PRIMAVERA P6
STEP BY STEP

2026 Edition

The Complete Beginner-to-Practitioner Tutorial

Build, Schedule, Resource-Load, Baseline and Update
a Real Construction Project in Oracle Primavera P6 Professional

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Eliwa Project Controls Limited

Primavera P6 Step by Step - 2026 Edition

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First edition, 2026

To Hanan,
and to Yosif, Yehya, Jasmine and Shadia -
the finest project I will ever be part of.

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Preface

Twenty years in project controls have taught me that Primavera P6 is learned twice. The first time, someone shows you the buttons - and you leave able to make a Gantt chart that looks like a schedule. The second time, usually on a live project with money and reputations attached, you learn what the buttons mean: why the data date is sacred, why the schedule log is read before the Gantt is admired, why a baseline is created before the first actual date and not after, and why float is a calculation and never a promise. This book exists to give you both educations at once.

It does so through one worked example, built completely, the way real schedules are built - enterprise data first, structure before activities, logic before dates, a baseline before progress - with the mistakes you would otherwise make on a live job engineered safely into the exercise instead: a supplier that slips, a crew that overloads, another that jumps its logic. Nothing here is theoretical. Every figure is a screenshot of the actual project you will build, and every number in the text is a number you will see on your own screen.

Work through it at a computer, in order, doing everything as you read. By the final page you will not have read about Primavera P6. You will have used it - correctly, completely, and once through the full life of a project. That is the only way anyone has ever really learned it.

- Dr. Hassan Khames Eliwa, Auckland, 2026

Part 1 - Introduction: What You Will Build

"Plans are worthless, but planning is everything."

- Dwight D. Eisenhower

By the end of this book you will have built, scheduled, resource-loaded, baselined and progress-updated a complete construction project in Oracle Primavera P6 Professional - not by reading about buttons, but by pressing them, in order, on a real worked example.

Most Primavera P6 books fail their readers in one of two ways. Either they are reference manuals - exhaustive tours of every menu that leave you knowing where things are but not what to do first - or they are shallow quick-starts that show you how to add an activity and then abandon you at exactly the moment real scheduling begins: logic, float, baselines and updates. This book takes a third path. It walks one project, the **Riverside Office Building**, from an empty database to a statused, variance-reporting schedule, and every single screenshot in these pages comes from that same project. If your screen matches the figure, you are on track. If it does not, the book tells you where to look.

That continuity matters more than it might first appear. Primavera P6 is not a difficult program to click around in; it is a difficult program to be **correct** in. The gap between a schedule that looks plausible and a schedule that calculates properly - one that a client, an engineer or a tribunal would accept - is made of small, invisible settings: calendars, time periods, duration types, relationship logic, data dates. A tutorial built from disconnected examples can never expose those interactions. A tutorial built on one continuous project cannot avoid them, because you will hit every one of them on the way to the finish line, in the same order a professional planner hits them on a live job.

Who this book is for

This book is written for four overlapping groups of readers. **Project managers** who receive P6 schedules from planners and want to stop nodding politely at Gantt charts they cannot interrogate. **New planners and schedulers** - engineers moving into project controls who need to become productive in P6 in days, not months. **Certification candidates** preparing for the PMI Scheduling Professional (PMI-SP), AACE Planning & Scheduling Professional (PSP) or the scheduling portions of the PMP, all of which assume exactly the working knowledge this book builds. And **students and career-changers** who want a concrete, demonstrable skill: at the end of this book you will have a portfolio-ready P6 project you built yourself.

No prior P6 experience is assumed. You should be comfortable with a Windows computer and you should know, at least loosely, what a project schedule is for.

Everything else - critical path method, float, baselines, earned progress - is explained from first principles at the moment you need it, never before.

The Riverside Office Building

Our worked example is a two-storey commercial office building with a project ID of **RVS-01**, a planned start of **05-Oct-26**, and roughly five and a half months of work. It is small enough to build in an afternoon of data entry and large enough to be honest: it has a proper work breakdown structure across four phases (Preliminaries, Substructure, Superstructure, and Fit-Out & Close-Out), thirty-two activities including three milestones, five resources with realistic rates, a procurement chain that carries float, a resource overload you will diagnose, a Christmas shutdown that interrupts the fit-out, a formal baseline, and a monthly progress update that includes - deliberately - one activity progressing out of sequence, so you can learn to read the warning P6 raises about it.

