iteris®

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1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705

May 17, 2017

In reply please refer to: 17LTR0032

Mr. Art Ida
Transportation Director
Culver City – Transportation Department
4343 Duquesne Avenue
Culver City, California 90232

Sent Via Federal Express
Telephone: 310-253-6566

Re: Systems Integrated Bid Protest, RFP #1587, Bus Signal Priority Systems Project

Dear Mr. Ida:

Iteris, Inc. now responds to Systems Integrated, LP's ("SI") May 6, 2017 bid protest on RFP #1587, Bus Signal Priority Systems Project (the "Project"). As discussed below, SI's bid protest is entirely without merit and is an abusive effort to interfere with the City's proper decision to award the Project to Iteris. Iteris respectfully requests that the City deny SI's protest.

SI's protest is separated into three issues. Iteris responds to these three issues in kind.

1. **ITERIS DOES NOT NEED A CONTRACTOR'S LICENSE TO COMPLETE THE PROJECT**

SI argues that because the Project scope of work includes "pulling conductors through existing conduit runs or using spare conductor or fiber in existing interconnect cables, and for mounting equipment on poles and in cabinets," any party submitting a proposal must be a licensed contractor. SI then argues that since Iteris does not have a license from the California Contractor State License Board, it is precluded from submitting a proposal for this work. In support of this argument, SI submits with its protest a memorandum prepared by its lawyers. SI's argument, along with its legal memorandum, is completely irrelevant to this Project.

SI conveniently ignores that the Project is for the implementation of an Intelligent Transport System ("ITS") that allows for an improved efficiency of City bus operations. The RFP asks for a turnkey system that allows traffic signals within the City to give priority to city buses. Importantly, the RFP does not call for proposals for the construction of any building, roadway, bridge or any structure. This is not a construction project, and a contractor's license is not needed.

California Business and Professions Code § 7026 defines a "contractor" for purposes of licensing requirements. Section 7026 states, with emphasis added:

> "Contractor," for the purposes of this chapter, **is synonymous with "builder"** and, within the meaning of this chapter, a contractor is any person who undertakes to or offers to undertake to, or purports to have the capacity to undertake to, or submits a bid to, or does himself or herself or by or through others, construct, alter, repair, add to, subtract from, improve, move, wreck or demolish **any building, highway, road, parking facility, railroad, excavation or other structure, project, development or**

> **improvement**, or to do any part thereof, including the erection of scaffolding or other structures or works in connection therewith, or the cleaning of grounds or structures in connection therewith, or the preparation and removal of roadway construction zones, lane closures, flagging, or traffic diversions, or the installation, repair, maintenance, or calibration of monitoring equipment for underground storage tanks, and whether or not the performance of work herein described involves the addition to, or fabrication into, any structure, project, development or improvement herein described of any material or article of merchandise. "Contractor" includes subcontractor and specialty contractor. "Roadway" includes, but is not limited to, public or city streets, highways, or any public conveyance.

SI's bid protest fails to explain how this Project falls into the categories set forth in Section 7026. The conduit and equipment installation work on which SI relies on is a mere fraction of the total amount of work to be performed on this Project. Said work is not the construction of any structure or building, but the installation of hardware necessary for the implementation of the ITS. Without demonstrating that the Project is one that would be covered by Section 7026, SI cannot simply rely on a legal conclusion from its attorneys that Iteris must hold a contractor's license.

Even if the conduit and equipment installation work, by some stretch of the imagination, falls into the categories set forth in Section 7026, Iteris would still be exempt from having to hold a contractor's license. Business & Professions Code § 7051 states: "This chapter does not apply to a licensed architect or a registered civil or professional engineer acting solely in his or her professional capacity or to a licensed structural pest control operator acting within the scope of his or her license or a licensee operating within the scope of the Geologist and Geophysicist Act." The Project requires the design and implementation of the ITS. To do so, Iteris and its engineers would be acting in a professional engineering capacity, and thus would be exempt from the requirements of California contractor license law.

