Brief for Blackpool ATC upgrade project

Overview

Blackpool Council wish to procure the services of a supplier who will be tasked with upgrading the existing automatic traffic counter (ATC) network. The successful supplier will best demonstrate how their product meets the requirements laid out in this brief, how their product will enhance and improve on the existing situation and how their product's reliability and ease of use will be of direct benefit to the authority. Good value for money is essential and this must be detailed from product costs through to installation and ongoing maintenance regimes.

Introduction

Blackpool Council's existing traffic counters are now obsolete. As time goes on and this equipment continues to fail, more and more count site locations will be lost; new equipment is therefore required to ensure reliable data collection.

If nothing is done then the final outcome will be the eventual failure of all of the existing count sites and result in Blackpool Council having no handle on the volumes of traffic using its highway network. This will have a number of negative effects on the authority, not least impacting on its ability to compile bids for future transport schemes and its ability to analyse the potential highway impacts of proposed future developments.

The need for a reliable and cost effective data collection and analysis package is therefore key.

Historic situation

Circa 2002, 39 permanent traffic counter sites were set-up across Blackpool's highway network in strategic locations. All of these locations consisted of inductive loops and a mains power supply. Each site also consisted of primitive telemetry that allowed remote connection to each site so that data could be downloaded to the office computer.

Circa 2010, and following changes in staffing and available resources it was agreed to decrease the number of traffic counter sites in operation. As a result of this, each of the 39 sites were assessed in terms of their strategic importance on the road network. Following the completion of this exercise 18 sites became dormant, leaving 21 sites still active. Due to factors relating to mains power supply and connectivity, remote data collection also ceased around this time with on-site data collection becoming the norm.

Existing situation

At the time of writing 16 of the aforementioned 21 sites are still operational. The other five have either failed due to equipment damage/power loss/physical damage or have alternatively still been operational but have been swapped to cover a site that has failed in a more strategic location. The operational sites listed below are also shown geographically in Appendix A.

- Common Edge Road (1)
- Yeadon Way (2)

- Poulton Road east (3)
- Fleetwood Road (4)
- Kelso Avenue (5)
- North Promenade (6)
- Church Street (7)
- St Walburgas Road (8)
- Park Road (9)
- Central Drive (10)
- Dickson Road (11)
- Progress Way (12)
- New South Promenade (13)
- East Park Drive (14)
- Faraday Way (15)
- Preston New Road west (16)

Details of these sites, including existing power source and equipment are given in Appendix B. Similarly, the five sites that have failed are also detailed.

Project upgrade – requirements

To upgrade the 16 sites listed above with modern day equipment to enable accurate traffic counting to continue over the coming years. The following requirements are sought:

- The technology should offer long term reliability, which should be guaranteed.
- The technology should be low maintenance once installed. Blackpool Council do not have the resources available to be regularly visiting sites to do things such as replacing battery packs.
- It must be clear what the preferred power source is for the site. Mains power cannot be guaranteed. If solar panels and battery packs are to be used in should be clear what their lifespan is and what the process and cost of replacements is. If solar power is to be used, consideration should also be given to sites with tree coverage and whether additional solar panels will be needed to ensure a sufficient and reliable power source.
- The counters will need to count volumetric data, by direction, for 24 hours a day, 7 days a week.
- Preferably the counters should be accessible remotely, with reliable telemetry, so that data can be downloaded from the office rather than having to travel to each site to get the information.
- It would also be expected that any new equipment would have a ‘warning system’ to inform the user if/when a counter goes down or any other element of the site fails. This would ensure that the counter can be put right as soon as possible and thus limit the amount of data lost.
- The new counters should also be compatible with an up to date software interface that allows for high quality data reports to be produced. The ongoing costs for this should be clear.

- It should be made clear how the counter addresses the clock change requirements for BST and GMT.
- If, due to funding constraints the telemetry side of the project is too expensive, it should be made clear how the data can be collected on site. Due to limited resources for the project this may be the only option. It should therefore be made clear how much data the counters can hold before data is lost and how regularly data collection would be recommended.
- If the counters are to use the existing loops present at a site it would be expected that these loops are fully tested to ensure they are working efficiently. It should be made clear what options there would be if the loops were found not to be up to standard. For example your capacity for loop cutting.
- A maintenance strategy should be in place to ensure that any problems that occur with the physical aspect of a site are addressed quickly and efficiently.
- Technical support for problems ranging from counter issues to software support should be available. Details of this should be clear.
- A warranty period should be provided. The details of the warranty should be clear, for all elements.
- The counters should be capable of classifying traffic accurately. The more detailed the breakdown the better but, as a minimum it would be expected that HGVs, LGVs, cars, motorcycles and bus/coach should be distinguishable and preferably pedal cycles.
- It would be useful if the counters could also record vehicle speeds.
- Blackpool Council should own and have access to the traffic data at all times.

Additional information

- The cost breakdown for all steps must be transparent. This should include:
    - Equipment cost
    - Installation cost
    - Telemetry cost
    - Remote access software license cost
    - Maintenance agreement cost

Summary

Blackpool Council wish to appoint a supplier to upgrade their existing ATC equipment. Potential suppliers should respond to all aspects of this brief, providing as much detail as is necessary in response to the requirements, ensuring clarity and transparency. The successful client will provide the best value for money in addition to showing how their product and services best matches these requirements. Demonstrations of any part of the technology may be requested during the evaluation period, mindful of COVID issues.