

# PM Scheduling, Load Balancing and Roadmap



HARD ROCK  
CASINO & HOTELS

TULSA | MAR 30 – APR 02



# Introductions



**DARREN BROWN** | Director of Professional Services, TMA Systems

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Darren has been with TMA for over twenty-eight years. Before TMA, Darren served in the United States Air Force with a maintenance and IT background. During Darren's time with TMA, he is experienced in initial sales, implementation, and ongoing support. His primary focus is Client Support and Professional Services. In his current role, Darren is responsible for overseeing large-scale projects and coordinating resources to ensure successful client implementations.



# Agenda

PM Setup	4
PM Schedules	6
Modern Interval Pattern (RRULE)	8
PM Batch Jobs	10
PM Load Balancing	12
Updating PMs	19
PM Roadmap	22

# PM Setup





# PM Setup

**CLIENT INFO**

+ Add Edit Copy Delete

Identity Preferences Counters Rental Preferences Password Modules Linked Accounts Cloud Storage Providers Session Log

Name UC Education

Preferences

Category	
Do Not Allow PM's to Slide	Granted
Show Bar Code	Granted

**REPAIR CENTER**

+ Add Edit Copy Delete First Prev Next Last Print

Identity Trade Customer Survey Auto Attend Task Notification Linked Accounts Email Settings Smart Route Cost Work Orders Ship To

Code PP Name Physical Plant

Phone # 918-455-3333 City

Address Line 1 State

Address Line 2 Country

Zip Code

Preferences

Estimates Required <input type="checkbox"/>	Close Task <input checked="" type="checkbox"/>
WO Authorization Required <input type="checkbox"/>	Hide Work Order Area (Sq. Ft.) <input type="checkbox"/>
Hide WO Estimates <input type="checkbox"/>	Suppress Right to Know Graphics <input type="checkbox"/>
Check Dupe Work <input checked="" type="checkbox"/>	Exclude Auto Notify Employee for PM Work Orders <input checked="" type="checkbox"/>
Open WO Only <input type="checkbox"/>	
Consolidate PM <input checked="" type="checkbox"/>	
Most WO Chargeable <input checked="" type="checkbox"/>	
Print Detail <input type="checkbox"/>	
Print Building Address <input type="checkbox"/>	
Print Belt/Filter/Part <input checked="" type="checkbox"/>	
Prompt for Print <input type="checkbox"/>	
Auto PO Counter <input type="checkbox"/>	
PO Prefix Counter <input type="checkbox"/>	
Dupe Check # Days 7	Auto Print User UC Admin
Time Zone (GMT-06:00) Central Time (US & Canada)	Mailbox Name
PM Week 7	
PM Generation 20	

Admin>Client info:  
Do Not Allow PMs to Slide

Organization>  
Repair Center>Records:  
PM Week

# PM Schedules





# PM Schedules

PM Schedule

Add PM    Batch Add PM    Edit Selected    Delete S

					Item Type	Item
<input type="checkbox"/>						

PM Schedule Entry

Save    Save & Add    Save & Clone    Cancel

Task Code\* [ ]    Employee [ 127 ]  
Task Description\* [ ]    Dan Zimmerman  
Repair Center\* [ ]    Contract Number [ ]  
Work Order Type\* [ ]    Rate Schedule [ ]  
Work Order Subtype [ ]    Warehouse Code [ ]  
Priority Code\* [ ]    Active     Charge   
Trade\* [ ]  
Department [ ]  
Account # [ ]

Scheduling Options

Last PM Date    Fixed     Floating     Calendar Based     Meter Based   
Est. Time [ ]  
Days To Complete [ ]

Calendar Schedule

Next PM Date\* [ 05/11/2025 ]    Season Start [ ]  
Repeats Every [ ] [ ]    Season End [ ]

Projected Dates [ ]

Meter Schedule

Meter Interval [ ]    Next PM Meter [ ]  
Percent Margin [ ]    Last PM Meter [ ]  
Assigned Meter [ ]    Proj Next Date [ ]  
Meter Calculation When WO Completes

