

Enhancing School Designs: A World of Knowledge at Your Fingertips





What is Technical Services Branch?

Things you may already know:

- Under the umbrella of Capital Projects Division
- Five sections
 - Building Engineering
 - Facility Evaluation
 - Facility Planning and Architecture
 - Interior Design
 - Site Services



What is Technical Services Branch?

Things you may not know:

- 60 staff including 57 specialists
- Some of the lesser known specialties include acoustics, hazardous materials testing, security, energy management





Services Related to School Design

- Standards Setting
- Development of Guidelines
- Design Advice
- Design Reviews
- Technical Drawing Reviews
- Specification Reviews
- Research
- Facility Condition Analysis
- Investigations





"Flood Guidelines"

Flood Risk Management Guidelines for Location of New Facilities Funded by Alberta Infrastructure

- December 2013
- Why?
- Key Topics:
 - Site Selection
 - Existing Facilities
 - Facility Classification
 - No Option Alternatives
 - Preferred Flood Elevation Levels





"Wildfire Guidelines"

<u>Guidelines for Wildfire Protection of Institutional</u> <u>Buildings in Forested Regions</u>

- March 2013
- Why?
- Meant to supplement existing codes and regulations





"Wildfire Guidelines"

- Key Topics:
 - Site Planning
 - Building Design (form, envelope, materials, fire protection)
 - Local Resources (water supply)
 - Building Separation
 - Building usage
 - Building Systems
 - Also Included:
 - Case studies on Government of Alberta buildings exposed to wildfires





Design excellence recognizes the value of architecture to create an environment which enriches the lives of its users, inspires learning and creativity in teachers and students, and contribute to the vitality, pride, and identity of the community.



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Best Practices included in this document include:

- 1) School Planning Typologies
- 2) Education Model Typologies
- 3) Urban Design



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- 4) Site Planning & Landscaping
- 5) Composition & Aesthetics
- 6) Community Integration, Involvement & Identity





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- 7) Experiential Space Planning
- 8) Universal Design
- 9) Neat & Active Design

10) Design For Flexibility







11)Modular Classrooms12)Materiality13)Signage, Graphics & Art







Technical Design Guidelines

- Architectural Guidelines release date is the end of March
- Developed by TSB by consolidating best practices information, from the position of knowledgeable owner, as well as national and international subject matter experts
- Living document





Technical Design Guidelines

- A reference rather than detailed instruction
- Innovative designs, products, systems and technology are encouraged after thorough evaluation of potential benefits and risks, value analysis and life cycle cost
- Used as a basis for evaluating designs





Technical Design Guidelines

New additions include:

- Crawl Spaces
- Green Roofs
- Interior Design







• POEs are related to the needs, activities, and goals of the people using the facility, or the functionality of the building for the users.





Purpose

- A POE will provide Infrastructure with the necessary data to:
 - Measure
 - Fine-tune
 - Adjust



- Test the application of new concepts. Tried-andtrue concepts and ideas can lead to good practice, and new ideas are necessary to make advances.
- And last but not least, a POE can justify actions and expenditures.



Methodology

- Most effective when done 12-18 months after facility has been operating
- Tools for gathering information:
 - Document Review
 - Functional Observation
 - Survey
 - Stakeholder Interviews





Methodology

- Analyze Data
- Make recommendations
- Create lessons learned







Methodology

- In addition, some POE's also include:
 - Financial Review
 - Includes energy/water utilization
 - Physical Review Building Evaluation
 - Indoor Air Quality Testing
 - Additional testing as required





Benefits

 The most significant benefits are the lessons learned. This can influence and change design criteria for future buildings (making our clients happier), as well as provide information about buildings currently in use.





Where can you find all of this information?

<u>Guidelines and POE Methodology</u> Alberta Infrastructure website under Technical Resources:

http://www.infrastructure.alberta.ca/500.htm

POEs By request from project managers





Questions?

