

Colony Farms, Forensic Psychiatric Hospital – Coquitlam BC

Electronic Security Enhancement Review

Prepared for: Onyeka Dozie, M. Sc., PMP, LEED AP
Brookfield Global Integrated Solutions Inc.
Vancouver, BC

Prepared by: Aspyr
Engineering Technology

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Revision History

Release Date	Title
November 16, 2017	Pre-Startup Discovery Report
November 17, 2017	Pre-Startup Discovery Report & Drawings
November 21, 2017	Pre-Startup Discovery Report & Drawings Rev1



Executive Summary

This report is intended to provide a brief review of design work completed for s.15 and provide an update for order-of-magnitude pricing to re-engage the project. This report has excluded the original scope of s.15 since that is now a separate project currently underway.

In August of 2016 Aspyr concluded the Design Documents for an Integrated Security Solution for the facility which included:

s.15

In October of 2016 the project was re-evaluated, and it was determined that only the s.15 and the remainder of the design was not going to be considered for construction. Aspyr set about re-writing the Tender documents and this revised scope was tendered later that month. In November the prices were evaluated, and all were higher than anticipated for the work and the package was then broken into sections to be priced separately. Finally, in January, a section and revised scope was awarded and procurement began.

In August of 2017 Aspyr was notified that the client was considering continuation of s.15 to include the remaining sections that were not awarded in January. Aspyr provided an Order of Magnitude budget to update the scope, drawings and contract administration work required for completion.



This report results from communications with BGIS and Government in October of 2017 to s.15

s.15

Lighting

The technology in LED lighting has evolved over last 15 months. We will need to review new product available on the market and evaluate if design specification for light fixtures and poles should change from existing design and what impact this will have on price – final product was not formally accepted by client during initial design and therefore ROM pricing may vary slightly. s.15

s.15

This

segment of the project requires further evaluation. For discussion purposes the lighting has been broken into three sections as illustrated on the attached drawing and each has a ROM cost associated which can be seen in the price breakdown table. *NOTE: Option pricing assumes that the Blue scope is completed first as the controls for all areas are within this scope.*

Fence Detection

Technology has advanced in the fence detection sector and the product selected at the time of design has been upgraded. Furthermore, there is at least one additional proven Canadian manufacturer in the Corrections vertical which can offer s.15 with Canadian Federal Correctional reference sites. ROM pricing will reflect these options in this report. Note that civil work required is not included in this ROM. This included ensuring the fence is true and free of foliage on both sides.

Surveillance System

Perhaps the most rapidly advancing sector of electronic security continues to



be video surveillance including cameras, imagers, recorders and analytics. Since the original tender documents were done, camera models have all been replaced and edge video analytics is often included with the price of the camera. Server and Storage appliances which include software have also been updated and considered in revised costing. There is no reason to look to a different manufacturer than was chosen in the first design, but the pricing and equipment have been adjusted in the ROM. Note that civil work which is not included with this ROM is clearing of tree limbs per documentation exchanged between Aspyr and BGIS during the initial Design Development. *NOTE: Poles for new cameras are installed as part of the Lighting Blue Package.*



Budget

Colony Farms Security Upgrade - Order of Magnitude Costing - Nov 21, 2017					
System	Materials	Labor	Total Cost	Cost plus Design 5% Design Contingency	Cost plus Design 10% Design Contingency
Electronic Perimeter Detection	\$100,000.00	\$90,000.00	\$190,000.00	\$199,500.00	\$209,000.00
DVMS Replacement and Perimeter Surveillance	\$285,000.00	\$275,000.00	\$560,000.00	\$588,000.00	\$616,000.00
Lighting and Electrical	\$658,925.00	\$120,000.00	\$778,925.00	\$817,871.25	\$856,817.50
Total Cost of all Systems	\$1,043,925.00	\$485,000.00	\$1,528,925.00	\$1,605,371.25	\$1,681,817.50
Project Management Cost - TBD (BGIS)			\$0.00	\$0.00	\$0.00
Engineering Redesign Aspyr/Acumen & PM			\$40,000.00		
Total Project Cost					
Options					
Redundant DVMS Server 84T	\$30,000.00				
Access Control Interlocks on existing units	\$18,000.00				
Infra Red IP PTZ Camera (ea)	\$37,000.00				
Low Light additional MP IP PTZ Camera (ea)	\$3,600.00				