Save    Save & Add    Save & Clone    Cancel

# Modern Interval Pattern





# PM Schedules – Modern Interval Pattern (RRule)

PM Schedule

Add PM   Batch Add PM   Edit Selected   Delete Selected

Item Type	Item T

**PM Schedule Entry** Save   Save & Add   Save & Clone   Cancel

Task Code\*

Task Description\*

Repair Center\*

Work Order Type\*

Work Order Subtype

Priority Code\*

Trade\*

Department

Account #

Employee

Brenda Mc

Contract Number

Rate Schedule

Warehouse Code

Active    Charge

**Scheduling Options**

Floating  Fixed

Last PM Date

Calendar Based    Meter Based

Est. Time

Days To Complete

**Calendar Schedule**

Use Modern Interval Pattern

Next PM Date\*

Repeats Every

MO  TU  WE  TH  FR  SA  SU

Jan  Feb  Mar  Apr  May  Jun

Jul  Aug  Sep  Oct  Nov  Dec

Week Days Only

Season Start

Season End

**Projected Dates**

**Meter Schedule**

Meter Interval

Percent Margin

Assigned Meter

Meter Calculation When WO Completes

**Use Modern Interval Pattern**

Next PM Date\*

Repeats Every

Jan  Feb  Mar  Apr  May  Jun

Jul  Aug  Sep  Oct  Nov  Dec

On day 1

On the first Sunday

# PM Batch Jobs





# PM Batch Jobs

✕ Batch Job Entry
Previous Save Cancel

Select PM, Item, or Item Type ▼

Single Type  Single Item  PM Types

Area <input checked="" type="checkbox"/> Asset <input checked="" type="checkbox"/> Biomed Equipment <input checked="" type="checkbox"/> Building <input checked="" type="checkbox"/>	Equipment <input checked="" type="checkbox"/> Entity <input checked="" type="checkbox"/> Facility <input checked="" type="checkbox"/> Floor <input checked="" type="checkbox"/>	Group <input checked="" type="checkbox"/> IT Equipment <input checked="" type="checkbox"/> Tool <input checked="" type="checkbox"/> Vehicle <input checked="" type="checkbox"/>
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Toggle

Generation Options ▼

Auto Print

Days Forward

Generation Type  Manual  Automatic

Generate All

Due Last Day of Month

Select Location ▼

▼ ...

