

One method, one schedule pair, every step shown

## A windows analysis you can re-run yourself.

Four schedule snapshots, one named method, and every register published whole. The conventions are stated before the first number. The input files are on this page. Run them through the same skill and you should get the same 17 working days.

Generated 23 August 2026. Method: AACE International Recommended Practice 29R-03, MIP 3.3 (Observational / Dynamic / Contemporaneous As-Is). Synthetic data throughout. This page shows what the method computes and, in the closing section, what it does not.

### Synthetic data

The Cedarline Pump Station Retrofit does not exist. The project, the activity names, the calendar, the progress and the delay events were all written into a generator script that is published on this page. No client, no owner, no contractor and no real schedule appears anywhere in these files. That is the point: a worked example has to be inspectable, and a real matter cannot be.

**What this page is.** Most published delay analysis shows you the answer. This one shows the run. A synthetic four-snapshot P6 schedule goes in, one named forensic method processes it, and the output is reproduced here whole, including the registers that are usually cut down to a summary and the findings that are usually left out.

**What it found.** Substantial Completion moved from 2025-09-12 to 2025-10-07, which is 17 working days (25 calendar days) on the project calendar. The three windows contributed +8, +7 and +2 working days, and they sum to 17, which is the same figure the baseline-to-final comparison produces independently. Six activities changed duration across the run. Four of those changes reached the completion date and two did not, because the two that did not sat on paths that still carried float. Nothing else moved: no logic was edited, no activity was

added or removed, and no out-of-sequence progress was recorded in any window.

**What it did not find.** Who was responsible. All 17 working days land in the Unattributed bucket, because a schedule file records that an activity took longer, not whose fault that was. The responsible-party column in the register below is empty in all 64 rows. Filling it in requires change orders, site records and correspondence, none of which a synthetic example can honestly supply. That gap is the most useful thing on this page.

The headline figures

Result in five numbers.

+17

Working days  
completion slip

3

Analysis  
windows

6

Duration changes  
found

64

Slip register rows  
published in full

17

Working days  
unattributed

The single visible exhibit for this page is the per-window table below. Everything else on the page is in a drawer, open it if you want it, and nothing has been shortened to fit.

| Window | Period | Window<br>length<br>(wd) | Completion<br>shift (wd) | Same<br>shift<br>(cd) | Cumulative<br>vs baseline<br>(wd) | Completion<br>date, prior →<br>later |
|--------|--------|--------------------------|--------------------------|-----------------------|-----------------------------------|--------------------------------------|
|        |        |                          |                          |                       |                                   |                                      |

| Window                            | Period                   | Window length (wd) | Completion shift (wd) | Same shift (cd) | Cumulative vs baseline (wd) | Completion date, prior → later |
|-----------------------------------|--------------------------|--------------------|-----------------------|-----------------|-----------------------------|--------------------------------|
| <b>W1</b><br>Baseline to Update 1 | 2025-02-03 to 2025-03-31 | 39                 | <b>+8</b>             | +12             | +8                          | 2025-09-12 → 2025-09-24        |
| <b>W2</b><br>Update 1 to Update 2 | 2025-03-31 to 2025-06-30 | 63                 | <b>+7</b>             | +9              | +15                         | 2025-09-24 → 2025-10-03        |
| <b>W3</b><br>Update 2 to Update 3 | 2025-06-30 to 2025-09-30 | 63                 | <b>+2</b>             | +4              | +17                         | 2025-10-03 → 2025-10-07        |
| <b>Sum of window shifts</b>       | 2025-09-12 to 2025-10-07 | n/a                | <b>+17</b>            | <b>+25</b>      | <b>+17</b>                  | n/a                            |

**3** windows, plus a summary row. Working-day figures are counted on the project calendar; the calendar-day column is shown beside them so the two are never confused.

Two things in that table are worth pausing on. First, the sum of the three window shifts (17 working days) equals the direct baseline-to-final comparison (17 working days). The windows method does not have to close like that, and when it does not close, the gap is a finding rather than a rounding note. Second, window three is a net figure: it carries a real slip and a real recovery in the same period, and the recovery is credited rather than dropped.

# Conventions.

A delay figure is meaningless without the conventions that produced it. Eight working days and eight calendar days are different claims. A variance of minus four means opposite things depending on the subtraction order. These are the conventions this analysis ran under, taken from the skill manifest the run wrote and from the basis blocks in the result.

| Convention      | This analysis                                                                                                                                  | Note                                                                                                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day unit        | Working days on the project calendar                                                                                                           | Every day count in this deliverable is in working days. No calendar-day figure is displayed. Where a contract clause is quoted verbatim in calendar days, the computed equivalent is given in working days alongside.                                 |
| Calendar basis  | One calendar, SYN-5D8H - Standard 5 Day x 8 Hour (clndr_id 4901), 8 h/day, Monday, Tuesday, Wednesday, Thursday, Friday, 15 holiday exceptions | Deltas are counted on the activity's own P6 calendar via work_day_delta. Where no project calendar is available the documented fallback is Monday to Friday with no holidays, and that fallback is disclosed on the affected figure.                  |
| Sign convention | A negative number means the contractor lost time                                                                                               | The subtraction order is deliberately opposite between start and finish, so that a negative value means lost time in both columns. Reversing either order to make them look consistent would invert the sign of every finish variance in this report. |

| Convention               | This analysis                                                                                                                                                                                                                              | Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sign on this page</b> | Slip and completion-shift columns are signed positive-later: a positive number means the date moved later, which is lost time                                                                                                              | Two column families, two signs, no contradiction. The negative-equals-lost convention quoted above governs the skill's start and finish variance columns, whose subtraction orders are set so a negative value reads as lost time in both. The slip and completion-shift figures published on this page are a different family: they measure movement in time, so later is positive. The +17 working days in the headline and a -17 in the skill's finish-variance column describe the same 17 lost working days. Neither convention is flipped to match the other. |
| <b>Float basis</b>       | Total float, read from the P6 <code>total_float_hr_cnt</code> field as exported, converted to days at the activity calendar hours per day. Completed activities are treated as not critical because a completed activity carries no float. | The skill manifest field <code>float_basis</code> came back null on this run. The statement here is the behaviour observed in the run, not a value read from the manifest.                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Date fields read</b>  | P6 Start and Finish columns only                                                                                                                                                                                                           | The completion-shift basis block for every window in this run reports <code>date_field_used: target_end_date</code> . In these files the planned (target) dates track the current Start and Finish, so the engine is reading the Finish column.                                                                                                                                                                                                                                                                                                                     |

| Convention                   | This analysis                                                                            | Note                                                                                                                                                              |
|------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Completion measure</b>    | Latest activity finish.<br>In all three windows the driving finish activity is COM-DEMOB | The basis block also reports <code>diverges_from_scd_end: false</code> in all three windows, so the measured completion agrees with the project scheduled finish. |
| <b>Entitlement milestone</b> | MS-SC (Substantial Completion)                                                           | Recorded in the outputs. It is not used as the completion measure; see the row above.                                                                             |