Lastly, an engineer, acting in its professional capacity, is permitted to let contracts to other licensed contractors to perform discrete portions of work. *See, Wallich v. Salkin* (1963) 219 Cal.App.2d 157. In that case, the California Appellate Court rejected the claims by the plaintiff homeowner that his architect improperly let subcontracts and supervised construction because the architect did not hold a contractor's license. The appellate court instead held that the defendant architect was permitted to let subcontracts and supervise construction. In so doing, the appellate court reviewed the roles of engineers and architects on construction projects, and found that it was common for engineers and architects to engage and supervise the work on projects they designed. *Wallich, 219 Cal.App.2d* at 160-161. The appellate court further acknowledged that engineers and architects are exempt from contractor licensing requirements. *Id.* Iteris, in its bid, intends on doing just that – entering into a subcontract with a licensed electrician to pull the conduit and install the equipment, all the while under the direct supervision and control of Iteris. Iteris' proposal is compliant with California law.

SI's argument that a contractor's license is necessary for the Project is wrong. In making its argument, SI relies on general propositions of California license law that have no applicability to an ITS project. Furthermore, SI ignores the law discussed above, which completely defeats its bid protest.

II. THE ALLEGED IRREGULARITIES RELATED TO REDACTION OF ITERIS' PROPOSAL DO NOT PROVIDE SUFFICIENT GROUNDS FOR A BID PROTEST

SI's second complaint is devoid of any law or facts to support casting aside Iteris' proposal. SI alleges that the City allowed Iteris to redact portions of its proposal after the deadline expired for doing so, and that as a result, SI was unable to "develop a complete review" of Iteris' proposal and that "a more complete protest has been denied by the City's action." At the outset, SI fails to establish any legal right to protest bid results because it could not perform a "complete review." That failure is fatal, and SI's protest related to this second issue may be denied.

Additionally, SI is not claiming that Iteris' bid was non-conforming or in deviation of the bidding instructions. However, even if one construed this second issue as such a challenge, the City's actions would not nullify the validity or conformance of Iteris' proposal. Additionally, the simple allegation that a non-conformity exists is not sufficient grounds for a bid protest. SI must show that the City's action gave some advantage to Iteris that affected its proposal price. *Ghilotti Construction Co. v. City Of Richmond* (1996) 45 Cal.App.4th 897. Furthermore, a non-conforming or deviating bid can be set aside only if the deviation is "capable of facilitating corruption or extravagance, or likely to affect the amount of bids or the response of potential bidders." *Ghilotti* at 908.

SI offers no evidence that Iteris gained any sort of advantage. SI's second complaint falls well short of its legal burden, and thus, there are no grounds for setting aside Iteris' bid.

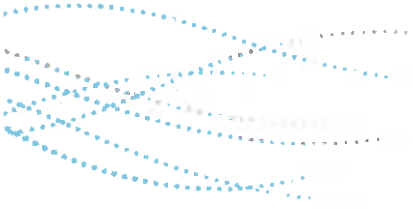
III. ITERIS GAINED NO COMPETITIVE ADVANTAGE AS A RESULT OF THE RELEASE OF ALLEGED PROPRIETARY INFORMATION

In its third and final complaint, SI alleges that the City released proprietary information related to the design of interconnecting signals using existing communications infrastructure and that as a result, SI lost a competitive advantage, or alternatively, Iteris gained a competitive advantage. SI's argument here is an exaggeration. The use of existing communications infrastructure is not proprietary, and Iteris gained no advantage by the alleged release of that design.

First, Iteris has used existing communications infrastructure to interconnect signals long before submitting its bid on this Project. As an example, attached hereto as Exhibit A is a December 7, 2012 email exchange where Iteris proposed using existing fiber and interconnects for an Inglewood signal project. SI's alleged proprietary design is nothing new.

