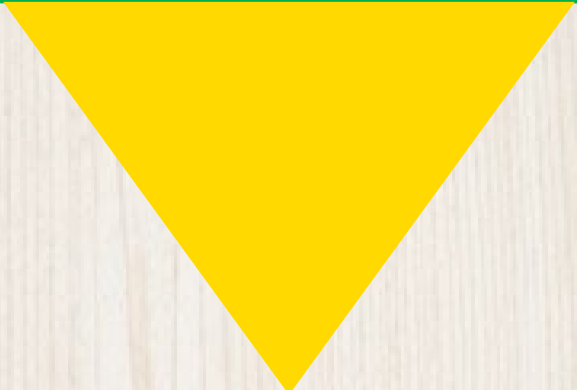


Asset Management

Identifying Minimum Maintenance Tasks



*Identifying Minimum Maintenance
Tasks Helps Sustain Assets for the
Long-term*



What is Minimum Maintenance?



Minimum Maintenance Types

Best Practice

- These are maintenance tasks that as an organization you've determined have some sort of value in performing. Value can be financial, component longevity, public perception etc.
- Examples Include:
 - Solar System Checks
 - Tower General Maintenance
 - OH Door Inspections
 - Roof Inspections
 - Electrical Component Checks

Regulatory

- These are tasks driven by industry standards and regulations.
- Examples Include:
 - CSA Regulatory Tower Inspections
 - National Building & Fire Code Fire Alarm Testing
 - Alberta Boilers Safety Association code for Boiler Inspections
 - DAM Safety Inspections

Reliability

- These are tasks driven by the equipment or component on what is typically required by the manufacturer for minimum maintenance, to achieve the desired life expectancy.
- Examples Include:
 - Generator checks and oil changes
 - HVAC system checks and maintenance
 - Boiler Checks

Safety

- These are tasks driven by company safety standards over and above industry regulations.
- Examples Include:
 - Fall Protection
 - Anchor Point Checks
 - Facility Safety Audits

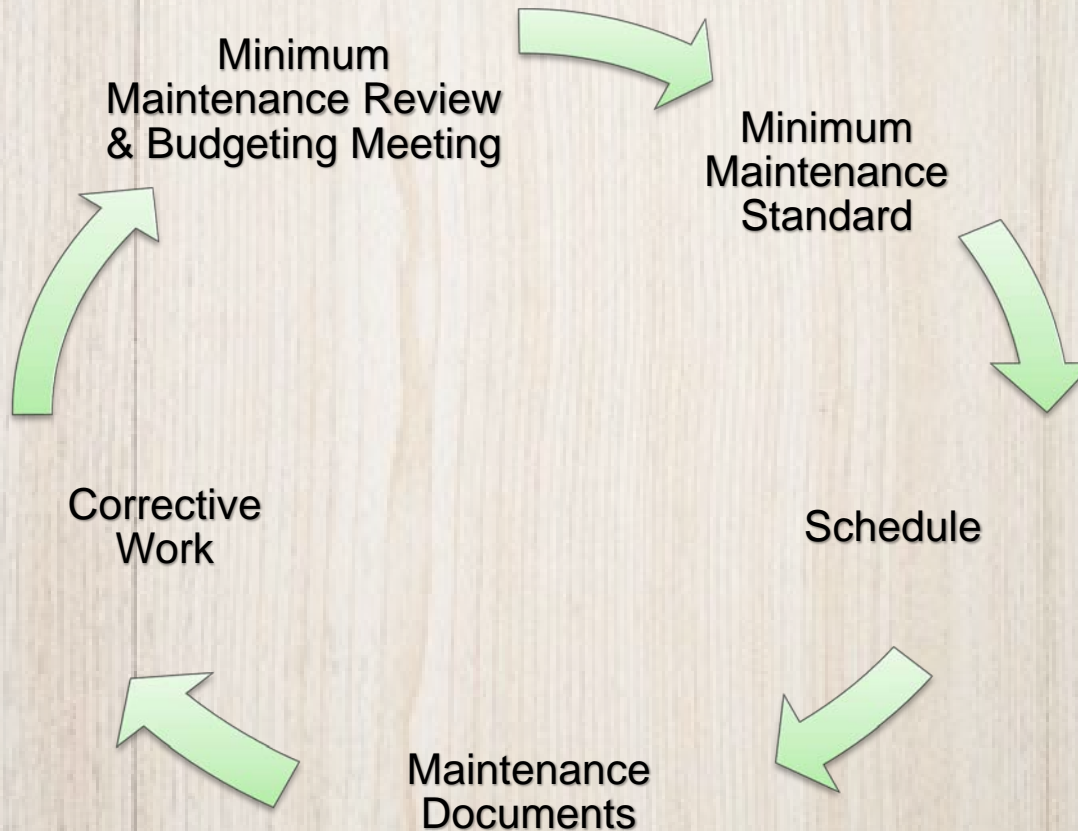
Key Aspects of a Minimum Maintenance Standard

