Schedule MD™

QUICKSTART GUIDES & SUPPORTING RESOURCES

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QUICKSTART GUIDE

Directly Analyze A P6 XER With Schedule MD

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DIRECTLY ANALYZE A P6 .XER WITH SCHEDULE

Schedule MD applies 33 reliability metrics and tallies 100's of data metrics for direct analysis of an .xer. This is particularly helpful for large schedules, and preserves the original CPM attributes. The most basic steps follows:

1. **Prep the P6 project before .xer export.** Schedule and summarize the project, and export .xer.
2. **Launch MD & Schedule MD Inputs**. Open an .xer via the MD desktop shortcut. Then complete the **Properties** and **Review & Sign** tabs.
3. **Exclude unmeasured metrics**. Uncheck metrics that do not apply to the .xer analysis.
4. **View results, run reports & custom lists**. View results in the **Metrics Manager (MM)** via a widget, matching object list, or run MD reports and or custom metric list.

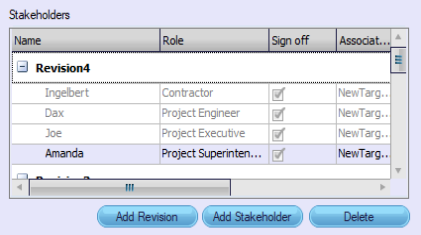
1. Prep the P6 Project Before Analysis in

In P6 before opening the .xer in MD, open the project in P6 and complete the following 3 steps from the P6 Tools menu.

1. **Schedule the project**. Via **Tools > Schedule,** click the ***Schedule*** button.
2. **Summarize the project.** In Primavera via **Tools > Summarize > Open Projects** from the menu bar. Click ***OK***.
3. **Export an .xer.** With the project open, Click **File > Export** from the menu. With **Primavera PM / MM – (.XER)** selected, click ***Next***. With **Project** selected, click ***Next***. Check the project(s), click ***Next***. Name the file and click ***Finish***.

2. Launch & Enter Schedule Inputs

Launch MD and select an .xer file and project. Then at minimum for each MD analysis, the **Properties** and **Review & Sign** tabs should be completed in **Schedule MD Inputs**.



1. **Launch MD from the desktop icon.** Navigate to the .xer. When MD opens a project the first time, **Schedule Inputs** is the first window that opens. If there is more than project in the .xer, select a project from the **List of available projects**.
2. **Enter Schedule MD Inputs**. At minimum, the **Properties** & **Review & Sign** tabs must be completed as they set the metrics applied and thresholds. Further, the **Signoffs** and **Narrative** are the primary sources of every **Comprehensive** score.
3. **Save Inputs.** Click ***Save*** to save the MD Inputs to the .xer. See the MD Inputs at any time via the MM list icon.

Complete the Properties tab

1. Select **Revision**, **Level**, and **Delivery** from menus.
4. Set criticality thresholds as critical and near-critical counts factor into several metrics.
2. **Completion Likelihood** is not required (if not risked, risk metrics may be excluded).
3. Next click the **Review & Sign** tab to complete the tab. Or, click ***Save*** to close the Inputs window and MD prompts saving the .xer with inputs.

Complete Review & Sign tab. Narrative Checklist

1. Check the ***Narrative*** checkbox.
2. In the bottom window **Primary Checks** tab, check ***Yes*** or ***No*** for each question.
3. Complete all tabs until all questions show as **Answered** at the bottom of the checklist window.

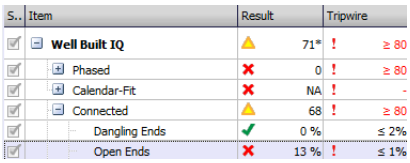
Finish Review & Sign. Add Revision, Stakeholders, & Sign-offs

1. Click ***Add Revision***. Type a name a click ***Enter***.
2. Click ***Add Stakeholder***. Enter a name and click ***Enter***.
3. Click **Undefined** below **Role** and select role from the menu.
4. Click the ***Signoff*** check box. The comment window opens for an optional comment. Click ***Continue***.
5. Click ***Sign*** in **Confirm Signature**. Once signed, a stakeholder cannot be edited.
6. Repeat steps 2-5 for new stakeholders and signoffs. To review the number of signoffs needed, in **MM** go to **Comprehensive tab > Aligned > Signoffs** to see the threshold (generally 4-5).
7. When finished, click ***Save***. MD prompts save of the .xer with inputs, and **MM** opens.

NOTE: Any plan change, whether calculated or only a graphic change, will archive signoffs and a new Revision, Stakeholders, and Signoffs are required to restore the score.

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3. Exclude Unmeasured Metrics



The first time the MM opens for a project, the score is artificially low since all metrics are scored *even if they cannot be calculated*. Hence, all uncalculated metrics should excluded as follows, in particular exclude all 9 metrics that cannot be scored for an .xer.

1. **Identify Unmeasured Metrics.** Look for asterisks which indicate the presence of an unmeasured metric in a tab. Go to each tab and expand nodes to see * at excludable metrics displaying with **NA** and an active check.
2. **Exclude metrics:** In each tab, expand nodes to uncheck active checks and the red **X** changes to a gray **NA** icon (NA and header node check remains even if all component metrics are unchecked/excluded). Faded checks cannot be excluded.

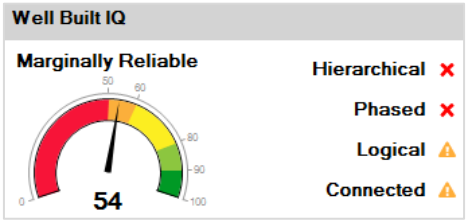
TIP: A metric is only eligible for exclusion if it does not apply (weather, risk, based on MD Inputs Schedule Properties) or if it cannot be calculated due to a lack of a denominator based on the metric definition. See definitions by hovering cursor over a metric label in the **MM**, click the ***View*** icon, or see complete list in the ***MD Cheat Sheets***.

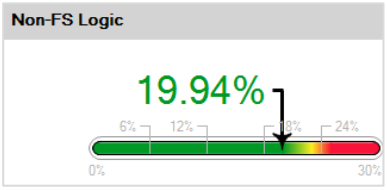
9 Metrics that cannot apply to .xers (only NetPoint):

1. Breaching Finish Dates,
2. Breaching Start Dates,
3. Off-base Delays,
4. Improper Detail,
5. Subjective Duration
6. Missing Resources
7. Abnormal Resource Logic
8. Secondary Calendar
9. Benchmark Frequency

4. View & Report MD Results

In each tab, metrics are divided into **MD**, **DCMA**, and data metric sections in the **MM** top window. Expand nodes and scroll the list to click to select a metric and see the result in the lower results window as a visual widget, or go to the customizable matching object list, or run standard MD reports.





1. **Dashboard widget.** Default MM display to visualize selected metric result.
2. **Matching object list.** Select a metric in an expanded node in the **MM** top window, then select **Matching objects** from the **Viewing** menu to see customizable list.
3. **Filters:** Use the filter box above the window to filter the list below. Clear filter to refresh to see complete MM results.

MD reports offered via the MM List Icon.

