

# The Municipality of West Perth

## Municipal Campus Feasibility Study



# Municipal Campus Feasibility Study

- Existing Building Evaluation
  - Assessment of existing building conditions
  - Review of built Fire Halls
- Accessibility Study
- Functional Needs Assessment
- Budget Costing Analysis



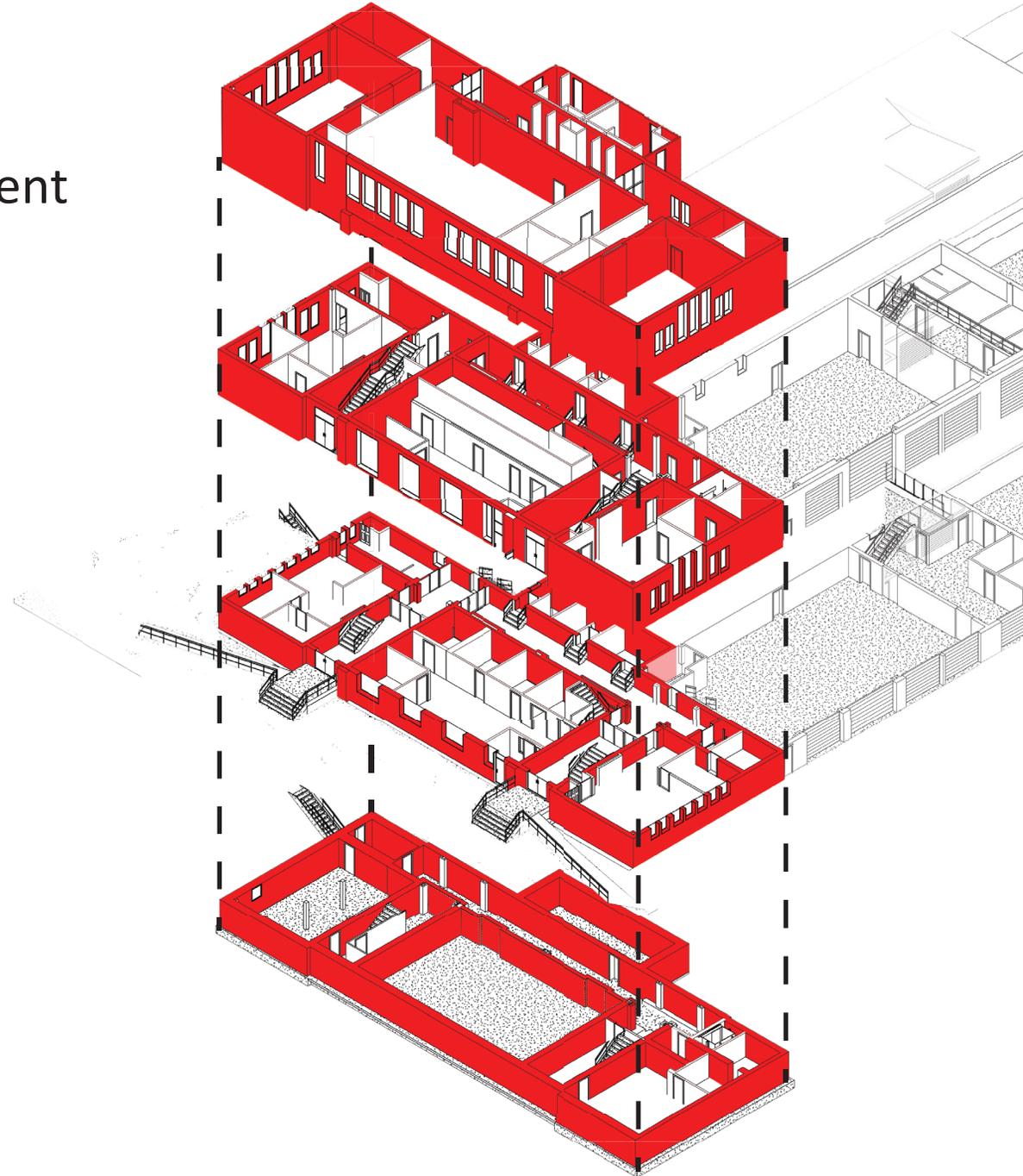
# Municipal Campus Feasibility Study

- Existing Building Evaluation
  - Assessment of existing building conditions
  - Review of built Fire Halls



