



NANAIMO LADYSMITH
PUBLIC SCHOOLS

2017 2018 Budget
March 1, 2017

Learning Together

Department of Facilities **Maintenance** 2020 Vision

Maintenance

2016 2017 - A Year In Review

- ▶ Approx. 158,000 m² buildings
 - Equates to approx. 870 average Canadian homes
- ▶ Approx. 74 Ha of sport fields, grassed area and boulevards
 - Approx. 183 acres
 - 60 playing fields
 - 12.5 Ha of trim area
 - Multi-Playground structures at all 29 elementary schools

Maintenance

2016 2017 - A Year In Review

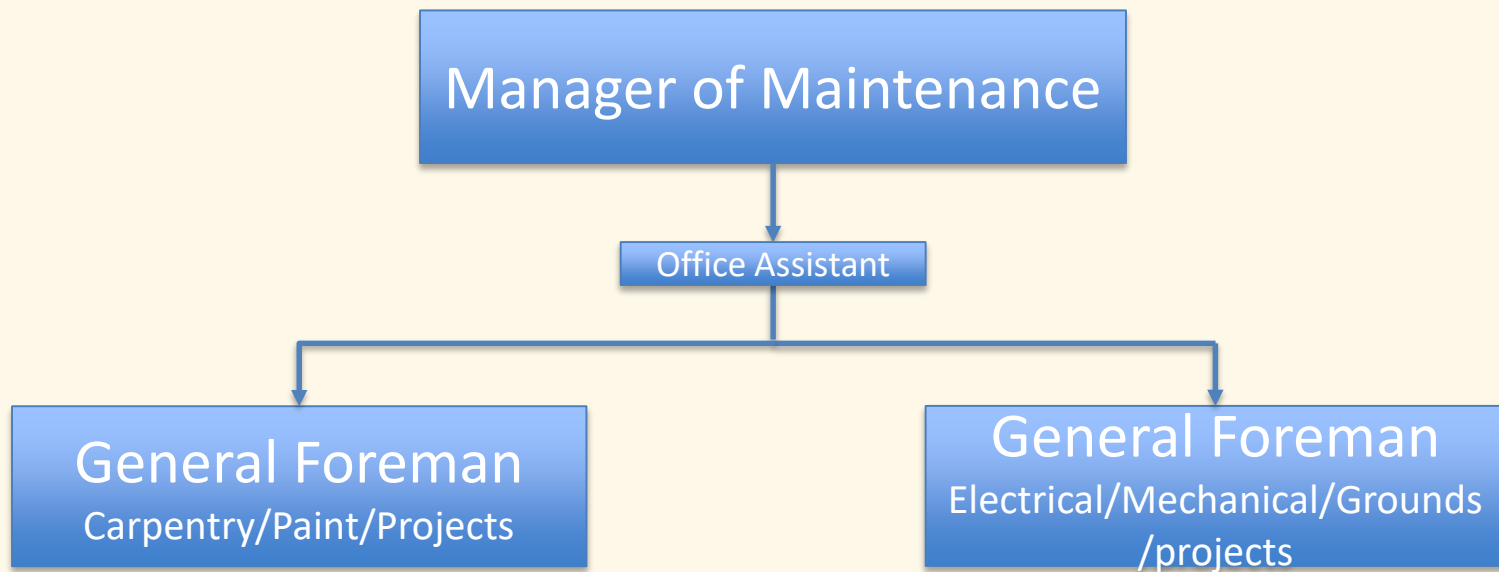
- ▶ The following slides break down each Department
 - Administration
 - Carpentry
 - Electrical
 - Grounds
 - Mechanical – HVAC & Plumbing
 - Painting

- ▶ An organizational chart will be displayed for each Department

- ▶ Each Department will be broken into Operating and Capital works

2016 2017 - A Year In Review

Maintenance - Administration



2016/17 - A Year In Review

Administration

- ▶ Reorganization Electrical / Mechanical / Grounds
- ▶ Administration of additional Carpenter for Classroom requests
- ▶ Work Order administration – 4593 July 1, 2016 to date (7781 2015/16 total)
- ▶ Departmental communications with requestors
 - School funded requests
 - PAC initiatives
 - Non Core requests
- ▶ Boulevard grass trim complaints

2016/17 - A Year In Review

Administration

- ▶ Lead in Drinking water management
- ▶ Feral Rabbit committee membership
- ▶ Snow removal management – winter 2017 \$45,000
- ▶ Vandalism July 1, 2016 to date
 - Carpentry, Windows, Grounds, Paint and misc.
 - Total \$27,754.36
- ▶ Insurance Claims 2016 to date
 - Hammond Bay water leak
 - NDSS water leak
 - Georgia Ave. break-in
 - IS break-in
 - Maintenance Yard break-in