Every one of those features was chosen because it teaches something that generic examples cannot. The float on the steel procurement will erode in front of your eyes when the supplier slips. The overload on the site crew will appear as a red histogram exactly when the roofing, cladding and window trades stack up. These are the moments that make schedules real.

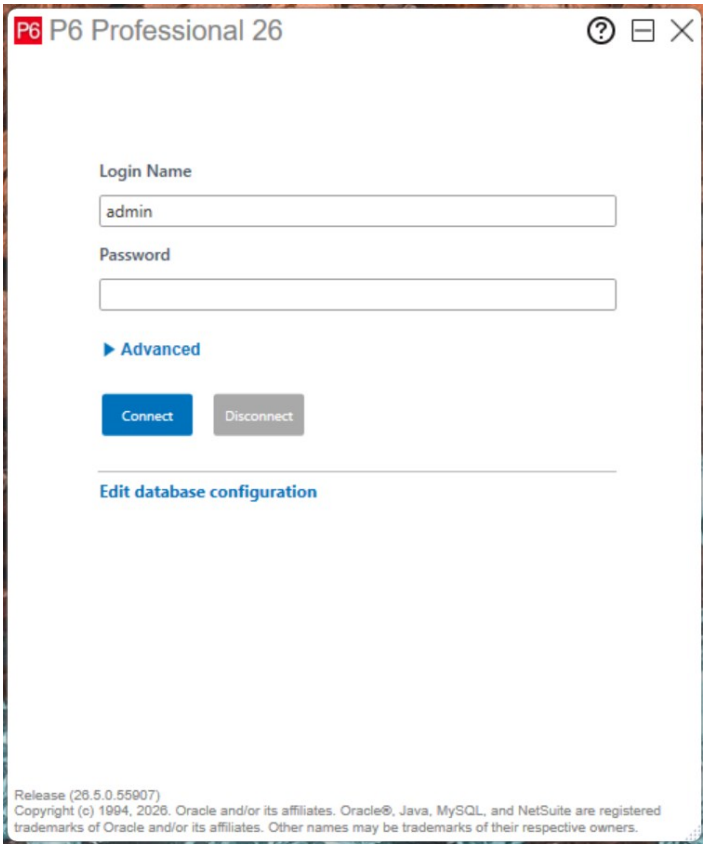


Figure 1.1 *The P6 Professional login dialog - your starting point.*

What you will be able to do

Work through all fourteen parts and you will be able to: create enterprise data (EPS nodes, OBS assignments and calendars) correctly; create a project with defaults that will not sabotage you later; design and build a work breakdown structure; enter activities of every type with sensible IDs and durations; link a network with Finish-to-Start, Start-to-Start and Finish-to-Finish logic, using lag where it is honest and avoiding it where it is not; schedule with F9 and actually read the schedule log; identify and explain the critical path and total float; build a resource dictionary, load the schedule, and find overallocation; set and display a baseline; run a disciplined monthly update with a moving data date; and produce filtered, grouped, print-ready layouts for reporting.

