Market and Feasibility Study
Waterfront Planning

PHASE TWO & THREE
Financial Analysis & Defragmentation Strategy

SUMMARY OF FINDINGS
&
RECOMMENDATIONS

JUNE 2011
PREAMBLE

As part of the vision to redevelop the Mission’s waterfront and downtown area, the District retained Patrick Cotter Architect Inc. (PCA) to complete Phases II and III (financial analysis and land defragmentation strategy) of the Waterfront Market Analysis and Feasibility Study. The primary purpose of the Waterfront Market Analysis and Feasibility Study is to determine the overall market and financial viability to planning and redeveloping the waterfront and downtown lands.

Phase I undertook a market analysis of the waterfront identifying the number and type of residential units and the amount square footage of commercial that can be absorbed. Phases II & III involved a Financial Analysis and a Land Defragmentation Strategy which set out to test the feasibility of waterfront redevelopment from a developer’s perspective. This Summary of Findings & Recommendations Report provides the reader with a comprehensive summary of Phases II and III’s investigation and findings.

Although the studies remain as an independent expert’s informational document not formally endorsed by Council, they demonstrate that a combination of uses on the waterfront is economically viable when undertaken systematically and that proceeding with the next phase (Implementation - Phase IV) of the Waterfront Market and Feasibility Study is warranted. A Council resolution to proceed with Phase IV is required.

The following Glossary of terms and concepts may prove helpful to the reader when considering the findings and recommendations of this report.

GLOSSARY

- **Baseline Concept Plan (BCP)** – The Baseline Conceptual Plan is based on a development scenario created in Phase I (Market Analysis) of the Waterfront Market and Feasibility Study. The BCP has been used as a starting point for the financial analysis and has been continually modified and enhanced with greater detail based on information provided by the District and Sub-Consultants. It should be clearly noted that the Baseline Conceptual Plan is not to be considered a Land-Use Plan for the Waterfront Area, but simply a tool that allows the Consultant to provide more accurate costing estimates through financial modeling. The final waterfront land use plan may or may not consider the various elements of the BCP.

  The Baseline Conceptual Plan and corresponding studies are a vital step in flushing out concerns and questions given the importance of this exercise. The District advised that it does not have any preconceptions to land use on the Waterfront Area. The range of proposed uses on the Waterfront Area is extensive and will be determined as part of a comprehensive planning exercise.

- **Financial Analysis** – addresses development cost assumptions, revenue assumptions, financial modeling and a financial viability assessment. The Financial Analysis has two distinct components (both of which are based on Baseline Concept Plan):

  - **Infrastructure Costing** which has been conceptually designed and costed on a year by year basis. A summary of significant items for the Infrastructure Development Program are found in Appendix C.

  - **Vertical Development** includes a development model for the building type(s) contained in each sub-precinct. Timing of each sub-precinct can be altered based on development approach.
- **Highway Bypass Re-alignment** – a major planning strategy of the Baseline Concept Plan is the re-alignment of the highway by-pass that bisects the site. The re-alignment integrates a new road and parcel network which opens up more developable land on the waterfront.

- **Implementation Strategy** – addresses alternative development scenarios, process and determination of next steps and associated costs.

- **Internal Rate of Return (IRR)** – the internal rate of return on an investment or project is the "annualized effective compounded return rate" or discount rate that makes the net present value (NPV) of all cash flows (both positive and negative) from a particular investment equal to zero. In more specific terms, the IRR of an investment is the interest rate at which the net present value of costs (negative cash flows) of the investment equals the net present value of the benefits (positive cash flows) of the investment.

  IRRs are commonly used to evaluate the desirability of investments or projects. The higher a project's internal rate of return, the more desirable it is to undertake the project. Assuming all projects require the same amount of up-front investment, the project with the highest IRR would be considered the best and undertaken first. A firm (or individual) should, in theory, undertake all projects or investments available with IRRs that exceed the cost of capital. Investment may be limited by availability of funds to the firm and/or by the firm's capacity or ability to manage numerous projects.

- **Land Defragmentation Strategy** – outlines the Consultant’s approach to minimize the amount of private land required to complete the transportation network and includes recommended sequencing for best achieving a reorganized and contiguous development at the Waterfront.

