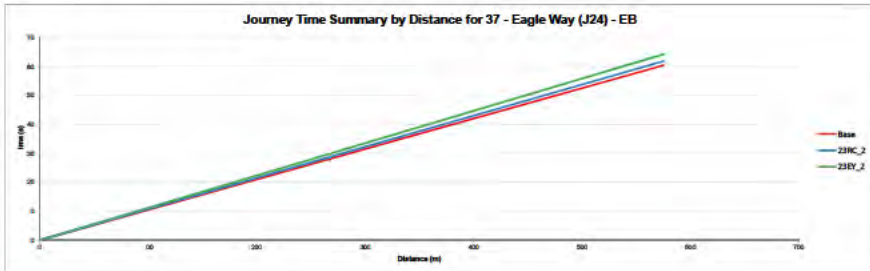
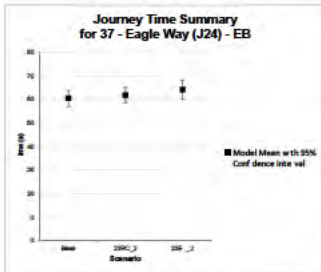
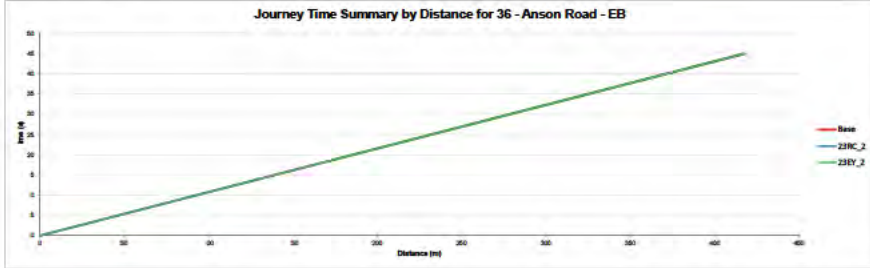
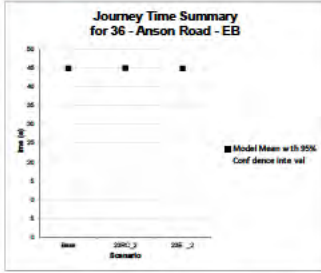


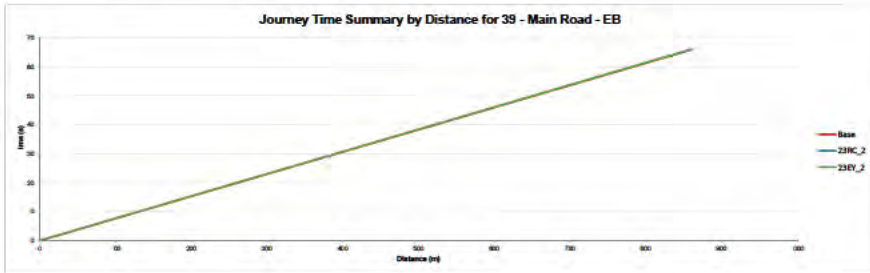
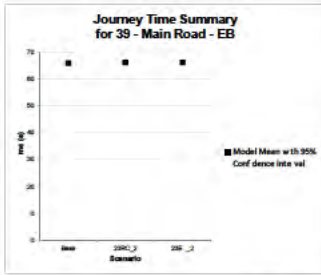
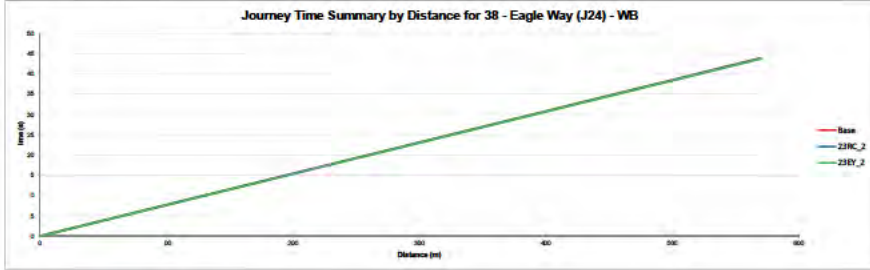
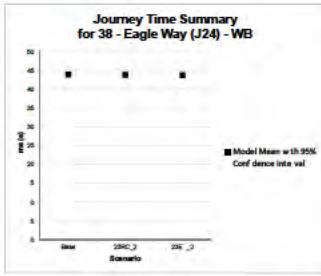


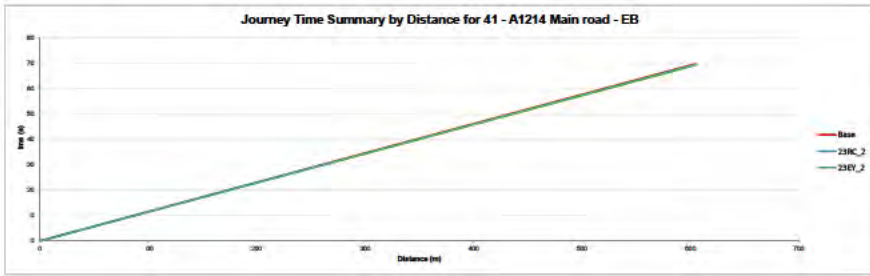
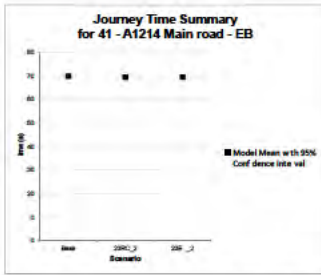
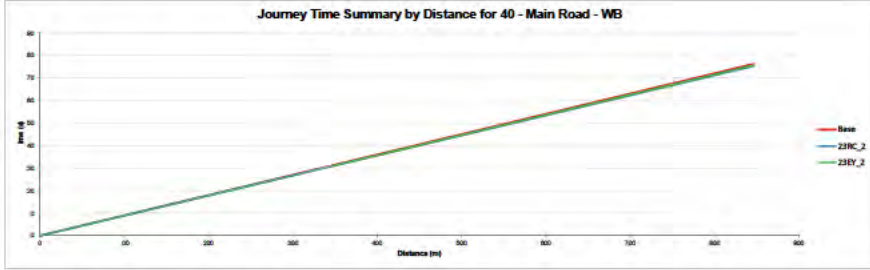
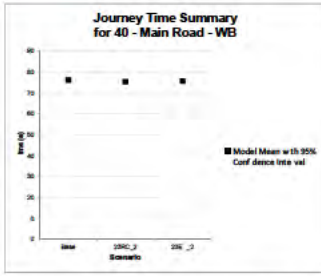


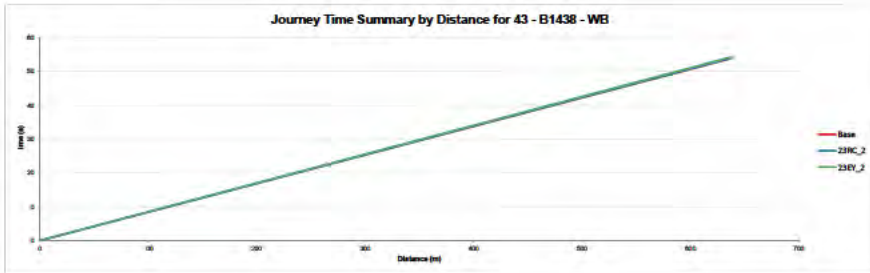
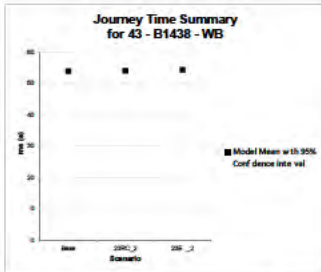
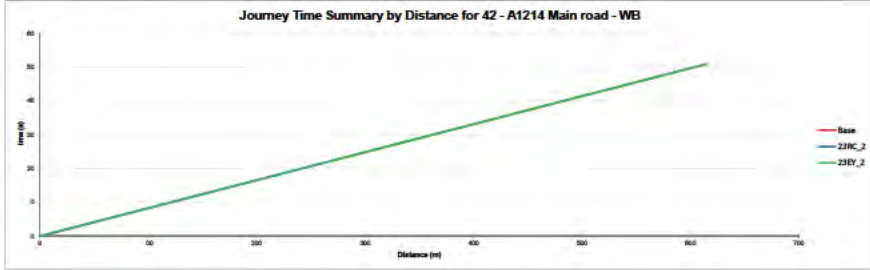
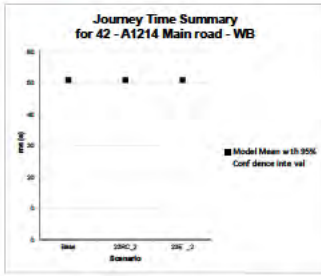


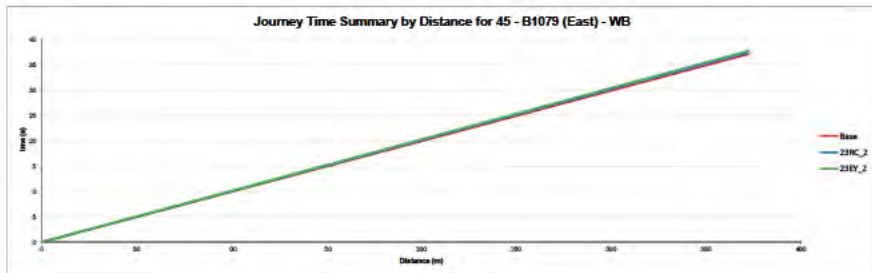
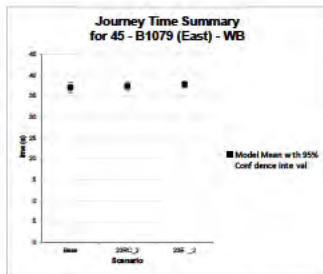
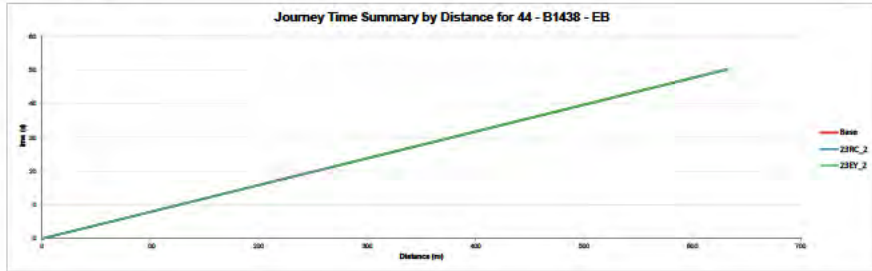
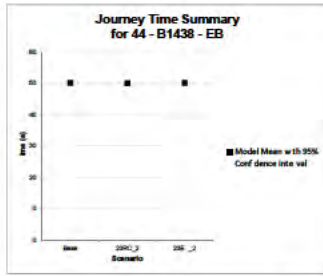


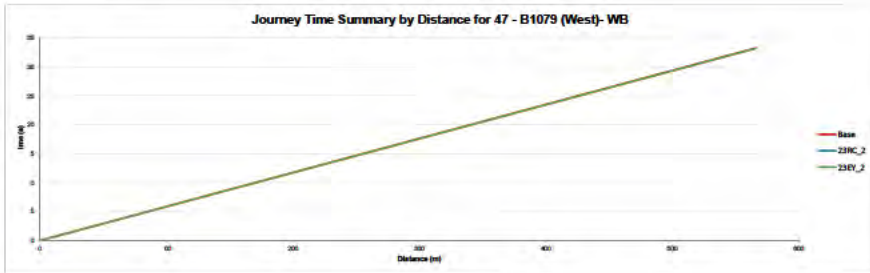
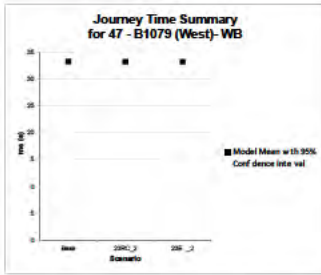
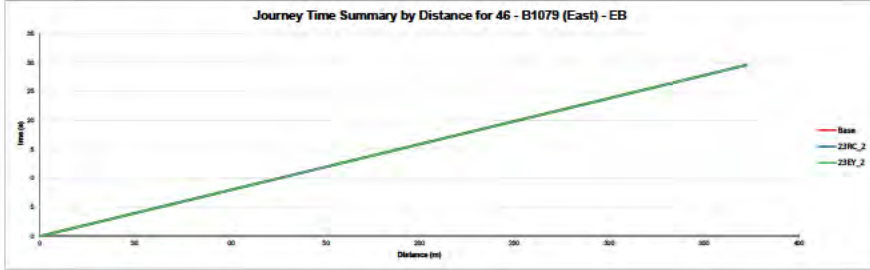
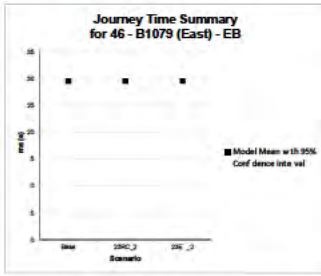


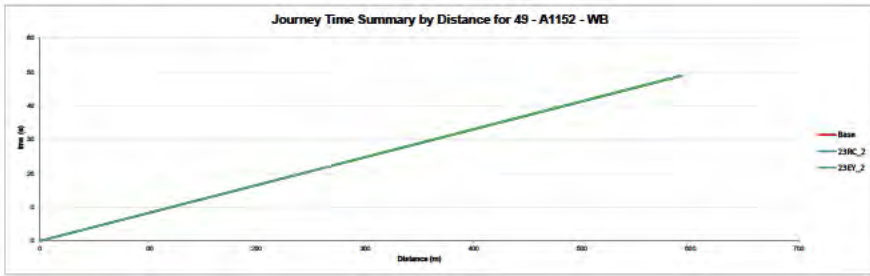
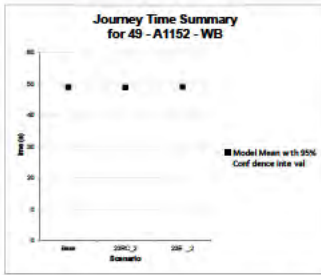
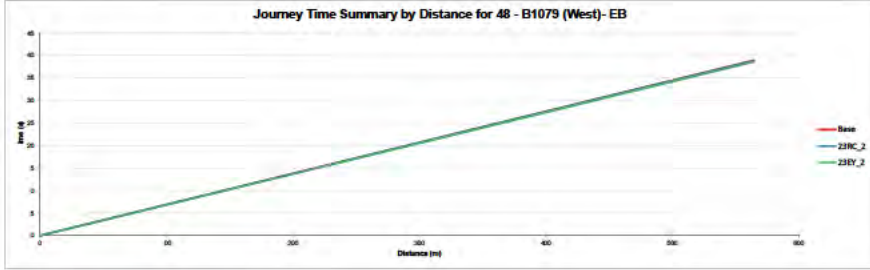
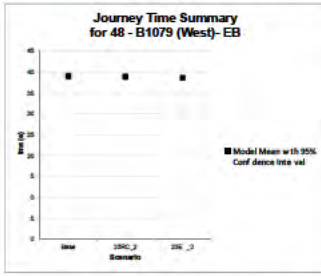


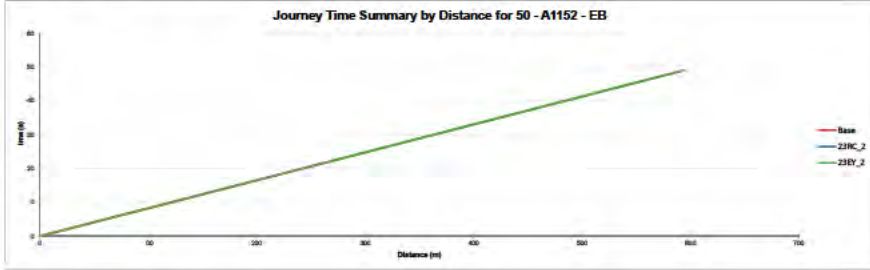
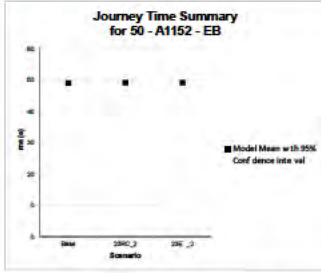




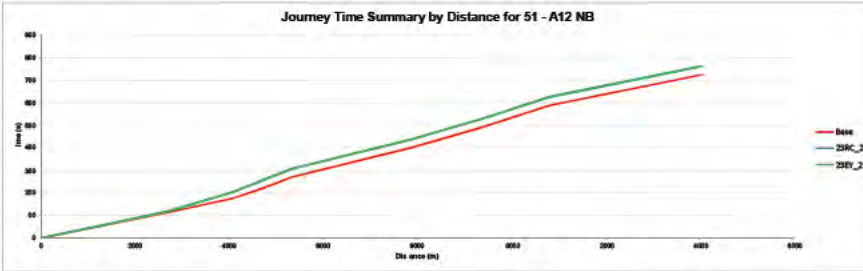
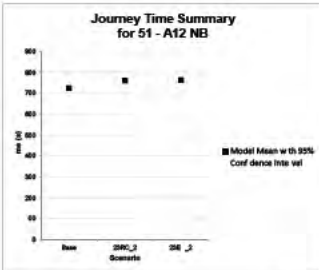
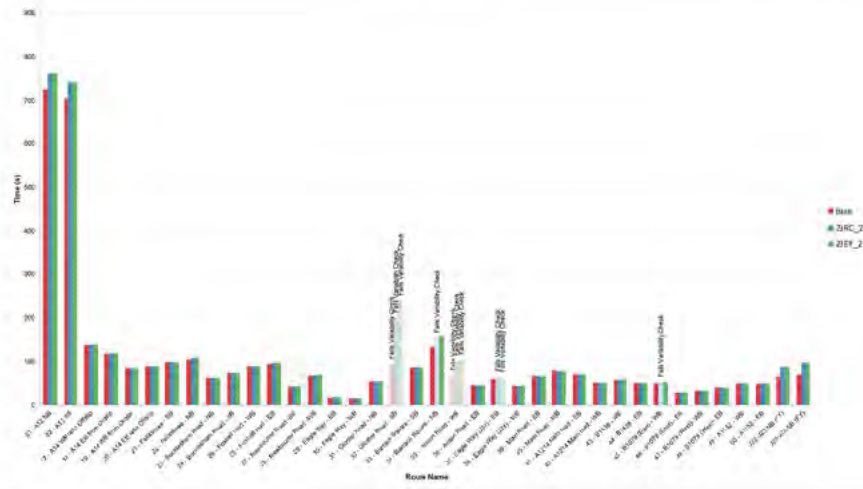


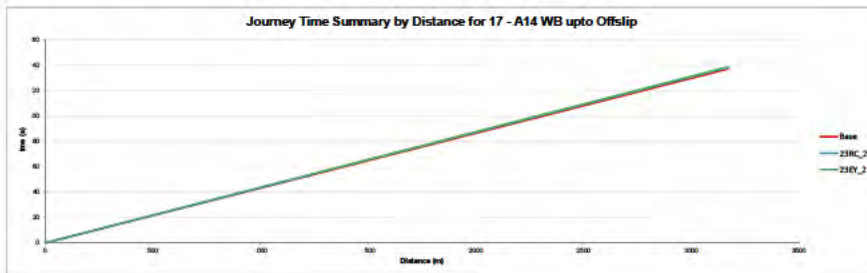
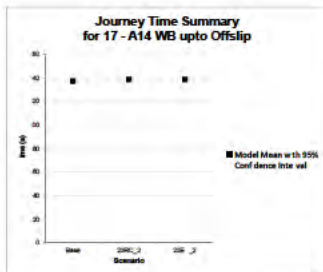
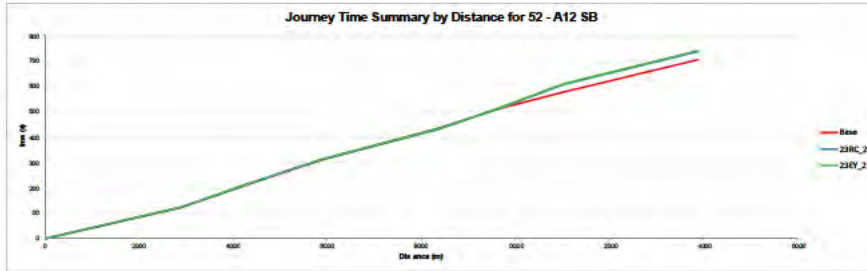
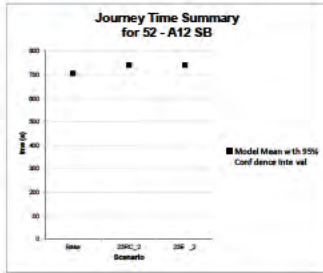


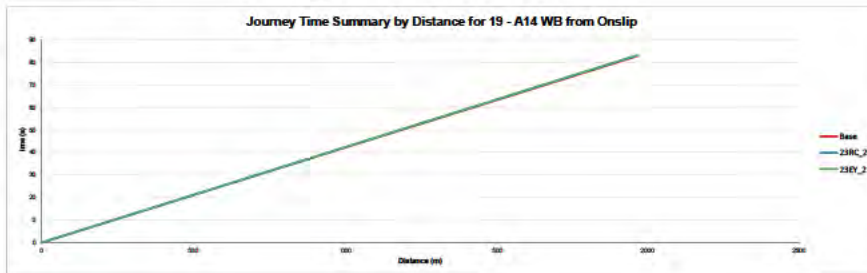
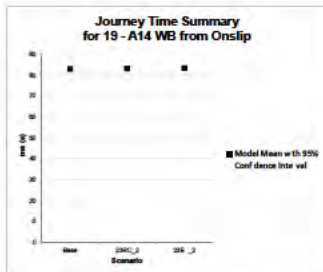
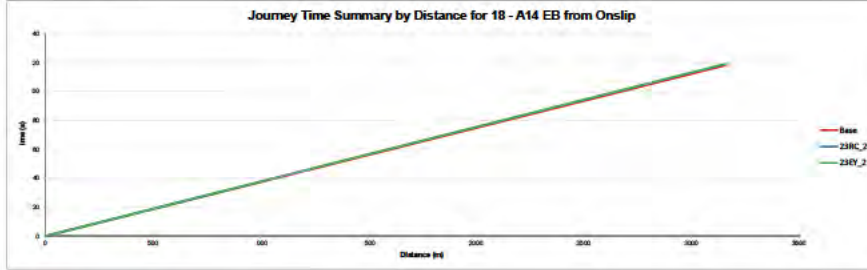
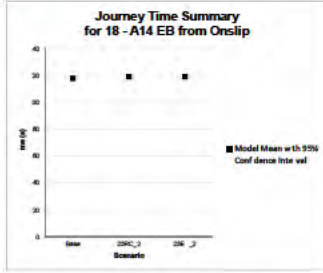


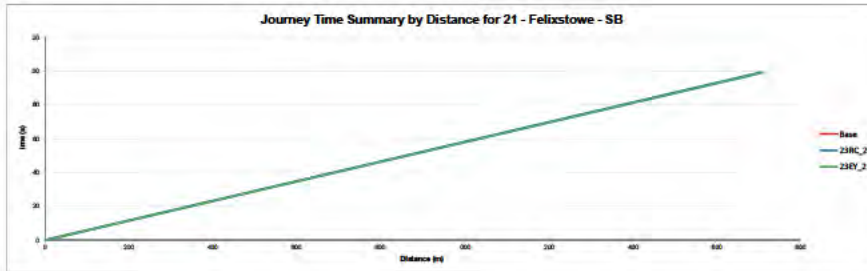
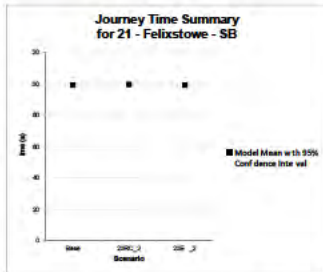
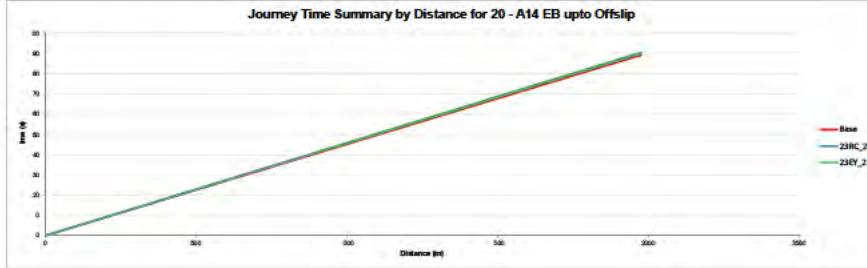
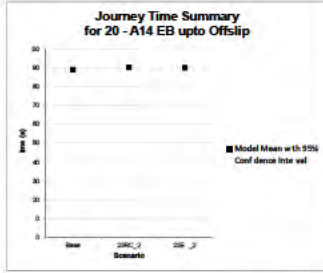


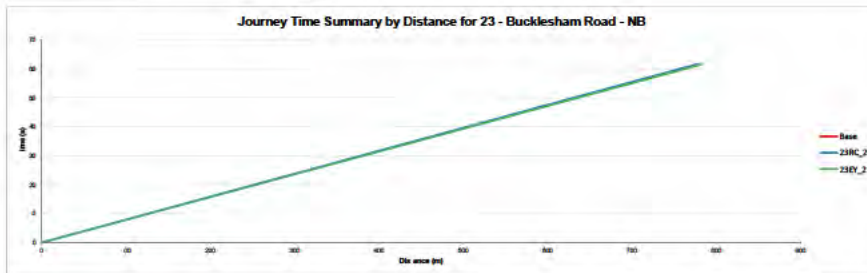
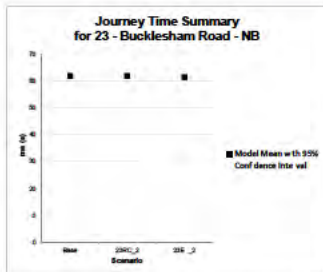
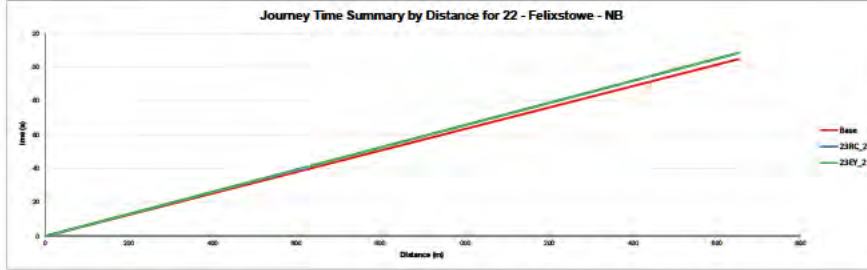
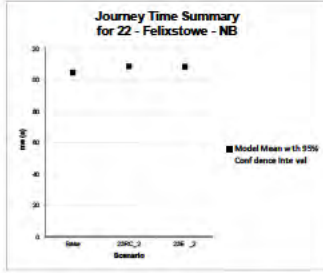
Full Routes Summary (IP)

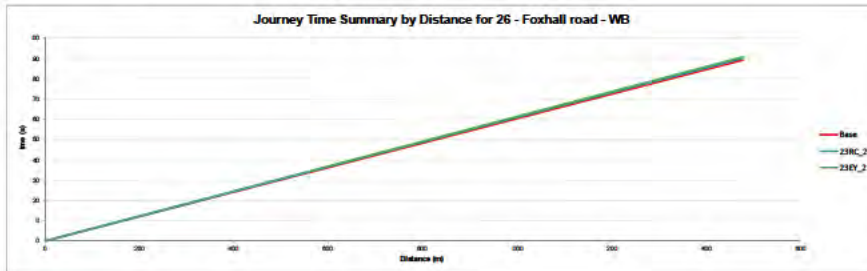
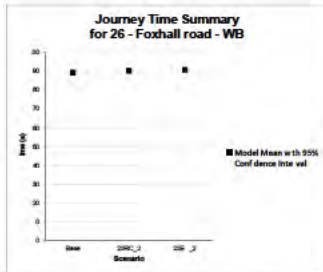
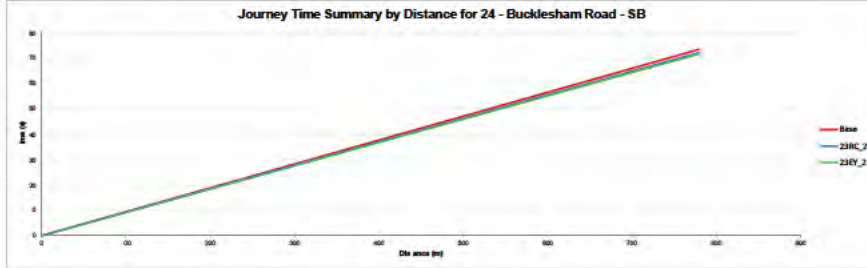
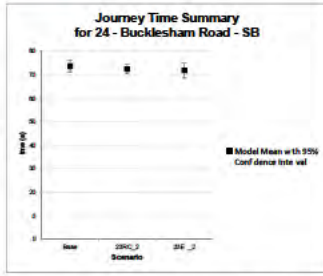


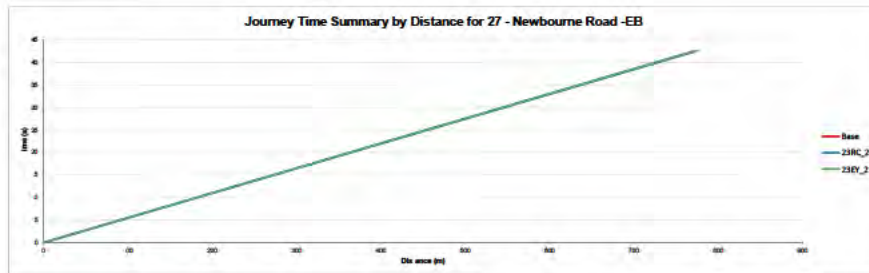
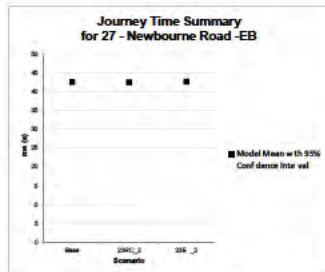
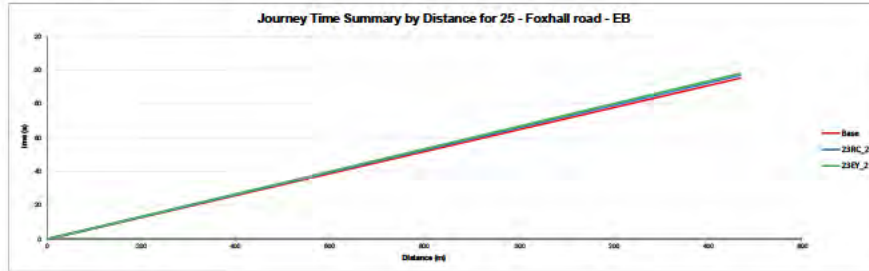
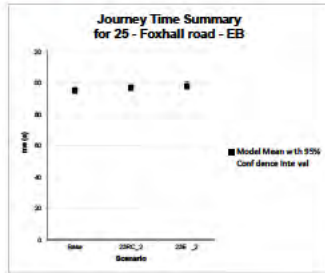


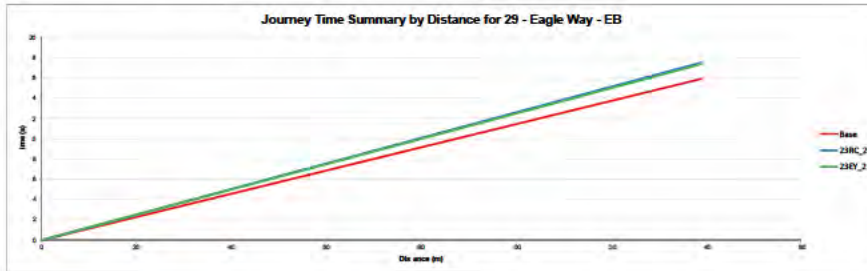
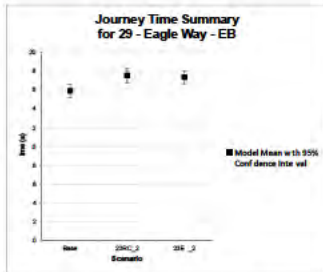
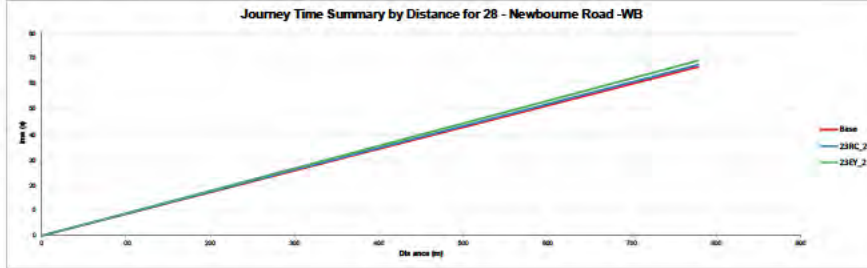
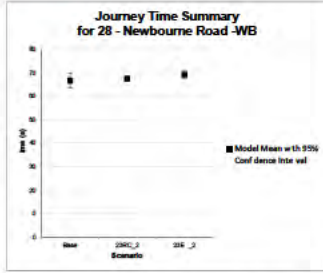


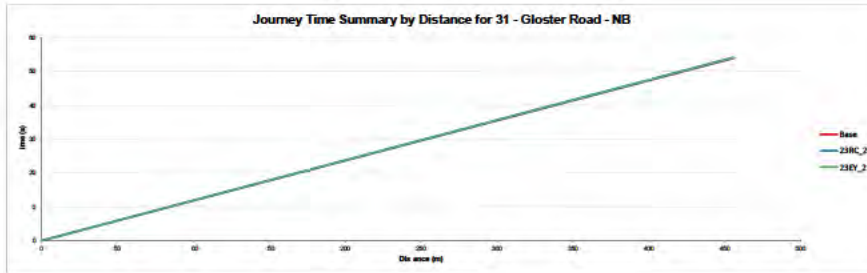
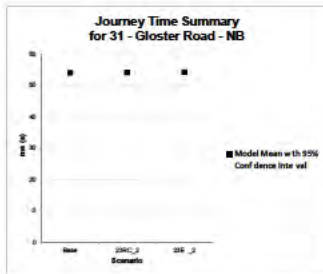
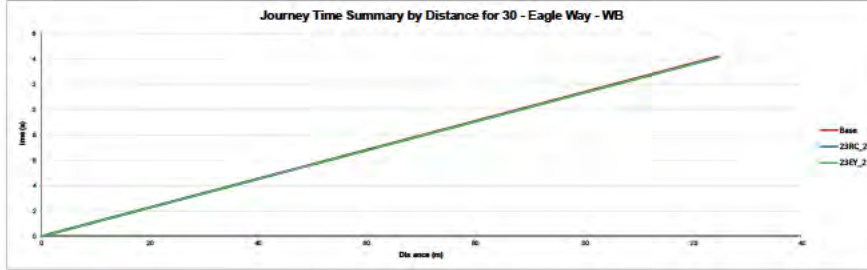
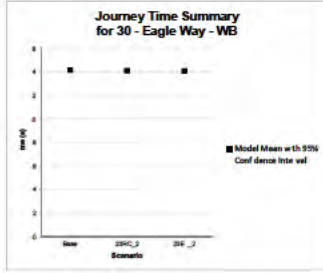


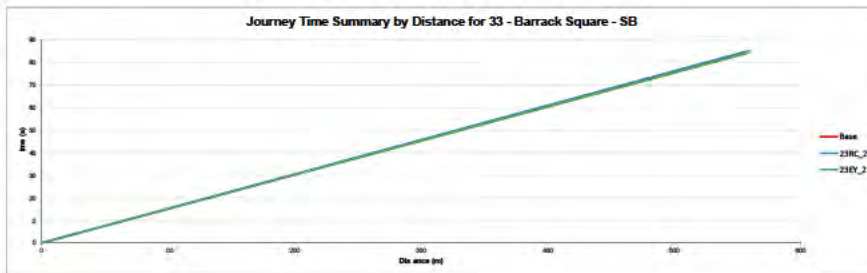
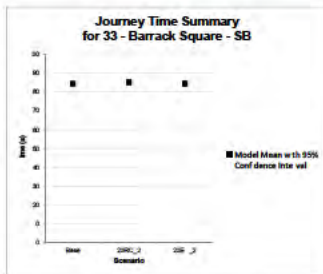
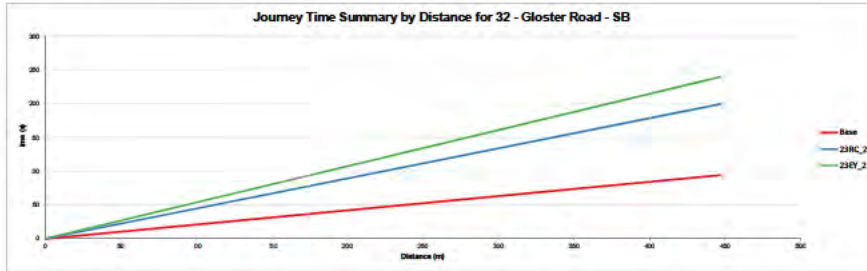
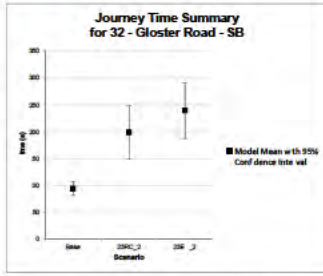


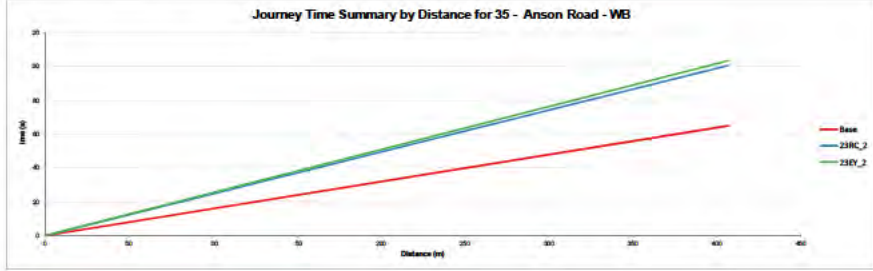
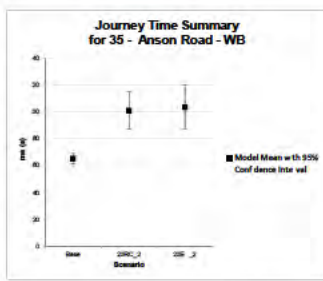
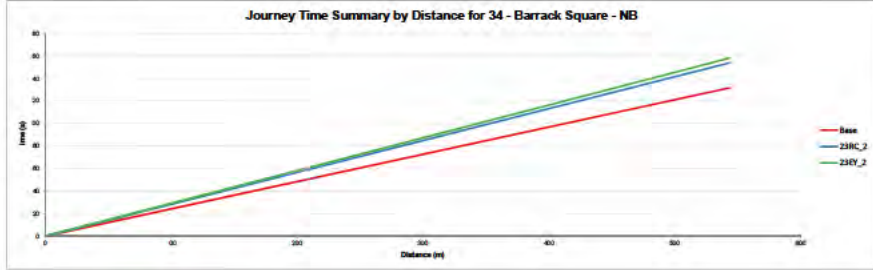
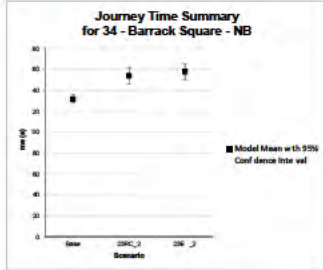


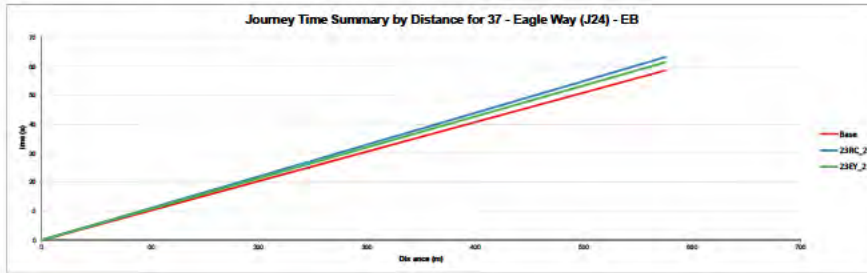
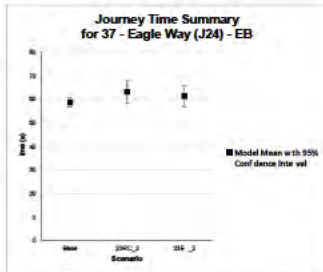
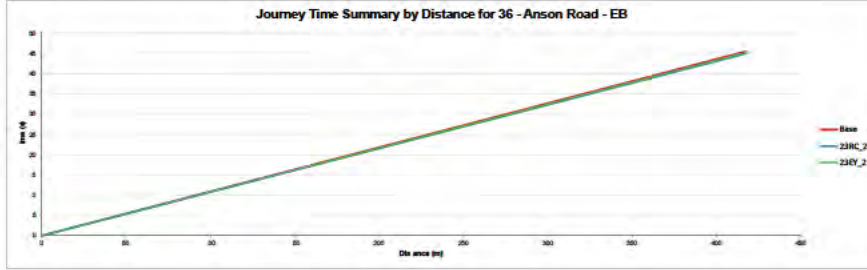
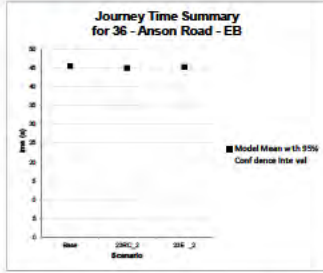


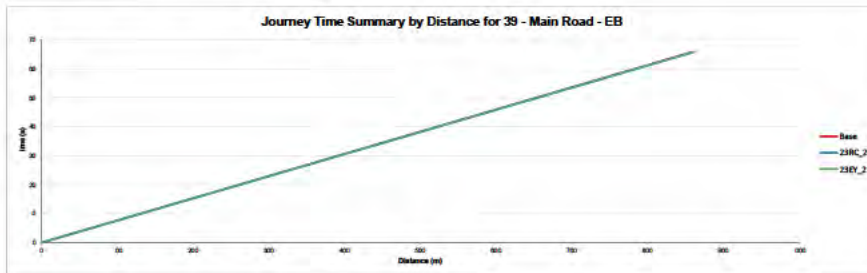
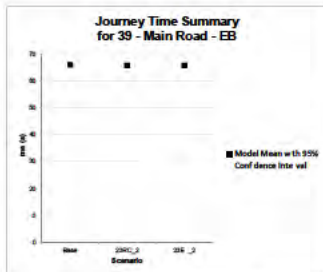
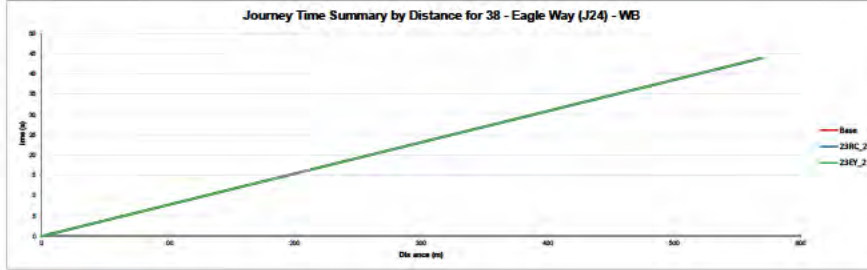
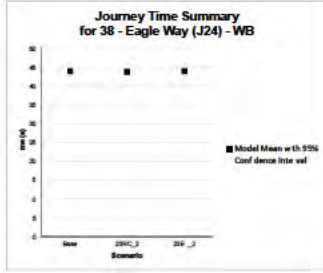


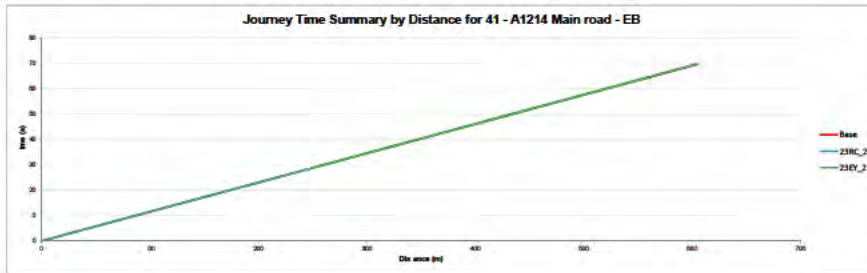
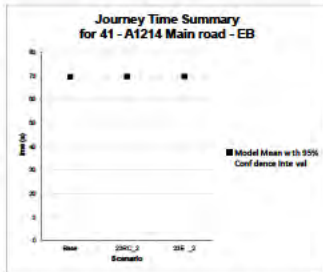
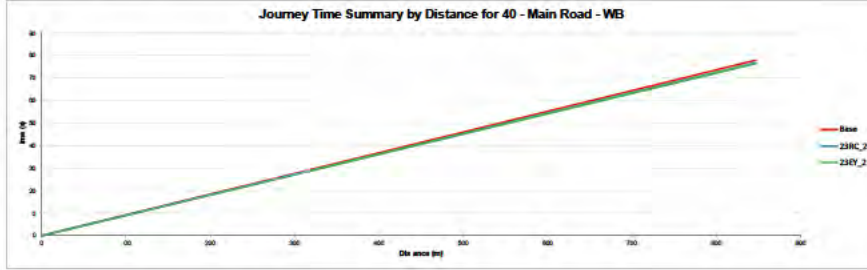
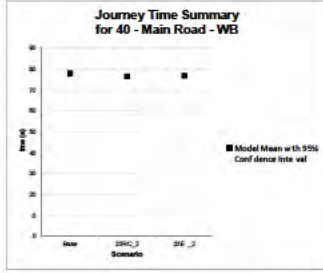


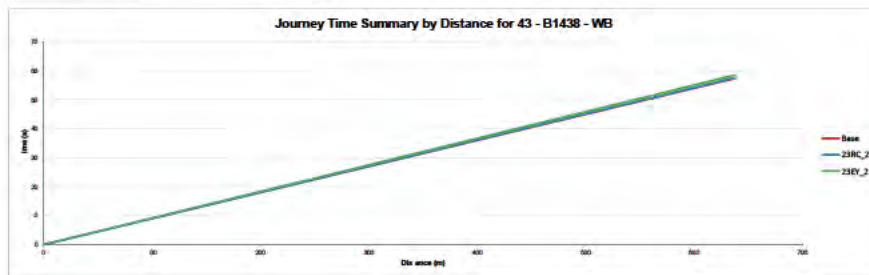
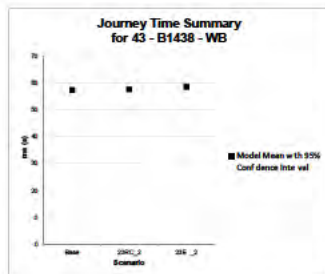
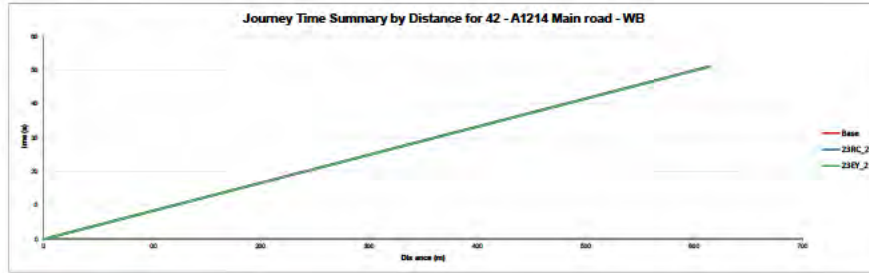
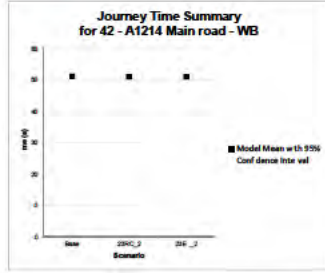


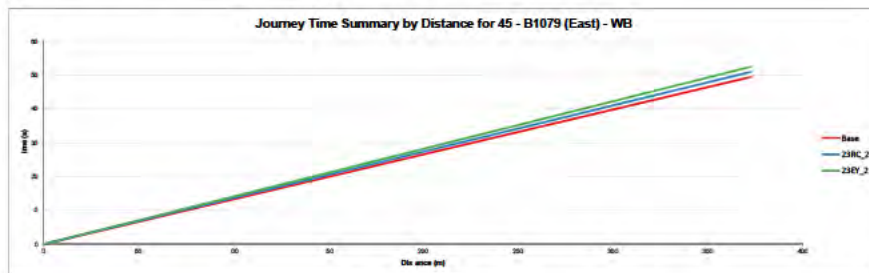
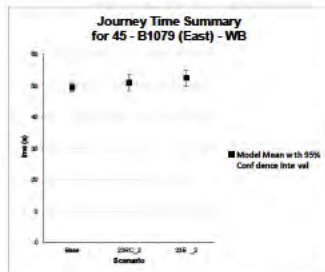
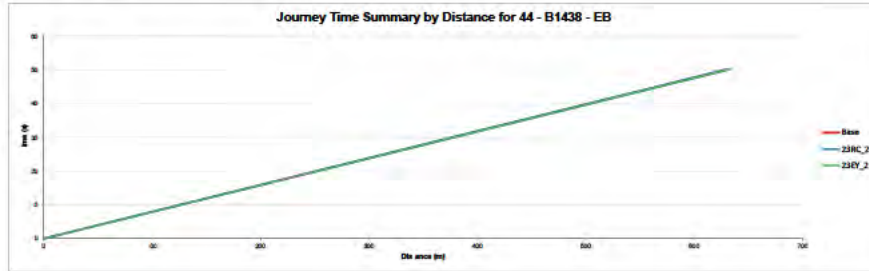
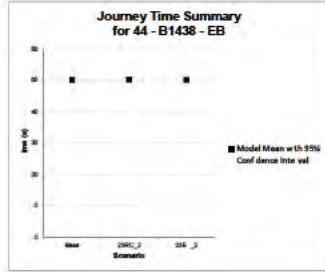


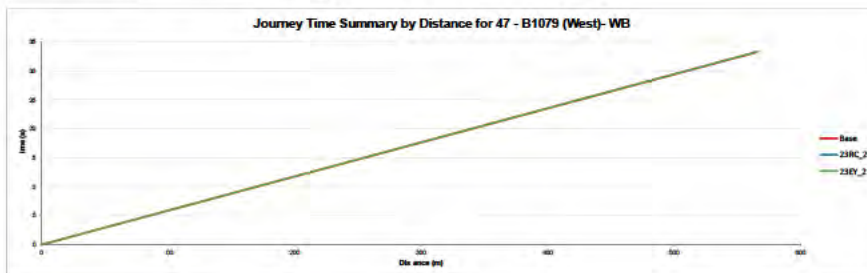
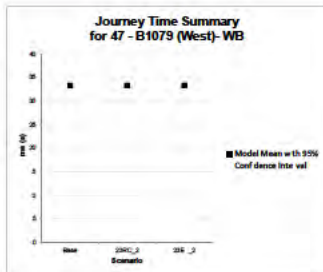
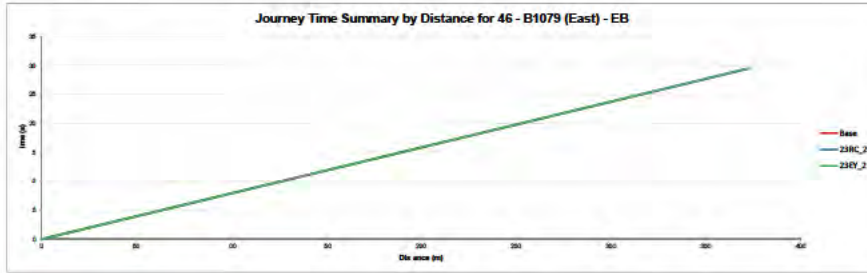
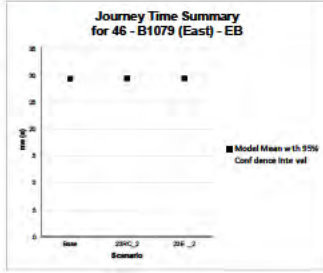


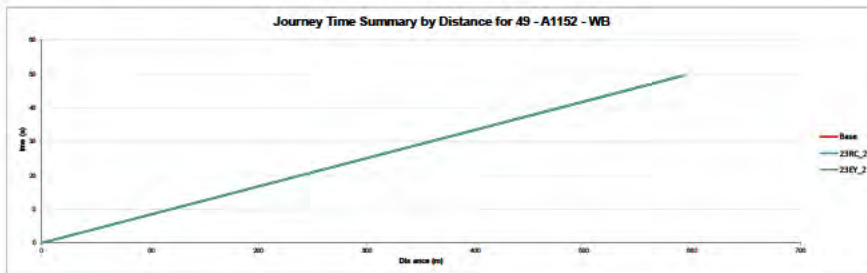
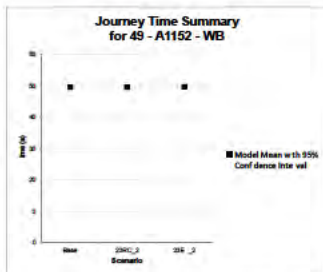
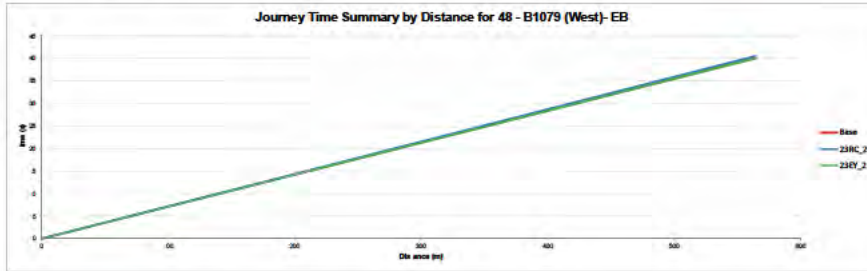
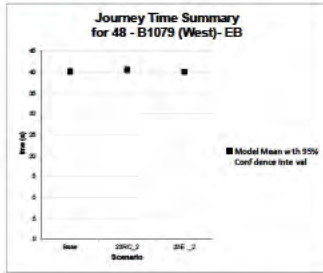


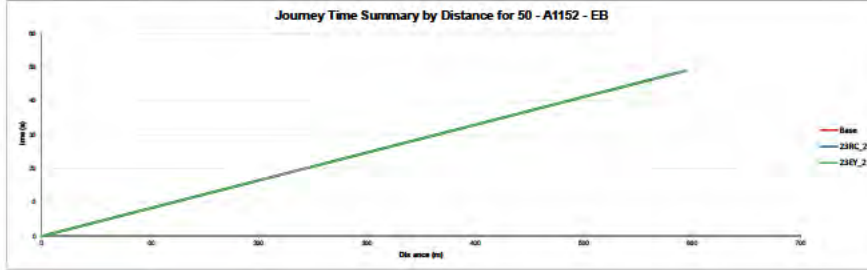
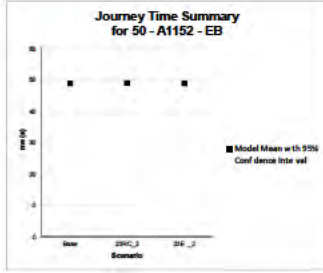




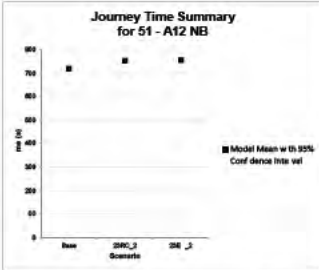
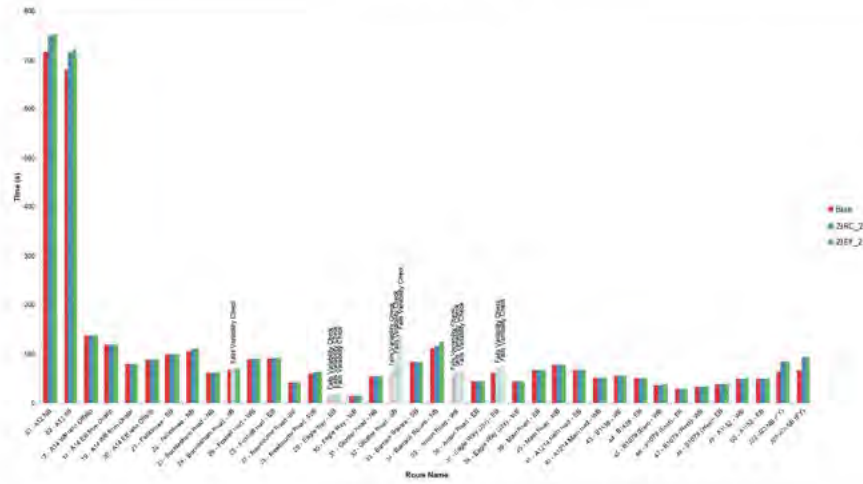




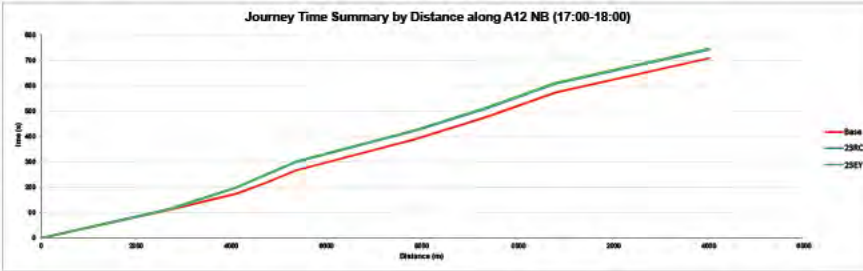


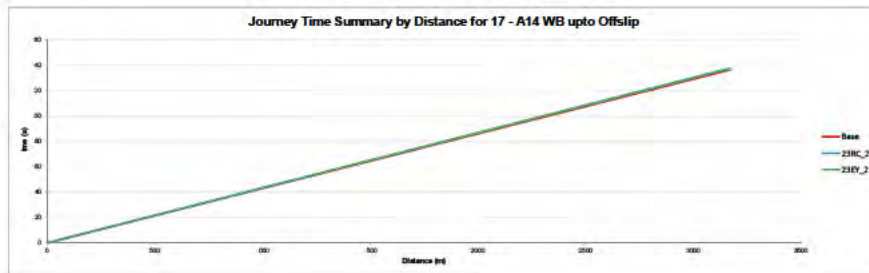
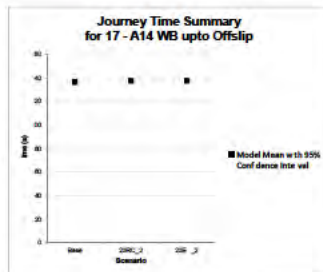
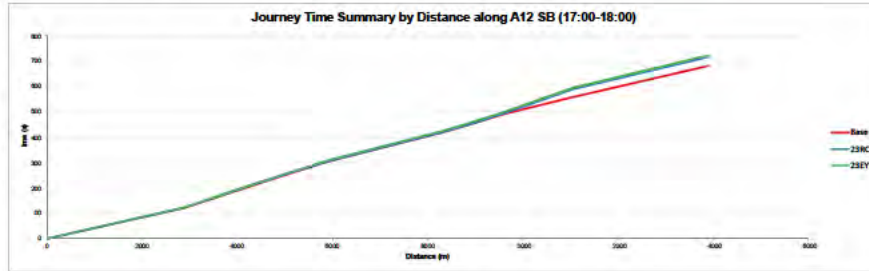
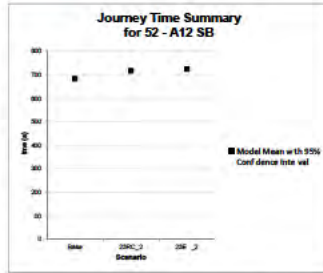


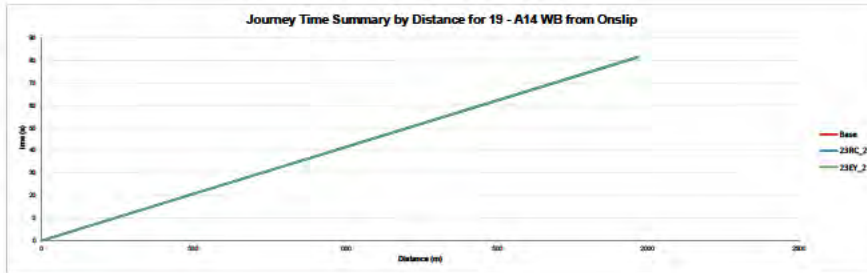
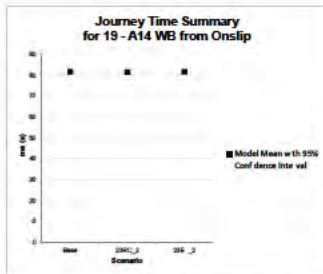
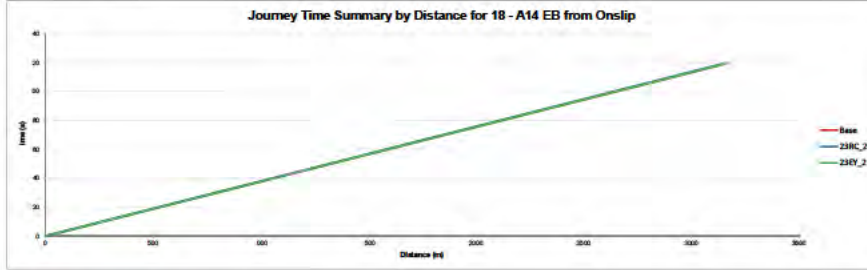
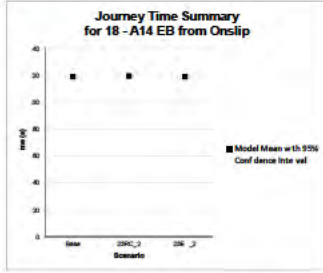
Full Routes Summary (PM)

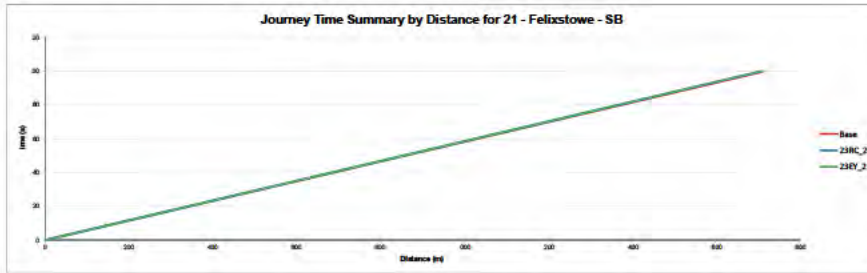
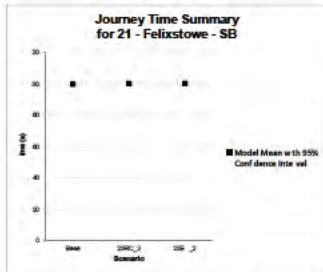
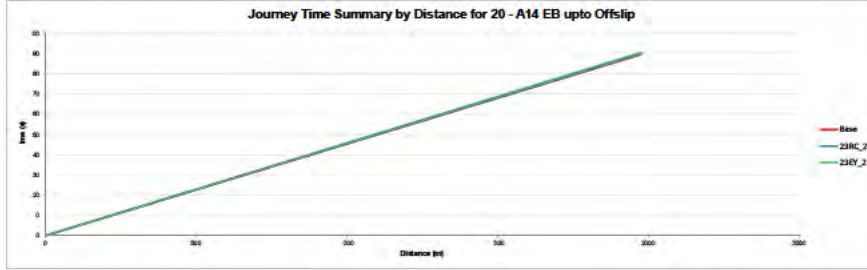
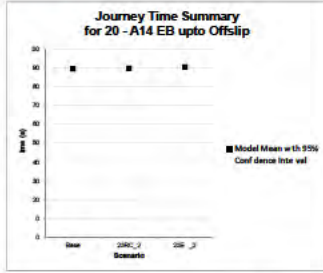


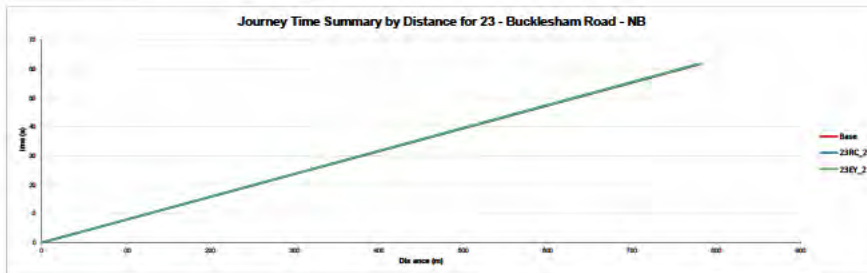
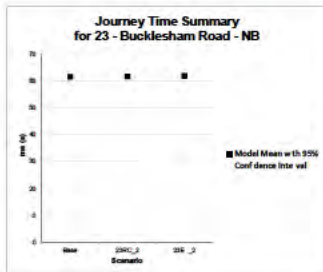
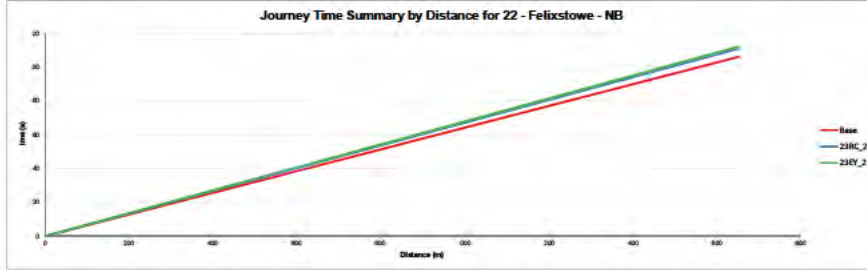
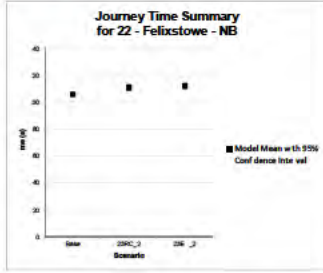
25/2/21 - Have changed title and axis labels to format for Technical Note detailing revised results. Chart is still showing 23 RC_2 and 23_EF

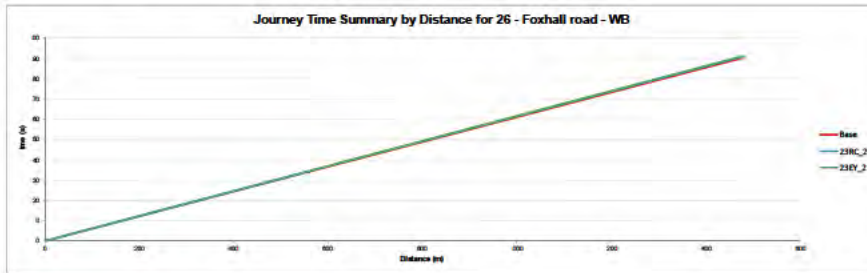
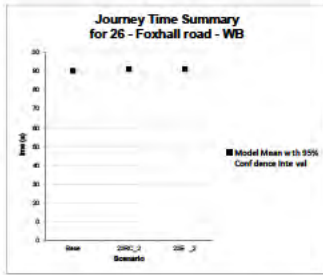
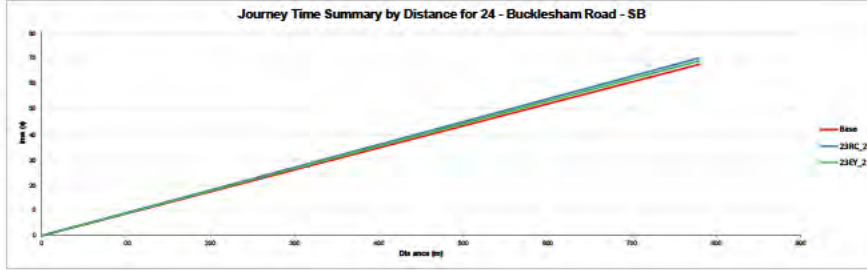
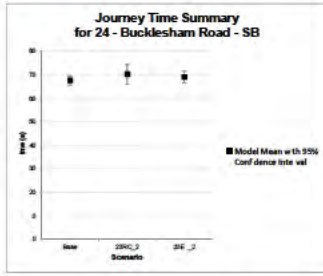


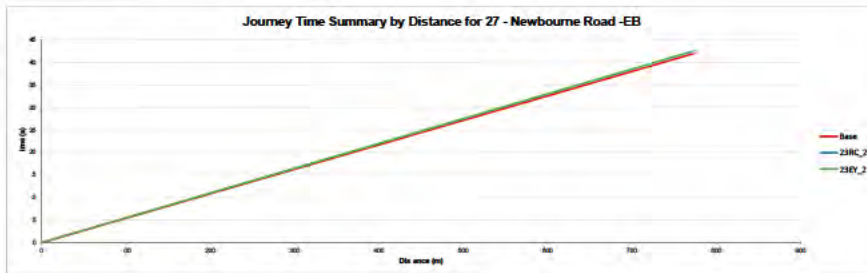
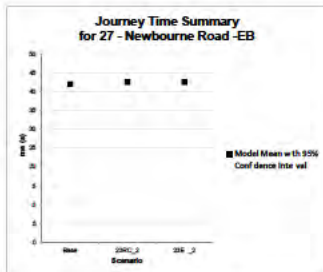
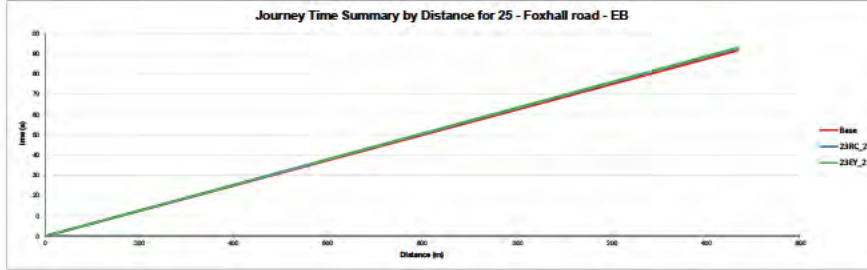
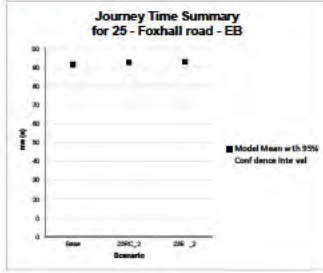


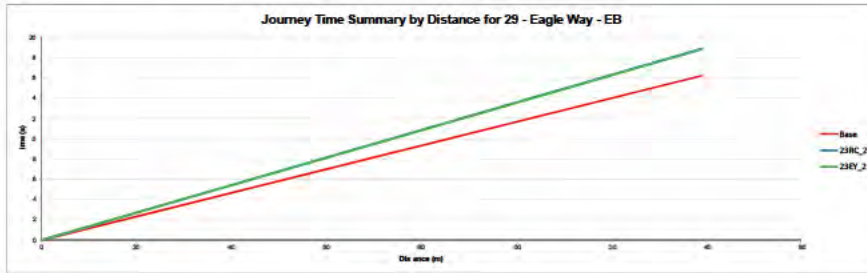
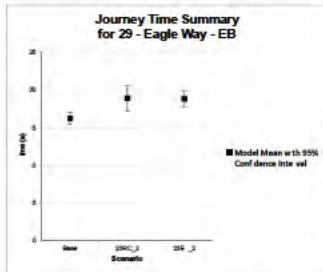
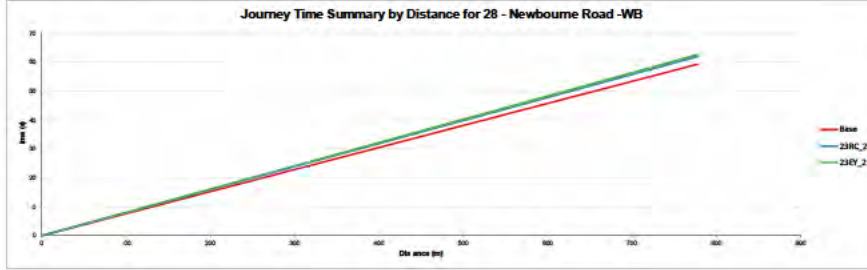
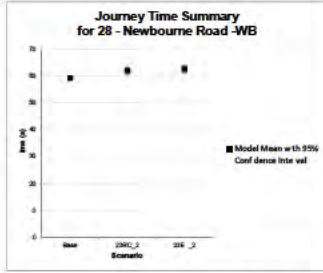


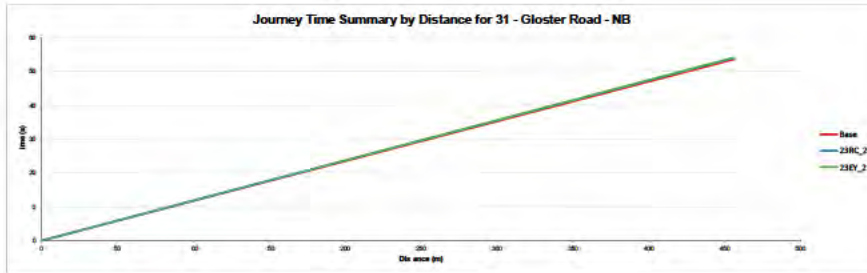
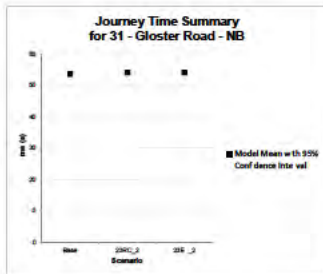
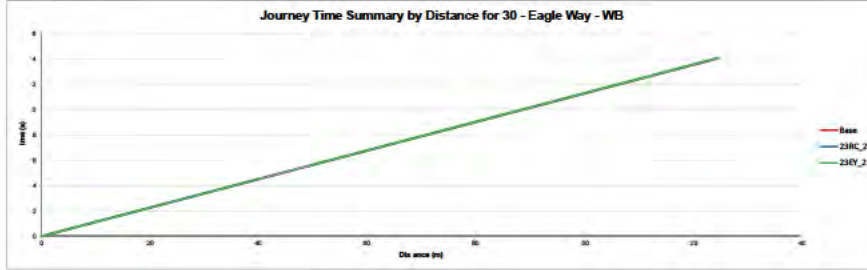
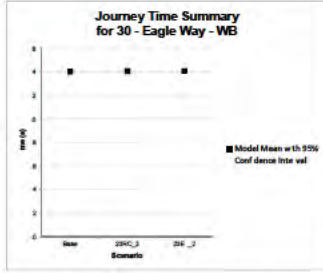


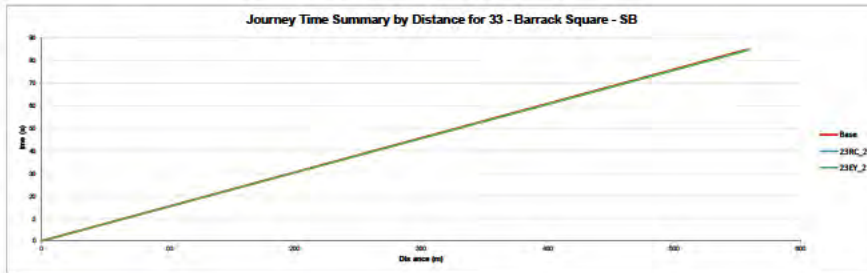
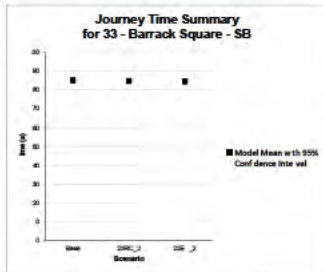
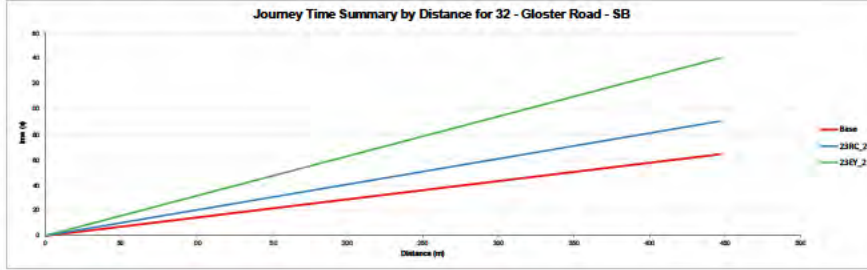
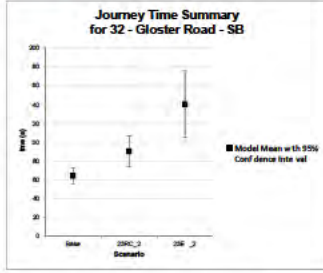


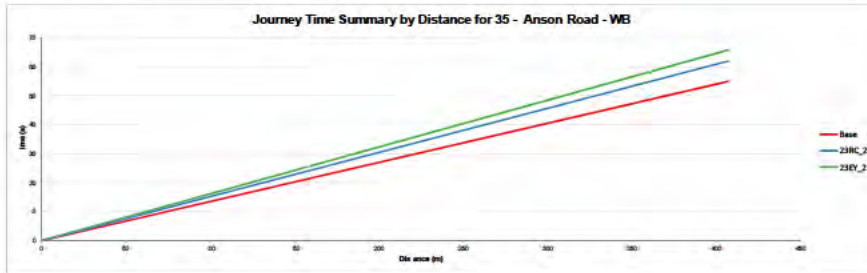
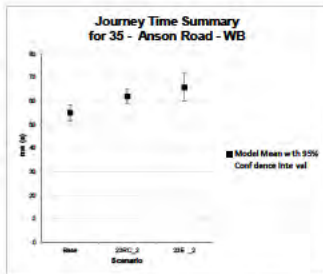
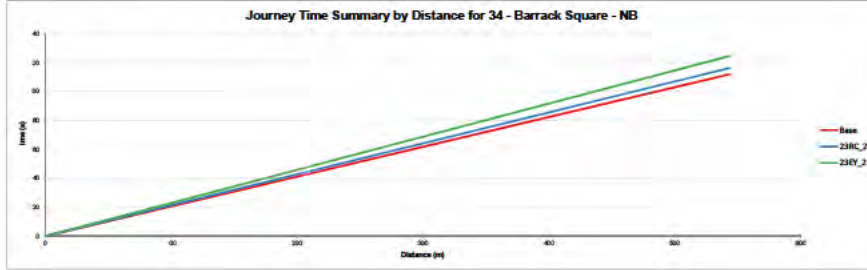
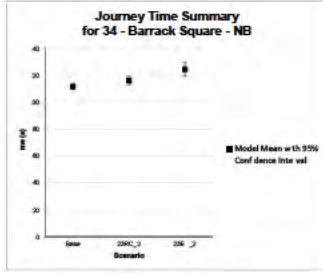


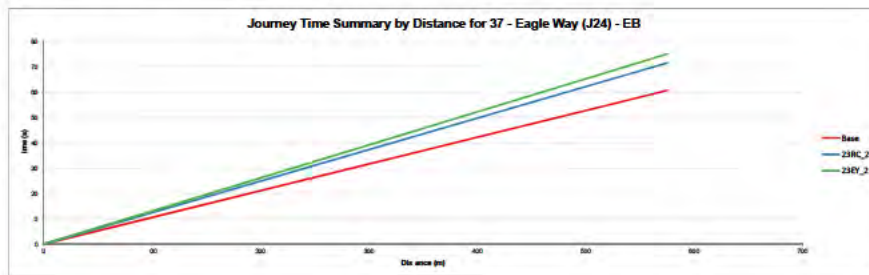
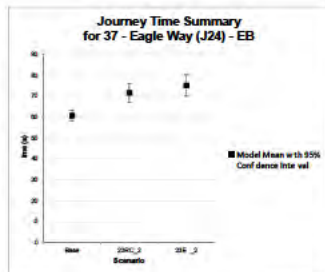
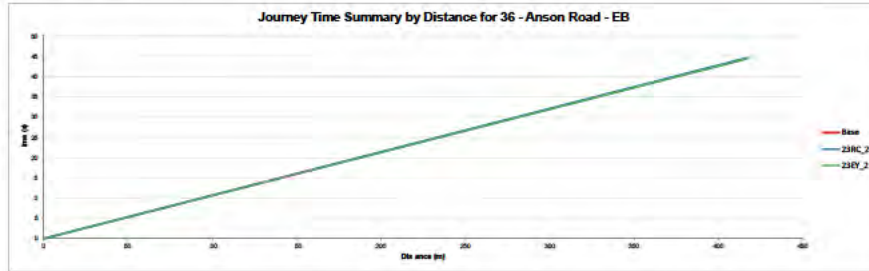
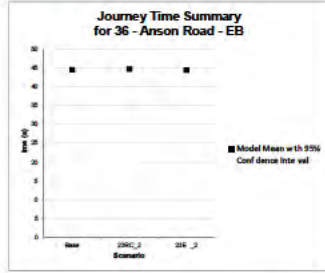


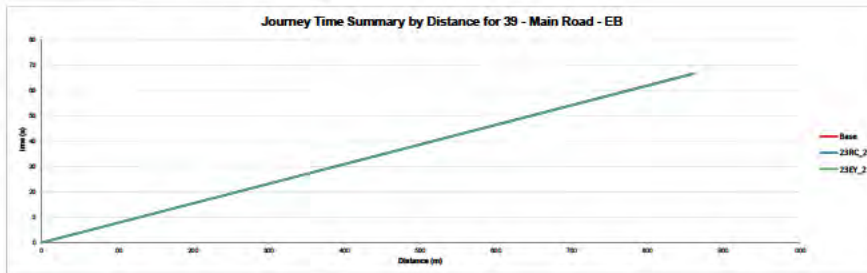
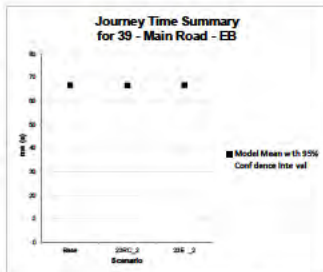
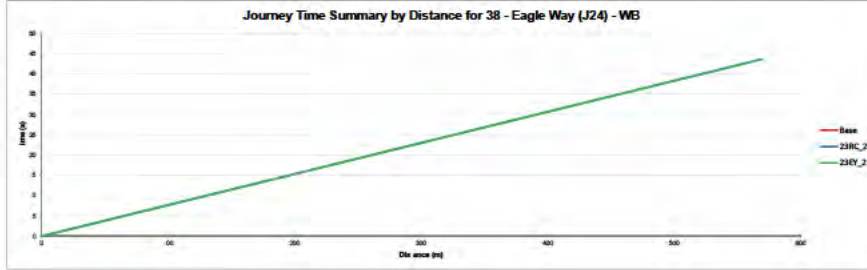
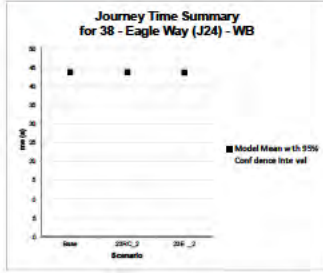


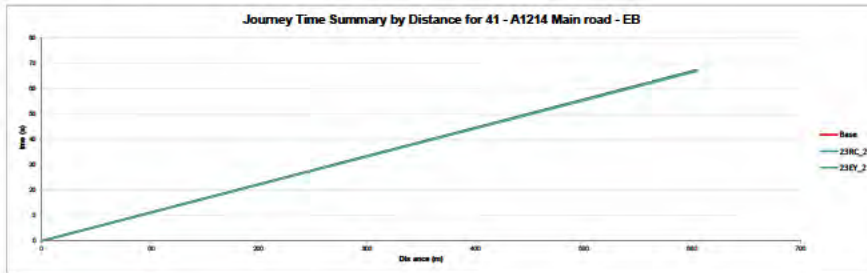
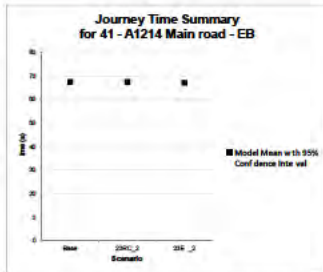
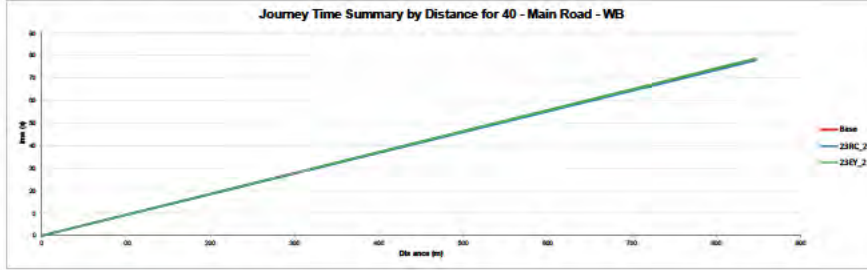
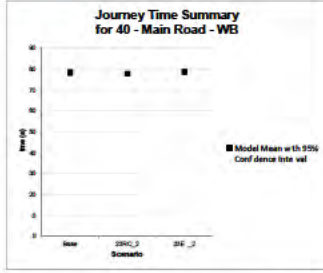


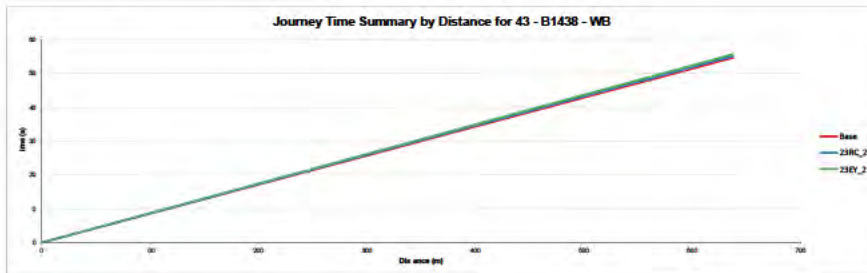
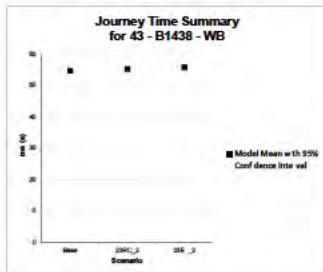
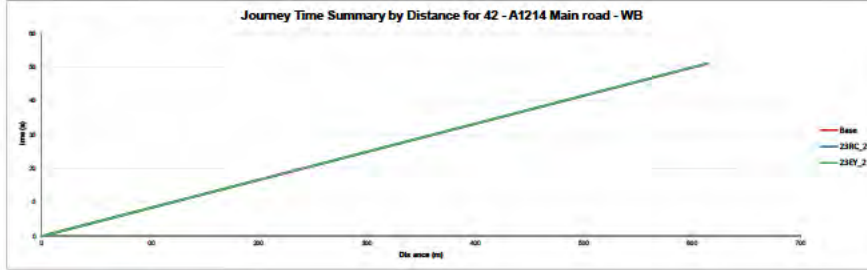
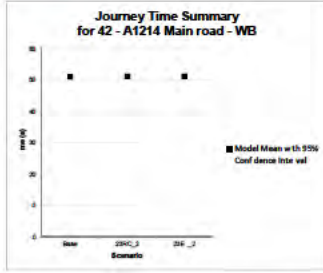


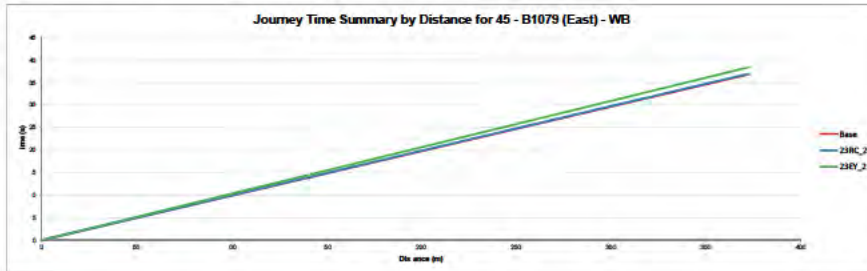
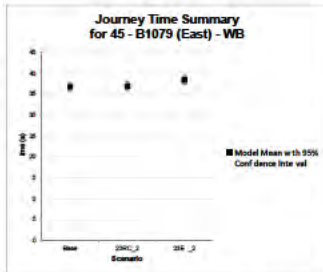
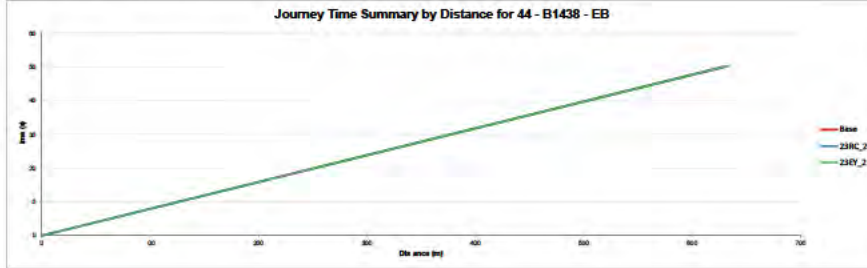
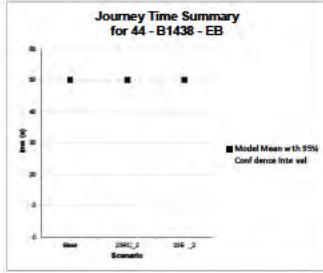


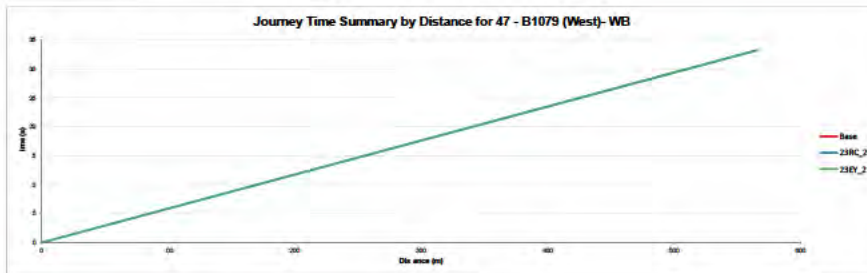
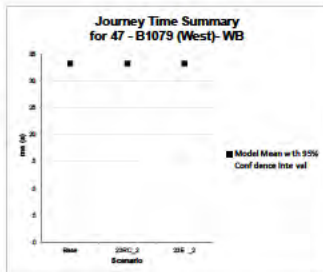
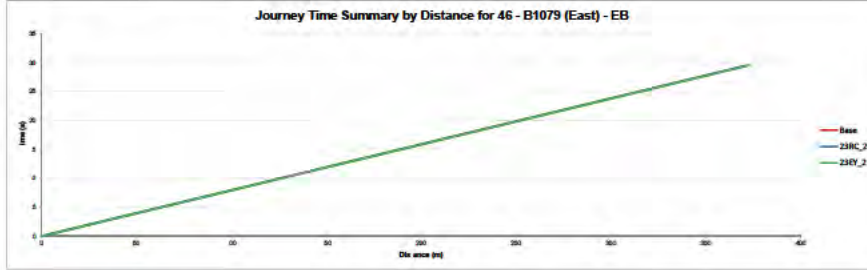
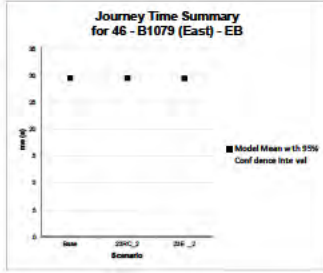


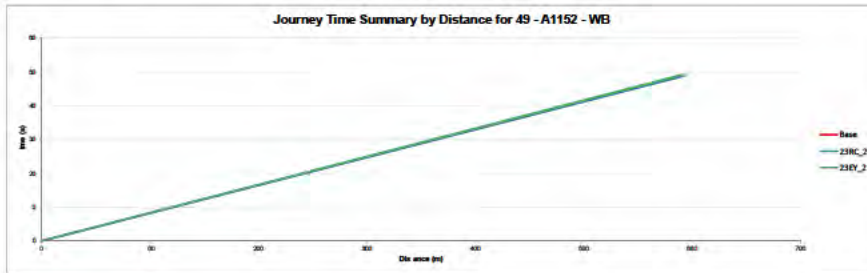
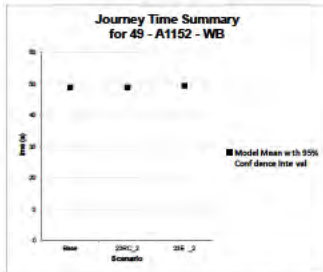
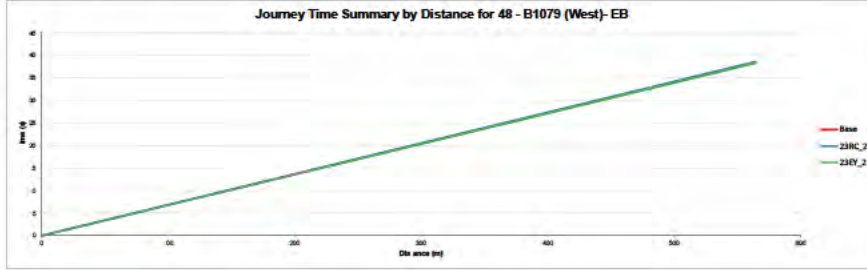
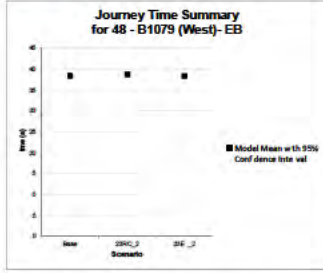


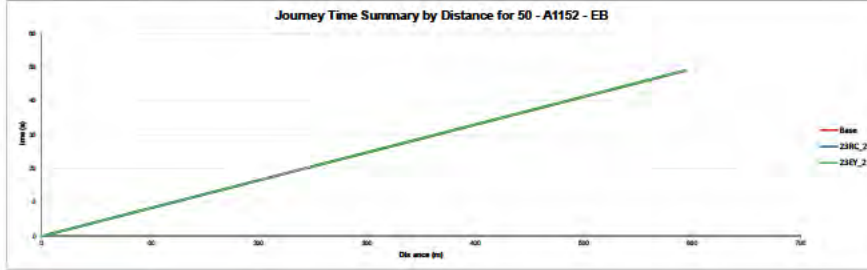
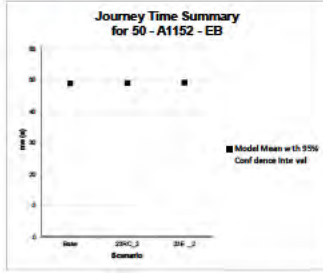








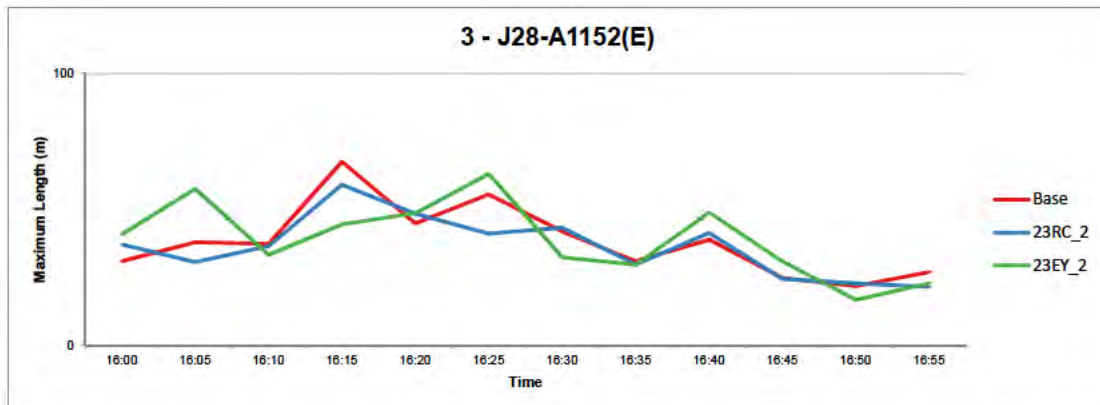
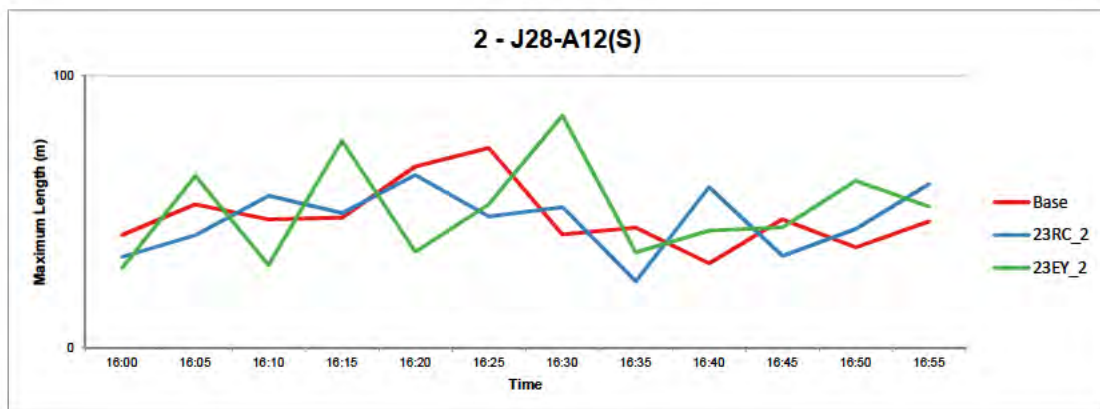
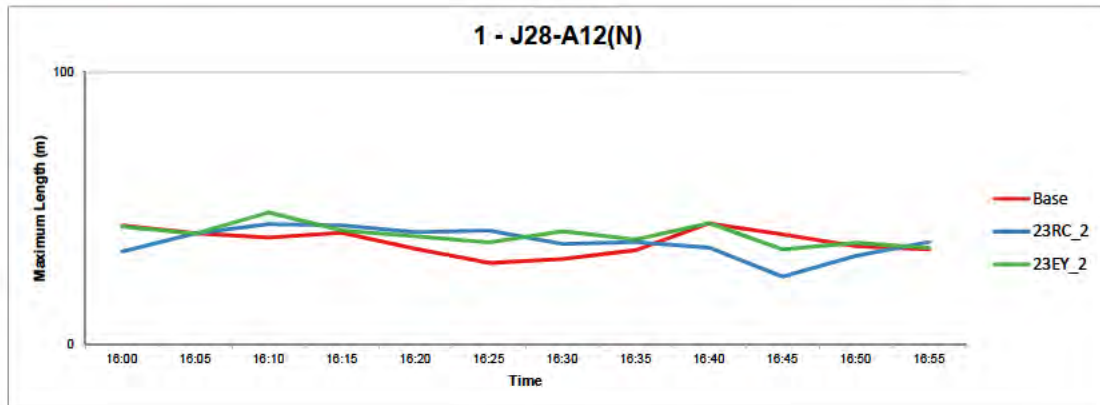


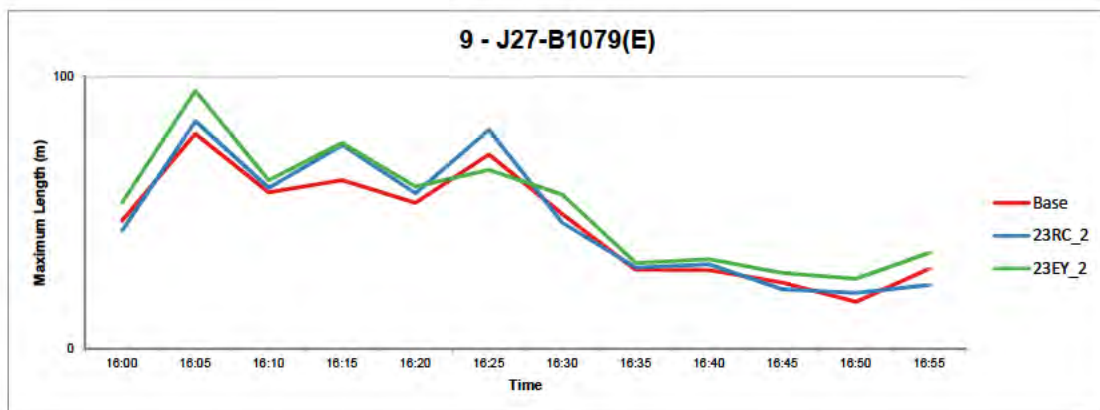
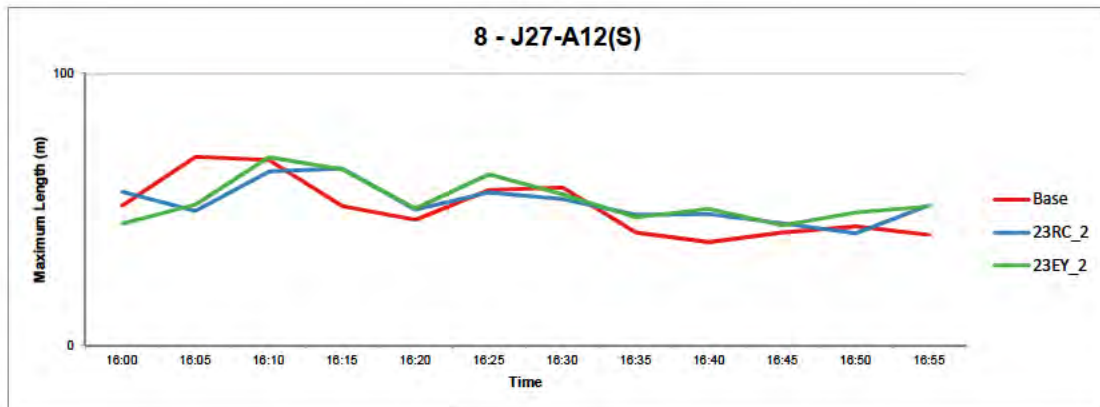
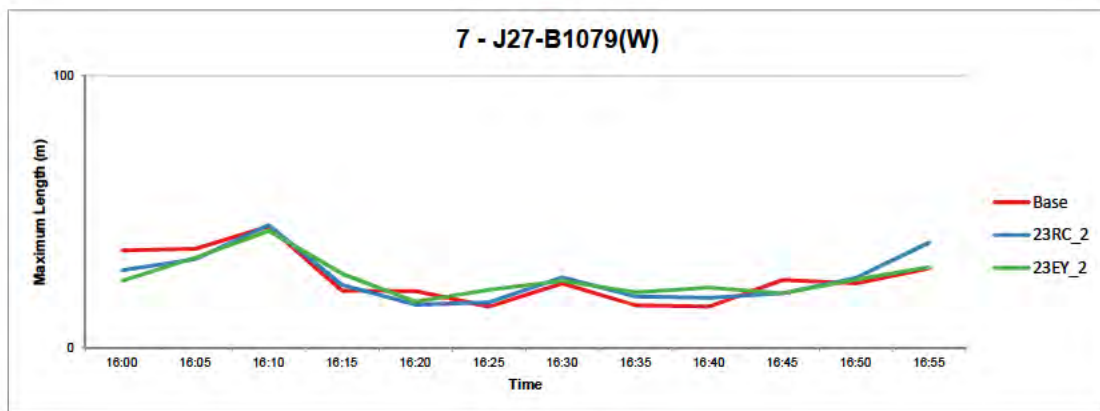
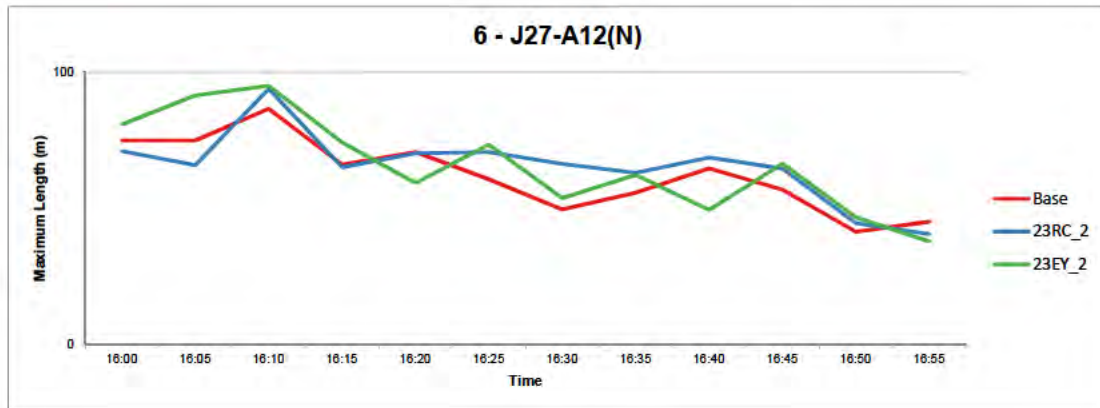


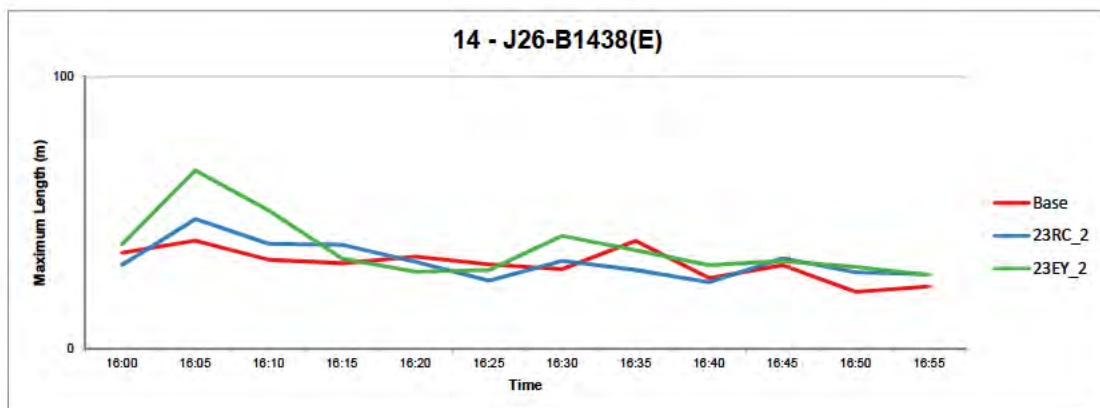
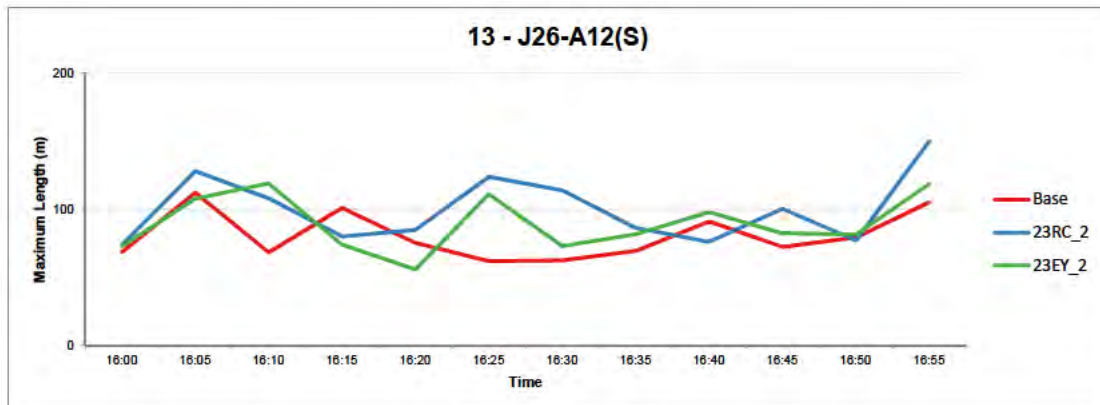
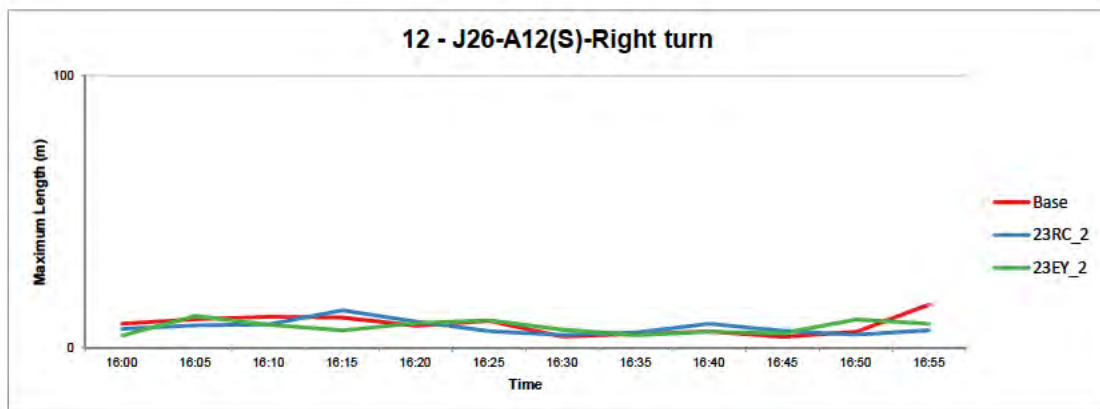
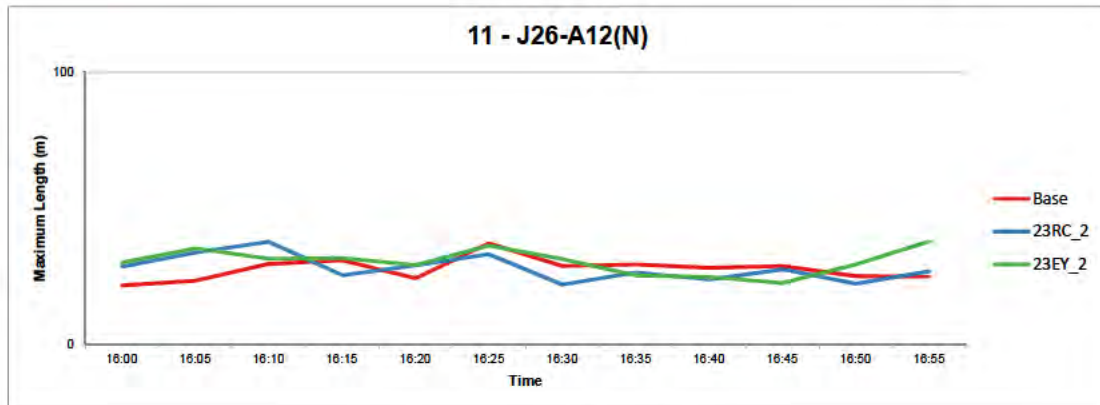


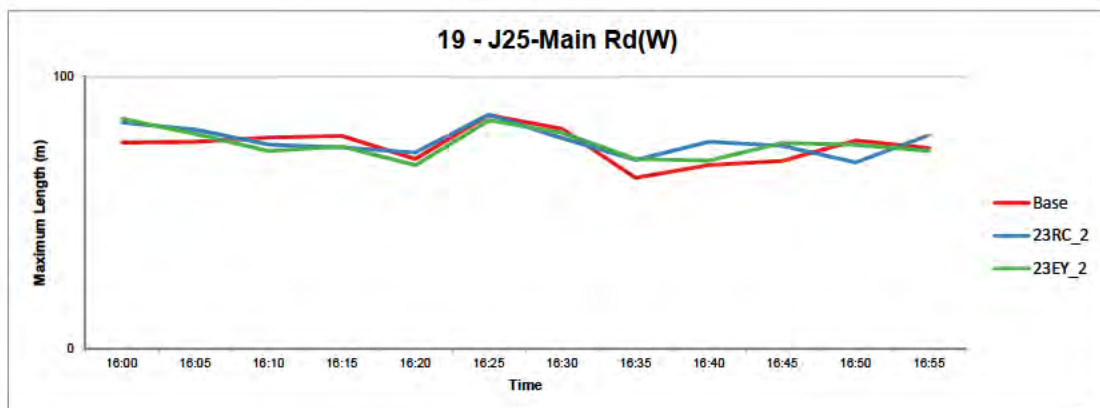
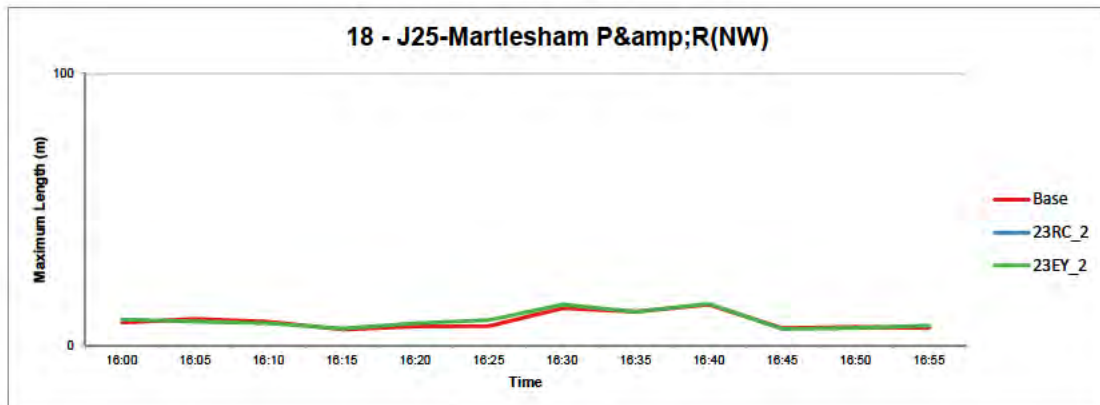
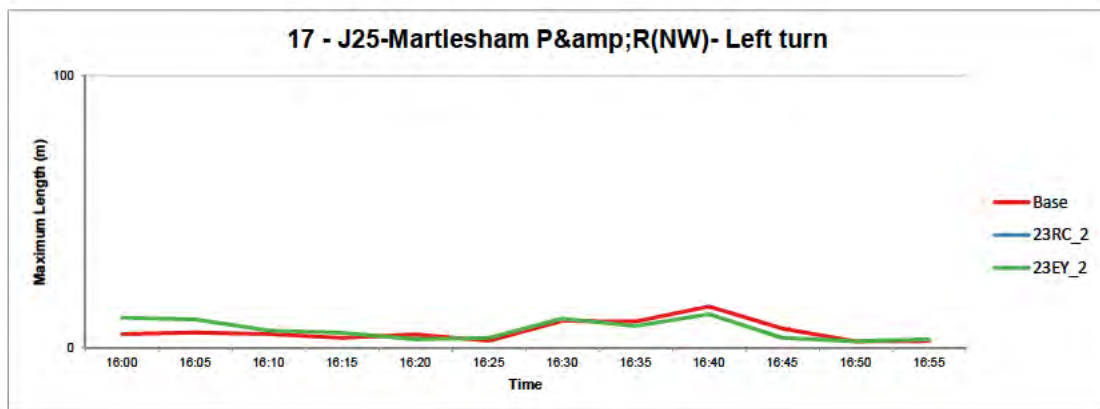
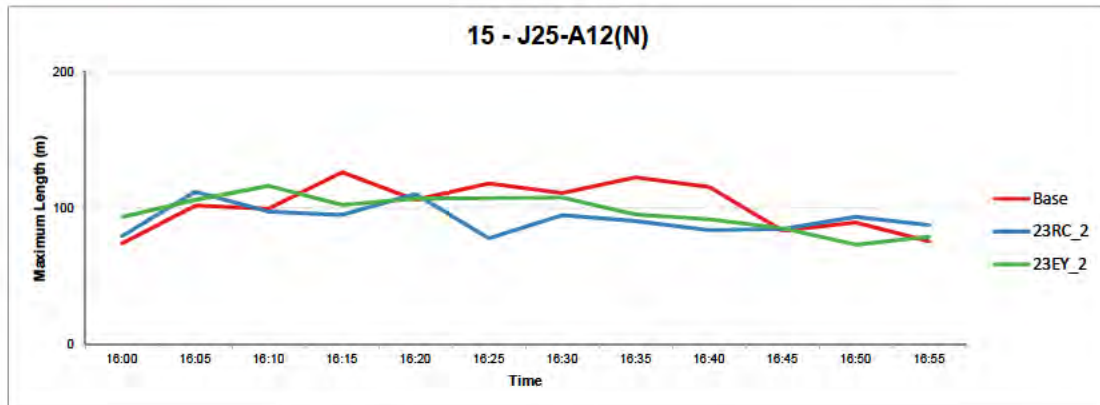
Journey Time Table
15:00-16:00
Base+2023_2