Municipality of West Perth

# Building Condition Assessment



# Municipality of West Perth

# Accessibility Study



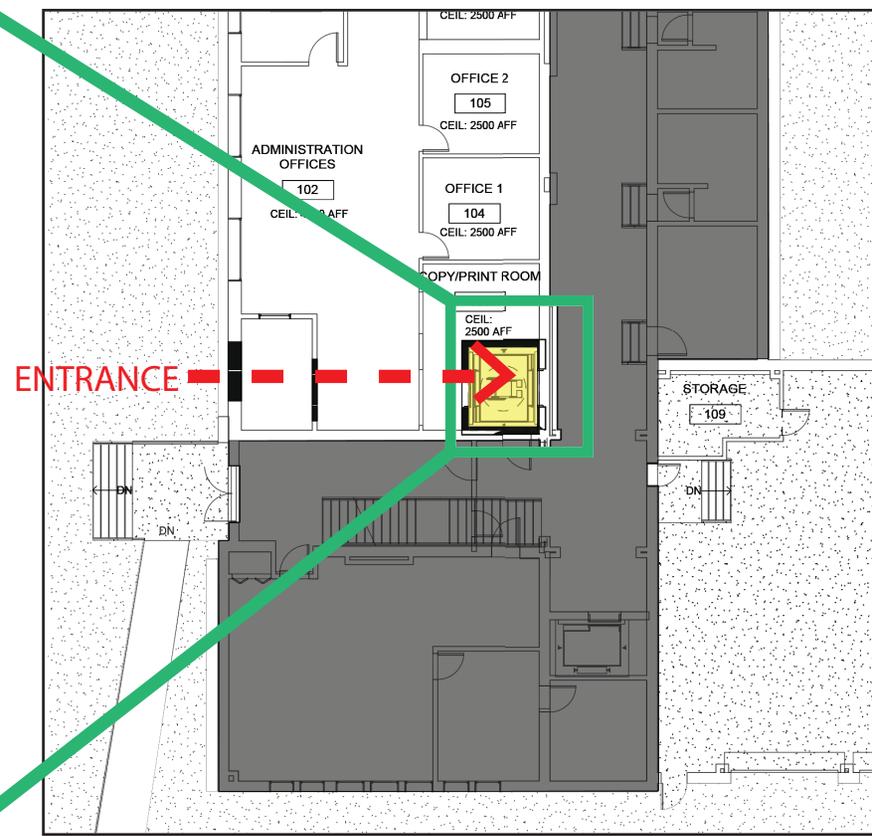
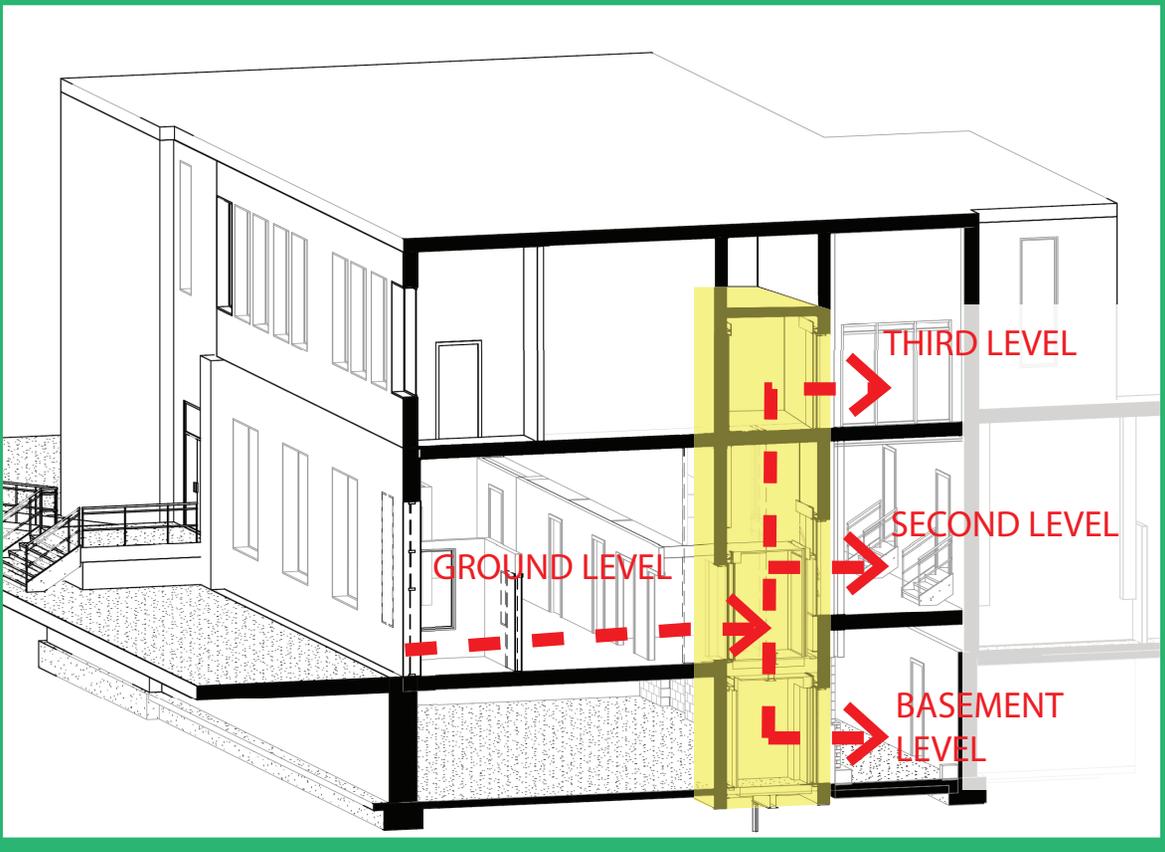
# Municipal Campus Feasibility Study