1. **Summary Report.** Includes all metrics, scores, and definitions, but not the matching object lists. Ideal for executive reports.
2. **IQ Report.** Includes MD metrics, scores, definitions, and matching object list. Ideal to drill down into results.
3. **DCMA Report.** Includes only the DCMA 14-point metrics and matching object lists (only report with lags and leads).
4. **Deficiency Report**. Includes all activities organized into a tornado diagram based on number of metrics outside of the threshold with the corresponding matching object lists. Does not include MD scores or definitions. Ideal to review activity effect on the score.

TIP: In Excel reports, expand/collapse metric category rows via icon left of column "A". Also, a blue underlined metric name in Column A is a hyperlink to its list.

Run & customize lists from the Metrics Manager

1. Right-click on the header row at the top of any list or in an expanded list. Or to work with Matching Objects first select the metric in the top window and then in **Viewing** above the bottom list select **Matching Objects**.
2. From the right-click menu, check/uncheck fields to include in the list. The list varies based on the selected metric.
3. Order/sort fields by drag and drop of column header labels.
4. Filter a list by entering text the filter field above the list being filtered, clear the list to refresh the window.
5. Right click header row for export choices of the full list or the list as displayed/sorted via **Export Displayed Rows**…

TIP: Expand a list via the expand icon for a larger view with the same options to customize the fields, order, and export options by right click on the header labels.

TIP: More on results. Take time to explore the 100's of data metrics listed in in each tab as they provide a great deal of information on the project. For example, you can see the % of links with lags, find the % of critical, near critical, or activities with negative total float, etc., to give very useful neutral data on the of the project schedule.

NOTE: *This guidance covers only the absolute minimum steps necessary to run an MD analysis on an .xer using the desktop MD application. For example, there are additional steps in the MD Inputs available to include a base case, weather metrics using planned NOAA weather data, and completion likelihood, but they are optional and can be easily added to an analysis. For more details on all these steps, please see the NetPoint User Guide found in In the* ***NetPoint Help Menu****.*

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Basic Steps for Schedule MD in NetPoint

BASICS TO USING SCHEDULE MD IN NETPOINT

Schedule MD (MD) runs up to 42 MD metrics and tallies100s of data metrics for a NetPoint plan. See the 4 basics steps to run MD below:

1. Open MD in NetPoint & Enter Schedule Inputs

1. **Open a NetPoint plan & Schedule MD.** With a NetPoint plan open, go to **Metrics > Open Metrics Manager**. The first time MD opens for a plan, MD Inputs will open.
2. **Enter Schedule MD Inputs**. At a minimum, the **Properties** & **Review & Sign** tabs must be completed to set the metrics applied and thresholds. Further, the **Signoffs** and **Narrative** are the primary sources of every **Comprehensive** score.
3. **Save Inputs**. Click ***Save*** to save MD Inputs. See MD Inputs any time via Metrics Manager (MM) ***List*** icon.

Complete the Properties Tab

1. Select **Revision**, **Level**, and **Delivery** from menus.
2. Set criticality thresholds as critical and near-critical counts factor into several metrics.
3. **Completion Likelihood** is not required (if not risked, risk metrics may be excluded).
4. Next click the **Review & Sign** tab to complete the tab. Or, click *Save* to close the Inputs window and MD prompts saving the xer with inputs.

Complete Review & Sign tab. Narrative Checklist

1. Check the *Narrative* checkbox.
2. In the bottom window **Primary Checks** tab, check *Yes* or *No* for each question.
3. Complete all tabs until all questions show as **Answered** at the bottom of the checklist window.

Finish Review & Sign. Add Revision, Stakeholders, & Sign-offs

1. Click *Add Revision*. Type a name a click *Enter*.
2. Click *Add Stakeholder*. Enter a name and click *Enter*.
3. Click **Undefined** below **Role** and select role from the menu.
4. Click the *Signoff* check box. The comment window opens for an optional comment. Click Continue.
5. Click *Sign* in **Confirm Signature** (cannot edit signed stakeholder).
6. Repeat steps 2-5 for new stakeholders and signoffs. To review the number of signoffs needed, in **MM** go to **Comprehensive tab > Aligned > Signoffs** to see the threshold (generally 4-5).
7. When complete, click *Save* to save MD Inputs and MM opens.

*N**OTE:** Any plan change, whether a calculated change in the plan or only a graphic edit (e.g., object color, grid size, or text edit) will archive the plan signoffs and new Revision, Stakeholders, and Signoffs are required to restore Comprehensive score.*

2. Exclude Unmeasured Metrics

The first time the MM opens for a project, the score is artificially low since all metrics are scored *even if they cannot be calculated*. Hence, unless they are to be added (e.g., a WBS), all uncalculated metrics should excluded as follows:

1. **Identify Unmeasured Metrics.** Look for asterisks which indicate the presence of an unmeasured metric in a tab. Go to each tab and expand nodes using to see * at excludable metrics displaying with **NA** with and an active check.
2. **Exclude metrics:** In each tab, expand nodes to uncheck active checks and the red **X** changes to a gray **NA** icon. NA and header node check remain even if all component metrics are unchecked/excluded. Faded checks cannot be excluded.

TIP: A metric is only eligible for exclusion if it does not apply (weather, risk, based on Schedule Properties Inputs, etc.) or if it cannot be calculated due to a lack of a denominator based on the metric definition. See definitions by hovering cursor over a metric label in the **MM**, click the ***View*** icon, or see complete list in the ***MD Cheat Sheets***.

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3. View & Report MD Results

In each tab, metrics are divided into **MD**, **DCMA**, and **Data Metric** sections in the MM top window. Expand nodes, scroll the through list, click to select a metric and see the results in the lower results window as a visual widget, or go to the customizable matching object list, or run preformatted MD reports. Also, use filters in each tab to search it's component metrics.

1. **Dashboard widget.** Default MM display to visualize selected metric result.
2. **Matching object list.** Expand node in the **MM** top window, and click row to select a metric, then select **Matching objects** in the **Viewing** menu to see a customizable results list in bottom window.
3. **Filters:** Use the filter box above the window to filter the list below. Clear filter to refresh to complete MM results.
4. **Run MD reports.** Run MD reports of the starting point before improving the plan.

MD reports offered via the MM List Icon

1. **Summary Report.** Includes all metrics, scores, and definitions, but not matching object lists. Ideal for executive reports.
2. **IQ Report**. Includes MD metrics, scores, definitions, and matching object lists. Ideal to drill down into results.
3. **DCMA Report**. Includes only DCMA 14-point metrics, definitions, and matching object lists (only report of lags & leads).
4. **Deficiency Report**. Includes all activities in a tornado diagram based on number of metrics breaking the threshold with the corresponding matching object lists. Does not include MD scores or definitions. Ideal to review activity impact on score.

NOTE: Plan changes instantly refresh results and require new reports.

TIP: In Excel reports, expand/collapse metric category rows via icon left of column "A". Also, a blue underlined metric name in **Column A** is a hyperlink to its list.