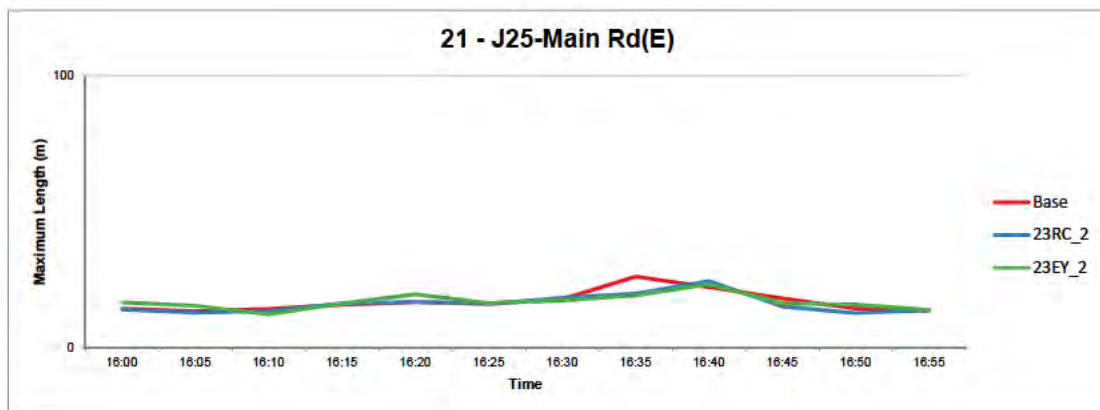
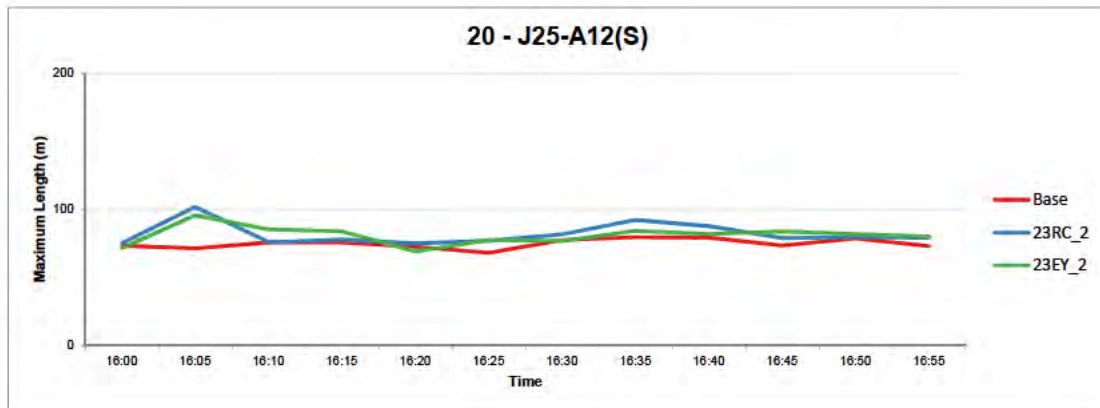
Route Names	Base	23RC_2	23EY_2
1 - J21 - J22 - NB	111	112	113
2 - J22 - J23 - NB	64	86	86
3 - J23 - J24 - NB	46	52	51
4 - J24 - J25 - NB	46	47	48
5 - J25 - J26 - NB	122	123	124
6 - J26 - J27 - NB	90	90	91
7 - J27 - J28 - NB	96	97	97
8 - J28 - A12 - NB	136	137	137
51 - A12 NB	714	747	749
9 - A12 - J28 - SB	123	125	125
10 - J28 - J27 - SB	92	92	92
11 - J27 - J26 - SB	91	92	92
12 - J26 - J25 - SB	118	119	119
13 - J25 - J24 - SB	34	34	35
14 - J24 - J23 - SB	39	40	41
15 - J23 - J22 - SB	66	93	94
16 - J22 - J21 - SB	122	126	126
52 - A12 SB	687	720	722
17 - A14 WB upto Offslip	136	137	137
18 - A14 EB from Onslip	119	119	119
19 - A14 WB from Onslip	83	83	83
20 - A14 EB upto Offslip	88	90	89
21 - Felixstowe - SB	97	99	99
22 - Felixstowe - NB	104	106	105
23 - Bucklesham Road - NB	61	62	61
24 - Bucklesham Road - SB	66	67	67
26 - Foxhall road - WB	88	89	89
25 - Foxhall road - EB	93	94	95
27 - Newbourne Road -EB	43	43	43
28 - Newbourne Road -WB	55	58	58
29 - Eagle Way - EB	16	18	18
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	54	54	55
32 - Gloster Road - SB	54	54	55
33 - Barrack Square - SB	84	84	85
34 - Barrack Square - NB	101	102	104
35 - Anson Road - WB	49	49	49
36 - Anson Road - EB	45	45	45
37 - Eagle Way (J24) - EB	60	62	64
38 - Eagle Way (J24) - WB	44	44	44
39 - Main Road - EB	66	66	66
40 - Main Road - WB	76	75	76
41 - A1214 Main road - EB	70	69	69
42 - A1214 Main road - WB	51	51	51
43 - B1438 - WB	54	54	54
44 - B1438 - EB	50	50	50
45 - B1079 (East) - WB	37	37	38
46 - B1079 (East) - EB	30	30	30
47 - B1079 (West)- WB	33	33	33
48 - B1079 (West)- EB	39	39	39
49 - A1152 - WB	49	49	49
50 - A1152 - EB	49	49	49
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	64	86	86
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	66	93	94

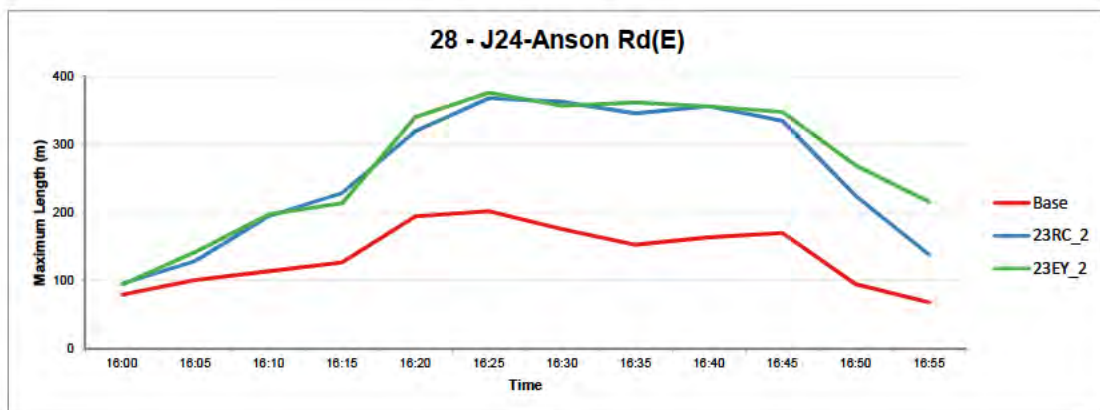
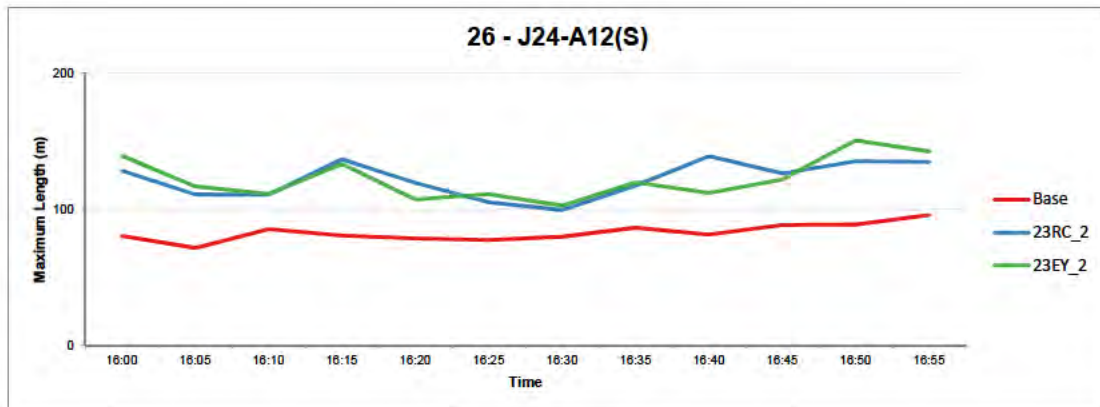
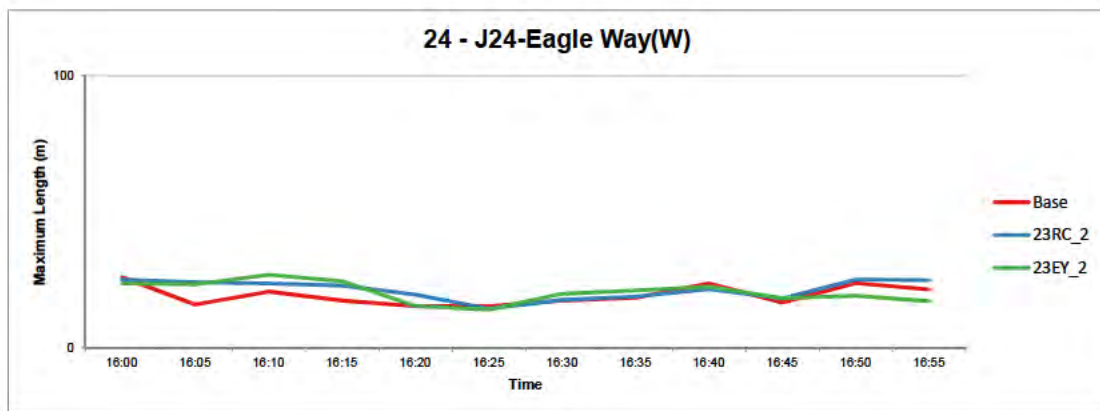
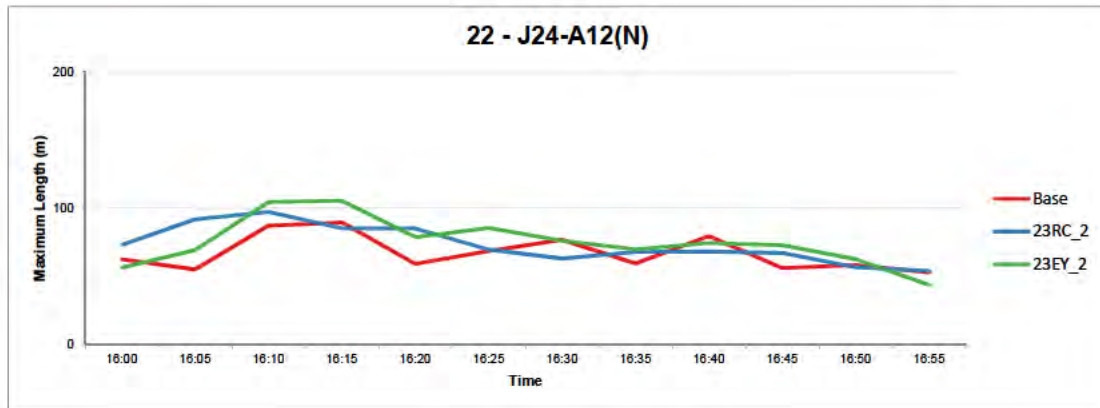


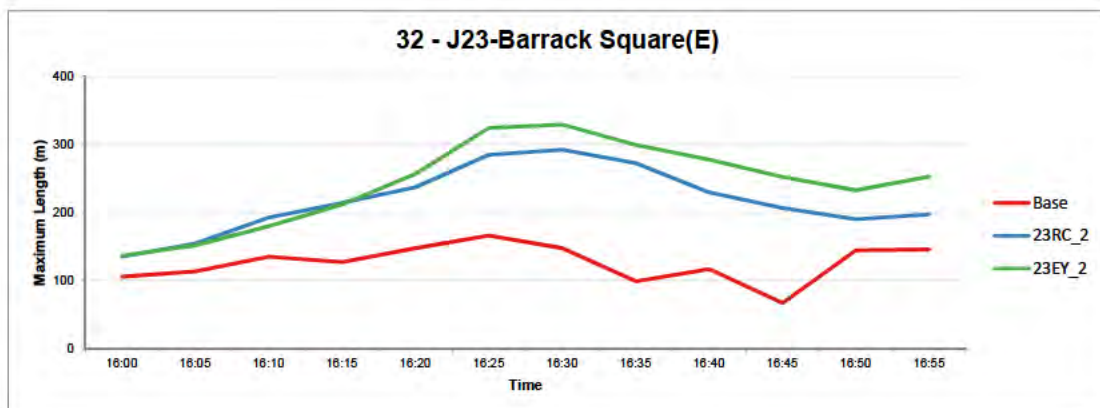
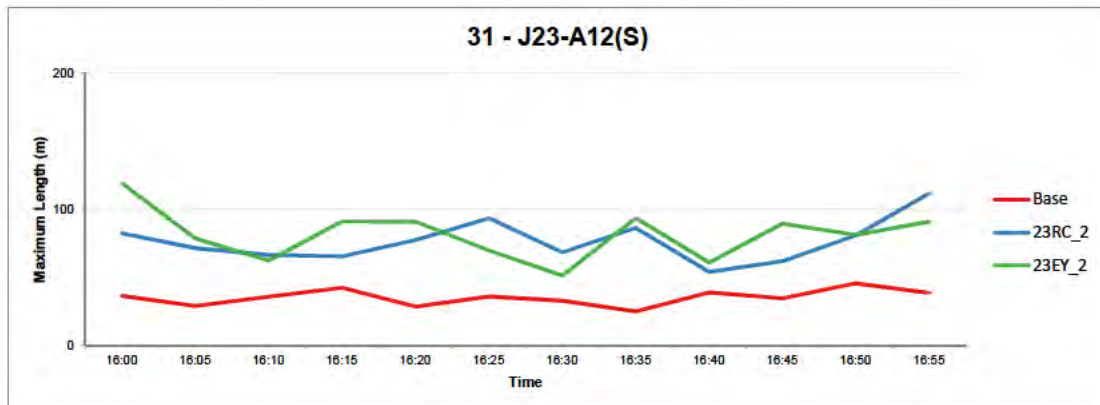
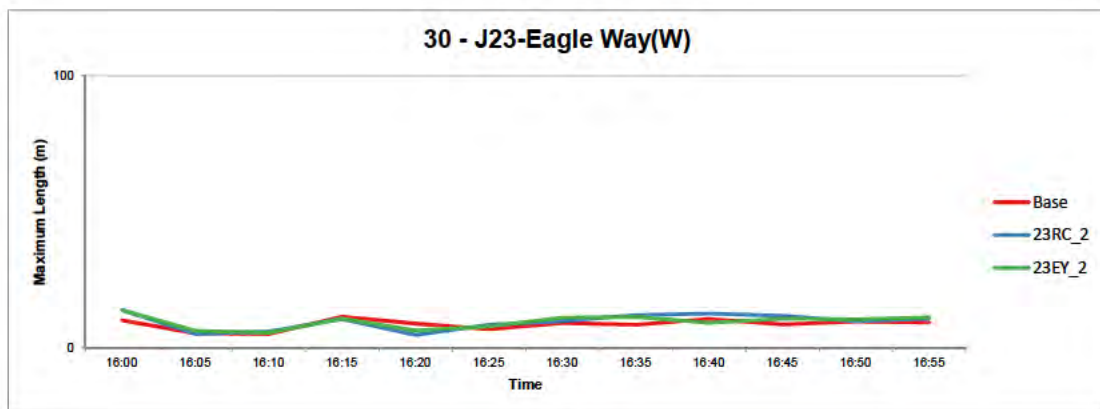
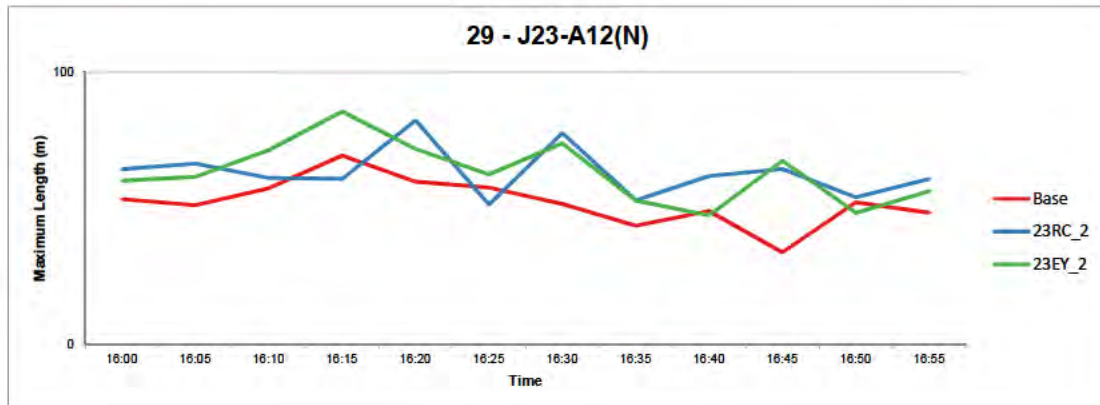


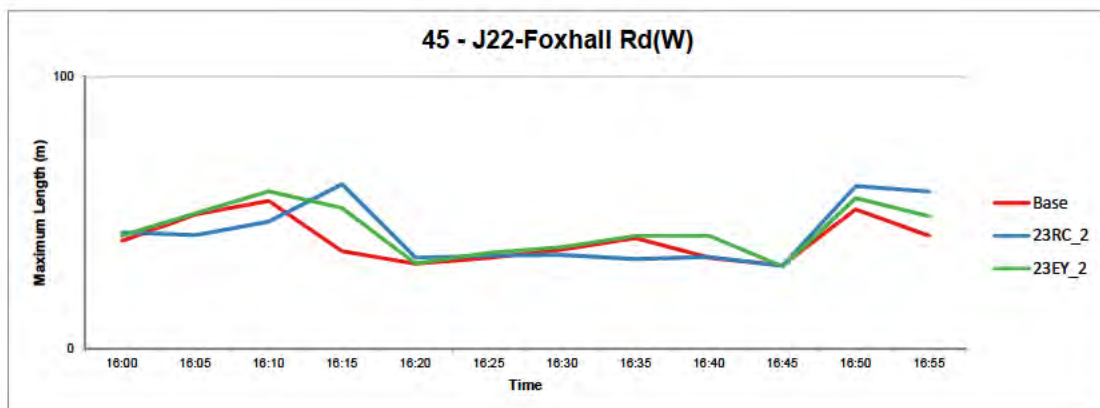
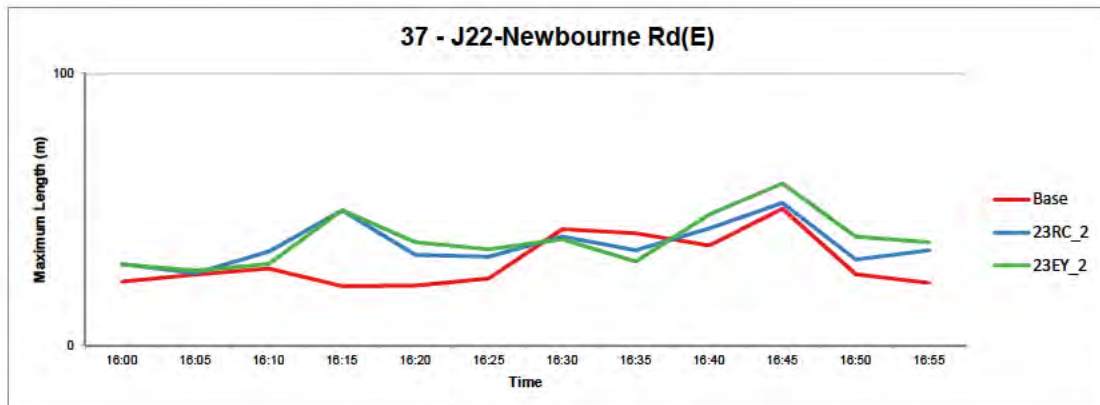
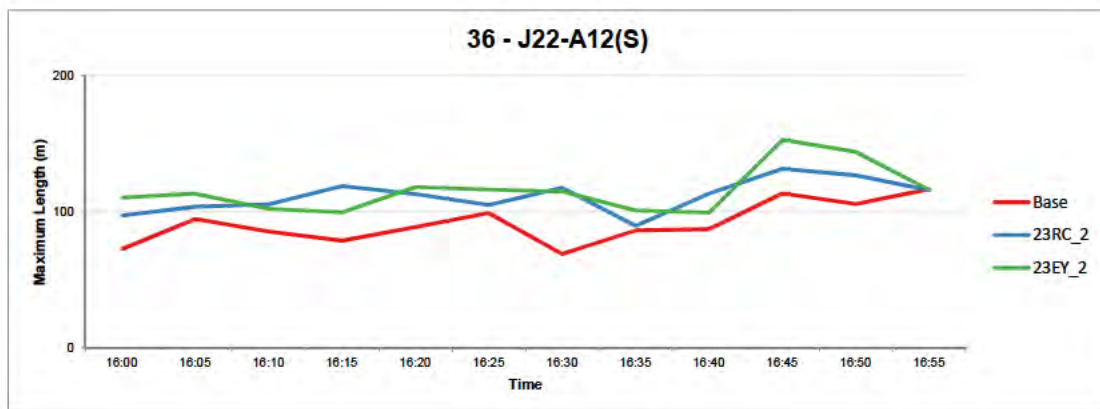
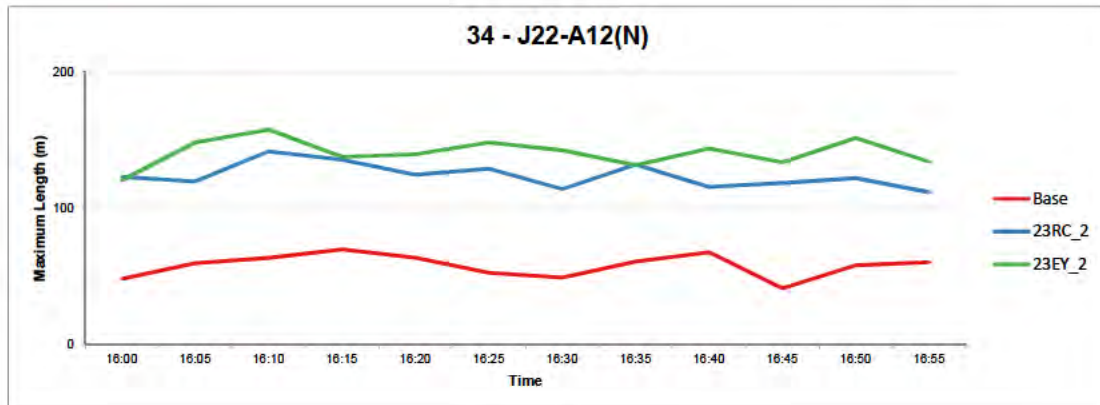


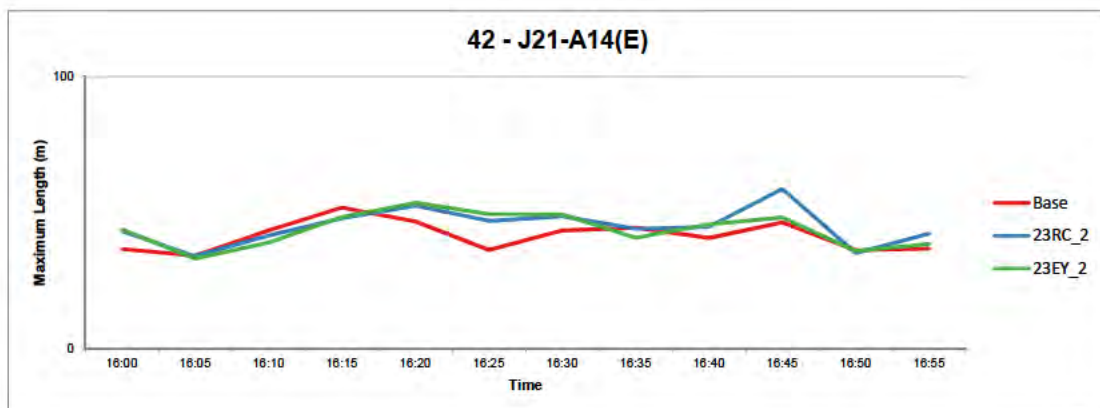
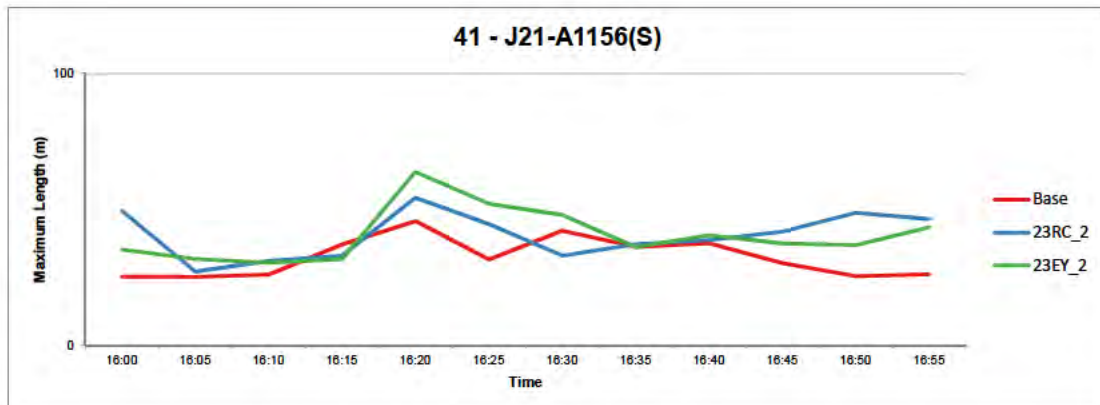
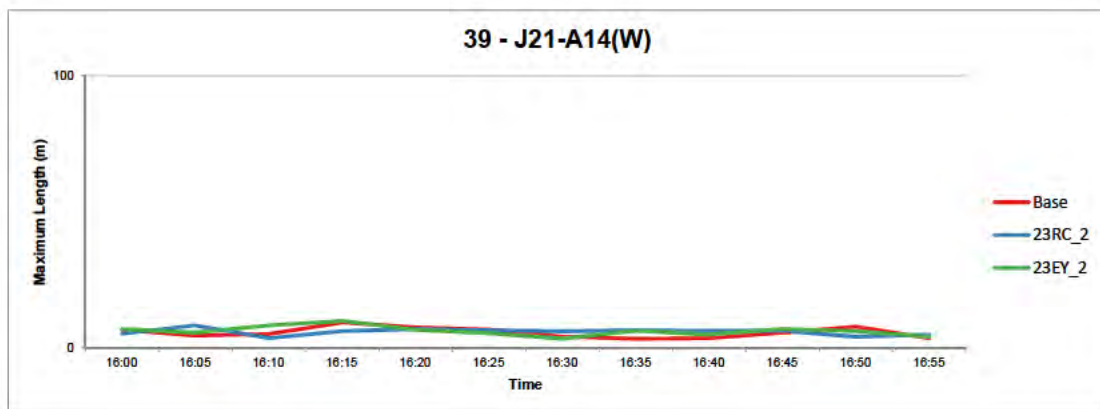
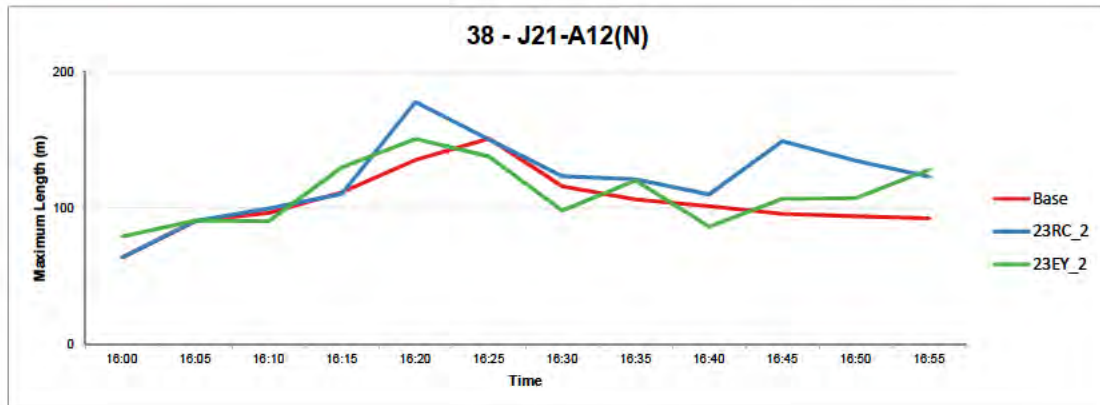






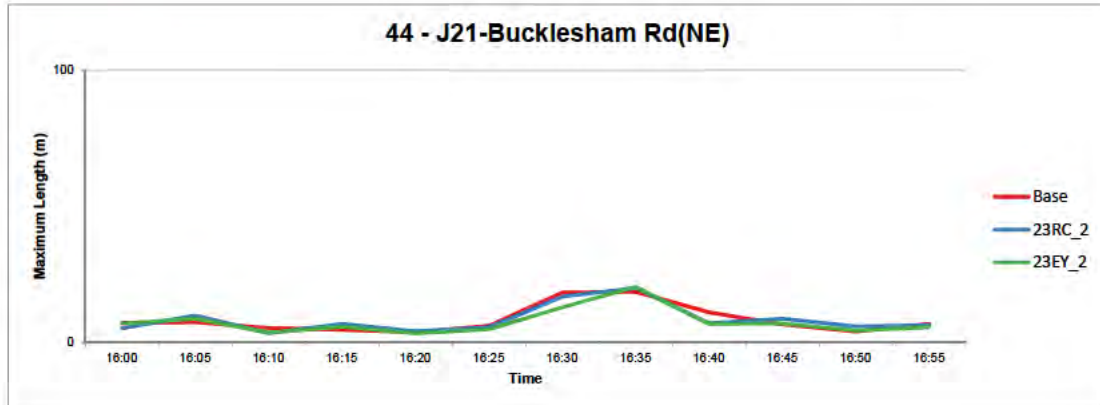








44 - J21-Bucklesham Rd(NE)





Queue Comparison
16:00-17:00
Maximum Length Summary
Maximum Length (m)

	Base	23RC_2	23EY_2
1 - J28-A12(N)	44.5	44.2	48.5
2 - J28-A12(S)	73.4	63.5	85.3
3 - J28-A1152(E)	67.4	59.0	63.0
6 - J27-A12(N)	86.6	93.9	95.0
7 - J27-B1079(W)	44.6	45.1	43.0
8 - J27-A12(S)	69.2	65.0	69.1
9 - J27-B1079(E)	78.9	83.5	94.7
11 - J26-A12(N)	37.1	37.7	37.8
12 - J26-A12(S)-Right turn	15.9	13.8	11.7
13 - J26-A12(S)	112.1	150.1	118.9
14 - J26-B1438(E)	39.6	47.6	65.5
15 - J25-A12(N)	126.4	112.1	116.5
17 - J25-Martlesham P&R(N)	15.2	12.4	12.4
18 - J25-Martlesham P&R(N)	14.9	15.3	15.3
19 - J25-Main Rd(W)	85.8	85.9	84.5
20 - J25-A12(S)	79.5	101.8	95.6
21 - J25-Main Rd(E)	26.2	24.5	23.4
22 - J24-A12(N)	89.6	97.4	105.5
24 - J24-Eagle Way(W)	26.0	25.1	26.9
26 - J24-A12(S)	95.7	138.9	150.6
28 - J24-Anson Rd(E)	201.9	368.0	376.1
29 - J23-A12(N)	69.3	82.3	85.5
30 - J23-Eagle Way(W)	11.4	13.9	13.9
31 - J23-A12(S)	45.5	111.6	119.1
32 - J23-Barrack Square(E)	166.2	292.2	329.2
34 - J22-A12(N)	69.8	141.8	157.8
36 - J22-A12(S)	116.6	131.6	152.9
37 - J22-Newbourne Rd(E)	50.2	52.3	59.5
45 - J22-Foxhall Rd(W)	54.2	60.3	57.7
38 - J21-A12(N)	151.3	178.1	150.9
39 - J21-A14(W)	9.3	8.2	9.9
41 - J21-A1156(S)	45.7	54.2	63.7
42 - J21-A14(E)	51.8	58.6	53.6
44 - J21-Bucklesham Rd(NE)	18.5	20.0	20.4



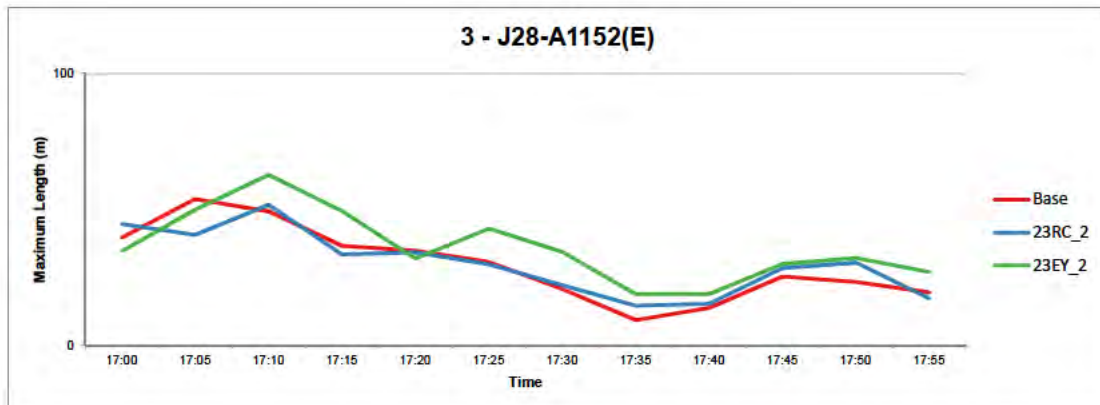
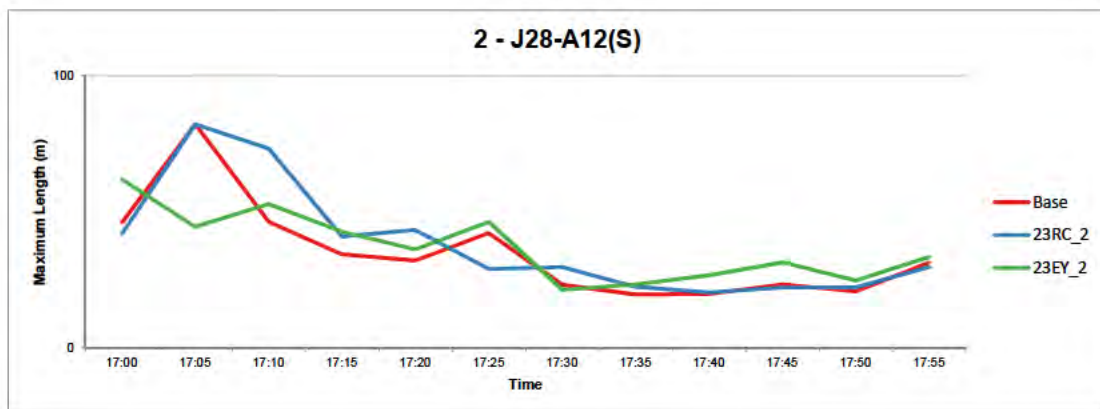
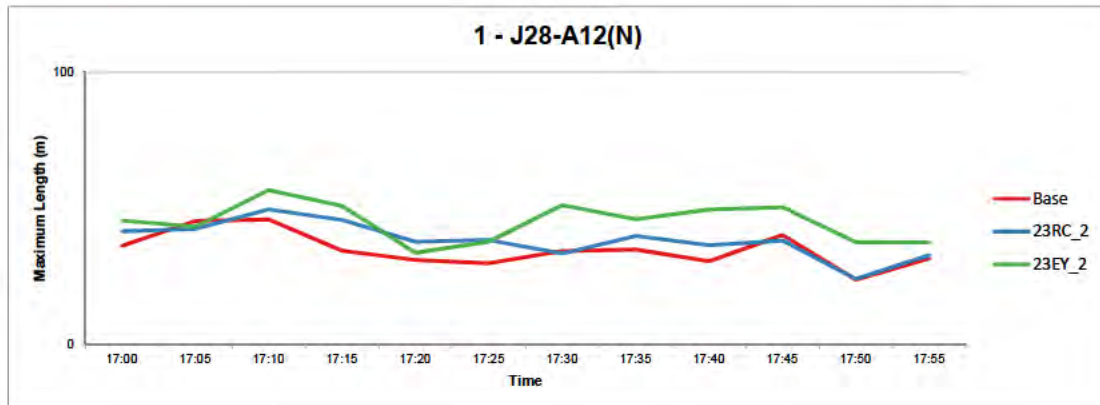
Queue Comparison
16:00-17:00
Average Length Summary
Maximum Length (m)

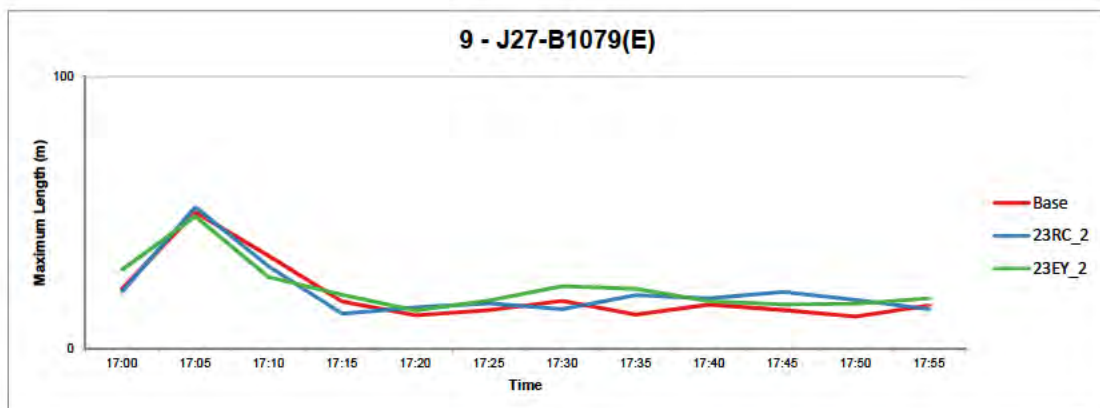
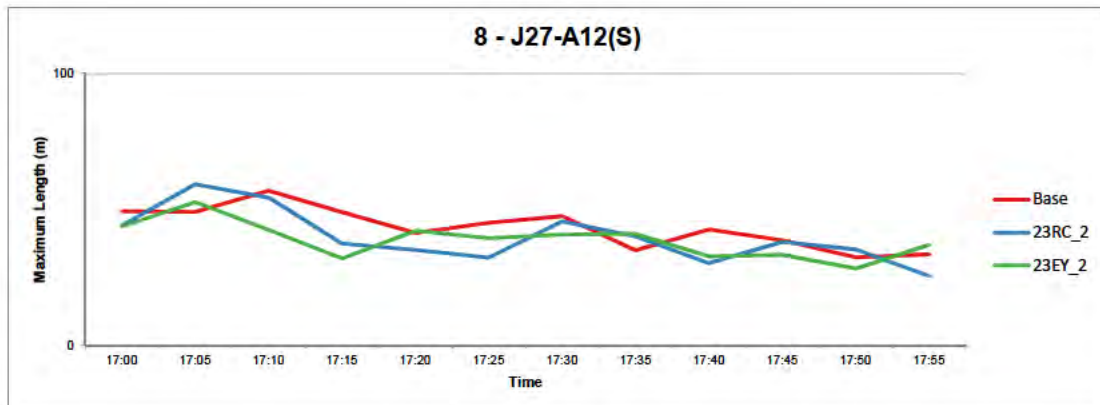
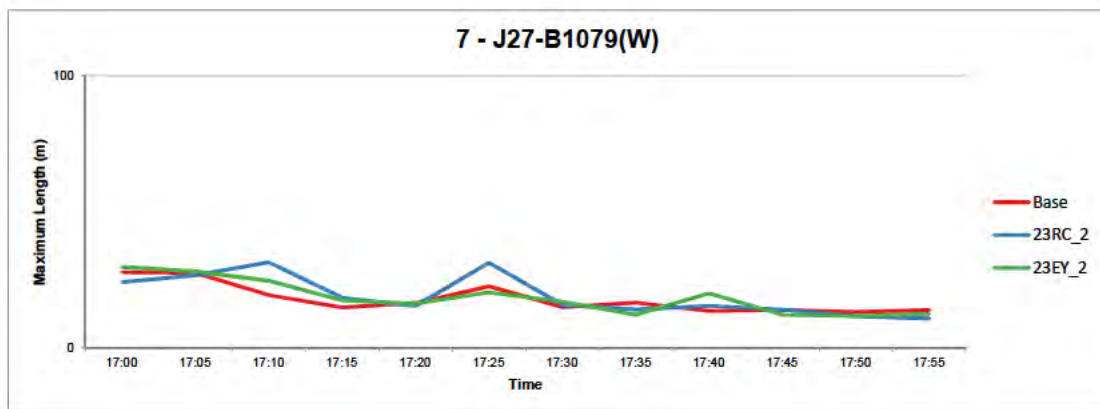
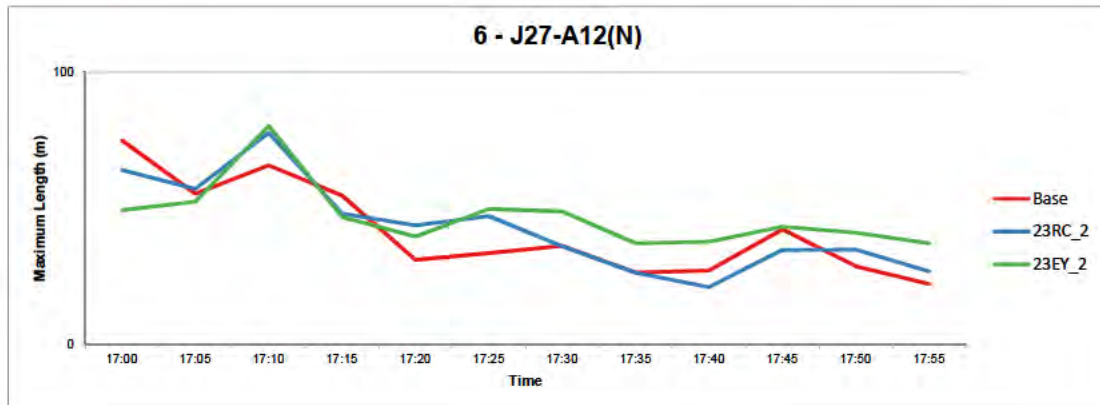
	Base	23RC_2	23EY_2
1 - J28-A12(N)	37.6	37.6	40.3
2 - J28-A12(S)	48.1	47.1	50.7
3 - J28-A1152(E)	38.2	36.3	39.0
6 - J27-A12(N)	62.2	65.3	65.9
7 - J27-B1079(W)	25.5	25.8	25.7
8 - J27-A12(S)	50.5	52.4	53.3
9 - J27-B1079(E)	45.7	47.5	51.7
11 - J26-A12(N)	27.7	28.0	30.4
12 - J26-A12(S)-Right turn	8.4	7.5	7.7
13 - J26-A12(S)	80.6	100.2	89.5
14 - J26-B1438(E)	31.0	32.1	36.8
15 - J25-A12(N)	102.1	92.3	97.2
17 - J25-Martlesham P&R(N)	6.1	6.7	6.7
18 - J25-Martlesham P&R(N)	8.9	9.3	9.3
19 - J25-Main Rd(W)	74.4	76.2	75.2
20 - J25-A12(S)	74.8	81.7	80.9
21 - J25-Main Rd(E)	17.0	16.2	16.9
22 - J24-A12(N)	67.1	73.3	74.9
24 - J24-Eagle Way(W)	19.3	21.3	20.5
26 - J24-A12(S)	82.9	121.9	122.4
28 - J24-Anson Rd(E)	136.6	257.9	272.4
29 - J23-A12(N)	52.3	63.2	63.2
30 - J23-Eagle Way(W)	8.6	9.6	9.6
31 - J23-A12(S)	35.2	76.6	81.5
32 - J23-Barrack Square(E)	126.2	217.2	242.0
34 - J22-A12(N)	57.9	124.1	140.9
36 - J22-A12(S)	91.4	111.5	115.7
37 - J22-Newbourne Rd(E)	30.5	36.9	38.7
45 - J22-Foxhall Rd(W)	39.7	42.3	43.4
38 - J21-A12(N)	104.7	121.3	110.6
39 - J21-A14(W)	5.6	5.9	6.2
41 - J21-A1156(S)	32.3	40.4	40.6
42 - J21-A14(E)	41.4	44.9	43.8
44 - J21-Bucklesham Rd(NE)	8.3	8.3	7.5

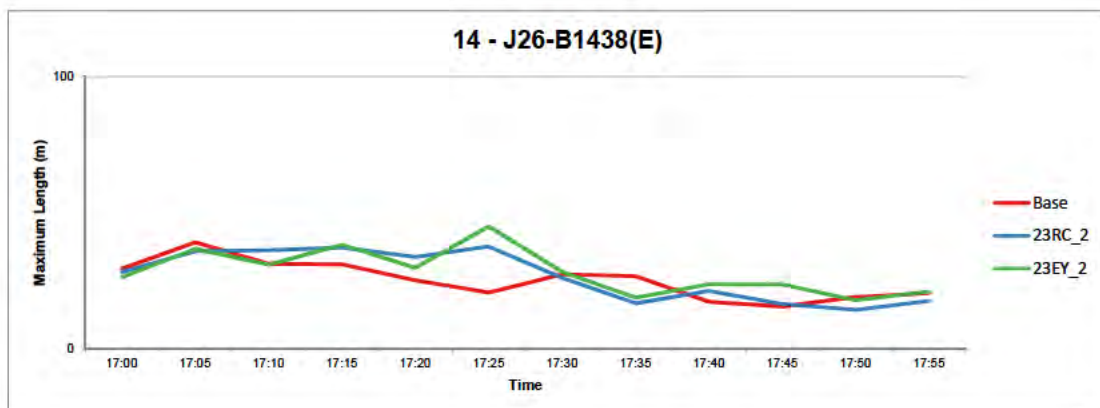
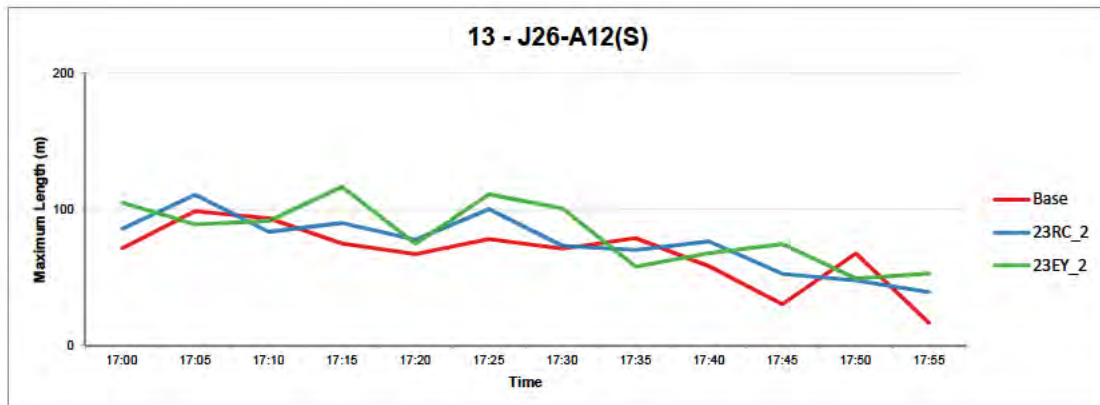
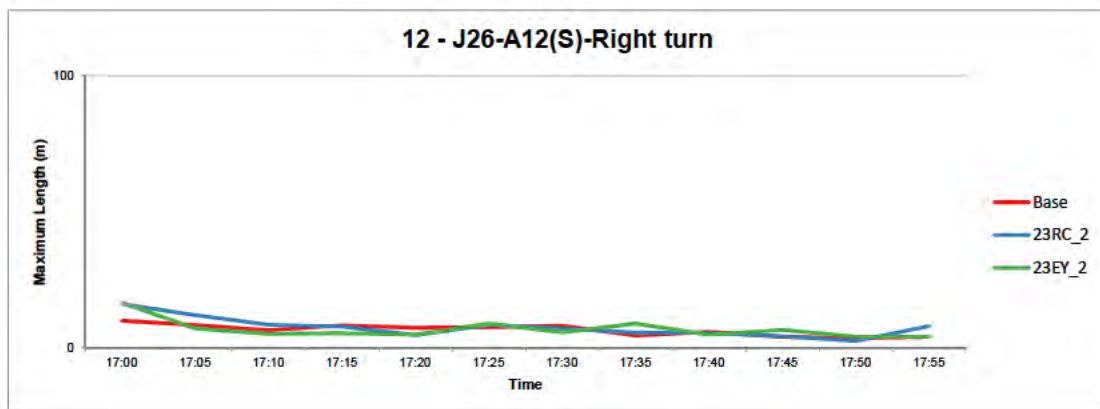
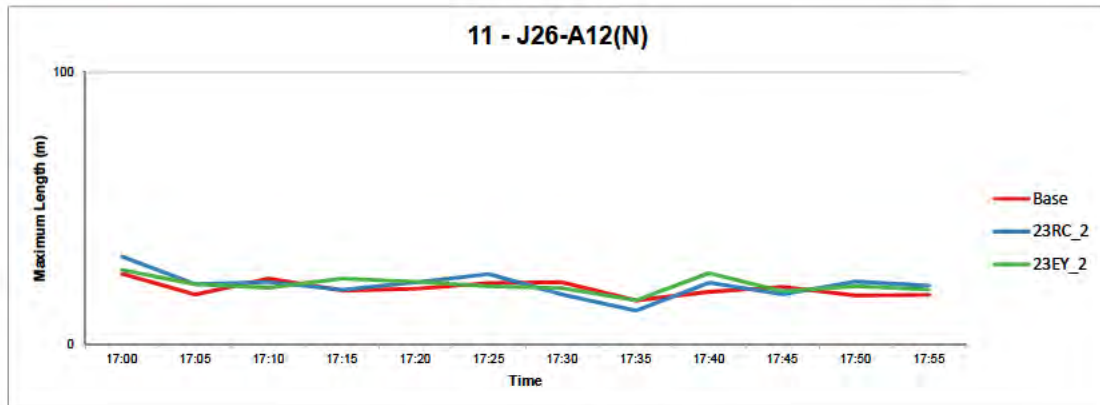


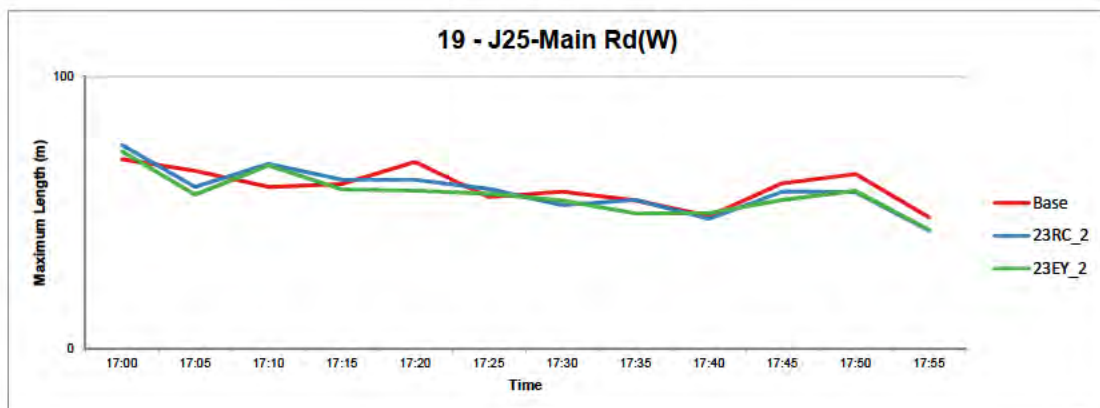
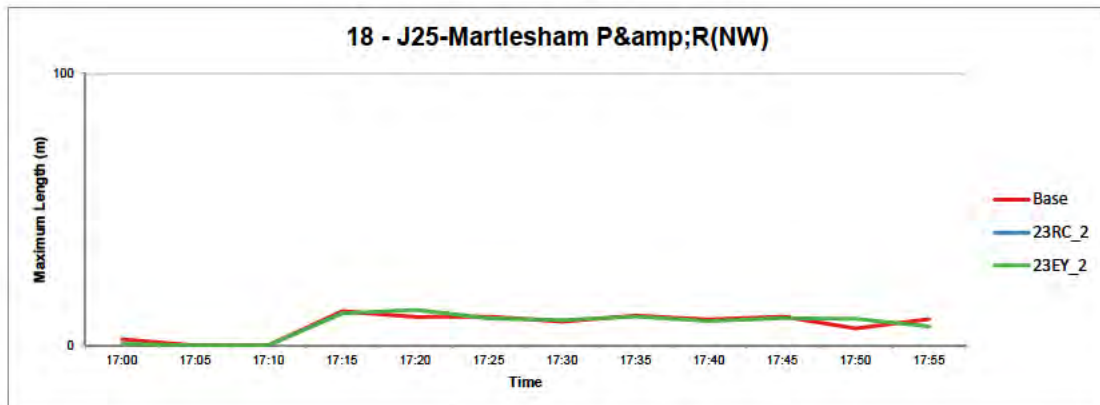
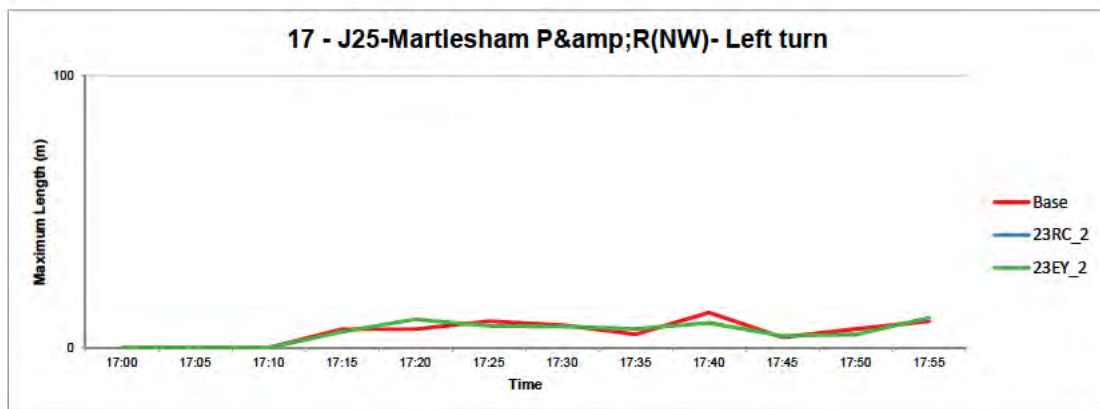
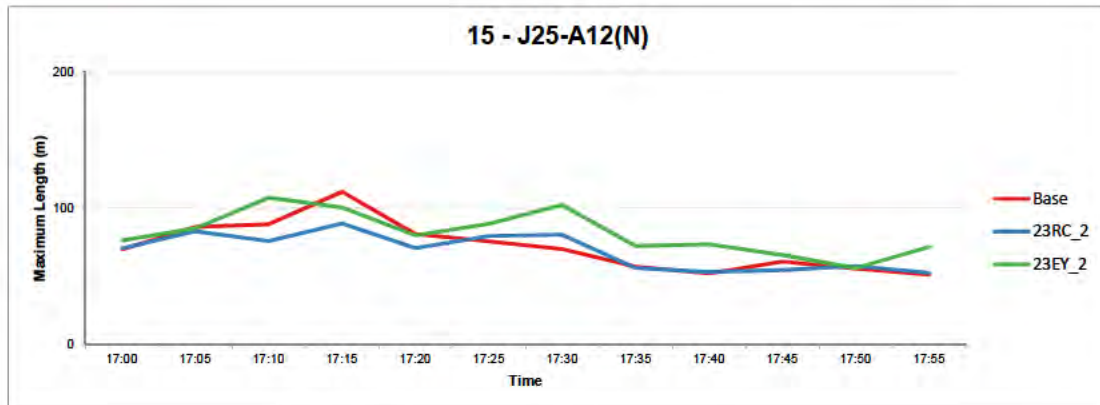
Journey Time Table
16:00-17:00
Base+2023_2

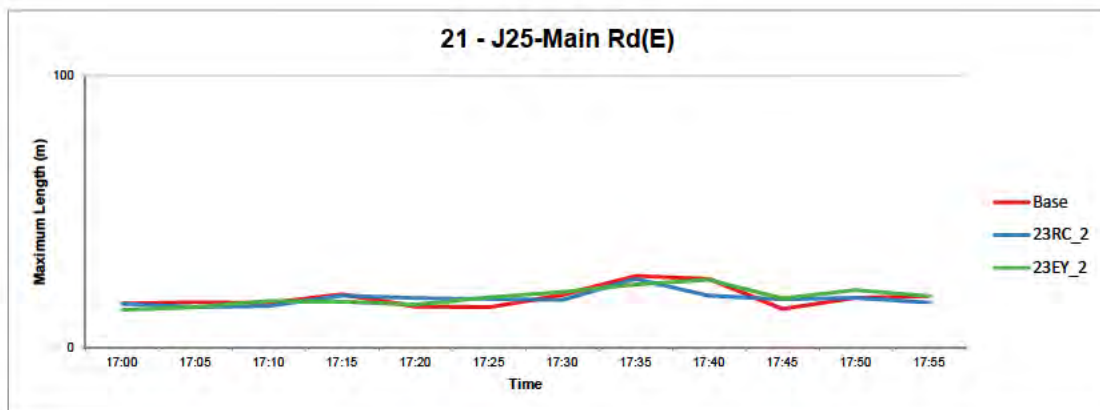
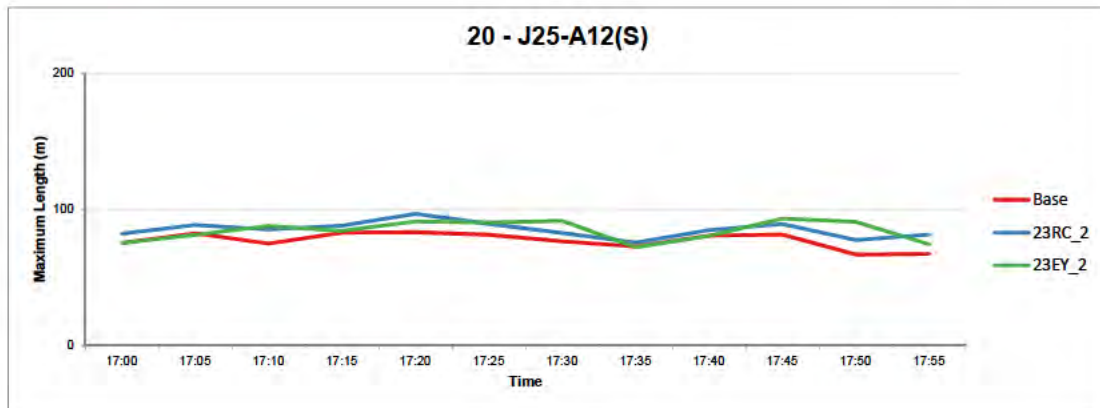
Route Names	Base	23RC_2	23EY_2
1 - J21 - J22 - NB	113	118	118
2 - J22 - J23 - NB	64	88	88
3 - J23 - J24 - NB	46	53	54
4 - J24 - J25 - NB	48	49	49
5 - J25 - J26 - NB	128	128	128
6 - J26 - J27 - NB	91	92	92
7 - J27 - J28 - NB	97	98	98
8 - J28 - A12 - NB	136	136	137
51 - A12 NB	725	761	762
9 - A12 - J28 - SB	123	124	124
10 - J28 - J27 - SB	93	93	94
11 - J27 - J26 - SB	94	94	94
12 - J26 - J25 - SB	124	121	121
13 - J25 - J24 - SB	36	37	37
14 - J24 - J23 - SB	40	42	42
15 - J23 - J22 - SB	68	99	100
16 - J22 - J21 - SB	127	130	130
52 - A12 SB	706	741	741
17 - A14 WB upto Offslip	137	139	139
18 - A14 EB from Onslip	118	119	119
19 - A14 WB from Onslip	83	83	83
20 - A14 EB upto Offslip	89	90	90
21 - Felixstowe - SB	99	99	99
22 - Felixstowe - NB	105	109	108
23 - Bucklesham Road - NB	62	62	61
24 - Bucklesham Road - SB	73	72	72
26 - Foxhall road - WB	89	90	91
25 - Foxhall road - EB	95	97	98
27 - Newbourne Road -EB	43	42	43
28 - Newbourne Road -WB	67	67	69
29 - Eagle Way - EB	16	18	17
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	54	54	54
32 - Gloster Road - SB	94	199	239
33 - Barrack Square - SB	85	85	84
34 - Barrack Square - NB	132	154	158
35 - Anson Road - WB	65	101	104
36 - Anson Road - EB	45	45	45
37 - Eagle Way (J24) - EB	59	63	61
38 - Eagle Way (J24) - WB	44	44	44
39 - Main Road - EB	66	66	66
40 - Main Road - WB	78	77	77
41 - A1214 Main road - EB	70	70	70
42 - A1214 Main road - WB	51	51	51
43 - B1438 - WB	57	58	58
44 - B1438 - EB	50	50	50
45 - B1079 (East) - WB	49	51	52
46 - B1079 (East) - EB	29	29	29
47 - B1079 (West)- WB	33	33	33
48 - B1079 (West)- EB	40	41	40
49 - A1152 - WB	50	50	50
50 - A1152 - EB	49	49	49
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	64	88	88
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	68	99	100

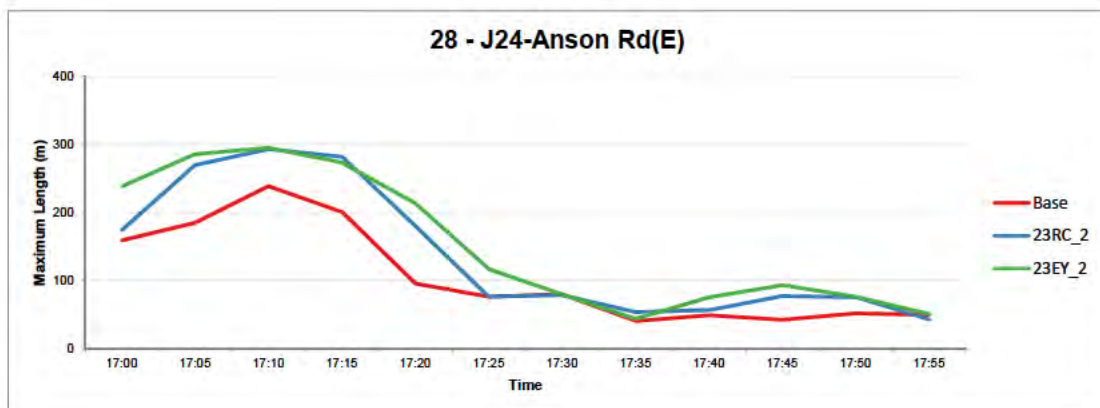
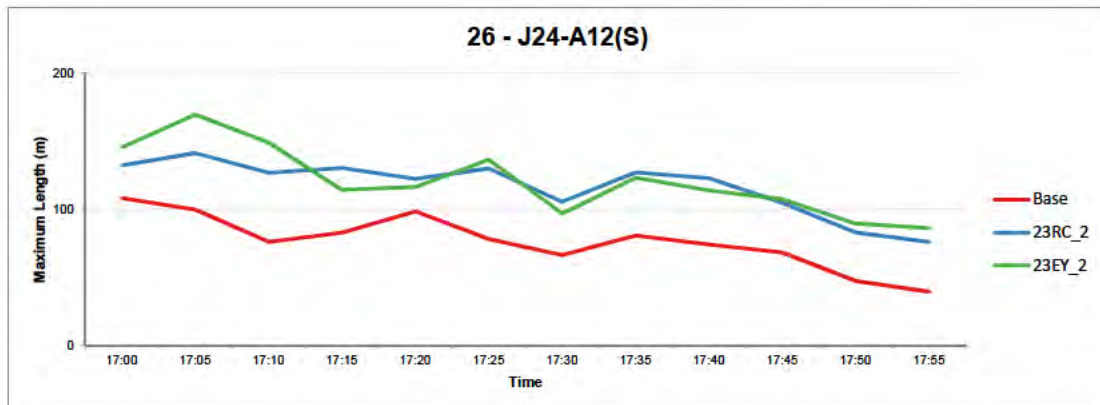
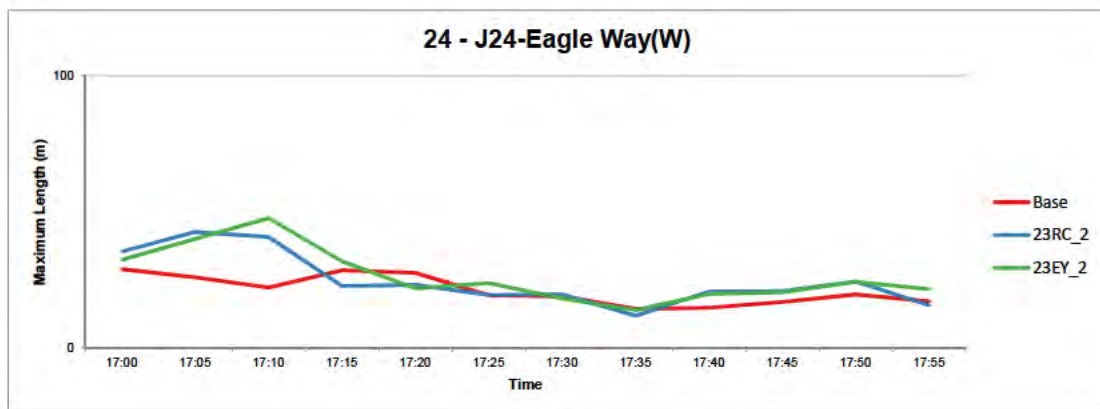
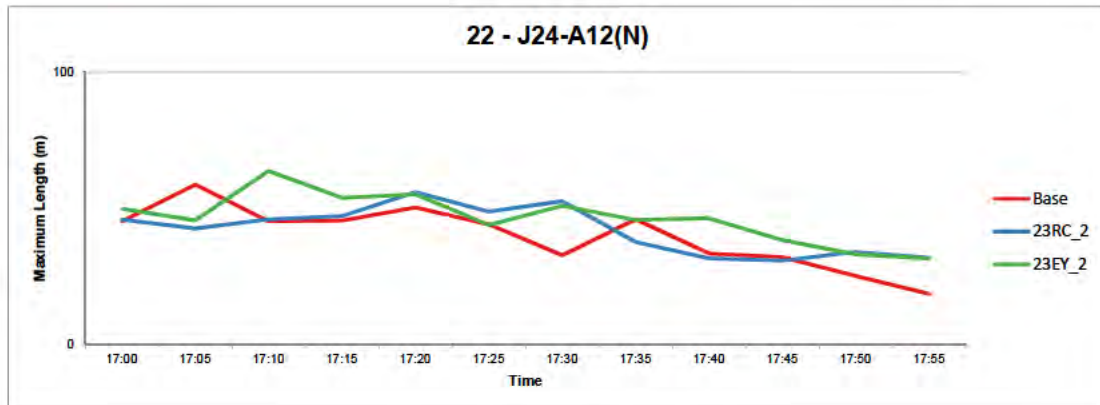


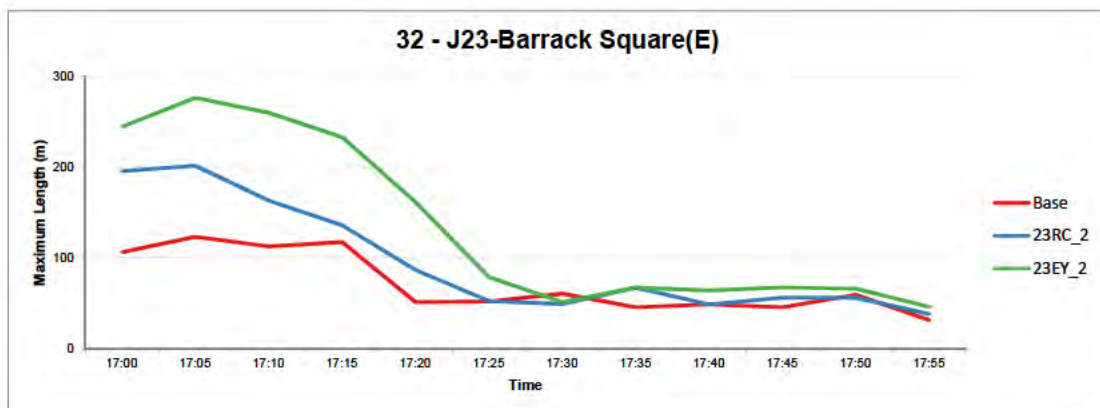
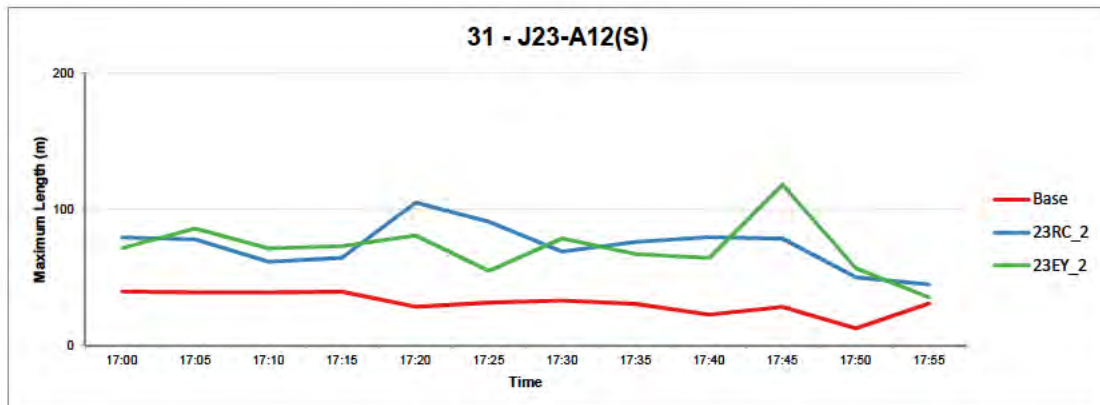
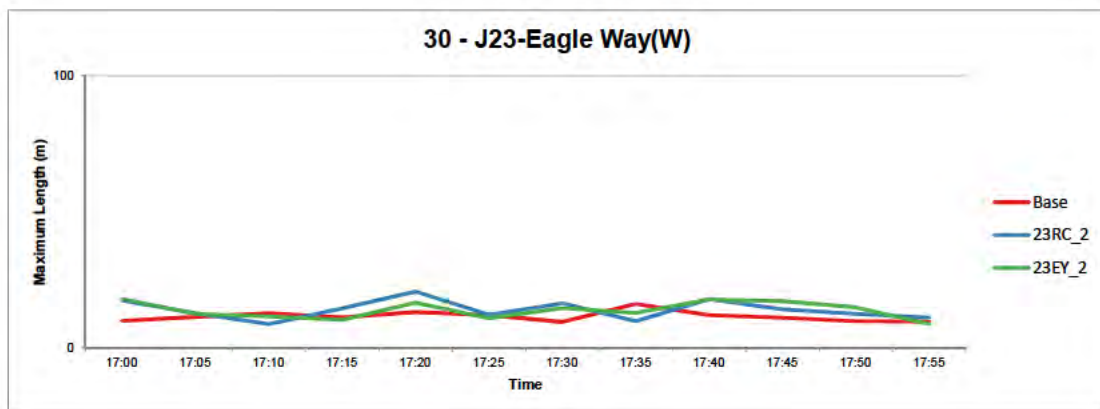
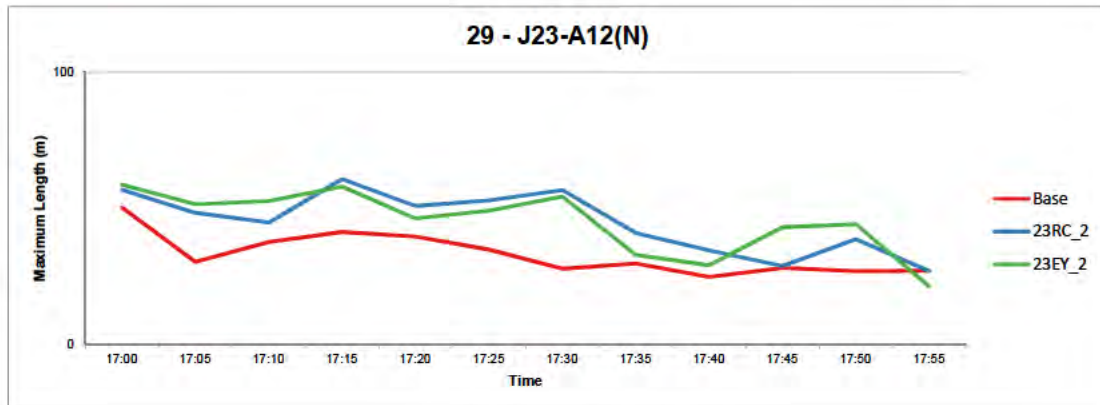


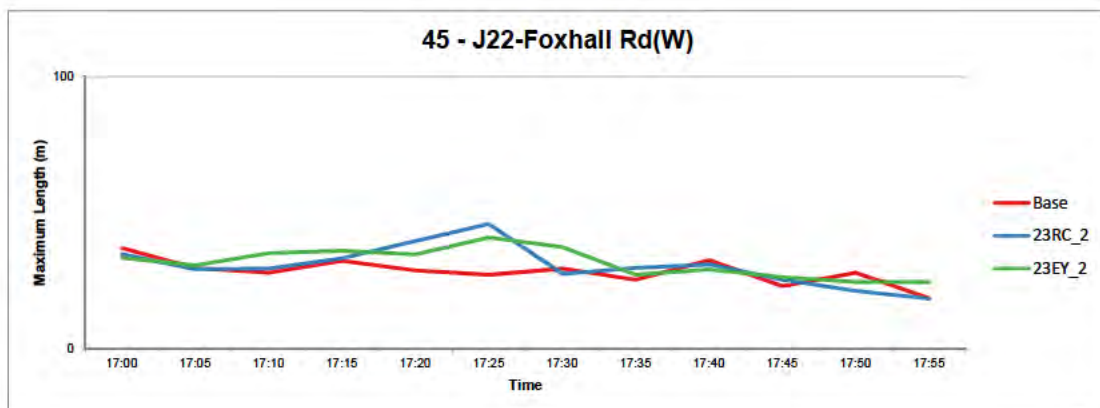
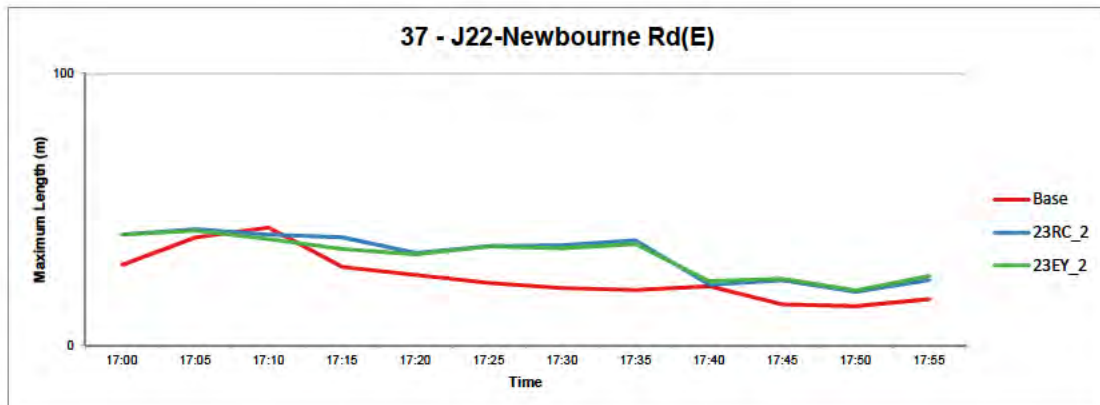
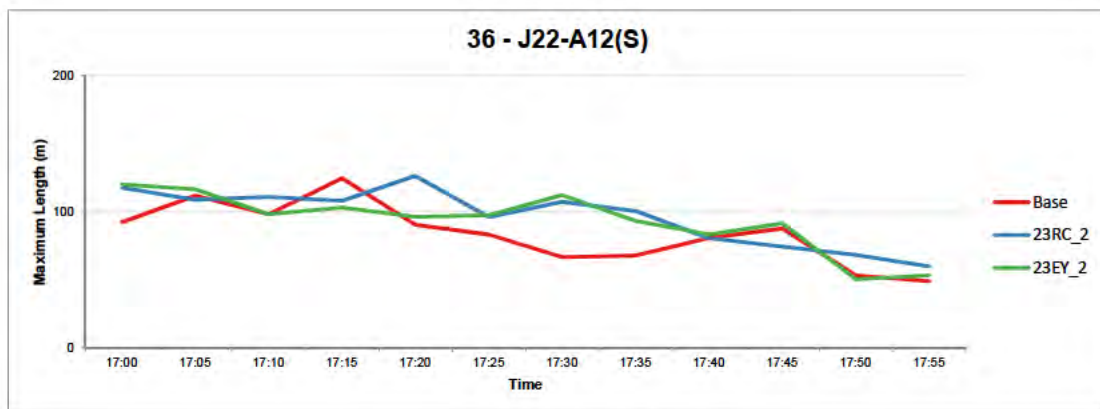
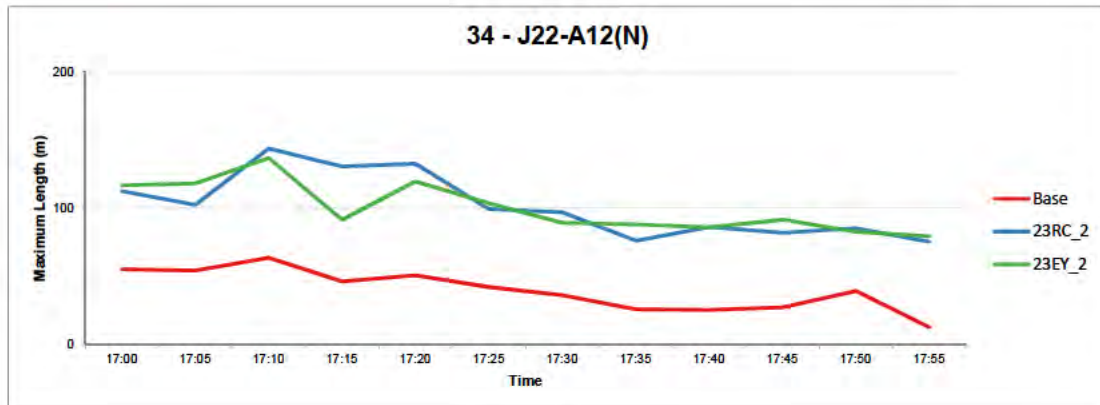


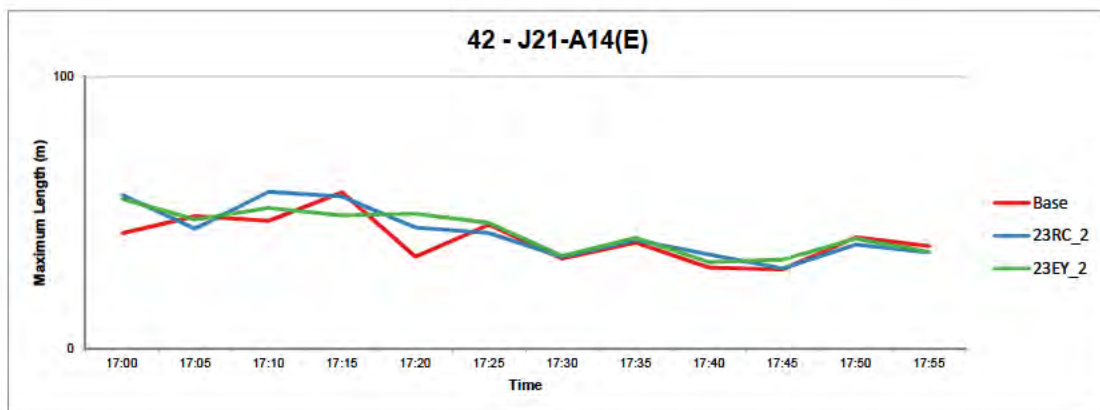
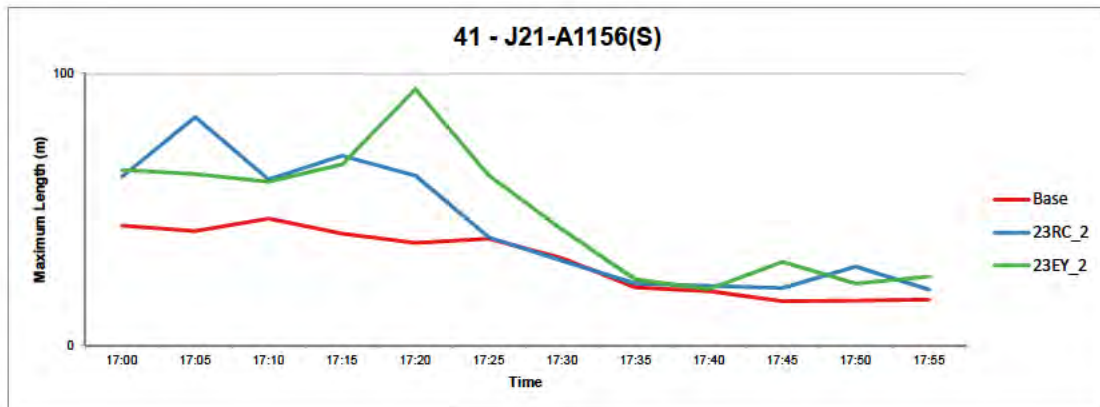
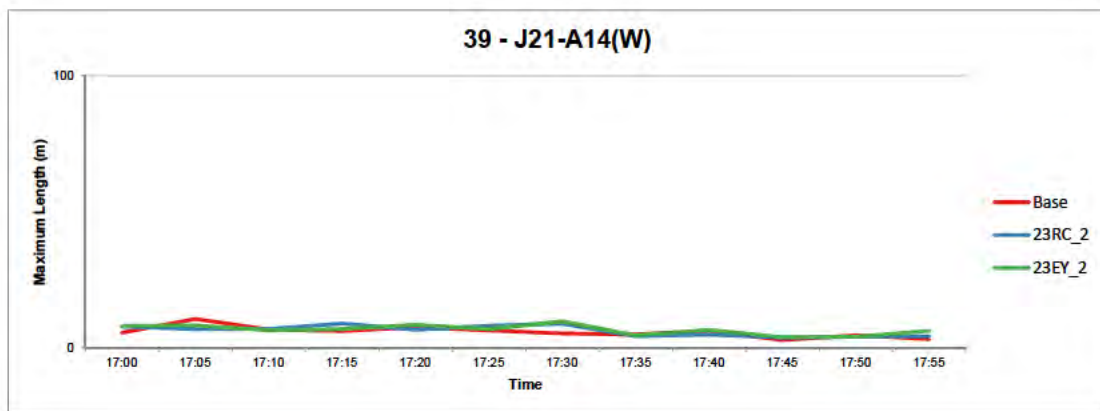
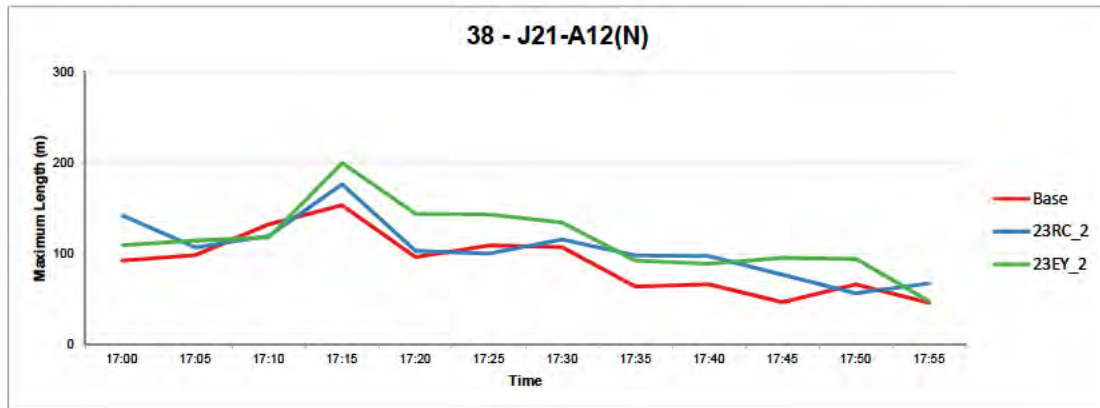






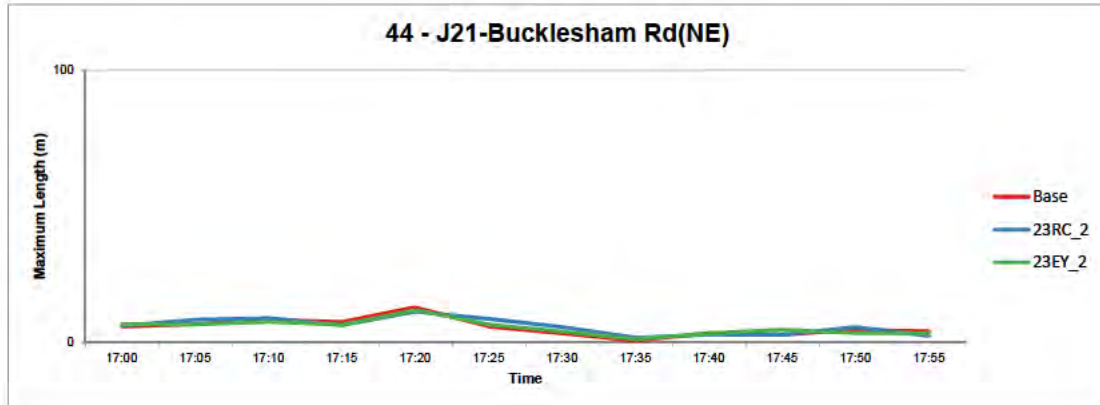








44 - J21-Bucklesham Rd(NE)





Queue Comparison
17:00-18:00
Maximum Length Summary
Maximum Length (m)

	Base	23RC 2	23EY 2
1 - J28-A12(N)	45.9	49.6	56.7
2 - J28-A12(S)	82.1	82.1	61.9
3 - J28-A1152(E)	53.8	51.6	62.6
6 - J27-A12(N)	74.9	77.7	80.3
7 - J27-B1079(W)	27.8	31.5	29.7
8 - J27-A12(S)	56.8	59.2	52.6
9 - J27-B1079(E)	50.0	52.0	48.6
11 - J26-A12(N)	26.0	32.3	27.4
12 - J26-A12(S)-Right turn	10.0	16.1	16.6
13 - J26-A12(S)	98.6	110.6	116.4
14 - J26-B1438(E)	39.1	37.5	44.9
15 - J25-A12(N)	112.1	88.8	107.8
17 - J25-Martlesham P&R(N)	12.9	11.0	11.0
18 - J25-Martlesham P&R(N)	12.5	13.1	13.1
19 - J25-Main Rd(W)	69.6	74.8	72.5
20 - J25-A12(S)	83.2	96.6	93.1
21 - J25-Main Rd(E)	26.4	25.4	25.0
22 - J24-A12(N)	58.8	55.9	63.7
24 - J24-Eagle Way(W)	28.9	42.6	47.7
26 - J24-A12(S)	108.1	141.3	169.6
28 - J24-Anson Rd(E)	238.6	293.2	295.0
29 - J23-A12(N)	50.3	60.7	58.7
30 - J23-Eagle Way(W)	16.1	20.7	18.0
31 - J23-A12(S)	39.5	105.0	118.0
32 - J23-Barrack Square(E)	123.3	201.5	276.4
34 - J22-A12(N)	63.7	143.8	137.0
36 - J22-A12(S)	124.6	126.4	120.0
37 - J22-Newbourne Rd(E)	43.3	42.7	42.1
45 - J22-Foxhall Rd(W)	36.9	45.7	40.8
38 - J21-A12(N)	153.4	176.4	199.9
39 - J21-A14(W)	10.6	9.0	9.7
41 - J21-A1156(S)	46.5	83.9	94.2
42 - J21-A14(E)	57.4	57.6	55.1
44 - J21-Bucklesham Rd(NE)	12.9	11.2	11.8



Queue Comparison
17:00-18:00
Average Length Summary
Maximum Length (m)

	Base	23RC_2	23EY_2
1 - J28-A12(N)	34.8	38.3	45.0
2 - J28-A12(S)	35.1	38.1	37.1
3 - J28-A1152(E)	29.7	30.2	36.0
6 - J27-A12(N)	41.5	43.1	46.9
7 - J27-B1079(W)	17.9	19.1	18.5
8 - J27-A12(S)	43.3	39.7	38.7
9 - J27-B1079(E)	19.8	21.1	22.4
11 - J26-A12(N)	20.6	21.8	21.9
12 - J26-A12(S)-Right turn	6.5	7.5	6.9
13 - J26-A12(S)	67.1	75.5	82.5
14 - J26-B1438(E)	25.2	26.7	28.2
15 - J25-A12(N)	71.7	68.6	81.6
17 - J25-Martlesham P&R(N)	5.8	5.7	5.7
18 - J25-Martlesham P&R(N)	7.6	7.6	7.6
19 - J25-Main Rd(W)	59.4	58.2	56.6
20 - J25-A12(S)	77.1	85.0	84.3
21 - J25-Main Rd(E)	18.5	18.1	18.7
22 - J24-A12(N)	39.7	42.0	46.5
24 - J24-Eagle Way(W)	21.1	24.7	26.3
26 - J24-A12(S)	76.6	116.8	120.7
28 - J24-Anson Rd(E)	105.6	138.3	153.4
29 - J23-A12(N)	33.2	45.1	45.1
30 - J23-Eagle Way(W)	11.6	14.0	13.8
31 - J23-A12(S)	31.1	73.0	71.4
32 - J23-Barrack Square(E)	71.1	95.9	134.6
34 - J22-A12(N)	39.9	102.0	100.3
36 - J22-A12(S)	83.8	96.5	92.9
37 - J22-Newbourne Rd(E)	25.0	33.3	32.8
45 - J22-Foxhall Rd(W)	28.2	30.4	31.6
38 - J21-A12(N)	89.7	104.9	115.0
39 - J21-A14(W)	5.8	6.3	6.7
41 - J21-A1156(S)	31.1	43.7	48.0
42 - J21-A14(E)	40.3	42.7	42.8
44 - J21-Bucklesham Rd(NE)	5.5	5.9	5.5



Journey Time Table
17:00-18:00
Base+2023_2

Route Names	Base	23RC_2	23EY_2
1 - J21 - J22 - NB	111	114	114
2 - J22 - J23 - NB	63	86	86
3 - J23 - J24 - NB	44	52	53
4 - J24 - J25 - NB	47	48	48
5 - J25 - J26 - NB	123	124	125
6 - J26 - J27 - NB	89	89	89
7 - J27 - J28 - NB	95	96	96
8 - J28 - A12 - NB	136	135	135
51 - A12 NB	717	752	754
9 - A12 - J28 - SB	122	123	124
10 - J28 - J27 - SB	90	91	91
11 - J27 - J26 - SB	90	90	92
12 - J26 - J25 - SB	119	118	120
13 - J25 - J24 - SB	33	33	34
14 - J24 - J23 - SB	38	39	39
15 - J23 - J22 - SB	66	94	94
16 - J22 - J21 - SB	124	128	129
52 - A12 SB	682	716	723
17 - A14 WB upto Offslip	136	137	138
18 - A14 EB from Onslip	119	120	119
19 - A14 WB from Onslip	81	81	81
20 - A14 EB upto Offslip	89	90	90
21 - Felixstowe - SB	100	100	100
22 - Felixstowe - NB	106	111	112
23 - Bucklesham Road - NB	62	62	62
24 - Bucklesham Road - SB	68	70	69
26 - Foxhall road - WB	90	91	91
25 - Foxhall road - EB	92	93	93
27 - Newbourne Road -EB	42	43	43
28 - Newbourne Road -WB	59	62	62
29 - Eagle Way - EB	16	19	19
30 - Eagle Way - WB	14	14	14
31 - Gloster Road - NB	54	54	54
32 - Gloster Road - SB	64	90	140
33 - Barrack Square - SB	85	85	85
34 - Barrack Square - NB	112	116	124
35 - Anson Road - WB	55	62	66
36 - Anson Road - EB	45	45	44
37 - Eagle Way (J24) - EB	61	72	75
38 - Eagle Way (J24) - WB	44	44	44
39 - Main Road - EB	67	67	67
40 - Main Road - WB	78	78	79
41 - A1214 Main road - EB	67	67	67
42 - A1214 Main road - WB	51	51	51
43 - B1438 - WB	55	55	56
44 - B1438 - EB	50	50	50
45 - B1079 (East) - WB	37	37	38
46 - B1079 (East) - EB	30	30	29
47 - B1079 (West)- WB	33	33	33
48 - B1079 (West)- EB	38	39	38
49 - A1152 - WB	49	49	49
50 - A1152 - EB	49	49	49
72 - J22 - J22B - NB	0	0	0
73 - J22B - J23 - NB	0	0	0
J22-J23 NB (FY)	63	86	86
70 - J23 - J22B - SB	0	0	0
71 - J22B - J22 - SB	0	0	0
J23-J22 SB (FY)	66	94	94



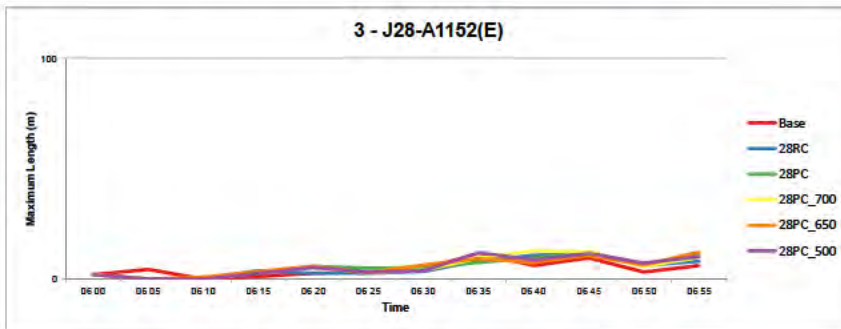
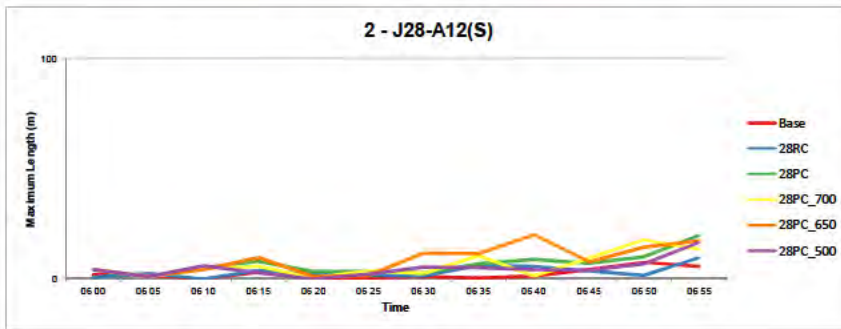
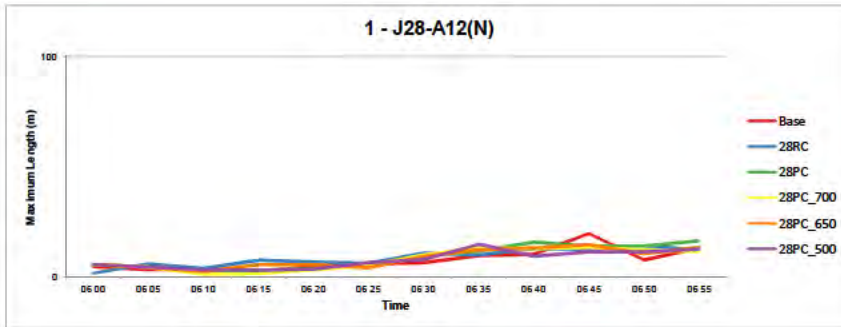
Overall Network Statistics
AM (06 00-09 00) + PM (15 00-18 00)
Base+2023 2

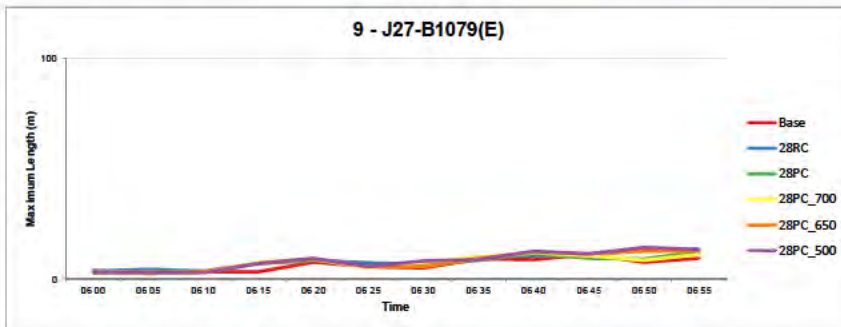
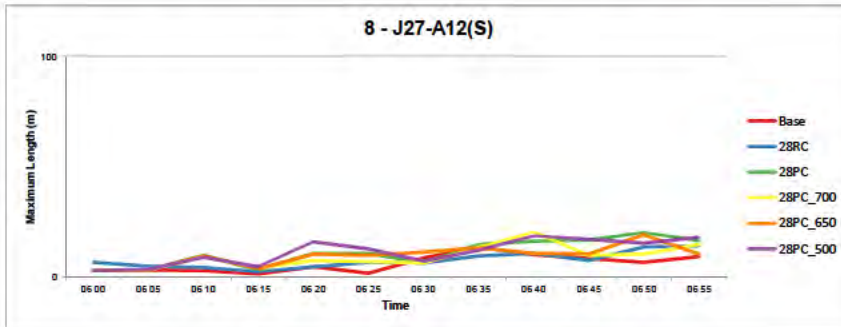
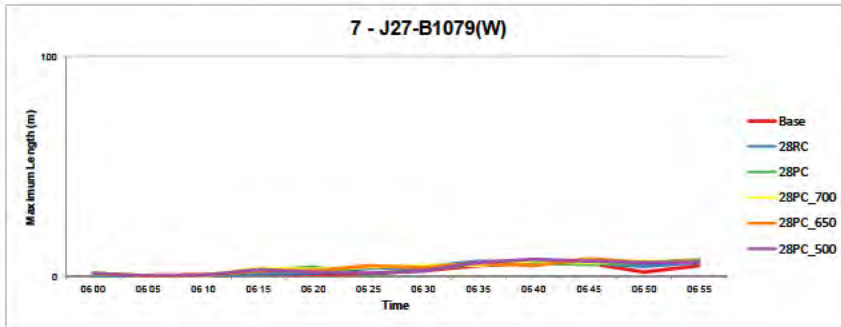
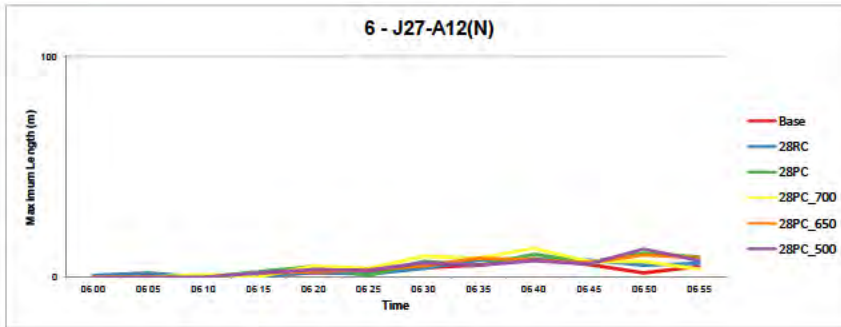
Overall Network Statistics	AM (6 00 -9 00)			PM (15 00 -18 00)		
	Base	2023RC	2023EY	Base	2023RC	2023EY
Total Time taken (s)	8602451	9086317	9494362	12308460	12191939	12385076
Total Time taken (h)	2390	2524	2637	3419	3387	3441
Total Distance (km)	163638	168087	173647	218666	218644	220871
Total Vehicles	24966	27293	27831	34457	36767	37028
Total Delay (s)	1452184	1709740	1876817	2631618	2512473	2610811
Total Delay (h)	403	476	522	731	698	725
Avg Speed (mph)	43	43	42	40	40	40
Avg Delay / Vehicle (s)	58	63	68	76	68	70

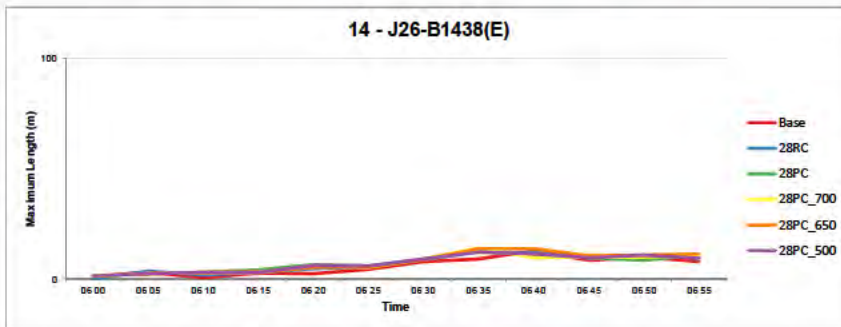
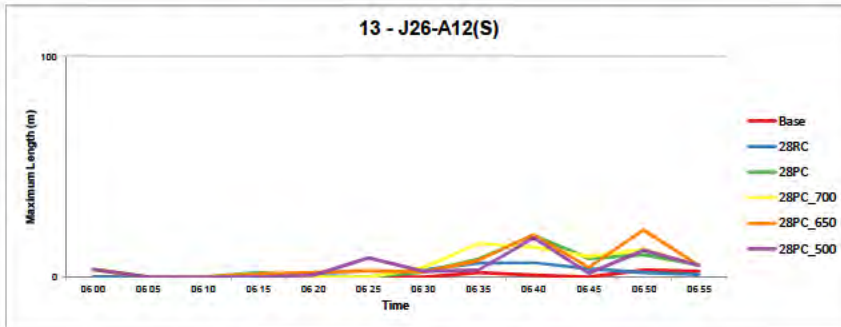
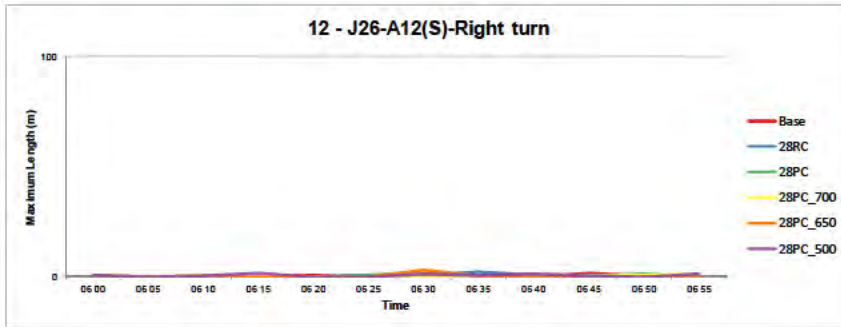
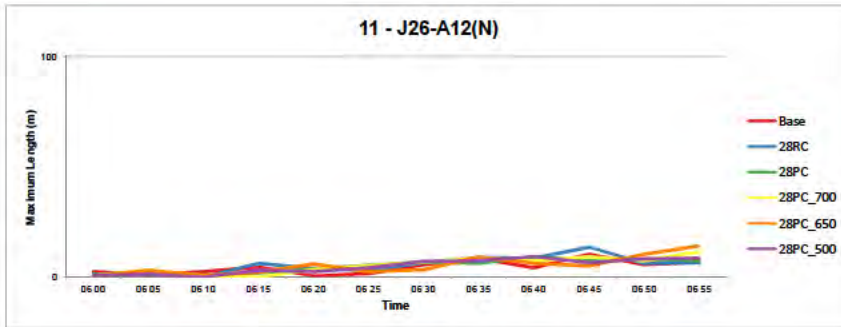
Appendix D

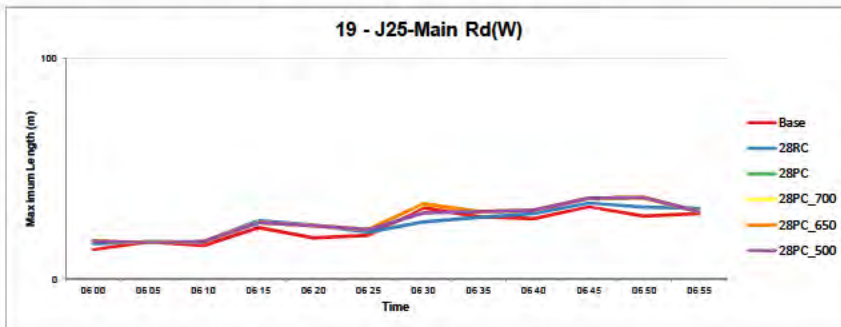
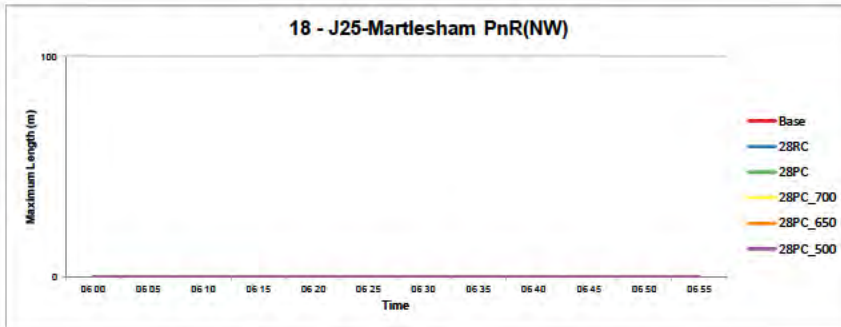
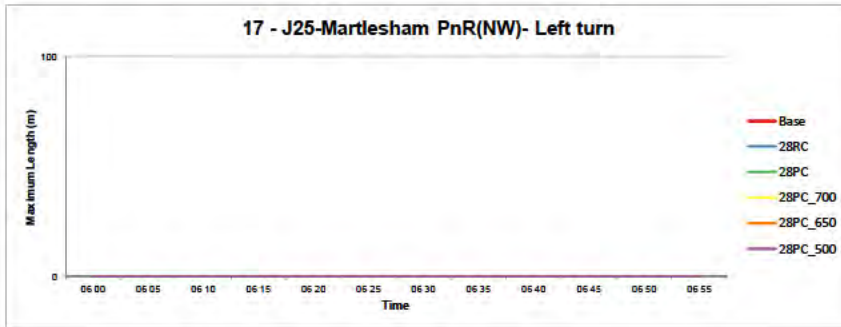
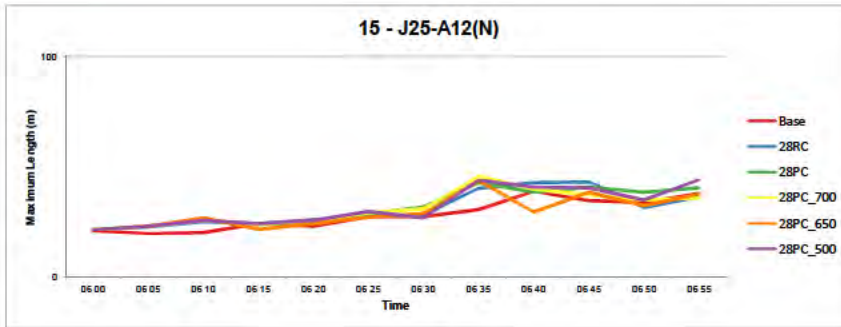
2028 FORECAST MODEL RESULTS

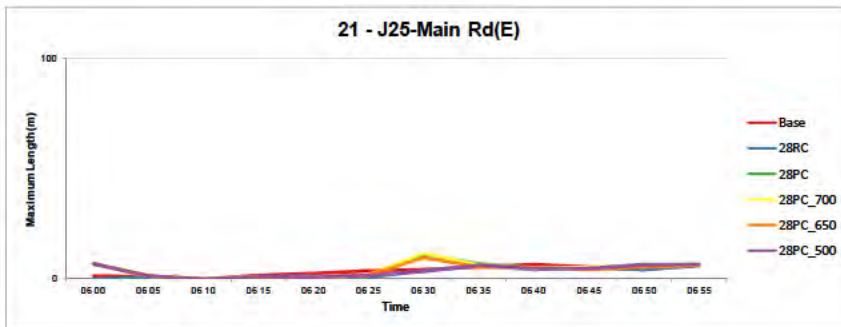
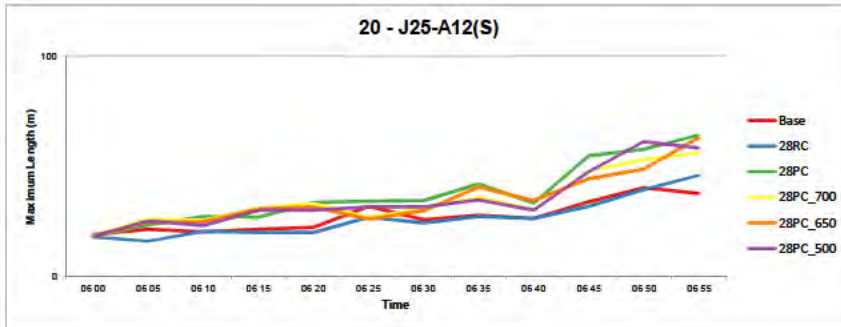


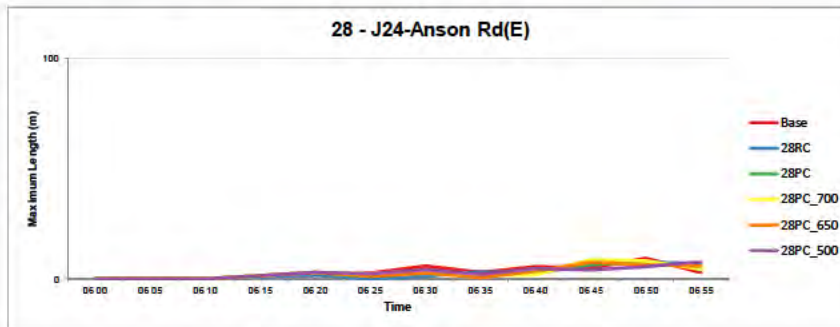
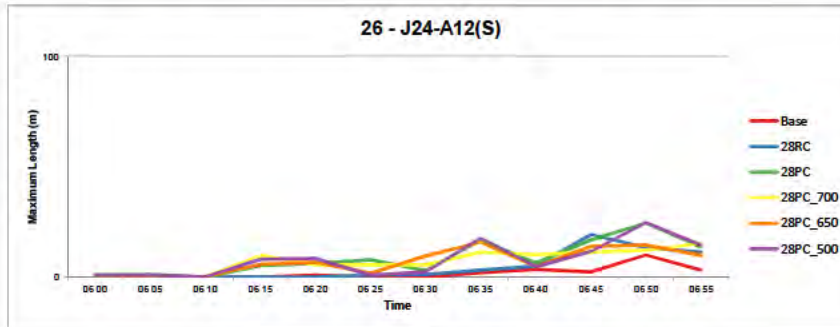
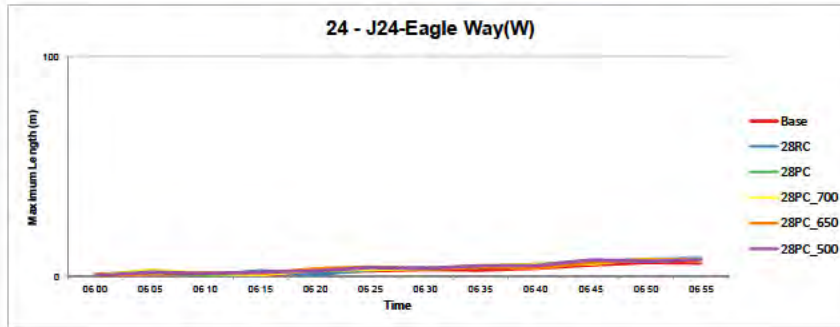
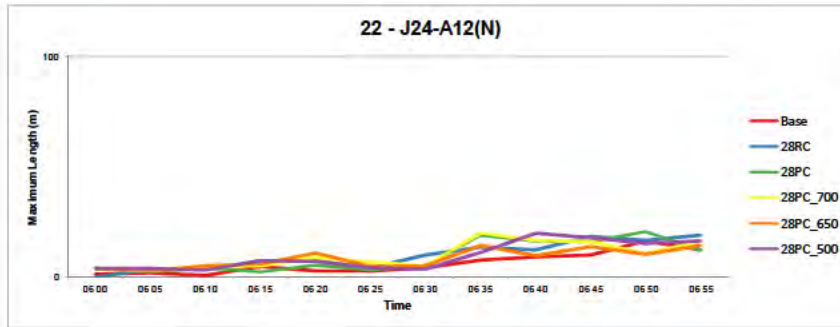


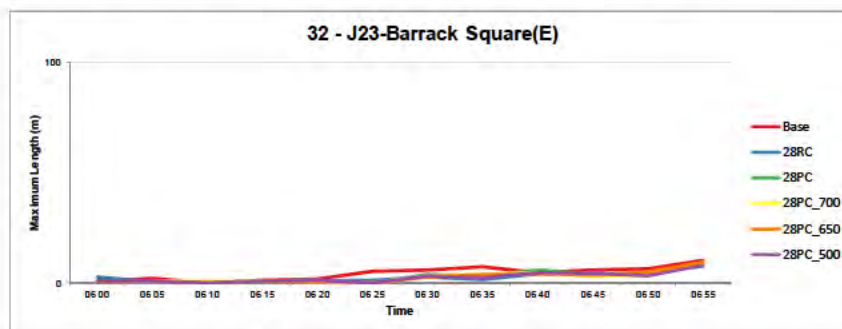
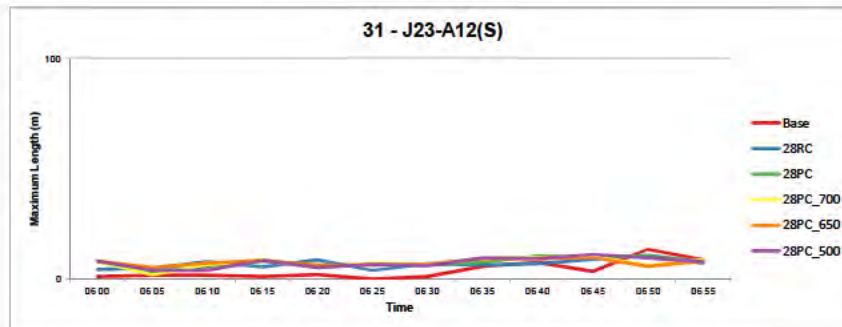
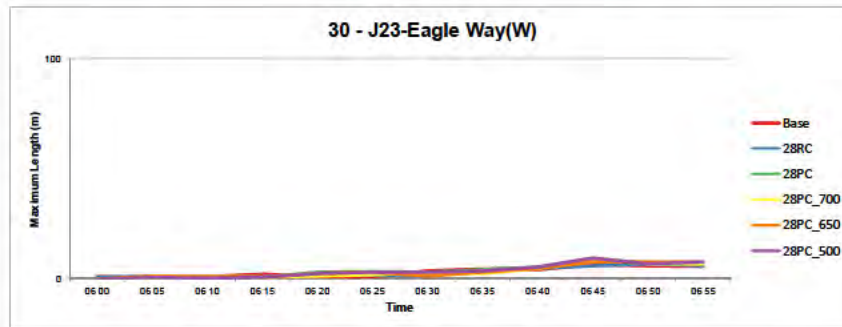
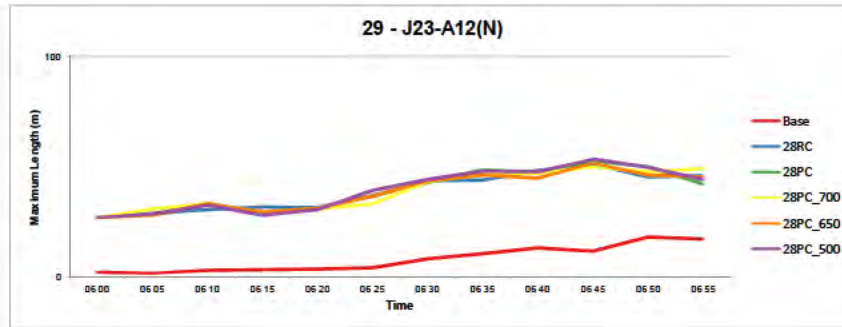


