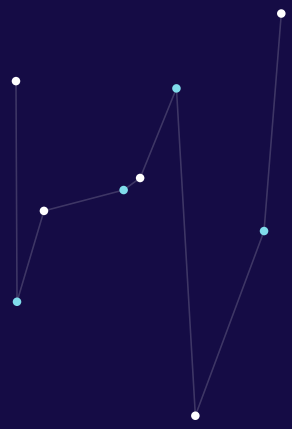
ACME TOWER · 28-STOREY RESIDENTIAL · NOVA SCOTIA · PART 2 · V3

Priced, dated and stress-tested. On a real calendar, it finishes late.



Part 2 adds the dimensions readers asked for after Part 1. The same OverVue plan now carries materials, subcontracts, site costs, an END date and order lead times. Version 3 re-dates every result for the plan's new START, **Mon Nov 9, 2026**, and END, **Wed Aug 9, 2028**: a real Nova Scotia calendar, drag in 5,000 Monte Carlo runs, the return on every way to buy time back, and the supply chain. Values marked **ASSUMED** are demo placeholders.

Sep 12, 2028
Real-calendar finish: Christmas breaks and NS holidays (ASSUMED), 25 working days after END.

Dec 6, 2028
P80 finish in the Monte Carlo (P50 Nov 20); 0% chance of meeting END.

41.8 days
Group drag of the two floor-stagger sets together; $879K mean drag cost.

5.4×
Return on $80K of second crews at DRED 65% (ASSUMED): 17.0 days back.

$51.26M
Plan cost in OverVue, before HST; 62.7% installed subcontracts.

WHAT WE FOUND

Five things Part 2 tells you.

01	**On a real calendar the schedule finishes late**	• The plan as built ends Fri Aug 4, 2028, 2 working days before END (Wed Aug 9). • **Christmas breaks and NS site holidays move it to Sep 12; Monte Carlo P50 Nov 20, P80 Dec 6.**
02	**Drag sits in the staggers and the substructure**	• The finish and handover stagger lags are worth 12.0 and 7.9 days alone, 41.8 together. • **Finish L12 Suites 13.5 days of mean drag, Raft slab 10.9: criticality alone misprices them.**
03	**$80,000 buys most at six tasks**	• At DRED 65% (ASSUMED): Waterproofing, Hand Over L28, Mobilize, Finish L12, Glaze L2, Excavate. • **17.0 days back, ROI 5.4×; a 4-day stagger saves 24.6 days and pays below $665,273.**
04	**Our review found 29 supply gaps and a glazing deadline**	• 29 of 32 supply items had no delivery planned; electrical gear may need 40–80 weeks. • **Place the glazing order by Fri Dec 11, 2026: on a real calendar its float is gone.**
05	**Subcontracts carry the money**	• 62.7% of the $51.26M is installed subcontracts; below a published Halifax range. • **Formwork, the GC fee and a surtax are unpriced: the gap is scope, not savings.**

INSIDE THIS REPORT

Contents

1. Executive summary 3
2. What changed since Part 1 4
3. Project overview and key dates 5
4. Schedule and critical path 6
5. Drag, drag cost and DRED 7
6. Recovery options: the return on each lever 9
7. Resources: conflicts, levelling and crews per floor 11
8. Financial analysis 13
9. Supply chain 15
10. Threats and opportunities 16
11. Schedule risk: Monte Carlo 17
12. Value breakdown: mandatory vs optional scope 18
13. BIM model: 4D and 5D 19
14. Project ROI and DIPP: what the owner must supply 20
15. Recommendations and next steps 21
16. Open questions for the owner, contractor and trades 22
Appendix A. Assumptions register 23
Appendix B. Method, data and sources 24

ABOUT THIS REPORT

This report analyses the OverVue plan "Acme Tower", plan version **Part 2 Scenario 2026-11-03**, read through OverVue's MCP connection on Nov 5 and 6, 2026. Nothing in the plan was changed for this report. It replaces Part 2 v2 (Nov 5, 2026).

Dates. The plan now runs from START, **Mon Nov 9, 2026**, to END, **Wed Aug 9, 2028**, both set in OverVue, whose calendar is Monday–Friday with no holidays. Christmas breaks and Nova Scotia site holidays (both ASSUMED) are applied outside OverVue, where stated.

Costs are Canadian dollars, whole dollars, before HST, and match OverVue's Budget Cost total to the dollar. Many prices are proxies, not quotes. **ASSUMED** marks every demo placeholder (Appendix A). This is a demonstration plan: all company and people names are fictional.

Glossary

TERM	MEANING
Working day (d), week (w)	1w = 5 working days; 1d = 8 hours. "@−33w2d" is a position 33 weeks and 2 days before END.
SS+1w	Start-to-start with a one-week lag: the next floor starts a week after this floor starts. OverVue holds lagged links exact.
Drag / group drag	Days a critical task, lag or block adds to the finish (Devaux, Total Project Control). Drags do not add up.
Drag cost	Drag × the owner's value of one day (lost project value). Time-related site costs are a resource cost, not drag cost.
DRED	Doubled Resource Estimated Duration: the trade's estimate of the duration with doubled resources or budget.
True cost of work	Resource cost + drag cost. Extra spending pays only where it cuts drag cost by more than it adds.
CLUB	Cost of levelling with unresolved bottlenecks: the drag cost of not having one more resource.
P50 / P80; criticality index	Date met in 50% / 80% of simulated runs; share of runs in which a task is critical.
DIPP	Devaux's Index of Project Performance: (expected value ± delay cost or gain) ÷ cost to complete.

RE-DATED NOV 6 · V3

01 · EXECUTIVE SUMMARY

The logic is sound. The calendar is not.

Part 1 showed what drives this 28-storey tower's schedule and labour cost. Part 2 asks what the plan is worth and how likely it is to finish on time. This version re-dates every result for the plan's new dates: START Mon Nov 9, 2026 and END Wed Aug 9, 2028. The critical path is unchanged at 417 working days from mobilization, and on OverVue's Monday–Friday calendar it ends two days before END. On a real Nova Scotia calendar it does not.

CALENDAR	FINISH	AGAINST END (WED AUG 9, 2028)
Plan as built (Mon–Fri, no breaks)	Fri Aug 4, 2028	2 working days spare
+ Christmas breaks, two weeks each winter (ASSUMED)	Wed Aug 23, 2028	11 working days late
+ Nova Scotia site holidays (ASSUMED)	Tue Sep 12, 2028	**25 working days late (5.0 weeks)**
Monte Carlo P50 / P80 (weather, spreads, risk events)	Mon Nov 20 / Wed Dec 6, 2028	74 / 86 working days late; 0% on time

Working days late = Monday–Friday days after Tue Aug 8, 2028, the last working day before END. 34 shutdown days fall between START and END: 20 Christmas-break days and 14 holidays. 9 of them (Nov 11 and Dec 21–30, 2026) now come before mobilization, so they no longer delay the work. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

Recovery options, measured in the same 5,000 runs

- **Tighten the floor stagger** from 1 week to 4 days: 24.6 days back on average with no extra crews; worth it if it costs less than $665,273.
- **Spend $80,000 on second crews** where the return is highest (DRED 65%, ASSUMED): 17.0 days, net value $387,835, ROI 5.4×. At DRED 80% it no longer breaks even.
- **Work the Nova Scotia holidays**: 17.3 days; worth up to about $27,600 for each holiday worked.
- **Place the window-wall order by Fri Dec 11, 2026**, as planned: on a real calendar it has no float left, and one week late loses days in 32% of runs.

Levers do not add up: they act on parallel paths, and no single one brings the P50 finish back to END (the largest saves 24.6 of 74 days). The plan costs **$51,263,184** before HST; installed subcontracts make up 62.7%. That is below a published Halifax benchmark because formwork, the contractor's fee and some systems are unpriced. Our supply trace found 29 of 32 items with no delivery planned; the electrical service gear is the first to check.

> WHAT THIS MEANS
>
> Before mobilization the owner and contractor need five decisions: a target date set on a real calendar; when mobilization really starts (our review found the plan's Thu Dec 31, 2026 sits inside the assumed Christmas break); whether to buy time back with a tighter stagger or second crews (the trades' answers decide which); the window-wall order by Dec 11; and the electrical gear lead time. The owner's value of a day replaces every ASSUMED drag cost in this report (Section 14).

NEW IN PART 2

02 · WHAT CHANGED SINCE PART 1

Same logic, a much fuller plan.

Part 1 (Oct 22, 2026) analysed the plan straight after it was built: labour-only costs and no calendar. Part 2 works on a scenario copy of that plan, adds what Part 1 left out, and answers the questions readers raised in the comments.

MEASURE	PART 1 (OCT 22)	PART 2 V3 (NOV 6)	WHAT CHANGED
Tasks	270 (6 in Design Space)	276 (3 in Design Space)	Crane climbs scheduled; 3 order lead times; 3 time-related cost carriers
Links	482	500	Lead times, crane climbs, cost carriers; all still mandatory
Calendar	None (offsets only)	START Mon Nov 9, 2026; END Wed Aug 9, 2028	Christmas breaks and NS holidays applied outside OverVue (ASSUMED)
Critical path	417 d, 82 tasks	417 d, 82 tasks	Unchanged
Precast → roof → Hand Over L2–L12 float	26 d	21 d	Crane climbs took 5 days
Plan cost	$10.94M labour only	$51.26M	Subcontracts, materials, site overheads, crane and hoist rental
Resource conflict	Suite Finishes 11 vs 10	Same, checked two ways	Day-level: 6 single days, not 6 weeks
Drag, drag cost, DRED	Not in the report	Group, task and lag drag in 5,000 runs	Both of Devaux's SS-lag conventions; drag cost = owner value only
Return on spend	—	Every lever ranked	The "extra $80,000" question answered
Risk	Open questions only	13 Possibilities in OverVue; Monte Carlo	Real Halifax weather; NS holidays
Supply chain	—	32 items traced	29 gaps found; 3 lead times added
Other new work	—	Crews per floor; value breakdown; 4D/5D BIM; owner ROI inputs	

Part 1 figures from the Part 1 report, "Acme Tower", Live Plan after the ASAP pass, Oct 22, 2026. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

The questions behind Part 2

- **"How do we know it exposed the conflicts correctly?"** Section 7: OverVue's check and an independent recount, compared period by period.
- **"Where is the drag, and does the criticality index show it?"** Section 5: group, task and lag drag in every Monte Carlo run.
- **"With an extra $80,000, where should it go?"** Section 6: every lever ranked by its return on the extra spend.
- **"How likely is the date, with weather and holidays?"** Sections 1 and 11: 21 real Halifax winters and a Nova Scotia site calendar.
- **"Is this the best plan by expected return?"** Sections 12 and 14: optional scope, and what the owner must supply for project ROI.
- **"Can the schedule drive a model?"** Section 13: the plan exported to an IFC 4D/5D model.