Furthermore, Iteris' original proposal submitted on October 27, 2016 included four specific references to the use of existing communication infrastructure (See Exhibit B attached hereto):

> 1. "Importantly for CCB's project, the needed communications link between Aps can also be accomplished using wired links created from existing fiber or twisted pair cabling used to signal communications." (page 42)
>
> 2. ".....County, we expect to make significant use of the existing communications infrastructure between intersections to minimize the need for wireless bridging due to the heavy foliage in many of CCB's corridors." (page 46)
>
> 3. ".....communications and monitoring. On other corridors this has largely been done with cellular communications but for this project we expect the existing intersection communications will be able to support this need." (page 46)



4. "…..the use of existing conduits, use of existing signal interconnect cables or fiber optics for selected runs, traffic controller upgrades, and equipment installation requirements." (page 61)

Second, SI's claim that the BAFO documents gave Iteris the ability to lower its overall cost using SI's alleged design is also not true. The Iteris response to the City's interview question # 10 – "How many access points were assumed in your costs?" – was included in the Iteris presentation on November 17, 2017, on slide No. 31, which stated:

> Iteris Response: the proposed cost estimate assumed 104 access points based on the provided cost sheet. We have preliminary design alternatives optimizing the BSP installation that modifies this number to between 50-75 access points. The optimization will be discussed as part of our presentation and would represent a significant cost savings for the City. (See, Exhibit C attached hereto.)

Third, SI argues that its design was unique to the City's approach set forth in the RFP or any work that Iteris previously performed. This is an overstatement. Each project is unique. Iteris implements designs that match the project requirements and characteristics, incorporating features that may or may not be similar to the design of this Project, as applicable.

The facts discussed above demonstrate that the release of SI's alleged proprietary design was a nonevent. Iteris gained nothing from it. The release of the design did not alter the competiveness of the RFP process, and is thus insufficient grounds for a bid protest.

* * *

In conclusion, SI's bid protest ignores key facts and applicable law. The protest is a frivolous attempt to interfere with Iteris' successful proposal, and the City must reject that attempt. Iteris looks forward to working with the City should it require any further information to resolve this protest.

Sincerely,
Iteris, Inc.

Dan Gilliam
Vice President Contracts

A. "Countywide Metro Rapid Signal Priority Expansion Phase II Project" City of Inglewood

Alek Hovsepian

From: Alan Fang
Sent: Friday, December 07, 2012 6:34 AM
To: Jonathan M. Yee; Jim Curry
Cc: Alek Hovsepian
Subject: RE: Bus Priority and interconnect in Inglewood
Attachments: 20121206_114726.jpg; 20121206_114733.jpg; 20121206_114737.jpg; 20121206_114757.jpg; 20121206_114802.jpg; 20121206_115751.jpg; 20121206_115756.jpg; 20121206_115806.jpg; 20121206_115809.jpg; 20121206_115836.jpg; 20121206_115852.jpg; 20121206_123032.jpg; 20121206_123039.jpg; 20121206_123101.jpg; 20121206_123109.jpg

Here is what I gathered from the field yesterday

- Century – Metro on TWP pairs Blue/White going NB, Existing Fiber, Controller on pairs Green/Red and Orange/Red.
- Hardy – TS location on WIFI, TWP all patched through, Controller on pairs Green/Red and Orange/Red AND Green/White and Orange/White (These last two pairs is most likely just between Hardy and Arbor Vitae)
- Arbor Vitae – Pole-mounted TS location on WIFI, TWP all patched through, Controller on pairs Green/Red and Orange/Red AND Green/White and Orange/White (These last two pairs is most likely just between Hardy and Arbor Vitae)
- La Brea/Market/Spruce – Metro on TWP pairs Blue/White going SB and pairs Blue/Red going NB, TWP all patched through, Controller on pairs Green/Red and Orange/Red
- Kelso – Pole-mounted TS location on WIFI, No C2 cable, TWP all patched through, Controller on pairs Green/Red and Orange/Red
- Nutwood – Pole-mounted TS location on WIFI, TWP all patched through, Controller on pairs Green/Red and Orange/Red AND Green/White AND Orange/White
- Manchester – On Manchester Blvd, TWP all patched through, Controller on pairs Blue/White and Brown/White
- Queen – TS location on WIFI, TWP all patched through, Controller on pairs Orange/White and Blue/Red
- Regent – TS location on WIFI, TWP all patched through, Controller on pairs Orange/White and Blue/Red
- Florence – Metro on TWP pairs Blue/Red going SB, TWP patched through, 2070 controller

Most likely the City of Inglewood already knows which pairs their controllers are on but I recorded it anyway. The main pairs Metro is using are the Blue/White and the Blue/Red pairs. Attached are photos I took of the locations where Metro was on the TWP.