## Preliminary Conclusions

### Accessibility

- Weighed “best approach”
  1. Full vs. Partial Accessibility.
  2. Full approach recommended for best public service.
  3. Costed accessibility included in major renovations.
  4. Site works to suit





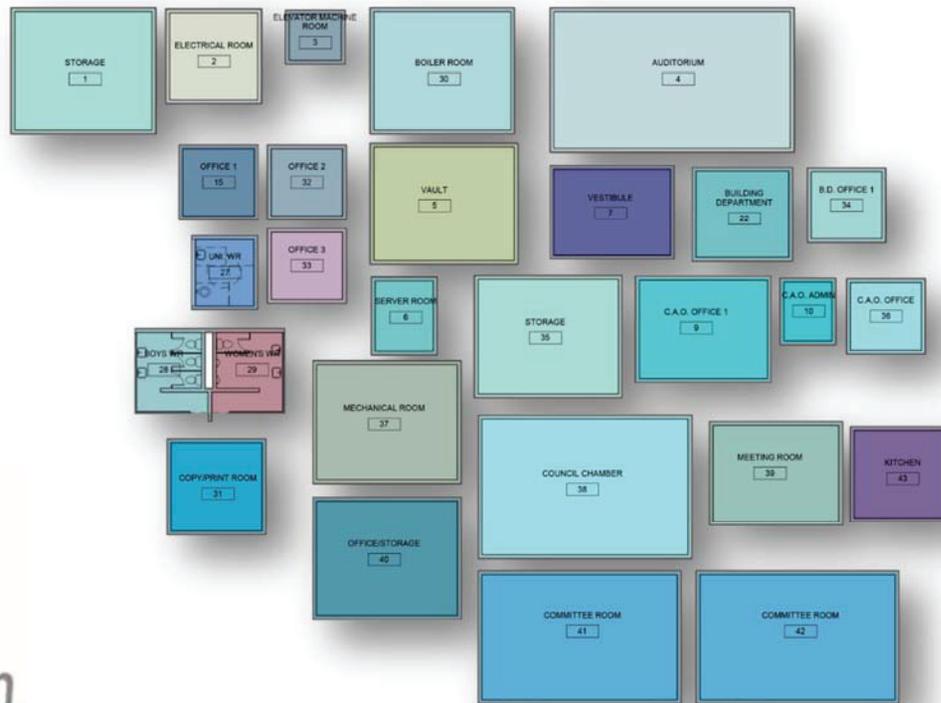