- **Market Analysis** – addresses engagement, interpretation of the 2006 design concept, residential market study, commercial market study and a market viability assessment.

- **Precincts** – Precincts included in the Baseline Concept Plan are:
  - Core Precinct
  - East Precinct
  - West Central Precinct
  - North Precinct
  - West Precinct

- **Waterfront Zones** – The Baseline Concept Plan organizes the waterfront edge development into the following categories:
  - Working Waterfront (West Central Precinct)
  - Public Recreation Waterfront (Core Precinct)
  - Destination Waterfront (Core and portions of East Precincts)
  - Residential Waterfront (East Precinct)
1. INTRODUCTION

The District of Mission is located along the Fraser River – a water resource that has been central to the development of the community given its industrial legacy. The river continues to have an industrial function, but increasingly, it is being viewed in terms of the opportunities it presents for mixed-use residential and commercial waterfront development. The waterfront represents a significant opportunity for Mission to achieve urban land intensification for over 60 hectares (150 acres) of land designated for high-density residential and mixed commercial/residential uses.

As part of the vision to redevelop the waterfront, the District retained Patrick Cotter Architect Inc. (PCA) to complete Phase 2 and 3 of the Market and Feasibility Study. The key purpose of the Study is to determine the overall market and financial viability to planning and redeveloping the waterfront lands.

PCA retained AMC Development Management LLP (AMC) to assist in completing the Study and various other sub-consultants to complete specific components of the Study. PCA and AMC will be collectively referred to as the Consultant throughout this document.

2. OBJECTIVES

The study's findings and recommendations will be used in the policy-making and planning of future land use, zoning, capital improvements, and economic incentives. Phase 2 and 3 of the Study will determine the financial viability of developing the Waterfront Area and provide a strategy for assisting third-party developer(s) with Land Defragmentation.

The engagement is divided into four discrete components:

1) Market Analysis (Completed: August 16, 2010) – addresses engagement, interpretation of the 2006 design concept, residential market study, commercial market study and a market viability assessment.

2) Financial Analysis (Completed as part of the Phase 2 & 3 Market And Feasibility Study) – addresses development cost assumptions, revenue assumptions, financial modeling and a financial viability assessment.

3) Land Defragmentation Strategy (Completed as part of the Phase 2 & 3 Market And Feasibility Study) – addresses a preliminary land defragmentation strategy and a land defragmentation assessment.

4) Implementation Strategy (To Be Determined) – addresses alternative scenarios, process and determination of next steps.

The goal of the study is to provide the District with clear decision-making direction with respect to the future commitment to, and investment in, the waterfront redevelopment initiative.
3. **SUMMARY OF FINDINGS**

**Baseline Concept Plan & Financial Analysis**

The Consultant prepared the Baseline Concept Plan, which outlined potential land-uses and densities for the East, Core, North, West-Central and West Precincts. *(The Precincts were further divided into Sub-Precincts and numbered. For instance East Precinct #1 is referred to as EP-1.)* See Appendix A. PCA has also provided a summary of its Planning Considerations & Recommendations in Appendix B.

The Consultant retained Creus Engineering Ltd. to assist it in preparing an Infrastructure Phasing Plan for the build-out of the Baseline Concept Plan, which is summarized in Appendix C. The Consultant also retained The Altus Group to provide general costing for the proposed vertical development.

The Consultant incorporated the information from the sub-consultants, along with a proposed Phasing Plan and Absorption Schedule through to the Year 2034, to determine the overall financial viability of the Baseline Concept Plan at Build-out and for a proposed Phase 1 of development. The Financial Models were further analyzed to determine a “Best Estimate” Absorption Schedule and a “Slower” Absorption Schedule to understand the effects if the Development were to proceed at a slower rate than anticipated.

