

7 - Facility Master Plan Strategy

Victoria Regional
Transit
Commission

Strategic Priorities

- To meet emission reduction objectives of the **Clean BC Strategy** BC Transit committed to transition from diesel bus fleets to battery electric bus fleets by 2040.
- **The Victoria Region Transit Future Plan – Revised 10 Year Transit Vision**
 - Establish Critical Transit Facilities
 - Implement RapidBus and Frequent Transit Network
- **Local Governments Plans** – Local governments have OCPs, Climate Action Plan & Transportation Plans and transit plays an important role in supporting these plans



Facility Planning Guiding Principles

- Service (Fleet) expansion and electrification targets
- Electrification infrastructure scenarios:
 - Scenario 1: Charging infrastructure to support a demonstration fleet of 10 BEBs
 - Scenario 2: Charging infrastructure maximized without distribution system upgrades
 - Scenario 3: Fully electric fleet with associated charging infrastructure and distribution system upgrades
- Optimize existing properties
- Maintain existing operations
- LEED Gold, Safe Design Certification



Recommendations for:

- Investments in existing transit operating centres
- Advancement of new transit operating centres

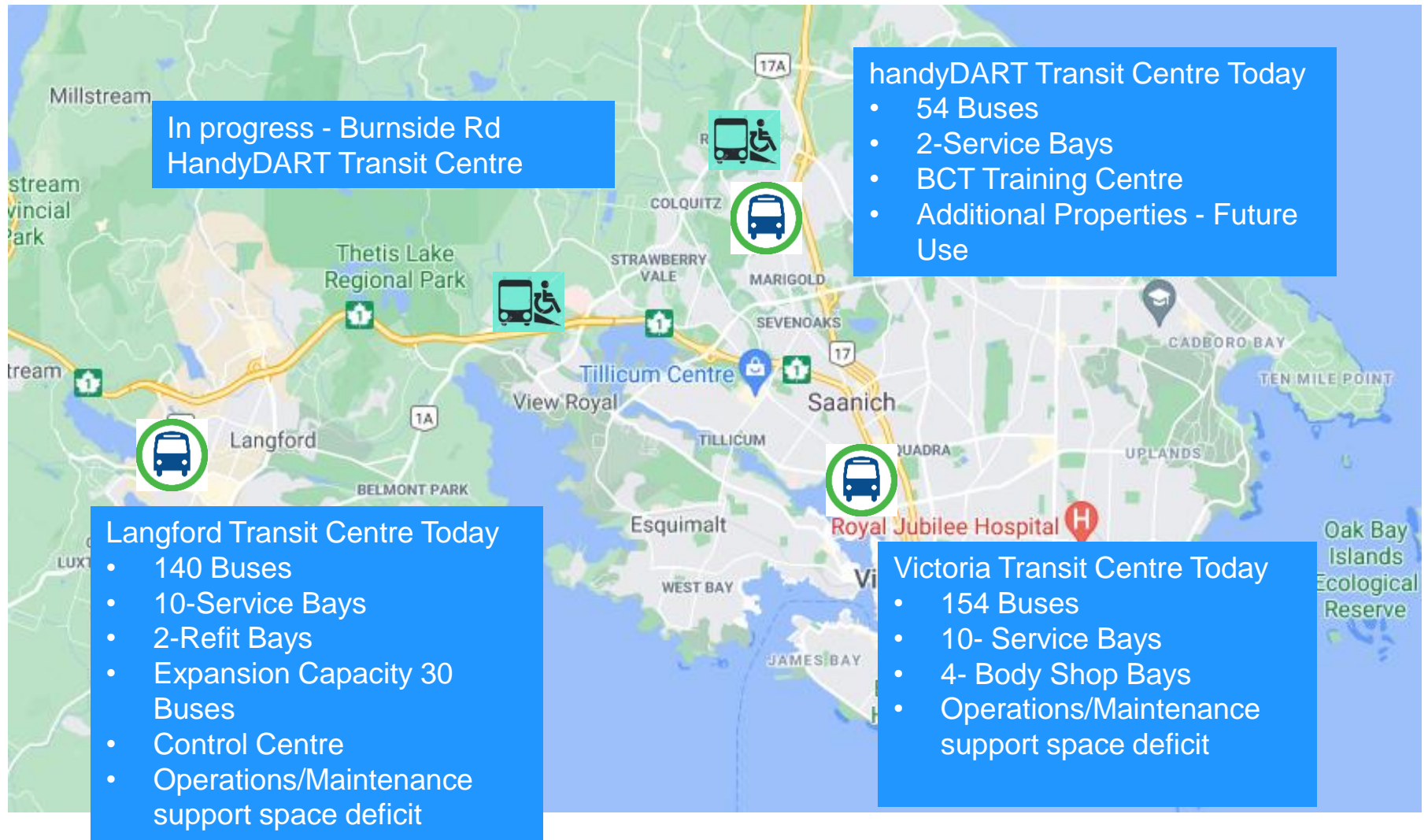
Fleet Projection Assumptions – To Support Transit Strategies