Run & customize lists from the Metrics Manager

1. Right click on the header row at the top of any list or in an expanded list. Or, to work with Matching Objects, first select the metric in the top window and then in Viewing above the bottom list select Matching Objects.
2. From the right-click menu, check/uncheck fields to include in the list. The list varies based on the selected metric.
3. Order the fields by drag and drop of column headers.
4. Sort by fields by clicking on the header row label
5. Filter a list by entering text the filter field above the list being filtered, clear the list to refresh the MM window.
6. Right click header row for export choices of the full list or only as displayed/sorted using *Export Displayed Rows*…

TIP: Expand a list via the Expand icon for a larger view with the same options to customize the fields, order, and export options by right click on the header labels.

4. Use MD Results Lists to Directly Improve Plan & Scores.

Using the MD reports, take action to improve the MD results by going to the lowest scoring MM tab and metrics to improve the score. Review the metric definiton and then interactively select and act on objects to see instant effect on the MD score.

1. **Save plan with a new name.** This preserves the original plan before improvement.
2. **Manually log changes.** MD does not log changes, so manually log if needed.
3. **Identify metrics to improve.** Review reports and use MD icons to identify low scores. Then starting with the lowest scores by expanding nodes in top window and click on a metric row to select metric. Be sure uncalculated metrics are excluded as suitable.
4. **Review MD definition.** Click MM ***View*** icon or refer to **IQ Report** or **Summary Report** for the metric definition and to understand how to remedy the metric score.
5. **Identify objects.** In the MM, go to the **Viewing > Matching Objects**, then click on an object in the list to see the plan scroll to that object.
6. **Take action on the plan. With** the object(s) selected in **Viewing** list, click ***Select*** to modify the object and/or or double click the object in the plan to edit the object itself, with other commands also available via the ***Highlight***, ***Delete,*** etc., buttons.
7. **Improve MD score & run new reports.** See instant refresh of MD results and run new reports via the MM List icon.

TIP: More on results. Take time to explore the 100s of data metrics listed in each tab as they provide a great deal of project information. For example, use filter to find the % and lists of **Links with Lags**, the % of **Critical** and **Near-critical activities**, or **Negative-total float activities**, etc., to give very useful fact-based, neutral data of the schedule.

This guidance covers only the minimum steps necessary to run an MD analysis. For example, there are additional steps in MD Inputs available to include a base case, weather metrics using planned NOAA weather data, and completion likelihood, etc., but they are optional and can be easily added to an analysis. For more details on all steps and advanced options, please see the complete NetPoint User Guide only available via the ***NetPoint Help Menu****.*

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SCHEDULE MD DETAILS

Tables of Schedule MD Definitions & Thresholds

HOW is the Schedule IQ™ Score (v1.2) Calculated?

Comprehensive

Aligned

Narrative Score: The number of points given to the narrative checklist.

Schedule Sign-offs: The number of stakeholders who have signed off on the schedule.

Formulaic

Subjective Durations: Activities designated as physical work whose durations are missing a formula and whose criticality factor is ≤ the near-criticality threshold, divided by all activities designated as physical work whose criticality factor is ≤ the near-criticality threshold.

Improper Detail: Incomplete activities designated as physical work with durations outside the recommended range, divided by all incomplete activities designated as physical work. The recommended range by level for each activity according to its calendar is: 2-12 months for level 1, 6 weeks-6 months for level 2, 2-6 weeks for level 3, and ≤ 2 weeks for level 4.

Complete

Missing WBS: The number of activities without a WBS element divided by the total number of activities.

Missing Codes: The number of activities without a code divided by the total number of activities.

Resourced

Upcoming Overages: The number of time units (e.g., days) that resource levels exceed limits within 13 periods (e.g., weeks) after the data date, divided by the total number of time units with resources assigned within 13 periods after the data date.

Missing Resources: The number of activities designated as physical work without a resource divided by the total number of activities designated as physical work.

Conforming

Breaching Finish Dates: Finish milestones or benchmarks that fall after their respective contract dates.

Breaching Start Dates: Start milestones or benchmarks that fall before their respective contract dates.

Off-base Delays: Delay activities that are NOT modeling weather, and that are present in the unprogressed baseline schedule.

Credible

Predictive

Critical Activities: The number of incomplete activities whose criticality factor is ≤ the threshold, divided by the total number of incomplete activities.

Schedule Margin: The project completion date minus the latest early finish date of all activities or milestones divided by the project completion date minus the data date.

Inadequate Float: Activities with merge risk indices ≥ 0.5 divided by the total number of activities. Merge risk indices are calculated as an activity's merge float divided by its total float.

Hidden Delay: Right of the data date, the gap sum of the longest path (i.e., path with the lowest total float) divided by the duration of the longest path.

Flexible

Schedule Gap Index: Right of the data date, the sum of all link gaps divided by the sum of remaining non-critical activity durations.

Risked

Completion Likelihood: The probability of completion as determined by risk analysis.

Resource-flowing

Abnormal Resource Logic: The number of non-finish-to-start links that have been designated as "Resource-Flow" divided by the total number of links designated as "Resource-Flow".

Weathered

Planned Weather Index: Right of the data date, the number of planned weather days divided by the number of reasonably anticipated weather days.

Well-Built

Logical

Logic Index: The number of valid activity-to-activity links divided by the total number of activities.

Open Ends: Activities that have either no predecessors or no successors divided by the total number of activities.

Dangling Ends: Activities that have only finish-to-finish and/or start-to-finish predecessors or only start-to-start and/or start-to-finish successors, divided by the total number of activities.

Paired Activities: Activities connected by both start-to-start and finish-to-finish links to the same predecessor or successor divided by the total number of activities connected by start-to-start, finish-to-finish, or start-to-finish links.

Inhibiting Logic: Finish-to-finish + start-to-finish links with activity successors and zero-gap divided by the total number of finish-to-finish, start-to-finish, and start-to-start links with activity successors (links with benchmarks excluded).

Phased

Benchmark Frequency: The number of benchmarks with at least one predecessor or successor divided by the total number of years in the schedule.

Calendar-Fit

Secondary Calendar Use: The number of activities designated as physical work assigned to secondary calendars, divided by the total number of activities designated as physical work.

Hierarchical

Missing Hammocks: Activities that aren't associated with any hammock divided by the total number of activities.

Milestone Density: The number of milestones and benchmarks without contract dates divided by the total number of activities.

Connected

Questionable Logic: Start-to-start and finish-to-finish links with zero lags divided by all start-to-start and finish-to-finish links.

Constraints: The number of activities with constraints divided by the total number of activities.

PDM Logic: The number of non-finish-to-start activity-to-activity links divided by the total number of links.

Improper Leads: The number of negative lags on finish-to-start links that are longer than the predecessor duration.

Redundant Logic: The number of redundant links divided by the total number of links.

Extreme Logic: The number of start-to-finish links divided by the total number of start-to-finish, finish-to-finish, and start-to-start links.

Controlled

Forensic

Hidden Forensic Delay: Left of the data date, the sum of all gaps on the path with the lowest forensic total float.

Breached Gaps: Links that span a period of time less than 0 and which have been actualized, divided by all actualized links.

Statused

Impractical Starts: The number of non-critical activities that start on early dates within 8 periods (for level 3 or 4 schedules) after the data date, divided by the total number of activities within 8 periods after the data date. For level 1 or 2 schedules, within 26 periods after the data date.

Out-of-sequence Work: Actualized critical and near-critical successor activities whose start dates breach the logic tie type, divided by the total number of actualized critical and near-critical activities.