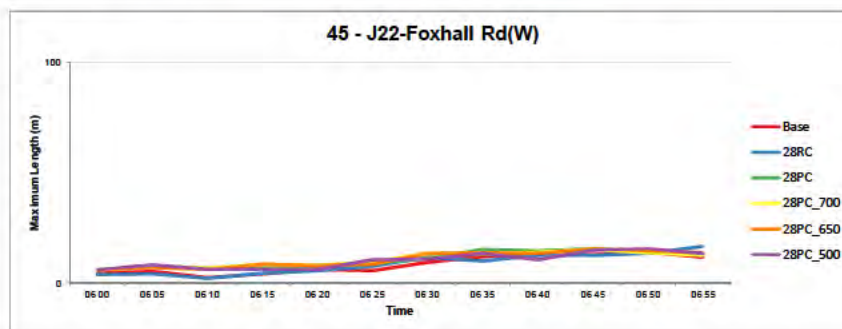
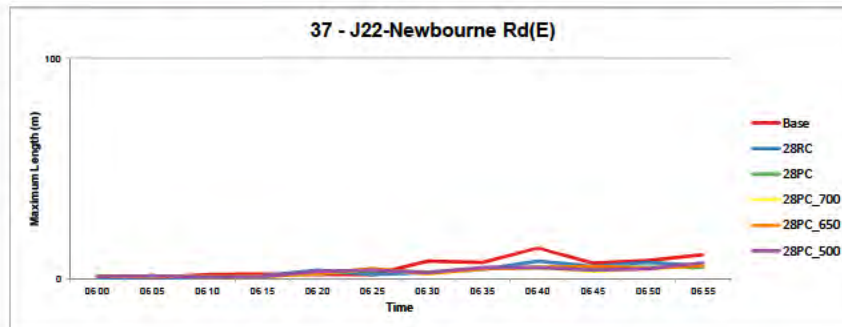
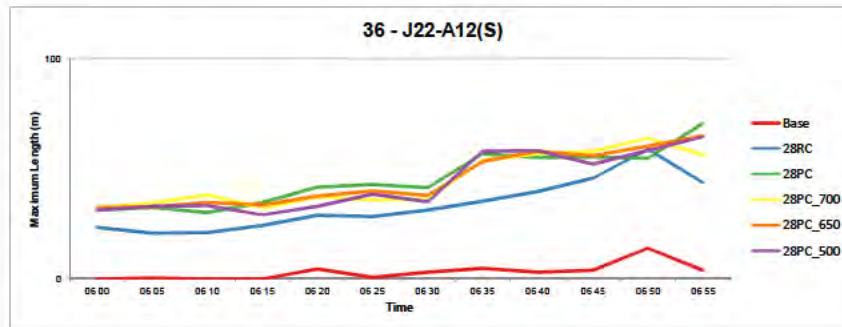
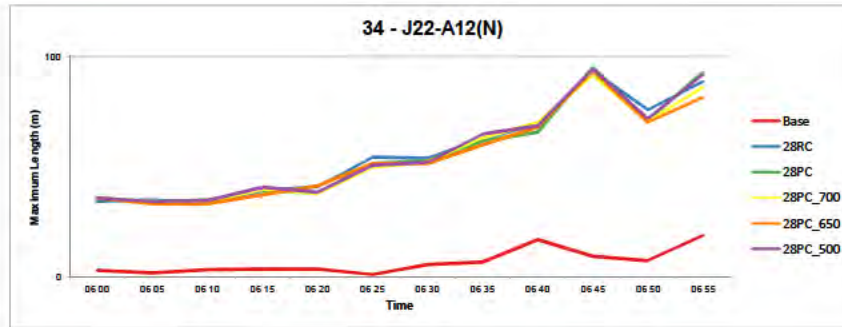


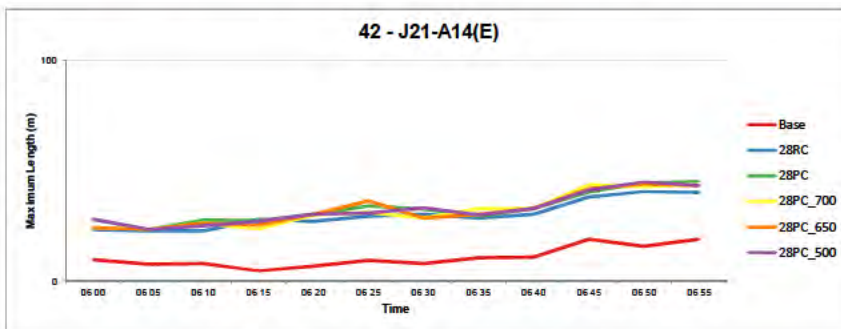
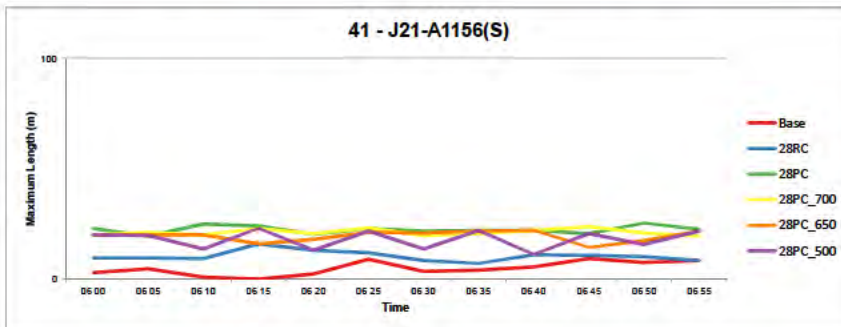
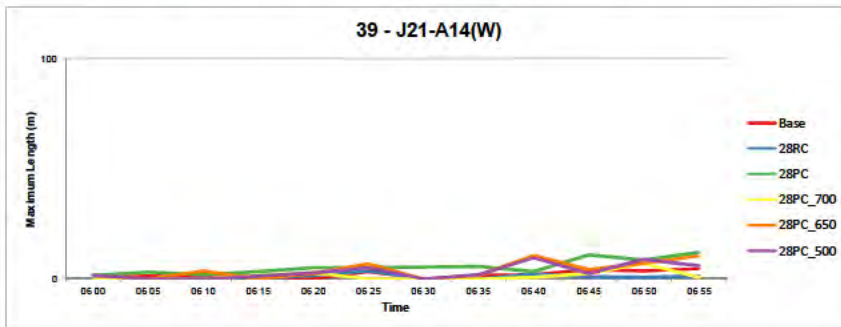
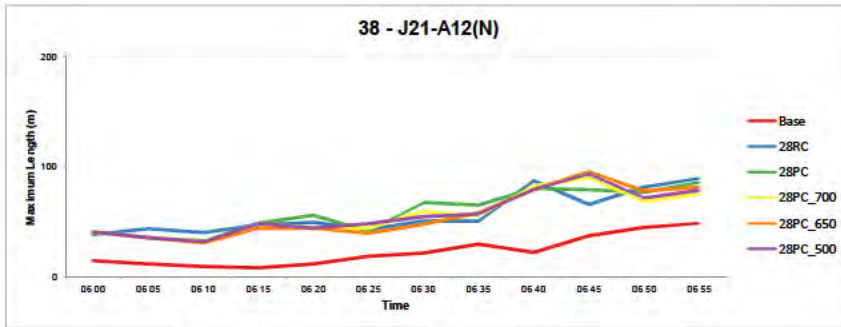


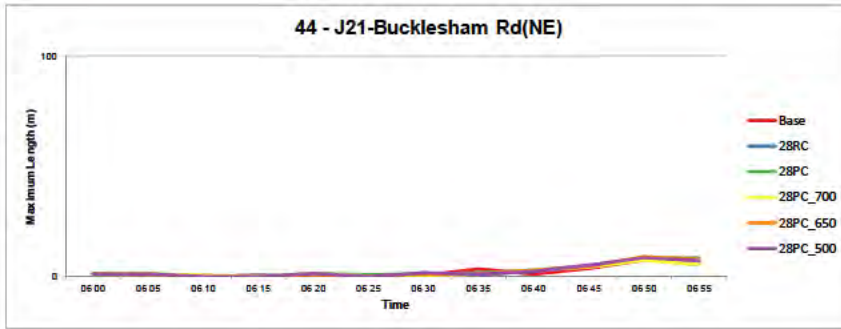














Queue Comparison
06:00-07:00
Maximum Length Summary
Maximum Length (m)

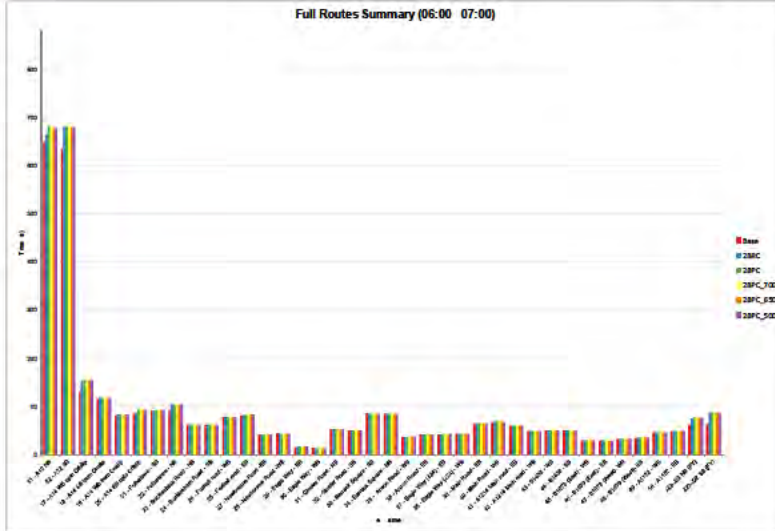
	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	19.8	14.2	16.4	13.4	14.6	14.8
2 - J28-A12(S)	7.5	9.6	19.6	17.8	19.9	16.5
3 - J28-A1152(E)	11.6	11.9	12.2	12.9	12.1	11.9
6 - J27-A12(N)	8.3	7.9	10.8	13.1	9.9	12.8
7 - J27-B1079(W)	6.2	7.2	7.6	7.4	8.4	8.0
8 - J27-A12(S)	13.5	14.0	20.1	20.4	19.1	18.6
9 - J27-B1079(E)	10.8	13.5	12.4	11.7	12.8	14.1
11 - J26-A12(N)	10.5	13.5	9.1	11.4	14.0	9.2
12 - J26-A12(S)-Right turn	1.7	2.2	1.9	1.3	3.1	1.7
13 - J26-A12(S)	3.1	6.5	19.0	15.2	21.4	17.9
14 - J26-B1438(E)	12.5	12.3	12.3	14.0	13.8	12.1
15 - J25-A12(N)	38.8	43.0	42.7	45.6	43.7	44.2
17 - J25-Martlesham PnR(NW)- Left turn	0.0	0.0	0.0	0.0	0.0	0.0
18 - J25-Martlesham PnR(NW)	0.0	0.0	0.0	0.0	0.0	0.0
19 - J25-Main Rd(W)	32.6	34.3	36.8	36.8	36.8	36.8
20 - J25-A12(S)	40.3	45.9	64.2	56.2	63.2	61.2
21 - J25-Main Rd(E)	6.6	5.9	11.0	11.6	9.6	6.7
22 - J24-A12(N)	16.3	18.9	20.6	20.0	14.3	19.8
24 - J24-Eagle Way(W)	6.4	8.3	7.8	8.1	7.9	7.8
26 - J24-A12(S)	9.9	19.2	24.5	15.3	15.8	24.7
28 - J24-Anson Rd(E)	9.2	7.7	7.2	8.8	7.5	7.7
29 - J23-A12(N)	18.1	51.0	52.4	49.8	51.5	53.4
30 - J23-Eagle Way(W)	6.5	6.7	9.0	9.4	7.8	9.5
31 - J23-A12(S)	13.5	10.9	10.5	10.2	9.7	11.2
32 - J23-Barrack Square(E)	10.1	7.5	8.6	9.1	9.3	7.9
34 - J22-A12(N)	18.7	93.3	94.9	91.5	93.3	94.4
36 - J22-A12(S)	13.9	58.9	70.6	63.9	64.8	64.6
37 - J22-Newbourne Rd(E)	14.1	8.1	5.3	6.4	6.0	7.3
45 - J22-Foxhall Rd(W)	13.7	16.5	15.3	15.0	15.5	15.5
38 - J21-A12(N)	48.6	89.4	85.8	89.9	95.8	93.2
39 - J21-A14(W)	4.7	3.4	12.1	7.0	10.5	9.4
41 - J21-A1156(S)	9.2	15.9	25.4	23.8	22.1	22.9
42 - J21-A14(E)	18.8	40.5	45.0	43.6	43.6	44.9
44 - J21-Bucklesham Rd(NE)	8.5	7.6	8.5	7.5	9.0	8.5



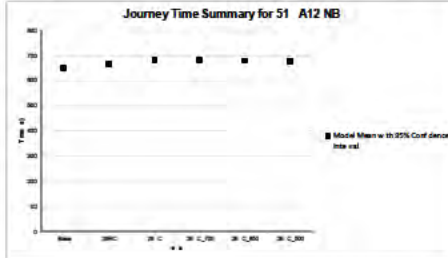
Queue Comparison
06 00-07 00
Average Length Summary
Maximum Length (m)

	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	7.6	8.8	8.9	7.8	8.5	7.8
2 - J28-A12(S)	2.3	3.2	6.7	6.2	8.7	4.8
3 - J28-A1152(E)	4.5	5.0	5.6	5.6	5.6	5.5
6 - J27-A12(N)	2.9	3.7	4.8	4.9	4.5	4.4
7 - J27-B1079(W)	2.8	3.6	3.9	4.4	4.2	3.9
8 - J27-A12(S)	6.1	7.6	10.9	9.1	9.6	11.4
9 - J27-B1079(E)	6.3	8.1	7.2	7.4	7.8	8.2
11 - J26-A12(N)	4.5	5.5	4.9	5.3	5.2	4.8
12 - J26-A12(S)-Right turn	0.3	0.4	0.4	0.3	0.4	0.6
13 - J26-A12(S)	0.7	2.0	4.9	5.4	5.8	4.6
14 - J26-B1438(E)	5.8	6.7	6.9	6.9	7.4	6.9
15 - J25-A12(N)	28.2	30.7	31.6	31.0	29.5	31.7
17 - J25-Martlesham PnR(NW)- Left turn	0.0	0.0	0.0	0.0	0.0	0.0
18 - J25-Martlesham PnR(NW)	0.0	0.0	0.0	0.0	0.0	0.0
19 - J25-Main Rd(W)	23.7	25.2	26.8	26.8	26.8	26.4
20 - J25-A12(S)	27.3	26.4	37.5	34.6	34.8	35.2
21 - J25-Main Rd(E)	3.5	2.6	4.3	4.2	3.9	3.5
22 - J24-A12(N)	6.1	9.6	9.2	9.7	8.3	9.5
24 - J24-Eagle Way(W)	3.2	3.8	4.0	4.1	3.9	4.2
26 - J24-A12(S)	1.8	4.5	8.5	7.3	6.9	7.8
28 - J24-Anson Rd(E)	3.0	2.5	2.7	2.9	2.6	2.9
29 - J23-A12(N)	8.1	38.7	39.1	38.9	38.5	39.4
30 - J23-Eagle Way(W)	3.1	2.9	3.7	3.2	3.4	3.6
31 - J23-A12(S)	4.0	6.8	7.6	7.4	7.5	7.4
32 - J23-Barrack Square(E)	4.2	2.6	2.8	2.5	2.5	2.4
34 - J22-A12(N)	6.8	56.7	56.0	55.4	54.7	56.5
36 - J22-A12(S)	3.2	33.4	45.5	44.6	45.1	43.7
37 - J22-Newbourne Rd(E)	5.6	3.5	3.3	3.2	3.4	3.4
45 - J22-Foxhall Rd(W)	8.3	8.6	10.5	10.6	10.6	10.1
38 - J21-A12(N)	23.3	57.3	59.1	56.3	56.3	56.8
39 - J21-A14(W)	1.8	0.9	5.5	1.3	4.0	3.3
41 - J21-A1156(S)	4.8	10.4	22.4	21.2	19.4	17.9
42 - J21-A14(E)	10.6	29.9	32.8	31.8	32.1	32.4
44 - J21-Bucklesham Rd(NE)	2.3	2.0	2.7	2.2	2.5	2.5

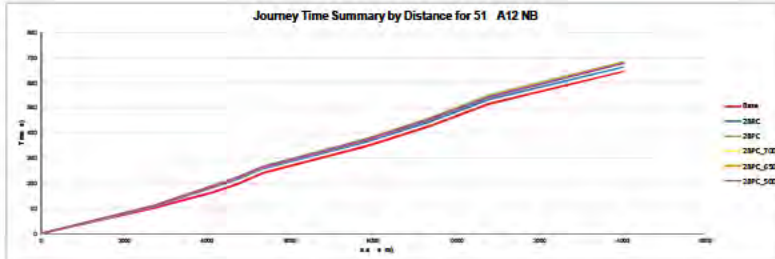
Full Routes Summary (06:00 07:00)

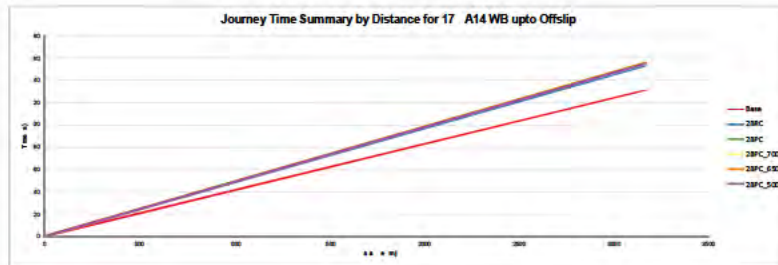
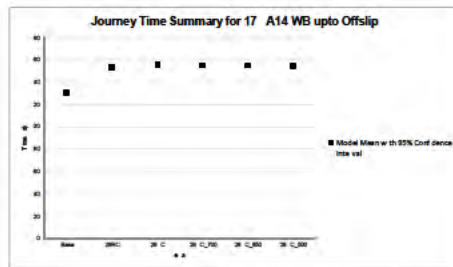
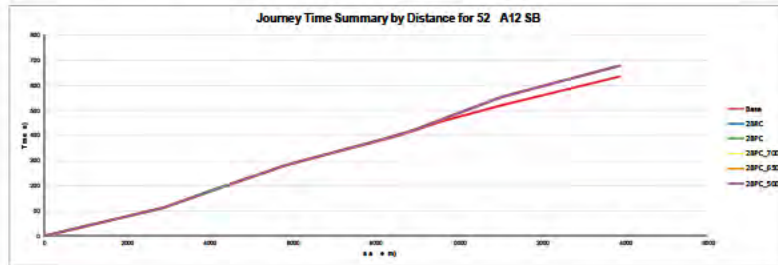
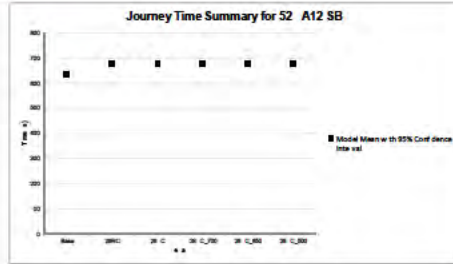


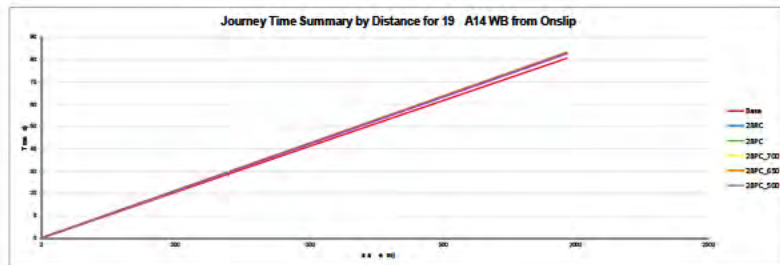
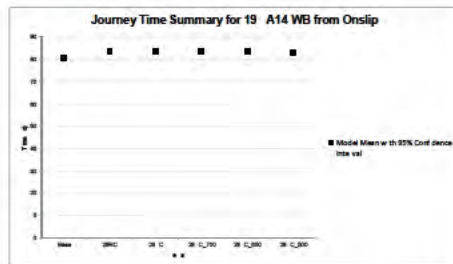
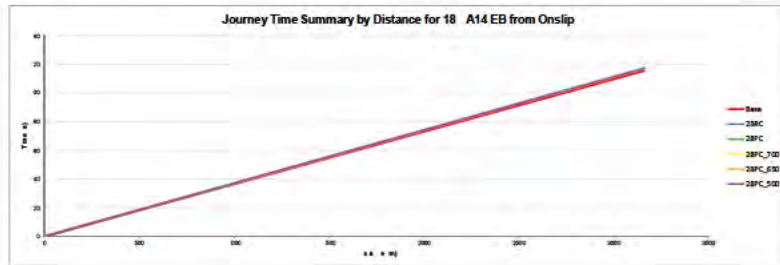
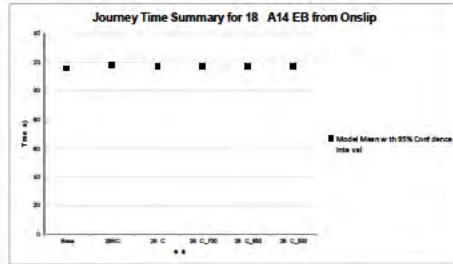
Journey Time Summary for 51 A12 NB

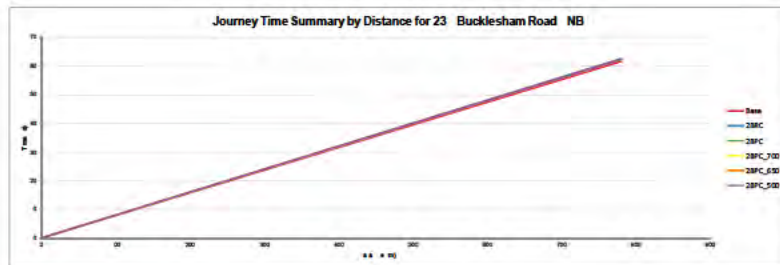
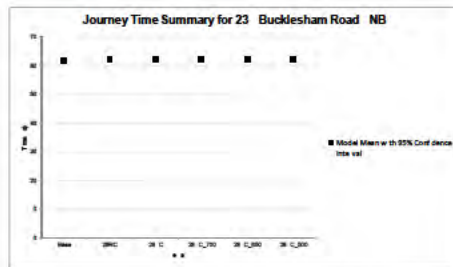
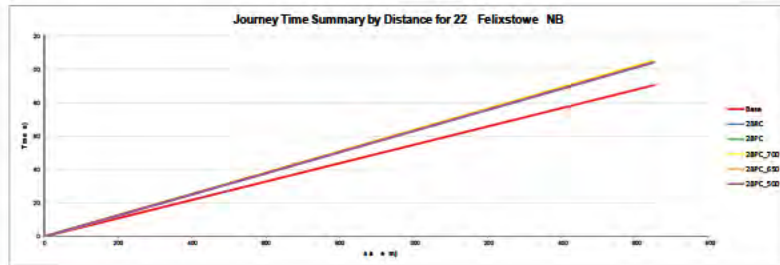
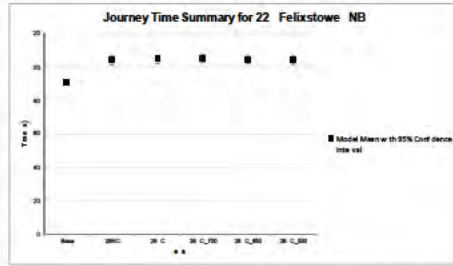


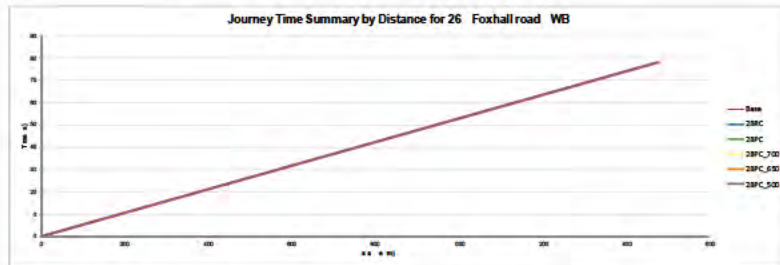
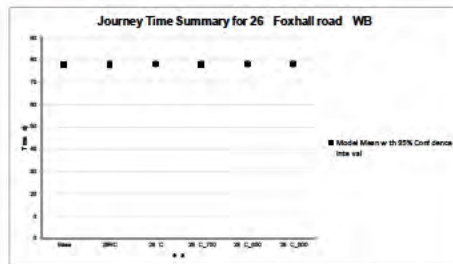
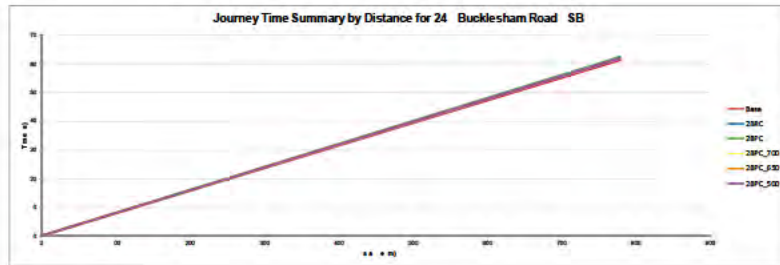
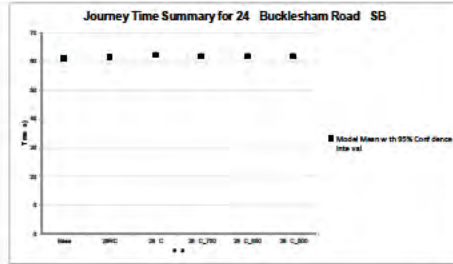
Journey Time Summary by Distance for 51 A12 NB

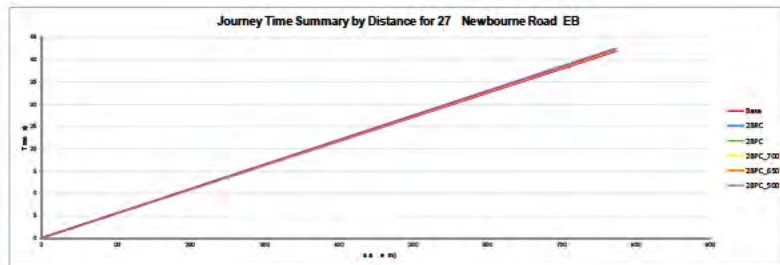
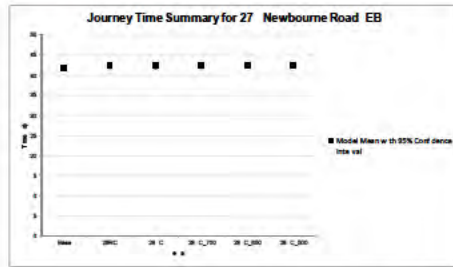
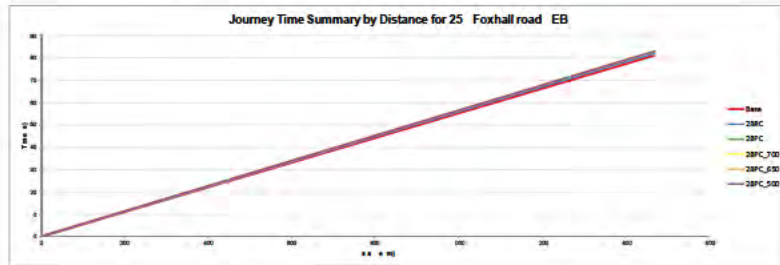
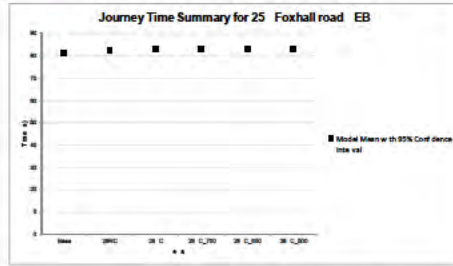


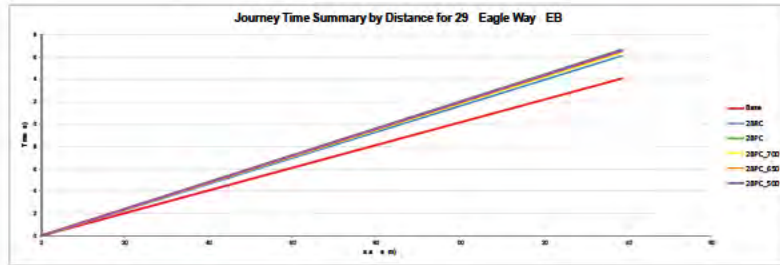
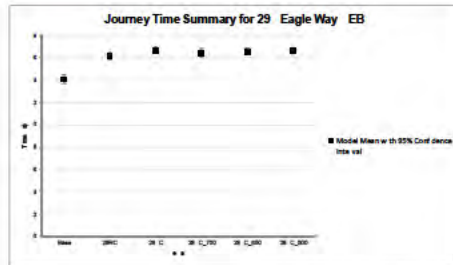
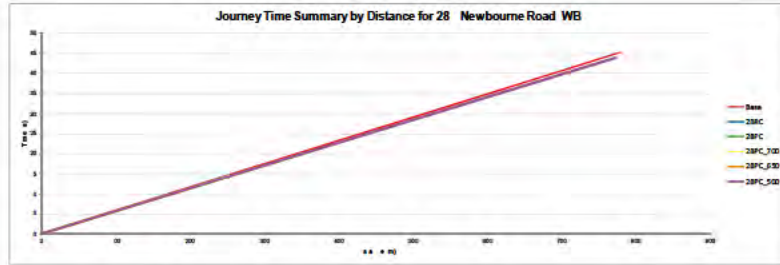
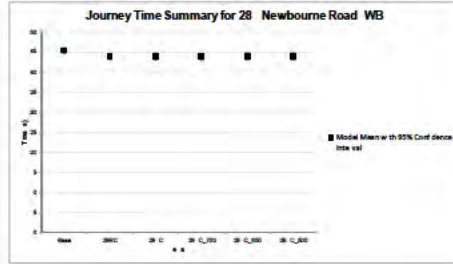


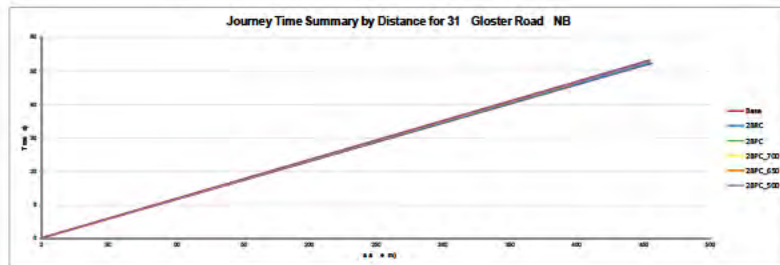
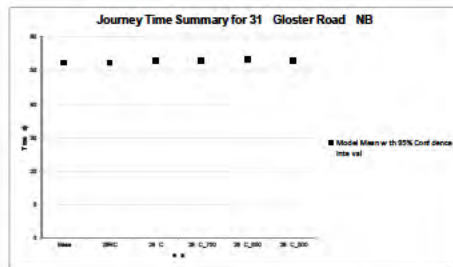
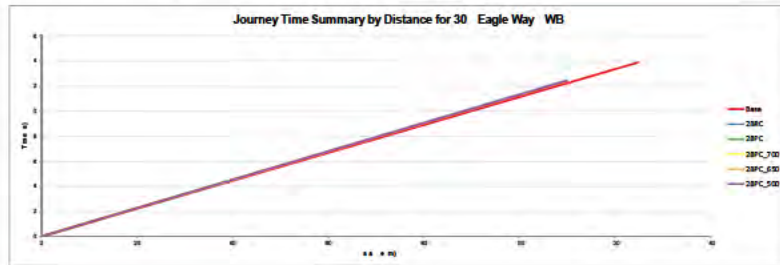
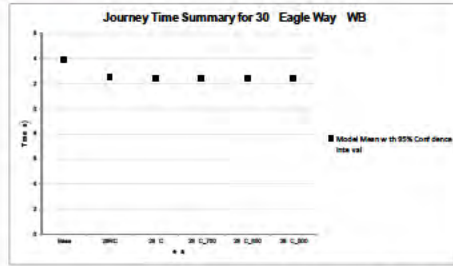


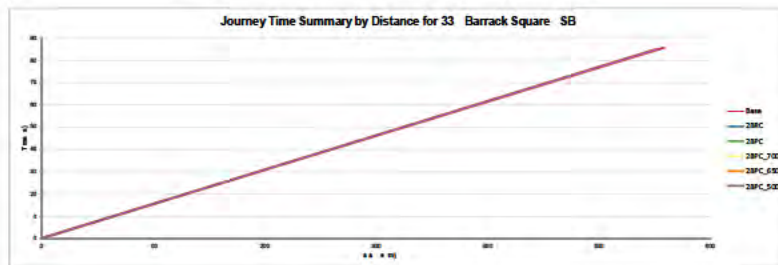
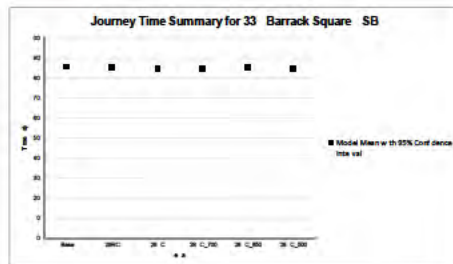
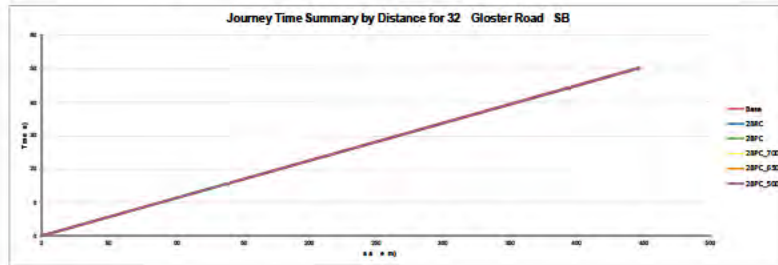
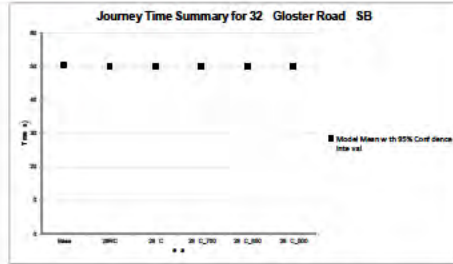


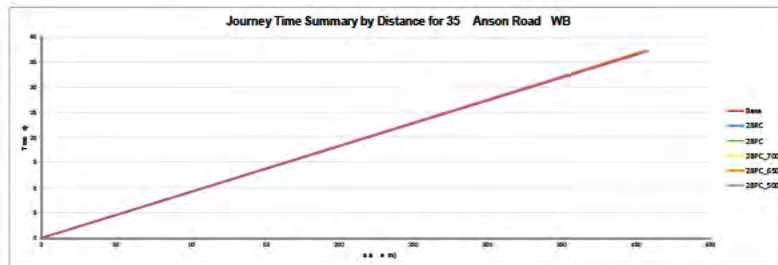
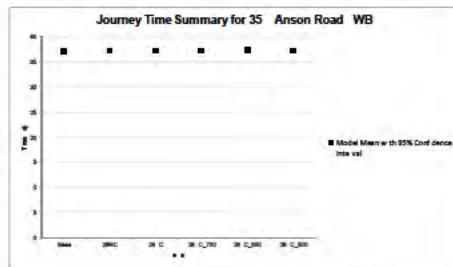
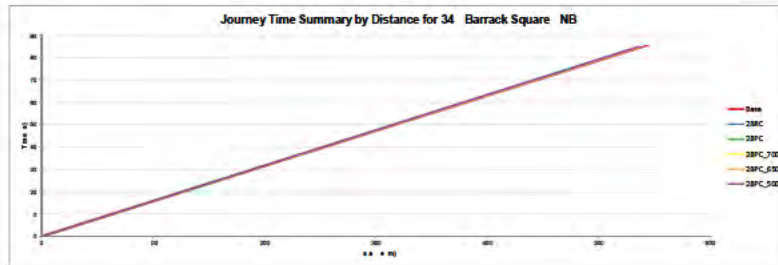
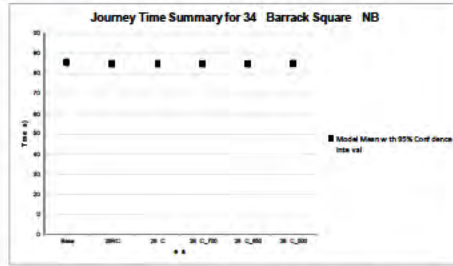


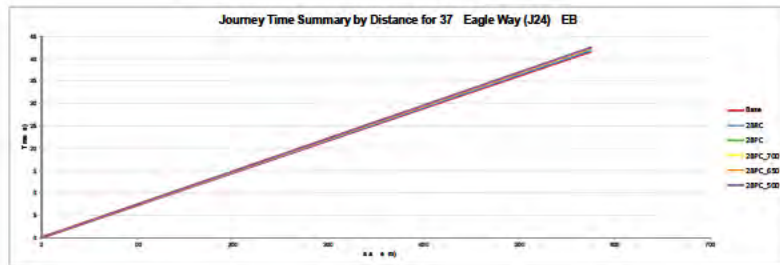
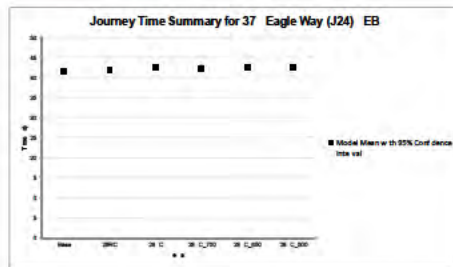
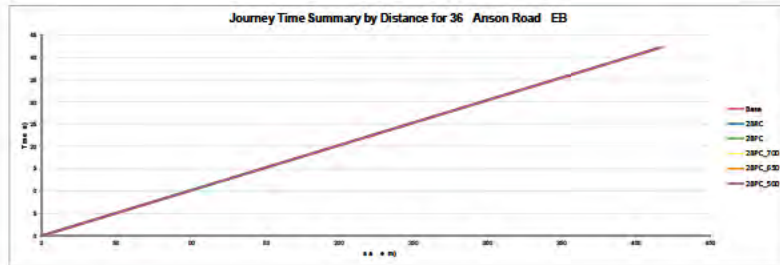
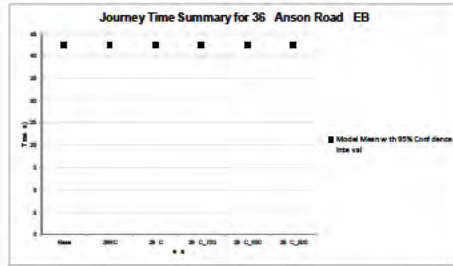


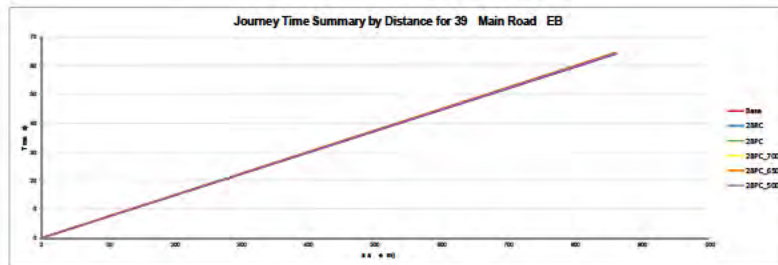
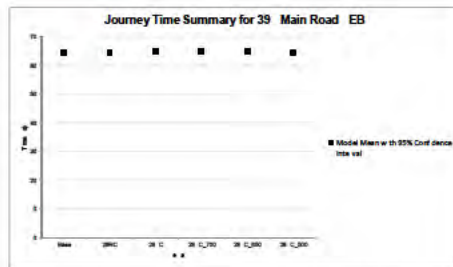
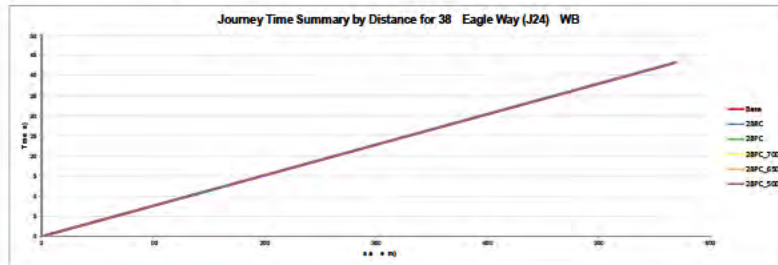
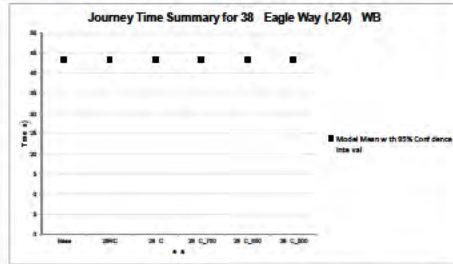


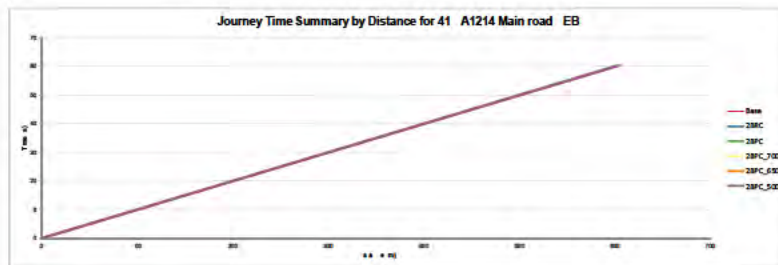
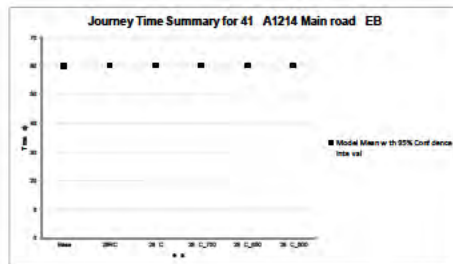
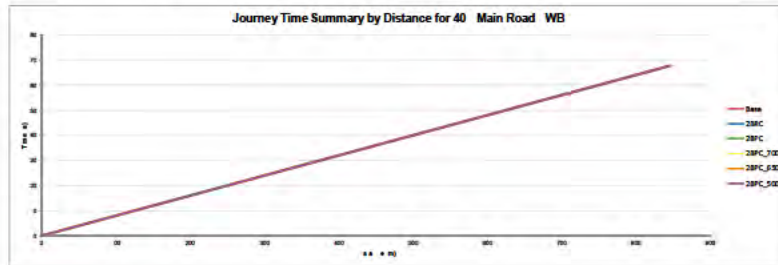
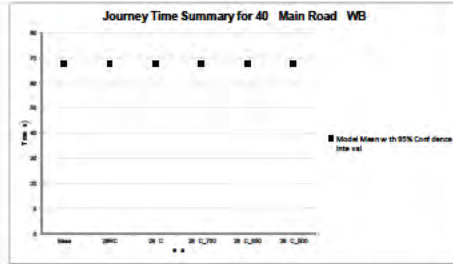


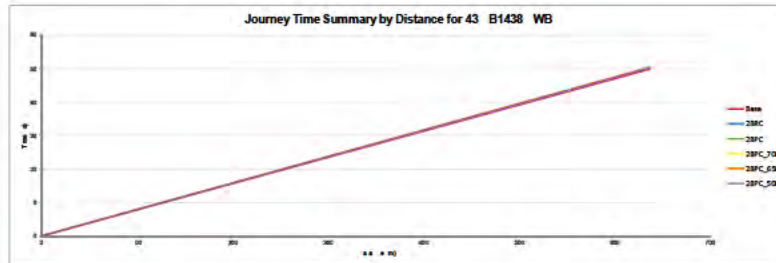
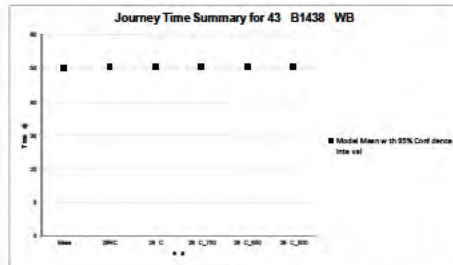
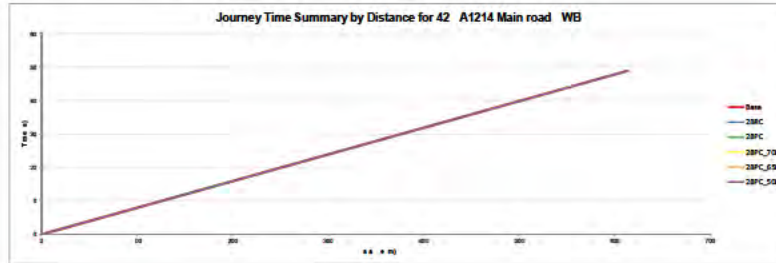
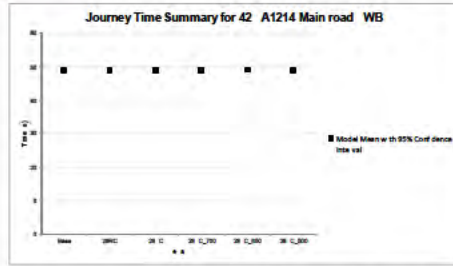


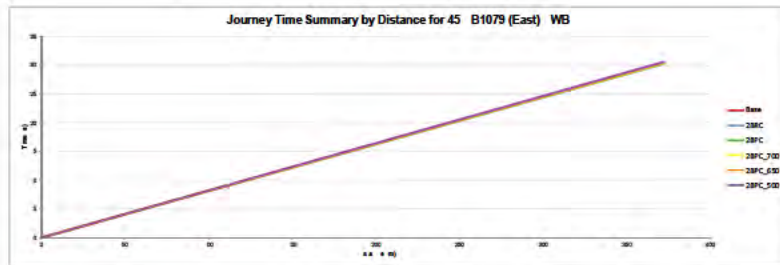
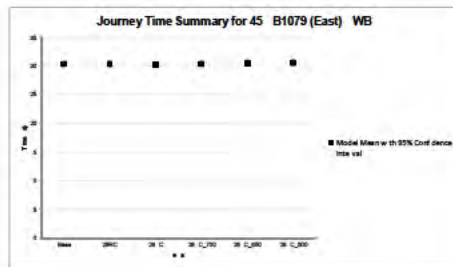
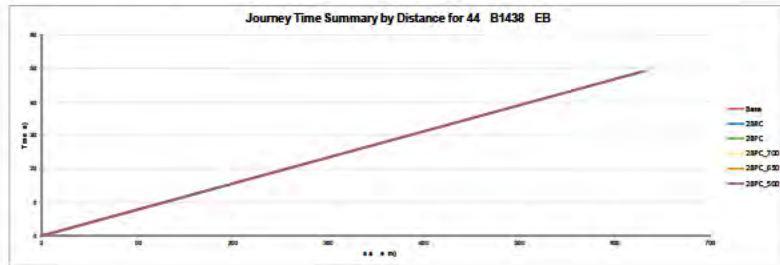
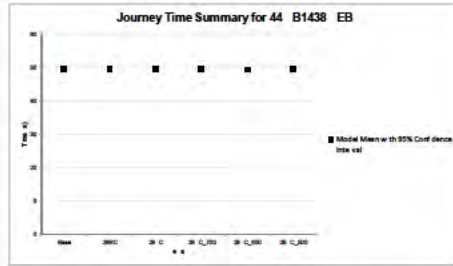


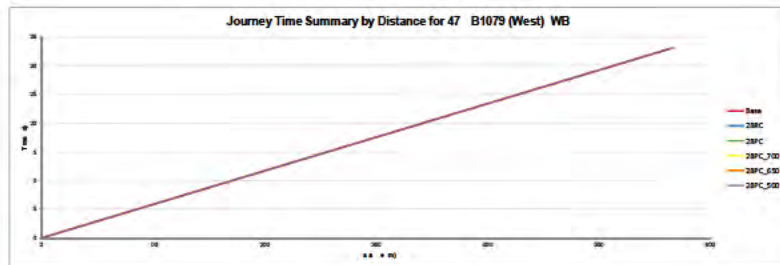
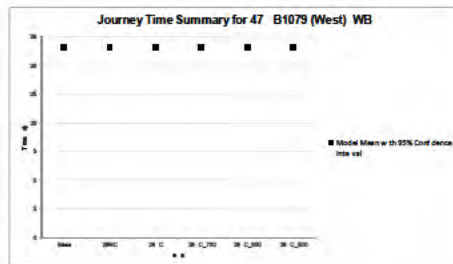
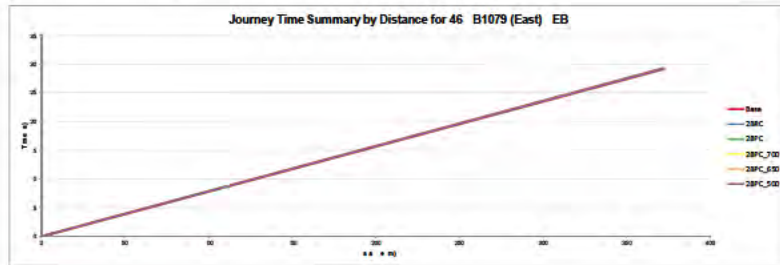
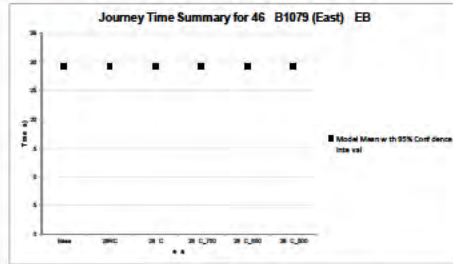


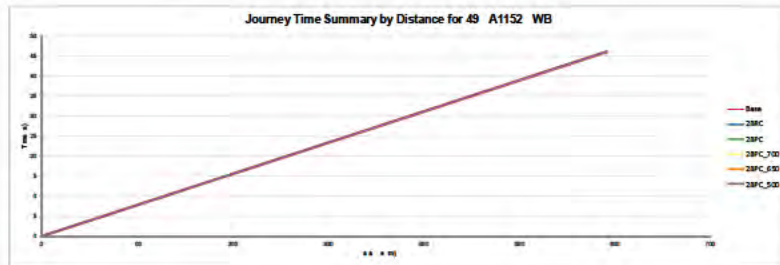
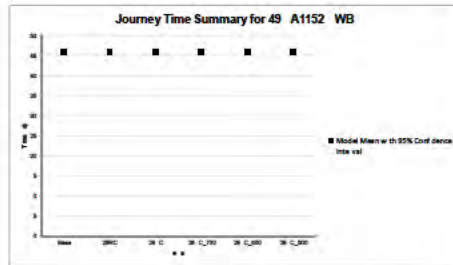
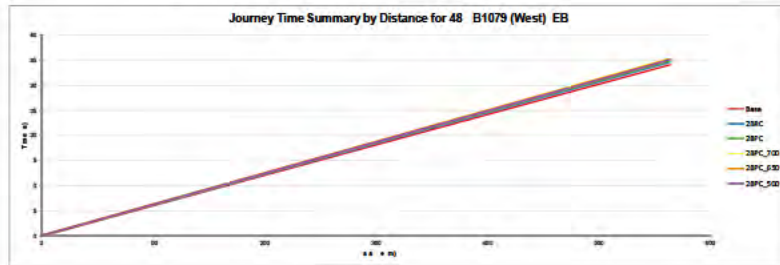
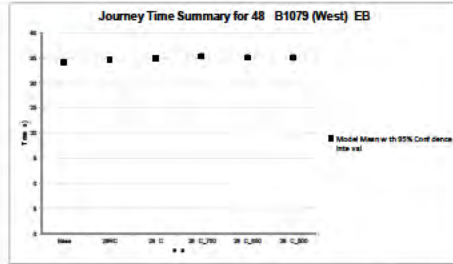


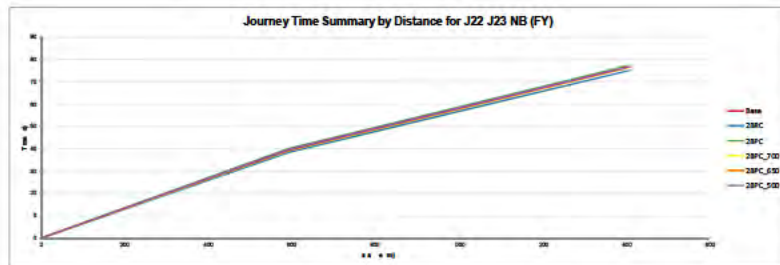
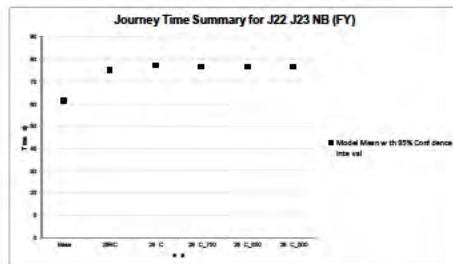
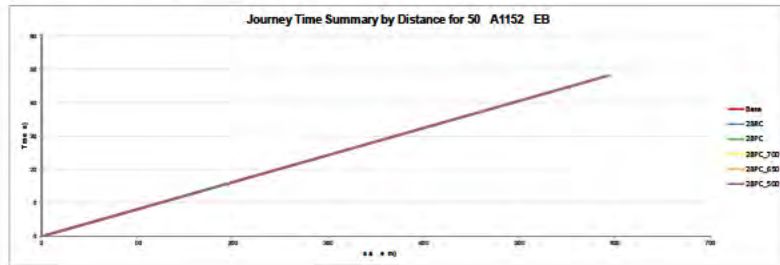
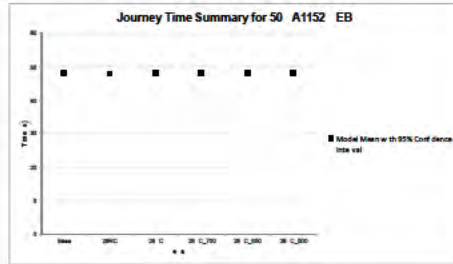




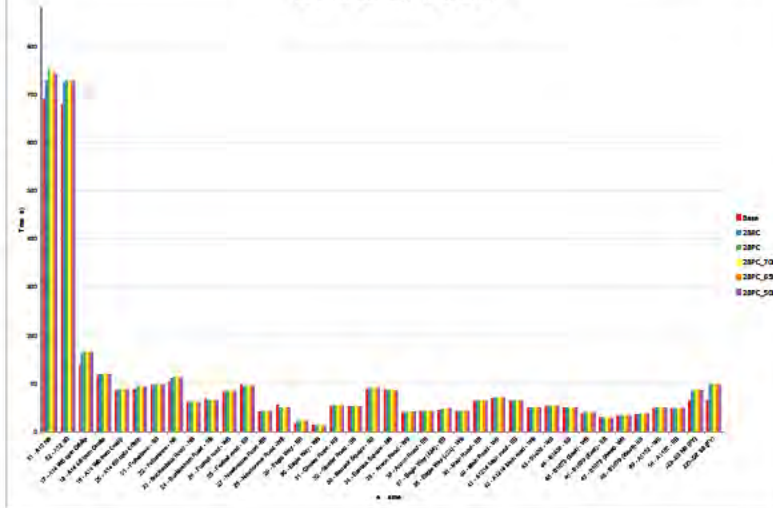




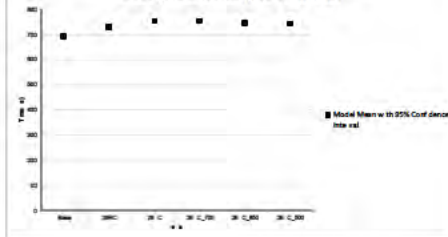




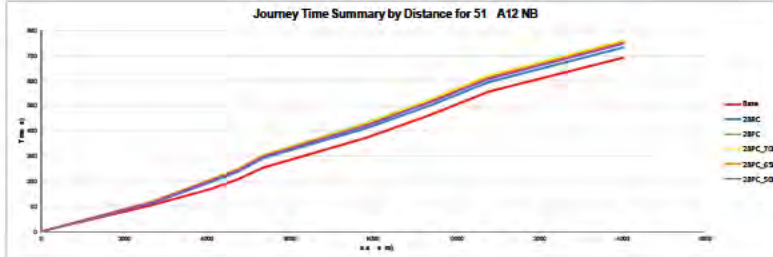
Full Routes Summary (07:00 08:00)

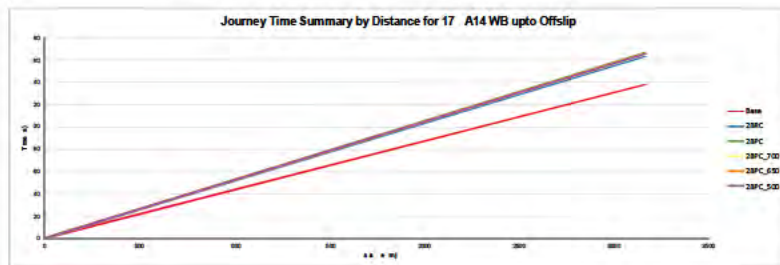
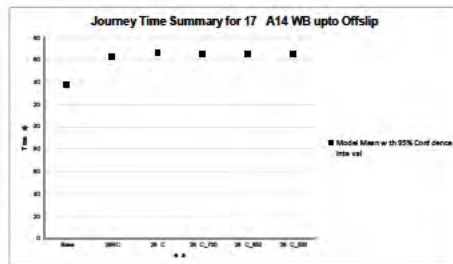
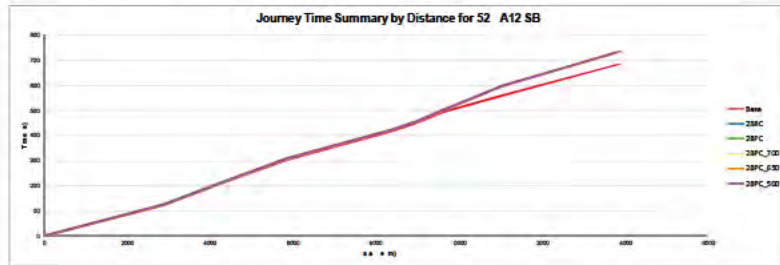


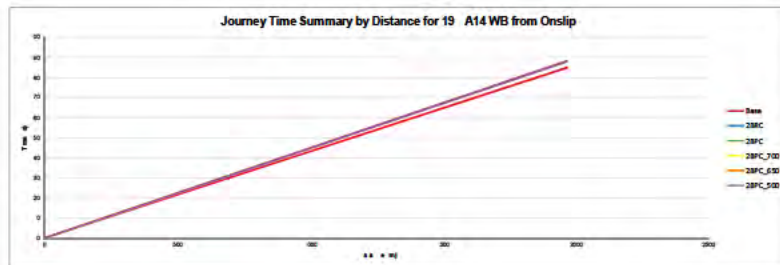
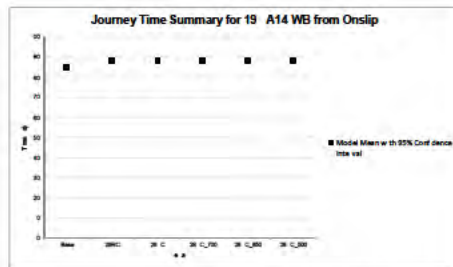
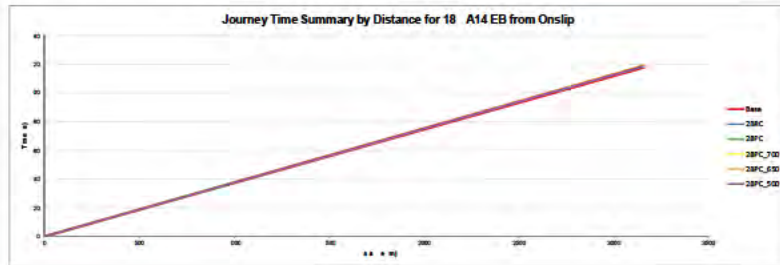
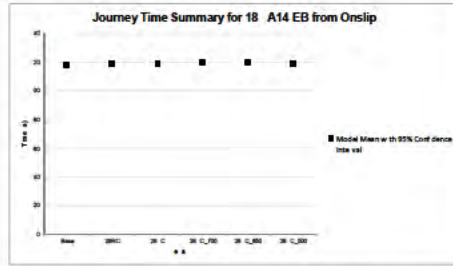
Journey Time Summary for 51 - A12 NB

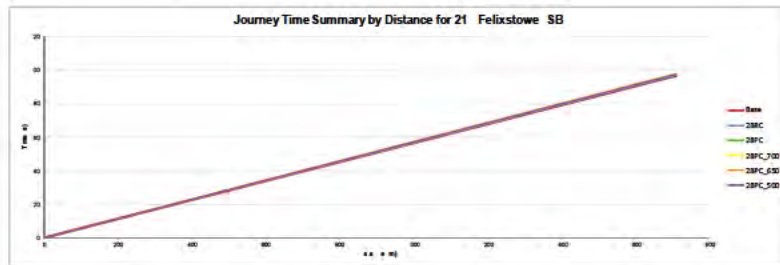
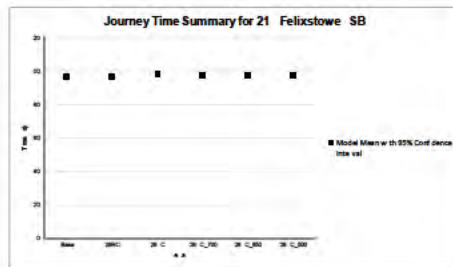
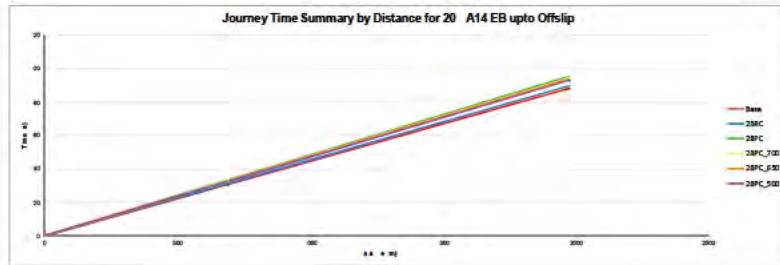
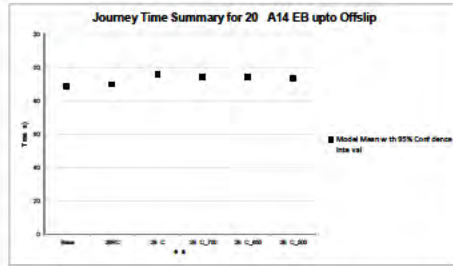


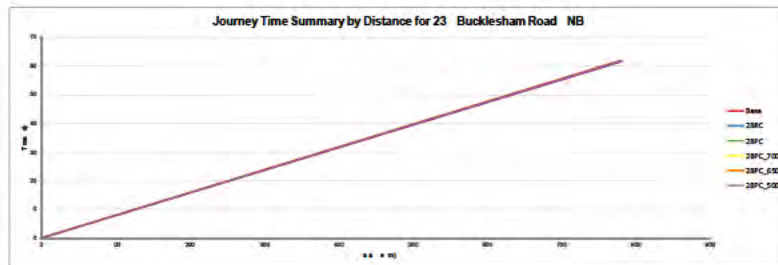
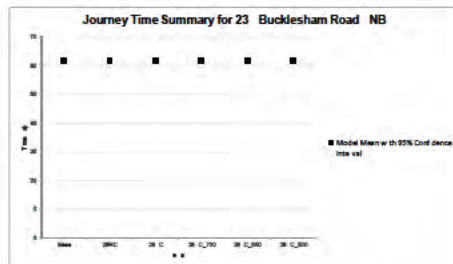
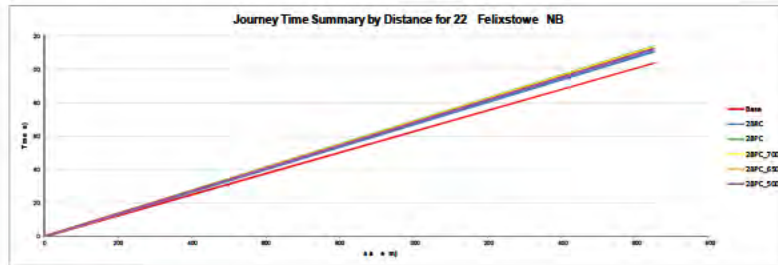
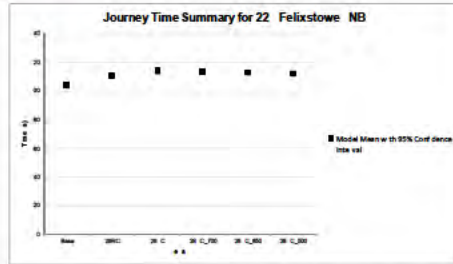
Journey Time Summary by Distance for 51 - A12 NB

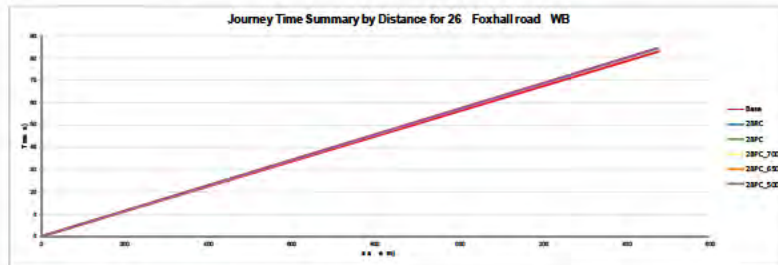
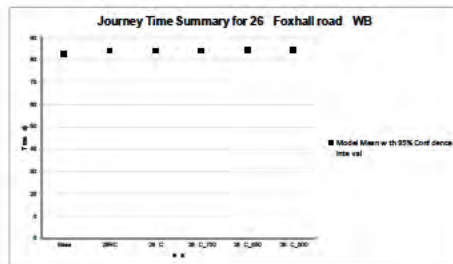
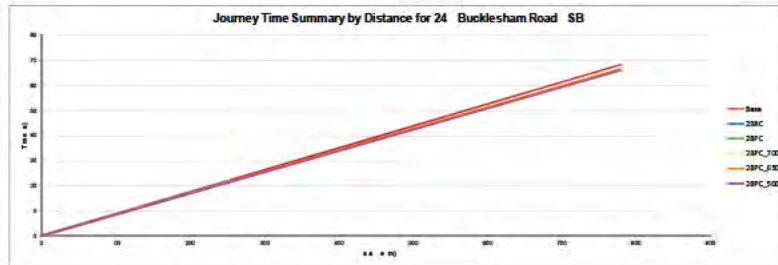
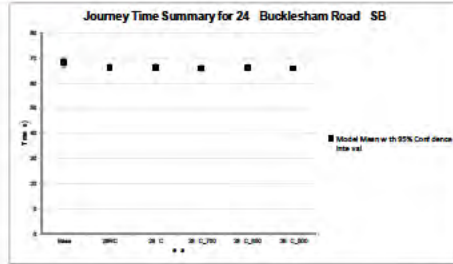


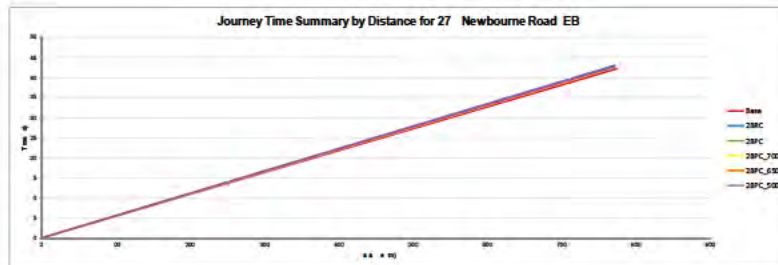
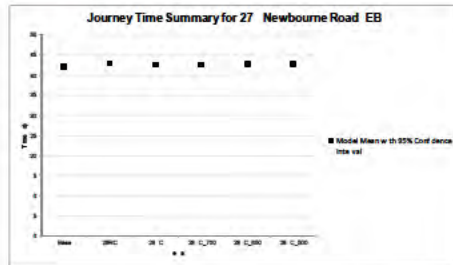
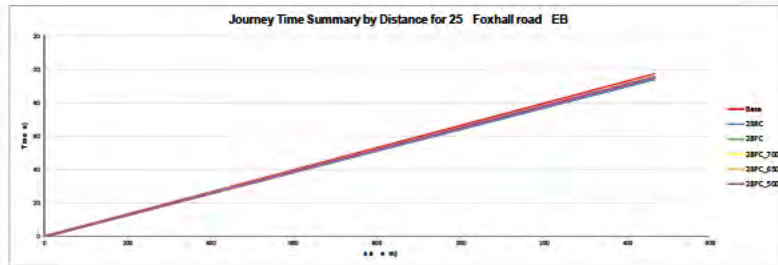
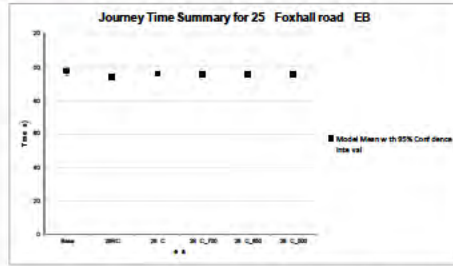


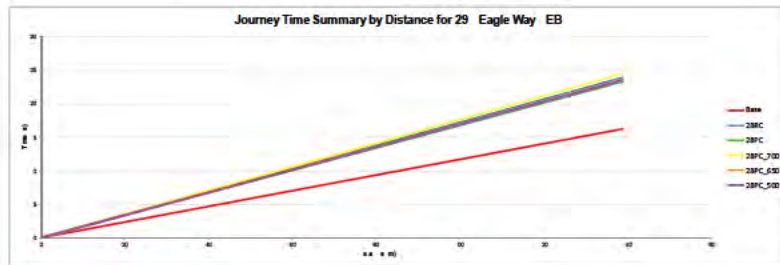
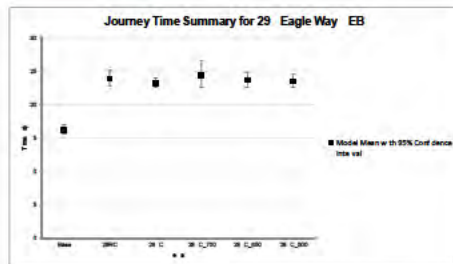
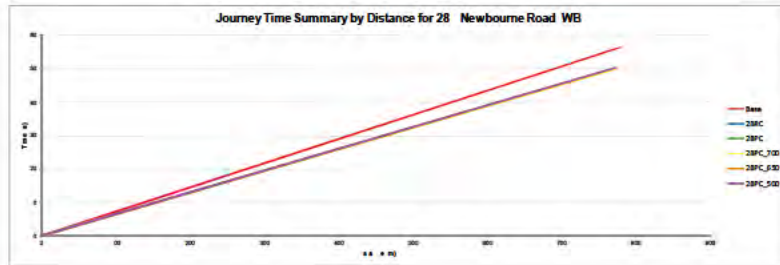
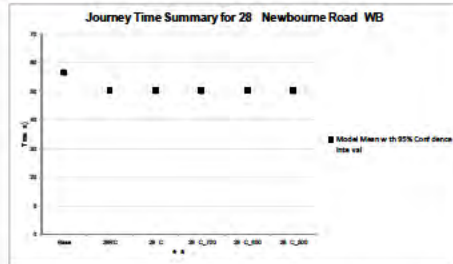


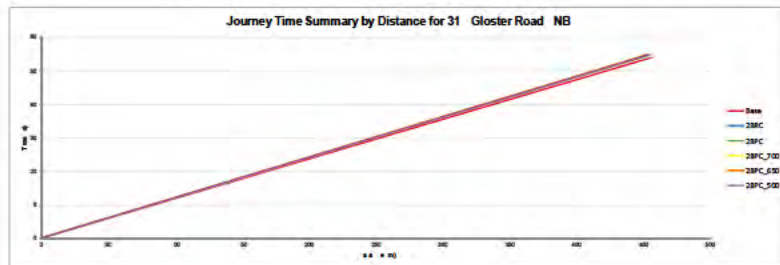
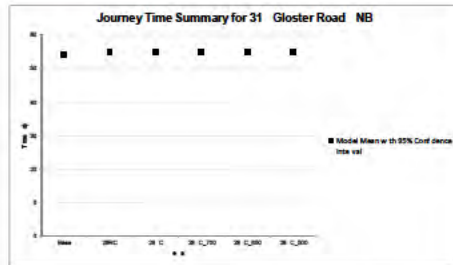
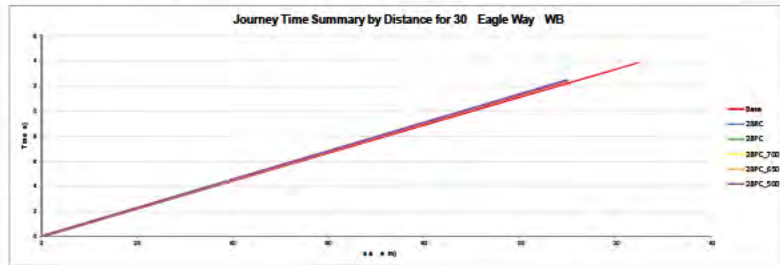
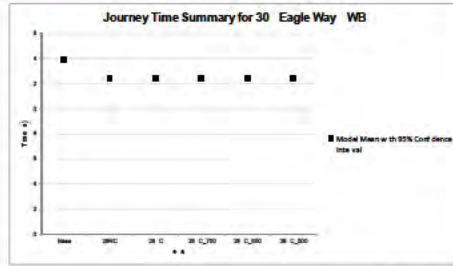


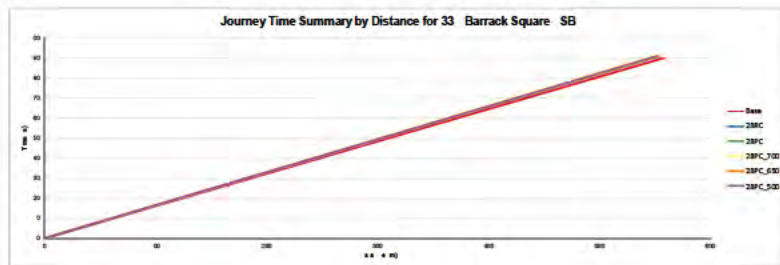
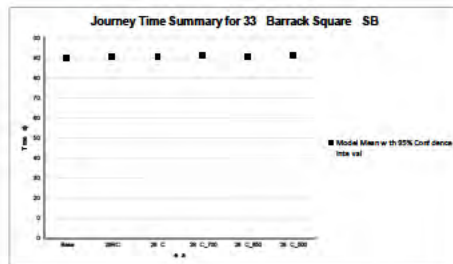
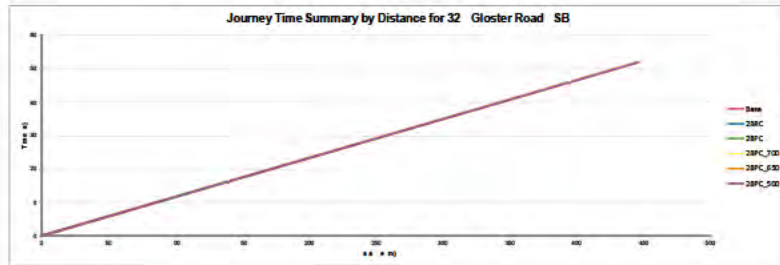
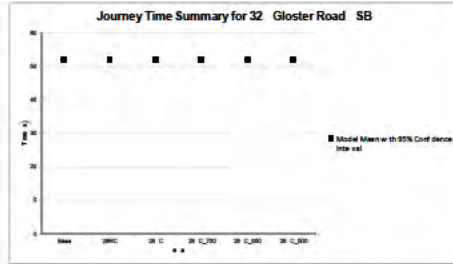


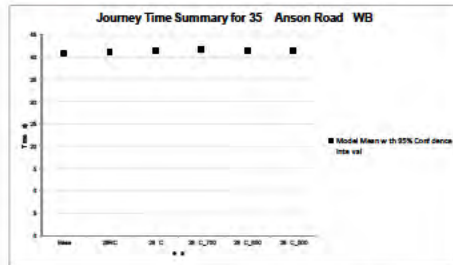
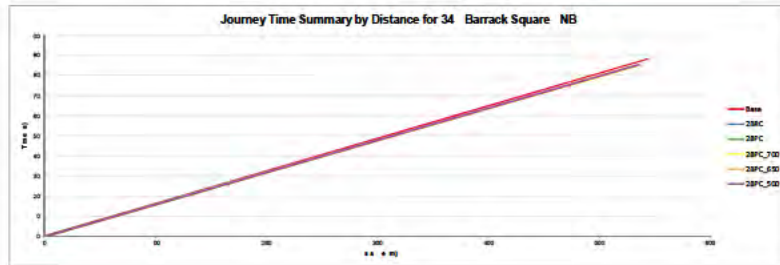
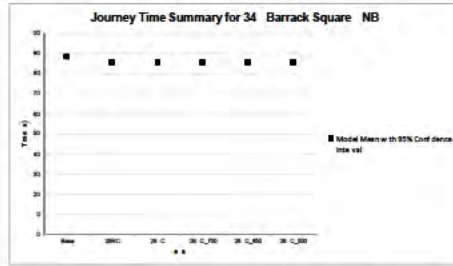


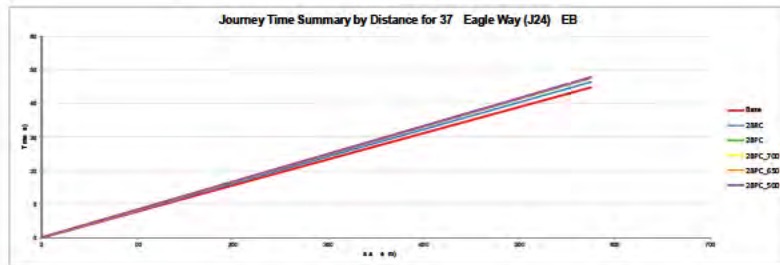
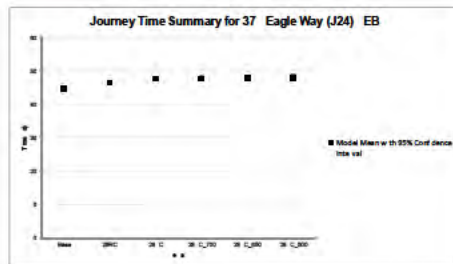
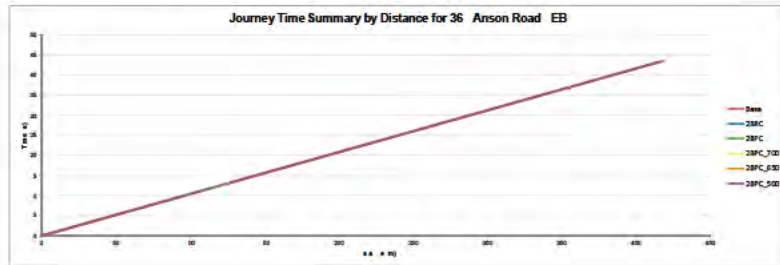
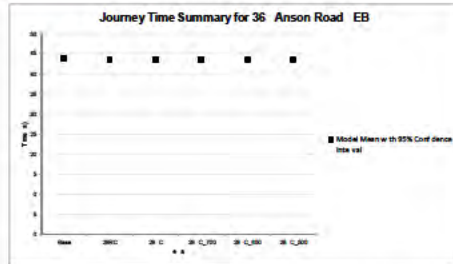


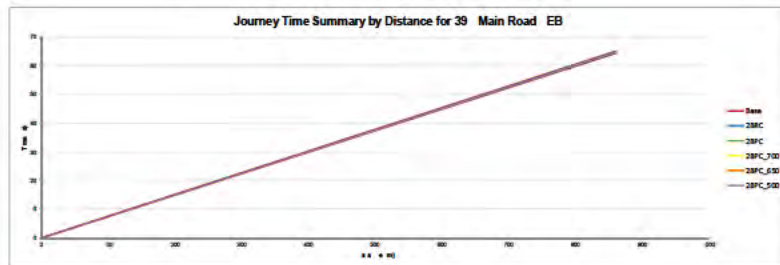
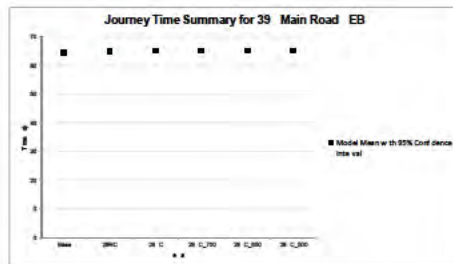
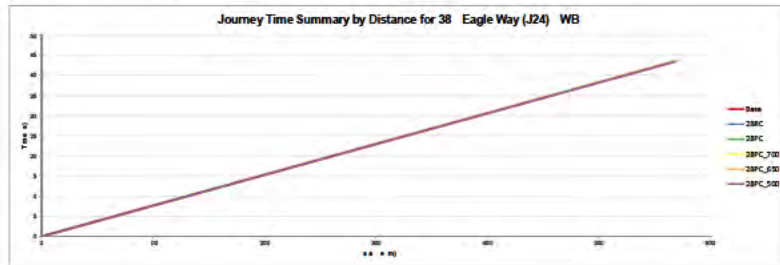
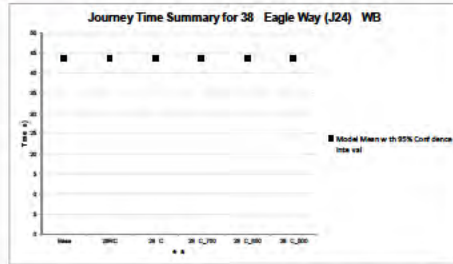


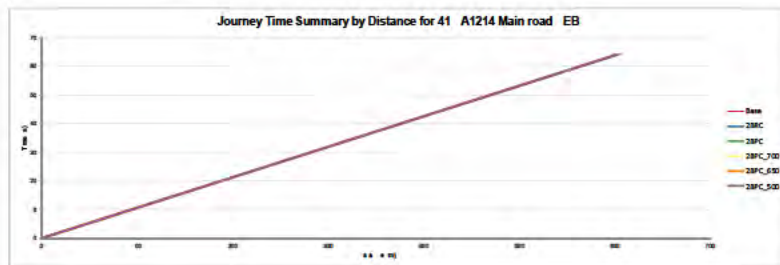
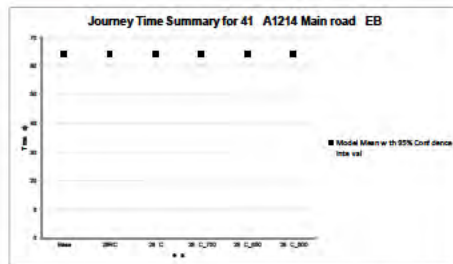
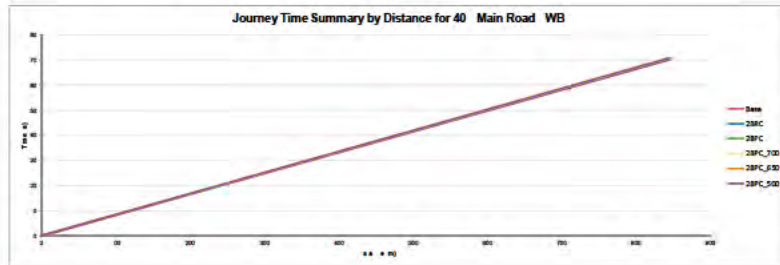
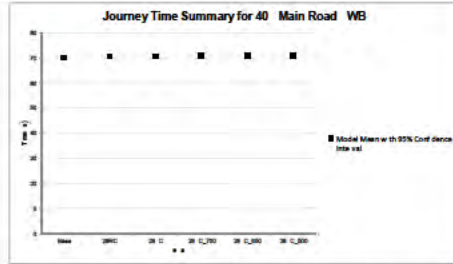


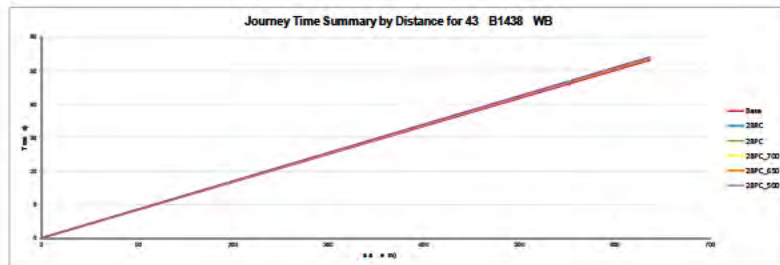
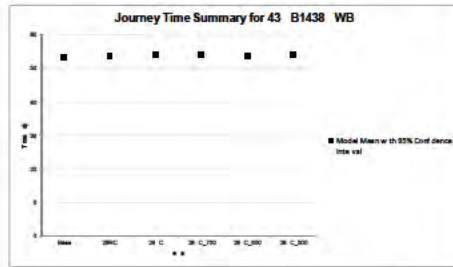
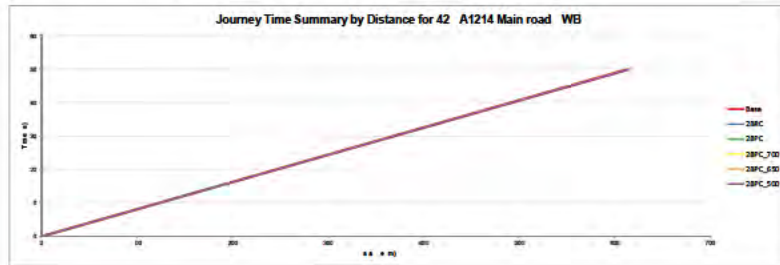
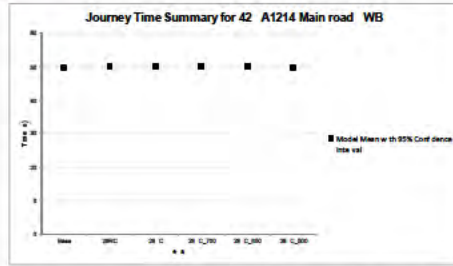


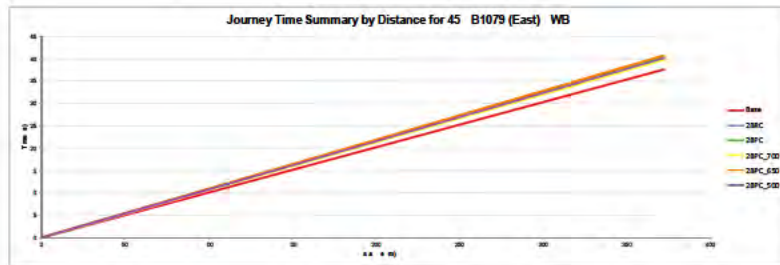
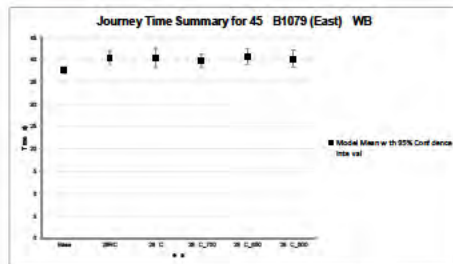
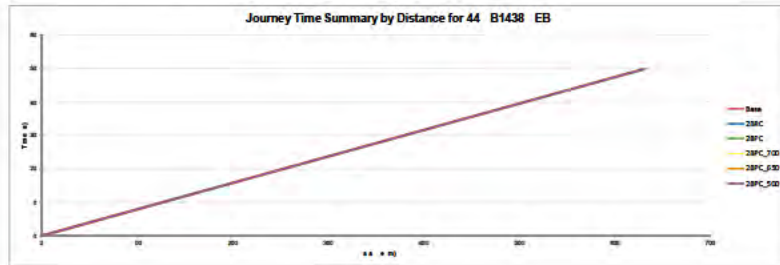
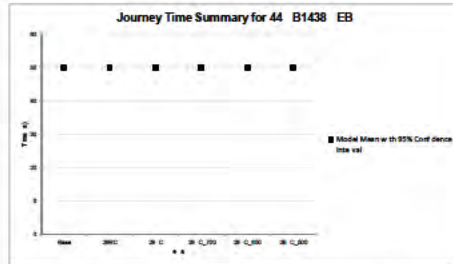


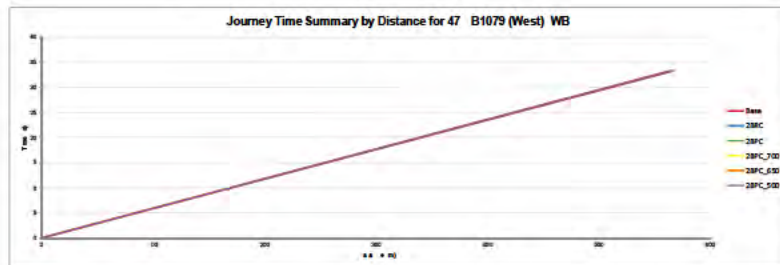
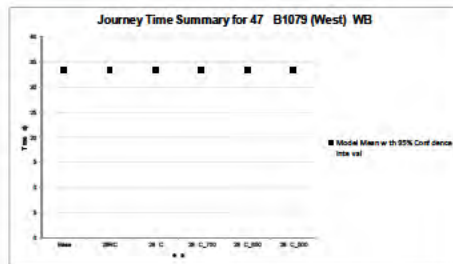
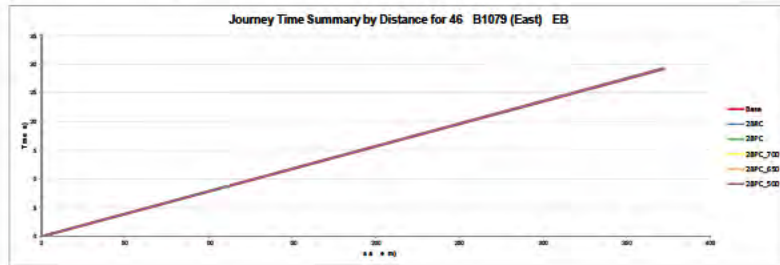
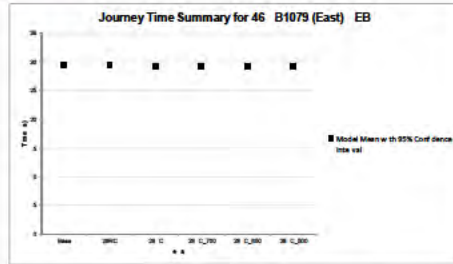


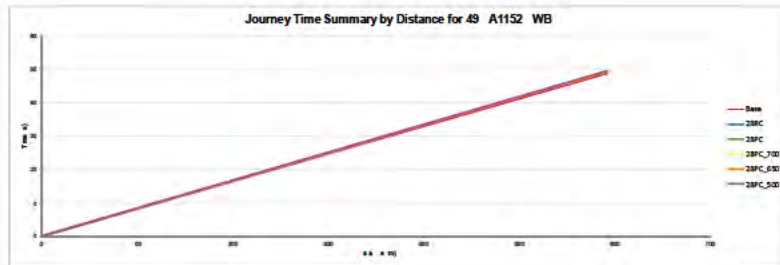
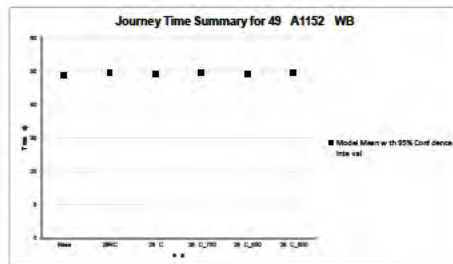
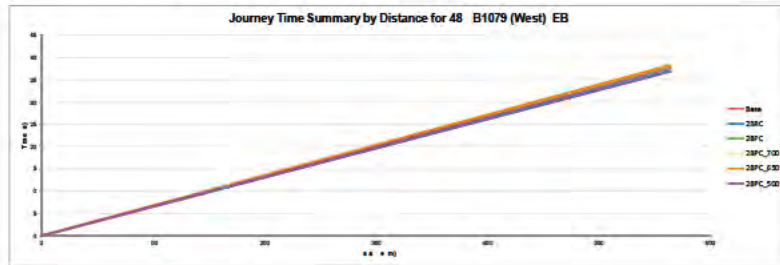
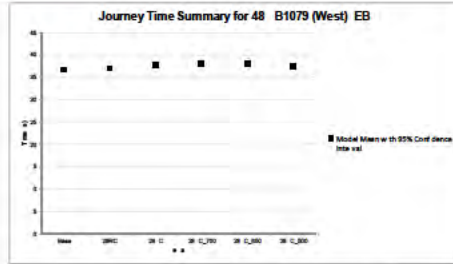


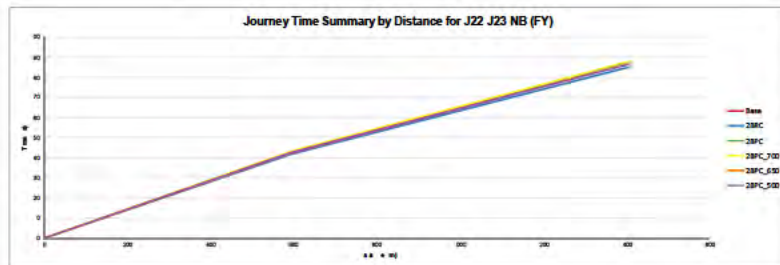
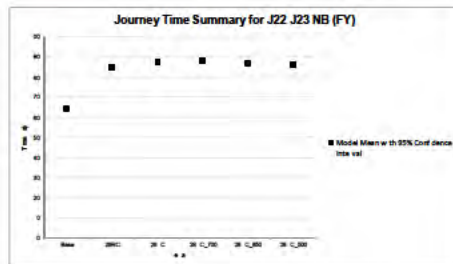
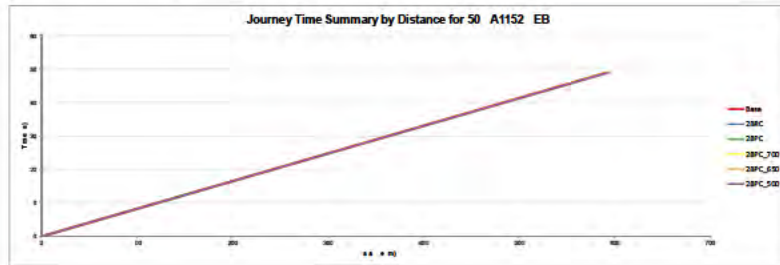
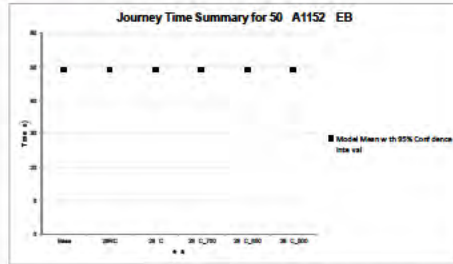


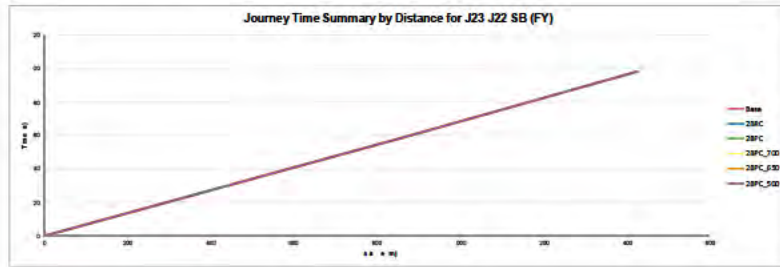
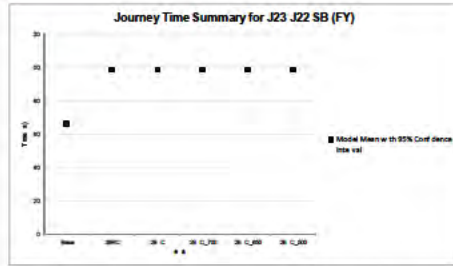




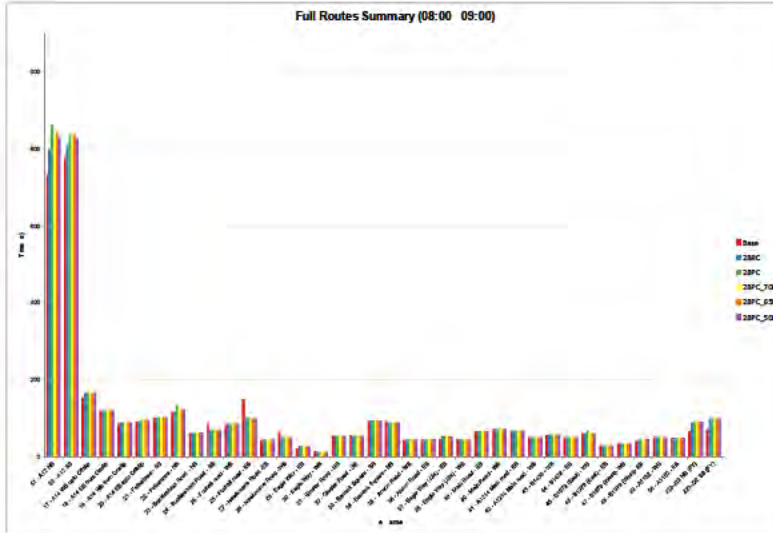




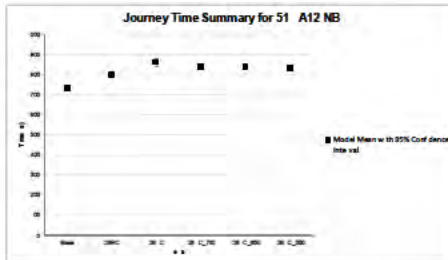




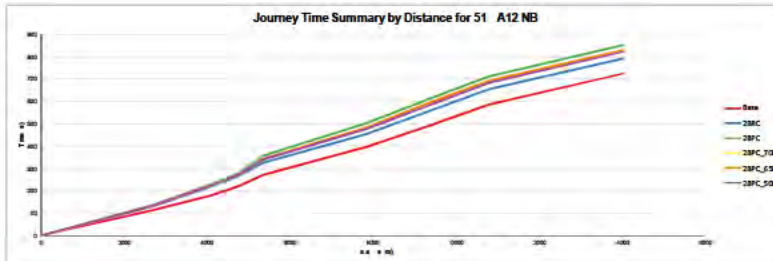
Full Routes Summary (08:00 09:00)

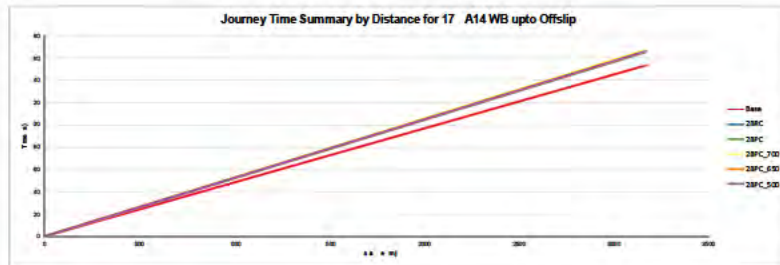
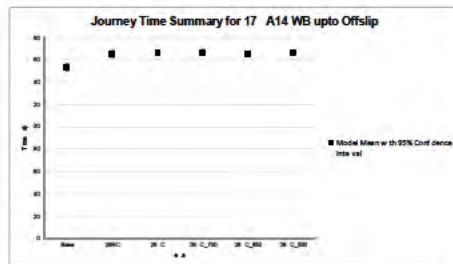
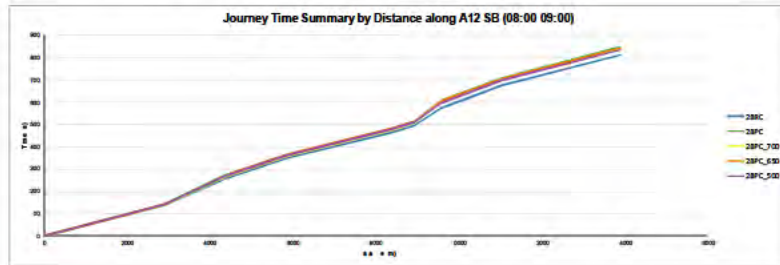
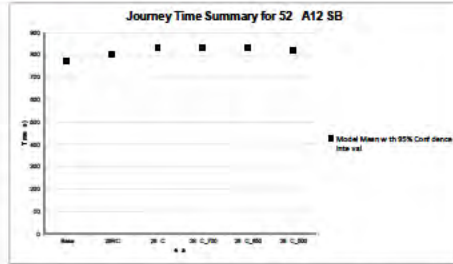


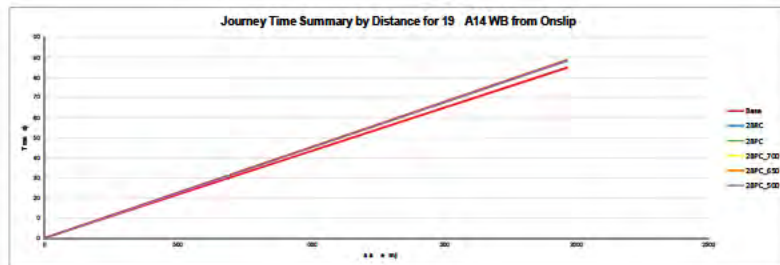
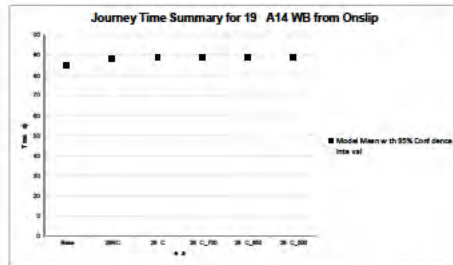
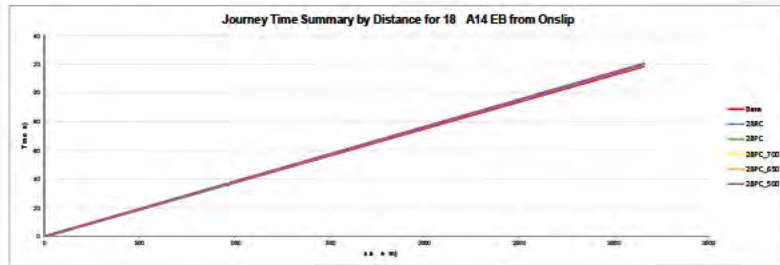
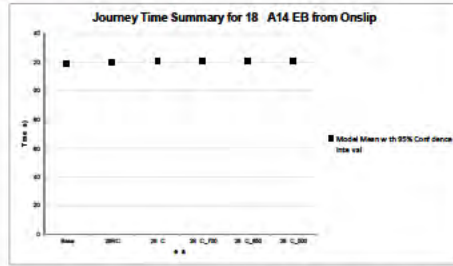
Journey Time Summary for 51 A12 NB

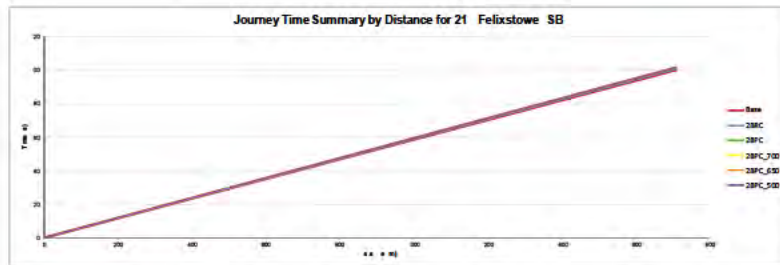
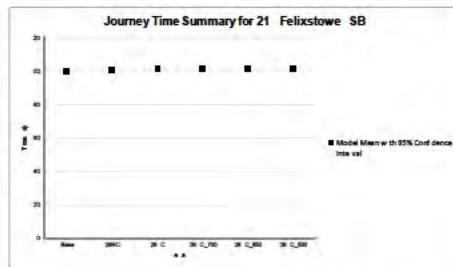
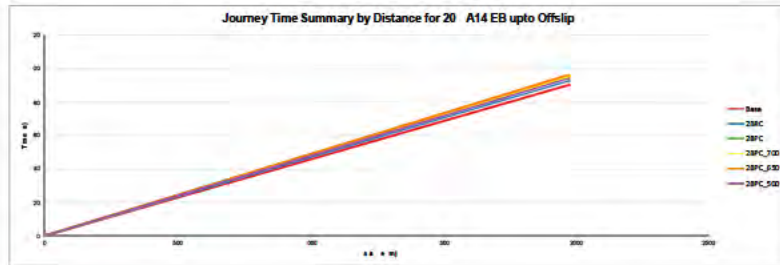
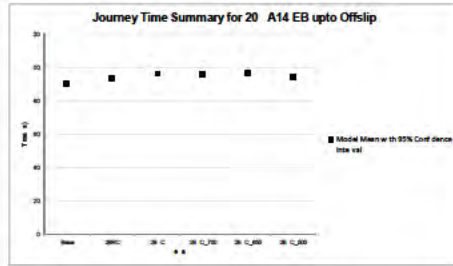


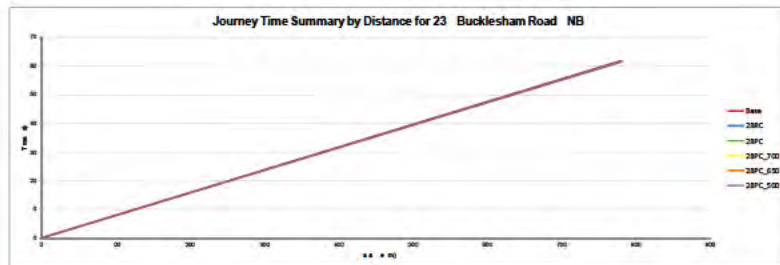
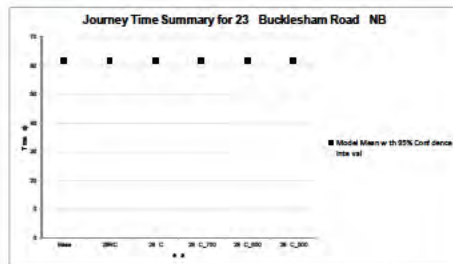
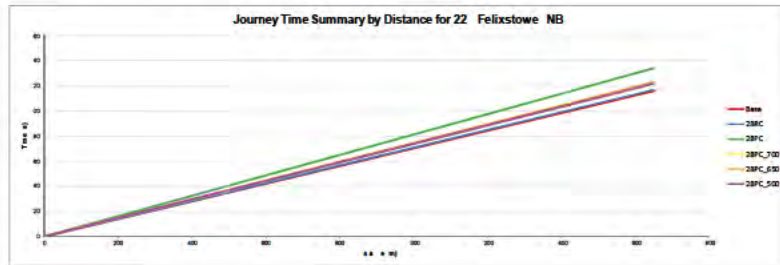
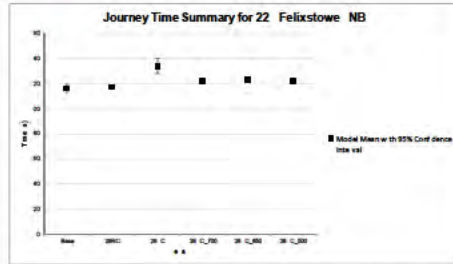
Journey Time Summary by Distance for 51 A12 NB

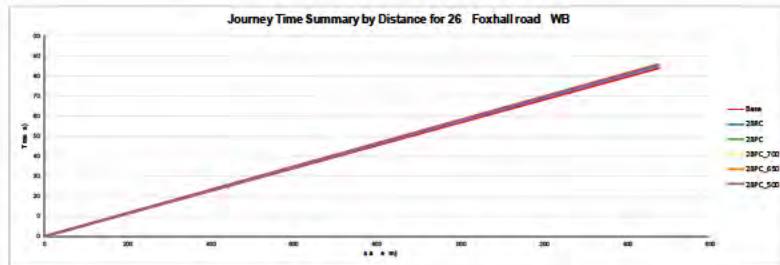
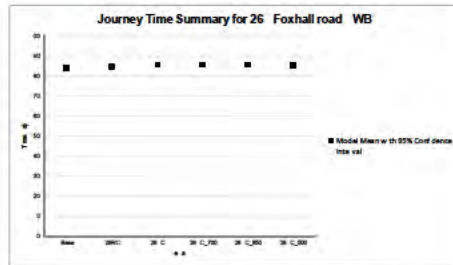
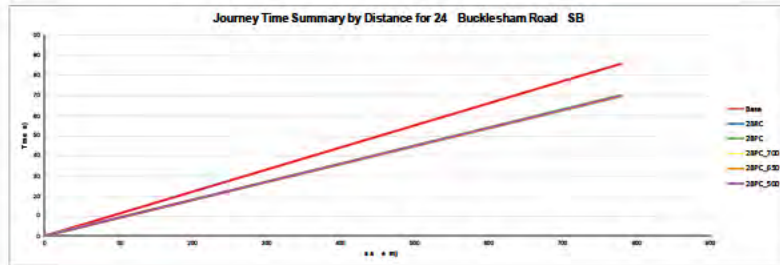
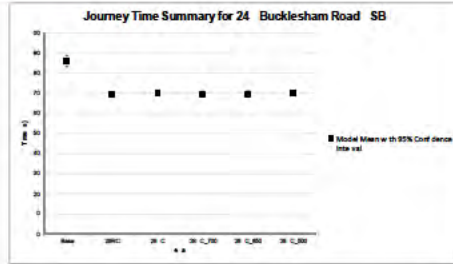


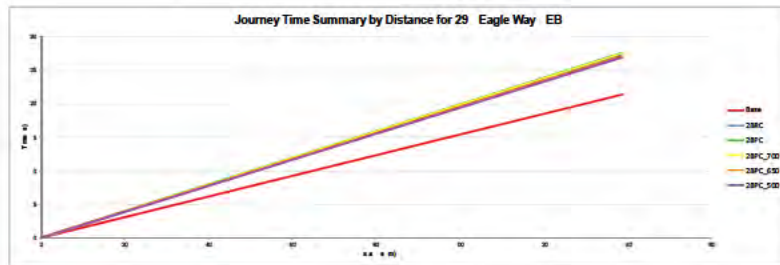
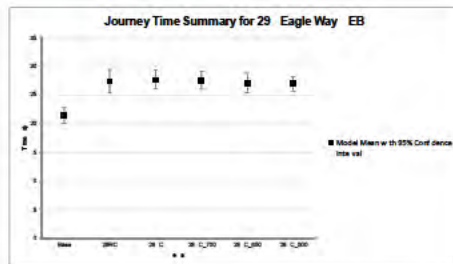
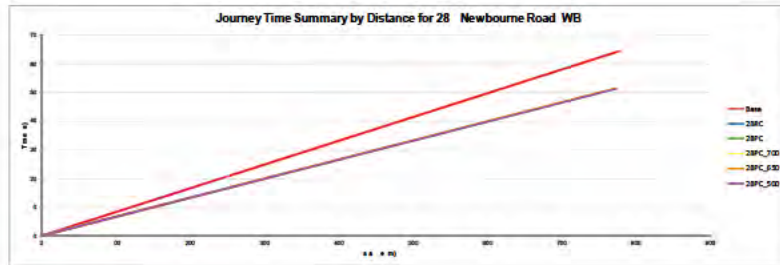
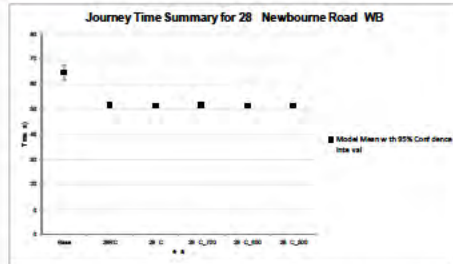


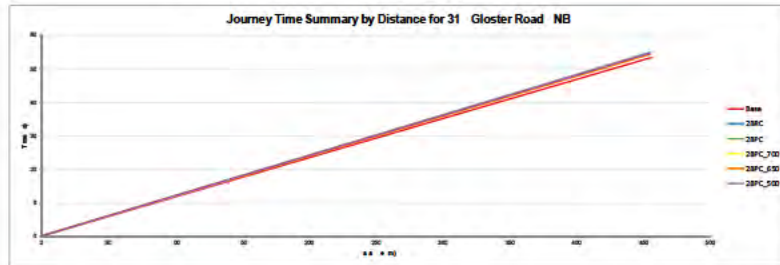
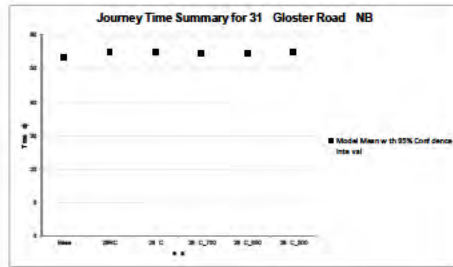
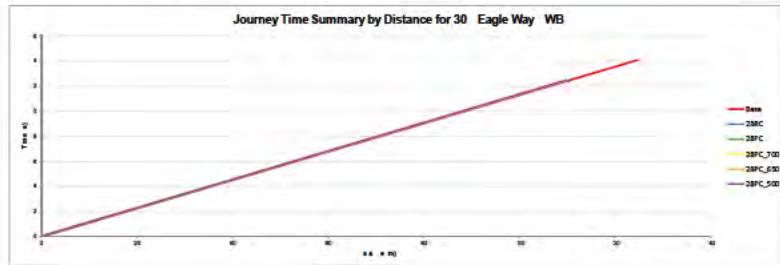
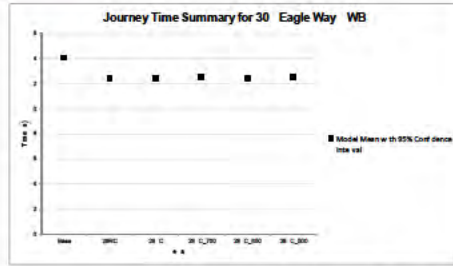


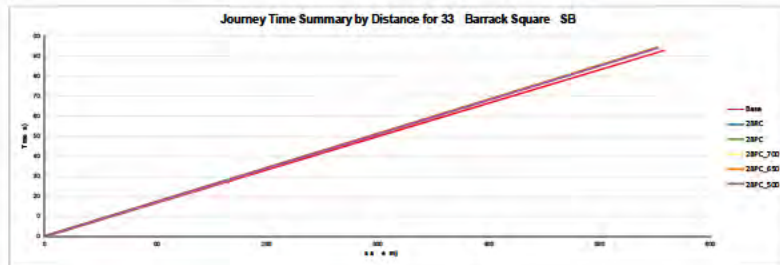
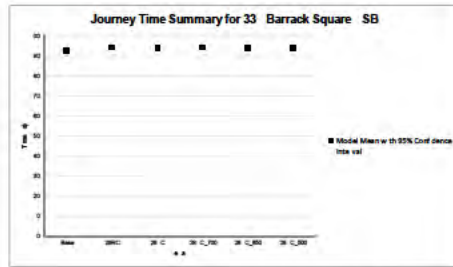
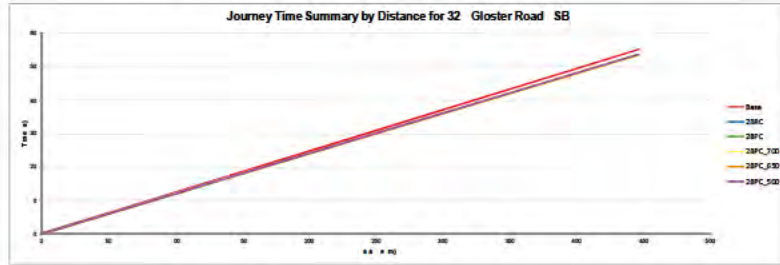
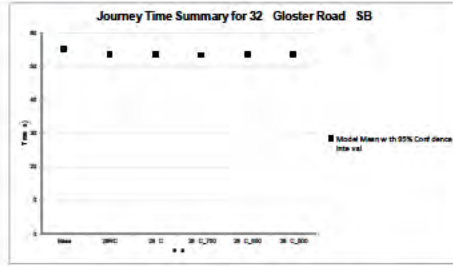