The Transit Future Plan and Update envisions significant transit service investments over the next 7 years including:

- Short-term – Transit Expansion Plans identify 6 buses and 60,000 service hours
- Design to not preclude articulated buses in future

Year / Growth Rate	2020	2025	2030	2035	2040	2045
1.0%	294	309	325	341	359	377
2.5%	294	333	376	426	482	545
3.0%	294	341	395	458	531	616
5.0%	294	375	479	611	780	996

Today - Victoria Operations Facilities



Master Plan Scenarios

25-year Scenarios were developed to support a 550-600 bus fleet that included the existing Victoria & Langford Transit Centres, handyDART, three options for a new conventional Transit Centre, and a 2nd future new conventional operating centre at an undetermined location

Scenario	Victoria Transit Centre (VTC)	Langford Transit Centre (LTC)	handyDART Transit Centre	New Transit Centre Phase 1 (CTC)	New Transit Centre Phase 2 (CTC)	Alternate New Transit Centre	2 nd Future Transit Centre
1	0 – 25+yrs Max 149 bus End 127 BEB	0 – 25+yrs Max 200 bus End 164 BEB	2 – 25+yrs 110 BEB	NA	NA	9-25+yrs 150 BEB	17-25+yrs 150 BEB
2	0 – 25+yrs Max 149 bus End 127 BEB	0 – 25+yrs Max 200 bus End 200 BEB	2 – 25+yrs 110 BEB	9-25+yrs 74 BEB	NA	NA	15-25+yrs 190 BEB
3	0 – 25+yrs Max 149 bus End 127 BEB	0 – 25+yrs Max 200 bus End 200 BEB	2 – 25+yrs 110 BEB	NA	9-25+yrs 144 BEB	NA	17-25+yrs 120 BEB

Multiple Account Evaluation Summary

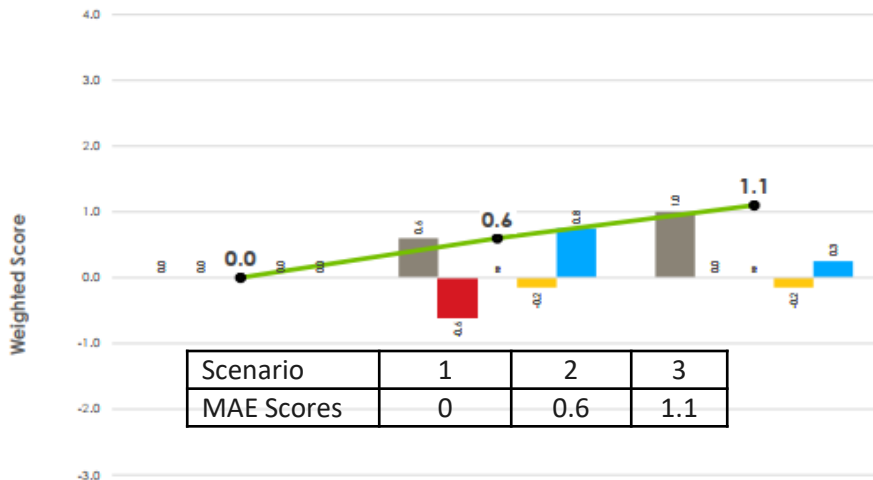
Criteria

- Financial (20%)
- Environment, Sustainability, Social Considerations (15%)
- Transit Operations Performance (20%)
- Implementation (25%)