Improper Status: The number of actualized activities right of the data date + the number of non-actualized activities left of the data date.

Re-baselined

Completion Likelihood Index: The completion likelihood in the revised baseline divided by the completion likelihood in the unprogressed baseline.

Trended

Earned Schedule Index: The project duration at which planned percent complete (i.e., resource consumption) should have occurred (in the selected base case file) divided by the elapsed duration from project start to data date. If > 1.0, progress is ahead of schedule. If < 1.0, progress is behind schedule.

Weathered

Actual Weather Index: Left of the data date, the number of actual weather days identified divided by the number of observed weather days according to the selected NOAA weather station(s).

WHY Does the Schedule IQ™ Score (v1.2) Matter?

Comprehensive

Aligned

Narrative Score: A schedule should align with the contractor planning basis. A lack of a narrative, or a low score, may justify withholding acceptance.

Schedule Sign-offs: A schedule should be signed off by ***4-5*** key stakeholders responsible for delivering the project. Too few or no signatures may represent a lack of credibility.

Formulaic

Subjective Durations: Critical/near-critical physical work activity durations should factor in production rates. Subjective durations are unreliable for schedule analysis unless established by the responsible stakeholder. ***≤20%***

Improper Detail: The majority of physical work activity durations should be of appropriate granularity so as to not impair progress measurement. ***≤20%***

Complete

Missing WBS: Activities should be developed using the WBS. An incomplete schedule may de-value schedule analysis and further be susceptible to delay and manipulation. ***≤5%***

Missing Codes: Codes should be provided to organize, filter, and roll up activities. A lack of organization overcomplicates finding activities and status reporting. ***≤5%***

Resourced

Upcoming Overages: The over-demand of key trades should be minimized, since leveling may not be solvable without extending project completion and/or unplanned acceleration. ***≤10%***

Missing Resources: ***95%*** of physical work activities should be loaded with man-hours, crafts or crews, or dollars.

Conforming

Breaching Finish Dates: ***Every*** contractual finish milestone should fall on or before the respective contract date. A failure may anticipate a breach of contract or false critical paths and visible or latent negative total floats.

Breaching Start Dates: ***Every*** contractual start milestone should fall on or after the respective contract date. A failure may anticipate a breach of contract or false critical paths and overstated total floats.

Off-base Delays: There should be ***no*** delays where the data date equals the project start date. Otherwise, total floats are subject to manipulation.

Credible

Predictive

Critical Activities: About ***15%-30%*** of activities should be critical. A schedule with too many critical activities is more susceptible to delay.

Schedule Margin: The critical path reserves ***5%-10%*** contingency. Otherwise, it is unlikely to correlate to a reasonable probability of on-time completion.

Inadequate Float: Activities with a high number of merging links should have sufficient total float. Otherwise, the risk of starting later is high due to overruns on multiple merging paths. ***≤25%***

Hidden Delay: There should be ***0*** days of embedded gap on the critical path; margin should be reserved at the end of the critical path.

Flexible

Schedule Gap Index: The ratio of activity-to-activity link gaps to activity durations should be compared as the data date progresses. An unknown or lopsided rate of gap depletion undermines the credibility of the schedule right of the data date. ***≥0.50***

Risked

Completion Likelihood: The schedule should support a reasonable probability of completion for the completion date. A likelihood below ***75%*** is generally considered high risk.

Resource-flowing

Abnormal Resource Logic: Resource-flow links are inherently finish-to-start according to the movement of crew. A resource-flow link that is otherwise should be confirmed for accuracy. ***≤5%***

Weathered

Planned Weather Index: Planned adverse weather should be at least 95% of the reasonably anticipated mean for each month. Otherwise, schedule margin may be insufficient and/or the project completion may be delayed. ***≥0.95***

Well-Built

Logical

Logic Index: To avoid an overly simple or an overly complicated network, the number of activity-to-activity links should be reasonably relative to the number of activities. ***1.25-1.75*** for levels 1/2 and ***1.5-2.5*** for levels 3/4

Open Ends: Activities without a predecessor/successor should be ***≤1%***. Unconnected activities make a schedule unreliable for what-if, risk, and delay/disruption analysis.

Dangling Ends: Activities with only finish-to-finish predecessors or only start-to-start successors should be ***≤2%***. Any occurrences may corrupt total floats and devalue risk analysis.

Paired Activities: Activities connected by both start-to-start and finish-to-finish links should be ***≤5%***. Multiple occurrence may impair logic clarity.

Inhibiting Logic: Zero-gap finish to finish logic should be ***≤5%***. If the successor has no other driving predecessor, then the zero-gap FF link is forcing the successor's early start to be later than necessary.

Phased

Benchmark Frequency: There should be ***1-2*** benchmarks per year for total float allocation. Otherwise, overconsumption of total float by trade contractors early on may prematurely render downstream work critical or near-critical.

Calendar-Fit

Secondary Calendar Use: Multiple calendars should be minimized for physical work activities. Unnecessary calendar variations exacerbate total float breaks and may blur logic chain patterns and critical path continuity. ***≤5%***

Hierarchical

Missing Hammocks: Level 3 activities should be traceable to their parent level 2 activities. Loss of vertical traceability undermines schedule reliability. ***≤5%***

Milestone Density: Discretionary milestones and benchmarks should be used in a reasonable proportion to the number of activities and schedule level. ***5-15%*** (levels 1/2), ***2-5%*** (levels 3/4).

Connected

Questionable Logic: Zero-lag start-to-start and finish-to-finish links should be ***≤5%***, since it undermines the use of start-to-start and finish-to-finish relationships.

Constraints: Activities with constraints should be ***≤5%***. Too many constraints render the schedule unreliable for what-if and delay/disruption analysis.

PDM Logic: Non-finish-to-start logic should not be overused, since it makes the logic more difficult to be understood by non-schedulers. ***≤20%***

Improper Leads: A successor should ***never*** start before a predecessor.

Redundant Logic: Redundant links should be ***≤5%***. Too many redundant links make it difficult to follow relationships and maintain the schedule.

Extreme Logic: Unless otherwise confirmed as reasonable, there should be ***no*** start-to-finish logic since it is extreme, complex, and difficult to follow.

Controlled

Forensic

Hidden Forensic Delay: Gap on the as-built critical path should be ***≤2*** days. A broken as-built critical path contains concealed delays that should be made visible.

Breached Gaps: Negative gaps between two actualized activities should be ***≤2%***. Any occurrence significantly impairs total float reliability for forensic analysis.

Statused

Impractical Starts: A reasonable number of imminent activities depending on schedule level should not be on early dates. Otherwise, it is not realistically reflecting how the work will unfold. ***≤80%*** (levels 1/2), ***≤60%*** (levels 3/4)

Out-of-sequence Work: Out-of-sequence progress should be repaired. Flawed actualized logic may render the schedule unreliable for delay/disruption analysis. ***≤2%***

Improper Status: There must be ***no*** activities left or right of the data date that are inaccurately statused. Flawed actual dates may render the schedule unreliable for delay/disruption analyses.

