

SESSION #CT-05

SEPTEMBER 20, 2013 | 8:00 AM

# Lessons from the DBFM Trenches



**The  
Future  
Is Now:  
Alternative  
Project Delivery**

AIA AAJ NATIONAL CONFERENCE  
PORTLAND, OR | SEPTEMBER 18-21 2013



THE AMERICAN INSTITUTE  
OF ARCHITECTS  
Academy of Architecture for Justice

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# Lessons From the DBFM trenches

Based on the experience learned from 7 justice related DBFM pursuits, both wins and loses, the challenges of this delivery method for the consultant architect will be examined bringing to light factors that impact project development not usually confronted in the traditional design bid model.

Good design  
makes a difference™



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# Learning Objectives

1. General understanding of the DBFM process
2. Risks for the architect and how to mitigate some of those risks.
3. Achieving Design Excellence in this delivery method
4. Understanding the new Contractor-Designer relationship in DBFM..





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**Senior Design Architect**

# AGENDA

## Pursuit

- Prequalification
- Quality of Team Partners
- Structure of the Team
- Where is the Client/User in This
- Pursuit Deliverables
- Pursuit Fees
- Pursuit Hours
- Scoring Process
- Pursuit Examples
- Liquidated Damages
- Staff Burn Out
- Why is it so Difficult

## Post Pursuit

- New Contractor/Architect Relationship
- New Client/Architect Relationship
- Design Excellence & Imperfect Standards
- Challenges of Maintaining quality in the P4 Environment



## Pre- qualification

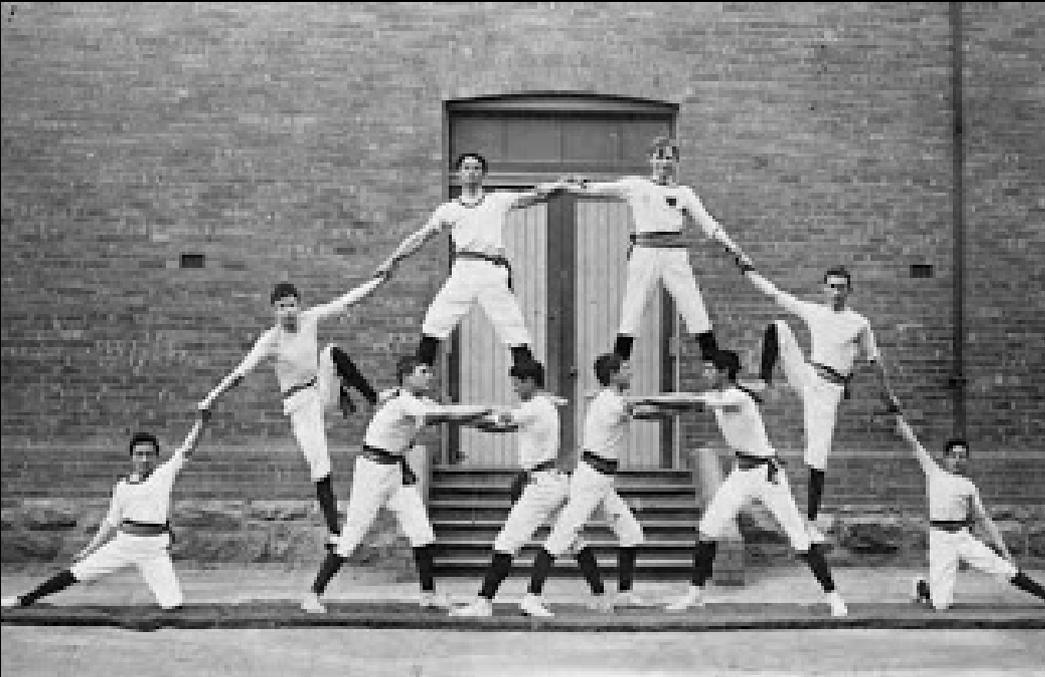
- Identify opportunities before they hit the street
- Identify and sell yourself to the best developer/contractor team
- Who leads the submission?

## Quality of the Team Partners



- The ultimate team sport
- Only as good as the weakest member of the team
- The architect cannot win on their own

## The Structure of the Team

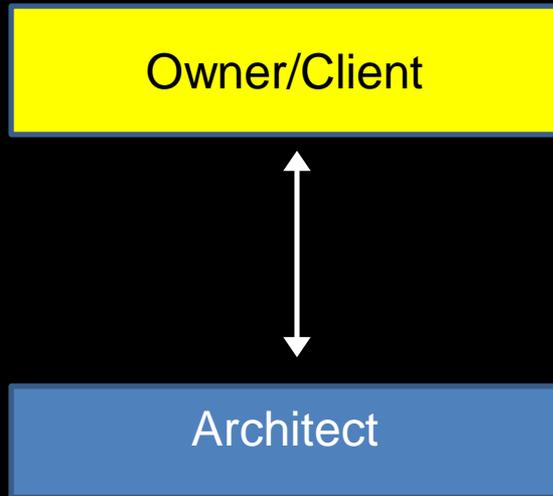


- Varies by contractor/developer team and pursuit
- Structure changes from pursuit to execution phase
- Alignment of interests in the pursuit is challenged in post pursuit