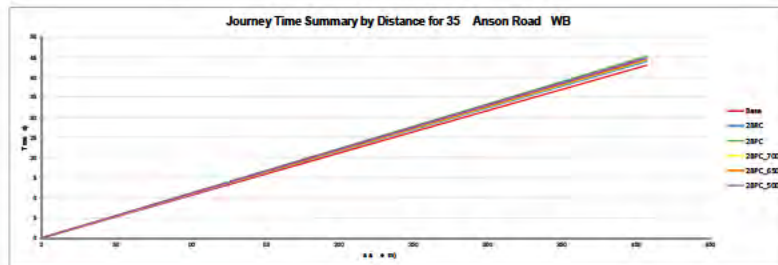
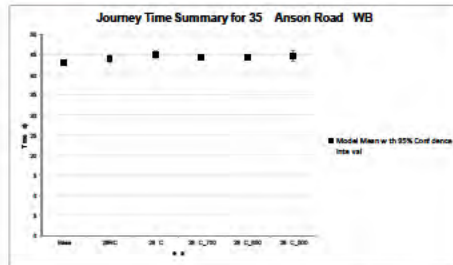
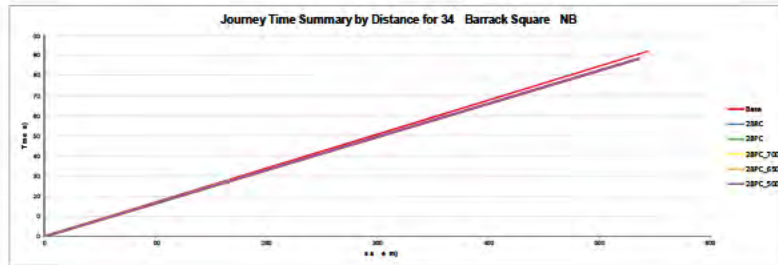
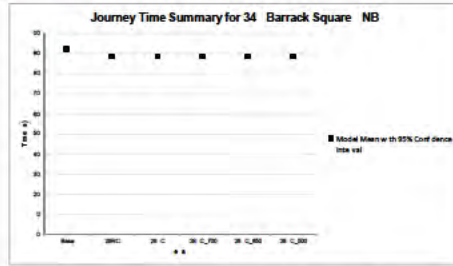


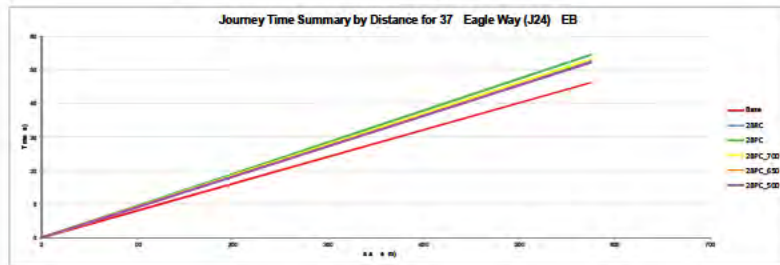
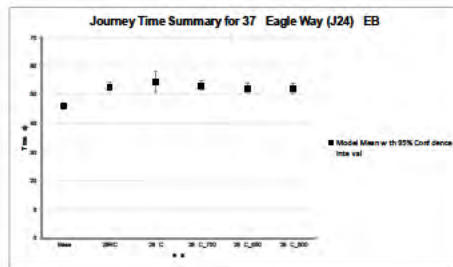
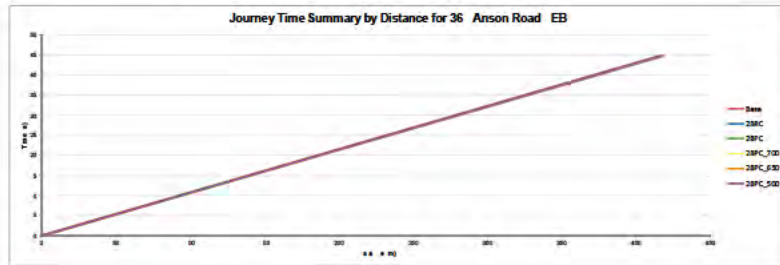
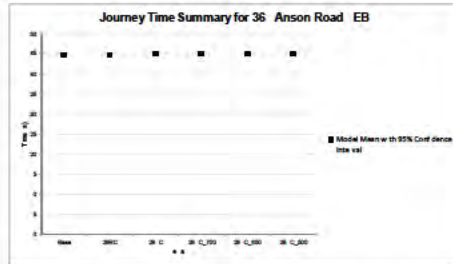


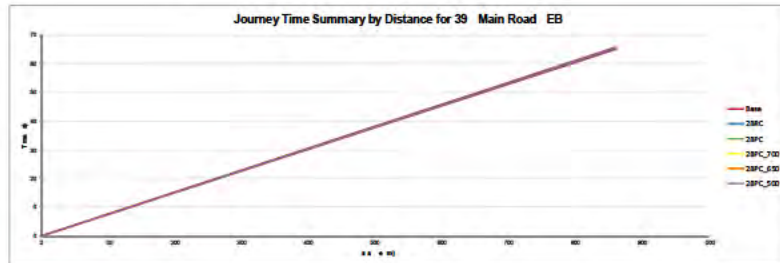
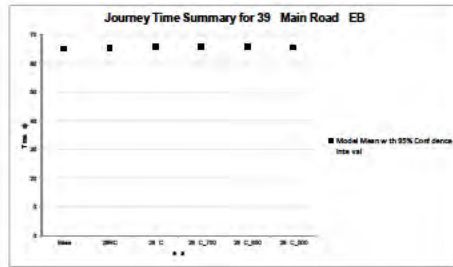
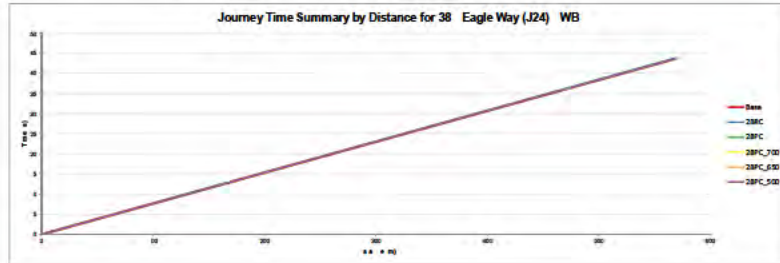
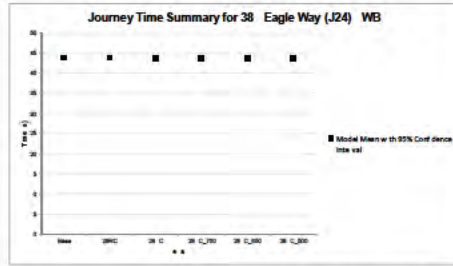


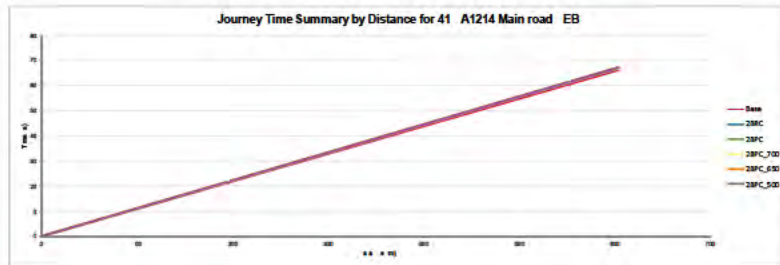
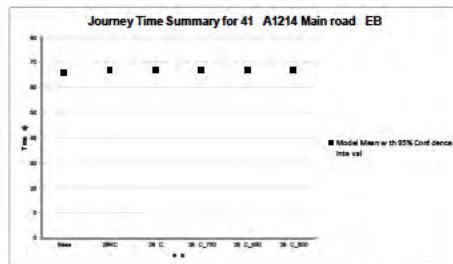
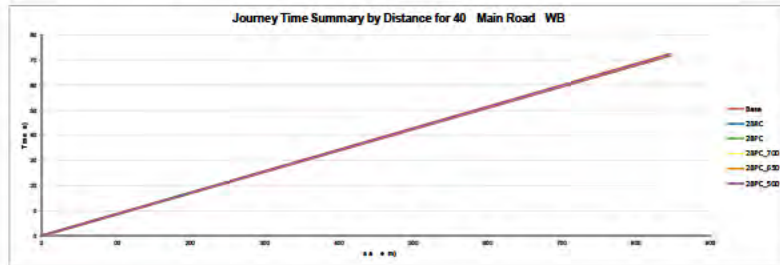
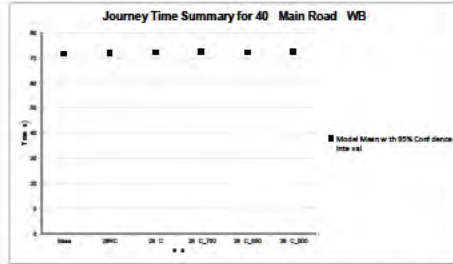


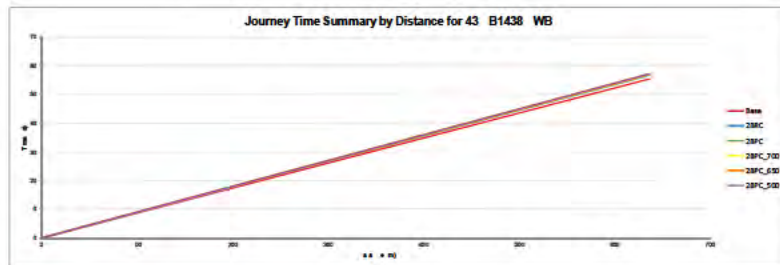
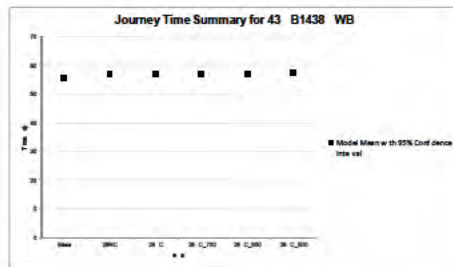
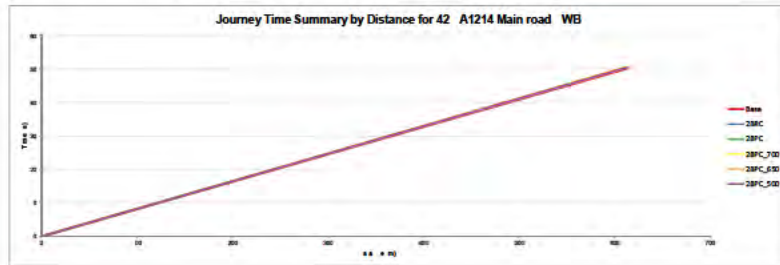
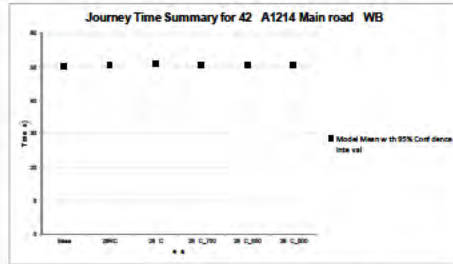


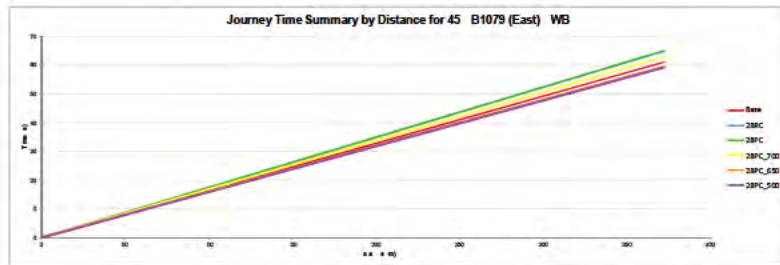
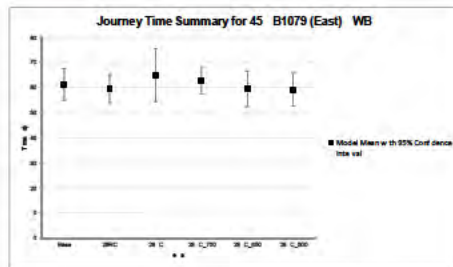
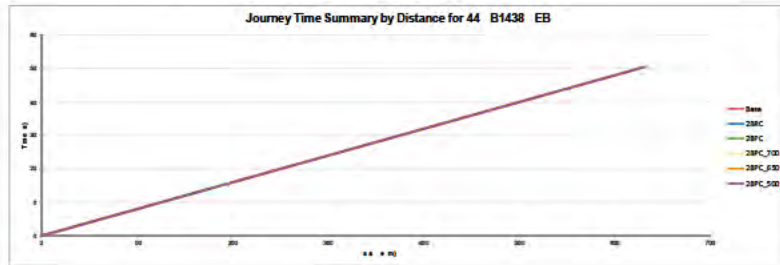
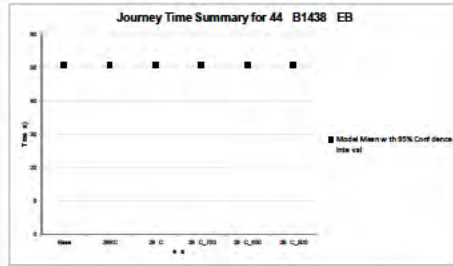


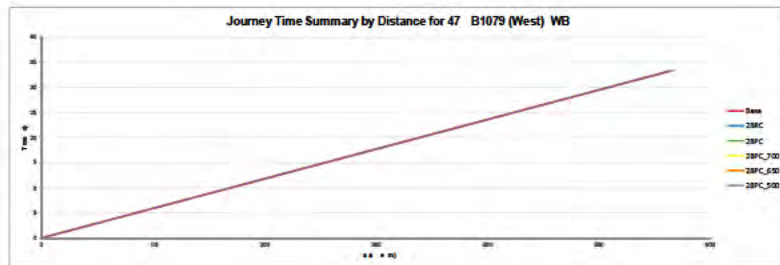
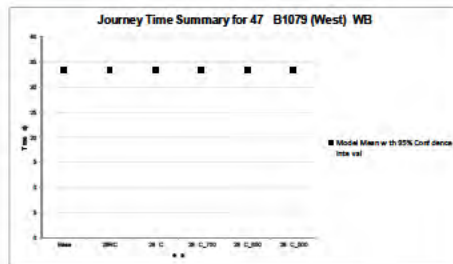
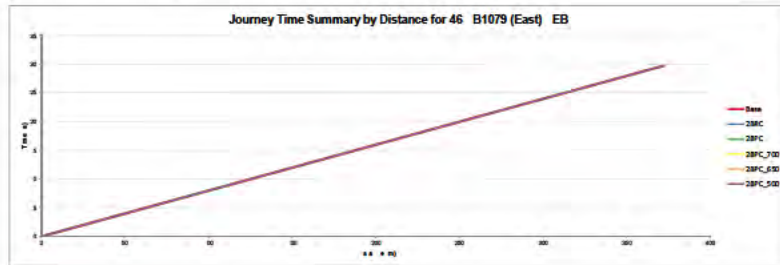
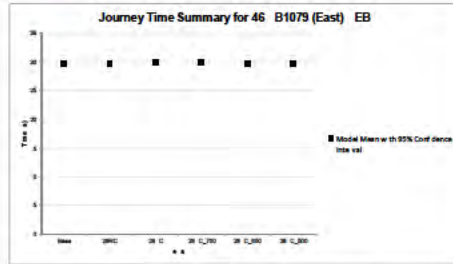


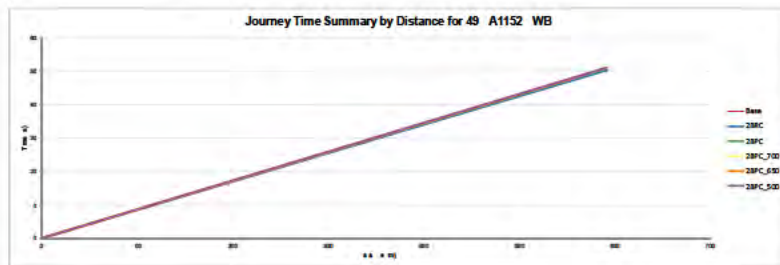
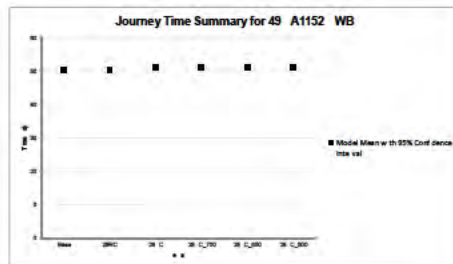
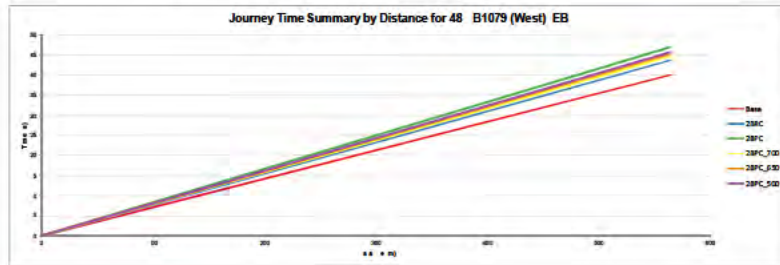
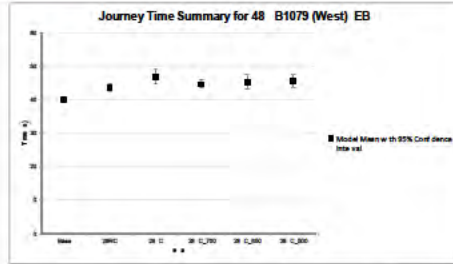


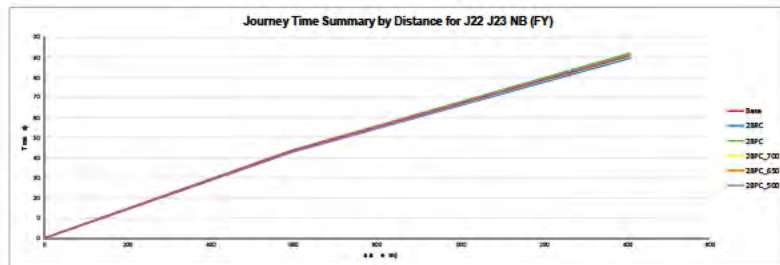
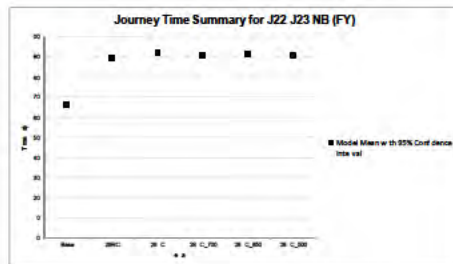
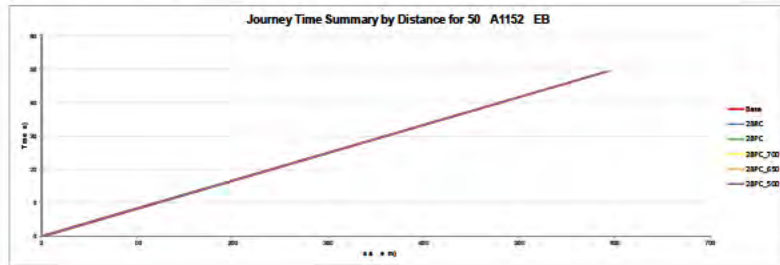
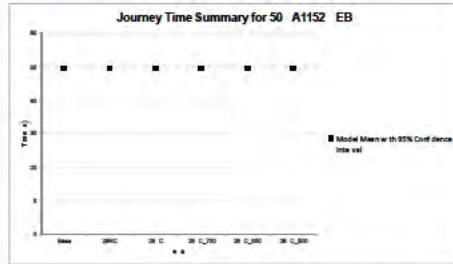


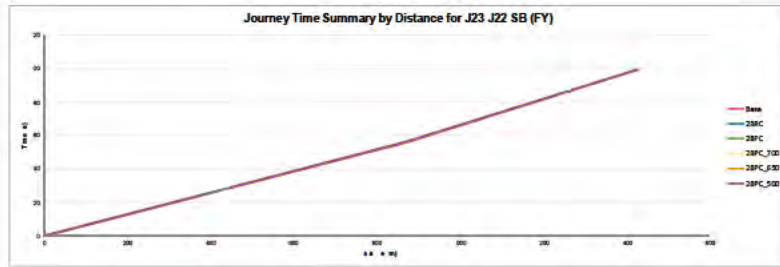
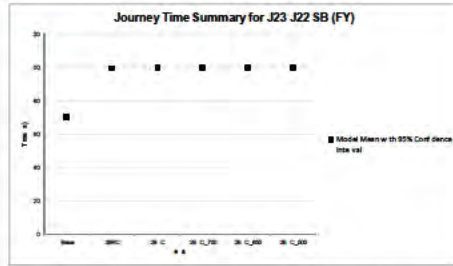








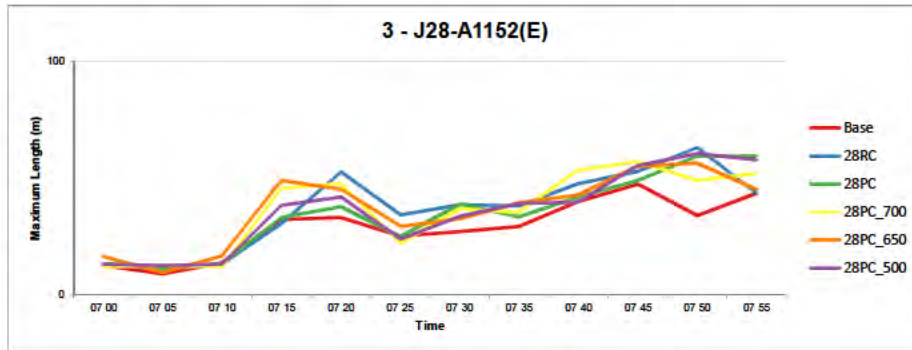
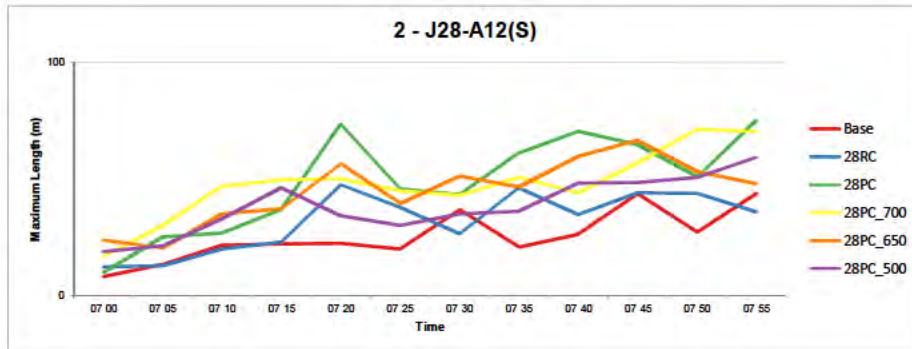
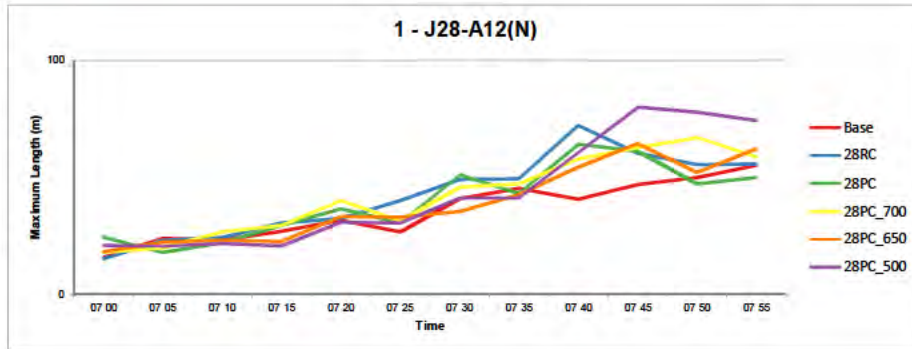


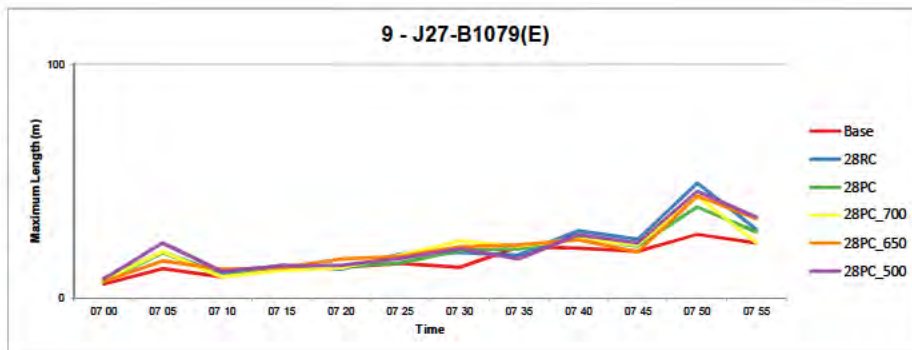
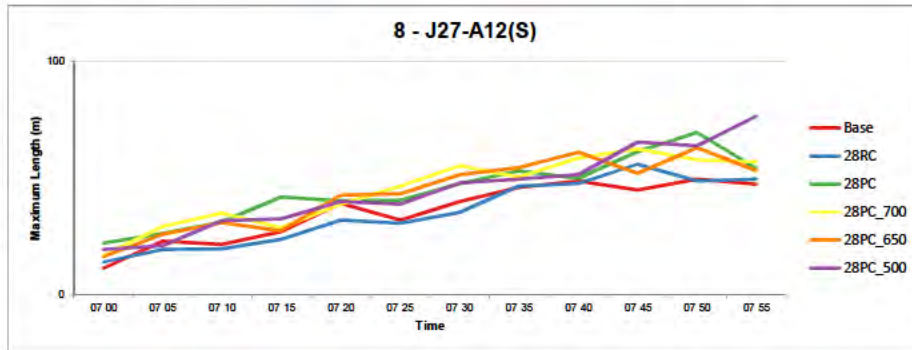
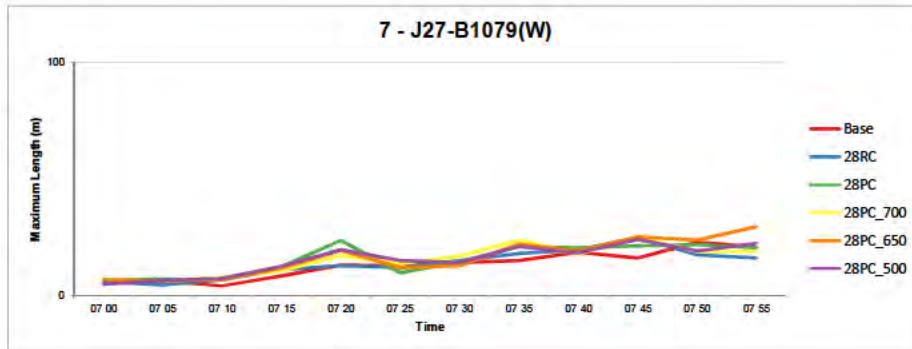
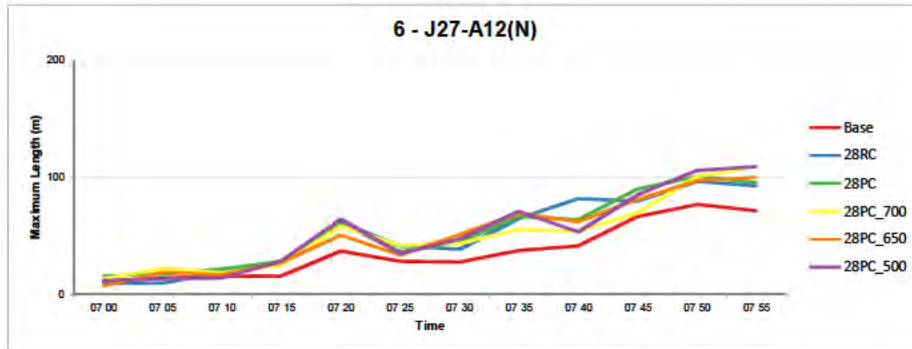


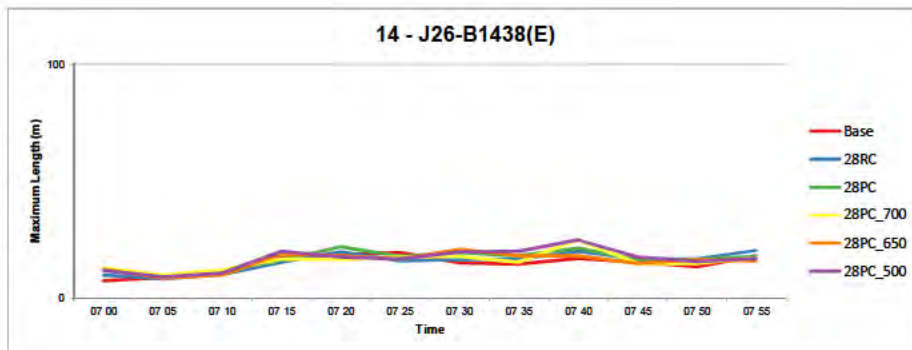
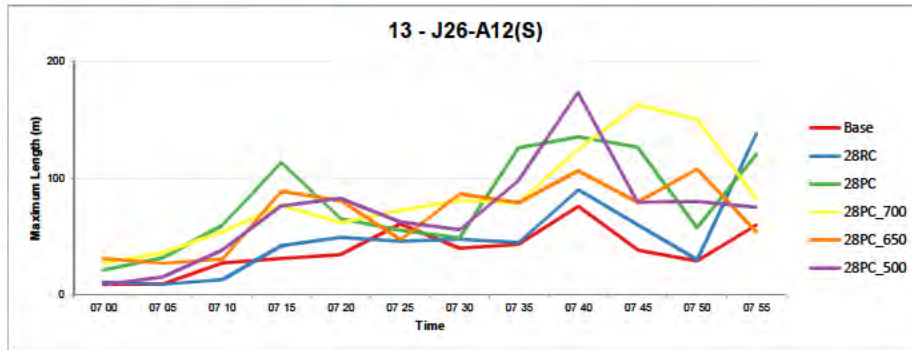
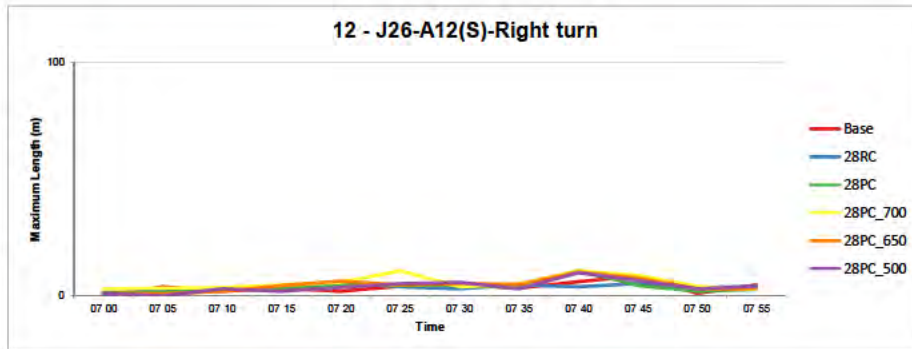
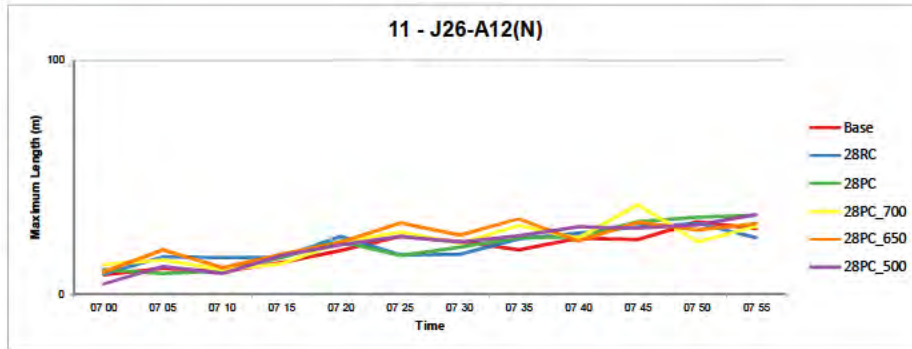


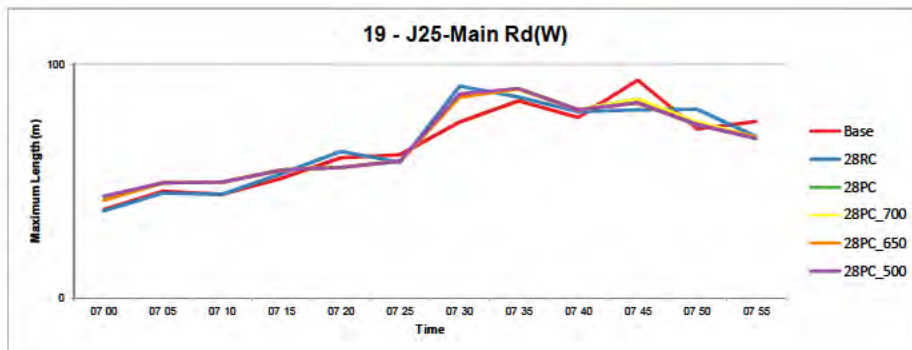
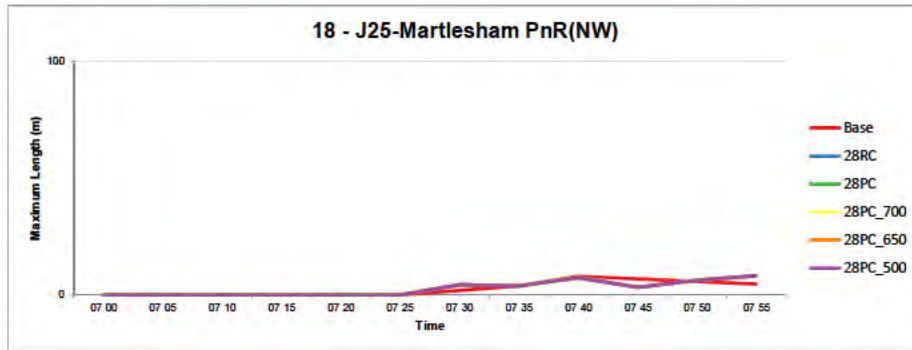
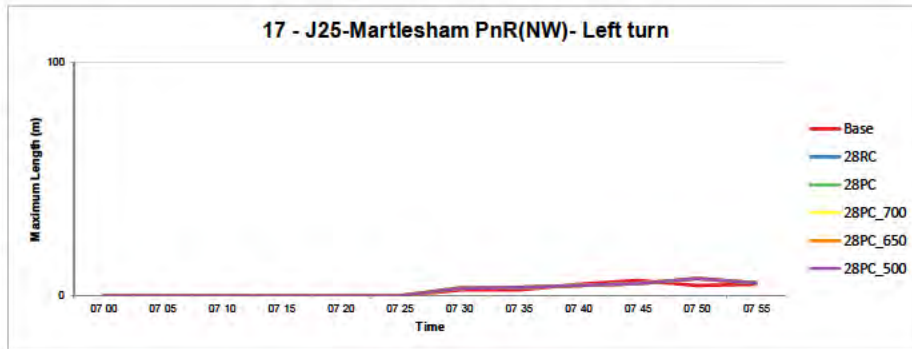
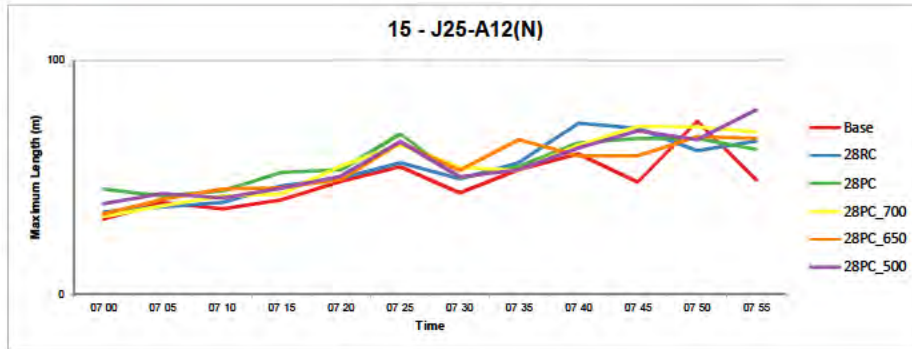
Journey Time Table
06:00-07:00
Base + all 2028

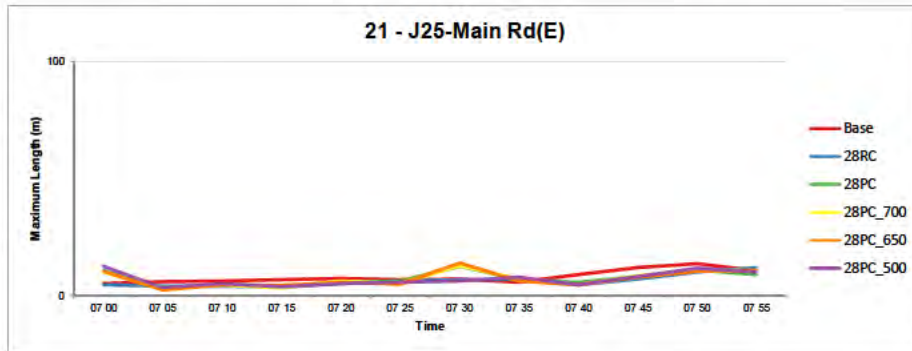
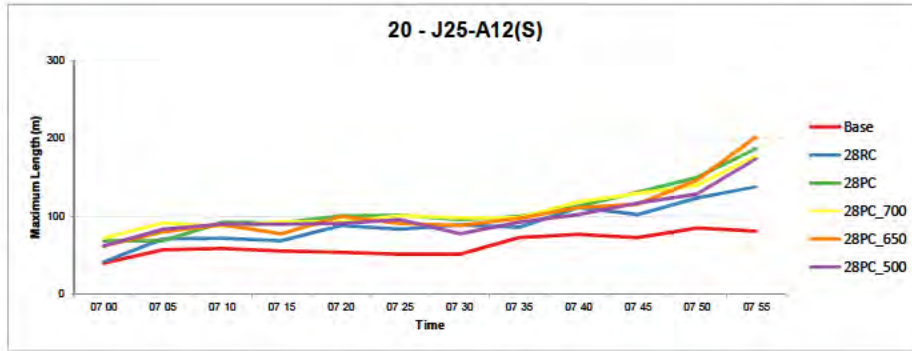
Route Names	Base	28RC	28PC	28PC_70 0	28PC_65 0	28PC_50 0
1 - J21 - J22 - NB	101	107	110	110	110	109
2 - J22 - J23 - NB	61	75	77	77	77	77
3 - J23 - J24 - NB	35	36	36	36	36	36
4 - J24 - J25 - NB	45	40	42	41	41	41
5 - J25 - J26 - NB	107	107	110	109	109	109
6 - J26 - J27 - NB	79	79	81	81	81	81
7 - J27 - J28 - NB	89	89	91	91	91	91
8 - J28 - A12- NB	130	130	134	134	133	133
51 - A12 NB	648	664	682	680	678	677
9 - A12 - J28 - SB	114	114	114	114	114	114
10 - J28 - J27 - SB	84	84	85	84	84	84
11 - J27 - J26 - SB	85	85	85	85	85	85
12 - J26 - J25 - SB	109	109	110	110	110	110
13 - J25 - J24 - SB	30	30	30	30	30	30
14 - J24 - J23 - SB	36	42	42	42	42	42
15 - J23 - J22 - SB	63	88	88	88	88	88
16 - J22 - J21 - SB	116	126	126	125	126	126
52 - A12 SB	636	679	680	679	679	679
17 - A14 WB upto Offslip	131	153	156	155	155	155
18 - A14 EB from Onslip	115	117	117	117	117	117
19 - A14 WB from Onslip	81	83	83	83	83	83
20 - A14 EB upto Offslip	85	85	95	93	93	93
21 - Felixstowe - SB	91	92	92	92	92	92
22 - Felixstowe - NB	91	104	104	105	104	104
23 - Bucklesham Road - NB	62	62	62	62	62	62
24 - Bucklesham Road - SB	61	62	62	62	62	62
26 - Foxhall road - WB	78	78	78	78	78	78
25 - Foxhall road - EB	81	82	83	83	83	83
27 - Newbourne Road -EB	42	42	42	42	42	42
28 - Newbourne Road -WB	45	44	44	44	44	44
29 - Eagle Way - EB	14	16	17	16	17	17
30 - Eagle Way - WB	14	12	12	12	12	12
31 - Gloster Road - NB	52	52	53	53	53	53
32 - Gloster Road - SB	50	50	50	50	50	50
33 - Barrack Square - SB	86	85	85	85	85	85
34 - Barrack Square - NB	86	85	85	85	85	85
35 - Anson Road - WB	37	37	37	37	37	37
36 - Anson Road - EB	42	42	42	42	42	42
37 - Eagle Way (J24) - EB	42	42	43	42	42	43
38 - Eagle Way (J24) - WB	43	43	43	43	43	43
39 - Main Road - EB	64	64	65	65	65	64
40 - Main Road - WB	68	68	68	68	68	68
41 - A1214 Main road - EB	60	60	60	60	60	60
42 - A1214 Main road - WB	49	49	49	49	49	49
43 - B1438 - WB	50	50	50	50	51	50
44 - B1438 - EB	49	49	49	49	49	49
45 - B1079 (East) - WB	30	30	30	30	30	31
46 - B1079 (East) - EB	29	29	29	29	29	29
47 - B1079 (West)- WB	33	33	33	33	33	33
48 - B1079 (West)- EB	34	35	35	35	35	35
49 - A1152 - WB	46	46	46	46	46	46
50 - A1152 - EB	48	48	48	48	48	48
72 - J22 - J22B - NB	0	39	40	39	40	40
73 - J22B - J23 - NB	0	37	37	37	37	37
J22-J23 NB (FY)	61	75	77	77	77	77
70 - J23 - J22B - SB	0	52	52	52	52	52
71 - J22B - J22 - SB	0	36	36	36	36	36
J23-J22 SB (FY)	63	88	88	88	88	88

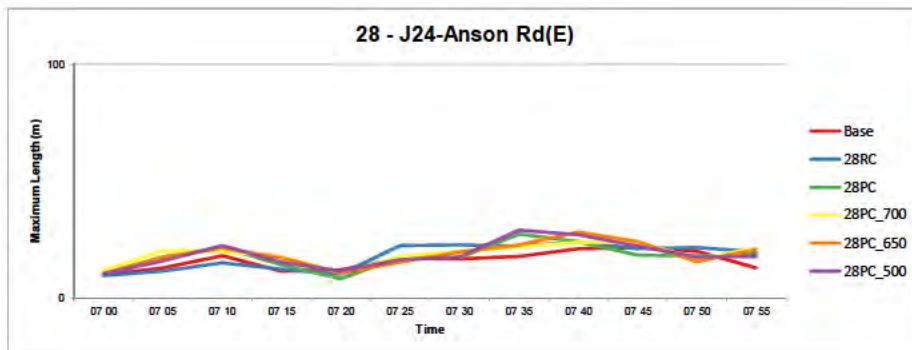
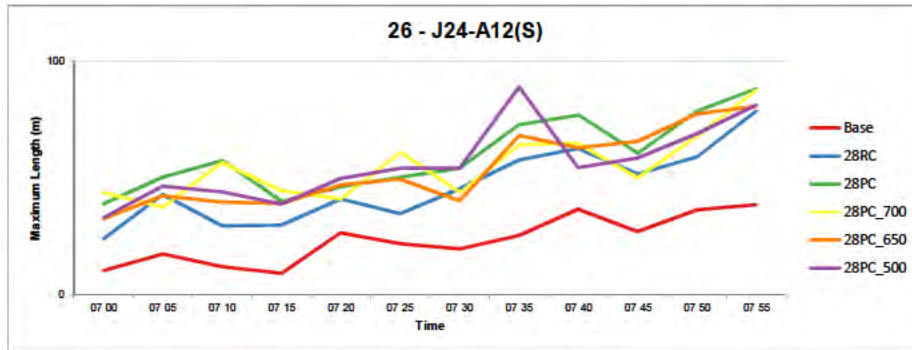
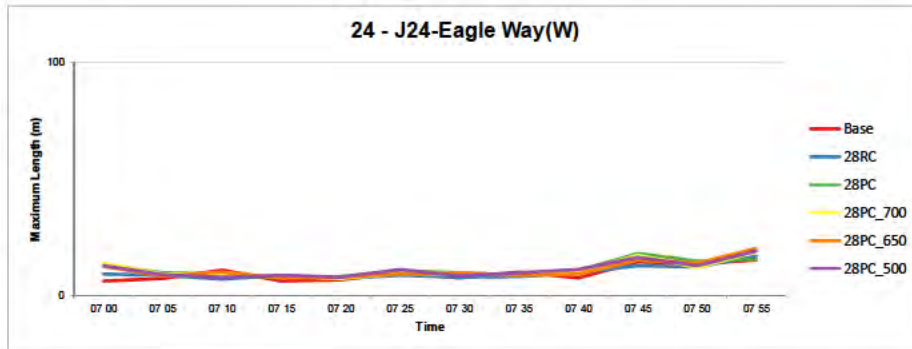
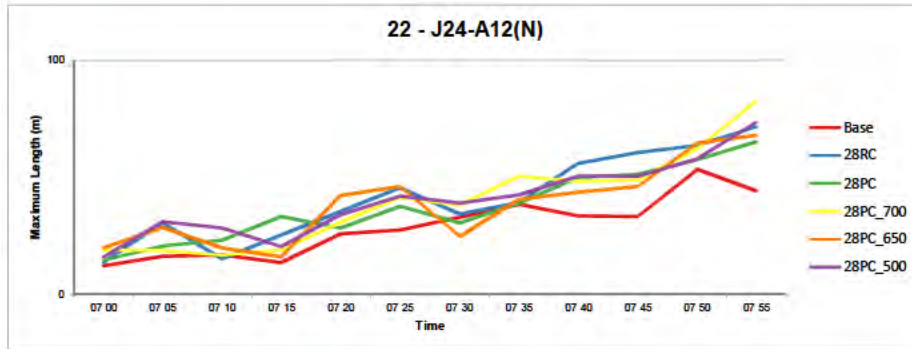


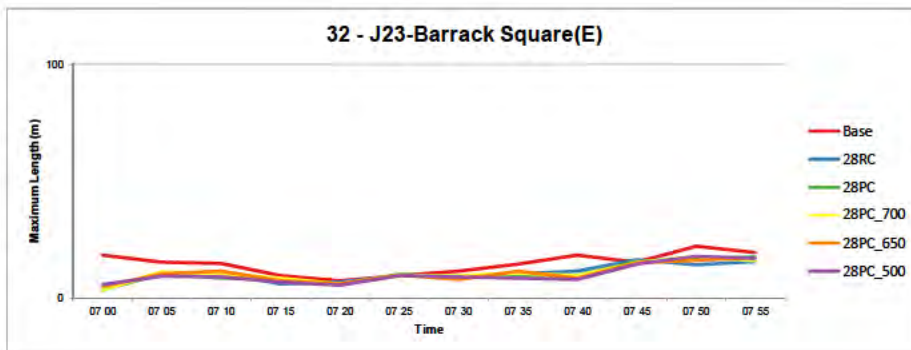
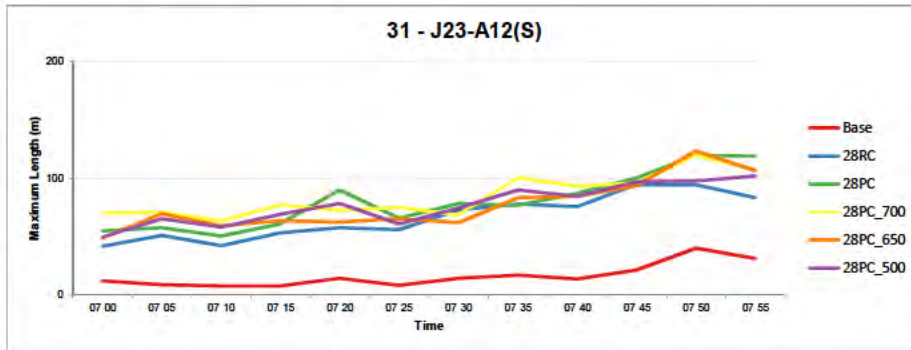
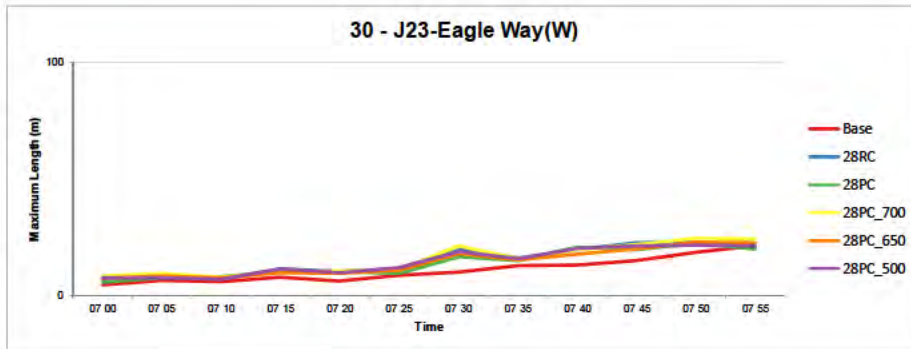
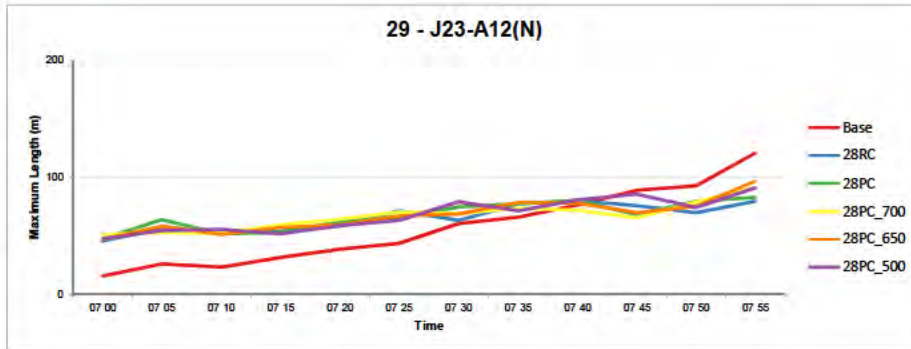


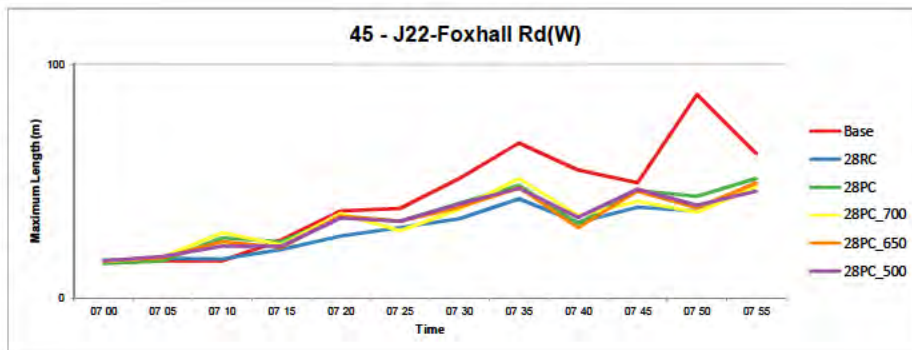
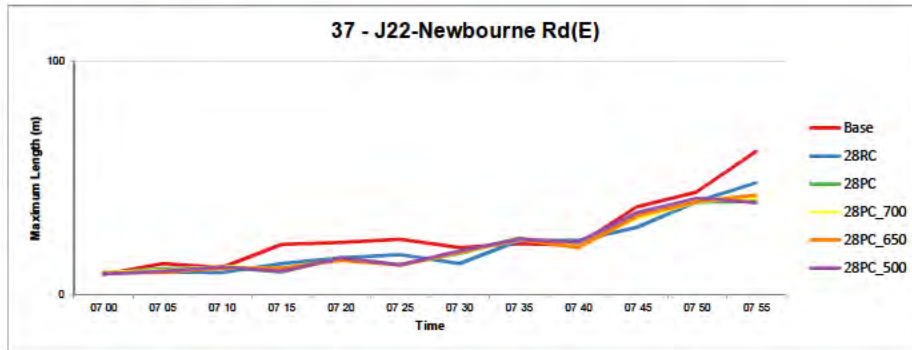
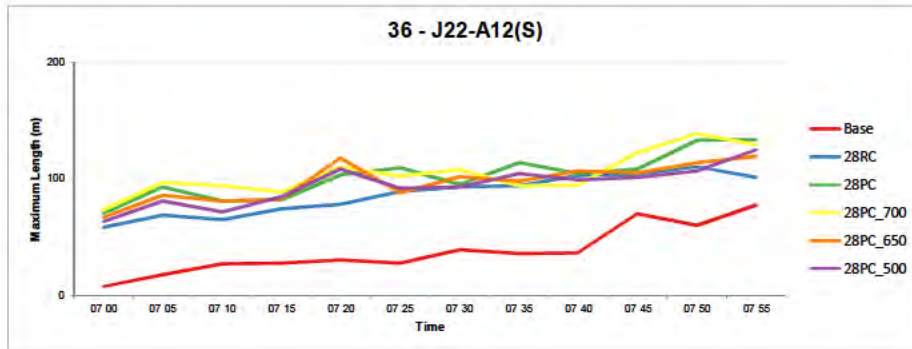
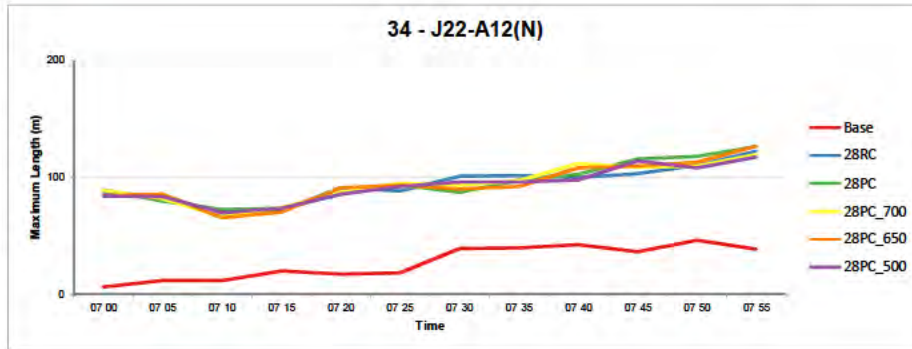


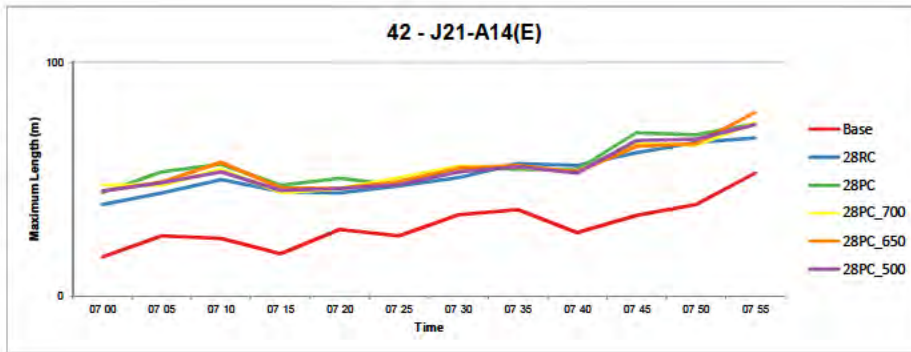
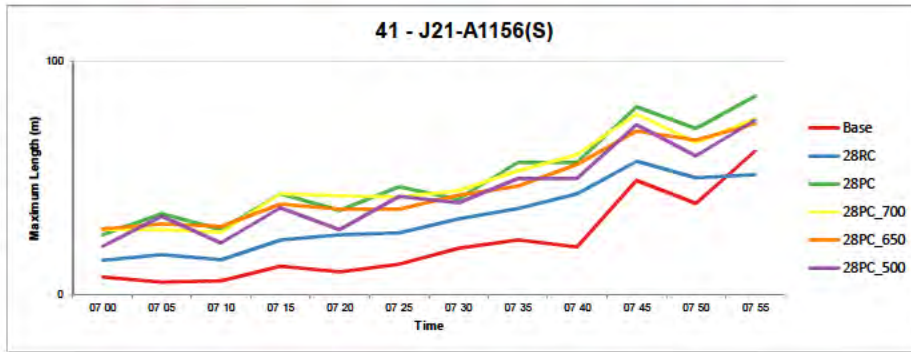
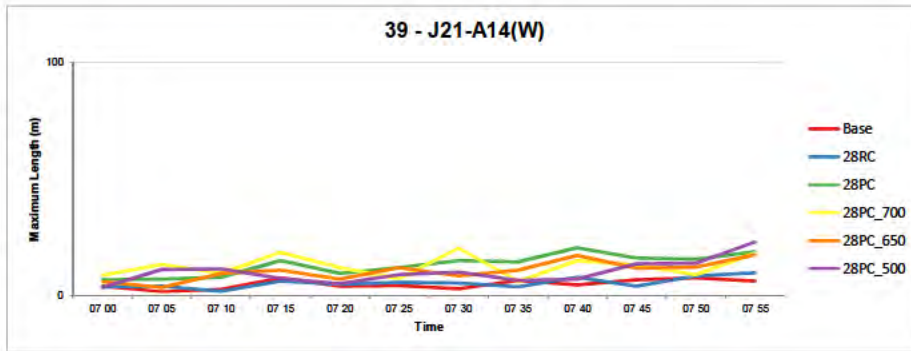
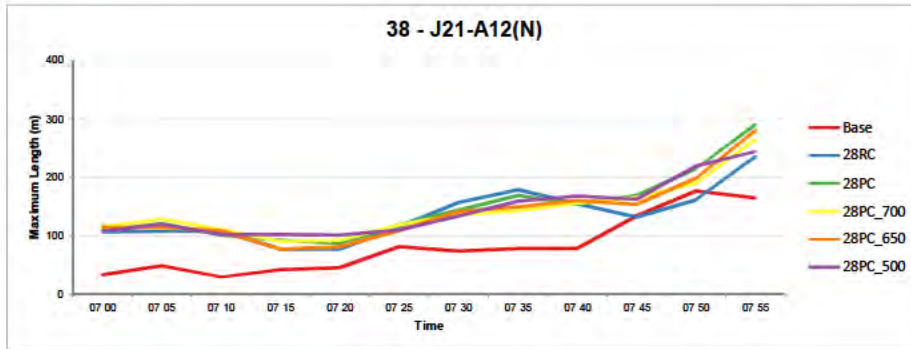






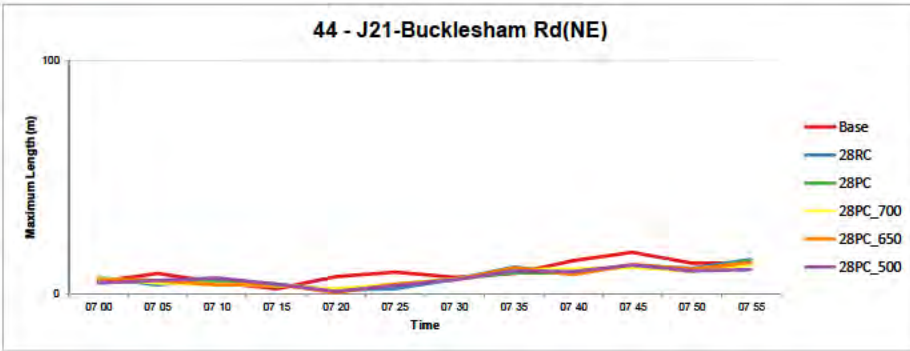








44 - J21-Bucklesham Rd(NE)





Queue Comparison
07 00-08 00
Maximum Length Summary
Maximum Length (m)

	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	55.3	72.3	64.2	67.0	64.4	80.0
2 - J28-A12(S)	43.8	47.5	75.1	71.2	66.4	59.3
3 - J28-A1152(E)	47.5	63.2	59.5	57.1	56.4	60.5
6 - J27-A12(N)	76.8	96.5	101.2	109.0	100.2	109.0
7 - J27-B1079(W)	22.9	24.9	23.6	25.2	29.6	24.0
8 - J27-A12(S)	49.5	56.0	69.5	62.6	63.0	76.6
9 - J27-B1079(E)	27.3	49.1	39.1	43.6	43.8	45.7
11 - J26-A12(N)	31.1	30.4	33.9	38.4	32.4	34.1
12 - J26-A12(S)-Right turn	8.5	5.6	10.9	10.7	10.1	9.9
13 - J26-A12(S)	75.8	138.2	135.2	162.8	107.7	173.3
14 - J26-B1438(E)	19.6	20.4	21.9	25.0	21.0	24.9
15 - J25-A12(N)	74.0	73.2	68.6	71.8	67.5	79.0
17 - J25-Martlesham PnR(NW)- Left turn	6.4	7.4	7.4	7.4	7.4	7.4
18 - J25-Martlesham PnR(NW)	8.1	8.2	8.2	8.2	8.2	8.2
19 - J25-Main Rd(W)	93.3	90.6	89.7	89.5	89.5	89.7
20 - J25-A12(S)	85.0	137.6	187.0	178.0	201.6	173.7
21 - J25-Main Rd(E)	13.6	11.8	12.5	12.6	13.9	12.5
22 - J24-A12(N)	53.5	71.8	65.3	82.7	68.0	73.6
24 - J24-Eagle Way(W)	15.2	17.0	18.2	18.7	20.2	19.0
26 - J24-A12(S)	38.6	78.7	88.3	87.6	80.8	88.9
28 - J24-Anson Rd(E)	21.7	24.2	27.3	23.9	28.2	29.1
29 - J23-A12(N)	120.9	80.2	83.1	91.1	96.9	91.3
30 - J23-Eagle Way(W)	21.3	22.9	22.4	24.5	22.9	21.6
31 - J23-A12(S)	40.1	94.5	119.6	119.6	123.3	102.1
32 - J23-Barrack Square(E)	22.3	16.5	17.7	18.0	17.4	18.0
34 - J22-A12(N)	46.3	122.5	126.5	119.7	126.6	117.3
36 - J22-A12(S)	77.7	110.2	133.7	138.6	119.4	125.0
37 - J22-Newbourne Rd(E)	61.4	48.1	40.1	41.5	42.7	41.5
45 - J22-Foxhall Rd(W)	87.1	49.4	51.2	51.2	49.3	47.0
38 - J21-A12(N)	176.8	235.5	290.1	265.3	280.7	244.3
39 - J21-A14(W)	7.6	9.8	20.5	20.3	17.4	23.0
41 - J21-A1156(S)	61.6	57.2	85.2	77.3	73.3	74.8
42 - J21-A14(E)	52.8	67.7	73.6	74.3	78.7	73.5
44 - J21-Bucklesham Rd(NE)	17.9	14.8	14.6	12.4	13.5	12.3



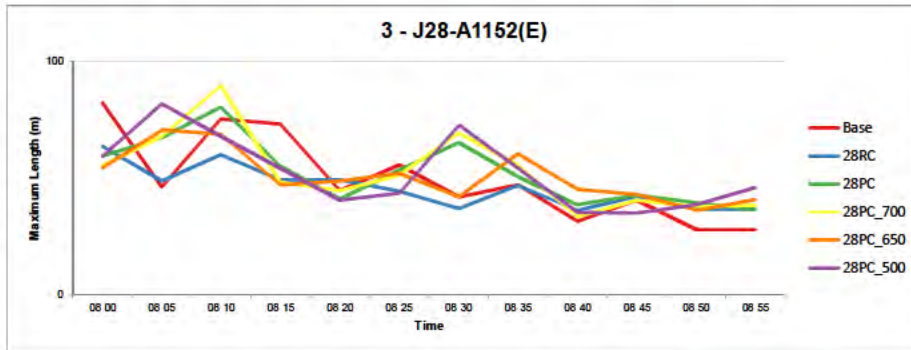
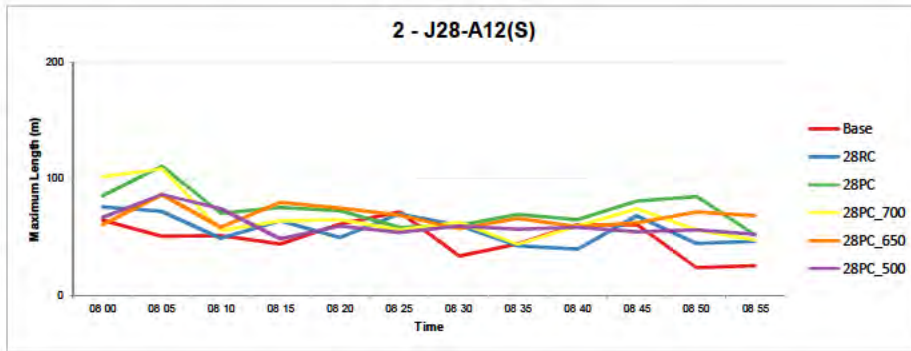
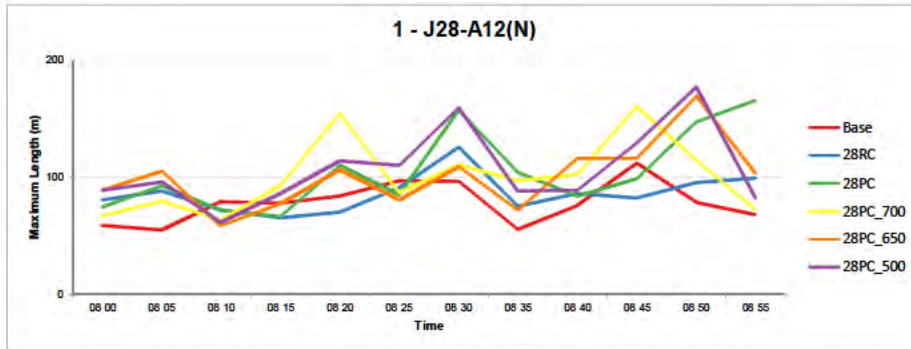
Queue Comparison
07 00-08 00
Average Length Summary
Maximum Length (m)

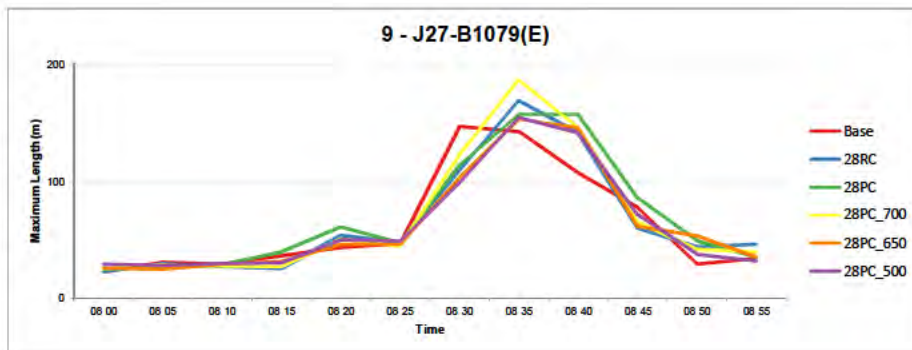
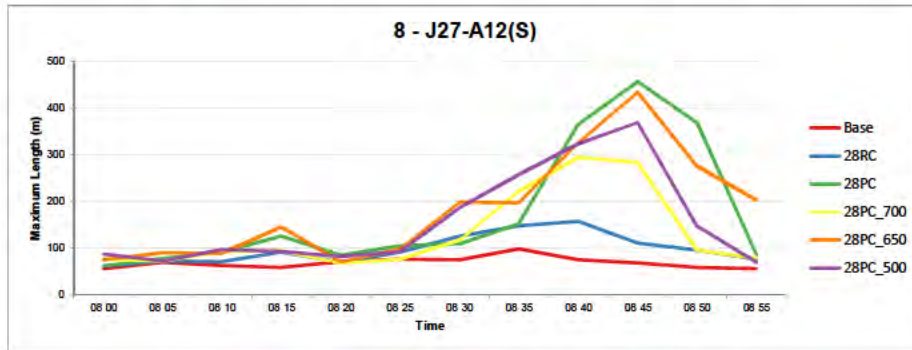
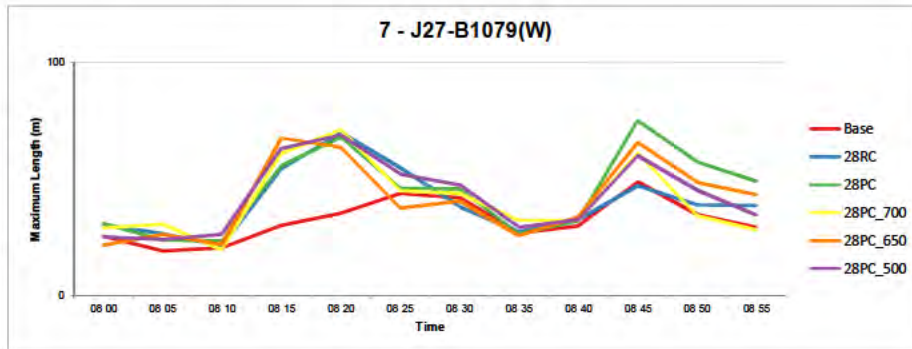
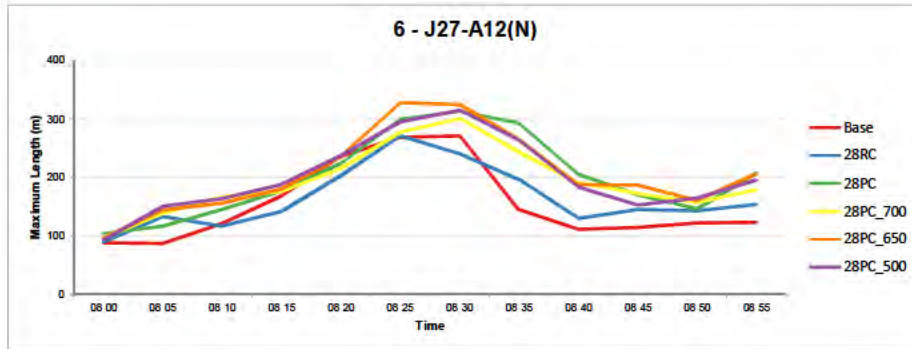
	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	35.7	42.3	39.8	42.1	38.7	43.4
2 - J28-A12(S)	25.5	32.0	48.6	47.8	44.8	38.4
3 - J28-A1152(E)	29.0	36.5	34.7	36.4	36.5	35.8
6 - J27-A12(N)	37.0	52.0	53.6	51.1	51.3	53.3
7 - J27-B1079(W)	13.2	13.7	15.5	15.3	16.3	15.4
8 - J27-A12(S)	36.0	35.3	44.8	44.8	43.5	44.9
9 - J27-B1079(E)	16.5	21.2	19.5	20.1	20.8	21.4
11 - J26-A12(N)	19.6	20.7	20.9	22.1	23.3	21.3
12 - J26-A12(S)-Right turn	3.6	3.6	3.8	5.5	4.4	3.9
13 - J26-A12(S)	38.3	48.5	80.2	84.0	68.3	70.5
14 - J26-B1438(E)	14.7	15.6	16.6	15.9	15.8	16.8
15 - J25-A12(N)	48.3	53.5	55.8	54.9	54.3	55.4
17 - J25-Martlesham PnR(NW)- Left turn	2.1	2.4	2.4	2.4	2.4	2.4
18 - J25-Martlesham PnR(NW)	2.6	2.8	2.8	2.8	2.8	2.8
19 - J25-Main Rd(W)	64.9	65.6	66.2	66.3	66.1	66.3
20 - J25-A12(S)	62.8	89.5	108.0	108.2	104.8	100.0
21 - J25-Main Rd(E)	8.0	6.2	7.2	7.1	7.2	7.0
22 - J24-A12(N)	29.1	41.0	37.6	39.7	38.4	40.5
24 - J24-Eagle Way(W)	9.7	9.8	11.4	11.2	11.1	11.3
26 - J24-A12(S)	23.6	46.5	59.6	55.3	53.9	56.1
28 - J24-Anson Rd(E)	16.0	17.8	17.8	18.9	18.8	18.7
29 - J23-A12(N)	57.1	65.3	67.4	66.8	67.4	67.8
30 - J23-Eagle Way(W)	10.9	14.8	13.9	15.4	14.2	14.6
31 - J23-A12(S)	16.5	66.6	80.1	84.6	76.8	77.3
32 - J23-Barrack Square(E)	14.7	10.5	10.5	10.7	10.6	10.1
34 - J22-A12(N)	27.4	94.1	95.3	94.6	94.3	93.3
36 - J22-A12(S)	38.3	86.7	102.3	104.4	97.2	94.2
37 - J22-Newbourne Rd(E)	25.8	21.1	20.6	20.8	20.7	21.0
45 - J22-Foxhall Rd(W)	43.2	30.2	34.2	33.3	33.1	33.3
38 - J21-A12(N)	82.3	134.4	147.6	143.0	140.8	144.5
39 - J21-A14(W)	5.0	5.5	13.3	12.6	10.6	10.2
41 - J21-A1156(S)	22.4	33.0	50.5	48.9	46.3	44.2
42 - J21-A14(E)	30.4	52.3	56.3	54.9	55.4	54.5
44 - J21-Bucklesham Rd(NE)	9.4	7.5	7.3	7.2	7.3	7.0

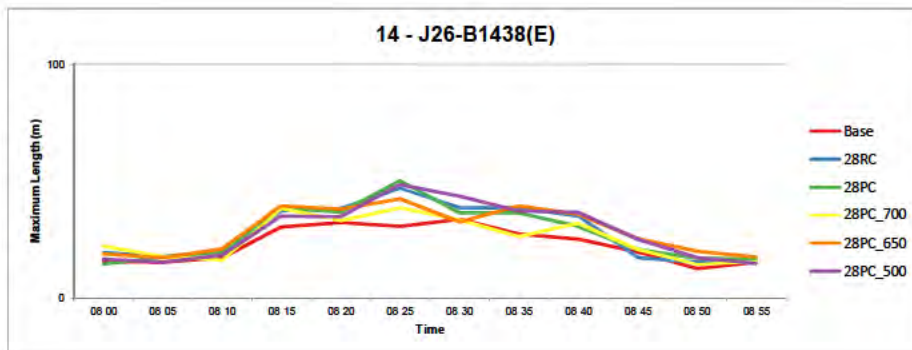
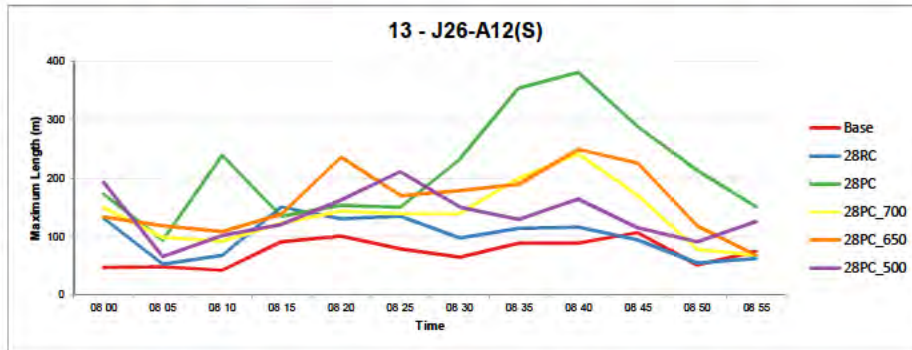
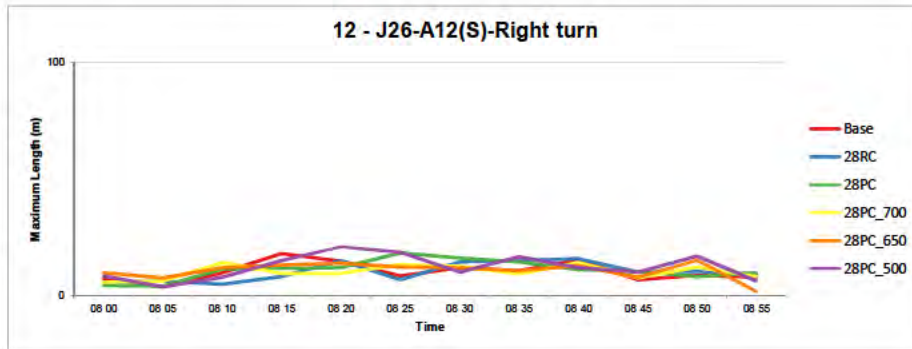
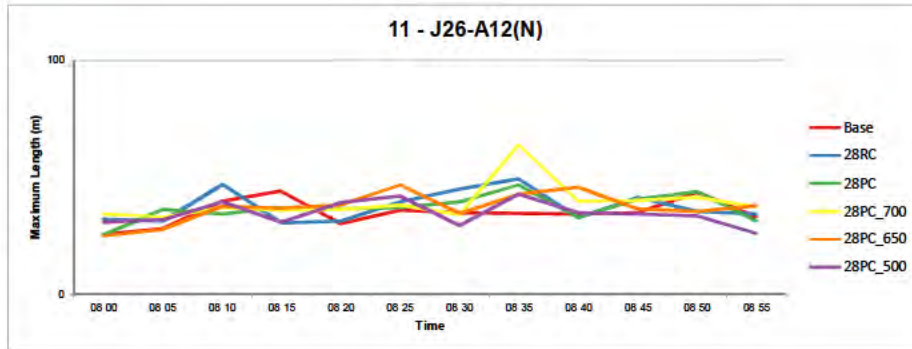


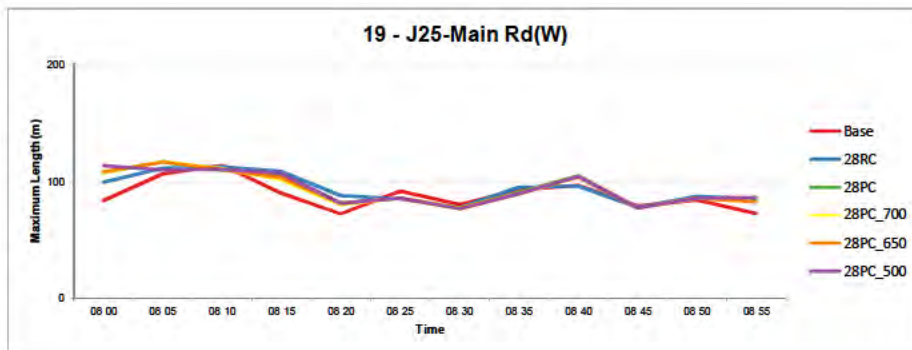
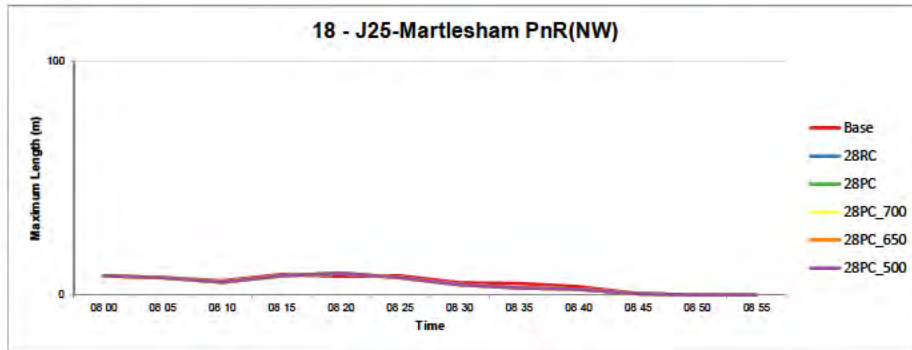
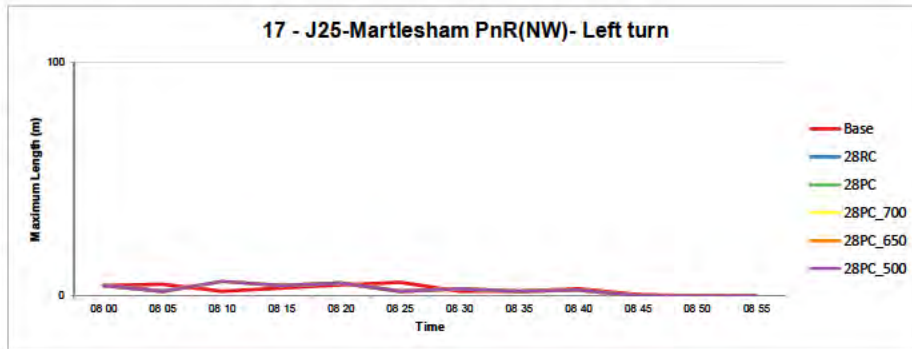
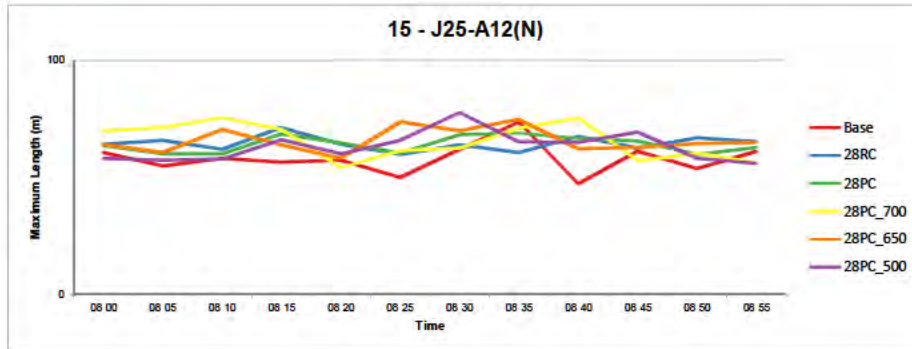
Journey Time Table
07:00-08:00
Base + all 2028

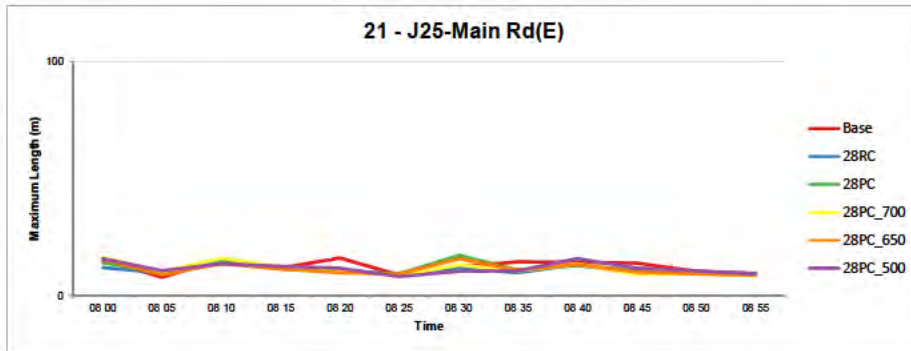
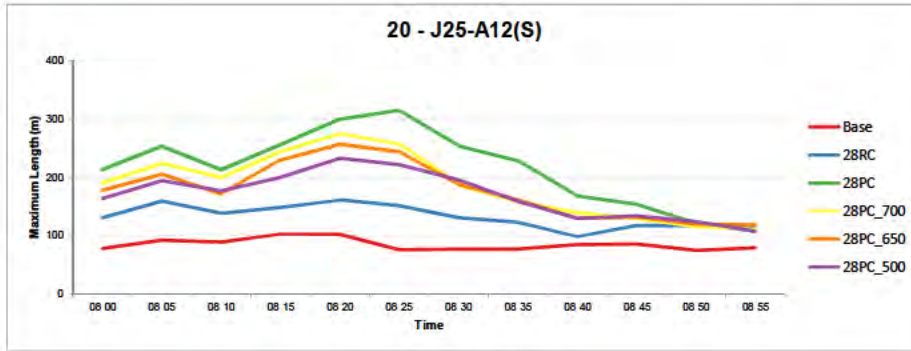
Route Names	Base	28RC	28PC	28PC_70 0	28PC_65 0	28PC_50 0
1 - J21 - J22 - NB	106	114	119	119	118	116
2 - J22 - J23 - NB	64	85	87	88	87	86
3 - J23 - J24 - NB	37	40	42	41	41	41
4 - J24 - J25 - NB	48	52	56	55	55	54
5 - J25 - J26 - NB	119	121	128	127	125	125
6 - J26 - J27 - NB	88	89	92	92	91	91
7 - J27 - J28 - NB	94	95	97	97	97	96
8 - J28 - A12- NB	136	137	140	139	139	138
51 - A12 NB	691	728	753	752	746	741
9 - A12 - J28 - SB	124	125	125	126	125	125
10 - J28 - J27 - SB	90	92	92	92	92	92
11 - J27 - J26 - SB	91	92	92	92	92	92
12 - J26 - J25 - SB	111	112	112	112	112	112
13 - J25 - J24 - SB	32	33	33	33	33	33
14 - J24 - J23 - SB	45	44	45	44	45	45
15 - J23 - J22 - SB	66	98	98	98	98	98
16 - J22 - J21 - SB	126	137	138	138	137	138
52 - A12 SB	679	726	729	728	727	728
17 - A14 WB upto Offslip	138	163	167	165	166	165
18 - A14 EB from Onslip	117	119	119	119	119	119
19 - A14 WB from Onslip	85	88	88	88	88	88
20 - A14 EB upto Offslip	88	90	95	94	94	93
21 - Felixstowe - SB	97	97	98	98	98	98
22 - Felixstowe - NB	104	110	114	113	113	112
23 - Bucklesham Road - NB	62	62	62	62	62	62
24 - Bucklesham Road - SB	68	66	66	66	66	66
26 - Foxhall road - WB	83	84	84	84	84	84
25 - Foxhall road - EB	97	94	96	95	95	95
27 - Newbourne Road -EB	42	43	43	43	43	43
28 - Newbourne Road -WB	56	50	50	50	50	50
29 - Eagle Way - EB	16	24	23	24	24	24
30 - Eagle Way - WB	14	12	12	12	12	12
31 - Gloster Road - NB	54	55	55	55	55	55
32 - Gloster Road - SB	52	52	52	52	52	52
33 - Barrack Square - SB	90	91	91	91	91	91
34 - Barrack Square - NB	88	86	85	85	85	85
35 - Anson Road - WB	41	41	41	42	41	41
36 - Anson Road - EB	44	43	43	44	44	44
37 - Eagle Way (J24) - EB	45	47	48	48	48	48
38 - Eagle Way (J24) - WB	44	44	44	44	44	44
39 - Main Road - EB	65	65	65	65	65	65
40 - Main Road - WB	70	71	71	71	71	71
41 - A1214 Main road - EB	64	64	64	64	64	64
42 - A1214 Main road - WB	50	50	50	50	50	50
43 - B1438 - WB	53	54	54	54	54	54
44 - B1438 - EB	50	50	50	50	50	50
45 - B1079 (East) - WB	38	41	41	40	41	40
46 - B1079 (East) - EB	29	29	29	29	29	29
47 - B1079 (West)- WB	33	33	33	33	33	33
48 - B1079 (West)- EB	37	37	38	38	38	37
49 - A1152 - WB	49	49	49	49	49	49
50 - A1152 - EB	49	49	49	49	49	49
72 - J22 - J22B - NB	0	42	43	43	43	43
73 - J22B - J23 - NB	0	43	45	45	44	44
J22-J23 NB (FY)	64	85	87	88	87	86
70 - J23 - J22B - SB	0	59	59	59	59	59
71 - J22B - J22 - SB	0	39	39	39	39	39
J23-J22 SB (FY)	66	98	98	98	98	98

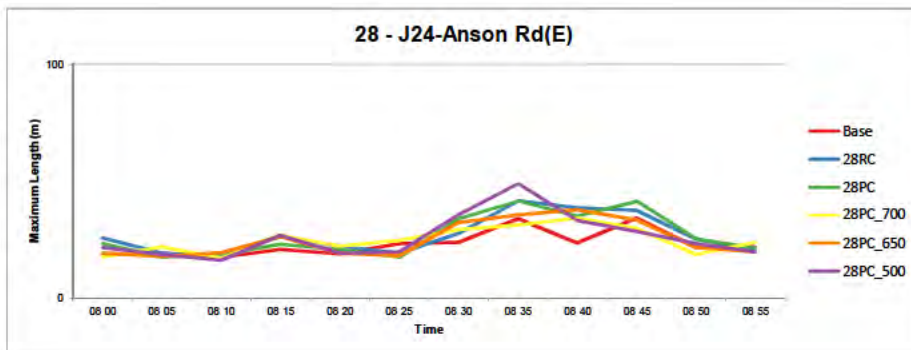
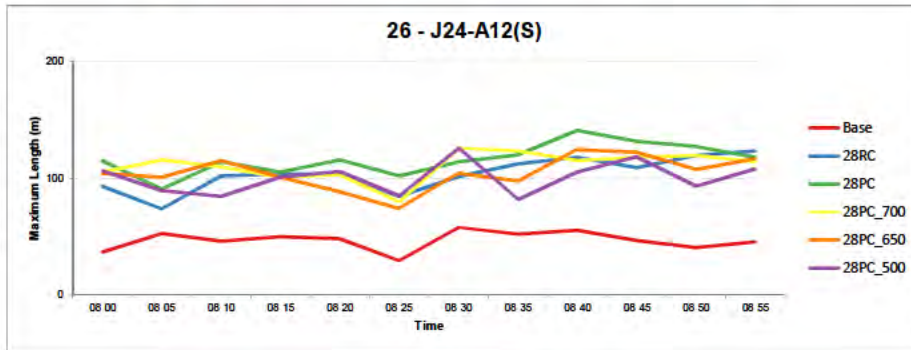
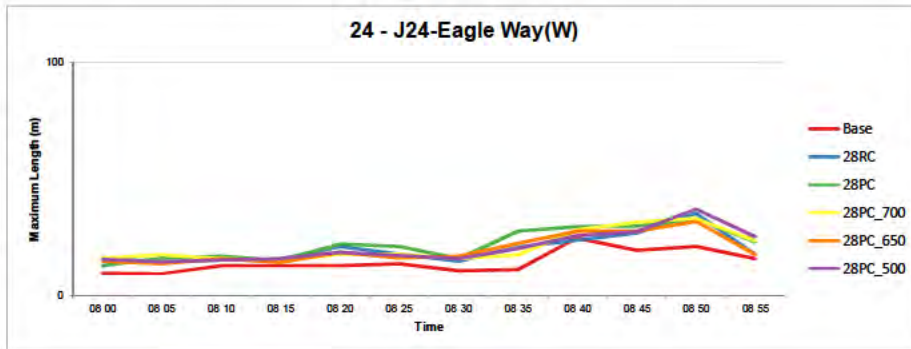
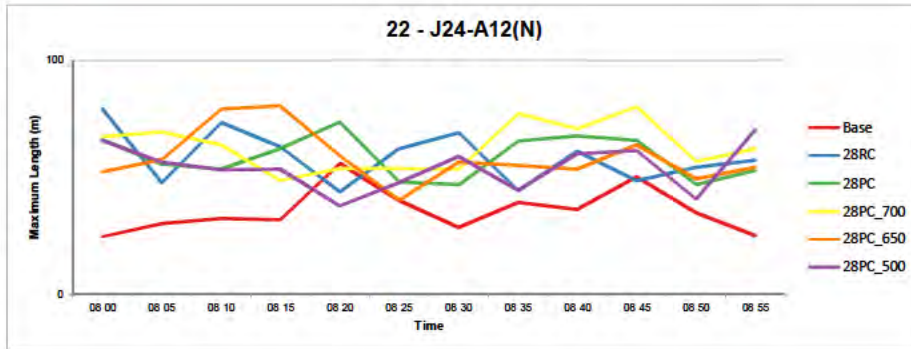


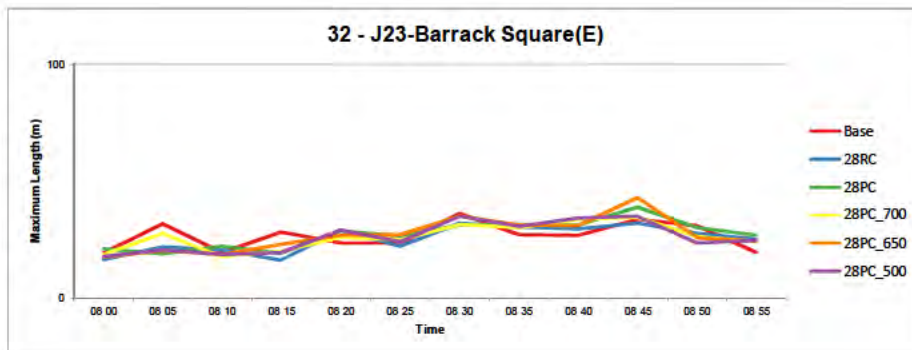
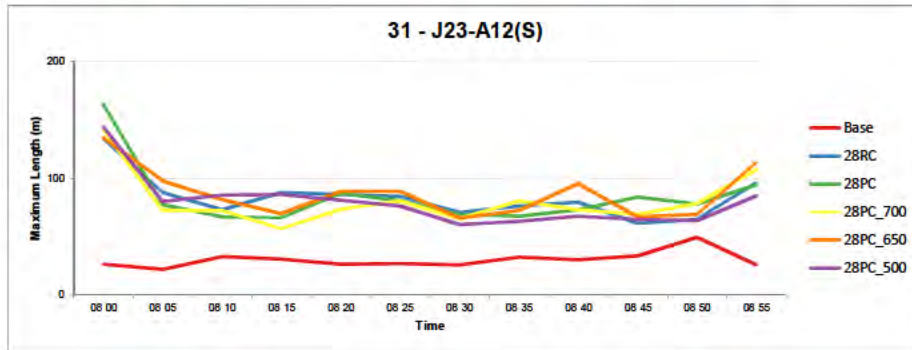
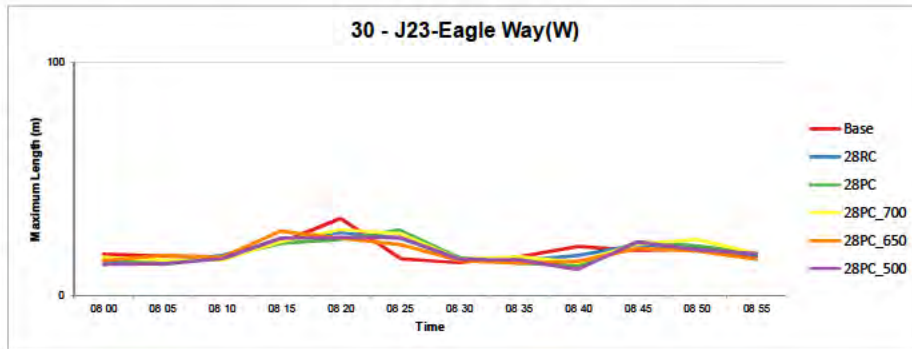
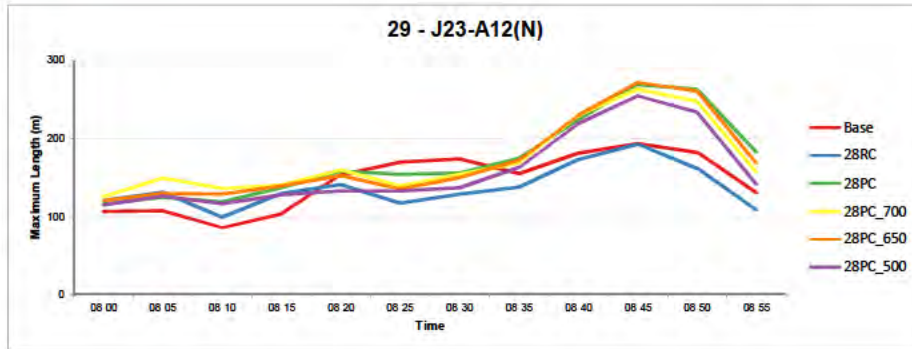


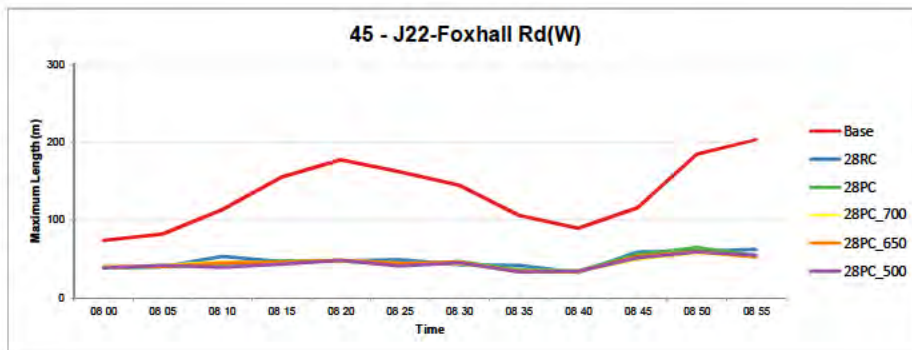
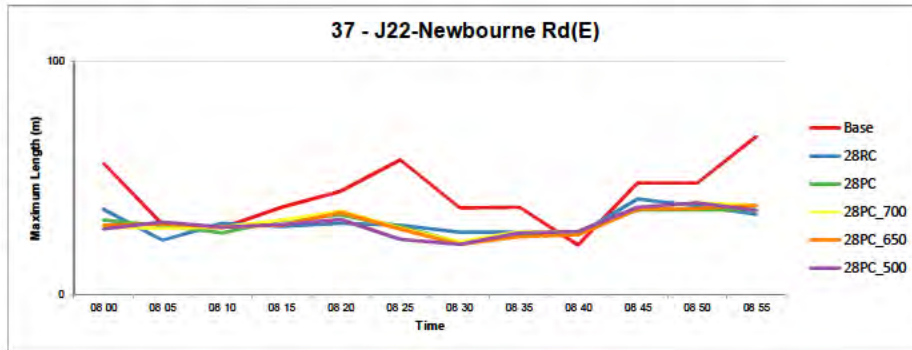
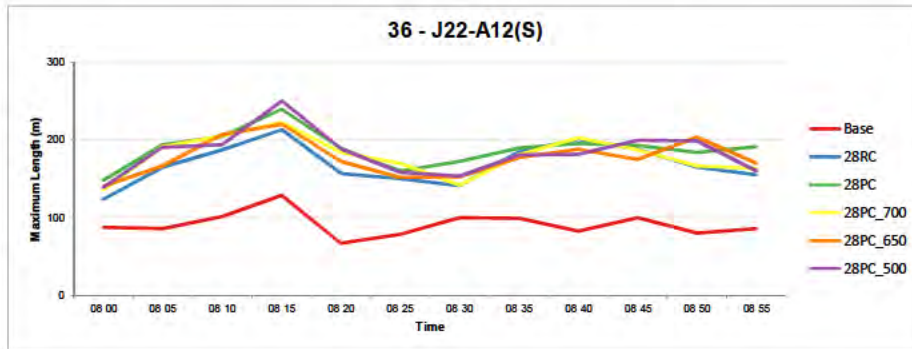
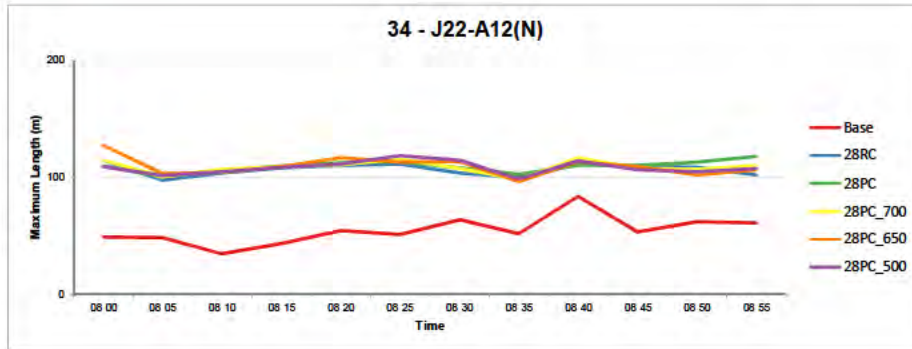


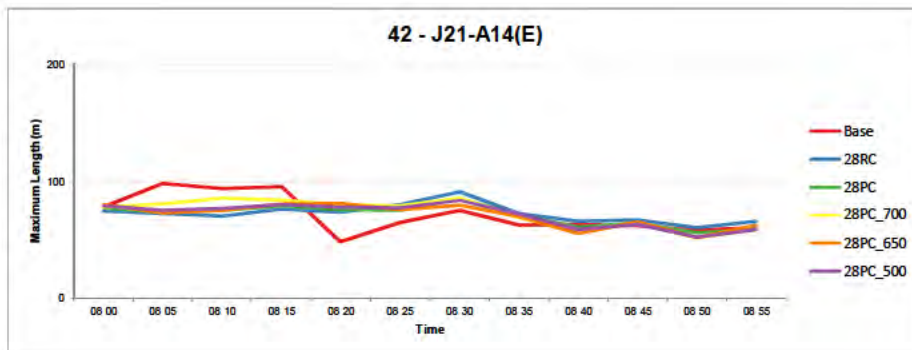
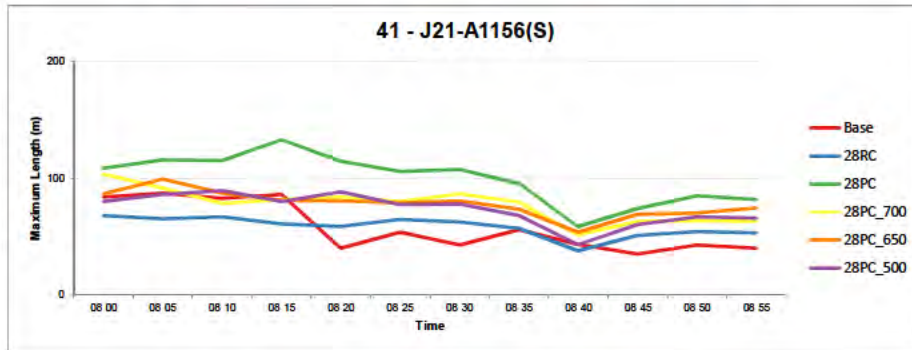
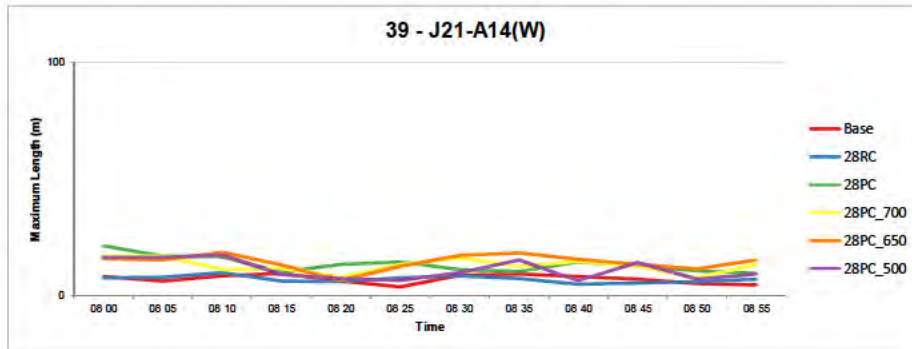
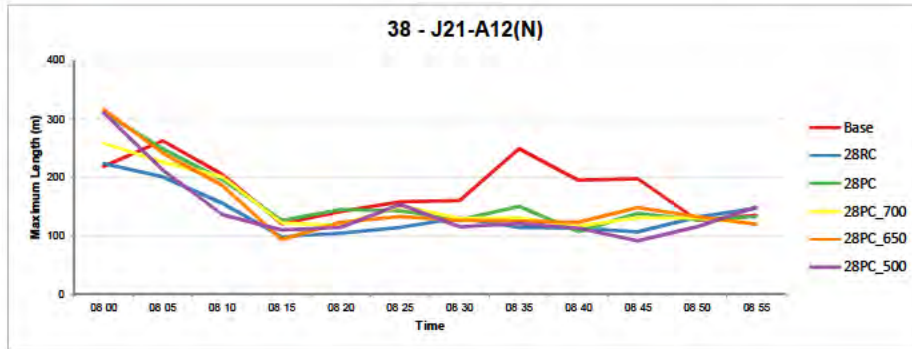






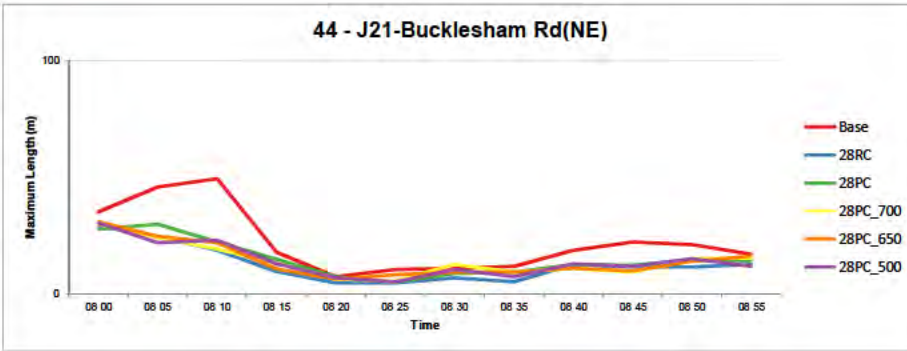








44 - J21-Bucklesham Rd(NE)





Queue Comparison
08 00-09 00
Maximum Length Summary
Maximum Length (m)

	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	112.2	125.9	166.0	160.5	169.5	177.5
2 - J28-A12(S)	71.7	75.9	110.9	108.6	86.4	86.6
3 - J28-A1152(E)	82.4	63.7	80.3	89.6	70.6	81.8
6 - J27-A12(N)	270.9	271.3	313.3	300.8	327.8	315.1
7 - J27-B1079(W)	48.7	69.8	74.8	71.0	67.4	68.8
8 - J27-A12(S)	99.1	157.7	457.0	294.5	434.0	369.2
9 - J27-B1079(E)	146.9	169.1	157.4	186.6	153.1	154.5
11 - J26-A12(N)	44.2	49.3	46.9	63.9	46.8	42.8
12 - J26-A12(S)-Right turn	18.1	15.8	18.3	14.2	15.1	20.9
13 - J26-A12(S)	107.1	150.7	380.9	241.6	249.2	210.9
14 - J26-B1438(E)	33.7	47.0	50.2	38.7	42.5	48.6
15 - J25-A12(N)	73.7	71.4	69.0	75.6	74.9	77.7
17 - J25-Martlesham PnR(NW)- Left turn	5.6	6.1	6.1	6.1	6.1	6.1
18 - J25-Martlesham PnR(NW)	8.8	9.4	9.4	9.4	9.4	9.4
19 - J25-Main Rd(W)	113.7	112.3	116.5	116.9	116.4	113.5
20 - J25-A12(S)	102.5	160.7	314.2	274.4	256.7	232.1
21 - J25-Main Rd(E)	16.0	13.8	17.2	16.3	15.7	15.8
22 - J24-A12(N)	56.0	79.5	73.6	80.2	80.6	70.4
24 - J24-Eagle Way(W)	24.7	35.3	32.9	33.0	31.8	37.0
26 - J24-A12(S)	57.9	123.0	140.9	125.7	124.6	125.8
28 - J24-Anson Rd(E)	34.2	41.6	41.5	34.3	37.8	49.0
29 - J23-A12(N)	193.5	192.9	269.1	263.4	271.8	254.7
30 - J23-Eagle Way(W)	33.1	26.9	28.0	28.3	27.7	24.9
31 - J23-A12(S)	49.4	133.7	163.4	141.9	134.6	143.9
32 - J23-Barrack Square(E)	36.2	32.0	38.9	34.5	43.0	35.0
34 - J22-A12(N)	83.7	114.3	117.9	117.1	127.5	118.5
36 - J22-A12(S)	128.6	212.9	239.3	222.9	220.1	250.2
37 - J22-Newbourne Rd(E)	67.8	41.1	36.5	39.6	38.3	39.5
45 - J22-Foxhall Rd(W)	203.4	62.4	65.1	58.3	59.7	58.8
38 - J21-A12(N)	263.0	223.8	311.0	258.5	316.7	311.1
39 - J21-A14(W)	9.5	9.9	21.2	17.0	18.5	17.4
41 - J21-A1156(S)	87.3	67.8	132.9	103.6	99.0	89.4
42 - J21-A14(E)	98.2	90.9	85.1	85.7	81.3	83.6
44 - J21-Bucklesham Rd(NE)	49.3	29.1	29.8	29.8	31.0	30.5



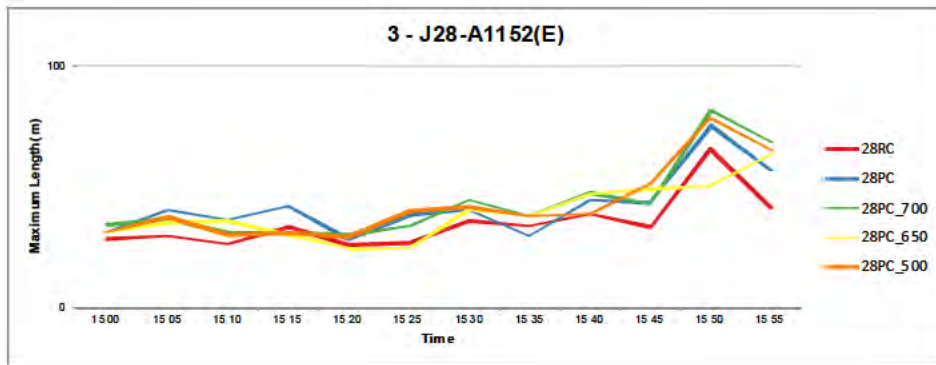
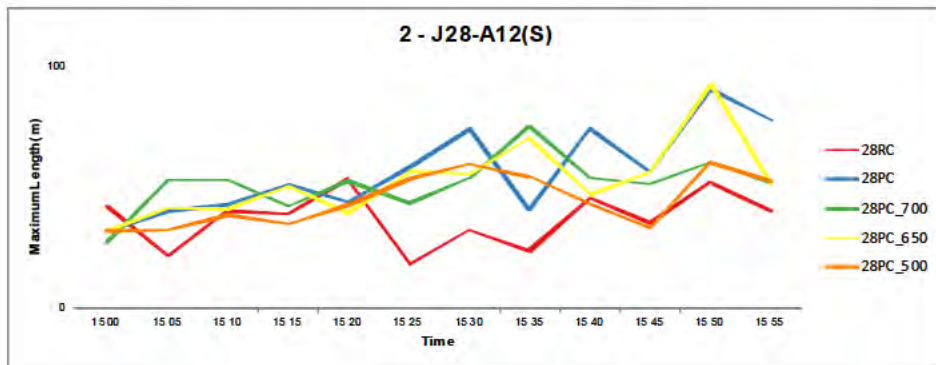
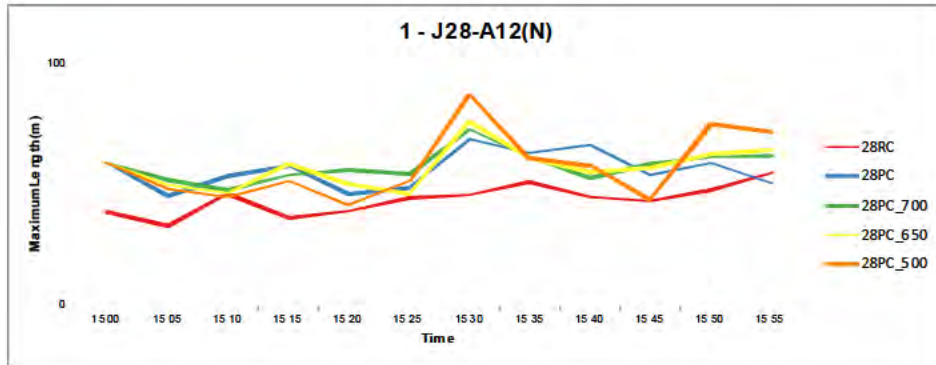
Queue Comparison
08 00-09 00
Average Length Summary
Maximum Length (m)

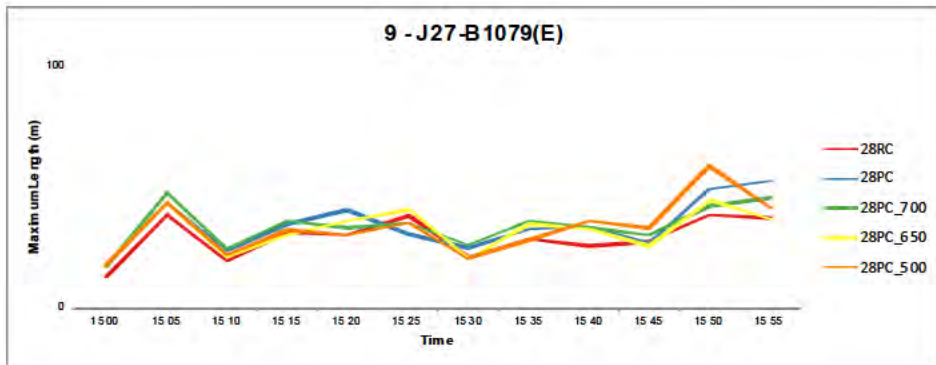
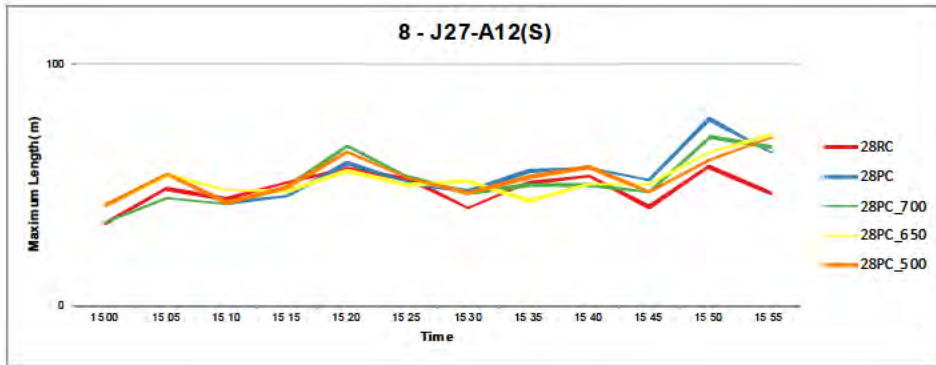
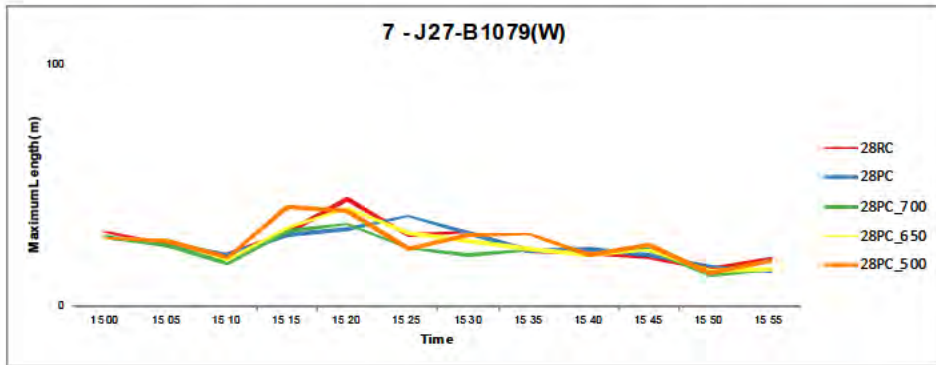
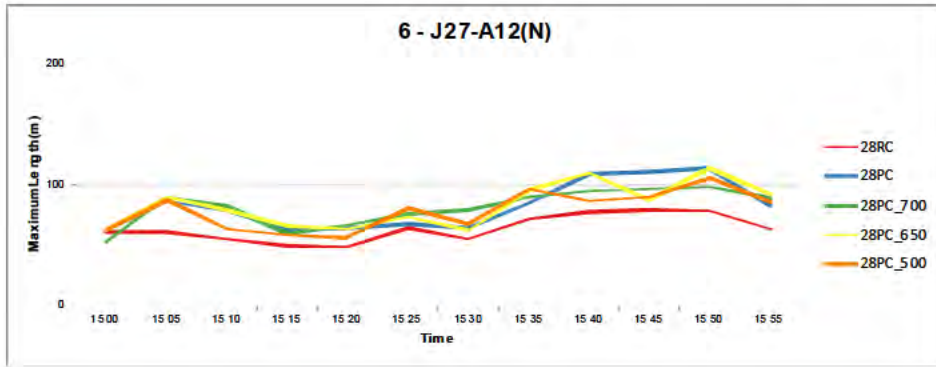
	Base	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	78.3	86.1	105.1	100.3	100.4	107.0
2 - J28-A12(S)	49.5	56.9	73.8	66.4	67.8	60.8
3 - J28-A1152(E)	49.6	45.9	52.5	52.6	50.8	52.5
6 - J27-A12(N)	154.9	163.7	200.1	192.8	206.3	200.4
7 - J27-B1079(W)	32.1	39.9	44.4	40.6	41.3	42.3
8 - J27-A12(S)	69.4	98.1	173.7	131.4	183.8	156.8
9 - J27-B1079(E)	62.2	64.6	68.8	67.1	63.0	62.7
11 - J26-A12(N)	35.0	37.5	36.9	39.3	37.2	34.6
12 - J26-A12(S)-Right turn	10.3	10.1	11.0	10.2	10.8	12.3
13 - J26-A12(S)	73.7	100.8	213.7	136.9	161.2	136.1
14 - J26-B1438(E)	23.0	28.4	28.0	25.8	29.1	28.7
15 - J25-A12(N)	58.1	64.6	64.2	65.5	65.9	63.1
17 - J25-Martlesham PnR(NW)- Left turn	2.7	2.6	2.6	2.6	2.6	2.6
18 - J25-Martlesham PnR(NW)	5.1	4.7	4.7	4.7	4.7	4.7
19 - J25-Main Rd(W)	88.4	93.5	93.7	93.5	93.4	93.9
20 - J25-A12(S)	84.8	132.6	214.9	185.5	177.7	169.9
21 - J25-Main Rd(E)	12.4	10.7	11.7	11.4	11.4	11.7
22 - J24-A12(N)	35.8	58.7	58.8	63.2	58.5	54.2
24 - J24-Eagle Way(W)	14.5	19.9	21.9	20.8	19.8	20.7
26 - J24-A12(S)	46.8	103.6	116.2	110.7	104.6	100.3
28 - J24-Anson Rd(E)	23.2	26.9	26.7	24.8	25.1	26.0
29 - J23-A12(N)	145.0	136.6	173.0	172.4	171.6	158.3
30 - J23-Eagle Way(W)	19.2	19.0	18.8	19.6	18.5	18.3
31 - J23-A12(S)	30.2	83.4	83.9	81.0	87.1	79.8
32 - J23-Barrack Square(E)	26.7	25.3	27.2	26.3	27.0	26.1
34 - J22-A12(N)	54.7	106.8	109.6	108.9	109.7	108.4
36 - J22-A12(S)	91.6	169.2	188.3	179.3	177.1	182.9
37 - J22-Newbourne Rd(E)	43.0	31.2	30.7	31.3	30.6	30.3
45 - J22-Foxhall Rd(W)	134.2	48.1	46.2	45.1	45.6	44.5
38 - J21-A12(N)	181.1	137.1	163.1	153.2	156.0	145.5
39 - J21-A14(W)	7.1	7.1	13.5	12.9	14.4	11.3
41 - J21-A1156(S)	57.9	58.4	99.5	77.2	77.9	73.7
42 - J21-A14(E)	71.6	72.4	71.0	72.8	70.8	71.2
44 - J21-Bucklesham Rd(NE)	22.3	12.7	14.9	14.3	14.4	14.2