Re-baselined

Completion Likelihood Index: A revised risk assessment should closely support the initially targeted probability of completion. A lower index suggests significant erosion of total float off the critical path and/or unaddressed delay. ***≥0.95***

Trended

Earned Schedule Index: Percent complete (i.e., resource consumption) should progress on schedule. More activities and work effort than planned that are remaining as of the data date may render the balance of the schedule unrealistic. ***≥0.95***

Weathered

Actual Weather Index: Actual stoppages should be within 20% of the weather observed by NOAA. Otherwise, it may indicate the station used was not representative of the actual site or a decision to work through abnormal adverse weather. **0.8-1.20**

Schedule MD™

QUICKSTART GUIDES & SUPPORTING RESOURCES

SCHEDULE MD DETAILS

List & MD Tab Location of All Schedule MD Data Metrics & DCMA Metrics With Definitions

	NPT Only	MD Input	Metric	Threshold	Definition
COMPREHENSIVE			High Duration	≤ 5%	Incomplete activities with duration > 44 days divided by the total number of incomplete activities.
			Resources	0% (!)	Incomplete activities without resources divided by the total number of incomplete activities.
			Activities		Excludes resource dep tasks. The building blocks of a schedule. Activities span a duration from start date to a finish date, each date portrayed by an end node.
			Resources		People, equipment, facilities, materials, funding, or anything else required to carry out the project's activities.
	✓		Activities without an ID		Activities without a user-input unique identifier.
	✓		Activities without a Description		Activities whose text field for naming or summarizing is empty.
			Codes		Applied to activities, milestones, and benchmarks for categorizing, organizing, sorting, filtering, or reporting more easily.
			Info Objects		External files or attachments embedded on the canvas or on activities within NetPoint.
	✓		Physical Work Activities		Activities that have been designated as "Physical Work" in their property boxes.
	✓		Submittal Activities		Activities that have been designated as "Submittal" in their property boxes.
	✓		Commissioning Activities		Activities that have been designated as "Commissioning" in their property boxes.
	✓		Validation Activities		Activities that have been designated as "Validation" in their property boxes.
	✓		Closeout Activities		Activities that have been designated as "Closeout" in their property boxes.
	✓		Procurement Activities		Activities that have been designated as "Procurement" in their property boxes.
	✓		Delivery Activities		Activities that have been designated as "Delivery" in their property boxes.
	✓		Design Activities		Activities that have been designated as "Design" in their property boxes.
	✓		Other Work Type Activities		Activities that have been designated as "Other" in their property boxes.
	✓		Activities with Normative Durations		Incomplete physical work activities with durations in recommended range (Recommended range by level for each activity according to its calendar is: 2-12 months for level 1, 6 weeks-6 months for level 2, 2-6 weeks for level 3, and ≤ 2 weeks for level 4.
	✓		Formulaic Activities		Activities that have had formulaic durations entered in their property boxes.
	✓		Finish Benchmarks on Contract Dates		Finish benchmarks which are finishing on or before the input contract date.
	✓		Finish Milestones on Contract Dates		Finish milestones which are finishing on or before the input contract date.
	✓		Start Benchmarks on Contract Dates		Start benchmarks which are starting on or after the input contract date.
	✓		Start Milestones on Contract Dates		Start milestones which are starting on or after the input contract date.
CREDIBLE			High Float	≤ 5% (!)	Incomplete activities with total float > 44 days divided by the total number of incomplete activities.
			Critical Path Test	- (!)	Whether or not the last activity on the critical path shifts in direct proportion (within 90%) to a delay to another activity on the critical path.
			Critical Path Length Index	≥ 0.95	Critical Path Length + total float divided by the critical path length.
			Activities with Total Float ≤ 10th percentile		Incomplete activities whose total float is less than or equal to the 10th percentile. For more info, see metric "10th Total Float Percentile".
			Activities with Total Float ≤ 5th percentile		Incomplete activities whose total float is less than or equal to the 5th percentile. For more info, see metric "5th Total Float Percentile".
			Negative-total-float Activities		Activities that, due to a delay or advance, are affecting the project completion or start, or interm completion event (benchmark).
			Zero-gap Links		Links which do not span any period of time.
			Negative-gap Links		Links which span a period of time less than 0.
			Positive-gap Links		Links which span a period of time greater than 0.
			Links with Gap ≥ 20 Periods		Links which span a period of time more than 20 periods (e.g. weeks for a schedule in days).
			Mean Total Float		The sum total float of all activities, divided by the number of activities in the schedule.
			Median Total Float		The 50th total float percentile, after ordering all activities from least total float to largest total float.
			100th Percentile Period Density		The highest number of activities taking place during any period (e.g. any week for a schedule in days).
			20th Percentile Period Density		80% of the weeks (for a schedule in days) from project start to project finish have at least this many activities taking place.
			50th Percentile Period Density		50% of the weeks (for a schedule in days) from project start to project finish have at least this many activities taking place.
			Average Period Density		The number of activities divided by the number of periods (weeks for a schedule in days) from the project start date to the project finish date.
			Critical Activities		Activities whose criticality factor is ≤ the threshold (user defined). For current thresholds, see the Schedule MD Inputs.
		✓	Near-critical Activities		Activities whose criticality factor is > the criticality threshold, but ≤ the near-criticality threshold (user defined). See threshiolds in MD Inputs.
			Critical Path Total Float		The total float of the last object on the longest path (excluding benchmarks).
			Extreme Gap Links		Links whose gap is greater than or equal to the 80th percentile total float, multiplied by 80%.
			5th Total Float Percentile		5% of incomplete activities have this amount of total float or less.
			10th Total Float Percentile		10% of incomplete activities have this amount of total float or less.
			80th Total Float Percentile		80% of incomplete activities have this amount of total float or less.
			Activities with Extreme Total Float		Activities whose total float is at or above the 80th total float percentile.
			Activities with Buffer = 0		Activities which if delayed, delay at least one successor.
		✓	Anticipated Weather (NOAA)		The number of weather days of project right of the DD based on a 10-year average observed by NOAA for the selected weather station(s).
		✓	Planned Weather		The number of days right of the data date due to weather as modeled in the Schedule MD Inputs.
		✓	Normal Weather Days Per Year		The number of planned weather days right of the data date divided by the number of years from the data date to the project finish date.
		✓	Weather Calendars		Calendars that have been designated as including weather.
		✓	Activities on Weather Calendars		Activities assigned a calendar in their property boxes, which has been designated as including weather.