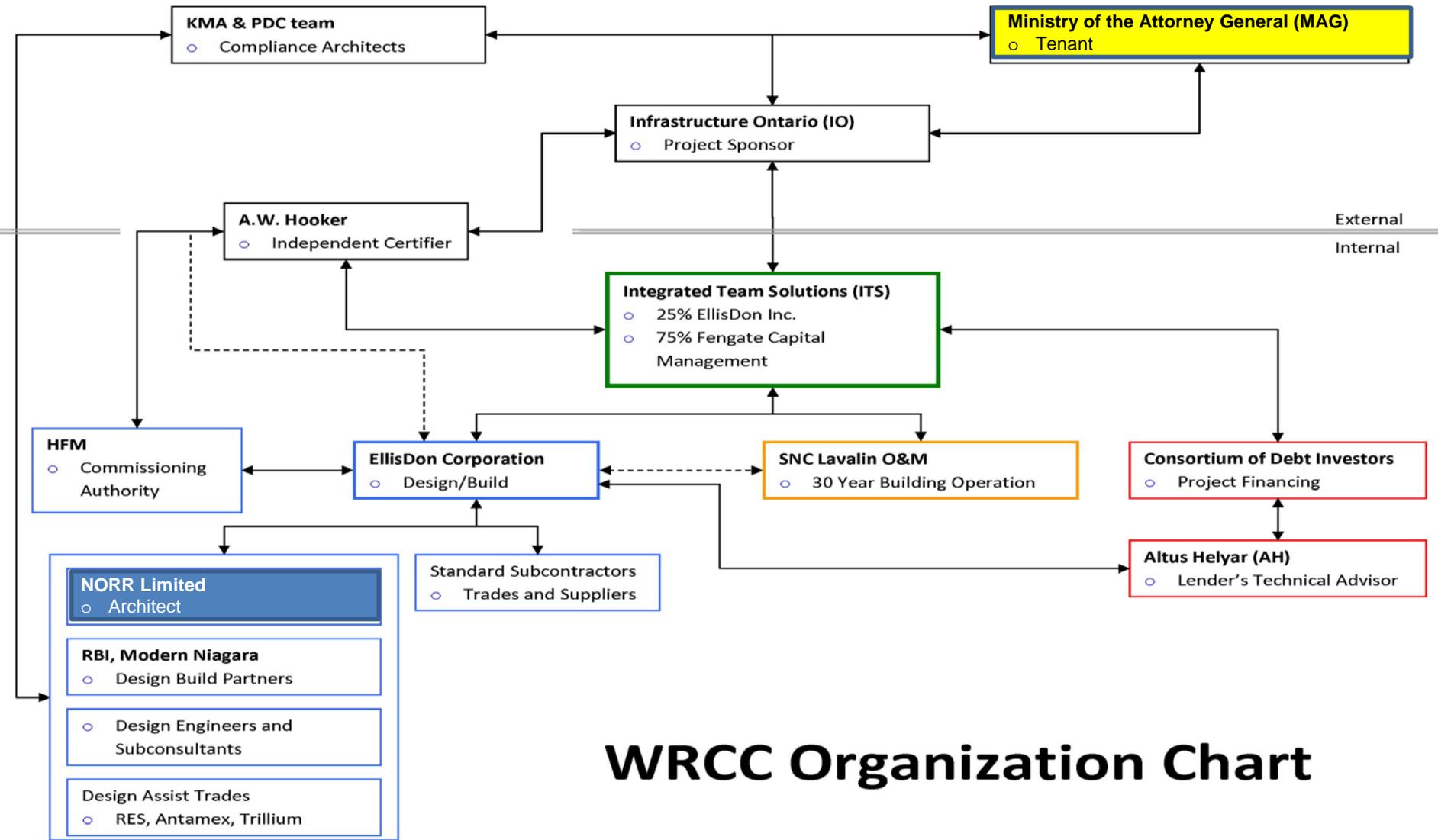
Where is the Client/User in This ?



