TO IMPLEMENT AND SUPPORT AN ED-FI UNIFIED DATA SYSTEM INFRASTRUCTURE IN AMAZON WEB SERVICES

RFP NO.: ED-FI 2018 – Clarifying Questions

June 7, 2018

Double Line is excited about the potential opportunity to work with SFUSD to implement its vision for data use leveraging the Ed-Fi Data Standard and Technology and the Amazon Web Services cloud platform. Please see the set of clarifying questions and associated answers below.

Q: Based on the information provided in the RFP and the SFUSD-MSDF grant proposal shared in the RFP Q&A document, please provide details and your best estimate for the costs related to extending the Ed-Fi data model for year 1. If these costs were already budgeted for in your response, please clarify the resources (people, number of hours, cost) devoted to that work.

A: Double Line has a rigorous data analysis and extension methodology and governance process, because we know it is in everyone's interest to limit the extension data model to the minimum required to meet the needs of clients. We organize potential extensions into two categories:

(1) true client extensions: data elements that are specific to the client or the client's state, and
(2) data model expansions: data elements that are not included in Ed-Fi only because the standard does not currently cover the data domain in question.

We assumed both categories of extensions would be needed in year 1, and we anticipated a bias toward data model expansions over true client extensions, due to the systems desired for integration and our knowledge of what the core Ed-Fi Data Standard covers.

SFUSD is in good company when it comes to data model expansions. Double Line has already created expansions for transportation, nutrition, and other systems for its other clients. We have secured permission to reuse these expansions as a base to meet SFUSD's needs. This not only reduces the effort but aligns SFUSD's expansions with existing uses of the data. This is important, as future standardization of these domains in Ed-Fi, if it happens, is likely to align with existing use cases in the field.

Finally, our data analysts are extremely talented and well versed in the Ed-Fi data model, mapping strategies, extension framework, and design conventions. We have a significant advantage in that we do more of this work than any other Ed-Fi implementer, including our work with the Ed-Fi Alliance supporting each new release of the Ed-Fi Data Standard itself.

As such, our cost proposal does include year 1 extension work. Forty percent of the team are data analysts / engineers who will be focused on the mapping, extension development, testing, and documentation required to meet both types of extensions required by SFUSD in year 1.

Q: It is critically important to SFUSD that we are active members in the Ed-Fi Alliance and share our solutions with the broader Ed-Fi community. For proposers who provided proprietary solutions, please provide specific details on what SFUSD would be able to share back to the Ed-Fi Alliance and its partner members, versus what you consider to be proprietary.

A: SFUSD's viewpoint on this validates our interest in partnering with you to deliver on your vision, as it aligns with our interest in furthering the overall vision of Ed-Fi and advancing the Ed-Fi community overall through our work with each client. Nothing in our proposed approach is proprietary. We believe strongly in open source and sharing assets between willing school districts and states, and we feel proprietary solutions impede progress in data integration, a challenge every district and state must deal with. We are excited by the opportunity to create an open source version of the Ed-Fi Data Vault and believe it can be a major contribution to the community of Ed-Fi Licensees.

Q: Please provide specific insights as to where you feel you lacked sufficient information to accurately bid/respond to the SFUSD project RFP and where you feel the project is most vulnerable to budget or costs overruns.

A: Double Line feels we received adequate information to respond to the RFP. We do acknowledge some risk related to those systems that were unnamed in the RFP. Based on the Q&A, we understand these systems are unnamed because they have not yet been selected. We also acknowledge some risk related to the data marts, as the number and size of the existing and to-be-created marts is undocumented. We made assumptions on these variables and documented them in our response.

Q: Please provide additional details on the roles each of your project team members will play on the project, the number of hours they will be devoted to the project, and the extent to which you will be on-site over the course of our implementation timeline versus remote.

A: Typically, our projects begin with an onsite kickoff and end with an onsite closeout. Depending on the size and scope of the project, and the working style of the client, we may have additional onsite visits during the execution of the project. In our proposal, we assumed one onsite kickoff, one interim onsite visit, and one onsite closeout meeting. If SFUSD prefers a different working model with additional onsite visits, we request the opportunity to adjust accordingly with that new knowledge in mind.

During project execution, your project manager will meet with you on a cadence you prefer (e.g., weekly) using conference call, screen sharing, and if desired video chat. The project manager will review progress from the previous week, plans for the coming week, and any current or future blockers to progress. He or she will also review the project risk register and discuss mitigation strategies. Additional items pertinent to the week's work may also be added to the regular meeting's agenda. The project manager will share the agenda ahead of the meeting and will work with you before that to collect any agenda items you wish to tackle.

In addition to the regular meeting, topic-specific meetings will be scheduled to continue stakeholder engagement from the onsite kickoff, to address specific requirements or design considerations, and to coordinate efforts between the Double Line team and SFUSD staff. Additional communication strategies will be determined at project kickoff and documented in the project's communication plan.

We have found the right balance between onsite work, when necessary for the success of the project, and remote work, when optimal to minimize travel expense. We encourage SFUSD to reach out to our references to get their perspective on how well this works on their projects.