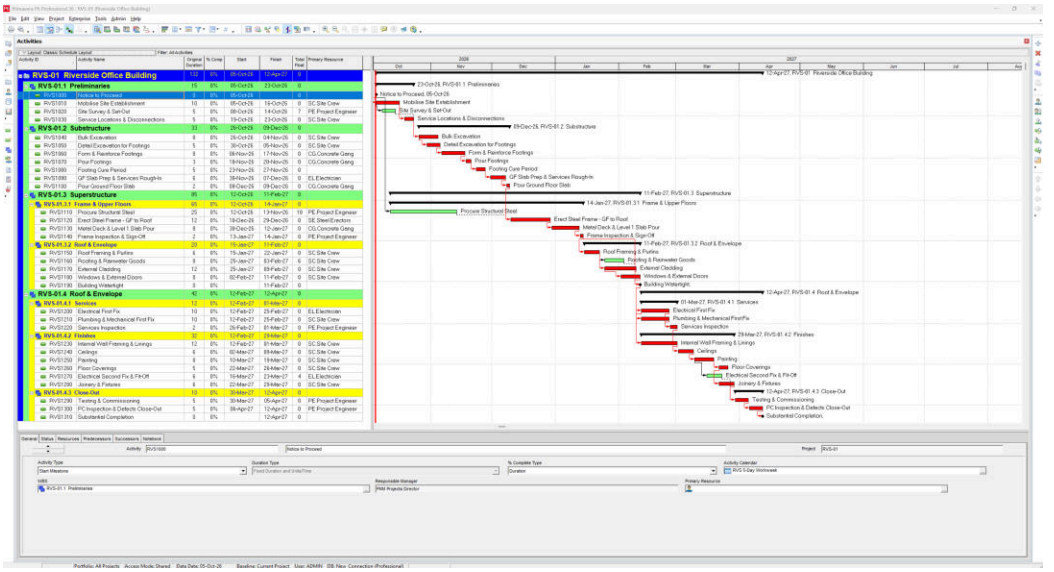


Figure 1.2 *Where we are heading: the finished Riverside schedule - statused, baselined, with the critical path highlighted.*

> **How to read this book**
>
> Do not read this book on the sofa. Read it at a computer with P6 Professional open, and do everything as you read it. Each part ends where the next begins; the project state accumulates. If you must skip ahead, the start of each part tells you what state the project should be in when you arrive.

One note on versions. The screenshots in this book were captured in P6 Professional, and the workflows shown have been stable across every release for more than a decade - P6 changes remarkably little from version to version, which is one reason it has remained the standard. If your toolbar icons are drawn slightly differently, nothing in this book changes. Where a setting genuinely differs between common versions, the text says so.

Going deeper - why Primavera P6, and CPM in sixty seconds

It is fair to ask, before investing a book's worth of effort, why this tool. Primavera began in 1983 as Primavera Project Planner - P3 - and for two decades P3 simply **was** construction scheduling; planners of a certain vintage still talk in its keystrokes. Oracle acquired Primavera in 2008, by which time P6 had succeeded P3, and the product has been the contractual default on large construction, energy, defence and infrastructure projects ever since. When an employer, a specification or a claims consultant says "the programme shall be maintained in Primavera," this - the Professional client, an enterprise database, XER files travelling between the parties - is what they mean. Microsoft Project owns the office; Primavera owns the site. Learning P6 is therefore

not a software choice so much as a decision to speak the language your industry's biggest projects are already conducted in.

The engine inside it predates the software by a generation. The **Critical Path Method** was developed in the late 1950s - DuPont and Remington Rand on plant maintenance, and in parallel the US Navy's PERT programme on Polaris - and its premise has not changed since: if you know what each task requires before it can begin, and how long each takes, then the earliest and latest possible timing of everything, and the identity of the chain that governs the end date, are pure arithmetic. Humans supply judgement - scope, durations, logic; the method supplies consequences. Sixty years of computing have made the arithmetic instant, but they have not changed the division of labour, and that is the correct frame for everything in this book: **P6 will never tell you what is true. It will tell you, flawlessly, what follows from what you claimed.** Garbage logic in, garbage dates out, at the speed of light. The craft you are here to learn is the input side.

Going further - if you are studying for a certification

Readers preparing for the scheduling credentials will find this book maps cleanly onto their syllabi, and it is worth knowing the correspondence up front so you can study with double purpose. The **PMI Scheduling Professional (PMI-SP)** examines schedule strategy, planning and development (Parts 5–8 here), monitoring and controlling (Parts 9 and 12), and stakeholder communication (Parts 12–13's narratives and layouts). The **AACE Planning & Scheduling Professional (PSP)** leans harder on CPM mechanics - forward and backward passes, float behaviour, constraint effects - which is Parts 8 and 9 territory, plus a practical exercise for which building Riverside is nearly literal rehearsal. And the scheduling questions inside the general **PMP** examination are conceptual versions of Parts 6, 8 and 9: decomposition, dependency types, critical path and float arithmetic. None of these exams tests P6 button-locations; all of them test whether the concepts behind the buttons are genuinely understood - which is why every part of this book explains the *why* before the *where*, and why the fastest certification study may simply be building the worked example twice.