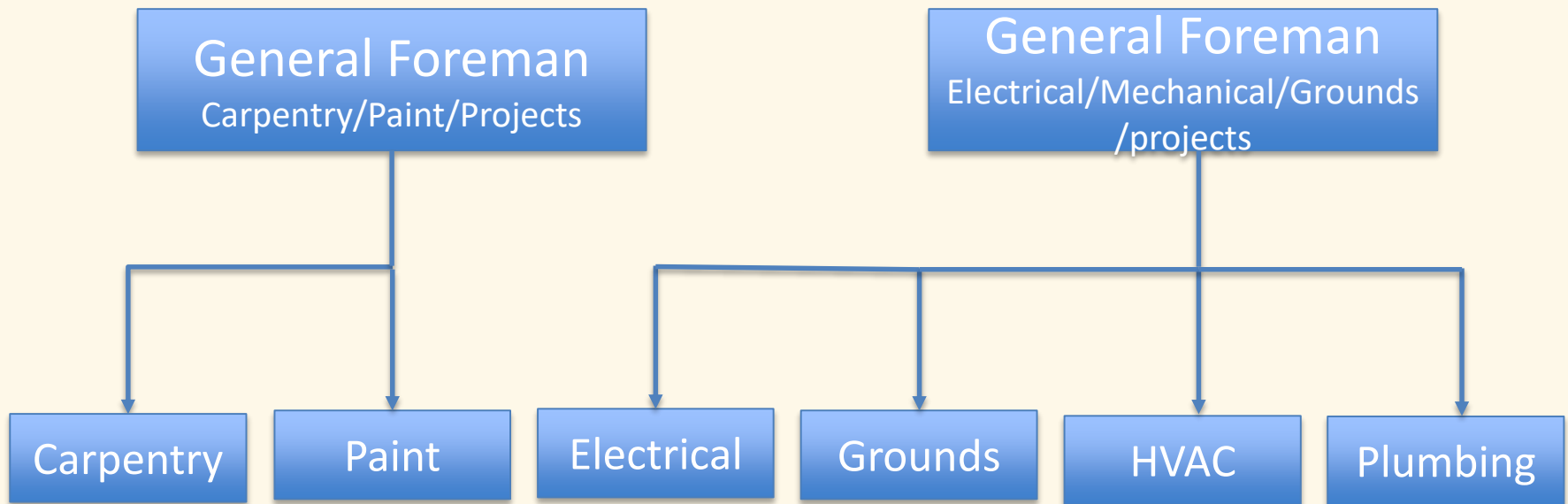
2016/17 - A Year In Review

Administration

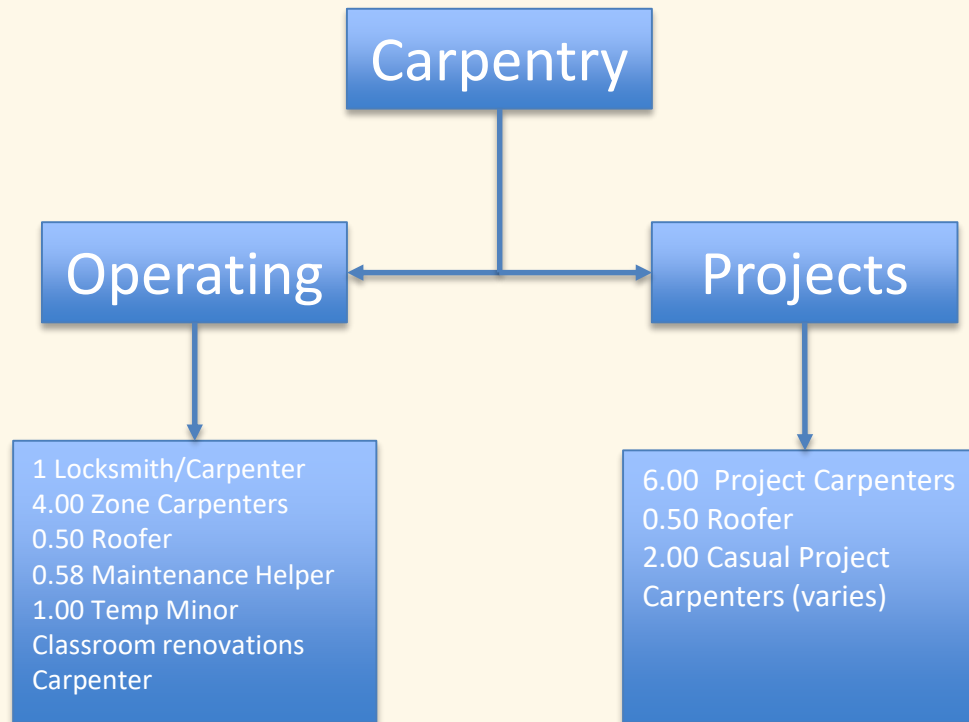
- ▶ School equipment repair budget overage
- ▶ School Consolidation Construction Management
- ▶ AFG Construction Management
- ▶ DAC renovation construction management
- ▶ Regulatory Maintenance
- ▶ Roofing Program construction management