Let me know if you have any questions.

Alan Fang
Associate Transportation Engineer
tel 949.270.9636 | fax 949.270.9401
axf@iteris.com | www.iteris.com

From: Jonathan M. Yee
Sent: Tuesday, December 04, 2012 9:48 AM
To: Alan Fang; Jim Curry
Cc: Alek Hovsepian
Subject: RE: Bus Priority and interconnect in Inglewood

Alan,

From the few cabinets I did maintenance on, I noticed the following:

-Century/Hawthorne used two copper pairs to bridge to Century/Market-Spruce. I unplugged the Ethernet extender @ Century/Market-Spruce and bridged the locations using the radios (there was line of sight)
-Prairie/Florence was connected to two copper pairs. However, the signal interconnect is now fiber.

ITERIS

Jonathan Yee, PE, TE
Transportation Systems
Iteris, Inc.
tel 949.270.9698 | fax 949.270.9401

From: Alan Fang
Sent: Tuesday, December 04, 2012 9:37 AM
To: Jim Curry
Cc: Alek Hovsepian; Jonathan M. Yee
Subject: RE: Bus Priority and Interconnect in Inglewood

I do recall seeing interconnect on the Hawthorne corridor. I do believe it is the north end. I think they linked the radios via interconnect at places where the radio wouldn't be able to bridge. I'll have to go out and check to determine which intersections exactly are using it.

From: Jim Curry
Sent: Tuesday, December 04, 2012 9:35 AM
To: Alan Fang
Cc: Alek Hovsepian; Jonathan M. Yee
Subject: FW: Bus Priority and Interconnect in Inglewood

Alan, see below. Question refers to Hawthorne Blvd corridor. I think that there are ten intersections on LaBrea at the north end of the Hawthorne corridor – Regent, Queen, Manchester, Nutwood, Kelso, Hillcrest, Market/Spruce, Arbor Vitae, Hardy, and Century.

Is that correct?

Are some or all of these intersections bridged using interconnect. Do you know where interconnect is being used?

Thanks.

Jim

From: Gota, Steven [mailto:GOTAS@metro.net]
Sent: Monday, December 03, 2012 12:48 PM

To: Jim Curry; Alek Hovsepian; Alan Fang
Cc: Jones, Reinland
Subject: FW: Bus Priority and Interconnect in Inglewood

FYI,

Can we please put this together for Chad.

Thanks
Steve

From: Chad Sweet [mailto:csweet@cityofinglewood.org]
Sent: Monday, December 03, 2012 11:32 AM
To: Gota, Steven
Subject: Bus Priority and interconnect in Inglewood

Hi Steve, It has been brought to my attention on a future La Brea Ave. TLSP project that there is other METRO devices that are currently used using existing interconnect.

Could I get the list of intersectional locations and communication mediums used from your office. As several interconnect systems are being considered for abandonment and conversion to either Wireless communication or future fiber optics back to the City's TMC, I do not want to disrupt any previous install/working systems in Inglewood that METRO uses.

Thanks,

Chad Sweet, P.E.
Senior Transportation Engineer
City of Inglewood - DPW
Main: 310-412-5333
Office: 310-412-8727
Fax: 310-412-5552

Alek Hovsepian

From: Alan Fang
Sent: Tuesday, December 18, 2012 1:26 PM
To: Alek Hovsepian; Alan Clelland
Cc: Jim Curry
Subject: RE: Mylars for S. Bay Design Plans

Was there supposed to be plans attached?

In the City of Inglewood Interconnect is used to connect La Brea/Century to La Brea/Market/Spruce and La Brea/Market/Spruce to La Brea/Florence.

There is an additional section that uses interconnect at Crenshaw/Manchester to Crenshaw/80th.

Let me know if these answered your questions.