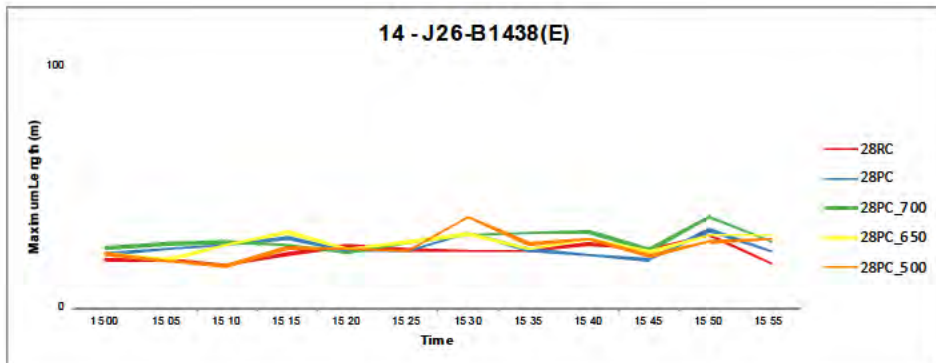
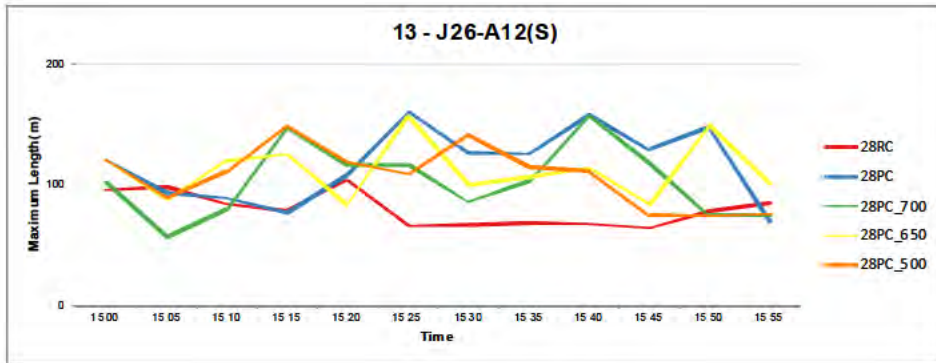
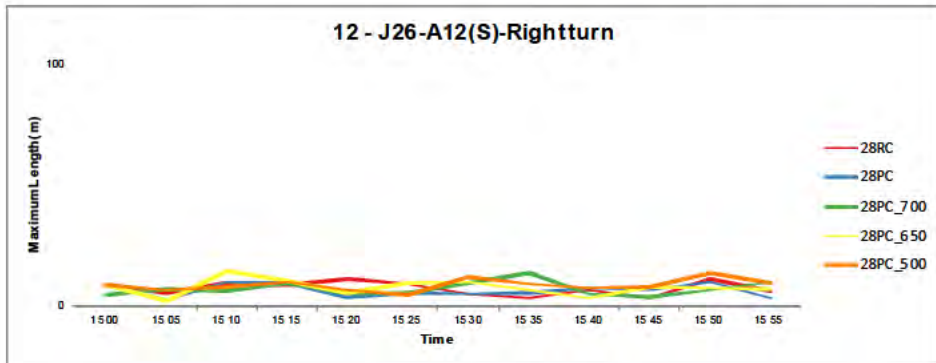
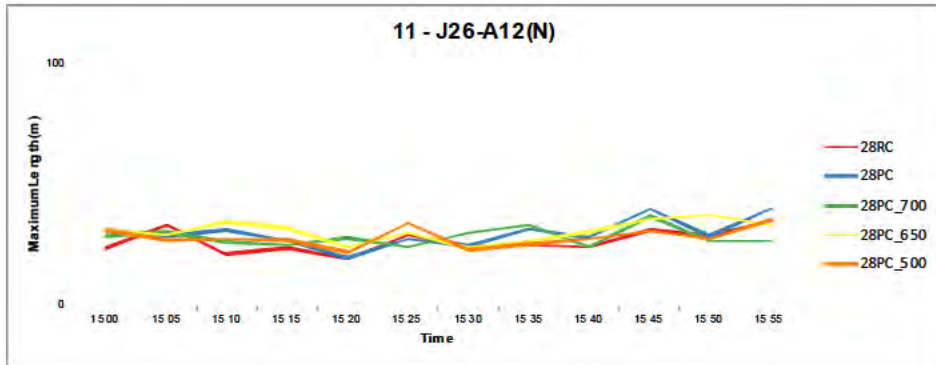


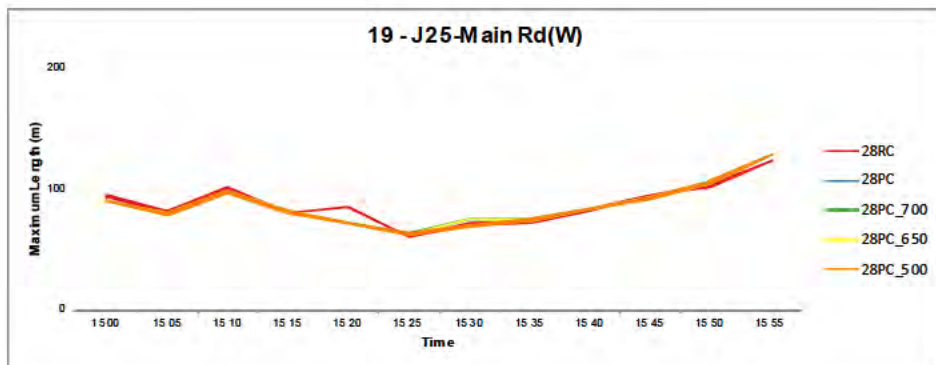
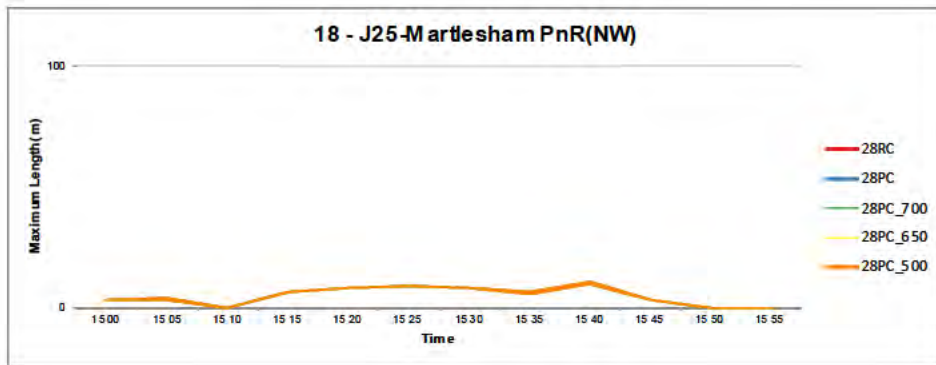
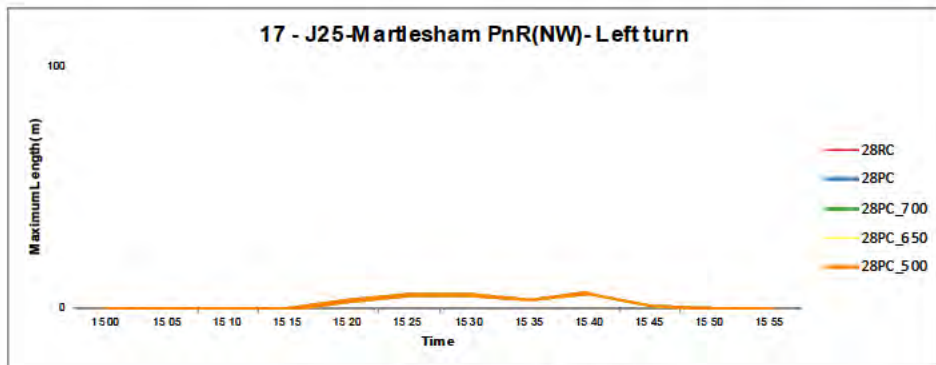
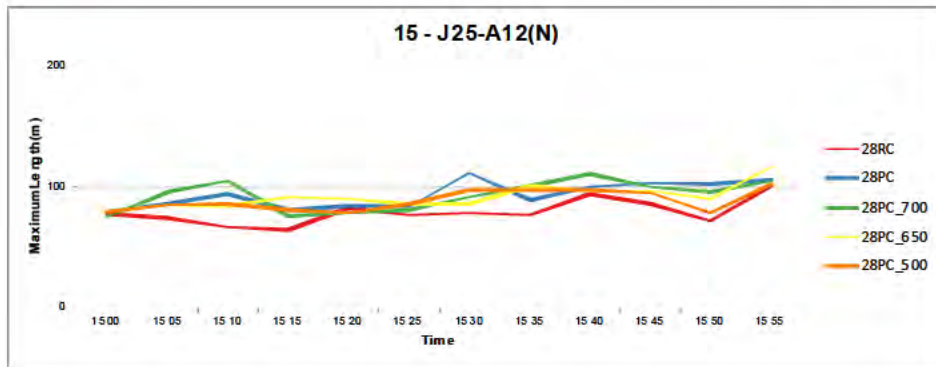
Journey Time Table
08:00-09:00
Base + all 2028

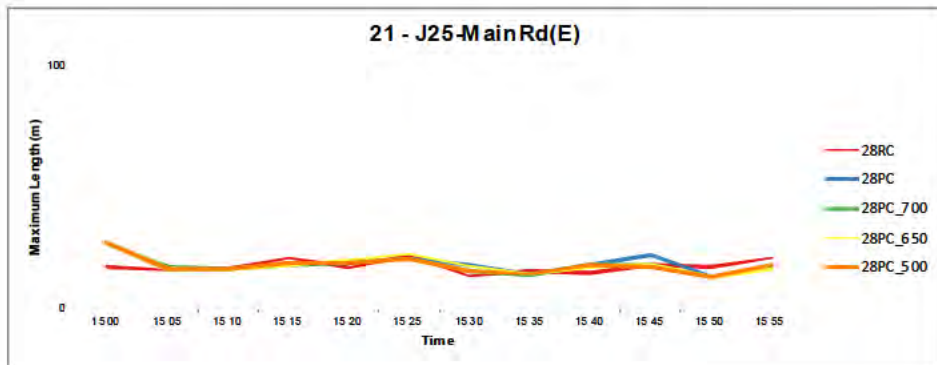
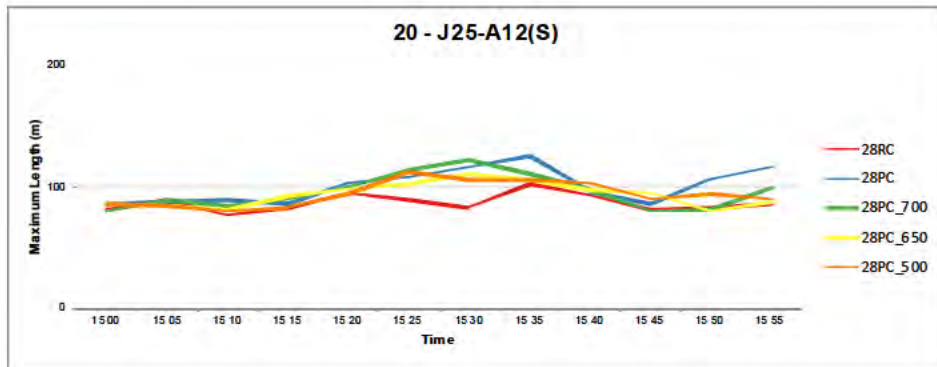
Route Names	Base	28RC	28PC	28PC_70 0	28PC_65 0	28PC_50 0
1 - J21 - J22 - NB	114	130	137	133	134	135
2 - J22 - J23 - NB	66	90	92	91	91	91
3 - J23 - J24 - NB	39	46	48	47	47	46
4 - J24 - J25 - NB	52	60	79	72	71	68
5 - J25 - J26 - NB	125	130	146	139	139	137
6 - J26 - J27 - NB	95	101	111	106	112	108
7 - J27 - J28 - NB	97	98	99	98	99	98
8 - J28 - A12- NB	137	138	140	139	139	139
51 - A12 NB	732	798	860	835	840	830
9 - A12 - J28 - SB	134	137	142	140	140	141
10 - J28 - J27 - SB	117	118	128	125	129	127
11 - J27 - J26 - SB	94	95	95	95	95	95
12 - J26 - J25 - SB	113	113	114	114	114	114
13 - J25 - J24 - SB	33	35	35	35	35	35
14 - J24 - J23 - SB	80	77	93	93	91	86
15 - J23 - J22 - SB	70	99	100	99	99	99
16 - J22 - J21 - SB	138	136	139	138	138	137
52 - A12 SB	776	805	836	833	834	826
17 - A14 WB upto Offslip	153	165	166	167	166	166
18 - A14 EB from Onslip	118	120	120	121	121	120
19 - A14 WB from Onslip	85	88	89	89	89	89
20 - A14 EB upto Offslip	90	93	96	95	96	94
21 - Felixstowe - SB	100	101	101	102	102	102
22 - Felixstowe - NB	116	117	134	122	123	122
23 - Bucklesham Road - NB	62	61	62	62	62	62
24 - Bucklesham Road - SB	86	69	70	70	70	70
26 - Foxhall road - WB	84	85	86	86	86	85
25 - Foxhall road - EB	149	100	100	100	100	99
27 - Newbourne Road -EB	43	43	44	44	44	44
28 - Newbourne Road -WB	64	51	51	51	51	51
29 - Eagle Way - EB	21	27	28	28	27	27
30 - Eagle Way - WB	14	12	12	12	12	12
31 - Gloster Road - NB	53	55	55	55	54	55
32 - Gloster Road - SB	55	54	54	54	54	54
33 - Barrack Square - SB	93	94	94	94	94	94
34 - Barrack Square - NB	92	88	88	88	89	88
35 - Anson Road - WB	43	44	45	44	44	45
36 - Anson Road - EB	45	45	45	45	45	45
37 - Eagle Way (J24) - EB	46	53	55	53	52	52
38 - Eagle Way (J24) - WB	44	44	44	44	44	44
39 - Main Road - EB	65	65	66	66	66	66
40 - Main Road - WB	72	72	72	73	72	73
41 - A1214 Main road - EB	66	67	67	67	67	67
42 - A1214 Main road - WB	50	51	51	51	51	51
43 - B1438 - WB	56	57	57	57	57	57
44 - B1438 - EB	51	51	51	51	51	50
45 - B1079 (East) - WB	61	60	65	63	59	59
46 - B1079 (East) - EB	30	30	30	30	30	30
47 - B1079 (West)- WB	33	33	33	33	33	33
48 - B1079 (West)- EB	40	44	47	45	45	46
49 - A1152 - WB	51	50	51	51	51	51
50 - A1152 - EB	49	49	49	49	49	49
72 - J22 - J22B - NB	0	43	44	43	43	43
73 - J22B - J23 - NB	0	47	48	47	48	48
J22-J23 NB (FY)	66	90	92	91	91	91
70 - J23 - J22B - SB	0	56	56	56	56	56
71 - J22B - J22 - SB	0	43	44	43	44	43
J23-J22 SB (FY)	70	99	100	99	99	99

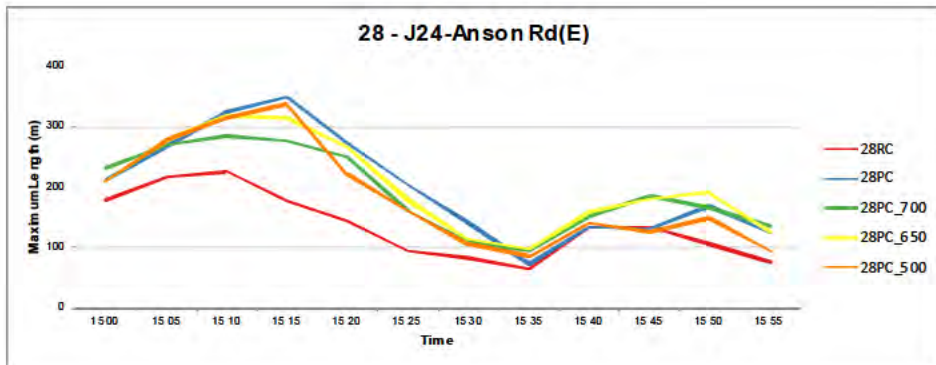
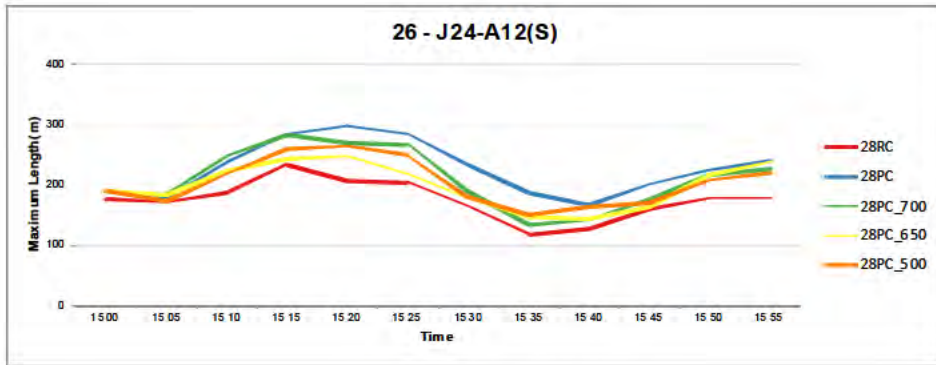
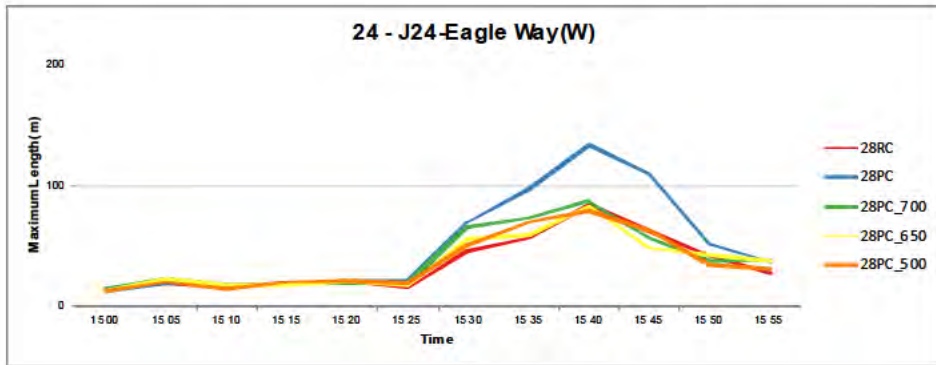
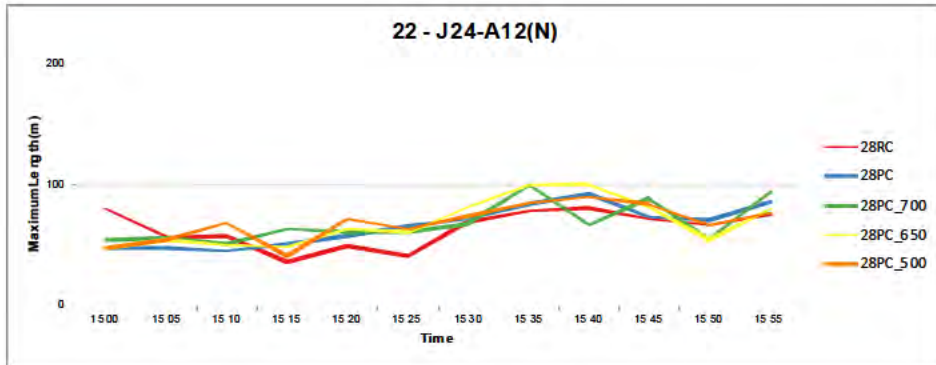


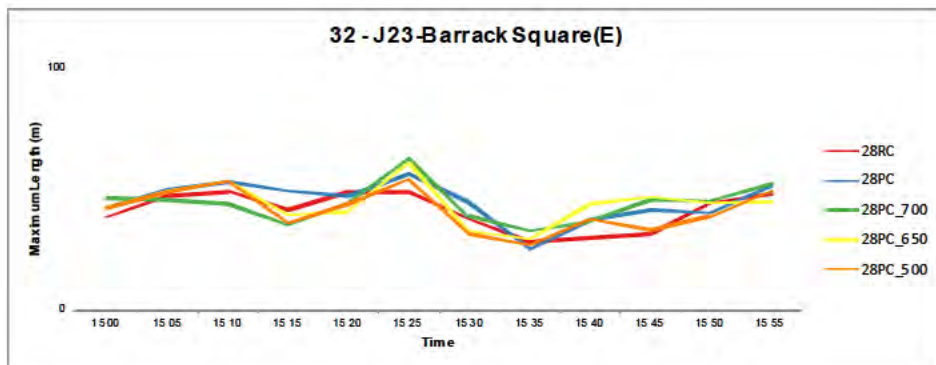
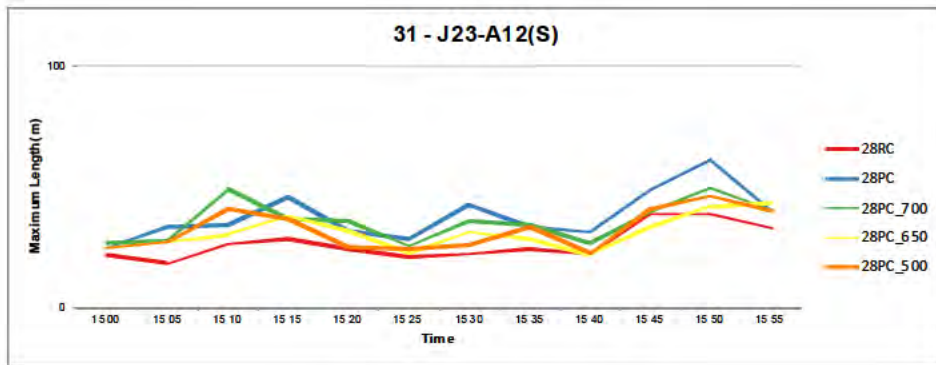
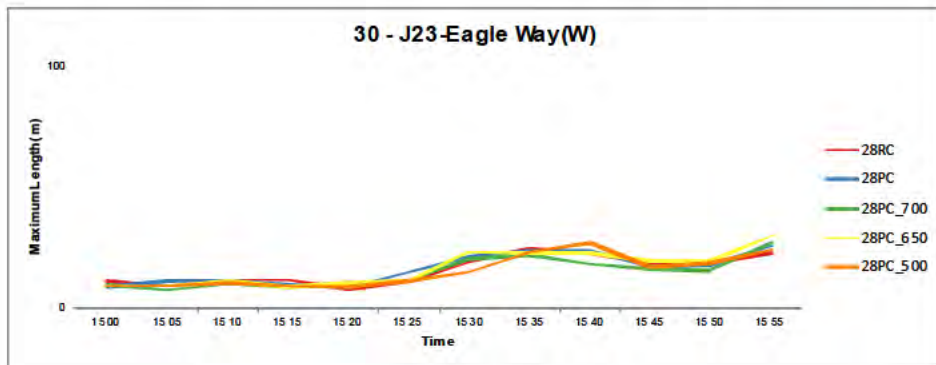
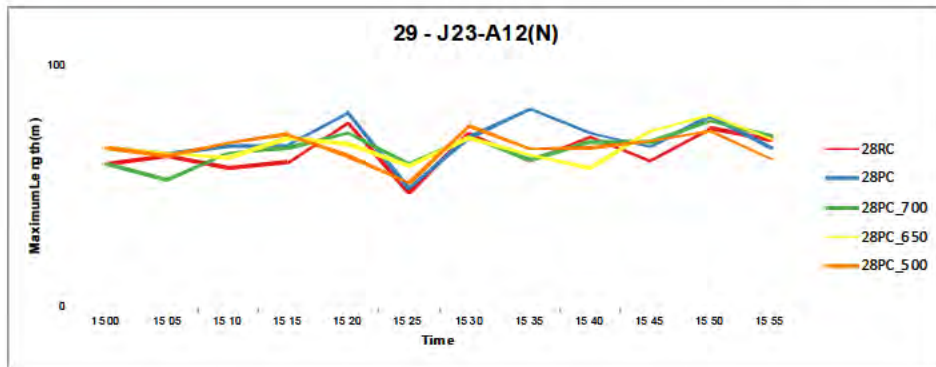


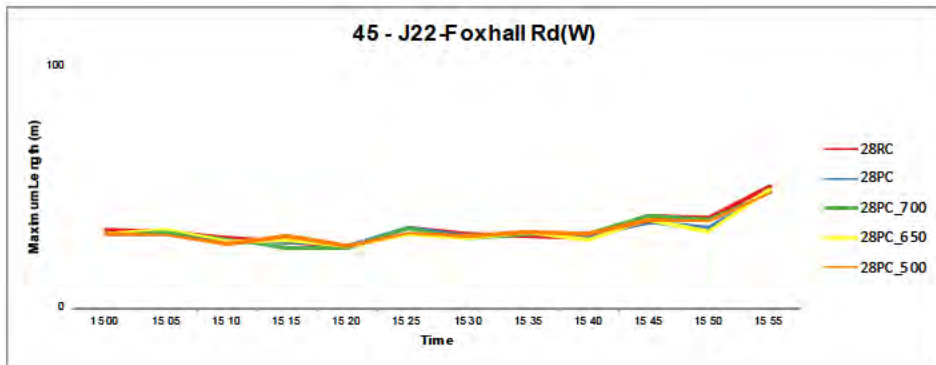
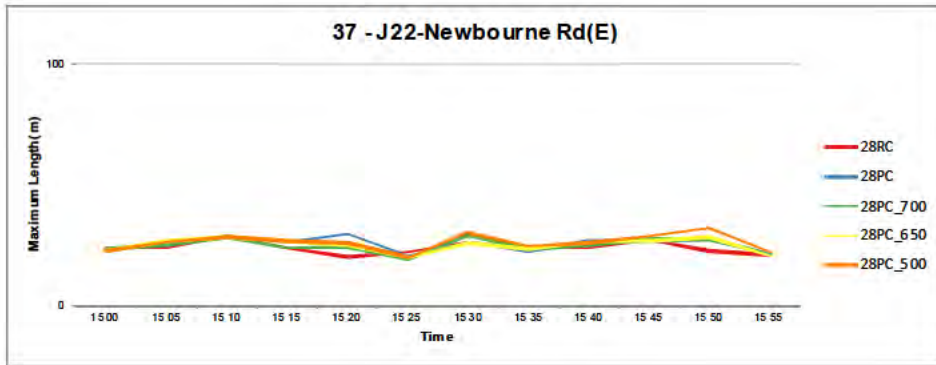
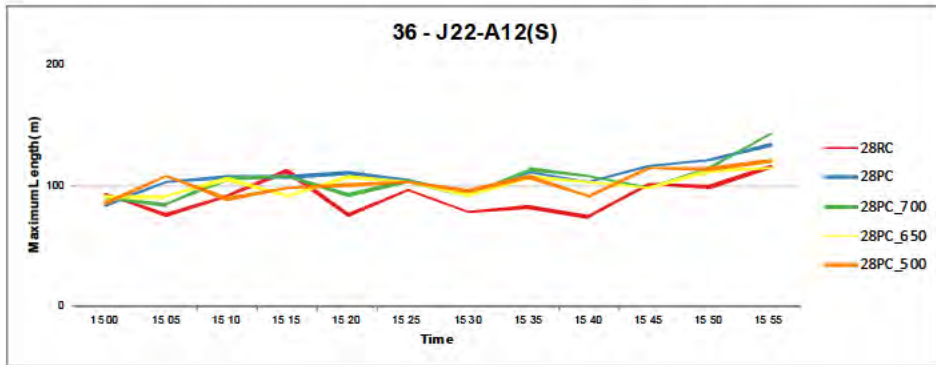
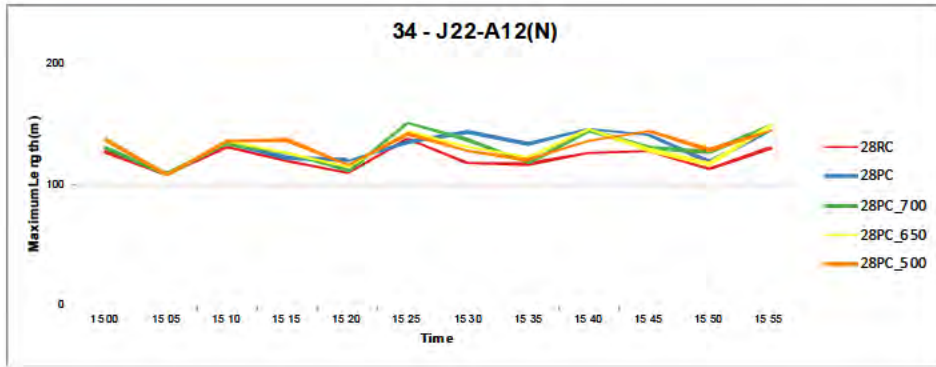


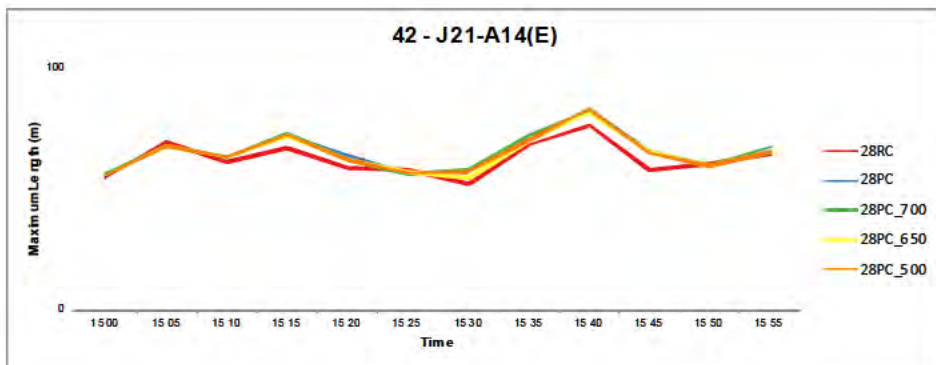
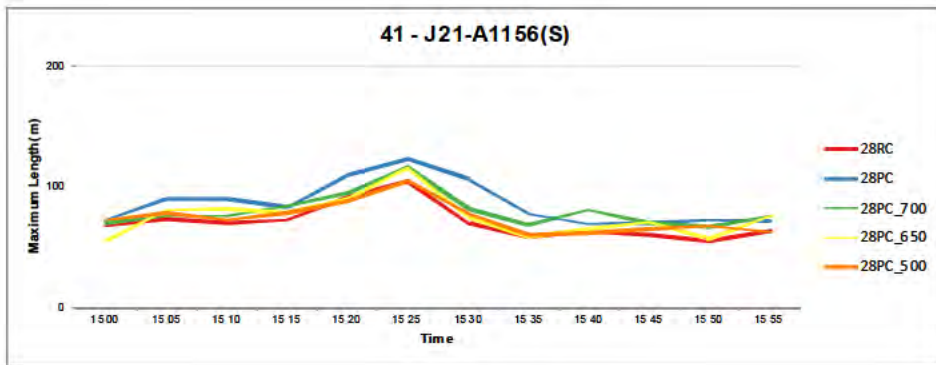
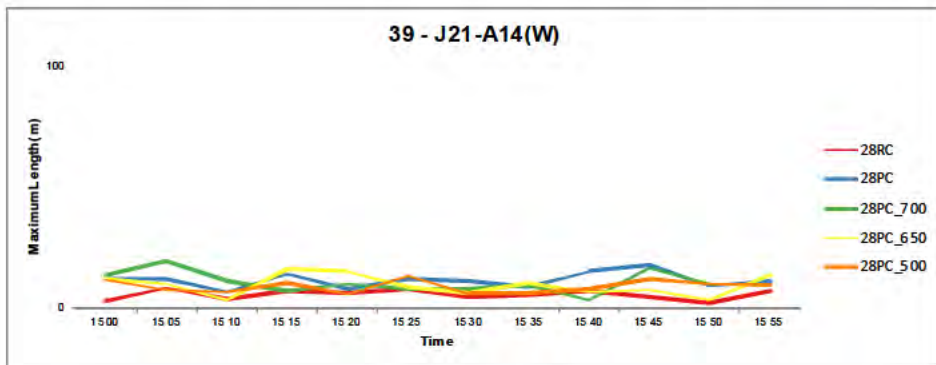
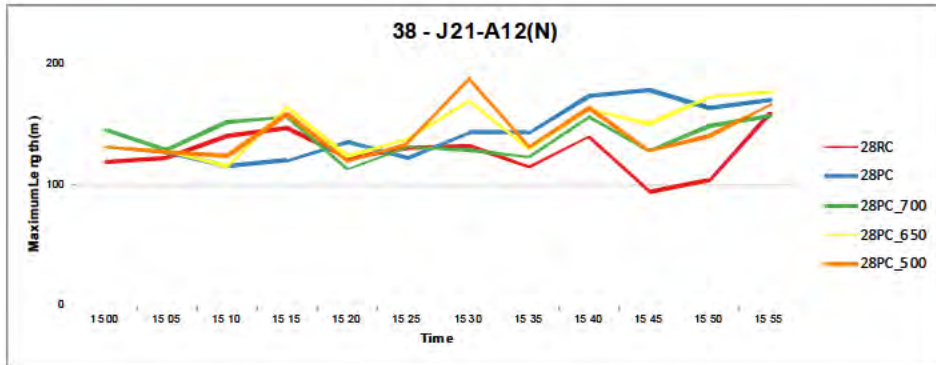






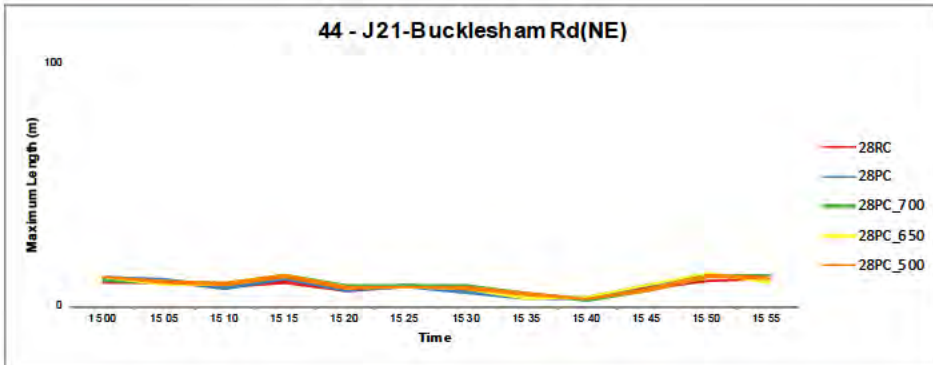








44 - J21-Bucklesham Rd(NE)





Queue Comparison
15 00-16 00
Maximum Length Summary
Maximum Length (m)

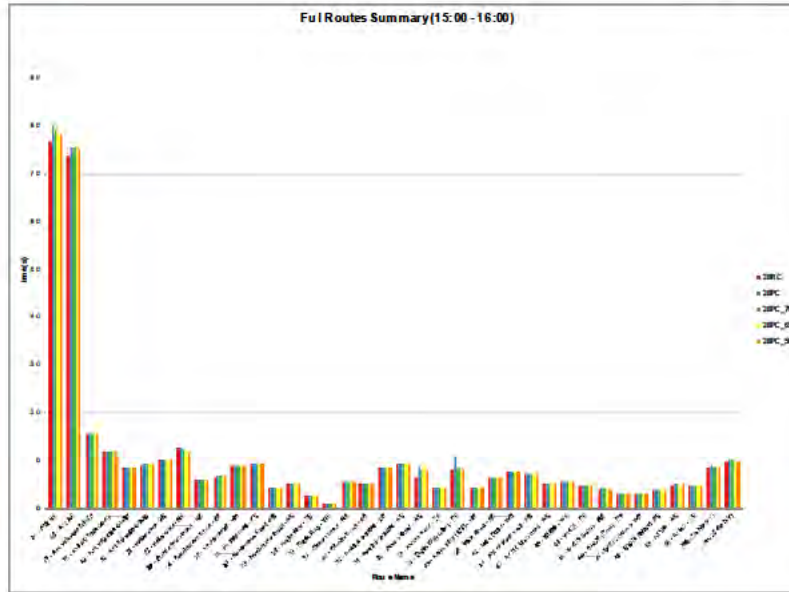
	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	55.0	68.8	73.0	75.9	86.8
2 - J28-A12(S)	53.5	91.0	75.4	92.9	60.4
3 - J28-A1152(E)	65.9	75.7	82.0	63.7	78.7
6 - J27-A12(N)	79.4	113.5	98.1	114.1	105.2
7 - J27-B1079(W)	44.7	37.5	34.2	40.9	41.1
8 - J27-A12(S)	57.8	77.4	69.9	70.8	69.5
9 - J27-B1079(E)	38.6	52.5	47.8	44.5	58.8
11 - J26-A12(N)	35.1	39.8	37.0	37.5	35.7
12 - J26-A12(S)-Right turn	11.6	10.1	13.7	14.6	13.7
13 - J26-A12(S)	104.6	160.7	157.3	157.5	148.9
14 - J26-B1438(E)	30.4	32.5	37.9	31.5	37.6
15 - J25-A12(N)	101.0	111.4	110.8	116.1	102.4
17 - J25-Martlesham PnR(NW)- Left turn	6.2	6.2	6.2	6.2	6.2
18 - J25-Martlesham PnR(NW)	10.4	10.4	10.4	10.4	10.4
19 - J25-Main Rd(W)	123.7	128.1	128.1	128.2	128.2
20 - J25-A12(S)	103.0	125.5	122.5	110.7	112.9
21 - J25-Main Rd(E)	22.2	27.4	26.9	27.4	27.4
22 - J24-A12(N)	80.5	92.4	99.4	100.2	89.7
24 - J24-Eagle Wav(W)	84.0	133.9	86.9	83.3	79.0
26 - J24-A12(S)	234.7	298.9	283.6	248.6	264.8
28 - J24-Anson Rd(E)	226.0	348.3	284.7	317.7	337.1
29 - J23-A12(N)	76.3	81.9	77.0	79.7	74.9
30 - J23-Eagle Wav(W)	24.8	25.9	27.3	29.9	27.1
31 - J23-A12(S)	39.1	61.5	49.9	43.5	46.5
32 - J23-Barrack Square(E)	49.1	56.4	62.6	60.6	54.4
34 - J22-A12(N)	137.8	146.0	151.1	148.5	144.5
36 - J22-A12(S)	115.4	134.0	142.9	114.8	120.7
37 - J22-Newbourne Rd(E)	29.2	29.9	29.5	28.8	32.3
45 - J22-Foxhall Rd(W)	50.3	48.4	47.8	48.9	47.7
38 - J21-A12(N)	158.6	178.3	157.2	176.4	187.7
39 - J21-A14(W)	8.6	17.8	19.8	16.4	13.7
41 - J21-A1156(S)	105.2	123.6	117.1	116.2	105.7
42 - J21-A14(E)	76.2	83.3	82.0	81.4	83.1
44 - J21-Bucklesham Rd(NE)	11.3	12.9	13.0	13.7	12.7



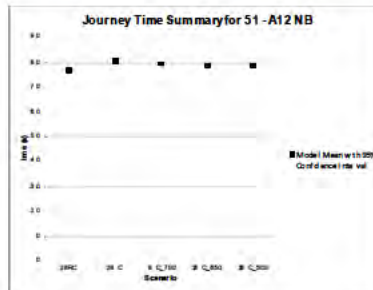
Queue Comparison
15 00-16 00
Average Length Summary
Maximum Length (m)

	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	43.8	56.1	57.7	57.3	57.8
2 - J28-A12(S)	37.1	57.0	51.8	53.0	44.9
3 - J28-A1152(E)	35.1	42.5	43.5	39.4	42.9
6 - J27-A12(N)	64.0	82.4	81.4	83.2	78.5
7 - J27-B1079(W)	26.2	25.4	23.5	25.4	26.6
8 - J27-A12(S)	48.3	54.1	51.8	52.4	53.4
9 - J27-B1079(E)	29.3	34.3	34.0	32.1	33.4
11 - J26-A12(N)	26.6	29.9	28.5	30.8	28.4
12 - J26-A12(S)-Right turn	7.5	6.7	7.3	8.0	8.9
13 - J26-A12(S)	80.2	117.4	103.1	112.9	107.9
14 - J26-B1438(E)	23.2	25.3	28.2	26.6	25.4
15 - J25-A12(N)	79.3	93.1	93.1	91.8	88.7
17 - J25-Martlesham PnR(NW)- Left turn	2.1	2.1	2.1	2.1	2.1
18 - J25-Martlesham PnR(NW)	5.0	5.0	5.0	5.0	5.0
19 - J25-Main Rd(W)	87.6	87.0	87.0	87.0	86.5
20 - J25-A12(S)	87.0	100.9	95.9	93.5	94.4
21 - J25-Main Rd(E)	17.6	18.6	18.1	18.2	18.0
22 - J24-A12(N)	63.6	66.1	68.2	68.7	68.7
24 - J24-Eagle Wav(W)	35.6	51.0	39.3	36.4	36.5
26 - J24-A12(S)	176.3	228.0	211.0	200.2	204.5
28 - J24-Anson Rd(E)	136.3	200.1	193.0	202.8	185.4
29 - J23-A12(N)	64.3	69.1	66.0	66.8	66.1
30 - J23-Eagle Wav(W)	15.9	16.4	14.9	16.6	15.4
31 - J23-A12(S)	26.8	38.2	35.8	31.4	32.6
32 - J23-Barrack Square(E)	41.2	44.8	44.1	43.9	41.4
34 - J22-A12(N)	122.2	132.1	130.7	130.1	131.5
36 - J22-A12(S)	91.4	107.8	104.5	101.4	102.2
37 - J22-Newbourne Rd(E)	24.2	25.6	25.0	25.3	26.3
45 - J22-Foxhall Rd(W)	32.9	32.0	32.3	31.7	32.2
38 - J21-A12(N)	127.1	143.4	138.9	146.7	142.5
39 - J21-A14(W)	5.8	11.7	10.8	9.7	9.1
41 - J21-A1156(S)	71.2	86.8	80.4	75.7	74.6
42 - J21-A14(E)	62.4	65.1	65.3	64.7	64.9
44 - J21-Bucklesham Rd(NE)	8.2	8.7	9.1	8.9	8.9

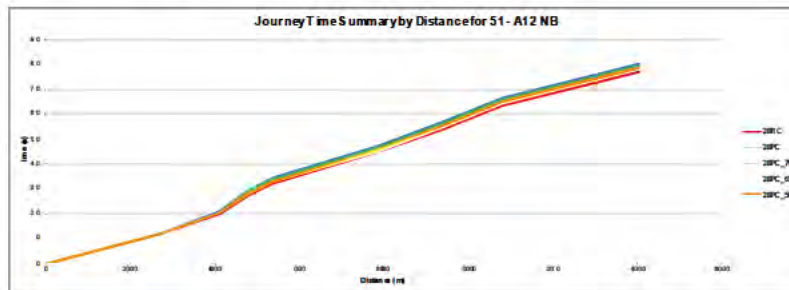
Full Routes Summary(15:00 - 16:00)

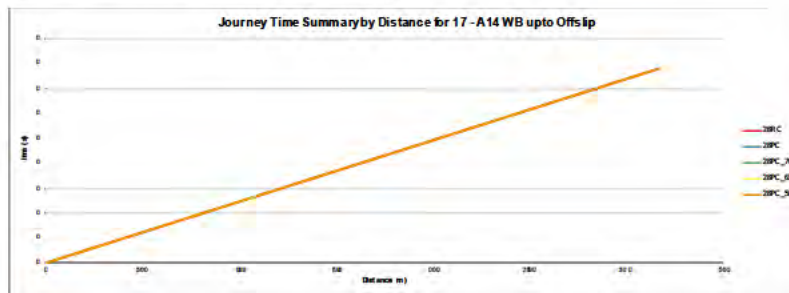
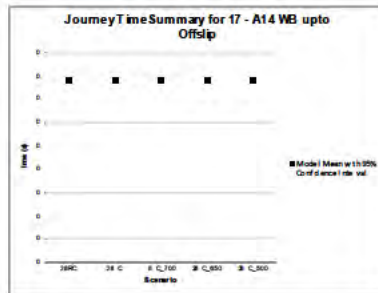
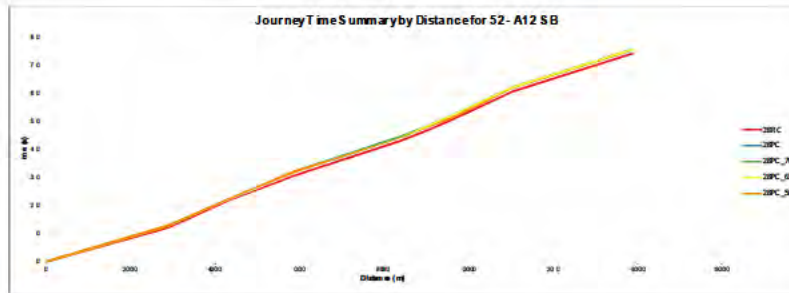
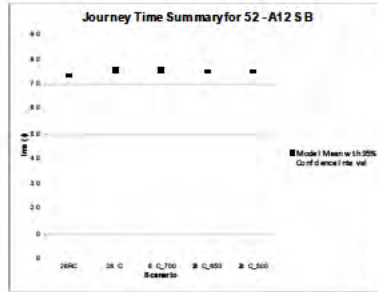


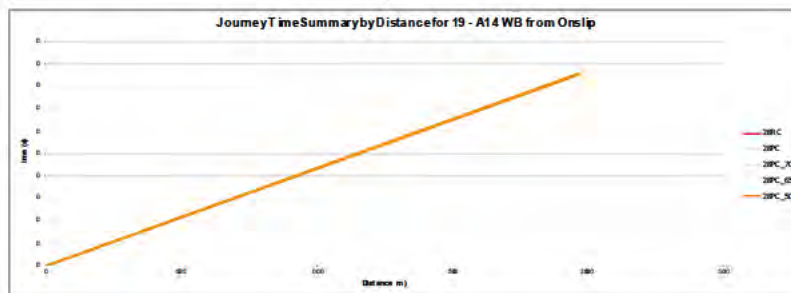
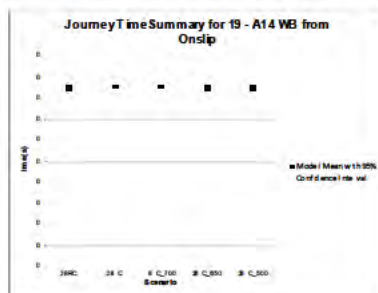
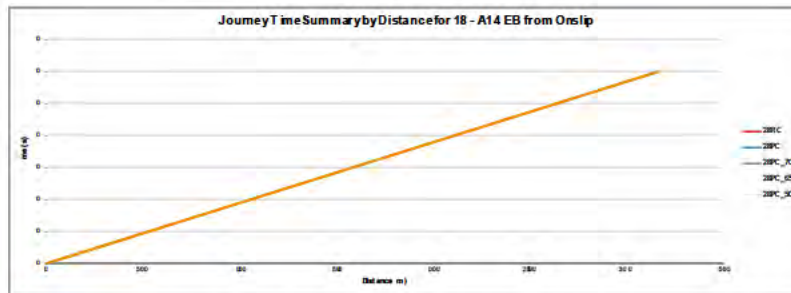
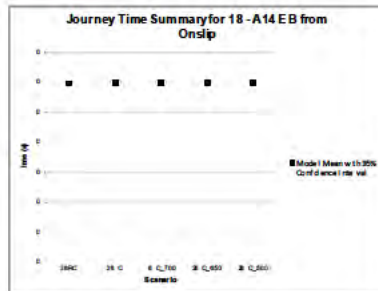
Journey Time Summary for 51 - A12 NB

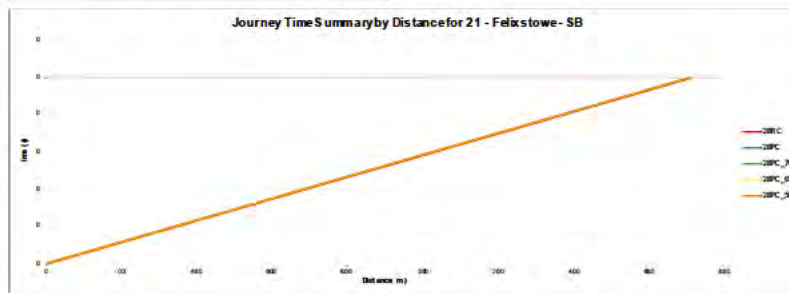
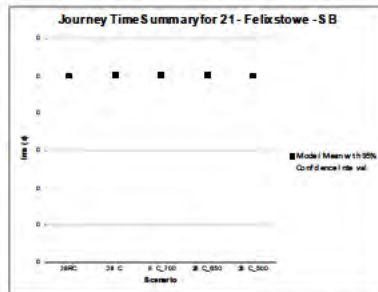
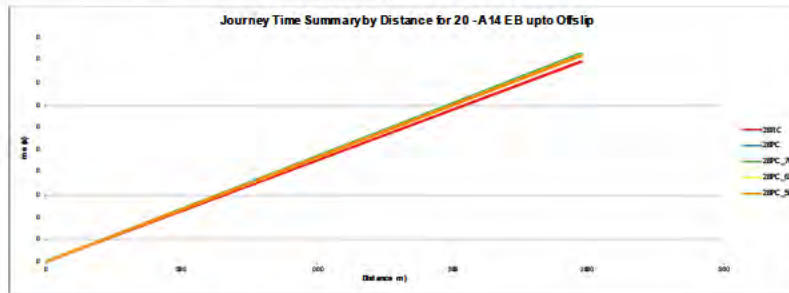
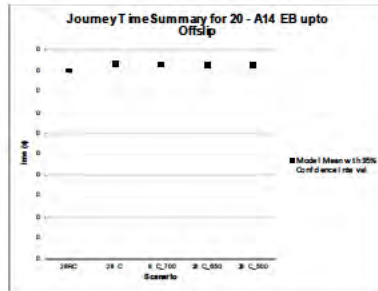


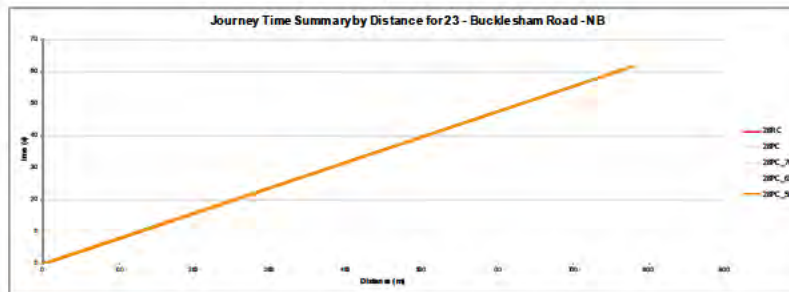
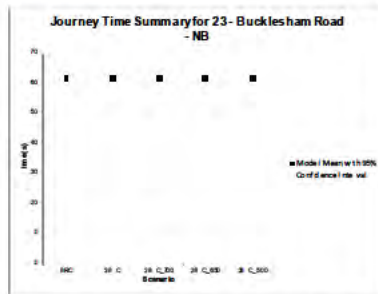
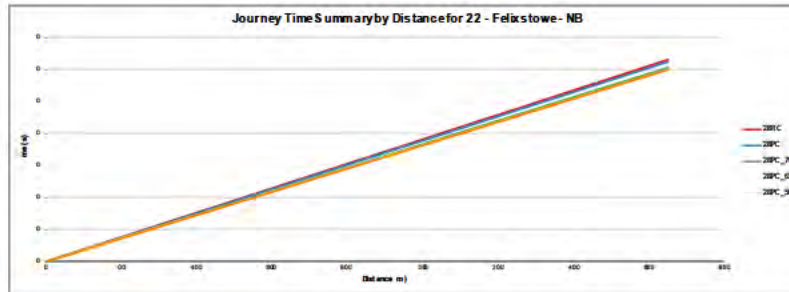
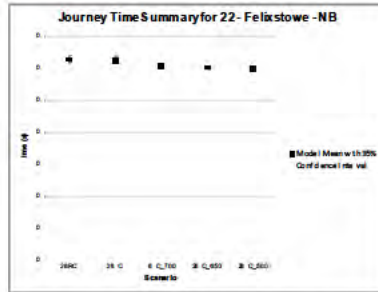
Journey Time Summary by Distance for 51 - A12 NB

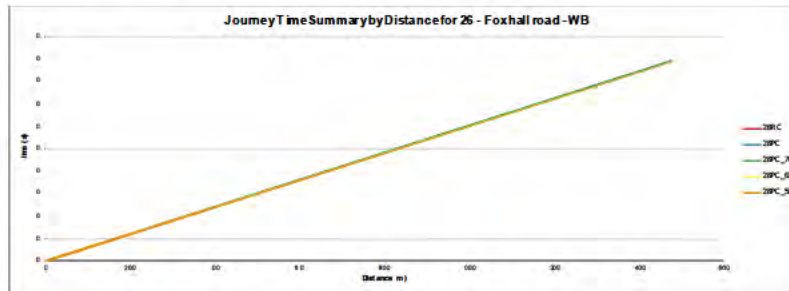
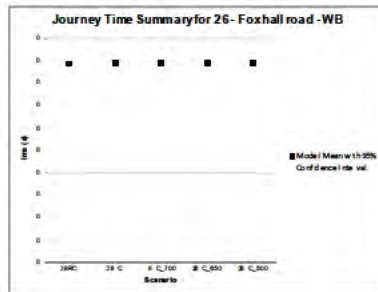
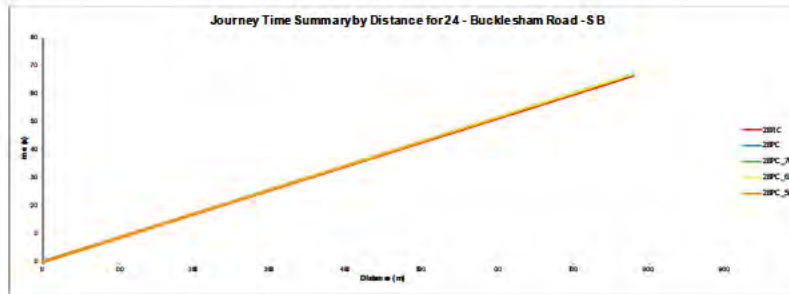
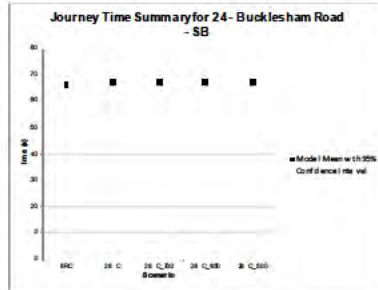


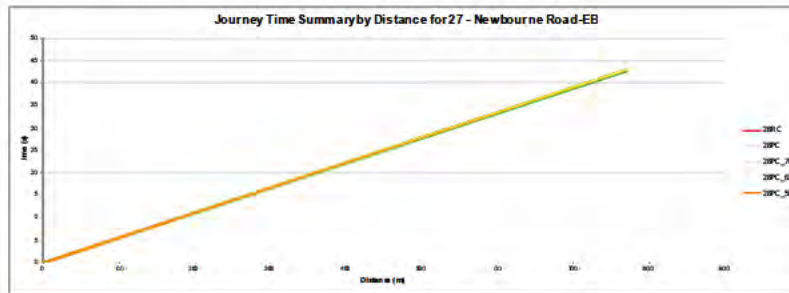
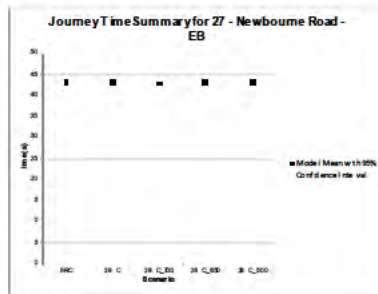
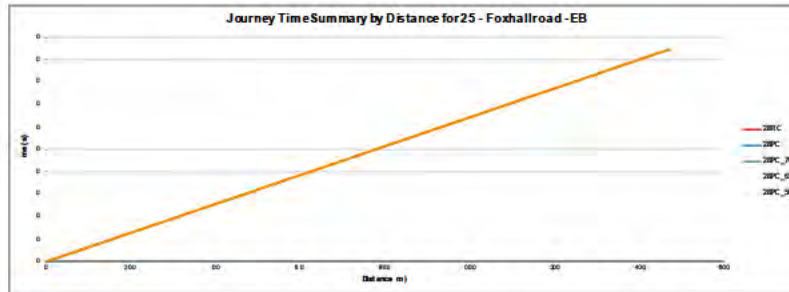
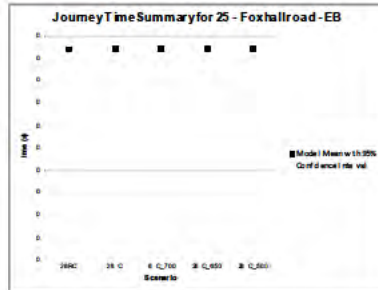


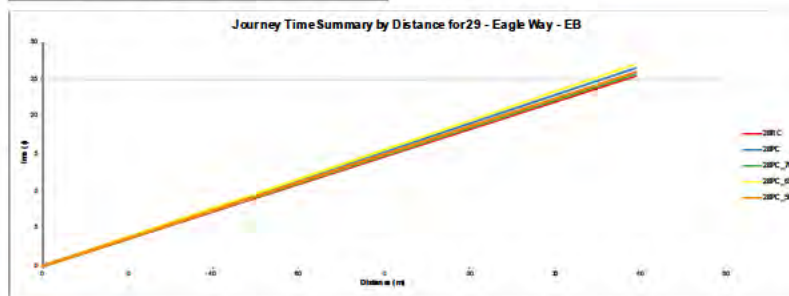
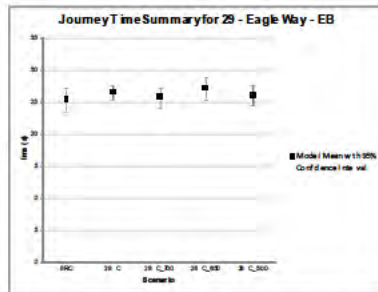
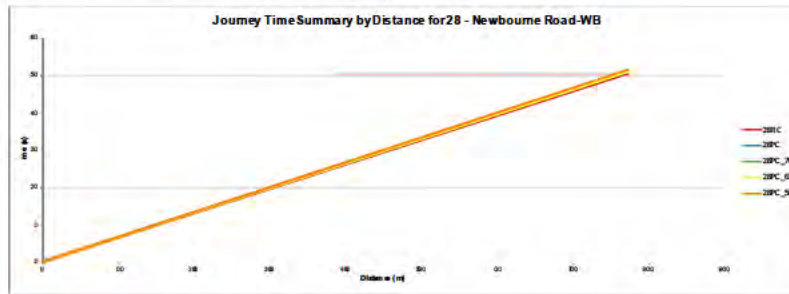
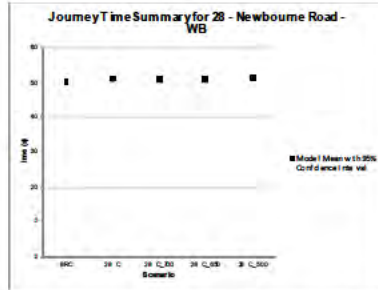


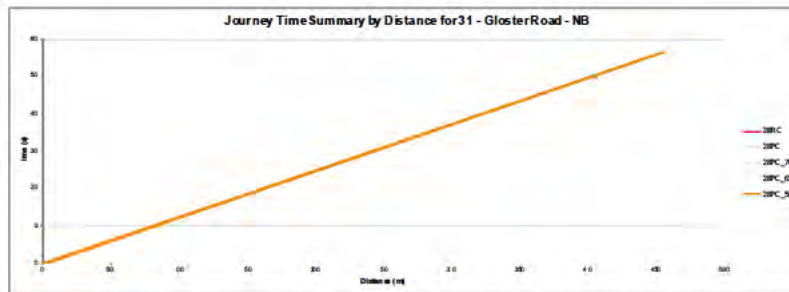
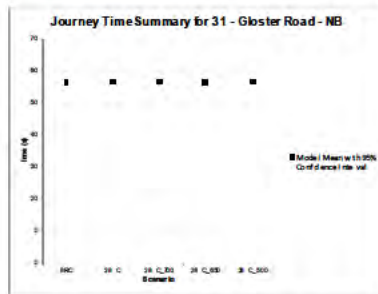
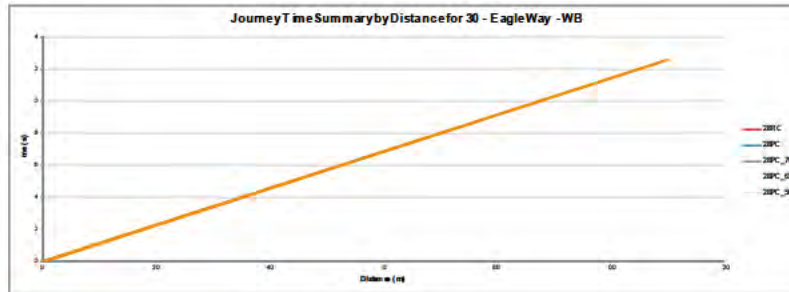
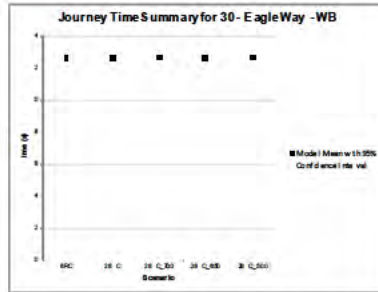


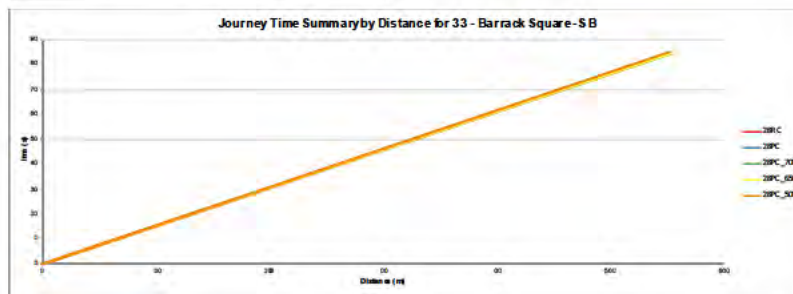
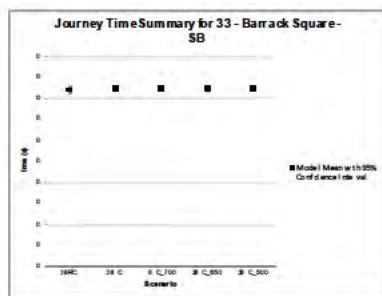
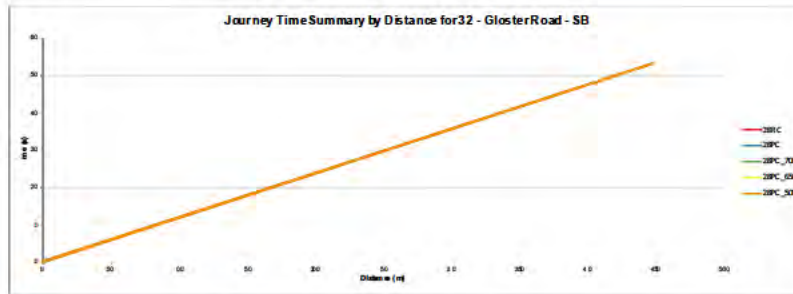
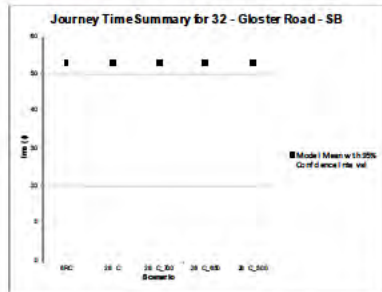


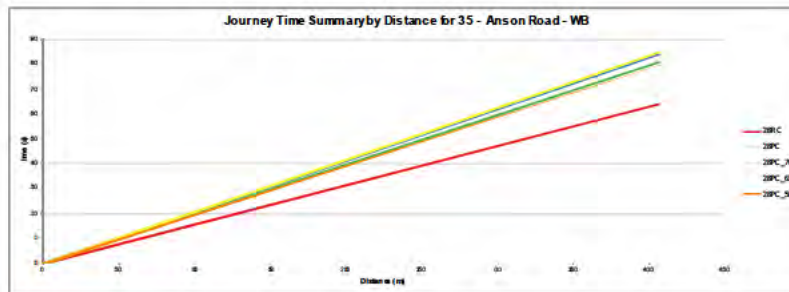
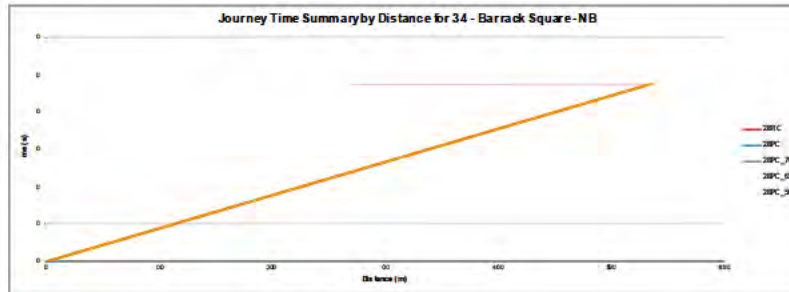
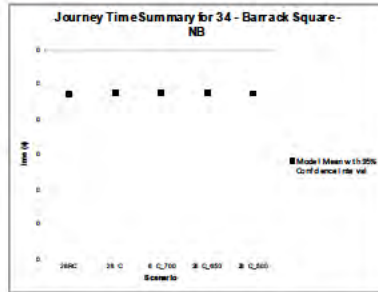


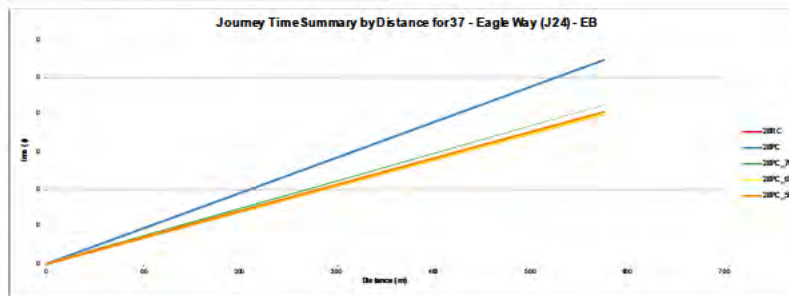
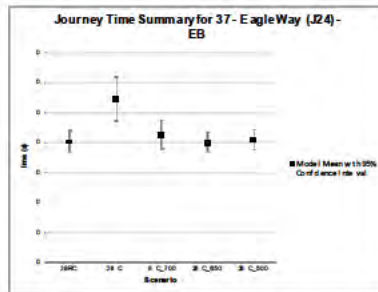
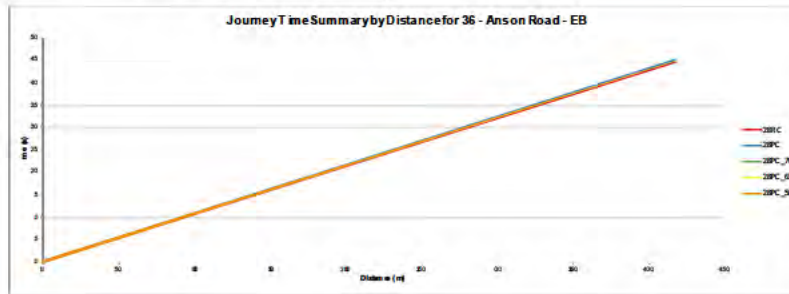
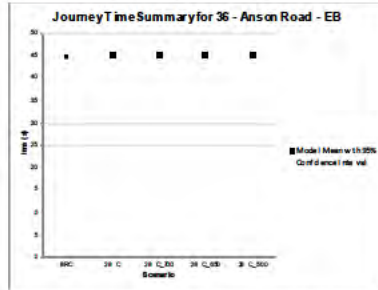


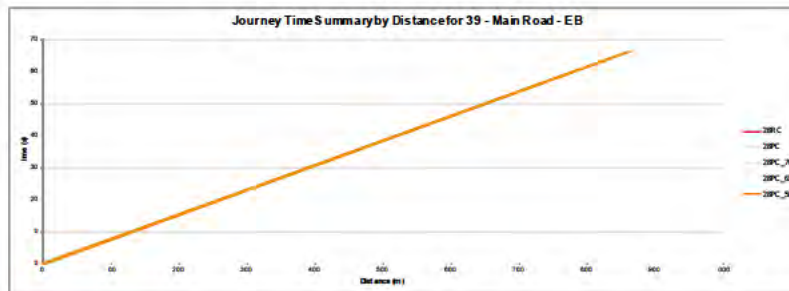
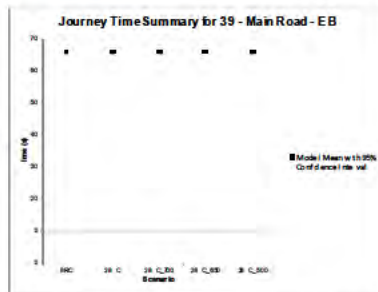
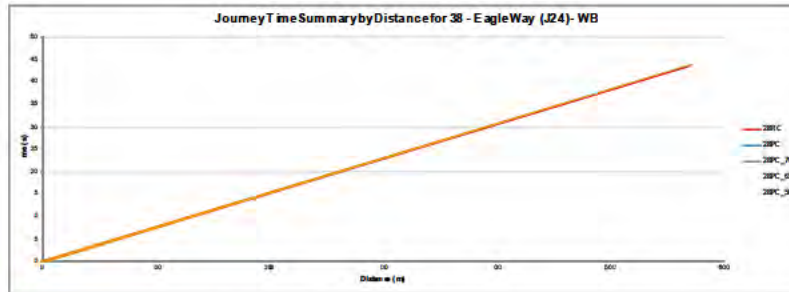
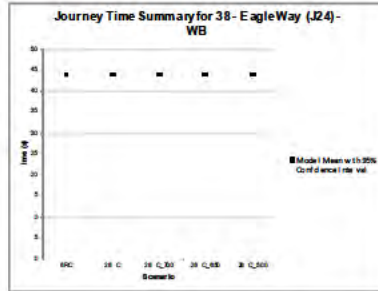


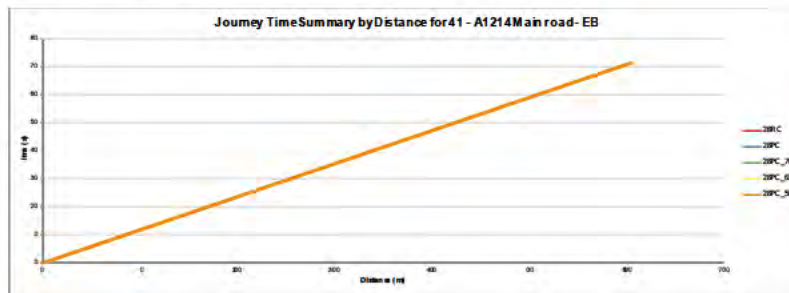
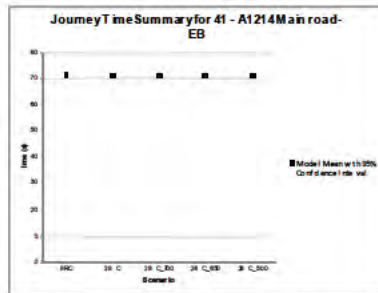
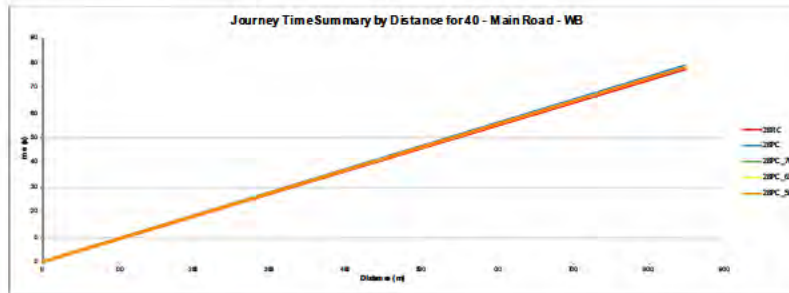
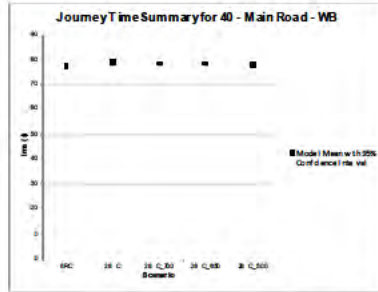


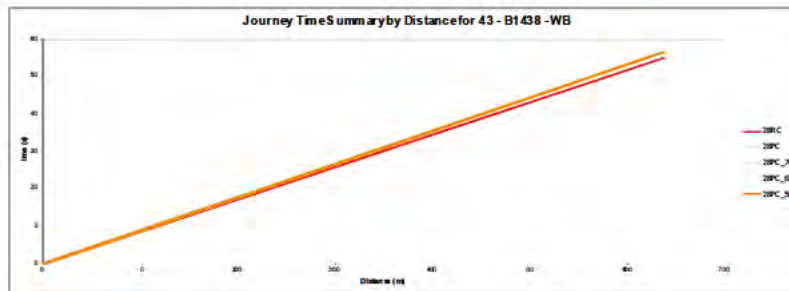
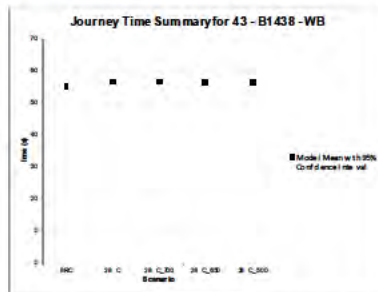
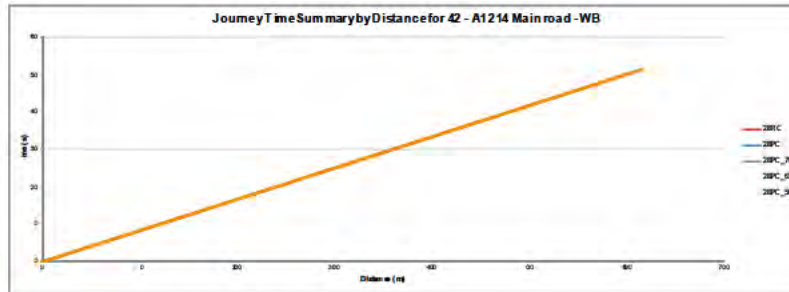
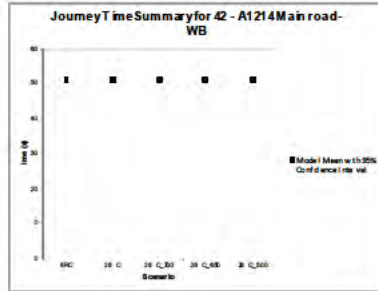


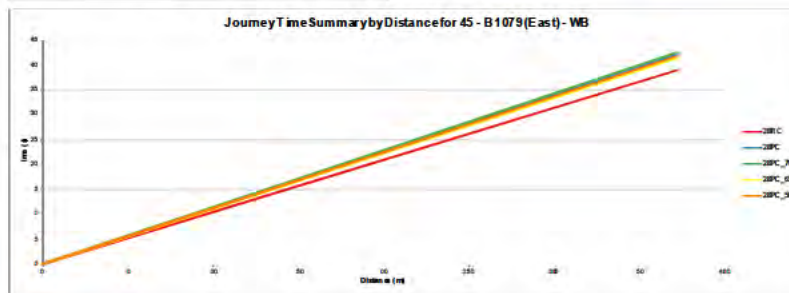
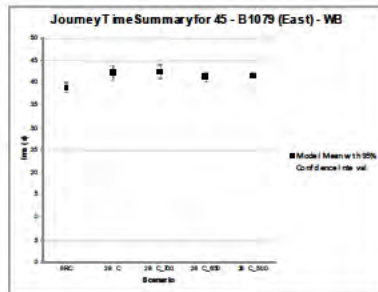
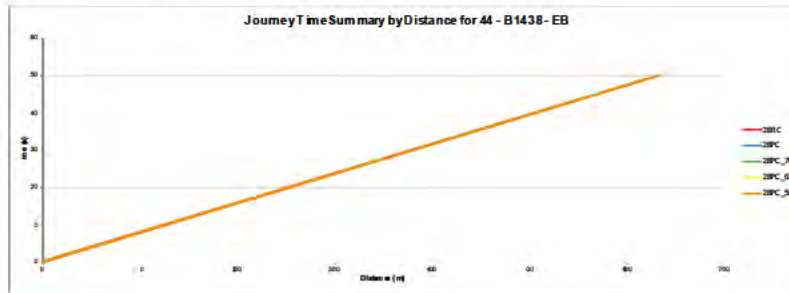
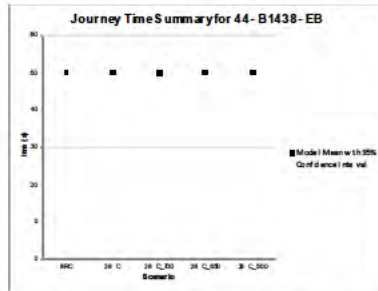


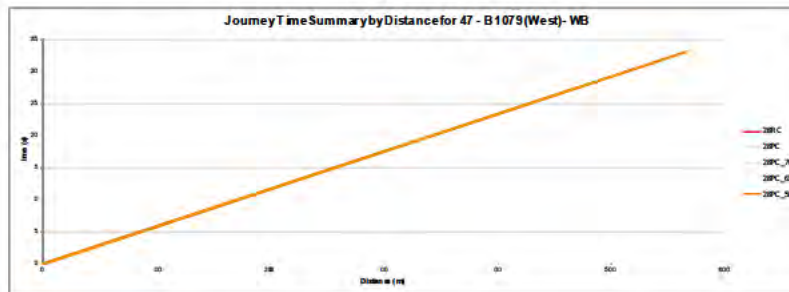
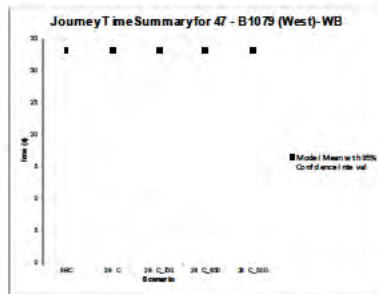
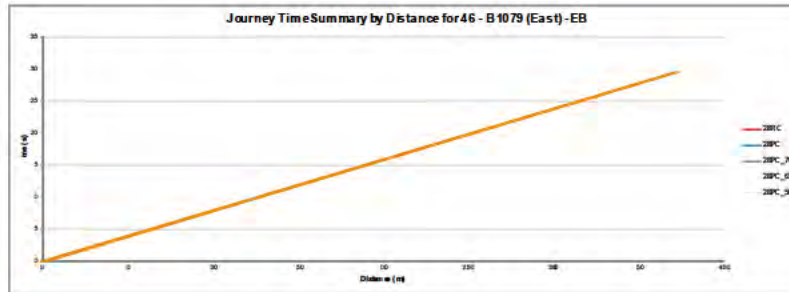
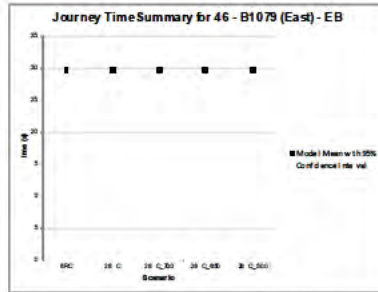


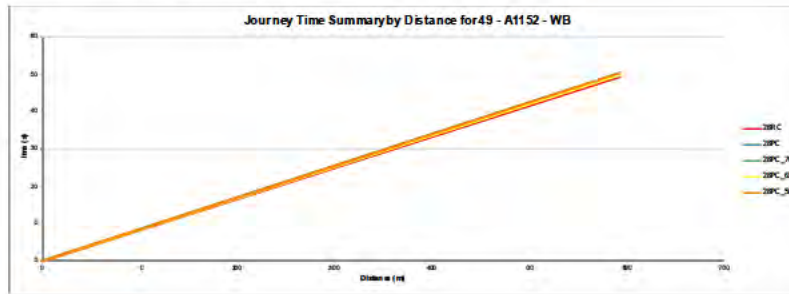
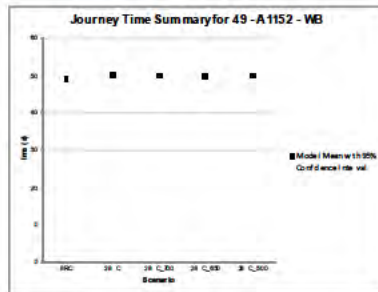
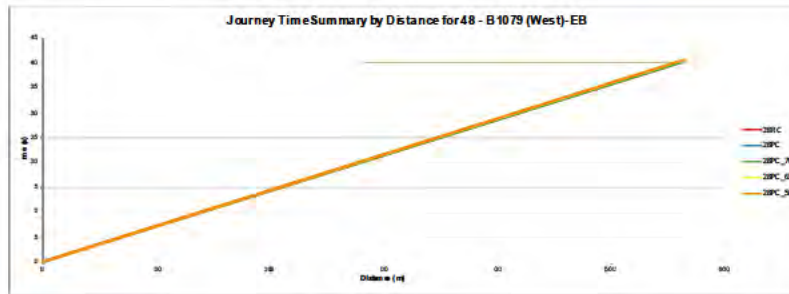
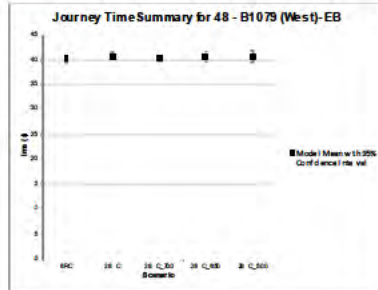


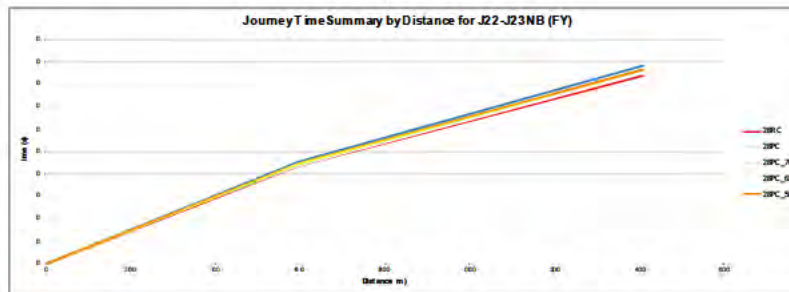
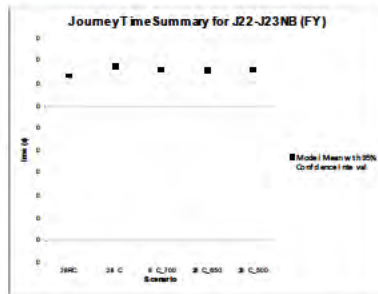
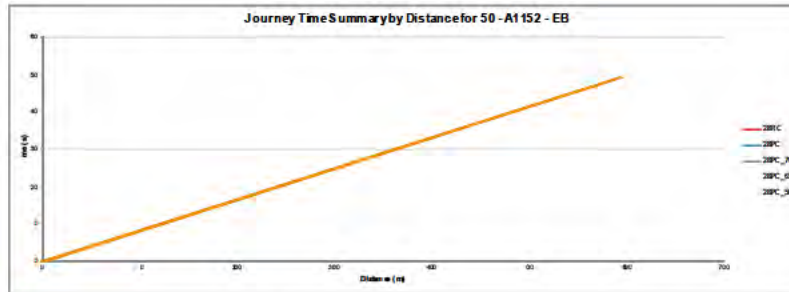
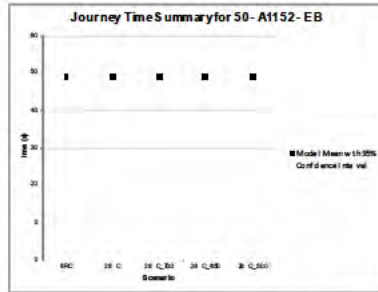


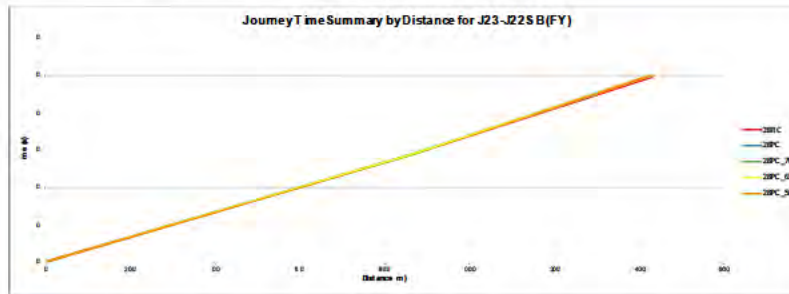
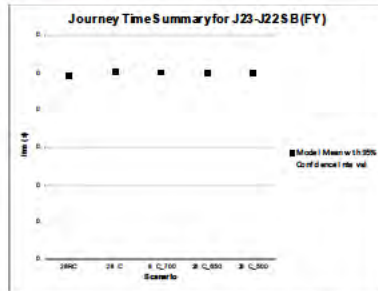




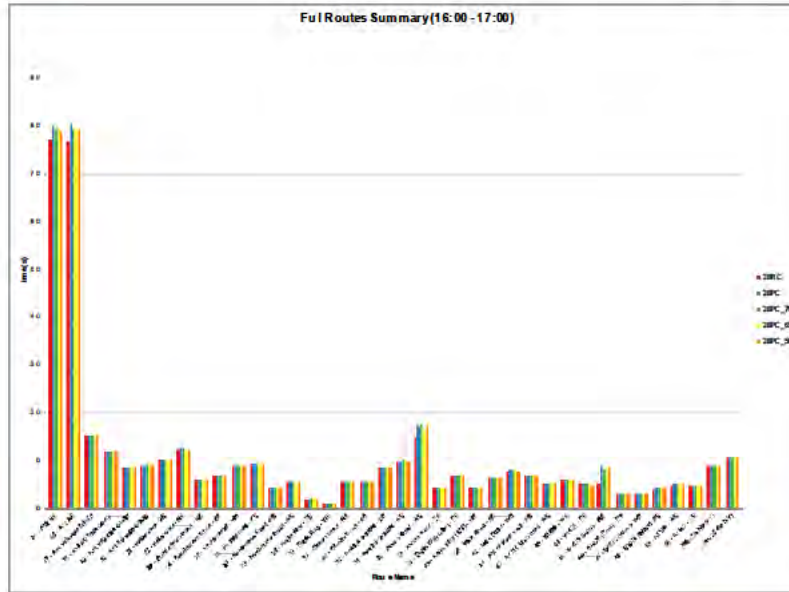




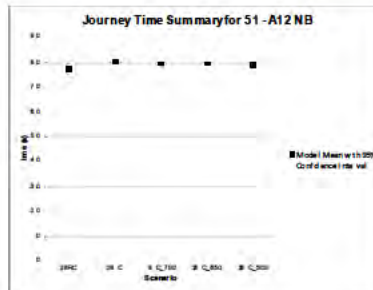




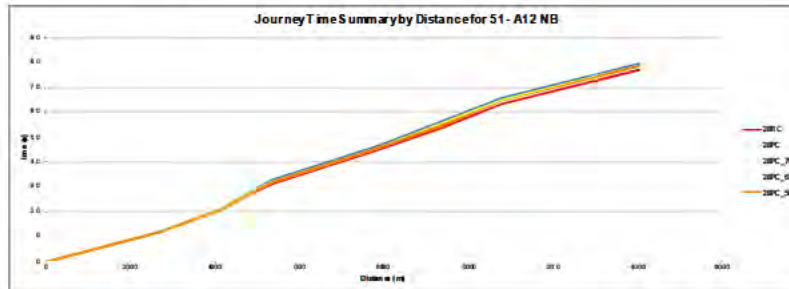
Full Routes Summary(16:00 - 17:00)

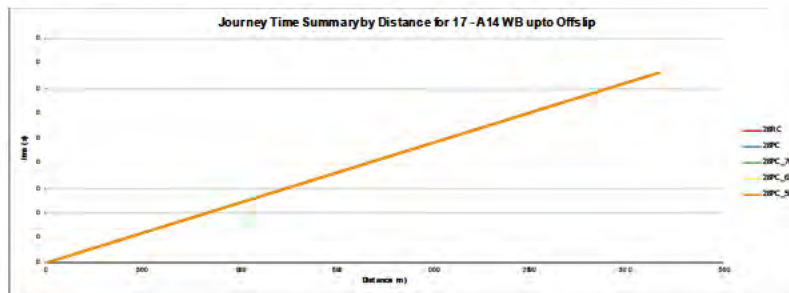
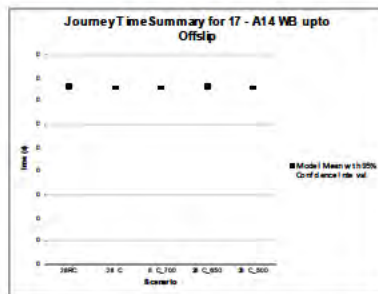
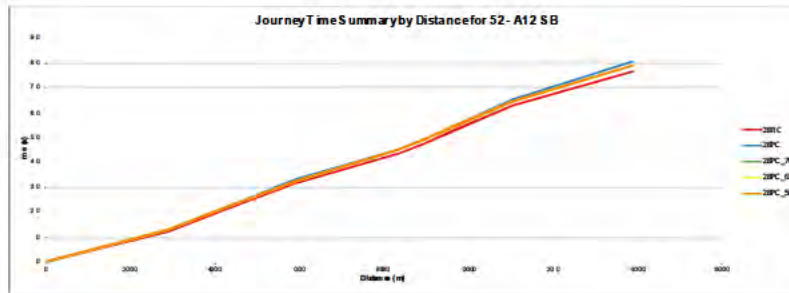
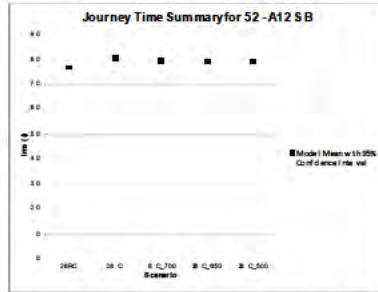


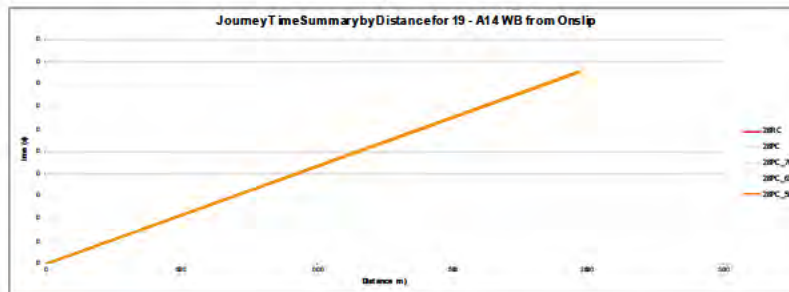
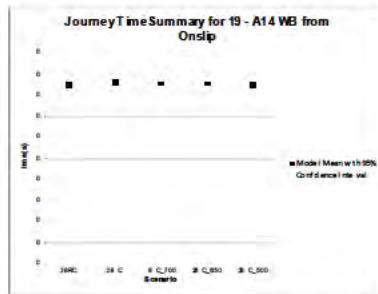
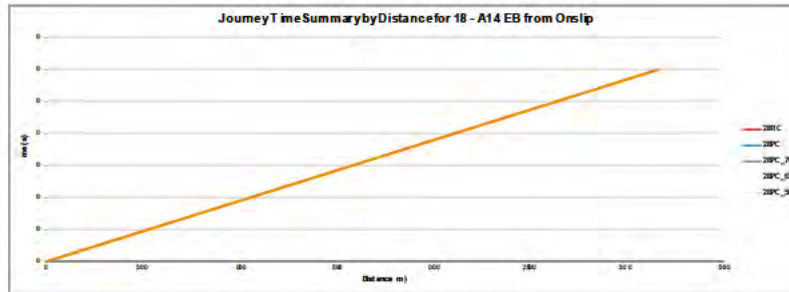
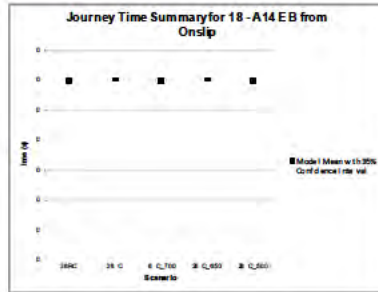
Journey Time Summary for 51 - A12 NB

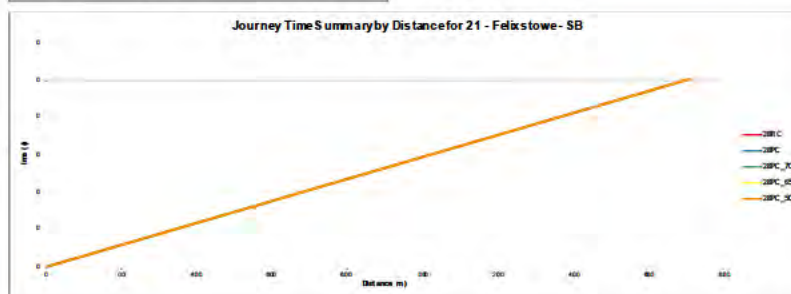
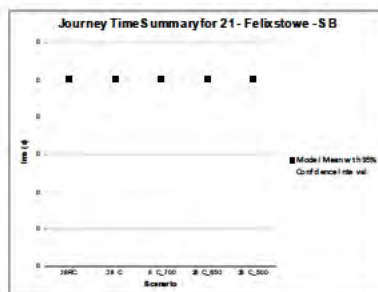
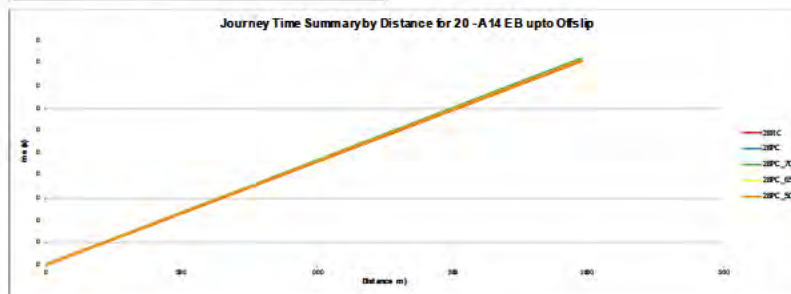
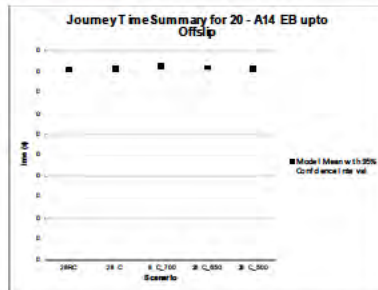


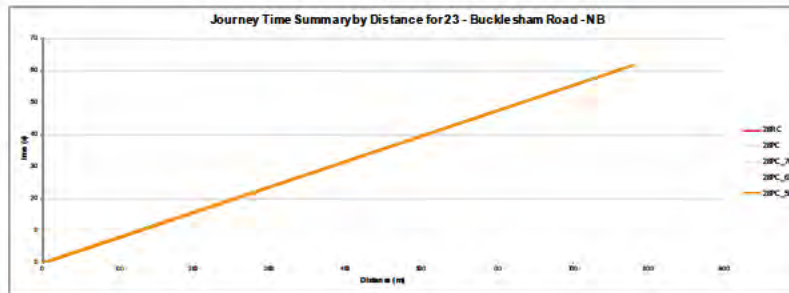
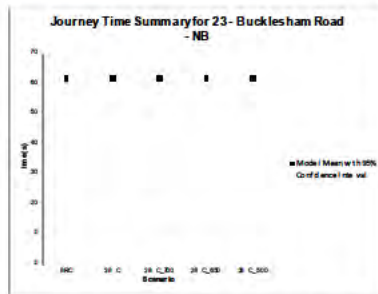
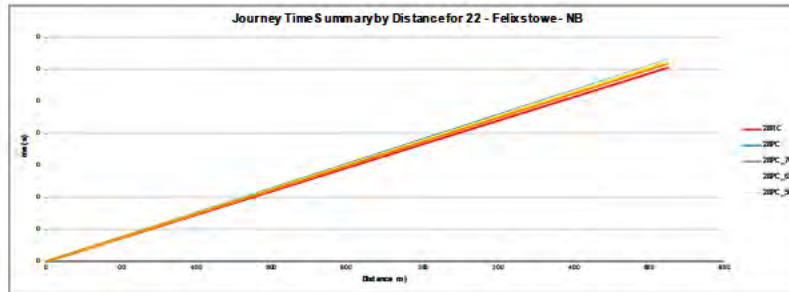
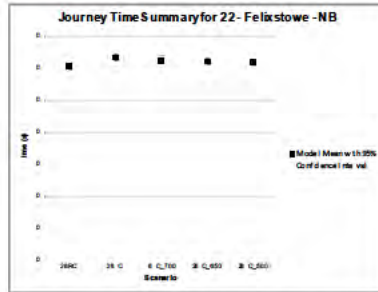
Journey Time Summary by Distance for 51 - A12 NB

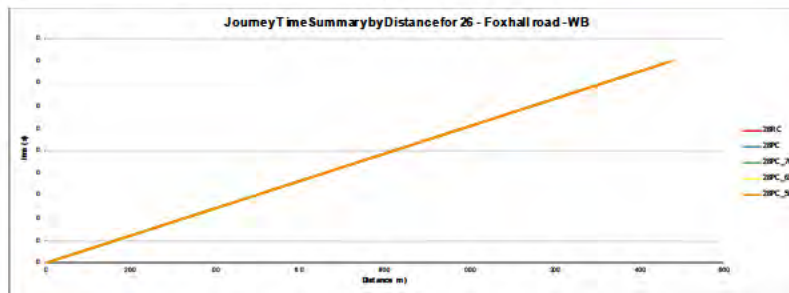
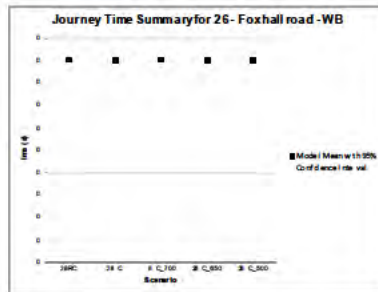
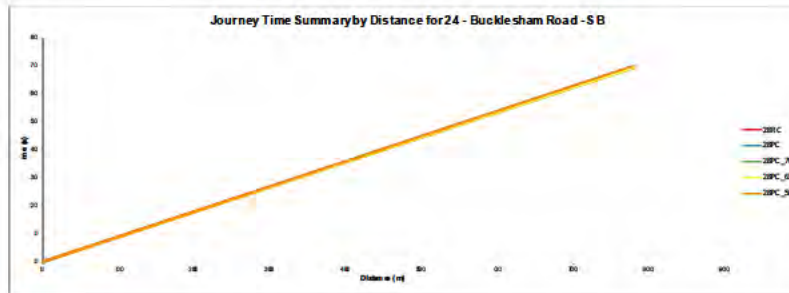
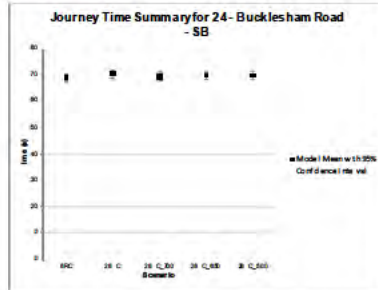


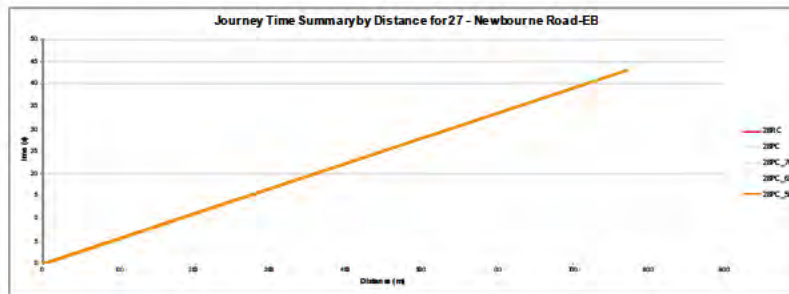
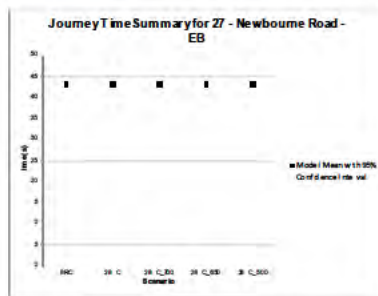
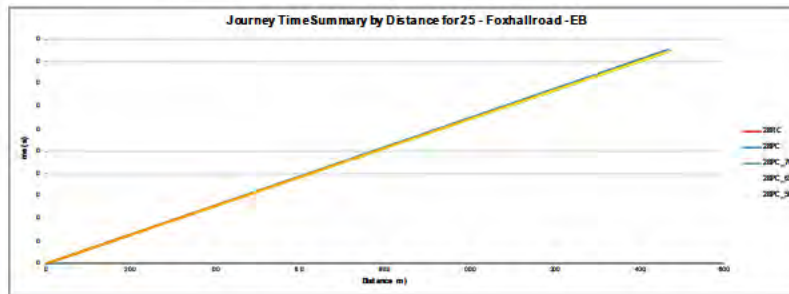
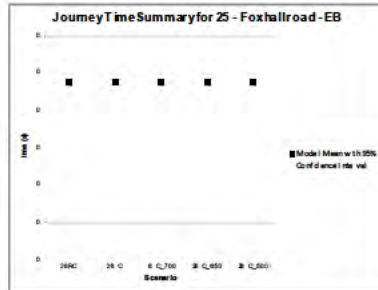


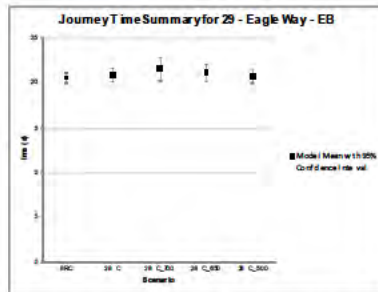
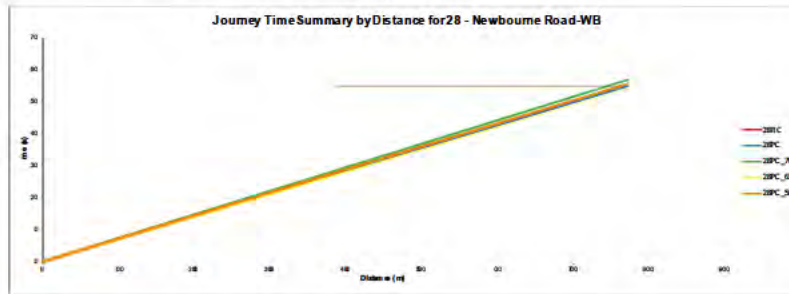
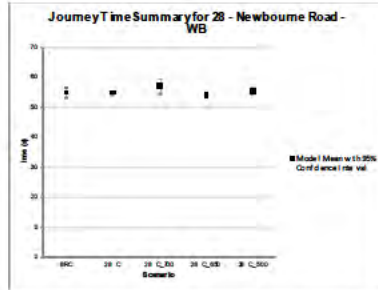


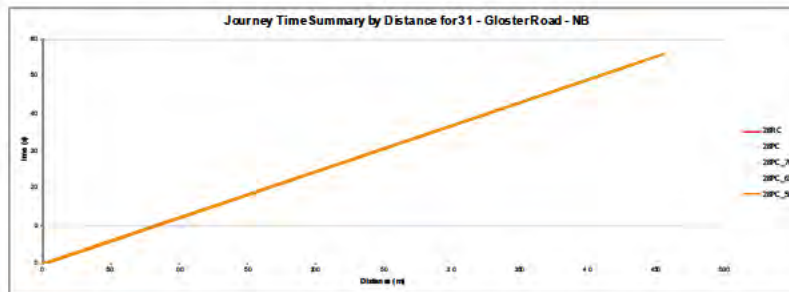
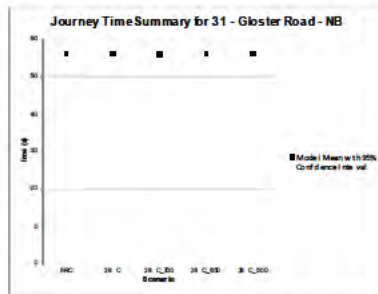
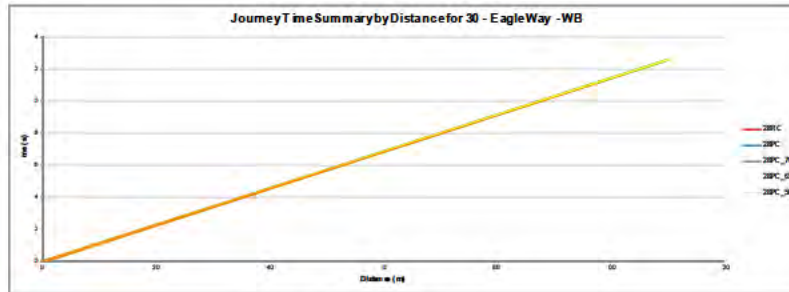
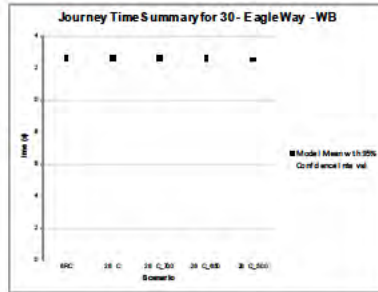


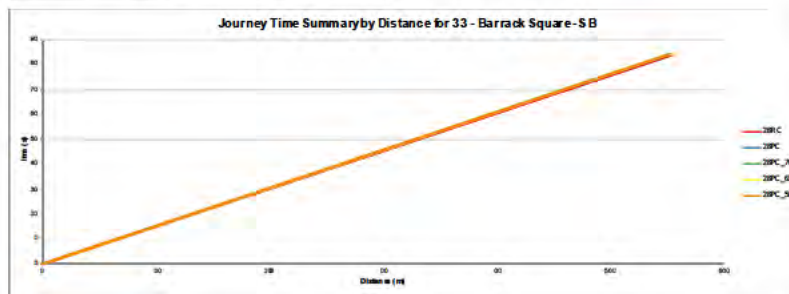
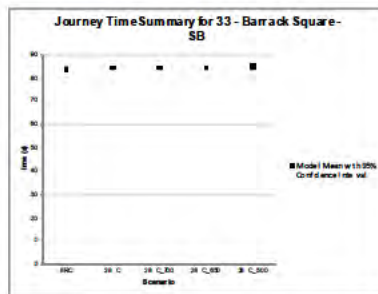
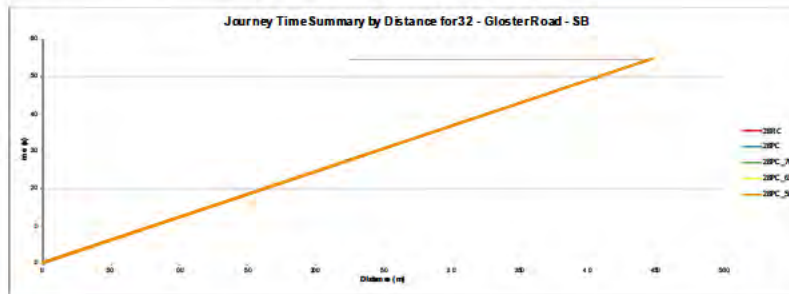
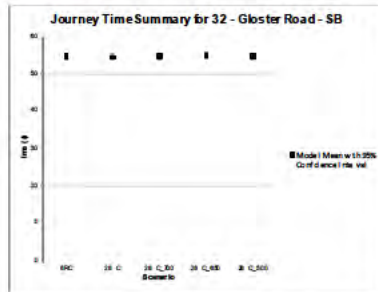


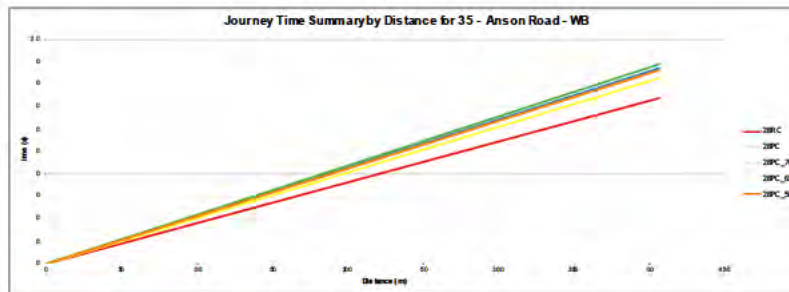
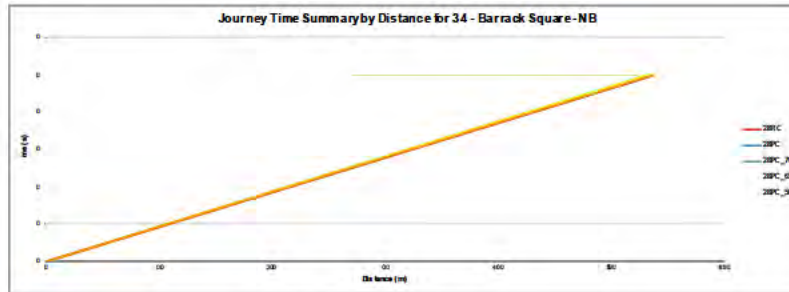
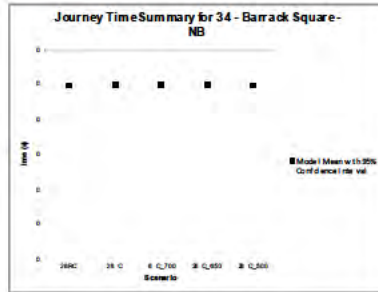


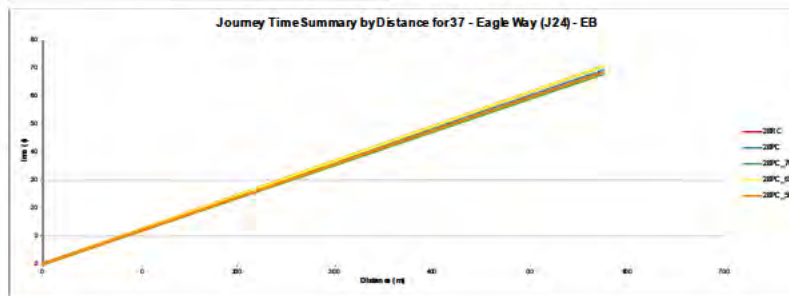
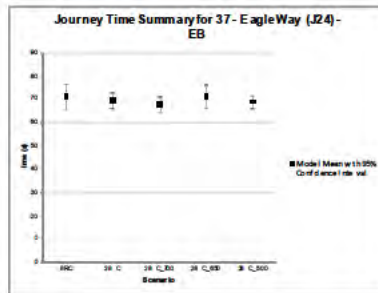
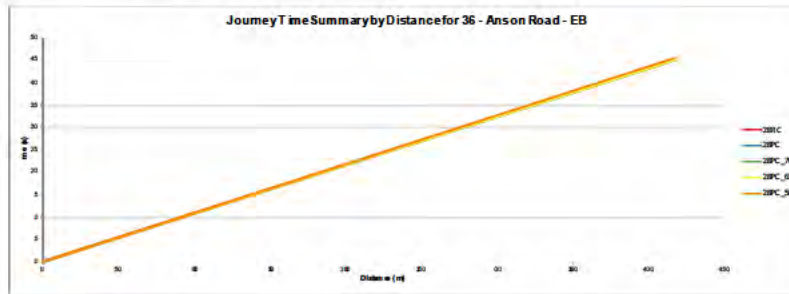
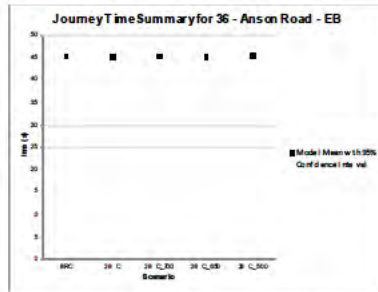


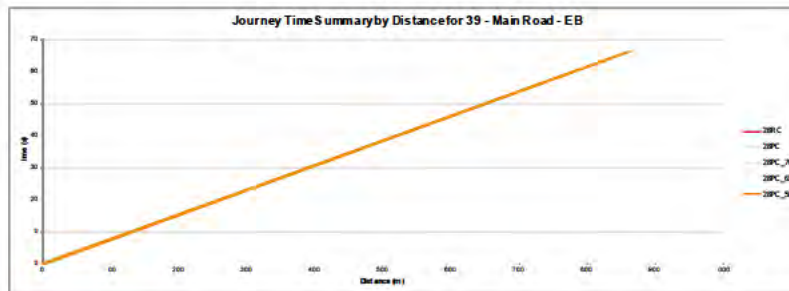
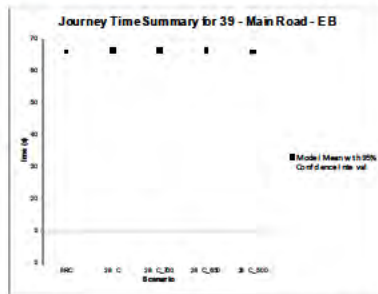
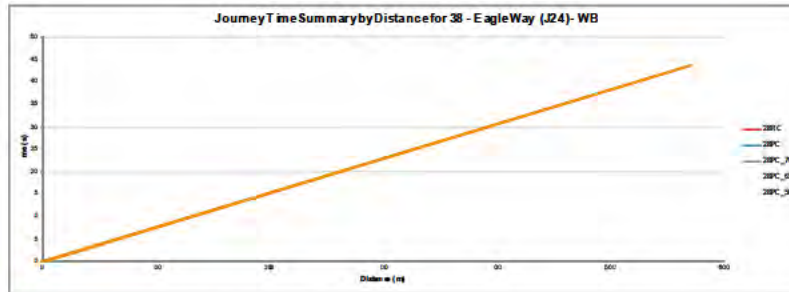
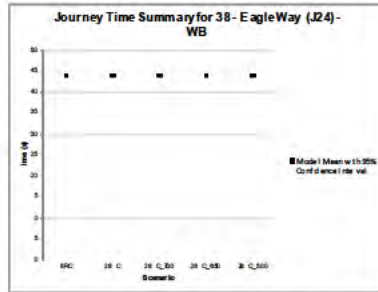