UPDATED FOR PART 2

03 · THE PROJECT

A 28-storey tower, handed over in three phases.

A concrete substructure and podium (L1–L5, with suites and parking on L2–L4), a precast tower from L5 to L28 with a roof and mechanical penthouse, three elevators, ground-floor lobby and amenity spaces, and landscaping at grade and on a roof terrace. 162 suites, 6 per floor. Residents move in over three occupancy phases: L2–L5 and the common areas, L6–L12, then L13–L28. Each floor follows Rough-In, Fit Out Corridors, Finish Suites and Hand Over. A full-scale mock-up suite is built and finished before suite production starts.

DELIVERABLE	TASKS	FIRST START	LAST FINISH	COST	SHARE
Building Structure	38 (1 DS)	Dec 31, 2026	Nov 15, 2027	$9.83M	19.2%
Site Preparation	11	Feb 22, 2027	Dec 29, 2027	$2.98M	5.8%
Site Services	7	Mar 08, 2027	Apr 12, 2027	$2.22M	4.3%
Building Systems	13	Mar 19, 2027	Dec 24, 2027	$11.74M	22.9%
Building Envelope	51 (2 DS)	Apr 02, 2027	Dec 08, 2027	$10.05M	19.6%
Suites: 1st Occupancy (L2–L5) + Common	25	Apr 08, 2027	Jan 25, 2028	$1.88M	3.7%
Landscaping	7	Apr 13, 2027	Jan 18, 2028	$197K	0.4%
Mock-up Suites	28	Apr 26, 2027	Jul 13, 2027	$103K	0.2%
Elevators	3	May 10, 2027	Dec 27, 2027	$1.91M	3.7%
Suites: 2nd Occupancy (L6–L12)	28	Jul 27, 2027	Mar 16, 2028	$3.15M	6.1%
Suites: 3rd Occupancy (L13–L28)	65	Nov 01, 2027	Aug 08, 2028	$7.21M	14.1%
Total	**276 (3 DS)**	**Dec 31, 2026**	**Aug 08, 2028**	**$51.26M**	**100.0%**

DS = Design Space (not on the TimeLine). Spans use OverVue task dates (END Aug 9, 2028, Mon–Fri); order lead times and cost carriers are left out of the spans but their costs are included. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

Key dates

EVENT	TASK	DATE IN OVERVUE	FLOAT
Elevator, glazing and precast orders placed	#275, #274, #273	Nov 9, Dec 11, 2026; Feb 15, 2027	see note
Site mobilised (inside the assumed Christmas break)	#11	Thu Dec 31, 2026	0 d
Tower crane installed; climbs after L11, L17, L22 (floors ASSUMED)	#3; #4–#6	Feb 22, 2027; Jun 24, Aug 6, Sep 13, 2027	0 d; 21 d
Mock-up suite complete	#147	Jul 13, 2027	0 d
Tower topped out (Erect Roof & MPH)	#46	Nov 15, 2027	21 d
First suites handed over (Hand Over L2)	#151	Dec 27, 2027–Jan 4, 2028	21 d
1st Occupancy complete (Hand Over L5)	#163	Jan 25, 2028	21 d
2nd Occupancy complete (Hand Over L12)	#200	Mar 16, 2028	21 d
3rd Occupancy complete (Hand Over L28)	#264	Tue Aug 8, 2028	0 d

Order lead times are ASSUMED (elevators 26 weeks, glazing 16, precast 12). Latest order dates that do not move the finish on OverVue's calendar: glazing Tue Dec 22, 2026; precast Mon Mar 1, 2027; elevators Wed Jun 16, 2027. On a real calendar the glazing order has no float: Fri Dec 11, 2026 is the latest (Section 6). Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

UPDATED FOR PART 2

04 · SCHEDULE AND CRITICAL PATH

Finishes, not structure, still drive completion.

The critical path: 417 working days in seven segments

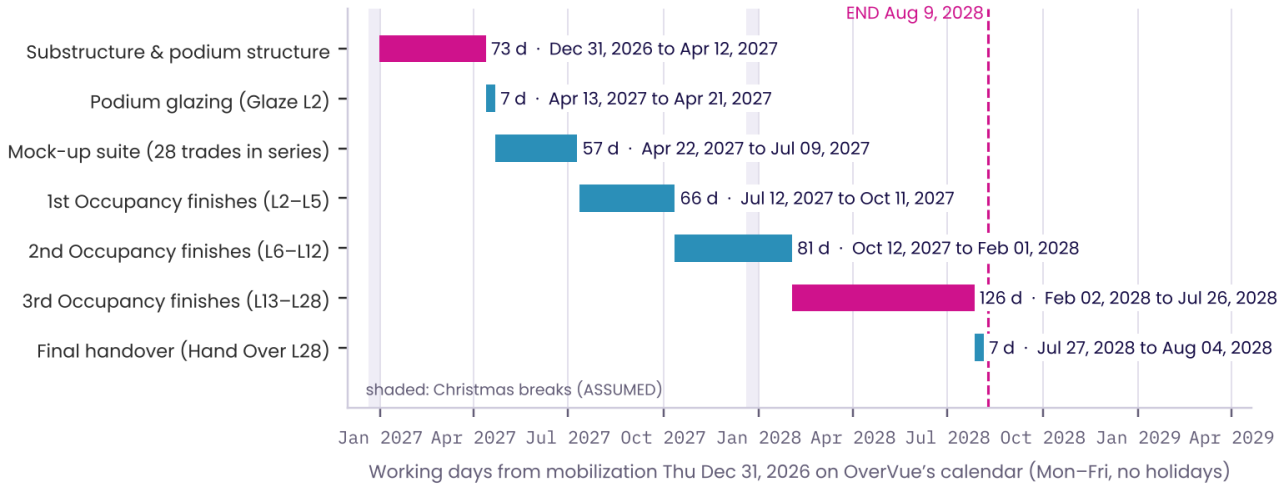


Figure 1. The 67-task driving chain in seven segments; Hand Over L13–L27 are also critical, in parallel. Pink: the substructure and the 3rd Occupancy finishes, the blocks with the most group drag (Section 5). Shaded: the ASSUMED Christmas breaks, not in OverVue's calendar. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

The chain is the same as in Part 1: mobilization and shoring → raft and foundations → L1–L3 structure → Glaze L2 → the 28-step mock-up suite → Finish Suites one floor a week in three occupancy tiers → Hand Over L13–L28 → END. At each tier boundary the next tier waits for the floor below to finish, which is why the 2nd and 3rd Occupancy segments run longer than the stagger alone suggests. The early finish is **Fri Aug 4, 2028**; Hand Over L28 sits in OverVue at Tue Aug 8, so the layout uses 2 of the 4 working days before END.

A REAL CALENDAR

With a two-week shutdown each winter and 14 Nova Scotia site holidays between START and END (both ASSUMED, applied outside OverVue, whose calendar has none), the same logic finishes on **Tue Sep 12, 2028**, 25 working days after END, before any risk is applied.

Our review found: Mobilize & Prepare Site (#11) sits on Thu Dec 31, 2026, inside the first assumed break; on a real calendar mobilization starts Mon Jan 4, 2027. **Recommended:** confirm the break and holiday dates with the site team and the trades' current agreements.

Near-critical work

FLOAT	TASKS	PATH
6 d	#8 Install Hoist, #20 Cast L3–L4, #21 Transfer Slab, Rough-In L2–L5	Podium rough-in path: the nearest competitor
11–14 d	Glaze L3–L5	Podium glazing feeding the L3–L5 rough-ins
12 d	#22 Erect L5 Precast	First tower floor
18 d	Rough-In L6–L12	2nd Occupancy rough-ins
21 d	Precast L11–L28, roof, heating; Hand Over L2–L12; crane climbs	The path that takes over once the finishes are shortened (was 26 d in Part 1)

Working days of float, plan as built on OverVue's calendar. On a real calendar our review found the glazing delivery (#274) drives Glaze L2 by 1 day, the substructure 1 day behind (Section 6). Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

UPDATED NOV 5 · V2

05 · DRAG, DRAG COST AND DRED

The staggers and the substructure carry the drag.

Drag, drag cost and DRED are Stephen Devaux's Total Project Control metrics, and he reviewed our method with us on Nov 5, 2026. Drag is how many days a critical task, lag or block adds to the finish. Drag cost prices those days at the owner's value of a day: **$21,028 per working day (ASSUMED)**, with site overheads kept out as a resource cost. DRED is each trade's estimate of the duration with doubled resources. Drag comes from the plan's logic; drag cost and DRED need owner and trade numbers, so both use ASSUMED values here.

Group drag first

Following Devaux's advice, we measure whole blocks of the critical path first, then look inside them. Each block (zero duration or zero lag) was removed in every one of 5,000 Monte Carlo runs and the finish compared. Drags are never added: two blocks on parallel paths can be worth little alone and a lot together.

BLOCK (NEVER SUMMED)	MEAN	P50	P80	RUNS > 0	MEAN DRAG COST	V2 MEAN
Finish Suites L13–L28 + Hand Over L13–L28	22.3 d	18	35	100%	$469,454	23.0 d
Finish Suites L2–L28	14.3 d	10	27	69%	$299,750	15.0 d
Substructure and L1–L3 structure (#3, #11–#19)	13.3 d	11	24	75%	$280,143	24.9 d
Hand Over L13–L28	8.3 d	8	9	100%	$174,844	8.1 d
Mock-up suite (#120–#147)	3.6 d	1	7	53%	$75,823	3.0 d
Glazing L2–L28 (#74–#103)	3.2 d	1	7	53%	$68,114	2.8 d
Lag drag: Finish Suites stagger lags (SS+1w)	12.0 d	10	23	69%	$253,097	12.6 d
Lag drag: Hand Over stagger lags (SS+1w)	7.9 d	5	11	93%	$165,398	6.9 d
Lag drag: both stagger sets together	**41.8 d**	41	53	100%	**$879,181**	40.5 d

Working days. Runs > 0 = share of the 5,000 runs in which the block adds any time. Mean drag cost = mean drag × the ASSUMED $21,028 per working day. v2 mean = the same model on the old dates (mobilization Nov 10, 2026, END Jun 19, 2028), for comparison. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

The two stagger-lag sets show Devaux's parallel-path effect in the real plan: 12.0 and 7.9 days alone, **41.8 together**, because the finish tier and the handover tier interlock. Shortening one repeating floor sequence by a day gains close to a day on every floor that follows. The stagger is the biggest block of drag, so what sets the 1-week stagger (working space, hoist time, inspections or habit) is the first question for the trades. The substructure block fell from 24.9 to 13.3 days: with the later start, the 2026 Christmas break and Remembrance Day fall before mobilization, and in this model the Jan–Apr 2027 window loses fewer weather days than the old Nov–Mar one (Section 11).