Alan Fang

From: Alek Hovsepian
Sent: Tuesday, December 18, 2012 12:59 PM
To: Alan Clelland
Cc: Jim Curry; Alan Fang
Subject: Re: Mylars for S. Bay Design Plans

Hello Alan

I have Alan Fang reviewing it. I'm in the field. We'll have a response soon

Alek

On Dec 18, 2012, at 12:57 PM, "Alan Clelland" <axc@iteris.com> wrote:

> Jim,
>
> Any comments?
>
> Alan
>
> **From:** Abi Mogharabi
> **Sent:** Tuesday, December 18, 2012 12:51 PM
> **To:** Alek Hovsepian; Alan Clelland
> **Subject:** FW: Mylars for S. Bay Design Plans

Hi alek, can you kindly handle this?
Sent from my Windows Phone

From: Narvaez, Andres
Sent: 12/18/2012 10:47 AM
To: Abi Mogharabi
Cc: White, Jane; Alan Clelland; Ly, Alvin
Subject: RE: Mylars for S. Bay Design Plans

Hello Abi,

The City of Inglewood just responded to me from the request I sent back in August. Chad had a question for Sheet 13. Does Metro use the existing interconnect for their Bus Signal Priority? Sheet 13 mentions the removal of the existing conduit. See attached e-mail.

Thanks,

Andres

From: Abi Mogharabi [mailto:axm@iteris.com]
Sent: Thursday, November 29, 2012 9:12 AM
To: Abi Mogharabi; Narvaez, Andres
Cc: White, Jane; Alan Clelland; Ly, Alvin
Subject: Mylars for S. Bay Design Plans

Hi Andres,

I personally delivered the mylars and a CD containing the CAD drawings of the project to the County on Wednesday the 28th. The attached is the transmittal letter.

Thanks, Abi

From: Abi Mogharabi
Sent: Monday, November 26, 2012 2:08 PM
To: 'Narvaez, Andres'
Cc: 'White, Jane'; Alan Clelland; 'Ly, Alvin'
Subject: RE: Message from KMBT_C552

Thank you Andres.

It was great working with you and Alvin on this lasting and interesting project.

Look forward to assisting you and the County on other upcoming projects.

Thanks, Abi

From: Narvaez, Andres [mailto:ANARVAEZ@dpw.lacounty.gov]
Sent: Monday, November 26, 2012 2:02 PM
To: Abi Mogharabi

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amount. When the decision to request priority has been made by the IVN on-bus system, IP-based communications are initiated with the intersection via Clever Device's mobile router at intersections where priority is desired. Three messages are transmitted for each priority request, two check-in messages and one check-out message, using the on-board IEEE 802.11b mobile router. The three messages are as follows:

- Message 1. The on-bus system sends a check-in message to the intersection where priority is being requested using the WLAN. The message is sent at pre-determined locations per Clever Device's software. At 30 miles per hour, this is typically at a distance of about 500-800 feet from the intersection. The time interval for sending the initial check-in message is user configurable to accommodate varying street traffic conditions and characteristics.
- Message 2. An update message is sent to the intersection six seconds later. This is done primarily for redundancy, to ensure that the request for priority is received by the intersection, but could also be used to update the estimated time of arrival accounting for any traffic conditions that the bus experiences as it approaches the intersection if supported by the intersection controller firmware.
- Message 3. Finally, as the bus enters the intersection, a check-out message is sent allowing the intersection controller to cancel any additional priority strategies that it may be employing. This will reduce the impact of providing priority to the bus on traffic signal operations.

Bus-To-Intersection Communications

The CSP architecture employs a WLAN to provide for communications between BSP equipped CCB buses and intersection traffic signal controllers equipped with the necessary wireless antennas, access points, and terminal servers to enable this messaging. The WLAN will be developed using the IEEE 802.11 specification to ensure compatibility with the CSP architecture and interoperability with Metro Rapid service on Sepulveda Boulevard. The WLAN consists of a network of devices known as access points (AP) that are connected or bridged together using wireless communications and, where available, wired communications and devices installed on both CCB buses and at intersection controllers. Each AP manages communications with a number of devices, both BSP equipped CCB buses and intersections, associated to it by authenticating each client's permission to be utilizing the network and by brokering network communications between each client and other network devices. Equipped CCB buses may move around within an AP's coverage area and be provided with network services as depicted in **Figure 6**.