## Owner - Architect Relationship



Traditional Design - Bid –  
Build relationship



# WRCC Organization Chart

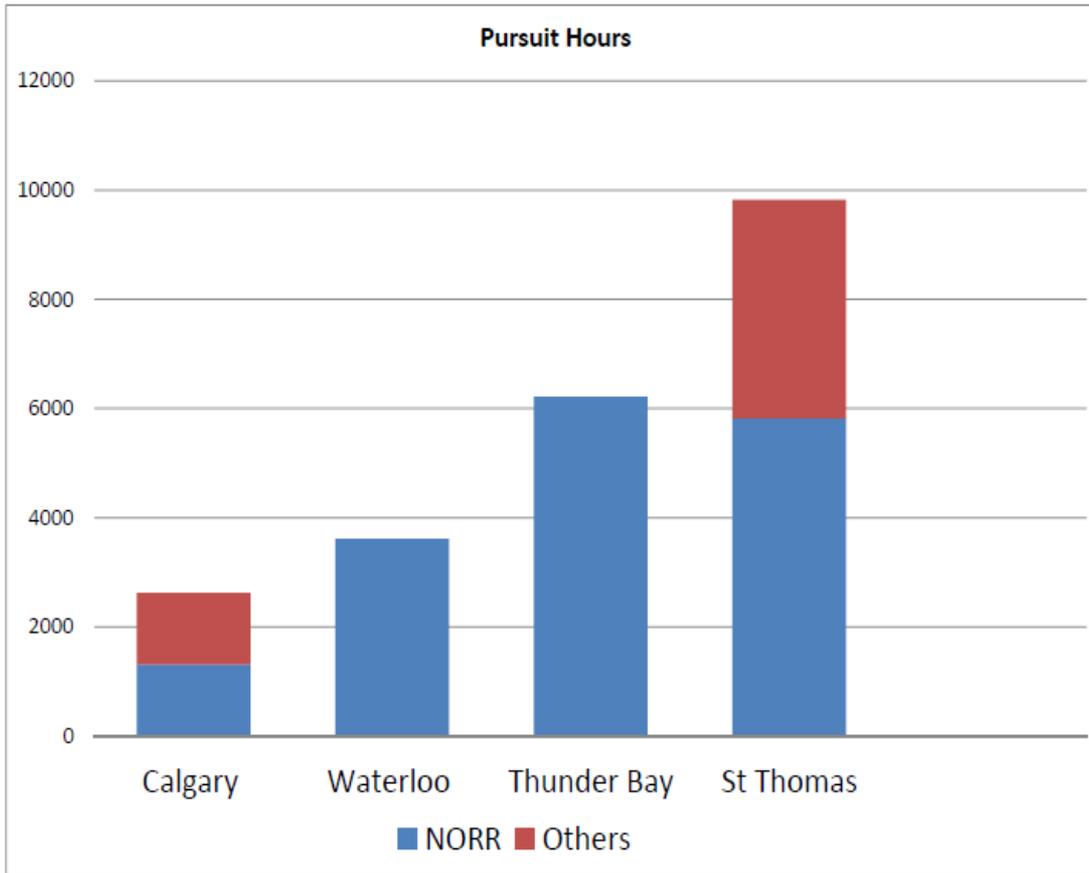
## Pursuit Deliverables



## Pursuit Fees



## Pursuit Hours



## The Scoring Process



## The Scoring Process

# The Scoring Process

## **Minimum scores**

70% of available points for Design (210)

70% of available points for Operations plan (150)

60% of available points for Project Management (35)

500 for perfect verses 395 for minimum performance  
or in other words 90 discretionary design points

## **3.1 Net Present Value**

*The lowest NPV will be awarded the maximum points available for NPV (450 points) and the Sponsors will deduct 30 points from the maximum points available for NPV (450 points) for every percentage point by which the Proponent's NPV exceeds the lowest NPV.*

*Therefore 1 design point equals .0333% of NPV*

## Pursuit examples

# P3 Courthouse Pursuits



**CALGARY COURTHOUSE**



**DURHAM REGION COURTHOUSE**



**WATERLOO REGION COURTHOUSE**



**THUNDER BAY COURTHOUSE**



**ST THOMAS COURTHOUSE**

# Calgary Courts Centre

## Lessons Learned



- NORR Associate Architect
- Kasian Architecture Interior Design & Planning Inc. Architect of Record
- Carlos Ott Design Consultant
- Spillis Candela DMJM Courthouse Consultant
- CANA Contractor
- GWL
- Pursuit 2003
- Completion 2007
- Gross area 1,000,000 s.f.
- 73 Courtrooms
- 13,700 sf per courtroom
- Total Cost \$280,000,000
- \$3,835,000 Cost per courtroom

## Calgary Courts Centre Lessons Learned

- First P-3 Courthouse project in Canada
- Complex and multi-headed pursuit team assembled years in advance
- Combination of local and international experts reflecting the need for both skill sets
- Involved direct and relatively informal meetings with the judges unlike more formal and controlled process that has evolved in more recent pursuits
- Operating cost factors drove decisions towards things like triple glazing
- Was not fully executed changed to Design Build after completion of pursuit phase

# Calgary Courts Centre Lessons Learned



# Calgary Courts Centre

## Lessons Learned



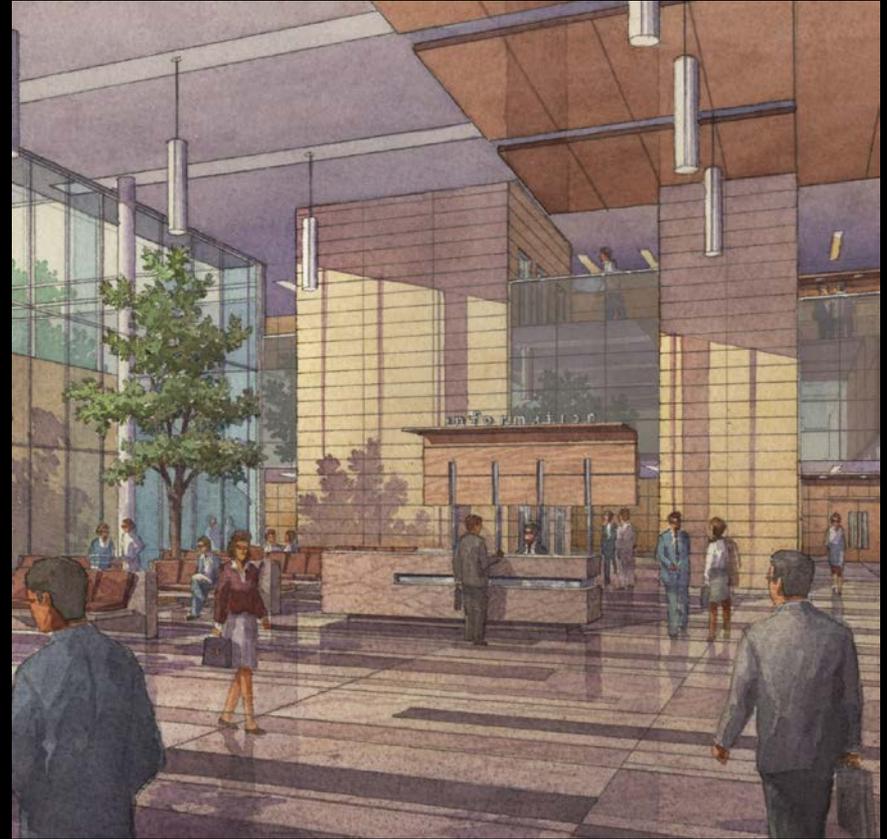
# Durham Region Consolidate Courthouse

We Lost



# Durham Region Consolidate Courthouse

We Lost



# Durham Region Consolidate Courthouse

We Lost

- Low construction cost
- 2nd place in Design
- Financing shortfall
- 3<sup>rd</sup> Place operations