Holiday exceptions on the project calendar, all **15** of them: 2025-01-01, 2025-02-17, 2025-04-18, 2025-05-19, 2025-07-01, 2025-08-04, 2025-09-01, 2025-10-13, 2025-12-25, 2025-12-26, 2026-01-01, 2026-02-16, 2026-04-03, 2026-05-18, 2026-07-01

### How it was run

## Five steps, in this order.

The order matters. Calendar sanity comes before any day arithmetic, because if the calendar changed between snapshots then working days from one snapshot are not the same unit as working days from the next. The integrity gate comes before the forensic math, because the forensic math assumes the files are sane and it is not the forensic skill's job to check that.

### Step 1

#### Decode every calendar and diff them across the chain.

One calendar, `SYN-5D8H - Standard 5 Day x 8 Hour`, identical in all four snapshots: same name, same hours per day, same work week, same 15 holiday exceptions. If any of those had drifted, the run stops rather than reporting a day count that silently changed unit mid-analysis.

## Step 2

### Parse each snapshot with the canonical parser and hash it.

Each file is read by the same XER parser every other CPP tool uses, not by a bespoke reader written for this page, and each is hashed so a reader can confirm they got the same bytes.

## Step 3

### Run the schedule integrity gate on all four snapshots.

This is where the example stops being flattering. The baseline draws one RED and two AMBER checks, and each update draws one AMBER. All six findings are published below with the validator's own wording, rather than trimmed.

## Step 4

### Run the forensic delay analysis, MIP 3.3 windows.

One call to `build_forensic_analysis()` across the four snapshots in chronological order, baseline first, with `MS-SC` recorded as the entitlement milestone. The skill wrote 6 deliverables and its own audit manifest. None of the numbers on this page were typed; they are read out of that run.

## Step 5

### Write the manifest, then generate this page from it.

The run dumps to `mip33_run.json`. This HTML is generated from that JSON by `build_worked_example_page.py`, so the page cannot drift from the run. To change a figure you change the input or the skill and regenerate.

#### – The integrity gate result, all 9 checks on all 4 snapshots 36 cells

Green, amber and red are the validator's own ratings. The five summary rows below the grid are the roll-ups it reports alongside them.

| Check                                                     | Baseline                    | Update 1                    | Update 2                    | Update 3                    |
|-----------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <b>cp_identification</b><br>Critical Path Identification  | AMBER                       | AMBER                       | AMBER                       | AMBER                       |
| <b>constraint_driven</b><br>Constraint-Driven Criticality | AMBER                       | GREEN                       | GREEN                       | GREEN                       |
| <b>open_ends_cp</b><br>Open Ends (CP Focus)               | RED                         | GREEN                       | GREEN                       | GREEN                       |
| <b>relationship_quality</b><br>Relationship Quality       | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>lag_issues</b><br>Lag Analysis                         | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>out_of_sequence</b><br>Out-of-Sequence Progress        | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>near_critical</b><br>Near-Critical Path                | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>logic_continuity</b><br>Logic Continuity to Completion | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>constraint_saturation</b><br>Constraint Saturation     | GREEN                       | GREEN                       | GREEN                       | GREEN                       |
| <b>Logic rating (score)</b>                               | AMBER<br>(76.2)             | GREEN<br>(95.3)             | GREEN<br>(96.3)             | GREEN<br>(96.3)             |
| <b>DCMA-14 checks passed</b>                              | 13 of 14<br>(worst<br>WARN) | 13 of 14<br>(worst<br>WARN) | 13 of 14<br>(worst<br>WARN) | 14 of 14<br>(worst<br>INFO) |
| <b>Critical / near-critical activities</b>                | 21 / 2                      | 17 / 2                      | 11 / 0                      | 3 / 0                       |



| Snapshot | Check             | Rating | Score | Validator note, verbatim                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|-------------------|--------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Baseline | constraint_driven | AMBER  | 70    | No hard constraints on critical path activities. CP is logic-driven. However, 1 activity on the P6 critical path (TFM, TF=0) diverges from the longest path (LPM) per AACE 49R-06. Math-grounded false-CP candidate possibly driven by a stripped lag/SS-FF-SF offset, retained logic, or out-of-sequence progress (no constraint is present on these activities). See the Constraint-Driven CP recommendation(s) and lpm_confirmed_false_cp. |
| Baseline | open_ends_cp      | RED    | 30    | 1 open end(s) ON the critical path (1 missing pred, 0 missing succ). CP logic is BROKEN.                                                                                                                                                                                                                                                                                                                                                      |
| Update 1 | cp_identification | AMBER  | 55    | 17 critical activities (63.0% of 27 incomplete). Excessive criticality: too many activities at zero float, possibly due to constraints or logic issues.                                                                                                                                                                                                                                                                                       |
| Update 2 | cp_identification | AMBER  | 55    | 11 critical activities (68.8% of 16 incomplete). Excessive criticality: too many activities at zero float, possibly due to constraints or logic issues.                                                                                                                                                                                                                                                                                       |
| Update 3 | cp_identification | AMBER  | 55    | 3 critical activities (100.0% of 3 incomplete). Excessive criticality: too many activities at zero float, possibly due to constraints or logic issues.                                                                                                                                                                                                                                                                                        |

6 non-green findings across all four snapshots. Every one is listed.

The note column is the validator's own text, reproduced without edit. Where that text references a recommended practice, the reference is the validator's, not a citation made by this page. This page cites one standard, and it is named in the closing section.

#### – The baseline stability gate 4 findings, worst severity PASS

The forensic skill runs its own baseline stability gate and returns a halt flag. On this run the flag is `has_block = no`, so the analysis was allowed to proceed.

| Severity | Finding                                               |
|----------|-------------------------------------------------------|
| PASS     | No hard date constraints on critical path activities. |
| PASS     | CPLI (proxy) = 1.000 >= 0.95.                         |
| PASS     | No activities with negative total float.              |
| PASS     | No open-ended activities on the critical path.        |

Summary as returned: {"block": 0, "warn": 0, "info": 0, "pass": 4, "total": 4, "worst\_severity": "PASS"}

## The registers

### Everything the method found, nothing removed.

A forensic register with rows missing is not a register. Every table in this section carries its full row count and every row is present. Long tables scroll inside their own frame with the header pinned; they are not cut to a top ten.