Part 2 - Getting Started: Installation, Database and Login

Before a single activity exists, three decisions have already been made for you - or by you: which edition of P6 you run, which database it talks to, and how your user preferences will format everything you see. Ten minutes here saves hours later.

P6 Professional and P6 EPPM - which one is this?

Oracle sells Primavera in two main flavours, and the distinction confuses almost everyone at first. **P6 Professional** is the Windows desktop client - the fast, dense, keyboard-friendly application that planners overwhelmingly prefer for building and calculating schedules. **P6 EPPM** (Enterprise Project Portfolio Management) is the web-based platform aimed at portfolio managers, dashboards and enterprise administration; it can also host the Professional client on top of its database. This book uses **P6 Professional** throughout. Everything you learn transfers conceptually to the web client, but the Professional client is where serious schedule development happens in practice, and it is what employers mean when a job advert says "must know P6."

Underneath the client sits a database, and here there are two common set-ups. In a company environment, P6 connects to a central **enterprise database** (Oracle or SQL Server) shared by every planner, administered by someone with the admin superuser account. On a personal machine - including the standalone installation most self-learners use - P6 ships with a local **SQLite** database that behaves identically for our purposes. This book works in either environment. If you are on a company database, one courtesy: build the tutorial project under its own EPS node, as we do in Part 4, so your practice data stays quarantined from live projects.

Logging in for the first time

Launch P6 Professional and you are met by the login dialog you saw in Figure 1.1: a **Login Name**, a **Password**, and - the field beginners overlook - the **Database** selector at the bottom. A single client can connect to several database aliases; if your screen looks empty or unfamiliar one day, the first thing to check is that you are connected to the database you think you are. On a standalone installation the default user is typically `admin`; on an enterprise system your administrator issues credentials tied to your OBS access (more on the OBS in Part 4).

When the application opens you land on the **Home workspace** - a navigation hub with large buttons for the core windows: Projects, Activities, Resources, Reports and their siblings. It is worth pausing here, because P6's window model differs from most software: you do not open documents, you open **windows onto the database**. The Projects window shows every project you have access to; the Activities window shows the activities of whichever projects are currently open; the Resources window shows

the shared resource pool. Nothing you see is a file on your disk - it is all live database data, which is why there is no Save button anywhere in P6. Every edit commits the moment you make it.

