Outline

• NRC
• Codes Development System
• National Building Code (NRC)
NRC’s unique value proposition

- Helping industry
- Offering access to knowledge
• Budget 2013-2014 of $894.4 M
• Over 3,500 employees
• Operating in every province in Canada
• Unique facilities—national assets
• Global reach
NRC legacy

- Pioneered the Internet in Canada
- Anti-counterfeit hologram technology on Canadian currency
- Robotic “Canadarm”– NASA’s space shuttles
- Infant meningitis vaccine
- World’s first civil jet flight powered by 100% biofuel
NRC Construction—since 1947

- Achieve higher performing, affordable buildings and infrastructure
- Accelerate technology commercialization
- Reduce compliance costs
NRC Construction competencies

- Building Envelope and Materials
- Civil Engineering and Infrastructure
- Intelligent Building Operations
- Fire Safety
- Building Regulations
- Technical & Testing Services
What Codes do

▷ Consistent and innovative requirements
▷ Performance levels and assessment methods
▷ Development and deployment of improved National Model Codes
What Codes do

› Performance-based technical solutions
› Removal of market-barriers
› Solutions brought together with technical expertise and world-class testing facilities
Present

- 50+ Codes published since 1941
- Most current
Present

▷ Over 75 guides, supplements and commentaries
Code development system

- Stakeholders
- Main collaborators
Canadian Commission on Building and Fire Codes

PTPACC  
(Canadian Commission on Building and Fire Codes)

CCBFC  
(Canadian Construction Industry & Public Committee)

Executive Committee  
- HVAC and Plumbing (SC-HP)
- Earthquake Design (SC-ED)
- Energy Efficiency in Buildings (SC-EEB)
- Fire Protection (SC-FP)
- Hazardous Materials and Activities (SC-HMA)
- Housing and Small Buildings (SC-HSB)
- Structural Design (SC-SD)
- Use and Egress (SC-UE)

PTPACC  
(Provincial/Territorial Policy Advisory Committee on Codes)

Standing Committees
- HVAC and Plumbing (SC-HP)
- Earthquake Design (SC-ED)
- Energy Efficiency in Buildings (SC-EEB)
- Environmental Separation (SC-ES)
- Fire Protection (SC-FP)
- Hazardous Materials and Activities (SC-HMA)
- Housing and Small Buildings (SC-HSB)
- Structural Design (SC-SD)
- Use and Egress (SC-UE)
Continuous Process
Impact of National Model Codes

› Safety
› Health
› Accessibility
› Fire protection
› Environment
Get involved!

› Volunteer for a standing committee
› Submit a code change request (CCR)
› Submit public review comments on proposed changes
› Respond to information requests
NBC 2005–2010 changes

- Introduced new definitions for fire stop and fire block
NBC 2005–2010 changes

- CAN/ULC-S115, “Fire Tests of Fire Stop Systems”
NBC 2005–2010 changes

Water distribution

Water closet

Polypropylene pipes
Summary—2010 Changes

• New definitions for fire stop and fire block
• Qualification of penetration protection requirements
• Relaxations for penetrations in fire separations
NBC 2010–2015 changes

- Penetration by outlet boxes
- CAN/ULC-S112.2, “Fire Test of Ceiling Firestop Flap Assemblies”
NBC 2010–2015 changes

- Qualification of fire block materials:
  - ASTM D5456, “Evaluation of Structural Composite Lumber Products”
- Midrise combustible construction and horizontal concealed spaces
Summary—2015 Changes

- Clarification for the protection of outlet boxes
- New standard for the design requirement of fire stop flaps
- New wood products accepted as fire block materials
- Fire block required in horizontal concealed spaces for 5- and 6-storey combustible buildings
What’s up next?

- Fire Stop Best Practices Guide
  - Canadian referenced document
- Continuity of fire separation
  - Fire stop at the perimeter
- Combustible DWV$^1$ piping penetrations
  - 50 pa differential testing procedure

$^1$ DWV: Drain-waste-vent
Thank you!
Any questions?