#### – Duration changes, every window 6 rows

Six duration changes across three windows. The last two columns are the interesting pair.

`Critical in later snapshot` is the engine's total-float test, which treats a completed

activity as not critical because a completed activity has no float. So an activity that both grew and finished inside the same window shows as a duration change that never appears in `duration_growth_cp`, even where it drove the window's slip. That is exactly what happens in windows two and three here. Reading only `duration_growth_cp` would report zero drivers for both of those windows while the completion date moved +7 and +2 working days. That is why this table reports `duration_growth_all` and shows both columns side by side.

| Window | Activity | Name                                   | Prior<br>(wd) | Later<br>(wd) | Change<br>(wd) | Critical<br>in later<br>snapshot | In<br>duration_growth |  |
|--------|----------|----------------------------------------|---------------|---------------|----------------|----------------------------------|-----------------------|--|
| W1     | ELE-PROC | MCC and VFD Fabrication and Delivery   | 35            | 47            | +12            | no                               | no                    |  |
| W1     | CIV-BASE | Form Reinforce and Pour Base Slab      | 12            | 20            | +8             | yes                              | yes                   |  |
| W2     | CIV-WALL | Form Reinforce and Pour Wet Well Walls | 14            | 21            | +7             | no                               | no                    |  |
| W3     | MEC-PIPE | Internal Process Piping Install        | 18            | 24            | +6             | no                               | no                    |  |
| W3     | ELE-COND | Conduit and Cable Tray Rough-In        | 14            | 20            | +6             | no                               | no                    |  |
|        |          |                                        |               |               |                |                                  |                       |  |

| Window | Activity | Name                         | Prior (wd) | Later (wd) | Change (wd) | Critical in later snapshot | In duration_growth |
|--------|----------|------------------------------|------------|------------|-------------|----------------------------|--------------------|
| W3     | COM-FUNC | Functional Testing All Modes | 10         | 6          | -4          | no                         | no                 |

6 duration changes, all windows, none omitted. Noise floor: changes under 0.1 working days are dropped by the engine as rounding jitter.

– Complete slip register, every activity that moved in every window 64 rows

This is the register the method actually produces. The Responsible party and Cause notes columns are empty in every row, and they are empty on purpose. The engine does not guess. Note also the Driver type column: the method distinguishes an activity whose own duration grew from an activity that merely inherited a push from upstream, which is the distinction that stops a cascade being counted as 64 separate delays.

| Window | Activity | Name                                   | Prior finish | Later finish | Slip (wd) | TF before | TF after | Durat |
|--------|----------|----------------------------------------|--------------|--------------|-----------|-----------|----------|-------|
| W1     | ELE-PROC | MCC and VFD Fabrication and Delivery   | 2025-03-25   | 2025-04-10   | +12       | 90        | 85       |       |
| W1     | CIV-BASE | Form Reinforce and Pour Base Slab      | 2025-04-09   | 2025-04-22   | +8        | 0         | 0        |       |
| W1     | CIV-WALL | Form Reinforce and Pour Wet Well Walls | 2025-04-30   | 2025-05-12   | +8        | 0         | 0        |       |
| W1     | CIV-CURE | Wall Cure and Strip Formwork           | 2025-05-09   | 2025-05-22   | +8        | 0         | 0        |       |
|        |          |                                        |              |              |           |           |          |       |

| Window | Activity      | Name                                           | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|------------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W1     | MS-<br>CONC   | Concrete<br>Structure<br>Complete              | 2025-<br>05-09  | 2025-<br>05-22  | +8           | 0            | 0           |       |
| W1     | CIV-<br>BKF   | Backfill and<br>Compact<br>Around<br>Structure | 2025-<br>05-20  | 2025-<br>05-30  | +8           | 2            | 4           |       |
| W1     | CIV-<br>SLAB  | Grade Slab<br>and Equipment<br>Pads            | 2025-<br>05-30  | 2025-<br>06-11  | +8           | 4            | 2           |       |
| W1     | MEC-<br>SET   | Set Pump<br>Skids and<br>Grout<br>Baseplates   | 2025-<br>05-22  | 2025-<br>06-03  | +8           | 26           | 24          |       |
| W1     | MEC-<br>PIPE  | Internal<br>Process Piping<br>Install          | 2025-<br>06-17  | 2025-<br>06-27  | +8           | 27           | 27          |       |
| W1     | MEC-<br>VALVE | Valve and<br>Actuator Install                  | 2025-<br>06-25  | 2025-<br>07-08  | +8           | 27           | 24          |       |
| W1     | MEC-<br>TEST  | Hydrostatic<br>Test Process<br>Piping          | 2025-<br>07-03  | 2025-<br>07-15  | +8           | 26           | 27          |       |
| W1     | ELE-<br>COND  | Conduit and<br>Cable Tray<br>Rough-In          | 2025-<br>06-23  | 2025-<br>07-04  | +8           | 0            | 0           |       |
| W1     | ELE-<br>MCC   | Set MCC and<br>VFD Line-Up                     | 2025-<br>06-30  | 2025-<br>07-11  | +8           | 0            | 0           |       |
|        |               |                                                |                 |                 |              |              |             |       |