DRED is the trade's estimate

DRED is not a calculation. It is each trade's answer to "how long with doubled resources, or a doubled budget?" The answer might be 50% of the duration, 85%, no change, or only part of a second crew. Until the trades answer, Section 6 tests three ASSUMED rates: a doubled crew takes 50%, 65% or 80% of the time. A reviewer of Part 1 noted that a continuous raft pour is paced by the batching plant and pumps, not crew size, so its DRED may be close to 100%.

> WHAT THIS MEANS
>
> Ask the trades two things before spending anything: what sets the 1-week floor stagger, and what their doubled-crew duration is on the raft, shoring, L1–L3 pours and the tier-end floors L5 and L12. Those answers decide where the money goes.

Then inside the blocks: drag by task

Probabilistic drag by task: where the days are, run after run

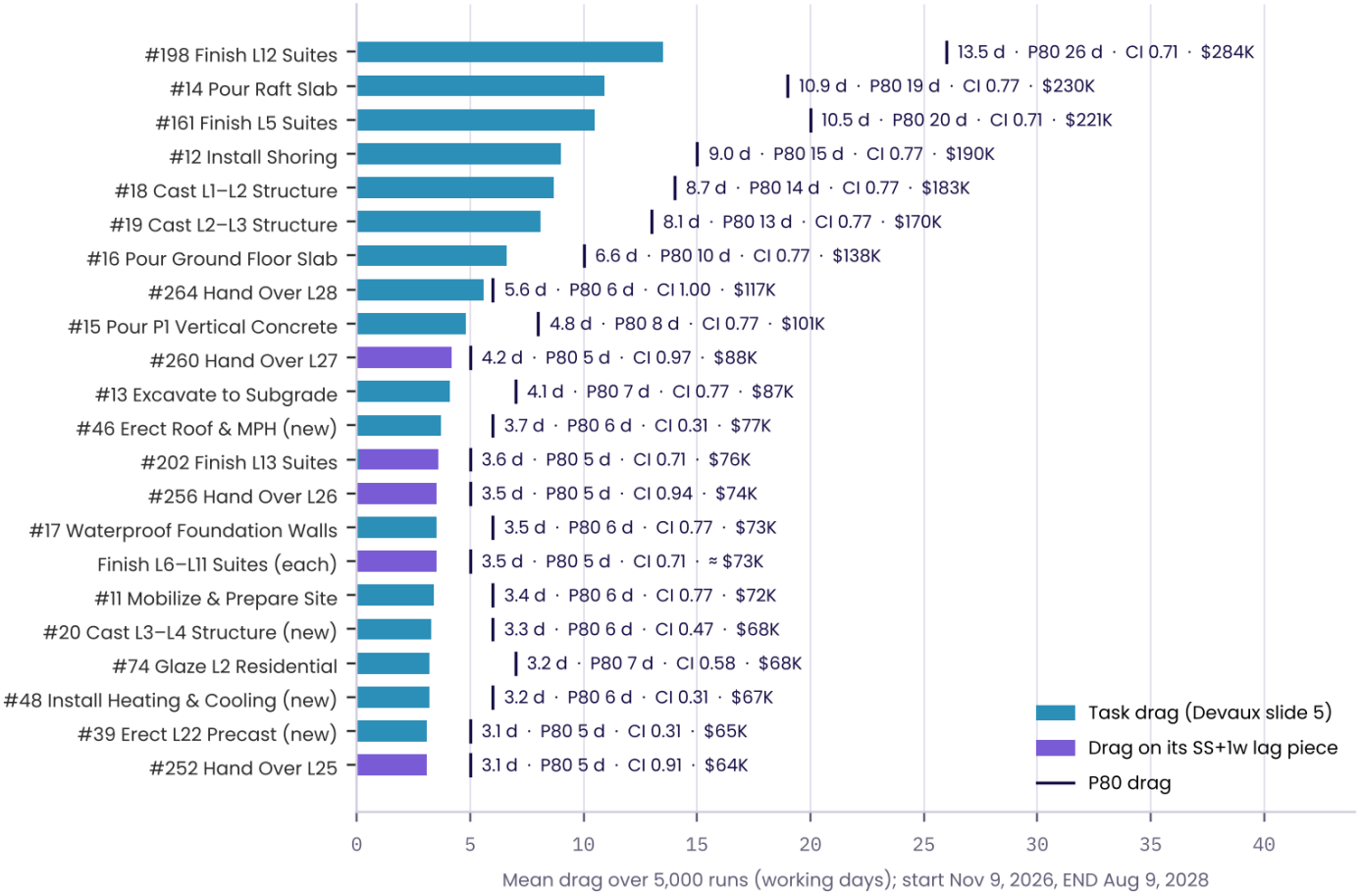


Figure 2. Mean drag counted Devaux's two ways: task drag with the SS lags kept (his slide 5, blue) plus drag on the task's own SS+1w lag piece (purple); the two together equal drag by his quick method, the lowest lag + total float of the SS successors (slide 4). Tick = P80. CI = criticality index. "New": not in the v2 list. Mean drag cost at the ASSUMED $21,028 a day. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

Criticality index is not drag

Devaux asked whether the Monte Carlo's criticality index (how often a task is critical) tracks drag. Only loosely. On task drag alone the rank correlation is 0.30, and Hand Over L25–L27 are critical in 91–97% of runs with no task drag at all: their drag sits on the first week of each handover, the SS+1w lag piece (L27 4.2 days, L26 3.5, L25 3.1). Counting that piece, the correlation rises to 0.68. Tasks with the same index still differ widely: Finish L12 Suites and Finish L6–L11 Suites are all critical in 71% of runs, but L12 carries 13.5 days and each of L6–L11 3.5. **Criticality says how often; drag says how much.**

- **No reverse critical path anomaly.** The plan has no finish-to-finish or start-to-finish links (360 FS, 138 SS+1w, 2 SS), so shortening a task cannot lengthen the project. If FF or SF links are added later, put a milestone at the end of each FF/SF successor.
- **Resource availability drag and CLUB.** A crew shortage that pushes END is drag too. Suite Finishes needs 11 crews against a limit of 10 (Section 7): waiting costs 1 day, so CLUB is about $21,028 of drag cost at 10 crews, and $231,308 if only 8 are available.
- **Buffers carry drag.** A schedule reserve on the critical path has drag equal to its length, at $21,028 a day here. Size it knowingly.
- **Track drag during the job.** Float and drag change as tasks slip: recompute both at each update, and re-check optional work when the critical path moves.

NEW IN PART 2

06 · RECOVERY OPTIONS

Buy time where the saving clearly beats the cost.

Devaux put a question to AI-assisted planning: with an extra $80,000 of budget, where should it go to raise the project's expected return most? We ranked every lever by its return on the extra spend: **ROI = (drag cost saved + site overheads saved − extra resource cost) ÷ extra resource cost**. Each lever was run on the same 5,000 Monte Carlo runs as the baseline (same weather year, same draws), with the value of a day ($21,028, drag cost) and site overheads ($5,984 a day, resource cost) both ASSUMED.

What each lever buys back, and whether it pays

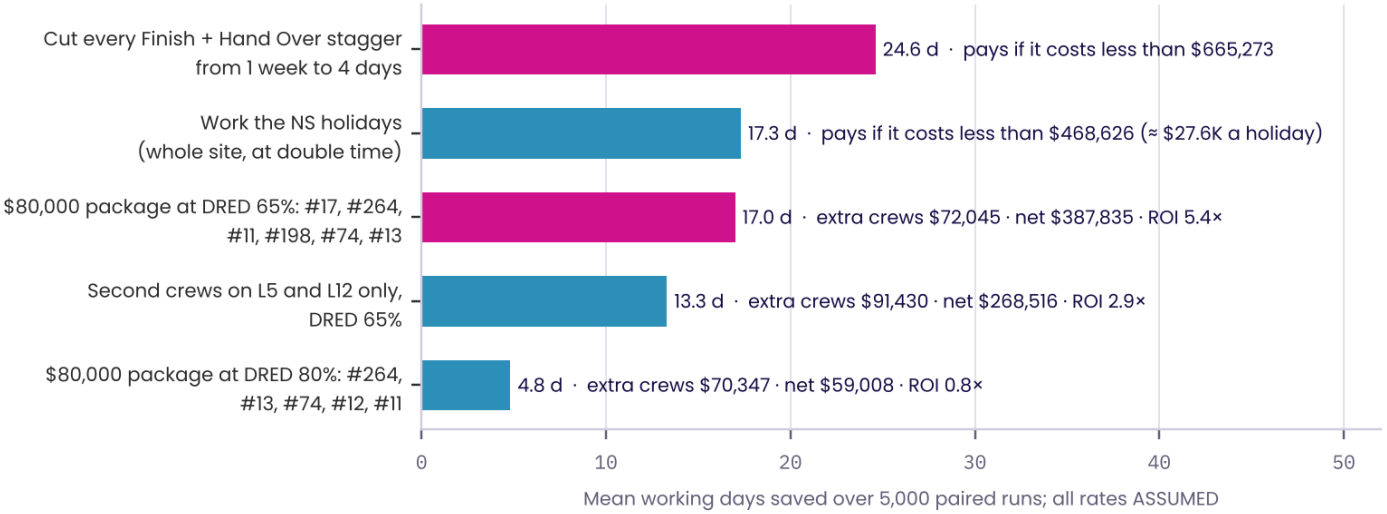


Figure 3. Mean working days saved per lever. Extra crew cost = crew rate × 8 h × extra crew-days; it leaves out mobilization, supervision, equipment and premium time, so every ROI here is optimistic. Levers do not add: they act on parallel paths. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

The $80,000 answer depends on DRED

DRED (ASSUMED)	WHERE THE $80,000 GOES	DAYS: MEAN / P50 / P80	EXTRA CREWS	NET VALUE	ROI
50%	All 14 targeted tasks (only $27,468 needed)	41.8 / — / —	$27,468	$1,101,569	—
65%	**#17 Waterproofing, #264 Hand Over L28, #11 Mobilize, #198 Finish L12, #74 Glaze L2, #13 Excavate**	17.0 / 17 / 26	$72,045	$387,835	**5.4×**
80%	#264 Hand Over L28, #13 Excavate, #74 Glaze L2, #12 Shoring, #11 Mobilize	4.8 / 4 / 7	$70,347	$59,008	0.8×

Packages picked by ROI within $80,000, then run together. At 50% two crews use the same crew-days, so the extra cost is near zero and ROI is not meaningful; rank by net value (P50 and P80 were not recorded for that case). Net value = drag cost saved + site overheads saved − extra crews. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

If a doubled crew takes 65% of the time, the money goes first to three small, high-return spends (Waterproofing, Hand Over L28, Mobilize), then to Finish L12 Suites, Glaze L2 and Excavate: about 17 days back, worth about five times the spend. Together they save slightly less than the sum of their single savings (17.4 days): parallel paths again. Glaze L2 and Excavate replace Shoring from v2 because, with the later start, the substructure is critical less often. If a doubled crew takes 80%, the same money no longer breaks even, and Devaux's rule applies: buy acceleration only where the saving clearly beats the cost, not at break-even, because every input is an estimate.