- Components and Subcomponents – Identifies the area the maintenance will impact ex/ Mechanical > Generator
- Frequency – how often the maintenance/operation item will happen
- Naming Convention – applying a naming convention to the task will allow for easy scheduling and filing
- Description – exactly what is happening for that maintenance/operations task
- Why? – identifying why the item is needed
- Owner/Executor – who is ultimately responsible to ensure the work is scheduled and then executed
- Timing – identifies the time of year the task is most suitable for
- Documents – identifies any supporting documentation

Minimum Maintenance and the Scheduling Life Cycle



From Planning to Scheduling to Execution



Facilities Planning and Scheduling Example




Minimum Maintenance Standard



Type	Component	Sub Component	Frequency	Naming Convention	Description
Regulatory	Structural	Tower	M48 - 48 Month	M48 Tower - Inspection	Guyed Structure - Structure and visual inspection of tower, CSA-S37-M86 Document S37-01, Appendix D Guyed Structures
Best Practice	Misc.	Tower	M02 - 2 Month	M02 - Area General Maintenance	Vegetation and garbage clean up, onsite equipment check, tower visual check, anti climb guard check, vandalism or damage check
Regulatory	Structural	Tower	M72 - 72 Month	M72 Tower - Inspection	Self Supporting Structure - Structure and visual inspection of tower, CSA-S37-M86 Document S37-01, Appendix D Self Supporting Structures

Why?	Owner	Executor	Timing	Documents
External company inspection of the tower and all its components to satisfy the guidelines of the code.	Facility Manager	External Vendor	Spring/Summer	M48-M72 Tower Regulatory Inspections, External Service Report
Assures our sites are maintained to a high level as many towers exist on private land	Facility Manager	Maintenance Worker	Year Round	M02 Tower Site General Maintenance Checklist
External company inspection of the tower and all its components to satisfy the guidelines of the code.	Facility Manager	External Vendor	Spring/Summer	M48-M72 Tower Regulatory Inspections, External Service Report