| Window | Activity       | Name                                       | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|----------------|--------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W1     | ELE -<br>CABLE | Power and<br>Control Cable<br>Pull         | 2025-<br>07-17  | 2025-<br>07-29  | +8           | 0            | 0           |       |
| W1     | ELE -<br>TERM  | Terminate and<br>Point-to-Point<br>Check   | 2025-<br>07-29  | 2025-<br>08-11  | +8           | 0            | 0           |       |
| W1     | MS -<br>ENERG  | Permanent<br>Power<br>Energized            | 2025-<br>07-29  | 2025-<br>08-11  | +8           | 0            | 0           |       |
| W1     | BLD -<br>ERECT | Erect Pre-<br>Engineered<br>Building Frame | 2025-<br>05-26  | 2025-<br>06-05  | +8           | 0            | 0           |       |
| W1     | BLD -<br>ROOF  | Roof Deck and<br>Membrane                  | 2025-<br>06-03  | 2025-<br>06-13  | +8           | 0            | 0           |       |
| W1     | BLD -<br>CLAD  | Wall Cladding<br>and Flashing              | 2025-<br>06-13  | 2025-<br>06-25  | +8           | 87           | 85          |       |
| W1     | BLD -<br>DOOR  | Overhead<br>Doors and<br>Louvres           | 2025-<br>06-19  | 2025-<br>07-02  | +8           | 85           | 84          |       |
| W1     | COM -<br>FLUSH | System Flush<br>and<br>Chlorination        | 2025-<br>08-06  | 2025-<br>08-18  | +8           | 0            | 0           |       |
| W1     | COM -<br>LOOP  | Instrument<br>Loop Checks                  | 2025-<br>08-18  | 2025-<br>08-28  | +8           | 0            | 0           |       |
| W1     | COM -<br>FUNC  | Functional<br>Testing All<br>Modes         | 2025-<br>09-02  | 2025-<br>09-12  | +8           | 0            | 0           |       |
|        |                |                                            |                 |                 |              |              |             |       |

| Window | Activity      | Name                                            | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|-------------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W1     | COM-<br>PERF  | Performance<br>and Capacity<br>Demonstration    | 2025-<br>09-09  | 2025-<br>09-19  | +8           | 0            | 0           |       |
| W1     | COM-<br>DEMOB | Demobilize<br>and Turnover<br>Documentation     | 2025-<br>09-12  | 2025-<br>09-24  | +8           | 0            | 0           |       |
| W1     | MS-SC         | Substantial<br>Completion                       | 2025-<br>09-12  | 2025-<br>09-24  | +8           | 0            | 0           |       |
| W2     | CIV-<br>WALL  | Form<br>Reinforce and<br>Pour Wet Well<br>Walls | 2025-<br>05-12  | 2025-<br>05-22  | +7           | 0            | 0           |       |
| W2     | CIV-<br>CURE  | Wall Cure and<br>Strip<br>Formwork              | 2025-<br>05-22  | 2025-<br>06-02  | +7           | 0            | 0           |       |
| W2     | MS-<br>CONC   | Concrete<br>Structure<br>Complete               | 2025-<br>05-22  | 2025-<br>06-02  | +7           | 0            | 0           |       |
| W2     | CIV-<br>BKF   | Backfill and<br>Compact<br>Around<br>Structure  | 2025-<br>05-30  | 2025-<br>06-10  | +7           | 4            | 0           |       |
| W2     | CIV-<br>SLAB  | Grade Slab<br>and Equipment<br>Pads             | 2025-<br>06-11  | 2025-<br>06-20  | +7           | 2            | 0           |       |
| W2     | MEC-<br>SET   | Set Pump<br>Skids and<br>Grout<br>Baseplates    | 2025-<br>06-03  | 2025-<br>06-12  | +7           | 24           | 0           |       |
|        |               |                                                 |                 |                 |              |              |             |       |

| Window | Activity      | Name                                       | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|--------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W2     | MEC-<br>PIPE  | Internal<br>Process Piping<br>Install      | 2025-<br>06-27  | 2025-<br>07-09  | <b>+7</b>    | 27           | 27          |       |
| W2     | MEC-<br>VALVE | Valve and<br>Actuator Install              | 2025-<br>07-08  | 2025-<br>07-17  | <b>+7</b>    | 24           | 27          |       |
| W2     | MEC-<br>TEST  | Hydrostatic<br>Test Process<br>Piping      | 2025-<br>07-15  | 2025-<br>07-24  | <b>+7</b>    | 27           | 27          |       |
| W2     | ELE-<br>COND  | Conduit and<br>Cable Tray<br>Rough-In      | 2025-<br>07-04  | 2025-<br>07-15  | <b>+7</b>    | 0            | 0           |       |
| W2     | ELE-<br>MCC   | Set MCC and<br>VFD Line-Up                 | 2025-<br>07-11  | 2025-<br>07-22  | <b>+7</b>    | 0            | 0           |       |
| W2     | ELE-<br>CABLE | Power and<br>Control Cable<br>Pull         | 2025-<br>07-29  | 2025-<br>08-08  | <b>+7</b>    | 0            | 0           |       |
| W2     | ELE-<br>TERM  | Terminate and<br>Point-to-Point<br>Check   | 2025-<br>08-11  | 2025-<br>08-20  | <b>+7</b>    | 0            | 0           |       |
| W2     | MS-<br>ENERG  | Permanent<br>Power<br>Energized            | 2025-<br>08-11  | 2025-<br>08-20  | <b>+7</b>    | 0            | 0           |       |
| W2     | BLD-<br>ERECT | Erect Pre-<br>Engineered<br>Building Frame | 2025-<br>06-05  | 2025-<br>06-16  | <b>+7</b>    | 0            | 0           |       |
| W2     | BLD-<br>ROOF  | Roof Deck and<br>Membrane                  | 2025-<br>06-13  | 2025-<br>06-24  | <b>+7</b>    | 0            | 0           |       |
|        |               |                                            |                 |                 |              |              |             |       |

| Window | Activity      | Name                                         | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|----------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W2     | BLD-<br>CLAD  | Wall Cladding<br>and Flashing                | 2025-<br>06-25  | 2025-<br>07-07  | <b>+7</b>    | 85           | 84          |       |
| W2     | BLD-<br>DOOR  | Overhead<br>Doors and<br>Louvres             | 2025-<br>07-02  | 2025-<br>07-11  | <b>+7</b>    | 84           | 84          |       |
| W2     | COM-<br>FLUSH | System Flush<br>and<br>Chlorination          | 2025-<br>08-18  | 2025-<br>08-27  | <b>+7</b>    | 0            | 0           |       |
| W2     | COM-<br>LOOP  | Instrument<br>Loop Checks                    | 2025-<br>08-28  | 2025-<br>09-09  | <b>+7</b>    | 0            | 0           |       |
| W2     | COM-<br>FUNC  | Functional<br>Testing All<br>Modes           | 2025-<br>09-12  | 2025-<br>09-23  | <b>+7</b>    | 0            | 0           |       |
| W2     | COM-<br>PERF  | Performance<br>and Capacity<br>Demonstration | 2025-<br>09-19  | 2025-<br>09-30  | <b>+7</b>    | 0            | 0           |       |
| W2     | COM-<br>DEMOB | Demobilize<br>and Turnover<br>Documentation  | 2025-<br>09-24  | 2025-<br>10-03  | <b>+7</b>    | 0            | 0           |       |
| W2     | MS-SC         | Substantial<br>Completion                    | 2025-<br>09-24  | 2025-<br>10-03  | <b>+7</b>    | 0            | 0           |       |
| W3     | MEC-<br>PIPE  | Internal<br>Process Piping<br>Install        | 2025-<br>07-09  | 2025-<br>07-17  | <b>+6</b>    | 27           | 0           |       |
| W3     | MEC-<br>VALVE | Valve and<br>Actuator Install                | 2025-<br>07-17  | 2025-<br>07-25  | <b>+6</b>    | 27           | 0           |       |
|        |               |                                              |                 |                 |              |              |             |       |