2016/17 - A Year In Review

Maintenance



Maintenance 2016/17 - A Year In Review



2016/17 - A Year In Review

Carpentry - Operating

- Core works completed or in progress
 - Gym inspections
 - Locker repairs
 - Re-keying/doors and hardware
 - Fire extinguishers
 - Broken windows
 - Window film
 - Roof inspections
 - Asbestos repairs
 - Gym partition maintenance/Gym equipment repairs
 - BEP inspections
 - Crawlspace inspections
 - Stair repairs
 - Major fitment repairs
 - Special needs equipment repairs
 - Closed school maintenance



2016/17 - A Year In Review

Carpentry - Operating

- 1670 school work orders generated July 1, 2016 to date
 - **310** work orders were direct requests to classrooms
 - An additional \$60,000 (Labour and Materials) added to complete backlogged classroom requests from mid November 2016 – June 30 2017
 - As of Jan 30, 2017, 87 classroom based w/o have been re-issued with 55 complete and 32 underway
 - Program has been well received by Principals and the pressure point has been reduced to near zero

2016/17 - A Year In Review

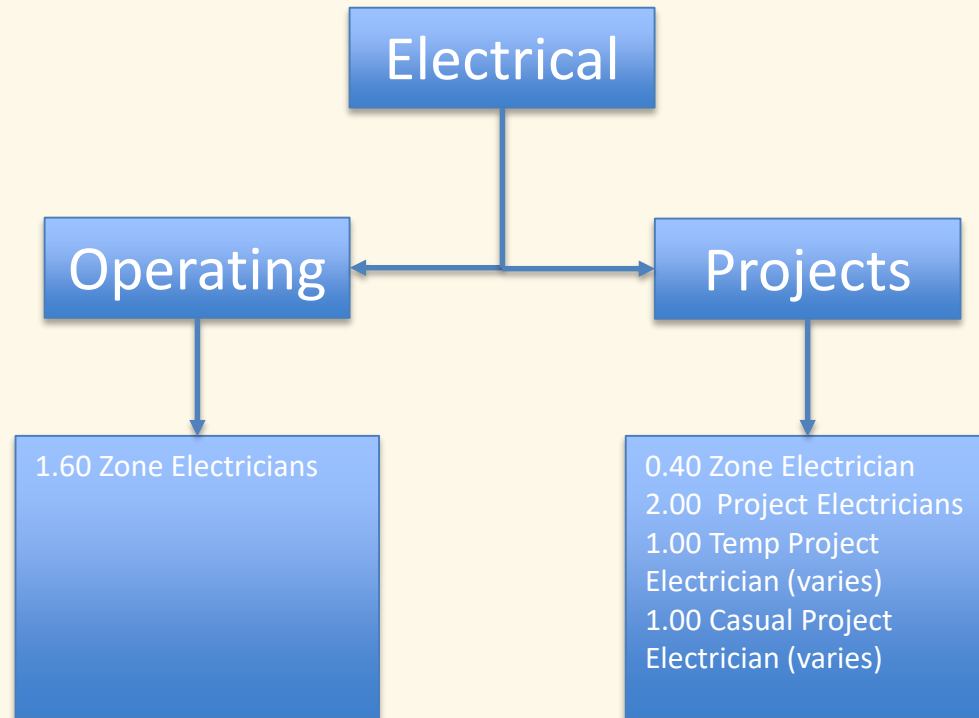
Carpentry - Projects

- ▶ Cedar Secondary completion
- ▶ Cedar Elementary Kindergarten
- ▶ Cedar Elementary portable installations
- ▶ NDSS school consolidation
- ▶ Re-opening of Mt. Benson (ConnectEd)
- ▶ ConnectEd BEP repair
- ▶ Payroll renovation (old print shop)
- ▶ DAC Office renovations/moves
- ▶ DAC Boardroom renovation
- ▶ LSS Washroom renovation
- ▶ LSS BEP
- ▶ Park Ave. computer lab renovation
- ▶ Hammond Bay gym partial BEP



2016/17 - A Year In Review

Electrical



2016/17 - A Year In Review

Electrical - Operating

■ Core works completed or in progress

- Fire alarm testing
- Fire alarm maintenance
- Emergency lighting testing/Emergency lighting maintenance
- Intrusion alarm maintenance/repair
- Classroom safety repairs
- Building lighting and power system maintenance/repair
- Commercial Kitchen equipment repair and exhaust certification (Fire)
- Shop equipment repairs
- Data infrastructure repair
- PA system repairs/support
- Phone repair
- Closed school maintenance