Lighting Option Breakdown				
Optional Lighting Packages	Percentage of Total Cost	Materials Cost	Labor Cost	Total Cost
Lighting Green Package	18.00%	\$121,315.00	\$21,600.00	\$142,915.00
Lighting Yellow Package	16.00%	\$103,530.00	\$19,200.00	\$122,730.00
Lighting Blue Package	66.00%	\$434,080.00	\$79,200.00	\$513,280.00
Combined Total		\$658,925.00	\$120,000.00	\$778,925.00



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Withheld pursuant to/removed as

s.15

Colony Farm Security Upgrade Security Engineering Fee Proposal

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Vancouver BC V6B 1P1

Prepared by:

Aspyr
Engineering Technology

Contact:

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Principal | Technology Systems Architect

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Company Profile

Overview

Aspyr was started by a group of specialists that has worked on thousands of technology projects, and wanted to use that experience to design solutions that people love to use. We primarily service a demand in sectors of the building industry such as healthcare, corrections and higher ED, where technology is critical to their success in delivering their core services. As such, these market sectors require a high level of expertise and experience in technology consulting and engineering that is not found in the current traditional engineering community.

Aspyr is focused on architecting holistic technology solutions involving IMIT, communications, security and audio-visual systems to organizations that rely on technology for its success.

Our technology consultants and engineers have industry certifications with VMware, Microsoft, HP, and Cisco in addition to being licensed by APEGBC with on staff Professional Engineers. But even more specialized, is our ability to truly integrate these disciplines, in order to create the most holistic, effective, lean, unified technology solutions for our clients.

Our staff allocated for this project are all licensed security consultants and have all relevant clearances required to work within secure facilities.



Expertise

Systems Architecture

We architect holistic solutions to enable different technology systems to interoperate over a common platform or infrastructure. To do this, we combine our deep understanding of multiple specific technology fields with the expertise to integrate them; bridging the gap between complex systems with the human experience in using them.

*Let's interface:
Multiple systems,
one unified solution.*

Audio Visual

We design touch-screen control, video conferencing, teleconferencing, live performance venue, AV presentation, sound reinforcement and PA systems as well as 3-D projection rooms and theatres. We focus on design by meticulously integrating technology into the architecture, and focus on creating immersive environments that make users forget they're using technology.

*Sight and sound:
from collaborative
workspaces, to live
performance venues
and 3D projections.*

Information Technology

We architect data network solutions that help our clients manage, access and share their information. We design wide, municipal and local area networks (MAN/WAN/LAN), wireless LAN solutions, physical and virtual server environments, and mass storage solutions.

*We make sure your
network works: from
network architecture to
wireless solutions and
virtualization.*

Communications

We design data centres, cable plants for voice and data networks, telephony solutions (VoIP & TDM), outside cable plants (OSP), and develop communications strategies.

We design not only the technology solution, but also management systems that maximize the benefits and efficiencies of the technology.

*We should talk: from
structured cabling, to
data centres and
unified
communications
solutions.*

Safety and Security

We design access-control, video-surveillance, intrusion-detection, intercom, entry-phone, nurse call systems, and provide threat assessments. We focus on people: we assess their threats and risks, then create solutions to directly mitigate those threats and improve safety.

*We keep you safe and
secure: whether
you're a small office
or a maximum-
security prison.*

Revit

We use Revit MEP as our BIM tool, collaborating with the design team to model spatial relationship to technology systems. Instead of relying on symbols on 2D drawings, designers can now use intelligent objects that can help determine optimal viewing site lines for AV rich rooms and security camera coverage and FOV (field of view).