	NPT Only	MD Input	Metric	Threshold	Definition
WELL-BUILT			Logic	≤ 5%	Incomplete activities with no predecessor and/or no successor divided by the total number of incomplete activities.
			Leads	0% (!)	Incomplete links with negative lags or negative gaps divided by the total number of incomplete links.
			Lags	≤ 5% (!)	Incomplete links with lags divided by the total number of incomplete links.
			Relationships	≥ 90% (!)	Incomplete finish-to-start links divided by the total number of incomplete links.
			Hard Constraints	≤ 5%	Manually scheduled incomplete activities and/or incomplete activities with hard Must Start On, Must Finish On, Start No Later Than, or Finish No Later Than constraints divided by all incomplete activities.
			Milestones		Zero-duration events represent key dates or points of progress in the schedule. Similar to activities, they track with the network if linked.
			Hammocks (LOEs)		A type of activity used to represent or summarize a group of other activities, milestones, and/or benchmarks. NetPoint hammocks cannot be linked or assigned resources.
			Object-to-object Links		Relationships between any two objects (activities, milestones, or benchmarks).
			FS Links		Relationships where the successor cannot start before the predecessor has finished (finish to start).
			Activity-to-activity Links		Links between any two activities only.
			FS Links with Lag		FS logic tie datum that denotes the least time between the finish of the predecessor and the start of the successor.
			FS Links with Lead		Negative lag modeling an overlap between two finish-to-start-connected activities.
			Activities with FS/SS & FF Predecessors		Activities that have at least one finish-to-start OR start-to-start predecessor AND at least one other finish-to-finish predecessor.
			Activities with Open Starts		Activities without any predecessors.
			Activities with Open Finishes		Activities without any successors.
			Start Milestones with Open End		Start milestones without any successors.
			Finish Milestones with Open End		Finish milestones without any predecessors.
			Calendars In-Use		The number of calendars with at least one or more activities, milestones, or benchmarks assigned.
			Activities on Constraints		Constraints are applied to dates to prevent activities from being moved earlier or later.
			Activities on SNE Constraints		A start no-earlier-than constraint is applied to an activity early start date and prevents it from being moved earlier in time.
			Activities on FNL Constraints		A finish-no-later-than constraint is applied to an activity late finish date and prevents it from being moved later in time.
			Activities with Dangling Start		Activities with at least one predecessor and at least one successor that have only finish-to-finish and/or start-to-finish predecessors.
			Activities with Dangling Finish		Activities with at least one predecessor and at least one successor that have only start-to-start and/or start-to-finish successors.
			FS Leads > Predecessor Duration		A negative lag between a predecessor-successor finish-to-start link that exceeds the duration of the predecessor.
			Zero-lag SS + Zero-lag FF Links		Start-to-start links with zero lag plus finish-to-finish links with zero lag (activity-to-activity only).
			Milestone/Benchmark Density		The number of milestones and benchmarks divided by the total number of activities in the schedule.
			Redundant Links		A link that cannot acquire zero gap under any combination of durations and lags, because successor is preceded by another successor to the activity or object.
			SS + FF Links		The subset of all logic ties comprising start-to-start or finish-to-finish links.
			Paired SS/FF Links		Start-to-start and finish-to-finish links with the same predecessor and successor.
			Activities on Paired SS & FF Logic		Activity and successor activity (or activity and predecessor activity) connected by both start-to-start & finish-to-finish logic ties.
			Calendar Periods		Number of periods (e.g. week for a schedule in days) from the activity with the earliest early-start date to the activity with the latest early-finish date.
			Logic Loops		Circular relationship where an activity is both predecessor and successor to the same activity or chain. (DCMA Critical Path Test and Redundant link metrics cannot calculate until logic loops are removed).
			Holidays Per Year		Number of holidays from project start to project finish date divided by number of years between project start to project finish date (assigned calendars).
CONTROLLED			Negative Float	0% (!)	Incomplete activities with negative float (GPM) or total float (CPM) divided by the total number of incomplete activities.
			Invalid Dates	0%	Completed activities before the data date + incomplete activities after the data date divided by the total number of activities.
		✓	Missed Tasks	-	Complete or incomplete activities with a baseline finish on or before DD whose current or actual finish is later than baseline finish, divided by # of activities with a baseline finish on or before the DD.
		✓	Baseline Execution Index	-	Completed activities divided by the number of activities that should have been completed according to the selected base case scenario.
			Activities Completed		Activities which have had both their start and finish dates actualized. Outlined in blue, they can no longer be modified.
			Activities In-progress		Activities which have begun but have not been finished. Intersecting with the data date, these activities are partially outlined in blue.
			Activities Remaining		Activities which have not yet begun (which have not yet been actualized), and which take place right of the data date.
			Completed Milestones		Milestones which have had their dates actualized. Outlined in blue, they can no longer be modified.
			Schedule Duration (Calendar Days)		Duration (in calendar days if the schedule is in days) from the project start to project completion.
			Remaining Schedule Duration (CDays)		Duration (in calendar days if the schedule is in days) from the data date to project completion.
			Activities on Early Dates		Activities whose drift is less than or equal to 0.
			Activities on Late Dates		Activities whose float is less than or equal to 0 and drift is greater than 0.
	✓	✓	Completed Near-critical Activities		Completed activities whose criticality factor is > criticality threshold, but < near-criticality threshold. In Schedule MD Inputs.
			Critical Path Length from Data Date		The interval (including non-working) between the DD and the early finish date of the last network object on the path with lowest total float.
			Critical Path Length from Project Start		The interval (including non-working) between the project start and the early finish date of the last network object on path with lowest total float.
			Completed Negative-gap Links		Completed links that span a period of time less than 0. A completed link is a link between two complete/partially complete activities (GPM embed before DD for non-FS links).
			Unprogressed Activities Left of DD		Activities left of the data date which have not been actualized yet.
			Progressed Activities Right of DD		Activities right of the data date which have already been actualized.
			Completed Critical Activities		Completed activities whose criticality factor is ≥ the criticality threshold (user defined). For current thresholds, see the Schedule MD inputs.
			Completed Links		Links between two completed or partially completed activities, so long as the embedded node (GPM) falls before the DD (for non FS links).
			Completed Zero-gap Links		A completed link that does not span any time. A completed link is a link between two completed/ partially completed activities(GPM embed before DD for non-FS links).
			Activities Starting on Data Date		Activities whose start dates coincide with the data date.
		✓	Completion Likelihood Index		The completion likelihood in current schedule divided by the completion likelihood in base case schedule (regardless of revision or progress).
		✓	Observed Weather (NOAA)		The number of weather days observed by NOAA left of the data date for the designated weather station(s).
		✓	Actual Weather		The number of weather days identified left of the data date according to all calendars.

Schedule MD™

QUICKSTART GUIDES & SUPPORTING RESOURCES

SCHEDULE MD DETAILS

The Schedule MD Inputs: *The Narrative Checklists*

The Narrative Checklists: Unprogressed Baseline)

Narrative for unprogressed baseline is included with the schedule submittal	☐ Yes	☐ No

Primary Checks

Author is signator to the schedule	☐ Yes	☐ No
Identifies key stakeholders who participated in the planning	☐ Yes	☐ No
Identifies key subcontractors who participated in the planning	☐ Yes	☐ No
Describes key assumptions used in the development of the schedule	☐ Yes	☐ No
Describes the high level sequencing execution, including key deliveries	☐ Yes	☐ No
Describes constructability reviews done and impact on the schedule	☐ Yes	☐ No
Describes studies of availability of key resources to support the schedule	☐ Yes	☐ No
Details basis for including owner, third-party, and delivery activities on the critical path	☐ Yes	☐ No
Describes basis of critical path total float	☐ Yes	☐ No
Lists prime and crucial milestones used for vertical traceability	☐ Yes	☐ No

Secondary

Assumptions

Narrative is consistent with *Core Traits of a Reliable Schedule*	☐ Yes	☐ No
Describes interactive planning sessions used to build the schedule	☐ Yes	☐ No
Describes items not included and not supported in the schedule	☐ Yes	☐ No
Identifies activities/logic depicting contractor interpretations	☐ Yes	☐ No