Name

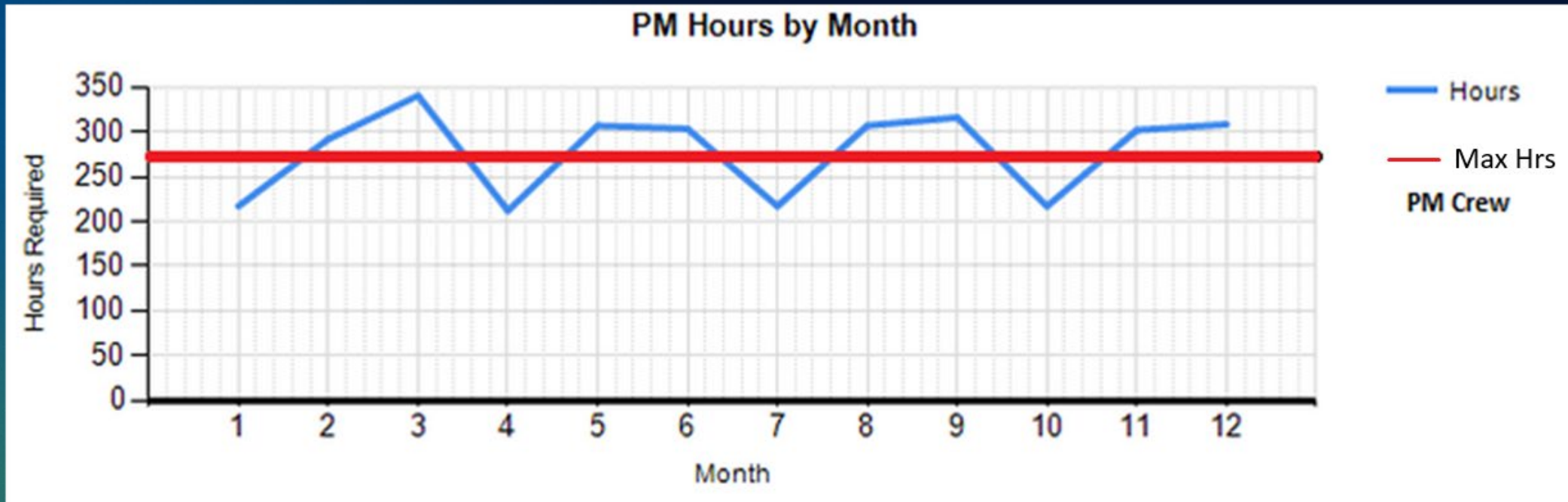
Other Criteria
Department
Risk Factor

Repair Center	<input style="width: 90%;" type="text"/>
Account	<input style="width: 90%;" type="text"/>
Work Order Type	<input style="width: 90%;" type="text"/>
Contract	<input style="width: 90%;" type="text"/>
Employee ID	<input style="width: 90%;" type="text"/>
Employee Name	<input style="width: 90%;" type="text"/>
Supervisor	<input style="width: 90%;" type="text"/>
Trade	<input style="width: 90%;" type="text"/>
Task	<input style="width: 90%;" type="text"/>
Regulatory	<input style="width: 90%;" type="text" value="Both Regulated/Non-Regulated"/>
Due Every	<input style="width: 50%;" type="text"/> <input style="width: 40%;" type="text" value="Select Frequency"/>

# PM Load Balancing



# PM Load Balancing

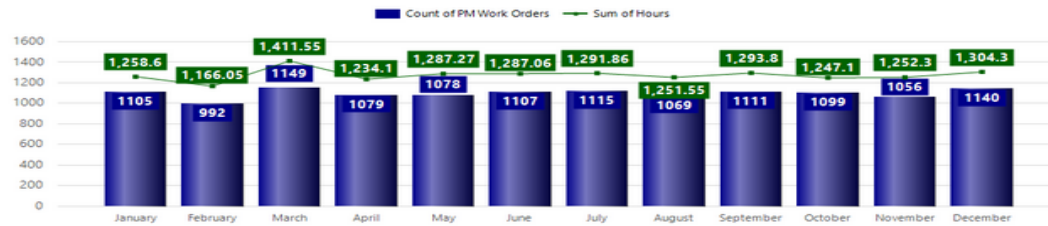




# PM Load Balancing

Monthly PM Load Balancing Report

Repair Center: Physical Plant



PM Counts by Priority	Total	Emergency	Project Work	Routine < 2 Days	Urgent > 2 Hours
Area	8	5	3	0	0
Building	13	4	0	9	0
Equipment	253	51	0	92	110
Facility	8	0	0	8	0
Group	5	2	0	2	1
Vehicle	35	0	32	0	3
<b>Total PM Schedules:</b>	<b>322</b>	<b>62</b>	<b>35</b>	<b>111</b>	<b>114</b>

PM Counts by Trade	Total	Brickmason	Building Manager	Cable Technician	Carpenter	Communications Engineer	Electrician	Elevator Mechanic	General Maintenance	Groundsman	Housekeeping	HVAC	Mechanic	No Trade	Painter	Server Admin
Area	8	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0
Building	13	0	0	0	0	5	2	0	0	0	0	0	0	4	2	0
Equipment	253	1	8	10	9	0	9	0	1	0	0	169	8	37	0	1
Facility	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
Group	5	0	0	0	0	0	1	1	0	0	0	3	0	0	0	0
Vehicle	35	0	0	0	0	0	0	0	0	3	0	0	16	16	0	0
<b>Total PM Schedules:</b>	<b>322</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>5</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>5</b>	<b>172</b>	<b>24</b>	<b>65</b>	<b>2</b>	<b>1</b>