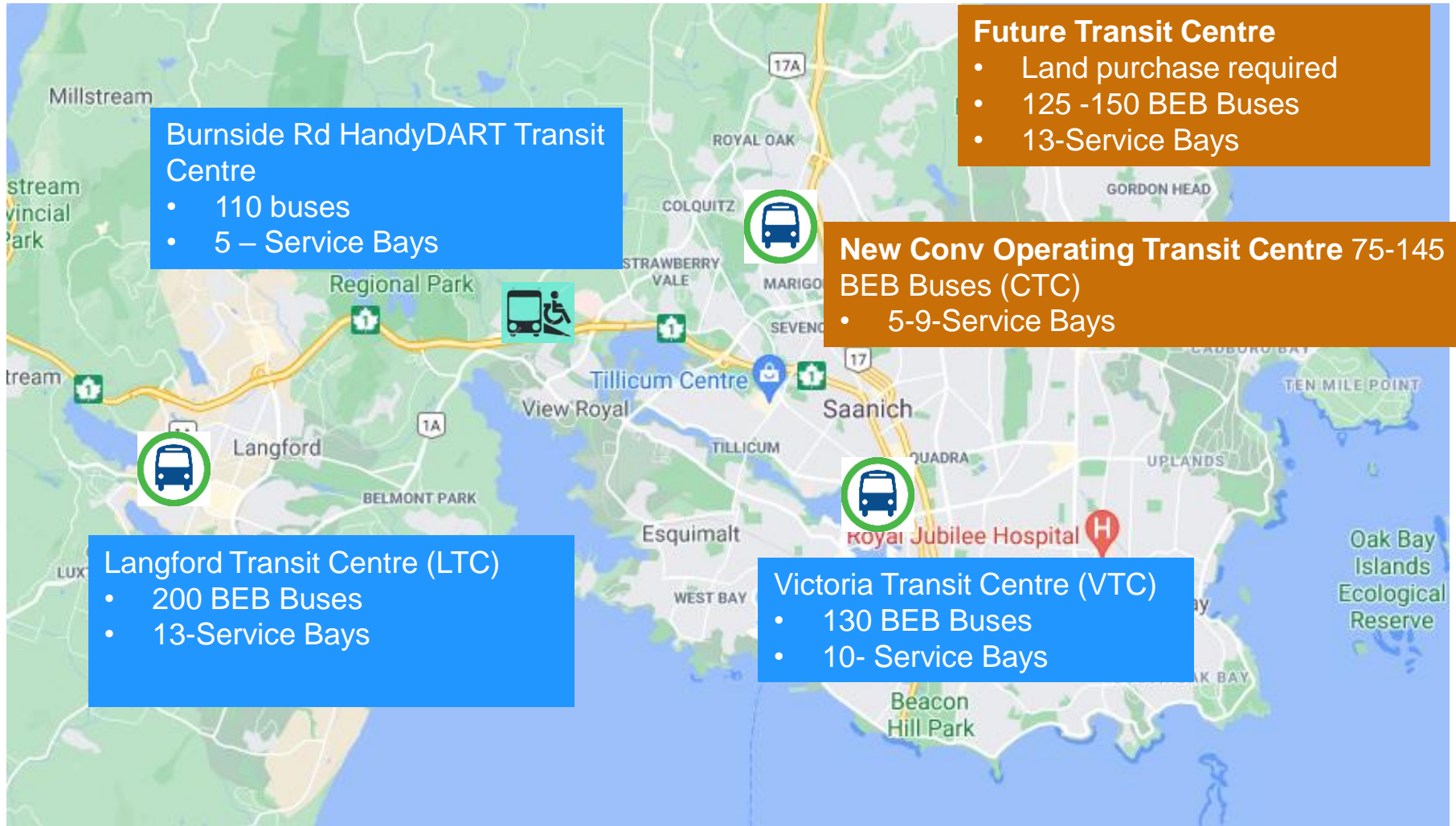
Scenario 3 with 144 bus facility at CTC scores the highest

- Fleet centralized in a geographical optimal location
- Delays need for an additional conventional transit facility to year 18
- Challenges for property acquisition & costs in all scenarios
- Delays the ability to introduce articulated buses

Multiple Account Evaluation - Weighted Score Results



Future State -Victoria Operations Facilities



Phase 1 Modernization Projects

The following Transit Centre Maintenance Modernization and Enhancements projects are being advanced to secure project approvals and funding.