# Waterloo Region Courthouse

We Won



# Waterloo Region Courthouse

We Won



# Waterloo Region Courthouse

We Won

- Sweet spot between design, cost, operations and finance
- Design revisions in negotiations phase

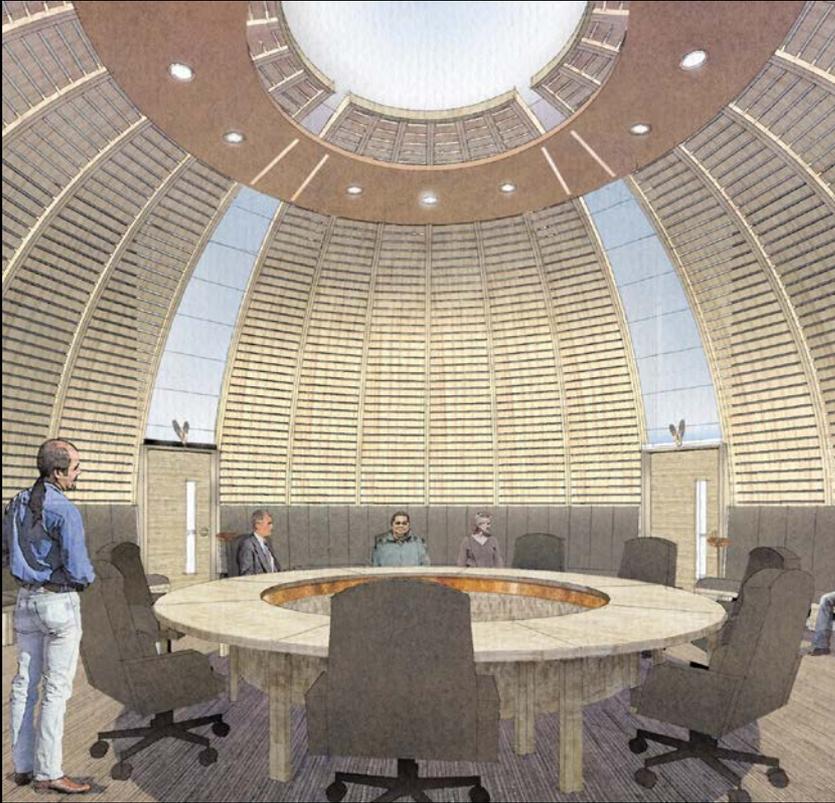
# Thunder Bay Courthouse

We Lost



# Thunder Bay Courthouse

We Lost



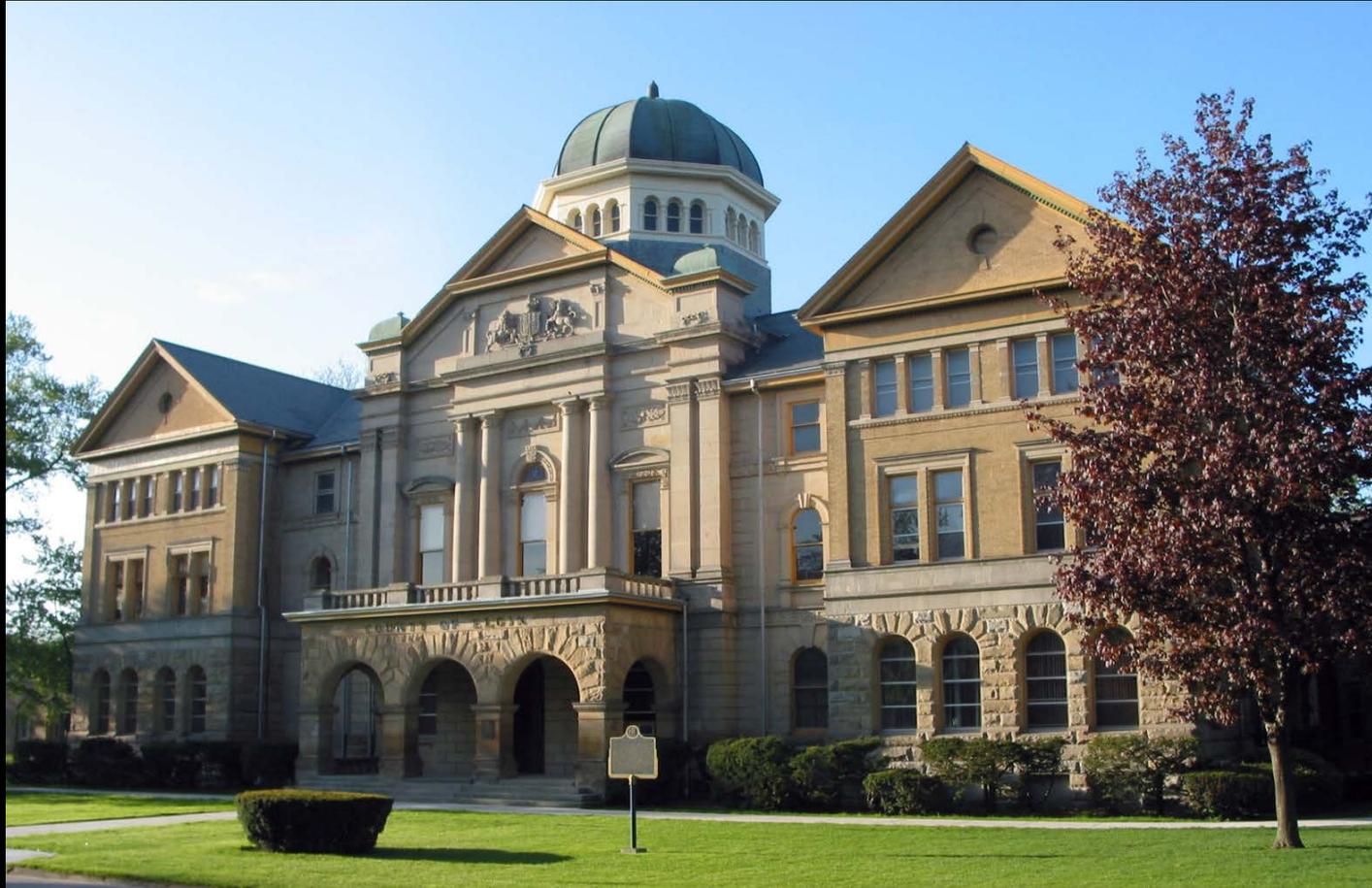
# Thunder Bay Courthouse

We Lost

- 2<sup>nd</sup> place in design
- 2<sup>nd</sup> place in cost