Figure 6 – Mobile Client Communicating with Access Point

Wireless communications equipment may be configured to provide point-to-point wireless communications connecting multiple Aps enabling continuous network access for CCB buses. For the Metro and Torrance Transit BSP Systems deployed to date, Encom and Cisco Wireless broadband radios that provide both wireless bridging and AP functionality have been used. Importantly for CCB's project, the needed communications link between Aps can also be accomplished using wired links created from existing fiber or twisted pair cabling used to signal communications. Once a wired or wireless network infrastructure link is established, the radio functions as an AP to accept mobile and intersection clients as well as to connect the AP with adjacent APs as depicted in **Figure 7**.

Figure 10 – Typical WLAN Access Point Equipment Installations

The AP equipment will be installed as high as possible on the traffic signal pole or on the signal mast arm in order to obtain an unobstructed line of sight to the adjacent APs and intersection clients and to minimize interference from surrounding vegetation and any other physical obstructions. For these intersections, line of sight is important in order to establish wireless links to the adjacent APs as well as coverage for the intersection and mobile clients. For this project, based on our experience in deployment of BSP systems across Los Angeles County, we expect to make significant use of the existing communications infrastructure between intersections to minimize the need for wireless bridging due to the heavy foliage in many of CCB's corridors.

The WLAN hardware is installed on a custom-fabricated aluminum panel that is attached to the cabinet frame on the back side of the intersection controller cabinet and hinged so that signal technicians can easily move the WLAN hardware out of the way when necessary for signal maintenance. The WLAN hardware includes a terminal server, network switch, and power supply equipment. Details of the panel are shown in **Figure 11**. At some AP locations additional networking equipment may be deployed to facilitate remote communications and monitoring. On other corridors this has largely been done with cellular communications but for this project we expect the existing intersection communications will be able to support this need.

Figure 11 – AP Equipment Panel in Type 332 Traffic Cabinet

Based upon this initial analysis, the Iteris Team will conduct a Radio Frequency (RF) coverage survey for strategic signalized intersections to verify solutions to potentially challenging RF issues along the routes and determine possible issues with RF propagation and characteristics along the various corridors. This will cover the noted strategic locations along the length of each segment of the various CCB corridors and will confirm the sections where utilization of the underlying traffic signal control communications infrastructure will be needed to deploy a fully functional WLAN. The RF coverage survey is conducted using an access point radio mounted temporarily in a bucket truck at a proposed access point radio location. Signal strength is monitored from a motor vehicle equipped with a wireless client radio and rooftop antenna as the motor vehicle approaches and departs from the access point location. From the signal strength observations, access point locations that provide for coverage with minimum threshold or higher signal strength levels (-75dB or better) are determined. Typically, the placement of access points is determined by the access point coverage.

Subtask 2.2. Meetings with Participating Culver City Stakeholders

The Iteris Team will conduct a meeting with the appropriate Culver City staff responsible for traffic signal operations and maintenance to discuss the placement of the WLAN equipment including antennas and communications equipment enclosures on traffic signal poles and mast arms, the placement of communications hardware mounted in the intersection controller cabinets, and the use of existing conduits, use of existing signal interconnect cables or fiber optics for selected runs, traffic controller upgrades, and equipment installation requirements.