*Virtual design is
reality.*

The Human Experience

We believe that the human experience (HX) is pervasive throughout a well thought out technology solution. As such, we have a dedicated Human Experience group within our firm with UX/UI (user experience/ user interface) experts that are focused on improving the human experience as people interact with technology-enabled spaces.



Relevant Experience

Feature Mental Health Projects

Centre for Mental Health & Addiction Replacement (CMHA), Coquitlam, BC | \$80 Million

Project Description

The Centre for Mental Health and Addictions is a new 105-bed facility to support those living with complex mental health and substance use issues. Located on the Riverview lands, this 3-story 79,000 SF facility will replace the Burnaby Centre for Mental Health and Addiction.

A goal of this project is to provide a facility that enables best practices in care for patients during the most acute phases of illness and support their long-term recovery in a facility that is safe and secure.

Upon completion, this project will be the most state of the art mental health and addiction facility in Canada.

Our Role

As a part of the Owner's team, we are responsible for the systems and solutions architecture and development of technical statement of requirements (SOR). The technology solution is comprised of s.15
s.15



Project Type

Design Build
(Owner's Advisory Team)

Dates

March 2016 – late 2019

Saskatchewan Hospital North Battleford Integrated Corrections Facility, North Battleford, SK | \$185 Million

Project Description

The Saskatchewan Hospital North Battleford Integrated Corrections Facility is a new \$185M integrated mental health hospital and secure (correctional) forensic psychiatric hospital delivered through the DBFM model.

This 28,650 SM facility is comprised of a 188-bed mental health hospital and a 96-room correctional centre for male and female offenders, which are linked together by a shared therapeutic mall. The shared therapeutic mall accommodates both the non-secure mental health patients as well as the secure (inmate) patients from Saskatchewan Corrections and Policing.

The facility replaces the 156-bed Saskatchewan Hospital North Battleford, which is over 100 year old and is Saskatchewan's only provincial psychiatric hospital.

A challenge of this project was to design the high-security shared therapeutic mall accommodate both the non-secure mental health patients as well as the secure (inmate) patients from Saskatchewan Corrections and Policing.

Our Role

We were the IMIT Lead and Systems Architect for IMIT, Communications and Integration Engine as a part of the successful Graham DBFM (P3) Delivery Team.

Our technology solution is comprised of ^{s.15}
s.15



Team

Delivery Team

Dates

July 2015 – October 2018

Additional Mental Health Experience

	IMIT/ Comm	Security	Audio Visual	Phi Ho	Wayne Burnstad
Cayman Long Term Mental Health Care Facility, Grand Cayman	■	■	■	■	
Riverview Hospital - Valleyview Centre (mental health & severe addiction), Coquitlam \$60 Million	■	■	■	■	■
Royal Columbian Hospital Phase 1 Mental Health Substance Use (MHSU) (Pursuit Team), New Westminster \$200 Million	■	■	■	■	■
BC Housing SRO Renewal Initiative (12 sites), Vancouver \$100 Million+	■	■		■	■
Burnaby Centre for Mental Health & Addiction - CCTV & Door Control, Burnaby	■	■			■
Saskatchewan Hospital North Battleford Integrated Corrections Facility, North Battleford, SK \$185 Million	■	■		■	■
Riverview Hospital - Centre for Mental Health & Addiction, Coquitlam \$80 Million	■	■	■	■	■
BC Housing 1134 Burrard Street Supportive Housing Tower, Vancouver \$25 Million	■	■		■	■
BC Housing Dunbar Apartments, Vancouver \$14 Million	■	■		■	
BC Housing Provincial Homelessness Initiative (PHI) Design & Construction Standards	■	■	■	■	
Children and Women's Hospital Mental Health Building Duress System, Vancouver		■			■
Creekside Withdrawal Management Centre at Surrey Memorial Hospital, Surrey \$5 Million	■	■		■	
Gordon Avenue Housing Project (Shelter & Transitional Housing), Coquitlam \$8.5 Million	■	■			■
Quibble Creek Health and Phoenix Transition Housing Centre at Surrey Memorial Hospital, Surrey \$12 Million	■	■		■	
Snxastwilxtn Centre - Penticton Indian Band Health Centre, Penticton	■	■	■		
The Maples Youth Mental Health Services Facility, Cottage 3, Burnaby	■	■			■
Youville Older Adult Behavior Stabilization Residence Renovations, Vancouver	■	■	■	■	
Colony Farm Forensic Psychiatric Hospital Perimeter Security Enhancements, Coquitlam	■	■		■	■
Colony Farm Forensic Psychiatric Hospital Security Refresh, Coquitlam	■	■		■	■
Community Living BC Young Adult Mental Health Treatment Centre Person Protection Alarm System Replacement, Burnaby		■			■
Cottonwood Lodge Care Facility at Riverview Hospital, Coquitlam	■	■		■	