■ 745 work orders generated July 1, 2016 to date

- This is on pace to exceed the 2015/16 work order total of **1271**



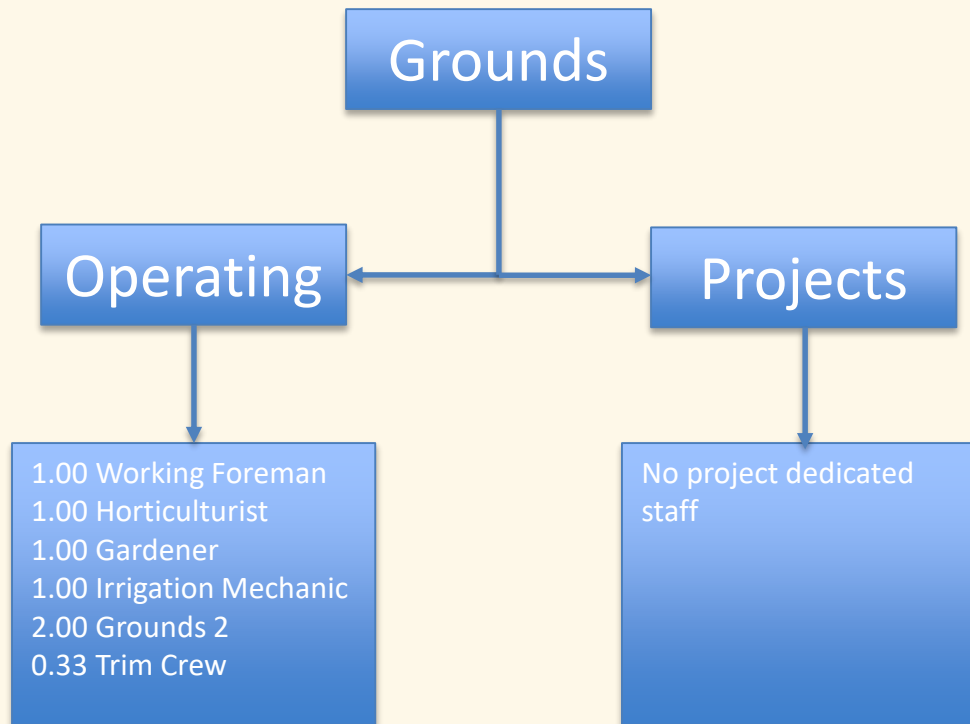
2016/17 - A Year In Review

Electrical - Projects

- ▶ SEMP project – Partnership with BC Hydro
- ▶ IS Infrastructure upgrade – wireless
- ▶ Cedar Secondary Conversion and Clock system
- ▶ Cedar Elementary K-Suite and portables
- ▶ NDSS PA
- ▶ NDSS school consolidation
- ▶ Re-opening of Mt. Benson (ConnectEd)
- ▶ Payroll renovation (old print shop)
- ▶ DAC Office moves
- ▶ DAC Boardroom renovation
- ▶ Park Ave. computer lab renovation
- ▶ School funded projects (time permitting)



2016/17 - A Year In Review Grounds



2016/17 - A Year In Review

Grounds - Operating

■ Core works completed or in progress

- Sports field maintenance
 - ❖ Mowing/irrigation/topdressing/aerating/fertilizer/seeding
- Playground inspection/repairs
- Drainage maintenance/repairs
- Winter systematics
 - ❖ Fence line clearing/brush/weed clearing/drainage maintenance/minor garden maintenance/irrigation head raising/turf maintenance
- Dangerous tree removal
- Fence repairs
- Snow removal
- Boulevard trim
- Garbage removal
- Garden maintenance (school celebrations)
- Parking lot grading
- Closed school maintenance