Subtask 2.3. Preliminary Design Report

The Preliminary Design Report will describe the required WLAN communications system design, incorporating both the results of the RF coverage survey and kickoff meetings conducted with Public works, and any proposed traffic signal control system equipment modifications. The Preliminary Design Report will describe the overall design of the WLAN including any cellular interties required for operations monitoring and network health monitoring, proposed IP addressing, and utilization of Culver City twisted pair/fiber infrastructure between access points. The WLAN network design will be based on the design developed by the Iteris Team and implemented for Metro Rapid and Torrance Transit corridors throughout Los Angeles County. The design of the WLAN will identify where WLAN access points are to be located, taking into account the RF propagation characteristics along the length of the corridor. The location of the access points along the corridor will be verified through a Radio Frequency (RF) coverage survey as described above. Special attention will be given to sections of the segment where the line of sight may be restricted due to elevation changes, curved street alignment, freeway or railroad overpasses or other obstacles including heavy foliage as noted in Figure 15 and Table 5. The Preliminary Design Reports will also meet the requirements for the OnStreet BSP Hardware

	TECHNICAL SPECIFICATIONS	COMPLIANCE	EXCEPTION	COMMENTS
	time. The Contractor shall confirm that the firmware in operation at project intersections at a minimum contains the Low Priority Operation of Program 233LA2 C features and maintains the capability to communicate with the ATTS Traffic Control System or its replacement.			
3.3	**BSP IMPLEMENTATION**			
3.3.1	**OnStreet Design** For the project corridors, the Contractor shall prepare a detailed design for the installation of appropriate intersection traffic signal control and communications equipment at signalized intersections within Culver City to enable BSP operations. A preliminary listing of project intersections and available twisted pair and fiber infrastructure is provided for reference in Section 5.2 and 5.3.5 respectively. The Contractor shall verify these intersections and available communications infrastructure with CCB and Public Works as part of the design process.	☒	☐	
3.3.1	The Contractor shall conduct a Radio Frequency (RF) coverage survey for each CCB project route to determine the RF propagation characteristics along the length of the corridor and to identify where the necessary WLAN access points and bridges are to be located to enable continuous WLAN access for CCB buses along project routes. Special attention shall be given to sections of the segment where the line of sight may be restricted due to elevation changes, curved street alignment, or street-side obstacles including trees. The types of traffic signal poles available for the installation of the bridge antennas and location of the intersection controller cabinets shall also be noted during the survey.	☒	☐	
3.3.1	The Contractor shall prepare a draft Preliminary Design Report (PDR) <CDRL> that describes the proposed traffic signal control system equipment modifications and WLAN communications system design, incorporating the results of the RF coverage survey and proposed use of twisted pair or fiber optic communications media as well as any meetings conducted Culver City. The PDR shall describe the overall design of the WLAN including any interties that are required for network monitoring and operational data being transmitted to the CSP Network Monitor and BSP databases as noted in other sections of this specification. The PDR will also include a description of where the CCB BSP Monitor will be installed as well as any necessary network or operational configuration that must be put into place to enable operations.	☒	☐	
3.3.1	Following submission of the PDR the Contractor shall conduct a design review meeting per the requirements set out in Section 8, to discuss the placement of WLAN equipment including antennas, pole-mounted enclosures, and hardware mounted in the intersection controller cabinets as well as the use of existing conduits, possible use of existing signal interconnect cable or fiber for selected runs, traffic controller and controller cabinet upgrades, traffic control timing and configuration necessary to enable BSP at intersections within the project corridors, and equipment installation requirements. The Contractor shall coordinate the design of traffic signal control and communications equipment with Culver City staff and obtain approval for all system designs. The Contractor shall revise the draft PDR and submit a Final PDR <CDRL> based on the outcomes of the design review meeting within two weeks.	☒	☐	Clarification needed – our assumption / interpretation of this requirement is we will provide parameters to enable BSP. We are not proposing a full retiming.
3.3.1	Based on the design approach developed for the Preliminary Design Report and agreed upon by Culver City, the Contractor shall prepare intersection plans (1"=20') for each of the signalized intersections, showing the proposed traffic signal control equipment modifications and WLAN communications equipment installation details <CDRL>. Intersection prints for project intersections are available and field checking of the intersection plan prints shall be			

Question #10

How many access points were assumed in your costs?

Iteris Response: The proposed cost estimate assumed 104 access points based on the provided cost sheet. We have preliminary design alternatives optimizing the BSP installation that modifies this number to between 50-75 access points. This optimization will be discussed as part of our presentation and would represent a significant cost savings for the City.

iteris