Single levers at DRED 65% (ASSUMED), ranked by return

SECOND CREW ON	DAYS SAVED (MEAN)	EXTRA CREWS	NET VALUE	ROI
#17 Waterproof Foundation Walls	1.2	$1,487	$30,079	20.2×
#264 Hand Over L28	2.3	$5,225	$57,297	11.0×
#11 Mobilize & Prepare Site	0.9	$3,375	$22,168	6.6×
#198 Finish L12 Suites	10.4	$45,704	$234,778	5.1×
#74 Glaze L2 Residential	1.4	$6,508	$30,121	4.6×
#161 Finish L5 Suites	9.5	$45,726	$209,867	4.6×
#12 Install Shoring	3.4	$19,365	$73,124	3.8×
#19 Cast L2–L3 Structure	2.8	$20,415	$55,953	2.7×
#14 Pour Raft Slab	4.4	$33,245	$85,192	2.6×
#13 Excavate to Subgrade	1.2	$9,747	$22,916	2.4×
#18 Cast L1–L2 Structure	3.0	$24,951	$55,437	2.2×
#16 Pour Ground Floor Slab	1.9	$19,369	$32,608	1.7×
#15 Pour P1 Vertical Concrete	1.4	$15,319	$21,774	1.4×
#3 Install Crane	0	$4,800	-$4,800	—
All 14 together	**36.7**	**$255,235**	**$735,981**	**2.9×**

High ratios on small tasks come from small spends; Finish L12 and L5 Suites carry the most net value. The raft slab's real DRED may be near 100% (Section 5). Same runs as Figure 3.

Levers with no crew cost in the model: the break-even

LEVER	DAYS: MEAN / P50 / P80	DRAG COST SAVED	SITE OVERHEADS SAVED	PAYS IF IT COSTS LESS THAN
Cut every Finish + Hand Over stagger from 1 week to 4 days	24.6 / 25 / 26	$517,894	$147,379	**$665,273**
Work the Nova Scotia holidays (whole site; Christmas breaks kept)	17.3 / 16 / 19	$364,811	$103,815	**$468,626**

Holiday work is paid at double time under the 2021–2026 CLRA–Labourers agreement (not re-checked; it expired Apr 30, 2026). About 17 holidays fall before the P50 finish, so the break-even is about $27,600 per holiday worked; the premium is not in the cost model. Same runs as Figure 3.

The glazing order: Fri Dec 11, 2026, with no float on a real calendar

Our review found the order far more sensitive than under the old dates. On OverVue's calendar the delivery (Thu Apr 1, 2027) has 7 days of float; with breaks, holidays and lead times paused on shutdown days (ASSUMED) it has **none**, or 11 days if the supplier's 16 weeks run through Christmas.

ORDER PLACED	MEAN DAYS LOST	RUNS LOSING ANY	LOSING 4+ DAYS	LOSING 10+ DAYS	MEAN DRAG COST + SITE OVERHEADS
1 week late (Fri Dec 18, 2026)	1.6	32%	22%	2%	$32,976 + $9,384
4 weeks late (Fri Jan 8, 2027)	3.9	44%	37%	19%	$81,643 + $23,233
6 weeks late (Fri Jan 22, 2027)	10.6	69%	62%	48%	$222,577 + $63,339
8 weeks late (Fri Feb 5, 2027)	20.3	87%	82%	73%	$427,562 + $121,673

Paired runs, same as Figure 3. One week late loses days in 32% of runs (11% in v2). An order placed any time in the break (Dec 21, 2026–Jan 1, 2027) loses 2.0 days on average: the lead time does not start counting until Mon Jan 4, 2027.

WHAT THIS MEANS

Order the glazing by Fri Dec 11, 2026; ask the trades about the stagger; then fund the best DRED answers.

NEW IN PART 2

07 · RESOURCES

One clash, checked two ways, worth about a day.

OverVue's Conflict Detection flags one conflict: Acme Suite Finishes in periods 17–12, 11 tasks against a limit of 10. To test that the flag is right, every one of the plan's 562 resource allocations was recounted outside OverVue, by week (OverVue's rule: a task counts in every week it touches) and by day.

CHECK	RESULT
OverVue Info Table (Conflict Detection on)	Suite Finishes, 11 floors (Finish L13–L28 Suites) in each of periods 17–12 (weeks of Apr 12 to May 17, 2028); nothing else
Independent weekly recount	The same 11 floors in the same 6 periods; nothing else
Independent daily recount	Only 6 single days at 11 crews (the first day of each flagged week); 10 on the other days
Cause	Finish Suites runs 51 days on a 5-day stagger: 51 ÷ 5 = 10.2, so the oldest floor's last day meets the newest floor's first

Every crew limit in the plan is 10 (placeholder) and every task carries exactly one bundled crew, so the check is correct arithmetic on assumed inputs. Counted on Nov 5; the move of END changed the dates of the periods, not which tasks fall in them. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

Start or wait?

When a floor is ready but no full crew is free, the planner can wait, start short-handed, add a crew for the clash days, or shorten the work. Each was modelled day by day on the L13–L28 tier (behaviour ASSUMED); option D was also tested in a scenario copy in OverVue. A shortage that moves END is resource availability drag, and its drag cost is CLUB (Section 5).

OPTION	EFFECT ON END	COST (ASSUMED)
A. Wait 1 day before starting L23	+1 day	$21,028 drag cost + $5,984 site overheads
B. Start short-handed, share crews	+2 days	$42,056 drag cost + $11,968 site overheads
C. Overtime on the 6 clash days	None	about $8,040 premium
D. 50-day floors on L13–L28 (tested in OverVue)	None in OverVue; 1 day of float before each handover; no conflict	-$42,880 labour, if the trade can do it

SUITE FINISHES CREWS AVAILABLE	A. WAIT	B. START SHORT-HANDED	C. EXTRA CREW-DAYS TO HOLD END
10 (plan placeholder)	+1 d / $21,028	+2 d / $42,056	6
9	+6 d / $126,168	+7 d / $147,196	42
8	+11 d / $231,308	+14 d / $294,392	88
7	+32 d / $672,896	+22 d / $462,616	144

Drag cost only, at the ASSUMED $21,028 a day; site overheads add $5,984 a day. At 8–10 crews waiting beats starting short-handed; at 7, starting short-handed wins by 10 days. Plan as built, no calendar breaks. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

Peak crews each trade needs (from the plan as built)

Suite Finishes 11; Drywall & Framing 8; Interiors 5; Fire Protection 4; Civil, Glazing, Mechanical and Roofing 3; General Contracting, Electrical, Landscaping, Masonry & Cladding 2; all others 1. The question for each trade is simply: do you have this many? Where a subcontract price covers part of a trade's work, OverVue now sees that trade as two resources and checks each against its own limit; check them together once real limits go in.