- Aboriginal content
- New compliance team, new compliance documents
- Different approach to design excellence

# St. Thomas Courthouse

We Won



# St. Thomas Courthouse

We Won



# St. Thomas Courthouse

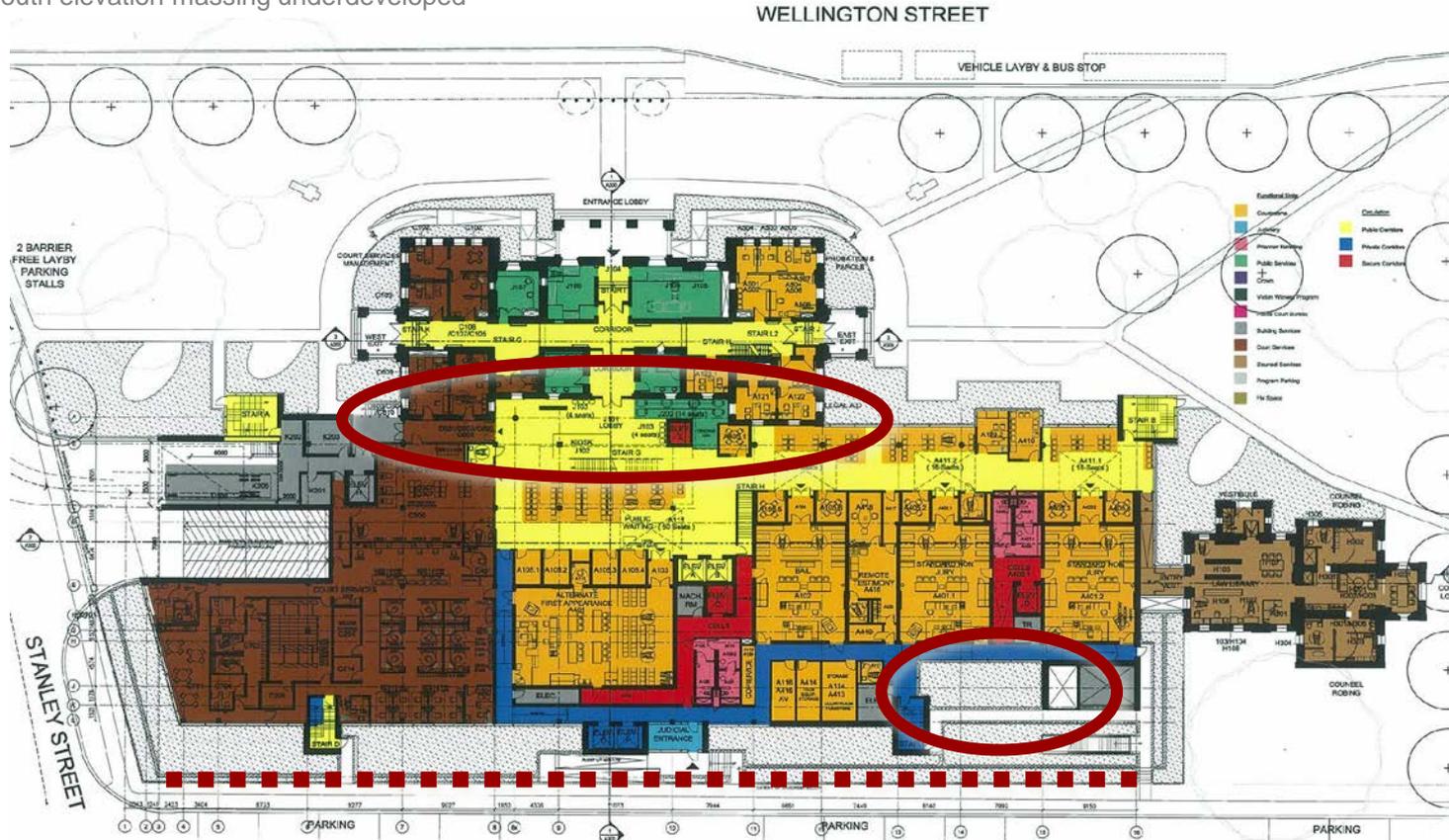
We Won

- First P-3 involving an existing heritage context
- Exemplar design
- Need to achieve a site plan agreement with the municipality on tight site
- Challenge of a non compliant exemplar design