A summary of the results of the Financial Analysis are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Best Estimate Absorption</th>
<th>Slower Absorption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build-out Model</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected Revenue</td>
<td>$1,690M</td>
<td>$1,223M</td>
</tr>
<tr>
<td>Projected Costs</td>
<td>$1,352M</td>
<td>$996M</td>
</tr>
<tr>
<td>Development Profit</td>
<td>$338M</td>
<td>$227M</td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>24.0%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Years to Payback</td>
<td>6.7 yrs</td>
<td>8.3 yrs</td>
</tr>
<tr>
<td><strong>Phase 1 Model</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected Revenue</td>
<td>$119.5M</td>
<td>$80.0M</td>
</tr>
<tr>
<td>Projected Costs</td>
<td>$110.0M</td>
<td>$74.8M</td>
</tr>
<tr>
<td>Development Profit</td>
<td>$9.5M</td>
<td>$5.2M</td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>29.4%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Years to Payback</td>
<td>2.9 yrs</td>
<td>3.2 yrs</td>
</tr>
</tbody>
</table>

Typically, an Internal Rate of Return of greater than 20% would be sufficient to proceed further with Development. However, Years to Payback may be more critical in determining the up-front risk.

It must be cautioned that while revenue assumptions are based on information provided in “Phase 1 - The Market Study”, they are only projections and market conditions can change significantly, which could have a material effect on the anticipated Development Profit. Additionally, the cost assumptions are based on conceptual designs, to which market conditions could change significantly. All of the revenue and cost assumptions should be revisited regularly, if Planning is to proceed.
Specifically, the Consultant is recommending proceeding with Planning of Phase 1. Phase 1 would include Sub-Precincts CP-1, EP-8, CP-6A*, EP-13, CP-10A*, which would consist of approximately 365 residential units and between 50,000 and 80,000 square feet of commercial space.

* Note: “A” refers to the east half of the Sub-Precinct only

Due to the proportionately higher infrastructure costs to access the West and West-Central Precincts, those Precincts have not been included in this initial Phase in order to minimize the Years to Payback. This is not to say those Precincts could not proceed independently of Phase 1, provided they are consistent with what the District envisions for the Waterfront.

**Land Defragmentation Strategy**

The Consultant has also prepared a detailed Land Defragmentation Strategy. As part of the strategy, the Baseline Concept Plan has minimized the changes to the existing street network retaining the majority of roads, and, where necessary, extending the natural grid of the transportation network while creating parcel blocks that are sized appropriately for future development. Drawing A-005 (Appendix D) breaks down the lands affected by the proposed road network.

**Basic Defragmentation Strategies include:**

1. Adopt a land-use plan, OCP and zoning bylaw that encourages the relocation of dispersed on-site uses to consolidated similar uses.
2. Define minimum parcel sizes for future development.
3. Look to create Public/Private Partnerships.
4. Indentify land “Consolidation Areas”.

As a guideline the following should be considered in order of priority:

1. Defragmentation As Part of Land Development
2. Defragmentation by Land Dedication
3. Defragmentation by Expropriation and Compensation

Although the redevelopment of the Mission Waterfront Lands is challenging, the Baseline Concept Plan and initial feasibility studies establish a vision, that when implemented with clear OCP and rezoning policies should be achievable. An essential component of the success of the redevelopment will be a strong public initiative with one or more major development partners.

**RECOMMENDATIONS**

The financial model shows that profit levels are just above the typical minimum requirement of 20% Internal Rate of Return. Based on this requirement being met and the District’s land ownership opportunity in Phase 1, it is the Consultant’s recommendation to proceed with Planning of the Study Area.

However, as more detailed planning is completed, it is important to continually test the financial model with more accurate costing and market data. Therefore, the recommendation to proceed is not a blanket recommendation that the Project is financially viable. Rather, the Consultant recommends that there is sufficient evidence of financial viability to proceed with the next step of planning, design and detailed costing.
As more detailed design and costing is prepared, the District and any Developers in the Waterfront will continually need to test their financial models and, if required, be prepared to put the Development on hold until market conditions change.

Consideration has been also given to the infrastructure components of the Civil, Geotechnical and Environmental disciplines and has been factored into financial viability of the proposed project. As expected, due to previous site uses and the required design elevation increase, the projected infrastructure costs are substantial. In order to maintain the financial viability of the proposed project, infrastructure required to service upcoming development should be implemented on an as needed, phase by phase basis. The cost estimates are consistent with this recommendation and are structured such that infrastructure costs are designated to specific precincts. In addition, any ventures such as a fill site or contaminated material remediation site that the District can operate on-site will prove useful in reducing the cost for import fill. Given the previous use of some parcels on the site some attention should be given to site remediation funding opportunities through the Federation of Canadian Municipalities (FCM) Green Municipal Fund (GMF). Through GMF, FCM provides funding to three types of environmental initiatives: plans, studies and projects. Grants are available for sustainable community plans, feasibility studies and field tests, while a combination of grants and loans are available for capital projects. Funding is allocated in five sectors of municipal activity: brownfields, energy, transportation, waste and water.