3D SECTION

GROUND LEVEL

 NEW ELEVATOR SHAFT

Municipality of West Perth

Functional Space Needs Analysis



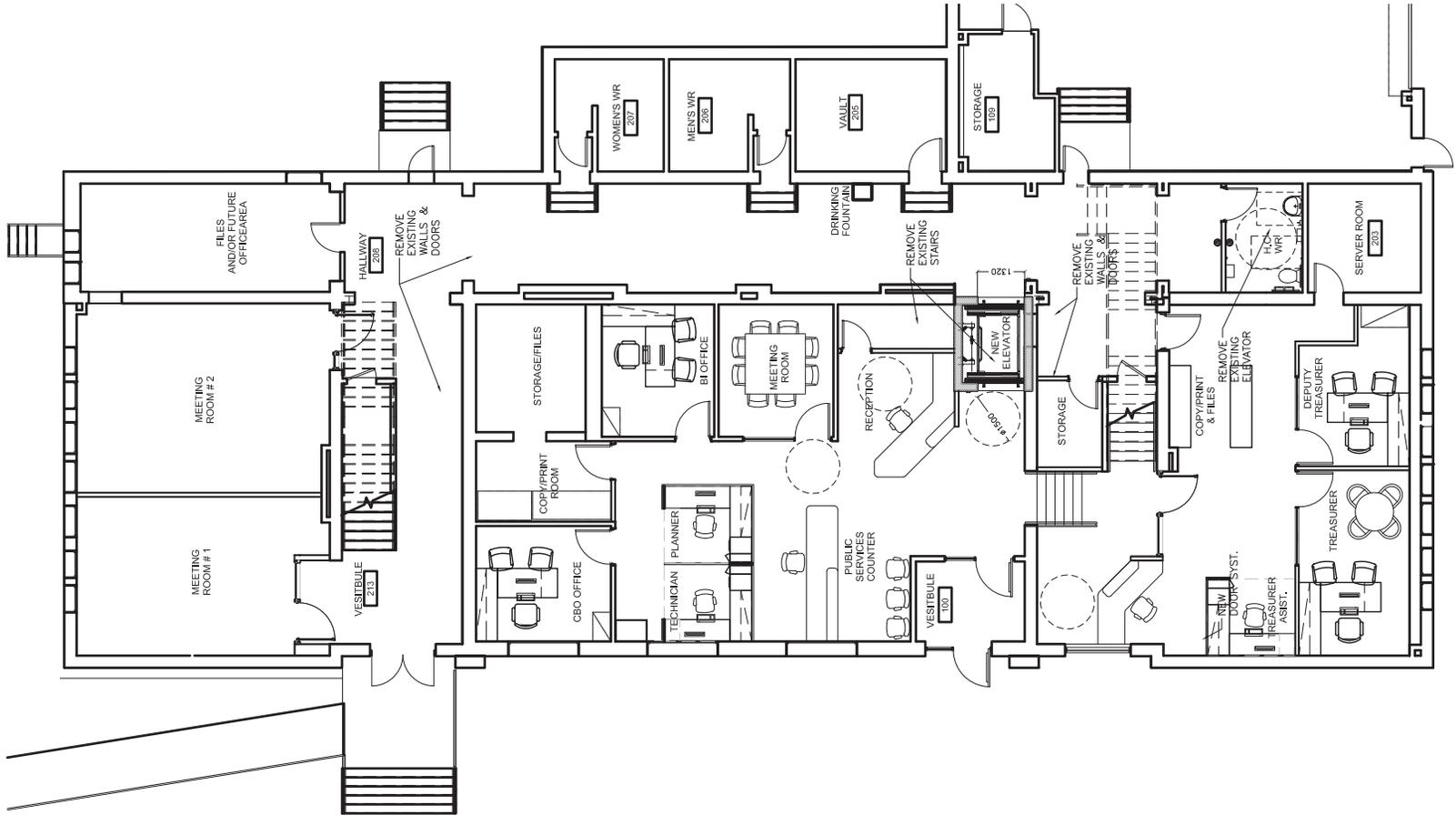
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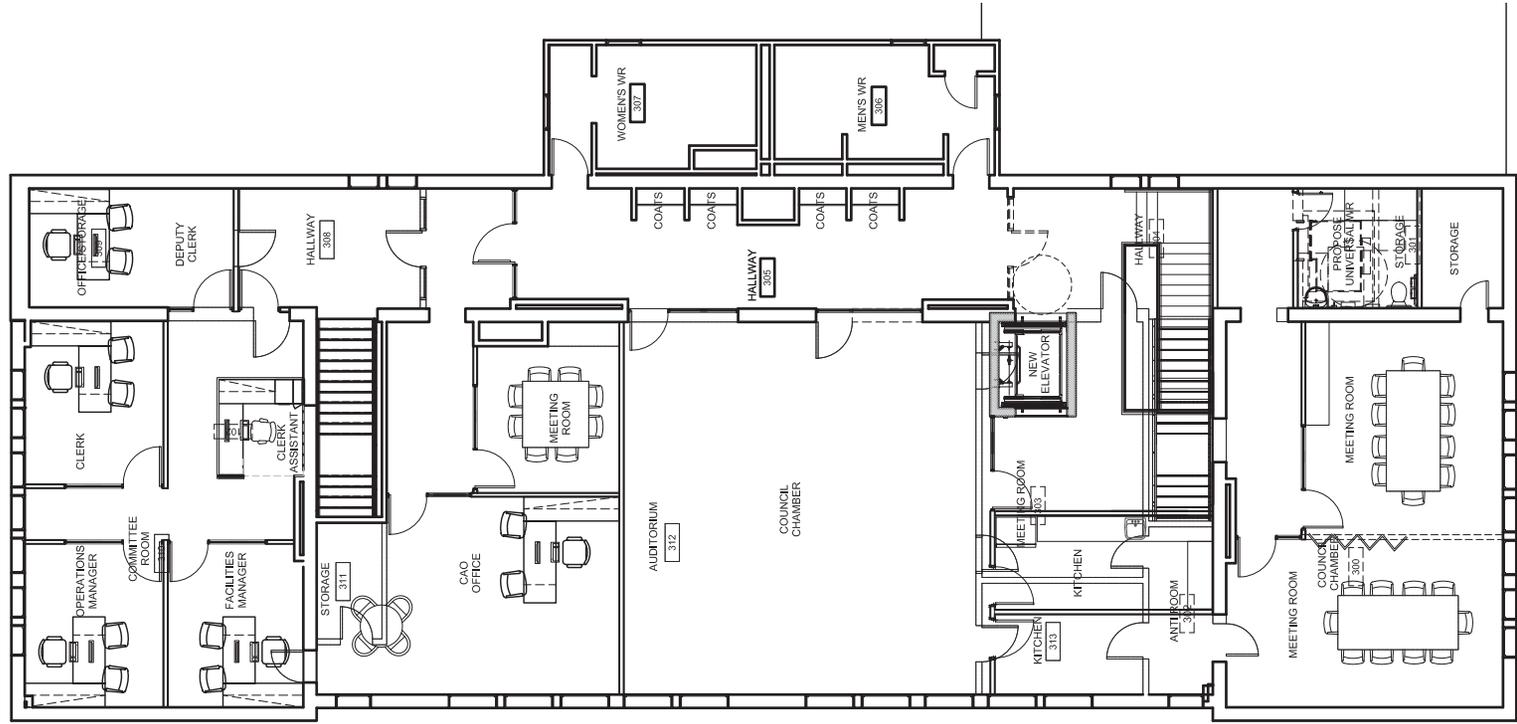
## Approach

