City Fibre Strategy

Mayor's Leaders' Table
December 15 2023

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Agenda:

- Purpose
- Timeline
- City's Existing Fibre Optic Coverage
- Telco Broadband Coverage
- Options
    - Expand
    - Partnership
    - Utility
    - Status Quo
- Recommendation
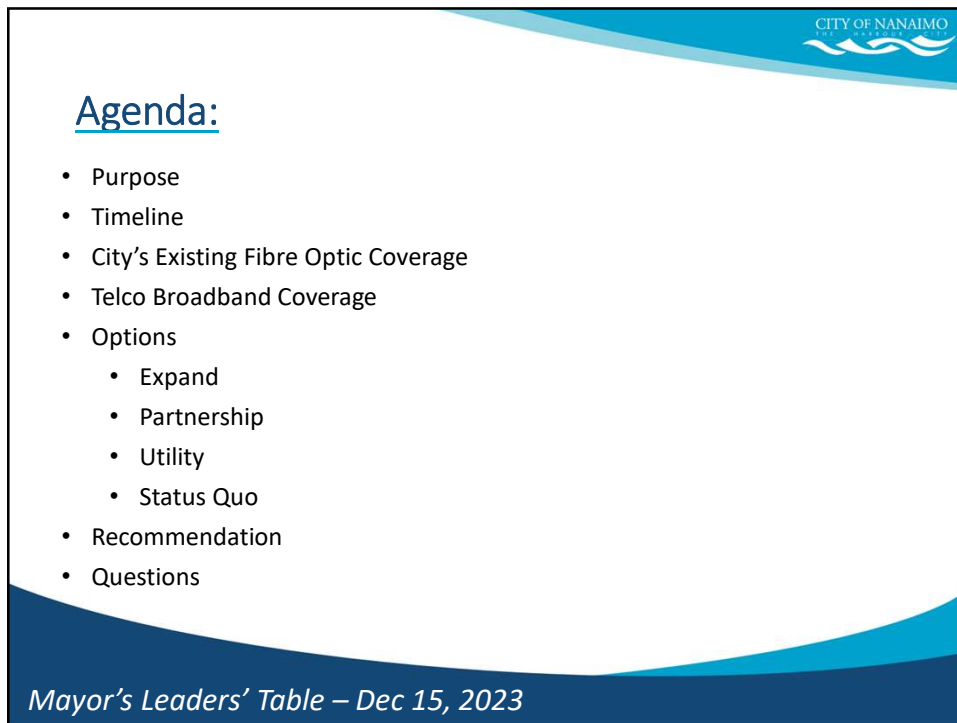- Questions

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CITY OF NANAIMO
THE HARBOUR CITY

Purpose:

To discuss, consider options, and provide recommendations to:

Aug 28 – 2023 Regular Council Meeting
Motion: That Council direct Staff to prepare a report in consultation with community partners referencing the recommendations provided by the Infrastructure Ask Working Group that provides options for expanding and integration the City's fibre network.

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CITY OF NANAIMO
THE HARBOUR CITY

Timeline

2020 Mayor's Task Force

2023 Council Motion

2022 Infrastructure Ask Working Group

- Nanaimo Regional General Hospital Patient Tower
- Equitable Housing
- Community Fibre Optic Network
- Nanaimo Regional General Hospital Cancer Centre
- South End Community Centre

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Council Motion and Options:

Aug 28 – 2023 Regular Council Meeting
Motion: That Council direct Staff to prepare a report in consultation with community partners referencing the recommendations provided by the Infrastructure Ask Working Group that provides options for expanding and integration the City's fibre network.

Options Include:
- Expanding Existing City Fibre
- Actively Pursue Cost-Sharing with Regional Partners
- Becoming a Fibre Optic Utility
- Status Quo

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Existing City Fibre Optic Coverage:
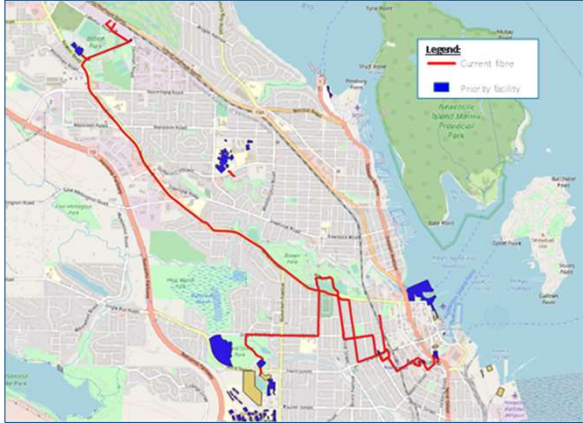
~7km, Connecting the City's Priority Facilities:

