HANSEN TECHNOLOGIES

ESTIMATE OF WORK

City of Columbus Enhanced Metering Project

Summary	
Client	City of Columbus
Banner SOW Number	BSOW-207
Subject	Enhanced Metering Project Phase 2 Release 2
Date	2/19/2021

Detail	
Description of Request	The City of Columbus is undertaking a project to enhance its water, sewer, and power metering. The project will consist of the implementation of an automated meter infrastructure system to provide meter readings from Water, Sewer, and Power meters. The project will include the installation, via meter exchange, of the existing power, sewer, and water meters and all the software required to operate the system, and to interface with the City of Columbus' systems and applications. This OOM is being developed to supply the City of Columbus with budgetary estimates to complete the final five (5) integrations required to fully implement the overall solution. (Collectively, "Release 2".) • Three (3) two-way, real time, integrations between BannerCX and Oracle MDMS (INT002, INT003 and INT005) utilizing the City of Columbus' enterprise service bus architecture (Talend). • A one-way, real time MDM URL Navigation frm BannerCX to MDM (INT006), and • 3) A one-way, flat file batch integration from BannerCX to Customer Portal (INT014)
Proposed Solution	**Approach:** Develop five (5) new integrations for the City of Columbus identified below; 1) INT002 - Service Order Reads Request/Response; BannerCX requests a read for service order completion such as move-in/move-out, MDM responds with a validated read or failure if a read is not available 2) INT003 - Remote Connect/Disconnect Request/Response; BannerCX requests a Remote Connect/Disconnect, MDM responds with success or failure 3) INT005 - Service Orders Creation/Completion; MDM requests a service order be created in BannerCX, BannerCX responds with service order completion details such as comments 4) INT006 – Implement a URL Link to navigate from BannerCX to MDM to eliminate a redundant search in MDM 5) INT014 - Implement a one-way batch integration to the Customer Portal with account and service information for use within the Customer Portal for customer viewing

Assumptions	• The integration development will be performed and tested in a Development Environment on Client hardware, accessible by Hansen resources. • The project will use the same Development environment as built and used in Phase 1 of the Enhanced Metering Project. • Hansen resources will have VPN access to the Development environment to perform the necessary development and test tasks. • Hansen will be expected to customize its integration artifacts (APIs) to match the Oracle MDMS requirements • There is no travel to Client included in this OOM estimate • Client will be responsible for testing the software in preparation for go-live in production environment and reporting any deficiencies to Hansen for investigation • Client will be responsible for the deployment of the code in each environment as needed to test and deploy into production • The City of Columbus will acquire and install on the Development environment a copy of Allround Automations PL\SQL Developer for Hansen use • The City of Columbus will acquire and install on the Development environment a copy of JetBrains IntelliJ for Hansen use
Exclusions	N/A
Guidelines	This Estimate of Effort is a high-level cost estimate based on the request and is designed to give an approximation of the size of work. It is non-binding and further in-depth investigation and analysis of the subject may lead to variations of this estimate. Please note that the estimate does not necessarily imply any timeline for delivery.
Estimate	**Fixed Price Cost range: $412,000.00 to $550,000.00** **TCP+ Increase: At the completion of this SOW, an additional $12,000 will be added the the annual TCP+ fee to support these custom integrations for the Client.**