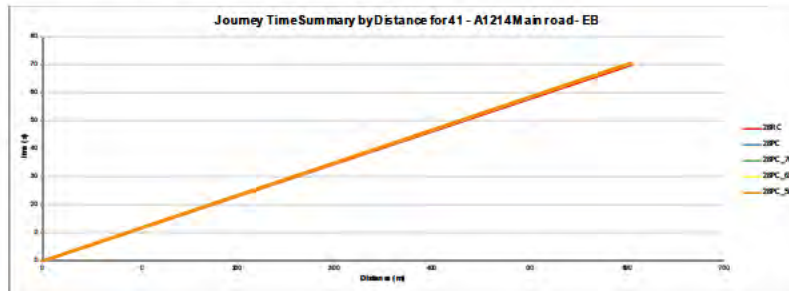
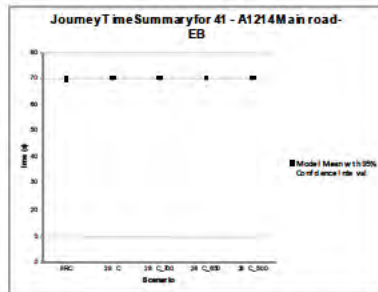
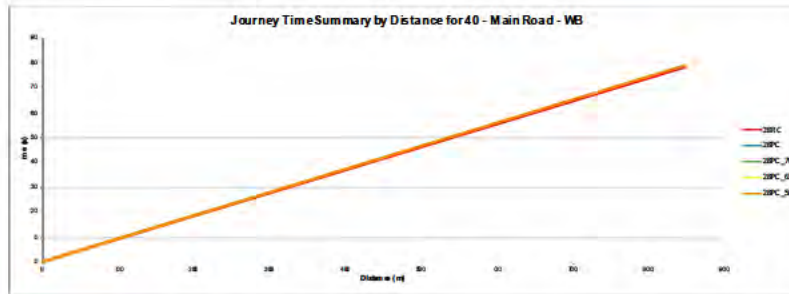
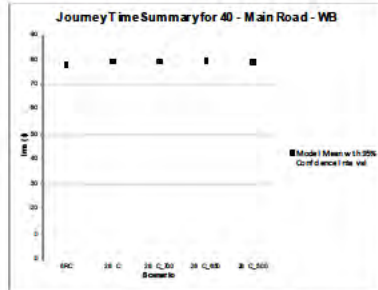


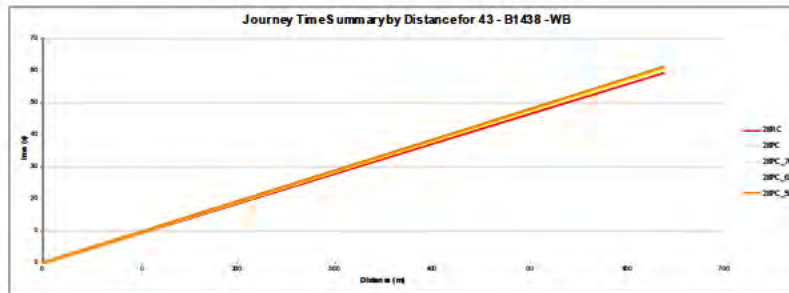
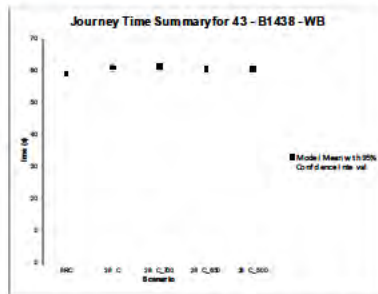
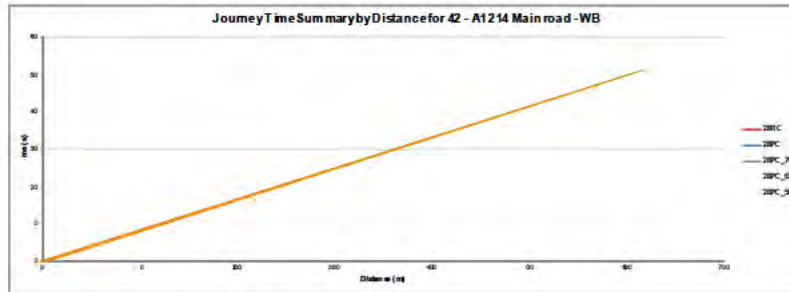
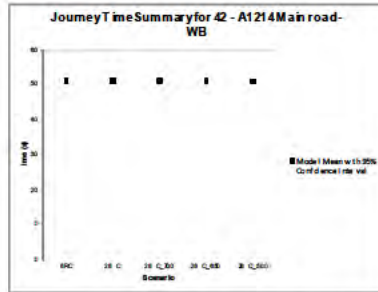


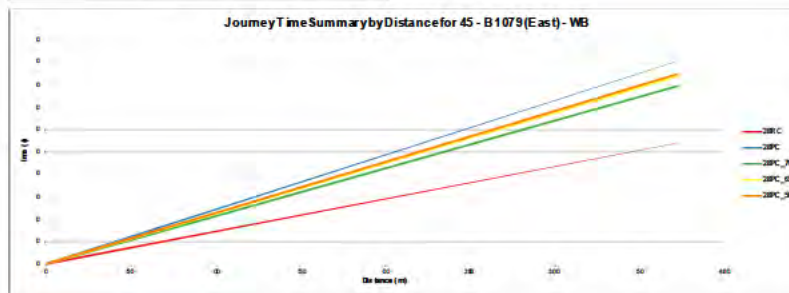
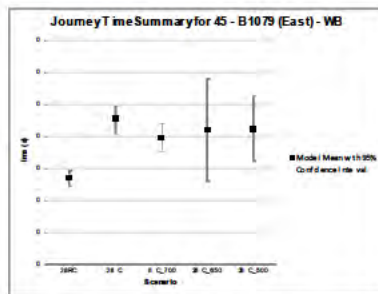
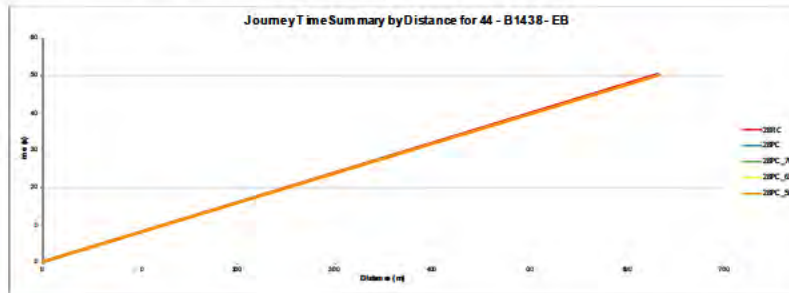
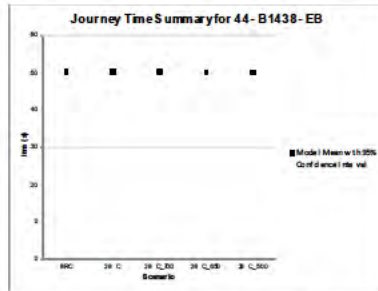


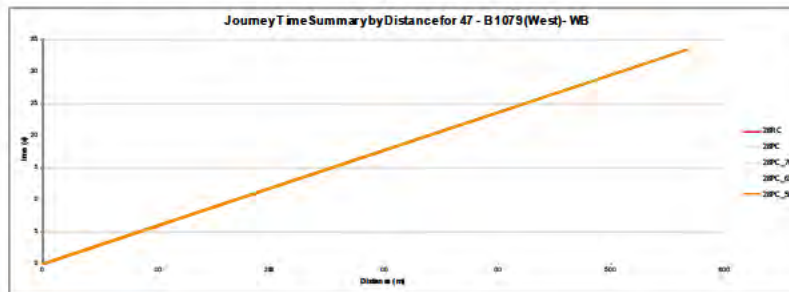
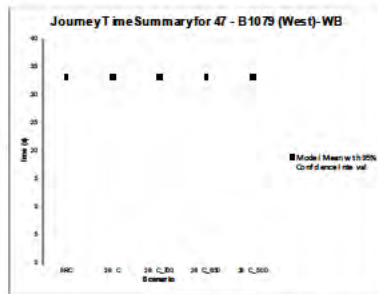
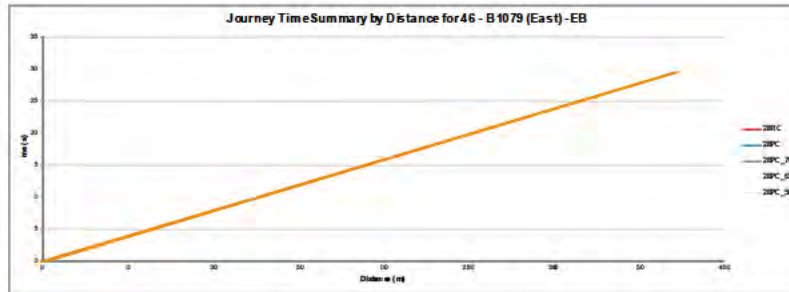
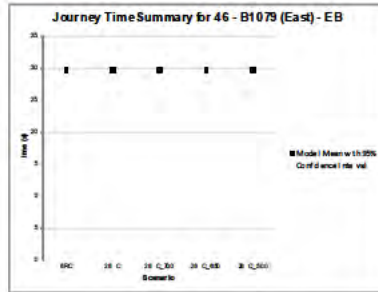


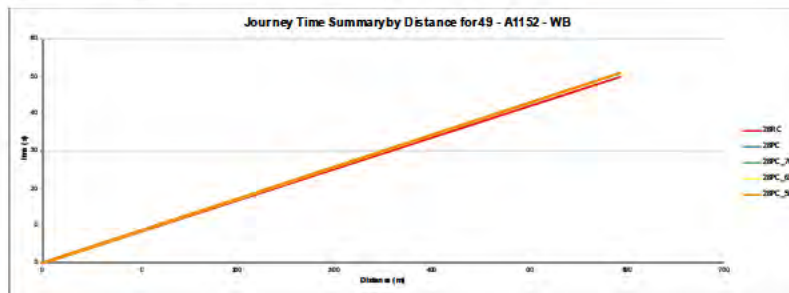
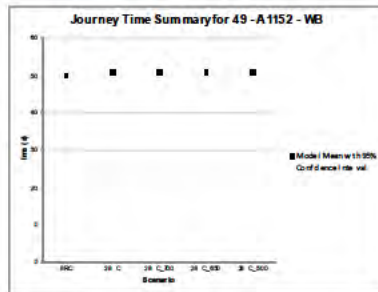
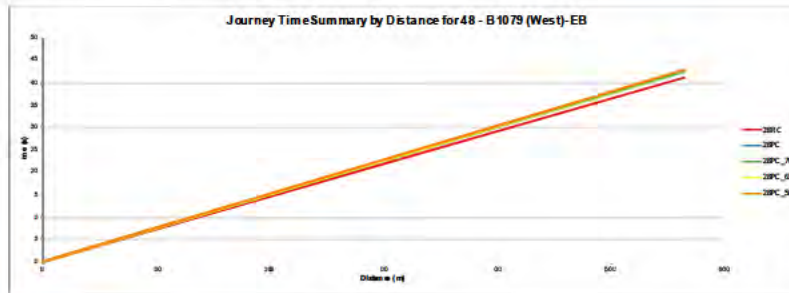
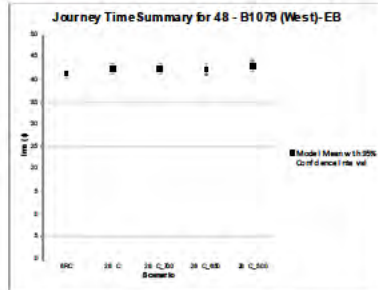


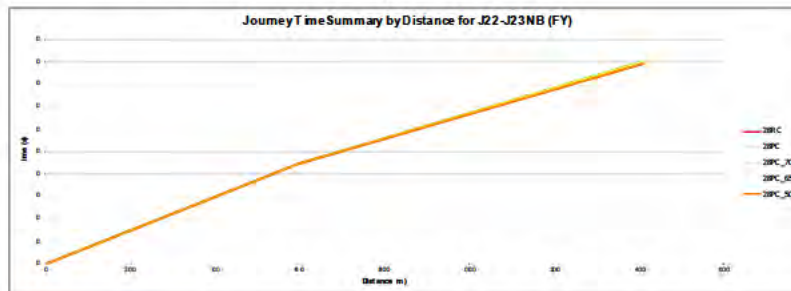
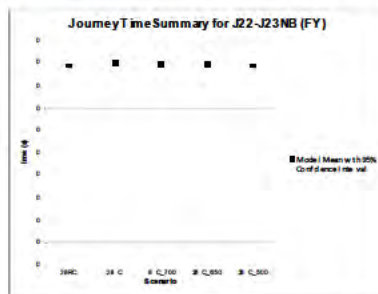
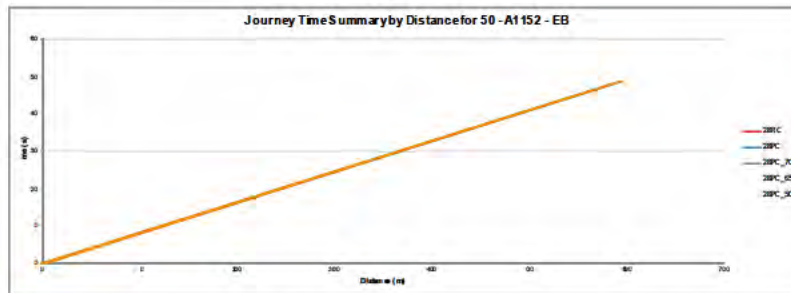
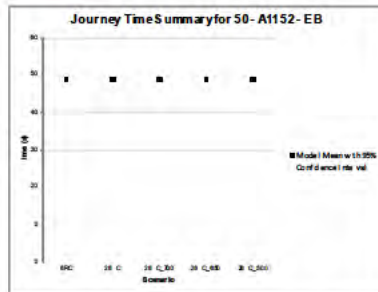


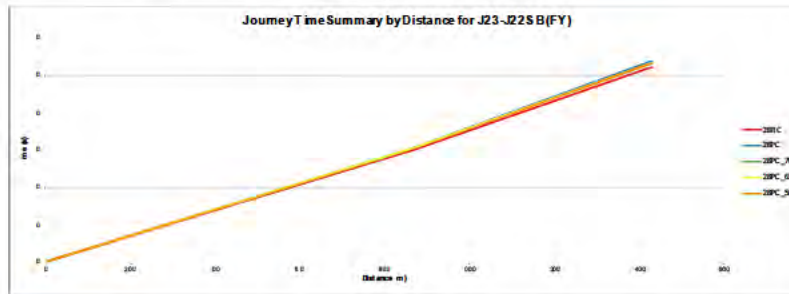
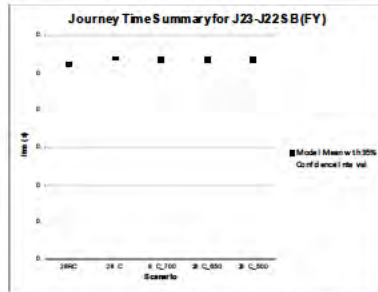




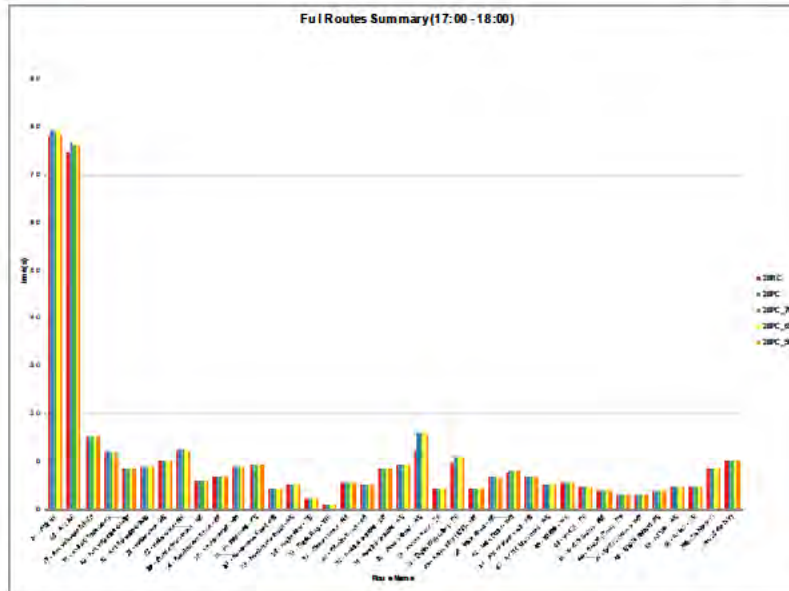




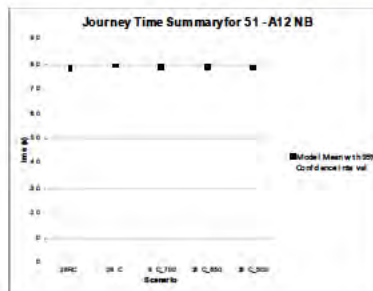




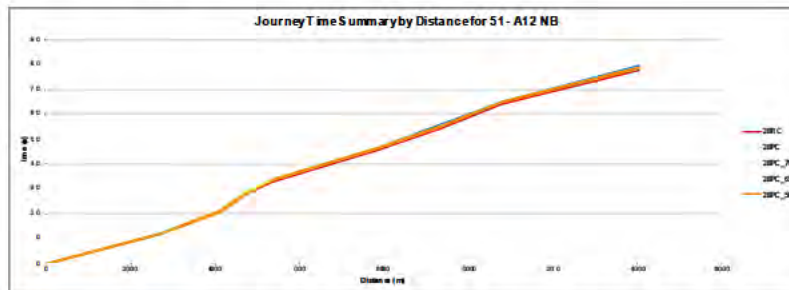
Full Routes Summary (17:00 - 18:00)

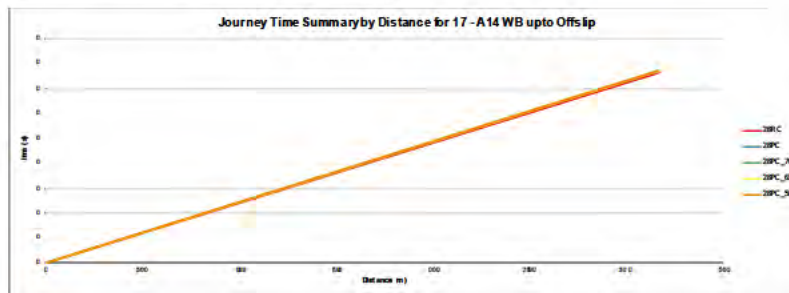
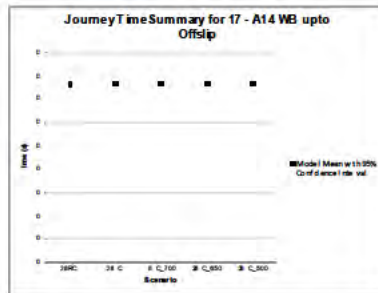
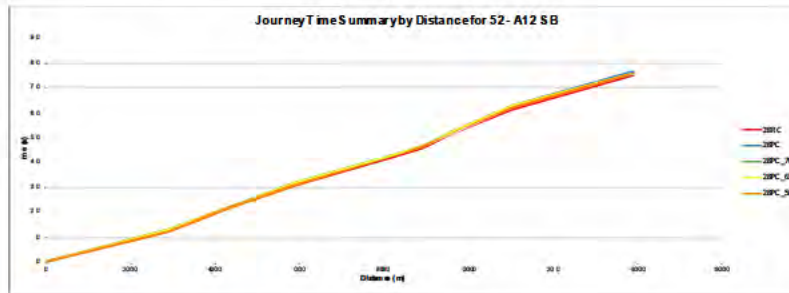
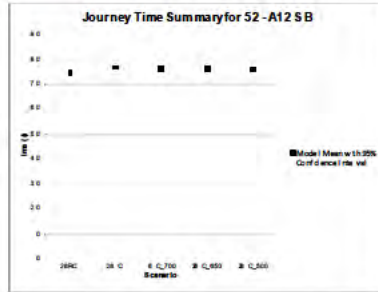


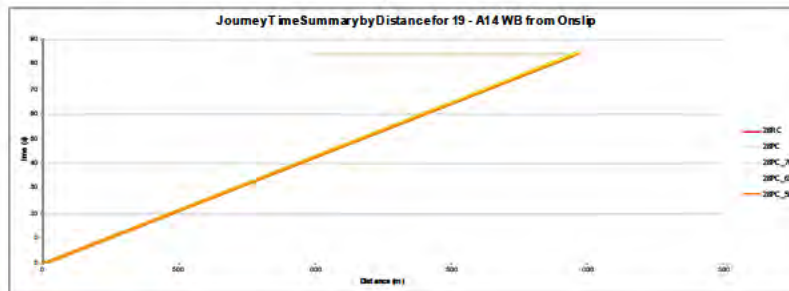
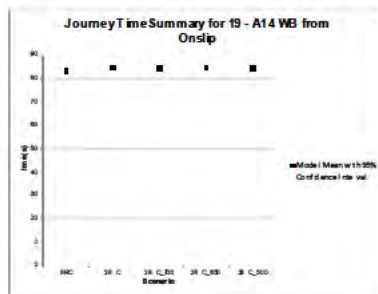
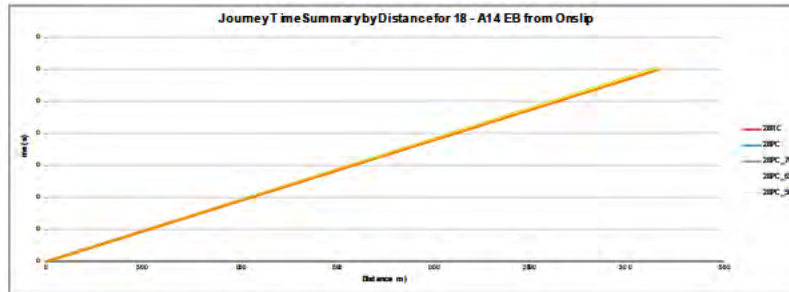
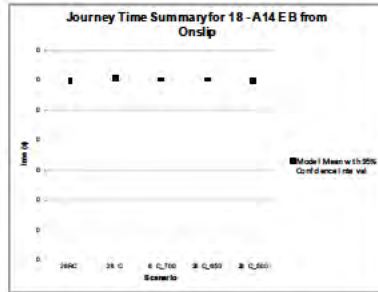
Journey Time Summary for 51 - A12 NB

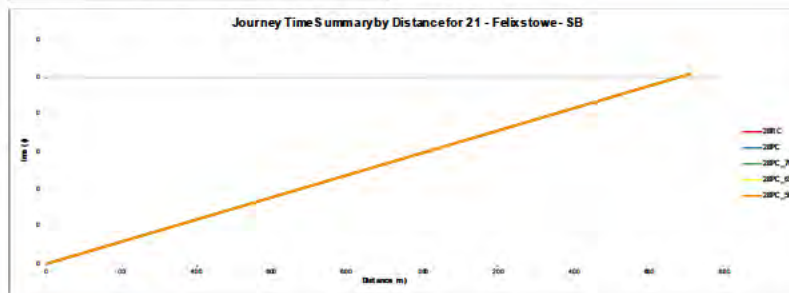
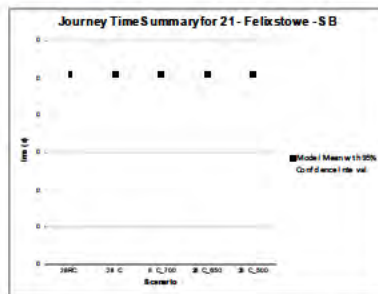
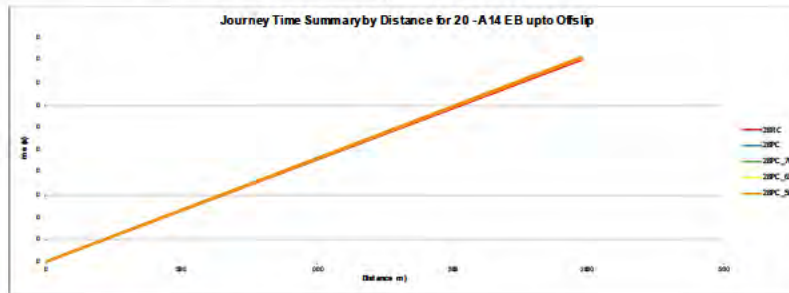
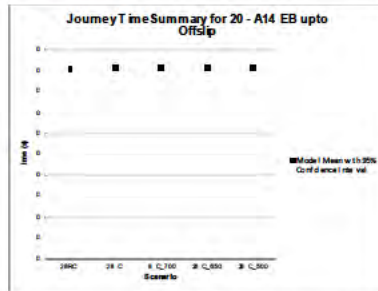


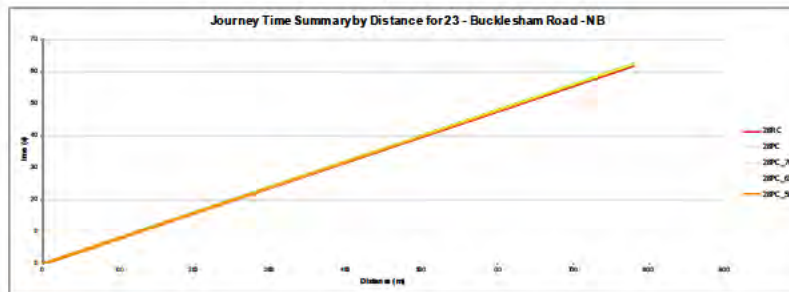
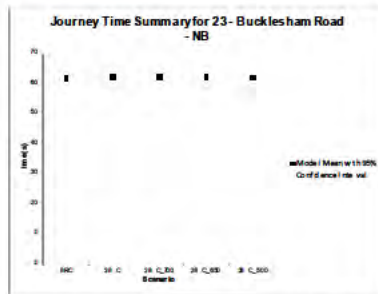
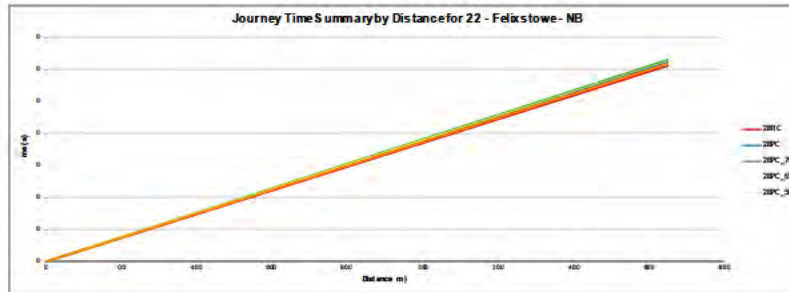
Journey Time Summary by Distance for 51 - A12 NB

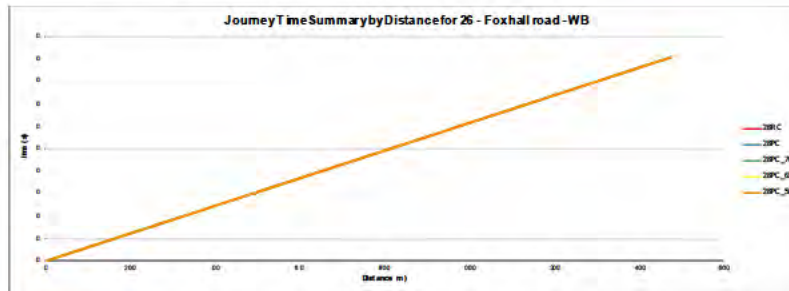
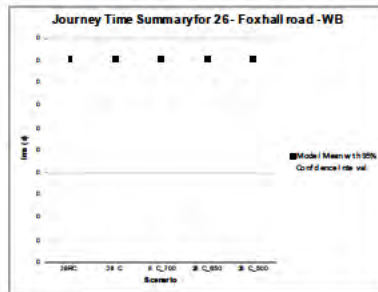
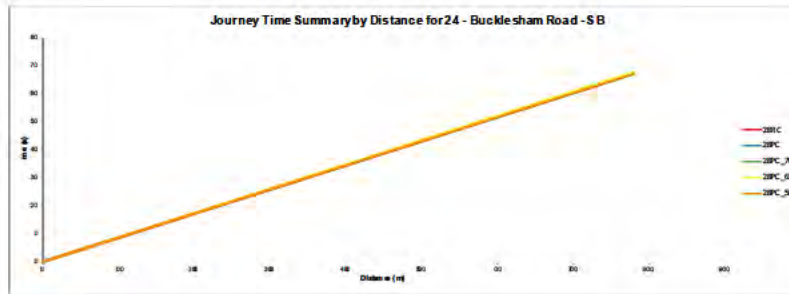
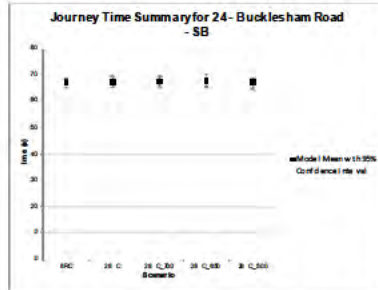


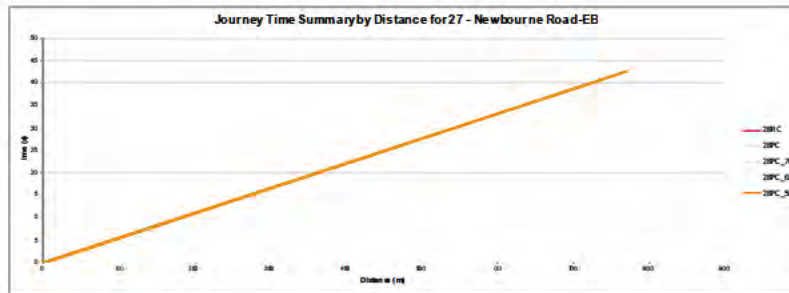
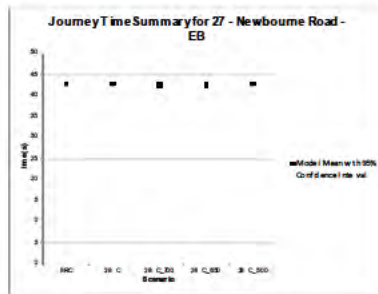
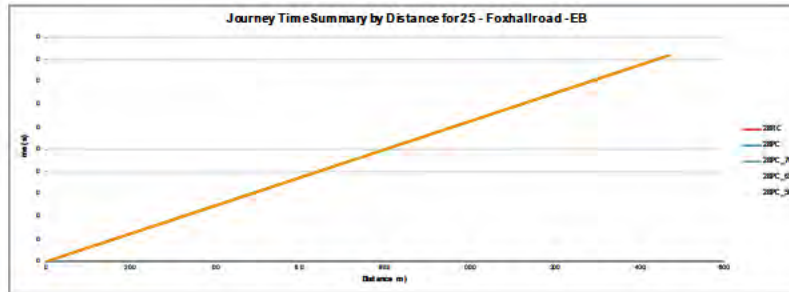
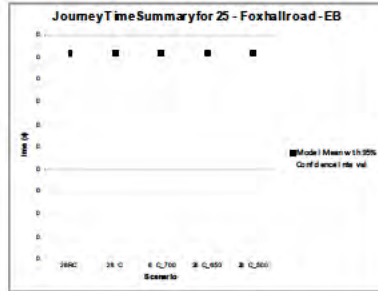


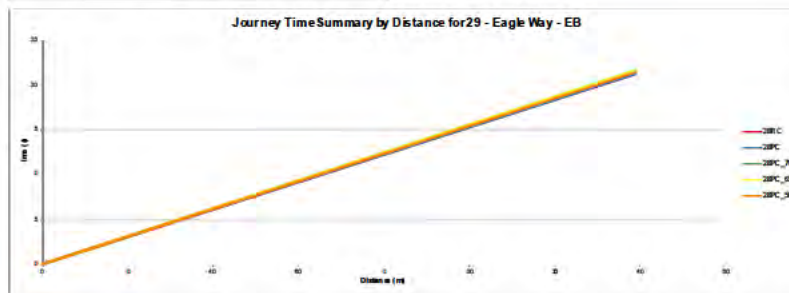
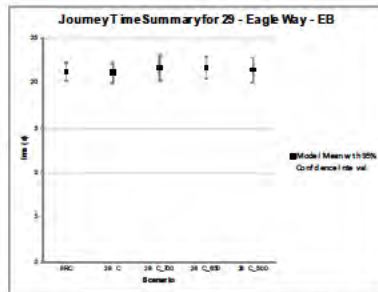
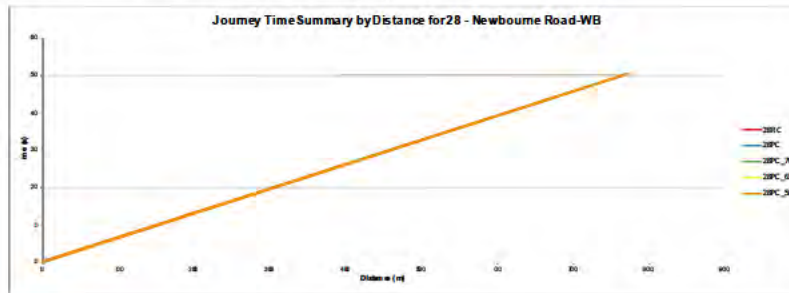
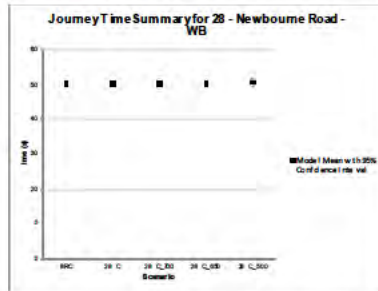


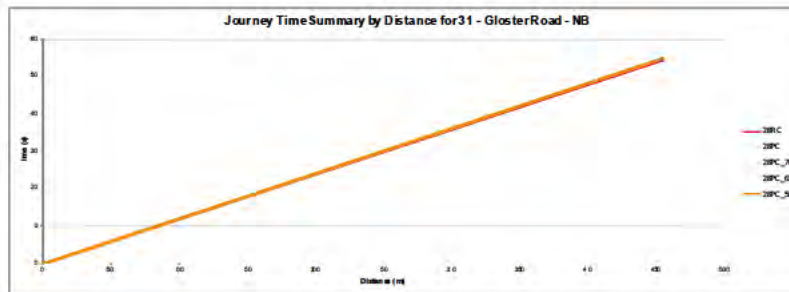
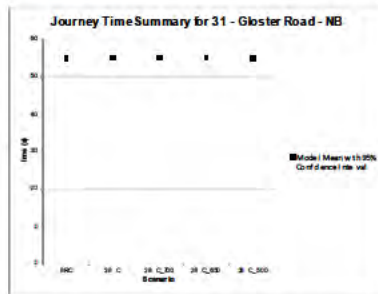
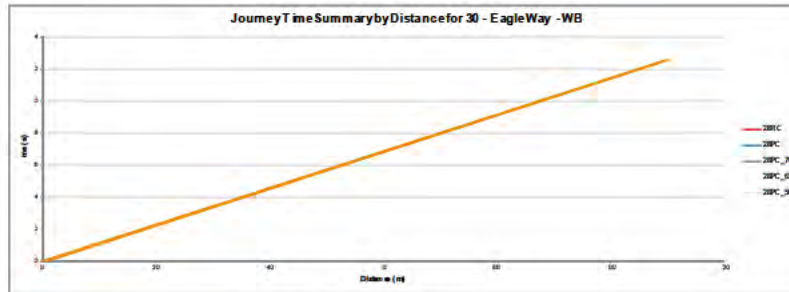
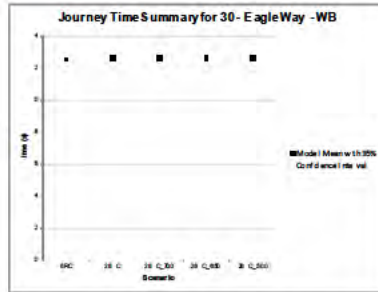


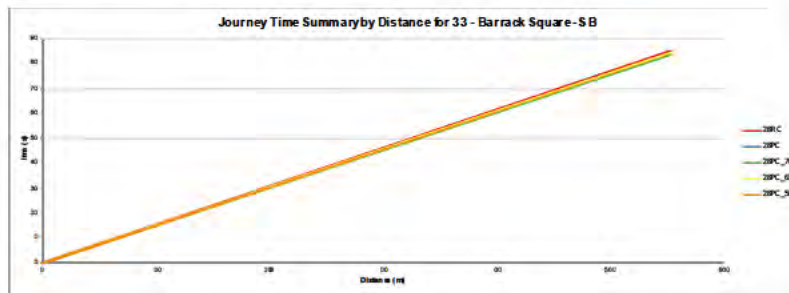
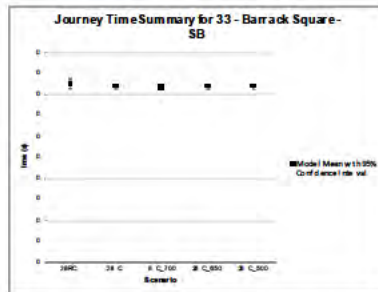
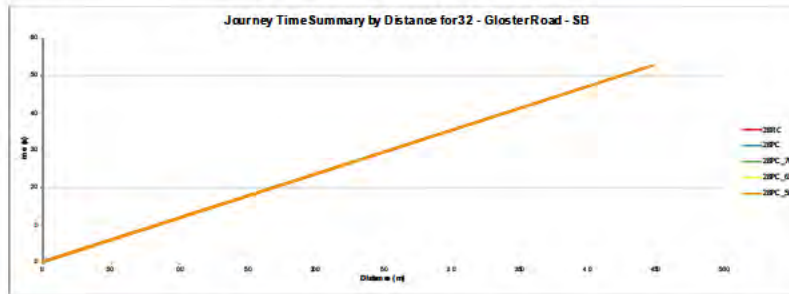
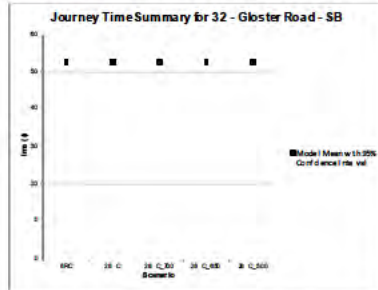


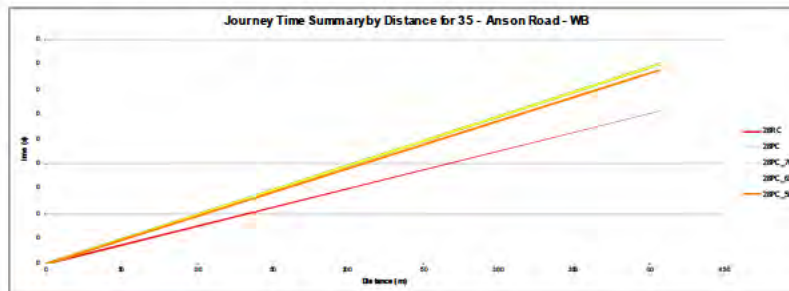
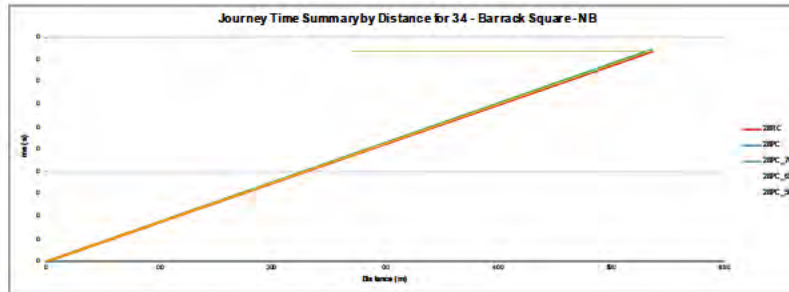
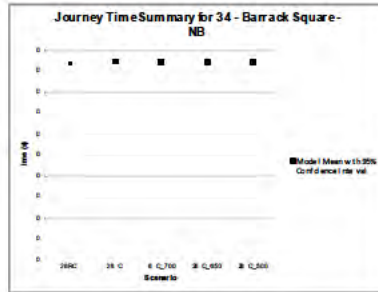


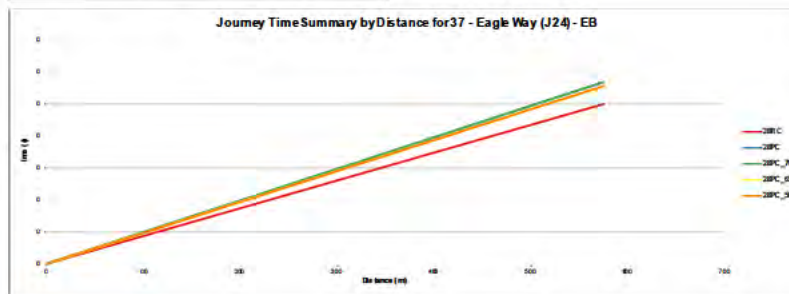
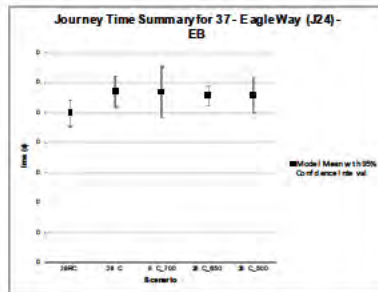
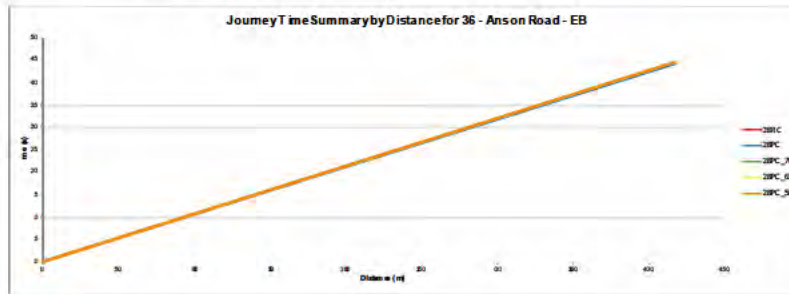
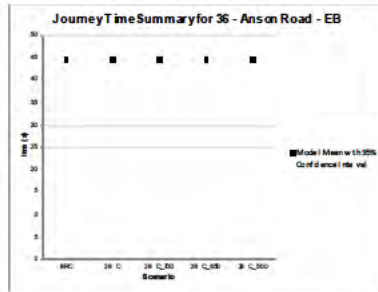


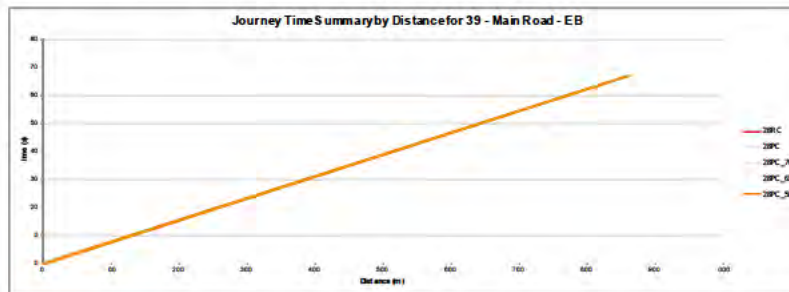
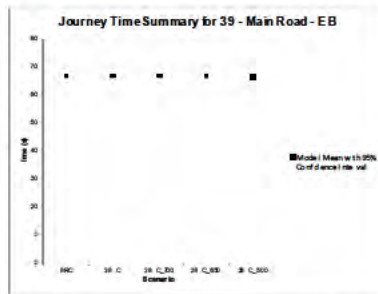
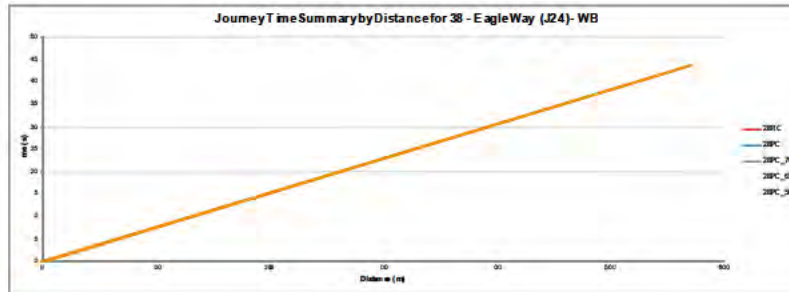
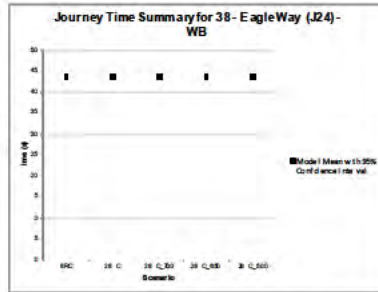


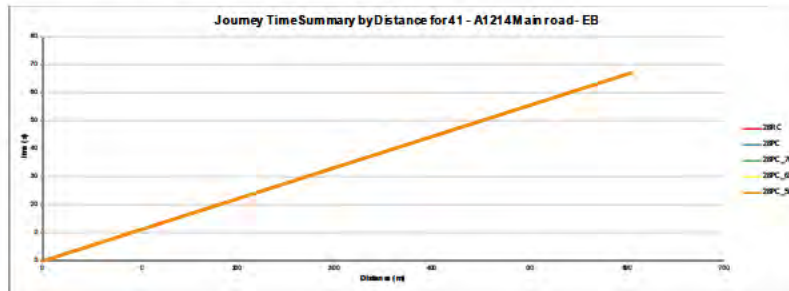
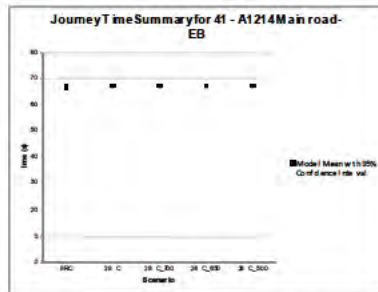
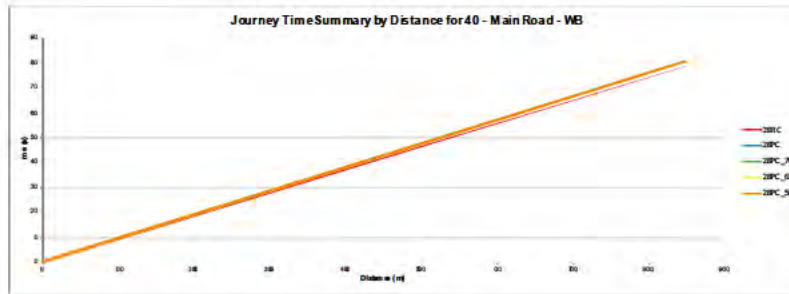
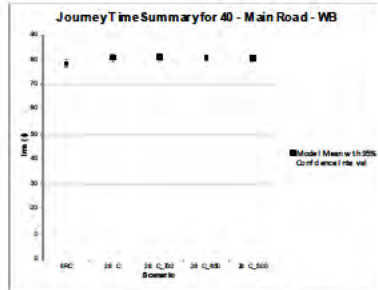


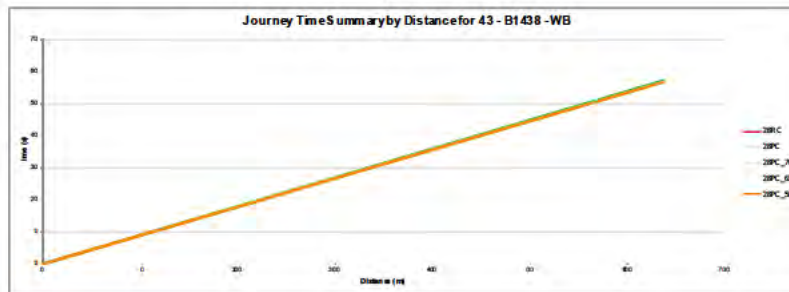
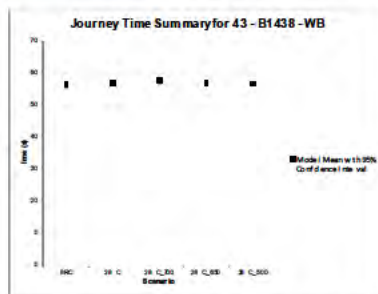
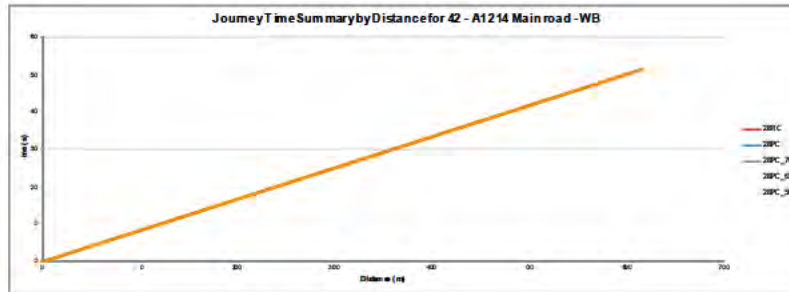
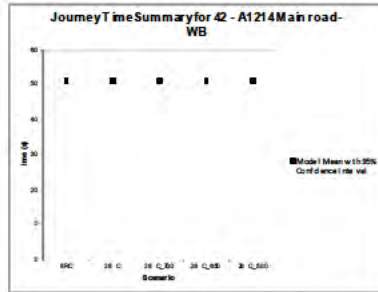


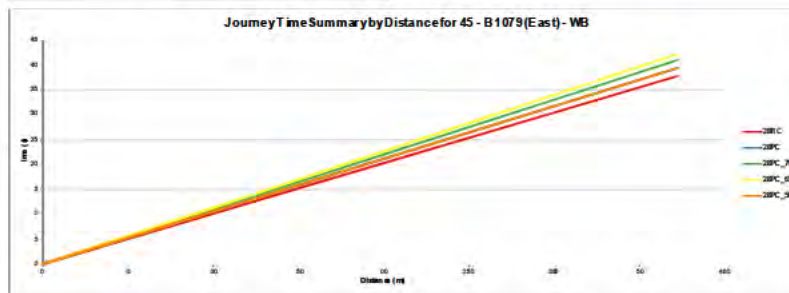
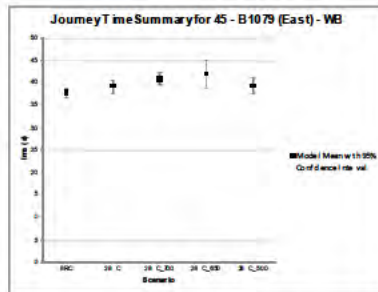
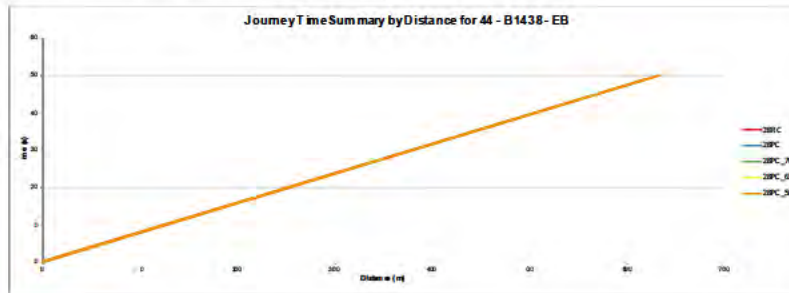
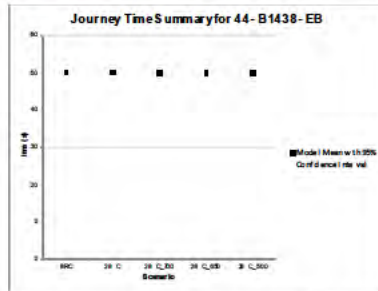


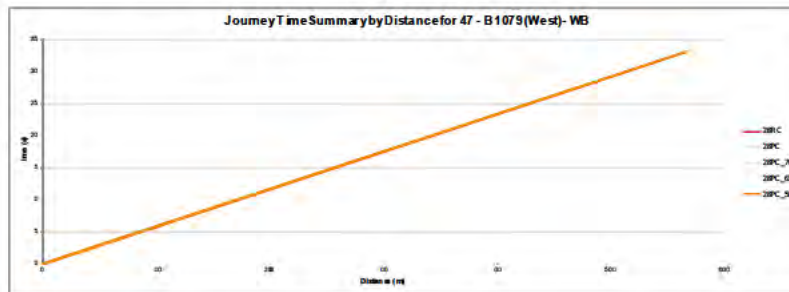
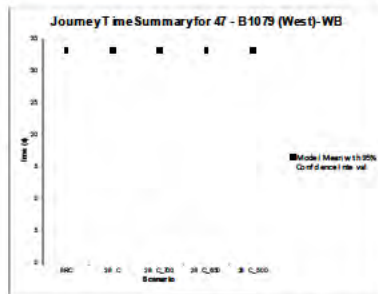
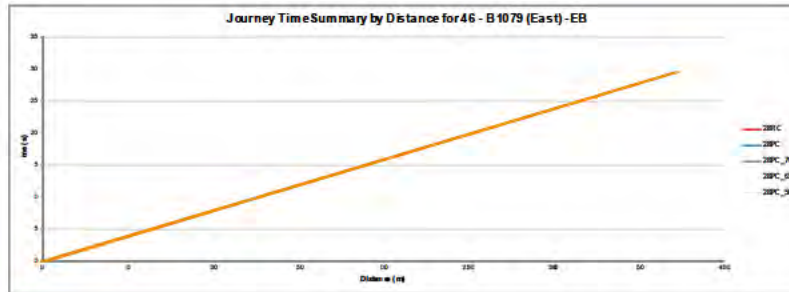
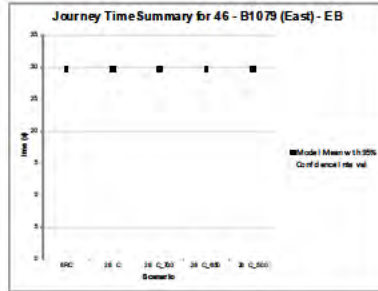


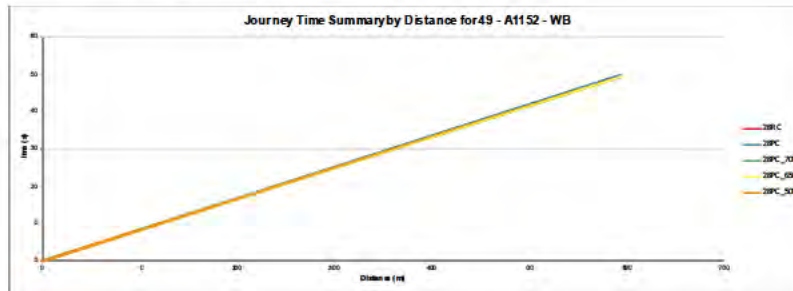
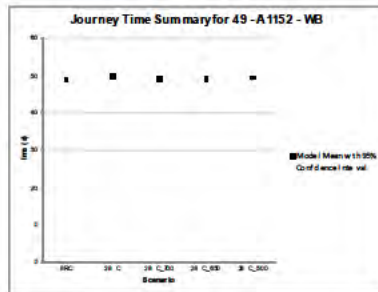
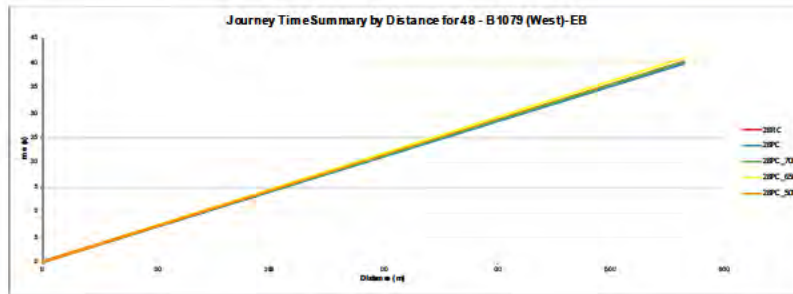
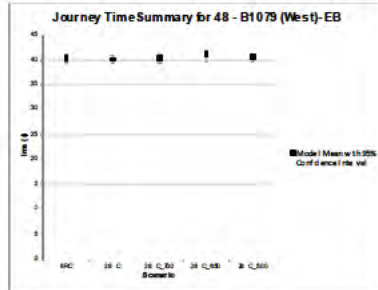


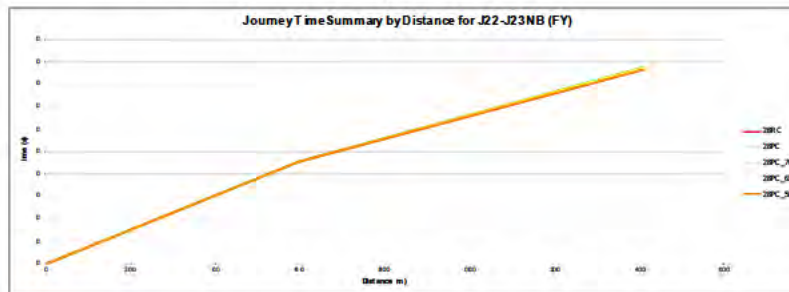
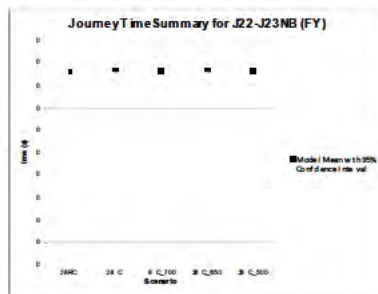
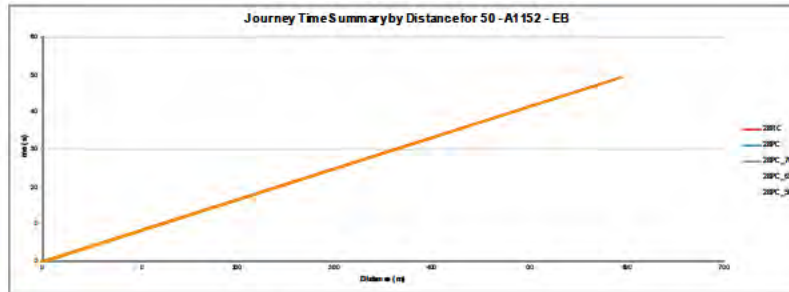
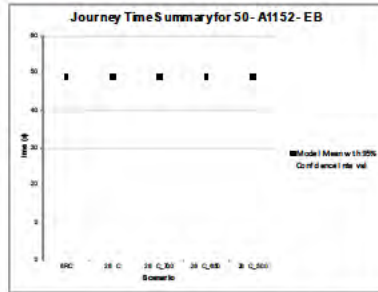


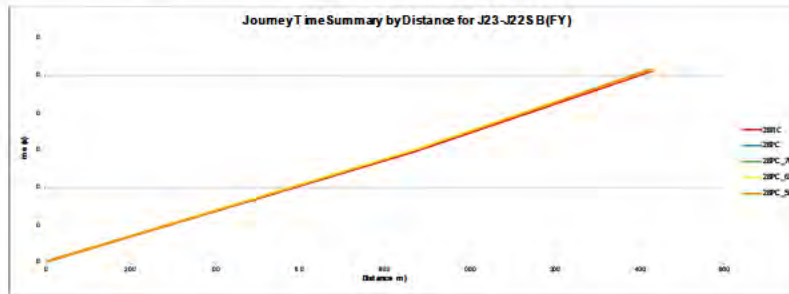
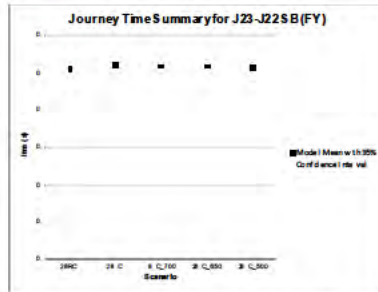








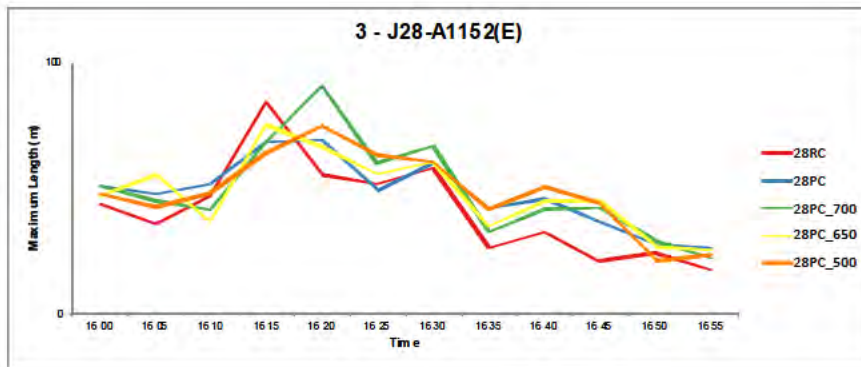
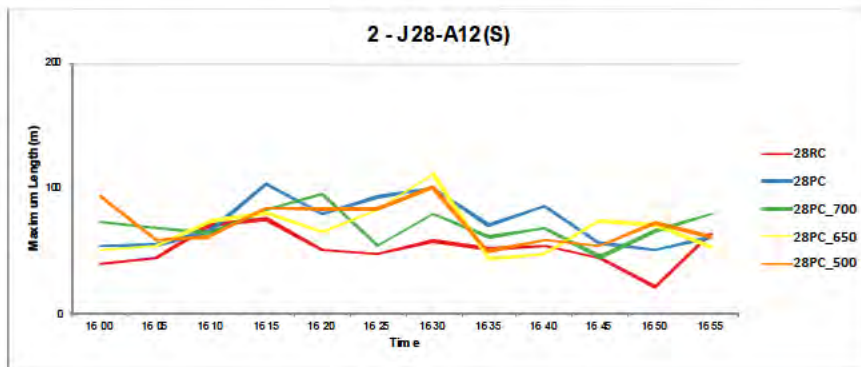
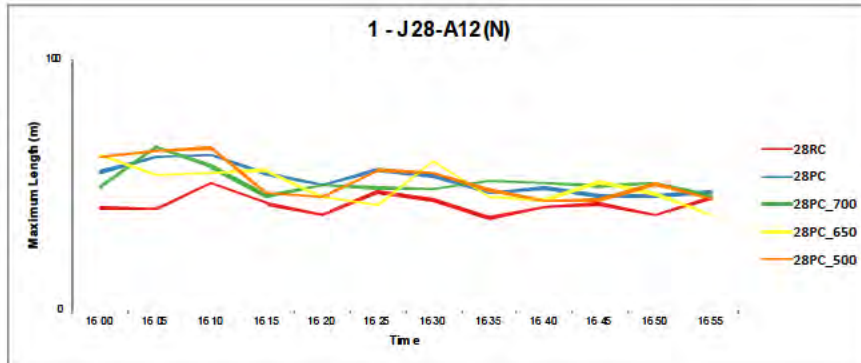


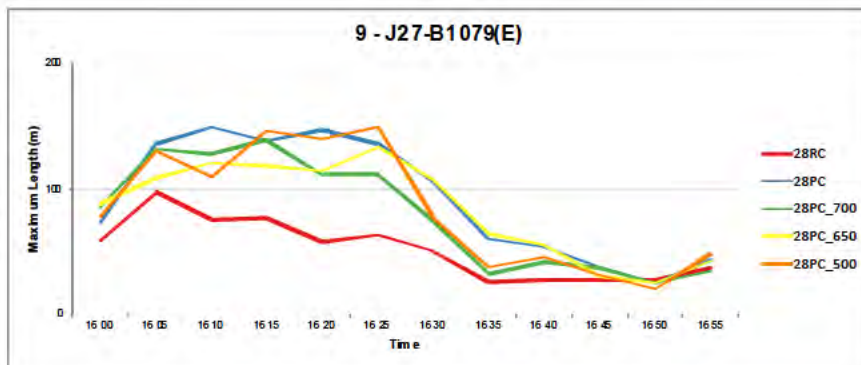
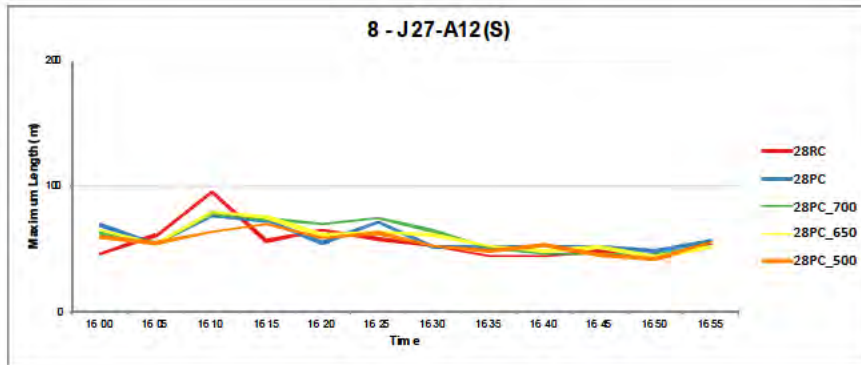
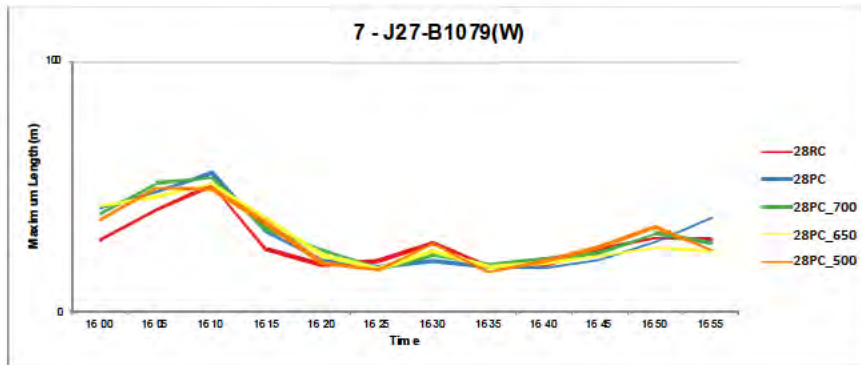
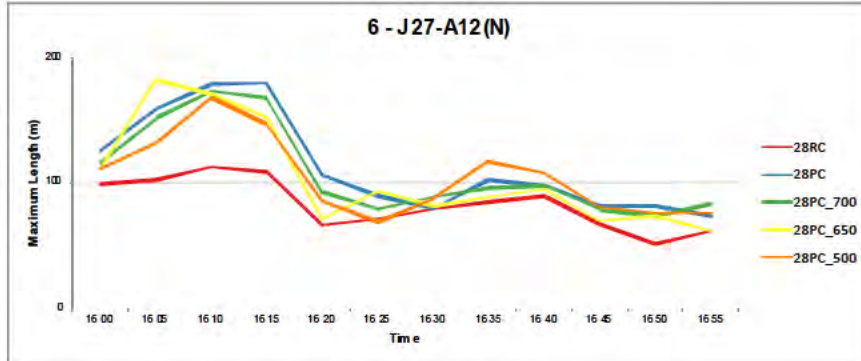


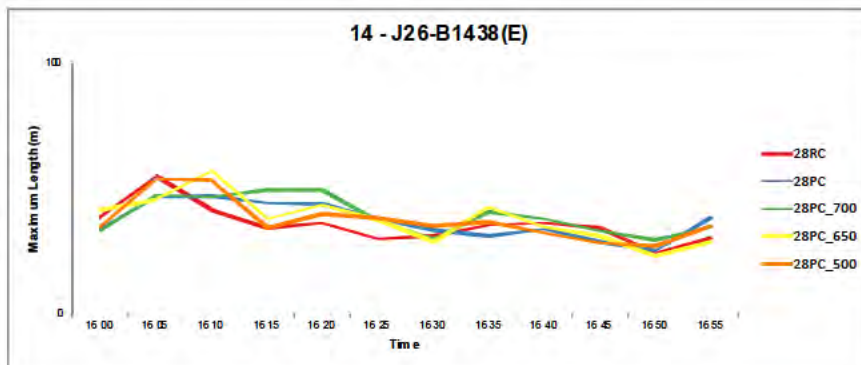
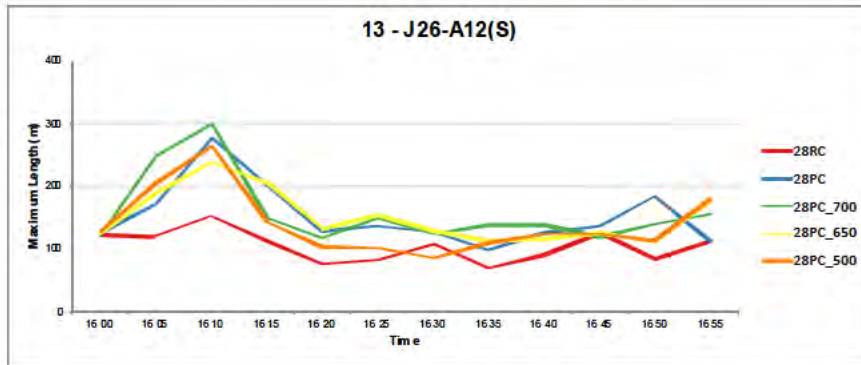
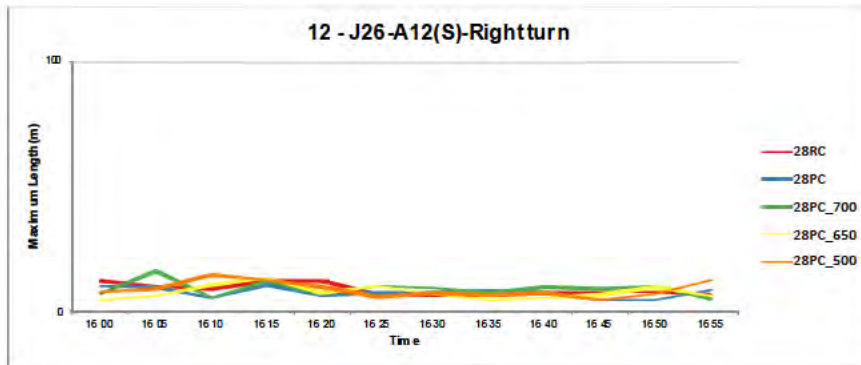
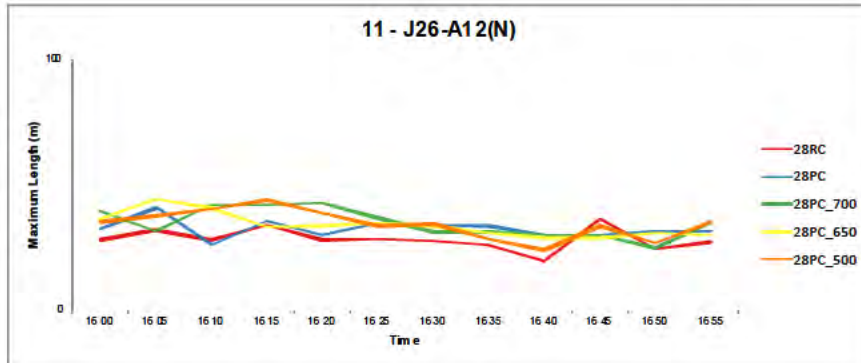


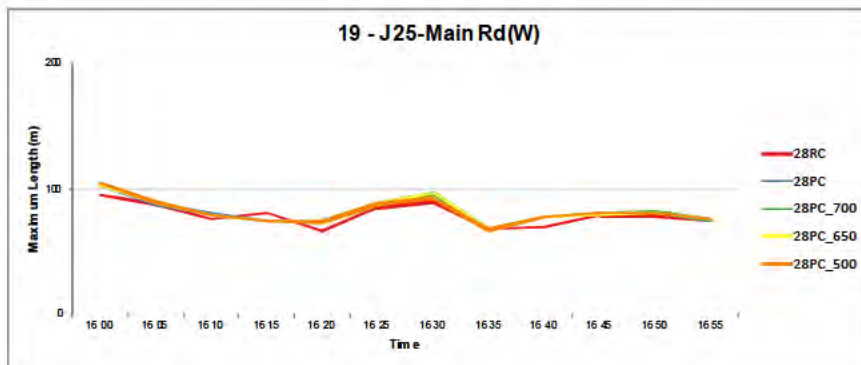
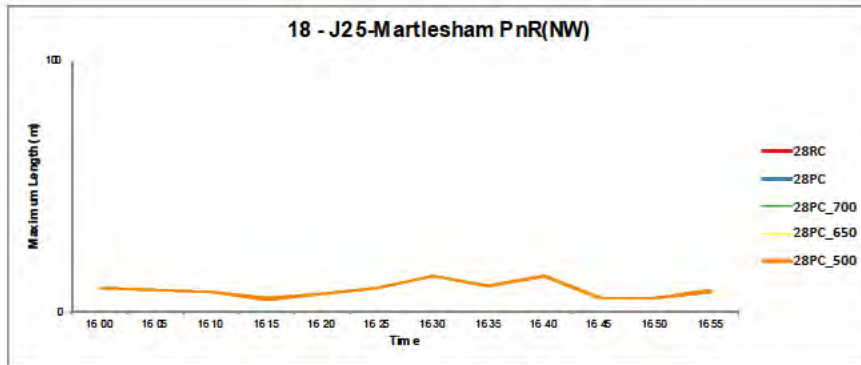
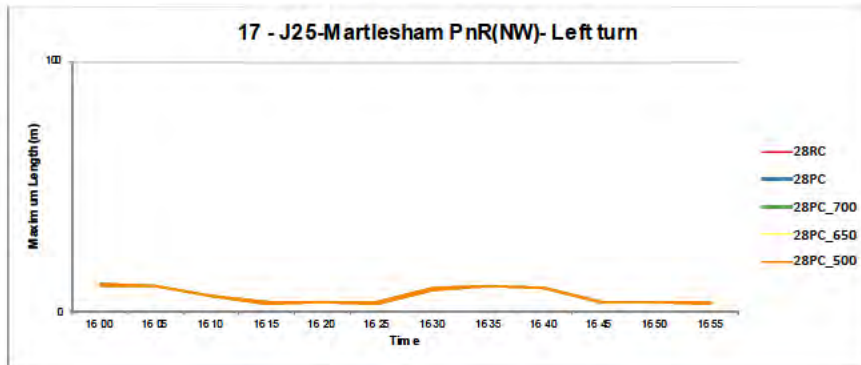
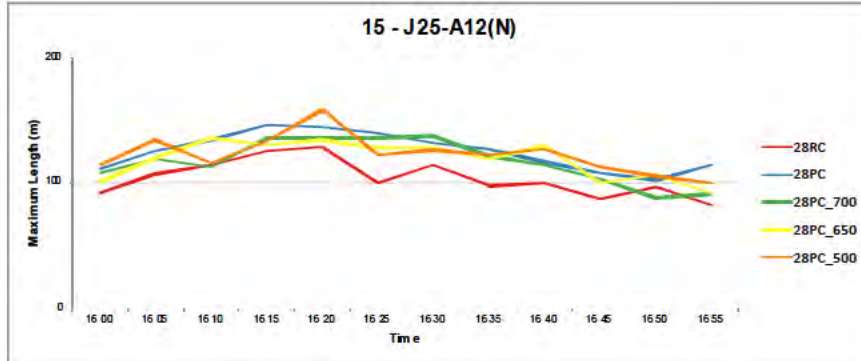
Journey Time Table
15:00-16:00
All 2028

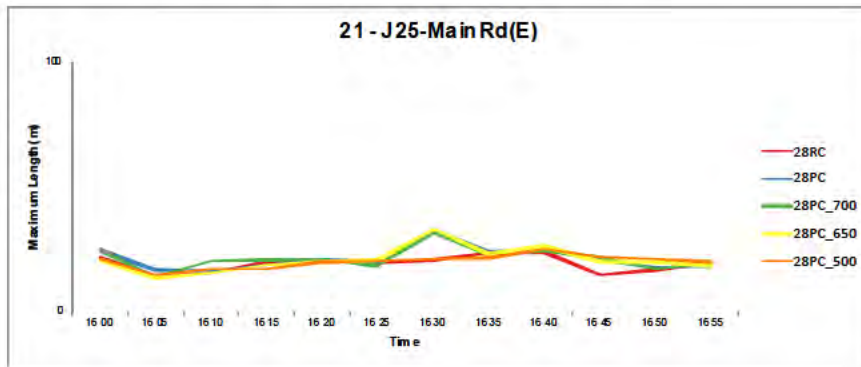
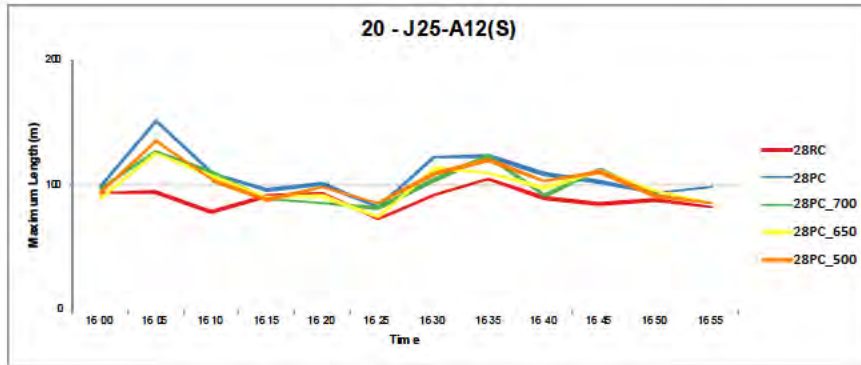
Route Names	28RC	28PC	28PC_7 00	28PC_6 50	28PC_5 00
1 - J21 - J22 - NB	115	119	117	117	117
2 - J22 - J23 - NB	84	88	86	86	86
3 - J23 - J24 - NB	70	84	81	74	77
4 - J24 - J25 - NB	49	52	51	51	51
5 - J25 - J26 - NB	125	131	130	129	128
6 - J26 - J27 - NB	91	93	93	93	92
7 - J27 - J28 - NB	97	99	98	98	98
8 - J28 - A12- NB	137	139	139	139	138
51 - A12 NB	768	804	795	786	788
9 - A12 - J28 - SB	126	131	131	130	130
10 - J28 - J27 - SB	94	97	97	97	96
11 - J27 - J26 - SB	92	94	94	94	94
12 - J26 - J25 - SB	119	122	122	122	121
13 - J25 - J24 - SB	36	37	37	37	37
14 - J24 - J23 - SB	42	42	42	42	42
15 - J23 - J22 - SB	99	101	100	100	100
16 - J22 - J21 - SB	134	137	136	137	136
52 - A12 SB	740	759	756	756	753
17 - A14 WB upto Offslip	156	157	157	156	156
18 - A14 EB from Onslip	119	120	120	120	120
19 - A14 WB from Onslip	85	86	86	85	85
20 - A14 EB upto Offslip	90	94	93	93	92
21 - Felixstowe - SB	100	100	100	100	100
22 - Felixstowe - NB	126	125	121	121	120
23 - Bucklesham Road - NB	62	62	62	62	62
24 - Bucklesham Road - SB	67	67	67	67	67
26 - Foxhall road - WB	89	89	89	89	89
25 - Foxhall road - EB	94	94	94	94	94
27 - Newbourne Road -EB	43	43	43	43	43
28 - Newbourne Road -WB	50	51	51	51	52
29 - Eagle Way - EB	26	27	26	27	26
30 - Eagle Way - WB	13	13	13	13	13
31 - Gloster Road - NB	57	57	57	57	57
32 - Gloster Road - SB	53	53	53	53	53
33 - Barrack Square - SB	84	85	85	85	85
34 - Barrack Square - NB	95	95	95	95	95
35 - Anson Road - WB	64	84	81	85	80
36 - Anson Road - EB	45	45	45	45	45
37 - Eagle Way (J24) - EB	81	109	85	80	82
38 - Eagle Way (J24) - WB	44	44	44	44	44
39 - Main Road - EB	66	66	66	66	66
40 - Main Road - WB	77	79	79	78	78
41 - A1214 Main road - EB	72	71	71	71	71
42 - A1214 Main road - WB	51	51	51	51	51
43 - B1438 - WB	55	57	57	57	57
44 - B1438 - EB	50	50	50	50	50
45 - B1079 (East) - WB	39	42	43	41	42
46 - B1079 (East) - EB	30	30	30	30	30
47 - B1079 (West)- WB	33	33	33	33	33
48 - B1079 (West)- EB	40	41	40	41	41
49 - A1152 - WB	49	50	50	50	50
50 - A1152 - EB	49	49	49	49	49
72 - J22 - J22B - NB	43	46	45	44	45
73 - J22B - J23 - NB	41	42	42	42	42
J22-J23 NB (FY)	84	88	86	86	86
70 - J23 - J22B - SB	58	58	58	58	58
71 - J22B - J22 - SB	41	42	42	42	42
J23-J22 SB (FY)	99	101	100	100	100

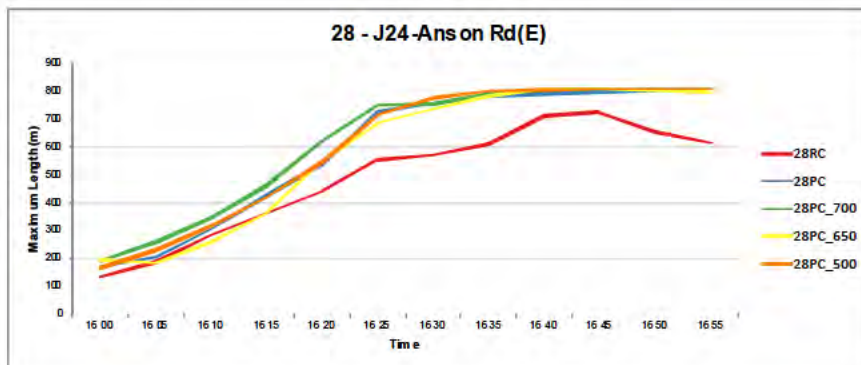
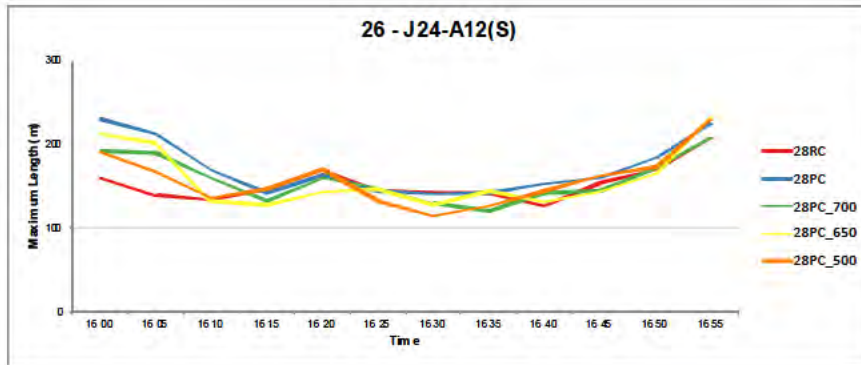
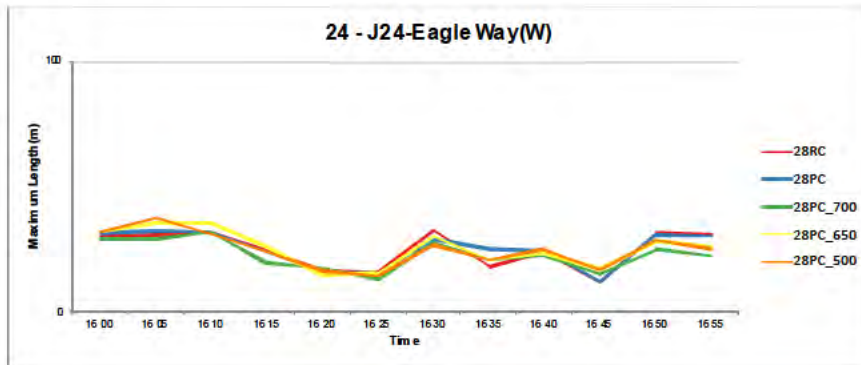
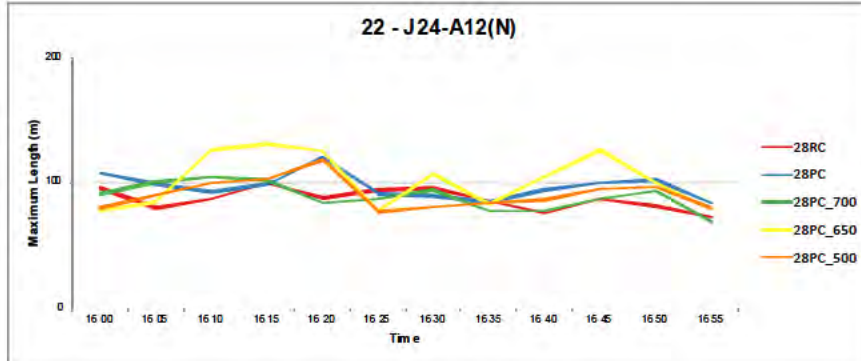


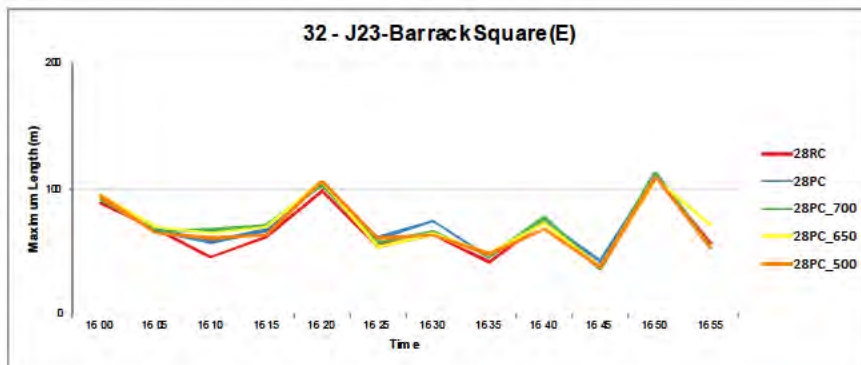
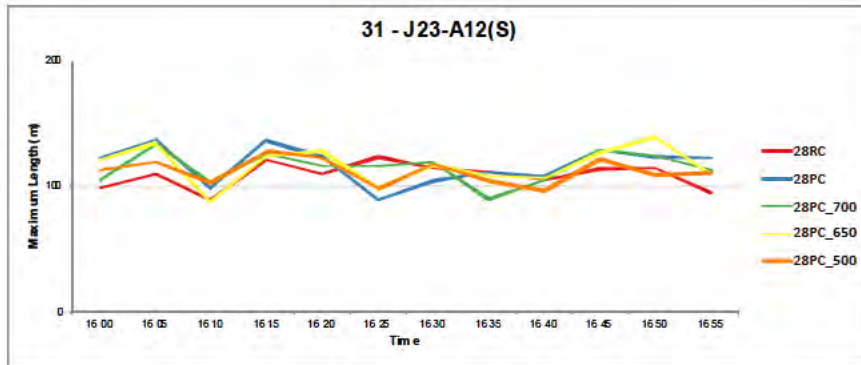
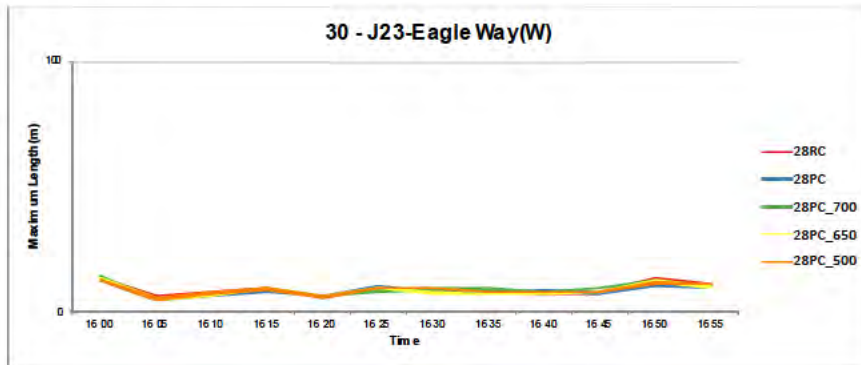
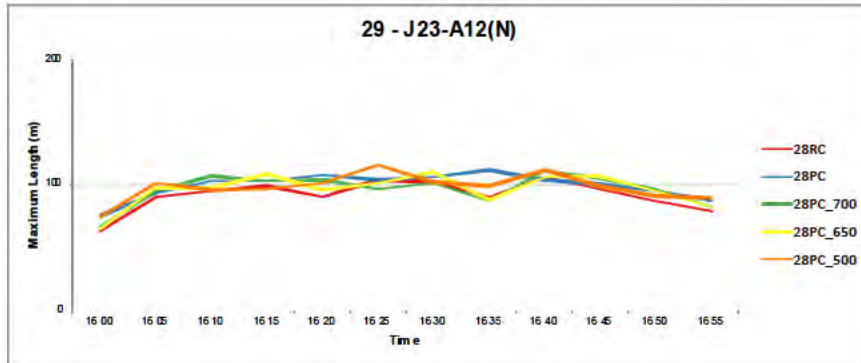


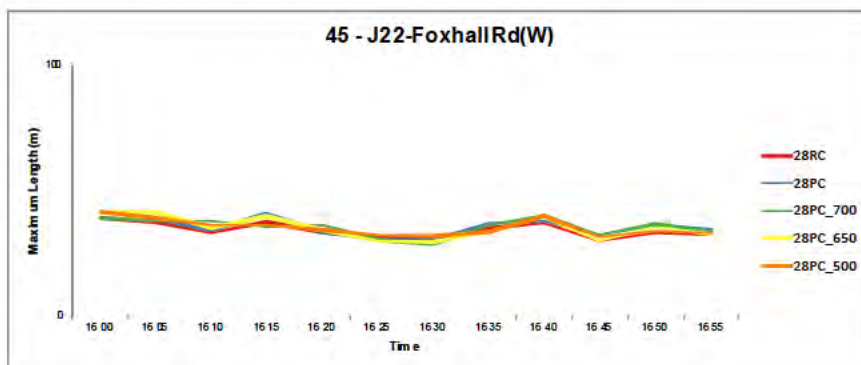
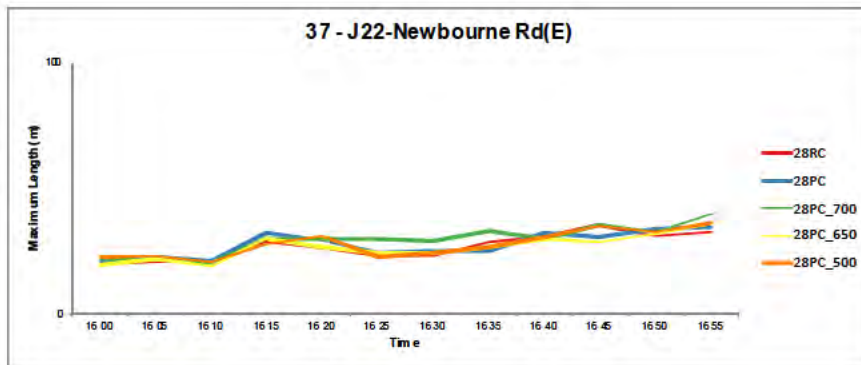
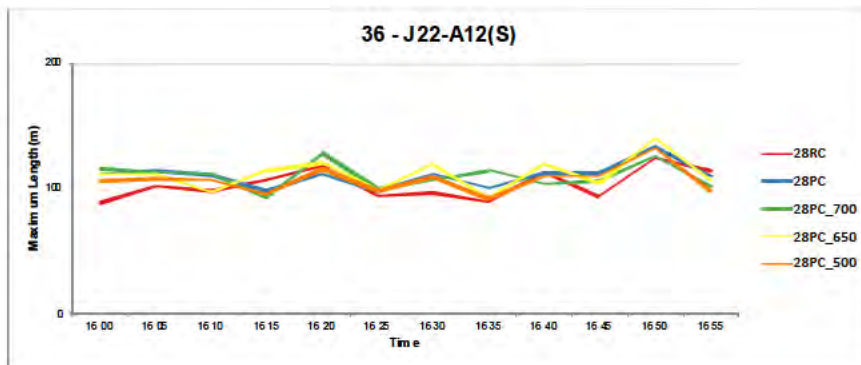
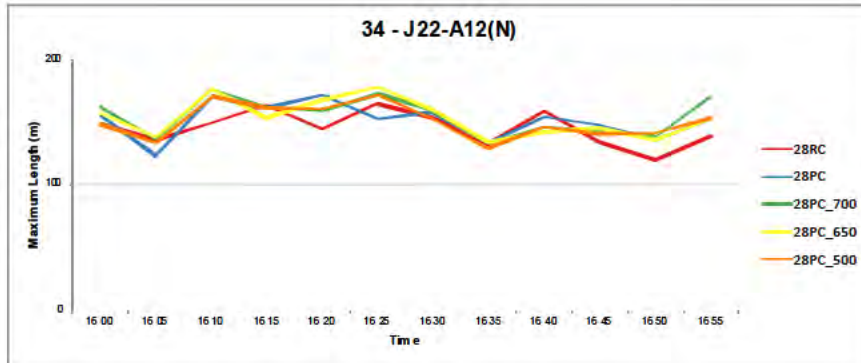


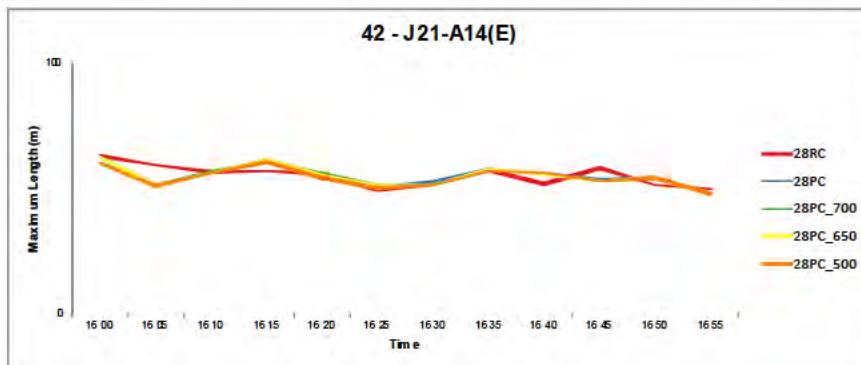
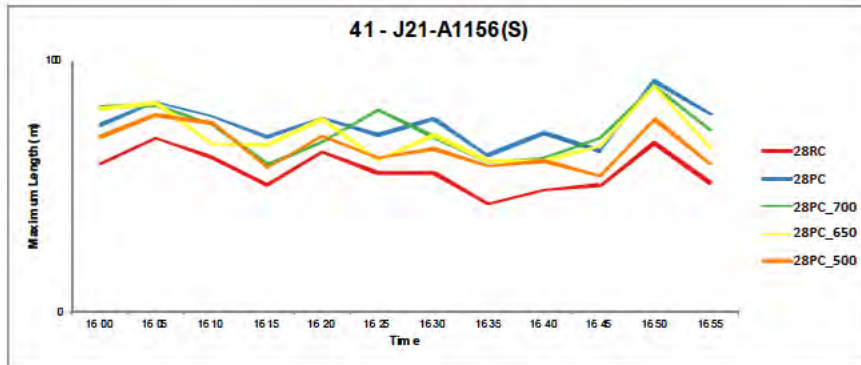
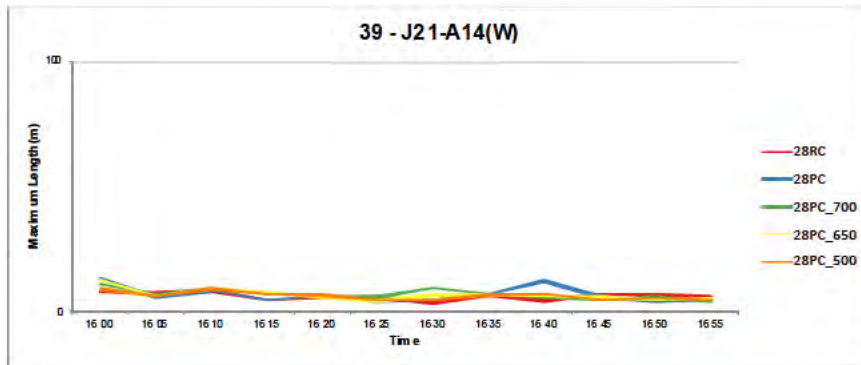
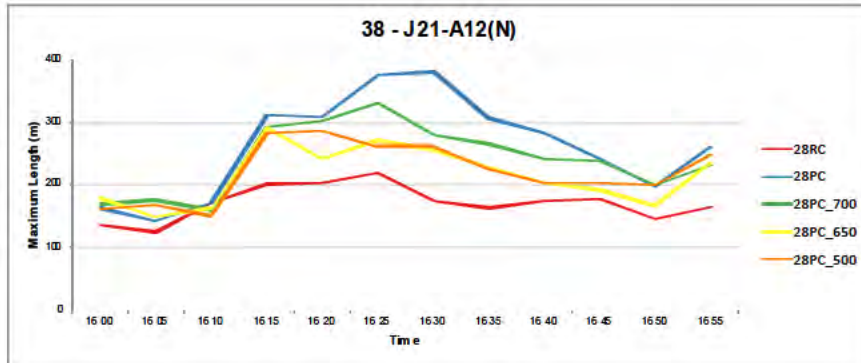


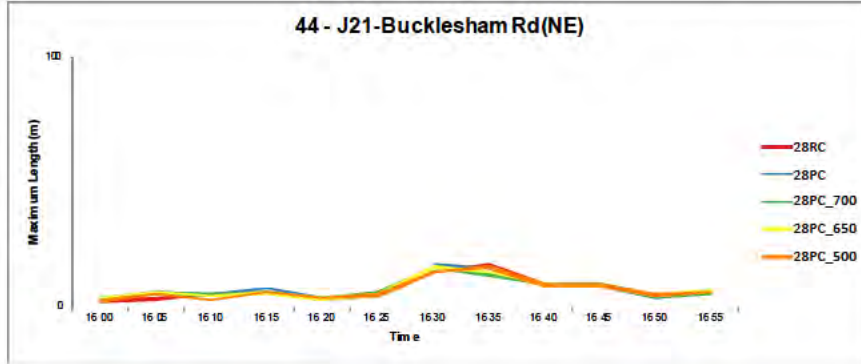














Queue Comparison
16 00-17 00
Maximum Length Summary
Maximum Length (m)

	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	50.6	61.8	65.3	62.0	64.9
2 - J28-A12(S)	76.3	104.4	95.7	112.6	101.5
3 - J28-A1152(E)	84.7	69.4	91.0	75.6	75.3
6 - J27-A12(N)	112.5	179.9	173.8	182.6	168.1
7 - J27-B1079(W)	50.9	55.6	53.8	51.4	49.8
8 - J27-A12(S)	95.9	76.9	79.3	79.8	69.9
9 - J27-B1079(E)	97.6	149.9	139.5	133.3	149.4
11 - J26-A12(N)	36.1	40.9	42.6	44.4	44.0
12 - J26-A12(S)-Right turn	12.5	11.0	16.5	13.6	15.0
13 - J26-A12(S)	153.2	276.9	299.4	239.9	265.0
14 - J26-B1438(E)	55.2	47.3	49.6	57.5	53.9
15 - J25-A12(N)	128.5	146.4	137.5	135.7	158.4
17 - J25-Martlesham PnR(NW)- Left turn	11.0	11.0	11.0	11.0	11.0
18 - J25-Martlesham PnR(NW)	14.2	14.2	14.2	14.2	14.2
19 - J25-Main Rd(W)	95.5	103.9	103.9	103.9	105.0
20 - J25-A12(S)	105.0	151.8	126.9	125.6	135.9
21 - J25-Main Rd(E)	23.9	33.0	32.0	33.0	25.0
22 - J24-A12(N)	100.0	120.6	104.6	130.8	118.5
24 - J24-Eagle Way(W)	33.1	32.5	31.9	35.6	37.9
26 - J24-A12(S)	207.6	231.3	208.4	233.1	230.5
28 - J24-Anson Rd(E)	726.3	810.3	809.9	809.6	809.9
29 - J23-A12(N)	105.9	112.1	110.8	110.1	115.7
30 - J23-Eagle Way(W)	13.8	13.0	14.5	13.8	13.2
31 - J23-A12(S)	123.8	137.8	133.7	139.4	128.1
32 - J23-Barrack Square(E)	109.6	109.9	113.0	108.7	109.1
34 - J22-A12(N)	165.0	171.8	177.0	177.8	171.8
36 - J22-A12(S)	124.6	133.6	128.6	140.7	132.9
37 - J22-Newbourne Rd(E)	35.5	34.7	40.0	36.0	36.5
45 - J22-Foxhall Rd(W)	39.1	41.9	40.0	41.6	41.5
38 - J21-A12(N)	218.3	380.3	330.4	290.9	286.4
39 - J21-A14(W)	8.5	13.7	11.4	13.0	9.5
41 - J21-A1156(S)	69.6	92.3	90.5	89.9	78.7
42 - J21-A14(E)	63.3	63.1	61.0	62.8	61.0
44 - J21-Bucklesham Rd(NE)	17.1	16.7	15.5	16.0	16.0



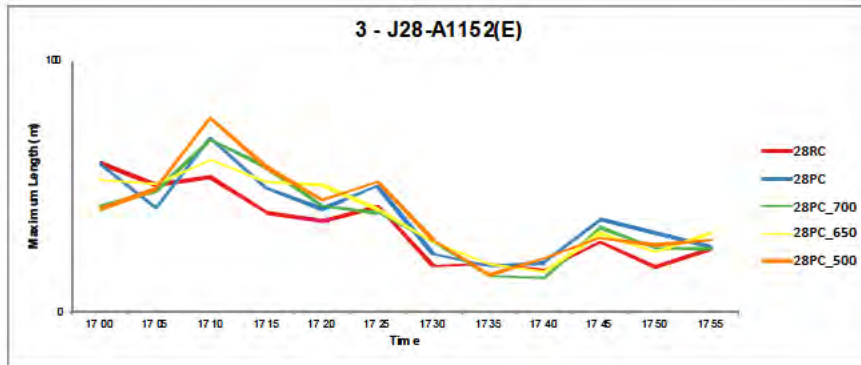
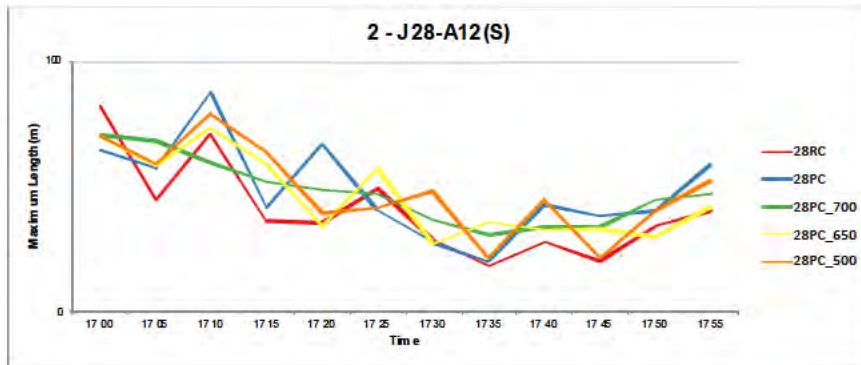
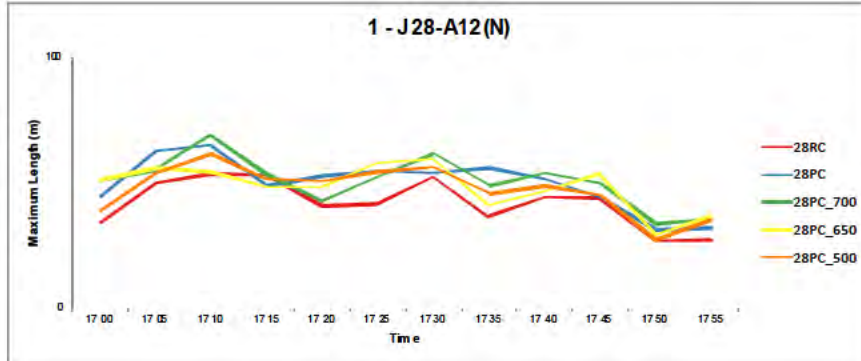
Queue Comparison
16 00-17 00
Average Length Summary
Maximum Length (m)

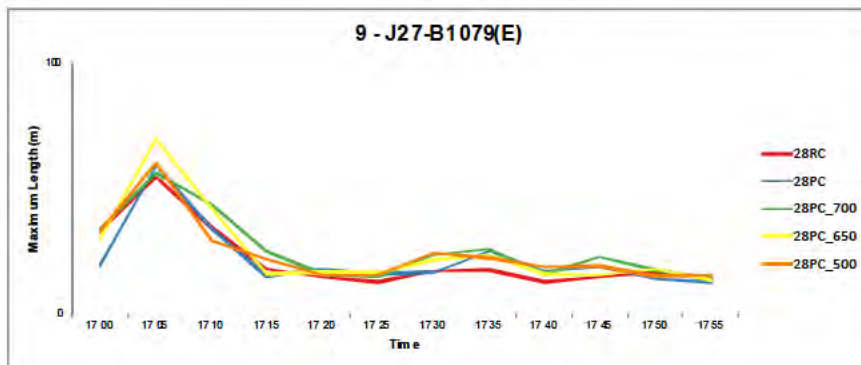
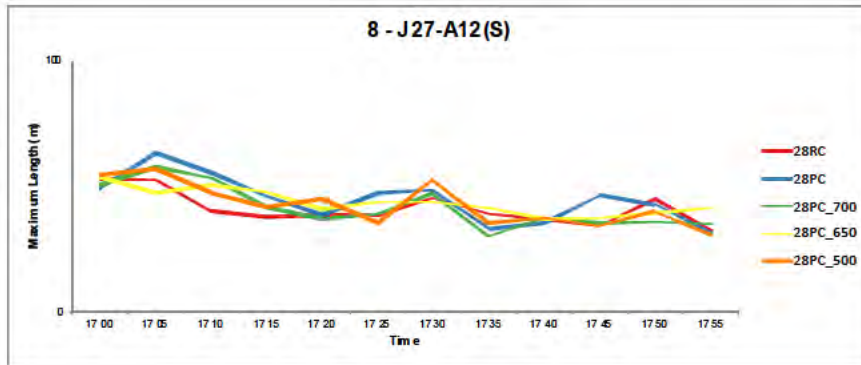
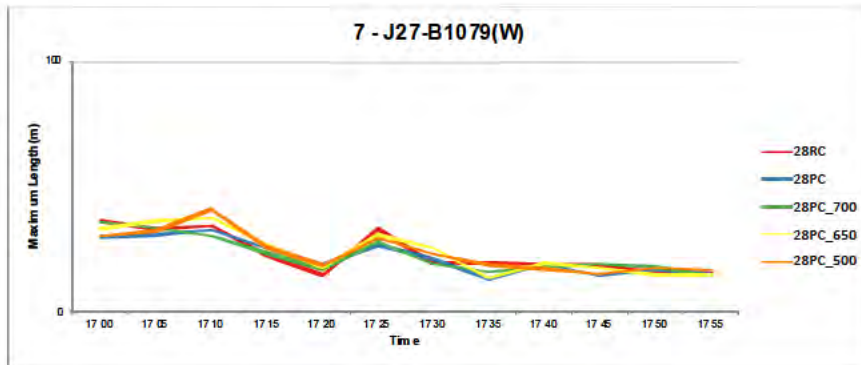
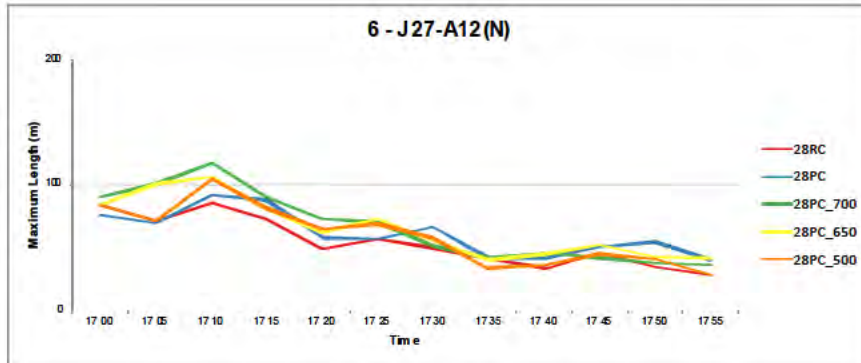
	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	42.2	52.1	51.1	49.8	51.8
2 - J28-A12(S)	52.4	73.8	70.4	68.0	72.4
3 - J28-A1152(E)	41.6	48.2	49.4	48.0	48.7
6 - J27-A12(N)	82.8	112.7	108.3	104.3	104.6
7 - J27-B1079(W)	27.9	30.1	30.6	29.4	29.8
8 - J27-A12(S)	55.9	59.5	60.3	59.3	55.9
9 - J27-B1079(E)	52.1	92.2	79.6	84.1	84.8
11 - J26-A12(N)	28.2	32.4	34.6	33.7	34.2
12 - J26-A12(S)-Right turn	9.1	7.9	9.4	8.0	9.1
13 - J26-A12(S)	105.2	152.3	159.0	152.0	140.9
14 - J26-B1438(E)	35.7	37.2	39.2	38.0	37.6
15 - J25-A12(N)	103.6	125.1	116.9	118.7	122.6
17 - J25-Martlesham PnR(NW)- Left turn	6.8	6.8	6.8	6.8	6.8
18 - J25-Martlesham PnR(NW)	8.9	8.9	8.9	8.9	8.9
19 - J25-Main Rd(W)	79.3	82.3	82.5	82.5	82.2
20 - J25-A12(S)	89.0	107.5	100.2	99.4	102.2
21 - J25-Main Rd(E)	19.3	21.4	21.4	20.9	20.1
22 - J24-A12(N)	87.0	97.0	89.1	101.8	90.8
24 - J24-Eagle Way(W)	25.2	25.4	23.0	25.5	25.0
26 - J24-A12(S)	153.4	172.8	158.5	159.5	158.4
28 - J24-Anson Rd(E)	489.7	594.2	618.4	582.0	601.7
29 - J23-A12(N)	91.9	99.4	96.3	96.3	98.2
30 - J23-Eagle Way(W)	9.2	8.8	9.1	8.8	9.2
31 - J23-A12(S)	109.2	117.4	115.2	117.2	112.4
32 - J23-Barrack Square(E)	66.8	70.9	70.9	72.0	69.3
34 - J22-A12(N)	145.4	151.6	155.1	153.5	151.0
36 - J22-A12(S)	103.6	111.0	110.5	112.1	107.2
37 - J22-Newbourne Rd(E)	27.0	27.8	29.6	26.7	28.0
45 - J22-Foxhall Rd(W)	34.2	35.9	35.6	35.4	35.4
38 - J21-A12(N)	170.9	262.0	240.3	214.5	221.0
39 - J21-A14(W)	6.4	7.1	7.2	7.1	6.7
41 - J21-A1156(S)	56.5	75.1	72.5	70.7	65.6
42 - J21-A14(E)	55.4	55.3	54.9	55.1	54.6
44 - J21-Bucklesham Rd(NE)	7.0	7.6	7.2	7.2	7.0

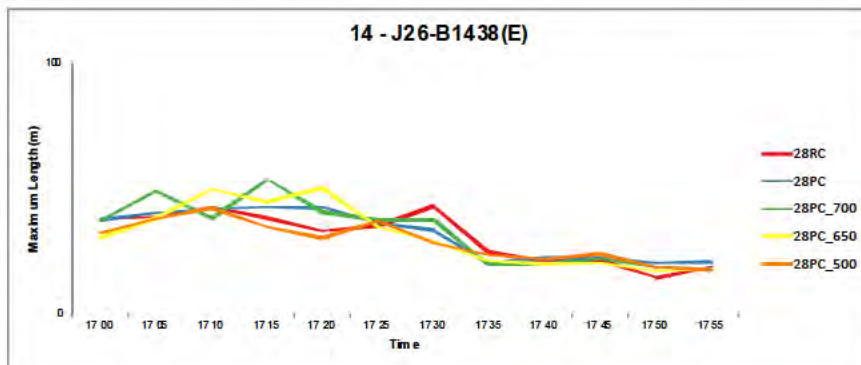
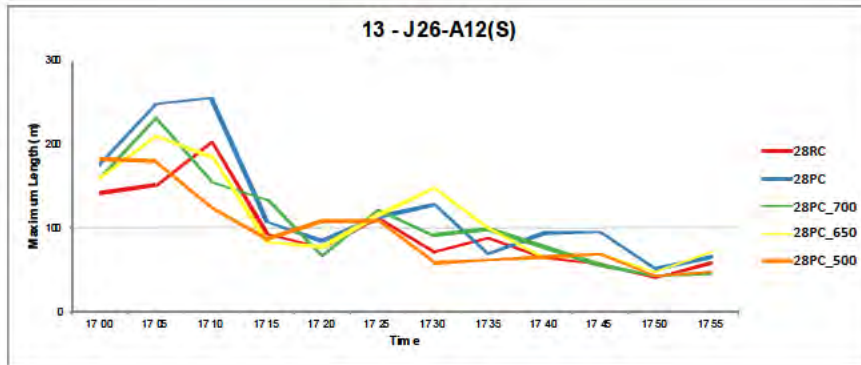
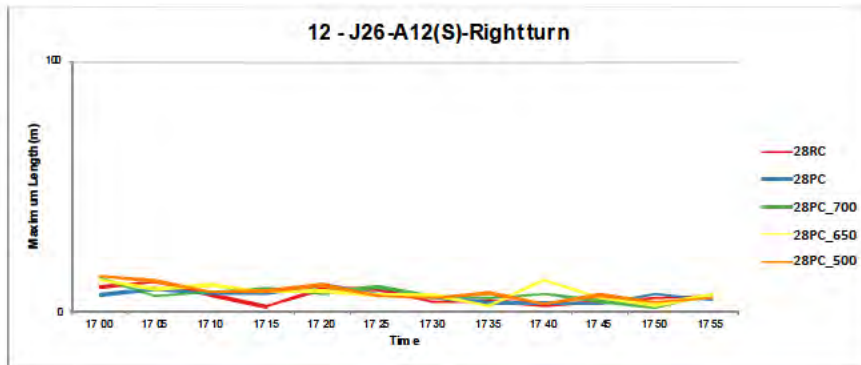
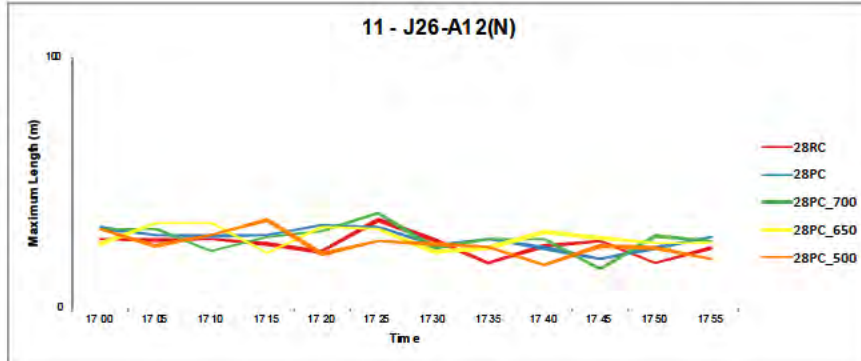