It is the Consultant’s opinion that the Financial Analysis shows acceptable results to proceed to Phase IV of the Study - Implementation.

The Consultant is recommending that The District of Mission proceed with the following next steps:

1. Proceed with planning, costing and financial modeling for Phase 1 of the Baseline Concept Plan.

2. Begin discussions with the Ministry of Transportation regarding proposed Highway Bypass realignment.

3. Begin discussions with land owners and stakeholders with particular focus on the Phase 1 development area.

4. Begin discussions with potential Master-Developers for Phase 1.

5. Pursue a design-based planning process, executed incrementally throughout the life of the plan, starting with an initial scope focused on detailed design of open space and public infrastructure for Phase 1.

6. Establish a detailed, design-based vision for each Precinct that would serve as a guiding document for detailed development proposals.

7. Establish a clear development and design review process, that would balance prescriptive and performance based objectives to permit flexibility and adaptability through the life of the plan.
District of Mission

Waterfront Planning - Marketing and Feasibility Study

Summary of Planning Considerations & Recommendations

MAY - 2011

patrick cotter architect inc.
design based planning

Unit #235, 11300 No. 5 Road
Richmond, BC V7A 5J7
T 604 272 1477 | 604 272 1471
www.cotterarchitects.com

DISTRICT OF MISSION – MARKET & FEASIBILITY STUDY – WATERFRONT PLANNING
1.0 DESIGN CONCEPT

Building on the precinct model from the *Mission Landing Waterfront Workshop Plan (2006)*, the Market Analysis and comments from Staff and Council, the final *Baseline Concept Plan* (BCP) was developed as the framework on which to base the Financial Analysis and as the model for further planning. *(Appendix A)*

A realistic and feasible development plan will require an orderly sequencing of servicing and development, and a strong commitment to follow the development sequence if the overall planning vision and potential is to be fully realized.

1.1 Overview:

The BCP takes as it starting point the established street systems of the waterfront development area. From this base, the street network is extended in a regular grid pattern to achieve optimally sized development parcels while minimizing the land acquisitions required to create them. It also recognizes the importance of pedestrian and vehicular connections to the downtown core. This connection between downtown and the waterfront is an important component for revitalizing both areas and takes advantage of the West Coast Express transit hub located between them.

1.2 Key Concepts:

1.2.1 Destination Waterfront

The Destination Waterfront, located in the Core Precinct, will be the catalyst for the entire project and must be implemented in Phase 1 of the development plan. It will be the single most important component of the redevelopment strategy attracting home buyers to the area as well providing a key marketing tool for development partners. *(Appendix E and Figure 1)*
1.2.2 Horne Street as “High-Street”

The connection of downtown to the waterfront is a core concept of the redevelopment plan. It will consist of the Destination Waterfront, a mixed use urban residential street, the transit hub and a pedestrian friendly connection to downtown.

1.2.3 Waterfront Zones:

Having access to waterfront property is desirable and with a diversity of uses along its length, it can become an important tool for supporting the adjacent land uses. The BCP organizes the waterfront edge development into the following categories:

- Working Waterfront (West Precinct)
- Public Recreation Waterfront (Core Precinct)
- Destination Waterfront (Core Precinct)
- Residential Waterfront (East Precinct)
1.2.4 Precincts

The primary organizational strategy for the precincts is based on the existing boundaries of the site namely the highway bridge, the CPR railway and railway bridge, the re-aligned bypass route, Horne Street and the escarpment separating the downtown core from the waterfront district. Precincts included in the Baseline Concept Plan are:

- Core Precinct
- East Precinct
- West Central Precinct
- North Precinct
- West Precinct

1.2.5 Raising the Grade

The BCP includes a strategy for raising the ground plane one storey by creating a parking level at the current grade and starting development above. This takes advantage of the dyke system (existing and proposed) and minimizes the amount of excavation required for underground parking and reduces the amount of fill required to raise the site above the flood plain.