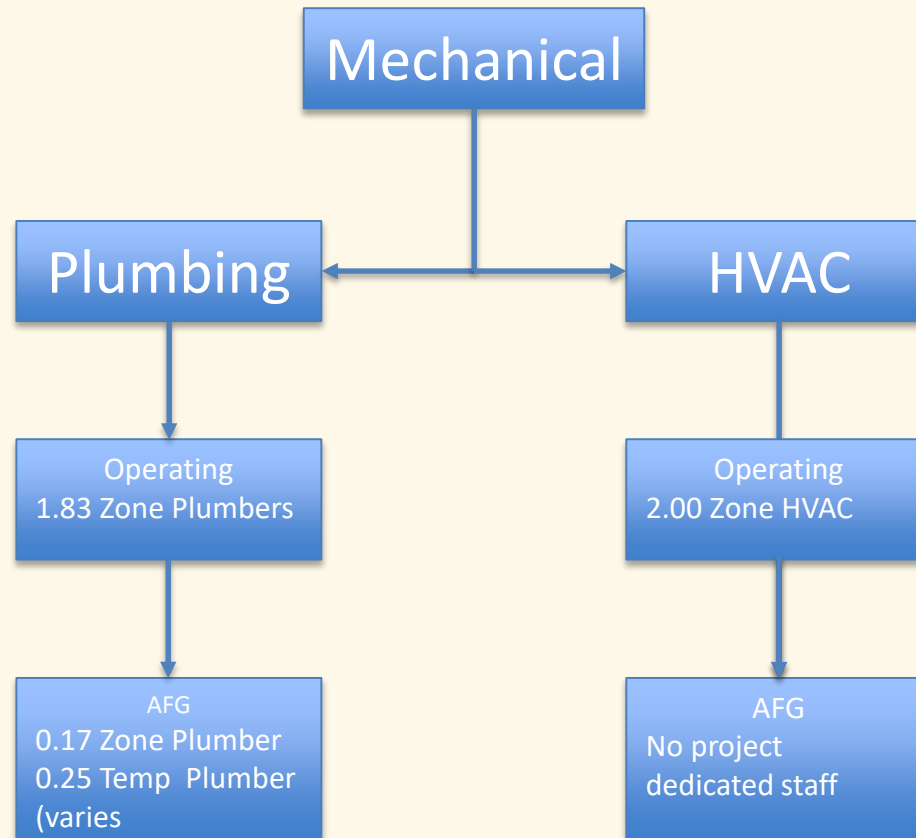
2016/17 - A Year In Review

Grounds - Projects

- ▶ Cedar Elementary portables site prep
- ▶ Park Ave. swings
- ▶ ConnectEd site works
- ▶ Cedar Secondary site cleanup
- ▶ Lieutenant Governor visit site cleanup

2016/17 - A Year In Review

Mechanical



2016/17 - A Year In Review

Plumbing - Operating

► Core works completed or in progress

- Fire suppression system certification/repair
- Well drinking water sampling (3 schools x 12/year)
- Fire hydrant testing
- Effluent testing
- Septic system maintenance/repair
- Commercial kitchen repair
- Well system maintenance
- Plumbing fixture maintenance/repair
- DHW repair/replacement

► **631** work orders generated July 1, 2016 to date

2016/17 - A Year In Review

HVAC - Operating

► Core works completed or in progress

- Yearly Boiler certification
- Yearly HVAC systematic maintenance
- Pressure vessel certification
- Filter replacement (x3)
- Dust extractor maintenance
- Boiler chemical maintenance
- DDC maintenance
- Energy management
- Building comfort calls

► **458** work orders generated July 1, 2016 to date

2016/17 - A Year In Review

Mechanical - Projects

► Plumbing

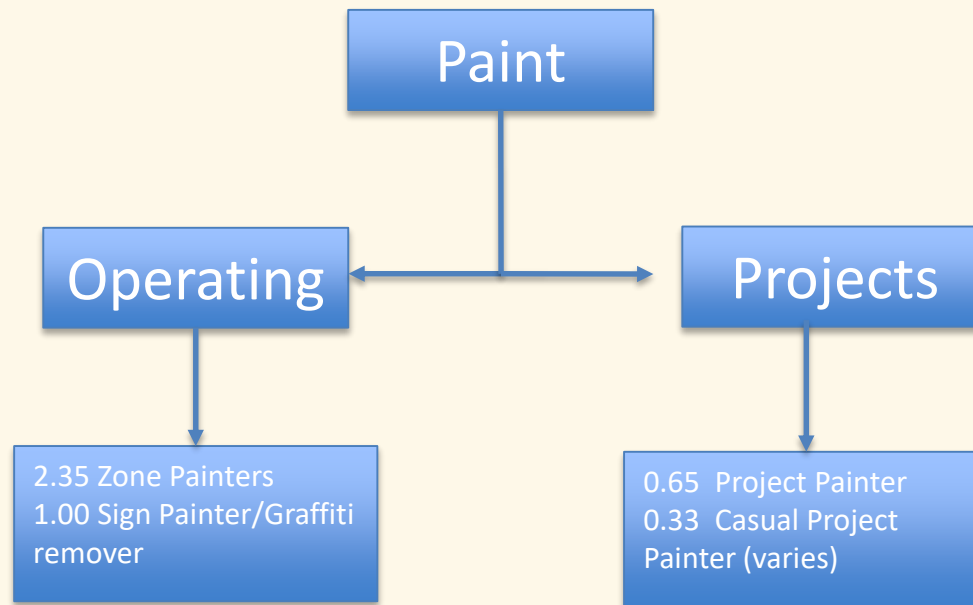
- Cedar Secondary completion
- Cedar Elementary K-Suite and Portable domestic water
- LSS Washroom renovation
- Rotary Field bleachers Custodian sink

► HVAC

- LSS Washroom renovation heating
- DAC Payroll HVAC installation
- DAC boiler replacement

2016/17 - A Year In Review

Painting



2016/17 - A Year In Review

Paint - Operating

■ Core works completed or in progress

- Interior paint – Uplands Elementary completion June 2017
 - ❖ Approximately 50 year turn around for all Facilities
- Graffiti removal
 - ❖ To date, 115 graffiti work orders received
 - ❖ All graffiti removed within 2 days, offensive immediately
- Health and Safety interior paint repairs
- Traffic control lines
- Game lines
- Exterior stairs non-skid
- Exterior school signs