Month		Brickmason	Building Manager	Cable Technician	Carpenter	Communications Engineer	Electrician	Elevator Mechanic	General Maintenance	Groundsman	Housekeeping	HVAC	Mechanic	Painter	Total
January	172.15	2	372		78		6.5		0.5	30		596.95	0.5		1,258.6
February	159.15	2	336		72	4	9		0.5	30		553.4			1,166.05
March	187.65	2	372		76		15.5	1.5	0.5	30	8	680.4	34	4	1,411.55
April	141.65	2	360		86	6	6.5		0.5	36		594.95	0.5		1,234.1
May	174.62	2	372	1	72		9		0.5	30		626.15			1,287.27
June	171.65	2	360	3	76		14		0.5	30		586.91	35		1,287.06
July	172.15	2	372	1.5	86		6.5		0.5	36	8	614.71	0.5		1,291.86
August	140.65	2	372	1.5	74		9		0.5	30		621.9			1,251.55
September	187.65	2	360		82		14	1.5	0.5	36	8	568.65	33.5		1,293.8
October	172.15	2	372		78		6.5		0.5	30		585.45	0.5		1,247.1
November	138.65	2	360	6	74		9		0.5	30		632.15			1,252.3
December	171.15	2	372		88		14		0.5	36	8	579.15	33.5		1,304.3
<b>Total:</b>	<b>1,989.27</b>	<b>24</b>	<b>4,380</b>	<b>13</b>	<b>942</b>	<b>10</b>	<b>119.5</b>	<b>3</b>	<b>6</b>	<b>384</b>	<b>32</b>	<b>7,240.77</b>	<b>138</b>	<b>4</b>	<b>15,285.54</b>



# Data Requirements – Hours

## Est. Time

PM Est. Time is the first place we look to get hours and supersedes Task Labor Standard and Average Time. This allows you to define at the actual schedule level the amount of time due to grouping, travel or obstruction variances.

## Labor Standard

Labor Standard is the second hours field we evaluate in the hierarchy that represents the standard time it takes to perform the PM task. This supersedes Task Average Time.

## Average Time

The average time is calculated as the average of the hours entered on a closed work order by task.



# Data Requirements

## What Data is Included -

### Baseline PMs

Anything with a date interval will be included.

### Meter Based

Dual schedules based on dates.

### Floating PM

Floating PMs will be included based on estimated projected dates on current interval and frequency.

## Report Options

### Frequencies

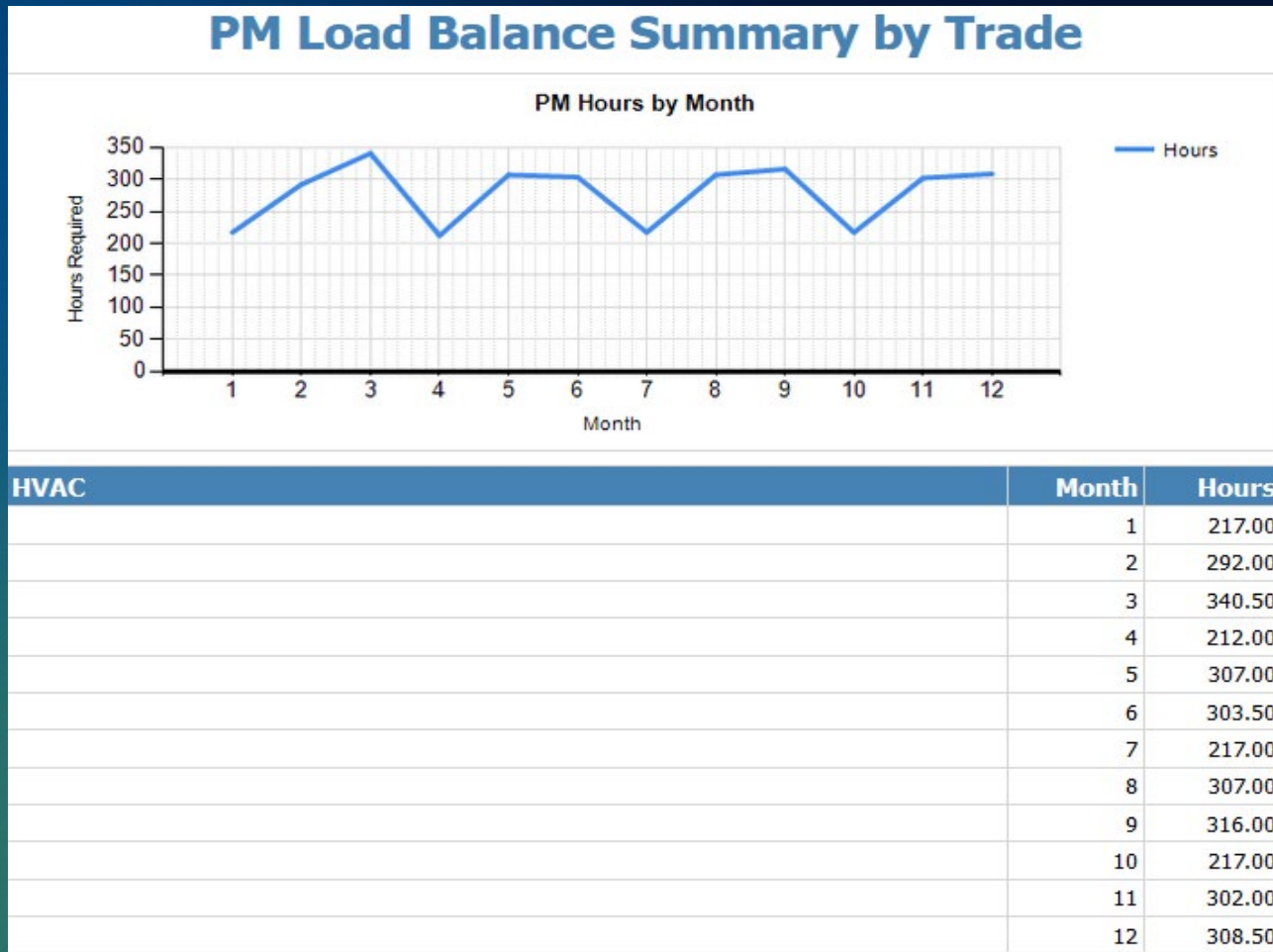
Monthly and Weekly PM load balance are the only two formats.