Completed/Active Projects:

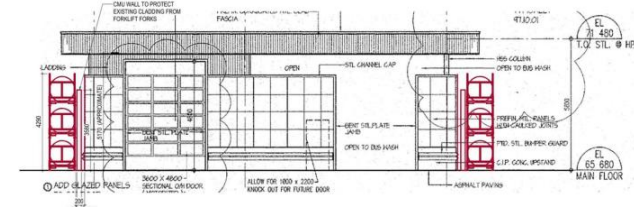
- LTC/VTC – in ground hoist replacements, farebox relocations, maintenance and operations office space improvements

Victoria Transit Centre: – 130 BEB Buses

- Infrastructure to support 10 battery electric bus pilot project for VTC
- Maintenance shop improvements, new electronics workshop, need for ops/maintenance office space

Langford Transit Centre: - 200 BEB Buses

- Additional storage for parts & tires,
- Relocate tire function to increase # of maintenance bays
- Electronic workshop upgrades
- Additional ops/maintenance admin space



Phase 2- Future Modernization Projects

As identified, additional **Transit Centre Maintenance Modernization and Enhancements** projects are needed to address the deficiency in workspace for administration, operations and maintenance at both LTC and VTC as well as yard improvements in anticipation of the transition to BEB Fleet.

Next Steps and Actions needed:

- Space planning - More work is needed to determine long term needs of operations, maintenance and supply services future functional needs and engagement on space planning to inform project planning for VTC & LTC, e.g. - Operations Control
- Planning for Safety & Training operational office space needs
- Advancement of plans to move the Provincial Distribution Centre (Warehouse) offsite
- Work to advance BEB infrastructure at LTC & VTC

Potential projects scope to be advanced:

- Additional admin space at VTC for Operations & Maintenance
- Additional admin & shop space at LTC
- VTC BEB bus parking & infrastructure – Reduces bus parking capacity
- LTC BEB bus parking & infrastructure – Increases bus parking capacity

Master Plan Projects – In Development

New Transit Centre projects identified

- **Phase 1 74 BEB Bus Facility** - Advance design and business case for Commerce Transit Centre battery electric bus operations centre to secure project approvals and funding.
 - Public Engagement and Indigenous Relations Consultant
 - Tendering for preliminary design to support business case and ICIP application
- **Phase 2 ~70 additional BEB Bus Expansion** - Develop options for a future phase 2 expansion of Commerce Circle Transit Centre.
- **5th Transit Centre** - Longer term need to plan and design a 5th Transit Centre of 120-150 buses to accommodate future service and fleet growth
- Acquire lands for future facility growth



O&M Facilities

- HandyDART
- Modernization
- New Facility
- Future Facility

Victoria Transit Centre Facility Modernization

VTC Phase 1 Modernization

VTC Phase 2 Electrification

Langford O&M Facility Modernization

LTC Phase 1 Modernization

LTC Phase 2 Electrification

handyDART Facility

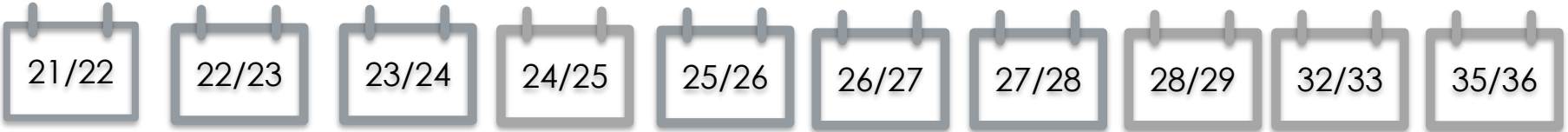
Pre-Implementation

New CTC Transit Centre Phase 1 (74 Bus)

CTC Phase 2 (70 Bus) or 5th Transit Centre (190 Bus)

Land Acquisition Transit Centre

5th Transit Centre (120 Bus)