■ 226 work orders generated July 1, 2016 to date

2016/17 - A Year In Review

Paint - Projects

- ▶ Cedar Secondary completion
- ▶ Cedar Elementary Kindergarten Renovation
- ▶ Cedar Elementary portable installations
- ▶ NDSS school consolidation
- ▶ Re-opening of Mt. Benson (ConnectEd)
- ▶ ConnectEd BEP repair
- ▶ Payroll renovation (old print shop)
- ▶ DAC Office moves
- ▶ DAC Boardroom renovation
- ▶ LSS Washroom renovation
- ▶ LSS BEP
- ▶ Hammond Bay Bounce wall



Maintenance 2016/17 - A Year In Review

Remaining Questions?



NANAIMO LADYSMITH
PUBLIC SCHOOLS

2017 2018 Budget
March 1, 2017

Learning Together

Department of Facilities **Maintenance** 2020 Vision

Maintenance

2017 2020 - The Way Forward

3 Year Plan – overall concept of addressing needs

1. Address immediate pressures from previous budget year
 - initiatives for consideration in arising from 16/17
2. Align data gathering and reporting to better support data driven decision making
 - Electrical and Plumbing initiatives for consideration arising out of 16/17 data

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Address Pressures identified in previous budget year	Respond to significant user pressures for service, reducing items of concern and allowing focus on core tasks	Propose adjustments to address immediate pressures	Monitor pressures after year 1 adjustment Propose any required additional adjustments	Monitor pressures after year 2 adjustment Expect adjustments to be minor

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Align Data gathering and reporting	<p>Continue to review and develop data around required and desired building maintenance and service</p> <p>Better defining: What is the level of service which best meets the needs of the building, users and budget?</p>	<p>Continue to develop benchmarking model and data collection</p> <p>Proposed minor adjustments in Electrical and plumbing service</p>	<p>Introduce budget items to adjust for Maintenance needs</p> <p>Based on data gathered up to and including year 1</p>	<p>Continue to adjust for maintenance requirements (ongoing to future years)</p> <p>Based on data gathered up to and including year 1</p>

Maintenance

2017 2020 - The Way Forward

Executive Summary of initiatives:

1. Align carpentry service with classroom demand
2. Align grounds service to growing season demand
3. Adjust Plumbing service to better support building systems and regulatory pressures
4. Adjust electrical service to better support school celebrations and regulatory pressures
5. Increase school equipment repair budget
6. Provide school based equipment replacement
7. Align Data gathering and reporting to better support data driven decision making

Maintenance

2017 2020 - The Way Forward

1. **Align Carpentry service with classroom demand**

- ▶ Alignment – provide dedicated service to specifically address classroom requests.
- ▶ Measurement – separation of school operation requests from maintenance requests will allow staff to adjust services separately based on strategic goals.
- ▶ Timeline – implement in 17/18 and review yearly to ensure appropriate service delivery.
- ▶ Challenges – classroom requests are important to the school but not core to maintaining the building.
- ▶ Opportunities – possible to review work yearly to determine if types of requests addressed meet the overall district goals.



Maintenance

2017 2020 - The Way Forward

Align Carpentry service for Classroom needs

- ▶ First 6 months of 2016/17 **1670** work orders received
- ▶ **310** work orders were direct requests to classrooms
- ▶ Additional \$60,000 (Labour and Materials) to complete backlogged classroom requests provided in November 2016
- ▶ 1 Carpenter was re-instated to work to address backlog
- ▶ As of Jan 30 2017, 87 classroom based w/o have been re-issued with 55 complete and 32 underway
- ▶ Program has been well received by Principals and the pressure point has been significantly reduced

2017 2020 - The Way Forward

Carpentry Work Orders 2014 - 2017

Year	W/O	Completed	Declined	Backlog
2014/15	3141	3029	13	48
2015/16	2743	2605	51	72
2016 to Date	1866	1563	59	223

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Dedicated Maintenance support of minor classroom based facilities alterations	Completes Learning services and classroom based work orders addressing minor discretionary school supported alterations	1.00 FTE Carpenter + Supplies	\$0 Ongoing, Review year 1 results and revise budget	\$0 Ongoing, Review year 2 results and revise budget

Maintenance

2017 2020 - The Way Forward

2. **Align Grounds service to growing season demand**

- ▶ Alignment – growing season services to match stakeholder stated needs
- ▶ Measurement – number of complaints from schools, staff, public, school protection program, OH & S departments, neighbors, etc.
- ▶ Timeline – implementation year one, and review yearly to ensure appropriate service delivery
- ▶ Challenges – provide a basic and acceptable, sustainable service for areas of the district which are not considered ‘classroom’ spaces
- ▶ Opportunities – provide a service which truly meets the needs of all stakeholders