Conformance

Describes the “area” paths of execution within buildings	☐ Yes	☐ No
Identifies crucial resource-flow logic ties & impact on critical path(s)	☐ Yes	☐ No
Describes approach to incorporating contract dates in the baseline	☐ Yes	☐ No
Describes inclusion of specified means and methods and scope not shown in the drawings	☐ Yes	☐ No
Details basis for critical and near-critical activity formulaic durations	☐ Yes	☐ No
Mentions that formulaic durations were based on a company historical database	☐ Yes	☐ No
Mentions that activity owners were involved in estimating durations	☐ Yes	☐ No

The Narrative Checklists: *Unprogressed Baseline)*

Completeness		
Identifies the average and peak resource demand vs. availability	☐ Yes	☐ No
Describes how resources impacted estimating activity durations	☐ Yes	☐ No
Identifies basis of WBS framework	☐ Yes	☐ No
WBS chart is provided	☐ Yes	☐ No
Identifies WBS element as a code category	☐ Yes	☐ No
Describes activity ID codes as hierarchical allowing vertical traceability	☐ Yes	☐ No
Mentions that activities are coded to their child or parent activity in the hierarchy	☐ Yes	☐ No
Describes how work involving repeating activities is modeled	☐ Yes	☐ No
Mentions how resource-flow logic ties are planner devised vs. software generated	☐ Yes	☐ No
Crew-flow or similar charts for repeating activities are provided	☐ Yes	☐ No
Critical Path		
Describes basis for minimal-value activities on the critical path	☐ Yes	☐ No
Identifies links in critical and near-critical paths that are preferential	☐ Yes	☐ No
Mentions that critical path total float was based on risk analysis	☐ Yes	☐ No
Mentions that critical path total float is generated based on early completion vs. date constraints	☐ Yes	☐ No
Risk		
Mentions that the project team created a risk register	☐ Yes	☐ No
Risk register and probability impact matrix are included	☐ Yes	☐ No
Describes risk mitigation scenarios evaluated and impact on schedule	☐ Yes	☐ No
Forensics		
Baseline monthly and cumulative percent complete forecasts are depicted	☐ Yes	☐ No
Documents basis for average and peak progress that can be attained	☐ Yes	☐ No
Baselines the number of activities planned to be finished every month	☐ Yes	☐ No
Progress		
Basis for determining normal adverse weather allowances is provided	☐ Yes	☐ No
Conditions considered (i.e., wind, precipitation, etc.) are identified	☐ Yes	☐ No
Mentions that weather is based on statistical analysis or contract specification	☐ Yes	☐ No
Mentions that physical work and delivery activities are largely on the same calendar	☐ Yes	☐ No
Bases for premium work and non-work days are identified	☐ Yes	☐ No

The Narrative Checklists: Revised Baseline

Narrative for progressed baseline is included with the schedule submittal	☐ Yes	☐ No

Primary Checks

Author is signator to the schedule	☐ Yes	☐ No
Identifies key stakeholders who participated in the re-baselining	☐ Yes	☐ No
Identifies key subcontractors who participated in the re-baselining	☐ Yes	☐ No
Describes key assumptions used in re-baselining the schedule	☐ Yes	☐ No
Describes revisions in the high level sequencing execution	☐ Yes	☐ No
Describes constructability reviews done and impact on the schedule	☐ Yes	☐ No
Variance analysis for critical and near-critical activities is provided	☐ Yes	☐ No
Documents delay(s) causing negative total float	☐ Yes	☐ No
Documents time extension request for owner caused delay, if any	☐ Yes	☐ No
Documents recovery plan executed to eliminate contractor delay	☐ Yes	☐ No
Provides a comparison between actual weather and normal weather	☐ Yes	☐ No

Secondary

Assumptions

Narrative is consistent with *Core Traits of a Reliable Schedule*	☐ Yes	☐ No
Describes interactive planning sessions used to revise the schedule	☐ Yes	☐ No
Describes assumptions re: rate of progress over the next 3 months	☐ Yes	☐ No
Describes basis for revising durations based on actual production rates	☐ Yes	☐ No

Conformance

Describes revisions in the "area" paths of execution within buildings	☐ Yes	☐ No
Identifies revised resource-flow logic ties & impact on critical path(s)	☐ Yes	☐ No
Describes revisions in approach to incorporating contract dates	☐ Yes	☐ No
Describes revisions in specified means and methods and scope shown not in the drawings	☐ Yes	☐ No
Describes studies of availability of key resources to support the re-baseline	☐ Yes	☐ No
Reconciles the average and peak resource demand vs. availability	☐ Yes	☐ No
Describes how resources impacted schedule recovery and durations	☐ Yes	☐ No

The Narrative Checklists: Revised Baseline

Critical Path

Variance analysis for critical and near-critical milestones is provided	☐ Yes	☐ No
Mentions that negative variances on critical and near-critical paths are reducing	☐ Yes	☐ No
Details basis for revisions in owner, third-party, and delivery activities	☐ Yes	☐ No
Provides basis for added minimal-value activities on the critical path	☐ Yes	☐ No
Identifies links in critical and near-critical paths that are preferential	☐ Yes	☐ No
Provides reconciliation of remaining critical path total float	☐ Yes	☐ No
Identifies critical path length index as similar to the prior 3-update average	☐ Yes	☐ No
Identifies % of activities on the critical path as similar to the prior 3-update average	☐ Yes	☐ No

Risk

Mentions that the project team created a risk register	☐ Yes	☐ No
Risk register and probability impact matrix are included	☐ Yes	☐ No
Describes risk mitigation scenarios evaluated and impact on schedule	☐ Yes	☐ No

Forensics

As-built percent complete curve is provided	☐ Yes	☐ No
Baseline forecast vs. actual percent complete is reconciled as to causes	☐ Yes	☐ No
Identifies baseline execution index ≥ 0.95	☐ Yes	☐ No

Progress

Provides documentation supporting days lost due to adverse weather	☐ Yes	☐ No
Criteria for normal and actual adverse weather are the same	☐ Yes	☐ No
Describes actual dates and remaining duration protocols	☐	☐
Mentions that in-progress activities were statused by estimating remaining duration	☐	☐
Mentions that actual dates for critical/near-critical activities are exact to the day +/- 1	☐ Yes	☐ No

Non-Progress

Summarizes the parts of the schedule targeted for NP revisions	☐ Yes	☐ No
Identifies NP revisions affecting critical and near-critical activities	☐ Yes	☐ No
Identifies other NP revisions in logic ties, milestones, & benchmarks	☐ Yes	☐ No

Data Date

Describes how planned dates within 8 weeks right of DD were developed	☐ Yes	☐ No
Mentions that resource leveling was used to establish planned dates right of DD	☐ Yes	☐ No
Mentions that key stakeholders were involved in developing planned dates right of DD	☐ Yes	☐ No