*does not include

Estimated Costs– Rough Order of Magnitude

Facility Master Plan Costs in 2021 Dollars

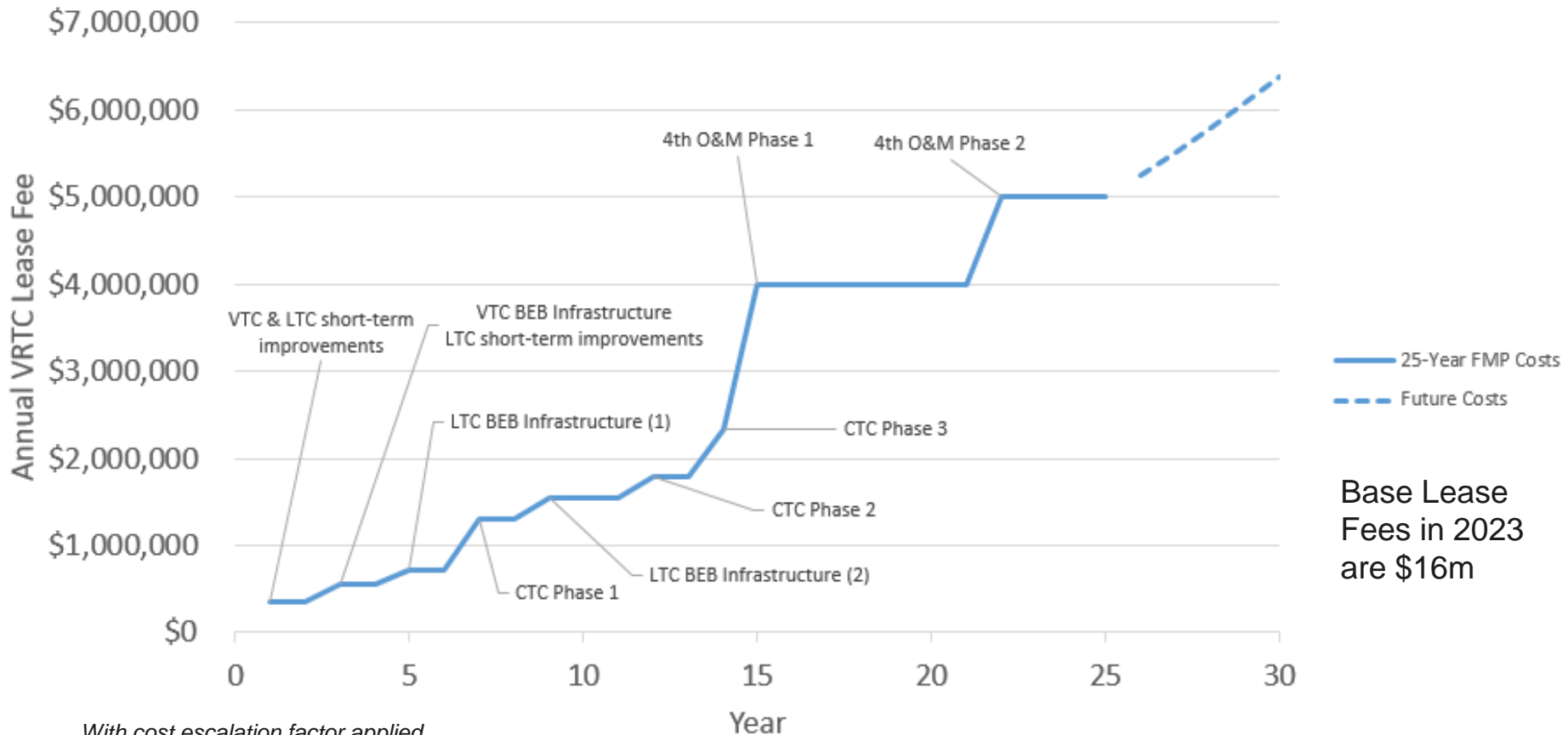
Scenario B Forecast for investment (Million \$ - No escalation 0)									
	Year 0-4	Year-5-6	Year 7-8	Year 9-11	Year 12-14	Year 14-15	Year 15-17	Year 22-25	
Year #	3	5	7	9	12	14	15	22	
VTC	\$38.47								\$38.47
LTC	\$16.31	\$12.02		\$16					\$44.51
CTC			\$42.59		\$14.40	28.1			\$85.09
5th site							\$82.00	\$35.20	\$117.20
									\$285.27
	\$54.78	\$12.02	\$42.59	\$16.18	\$14.40	\$28.10	\$82.00	\$35.20	\$285.27

Facility Master Plan Costs in Escalated Dollars

Scenario B Forecast for investment (Million \$ - Escalation included)									
	Year 0-4	Year-5-6	Year 7-8	Year 9-11	Year 12-14	Year 14-15	Year 15-17	Year 22-25	
Year #	3	5	7	9	12	14	15	22	
VTC	\$43.96								\$43.96
LTC	\$19.23	\$16.74		\$27.38					\$63.35
CTC			\$65.38		\$28.21	\$60.69			\$154.28
5th site							\$185.97	\$112.33	\$298.30
									\$559.89
	\$63.19	\$16.74	\$65.38	\$27.38	\$28.21	\$60.69	\$185.97	\$112.33	\$559.89