Crews per floor: line of balance

Line of balance: six floor trades, three occupancy tiers

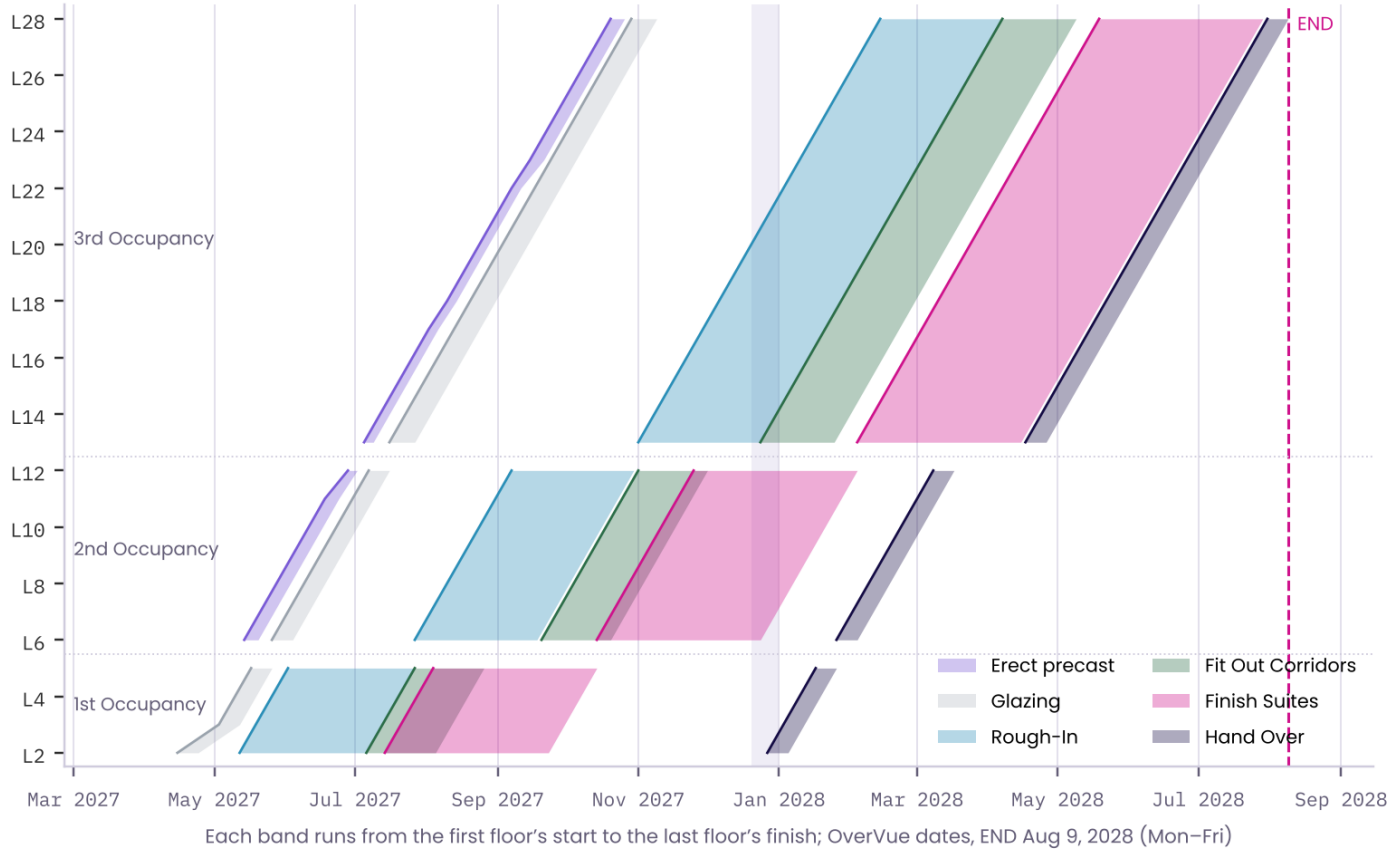


Figure 4. Six floor trades by start and finish on each floor, from OverVue task dates read on Nov 6, 2026 (END Aug 9, 2028, Mon–Fri, no breaks). Shaded: the 2027 Christmas break (ASSUMED), not in OverVue's calendar. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

With an ASSUMED limit of two crews on one floor at once (glazing drawn but not counted, as exterior work), **no floor ever has more than two**. 92 floor-days sit at the limit, all Fit Out Corridors plus Finish Suites: 16 days on each of L2–L5 and 4 on each of L6–L12. On L13–L28 the trades run strictly one at a time. Counting the mock-up suite, the railings and the hoist held-up areas on every floor they could touch gives three crews on one floor for 4 days, around late May 2027, only if the mock-up is on L2, L3 or L4.

The chart also shows a point raised on Part 1: L2–L12 suites finish between late September 2027 and early February 2028, but their handovers wait until late December 2027–March 2028. Earlier occupancy needs the building systems commissioned and certified first (Section 15). Each floor task is one bundled crew (Rough-In alone covers drywall, mechanical, electrical and sprinkler rough-ins), so this check undercounts the real trades on a floor.

NEW IN PART 2

08 · FINANCIALS

$51.26M, and most of it is subcontracts.

Where the $51.26M goes

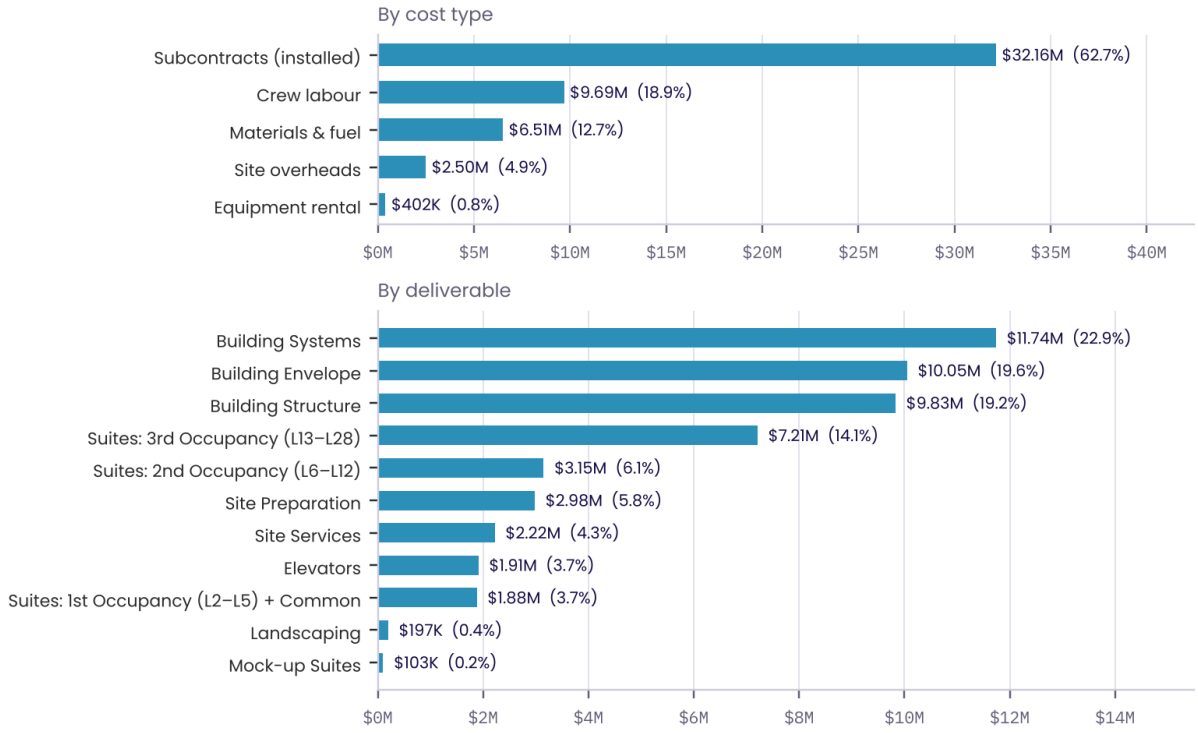


Figure 5. Plan cost by cost type and by deliverable; total matches OverVue's Budget Cost, $51,263,184. Cost by type from the Nov 5 recount of all 562 allocations; by deliverable as published in Part 2 v1. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

COST TYPE	AMOUNT	HOW IT IS PRICED
Subcontracts (installed)	$32,158,398	15 installed prices: mechanical $9.15M, window wall $8.52M, precast slabs and columns $6.57M, electrical $3.05M, elevators $1.91M, sprinklers and pumps $1.48M, envelope and roofing $1.11M. The trade's crew is kept on the task at $0 so crew counts still work.
Crew labour	$9,689,640	24 Acme crews at hourly rates from 2025 collective agreements plus burden and markup (Part 1 basis, not re-verified)
Materials & fuel	$6,511,487	Ready-mix $190/m³, rebar $1,800/t, suite packages, finishes, framing and drywall, propane; low-end retail or price-file proxies
Site overheads	$2,501,312	ASSUMED $748/h ($5,984 a working day) from mobilization to END: site staff, offices, utilities, insurance. A time-related resource cost
Equipment rental	$402,347	Tower crane $145/h and hoist $129/h while on site (RSMeans Halifax 2026 estimate, from the price file), plus heater rental

Whole dollars, CAD, before HST. Rates with cents were rounded up to the next dollar. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

DRAG COST IS NOT IN THIS BUDGET

Site overheads grow with every day the job runs, so they are a resource cost and sit in the budget. The owner's value of a day ($21,028, ASSUMED) is lost project value: drag cost, kept separate. **True cost of work = resource cost + drag cost**: a day late at END costs about $27,012 in all.

Cash flow

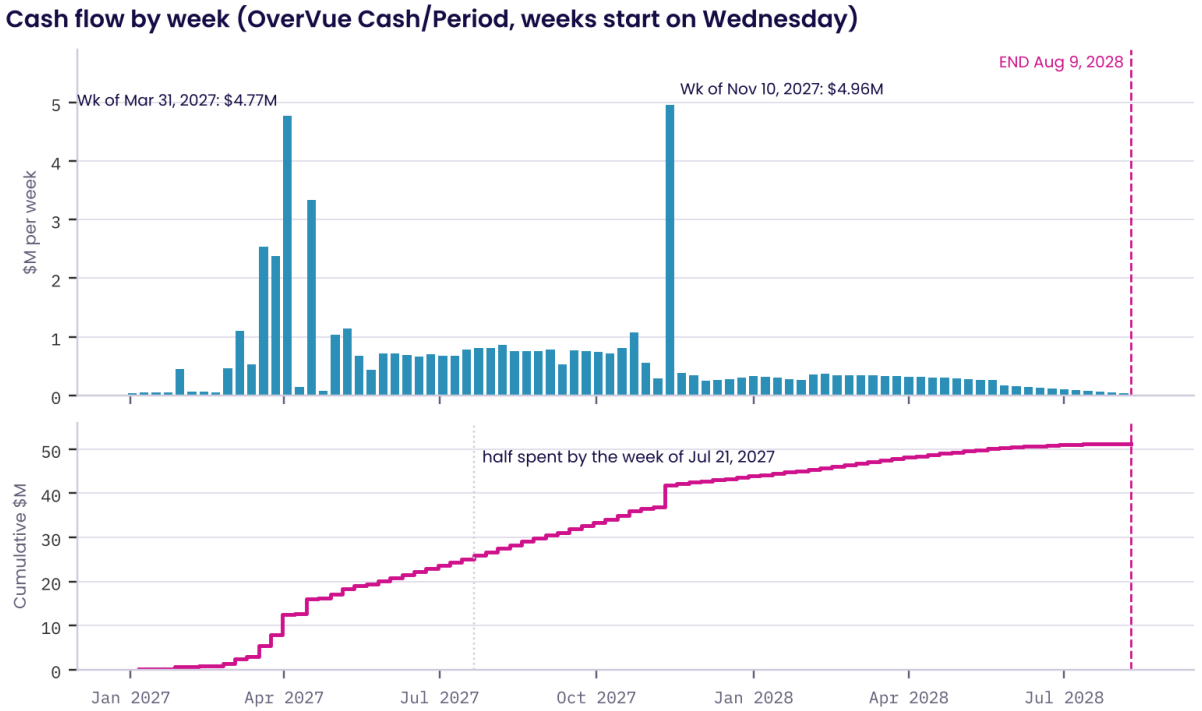


Figure 6. OverVue's weekly Cash/Period as read from the Info Table on Nov 6, 2026 (END Wed Aug 9, 2028). OverVue counts periods back from END, so its weeks now start on Wednesday. Every weekly value equals the Nov 5 read: only the dates moved. The running total matches OverVue's Budget Cost in all 92 periods. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

OverVue charges a fixed or per-use price in a task's first week, so the subcontract lump sums land early: the four weeks from Wed Mar 24 to Tue Apr 20, 2027 carry $10.6M as the first large packages start, and the week of Wed Nov 10, 2027 is the largest single week ($4.96M). Real progress billing would spread them over each package's duration. Even so, half the cost is committed by the week of Jul 21, 2027, a year before completion.