Maintenance

2017 2020 - The Way Forward

Align Grounds service to growing season demand

- ▶ Numerous complaints received growing season 2016 (April – September) from both schools and Public (0.66 FTE)
- ▶ It is anticipated that there will be significantly more complaints this upcoming season at (0.33 FTE)
- ▶ Of the **463** work orders processed in Grounds in 15/16 - **268** requests were made during the “growing season”

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Maintenance support of Grounds issues during growing season	Basic grounds staff does not allow servicing of all areas adequately during the intense growing season	0.83 FTE \$46,532 Labour	0 Ongoing, Review year 1 results and revise budget	0 Ongoing, Review year 2 results and revise budget

Maintenance

2017 2020 - The Way Forward

3. **Adjust Plumbing service to better support building systems and regulatory pressures**

- ▶ Alignment – moves Plumbing service closer to systematic approach to maintenance rather than reactionary
- ▶ Measurement – Less failures due to age – systematic approach allows for planned replacement/maintenance
- ▶ Timeline – implement in 17/18 and review yearly to ensure appropriate service delivery
- ▶ Challenges – Some building systems repairs are reactionary rather than planned. Little time available to use systematic approach to maintenance
- ▶ Opportunities – provide better school operation by limiting system failure due to age, better separation between operating and capital



Maintenance

2017 2020 - The Way Forward

Adjust Plumbing service to better support building systems and regulatory pressures

- ▶ Currently 1.83 FTE Zone Electricians.
- ▶ From July 1, 2016 to date, **745** work orders generated.
- ▶ This is on pace to exceed the 2015/16 work order total of **1271**

2017 2020 - The Way Forward

Plumbing Work Orders 2014 - 2017

Year	W/O	Completed	Declined	Backlog
2014/15	776	771	4	1
2015/16	874	851	4	19
2016 to Date	631	577	8	46

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Maintenance Support of Plumbing regulatory issues and systematic building maintenance	Adjust budget to reflect 2 FTE will assist in addressing backlog and systematic preventive maintenance work	0.17 FTE + Supplies	\$0 Ongoing, Review year 1 results and revise budget	\$0 Ongoing, Review year 2 results and revise budget

Maintenance

2017 2020 - The Way Forward

4. Adjust Electrical service to better support school celebrations and regulatory pressures

- ▶ Alignment – moves electrical service closer to demand
- ▶ Measurement – fewer declined school based requests, fewer deferred regulatory items
- ▶ Timeline – implement in 17/18 and review yearly to ensure appropriate service delivery
- ▶ Challenges – classroom requests are important to the school but not core to maintaining the building
- ▶ Opportunities – provide better school based request support, better separation between operating and capital



Maintenance

2017 2020 - The Way Forward

Adjust Electrical service to better support school celebrations and regulatory pressures

- ▶ Consolidated 3 GF into 2 positions.
- ▶ Electrical GF given Mechanical/Plumbing/HVAC/Welding and Grounds departments.
- ▶ Currently 1.60 FTE Zone Electricians.
- ▶ From July 1, 2016 to date, **745** work orders generated.
- ▶ This is on pace to exceed the 2015/16 work order total of **1271**.

2017 2020 - The Way Forward

Electrical Work Orders 2014 - 2017

Year	W/O	Completed	Declined	Backlog
2014/15	1479	1479	0	0
2015/16	1272	1222	33	7
2016 to Date	846	752	37	44
2016 PM	40	0	0	40

2017 2020 - The Way Forward

Example of Data review activities

Electrical Department

Electrical Department						
Staff	1.0 General Foreman					
	1.6 FTE					
Hours	2080					
Hours available	5408					
Vacation	400					
Avg. sick	104					
Total Budget Hours	4904					
15/16 W/O	1271					
Priority (School Dude)	Status	Description	Days	Hours	running total	
Safety	Health and Safety					
		Fire Alarm Maintenance (regulatory)	12	96	96	
		Fire Alarm Testing (regulatory)	70	560	656	
		Emergency Lighting Maintenance	10	80	736	
		Emergency Lighting Testing + repair (Regulatory)	60	480	1216	
		Commercial Kitchen Fire Suppression (regulatory Contract)	6	48	1264	
		Elevators/lifts (Regulatory Contract)	5	40	1304	
		Intrusion Alarms Maint.	35	280	1584	
		Intrusion alarm Testing (not done for 6 years-no time)	35	280	1864	
		End User Power Issues (Safety)	15	120	1984	
		Total Health and Safety	248	1984		
High	Core	Building Power Distribution	15	120	2104	
		Well system Maintenance	10	80	2184	
		Service Septic systems x3	6	48	2232	
		P/A Systems	35	280	2512	
		Phone repair	10	80	2592	
		Data infrastructure	30	240	2832	
		Ed. Program equipment support (shops/Kitchens etc)	40	320	3152	
		Admin./WO Management elevators,kitchen equip, shop equip	200	1600	4752	
		Gym Partition Doors (large)	10	80	4832	
		Gym Equipment safety/repairs/scoreclocks/BB winches	15	120	4952	
		Lighting Interior (has fallen off because of lighting program)	50	400	5352	
		Exterior Lighting	20	160	5512	
		Clock Systems	15	120	5632	
		Special Needs Equipment	5	40	5672	
		Hand Dryers	15	120	5792	
		Minimal Closed School Maintenance	10	80	5872	
		Total Core	486	3888		
Medium	Optional	End User Power / program support w/o's	40	320	6192	
		Operations Equipment Support-vacuums, scrubbers	25	200	6392	
		Total Optional	65	520		
Low	Discretionary	Public Event support (rotary bowl)	20	160	6552	
		Projector/Elmo's (retire only)	20	160	6712	
		Lighted School Signs	20	160	6872	
		School Productions-plays, concerts, lighting and sound	190	1520	8392	
		Total Discretionary	250	2000		
		Budget			4904	
		Deficiency			-3488	
		FTE			1.68	