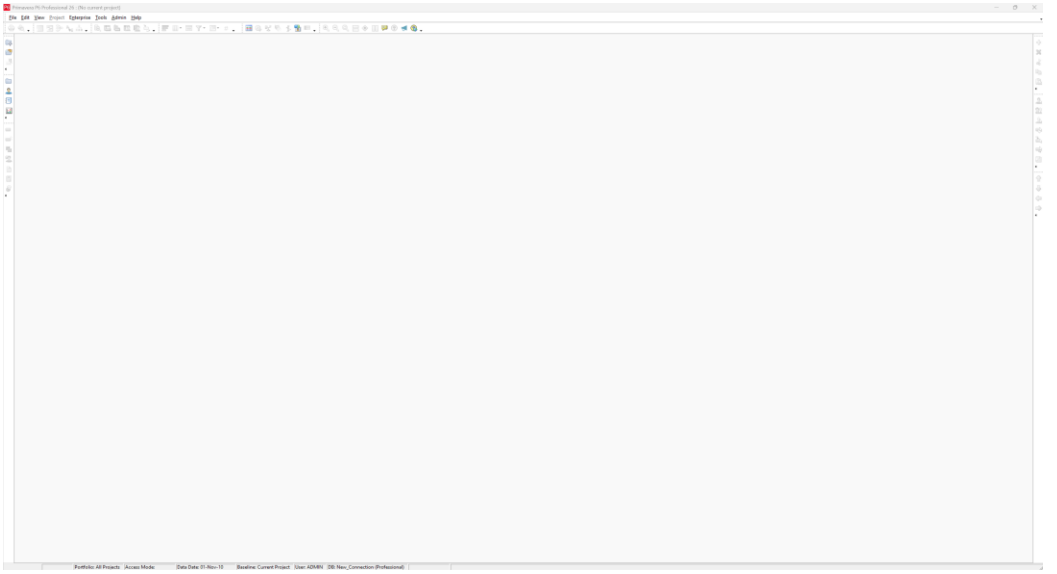


Figure 2.1 *The Home workspace - P6's navigation hub.*

> **There is no Undo worth trusting**
>
> Because P6 writes directly to the database, its undo capability is minimal to non-existent depending on version. Deleting a project, a WBS node or a hundred activities is immediate and permanent. Professionals protect themselves with baselines, exports (XER files) and, in this book, a tutorial project that is safely disposable. Develop the habit now: before any bulk change on real work, export an XER first.

The Projects window

Click **Projects** on the Home workspace (or choose **Enterprise > Projects**) and you see the project directory: every project in the database, arranged in a hierarchy called the EPS - the Enterprise Project Structure - which we will build in Part 4. Each row shows a project with its ID, name, dates and status. Opening a project from here (right-click > **Open Project**) is what loads its activities into the Activities window. You can open several projects at once, which is how programme-level planners see across a portfolio, but for this book we open exactly one.