Benchmark and gaps

Earlier research found an Altus Group Halifax range for 13–39 storey residential of about $305–$375 per square foot, about $54.6M–$67.1M on 178,987 sf net. This was not re-verified for this report and may have changed. The plan sits below that range because several items are not priced yet:

- Formwork (the concrete crew's carpenters form, but form materials are not priced) and the general contractor's fee and overhead.
- Ventilation and garbage-chute materials; parking-level and ground-floor building systems; corridor wall paint (about $37,500).
- A reported Canadian surtax on U.S. aluminum products (window wall, railings); verify with Finance Canada and CBSA before relying on it.
- Owner costs outside construction, such as a Halifax Water development charge increase reported after a freeze ending Nov 9, 2026 (verify).
- Window wall at $1,000/m² is the price file's suggestion, not a quote; heat is likely light for two winters.

WHAT THIS MEANS

The total is a demonstration budget built from proxies and retail prices. It is good enough to show where the money and the cash peaks sit, not to bid. Quotes for the five largest packages and take-offs from drawings would replace most of the ASSUMED quantities.

NEW IN PART 2

09 · SUPPLY CHAIN

We traced 32 supply items: 29 had no delivery planned.

Our review traced every material and subcontract resource in the schedule (32 items, not counting crews, equipment, fuel and site overheads) to the first task that uses it. Three now have a lead-time task in front of them, added in Part 2: precast (12 weeks), glazing (16) and elevators (26), all ASSUMED. For the other 29, the schedule assumes the material is on site the day its task starts. The table shows the gaps we found, earliest first, on the new dates.

FIRST USE	ITEM	FIRST TASK	PUBLISHED LEAD TIME	FLAG
Mon Feb 1, 2027	Ready-mix concrete, rebar	#14 Pour Raft Slab	Concrete 1–4 weeks; rebar not stated	Twelve weeks away: rebar shop drawings and fabrication to confirm
Mon Mar 8, 2027	**Electrical service gear**	#116 Energize Primary Power	Medium-voltage switchgear 52–80 weeks; pad-mount transformers 40–65 weeks	**Found: if that gear is needed, its order date passed about 6–16 months ago.** Ask: low or medium voltage? Utility-owned transformer? Ordered?
Mon Apr 5, 2027	Fire pump and jockey pump	#55, #56	Not found	Engineered equipment, 21 weeks away: ask
Mon May 10, 2027	Roofing	#69 Podium Roof	Membrane 3–10 weeks	Order between Jan 18 and Apr 5, 2027
Wed May 26, 2027	Aluminum railings	#105	Not found	Tariff risk (Possibility 4)
Wed Jul 14, 2027	Suite package, finishes, paint, tile	#149 Finish L2 Suites	Not found	27 floors of repeat deliveries: needs a per-floor delivery schedule

Dates are OverVue's own (Mon–Fri, no holidays); with breaks and holidays each first use falls 2–7 days later. Weeks counted from Nov 6, 2026. Published lead times are from one U.S. contractor's 2026 guides (Terrapin Construction Group; not Halifax-specific, not verified with suppliers). Order-by dates allow 2–6 weeks for submittals. "Not found" is not zero. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

- **The electrical service is the item to check first.** It may not apply (a low-voltage service, a utility-owned transformer): it is a question, not a finding. If it does apply, Energize Primary Power and everything after it would move.
- **Recommended:** place the glazing order by Fri Dec 11, 2026, five weeks from today (Section 6).
- **Recommended:** add a delivery task for every item whose lead time is longer than its float, as we did for precast, glazing and elevators.
- **Recommended:** a per-floor delivery schedule for the suite package, tied to each Finish Suites task.

NEW IN PART 2

10 · THREATS AND OPPORTUNITIES

Thirteen possibilities, now in OverVue.

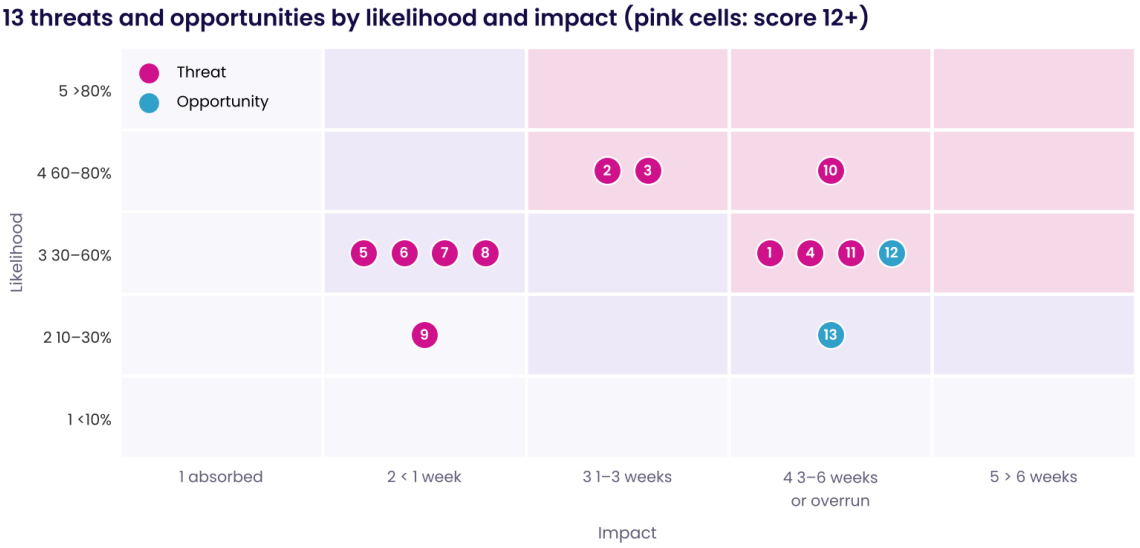


Figure 7. Likelihood and impact scores are Claude's judgement, approved for the demo (ASSUMED); score = likelihood × impact, 12+ is high priority. All 13 are OverVue Possibilities with lead person, impact areas, response and a pre-mitigation score (1–2 Low, 3 Moderate, 4–5 High), linked to their tasks. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

#	THREAT OR OPPORTUNITY	LINKED TASK	SCORE	RESPONSE
10	Estimate below benchmark; scope unpriced	#276 Site Overheads	16	Price the gaps; quotes for the five largest packages
1	Glazing delivery slips past 16 weeks	#274	12	Order by Fri Dec 11, 2026; ask if the 16 weeks pause over Christmas
2	Winter concreting slows the podium	#14 Pour Raft Slab	12	Cold-weather plan for a February raft pour; price heat and hoarding
3	Building systems start before the podium slabs	#58 Install Sprinklers	12	Split by floor or link to the pours above
4	Tariffs raise aluminum window and railing costs	#274	12	Confirm origin; lock prices at order
11	Halifax Water development charge rises (owner)	#115 Connect Water	12	Owner confirms the charge and any lock-in date
12	Opportunity: second crew on L5 and L12 finishes	#198, #161	12	Ask Acme Suite Finishes for a doubled-crew duration
13	Opportunity: 4-day floor stagger	Finish, Hand Over L2–L28	8	Ask what sets the 1-week stagger (worth 24.6 days)
5	Elevator delivery slips past 26 weeks	#275	6	Order at START (Nov 9, 2026); about 157–163 days of float
6	Crane climb floors unconfirmed; Climb 1 clashes with Temp Roof L11	#4	6	Confirm floors; move #65 off the climb days
7	Precast erection stoppage at L21–L22	#39	6	21 days of float absorbs a short stop
8	Not enough construction heat	#65	6	Size heat per floor and month
9	Main roof parapet change order	#70	4	Settle the detail before shop drawings

Lead people in the register are fictional. A one-week glazing slip loses days in 32% of runs (mean 1.6 days, $32,976 of drag cost); six weeks late, 10.6 days and $222,577 (ASSUMED, Section 6). Possibility 1 in OverVue may still quote the old glazing order date (Oct 21, 2026): **Recommended:** update it to Dec 11. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

NEW IN PART 2

11 · SCHEDULE RISK

On a real calendar, END is out of reach.

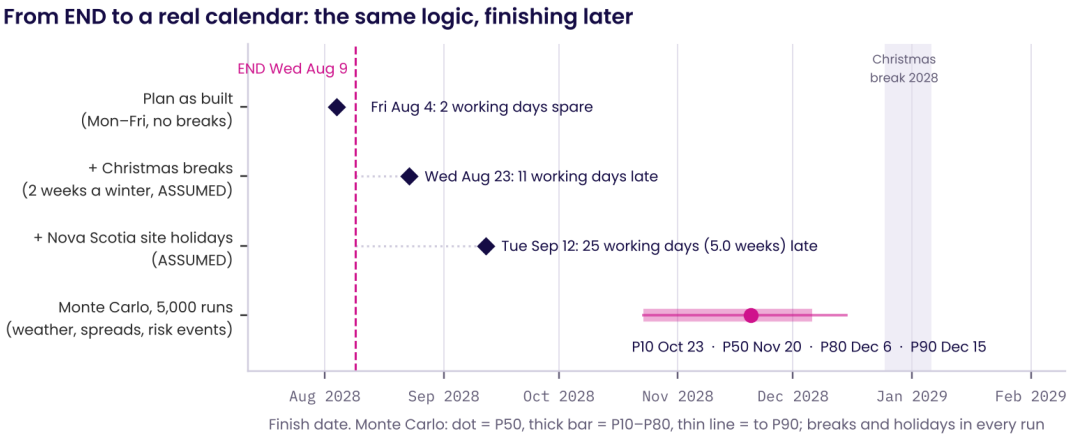


Figure 8. Christmas breaks (Dec 21, 2026–Jan 1, 2027; Dec 20–31, 2027; Dec 25, 2028–Jan 5, 2029) and Nova Scotia site holidays (CLRA–Labourers designated holidays, observed dates) are ASSUMED. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

How it was built. Durations vary by trade group on triangular spreads (for example Finish Suites -15% / 0 / +30%), with tasks in the same group moving together (correlation 0.8, ASSUMED). Six threats from the register add delay at their likelihood. Weather replays the real daily record for Halifax Stanfield from Environment and Climate Change Canada: each run picks one of 21 past winters (start years 1996–2000 and 2007–2022) and loses work days on set rain, snow, gust and cold thresholds by type of work (ASSUMED rules). It assumes the source durations hold no weather allowance. **New in v3:** START Mon Nov 9, 2026 and END Wed Aug 9, 2028, so the substructure now runs January to April 2027 instead of November 2026 to March 2027.