Estimated Facility Lease Fees – Rough Order of Magnitude

Victoria Conventional 25-year FMP Cost Estimate



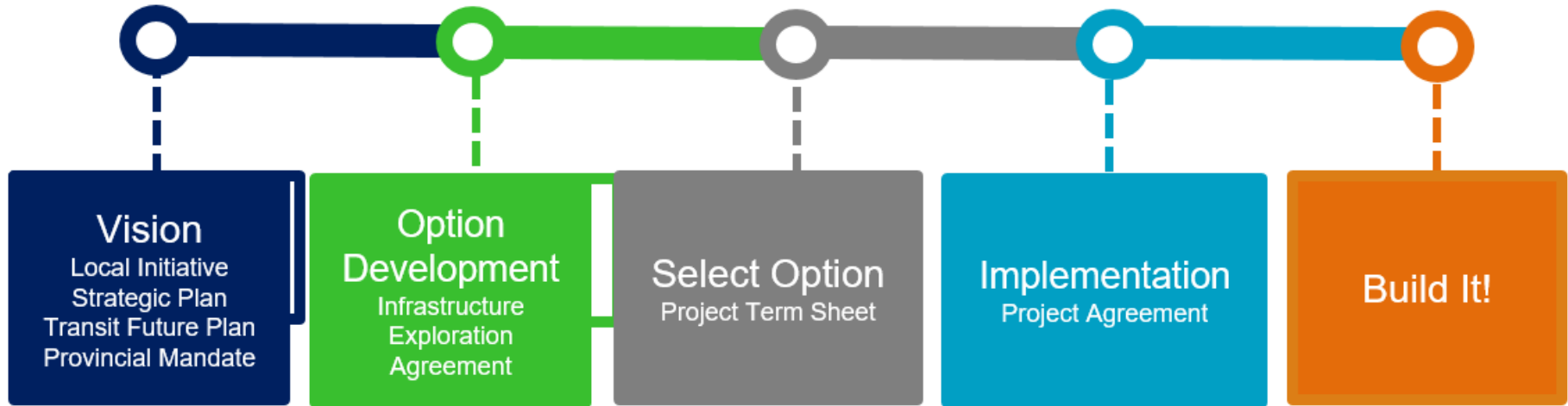
Base Lease Fees in 2023 are \$16m

With cost escalation factor applied
Estimated facility lease fees assume projects are federally funded.
Estimated facility lease fees do not reflect increases/(decreases) on existing asset base
Every 225,000 dollars in VRTC expense is = to \$1 in residential property tax

Facility Master Plan Process

We are here:

Strategy developed for endorsement and advancement



Projects are advanced to provide the capacity to support BEB roll out and fleet growth from the Master Plan Vision to Projects for Implementation. As the projects advance a more accurate schedules and costs will be developed

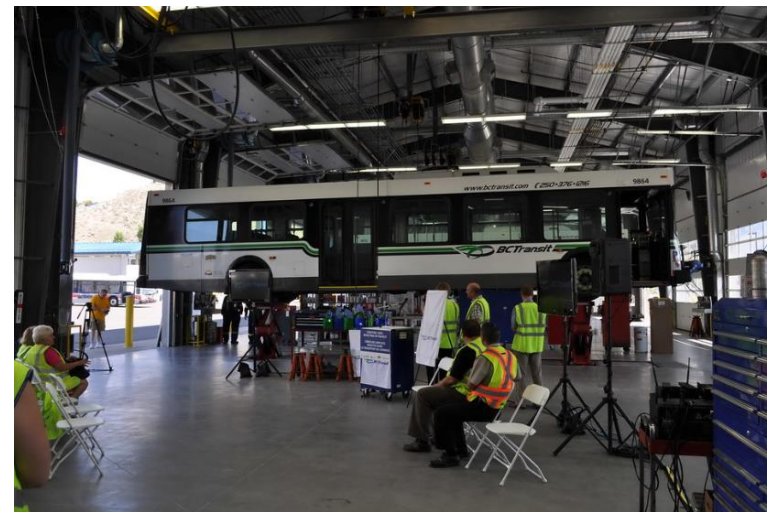
The advancement of projects require:

- Approvals by the Province, Canada (ICIP projects) VRTC and the BC Transit Board (>\$10M)
- Capital programming (budget planning), prepare business cases and applications for funding

Next Steps

The following steps will be taken to advance the Facility Master Plan Strategy:

- VRTC approval of Facility Master Plan Strategy in June 2022 to allow for;
 - Advancement of specific facility modernization and new facility project planning, approvals, business cases and secure funding
 - Individual projects are still subject to approval of local government share of the costs
- Continue to advance handyDART, Conventional Transit Operation Centre and battery electric bus projects
- Space planning for functional needs that require refinement (Maintenance, Operations, Safety & Training and Warehousing)





Thank you

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