### Levels

Repair Center, Trade and No Trade for small clients.



# PM Load Balance Summary



- Hours by Cycle
- Perfect World
- Reality



# PM Load Balance Summary

PM Load Balance Detail by Trade												
Task Code	Task Desc.	Item Type	Tag #	Tag Desc.	Next Date	Month	Interval	Frequency	Location	Loc. Type	Dept.	Hrs
1603	Air Handling Unit - Quarterly	Equipment	10000-02	Air handler	1/6/2023	1	3 Month		SUR	Building Code		
1603	Air Handling Unit - Quarterly	Equipment	10000-02	Air handler	4/6/2023	4	3 Month		SUR	Building Code		
1603	Air Handling Unit - Quarterly	Equipment	10000-02	Air handler	7/6/2023	7	3 Month		SUR	Building Code		
1603	Air Handling Unit - Quarterly	Equipment	10000-02	Air handler	10/6/2023	10	3 Month		SUR	Building Code		
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	1/6/2023	1	2 Week	50		Building Code		2.50
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	1/20/2023	1	2 Week	50		Building Code		2.50
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	2/3/2023	2	2 Week	50		Building Code		2.50
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	2/17/2023	2	2 Week	50		Building Code		2.50
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	3/3/2023	3	2 Week	50		Building Code		2.50
P1612A	Annual, Air-Cooled Condenser	Equipment	10000b	Air handler	3/17/2023	3	2 Week	50		Building		2.50

- Use Excel Format
- Look at peak months
- Determine what can move
- Move seasonal first
- Move non-seasonal last

# Updating PMs





# Updating PMs

**TASK** Save Cancel

Identity | Task Check List | Resolution | Requirements | **PMs** | Repair Centers | Work Orders | Cost

**Code** P1625Q **Description** Quarterly, Lube Route for Liebert CRAH

PM Schedule

Add PM | Batch Add PM | Edit Selected | Delete Selected

			Item Type	Item Tag	Description	Average Time	Unit	Interval	Location	Trade	Repair Center	Next PM Date	Last PM Date	Department
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-04	Liebert CRAH Challenger 3000		1	Month	Main Campus, Administration Building, 01-K3	HVAC	Physical Plant	04/28/2023	03/29/2023	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-01	Liebert CRAH Challenger 3000		1	Month	Main Campus, Administration Building, 01-K3	HVAC	Physical Plant	04/28/2023	03/29/2023	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-02	Liebert CRAH Challenger 3000		1	Month	Main Campus, Administration Building, 01-K3	HVAC	Physical Plant	04/28/2023	03/29/2023	