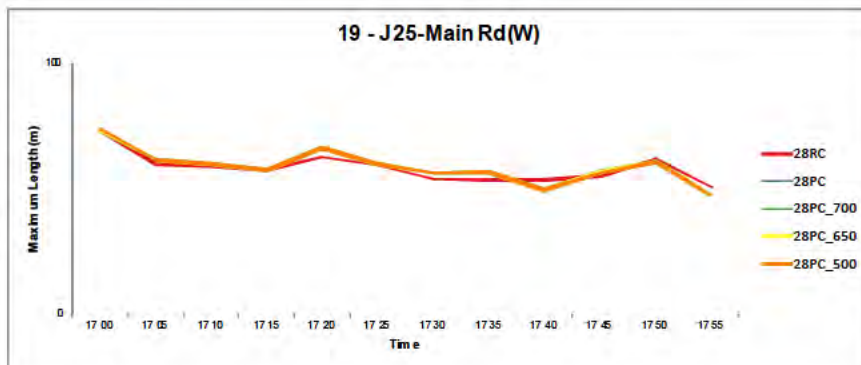
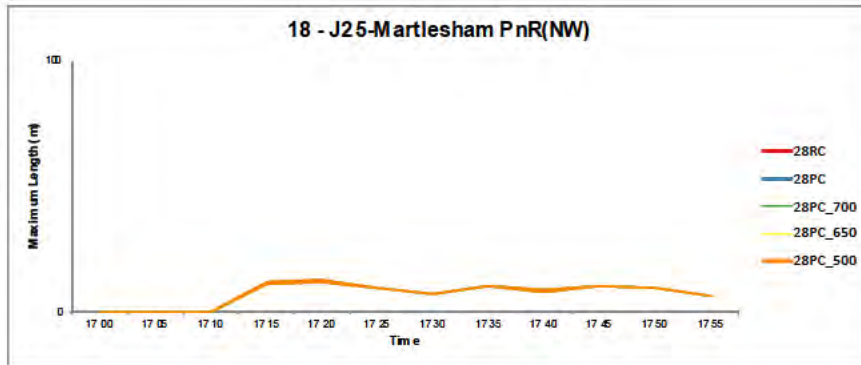
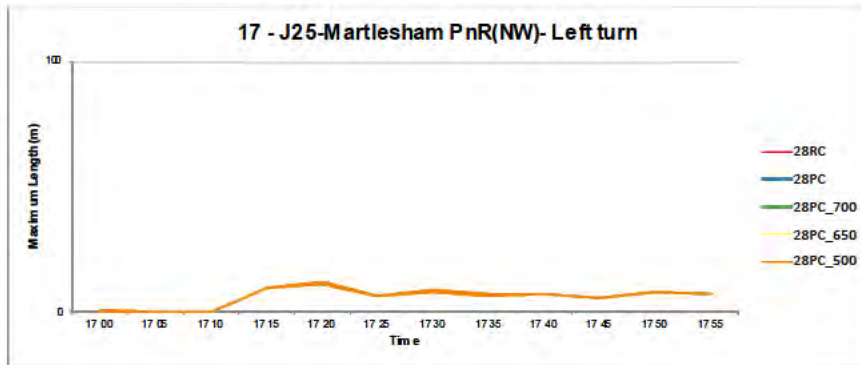
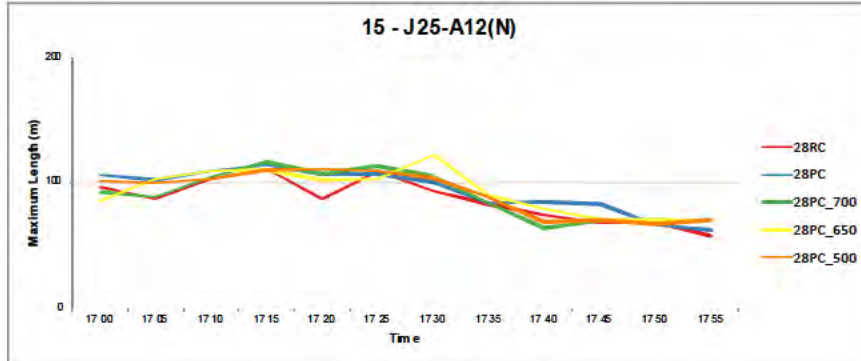
Journey Time Table
16:00-17:00
All 2028

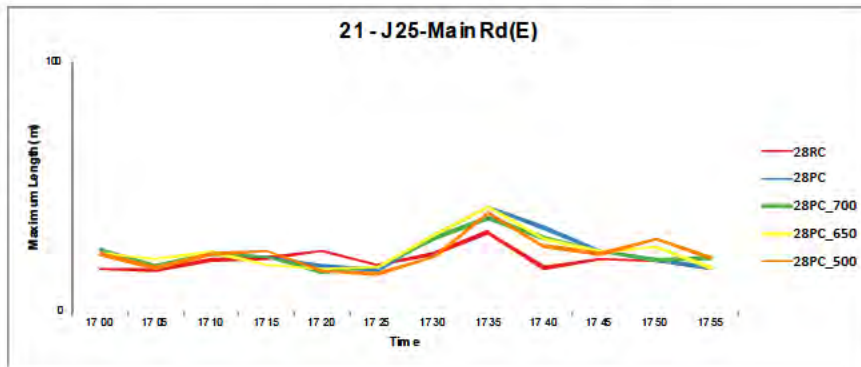
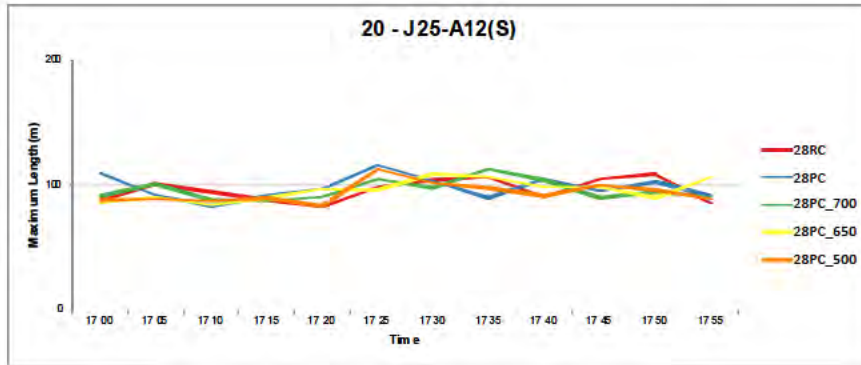
Route Names	28RC	28PC	28PC_7 00	28PC_6 50	28PC_5 00
1 - J21 - J22 - NB	116	118	118	118	117
2 - J22 - J23 - NB	89	90	90	90	89
3 - J23 - J24 - NB	60	64	61	62	61
4 - J24 - J25 - NB	51	55	53	53	53
5 - J25 - J26 - NB	130	139	137	136	135
6 - J26 - J27 - NB	92	94	94	94	93
7 - J27 - J28 - NB	98	100	99	99	99
8 - J28 - A12- NB	137	139	138	138	138
51 - A12 NB	774	803	795	793	789
9 - A12 - J28 - SB	125	130	129	129	129
10 - J28 - J27 - SB	96	102	102	101	101
11 - J27 - J26 - SB	95	97	97	97	97
12 - J26 - J25 - SB	123	127	125	126	126
13 - J25 - J24 - SB	38	40	39	40	39
14 - J24 - J23 - SB	47	48	48	48	48
15 - J23 - J22 - SB	105	108	107	107	107
16 - J22 - J21 - SB	139	151	148	145	145
52 - A12 SB	770	805	796	795	793
17 - A14 WB upto Offslip	153	153	152	153	152
18 - A14 EB from Onslip	120	121	120	120	120
19 - A14 WB from Onslip	85	86	86	86	86
20 - A14 EB upto Offslip	91	92	92	92	91
21 - Felixstowe - SB	101	101	101	101	101
22 - Felixstowe - NB	121	127	126	125	124
23 - Bucklesham Road - NB	62	62	62	62	62
24 - Bucklesham Road - SB	69	71	70	70	70
26 - Foxhall road - WB	91	90	90	90	90
25 - Foxhall road - EB	95	95	95	95	95
27 - Newbourne Road -EB	43	43	43	43	43
28 - Newbourne Road -WB	55	55	57	54	56
29 - Eagle Way - EB	21	21	22	21	21
30 - Eagle Way - WB	13	13	13	13	13
31 - Gloster Road - NB	56	56	56	56	56
32 - Gloster Road - SB	55	55	55	55	55
33 - Barrack Square - SB	84	84	84	84	85
34 - Barrack Square - NB	100	100	100	100	100
35 - Anson Road - WB	147	175	179	165	172
36 - Anson Road - EB	45	45	45	45	46
37 - Eagle Way (J24) - EB	71	69	68	71	69
38 - Eagle Way (J24) - WB	44	44	44	44	44
39 - Main Road - EB	66	66	66	66	66
40 - Main Road - WB	78	79	79	79	79
41 - A1214 Main road - EB	70	70	70	71	71
42 - A1214 Main road - WB	51	51	51	51	51
43 - B1438 - WB	59	61	61	61	61
44 - B1438 - EB	50	50	50	50	50
45 - B1079 (East) - WB	54	91	79	84	85
46 - B1079 (East) - EB	30	30	30	30	30
47 - B1079 (West)- WB	33	33	33	33	33
48 - B1079 (West)- EB	41	43	43	42	43
49 - A1152 - WB	50	51	51	51	51
50 - A1152 - EB	49	49	49	49	49
72 - J22 - J22B - NB	44	45	44	44	44
73 - J22B - J23 - NB	45	46	45	45	45
J22-J23 NB (FY)	89	90	90	90	89
70 - J23 - J22B - SB	60	61	61	61	61
71 - J22B - J22 - SB	44	46	46	46	46
J23-J22 SB (FY)	105	108	107	107	107

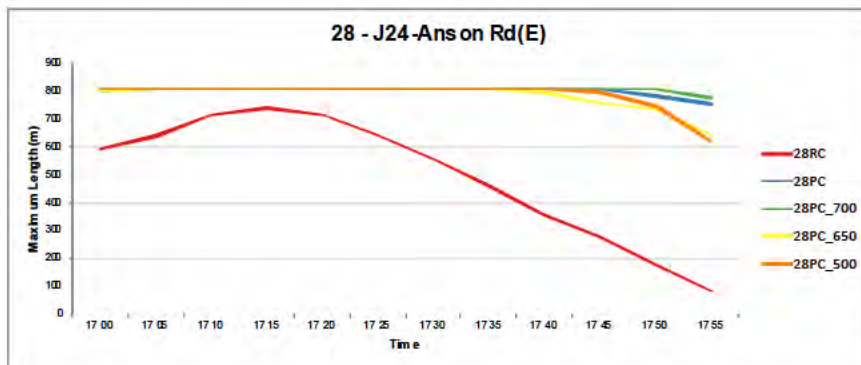
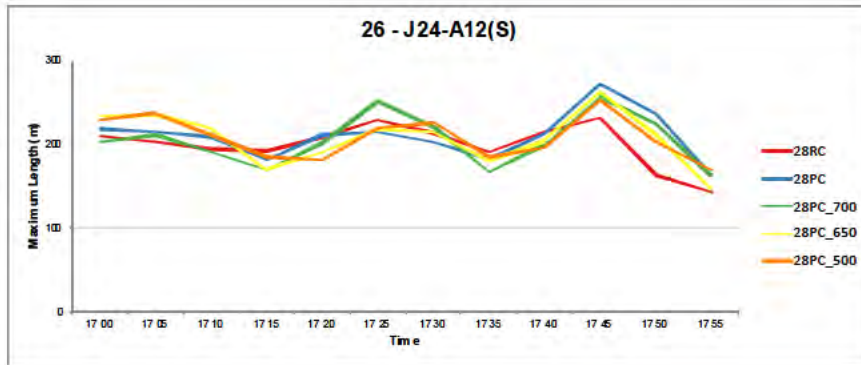
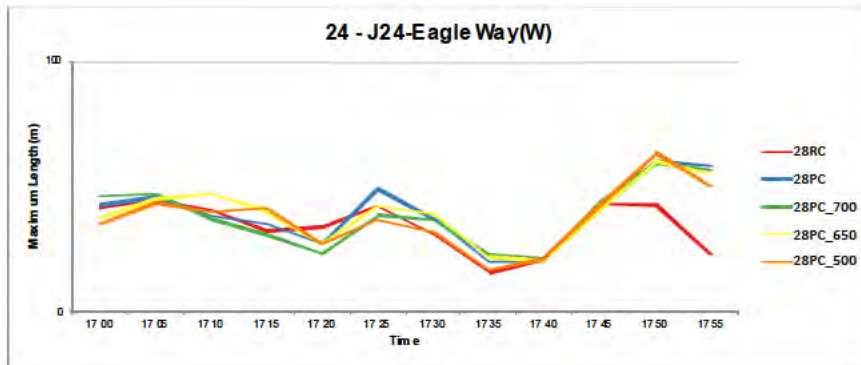
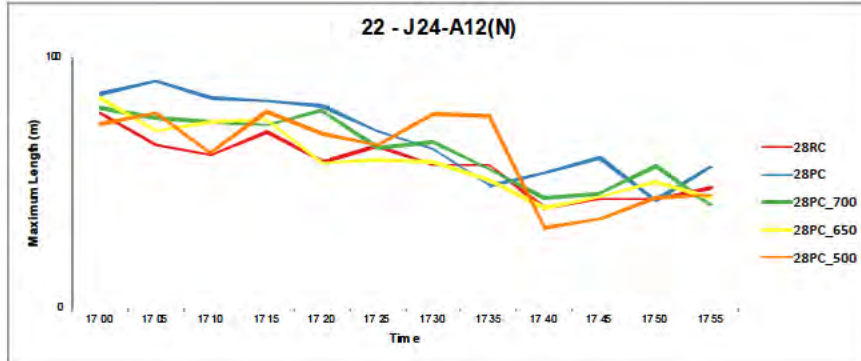


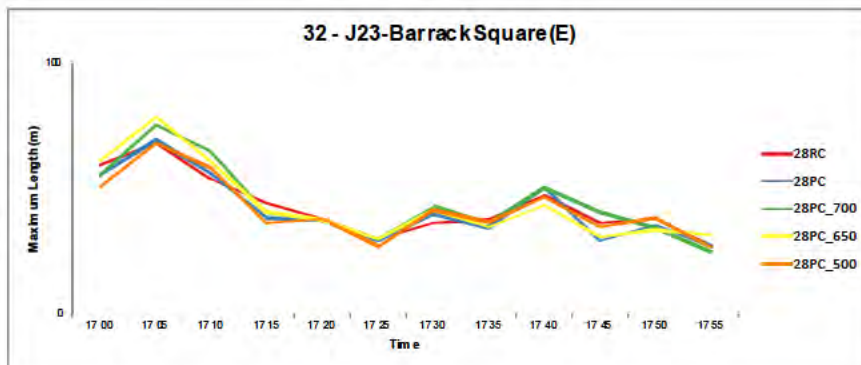
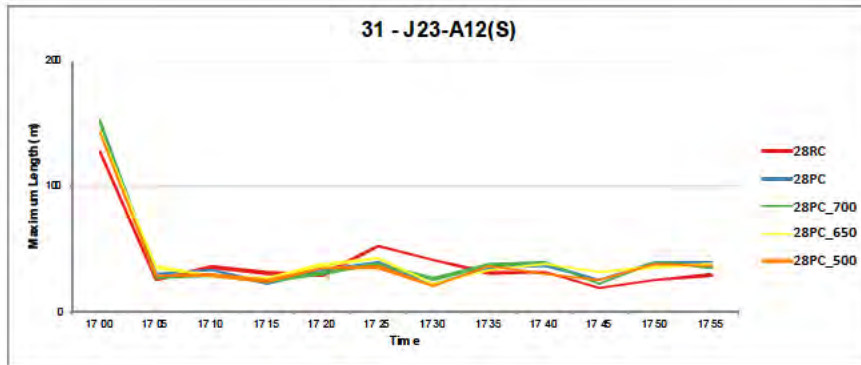
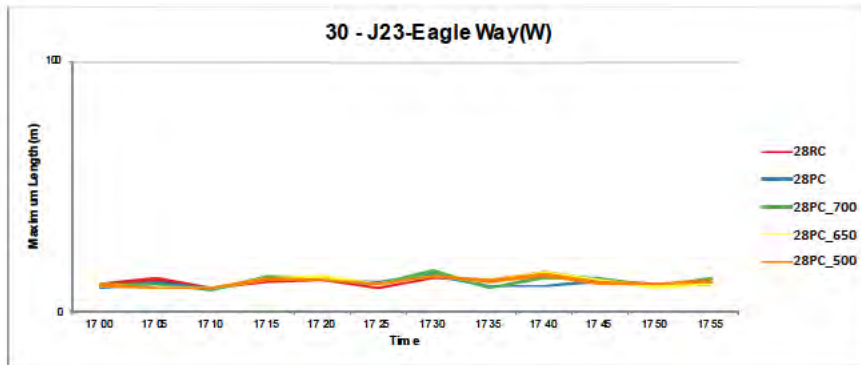
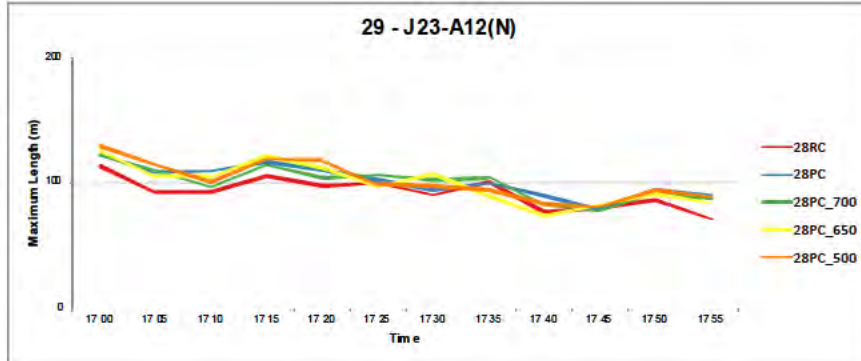


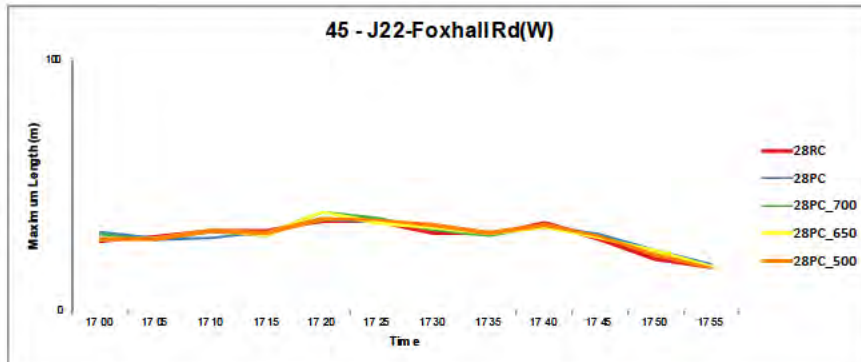
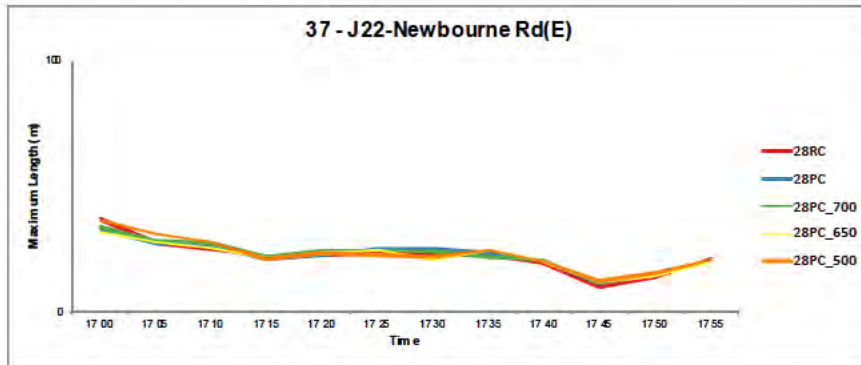
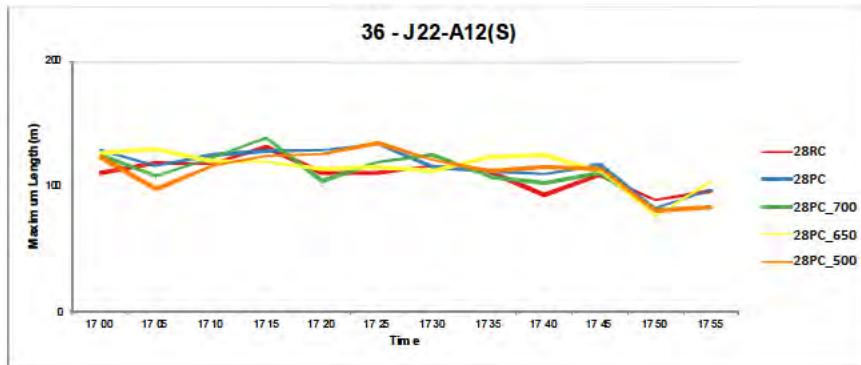
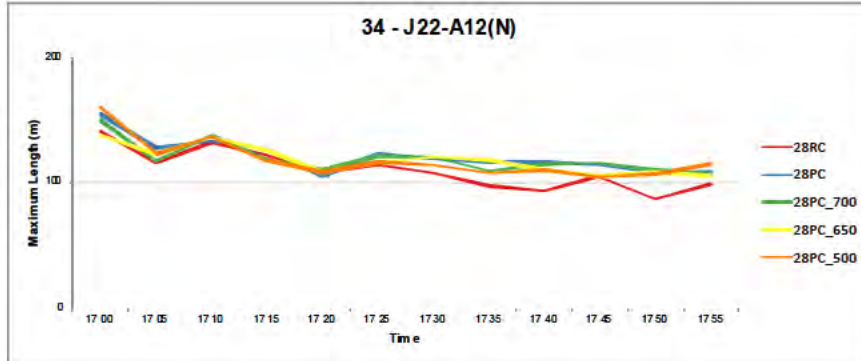


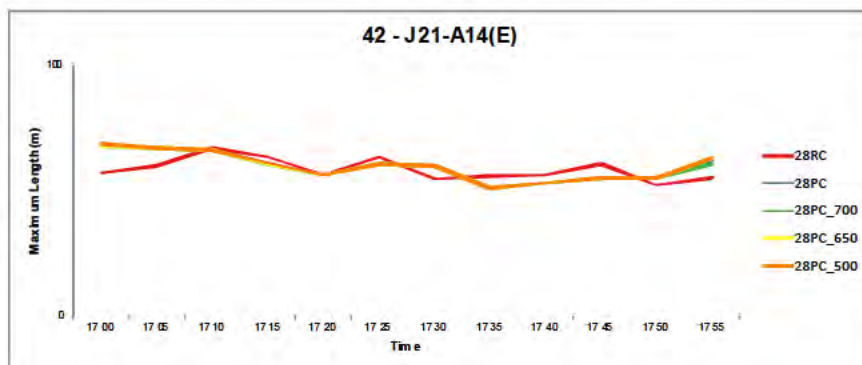
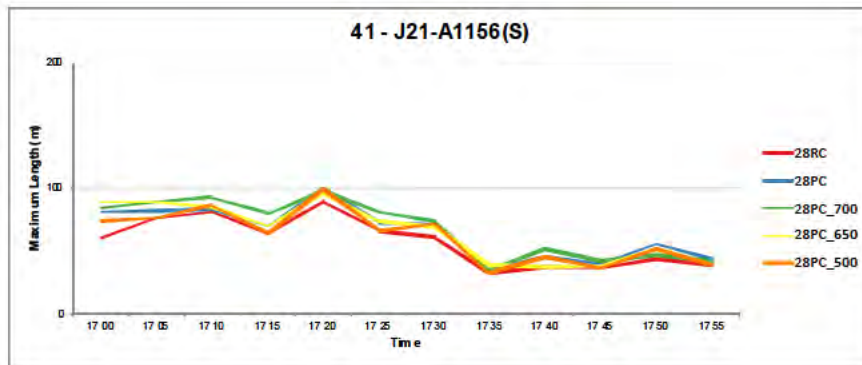
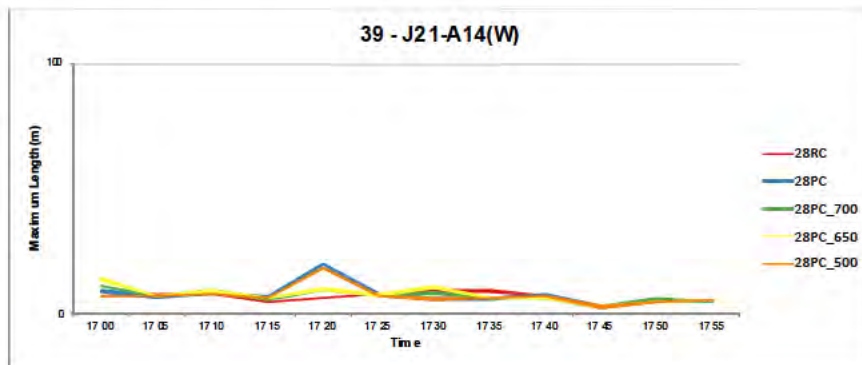
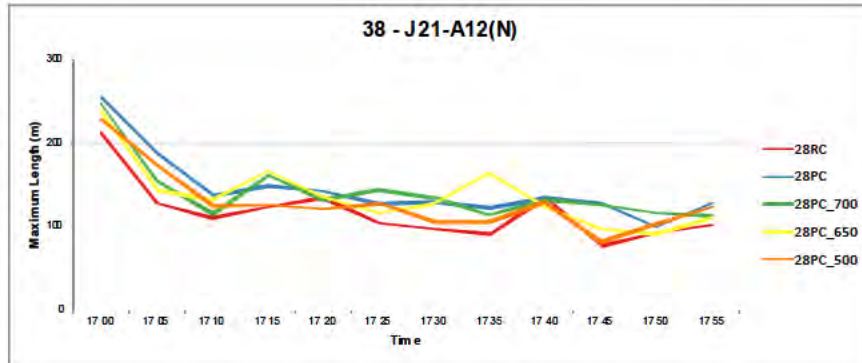


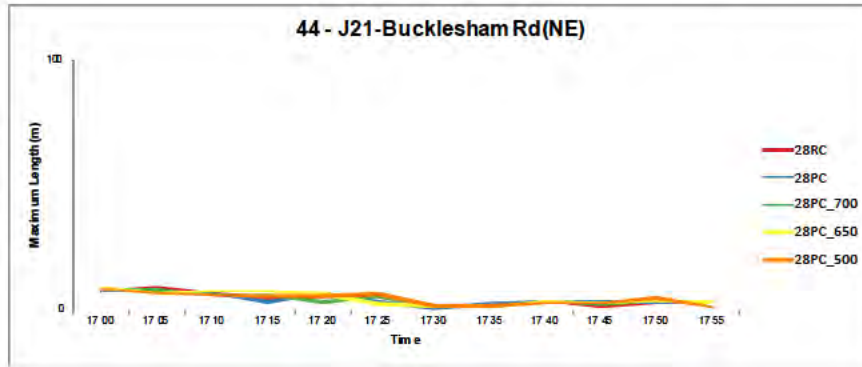














Queue Comparison
17 00-18 00
Maximum Length Summary
Maximum Length (m)

	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	53.4	65.2	69.1	59.7	61.5
2 - J28-A12(S)	82.3	87.5	71.0	73.7	79.4
3 - J28-A1152(E)	59.5	69.2	68.7	60.5	77.2
6 - J27-A12(N)	85.9	91.6	117.1	106.3	105.1
7 - J27-B1079(W)	36.6	32.9	36.1	37.6	41.1
8 - J27-A12(S)	53.0	63.5	58.0	54.0	57.2
9 - J27-B1079(E)	54.8	59.3	56.4	70.2	60.3
11 - J26-A12(N)	35.2	33.0	38.0	34.0	35.1
12 - J26-A12(S)-Right turn	12.0	10.9	13.9	13.1	14.6
13 - J26-A12(S)	203.1	256.6	233.0	211.2	182.9
14 - J26-B1438(E)	43.1	42.8	54.3	50.5	42.5
15 - J25-A12(N)	111.4	114.1	116.5	122.3	111.4
17 - J25-Martlesham PhR(NW)- Left turn	11.7	11.7	11.7	11.7	11.7
18 - J25-Martlesham PhR(NW)	12.3	12.3	12.3	12.3	12.3
19 - J25-Main Rd(W)	73.6	73.5	73.5	73.5	74.0
20 - J25-A12(S)	108.7	115.8	112.7	108.7	112.6
21 - J25-Main Rd(E)	31.8	42.0	37.4	41.9	39.7
22 - J24-A12(N)	77.9	90.5	79.9	83.8	78.3
24 - J24-Eagle Way(W)	45.0	60.3	59.7	60.3	63.6
26 - J24-A12(S)	232.4	273.2	257.1	263.3	253.1
28 - J24-Anson Rd(E)	741.2	812.4	811.7	810.8	812.0
29 - J23-A12(N)	113.2	122.3	122.7	125.9	129.6
30 - J23-Eagle Way(W)	15.6	14.8	16.5	16.2	14.9
31 - J23-A12(S)	128.2	152.3	151.7	143.7	142.6
32 - J23-Barrack Square(E)	68.3	69.8	75.7	78.8	68.3
34 - J22-A12(N)	141.6	155.3	150.4	137.9	160.1
36 - J22-A12(S)	132.0	134.4	139.1	130.1	135.4
37 - J22-Newbourne Rd(E)	37.2	32.7	33.8	32.0	36.6
45 - J22-Foxhall Rd(W)	36.0	36.6	39.9	39.9	36.8
38 - J21-A12(N)	212.7	254.8	247.0	237.6	228.7
39 - J21-A14(W)	9.5	20.2	11.5	14.2	18.4
41 - J21-A1156(S)	90.0	99.6	98.2	96.7	99.7
42 - J21-A14(E)	67.4	68.7	67.8	67.8	69.1
44 - J21-Buckesham Rd(NE)	9.2	8.0	8.4	9.3	8.6



Queue Comparison
17 00-18 00
Average Length Summary
Maximum Length (m)

	28RC	28PC	28PC 700	28PC 650	28PC 500
1 - J28-A12(N)	42.0	49.8	50.6	48.6	47.4
2 - J28-A12(S)	40.9	49.0	48.0	46.3	48.7
3 - J28-A1152(E)	33.9	38.9	36.7	38.2	39.4
6 - J27-A12(N)	54.2	61.1	66.2	65.1	59.5
7 - J27-B1079(W)	23.7	22.2	23.0	24.3	24.0
8 - J27-A12(S)	41.3	45.0	41.8	43.8	42.7
9 - J27-B1079(E)	21.8	22.3	26.0	25.1	24.4
11 - J26-A12(N)	25.3	27.8	27.7	28.0	25.3
12 - J26-A12(S)-Right turn	6.5	6.6	7.5	7.9	8.0
13 - J26-A12(S)	96.8	124.7	107.4	111.8	95.1
14 - J26-B1438(E)	31.0	31.9	32.9	31.4	29.2
15 - J25-A12(N)	86.6	94.1	90.4	93.1	92.1
17 - J25-Martlesham PnR(NW)- Left turn	6.1	6.1	6.1	6.1	6.1
18 - J25-Martlesham PnR(NW)	7.2	7.2	7.2	7.2	7.2
19 - J25-Main Rd(W)	58.6	58.9	58.9	58.9	59.0
20 - J25-A12(S)	96.2	98.2	96.2	96.1	94.0
21 - J25-Main Rd(E)	20.9	24.3	23.8	24.3	23.4
22 - J24-A12(N)	57.2	68.3	62.9	59.2	61.5
24 - J24-Eagle Wav(W)	34.6	39.7	38.9	39.9	37.7
26 - J24-A12(S)	200.2	210.8	205.6	208.1	208.7
28 - J24-Anson Rd(E)	497.9	803.5	806.9	785.0	788.7
29 - J23-A12(N)	92.0	101.4	100.0	99.5	101.6
30 - J23-Eagle Wav(W)	12.2	11.7	12.3	12.3	12.2
31 - J23-A12(S)	40.1	42.5	42.1	43.0	40.4
32 - J23-Barrack Square(E)	43.2	42.1	44.6	43.9	42.1
34 - J22-A12(N)	110.4	121.4	119.8	118.2	118.6
36 - J22-A12(S)	110.2	116.9	111.4	115.6	113.0
37 - J22-Newbourne Rd(E)	22.4	22.7	22.9	22.2	23.2
45 - J22-Foxhall Rd(W)	29.9	30.5	30.5	30.5	30.4
38 - J21-A12(N)	117.2	144.9	140.7	137.3	129.1
39 - J21-A14(W)	6.9	7.8	7.2	7.8	7.4
41 - J21-A1156(S)	57.5	65.2	68.3	65.2	62.2
42 - J21-A14(E)	58.7	59.9	59.6	59.8	60.0
44 - J21-Bucklesham Rd(NE)	4.5	4.6	4.4	4.8	4.6



Journey Time Table
17:00-18:00
All 2028

Route Names	28RC	28PC	28PC_7 00	28PC_6 50	28PC_5 00
1 - J21 - J22 - NB	118	120	120	120	120
2 - J22 - J23 - NB	86	87	87	87	87
3 - J23 - J24 - NB	73	76	76	77	76
4 - J24 - J25 - NB	50	51	51	51	50
5 - J25 - J26 - NB	128	131	130	131	129
6 - J26 - J27 - NB	90	91	90	91	90
7 - J27 - J28 - NB	97	98	97	97	97
8 - J28 - A12 - NB	136	136	136	136	136
51 - A12 NB	781	795	790	792	787
9 - A12 - J28 - SB	123	128	127	127	126
10 - J28 - J27 - SB	93	93	94	94	93
11 - J27 - J26 - SB	91	93	93	93	93
12 - J26 - J25 - SB	120	122	121	121	121
13 - J25 - J24 - SB	35	36	36	35	35
14 - J24 - J23 - SB	51	53	53	53	53
15 - J23 - J22 - SB	102	104	104	104	103
16 - J22 - J21 - SB	131	135	134	134	134
52 - A12 SB	748	770	766	764	762
17 - A14 WB upto Offslip	153	154	154	154	154
18 - A14 EB from Onslip	120	121	121	121	120
19 - A14 WB from Onslip	84	85	85	85	84
20 - A14 EB upto Offslip	91	91	91	91	91
21 - Felixstowe - SB	102	102	102	102	102
22 - Felixstowe - NB	122	125	126	126	124
23 - Bucklesham Road - NB	62	62	62	62	62
24 - Bucklesham Road - SB	67	67	68	68	67
26 - Foxhall road - WB	91	91	91	91	91
25 - Foxhall road - EB	92	92	92	92	92
27 - Newbourne Road -EB	43	43	43	43	43
28 - Newbourne Road -WB	50	50	51	50	51
29 - Eagle Way - EB	21	21	22	22	22
30 - Eagle Way - WB	13	13	13	13	13
31 - Gloster Road - NB	55	55	55	55	55
32 - Gloster Road - SB	53	53	53	53	53
33 - Barrack Square - SB	85	84	84	84	84
34 - Barrack Square - NB	94	94	94	94	94
35 - Anson Road - WB	123	161	160	160	156
36 - Anson Road - EB	45	45	45	45	45
37 - Eagle Way (J24) - EB	100	114	114	112	112
38 - Eagle Way (J24) - WB	44	44	44	44	44
39 - Main Road - EB	67	67	67	67	67
40 - Main Road - WB	79	81	81	81	80
41 - A1214 Main road - EB	67	67	67	67	67
42 - A1214 Main road - WB	51	51	51	51	51
43 - B1438 - WB	57	57	58	57	57
44 - B1438 - EB	50	50	50	50	50
45 - B1079 (East) - WB	38	39	41	42	40
46 - B1079 (East) - EB	30	30	30	30	30
47 - B1079 (West)- WB	33	33	33	33	33
48 - B1079 (West)- EB	40	40	40	41	41
49 - A1152 - WB	49	50	50	50	50
50 - A1152 - EB	49	49	49	49	49
72 - J22 - J22B - NB	45	45	45	45	45
73 - J22B - J23 - NB	41	42	42	42	42
J22-J23 NB (FY)	86	87	87	87	87
70 - J23 - J22B - SB	59	60	60	60	60
71 - J22B - J22 - SB	43	44	44	43	43
J23-J22 SB (FY)	102	104	104	104	103



Overall Network Statistics
 AM (6:00 9:00), PM (15:00 18:00)
 All 2028

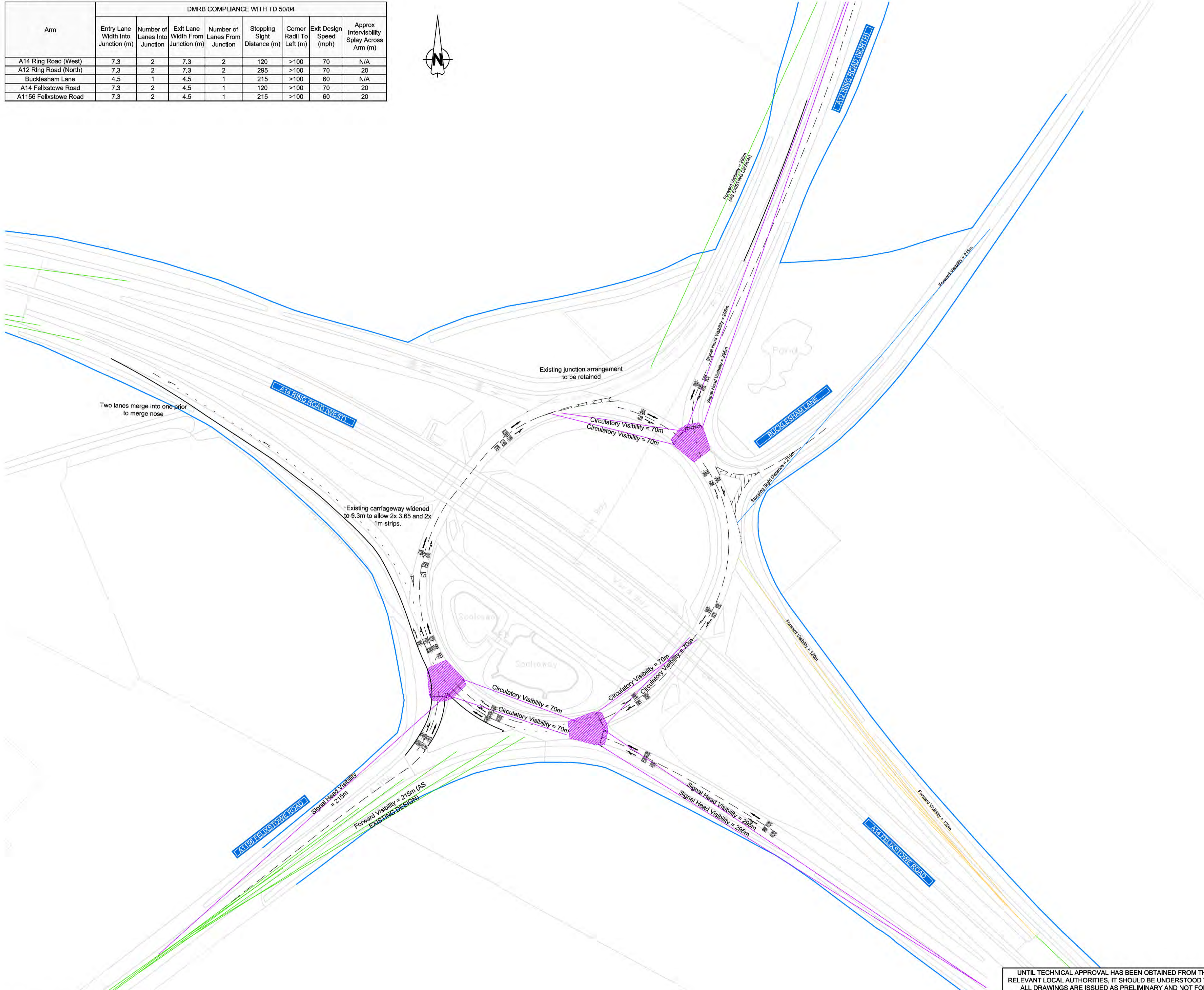
Overall Network Statistics	AM (6:00 9:00)					PM (15:00 18:00)				
	2028RC	2028PC	2028 700HGV	2028 650HGV	2028 500HGV	2028RC	2028PC	2028 700HGV	2028 650HGV	2028 500HGV
Total Time taken (s)	9695031	10357793	10249112	10242904	10177289	13490788	14327711	14222067	14172359	14128851
Total Time taken (h)	2693	2877	2847	2845	2827	3747	3980	3951	3937	3924
Total Distance (km)	175572	183273	182676	182468	182069	231152	237519	236824	236695	236295
Total Vehicles	26625	27359	27272	27253	27206	36460	36995	36953	36937	36904
Total Delay (s)	2013959	2330742	2253957	2258098	2213536	3269462	3816477	3746002	3702676	3677716
Total Delay (h)	559	647	626	627	615	908	1060	1041	1029	1022
Avg Speed (mph)	41	40	40	40	40	38	37	37	37	37
Avg Delay / Vehicle (s)	76	85	83	83	81	90	103	101	100	100

Appendix E



JUNCTION MITIGATION DESIGNS

Arm	DMRB COMPLIANCE WITH TD 50/04							
	Entry Lane Width Into Junction (m)	Number of Lanes Into Junction	Exit Lane Width From Junction (m)	Number of Lanes From Junction	Stopping Sight Distance (m)	Corner Radii To Left (m)	Exit Design Speed (mph)	Approx Intervisibility Splay Across Arm (m)
A14 Ring Road (West)	7.3	2	7.3	2	120	>100	70	N/A
A12 Ring Road (North)	7.3	2	7.3	2	295	>100	70	20
Bucklesham Lane	4.5	1	4.5	1	215	>100	60	N/A
A14 Felixstowe Road	7.3	2	4.5	1	120	>100	70	20
A1156 Felixstowe Road	7.3	2	4.5	1	215	>100	60	20



Construction Design and Management (CDM)
Key Residual Risks
 Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

- 1) Overhead and underground services
- 2) Street Lighting Cables
- 3) Working adjacent to water courses and flood plain
- 4) Soft ground conditions
- 5) Working adjacent to live highways and railway line
- 6) Unchartered services
- 7) Existing buildings with potential asbestos hazards

- NOTES:**
1. Do not scale from this drawing
 2. All dimensions are in metres unless otherwise stated.
 3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
 4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting.
 5. The junctions, roundabouts and links have been designed in accordance with the following DMRB standards:
 - TA 23/81: Junctions and Accesses - Determination of Size of Roundabouts and Major-Minor Junctions
 - TA 90/05: The Geometric Design of Pedestrian, Cycle and Equestrian Routes;
 - TA 91/05: Provision for Non-Motorised Users;
 - TD 9/93: Highway Link Design;
 - TD 50/04: The Geometric Layout of Signal-controlled Junctions and Signalized Roundabouts;
 - Traffic Advisory Leaflet 3/03: Equestrian Crossings.

- KEY:**
- Assumed Highway Boundary
 - Signal Head Visibility
 - Traffic Signal Head
 - High-mast Traffic Signal Head
 - Intersignal Visibility
 - Forward Visibility on Exit
 - Forward Visibility on Entry

- F Widening of A14 (west) off-slip GG DN DN 13.09.17
- E Amendments to kerb and road signs GG DN DN 25.08.17
- D Amendments to reflect traffic modelling. MDM LW PAB 26.06.17
- C Amendments as per Road Safety Audit. MDM LW PAB 12.06.17
- B Amendments as per client's requests. MDM LW PAB 10.03.17
- A Amendments as per client's requests. MDM LW PAB 19.10.16
- First Issue - - - 19.10.16

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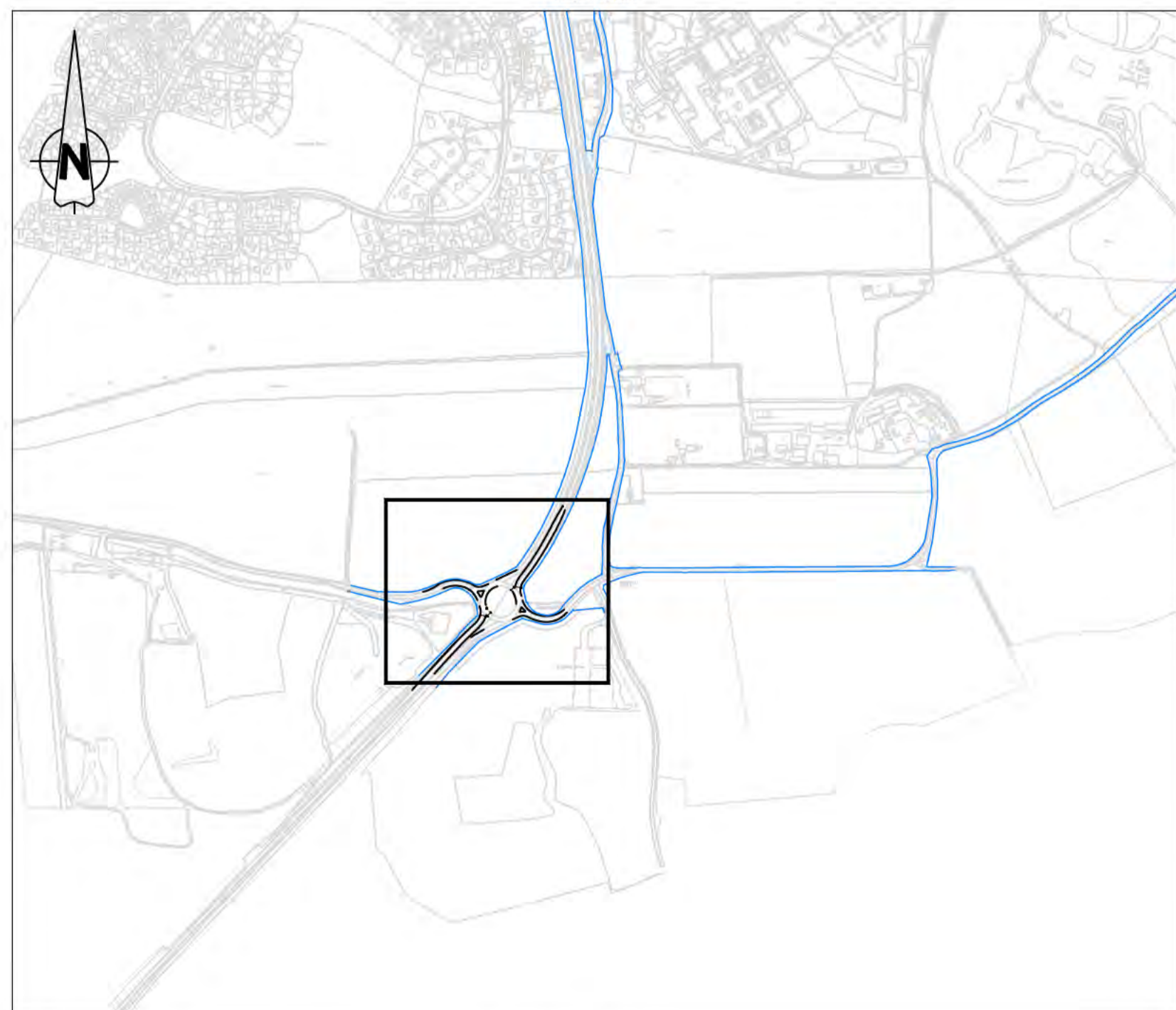
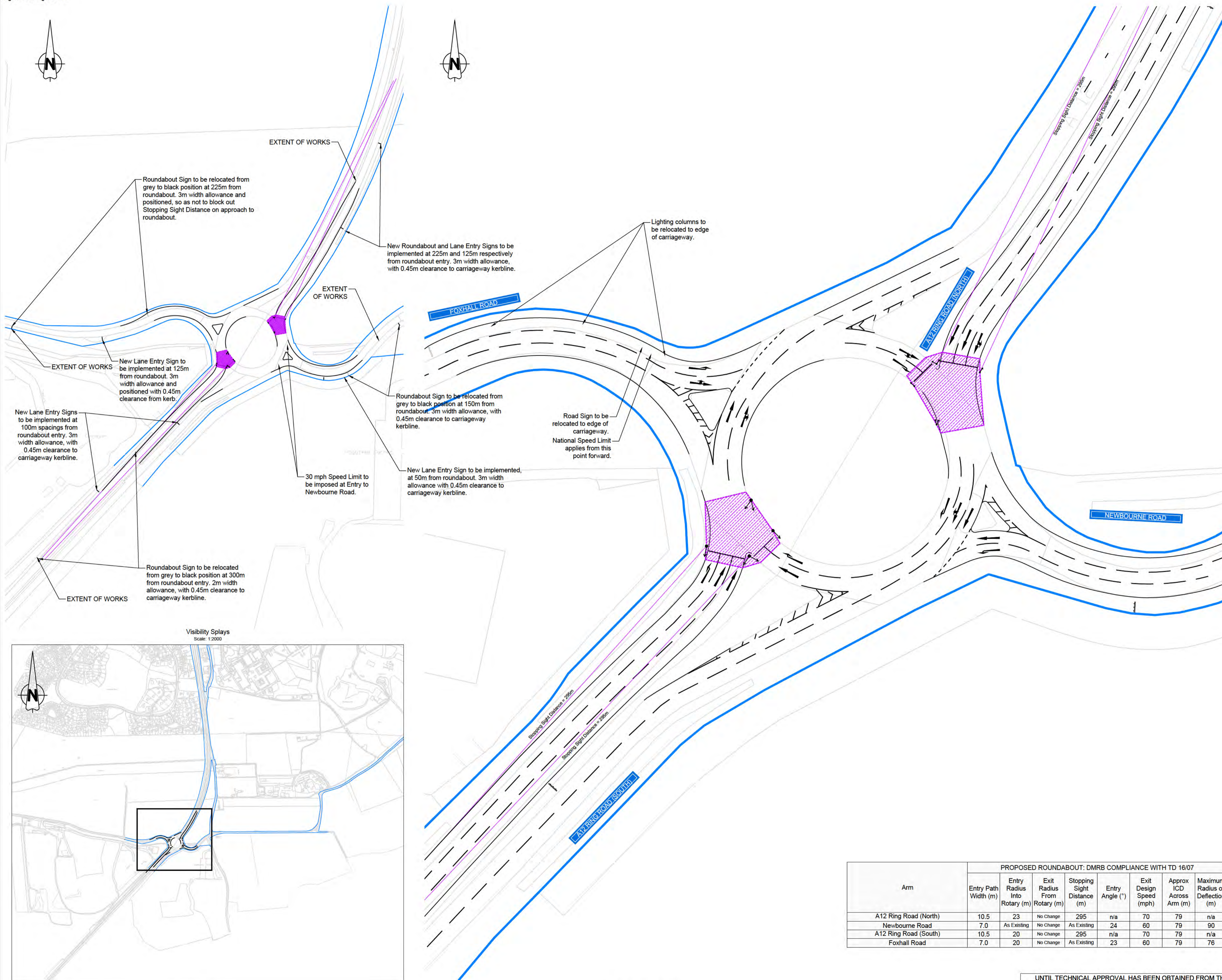
Carlyle Land Ltd and
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 Land South and East of
 Aداstral Park, Ipswich

Off-site Highway Mitigation:
 A14 Roundabout Signalisation

Status	Checked	Date
Approval	LW	19.10.2016
Drawn	MDM	
Scale	1:1000	

0 10 20 30 40 50
 METRES

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Visibility Spays
Scale: 1:2000

Context Plan
Scale: 1:10000

Indicative Junction Layout
Scale: 1:500

Construction Design and Management (CDM)
Key Residual Risks
 Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

- 1) Overhead and underground services
- 2) Street Lighting Cables
- 3) Working adjacent to water courses and flood plain
- 4) Soft ground conditions
- 5) Working adjacent to live highways and railway line
- 6) Unchartered services
- 7) Existing buildings with potential asbestos hazards

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 - TD 16/07: The Geometric Design of Roundabouts.
 - TD 9/93: Highway Link Design;
 - TD 50/04 The Geometric Layout of Signal Controlled Junctions and Signalised Roundabouts

- KEY:**
- Site Boundary
 - Highway Boundary
 - Stopping Sight Distance on Approach
 - Junction Intervisibility
 - Signal Head

A Road Markings amended GG DN DN 21.11.17
 - First Issue - - - 09.11.17

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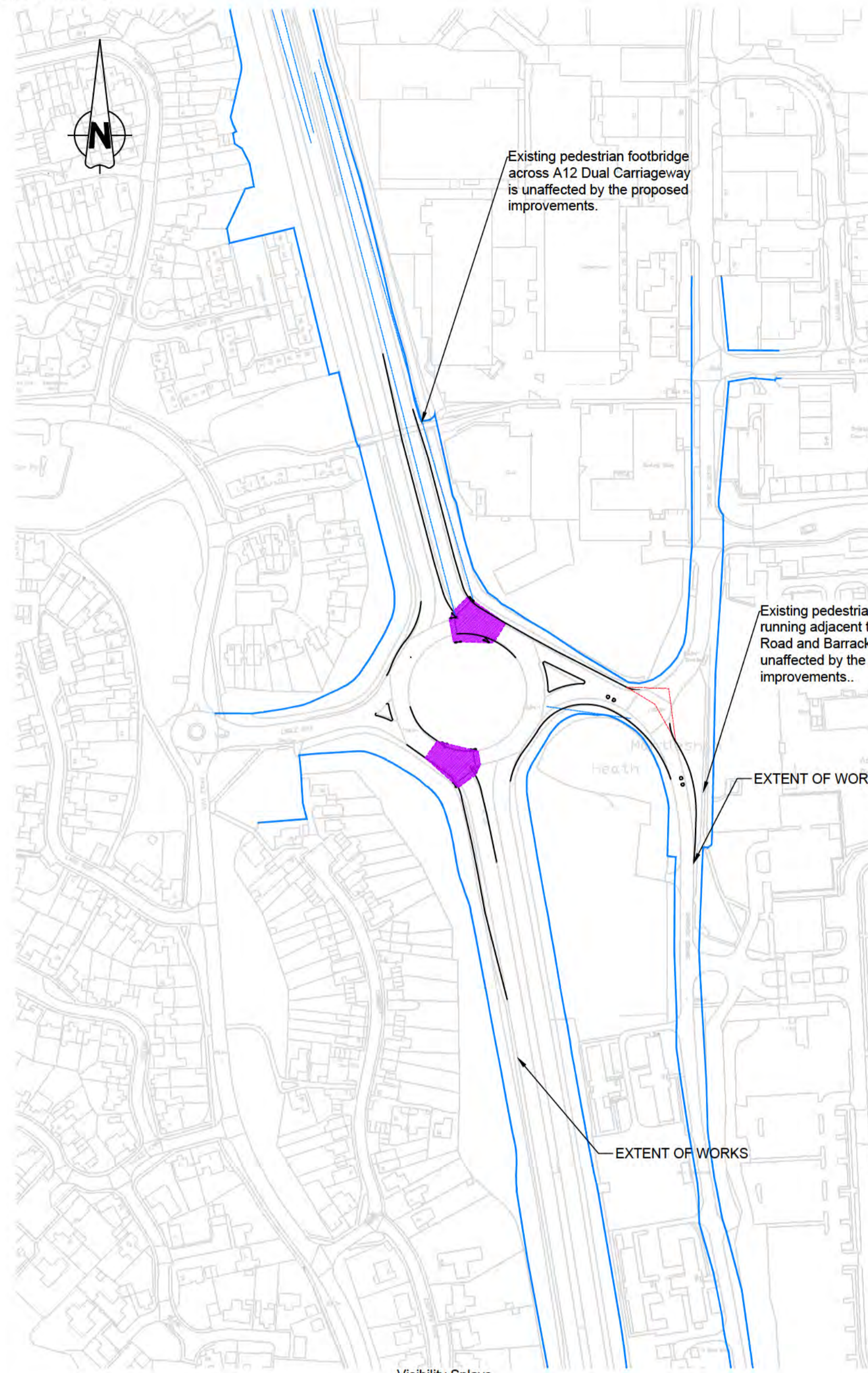
Land South and East of
 Aداstral Park, Ipswich

Off-site Mitigation
 Foxhall Roundabout
 SCC Highways Proposal

Status		Status Date	
Approval		November 2017	
Drawn	Checked	Date	
DPN	LW	09.11.2017	
Scale	Number	Rev	
As Shown	10391-HL-40	A	

Arm	PROPOSED ROUNDABOUT: DMRB COMPLIANCE WITH TD 16/07							
	Entry Path Width (m)	Entry Radius Into Rotary (m)	Exit Radius From Rotary (m)	Stopping Sight Distance (m)	Entry Angle (°)	Exit Design Speed (mph)	Approx ICD Across Arm (m)	Maximum Radius of Deflection (m)
A12 Ring Road (North)	10.5	23	No Change	295	n/a	70	79	n/a
Newbourne Road	7.0	As Existing	No Change	As Existing	24	60	79	90
A12 Ring Road (South)	10.5	20	No Change	295	n/a	70	79	n/a
Foxhall Road	7.0	20	No Change	As Existing	23	60	79	76

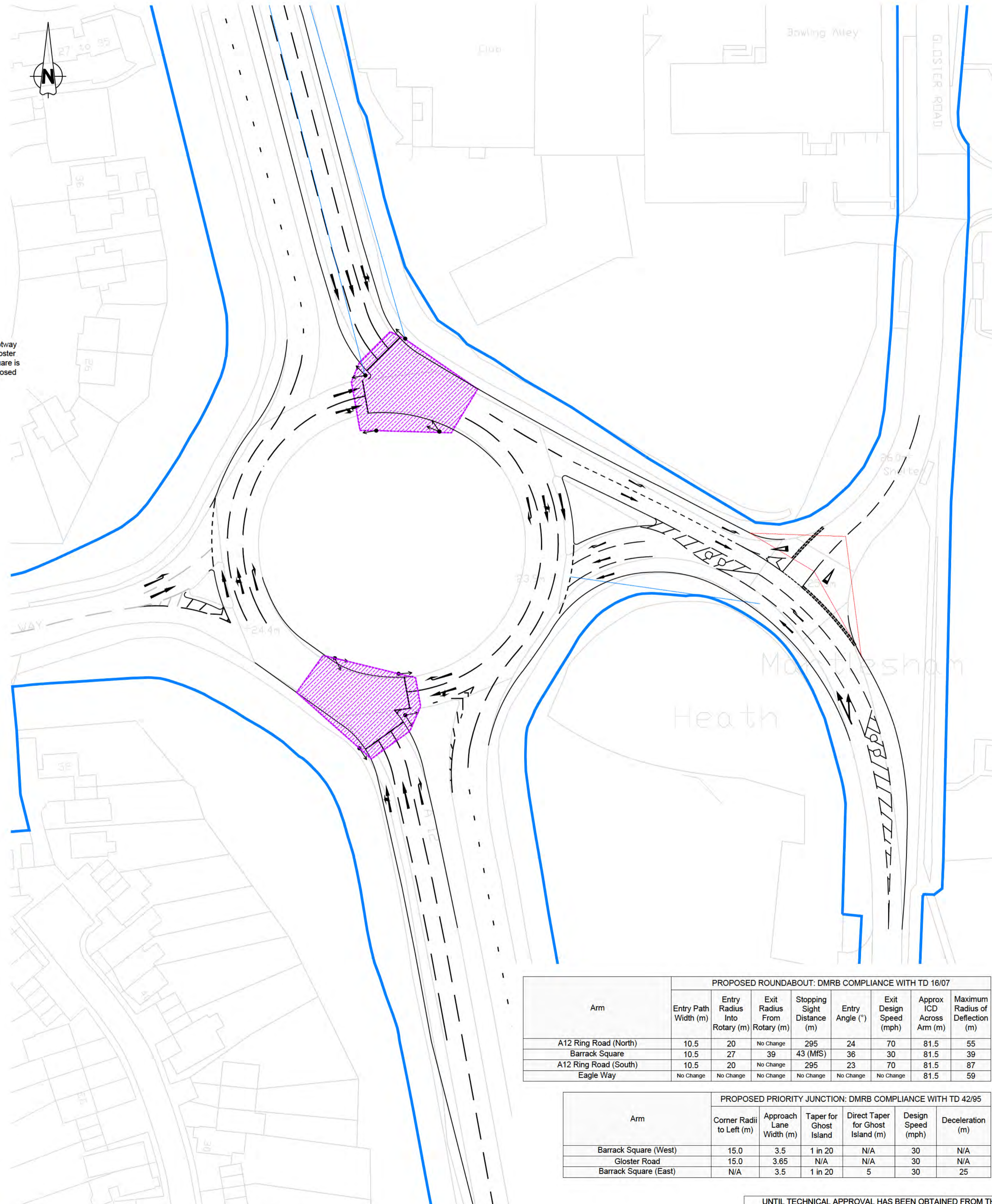
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Visibility Splays
Scale: 1:2000



Context Plan
Scale: 1:10000



Indicative Junction Layout
Scale: 1:500

PROPOSED ROUNDABOUT: DMRB COMPLIANCE WITH TD 16/07								
Arm	Entry Path Width (m)	Entry Radius Into Rotary (m)	Exit Radius From Rotary (m)	Stopping Sight Distance (m)	Entry Angle (°)	Exit Design Speed (mph)	Approx ICD Across Arm (m)	Maximum Radius of Deflection (m)
A12 Ring Road (North)	10.5	20	No Change	295	24	70	81.5	55
Barrack Square	10.5	27	39	43 (M/S)	36	30	81.5	39
A12 Ring Road (South)	10.5	20	No Change	295	23	70	81.5	87
Eagle Way	No Change	No Change	No Change	No Change	No Change	No Change	81.5	59

PROPOSED PRIORITY JUNCTION: DMRB COMPLIANCE WITH TD 42/95						
Arm	Corner Radii to Left (m)	Approach Lane Width (m)	Taper for Ghost Island	Direct Taper for Ghost Island (m)	Design Speed (mph)	Deceleration (m)
Barrack Square (West)	15.0	3.5	1 in 20	N/A	30	N/A
Gloster Road	15.0	3.65	N/A	N/A	30	N/A
Barrack Square (East)	N/A	3.5	1 in 20	5	30	25

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- KEY:**
- Site Boundary
 - Highway Boundary
 - Stopping Sight Distance on Approach
 - Junction Intervisibility
 - Signal Head

- F Road markings amended GG DN DN 21.11.17
- E Amended to SCC proposal GG DN DN 10.11.17
- D Amendments to circulatory carriageway and barrack square junction GG DN DN 13.09.17
- C Amendments for traffic modelling. MDM LW PAB 26.06.17
- B Further amendments for deflection. MDM DN PAB 15.06.17
- A Amendments as per client's requests. MDM LW PAB 03.03.17
- First Issue - - - 28.02.17

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Land South and East of
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Off-site Highway Mitigation:
 Aداstral Park Roundabout
 and Gloster Road Mitigation

Status	Approval	Status Date	Feb 2017
Drawn	MDM	Checked	LW
Date	28.02.2017	Date	28.02.2017
Scale	As Shown	Number	10391-HL-23
Rev	F	Rev	F

0 10 20 30 40 50
 METRES

Appendix F

SIZEWELL C FLOW PROFILING TECHNICAL NOTE

50400326-WSP-TP-TN-001

TO	Joe Hough (Suffolk County Council)	FROM	Sian Loveday (WSP)
DATE	17 December 2020	CONFIDENTIALITY	Confidential
SUBJECT	VISSIM modelling: Sizewell C Worker Profiling		

INTRODUCTION

Background

This Technical Note has been prepared to detail how SZC workers arriving at and departing from the proposed Sizewell C (SZC) site have been distributed around their anticipated shift start and end times for the purpose of flow profiling within VISSIM. By analysing observed worker distributions at the existing Hinkley Point C (HPC) site and applying these to the likely SZC shift patterns, the profile of arriving and departing workers has been derived at SZC, at Yoxford and at Martlesham.

Methodology

SZC worker entry and exit profiles have been derived in 15-minute intervals for use in the two SZC VISSIM models using the methodology set out below:

- 1 Derive existing 'typical' entry and exit worker profiles at HPC in 5-minute intervals, based on observed data;
- 2 Identify the SZC shift start and end times;
- 3 Apply the 'typical' entry and exit worker distributions from step 1 to each SZC shift from step 2 to provide an estimate of the SZC workers likely to be entering and exiting the site in each 5-minute interval;
- 4 Apply a travel time offset to shift the estimated SZC distribution so that it's appropriate for use at Yoxford and Martlesham respectively;
- 5 Apply the offset distribution to the hourly SZC worker trips sourced from the forecast VISUM scenarios to produce 15-minute SZC worker trip matrices suitable for VISSIM.

EXISTING HPC PROFILE AT SECURITY GATE

Data Obtained From HPC

HPC is the first new power station to be built in the UK in over 20 years. Currently under construction in Somerset, it provides the closest reflection of how SZC will operate through the construction phase. Therefore, to form a basis for deriving an arrival and departure profile for SZC, the following data was obtained from HPC.

ENTRY AND EXIT COUNTS

Workers at the HPC site are required to enter and exit the construction site through security gates which form the only access to the site. This enables monitoring of the number and identity of people working on site at any one time. The timestamps of construction workers travelling through the security gate at the HPC site were obtained for a full 24-hour period on a Tuesday in February 2020. At this point in time the HPC development was operating at the equivalent of the SZC Early Years scenario but is considered to provide a reasonable estimate of the distribution of workers entering/exiting for a typical shift regardless of the stage of construction.

The raw data was provided to the nearest second and presented as an arrival or departure. Table 1 below sets out the total number of entries and exits recorded.

Table 1 – Total Recorded Entries and Exits

Security Gate Movements	No. people
Entries	6,331
Exits	6,161
Total	12,492

SCHEDULED SHIFT PATTERNS

A list of shifts and their typical start and end times and the number of anticipated workers was also obtained from HPC. The HPC shift start and end times were all found to fall on the hour or half past the hour.

HPC Entry Profile

The HPC entry timestamps were aggregated in 5-minute intervals (i.e. 288 data points in 24-hours) and compared with the scheduled shift start times as shown in Figure 1. This graph illustrates the recorded security gate entries (green line) relative to the scheduled shift start times (purple bars). Note that the data is shown on separate vertical axes, with different scales

Figure 1 – HPC Recorded Security Gate Entries and Scheduled Shift Start Times

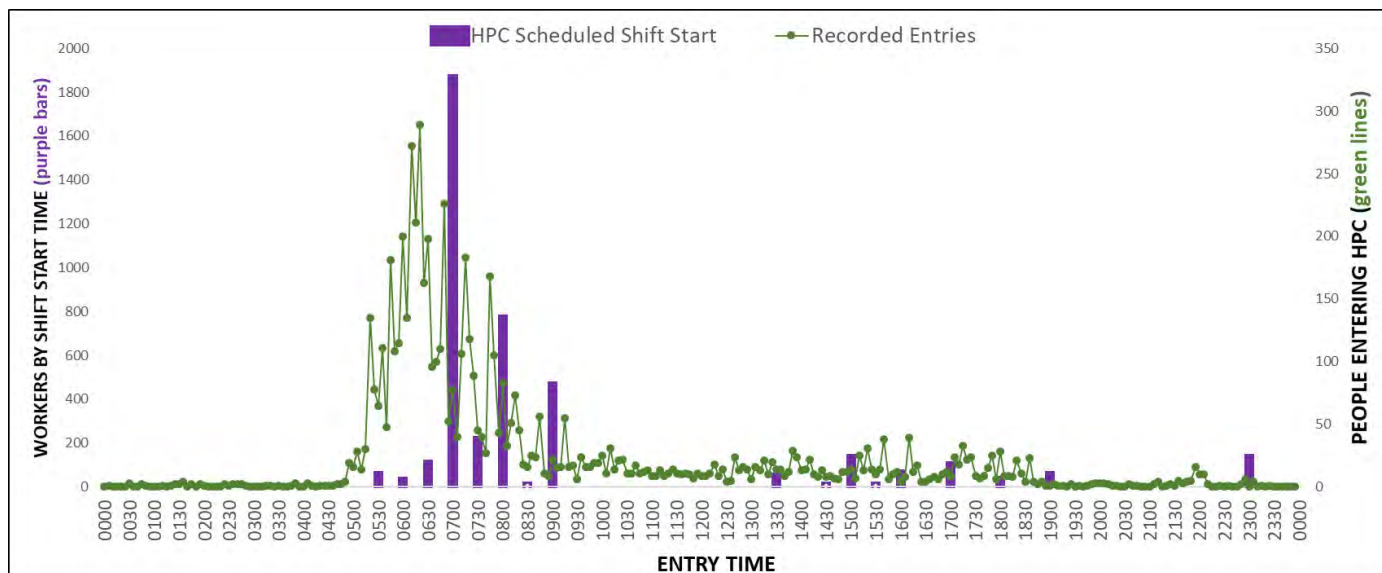
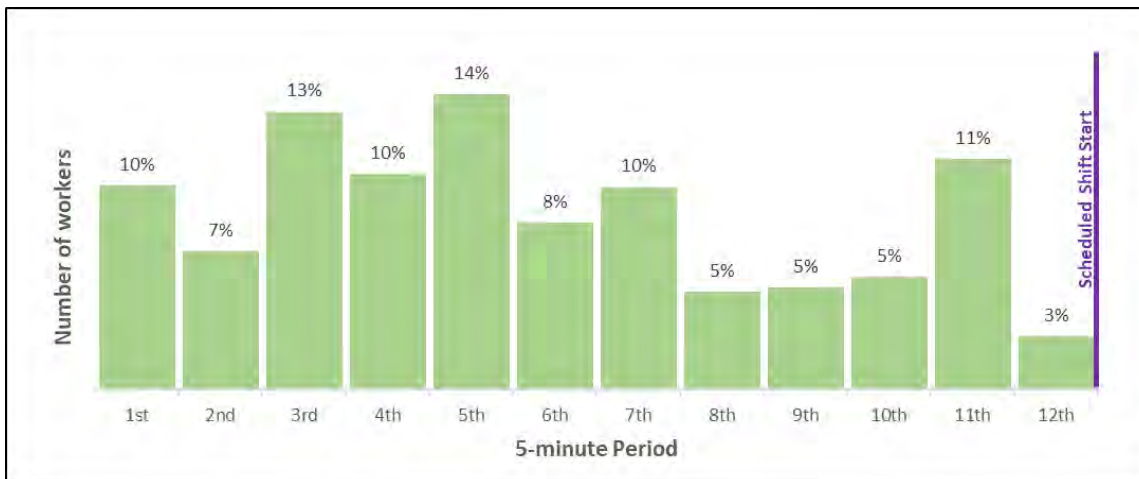


Figure 1 demonstrates that the most common shift start time is 07:00, when almost 2000 HPC workers are scheduled to begin their shifts. In the preceding hour and a half, only 189 workers are scheduled to begin their shift. Therefore, Figure 1 clearly shows that many workers arrive on site before their shift is scheduled to begin, as expected. It is estimated that the majority of workers arrive sometime during the hour prior to their scheduled start time.

This data has been used to produce an estimated distribution of worker arrivals ahead of a typical shift start and has been derived using the observed entries at HPC during the hour preceding 07:00 (i.e. from 06:00-07:00). Data has been aggregated in 5-minute intervals to allow travel time offsets to be applied later in the process. The resultant distribution is split into twelve 5-minute time segments leading up to the shift start time. Figure 2 below illustrates the estimated 'typical' entry distribution in advance of a shift beginning.

Figure 2 – Typical arrival distribution in advance of a shift



HPC Exit Profile

The HPC exit timestamps were also aggregated to 5-minute intervals (i.e. 288 data points in 24-hours) and compared with the HPC shift end times as shown in Figure 3. This graph illustrates the recorded security gate exits (orange line) relative to the scheduled shift end times (purple bars). Note that the data is shown on separate vertical axes, with different scales.

Figure 3 – HPC Recorded Security Gate Exits and Scheduled Shift End Times

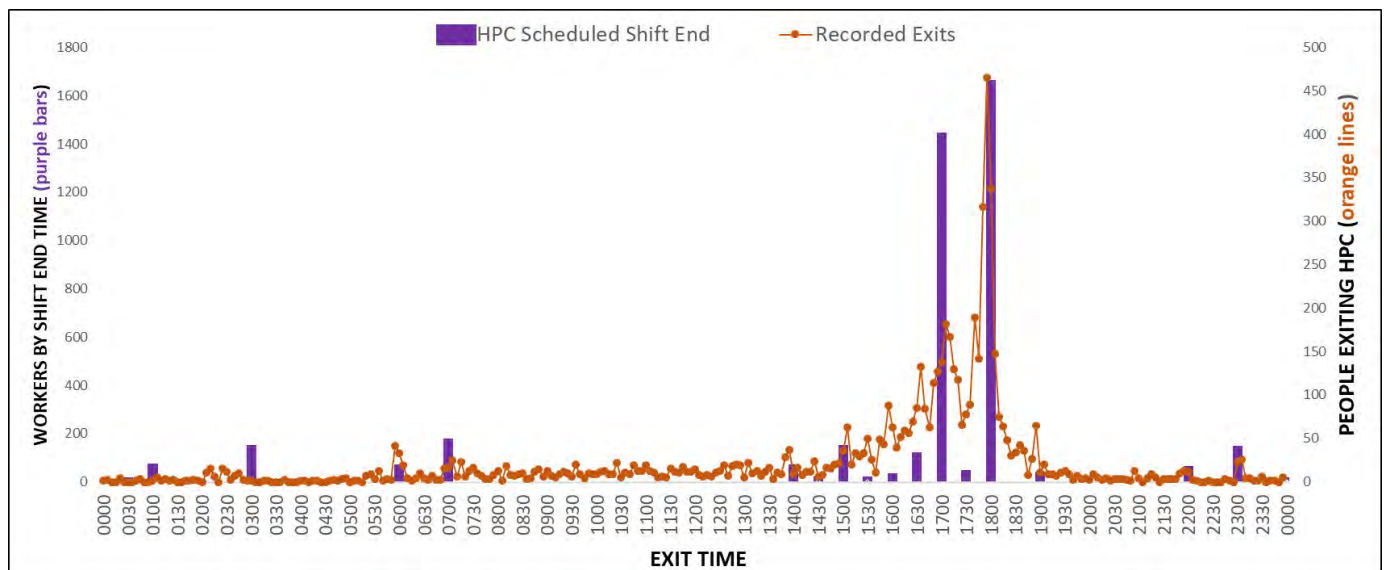
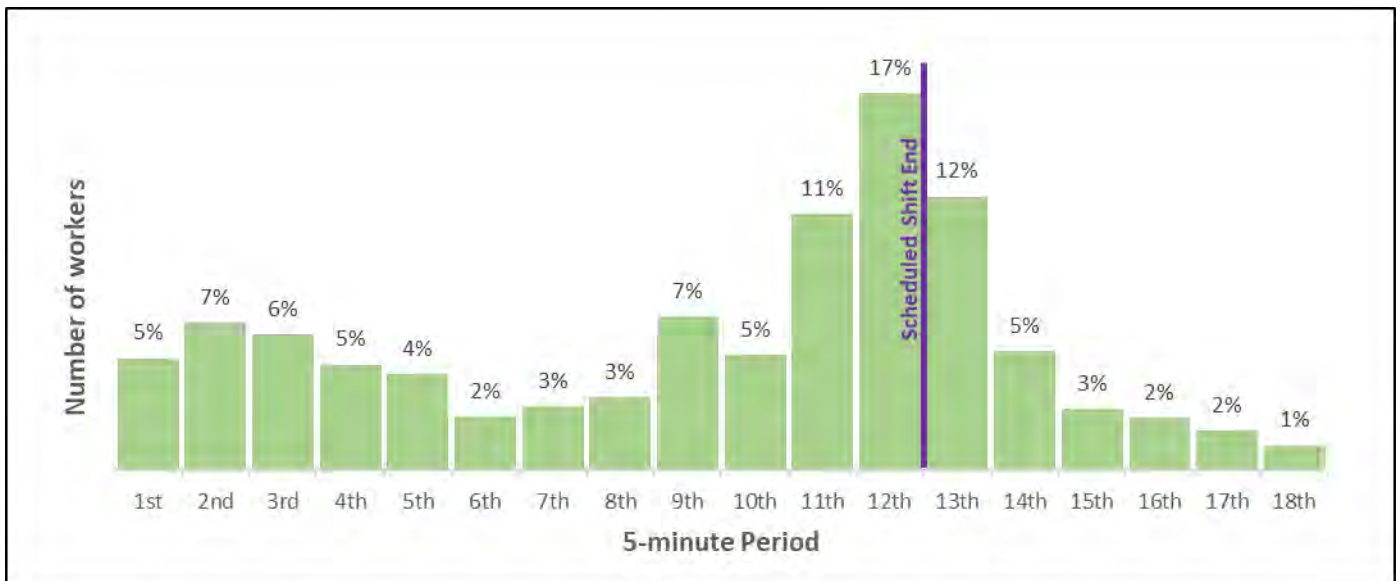


Figure 3 demonstrates that the majority of HPC workers are scheduled to finish their shift at either 17:00 or 18:00. Studying the patterns around the scheduled shift end time of 18:00, there is a clear spike in exits just before the scheduled finish time, with a less significant but still noticeable number of workers exiting both before and after this spike.

For this reason, the estimated departure distribution has been based on the hour prior to (capturing any workers leaving early) and the 30 minutes after the 18:00 shift end time. The 18:00 HPC shift end time was selected as a proxy for a typical distribution as it contains the greatest number of exiting workers and gives the clearest exit distribution after the shift end time.

An approximate distribution of worker departures around a typical shift end time has been derived using the observed exit data at HPC around the 18:00 shift end time. The distribution was based on the hour before and 30-minutes after the 18:00 shift end (i.e. from 17:00-18:30). The data has been aggregated in 5-minute intervals and the resultant distribution is therefore split into 18 time segments within the 90-minute period. Figure 4 below illustrates the estimated 'typical' exit distribution before and after a shift is due to end.

Figure 4 – Typical HPC Exit Profile



The estimated 'typical' worker entry and exit distributions (Figure 2 and Figure 4), provide a rough approximation for the level of arrival and departure time distribution that might be expected at a nuclear power station construction site. These distributions have been applied to the SZC shift times as detailed in the following chapter.

PREDICTED SZC WORKER PROFILE AT SECURITY GATE

SZC Scheduled Shift Patterns

Approximate SZC peak construction shift windows were provided by EDF. A trapezoidal distribution of start and end times has been assumed for each Sizewell C shift window, in line with the assumptions made for the VISUM modelling. The anticipated peak construction SZC shift start and end times are shown in Figure 5 and Figure 6 respectively.

Figure 5 - SZC Shift Start Times (Peak Construction)

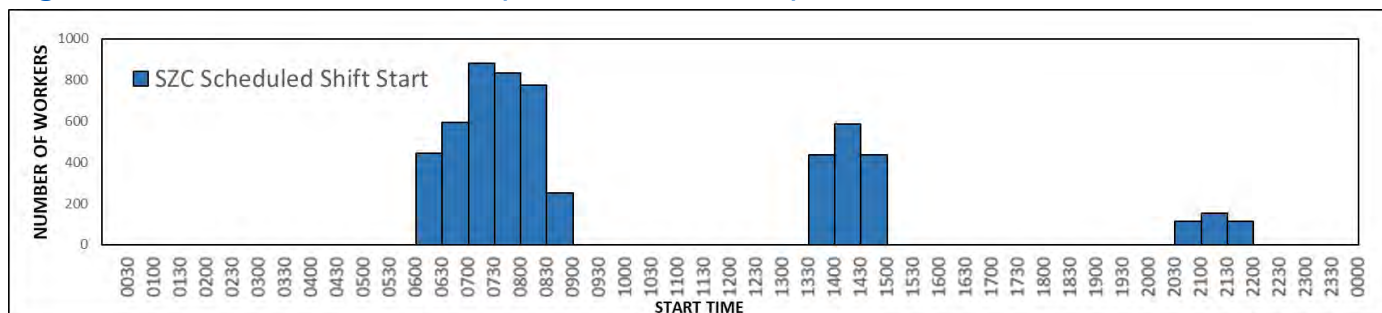


Figure 6 - SZC Shift End Times (Peak Construction)

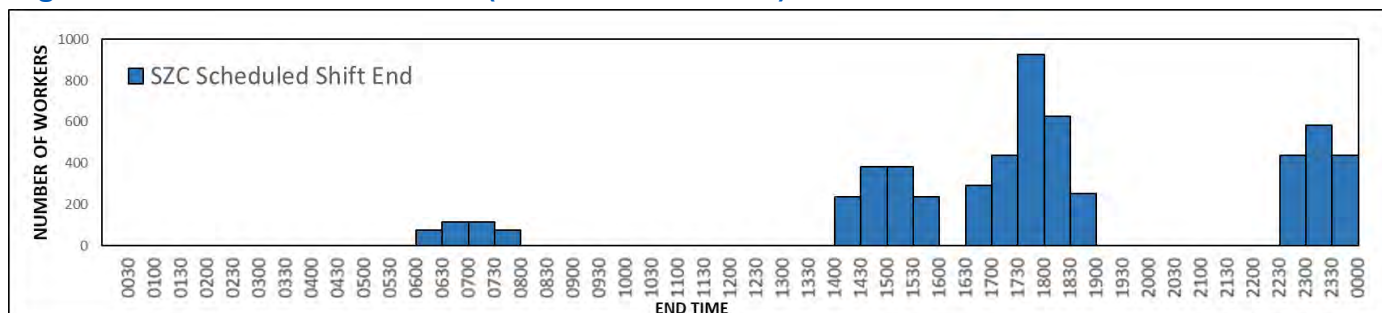
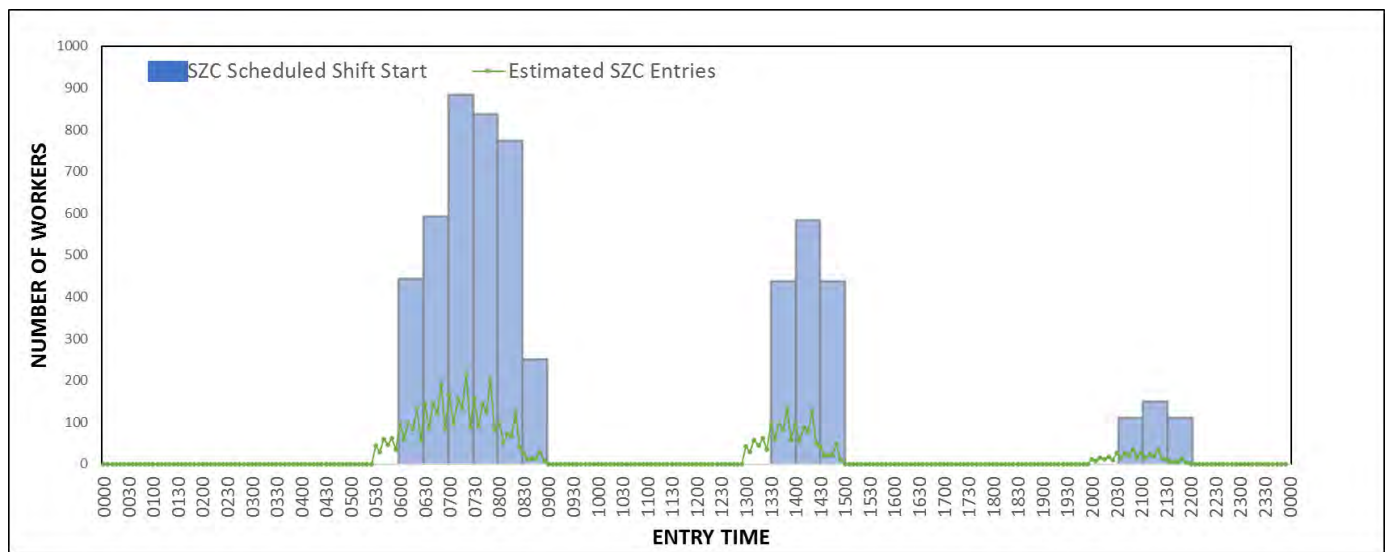


Figure 5 and Figure 6 illustrate the trapezoidal shape that was assumed. Figure 5 shows that there is a total of 12 different half hourly periods per day where a SZC shift is assumed to start, with a peak period from 07:00-07:30. Figure 6 shows that there is a total of 16 different half hourly periods per day where a SZC shift is scheduled to end, with a peak period from 17:30-18:00.

Estimated SZC Entry Profile

For each of the 12 half-hourly periods where a SZC shift is assumed to start (illustrated in Figure 5), the scheduled workers for that shift have been profiled across the preceding hour using the derived 'typical' entry profile (Figure 2). The profile was applied relative to the end of each 30-minute shift start period e.g. for the shift starting at 06:00-06:30, the 'typical' profile was applied to the hour ending 06:30 meaning worker arrival times for this shift are distributed from 05:30-06:30. The resultant SZC worker entry distribution is shown for each 5-minute period alongside the scheduled SZC shift start times in Figure 7 below.

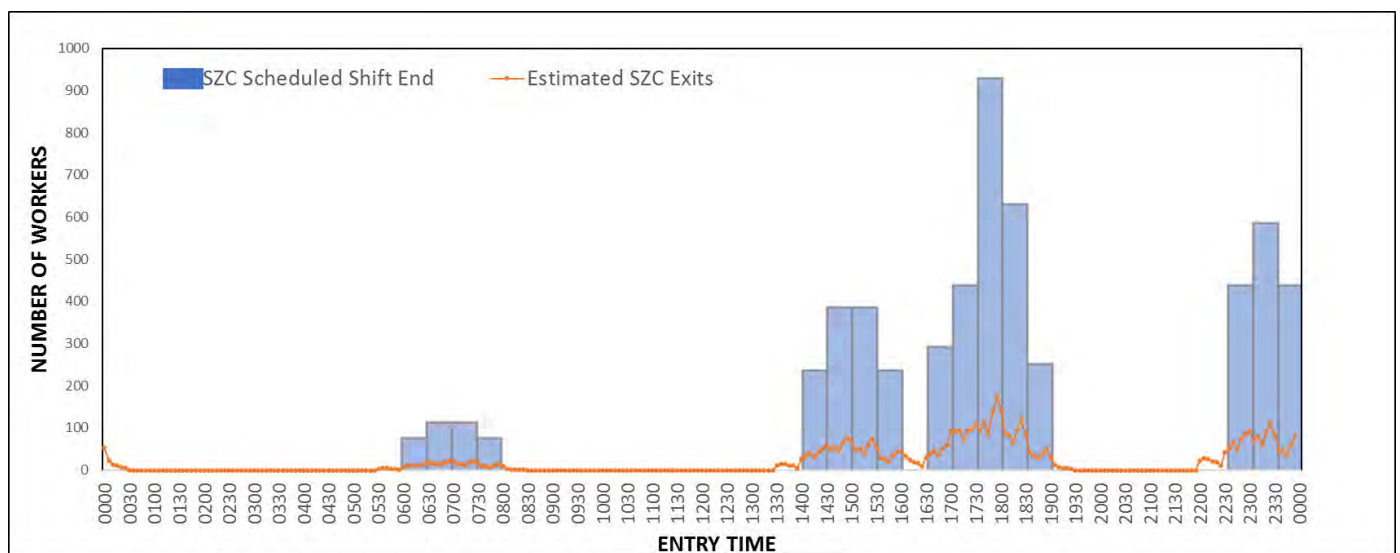
Figure 7 – Estimated SZC Entry Distribution



SZC Exit Profile

Similarly, for each of the 16 periods where a SZC shift is scheduled to end (illustrated in Figure 6), the scheduled workers for that shift have been profiled across the preceding hour and the following half hour using the derived HPC exit profile (Figure 4). As above, the profile was applied relative to the end of each 30-minute window e.g. for the shift ending from 06:00-06:30, the 'typical' profiling was applied from 05:30-07:00. The resultant SZC exits for each 5 minute period are illustrated alongside the scheduled SZC shift end times in Figure 8 below.

Figure 8 – HPC Profiled SZC Exits



APPLICATION IN VISSIM

Profile Offsets

The SZC entry and exit profiles derived in the previous section show the estimated distribution of arrivals and departures at the SZC construction site. The same profile patterns are likely to be replicated on the surrounding road network albeit slightly offset to account for any travel time. The estimated profiles have therefore been offset ready for use in the two Sizewell C VISSIM models.

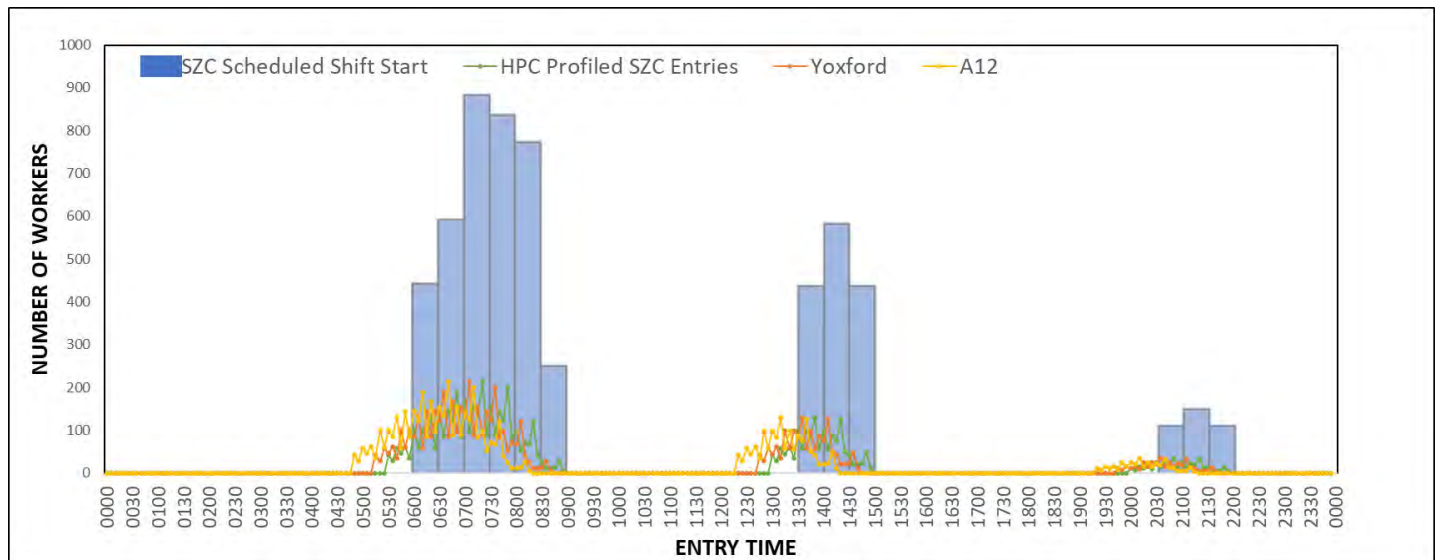
The two VISSIM models have been prepared to assess the Yoxford area and the A12 corridor between Seven Hills and Melton. For each VISSIM model, the construction site arrival/departure profiles (Figure 7 and Figure 8) have been offset (backward for entries and forward for exits) by the travel time from the SZC site to Yoxford and the A12 near Martlesham respectively. The offsets were derived using Google Maps' typical journey times, as follows:

- Yoxford: offset by 15-minutes; and
- A12 near Martlesham: offset by 40-minutes

The resultant entry and exit profiles at the SZC site, Yoxford and Martlesham (A12), are shown on Figure 9 and Figure 10 respectively.

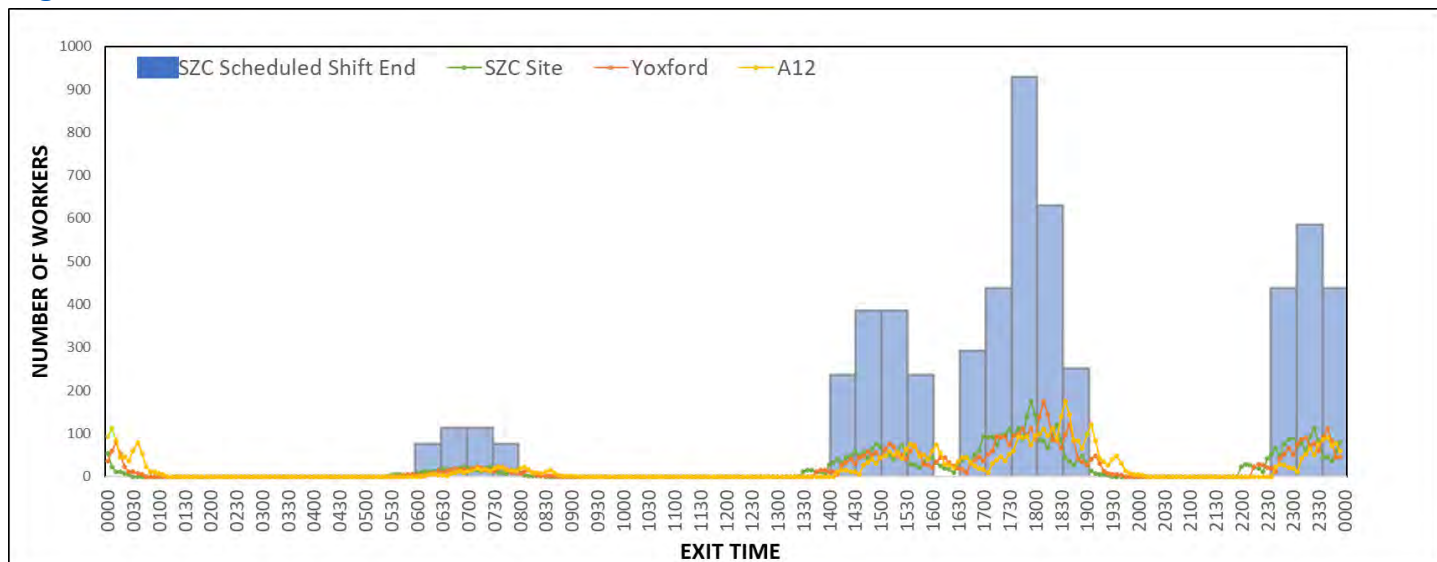
Peaks in the entry profile (Figure 9) can be observed to occur earliest at the A12, then at Yoxford 25-minutes later, then at the Sizewell C site 15-minutes after that which is in line with the approximate travel times to the site.

Figure 9 – Estimated SZC Entries on site, at Yoxford and on the A12 near Martlesham



Peaks in the exit profile (Figure 10) can be seen to occur earliest at the Sizewell C site, then at Yoxford 15-minutes later and then at Martlesham (A12) 25 minutes after that in line with the approximate travel times from the site.

Figure 10 - Estimated SZC Exits on site, at Yoxford and on the A12 near Martlesham



Calculation of 15-minute distribution percentages

Based on Figure 9 and Figure 10, the number of SZC worker trips expected to arrive in each VISSIM study area in each 15-minute period has been expressed as a percentage of the hourly SZC worker trips. In other words, four profiling percentages were calculated for each hour which sum to 100%.

This approach was adopted so that the hourly volumes of SZC workers could be sourced from the VISUM model meaning the VISSIM model remains consistent. It is also important that the SZC worker demands come from VISUM as these volumes account for the change in shift patterns between the Early Years and Peak Construction scenarios. The only difference with the SZC worker demand in VISSIM is the presence of a non-flat profile. Applying the profiling as a set of percentages for each hour allowed the arrival / departure distributions to be applied to the 2023 Early Years and 2028 Peak Construction SZC worker volumes respectively ensuring that the differing peaks in Sizewell C worker volumes in 2023 and 2028 are allowed for.

The VISSIM models cover the following hours and profiling percentages were therefore needed for these seven hours:

- 06:00 - 07:00;
- 07:00 - 08:00;
- 08:00 - 09:00;
- 15:00 - 16:00;
- 16:00 - 17:00;
- 17:00 - 18:00; and
- 18:00 - 19:00 (Yoxford only)

The resultant entry and exit profiles of SZC workers at Yoxford are set out in Table 2. Note that there are no profiles shown for entries from 15:00-19:00 because no SZC arrivals are anticipated during this period, as illustrated in Figure 9 above.

Table 2 – SZC Worker Profiling at Yoxford

Modelled Hour	15-minute Period (minutes past the hour)			
	00:00-00:15	00:15-00:30	00:30-00:45	00:45-01:00
ENTRY PROFILE				
06:00 - 07:00	19%	26%	27%	28%
07:00 - 08:00	30%	27%	28%	15%
08:00 - 09:00	70%	15%	15%	0%
EXIT PROFILE				
06:00 - 07:00	7%	24%	30%	39%
07:00 - 08:00	29%	27%	27%	17%
08:00 - 09:00	62%	30%	8%	0%
15:00 - 16:00	29%	27%	27%	17%
16:00 - 17:00	28%	28%	13%	32%
17:00 - 18:00	15%	28%	26%	32%
18:00 - 19:00	35%	27%	25%	14%

The resultant entry and exit profiles of SZC workers on the A12 near Martlesham are set out in Table 3.

Table 3 – SZC worker profiling at A12 near Martlesham

Modelled Hour	15-minute Period (minutes past the hour)			
	00:00:00:15	00:15-00:30	00:30-00:45	00:45-01:00
ENTRY PROFILE				
06:00 - 07:00	28%	21%	31%	20%
07:00 - 08:00	45%	23%	25%	7%
08:00 - 09:00	89%	11%	0%	0%
EXIT PROFILE				
06:00 - 07:00	6%	22%	21%	51%
07:00 - 08:00	24%	23%	32%	21%
08:00 - 09:00	46%	19%	28%	6%
15:00 - 16:00	23%	23%	32%	21%
16:00 - 17:00	41%	16%	26%	16%
17:00 - 18:00	9%	19%	32%	40%

Application within VISSIM

The entry and exit profiles in Table 2 and Table 3 have been applied to split the hourly SZC worker car trips (from VISUM) into 15-minute matrices that are assigned in the VISSIM model.

It should be noted that the SZC matrices in VISUM also contain a small number of 'non-work' trips which are made by 'non-home based' workers living either on the accommodation campus or in other rented accommodation, when they are not on shift (i.e. shopping/leisure etc) and trips made by 'associated development' workers (e.g. catering, cleaning, admin, security, etc). The construction worker shift pattern profiles are not applicable in these cases, so a flat profile has been assumed for these trips.

Yoxford VISSIM model

Table 4 identifies which profile has been applied to each of the individual movements in the matrices for the Yoxford VISSIM model; the entry, exit or flat profile. SZC trips do not exist for all of the origin-destination pairs listed in Table 4 and the majority of SZC trips head to / from the B1122, A12 South or P&R and therefore receive an 'entry' or 'exit' profile.

Table 4 – Application of profiles to SZC matrices in the Yoxford VISSIM model

		Destination						
Origin	From \ To	The Street	P&R	A1120	A12 South	A144	A12 North	B1122
	The Street		entry	flat	flat	flat	flat	entry
	P&R	exit		exit	exit	exit	exit	exit
	A1120	flat	entry		entry	flat	flat	entry
	A12 South	flat	entry	exit		exit	exit	entry
	A144	flat	entry	flat	entry		flat	entry
	A12 North	flat	entry	flat	entry	flat		entry
	B1122	exit	entry	exit	exit	exit	exit	

A12 VISSIM model

In the A12 VISSIM model it is assumed that all workers use the A12 to travel to and from the SZC site. Table 5 shows how the three profile types have been applied to different types of SZC trips in the A12 VISSIM model. The majority of the Sizewell C trips travel to/from the A12 North and therefore receive an entry or exit profile rather than a flat profile.

Table 5 – Application of profiles to SZC matrices in the A12 Corridor VISSIM model

Movement	Profile Used
From the A12 North (i.e. southbound)	Exit
To the A12 North (i.e. northbound)	Entry
All other movements	Flat

CONCLUSION

The profiling of workers arriving and leaving the HPC site provides a reasonable approximation of the likely profiling of SZC construction workers relative to their shift start / end times. The HPC entry and exit profiles have therefore been applied to the SZC shift times in order to approximate the distribution of workers relative to their shift times.

Whilst this process provides a high-level approximation of the likely shape of the SZC worker distribution for each hour, the inclusion of any form of peaks in demand will effectively allow the junctions to be stress tested in each hour. The estimated profile will provide a reasonable estimate of when SZC workers travel through both Yoxford and the A12 study areas. This approach is not dissimilar to the approach taken in Junctions 9 where-by a bell-curve profile is assumed so that peaks in demand across the hour are considered. This approach is preferable to assuming a flat profile for SZC trips which would not account for any peaks in demand.



APPENDIX 10A

RSA Designers Response

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Sizewell Link Road	Alignment Problem 1	Location: A – Various along the SLR including the section between chainages 4400 & 5400.	<p>Risk of reduced forward visibility for drivers on the SLR.</p> <p>The proposed SLR is to be constructed using a number of cuttings, where the carriageway will have high embankments on either side. These embankments are likely to reduce forward visibility for drivers using the SLR which may increase the risk of shunt type collisions should vehicles be queuing or stationary ahead.</p>	It is recommended that stopping sight distances are maximised, especially so on approach to junctions where there is an increased risk of slowing or stationary traffic.	<p>The SLR alignment was originally designed for 85kph and 160m forward visibility splay. Thus, the design is compliant to this latter. However, further checks will be required following the RRRAP assessment and the introduction of VRS. Depending on the barriers' height and location (which is also related to the depth of the swale next to the carriageway), it is possible that local widenings will be required to achieve the forward visibility.</p> <p>The current design is based on Lidar data and OS Mapping. At the next stage of detailed design, FSSD will be checked so it's compliant with standards.</p>
Sizewell Link Road	Alignment Problem 2	Location: B – Chainage 3400	<p>Risk of vehicles leaving the carriageway and rolling down the embankment.</p> <p>The SLR at the location highlighted above appears to be located on a high embankment. If a vehicle were to lose control and leave the carriageway at this location there is a risk of an increase to the severity of any injuries suffered to the vehicle occupants due to the embankment height.</p>	It is recommended that all high embankments be protected by vehicle restraint systems.	RRRAP could not be carried out at the current stage due to 3D Topographical Survey information not being available. The design team recognises the need for RRRAP to be carried out when detailed survey information will come available at a further design stage. Mindful of this need, the design has already allocated for extra verge width to accommodate VRS.
Sizewell Link Road	Alignment Problem 3	Location: C – B1122/Middleton Moor Link road	<p>Risk of high vehicle speed and overshoot collisions.</p> <p>A new link road is proposed to link the SLR with the B1122 at Middleton Moor. The link road has a particularly straight alignment with a junction at each end and a proposed 100kph speed limit. There is a risk that the alignment of the link road will encourage high vehicle speeds and potentially lead to vehicles overshooting the give way/stop line at the junctions.</p>	It is recommended that measures are provided to help reduce vehicles speeds and adequate warning is provided to inform drivers of the junctions at either end of the link road.	Noted. Measures will be implemented at the next design stage.
Sizewell Link Road	Road Markings Problem 4	Location: D – Side road junctions at chainages 4100 and 5900	<p>Increased risk of collisions between vehicles waiting to turn into the side roads and other vehicles on the SLR.</p> <p>The SLR is constructed with several side road junctions, and many of these have a right turn lane proposed to provide a safe waiting area when turning into the side road. However, the two side roads as detailed above do not appear to have right turn lanes proposed. This is likely to increase the risk of a collision between a vehicle waiting to turn right into the side road and a vehicle continuing straight on the SLR.</p>	It is recommended that adequate provision is made on the SLR to allow for safe right turn manoeuvres into the side road junctions.	The current design includes right-turn lanes for all the T-junctions.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Two Village Bypass	Signing Problem 1	Location: A – New roundabout to the eastern end of the bypass	<p>Risk of high vehicle speeds causing overshoot or shunt type collisions at the proposed roundabout.</p> <p>Where the new bypass joins the A12 at the eastern end of the scheme, the A12 is in a rural environment (see Photo 1). Although there is currently a 50mph speed limit, it is a dual carriageway and drivers may not be expecting to encounter an at-grade roundabout in such a rural environment. This may lead to vehicle overshoot and shunt type collisions at the roundabout. There already appears to be a road safety issue at this location. There are existing 'Accident site' signs on the A12 approach to this junction.</p>	It is recommended that the roundabout be adequately signed in advance on the A12 and the location of the roundabout is made clear to drivers.	Recommendation is noted. This will be considered when the traffic sign design is undertaken.
Two Village Bypass	Signing Problem 2	Location: B – Public rights of ways crossing over the bypass.	<p>Risk of vehicles colliding with pedestrians crossing the bypass.</p> <p>The new bypass severs a number of public rights of way (PROW). Pedestrians using the PROWs are expected to cross over the bypass at-grade. There is a risk of collisions between vehicles and pedestrians on the bypass.</p>	It is recommended that adequate warning be provided for vehicles of the potential for pedestrians to be crossing the carriageway and that adequate visibility be provided to allow pedestrian to safely judge gaps in traffic prior to crossing.	Recommendation is noted. This will be considered when the traffic sign design is undertaken.
Yoxford Roundabout			No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1
Freight Management Facility			No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1
Darsham (Northern Park and Ride)	Alignment Problem 1	Location: A – Willow Marsh Lane East junction with Western Approach Park and Ride Access.	<p>Risk of agricultural vehicles being involved in head-on collisions and/or depositing mud onto the carriageway.</p> <p>The junction of Willow Marsh Lane East with Western Approach appears to be very narrow. Willow Marsh Lane provides access for agricultural vehicles to fields and barns (see Photo 1). Should the junction be of insufficient width, large vehicles could be forced to either encroach into the opposing traffic lanes which could result in head-on collisions or side swipe collisions. The large vehicles could also be forced to drive on the highway verge which may bring dirt and mud onto the carriageway which could increase the risk of a vehicle losing control.</p>	It is recommended that the Willow Marsh Lane East/Western Approach junction be of sufficient construction to accommodate the likely users.	The section highlighted is not a junction, but a "Direct Access" designed as per TD41/95 (now superseded by CD123). The access is expected to be used mainly by cyclists (national cycle route is retained on Willow Marsh Ln). White House Farm (building located on the A12, South-West of roundabout location) will still retain its main access on the A12 which will also grant right of way to all the surrounding fields (which however are included within the red line boundary). Thus, expected vehicular traffic flow is will be minimal and therefore, the risk of mud being brought onto the carriageway will also be minimal.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Darsham (Northern Park and Ride)	Signing Problem 2	Location: B – A12/Western Approach roundabout.	<p>Risk of drivers failing to correctly negotiate the roundabout.</p> <p>The proposed new roundabout at the junction of the A12 and Western Approach has three arms. Each arm has chevron signs and keep left signs to help guide drivers in the correct direction around the roundabout. However, whilst the two A12 arms have 2 chevron signs along with a keep left sign within the island, the Western Approach arm of the roundabout only has a single chevron sign proposed. This may increase the risk of a driver failing to identify the need to proceed to the left at the roundabout, potentially leading to a head-on collision.</p>	It is recommended that a minimum of two chevrons are provided along with the keep left arrow on each arm of the roundabout.	Recommendation is noted. This will be considered when the traffic sign design is undertaken.
Darsham (Northern Park and Ride)	Signing Problem 3	Location C – A12 Northbound Approach to roundabout	<p>Incorrect placement of signs.</p> <p>Existing speed limits change signage is shown to be installed on the 'old' line of the A12. This may result in drivers approaching the roundabout at excessive speeds and risk overshoot of the give way line and increased risk of collision. The visual 'gateway' created by the signage may also result in drivers heading towards them and entering the opposing traffic lane with risk of head on collision.</p>	It is recommended that the speed limit signage is installed on the realigned A12 approach towards the roundabout.	Unclear, further explanations required. The existing speed limit signs on the "old" A12 line are shown as "to be removed". Proposed speed limit change is now located on the A12 north of the roundabout.
B1078/B1079 Junction	Signing Problem 1	Location: A – Junction of the B1089 and the B1079.	<p>Risk of drivers overshooting the junction.</p> <p>The existing give way sign at the junction of the B1089 and the B1079 is partially masked by the speed limit signing (see Photo 1). Drivers approaching the junction from the west, have difficulty in seeing the sign, and the proposed give way sign is to be located in a similar location.</p> <p>Therefore, there is a risk of the new sign being obscured by the speed limit sign. This may increase the risk of drivers failing to identify the need to give way at this junction resulting in overshoot collisions with vehicles on the B1079.</p>	It is recommended that the give way sign be located so that it is clearly seen by approaching drivers and/or that an additional give way sign be located on the offside where it would be in the driver's eye-line.	Recommendation is noted. This will be considered when the traffic sign design is undertaken.
B1078/B1079 Junction	Signing Problem 2	Location: B – B1078 on approach to its junction with the B1079.	<p>Risk of drivers overshooting the junction.</p> <p>The proposals include replacing the existing advance give way signs. However, both advance give way signs display the same distance sub-plate of 100yds even though they are located at different distances from the give way markings. This may lead to drivers becoming confused as to the distance to the give way line resulting in overshoot collisions.</p>	It is recommended that the distance to hazard sub-plates of the advance give way signs be amended to show the correct distance to the give way line.	Recommendation is noted. This will be considered when the traffic sign design is undertaken.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
A140/B1078 Junction	Signing Problem 1	Location: A – A140 southbound approach to its junction with the B1078	<p>Risk of vehicles entering the A140 into the path of other vehicles.</p> <p>Proposed advance directional sign (ADS) Diag. 2033, is to be provided on the A140 in advance of its junction with the B1078. The location of the sign (ADS furthest to the north) is to be positioned close to an existing field access and potentially within the visibility splay. This could restrict the view for drivers attempting to exit the field of vehicles approaching on the A140, increasing the risk of a collision.</p>	It is recommended that the ADS be positioned so it doesn't adversely affect drivers' visibility of other vehicles.	Sign to be relocated approx. 1.7m further from edge of carriageway to avoid clashes with a 160m – 2m set-back visibility splay (as per CD123 considering a design speed of 85kph). Sign location and installation feasibility to be assessed at detailed design stage.
A140/B1078 Junction	Signing Problem 2	Location: B – A140 southbound approach to its junction with the B1078	<p>Risk of drivers becoming confused as to the junction layout due to incorrect signage.</p> <p>Proposed warning signs Diag. 506.1R & 572 are a junction warning sign with supplementary distance plate to be located on the nearside and offside of the A140 on its southbound approach to the B1078 junction. However, the sign shows the side road of the junction to be to the right side of the main road and not the left side (as is the case). This could lead to driver confusion, late lane changes and braking manoeuvres resulting in shunt type collisions.</p>	It is recommended that the junction warning sign be amended to reflect the road layout.	Agreed, sign diag. 506.1R to be replaced by diag. 504.1.
A140/B1078 Junction	Signing Problem 3	Location: C – B1078 approach to the A140	<p>Risk of drivers failing to view the speed limit resulting in higher speeds.</p> <p>The existing 50mph/National Speed limit signs on the B1078 approach to the A140 junction are obscured by overgrown vegetation (see Photo 1). Should drivers fail to view the 50mph speed limit signs, it could result in higher vehicle speeds on the A140 increasing the risk of collisions.</p>	It is recommended that the vegetation be removed from the vicinity of the speed limit signs.	Agreed, drawings to include a note on vegetation clearance.
A12/A144 Junction	Road Markings Problem 1	Location: A – A12/A144 junction	<p>Risk of collisions between right turning vehicles.</p> <p>The proposed right turn waiting area for traffic entering or exiting the A144 has no road markings to help guide drivers as to where they should be positioned. A vehicle attempting a right turn out of the A144 may therefore position the vehicle within the central reserve whilst obstructing vehicles wishing to turn right into the A144. Also, without the provision of a safe waiting area for right turning vehicles out of the A144, drivers may become reluctant to perform the manoeuvre in two stages, instead attempting in a single manoeuvre where there is an increased risk of collisions.</p>	It is recommended that road markings be provided in the central reserve to help guide drivers.	Noted. Road markings are indicative at this stage. Traffic markings will be reviewed in light of this recommendation at detailed designed stage.
A12/A144 Junction	Signing Problem 2	Location: B – A12/A144 junction – private access onto A12.	<p>Risk of head-on collisions.</p> <p>There is a private access directly onto the A12 to the north of its junction with the A144 (see Photo 1). The private access is within the proposed section of A12 that has the traffic island within the central island. Should a vehicle exiting the private access turn right they would be travelling against the flow of traffic which could result in head-on collisions.</p>	It is recommended that appropriate directional signing be provided at the private access.	Noted. This will be considered when the detailed traffic sign design is undertaken.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
B1119/A12 Junction			No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1
A1094/B1069 Junction	Signing Problem 1	Location: A – Junction of the A1094 and the B1069	<p>Increased risk of collisions between turning vehicles.</p> <p>Although some vegetation clearance is proposed on the A1094, there does not appear to be any proposals for vegetation clearance on the B1069 approach to the junction with the A1094. There are a number of signs currently partially obscured by overgrown vegetation (see Photo 1) and the map type advance direction sign (ADS) is lying on the ground. If drivers fail to view the advance signing, there is an increased risk of a vehicle overshooting the give way line and colliding with a vehicle on the A1094.</p>	It is recommended that vegetation clearance be carried out on the B1069 and the ADS be re-erected.	Agreed, drawings to include a note on vegetation clearance.
Southern Park and Ride	Signing Problem 1	Location: A – A12 Northbound immediately after the offslip to the B1078	<p>Risk of drivers being unaware of the offside lane drop.</p> <p>As part of these junction improvement works, the offside lane drop on the A12 is to be relocated further to the south, just after the offslip to the B1078. The offside lane will be hatched with three 'tuck-in' arrows to help inform drivers of the need to move from the offside lane into the nearside.</p> <p>However, there doesn't appear to be any advance signage associated with the lane drop. If drivers are not notified of the lane drop in advance this could result in late lane change manoeuvres resulting in loss of control or side swipe collisions.</p>	It is recommended that adequate advance signage be provided of the lane drop.	Noted. Road markings are indicative at this stage. Traffic markings will be reviewed in light of this recommendation at detailed designed stage.
Southern Park and Ride	Road Markings Problem 2	Location: B – A12 northbound between the offslip and onslip.	<p>Increased risk of collisions at layby. The offside lane of the A12 is to be hatched-out from a point to the north of its offslip to the B1116.</p> <p>Immediately to the north of the start of the hatching, there is an existing layby. The layby is to remain following the improvement works. However, with the end of the offside lane of the A12 being so close to the layby, there is a risk of drivers merging into a single lane being unaware of the risk of vehicles either slowing to enter the layby or of vehicles exiting the layby, potentially at low speeds due to the gradients. This may increase the risk of collisions between vehicles on the A12 with vehicles entering or exiting the layby.</p>	It is recommended that the layby be closed or relocated.	Layby to be retained as per SCC requirements. The off-side lane is to be hatched off to its complete width prior the start of the layby. Therefore, at the layby location the carriageway is treated as a single carriageway and signs are erected to make drivers aware of the layby existence.
Southern Park and Ride	Alignment Problem 3	Location: C – A12 northbound onslip.	<p>Risk of vehicles colliding with power line poles.</p> <p>The park and ride scheme provides a new footway and crossing over the entry/exit from the proposed park and ride site. However, there is an existing power-line post within the proposed alignment of the footway and it will be very close to the edge of the diverge taper into the park and ride site (see Photo 1). Should these posts be subject to a collision with a passing vehicle, the electricity power line could fall to the ground and come into contact with other road users. The poles may also obstruct pedestrian movement on the footway, forcing pedestrians into the deceleration lane with risk of collision from traffic.</p>	It is recommended that power line posts be protected or relocated.	Noted. Liaison with Statutory undertakers will be carried out at the next stage of design and agreement on a suitable solution considering the recommendation.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Bridleway 19	Walkers, Cyclists & Horse Riders Problem 1	Location: A – Bridleway crossing at the Lovers Lane / B1122 junction.	<p>Risk that the bridleway pen will reduce visibility for road users.</p> <p>Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing has pens, consisting of post and rail fencing, on either side of the B1122 to provide a safe waiting area for horse riders. Due to the close proximity of the bridleway crossing to the Lovers Lane junction, there is a risk that the pen may restrict visibility for drivers attempting to exit Lovers Lane onto the B1122 resulting in a collision.</p>	It is recommended that the bridleway pens be located / constructed so they do not restrict visibility for other road users.	Agreed. Form of bridleway pen to be developed at next design stage
Bridleway 19	Walkers, Cyclists & Horse Riders Problem 2	Location: B – Bridleway crossing at the Lovers Lane / B1122 junction.	<p>Risk that drivers existing Lovers Lane will fail to stop for horse riders crossing.</p> <p>Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing is a Pegasus crossing, requiring road users to stop when faced with a red traffic signal, allowing horse riders to cross. However, due to the close proximity of the crossing to the Lovers Lane junction, there is a risk of drivers exiting Lovers Lane and turning left, failing to identify the crossing resulting in a red-light violation and potentially colliding with horse riders crossing the B1122. Visibility at the junction may be further compromised due to Lovers Lane being within a cutting on the approach to the B1122.</p>	It is recommended that drivers on Lovers Lane are made aware of the Pegasus crossing on the B1122 and it can clearly be seen from the Lovers Lane junction.	Agreed. Advance signage Pegasus crossing for left turners to be provided on Lovers Lane. Current Earthworks design permits clear visibility of pen at junction.
Bridleway 19	Walkers, Cyclists & Horse Riders Problem 3	Location: C – Proposed bridleway between the north and western arms of the proposed Main Site Access roundabout.	<p>Risk of walkers, cyclists and horse riders falling down embankment at rear of facility.</p> <p>The proposed bridleway guides walkers, cyclists and horse riders between the north and western arms of the new roundabout. The bridleway is 3 metres in width, with an embankment adjacent to its northern edge. The narrow width of the facility (considering all users can utilise this facility) combined with the close proximity to the top of the embankment could lead to a walker, cyclist and horse rider falling down the embankment resulting in injury.</p>	It is recommended that either the Bridleway be widened (potential for widening shown on drawings) or a post and rail fence be provided at the top of the embankment.	Agreed. Bridleway to be moved towards roundabout and away from embankment on section to north of roundabout. Section to west or roundabout provided with post and rail fence.
Bridleway 19	Walkers, Cyclists & Horse Riders Problem 4	Location: Various– Bridleway crossings and on-street sections of Bridleway.	<p>Risk to drivers failing to realise the possibility of horse riders crossing the carriageway or riding within / adjacent to the carriageway.</p> <p>There are a number of Pegasus crossings proposed as part of Bridleway 19. Due to the rural nature of the area, drivers may not be expecting a signalised crossing and be slow to react to the red signal. Also, the Bridleway has an on-street section at Sandy Lane where horse riders and other road users will be forced to share the carriageway space. In addition, the Bridleway is very close to the edge of carriageway where it crosses the level crossing on the B1122 and horses may become spooked should a vehicle pass too close or at high speeds.</p>	It is recommended that warning signs are provided in advance of any section of Bridleway which crosses a carriageway or where horse-riders are forced to ride along a carriageway or horse riders are unsegregated from passing traffic.	<p>Provision of advance warning signs on existing highways (unaltered) i.e. B1122, Abbey Lane where Pegasus crossings are proposed to be discussed with local highways authority at detailed design stage. Required locations of signs would be outside the red-line boundary.</p> <p>Unable to practically avoid close proximity of horses and vehicles at B1122 level crossing.</p>

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Bridleway 19	Walkers, Cyclists & Horse Riders Problem 5	Location D – B1122 Abbey Road	<p>New residential development access not considered within scheme design.</p> <p>There is a new residential development and associated access on the west side of B1122 Abbey Road, close to the location of the realigned Lovers Lane junction. This is not shown on the design drawings nor was sufficient information available to determine the geometry of the possible staggered cross roads during the site visit. The bridleway will cross the new junction, although how this will be achieved has not been addressed. Without holding pens at the bellmouth crossing there is risk of collision between equestrians, cyclists and pedestrians, or riders losing control of horses and their entering the road in front of traffic.</p>	It is recommended that the bridleway design be amended to include safe crossing of the new development access and new Lovers Lane junction be designed taking into account the new development access to help avoid any safety related issues involving turning vehicles.	It is understood that the development will make use of an existing private access located directly to the south of the Pegasus crossing. Therefore the entrance will not be crossed by the bridleway and will not form a cross roads with the new Lovers Lane junction.
Buckleswood Road Level Crossing			No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1	No issues highlighted during RSA Stage 1
GRR Level Crossing	Signing Problem 1	Location: A – B1122 southbound approach to crossing.	<p>Risk of crossing signals being obscured by parked vehicles.</p> <p>The level crossing is due to have a set of signals on either side to inform drivers of the need to stop when a train is approaching and the barriers are to be closed. However, the signals on the southbound carriageway are located in close proximity to a maintenance parking bay. If a high sided vehicle were to be parked in the maintenance bay, it may obscure drivers' view of the signals, increasing the risk of vehicles failing to stop when a train is approaching/crossing the road.</p>	It is recommended that the signals can be clearly viewed by drivers on approach to the crossing.	To be considered in signals detailed design.
King Georges Avenue / Valley Road	Walkers, Cyclists and Horse Riders Problem 1	Location: A – Footway/cycleway through the Big Field	<p>Footway/cycleway width may cause collisions between users.</p> <p>There is a proposed footway/cycleway from Valley Road to the north through the Big Field. The facility is 1.5m in width for two-way cycle and pedestrian usage. This narrow width may be insufficient to allow cyclists and pedestrians to pass each other safely, increasing the risk of collision between the users.</p>	It is recommended that the footway/cycleway be of sufficient width to allow users to safely pass each other.	Width of footway to be appraised at detailed design.
Lovers Lane	Walkers, Cyclists and Horse Riders Problem 1	Location: A – Bridleway crossing at the Lovers Lane / B1122 junction.	<p>Risk that the bridleway pen will reduce visibility for road users.</p> <p>Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing has pens, consisting of post and rail fencing, on either side of the B1122 to provide a safe waiting area for horse riders. Due to the close proximity of the bridleway crossing to the Lovers Lane junction, there is a risk that the pen may restrict visibility for drivers attempting to exit Lovers Lane onto the B1122 resulting in a collision.</p>	It is recommended that the bridleway pens be located/constructed so they do not restrict visibility for other road users.	Agreed. Form of bridleway pen to be developed at next design stage.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Lovers Lane	Walkers, Cyclists and Horse Riders Problem 2	Location: B – Bridleway crossing at the Lovers Lane / B1122 junction.	<p>Risk that drivers exiting Lovers Lane will fail to stop for horse riders crossing.</p> <p>Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing is a Pegasus crossing, requiring road users to stop when faced with a red traffic signal, allowing horse riders to cross. However, due to the close proximity of the crossing to the Lovers Lane junction, there is a risk of drivers exiting Lovers Lane and turning left, failing to identify the crossing resulting in a red-light violation and potentially colliding with horse riders crossing the B1122. Visibility at the junction may be further compromised due to Lovers Lane being within a cutting on the approach to the B1122.</p>	It is recommended that drivers on Lovers Lane are made aware of the Pegasus crossing on the B1122 and that it can clearly be seen from the Lovers Lane junction.	Agreed. Advance signage Pegasus crossing for left turners to be provided on Lovers Lane. Current Earthworks design permits clear visibility of pen at junction.
Lovers Lane	Walkers, Cyclists and Horse Riders Problem 3	Location D – B1122 Abbey Road	<p>New residential development access not considered within scheme design.</p> <p>There is a new residential development and associated access on the west side of B1122 Abbey Road, close to the location of the realigned Lovers Lane junction. This is not shown on the design drawings nor was sufficient information available to determine the geometry of the possible staggered cross roads during the site visit. The bridleway will cross the new junction, although how this will be achieved has not been addressed. Without holding pens at the bellmouth crossing there is risk of collision between equestrians, cyclists and pedestrians, or riders losing control of horses and their entering the road in front of traffic.</p>	It is recommended that the bridleway design be amended to include safe crossing of the new development access and new Lovers Lane junction be designed taking into account the new development access to help avoid any safety related issues involving turning vehicles.	It is understood that the development will make use of an existing private access located directly to the south of the Pegasus crossing. Therefore the entrance will not be crossed by the bridleway and will not form a cross roads with the new Lovers Lane junction.
Lovers Lane	Signs Problem 4	Location: C – Recycle centre on Lovers Lane	<p>Increased risk of collisions between traffic on Lovers Lane and queuing traffic.</p> <p>There is an existing Recycle Centre on Lovers Lane (see Photo 1). The Recycle Centre appears to suffer from queuing traffic (due to existing 'Queues Likely Ahead' signs and observations on site). With traffic flows likely to increase due to the Sizewell project, there is an increased risk of vehicles travelling along Lovers Lane colliding with the rear of stationary traffic waiting to turn into the Recycle Centre. This issue is compounded due to the Recycle Centre being sited in a location which is not clearly identifiable for northbound traffic and is over the crest of a summit. Any queues are, therefore, unlikely to be seen until a driver passes over the summit. Whilst a 'left turn in' taper is proposed to help alleviate the queuing southbound into the Recycle Centre, a right turn island is not proposed for northbound traffic wishing to turn right into the centre. The increased traffic levels are likely to increase the risk of vehicles on Lovers Lane colliding with stationary traffic at the Recycle Centre.</p>	It is recommended that a right turn lane be provided to provide a safe waiting area for vehicles waiting to turn right into the Recycle Centre.	Traffic data indicates very little northbound traffic turning right into the recycle centre. It is proposed to prohibit entrance into the recycle centre from the south with the provision of a no right hand turn sign and amendment to the junction layout which will allow drivers to exit only.