1.2.6 Public Parking

The BCP includes adequate public parking in convenient locations that is needed to support the commercial spaces in general and the Village Commercial Centre in particular.

1.2.7 Green Laneways

The existing laneways between Durieu Street, Mershon Street and Horne Street are designed to become part of development parcels to facilitate the underground parking requirements. A right-of-way for vehicular traffic and surface parking would be maintained but the laneway would be developed in the form of a residential street.

1.2.8 Green Streets

The BCP calls for the development of Durieu Street as a “Green Street” connecting a park in the North Precinct with the Public Recreation Waterfront in the Core Precinct. The road right-of-way would be larger to accommodate a landscape median and double tree-lined boulevards on both sides of the street to create a continuous green corridor that promotes a pedestrian orientated neighbourhood.

1.2.9 Highway Bypass Re-alignment

A major planning strategy of the BCP is the re-alignment of the highway by-pass that bisects the site. This integrates it into the new road / parcel network and opens up more developable land on the waterfront. (Appendix F and Figure 2)
FIGURE 2 - PRECINCTS, STREET GRIDS + HWY ALIGNMENT

1.2.10 Transportation Hub

The West Coast Express station located in the North Precinct already serves as a transportation hub for the area. It will be a key element in establishing the Mission Waterfront Lands as affordable waterfront living within easy access of Metro Vancouver.

1.2.11 Balanced Development Mix

The BCP calls for a variety of uses across the site developed at a pace governed by market demand. All phases of development should include a mix of supporting uses that minimize the upfront infrastructure costs and provide affordable and attractive neighbourhoods. This is of particular importance in Phase 1 of the project which will set the tone for the rest of the development.

1.2.12 Densities, Building Heights and Site Coverage (Appendix A & B)

- Densities range across the development study area from 0.25 to 2.4 F.A.R.
- Building heights range from 1 to 6 storeys.
- Site coverage ranges from 25 to 80%

1.2.13 Zoning Criteria

Comprehensive Development zones should be used to promote flexibility in the design of developments. Design guidelines should promote view corridors, open space corridors, highly developed pedestrian and public realm, strong street level interface between all buildings and streets, establishing desired setbacks, proximities and adjacencies.
1.2.14 Defragmentation Strategy

A key element of the overall redevelopment of the waterfront lands will be the acquisition and re-distribution of land ownership in line with the Baseline Concept Plan. Given the limited resources available to the District, it is critical that land acquisition be managed to minimize the exposure of the tax base while at the same time creating a favourable climate for major development partners to embrace and invest in the long-term development vision. The BCP minimizes changes to the existing street network while creating parcels that are appropriately sized for future development. (Appendix G)

Strategies for Defragmentation:

- Adopt a land use plan, OCP and zoning bylaws that encourage the creation of appropriate land development parcels.
- Define minimum parcel sizes.
- Consider public private partnerships with “Master Developer” partners.

Methods of Defragmentation:

- Defragmentation achieved through planning that respects and works within the existing street grid, and strategically limits the engagement of privately held lands to a minimum.
- Defragmentation achieved through consolidation of privately held lands through the development process.
- Defragmentation achieved through the dedication of private lands through the development process.
- Defragmentation achieved through expropriation, disposition, or acquisition of publicly held lands.

1.3 Conclusion:

The Baseline Concept Plan confirms the validity of the precinct designations and recommends further refinement by integrating an appropriate street grid reinforced by a re-alignment of the highway by-pass. This grid of streets encourages pedestrian and vehicular connectivity to the downtown core as a key element to the success of both areas. Adopting defragmentation strategies to reduce upfront costs will be essential in implementing the BCP over time. The first phase of development should be focused on the Horne Street corridor starting with the destination waterfront, providing the full range of civic, mixed-use, village commercial, and residential uses, as well as public open space, and concentration of retail, entertainment and marine uses at the waterfront. Development of the balance of the lands should proceed both eastward and westward, with consolidation and redevelopment managed through minimum parcel sizes, and in coordination with an orderly plan for servicing.