The Data Engineers listed in the *Project Team* section of our proposal will focus on mapping to Ed-Fi, design and development of extensions, data integration, data vault installation and setup, data mart development, testing, and related documentation and training. This team will be dedicated to this project and provide more than 1,500 hours of work. Additionally, as mentioned in our proposal, we will have an internal team developing the Data Vault solution with the commitment to open source the solution to SFUSD and via the Ed-Fi Exchange.

The Software Engineers listed in the *Project Team* section of our proposal will focus on the rules engine, the AWS setup, the deployment of the Ed-Fi assets, and the configuration of all software. They will assist the Data Engineers with architectural, testing, and some development support. We anticipate the Software Engineers to dedicate more than 300 hours to this project.

In addition, support, training, and knowledge transfer hours are anticipated as explained in a later question.

Q: Please provide updated financial statements for the following calendar years: 2016 and 2017. If these financial statements are not available, please provide a letter of justification from your CFO or accountant explaining why they are unavailable and attesting to the financial health of your company.

A: Financial statements can be found as attachments in the email.

Q: Please indicate what experience your company has working with California districts, California Charter Management Organizations, of the California Department of Education as it relates to standing up an Ed-Fi data infrastructure. If you do not have experience with any of the above, please affirmatively state that you do not.

A: Double Line has more experience working with states and school districts to implement Ed-Fi than any other vendor. We have discussed potential Ed-Fi implementations with a number of California school districts, and many are currently in the process of identifying budget, scoping a project, or preparing a procurement. As such, we have not yet worked with a California school district. We are excited by SFUSD taking the lead in California with its first major Ed-Fi implementation, and we hope to offer our experience to help SFUSD make its implementation of Ed-Fi a shining example of what is possible with Ed-Fi for other California districts.

Q: Please explain in greater detail your proposed plan for securing SFUSD data as it moves to the cloud. For instance, if you are proposing a VPN, please specify the type of VPN you intend to use/recommend and what work you anticipate doing versus expect of the SFUSD project team.

For applications that are housed on-premises, a secure mechanism to transfer data to the cloud is required. In some situation, this requires a VPN. For example, if SFUSD's on-premises applications are secured in ways where SSL-secured connections over the Internet to the Ed-Fi API are not possible, a VPN may be required. Even if such a connection is possible, a VPN may still be desired to enable SFUSD staff to access virtual machines and SQL Server instances hosted on the cloud in the same manner as they access locally hosted servers and SQL Server instances.

If SFUSD determines, in consultation with Double Line, it requires or desires a VPN connection to its virtual private cloud in AWS, our recommended approach options follow below.

If SFUSD presently has no VPN infrastructure, we recommend a VPN appliance. With access to SFUSD's network, Double Line can assist in configuring this appliance. If SFUSD already has a VPN appliance, Double Line can assist SFUSD in configuring the appliance for this additional connection to SFUSD's virtual private cloud in AWS. If SFUSD does not already have a VPN appliance and is not interested in putting one in place, then our recommended approach is to install a VPN client on servers containing data sources for the Ed-Fi implementation and connecting to a VPN Gateway we configure in AWS. This approach lacks redundancy.

In our experience, the technical ecosystem of most districts permits at least outbound SSL-secured connections over the Internet from on-premises source systems. If this is the case at SFUSD, a VPN connection to the virtual private cloud in AWS is not required.

Q: Please provide in detail, what level of initial capacity building and knowledge transfer (including documentation and staff training), as well as on-going support you are prepared to and are proposing to provide to the SFUSD project team in your proposed response. Specifically, please identify the individuals who will be responsible for that support, their experience with new Ed-Fi implementations, number of hours of support assumed/included in your proposal, and their availability to the project team (virtual/onsite, working hours).

A: For the content of training, please see *Training and Knowledge Transfer* in our proposal response. Each implementation of Ed-Fi is different enough that we feel it's important that trainers fully understand the nuances and details of your implementation. SFUSD staff will have questions about how topics relate to specific elements of its implementation, and we believe it's important that the team delivering the training can answer questions from staff, as well as be capable of doing unplanned demonstrations of functionality, configuration, or other elements as appropriate to fully respond to items raised by staff. As such, we do not push training to a separate team. The training is delivered by the project team themselves, bringing in additional subject matter experts as appropriate. The project team is described in the Project Team section of our proposal response, with more detail in Appendix B: Project Team. These experts have 3 to 6 years of experience with Double Line and have worked on numerous district and state implementations of Ed-Fi. Ben, Lillie, Morinsola, and Dennis have all been relied upon by the Ed-Fi Alliance to work on the Ed-Fi Data Standard and Technology itself, as new versions are released. The project team will establish remote support access and processes, integrating

with SFUSD's existing ticketing system and support processes. The team's working hours are normally 9am to 6pm Central Time. However, we are used to supporting solutions in multiple time zones and our teams work with clients to plan for appropriate coverage of the day part(s) needed. In our proposal response, we assumed 30-40 hours per month of support. Upgrades and other major activities are separate line items, as outlined in the Total Project Budget section of our proposal response.