- Municipal Hall
- SARC
- Fire Station 1
- Beban
- Public Works
- NIC
- NAC

Considerations:
Telus, Rogers Dependencies
- Connectivity redundancies
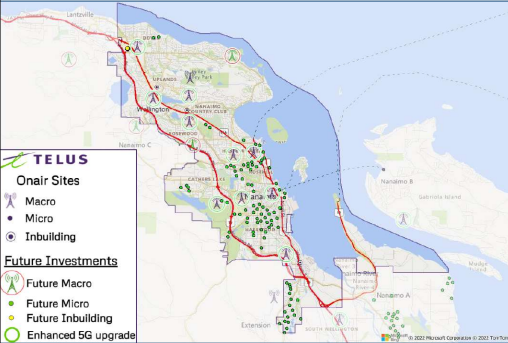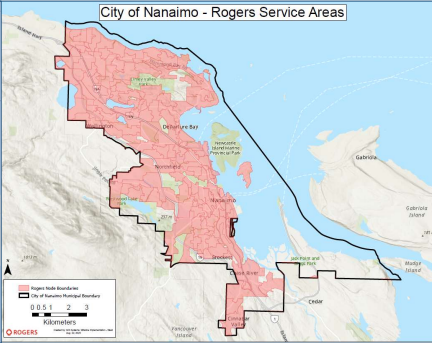- Internet access
Estimated Build Costs:
- $50-$300/m with civil project
- $300-$1000/m stand-alone

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Telco Broadband Coverage:

Combined Broadband coverage is >95% All City Addresses

Telus investments:
Pure Fibre: $30M
Cellular and Fibre
Enhancements: $9M

Rogers / Shaw:
Fibre coverage includes
Downtown, VIU,
Northfield

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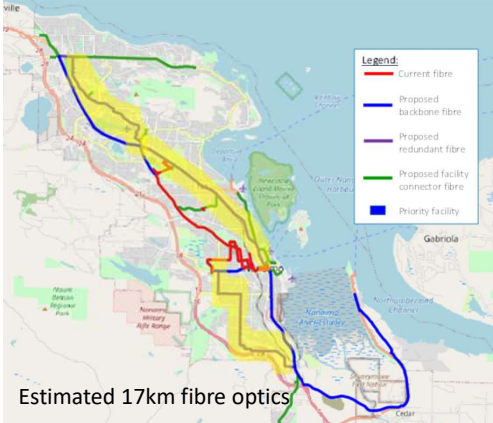
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Options: Expand

Investing to create redundant fibre to City's Priority Facilities.

Benefits:
- Business continuity
- Reduced reliance on Telcos
- Scalable network control
- Possibilities of cost-sharing with partners and reselling dark fibre

Considerations:
- Staff resources
- Increase to 5 and 10-year budgets
- Telcos provide fibre services to these sites
- Cost recovery: ~2040

Estimated 17km fibre optics

Capital Investment Estimate ~ $5-10M

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Options: Partnership

Actively pursue agreements with regional partners for cost and administration sharing of fibre optic assets.

Benefits:
- Relationship development between entities
- Reduced costs for mutually beneficial fibre links
- Possibility to expand City fibre beyond priority facilities

Considerations
- Staff resources to manage agreements
- Increase to 5 and 10-year budgets
- Most locations serviced by Telcos
- Mutual connections may not improve redundancy among priority facilities
- Cost recovery: Project dependent

Fibre Routes TBD

Capital Investment Estimate: TBD

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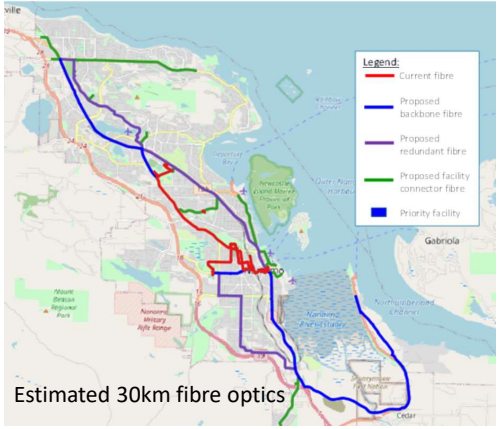
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Options: Utility

Expanding fibre optics coverage and resell services to regional partners and private sector.

Benefits:
- All benefits with Options 1 and 2
- Expanded fibre optic coverage for community use
- Revenue generation

Considerations
- Increases 5 and 10-year budgets
- Staffing increase for business unit
- Annual CRTC certifications as CLEC
- Partnership with 3rd party service providers for end user services
- Increased Telco cost for Internet access
- A direct competitor to the Telcos
- Cost recovery ~ 2050+

Estimated 30km fibre optics

Capital Investment Estimate ~ $10-15+M

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Options: Status Quo

<5km of fibre optic expansion and upgrade 2024-2033.

Benefits:
- No change to existing budget or staffing levels
- Does not take IT capacity from priority activities (ex. Cyber Security, system upgrades)

Considerations
- Increasing demand for digital services increases Telco reliance
- Opportunity costs for not leveraging civil projects to expand coverage and not seeking opportunities for connectivity with regional partners

2024-2032 Budget: $789,000

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Recommendation: Expand+

How:
- Invest to build redundant fibre connectivity to all or most of the City's Priority Facilities. Minimize costs by:
    - Including telecommunications with civil projects
    - Establish relationship with regional partners and seek opportunities for cost sharing to assist with this expansion

Benefits, Considerations:
- Increased control and scalability of network communications

- Reduced reliance on Telcos

- IT staff resources requirement, however, will not detract focus and capacity to implement major initiatives (ex. Cyber Security program)

- Requires increases to 5 and 10-year budgets, cost recovery to include estimates on cost-avoidance associated with Telco system outages

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Questions

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