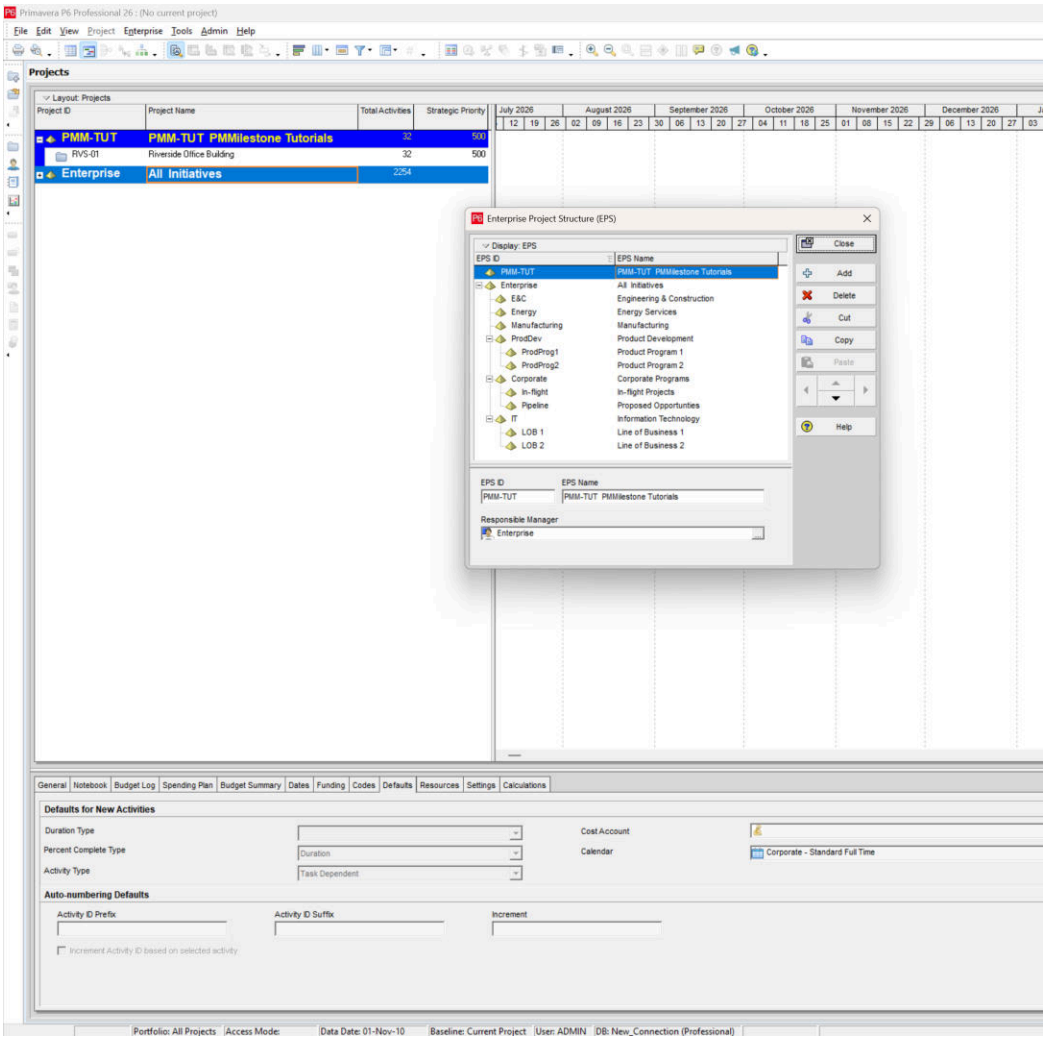


Figure 2.2 *The Projects window, with projects organised under EPS nodes.*

User Preferences: make P6 speak your language

Before creating anything, set your user preferences - they control how every date, duration and unit in the entire application is displayed for **your** login, and if you set them now, every screenshot you produce for the rest of this project will be consistent. Choose **Edit > User Preferences**.

Step 1. On the **Dates** tab, set the date format to **DD-Mon-YY** (so 05-Oct-26 displays exactly as this book prints it) and switch off the display of time unless you schedule hourly work. A date format with the month as a word eliminates the transatlantic 05/10 versus 10/05 ambiguity that has embarrassed more than one progress report.

Step 2. On the **Time Units** tab, set durations to display in **days** and units per time in **percent** (so a full-time assignment reads 100% rather than 8h/d). Set decimal places to suit - zero or one is plenty for a schedule at this level.