The Narrative Checklists: Update

Narrative for the update is included with the schedule submittal	☐ Yes	☐ No

Primary Checks

Provides responses to owner's comments on prior update	☐ Yes	☐ No
Variance analysis for critical and near-critical activities is provided	☐ Yes	☐ No
Identifies how negative variances on critical and near-critical paths are reducing	☐ Yes	☐ No
Provides reconciliation of remaining critical path total float	☐ Yes	☐ No
Identifies critical path length index as similar to the prior 3-update average	☐ Yes	☐ No
Documents delay(s) causing negative total float	☐ Yes	☐ No
Provides documentation supporting days lost due to adverse weather	☐ Yes	☐ No
Describes how planned dates within 8 weeks right of DD were developed	☐ Yes	☐ No
Mentions that in-progress activities were statused by estimating remaining duration	☐ Yes	☐ No
Mentions that actual dates for critical/near-critical activities are exact to the day +/- 1	☐ Yes	☐ No

Secondary

Assumptions

Narrative is consistent with Core Traits of a Reliable Schedule	☐ Yes	☐ No
Describes basis for revising durations based on actual production rates	☐ Yes	☐ No
Describes assumptions re: rate of progress over the next 3 months	☐ Yes	☐ No
Identifies information not available in time to include in the update	☐ Yes	☐ No

Critical Path

Potential recovery plan in response to negative variances is outlined	☐ Yes	☐ No
Identifies % of activities on the critical path as similar to the prior 3-update average	☐ Yes	☐ No
Potential recovery plan to mitigate contractor delay is outlined	☐ Yes	☐ No
Mentions that negative total floats are reducing	☐ Yes	☐ No

Forensics

As-built percent complete curve is provided	☐ Yes	☐ No
Baseline forecast vs. actual percent complete is reconciled as to causes	☐ Yes	☐ No
Identifies baseline execution index ≥ 0.95	☐ Yes	☐ No

Progress

Provides a comparison between actual weather and normal weather	☐ Yes	☐ No
Criteria for normal and actual adverse weather are the same	☐ Yes	☐ No
Describes actual dates and remaining duration protocols	☐ Yes	☐ No

Non-progress		
Minor delay that was mitigated and corrective action are described	☐ Yes	☐ No
Minor, non-progress revisions are identified	☐ Yes	☐ No
None of the non-progress revisions impact critical or near-critical paths	☐ Yes	☐ No
Data Date		
Mentions that resource leveling was used to establish planned dates right of DD	☐ Yes	☐ No
Mentions that key stakeholders were involved in developing planned dates right of DD	☐ Yes	☐ No

Schedule MD™

QUICKSTART GUIDES & SUPPORTING RESOURCES

SCHEDULE MD DETAILS

What Is Scored for Each Type of Schedule

What Metrics (v1.2) Apply to **.xer Files**? (33)

Comprehensive	Credible	Well-Built	Controlled
Narrative Score	Critical Activities	Logic Index:	Hidden Forensic Delay
Schedule Sign-offs	Schedule Margin	Open Ends	Breached Gaps
Subjective Durations	Inadequate Float	Dangling Ends	Impractical Starts
Improper Detail	Hidden Delay	Paired Activities	Out-of-sequence Work
Missing WBS	Schedule Gap Index	Inhibiting Logic	Improper Status
Missing Codes	Completion Likelihood	Questionable Logic	Completion Likelihood Index
Upcoming Overages	*Abnormal Resource Logic*	*Secondary Calendar Use*	Earned Schedule Index
Missing Resources	Planned Weather Index	Missing Hammocks	Actual Weather Index
Breaching Finish Dates		Milestone Density	
Breaching Start Dates		*Benchmark Frequency*	
Off-base Delays		Constraints	
		PDM Logic	
		Improper Leads	
		Redundant Logic	
		Extreme Logic	

What Metrics (v1.2) Apply to **Revised Baselines**? (41)

Comprehensive	Credible	Well-Built	Controlled
Narrative Score	Critical Activities	Logic Index:	Hidden Forensic Delay
Schedule Sign-offs	Schedule Margin	Open Ends	Breached Gaps
Subjective Durations	Inadequate Float	Dangling Ends	Impractical Starts
Improper Detail	Hidden Delay	Paired Activities	Out-of-sequence Work
Missing WBS	Schedule Gap Index	Inhibiting Logic	Improper Status
Missing Codes	Completion Likelihood	Questionable Logic	Completion Likelihood Index
Upcoming Overages	Abnormal Resource Logic	Secondary Calendar Use	Earned Schedule Index
Missing Resources	Planned Weather Index	Missing Hammocks	Actual Weather Index
Breaching Finish Dates		Milestone Density	
Breaching Start Dates		Benchmark Frequency	
Off-base Delays		Constraints	
		PDM Logic	
		Improper Leads	
		Redundant Logic	
		Extreme Logic	

What Metrics (v1.2) Apply to **Unprogressed Baselines**? (35)

Comprehensive	Credible	Well-Built	Controlled
Narrative Score	Critical Activities	Logic Index:	*Hidden Forensic Delay*
Schedule Sign-offs	Schedule Margin	Open Ends	*Breached Gaps*
Subjective Durations	Inadequate Float	Dangling Ends	Impractical Starts
Improper Detail	Hidden Delay	Paired Activities	*Out-of-sequence Work*
Missing WBS	Schedule Gap Index	Inhibiting Logic	*Improper Status*
Missing Codes	Completion Likelihood	Questionable Logic	*Completion Likelihood Index*
Upcoming Overages	Abnormal Resource Logic	Secondary Calendar Use	*Earned Schedule Index*
Missing Resources	Planned Weather Index	Missing Hammocks	*Actual Weather Index*
Breaching Finish Dates		Milestone Density	
Breaching Start Dates		Benchmark Frequency	
Off-base Delays		Constraints	
		PDM Logic	
		Improper Leads	
		Redundant Logic	
		Extreme Logic	

What Metrics (v1.2) Apply to **Updates**? (39)

Comprehensive	Credible	Well-Built	Controlled
Narrative Score	Critical Activities	Logic Index:	Hidden Forensic Delay
Schedule Sign-offs	Schedule Margin	Open Ends	Breached Gaps
Subjective Durations	Inadequate Float	Dangling Ends	Impractical Starts
Improper Detail	Hidden Delay	Paired Activities	Out-of-sequence Work
Missing WBS	Schedule Gap Index	Inhibiting Logic	Improper Status
Missing Codes	*Completion Likelihood*	Questionable Logic	*Completion Likelihood Index*
Upcoming Overages	Abnormal Resource Logic	Secondary Calendar Use	Earned Schedule Index
Missing Resources	Planned Weather Index	Missing Hammocks	Actual Weather Index
Breaching Finish Dates		Milestone Density	
Breaching Start Dates		Benchmark Frequency	
Off-base Delays		Constraints	
		PDM Logic	
		Improper Leads	
		Redundant Logic	
		Extreme Logic	

What Metrics (v1.2) are **Adjusted for Level**? (6)

Metric	Level 1/2	Level 3/4
Logic Index	1.25-1.75	1.5-2.5
Impractical Starts	Within 26 periods, ≤80%	Within 8 periods, ≤60%
Subjective Durations	≤20% outside 2-12 months (L1), 6 weeks-6 months (L2)	≤20% outside 2-6 weeks (L3), ≤ 2 weeks (L4)
Missing Hammocks	-	≤5%
Schedule Sign-offs	≥5	≥4
Milestone Density	5%-15%	2%-5%