| Window | Activity      | Name                                     | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W3     | MEC-<br>TEST  | Hydrostatic<br>Test Process<br>Piping    | 2025-<br>07-24  | 2025-<br>08-01  | +6           | 27           | 0           |       |
| W3     | ELE-<br>COND  | Conduit and<br>Cable Tray<br>Rough-In    | 2025-<br>07-15  | 2025-<br>07-23  | +6           | 0            | 0           |       |
| W3     | ELE-<br>MCC   | Set MCC and<br>VFD Line-Up               | 2025-<br>07-22  | 2025-<br>07-30  | +6           | 0            | 0           |       |
| W3     | ELE-<br>CABLE | Power and<br>Control Cable<br>Pull       | 2025-<br>08-08  | 2025-<br>08-18  | +6           | 0            | 0           |       |
| W3     | ELE-<br>TERM  | Terminate and<br>Point-to-Point<br>Check | 2025-<br>08-20  | 2025-<br>08-28  | +6           | 0            | 0           |       |
| W3     | MS-<br>ENERG  | Permanent<br>Power<br>Energized          | 2025-<br>08-20  | 2025-<br>08-28  | +6           | 0            | 0           |       |
| W3     | COM-<br>FLUSH | System Flush<br>and<br>Chlorination      | 2025-<br>08-27  | 2025-<br>09-05  | +6           | 0            | 0           |       |
| W3     | COM-<br>LOOP  | Instrument<br>Loop Checks                | 2025-<br>09-09  | 2025-<br>09-17  | +6           | 0            | 0           |       |
| W3     | COM-<br>FUNC  | Functional<br>Testing All<br>Modes       | 2025-<br>09-23  | 2025-<br>09-25  | +2           | 0            | 0           |       |
|        |               |                                          |                 |                 |              |              |             |       |

| Window | Activity      | Name                                         | Prior<br>finish | Later<br>finish | Slip<br>(wd) | TF<br>before | TF<br>after | Durat |
|--------|---------------|----------------------------------------------|-----------------|-----------------|--------------|--------------|-------------|-------|
| W3     | COM-<br>PERF  | Performance<br>and Capacity<br>Demonstration | 2025-<br>09-30  | 2025-<br>10-02  | +2           | 0            | 0           |       |
| W3     | COM-<br>DEMOB | Demobilize<br>and Turnover<br>Documentation  | 2025-<br>10-03  | 2025-<br>10-07  | +2           | 0            | 0           |       |
| W3     | MS-SC         | Substantial<br>Completion                    | 2025-<br>10-03  | 2025-<br>10-07  | +2           | 0            | 0           |       |

**64** rows total (W1: 26, W2: 24, W3: 14). Scroll inside the frame; the header stays put. No row is hidden.

#### – Milestone movement, every window 8 rows

Working-day and calendar-day slip are shown side by side for every milestone, because the same movement reads as a different number in each unit and a claim quotes one of them.

| Window | Milestone    | Name                           | Prior          | Later          | Slip<br>(wd) | Slip<br>(cd) |
|--------|--------------|--------------------------------|----------------|----------------|--------------|--------------|
| W1     | MS-CONC      | Concrete Structure<br>Complete | 2025-<br>05-09 | 2025-<br>05-22 | +8           | +13          |
| W1     | MS-<br>ENERG | Permanent Power<br>Energized   | 2025-<br>07-29 | 2025-<br>08-11 | +8           | +13          |
| W1     | MS-SC        | Substantial<br>Completion      | 2025-<br>09-12 | 2025-<br>09-24 | +8           | +12          |
| W2     | MS-CONC      | Concrete Structure<br>Complete | 2025-<br>05-22 | 2025-<br>06-02 | +7           | +11          |
|        |              |                                |                |                |              |              |

| Window | Milestone | Name                      | Prior      | Later      | Slip (wd) | Slip (cd) |
|--------|-----------|---------------------------|------------|------------|-----------|-----------|
| W2     | MS-ENERG  | Permanent Power Energized | 2025-08-11 | 2025-08-20 | +7        | +9        |
| W2     | MS-SC     | Substantial Completion    | 2025-09-24 | 2025-10-03 | +7        | +9        |
| W3     | MS-ENERG  | Permanent Power Energized | 2025-08-20 | 2025-08-28 | +6        | +8        |
| W3     | MS-SC     | Substantial Completion    | 2025-10-03 | 2025-10-07 | +2        | +4        |

8 milestone movements across all windows.

#### – Cumulative per-activity slip 26 rows

Signed slip per activity summed across all three windows. Reading this as a per-party total would double count: a single upstream growth appears here once for itself and once for every downstream activity it pushed. The attribution section below deals with that.

| Activity  | Name                            | Total slip across windows (wd) | Windows it moved in | Critical at final snapshot |
|-----------|---------------------------------|--------------------------------|---------------------|----------------------------|
| MEC-PIPE  | Internal Process Piping Install | +21                            | 3                   | no                         |
| MEC-VALVE | Valve and Actuator Install      | +21                            | 3                   | no                         |
| MEC-TEST  | Hydrostatic Test Process Piping | +21                            | 3                   | no                         |
| ELE-COND  | Conduit and Cable Tray Rough-In | +21                            | 3                   | no                         |