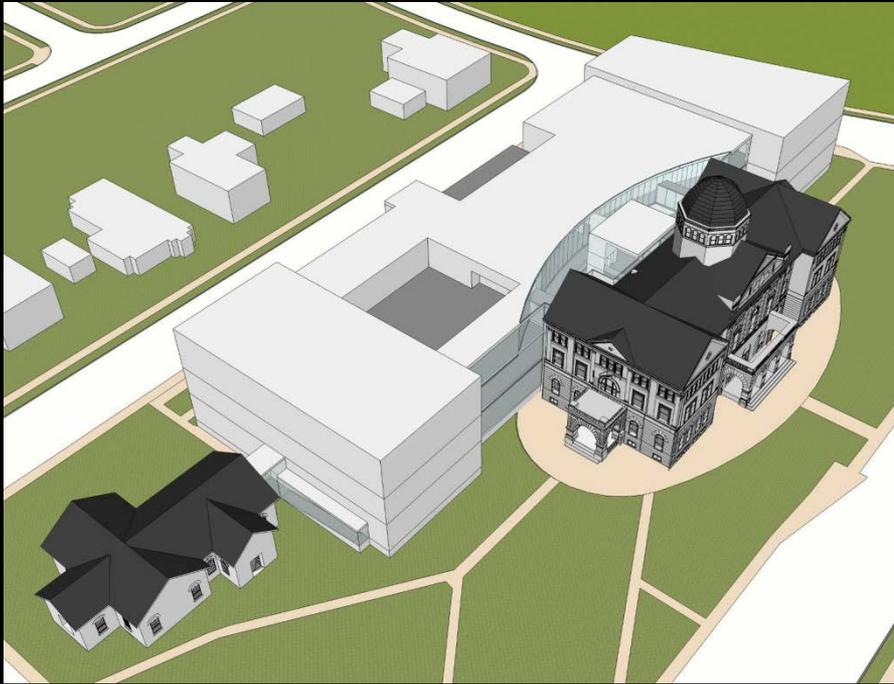
**Illustrative, exemplar or blank slate**

- Heritage south elevation not celebrated
- Clearance requirements to vehicle barriers not maintained
- Massing indent at southeast corner
- South elevation massing underdeveloped

## Illustrative, exemplar or blank slate St. Thomas Courthouse



Illustrative, exemplar or blank slate  
St. Thomas Courthouse





# Ontario Provincial Police Modernization

## Other P3 Experience



# South West Detention Other P3 Experience



# Iqaluit Airport

## Other P3 Experience



# Pan Am Aquatics Centre

## Other P3 Experience



## Liquidated Damages



## Staff Burn Out



**Why is it so difficult**



## Post Pursuit

**Introduction:**  
The new P3 Compliance Arena



## Introduction:

### The new P3 Compliance Arena



- The new Contractor/Architect relationship
- The new Client/Owner relationship
- Design Excellence and Imperfect Standards
- The transition from pursuit to construction documents
- The challenge of quality control in a P3 environment

## The new Contractor/Architect relationship



- Focus shift from GFA reduction to schedule risk
- Built-in drafting service
- Construction site representation
- Preferred construction methods

## The new Client/Architect Relationship



- Loss of direct contact with the end user/owner
- User/owner represented by compliance architects (PDC)
- Puts and Takes List
- The paper trail importance

# Design Excellence & Imperfect Standards



# Design Excellence & Imperfect Standards



- Mandating Design Excellence
- The Courtroom Evolution
- Security Measures
- STCC Partition Design
- PSOS versus Local requirements



# Design Excellence & Imperfect Standards

## 2.2 Waterloo Region Consolidated Courthouse Design Principles

The defining principles are intended to convey to proponents the significance that excellence in design has for the Ministry of Energy and Infrastructure, the Ministry of the Attorney General, Infrastructure Ontario, and the host community - the City of Kitchener.

Good courthouse design is an essential component of a fair, accessible, efficient and well-managed system of justice. Courthouse design will reflect **excellence in design** in keeping with the importance of the functions within.

The following principles will govern the design of the Waterloo Region Consolidated Courthouse:

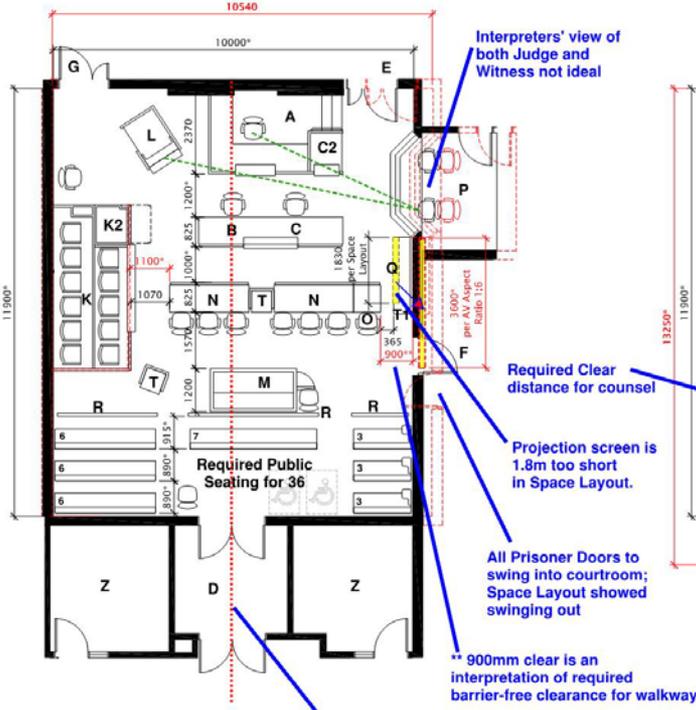
# The Courtroom Evolution



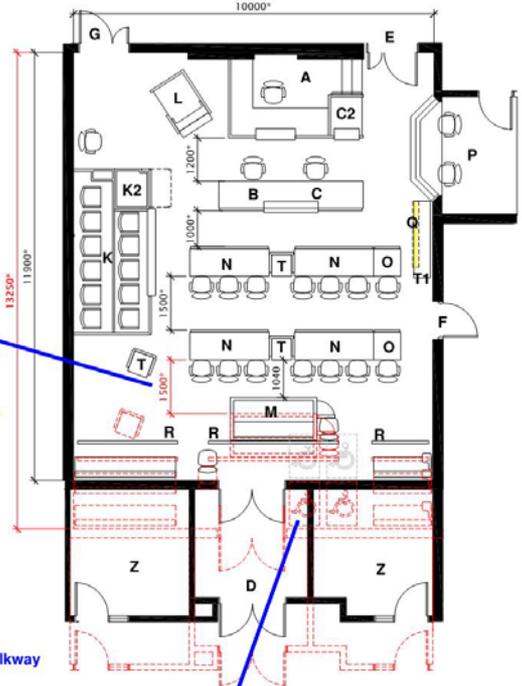
- Ontario Building Code (OBC)
- Ontario Realty Corporation (ORC)
- Facility Accessibility Design Standards (FADS)
- Province of Ontario Architectural Design Standards for Court Houses (AODS)
- Crime Prevention Through Environmental Design (CPTED)

# The Courtroom Evolution

"Day 1" Standard Courtroom Layout with Simultaneous Interpretation Booth



Alternate Standard Courtroom Layout with Additional Row of Counsel Tables



**LEGEND**

- A Judicial Dias
- B Court Clerk/ Registrat Desk
- C Court Reporter Desk
- D Courtroom Entry Vestibule (Doors to be centred on Dias)
- E Judge's Entry
- F Prisoner Entry
- G Jury/Staff Entry
- K Jury Box
- K2 Removable Chair: BF Juror
- L Witness Box (Portable)
- M Prisoner's Box
- N Counsel Table
- O Counsel Table Extension Piece
- P Simultaneous Interpretation Booth
- Q Motorized Projection Screen (Ceiling)
- R Public Rail (Removable)
- T Lectern
- T1 Evidence Presentation Station
- Z Interview Room

All dimensions with \* are required by Space Layout, written text of Design Brief, or Barrier-free Standard

Jury Courtrooms create non-symmetrical courtroom layouts if Courtroom Doors centred on Dias where symmetry was advocated

To accommodate Barrier-free spots with additional row of Counsel, Courtroom should be longer