Health Care Experience

	IMIT/ Comm	Security	Audio Visual	Phi Ho	Wayne Burnstad
BC Children's and BC Women's Redevelopment Project - P3 Pursuit Team, Vancouver \$350 Million	■	■	■	■	■
Burnaby Hospital Patient Education Centre Renovations, Burnaby	■	■	■	■	
Children's Healthcare of Atlanta Hospital Technology Assessment (1.2M SF)	■	■	■	■	
Chilliwack General Hospital Sterile Processing Department Renovation and Expansion, Chilliwack	■	■		■	
Delta Hospital Pre-Admission Clinic Renovation, Delta	■			■	
Eagle Ridge Hospital ER Renovation, Port Moody	■			■	■
Lakes District Hospital & Health Centre Replacement Project, Burns Lake \$55 Million	■	■	■	■	■
Langley Memorial Hospital Maternity Renovation/Expansion, Langley	■	■			■
Langley Memorial Hospital Sterile Processing Department Renovation and Expansion, Langley	■	■		■	
Penticton Regional Hospital Patient Care Tower, Penticton BC \$325 Million	■	■	■	■	■
Port Hardy Hospital ER Renewal, Port Hardy	■			■	
Sechelt Hospital Redevelopment, Sechelt \$44.1 Million	■	■	■	■	■
Surrey Memorial Hospital Redevelopment Owner's Consultant Team, Surrey \$350 Million	■	■	■	■	
The New St. Paul's Hospital Technology Vision, Vancouver \$1.2 Billion	■	■	■	■	
Vancouver General Hospital - Diamond Health Care Centre, Vancouver \$100 Million	■	■	■	■	
BC Housing Marguerite Ford Supportive Housing - 215 West 2nd Ave, Vancouver \$22 Million	■	■		■	
Maple Ridge Care Facility at Maple Ridge Hospital, Maple Ridge	■	■		■	
Blueberry River Community Health & Civic Centre, Peace River District	■	■		■	
Coldwater Community Health & Civic Centre, Merritt	■	■		■	
Cottonwood Lodge Care Facility at Riverview Hospital, Coquitlam	■	■		■	
Dania Campus of Care, Burnaby	■	■		■	
Evergreen Community Health Clinic Renovation, Vancouver	■			■	
Gordon Avenue Housing Project (Shelter & Transitional Housing), Coquitlam \$8.5 Million	■	■			■
Port Hardy Complex Care Facility, Port Hardy	■	■		■	
Quibble Creek Health and Phoenix Transition Housing Centre at Surrey Memorial Hospital, Surrey \$12 Million	■	■		■	



Project Scope

The Forensic Psychiatric Hospital is a facility that treats and rehabilitates individuals who have come in conflict with the law and are deemed unfit to stand trial or not criminally responsible due to mental illness. The scope of this project includes installation of LED lighting, fence detection and a surveillance system. These improvements are part of a larger security systems upgrade at the facility.