| Activity  | Name                                   | Total slip<br>across windows<br>(wd) | Windows it<br>moved in | Critical at<br>final snapshot |
|-----------|----------------------------------------|--------------------------------------|------------------------|-------------------------------|
| ELE-MCC   | Set MCC and VFD Line-Up                | +21                                  | 3                      | no                            |
| ELE-CABLE | Power and Control Cable Pull           | +21                                  | 3                      | no                            |
| ELE-TERM  | Terminate and Point-to-Point Check     | +21                                  | 3                      | no                            |
| MS-ENERG  | Permanent Power Energized              | +21                                  | 3                      | no                            |
| COM-FLUSH | System Flush and Chlorination          | +21                                  | 3                      | no                            |
| COM-LOOP  | Instrument Loop Checks                 | +21                                  | 3                      | no                            |
| COM-FUNC  | Functional Testing All Modes           | +17                                  | 3                      | no                            |
| COM-PERF  | Performance and Capacity Demonstration | +17                                  | 3                      | yes                           |
| COM-DEMOB | Demobilize and Turnover Documentation  | +17                                  | 3                      | yes                           |
| MS-SC     | Substantial Completion                 | +17                                  | 3                      | yes                           |
| CIV-WALL  | Form Reinforce and Pour Wet Well Walls | +15                                  | 2                      | no                            |
| CIV-CURE  | Wall Cure and Strip Formwork           | +15                                  | 2                      | no                            |
|           |                                        |                                      |                        |                               |

| Activity      | Name                                       | Total slip<br>across windows<br>(wd) | Windows it<br>moved in | Critical at<br>final snapshot |
|---------------|--------------------------------------------|--------------------------------------|------------------------|-------------------------------|
| MS-<br>CONC   | Concrete Structure<br>Complete             | +15                                  | 2                      | no                            |
| CIV-<br>BKF   | Backfill and Compact<br>Around Structure   | +15                                  | 2                      | no                            |
| CIV-<br>SLAB  | Grade Slab and<br>Equipment Pads           | +15                                  | 2                      | no                            |
| MEC-<br>SET   | Set Pump Skids and<br>Grout Baseplates     | +15                                  | 2                      | no                            |
| BLD-<br>ERECT | Erect Pre-Engineered<br>Building Frame     | +15                                  | 2                      | no                            |
| BLD-<br>ROOF  | Roof Deck and<br>Membrane                  | +15                                  | 2                      | no                            |
| BLD-<br>CLAD  | Wall Cladding and<br>Flashing              | +15                                  | 2                      | no                            |
| BLD-<br>DOOR  | Overhead Doors and<br>Louvres              | +15                                  | 2                      | no                            |
| ELE-<br>PROC  | MCC and VFD<br>Fabrication and<br>Delivery | +12                                  | 1                      | no                            |
| CIV-<br>BASE  | Form Reinforce and<br>Pour Base Slab       | +8                                   | 1                      | yes                           |

**26** activities moved at least once across the run.

– **Critical path membership change, every window** 3 rows

The critical path shrinks across the run because activities complete and completed activities are not critical. No activity became newly critical in any window, which is consistent with the only thing changing being duration on paths that were already critical.

| Window | Critical,<br>prior | Critical,<br>later | Newly<br>critical | No longer critical                                                              |
|--------|--------------------|--------------------|-------------------|---------------------------------------------------------------------------------|
| W1     | 21                 | 17                 | none              | CIV-EXC, CIV-MUD, MS-NTP, PRE-PERMIT                                            |
| W2     | 17                 | 11                 | none              | BLD-ERECT, BLD-ROOF, CIV-BASE, CIV-CURE, CIV-WALL, MS-CONC                      |
| W3     | 11                 | 3                  | none              | COM-FLUSH, COM-FUNC, COM-LOOP, ELE-CABLE, ELE-COND, ELE-MCC, ELE-TERM, MS-ENERG |

– **What did not change** 4 checks, all zero

Worth stating explicitly, because in a real matter these are where the arguments live.

```
logic changes      added 0   removed 0   type_changed 0   lag_changed 0
activities added    0   (all three windows)
activities removed  0   (all three windows)
out-of-sequence    0   (all three windows)
```

So in this example there is no retroactive baseline edit, no scope creep hidden in an activity insert, no relationship retyped to shorten a path, and no progress recorded against work whose predecessor had not finished. A real schedule chain rarely looks like this. The example is deliberately clean on those axes so the day arithmetic can be checked without them.

**The part the software cannot do**

## Attribution.

---

The conserved attribution for this run is:

```
{
  "Owner": 0,
  "Contractor": 0,
  "Concurrent": 0,
  "Force Majeure": 0,
  "Unattributed": 17
}
```

Every working day is unattributed. That is the correct answer for this input, not a failure of the run. The generator script says which duration grew and by how much; it does not contain a change order, an RFI response, a weather record or a letter, and without those there is no honest basis to move a day from Unattributed into Owner or Contractor. The method flags where the attribution decision has to be made. Making it is the analyst's work and it needs documents.

**The conservation check.** The attribution figures sum to 17 working days, which equals the project drift of 17 working days. The engine also reports a second, deliberately unusable figure for comparison: the raw sum of the slip register across all windows, which is 448 working days. That second number is what you get by adding up every activity's slip, and it over-counts by a factor of about 26 because one upstream growth pushes many downstream activities and each push is counted again. The engine ships both figures and names the non-conserved one so it cannot be quoted as an entitlement.

The engine's own wording for that second figure, verbatim:

```
cascade-inclusive raw slip-register sum across all windows (double-counts a root delay
```

Re-run it

## Reproducibility manifest.

---

Three commands, in this order, from the folder holding the four XER files. Step one rebuilds the schedules from the generator, so a reader who wants to change the delay story can edit one dictionary and see the whole analysis move.

```
python build_cedarline_schedules.py .
python run_mip33.py .
python build_worked_example_page.py
```

Verify each input hash before re-running. A changed input is a different analysis, not a failed reproduction.

**On hash stability.** The generator pins the XER export header rather than stamping it with the current time, so the four input files are byte-identical every time step one runs and the SHA-256 values below stay true. The run itself is not byte-stable and is not meant to be: the skill manifest records the moment it ran, and the deliverable filenames carry the run date, so re-running on a different day changes the output hashes while leaving every computed figure the same. Check the inputs against the hashes; check the outputs against the numbers.