Works below line generally not completed



2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Maintenance Support of Electrical safety issues and School celebrations	Basic Electrical staffing does not allow for School celebration setups or some building protection items	0.40 FTE + Supplies	\$0 Ongoing, Review year 1 results and revise budget	\$0 Ongoing, Review year 2 results and revise budget

Maintenance

2017 2020 - The Way Forward

5. Increase school equipment repair budget

- ▶ Alignment – budget to match school requirements
- ▶ Measurement – budget not overspent
- ▶ Timeline – implementation year one, and review yearly
- ▶ Challenges – some decisions on repairs made at the school level and charged to the district budget, consistency of funding
- ▶ Opportunities – will allow schools to service equipment allowing it to achieve its maximum life cycle

Maintenance

2017 2020 - The Way Forward

Align school equipment repair budget

- ▶ First 6 months of 16/17 saw entire budget (\$154,000) spent
- ▶ Currently supporting program from other departmental savings
- ▶ Equipment serviced include:
 - Commercial kitchen equipment repair/maintenance contract
 - Wages
 - Power Tool Repair
 - Welding Repairs
 - Phone contract repair
 - Musical instrument repair/maintenance
 - Band equipment tuning/repairs
 - Microscope repairs/maintenance
 - Sewing machine maintenance/repairs

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Maintenance support of School Equipment Repair	Increase budget to allow for repairs and Maintenance of School Equipment – 2016/17 pressures have overspent current budget, items which cannot be effectively repaired will be referred to replacement program	75,000 Supplies	\$0 Ongoing, Review year 1 results and revise budget	\$0 Ongoing, Review year 2 results and revise budget

Maintenance

2017 2020 - The Way Forward

6. Provide School Based Equipment Replacement

- ▶ Measurement – upgraded items and movement towards a planned replacement schedule using compiled inventory condition list
- ▶ Timeline – ongoing
- ▶ Challenges – consistency of funding, create and maintaining inventory, condition assessment, prioritizing requests, etc.
- ▶ Opportunities – removal of equipment which is not maintainable or repairable or it is replaced in accordance with life cycles, reduced repairs, reduced user requests for updates/repairs

Maintenance

2017 2020 - The Way Forward

Provide School Based Equipment Replacement

- ▶ Alignment – support schools for replacement of items maintained by Maintenance
 - Shop Lathes
 - Shop power equipment –table saws, drill press, milling machines, planers, sanders, welders, etc.
 - Commercial Kitchen equipment, coolers, freezers, dishwashers, ranges, serveries, ice makers, fryers etc.
 - Non-commercial appliances – fridges, stoves, dishwashers etc.

2017 - 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
School Based equipment replacement funding	Shop, commercial kitchen, appliances upgrades	\$150,000 Supplies	\$0 Ongoing, Review year 1 results and revise budget	\$0 Ongoing Review year 2 results and revise budget



Maintenance

2017 2020 - The Way Forward

7. Align Data gathering and reporting to better support data driven decision making

- ▶ Alignment – better aligning service with need to provide sustainable supports for school operations
- ▶ Measurement – staffing levels, work requested, work completed, work outstanding, nature of outstanding work, reviewing and approving outstanding work
- ▶ Timeline - Ongoing
- ▶ Challenges – populating preventive maintenance module, balance between service levels requested and service levels provided, isolating and analyzing each departments baselines, tailoring data for decision making, changing space and program needs
- ▶ Opportunities – understanding the sustainable baseline for maintenance which meets the needs of a diverse set of stakeholders, good practice and regulatory requirements

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Data gathering to support data driven decision making	Sustainable baseline for maintenance which meets the needs of a diverse set of stakeholders, good practice and regulatory requirement.	\$50,000 Labour + Supplies	\$0	\$0

Maintenance

2017 2020 - The Way Forward

Any remaining questions?