The Security solution will include:

- Facilitate a kick-off meeting to review the project scope or work, project schedule and equipment shutdown requirements.
- Review existing historical documents (eg; assessment reports, maintenance reports, as-built drawings, etc)
- Conduct a site survey. Access to the site shall be coordinated through WSI.
- Produce a schematic design report that outlines the scope of work, schedule and methodology for the equipment upgrades, including any required shutdowns.
- Produce contract documents (drawings and specifications) and submit to the Owner for review at the following stages, including facilitation of a Design review meeting, Q&A, and revisions as required:
- Retain the services of a qualified Quantity Surveyor to provide a class A pre-tender construction cost estimate.
- Provide tendering services, including attending mandatory contractor walkthrough, issuing of addenda, review of alternate product submissions, tender evaluation, etc
- Provide construction administration services, including attending site meetings (biweekly) (Site meetings are limited to 4 on site and 6 conference calls.), shop drawing review, responding to RFI's, issuing of site instructions
- Provide commissioning services, including the following:
 - A. Review the contractor's commissioning plan and schedule.
 - B. Review all test documentation submitted by the contractor.
 - C. Review the schedule and coordinate the contractor's Operator training requirements.
 - D. Review of O&M manuals and as-built drawings.
 - E. Submit a letter of acceptance confirming the system operated as intended based on the contract documents and owner's requirements.



Scope of Consulting Services

The following is the scope of our Technology consulting services:

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s.21

s.17



Proposed Fee

s.17,s.21



To Conclude

Should you have any questions, please contact the undersigned.

Thank you for the opportunity to submit our proposal.

Regards,

Phi Kim Ho, *P.Eng., Principal | Technology Systems Architect*



Project/Contract: _____

Project/Contract #: _____

From (Proponent): _____

Company Name

Street address or postal box number

City/town, Province and Postal Code

To (Owner): **BGIS Workplace Solutions Inc. (WSI)**
23-3318 Oak Street
Victoria, B.C.
V8X 1R1

Attention: [PROJECT MANAGER]

Section 1.0 – Fee Quotation

I/WE, the undersigned, having examined the RFQ document for the above-named Project/Contract, including addendum number(s) N/A to N/A, and having carefully examined the *Place of the Work* and fully informed ourselves of existing conditions, limitations and difficulties that may arise during the execution of the *Work*, hereby offer to provide to WSI, all services, labour and materials required to complete the assignment described in the Request for Proposals dated **[2018-07-24]** for the Fee Quotation of fee:

s.17,s.21
\$ _____ in Canadian dollars, excluding *Value Added Taxes*. (Amount in figures)

Indicate the Fee Quotation and Monthly Rate below in Canadian dollars, excluding Value Added Taxes (amounts in figures).

Section 2.0 – Schedule of Hourly Rates

I/WE agree to provide additional services, upon receiving instructions in writing from WSI for the hourly rates stated below until completion of the assignment.

Position

Hourly Rate

.1 Architect (principal)

s.17,s.21

.2 Electrical Engineer

.3 Mechanical Engineer

.4 Other - Technology Systems Architect

I/WE, the undersigned declare that:

- (a) we agree to perform the *Work* within the required completion times specified in the RFQ,
- (b) we have arrived at this Quotation without collusion with any competitor;
- (c) the Quotation is open for acceptance by WSI for a period of thirty (30) days from the RFQ Closing Date; and
- (d) all Quotation Form Supplements called for by the Request For Proposals form an integral part of this submission.

SIGNATURES:

Signed and Submitted by:

Company name

Name and title of authorized signing officer

Signature of authorized signing officer

Name of witness

Signature of Witness

Dated this _____ day of _____, 20____.