Inputs

| Snapshot | File                                                    | Data date  | Scheduled finish | Acts | Rels | Complete / active / not started | Bytes  | SHA-256                                                          |
|----------|---------------------------------------------------------|------------|------------------|------|------|---------------------------------|--------|------------------------------------------------------------------|
| Baseline | CEDA<br>RLIN<br>E-<br>BL-<br>2025<br>-02-<br>03.x<br>er | 2025-02-03 | 2025-09-12       | 35   | 42   | 0 / 0 / 35                      | 20,103 | 9ecb3f40150d2811385d3dcfd8ea742ba633df5ca8a756f19653d158ab1ec41c |
|          |                                                         |            |                  |      |      |                                 |        |                                                                  |

| Snapshot | File                                          | Data date  | Scheduled finish | Acts | Rels | Complete / active / not started | Bytes  | SHA-256                                                               |
|----------|-----------------------------------------------|------------|------------------|------|------|---------------------------------|--------|-----------------------------------------------------------------------|
| Update 1 | <a href="#">CEDA RLIN E-U1-2025-03-31.xer</a> | 2025-03-31 | 2025-09-24       | 35   | 42   | 8 / 3 / 24                      | 20,125 | 69328b92ea1530c92b2b0e96a17aca<br>a3897800876768ade9d2e16d36508bf3ec  |
| Update 2 | <a href="#">CEDA RLIN E-U2-2025-06-30.xer</a> | 2025-06-30 | 2025-10-03       | 35   | 42   | 19 / 3 / 13                     | 20,099 | f99704e94d7eb7cb6e06922b6d66bf342150<br>bff708f0d5e7c7279df47e378eb4  |
| Update 3 | <a href="#">CEDA RLIN E-U3-2025-09-30.xer</a> | 2025-09-30 | 2025-10-07       | 35   | 42   | 32 / 1 / 2                      | 20,042 | e896186581da7e324ce278d988f7e3b7d80e<br>70d35ffa463adff664b40f17c4a45 |

4 input files. SHA-256 in full; click a filename to download it.

Input topology

| Input | Activities | Relationships | Calendars | Data date | Topology hash |
|-------|------------|---------------|-----------|-----------|---------------|
|       |            |               |           |           |               |

| Input                       | Activities | Relationships | Calendars | Data date  | Topology hash                                                       |
|-----------------------------|------------|---------------|-----------|------------|---------------------------------------------------------------------|
| CEDARLINE-BL-2025-02-03.xer | 35         | 42            | 1         | 2025-02-03 | v2:a8efb57a84ec2578f9a9dce51cc3c7e0414a55499adc63bbf8c52d34f3b0232c |
| CEDARLINE-U1-2025-03-31.xer | 35         | 42            | 1         | 2025-03-31 | v2:855dfe0cd0689590b0d5bb96107cf0ad8aeb837b87f4a6b7b91f82e23e5a996a |
| CEDARLINE-U2-2025-06-30.xer | 35         | 42            | 1         | 2025-06-30 | v2:ed50450f6059825809c9c8d23857d60811c27318cf57ac36038f668d40f97617 |
| CEDARLINE-U3-2025-09-30.xer | 35         | 42            | 1         | 2025-09-30 | v2:8610c8f25eb0de549050db9c193661cec85bdd127d13f4df1a83f274b7a4c945 |

Topology hash is a canonicalized signal over activity codes, durations and predecessor links, types and lags. All four hashes differ because durations differ. It is a change signal, not a statement that two schedules are forensically equivalent.

### Engine and environment

|                     |                                                                      |
|---------------------|----------------------------------------------------------------------|
| skill               | forensic-delay-analysis v3.2                                         |
| method              | AACE 29R-03 MIP 3.3 (Observational/Dynamic/Contemporaneous As-Is – v |
| method id           | windows_analysis                                                     |
| engine version      | 2.9.41                                                               |
| verification        | release-evidence/v2.9.41/                                            |
| python              | 3.12.10                                                              |
| platform            | Windows-11-10.0.26200-SP0                                            |
| manifest schema     | cpp-skill-manifest/v1                                                |
| generated (UTC)     | 2026-08-21T15:02:29Z                                                 |
| baseline index      | 0                                                                    |
| task types excluded | TT_LOE, TT_WBSSummary                                                |
| completion filter   | zero-remaining-duration dropped (milestones preserved)               |

activities dropped 0  
engine alerts 0 total {"ALERT": 0, "WARN": 0, "INFO": 0, "OTHER": 0}

– Deliverables the skill wrote, with sizes and hashes 6 files

These are the skill's own outputs. The HTML dashboard and the DOCX report are the skill's deliverable format; this page is a separate write-up of the same run. Every computed figure in them is exactly as the skill produced it. The one thing added to the HTML dashboard afterwards is a publishing layer, because that file is a public URL and had been reachable from search with nothing on it to say what it was: a robots noindex, the demonstration-data banner, and a band stating that the run stops before attribution. The hashes in the table below are of the published files, so they include that layer; re-running the driver reproduces them.

| File                                                                               | Bytes   | SHA-256                                                                                                                                                              |
|------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Cedarline_Pump_Station_Retrofit_Forensic_Analysis_2026-08-21.html</a>  | 193,511 | da624e18ae3ece10bd19aac370879e5cf36b7962003488a6aaa0a8c78dc1be5f<br>skill output before publishing: 6f3346b2a03306006929b624a70cb9907b45397630a634fe6732300f75c793aa |
| <a href="#">Cedarline_Pump_Station_Retrofit_Forensic_Analysis_2026-08-21.docx</a>  | 64,815  | bfae4617eeafd0552d8e5373af06439571c77ad7fe1dda6d8ababbb9ff23e44a                                                                                                     |
| <a href="#">Cedarline_Pump_Station_Retrofit_Windows_Narrative_2026-08-21.txt</a>   | 11,160  | 930d75567bbe24e988cc5d20885ba8284e2329b7d35b612e5cd41eb842cd0022                                                                                                     |
| <a href="#">Cedarline_Pump_Station_Retrofit_Delay_Drivers_2026-08-21.csv</a>       | 5,154   | 30624c7a86323559b93234316598773278efef8f131b7b0484d7e0be12154b57                                                                                                     |
| <a href="#">Cedarline_Pump_Station_Retrofit_Completion_Tracking_2026-08-21.csv</a> | 246     | b34215b60d8dbf31dd2ebb9c241b421946011fe28dbe5cfe0f1c3a96d6797479                                                                                                     |
|                                                                                    |         |                                                                                                                                                                      |

| File                                                                          | Bytes | SHA-256                                                          |
|-------------------------------------------------------------------------------|-------|------------------------------------------------------------------|
| <a href="#">Cedarline_Pump_Station_Retrofit_Delay_Register_2026-08-21.csv</a> | 73    | 76b768d65b69255bac5631b00f4bc58a794a891352b60cfb3441b34c8fb9686c |

#### – Where the manifest came back empty 9 null fields

The skill's manifest schema declares fields that this run did not populate. Rather than leave the gap unstated or fill it from assumption, both lists are published and the source of every substitute is named.

```
input fields returning null:
    activity_count, calendar_count, data_date, relationship_count, topology_hash

convention fields returning null:
    calendar_basis_id, excluded_from_analysis, float_basis, scheduling_mode_as_read
```

The five input fields were recomputed directly from the XER files by the run script, using the same parser and the same topology-hash function the engine uses, and those recomputed values are what the Input topology table above shows. The four convention fields are reported as null. The float-basis row in the Conventions table describes the behaviour observed in this run and says so; it is not presented as a manifest value.