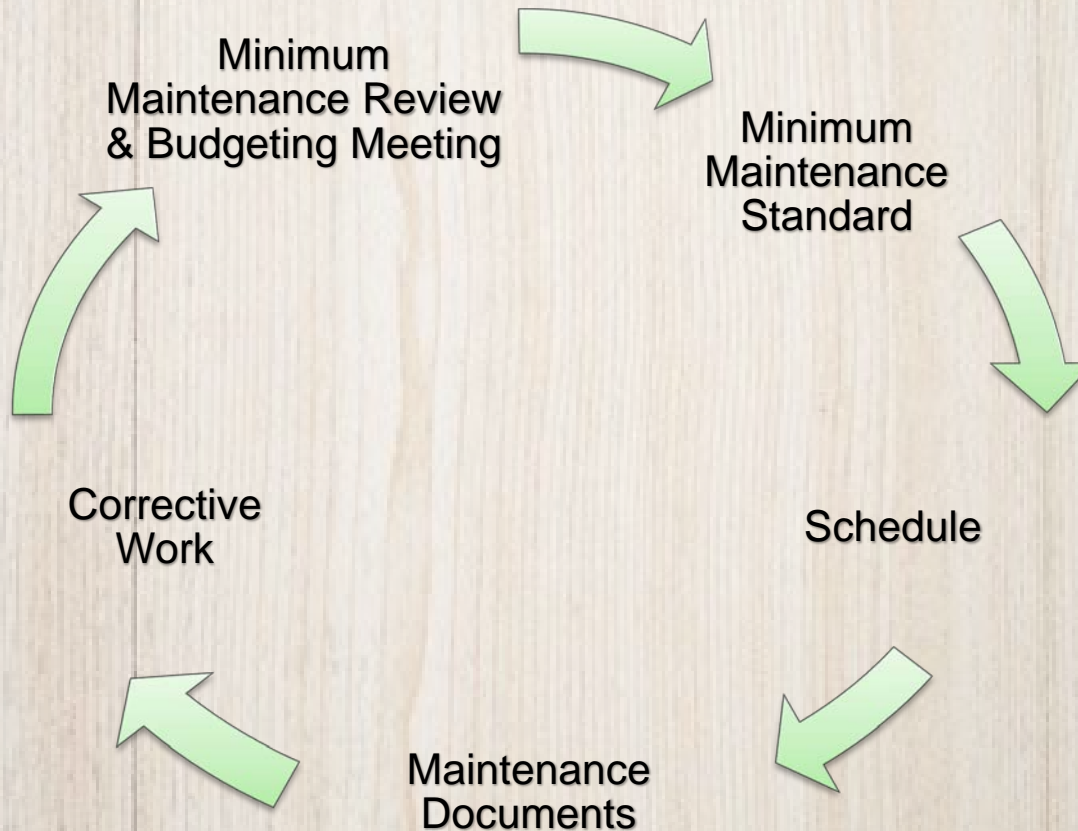
Maintenance Documents

Tower Site General Maintenance Checklist				
Tower Name: New Brigden				
Legal Location: NW-34-32-05w4				
Date: Sept. 14				
Inspected By: Ryley Girletz				
 Special Areas Board				
	Yes	No	NA	Corrected (Y/N)? Provide Comments if not
Site Check:				
Is there garbage onsite?		No		
Is the vegetation maintained to an acceptable level?	Yes			
Is the fence in good condition?	Yes			Repaired fence
Is the building in good condition?	Yes			
Are locks in place?	Yes			
Are there any other signs of damage or vandalism onsite?		No		
Tower Check:				
Are the cables in good condition?	Yes			
Is the anti-climb device in good condition?	Yes			
Is there any visible damage to the tower?		No		
Other Issues Onsite:	Cable guard needs to be repaired on the building side.			

Minimum Maintenance Standard Review & Budgeting Meeting

- Minimum Maintenance Standard Review:
 - Regulatory Items will be reviewed for changes in the regulation
 - Best Practice items will be aligned to management strategies to ensure the level of service expectations put forth by council.
 - Reliability items will be reviewed to assure alignment to manufacturers recommendations or field proven tasks.
 - Safety items are impacted by safety bulletins, incidents and near misses throughout the previous year, and changes required in the minimum maintenance standard to positively impact safety.
- Budgeting Meetings
 - Once minimum maintenance items are identified, these items can then be incorporated into the schedule and subsequently the annual budget.

From Planning to Scheduling to Execution





So what is it that I'm asking for?



Project Timeline

January 2023- December 2023

- Introductory group meeting
- Introduce group and “mini” group goals
 - Establish safety, best practice and regulatory components for all asset classes
- Establishment of “mini” working groups, represented by asset class experts
- Work groups to meet monthly to identify minimum maintenance standard items
- Online meetings - Meetings will be a max of 2hrs, and will require actions to be assigned and worked on outside of the meetings

February 2024

- Work group will present a Minimum Maintenance Standard to the IAMA at their winter meeting
- The minimum maintenance standard will be reviewed annually by the original working group with the goal of updating regulatory, best practice and safety components.



Questions or want to learn more?



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