End of Quotation Form

General Liability Insurance

CSIO CERTIFICATE OF LIABILITY INSURANCE						
This certificate does not amend, extend or alter the coverage afforded by the policies below.						
1. CERTIFICATE HOLDER - NAME AND MAILING ADDRESS To Whom it May Concern			2. INSURED'S FULL NAME AND MAILING ADDRESS Aspyr Engineering Ltd. 650-2700 Production Way Burnaby, BC V5A 4X1			
3. DESCRIPTION OF OPERATIONS/LOCATIONS/AUTOMOBILES/SPECIAL ITEMS TO WHICH THIS CERTIFICATE APPLIES (but only with respect to the operations of the Named Insured) Electrical Engineering Office						
4. COVERAGES This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated notwithstanding any requirements, terms or conditions of any contract or other document with respect to which this certificate may be issued or may pertain. The insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS						
TYPE OF INSURANCE	INSURANCE COMPANY AND POLICY NUMBER	EFFECTIVE DATE YYYY/MM/DD	EXPIRY DATE YYYY/MM/DD	COVERAGE	LIMITS OF LIABILITY (Canadian dollars unless indicated otherwise)	
					DED.	AMOUNT OF INSURANCE
COMMERCIAL GENERAL LIABILITY	Aviva Ins. Co. of Canada	2018/ 6/ 1	2019/ 6/ 1		1,000	5,000,000
					1,000	5,000,000
						5,000,000
					1,000	5,000,000
						50,000
					1,000	500,000
					1,000	5,000,000
5. CANCELLATION Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail 0 days written notice to the certificate holder named above, but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives.						
6. BROKERAGE/AGENCY FULL NAME AND MAILING ADDRESS Johnston Meier Insurance Agencies Group 305-2748 Lougheed Highway Port Coquitlam, BC V3B 6P2 BROKER CLIENT ID: ACU100			7. ADDITIONAL INSURED NAME AND MAILING ADDRESS (Commercial general Liability - but only with respect to the operations of the Named Insured) To Whom it May Concern			
8. CERTIFICATE AUTHORIZATION						
Issuer Johnston Meier Insurance Agencies Group			Contact Number(s)			
Authorized Representative			Type No () - Type No			
Signature of Authorized Representative X Per <i>[Signature]</i> Johnston Meier Insurance Agencies Ltd.			Type No (604) 944-9577 Type No (604) 944-1951			
			E-Mail Address			
CSIO - Certificate of Liability Insurance CA4301a 201605			2018 5 29			

s.21



Professional Liability Insurance



Box #275, Suite #400 - 555 Burrard Street
Vancouver, B.C. V7X 1M8
Telephone: 604-683-5583
Toll Free: 1-800-690-7475
Facsimile: 604-683-8032
www.mpib.com

TO:

THIS IS TO CERTIFY THAT insurance has been effected as shown below:

INSURED: Aspyr Engineering Ltd.
and other insureds who may be identified in the policy.

INSURER: XL Specialty Insurance Company

POLICY NO: s.21

POLICY EXPIRY: July 29, 2019; 12:01 A.M. Local Standard Time

COVERAGE: PROFESSIONAL LIABILITY INSURANCE

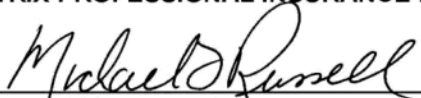
LIMIT OF LIABILITY: CAN \$2,000,000. Each claim and in the
Aggregate annually CAN \$2,000,000.

This certificate is valid at the date of issuance. The policy is subject to change, expiration or cancellation without notice to the certificate-holder.

This certificate is issued for information only, and confers no rights on any holder. This certificate does not amend, extend or alter the coverage afforded by the policy

The Policy contains all the terms and conditions of coverage. The policy is not limited to claims by or in connection with the above-noted certificate-holder. The Limit of Liability may be inclusive of damages and claims expenses; the aggregate limit is the maximum available for all covered claims.

METRIX PROFESSIONAL INSURANCE BROKERS INC.



Authorized Representative

Dated: August 1, 2018
/bz