#### – The engine's own limitations list, verbatim 6 items

Copied from the manifest without edit, including the em-dashes and section references in the original.

1. Engine `computeCPM` (Section C) is the calendar-aware path. Section D / `runCPM` is NOT used in forensic deliverables (it is the Monte Carlo inner-loop engine, intentionally not calendar-aware).
2. Bayesian and kinematic public-API surfaces are JS-only and excluded from JS↔Python parity claims (see cpm-engine DAUBERT.md §11).
3. Multi-jurisdiction default holiday rule sets are framework-aligned defaults sufficient for general-purpose date math; analysts must verify the operative jurisdiction's statute for forensic use (see cpm-engine docs/jurisdictions.md).

4. Topology hash is a canonicalized-topology signal under the hashed-field set (codes, durations, predecessor links + types + lags); it is NOT a forensic-equivalence statement.
5. Windows analysis (AACE 29R-03 MIP 3.3) is observational; it does NOT prove causation. Causation is the analyst's burden.
6. Concurrent-delay attribution uses the engine's attribution rules (see SKILL.md). Other AACE-recognized attribution methods (Time Impact, As-Planned vs As-Built, Collapsed As-Built) may produce different attributions on the same fact set.

Read this before citing anything above

## What this example establishes, and what it does not.

### What it does establish

1. **The arithmetic is checkable.** The four input files, the generator, the run script and the page generator are all published. Anyone can re-run the chain and compare.
2. **The windows close.** Three window shifts summing to 17 working days against a baseline-to-final drift of 17 working days, computed by two different routes through the same data.
3. **Float is handled, not assumed away.** Four of the six duration changes reached the completion date and two did not. `ELE-PROC` grew 12 working days and `MEC-PIPE` grew 6, and neither moved completion, because their paths carried float. The register shows total float before and after for every row so that claim can be checked rather than taken.
4. **Recovery is credited.** Window three nets a real compression against a real slip instead of dropping the negative movement.
5. **The registers are complete.** 64 slip rows, 26 cumulative activity rows, 6 duration changes, 8 milestone movements, 6 non-green integrity findings. Every one is on the page.

### What it does not establish

1. **Not causation.** A windows analysis is observational. It records that the completion date moved and which activity moved it. It does not establish why, and the method's

own limitations list says so in the words quoted above.

2. **Not entitlement.** All 17 working days are unattributed. No day here belongs to an owner or a contractor, because nothing in the input assigns responsibility. A real submission needs the contemporaneous record.
3. **Not concurrency.** Concurrent delay could not be assessed on this input at all. Concurrency is a question about two parties delaying at once, and with every day unattributed there are no parties to compare. The example does not demonstrate concurrency analysis and should not be cited as if it did.
4. **Not a substitute for the other methods.** MIP 3.3 is one method. A subtractive but-for analysis or an additive fragnet analysis on this same data could produce a different figure, and the manifest's limitations list says exactly that. A single method producing a number is not corroboration.
5. **Not proof the files import into P6.** The four XERs carry the real P6 22.x to 24.x column sets and are read by the canonical parser, and their dates and float come from the canonical CPM engine rather than being typed. They have not been imported into a Primavera P6 installation and verified there, because no P6 licence was used in producing this page. Treat them as parser-verified, not P6-verified.
6. **Not a real project.** The delay events were chosen to be legible: one clean growth per window, no logic churn, no out-of-sequence progress, no calendar change, no rebaseline. Real schedule chains are messier on every one of those axes, and the messy parts are usually where the dispute is.
7. **Not evidence about the baseline being sound.** The integrity gate returned one RED and two AMBER on the baseline, two of them traceable to the start milestone and one to the criticality percentage. Those were left in rather than fixed. A real engagement resolves them or records why they were accepted before relying on the result.

### Standards named on this page

One: AACE International Recommended Practice 29R-03, Forensic Schedule Analysis, and within it the MIP 3.3 method identifier (Observational / Dynamic / Contemporaneous As-Is). That is the method the skill implements and the method label it stamps on its own manifest. No case, statute or other protocol is cited on this page. Where a general statement would do, this page makes the general statement rather than reaching for a specific authority.

Take the files

## Download and re-run.

---

The four inputs and the three scripts. The scripts are the whole chain: schedules in, analysis out, page out.

### **CEDARLINE-BL-2025-02-03.xer**

Baseline snapshot · data date 2025-02-03 · 20,103 bytes · 35 activities

### **CEDARLINE-U1-2025-03-31.xer**

Update 1 snapshot · data date 2025-03-31 · 20,125 bytes · 35 activities

### **CEDARLINE-U2-2025-06-30.xer**

Update 2 snapshot · data date 2025-06-30 · 20,099 bytes · 35 activities

### **CEDARLINE-U3-2025-09-30.xer**

Update 3 snapshot · data date 2025-09-30 · 20,042 bytes · 35 activities

### **build\_cedarline\_schedules.py**

Builds the four snapshots. The delay story lives in one dictionary near the top; change it and the whole analysis moves.

### **run\_mip33.py**

Runs the five steps and writes mip33\_run.json. Calls the real skills, computes nothing itself.

### **build\_worked\_example\_page.py**

Generates this page from mip33\_run.json. Every figure above is read, not typed.

### **mip33\_run.json**

The complete run dump: calendars, integrity results, all three windows, all registers, the manifest.

### **run\_log.txt**

Console output of the run, unedited, so the step order and the alert counts can be read directly.

### **cedarline-worked-example.zip**

Everything in one download: the four XERs, the three scripts, the run dump, both logs, the skill deliverables, the filed-copy PDF, and a checksums.txt with per-OS verify commands. 841 KB.

### **CPP-Worked-Example-MIP-3-3.pdf**

Filed copy of this page: drawers open, registers unclipped, 35 pages, ready to attach as an exhibit.

The skill's own deliverables from this run, the HTML dashboard, the DOCX report, the narrative and the CSVs, are listed with their hashes in the manifest section above and can be downloaded from there.

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