Scheme	Identified Problem	Location	Problem Summary	Recommendation	Designers Response
Main Site Access	Walkers, Cyclists and Horse Riders Problem 1	Location: A – Proposed bridleway between the north and western arms of the roundabout.	<p>Risk of walkers, cyclists and horse riders (WC&HRs) falling down embankment at rear of facility.</p> <p>The proposed bridleway guides WC&HRs between the north and western arms of the new roundabout. The bridleway is 3 metres in width, with an embankment adjacent to its northern edge. The narrow width of the route (considering all users can utilise this facility) combined with the close proximity to the top of the embankment could lead to a WC&HR falling down the embankment resulting in injury.</p>	It is recommended that either the Bridleway be widened (potential for widening shown on drawings) or a post and rail fence be provided at the top of the embankment.	Agreed. Bridleway to be moved towards roundabout and away from embankment on section to north of roundabout. Section to west or roundabout provided with post and rail fence.



Suffolk County Council

***SIZEWELL C
TWO VILLAGE BYPASS***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C TWO VILLAGE BYPASS

Stage 1 Road Safety Audit

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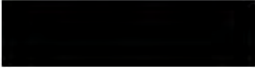
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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - Two Village Bypass Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref5</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - *Two Village Bypass* scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 3pm – 4pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. Departures on some of the approaches to the roundabout were required to achieve a better deflection within the available red line boundary.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of a new bypass on the A12 (Two Village Bypass, 2VBP) which will tie back in to the existing network via two new roundabouts (named eastern and western roundabout). A side road around the centre of the bypass will be diverted and linked to 2VBP via a left/right staggered T-Junction.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – New roundabout to the eastern end of the bypass

Summary: Risk of high vehicle speeds causing overshoot or shunt type collisions at the proposed roundabout.

Where the new bypass joins the A12 at the eastern end of the scheme, the A12 is in a rural environment (See Photo1). Although there is currently a 50mph speed limit, it is a dual carriageway and drivers may not be expecting to encounter an at-grade roundabout in such a rural environment. This may lead to vehicle overshoot and shunt type collisions at the roundabout. There already appears to be a road safety issue at this location. There are existing 'Accident site' signs on the A12 approach to this junction.



Photo 1 – View of A12 southbound approach to proposed roundabout

RECOMMENDATION:

It is recommended that the roundabout be adequately signed in advance on the A12 and the location of the roundabout is made clear to drivers.

3.3. PROBLEM 2

Location: B – Public rights of ways crossing over the bypass.



Summary: Risk of vehicles colliding with pedestrians crossing the bypass.

The new bypass severs a number of public rights of way (PROW). Pedestrians using the PROWs are expected to cross over the bypass at-grade. There is a risk of collisions between vehicles and pedestrians on the bypass.

RECOMMENDATION:

It is recommended that adequate warning be provided for vehicles of the potential for pedestrians to be crossing the carriageway and that adequate visibility be provided to allow pedestrian to safely judge gaps in traffic prior to crossing.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19

Appendix A

DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-000-DRW-1000XX P02	PROPOSED STAGGERED JUNCTION
SZC-SZ0204-000-DRW-100038_P12	TWO VILLAGE BYPASS PROPOSED LAYOUT AND PROFILE
SZC-SZ0204-000-DRW-100039 P05	TWO VILLAGE BYPASS A12/A1094 PROPOSED ROUNDABOUT LAYOUT & PROFILE
SZC-SZ0204-000-DRW-100040 P05	TWO VILLAGE BYPASS A12 WESTERN ROUNDABOUT LAYOUT
SZC-SZ0204-SBR-000-DRW-100004 P01	River Alde Road Bridge General Arrangement and Sections
SZC-SZ0204-SBR-000-DRW-100001 P01	Farnham Hall Footbridge General Arrangement and Elevation 1 of 2
SZC-SZ0204-SBR-000-DRW-100002 P01	Farnham Hall Footbridge General Arrangement and Elevation 2 of 2

Appendix B



PROBLEM LOCATION PLAN



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Suffolk County Council

***SIZEWELL C
A1094/B1069 JUNCTION***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C A1094/B1069 JUNCTION

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF6

WSP

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DATE: SEPTEMBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref6			
File reference	As above			



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3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT	5
4. AUDIT TEAM STATEMENT	6

APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - A1094/B1069 Junction Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref6</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - A1094/B1069 Junction scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 3:30pm – 5pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of highway improvements to the A1094/B1069 junction. These consist of lowering the speed limit to 40mph, refreshing the carriageway markings and signing improvements.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – Junction of the A1094 and the B1069

Summary: Increased risk of collisions between turning vehicles.

Although some vegetation clearance is proposed on the A1094, there does not appear to be any proposals for vegetation clearance on the B1069 approach to the junction with the A1094. There are a number of signs currently partially obscured by overgrown vegetation (see Photo 1) and the map type advance direction sign (ADS) is lying on the ground. If drivers fail to view the advance signing, there is an increased risk of a vehicle overshooting the give way line and colliding with a vehicle on the A1094.

RECOMMENDATION:

It is recommended that vegetation clearance be carried out on the B1069 and the ADS be re-erected.

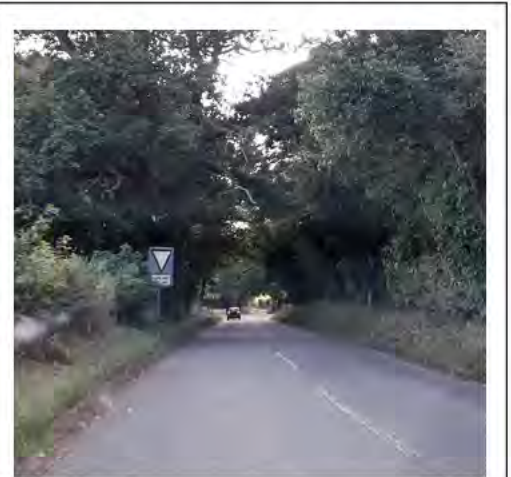




Photo 1 – Advance give way signs on approach to the junction

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

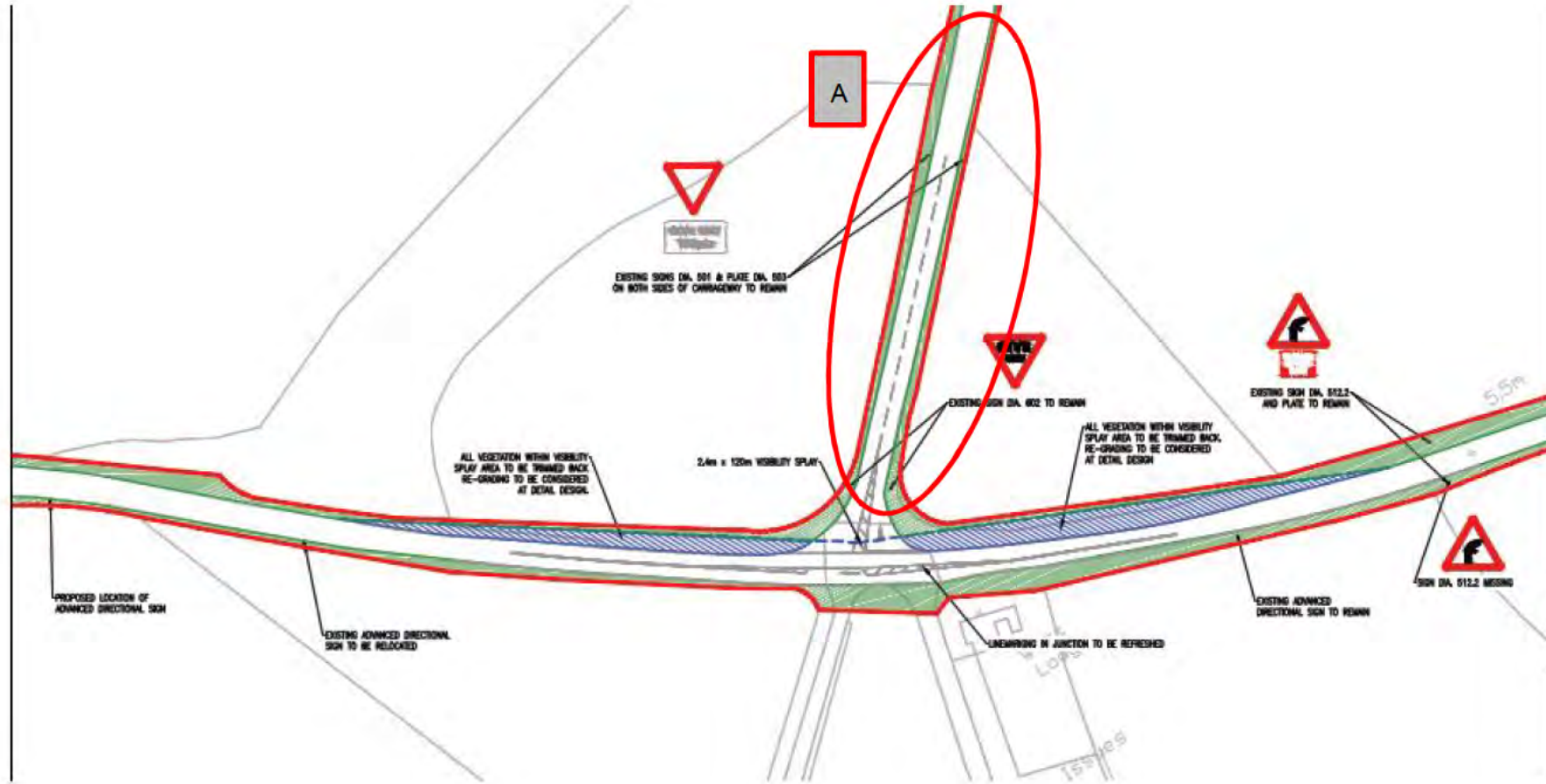
SZC-SZ0204-XX-000-DRW-100115RevP05 Extents of Proposed 40mph Speed Limit

SZC-SZ0204-XX-000-DRW-100049RevP04 Proposed Highway Layout

Appendix B



PROBLEM LOCATION PLAN





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Suffolk County Council

***SIZEWELL C
A12/A144 JUNCTION***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C A12/A144 JUNCTION

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF10

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref10			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – A12/A144 Junction Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref10</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – A12/A144 Junction* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 10am – 11am. The weather was heavy rain. The road surface was wet with some ponding during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. *The design of the junction on its approaching minor road has been adapted to the existing and available space, considering the constraint of the Thorington Holiday cottages edges, in order to avoid the limits of this property. (copied from Brief)*

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of new traffic islands, improvements to drainage and carriageway markings at the junction of the A12 and A144.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. ROAD MARKINGS

3.2. PROBLEM 1

Location: A – A12/A144 junction

Summary: Risk of collisions between right turning vehicles.

The proposed right turn waiting area for traffic entering or exiting the A144 has no road markings to help guide drivers as to where they should be positioned. A vehicle attempting a right turn out of the A144 may therefore position the vehicle within the central reserve whilst obstructing vehicles wishing to turn right into the A144. Also, without the provision of a safe waiting area for right turning vehicles out of the A144, drivers may become reluctant to perform the manoeuvre in two stages, instead attempting in a single manoeuvre where there is an increased risk of collisions.

RECOMMENDATION:

It is recommended that road markings be provided in the central reserve to help guide drivers.

3.3. SIGNING

3.4. PROBLEM 2

Location: B – A12/A144 junction – private access onto A12.

Summary: Risk of head-on collisions.

There is a private access directly onto the A12 to the north of its junction with the A144 (see Photo 1). The private access is within the proposed section of A12 that has the traffic island within the central island. Should a vehicle exiting the private access turn right they would be travelling against the flow of traffic which could result in head-on collisions.

RECOMMENDATION:

It is recommended that appropriate directional signing be provided at the private access.

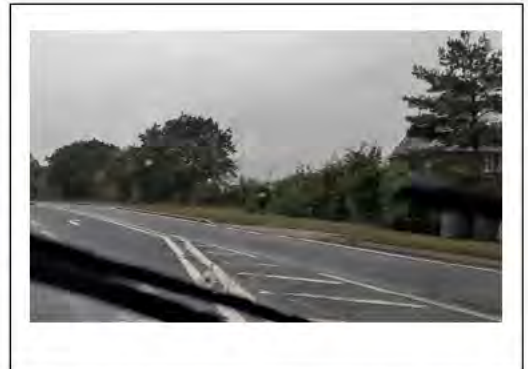




Photo 1 – Private access on the A12

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

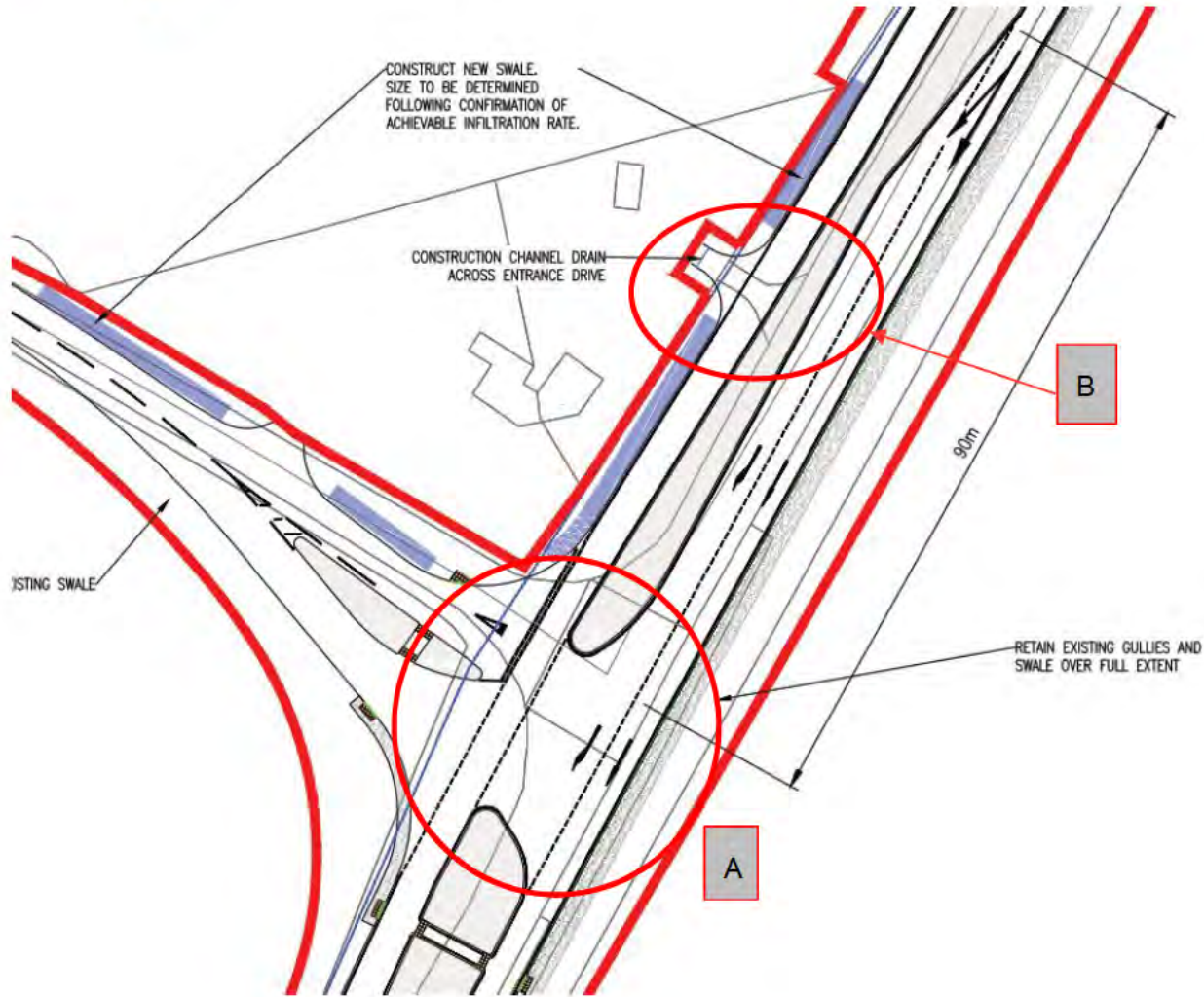
SZC-SZ0204-XX-000-DRW-100052_P09

A12/A144 Proposed Highway Layout

Appendix B



PROBLEM LOCATION PLAN





WSP
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Level 2,
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Suffolk County Council

***SIZEWELL C
B1119/A12 JUNCTION***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C B1119/A12 JUNCTION

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF7

WSP

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DATE: SEPTEMBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref7			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - B1119/A12 Junction Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref7</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - B1119/A12 Junction scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 4:30pm – 5:30pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme



The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of highway improvements to the B1119/A12 junction. These consist of changes to the carriageway markings, kerb lines and gullies.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

There were no Road Safety Issues raised during the Stage 1 Road Safety Audit.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100054RevP07 Proposed Highway Layout

Appendix B



PROBLEM LOCATION PLAN

Not Required



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Suffolk County Council

***SIZEWELL C
A140/B1078 JUNCTION***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C A140/B1078 JUNCTION

Stage 1 Road Safety Audit

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PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF1

WSP

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DATE: SEPTEMBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref1			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - A140/B1078 Junction Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref1</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - A140/B1078 Junction scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 1pm – 2pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of highway improvements to the A140/B1078 junction. These consist of signing and road marking alterations on the A140 approach to the junction.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – A140 southbound approach to its junction with the B1078

Summary: Risk of vehicles entering the A140 into the path of other vehicles

Proposed advance directional sign (ADS) Diag. 2033, is to be provided on the A140 in advance of its junction with the B1078. The location of the sign (ADS furthest to the north) is to be positioned close to an existing field access and potentially within the visibility splay. This could restrict the view for drivers attempting to exit the field of vehicles approaching on the A140, increasing the risk of a collision.

RECOMMENDATION:

It is recommended that the ADS be positioned so it doesn't adversely affect drivers' visibility of other vehicles.

3.3. PROBLEM 2

Location: B – A140 southbound approach to its junction with the B1078

Summary: Risk of drivers becoming confused as to the junction layout due to incorrect signage.

Proposed warning signs Diag. 506.1R & 572 are a junction warning sign with supplementary distance plate to be located on the nearside and offside of the A140 on its southbound approach to the B1078 junction. However, the sign shows the side road of the junction to be to the right side of the main road and not the left side (as is the case). This could lead to driver confusion, late lane changes and braking manoeuvres resulting in shunt type collisions.

RECOMMENDATION:

It is recommended that the junction warning sign be amended to reflect the road layout.

3.4. PROBLEM 3

Location: C –B1078 approach to the A140

Summary: Risk of drivers failing to view the speed limit resulting in higher speeds.

The existing 50mph/National Speed limit signs on the B1078 approach to the A140 junction are obscured by overgrown vegetation (see Photo 1). Should drivers fail to view the 50mph speed limit signs, it could result in higher vehicle speeds on the A140 increasing the risk of collisions.



RECOMMENDATION:

It is recommended that the vegetation be removed from the vicinity of the speed limit signs.



Photo 1 – View of speed limit signs

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision Data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100041RevP04

A140/B1078 Existing Highway Layout

SZC-SZ0204-XX-000-DRW-100043RevP03

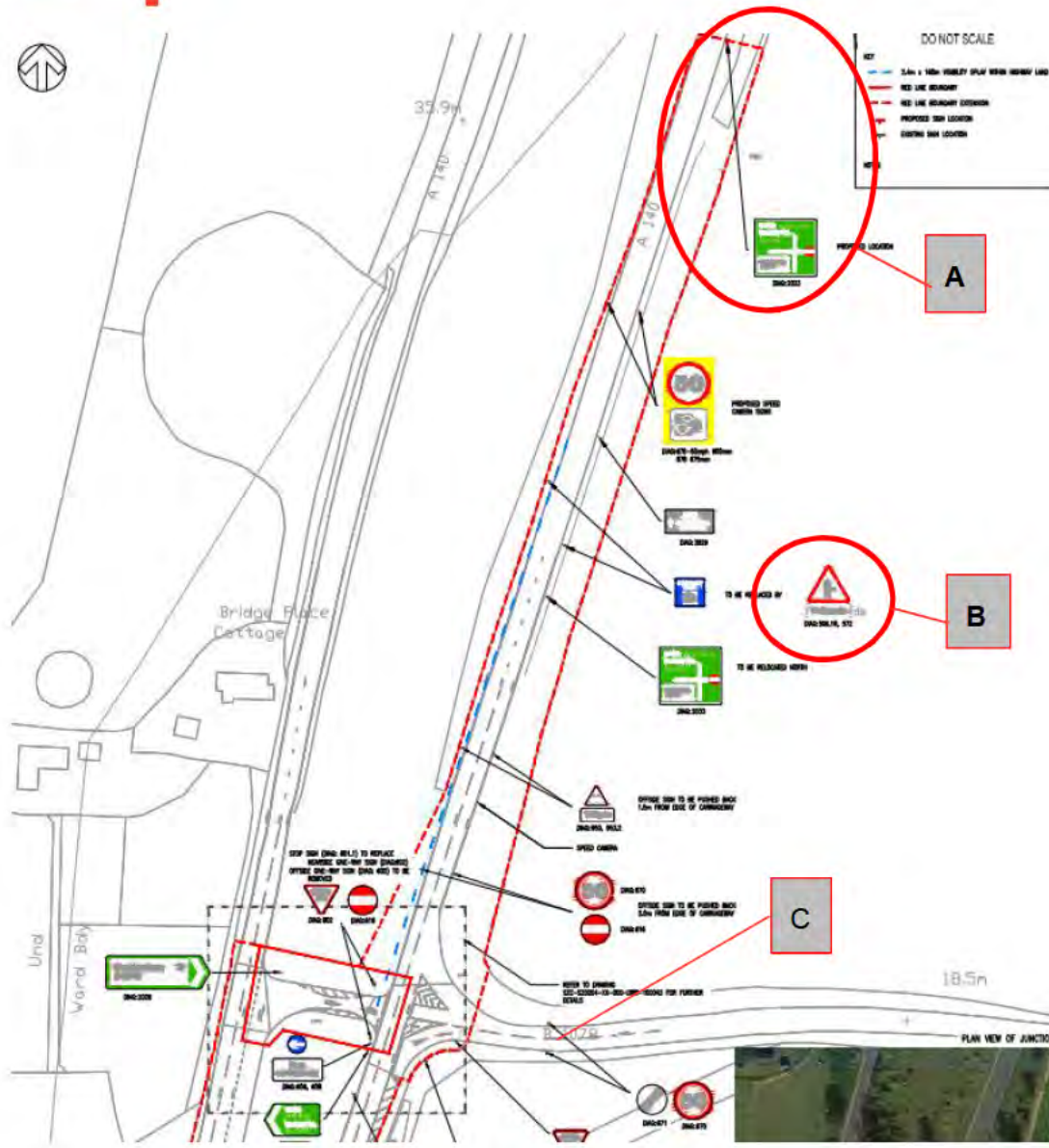
A140/B1078 Proposed Highway Layout



Appendix B



PROBLEM LOCATION PLAN





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Suffolk County Council

***SIZEWELL C
B1078/B1079 JUNCTION***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C B1078/B1079 JUNCTION

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF2

WSP

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DATE: SEPTEMBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref2			
File reference	As above			



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4. AUDIT TEAM STATEMENT	6

APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - B1078/B1079 Junction Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref2</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - B1078/B1079 Junction scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 1:15pm – 2pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The set-back visibility splay on a junction for 100kph should be 215m, 160m being one step below desirable minimum. 120m represents two steps below and 90m three steps below.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of highway improvements to the B1078/B1079 junction. These consist of signing and road marking alterations.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – Junction of the B1089 and the B1079.

Summary: Risk of drivers overshooting the junction.

The existing give way sign at the junction of the B1089 and the B1079 is partially masked by the speed limit signing (see Photo 1). Drivers approaching the junction from the west, have difficulty in seeing the sign, and the proposed give way sign is to be located in a similar location. Therefore, there is a risk of the new sign being obscured by the speed limit sign. This may increase the risk of drivers failing to identify the need to give way at this junction resulting in overshoot collisions with vehicles on the B1079.



Photo 1 – View of the give way sign obscured by the speed limit signs

RECOMMENDATION:

It is recommended that the give way sign be located so that it is clearly seen by approaching drivers and/or that an additional give way sign be located on the offside where it would be in the driver's eye-line.

3.3. PROBLEM 2

Location: B – B1078 on approach to its junction with the B1079.



Summary: Risk of drivers overshooting the junction.

The proposals include replacing the existing advance give way signs. However, both advance give way signs display the same distance sub-plate of 100yds even though they are located at different distances from the give way markings. This may lead to drivers becoming confused as to the distance to the give way line resulting in overshoot collisions.

RECOMMENDATION:

It is recommended that the distance to hazard sub-plates of the advance give way signs be amended to show the correct distance to the give way line.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	3009/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision data
SZC Map

Drawings

SZC-SZ0204-xx-000-DRW-100046RevP04 B1078 Existing and Proposed Highway Layout combined

SZC-SZ0204-xx-000-DRW-100047RevP06 B1078/B1079 Proposed Highway Layout

Appendix B



PROBLEM LOCATION PLAN



WSP
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Suffolk County Council

***SIZEWELL C
BRIDLEWAY 19***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C BRIDLEWAY 19

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF18

WSP

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	03/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref18			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Bridleway 19 Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref18</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Bridleway 19* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 12:30pm – 1:30pm. The weather was raining with sunny spells. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The Pegasus crossing on B1122 immediately to the south of the relocated Lovers Lane Junction may be considered to be a departure from standard with the signals positioned less than 25m from the junction.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

Bridleway 19 provides a new pedestrian / cycleway and equestrian link from Sizewell GAP / Lovers Lane (starting to the east of the junction with King Georges Avenue) through to the junction of Roundhouse Lane on Eastbridge Road via the B1122 Abbey Road. The proposal is intended to provide a non-motorised user (NMU) route separated from Lovers Lane and B1122 which will be subject to increased traffic including Heavy Goods Vehicles (HGVs) during the Sizewell C expansion construction phase. The scheme also includes the diversion of the Public Right of Way in the fields to the west of the GRR. Whilst being separated from public highways for the most part the NMU route interfaces with the highways as follows;

- 1) Pegasus crossing of Eastbridge Road and B1122 in close proximity to the Main Site Access roundabout on the B1122.
- 2) Uncontrolled crossing of the access road to Leiston Abbey off B1122 Abbey Road.
- 3) Uncontrolled crossing of Abbey Lane at the junction with B1122
- 4) Crossing of the proposed GRR level crossing on the B1122 to the north of the (relocated) Lovers Lane junction.
- 5) Pegasus crossing of the B1122 to the south of the (relocated) Lovers Lane junction
- 6) Pegasus crossing on Lovers Lane to the north of the cross roads with Sandy Lane / Valley Road.
- 7) Pedestrian / cycle link to the temporary worker site access on Valley Road requiring uncontrolled crossings of Valley Road and field access.
- 8) Uncontrolled crossing on Sizewell Gap at southern termination of route.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. WALKERS, CYCLISTS AND HORSE RIDERS

3.2. PROBLEM 1

Location: A – Bridleway crossing at the Lovers Lane / B1122 junction.

Summary: Risk that the bridleway pen will reduce visibility for road users.

Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing has pens, consisting of post and rail fencing, on either side of the B1122 to provide a safe waiting area for horse riders. Due to the close proximity of the bridleway crossing to the Lovers Lane junction, there is a risk that the pen may restrict visibility for drivers attempting to exit Lovers Lane onto the B1122 resulting in a collision.

RECOMMENDATION:

It is recommended that the bridleway pens be located / constructed so they do not restrict visibility for other road users.

3.3. PROBLEM 2

Location: B – Bridleway crossing at the Lovers Lane / B1122 junction.

Summary: Risk that drivers existing Lovers Lane will fail to stop for horse riders crossing.

Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing is a Pegasus crossing, requiring road users to stop when faced with a red traffic signal, allowing horse riders to cross. However, due to the close proximity of the crossing to the Lovers Lane junction, there is a risk of drivers exiting Lovers Lane and turning left, failing to identify the crossing resulting in a red-light violation and potentially colliding with horse riders crossing the B1122. Visibility at the junction may be further compromised due to Lovers Lane being within a cutting on the approach to the B1122.

RECOMMENDATION:

It is recommended that drivers on Lovers Lane are made aware of the Pegasus crossing on the B1122 and it can clearly be seen from the Lovers Lane junction.

3.4. PROBLEM 3

Location: C – Proposed bridleway between the north and western arms of the proposed Main Site Access roundabout.

Summary: Risk of walkers, cyclists and horse riders falling down embankment at rear of facility.

The proposed bridleway guides walkers, cyclists and horse riders between the north and western arms of the new roundabout. The bridleway is 3 metres in width, with an embankment adjacent to its northern edge. The narrow width of the facility (considering all users can utilise this facility) combined with the close proximity to the top of the embankment could lead to a walker, cyclist and horse rider falling down the embankment resulting in injury.

RECOMMENDATION:

It is recommended that either the Bridleway be widened (potential for widening shown on drawings) or a post and rail fence be provided at the top of the embankment.

3.5. PROBLEM 4

Location: Various– Bridleway crossings and on-street sections of Bridleway.

Summary: Risk to drivers failing to realise the possibility of horse riders crossing the carriageway or riding within / adjacent to the carriageway.

There are a number of Pegasus crossings proposed as part of Bridleway 19. Due to the rural nature of the area, drivers may not be expecting a signalised crossing and be slow to react to the red signal. Also, the Bridleway has an on-street section at Sandy Lane where horse riders and other road users will be forced to share the carriageway space. In addition, the Bridleway is very close to the edge of carriageway where it crosses the level crossing on the B1122 and horses may become spooked should a vehicle pass too close or at high speeds.

RECOMMENDATION:

It is recommended that warning signs are provided in advance of any section of Bridleway which crosses a carriageway or where horse-riders are forced to ride along a carriageway or horse riders are unsegregated from passing traffic.

3.6. PROBLEM 5

Location D – B1122 Abbey Road



Summary: New residential development access not considered within scheme design

There is a new residential development and associated access on the west side of B1122 Abbey Road, close to the location of the realigned Lovers Lane junction. This is not shown on the design drawings nor was sufficient information available to determine the geometry of the possible staggered cross roads during the site visit. The bridleway will cross the new junction, although how this will be achieved has not been addressed. Without holding pens at the bellmouth crossing there is risk of collision between equestrians, cyclists and pedestrians, or riders losing control of horses and their entering the road in front of traffic.

RECOMMENDATION:

It is recommended that the bridleway design be amended to include safe crossing of the new development access and new Lovers Lane junction be designed taking into account the new development access to help avoid any safety related issues involving turning vehicles.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	ITS Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19

Appendix A

DOCUMENT LIST

Documents

Collision data

SZC Map

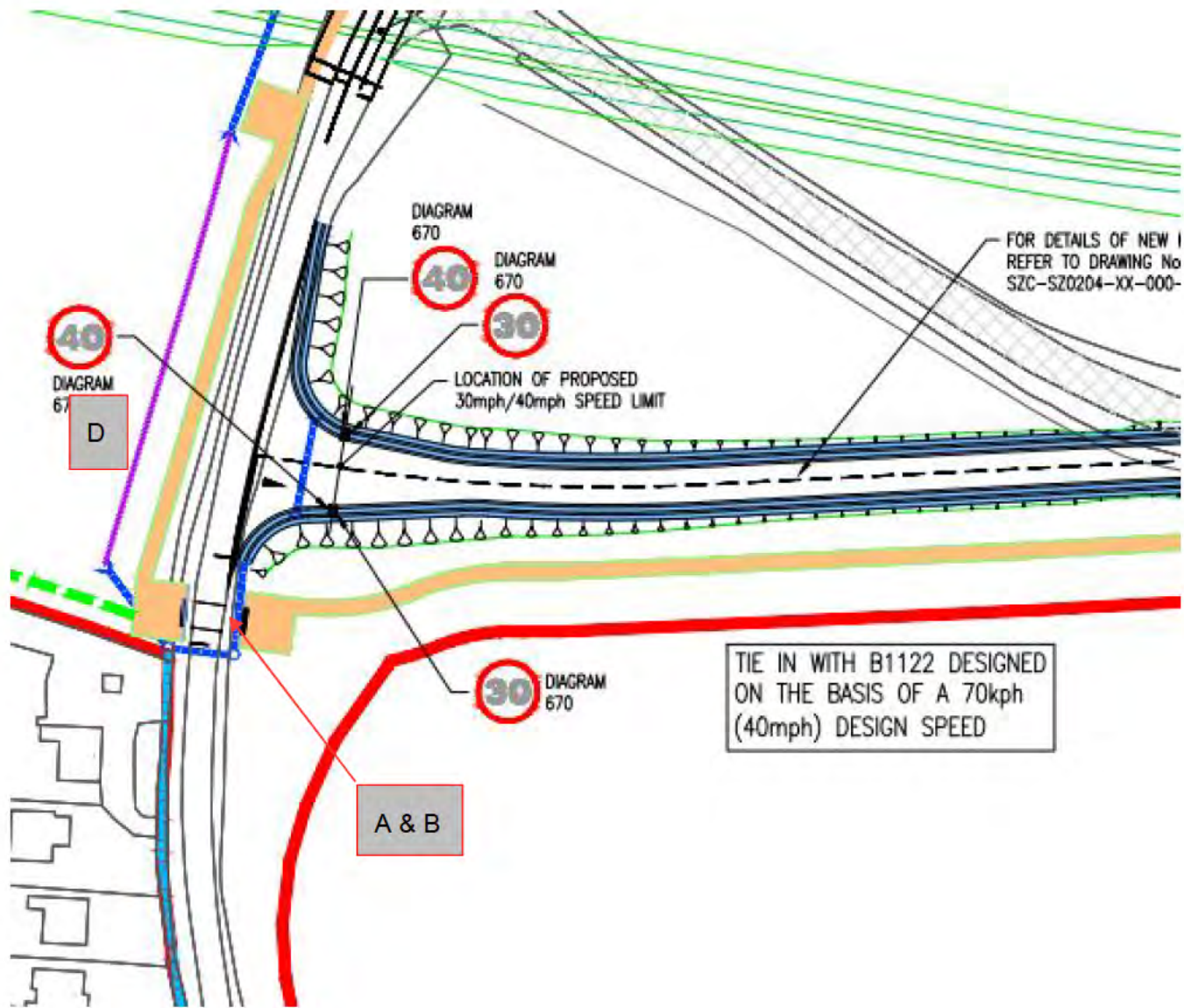
Drawings

<i>SZC-SZ0204-XX-000-DRW-100118-E</i>	<i>Pedestrian/Cycleway/Bridleway 1 of 6</i>
<i>SZC-SZ0204-XX-000-DRW-100119-I</i>	<i>Pedestrian/Cycleway/Bridleway 2 of 6</i>
<i>SZC-SZ0204-XX-000-DRW-100120-H</i>	<i>Pedestrian/Cycleway/Bridleway 3 of 6</i>
<i>SZC-SZ0204-XX-000-DRW-100121-G</i>	<i>Pedestrian/Cycleway/Bridleway 4 of 6</i>
<i>SZC-SZ0204-XX-000-DRW-100122-K</i>	<i>Pedestrian/Cycleway/Bridleway 5 of 6</i>
<i>SZC-SZ0204-XX-000-DRW-100123-J</i>	<i>Pedestrian/Cycleway/Bridleway 6 of 6</i>

Appendix B



PROBLEM LOCATION PLAN







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Suffolk County Council

***SIZEWELL C
BUCKLESWOOD ROAD LEVEL
CROSSING***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C BUCKLESWOOD ROAD LEVEL CROSSING

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF17

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	03/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref17			
File reference	As above			



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4. AUDIT TEAM STATEMENT	6

APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Buckleswood Road Level Crossing Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref17</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Buckleswood Road Level Crossing* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 1pm – 2pm. The weather was raining. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.



The GRR will cross the existing Buckleswood Road highway to the northwest of Leiston village. Modifications to the existing carriageway include local widening either side of the level crossing to achieve 5.0m width at the signalised level crossing. The level crossing will be elevated above the existing road level to accommodate drainage and therefore the regrading of the approach roads will be required. No changes to the road geometry are proposed other than those discussed above.



3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

There were no road safety issues identified during the Stage 1 Road Safety Audit

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	ITS Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100089-P05 Buckleswood Road Level Crossing Layout

Appendix B



PROBLEM LOCATION PLAN

Not Required



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Suffolk County Council

***SIZEWELL C
DARSHAM (NORTHERN PARK AND
RIDE)***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C DARSHAM (NORTHERN PARK AND RIDE)

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF9

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref9			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Darsham Northern Park and Ride Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref9</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Darsham Northern Park and Ride* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 9am – 10am. The weather was raining. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team was notified of departures on the western approach to the roundabout to achieve better deflection within the available red line boundary.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of a new at-grade roundabout on the A12 to provide access to the Darsham Park and Ride facility.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. ALIGNMENT

3.2. PROBLEM 1

Location: A – Willow Marsh Lane East junction with Western Approach Park and Ride Access.

Summary: Risk of agricultural vehicles being involved in head-on collisions and/or depositing mud onto the carriageway.

The junction of Willow Marsh Lane East with Western Approach appears to be very narrow. Willow Marsh Lane provides access for agricultural vehicles to fields and barns (see Photo 1). Should the junction be of insufficient width, large vehicles could be forced to either encroach into the opposing traffic lanes which could result in head-on collisions or side swipe collisions. The large vehicles could also be forced to drive on the highway verge which may bring dirt and mud onto the carriageway which could increase the risk of a vehicle losing control.

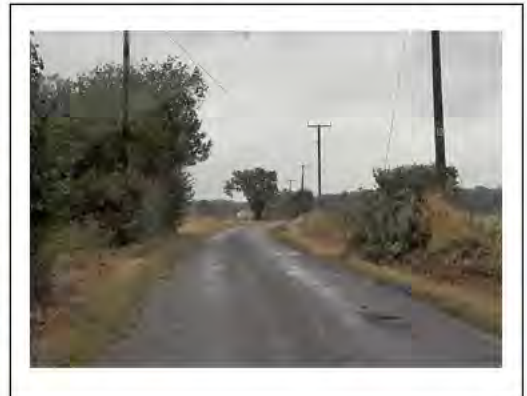


Photo 1 – Willow Marsh Lane

RECOMMENDATION:

It is recommended that the Willow Marsh Lane East/Western Approach junction be of sufficient construction to accommodate the likely users.

3.3. SIGNING

3.4. PROBLEM 2

Location: B – A12/Western Approach roundabout.

Summary: Risk of drivers failing to correctly negotiate the roundabout.

The proposed new roundabout at the junction of the A12 and Western Approach has three arms. Each arm has chevron signs and keep left signs to help guide drivers in the correct direction around the roundabout. However, whilst the two A12 arms have 2 chevron signs along with a keep left sign within the island, the Western Approach arm of the roundabout only has a single chevron sign proposed. This may increase the risk of a driver failing to identify the need to proceed to the left at the roundabout, potentially leading to a head-on collision.

RECOMMENDATION:

It is recommended that a minimum of two chevrons are provided along with the keep left arrow on each arm of the roundabout.

3.5. PROBLEM 3

Location C – A12 Northbound Approach to roundabout

Summary: Incorrect placement of signs



Existing speed limits change signage is shown to be installed on the 'old' line of the A12. This may result in drivers approaching the roundabout at excessive speeds and risk overshoot of the give way line and increased risk of collision. The visual 'gateway' created by the signage may also result in drivers heading towards them and entering the opposing traffic lane with risk of head on collision.

RECOMMENDATION:

It is recommended that the speed limit signage is installed on the realigned A12 approach towards the roundabout.



4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100022_P07

Northern Park and Ride Willow March Lane

Access – Highway Works

SZC-SZ0204-XX-000-DRW-1000XX_P02

Northern Park and Ride Willow March Lane

Access – Proposed Profiles

Appendix B



PROBLEM LOCATION PLAN



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Suffolk County Council

***SIZEWELL C
FREIGHT MANAGEMENT FACILITY***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C FREIGHT MANAGEMENT FACILITY

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF4

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DATE: SEPTEMBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref4			
File reference	As above			



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4. AUDIT TEAM STATEMENT	6

APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - Freight Management Facility Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref4</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - *Freight Management Facility Ride* scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 2:30pm – 3:30pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

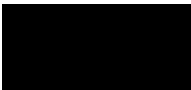

This aspect of the scheme consists of highway improvements to Felixstowe Road. These consist of a new junction with associated road marking improvements on Felixstowe Road.



3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

There were no road safety issues during this Stage 1 Road Safety Audit

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100XXXRevP05

Proposed Highway Layout – Seven Hills

Appendix B



PROBLEM LOCATION PLAN

Not Required



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Suffolk County Council

***SIZEWELL C
GRR LEVEL CROSSING***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C GRR LEVEL CROSSING

Stage 1 Road Safety Audit

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PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF16

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DATE: OCTOBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	03/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref16			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – GRR Level Crossing Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref16</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – GRR Level Crossing* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 12:30pm – 13:30pm. The weather was raining with sunny spells. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

The GRR will cross the existing B1122 highway to the north of Leiston village on-route to the Sizewell C construction site. Modifications are required to the B1122 to construct a signalised level crossing including the raising of the road level at the crossing point by 1.5m to 10m AOD. The horizontal geometry of the road is relatively unaffected. The GRR Level crossing location clashes with the existing junction to Lovers Lane. The Lovers Lane junction is to be relocated 80m to the south of the crossing (refer to Lovers Lane Safety RSA brief 50400326-GG119-LL1). In addition, Bridleway 19 will cross the B1122 to the south of the new Lovers Lane Junction and continue to the west of the B1122, including across the Level Crossing.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – B1122 southbound approach to crossing.



Summary: Risk of crossing signals being obscured by parked vehicles.

The level crossing is due to have a set of signals on either side to inform drivers of the need to stop when a train is approaching and the barriers are to be closed. However, the signals on the southbound carriageway are located in close proximity to a maintenance parking bay. If a high sided vehicle were to be parked in the maintenance bay, it may obscure drivers' view of the signals, increasing the risk of vehicles failing to stop when a train is approaching/crossing the road.

RECOMMENDATION:

It is recommended that the signals can be clearly viewed by drivers on approach to the crossing.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	ITS Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

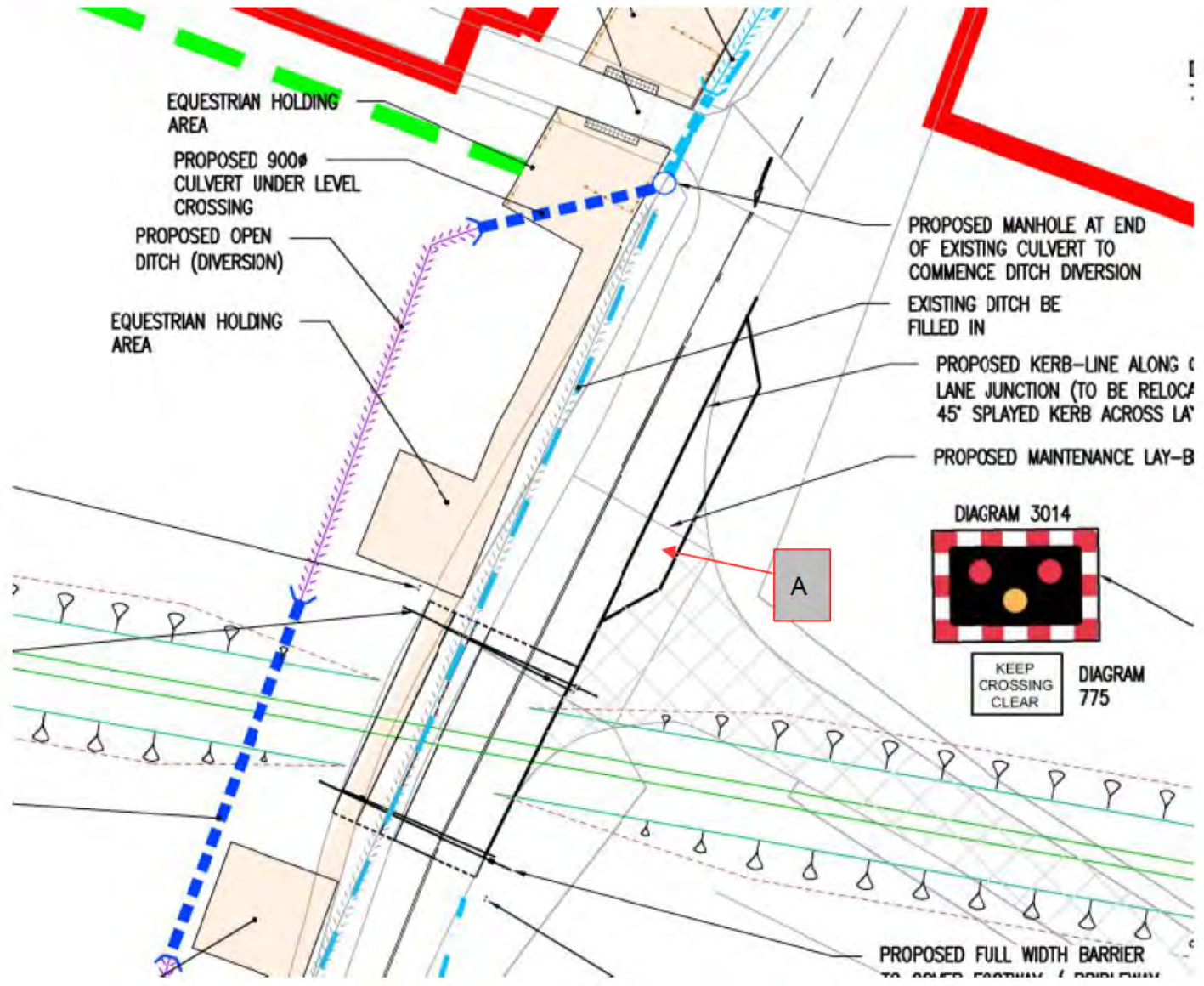
Drawings

SZC-SZ0204-XX-000-DRW-100010-P05 B1122 Abbey road Level Crossing Plan

Appendix B



PROBLEM LOCATION PLAN





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Suffolk County Council

***SIZEWELL C
KING GEORGES AVENUE/VALLEY
ROAD***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C KING GEORGES AVENUE/VALLEY ROAD

Stage 1 Road Safety Audit

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PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF14

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DATE: OCTOBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref14			
File reference	As above			



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4. AUDIT TEAM STATEMENT	6

APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – King Georges Avenue/Valley Road Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref14</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – King Georges Avenue/Valley Road* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 11:30am – 12:30pm. The weather was raining. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

The scheme involves the construction of an access bell mouth into the temporary construction site (Big Field). This serves the bottom third area of the site to be used for predominately for parking / bus pick-up. Other than the junction construction King Georges Avenue highway will be unaffected.

Immediately off the junction with Lovers Lane, Valley Road is to be widened to accept two-way traffic and provide access into the worker accommodation area of the Big Field site. A more formal access into the field opposite the Big Field junction is to be provided. The junction of Valley Road / Lovers Lane is to be re-constructed to accommodate vehicle movements.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. WALKERS, CYCLISTS AND HORSE RIDERS

3.2. PROBLEM 1

Location: A – Footway/cycleway through the Big Field



Summary: Footway/cycleway width may cause collisions between users.

There is a proposed footway/cycleway from Valley Road to the north through the Big Field. The facility is 1.5m in width for two-way cycle and pedestrian usage. This narrow width may be insufficient to allow cyclists and pedestrians to pass each other safely, increasing the risk of collision between the users.

RECOMMENDATION:

It is recommended that the footway/cycleway be of sufficient width to allow users to safely pass each other.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

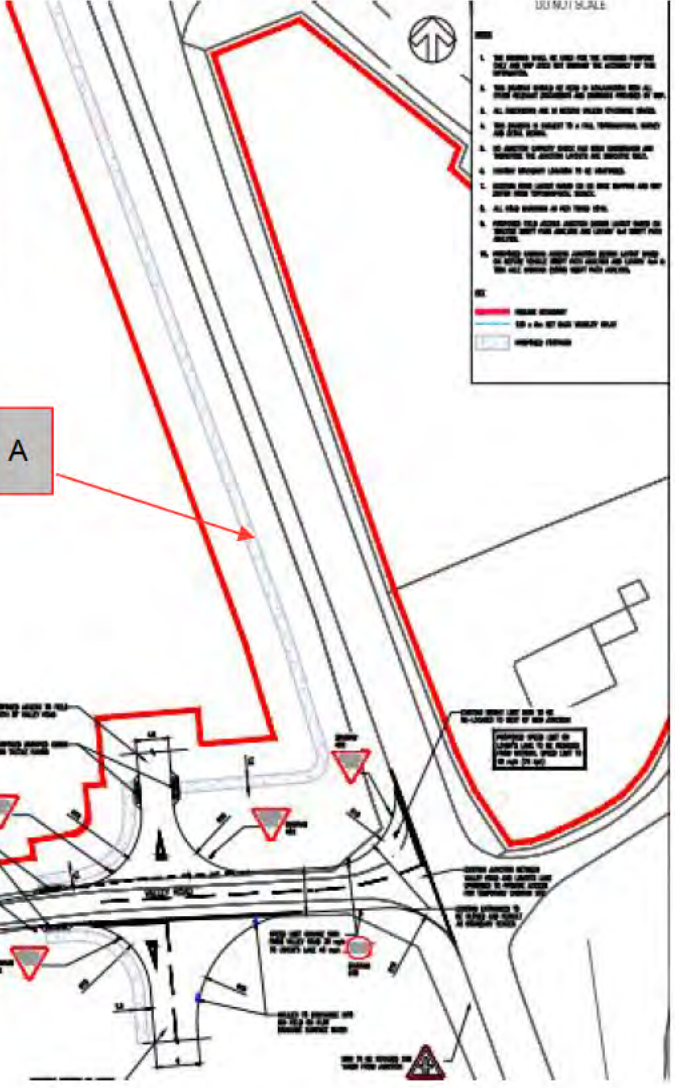
SZC-SZ0204-XX-000-DRW-100128-P04 Valley Road Proposed Junction General Arrangement

SZC-SZ0204-XX-000-DRW-100129-P03 King Georges Avenue Proposed Junction Layout

Appendix B



PROBLEM LOCATION PLAN



- ULTIMATE SCALE
1. THE APPROVED PLAN IS VALID FOR THE APPROVED PERIOD ONLY AND NOT VALID FOR WORKING THE APPROVED PLAN.
 2. THE APPROVED PERIOD IS VALID FOR A PERMITTED USE OF THE APPROVED PERIOD AND NOT FOR OTHER USES.
 3. ALL APPROVED ARE IN ACCORD WITH THE APPROVED PLAN.
 4. THE APPROVED ARE SUBJECT TO A FULL TECHNICAL REVIEW AND APPROVAL.
 5. THE APPROVED PERIOD SHALL BE VALID FOR APPROVED AND WORKING THE APPROVED PERIOD AS APPROVED ONLY.
 6. APPROVED PERIODS SHALL BE VALID FOR APPROVED ONLY.
 7. APPROVED PERIODS SHALL BE VALID FOR APPROVED AND WORKING THE APPROVED PERIOD AS APPROVED ONLY.
 8. ALL PERMITS SHALL BE VALID FOR APPROVED ONLY.
 9. APPROVED PERIODS SHALL BE VALID FOR APPROVED AND WORKING THE APPROVED PERIOD AS APPROVED ONLY.
 10. APPROVED PERIODS SHALL BE VALID FOR APPROVED AND WORKING THE APPROVED PERIOD AS APPROVED ONLY.
- KEY
- PROPOSED ROAD
 - EXISTING ROAD
 - PROPOSED FUTURE

ALL APPROVED TO BE VALID FOR APPROVED ONLY.

APPROVED PERIOD SHALL BE VALID FOR APPROVED ONLY.

APPROVED PERIOD SHALL BE VALID FOR APPROVED ONLY.

APPROVED PERIOD SHALL BE VALID FOR APPROVED ONLY.

APPROVED PERIOD SHALL BE VALID FOR APPROVED ONLY.



WSP
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***SIZEWELL C
LOVERS LANE***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C LOVERS LANE

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF15

WSP

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	03/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref15			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Lovers Lane Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref15</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Lovers Lane* scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMaPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 12pm – 1pm. The weather was raining with sunny spells. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. Departures from standard are required on the realigned section of road in the vicinity of the site access ghost island junction. Specifically, the horizontal radii on the realigned road is 180m which is 2 steps below the requirement for a 70kph design speed road within Table 3 TD 9/93. This is constrained by the redline boundary and space required for the WMZ 6 Balancing Pond. It is considered that the tighter radii will discourage overtaking / speeding on the bend and therefore improve safety on the approaches to the ghost island junction.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

Lovers Lane highway will be used to provide the primary access to the Sizewell C construction site for Heavy Goods Vehicle (HGV) deliveries. The road also links the construction site access to the temporary worker site (Big Field) situated to the south on Lovers Lane. Access to Lovers Lane will be from the A12 to the north via the B1122. HGV access via Leiston Village being prohibited under normal circumstances.

Lovers Lane has a revised design speed limit of 70kph reverting back to 100kph to the south of the Big Field access junction. The highway improvements on Lovers Lane comprise of the following;

- 1) Re-location of the Lovers Lane junction on the B1122 to the south. The existing junction clashes with the proposed Green Rail Route (GRR). A new section of approach road to the junction is proposed to tie back into Lovers Lane.
- 2) Re-alignment of Lovers Lane in the vicinity of the proposed construction site access and provision of a ghost island junction at the access. The existing road possess adverse bends at this location and clashes with the proposed WMZ 6 balancing pond location. The scope includes the construction site access down to the crossing point of the GRR.
- 3) Provision of a Pegasus Road crossing to the north of the Valley Road cross roads. This is for the Bridleway 19 pedestrian / cyclist / equestrian route which runs along Lovers Lane from King Georges Avenue junction through to the B1122.
- 4) Off slip access to the Recycle Centre to the north of the Valley Road junction.
- 5) Widening of Lovers Lane to accommodate a ghost island and new HGV access into the 'Big Field'.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. WALKERS, CYCLISTS AND HORSE RIDERS

3.2. PROBLEM 1

Location: A – Bridleway crossing at the Lovers Lane / B1122 junction.

Summary: Risk that the bridleway pen will reduce visibility for road users.

Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing has pens, consisting of post and rail fencing, on either side of the B1122 to provide a safe waiting area for horse riders. Due to the close proximity of the bridleway crossing to the Lovers Lane junction, there is a risk that the pen may restrict visibility for drivers attempting to exit Lovers Lane onto the B1122 resulting in a collision.

RECOMMENDATION:

It is recommended that the bridleway pens be located/constructed so they do not restrict visibility for other road users.

3.3. PROBLEM 2

Location: B – Bridleway crossing at the Lovers Lane / B1122 junction.

Summary: Risk that drivers exiting Lovers Lane will fail to stop for horse riders crossing.

Bridleway 19 is to cross over the B1122 to the south of its junction with Lovers Lane. The bridleway crossing is a Pegasus crossing, requiring road users to stop when faced with a red traffic signal, allowing horse riders to cross. However, due to the close proximity of the crossing to the Lovers Lane junction, there is a risk of drivers exiting Lovers Lane and turning left, failing to identify the crossing resulting in a red-light violation and potentially colliding with horse riders crossing the B1122. Visibility at the junction may be further compromised due to Lovers Lane being within a cutting on the approach to the B1122.

RECOMMENDATION:

It is recommended that drivers on Lovers Lane are made aware of the Pegasus crossing on the B1122 and that it can clearly be seen from the Lovers Lane junction.

3.4. PROBLEM 3

Location D – B1122 Abbey Road

Summary: New residential development access not considered within scheme design

There is a new residential development and associated access on the west side of B1122 Abbey Road, close to the location of the realigned Lovers Lane junction. This is not shown on the design drawings nor was sufficient information available to determine the geometry of the possible staggered cross roads during the site visit. The bridleway will cross the new junction, although how this will be achieved has not been addressed. Without holding pens at the bellmouth crossing there

is risk of collision between equestrians, cyclists and pedestrians, or riders losing control of horses and their entering the road in front of traffic.

RECOMMENDATION:

It is recommended that the bridleway design be amended to include safe crossing of the new development access and new Lovers Lane junction be designed taking into account the new development access to help avoid any safety related issues involving turning vehicles.

SIGNS

3.5. PROBLEM 4

Location: C – Recycle centre on Lovers Lane

Summary: Increased risk of collisions between traffic on Lovers Lane and queuing traffic.

There is an existing Recycle Centre on Lovers Lane (see Photo 1). The Recycle Centre appears to suffer from queuing traffic (due to existing 'Queues Likely Ahead' signs and observations on site). With traffic flows likely to increase due to the Sizewell project, there is an increased risk of vehicles travelling along Lovers Lane colliding with the rear of stationary traffic waiting to turn into the Recycle Centre. This issue is compounded due to the Recycle Centre being sited in a location which is not clearly identifiable for northbound traffic and is over the crest of a summit. Any queues are, therefore, unlikely to be seen until a driver passes over the summit. Whilst a 'left turn in' taper is proposed to help alleviate the queuing southbound into the Recycle Centre, a right turn island is not proposed for northbound traffic wishing to turn right into the centre. The increased traffic levels are likely to increase the risk of vehicles on Lovers Lane colliding with stationary traffic at the Recycle Centre.





Photo 1 – View south of the Recycle Centre

RECOMMENDATION:

It is recommended that a right turn lane be provided to provide a safe waiting area for vehicles waiting to turn right into the Recycle Centre.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	03/10/19

Appendix A

DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

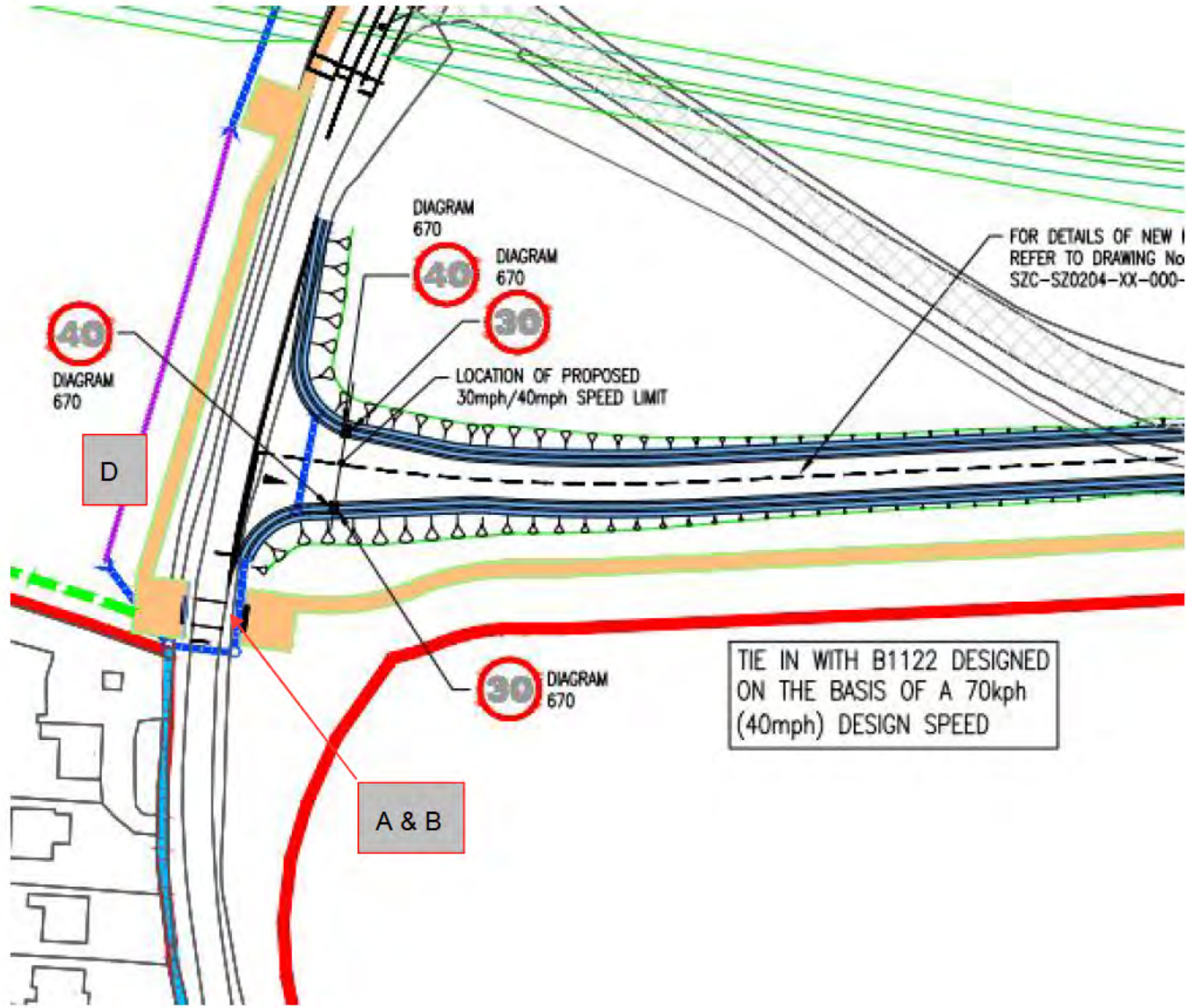
<i>SZC-SZ0204-XX-000-DRW-100104-P08</i>	<i>Lovers Lane Improvement Works Sheet1</i>
<i>SZC-SZ0204-XX-000-DRW-100105-P08</i>	<i>Lovers Lane Improvement Works Sheet2</i>
<i>SZC-SZ0204-XX-000-DRW-100106-P07</i>	<i>Lovers Lane Improvement Works Sheet3</i>
<i>SZC-SZ0204-XX-000-DRW-100110-P05</i>	<i>Lovers Lane B1122 Junction</i>
<i>SZC-SZ0204-XX-000-DRW-100111-P06</i>	<i>Lovers Lane Secondary Site Access Junction</i>
<i>SZC-SZ0204-XX-000-DRW-100112-P05</i>	<i>Lovers Lane Recycle Centre Left Turn Lane and Pegasus Crossing</i>
<i>SZC-SZ0204-XX-000-DRW-100114-P05</i>	<i>Lovers Lane Widening and Big Field Access Junction</i>

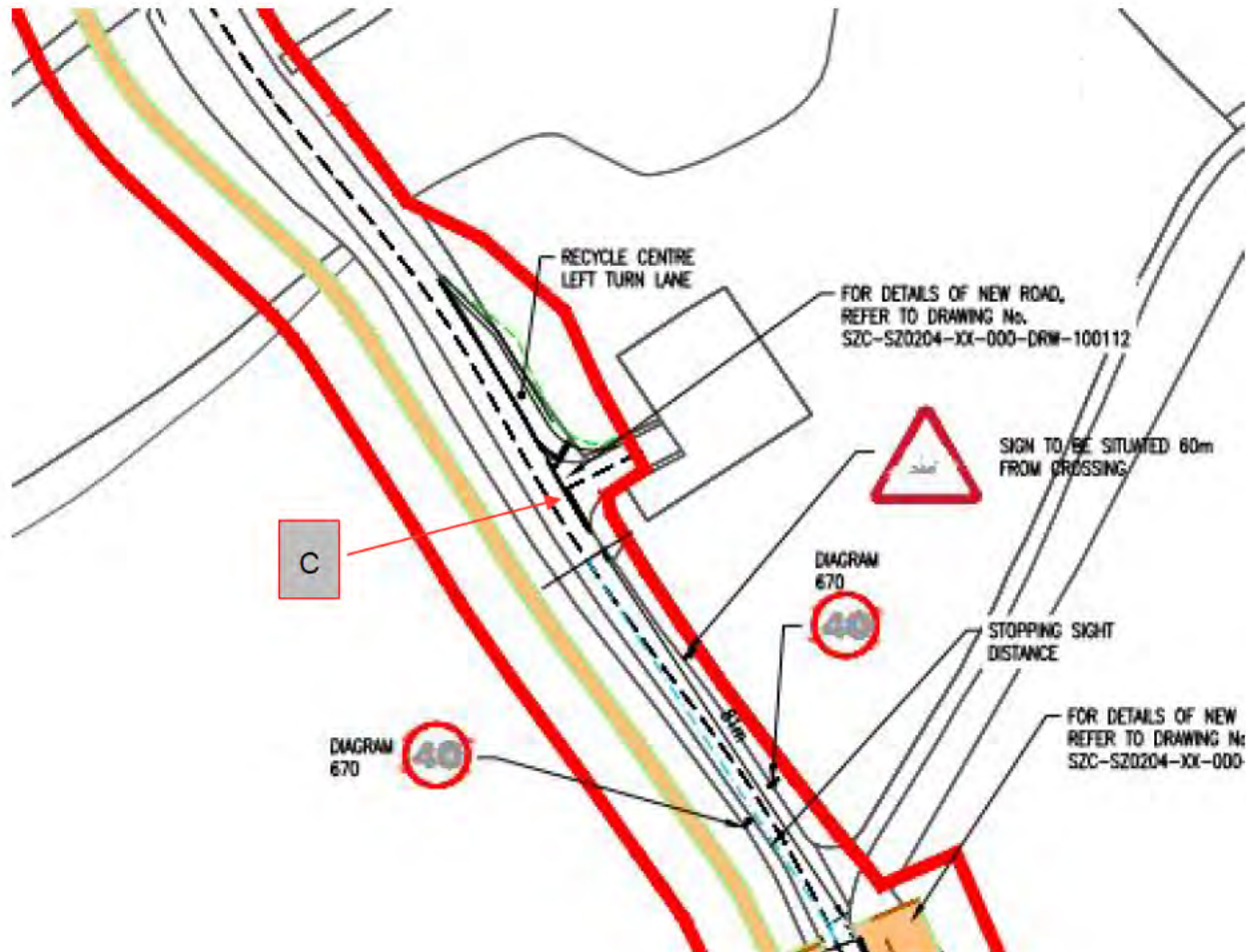


Appendix B



PROBLEM LOCATION PLAN







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***SIZEWELL C
MAIN SITE ACCESS***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C MAIN SITE ACCESS

Stage 1 Road Safety Audit

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PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF13

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DATE: OCTOBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref13			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Main Site Access Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref13</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Main Site Access* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 11am – 12pm. The weather was raining. The road surface was very wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. *No departures from standard have been formally submitted to the Highway Authority for approval at this stage. However, a few potential departures from standard have been identified that may or may not be required depending on the outcome of later design stages.*

Western Arm (B1122) forward visibility on approach to proposed roundabout - Tree and vegetation clearance will be required to achieve 120m DMSSD. If these clearance works prove not to be possible a departure from standard would be required.

Southern Arm (B1122) forward visibility on the exit from the roundabout - Tree and vegetation clearance will be required to achieve 120m DMSSD. If these clearance works prove not to be possible a departure from standard would be required. (copied from the Brief).

Northern Arm (East Bridge Road) combination of a relaxation in horizontal curvature (90m radii) and relaxation in superelevation (3.5%). (the above is copied directly from the Brief)

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme includes a new at-grade 4-arm roundabout on the B1122 to provide access to the Sizewell main site.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. WALKERS, CYCLISTS AND HORSE RIDERS

3.2. PROBLEM 1

Location: A – Proposed bridleway between the north and western arms of the roundabout.



Summary: Risk of walkers, cyclists and horse riders (WC&HRs) falling down embankment at rear of facility.

The proposed bridleway guides WC&HRs between the north and western arms of the new roundabout. The bridleway is 3 metres in width, with an embankment adjacent to its northern edge. The narrow width of the route (considering all users can utilise this facility) combined with the close proximity to the top of the embankment could lead to a WC&HR falling down the embankment resulting in injury.

RECOMMENDATION:

It is recommended that either the Bridleway be widened (potential for widening shown on drawings) or a post and rail fence be provided at the top of the embankment.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100000_P01 Main Site Access Roundabout Proposed layout

SZC-SZ0204-XX-000-DRW-100002_P01 Main Site Access Roundabout Utility Plan

SZC-SZ0204-XX-000-DRW-100001_P01 Main Site Access Roundabout Proposed Vertical Profiles

Appendix B



PROBLEM LOCATION PLAN





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SIZEWELL C
SIZEWELL LINK ROAD

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C SIZEWELL LINK ROAD

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF11

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DATE: OCTOBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref11			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Sizewell Link Road Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref11</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Sizewell Link Road (SLR)* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 10:30am – 11:30am. The weather was raining. The road surface was very wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. *Departures required on the A12/SLR roundabout north and south approaches and B1122/MMLR¹ roundabout west approach. Specifically, the horizontal radii on the approaches of the existing roads (i.e. A12 and B1122) are tighter than the ones indicated in TD9/93 Table 3. This was required to achieve a better deflection within the available red line boundary. (copied from Brief).*

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be

¹ Middleton Moor Link Road

produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

The Sizewell Link Road (SLR) has a design speed of 100kph. It would connect the A12 to a new roundabout, whilst bypassing the existing B1122 and settlements of Middleton Moor and Theberton and re-joins the B1122 to the east of Theberton. A new roundabout will be located on the B1122 (west of Middleton Moor) and a new link road will connect this to the SLR at a T-junction.

Seven additional T-junctions are proposed on the SLR between Middleton Moor Link Road (MMLR) and the east end tie in to the B1122.

Currently, all the T-junctions have been designed as ghost island junctions with provisions for non-motorised users (NMU)s to provide continuity of the public right of way (PROW).

The western section of SLR (i.e. between the A12 roundabout and MMLR junction) has geometry that would allow overtaking, but this has not been an important consideration in the design.

ROAD MARKINGS

3.5. PROBLEM 4

Location: D – Side road junctions at chainages 4100 and 5900



Summary: Increased risk of collisions between vehicles waiting to turn into the side roads and other vehicles on the SLR.

The SLR is constructed with several side road junctions, and many of these have a right turn lane proposed to provide a safe waiting area when turning into the side road. However, the two side roads as detailed above do not appear to have right turn lanes proposed. This is likely to increase the risk of a collision between a vehicle waiting to turn right into the side road and a vehicle continuing straight on the SLR.

RECOMMENDATION:

It is recommended that adequate provision is made on the SLR to allow for safe right turn manoeuvres into the side road junctions.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19

Appendix A

DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100055_P07	Highway Works – Key Plan
SZC-SZ0204-XX-000-DRW-1000XX_P01	Trust Farm Staggered Junction
SZC-SZ0204-XX-000-DRW-100056_P09	Proposed Layout and Profile – Dwg1
SZC-SZ0204-XX-000-DRW-1000XX_P01	Sizewell Link Road/Fordley Road Junction
SZC-SZ0204-XX-000-DRW-1000XX_P01	Hawthorn Road Junction
SZC-SZ0204-XX-000-DRW-1000XX_P01	Sizewell Link Road/Moat Road Junction
SZC-SZ0204-XX-000-DRW-1000XX_P01	Pretty Road Junction & Footbridge
SZC-SZ0204-XX-000-DRW-100096_P06	General Arrangement – Dwg 3
SZC-SZ0204-XX-000-DRW-100097_P06	General Arrangement – Dwg 4
SZC-SZ0204-XX-000-DRW-100098_P06	General Arrangement – Dwg 5
SZC-SZ0204-XX-000-DRW-100099_P06	General Arrangement – Dwg 6
SZC-SZ0204-XX-000-DRW-100061_P06	General Arrangement Key plan
SZC-SZ0204-XX-000-DRW-100062_P06	General Arrangement – Dwg 1
SZC-SZ0204-XX-000-DRW-100063_P06	General Arrangement – Dwg 2
SZC-SZ0204-SBR-000-DRW-100006_P01	SLR Pretty Road Footbridge Cross Section and Miscellaneous details Sheet 2 of 2
SZC-SZ0204-SBR-000-DRW-100003_P01	SLR Suffolk Rail Bridge General Arrangement and sections

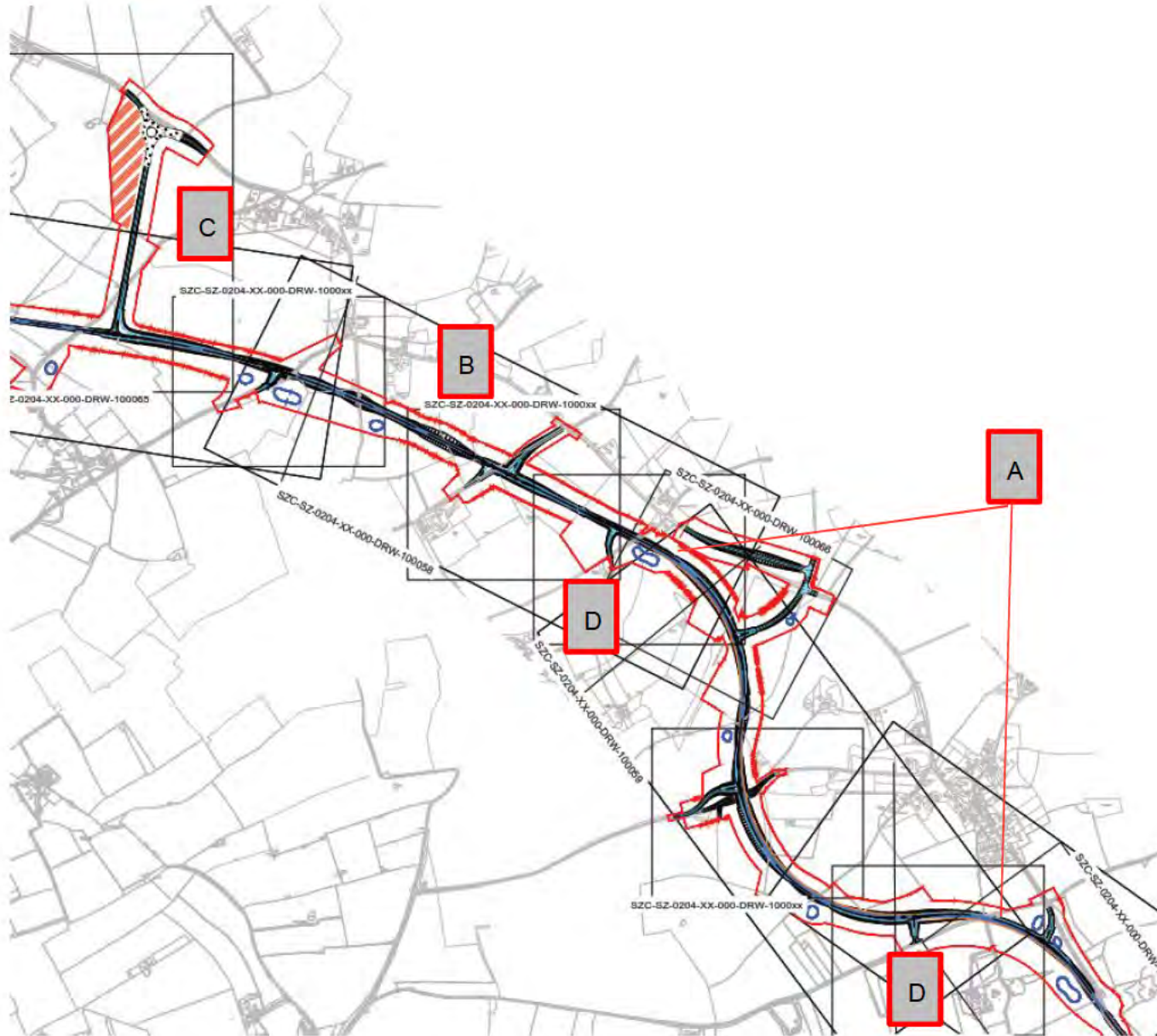


SZC-SZ0204-SBR-000-DRW-100005_P01	SLR	Pretty	Road	Footbridge	General
Arrangement and Elevation Sheet 1 of 2					
SZC-SZ0204-XX-000-DRW-100060_P09	Proposed Layout and Profile – Dwg 5				
SZC-SZ0204-XX-000-DRW-100064_P06	Sizewell Link Road/A12 Junction				
SZC-SZ0204-XX-000-DRW-100065_P06	Sizewell Link Road/A12 Junction				
SZC-SZ0204-XX-000-DRW-100066_P06	Sizewell Link Road/B1122/B1125 Junction				
SZC-SZ0204-XX-000-DRW-100067_P06	Sizewell Link Road/B1122/Theberton Junction				
SZC-SZ0204-XX-000-DRW-100057_P09	Proposed Layout and Profile – Dwg 2				
SZC-SZ0204-XX-000-DRW-100058_P09	Proposed Layout and Profile – Dwg 3				
SZC-SZ0204-XX-000-DRW-100059_P09	Proposed Layout and Profile – Dwg 4				
SZC-SZ0204-XX-000-DRW-100002_P01	Utility Plan				
SZC-SZ0204-XX-000-DRW-100000_P01	Main Site Access Roundabout Proposed Layout				
SZC-SZ0204-XX-000-DRW-100001_P01	Main Site Access Roundabout Proposed Vertical Profiles				
SZC-SZ0204-XX-000-DRW-100032_P07	Southern Park & Ride A12 Highway Works Drg4				
SZC-SZ0204-XX-000-DRW-100028_P07	Southern Park & Ride A12 Highway Works Key Plan				
SZC-SZ0204-XX-000-DRW-100029_P11	Southern Park & Ride A12 Highway Works Dwg1				
SZC-SZ0204-XX-000-DRW-100030_P07	Southern Park & Ride A12 Highway Works Dwg2				
SZC-SZ0204-XX-000-DRW-100031_P08	Southern Park & Ride A12 Highway Works Dwg3				

Appendix B



PROBLEM LOCATION PLAN





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***SIZEWELL C
SOUTHERN PARK AND RIDE***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C SOUTHERN PARK AND RIDE

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF3

WSP

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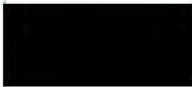


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DATE: SEPTEMBER 2019

Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	30/09/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref3			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C - Southern Park and Ride Stage 1 Road Safety Audit</i>
Date:	<i>September 2019</i>
Document reference and revision:	<i>50400326/2019/Ref3</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the Sizewell C - *Southern Park and Ride* scheme on behalf of Steve Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steve Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steve Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Monday 23rd September 2019 between 2pm – 3pm. The weather was fine with sunny spells. The road surface was dry during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

This aspect of the scheme consists of highway improvements to the A12/B1078 junction. These consist of signing and road marking alterations, as well as an additional access from the A12 eastbound slip road into fields to the north of the A12.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1. SIGNING

3.2. PROBLEM 1

Location: A – A12 Northbound immediately after the offslip to the B1078

Summary: Risk of drivers being unaware of the offside lane drop.

As part of these junction improvement works, the offside lane drop on the A12 is to be relocated further to the south, just after the offslip to the B1078. The offside lane will be hatched with three 'tuck-in' arrows to help inform drivers of the need to move from the offside lane into the nearside. However, there doesn't appear to be any advance signage associated with the lane drop. If drivers are not notified of the lane drop in advance this could result in late lane change manoeuvres resulting in loss of control or side swipe collisions.

RECOMMENDATION:

It is recommended that adequate advance signage be provided of the lane drop.

3.3. ROAD MARKINGS

3.4. PROBLEM 2

Location: B – A12 northbound between the offslip and onslip.

Summary: Increased risk of collisions at layby.

The offside lane of the A12 is to be hatched-out from a point to the north of its offslip to the B1116. Immediately to the north of the start of the hatching, there is an existing layby. The layby is to remain following the improvement works. However, with the end of the offside lane of the A12 being so close to the layby, there is a risk of drivers merging into a single lane being unaware of the risk of vehicles either slowing to enter the layby or of vehicles exiting the layby, potentially at low speeds due to the gradients. This may increase the risk of collisions between vehicles on the A12 with vehicles entering or exiting the layby.

RECOMMENDATION:

It is recommended that the layby be closed or relocated.

3.5. ALIGNMENT

3.6. PROBLEM 3

Location: C – A12 northbound onslip.

Summary: Risk of vehicles colliding with power line poles.

The park and ride scheme provides a new footway and crossing over the entry/exit from the proposed park and ride site. However, there is an existing power-line post within the proposed alignment of the footway and it will be very close to the edge of the diverge taper into the park and ride site (see Photo 1). Should these posts be subject to a collision with a passing vehicle, the electricity power line could fall to the ground and come into contact with other road users. The poles may also obstruct pedestrian movement on the footway, forcing pedestrians into the deceleration lane with risk of collision from traffic.



RECOMMENDATION:

It is recommended that power line posts be protected or relocated.



Photo 1 – Power line poles to the rear of the layby

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	30/09/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100028RevP07 Highway Works Key Plan

SZC-SZ0204-XX-000-DRW-100031RevP08 Highway Works Drawing 3

SZC-SZ0204-XX-000-DRW-100030RevP07 Highway Works Drawing 2

SZC-SZ0204-XX-000-DRW-100029RevP11 Highway Works Drawing 1

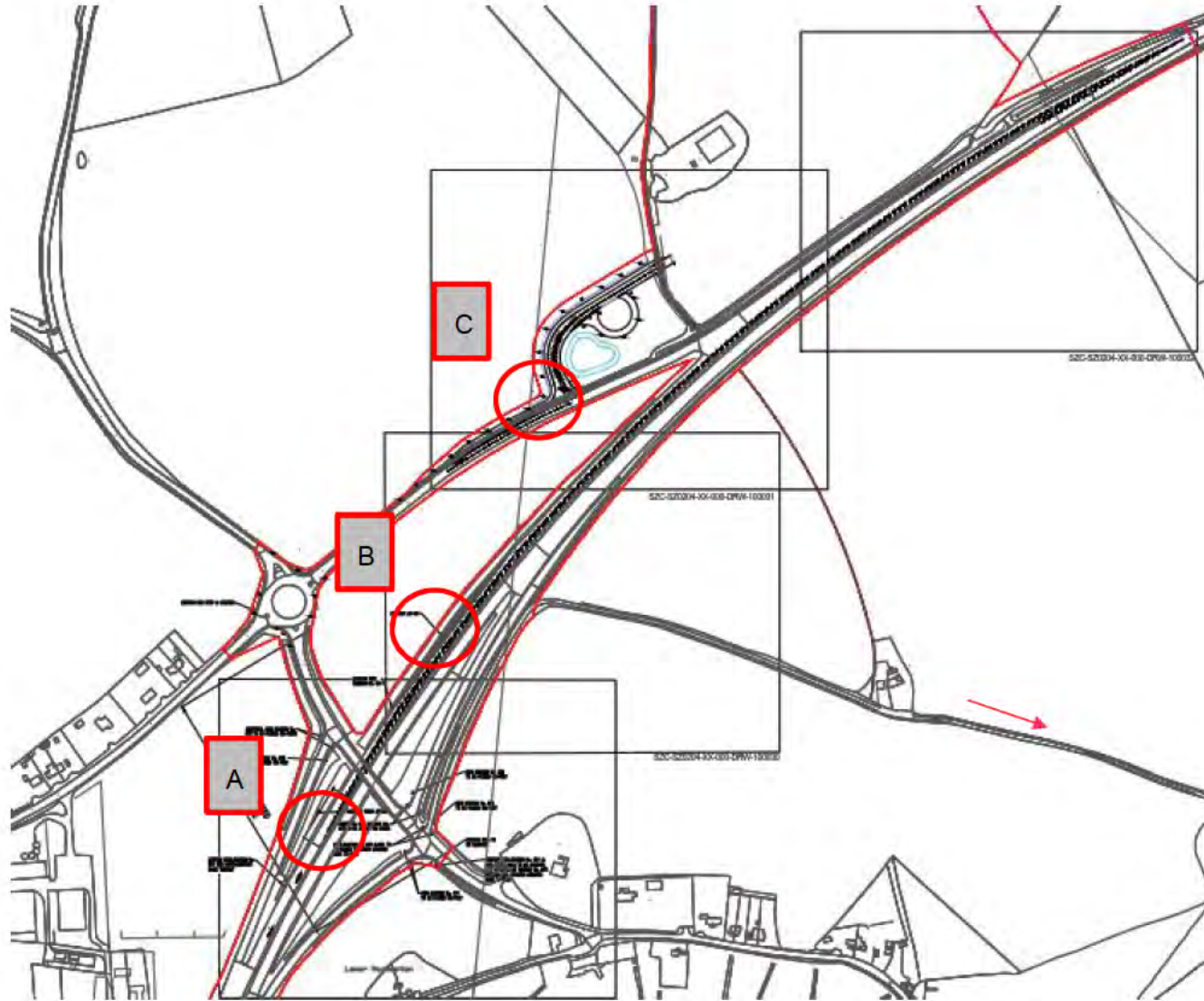
SZC-SZ0204-XX-000-DRW-100032RevP07 Highway Works Drawing 4



Appendix B



PROBLEM LOCATION PLAN





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***SIZEWELL C
THEBERTON BYPASS***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C THEBERTON BYPASS

Stage 1 Road Safety Audit

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PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF12

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DATE: OCTOBER 2019



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Theberton Bypass Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref12</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Theberton Bypass* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 10:30am – 11:30am. The weather was raining. The road surface was very wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. The audit team were not notified of any departures from standards.

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.



Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.

The Theberton Bypass is a variant of the Sizewell Link Road where the bypass is to be constructed to the south of the village of Theberton.

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

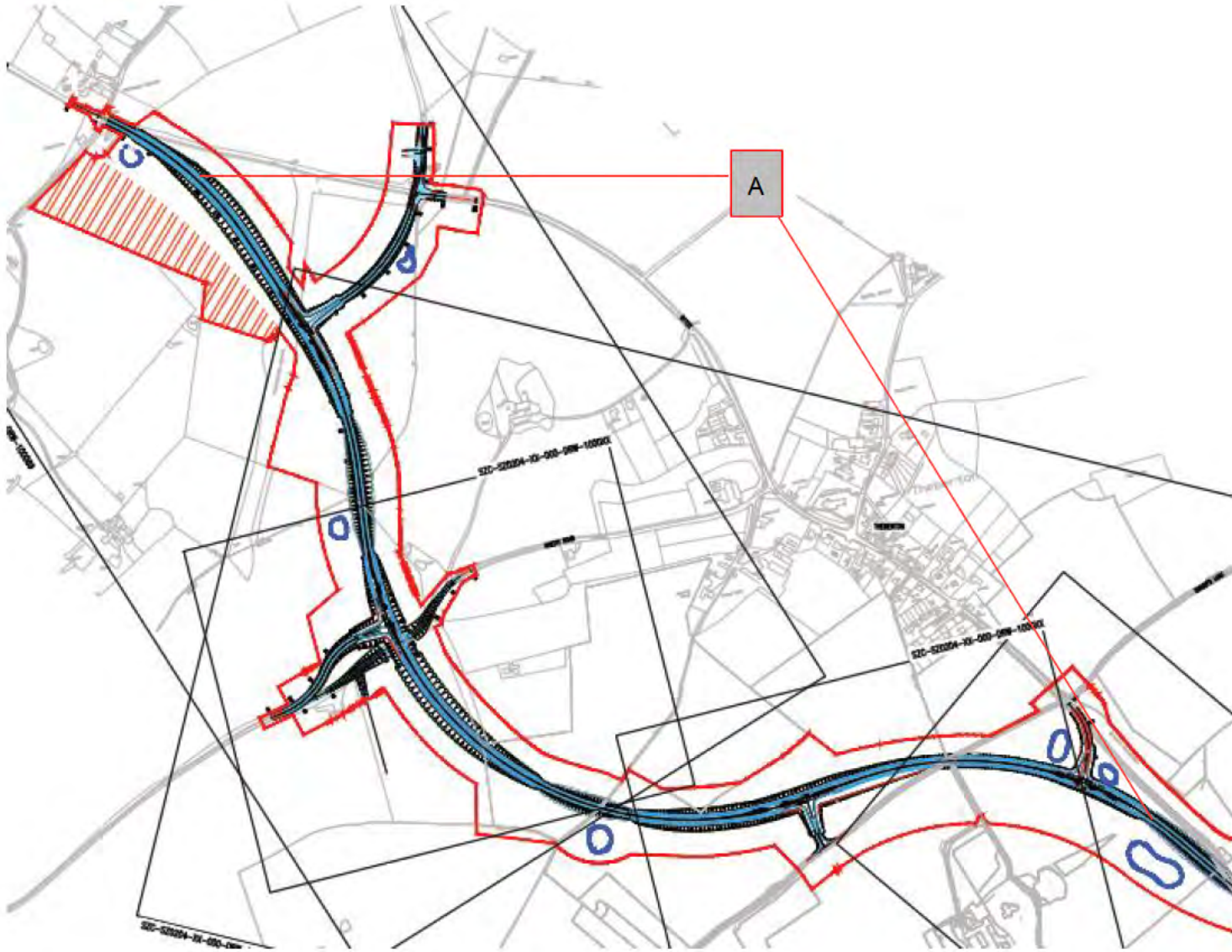
Drawings

SZC-SZ0204-XX-000-DRW-100068_P05	Theberton Bypass Highway Works Key Plan
SZC-SZ0204-XX-000-DRW-100070_P06	Proposed Layout and Longsection Drawing 2
SZC-SZ0204-XX-000-DRW-100069_P06	Proposed Layout and Longsection Drawing 1

Appendix B



PROBLEM LOCATION PLAN





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Suffolk County Council

***SIZEWELL C
YOXFORD ROUNDABOUT***

Stage 1 Road Safety Audit



Suffolk County Council

SIZEWELL C YOXFORD ROUNDABOUT

Stage 1 Road Safety Audit

CONFIDENTIAL

PROJECT NO. 50400326

OUR REF. NO. 50400326/2019/REF8

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DATE: OCTOBER 2019



Quality control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	N/A			
Date	02/10/19			
Prepared by	Neil Jones			
Signature				
Checked by	Dave Minshall			
Signature				
Authorised by	Axel Kappeler			
Signature				
Project number	50400326			
Report number	50400326/2019/Ref8			
File reference	As above			



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APPENDICES

APPENDIX A

APPENDIX B

1. PROJECT DETAILS

Report title:	<i>Sizewell C – Yoxford Roundabout Stage 1 Road Safety Audit</i>
Date:	<i>October 2019</i>
Document reference and revision:	<i>50400326/2019/Ref8</i>
Prepared by:	<i>WSP</i>
On Behalf of:	<i>Suffolk County Council</i>

2. INTRODUCTION

2.1.1. This report results from a Stage 1 Road Safety Audit (RSA) carried out on the *Sizewell C – Yoxford Roundabout* scheme on behalf of Steven Merry, Audit Project Sponsor. The Road Safety Audit was carried out during September 2019.

2.1.2. The Road Safety Audit Team approved by Steven Merry, Audit Project Sponsor was as follows:

Audit Team Leader: Neil Jones BA(hons), DipTEDM, MSoRSA, MCIHT

Audit Team Member David Minshall IEng, MICE, MCIHT, MSoRSA, IMAPS

Neil Jones holds a Road Safety Certificate of Competence meeting the requirements of the European Directive 2008/96/EC and GG119 paragraph 3.9 and appendix G.

2.1.3. The audit took place in WSP's Birmingham office in September 2019. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Steven Merry, Audit Project Sponsor, and accepted by the Audit Team on the 9th September 2019.

2.1.4. The Audit Team visited the site together on Tuesday 24th September 2019 between 9am-10am. The weather was raining. The road surface was wet during the site visit. Traffic was free flowing.

2.1.5. The Road Safety Audit also comprised of an examination of the documents and drawings supplied to the Road Safety Audit Team, referenced in Appendix A of this report.

2.1.6. All comments and recommendations are referenced to the design drawings and the locations have been indicated on the plan located in Appendix B.

2.1.7. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges Standard GG 119 Road Safety Audit.

2.1.8. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

2.1.9. *Departures on A12 West and B1122 approaches were required to achieve a better deflection within the available red line boundary. Existing radii on A12 and B1122 on the junction appear lower than those advised by DMRB TD9/93 Table 3. (copied from Brief)*

2.1.10. Audit administration

This Audit Report has been submitted to the Audit Project Sponsor for consideration. A copy of this RSA report should then be passed onto the design team to allow a RSA response report to be produced. This should be completed within 1 month of the issue of the RSA report and the Audit Project Sponsor should then provide a copy to the RSA team for information.

The Audit Project Sponsor is responsible for identifying any misinterpretations of the scheme proposals or if any problem or recommendation is not accepted.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter.

2.2. Purpose of the Scheme

The plan is to build and operate a new nuclear power station in Suffolk on land immediately to the north of the Sizewell B power station, adjacent to an area that has had nuclear power stations operating since 1966. As part of these works, a number of highway improvement works and new carriageway construction (including 2 new bypasses) are to be constructed.



This aspect of the scheme consists of the upgrade of the existing T-Junction between the A12 and the B1122 to a Roundabout. Furthermore, the final section of the B1122 is realigned and connected to the new B1122 alignment via a T-Junction to retain access to properties on the south-western side of the Roundabout.

The resulting space located in between the existing B1122 carriageway and the proposed roundabout will be used to accommodate an infiltration pond.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

There were no road safety issues raised during the Stage 1 Road Safety Audit

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	Neil Jones
Signed:	
Position:	ITS Principal Consultant (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19
ROAD SAFETY AUDIT TEAM MEMBER(s)	
Name:	Dave Minshall
Signed:	
Position:	Principal Engineer (Road Safety Engineering)
Organisation:	WSP
Date:	02/10/19



Appendix A



DOCUMENT LIST

Documents

Collision data

SZC Map

Drawings

SZC-SZ0204-XX-000-DRW-100019_P08
LAYOUT

A12/B1122 ROUNDABOUT PROPOSED

SZC-SZ0204-XX-000-DRW-100020P02
PROFILES

A12/B1122 ROUNDABOUT PROPOSED

Appendix B



PROBLEM LOCATION PLAN

Not Required



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APPENDIX 10B

Road Traffic Collisions



TECHNICAL NOTE: SIZEWELL C ROAD TRAFFIC COLLISION ANALYSIS

DATE:	27 May 2021	CONFIDENTIALITY:	Public
SUBJECT:	Sizewell C Road Traffic Collision Analysis		
PROJECT:	50400326	AUTHOR:	John Hicks
CHECKED:	Nick Cottman	APPROVED:	Nick Cottman

1.0 INTRODUCTION

- 1.1 This paper sets out to quantify the change in the number of road traffic collisions (RTC) resulting from changes in traffic flows during the construction and operational phases of the Sizewell C project. This information has informed the Health and Wellbeing Assessment described in **Chapter 2** of the **ES Addendum** (Doc Ref. 6.14).
- 1.2 **Chapter 10** of the Sizewell C **Transport Assessment** (Doc Ref. 8.5(A)) [AS-017], submitted with the DCO Application in May 2020, sets out a qualitative analysis of the change in RTC for key parts of the highway network affected by Sizewell C. The Transport Assessment looks at the highway network around the main development site, at all the associated developments and the other highway improvements. It also considers other locations identified by Suffolk County Council or the Police and Crime Commissioner, including the A12 at Martlesham and Woodbridge and the B1125.
- 1.3 This appendix to the **Consolidated Transport Assessment Addendum** (Doc Ref. 8.5(B)) describes the additional analysis undertaken to quantify the change in collisions across the local highway network for which Suffolk County Council have provided RTC data. It sets out the change in the number of RTC for the 2023 early years, 2028 peak construction and 2034 operational phase scenarios, consistent with the Transport Assessment, providing a snapshot of changes in RTC at these three key periods during construction and operation.

2.0 METHODOLOGY

- 2.1 The analysis included in the **Transport Assessment** (Doc Ref. 8.5(A)) [AS-017] was based on historic collision data provided by Suffolk County Council, base year and forecast traffic flows taken from the VISUM strategic traffic model and informed professional judgement about the RTC impacts. The latter was, in part, informed by the COBALT (cost-benefit analysis light touch) manual, which sets out how the Department for Transport treats RTC changes in the economic assessment of new road schemes in accordance with WebTAG (Transport Analysis Guidance). It is a reasonable source and approach to follow in developing this analysis.
- 2.2 Suffolk County Council provided RTC data between May 2014 and May 2019 for all the main roads likely to be affected by Sizewell C between and including the A14 Ipswich, the A12 at Lowestoft and the A140 that forms the western edge of the VISUM study area. This data included several minor roads closer to the Sizewell C site between the A1094 and the B1112 where traffic impacts are likely to be greatest.
- 2.3 The RTC data was provided by Suffolk County Council by area or corridor, and showed the number and severity of RTC over this period. The RTC data was reported in **Table 2.5, Chapter 2** of the **Transport Assessment** (Doc Ref. 8.5(A)) [AS-017], and describes the existing conditions for RTC on the network. The analysis in the Transport Assessment (Doc Ref. 8.5(A)) [AS-017] included identifying a RTC rate per million-vehicle-kilometres to highlight links with higher than average RTC rates.
- 2.4 The Suffolk County Council data, plus that taken from the Crashmap website, formed the basis of the RTC analysis set out in **Chapter 10** of the **Transport Assessment** (Doc Ref. 8.5(A)) [AS-017]. It also formed the basis of RTC analysis in **Chapter 28** [APP-346] and **Chapter 10** [APP-198] of the **Environmental Statement** (Doc Ref. 6.3(A)).

- 2.5 The VISUM strategic traffic model developed for Sizewell C has a 2015 base year. This conveniently falls within the period May 2014 to May 2019 for which Suffolk County Council provided RTC data. It is reasonable to assume that 2014 traffic flows would have been lower than those in the 2015 base year and flows would have been higher in 2016, 2017, 2018 and 2019.
- 2.6 The method of predicting changes in RTC in future years and the guidance for doing so is in the COBALT¹ manual. For this analysis, the COBALT software has not been used but the COBALT parameters and approach has been in order to assess the impact of Sizewell C traffic on RTC numbers.
- 2.7 Suffolk County Council did not split the data into separate junction and link accidents but aggregated it across the whole network by corridor or area. In the analysis therefore, we have used the combined link and junction collision parameters set out in COBALT to assess the likely RTC changes resulting from Sizewell C.
- 2.8 The COBALT parameter files suggest that collision numbers increase linearly with increasing traffic volumes. This can be inferred by the number of RTC increasing per million-vehicle-kilometres. Such an approach, assuming the linear increase of collisions with increasing traffic volume, is a reasonable approach for combined link and junction accidents.
- 2.9 On this basis, it is possible to predict future year collision numbers by considering the change in traffic volumes on the respective link. These changes in traffic volumes come from the VISUM model for the assessment years - 2023 early years, 2028 peak construction and 2034 operational phase. As in the DCO **Transport Assessment** (Doc Ref. 8.5(A)) and **Environmental Statement** (Doc Ref. 6.3), the Reference Case is compared against the cases relating to the Sizewell C construction and operational assessment years. The cumulative assessment that includes the Scottish Power scheme has also been assessed but is not reported here because the additional traffic flows are relatively small and the RTC results are essentially the same as those without Scottish Power. From this analysis, we have predicted the change in collisions at early years, peak construction and in the operational phase.
- 2.10 The collision data provided by Suffolk County Council covers the five year period May 2014 to May 2019. In the analysis, we have taken the average number of collisions on each link over this period by simply dividing the total number of RTC by five. From this, we have applied traffic growth and committed development from the base year 2015 by using output traffic flows taken from the VISUM model for the appropriate Reference Case year, for example 2023. This approach may slightly overestimate or provide an upper bound figure for 2023 collision numbers. This is because some of the observed collisions are later than 2015 but we are factoring growth from 2015 to the future year. However, we do not think this is significant in the analysis but should be noted.
- 2.11 We adopted this approach for each link for which we have observed collision data, and traffic volumes from the VISUM model, to estimate the change in collision numbers due to Sizewell C. Suffolk County Council agreed the VISUM network coverage of the base year to include all links with significant impacts resulting from Sizewell C. By comparing the observed and predicted number of collisions, it can be seen that the collisions analysis picks up about 97% of the recorded collisions. This is a sufficiently large proportion from which to predict the percentage change in RTC due to Sizewell C.
- 2.12 This analysis derived the change in collision numbers across each link of the network considered, e.g. B1078. By summation of all links across the whole network, it gives the total change in collision numbers expected due to the traffic increase from Sizewell C. This therefore provides a forecast of the RTC change resulting from traffic growth, committed development and Sizewell C and in 2023 early years, 2028 peak construction and the 2034 operational phase.
- 2.13 The COBALT manual also indicates that there is a long term downward trend in collision numbers over time. This is an important consideration since it indicates that the total number of collisions across the network will continue to reduce over time, irrespective of Sizewell C.
- 2.14 However, before applying these beta factors in the analysis, we have reviewed whether it is consistent with observed collision numbers on the highway network local to Sizewell C. Clearly, if there were no downward trend in the observed RTC data, it would be inconsistent to use the beta factor in future predictions.

¹ (COBALT is an acronym for cost-benefit analysis light touch.)

- 2.15 To test whether there is a downward trend for observed collision numbers on the local highway network, we looked at collisions for the period 2014 to 2018. (We excluded 2019 as we did not have a full year of data.) We noted an abnormally low number of RTC in 2014, so excluded that data and added 2013 data into the analysis. Suffolk County Council did not provide this 2013 data but we obtained it from the Crashmap website.
- 2.16 The local highway network affected by Sizewell C for which we have RTC data consists of several different road types:
- 191.2 kilometres of single carriageway A road;
 - 54.5 kilometres of dual carriageway A road; and
 - 150.4 kilometres of B and C roads.
- 2.17 Using COBALT beta values for each of these road types, we calculated a weighted beta factor to apply across the local highway network affected by Sizewell C.
- 2.18 This analysis of the 2013 to 2018 data showed clearly a significant downward trend in collision numbers across the local highway network over this period. The linear regression analysis has a r^2 value of 0.85 showing good correlation, giving confidence in the trend. On **Figure 2.1**, the gradient from the trendline in the regression analysis indicated a 5.2% per annum reduction in collision numbers over the period 2013 to 2018. This is consistent with the COBALT figure for the period 2004 to 2019, which is also 5.2% per annum.

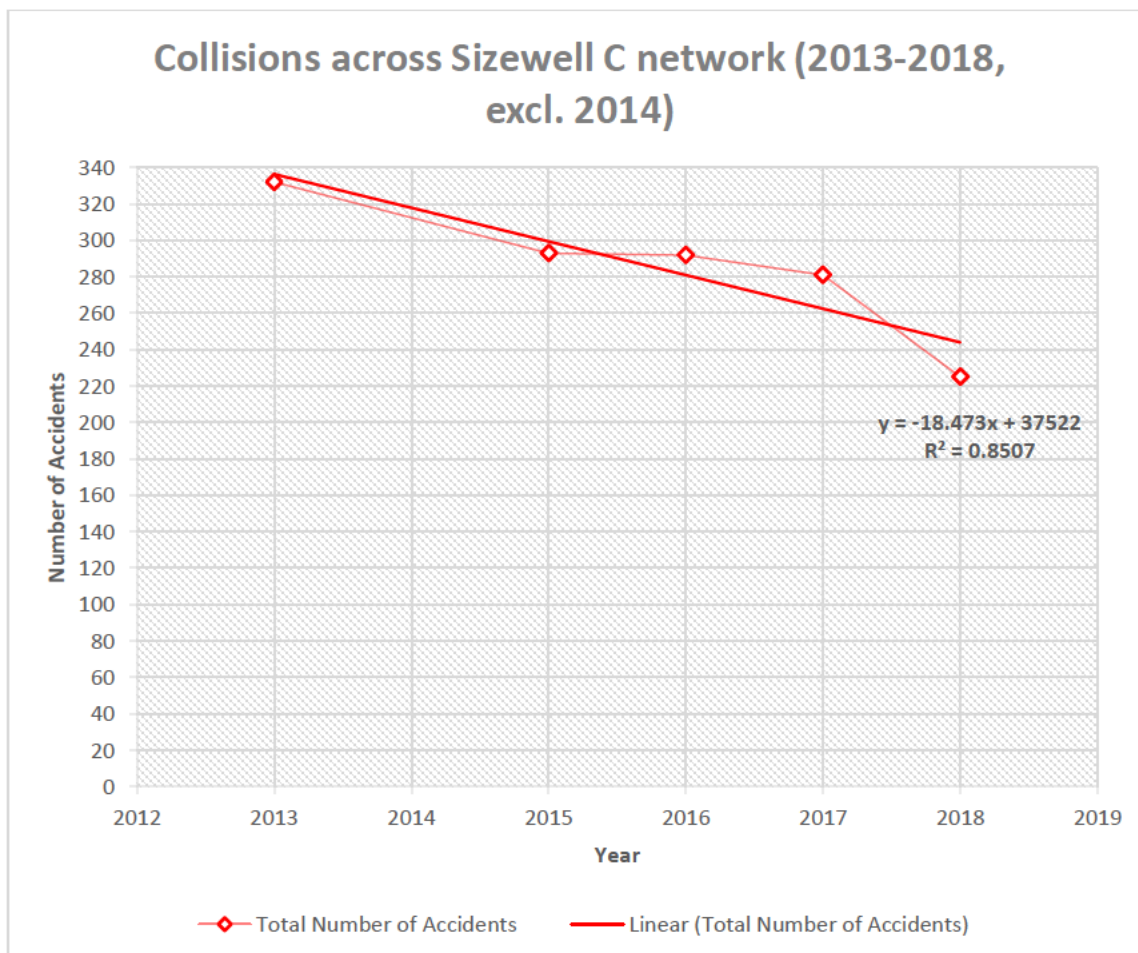


Figure 2.1: Regression Analysis of 2013-2018 Collision Data

- 2.19 Given the similarity between the downward trend in the observed RTC data and that predicted by COBALT, it is reasonable to include this beta factor in the subsequent analysis. COBALT indicates that for the period 2020 - 2029, the local beta factor reduces to 2.6% per annum and for 2030 - 2039 to 1.3% per annum. We have therefore applied appropriate beta factors to the 2023, 2028 and 2034 analysis.

- 2.20 The effect of the beta factor is to significantly reduce the expected number of collisions in future years on the local highway network. This effect is much greater than the likely increase in collisions resulting from Sizewell C. This means that, overall, there would be a reduction in the total number of collisions on the local highway network, even with Sizewell C traffic included; albeit, that reduction would be greater without Sizewell C.
- 2.21 However, because the Reference Case number of collisions would be lower, Sizewell C would have a slightly greater percentage impact on collisions than if we had ignored the beta factor. In the results presented below, we have quoted a range a percentage impacts resulting from Sizewell C for 2023, 2028 and the 2034 assessments. The lower percentage excludes the beta factor and the higher percentage includes beta.

3.0 RESULTS

- 3.1 The analysis shows that in 2023 early years, the total number of collisions predicted across the local highway network without beta would be 317 per annum, reducing to 260 per annum taking beta into account. The analysis forecasts that additional traffic resulting from Sizewell C Early Years traffic levels would add 14 collisions per annum to the local highway network. This gives a change of between 4.4% and 5.4% per annum. The historic severity split across the Sizewell C network suggests that of the additional 14 collisions, 12 would be slight, 2 serious and none fatal.
- 3.2 Similarly, in 2028, the predicted number of annual collisions across the local network without the beta factor would be 337, with beta reducing this to 228 collisions per annum. The additional Sizewell C traffic is forecast to add 18 collisions to the local highway network based on the peak construction flows. This would give a percentage change of between 5.3% and 7.8% per annum in the number of collisions. The severity split of the additional 18 collisions per annum is forecast to be 15 slight, 2-3 serious collisions and less than one fatal collision per year (c. one fatal collision in four years) during the peak construction. The increase in collisions is an aggregated value across the whole network within the study area with the change on any individual link being different.
- 3.3 In 2034, the forecast number of collisions without beta would be 361 each year and this is forecast to reduce to 208 collisions per annum taking beta into account. Sizewell C traffic would add no collisions per annum.
- 3.4 The change in RTC due to Sizewell C traffic is shown in **Table 3.1**.

Table 3.1: Change in RTC due to Sizewell C traffic

Scenario	2023 early years collisions pa	2028 peak construction collisions pa	2034 operational collisions pa
Reference Case without beta	317	337	361
Reference Case with beta	260	228	208
Sizewell C	14	18	0
SZC change	4.4% - 5.4%	5.3% - 7.8%	0%

- 3.4 The number of additional collisions varies by link throughout the network because the percentage change in traffic volumes resulting from Sizewell C varies across the network.

4.0 CONCLUSIONS

- 4.1 This output and these findings have informed the Health and Wellbeing Assessment described in **Chapter 2 of the ES Addendum** (Doc Ref. 6.14), noting that the significant reduction in collisions across the network (due to the beta factor) far outweighs the effect of the Sizewell C additional traffic.



- 4.2 The analysis does not take account of changing vehicle composition during the Sizewell C construction phase. However, elements of the **Construction Traffic Management Plan** (Doc Ref. 8.7) [APP-608] such as HGV driver rules, induction for HGV drivers at the Freight Management Facility and HGV routes tracked using GPS, plus a construction worker code of conduct that includes driver rules, will all act to reduce the likelihood of collisions.

REFERENCES

COBALT User Guide Version 2013.02 November 2015 Department for Transport
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/488064/cobalt-user-manual.pdf