## Security Measures: Blast Design (exterior wall, structural redundancy)



## Security Measures: Cell Wall Design



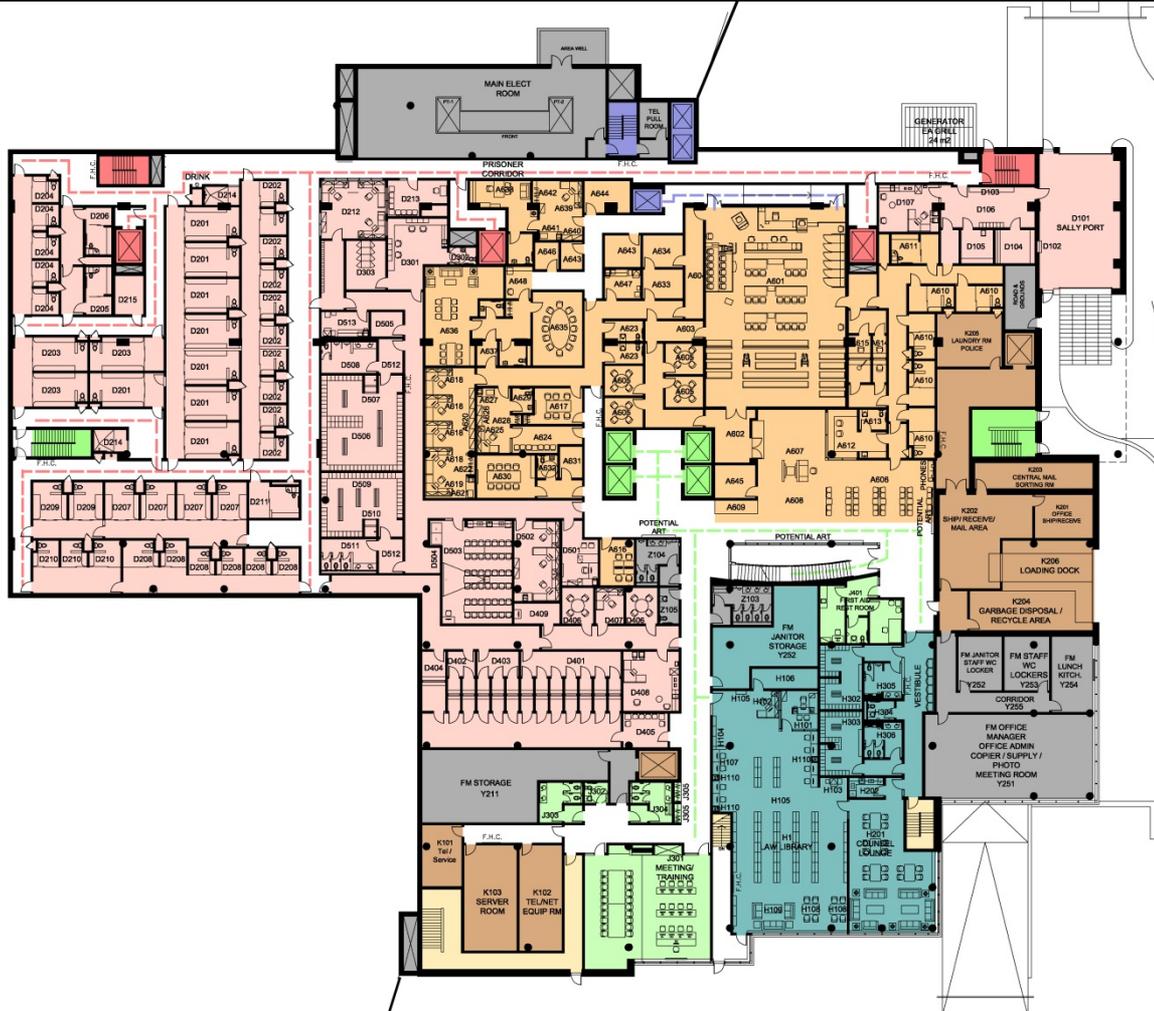
## Secure Measures: Poor Acoustics



## STCC ratings: Wall vs Room & Door ratings



# PSOS versus Local requirements: Adjacencies





# PSOS versus Local requirements: Adjacencies



## PSOS versus Local requirements: Privacy versus Safety



## PSOS versus Local requirements: Appropriate Scaling of Public Services



## The transition from pursuit to Construction Documents

- GFA Expansion
- Proper Documentation from Existing Site Conditions



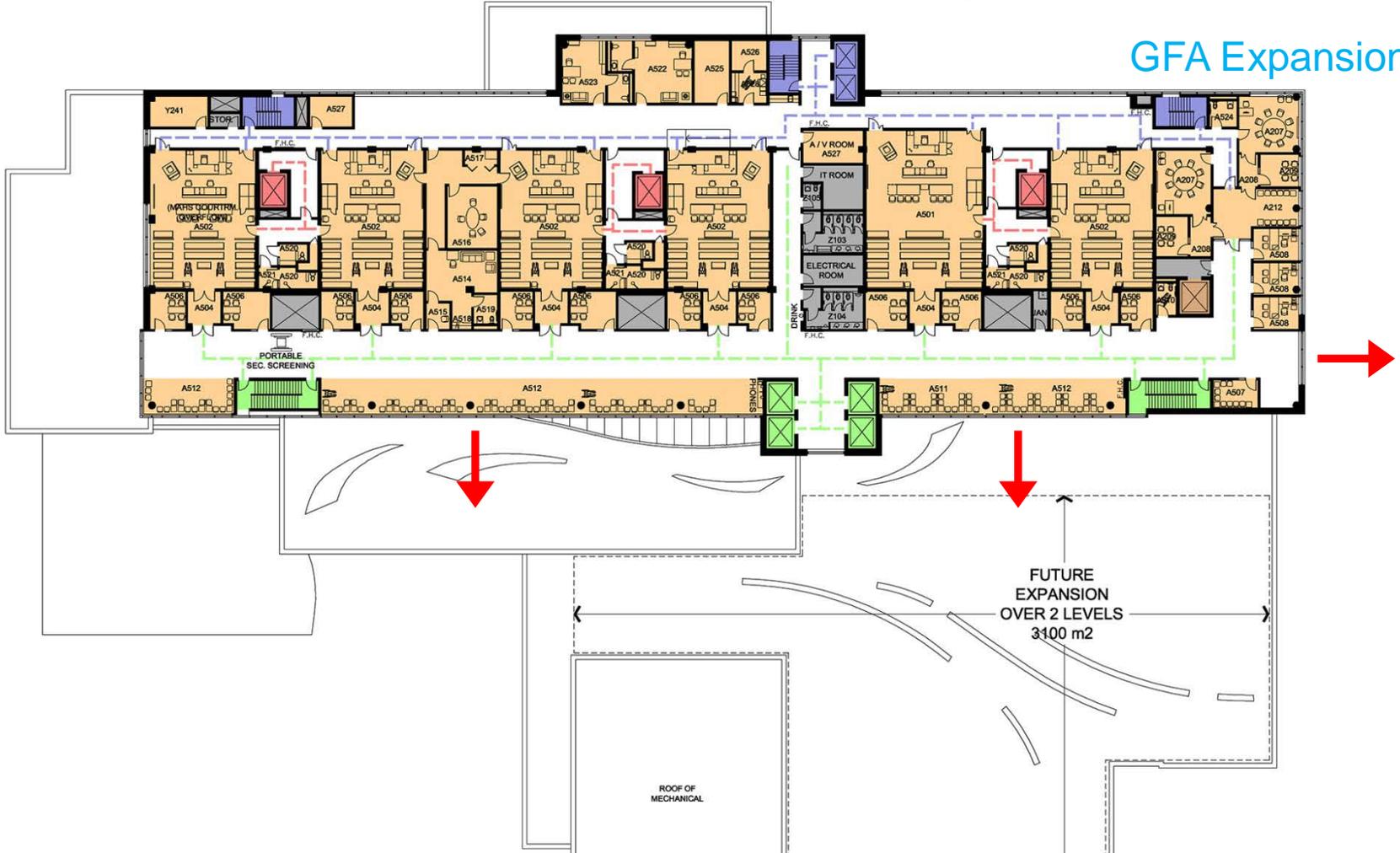
# The Transition from Pursuit to Construction Documents:

## GFA Expansion



# The Transition from Pursuit to Construction Documents:

## GFA Expansion



# The Transition from Pursuit to Construction Documents: GFA Expansion



# The Transition from Pursuit to Construction Documents: GFA Expansion



# The transition from pursuit to Construction Documents: Proper Site Documentation



## The Challenge of Maintaining Quality in the P3 Environment



## The Challenge of Maintaining Quality in the P3 Environment



- Sub-Consultant Control
- Fast Track Construction
- The Importance of Mock-ups

Sub-Consultants Control:



# Fast-Track Construction:



Mock-Ups:



Mock-Ups:





Discussion / **Questions**

**Thank You**