CASE (WEEKS AFTER END)	P10	P50	P80	P90	BY END
v3: START Nov 9, 2026, END Aug 9, 2028	Oct 23 (10.8)	**Nov 20 (14.8)**	**Dec 6 (17.2)**	Dec 15 (18.6)	0%
v2: same model, old dates (END Jun 19, 2028)	Sep 14 (12.9)	Oct 16 (17.4)	Nov 3 (20.0)	Nov 15 (21.7)	0%

All dates 2028. Weeks after END = Monday–Friday days after the last working day before END, ÷ 5. The v2 row was re-run on Nov 6 at the old END as a regression check and reproduces v2 exactly, so every difference comes from the calendar move. 5.1% of v3 runs finish after Fri Dec 22, 2028, into the 2028 Christmas break. Monte Carlo v3: 5,000 runs, Christmas breaks and NS holidays on, Nov 6, 2026, built on the OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

- **Drivers:** the substructure (critical in 77% of runs, was 94%), Finish Suites L5–L13 (71%), and a roof chain, #39 Erect L22 Precast → #46 Erect Roof & MPH → #48 Install Heating & Cooling (31%).
- **Our review found two new seasonal exposures:** #46 Erect Roof & MPH now falls in November 2027, crane work in autumn gales, and #48 Install Heating & Cooling runs across the 2027 Christmas break (Nov 26, 2027–Jan 20, 2028 on the real calendar).
- **Winter, against our expectation:** the Jan–Apr 2027 substructure window loses fewer days than the old Nov–Mar one (mean 91.9 against 99.0 days, Mobilize to Cast L2–L3, weather only): late-fall heavy rain stops work more often than Jan–Mar snow. The model does not price heat or hoarding for the February raft pour.
- **Cost of the delay:** the P50 finish is 74 working days after END and the P80 86 (Monday–Friday days after Tue Aug 8, 2028). At the ASSUMED $21,028 a day that is about $1.56M and $1.81M of drag cost, plus about $443K and $515K of site overheads.
- **Correlation matters:** without it the spread-only range narrows falsely (v1: 431–451 working days, not 418–455).

> WHAT THIS MEANS
>
> Even the best case misses END, and the later dates bought only about 2.6 weeks against it. Set the target with holidays and a weather allowance; aim recovery at the staggers, the substructure and the glazing order.

NEW IN PART 2

12 · VALUE BREAKDOWN

Optional scope costs money, not time.

Is this the best plan by expected return? The scope was split into mandatory work (the building cannot be handed over without it) and optional work that adds value but could be cut, simplified or deferred. Optional: roof terrace, amenity and commercial fit-out, ground-level landscaping and common-area finishes. Each was weighed against its cost and its drag.

OPTIONAL ITEM	TASKS	PLAN COST	DRAG	LEAST FLOAT	BREAK-EVEN / SUITE / MONTH	AT 3× COST
Ground-level landscaping	#266, #267, #271, #272	$122,759	0	27w3d	$14.72	$44.16
Roof terrace	#268–#270	$74,596	0	28w	$8.95	$26.84
Amenity & commercial fit-out	#164	$12,960	0	36w1d	$1.55	$4.66
Common-area finishes	#165–#167	$12,960	0	20w	$1.55	$4.66
All optional scope	**11 tasks**	**$223,275**	**0**	**20w**	**$26.77**	**$80.32**

Break-even = the rent premium per suite per month that repays the cost over 5 years at 6.2%, across 162 suites (both ASSUMED). Costs are labour only on most of these tasks, hence the 3× stress test. Float is on OverVue's calendar and did not change with the dates. Source: OverVue plan "Acme Tower", Part 2 Scenario 2026-11-03, read Nov 6, 2026.

- **Drag is zero** on every optional task; the tightest has 20 weeks of float. Cutting any of it saves no time, so drag cost is $0 and DRED does not apply. The decision is cost against value only.
- **Every item pays for itself** at a small premium: under $15 per suite per month at plan cost, under $45 even at three times the cost. For scale, the assumed average rent is $2,324 a month.
- **Some of it may not be optional.** Halifax's Regional Centre Land Use By-law requires a landscape plan for new buildings of 2,000 m² or more and refers to amenity space requirements; the amenity section could not be retrieved, so this is not confirmed.
- **Commercial space** is bundled with amenity in #164. Cutting it loses commercial rent, not just a tenant premium; it needs its own lease rate.
- **Re-check when the critical path moves.** If a recovery lever shortens the finishes, an optional task could become critical; its value must then be weighed against its drag cost too.

WHAT THIS MEANS

On these assumptions the best plan by expected return keeps all four items. The answer would change only if real costs were many times higher than priced, or tenants put almost no value on them. Public sources gave no usable dollar values, so none were invented.

NEW IN PART 2

13 · BIM MODEL

The plan, built into a 4D/5D model.

The Part 2 Scenario was exported from OverVue (read-only) into an IFC4 model, opened in Bonsai BIM, the free BIM add-on for Blender. The geometry is a simplified, generated 28-storey tower, not for construction. Version 3 of the model ties every one of its 1,525 elements to a dated OverVue task. It was built on Nov 5, before START and END moved, so its dates are 37 working days earlier than this report's; the logic and costs are the same.

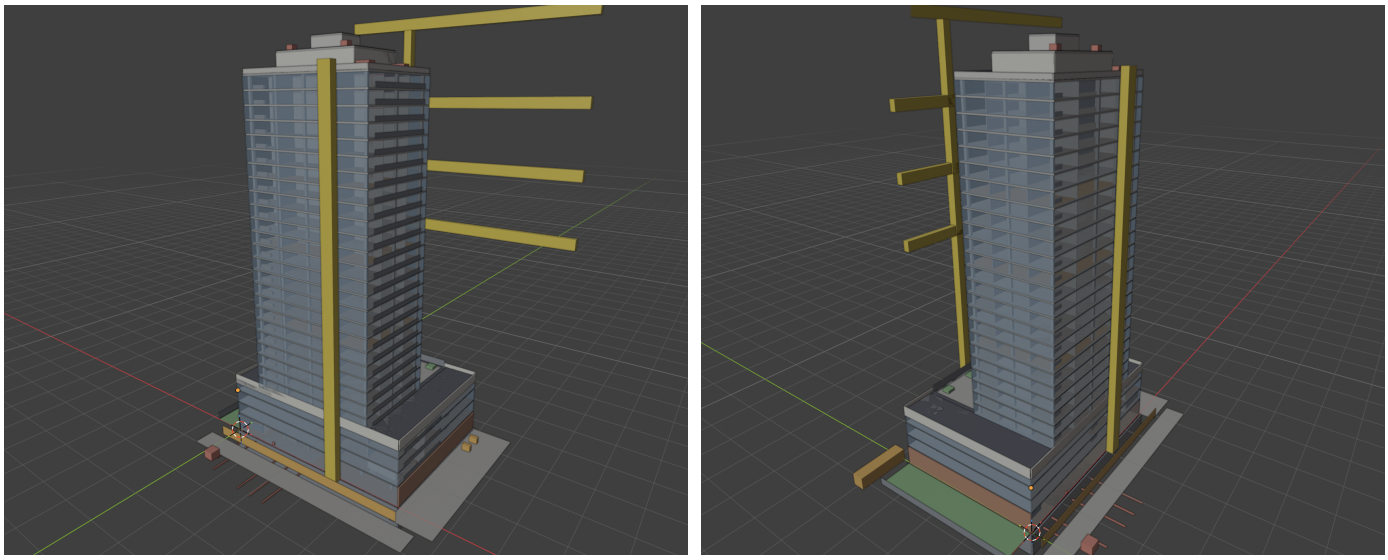


Figure 9. Acme Tower v3 in Bonsai BIM, two views. This static view shows the tower crane's jib at all four heights (after installation and after each climb) at once; in the 4D animation each jib appears with its task and the one below is removed. Source: Acme-Tower-4D-v3.ifc, built from the OverVue Part 2 Scenario, Nov 5, 2026.

DIMENSION	WHAT V3 HOLDS
3D	Storeys P1, L1–L28, roof and penthouse; cast-in-place podium, precast tower, core, stairs, glazing, finishes, crane and hoist; 87 simplified spaces and 32 zones (levels, occupancy tiers)
4D: schedule	All 276 OverVue tasks (289 IFC tasks with deliverables, START and END) and the 500 links (360 FS, 138 SS+1w, 2 SS), dated from the earlier END, Jun 19, 2028 (to be re-exported for Aug 9); early and late dates, float and critical flags; the crane in four stages
5D: cost	Cost schedule by deliverable, task and allocation: 66 resources, 562 allocations, total $51,263,184 in CAD
Analysis data	Drag and drag cost on each task (Part 2 v1 values); risk IDs on 677 elements; optional-scope flags on 24 elements; pricing basis per element

Checks passed on Nov 5: schema validation with 0 errors; links identical to OverVue; every task's dates equal its OverVue position at that time; cost total equal to OverVue's Info Table.

What our review of the 4D model found. Building-systems work (#51–#60) starts before the podium slabs above it exist (risk 3), and the first crane climb runs on the same days as the L11 temporary roof (risk 6). We found both by watching the model build, not by reading the schedule. **Note for readers:** in Bonsai, use File > Open IFC Project; File > Import > IFC (Geometry Only) brings in shapes without the schedule or costs.

NEW IN PART 2

14 · PROJECT ROI AND DIPP

What the owner must supply first.

Section 6 ranks schedule levers by their return on extra spend. The larger question, the return on the whole project and whether a schedule change raises it, needs the owner's numbers. **We have not estimated it.** The $51.26M cost model leaves out land, soft costs, the general contractor's fee and formwork, so any project ROI built on it would be overstated.