### Functional Space Needs Analysis

- Review all Functional Positions.
- Review Organizational structure.
- Review best practices to determine
  - Optimal size of functional area.
  - Functional relationships.
  - Best public service face.
  - Furniture and Equipment fit.







# Municipal Campus Feasibility Study Approach

## Iterative Process

- Four Options with variations investigated
- Reviewed Options with Planning Committee
- Refined Options based upon Planning Committee feedback



# Municipal Campus Feasibility Study

## Two Main Conceptual Campus Development Approaches:

1. Redevelopment of Existing Municipality Building with New build Fire Hall and Museum.
2. Completely New Consolidated Development.



# Municipal Campus Feasibility Study

## Building Option I

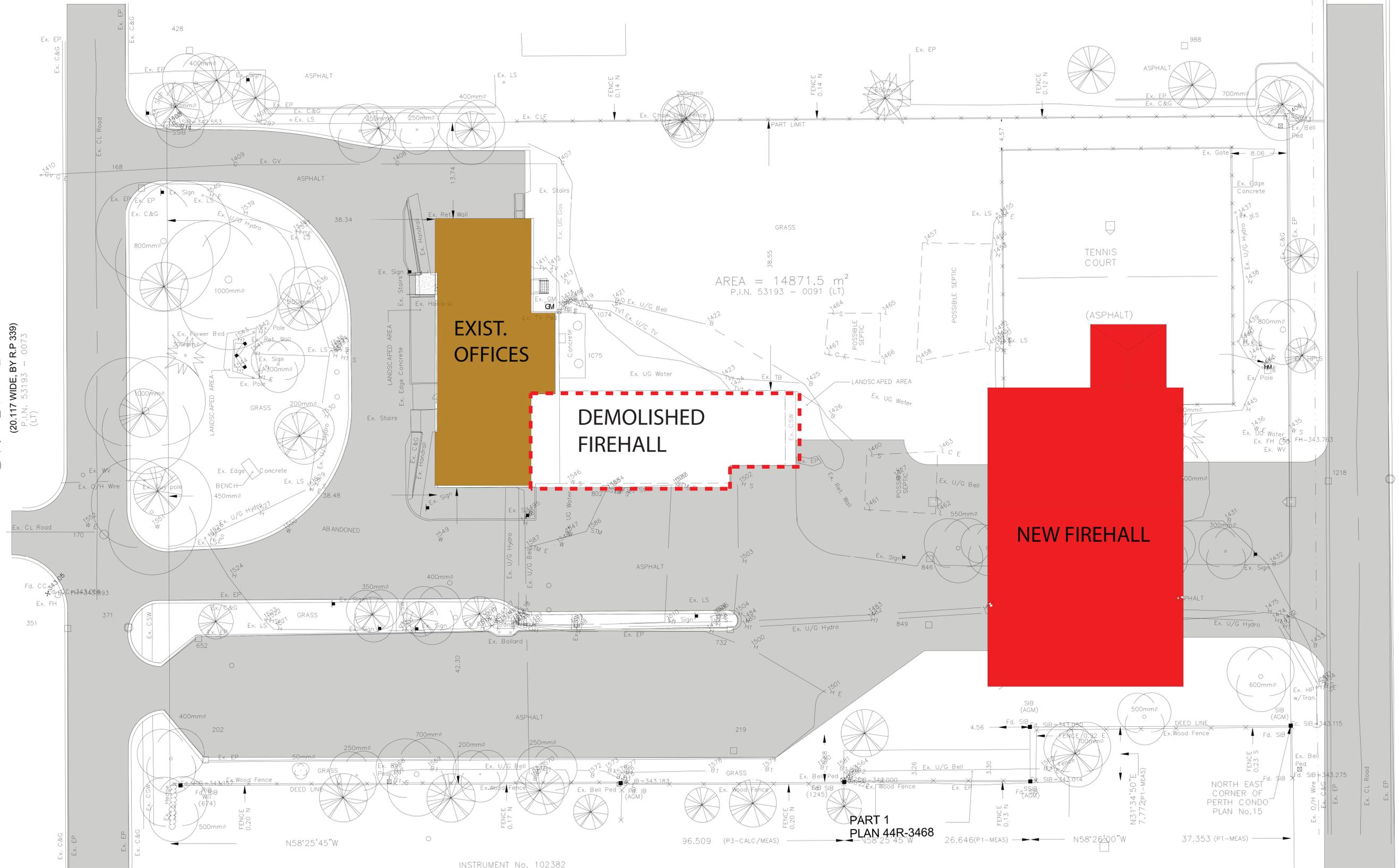
Scope:

- Two Existing Buildings:
  - Major Renovations to Existing Administration Building.
    - Fire Hall and Museum Demolished
  - New Fire Services Station
    - Including new Fire Services Museum



ST. DAVID STREET

(20.117 WIDE, BY R.P. 339)  
P.I.N. 53193 - 0073  
(LT)



PART 1  
PLAN 44R-3468

INSTRUMENT No. 102382

NORTH EAST  
CORNER OF  
PERTH CONDO  
PLAN No.15

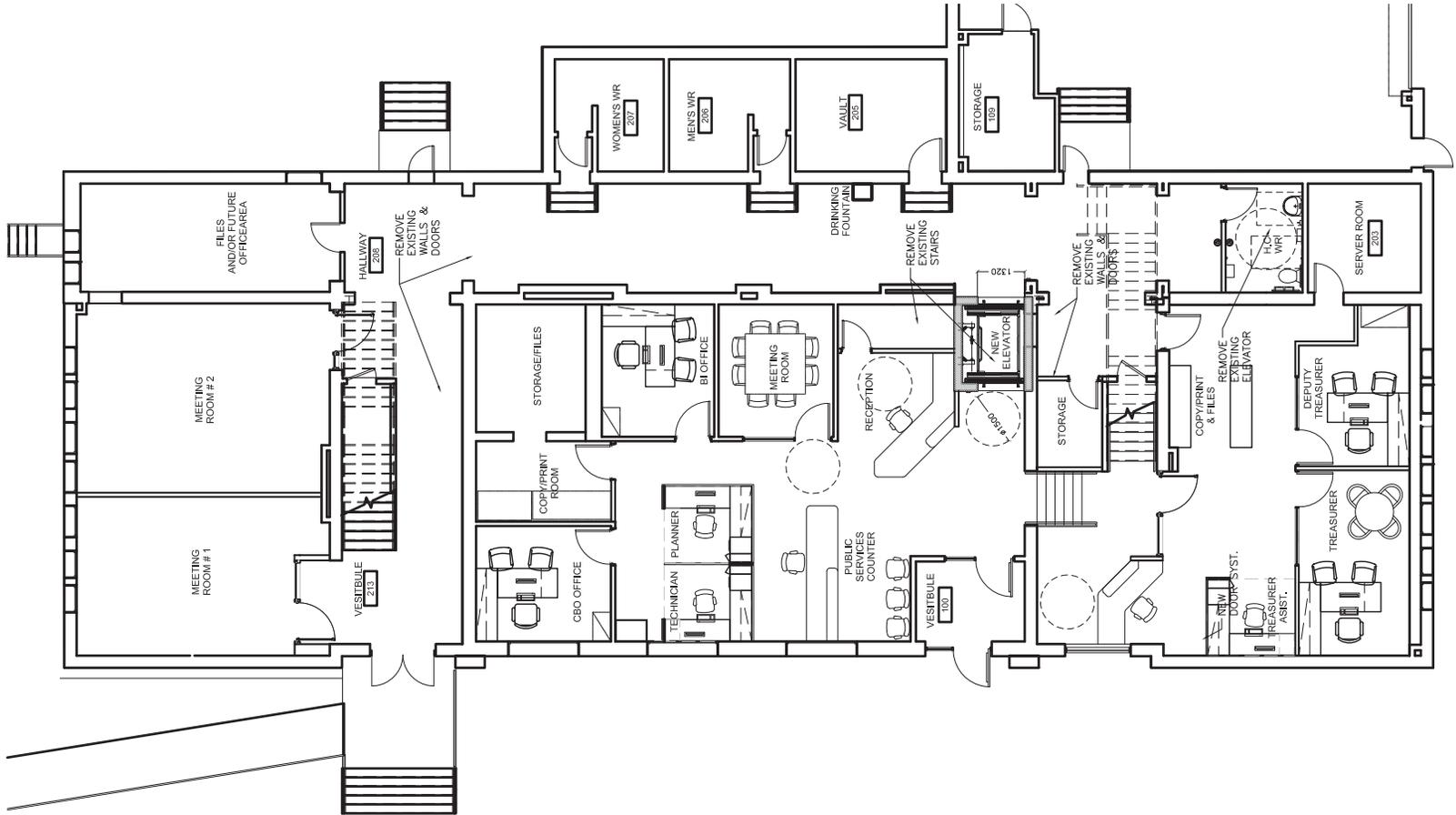
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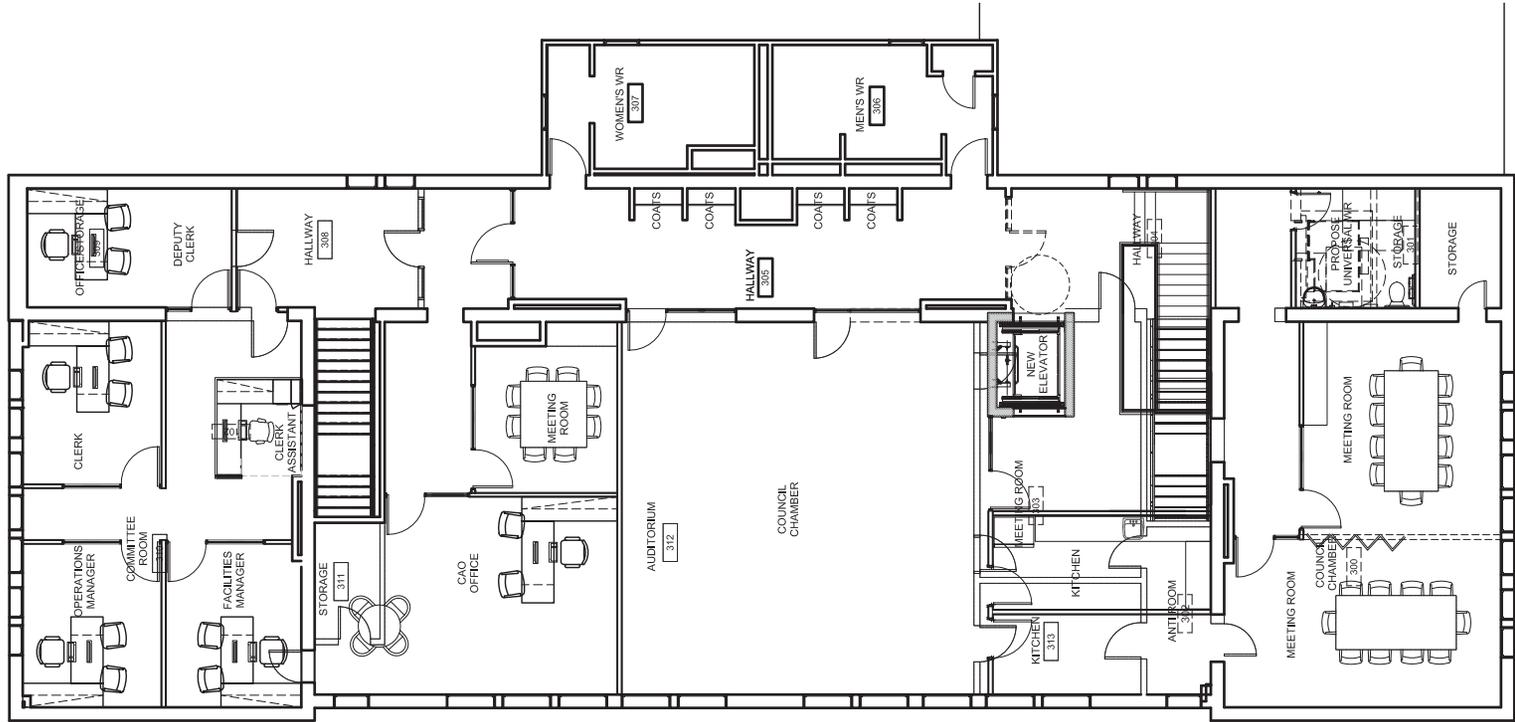
## Preliminary Conclusions