From the Task Schedule windows in WebTMA

Accounting | Organization | Admin | Reports | Help

**PM Schedule Entry** Save Cancel

Identity | Task Check List | Resolution | Requirements | **PMs**

**Code** P1625Q

PM Schedule

Add PM | Batch Add PM | Edit Selected | Delete Selected

			Item Type	Item Tag
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-04
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-01
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-02
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment	CRAH-03

Repair Center:

Work Order Type:

Work Order Subtype:

Priority:

Trade\*:

Rate Schedule:

Technician:

Department:

Speed Type:

Warehouse Code:

Active  Charge

Scheduling Options

Last PM Date:  Fixed  Floating

Est. Time:

Days To Complete:

Calendar Schedule

Next PM Date:

Due Every:

Recurrence:

Season Start:

Season End:

Fixed DOW:

Save Cancel



# Updating PMs

From the PM Batch Update

WebTMA 7 BATCH PM UPDATE

Fast Find - Search

Action Menu

General Information

New Browse Selection

Item Tag	Est Time	Item Type	Repair Center Name	Department Name	Task Description	Next PM Date
<input type="checkbox"/> .MAIN		Building	12345455		General Carpentry Work	03/11/2025
<input type="checkbox"/> .MAIN-a_TEST		Area	25-CENTRAL		Construct/Build	03/11/2025
<input checked="" type="checkbox"/> 005		CEEquipment	25-CENTRAL		1Y-Regional Buildings-Fire Drill-1st Shift-NC-MR	11/30/2025
<input type="checkbox"/> 006		CEEquipment	25-CENTRAL		General Carpentry Work	12/31/2025
<input type="checkbox"/> 03-Office B-19326		Building	12345455		General Carpentry Work	03/07/2025
<input type="checkbox"/> 03-Office B-19326		Building	Biomedical Facilities		1Y-Regional Buildings-Fire Drill-1st Shift-NC-MR	10/25/2030
<input type="checkbox"/> 100		Equipment	25-CENTRAL		Task with Trade2	04/01/2026
<input type="checkbox"/> 100		Equipment	12345455		Construct/Build	04/27/2025
<input type="checkbox"/> 100		Equipment	12345455		1Y-Regional Buildings-Fire Drill-1st Shift-NC-MR	03/27/2026
<input type="checkbox"/> 100		Equipment	Eric Test RC		Construct/Build	04/28/2025
<input type="checkbox"/> 100		Equipment	EHS RC		General Carpentry Work	05/12/2025

250 Items per page Select Page Items Selected: 1

Remove Selected Mass Update

Action Menu Favorites Records Reports

PMSchedule Mass Update Update Cancel

Update Fields Option

**General**

Include New Value

Active

Repair Center

Work Order Type

Priority Description

Trade

Department

Account #

Rate Schedule

Warehouse Name

Technician Code

Crew Name

**Scheduling Options**

Include New Value

Est. Time

Days To Complete

Next PM Date  Fixed  Floating

Every  Day(s)

Update Cancel

# PM Roadmap





# PM Road Map

## Two Scheduling Formats

TMA will continue to support both rules. There will be some transition on reporting during the development for Modern (RRULE).

## Load Balance Reports

PM Load Balance reports will fully support the new Modern RRULE mid-April.

## PM Reports

PM Report Lists will complete in the third quarter. The format needs to be adjusted to meet both formats.

## An Additional PM Consolidation Option

- A new UI will be developed to include a task/(PM Plan) that will have multiple frequencies. Grouping would include Annual, Semi-Annual, Quarterly, and Monthly as an example.
- These will only be PM Based.
- There will still be the ability to assign the task/(PM Plan) in multiple MWIs.
- The task/(PM Plan) will have its own Tash Sheet or Master Check list by frequencies.
- Task/(PM Plan) will still have their own estimated times for load balancing by frequencies
- Task/(PM Plan) will still have their own estimated times for load balancing at MWI level for unique items or groups
- There will be a next date for the Task/(PM Plan) assigned at the lowest frequency schedule, Annual based on example above. We will expose the forecast for future intervals following the Modern PM forecast design.
- Multi-trade will be supported but only using the original PM consolidation process.
- From a reporting perspective, you would have 1 Annual, 1 Semi-Annual, 2 Quarterly, and 6 Monthly PMs in the history report.

Q&A

Thank you