What the owner supplies

INPUT	WHAT IT FEEDS
Land cost; soft costs (design, permits, fees, financing costs)	Total investment
Rent roll by suite type; vacancy and lease-up; operating costs	Net operating income
Financing terms; hold period and exit cap rate, or sale value	Expected value of the project
Value of the project if delivered on the target date	The starting point for the value of a day
Loss of value per week late and gain per week early, by occupancy phase	Replaces the ASSUMED $21,028 a day; drag cost per value stream
Cost estimate to complete, updated at each report	DIPP

How they will be used

- **Project ROI** = (expected value - total investment) ÷ total investment.
- **DIPP**, Devaux's Index of Project Performance = (expected value, plus any acceleration gain or minus any delay cost) ÷ cost estimate to complete. Above 1, the value still to be gained exceeds the cost still to be spent. A lever is worth buying when it raises DIPP.
- **Value per occupancy phase.** Each tier's suites start earning at their own handover, so drag cost can be counted per value stream, not only at END. A reviewer of Part 1 with long experience of investment-based project management suggested this.
- **Earned value.** OverVue has no earned-value tracking today. With it, DIPP's progress version can be derived from the cost and schedule performance indices.

> WHAT THIS MEANS
>
> Three questions at initiation set every drag cost in this report: what the project is worth on the target date, how much that drops for each week late, and how much it rises for each week early. Early finish almost always has value. Until the owner answers, every drag cost and ROI here is a demonstration.

15 · NEXT STEPS

Eight things to do before mobilization.

01	**Set a realistic target date**	• On a real calendar the plan ends Sep 12, 2028 before any risk; Monte Carlo P80 Dec 6. • **Agree the target date and the real mobilization date (Dec 31 sits inside the assumed break).**
02	**Place the window-wall order**	• On a real calendar Fri Dec 11, 2026 is also the latest date; one week late loses days in a third of runs. • **Order by Dec 11 and ask whether the 16 weeks pause over Christmas.**
03	**Ask the trades about the stagger**	• 24.6 days back for no extra crews, if the 1-week stagger is a choice, not a limit. • **Ask what sets it: working space, hoist time, inspections.**
04	**Get DRED answers, then spend**	• Doubled-crew durations for Finish L12 and L5, Shoring, the raft and L1–L3 pours, Hand Over L28. • **Buy only where the saving clearly beats the cost.**
05	**Check the long-lead supply items**	• Electrical service gear first (40–80 weeks if medium voltage), then raft rebar and fire pumps. • **Add delivery tasks where lead time exceeds float.**
06	**Plan commissioning before handover**	• Occupancy needs HVAC commissioned and certified; a reviewer saw 6–10 weeks by a few specialists and vendor reps. • **Add a commissioning task before Hand Over L2, resourced as scarce; book vendor reps early.**
07	**Replace placeholder values**	• Real crew limits (Suite Finishes needs 11), the owner's value of a day, site overheads, holiday calendar. • **Then re-run drag, conflicts and the lever ranking.**
08	**Track drag during the job**	• Recompute drag and float at every update; re-check optional work when the critical path moves. • **Keep every change in a scenario copy with a snapshot.**

16 · OPEN QUESTIONS

What the owner, contractor and trades can answer.

WHO	QUESTION	REPLACES
Owner	Value on the target date; loss per week late; gain per week early; does it differ by occupancy phase?	ASSUMED $21,028 a day
Owner	Land, soft costs, rent roll, vacancy, operating costs, financing, hold period and cap rate	Project ROI and DIPP (Section 14)
Owner	Is the site under the Regional Centre by-law, and what amenity space does it require?	Optional vs mandatory split
General contractor	Christmas shutdown and holiday calendar for every trade; does mobilization start Dec 31 or after the break? Do the durations include a weather allowance?	NS holidays, Monte Carlo
General contractor	Time-related site costs per day; crane and hoist rental terms	ASSUMED $5,984 a day
General contractor	Which suite is the mock-up; maximum crews on one floor; crane climb floors; hoist's first floor	Mock-up floor, limit of 2, climbs
Electrical	Low or medium-voltage service? Utility or customer transformer? Gear lead time; ordered yet?	Supply chain flag
Acme Suite Finishes	Crews available; 50 days per floor possible; doubled-crew duration on L5 and L12; what sets the 1-week stagger	Limit 10, DRED, stagger
Acme Concrete, Excavation & Shoring	Doubled-crew durations for shoring, raft, ground slab and L1–L3 pours; is the raft paced by plant and pumps? Winter-concreting cost for a February raft pour	DRED rates, risk 2
Glazing subcontractor	Order by Dec 11, 2026 confirmed? Real lead time, and does it pause over Christmas? Doubled-crew duration and cost on Glaze L2	16-week lead, DRED
Mechanical, Fire Protection	Floors each systems task covers; fire pump lead time; commissioning duration and specialists	Risk 3, supply, commissioning
General Contracting	Hand Over per floor with two crews; what sets the handover stagger	DRED, stagger

APPENDIX A

Assumptions register

ASSUMPTION	VALUE USED	BASIS
START and END	Mon Nov 9, 2026 to Wed Aug 9, 2028	Set in OverVue on Nov 5, 2026
Calendar	Mon–Fri in OverVue; breaks and holidays applied outside it where stated	OverVue has no holiday calendar in this plan
Christmas breaks	Dec 21, 2026–Jan 1, 2027; Dec 20–31, 2027; Dec 25, 2028–Jan 5, 2029	Two weeks a winter
Nova Scotia site holidays	11 designated holidays, observed dates; 14 working days between START and END outside the breaks	CLRA–Labourers 2021–2026 agreement (expired Apr 30, 2026); other trades not checked
Supplier lead times over shutdowns	Lead times pause on site shutdown days	Model assumption; tested both ways for glazing; ask suppliers
Value of a day (drag cost)	$21,028 per working day	Loan $45M at 6.2% + rent on 96 suites at $2,324/month; owner value only
Site overheads	$5,984 per working day	Resource cost, not drag cost; estimates, not sourced
DRED	50% / 65% / 80% of the current duration	Placeholder until the trades answer; extra crew cost excludes mobilization, supervision, equipment, premium
Order lead times	Elevators 26w, glazing 16w, precast 12w	Placeholder until suppliers confirm
Supply lead times	Published ranges	One U.S. contractor's 2026 guides; not Halifax-specific
Crane climb floors	After L11, L17, L22	Ask-Contractor tag kept
Crew limits; crews on one floor	10 for every trade; maximum 2	Placeholders
Monte Carlo spreads, events, correlation	Triangular by trade group; 6 events; correlation 0.8	Judgement; weather record is real
Weather loss rules	Day lost on set rain, snow, gust and cold thresholds by work type	Thresholds set by Claude (judgement), applied to 30 years of real daily weather: Environment and Climate Change Canada, Halifax Stanfield, 1996–2025 (GeoMet API)
Risk scores	Likelihood × impact, 1–5 scales; OverVue levels 1–2 Low, 3 Moderate, 4–5 High	Claude's judgement, approved for the demo
Break-even terms	5 years at 6.2%, 162 suites	Placeholder for the owner's pro forma
Quantities	Rebar 840 t, wall paint 19,440 m², precast area and more	From the schematic model and price file
Prices	Low end of price-file ranges; retail prices; RSMeans 2018 Halifax escalated	Not quotes; window wall $1,000/m² is the file's suggestion

APPENDIX B

Method, data and sources

- **Data.** Read from OverVue through its MCP connection, plan version Part 2 Scenario 2026-11-03: on Nov 5, 2026 the 562 resource allocations and 13 Possibilities; on Nov 6, 276 tasks and 500 links with START Nov 9, 2026 and END Aug 9, 2028. The weekly Info Table was re-read on Nov 6 from the Live Plan, which holds the same content since a checkout on Nov 5. Read-only. The allocations could not be re-read after Nov 5 (an OverVue fetch issue, reported to the developer): cost by type comes from the Nov 5 recount, cost by deliverable from Part 2 v1.
- **Cost and cash.** Rate × 8 hours × working days × allocation for hourly resources; fixed and per-use prices in the task's first week, as OverVue does. The total and every one of the 92 weekly Cash/Period values match OverVue's Info Table; the cash chart plots the Info Table as read.
- **Critical path and drag.** Forward and backward passes from mobilization. Probabilistic drag: remove-and-rerun in each of 5,000 Monte Carlo runs for tasks, blocks and lags, counted both of Devaux's ways for SS lags; the engine reproduces the figures on his worked examples. Group drags were run as groups, never summed.
- **Return on levers.** Each lever re-run on the same 5,000 draws and weather years as the baseline (paired runs); days saved valued at the ASSUMED value of a day and site overheads.
- **Conflicts and levelling.** Allocations counted per day and per OverVue week; start-or-wait options replayed day by day; option D tested in a scenario copy in OverVue.
- **Supply chain.** Each material and subcontract resource traced to its first task; compared with published lead times.
- **Monte Carlo.** 5,000 runs per case in Python, Gaussian-copula correlation within trade groups, real daily weather replayed by start year, Christmas breaks and NS holidays. Regression check on Nov 6: the engine on the new data, anchored at the old END, reproduces v2 exactly.
- **BIM.** IFC4 written directly with IfcOpenShell from the OverVue data on Nov 5; validated with IfcOpenShell's schema validator.
- **Limits.** Every ASSUMED input can change the results. Each floor task is one bundled crew. Costs are a demonstration budget, not an estimate for bidding.

Sources

SOURCE	USED FOR
Stephen Devaux, Total Project Control; call and slides, Nov 5, 2026	Drag, drag cost, DRED, group drag, SS-lag conventions, TCW, CLUB, DIPP
Environment and Climate Change Canada, daily climate data, Halifax Stanfield (GeoMet API)	Weather record for the Monte Carlo
Nova Scotia Labour Standards holiday chart; Remembrance Day page; CLRA–Labourers Local 615 agreement	Nova Scotia site holidays and double-time rule
Terrapin Construction Group, 2026 lead-time guides (U.S.)	Published lead times in the supply chain check
Halifax Regional Centre Land Use By-law (amendments to Apr 13, 2026)	Landscape plan and amenity space requirements (partly retrieved)
Rentals.ca Renter Preference Survey, Summer 2025	Renter interest in outdoor space; no dollar premium found
Altus Group construction cost guide (Halifax), from earlier notes	Benchmark range; not re-verified
Alan's price file (RSMeans 2018 Halifax × StatCan BCPI; retail lists Nov 3, 2026)	Material, subcontract and rental prices
2025 commercial collective agreements (Part 1 basis)	Crew rates; not re-verified, may have changed

THANKS

To Stephen Devaux, originator of drag and DRED, who reviewed the drag method with us on Nov 5, 2026, and to the readers whose questions on Part 1 shaped this report. Any errors in applying the methods are ours.

Prepared with Claude from OverVue plan data. Rates, holidays, by-law, lead-time and benchmark sources may have changed since they were read; verify before relying on them.