### Existing Building Evaluation

- Weighed Costs to renovation approaches
  1. Full Mechanical HVAC replacement.
  2. Partial Electrical Replacement
  3. Major renovations to As New Condition.
  4. Renovations to Functional Plan
  5. Site works to suit







# Municipal Campus Feasibility Study

## Building Option II

Scope:

- Consolidated New Building:
  - Fire Hall and Museum Demolished







## OPTIONS COMPARISON SYNOPSIS

OPTIONS	Construction Costs Final Cost with HST Rebate.	
Option 1 - Major Renovations within Existing Facilities Fire Hall and Museum Demolished	BASE COST Soft Costs F&E <b>Total</b>	\$ 3,559,715.91 \$ 379,364.60 \$ 417,368.64 <b>\$ 4,356,449.15</b>
Option 1a - New Freestanding Fire Hall and Museum	BASE COST Soft Costs F&E <b>Total</b>	\$ 2,204,467.58 \$ 208,992.05 \$ 15,254.00 <b>\$ 2,428,713.63</b> \$ <b>6,785,162.78</b>
Option 2 - All New Facilities	BASE COST Soft Costs F&E <b>Total</b>	\$ 5,275,862.70 \$ 483,613.85 \$ 326,039.04 <b>\$ 6,085,515.59</b> \$ <b>6,085,515.59</b>



<b>MUNICIPALITY OF WEST PERTH. BUILDING ENERGY CONSUMPTION</b>			
<b>Building Performance Factors</b>	<b>OPTION 1</b>	<b>OPTION 1a</b>	<b>OPTION 2</b>
	<b>Renovation to Office</b>	<b>Free Standing Fire Hall</b>	<b>Combined New Building</b>
Floor Area	1,674 m <sup>2</sup>	1,243 m <sup>2</sup>	2,056 m <sup>2</sup>
Exterior Wall Area	1,902 m <sup>2</sup>	821 m <sup>2</sup>	849 m <sup>2</sup>
Average Lighting Power	9.69 W/m <sup>2</sup>	9.69 W/m <sup>2</sup>	9.69 W/m <sup>2</sup>
Occupant Load	67	39	82
% Windows	18%	14%	31%
<b>Energy Use Intensity</b>			
Electricity EUI	173 MJ/sm/yr	162 MJ/sm/yr	154 MJ/sm/yr
Fuel EUI	426 MJ/sm/yr	514 MJ/sm/yr	280 MJ/sm/yr
Total EUI	599 MJ/sm/yr	676 MJ/sm/yr	434 MJ/sm/yr
<b>Life Cycle Energy Use/Cost</b>	over 30 years	over 30 years	over 30 years
Life Cycle Electricity Use	2,410,560 kWh	3,654,240 kWh	3,210,066 kWh
Life Cycle Fuel Use	21,393,720 MJ	35,506,680 MJ	20,168,760 MJ
	\$ 479,257.80	\$ 357,922.18	
<b>Life Cycle Energy Cost</b>	<b>\$</b>	<b>837,179.98</b>	<b>\$ 491,718.95</b>

## Energy Costs over 30 Years



## 30 YEAR LIFE CYCLE OPTIONS COMPARISON SYNOPSIS

OPTIONS		Construction Costs	Operating Costs	Total Life Cycle Costs
<b>Option 1 - Major Renovations within Existing Facilities</b>	<b>Total</b>	\$ 4,356,449.15	\$ 479,257.00	\$ 4,835,706.15
Exist. Fire Hall and Museum Demolished				
<b>Option 1a - New Freestanding Fire Hall and Museum</b>	<b>Total</b>	\$ 2,428,713.63	\$ 357,922.18	\$ 2,786,635.81
<b>Total Combined Costs</b>		<b>\$ 6,785,162.78</b>	<b>\$ 837,179.18</b>	<b>\$ 7,622,341.96</b>
<b>Option 2 - All New Facilities</b>	<b>Total</b>	<b>\$ 6,085,515.59</b>	<b>\$ 491,718.95</b>	<b>\$ 6,577,234.54</b>

## 30 Year Life Cycle Costs



# Practical Constraints

## 1. Effective use of available Physical Facilities



# Practical Constraints

1. Effective use of available Physical Facilities
2. Cost Effectiveness (Budget)



# Practical Constraints

1. Effective use of available Physical Facilities
2. Cost Effectiveness (Budget)
3. **Time Effective (Schedule)**



# Practical Constraints

1. **Effective use of available Physical Facilities**
2. **Cost Effectiveness (Budget)**
3. **Time Effective (Schedule)**



**Thank You**