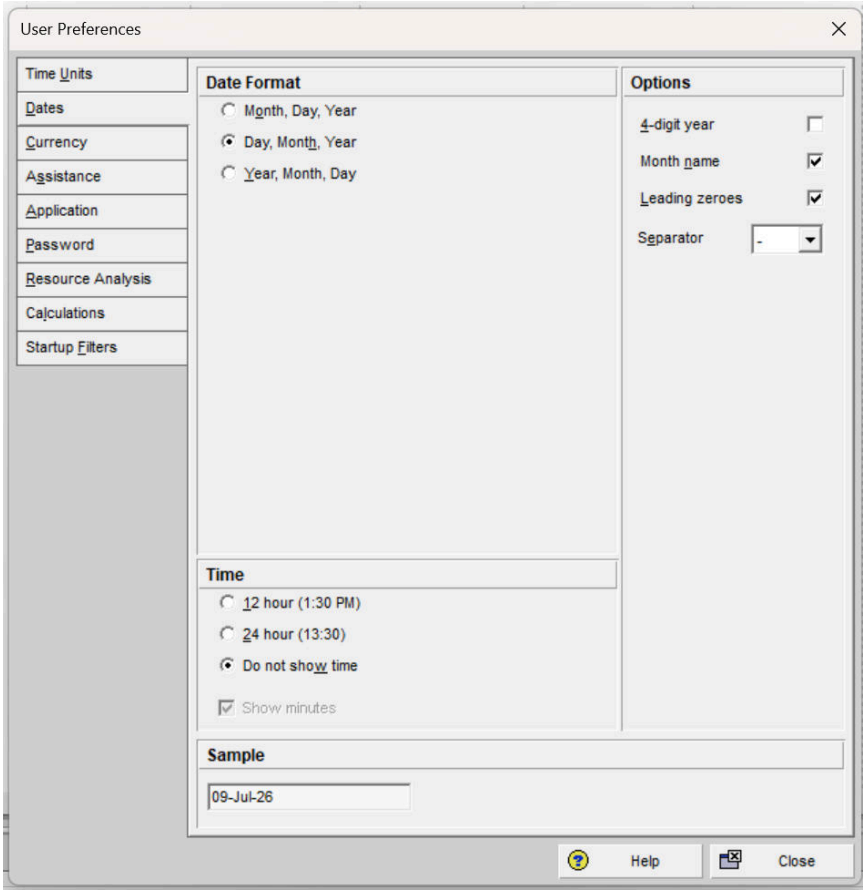


Figure 2.3 *User Preferences - the Dates tab.*

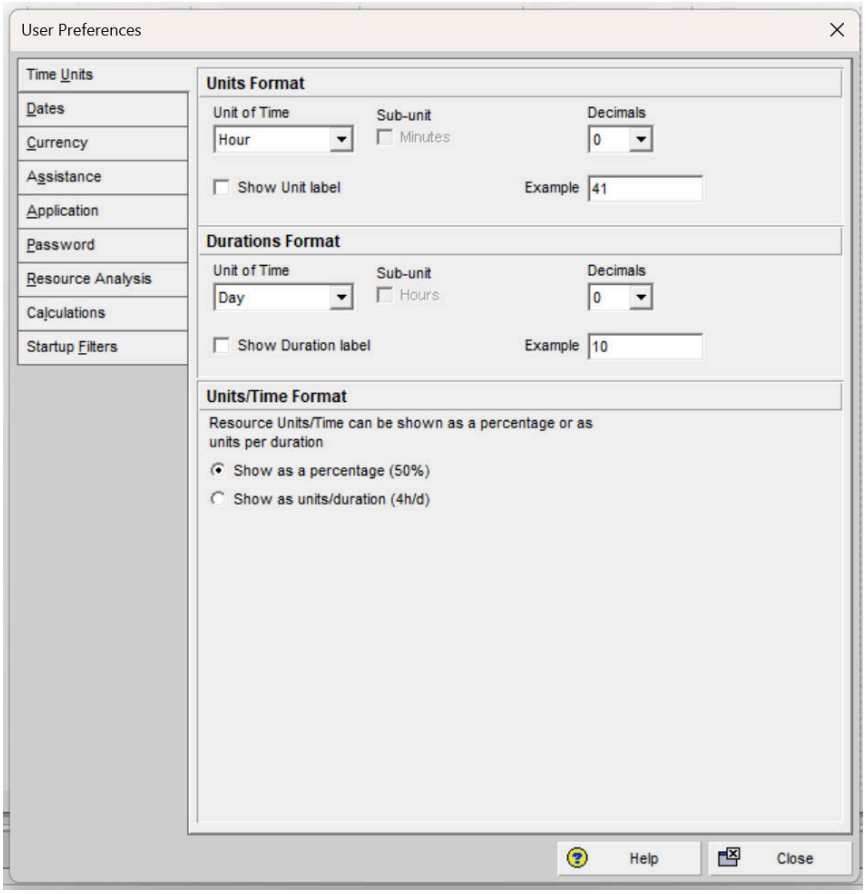


Figure 2.4 *User Preferences - Time Units: durations in days, units per time as a percentage.*

Two things to understand about these settings. First, they are **display only** - changing the date format does not touch the data, and a colleague with different preferences sees the same schedule formatted their way. Second, and this trips people constantly: what a "day" means in hours is **not** set here. That conversion lives in Admin Preferences, it affects calculation rather than display, and getting it wrong is the single most common reason a beginner's durations look insane. We deal with it properly in Part 4, before you type a single duration.

> **Checkpoint**
> You can log in, you know which database you are connected to, you understand that P6 has no Save button because everything is live, and your dates display as DD-Mon-YY. Nothing has been created yet - that is correct.

Going deeper - the XER habit

Part 2 warned that P6 has no undo worth trusting; here is the professional compensation. An **XER file** is a complete export of a project - activities, logic,

calendars, resources, assignments, codes - in Primavera's native interchange format, produced with **File > Export** in under a minute. Working planners develop a reflex: export before anything bulk or irreversible - a global change, an import from someone else, a re-baseline, a large deletion - and on many projects, export on a rhythm regardless (each period's statused programme, archived with the report it supported, is the raw material of every future delay analysis). Get the reflex now, while the stakes are zero: export RVS-01 at the end of each part of this book and date-stamp the filename - `RVS-01_2026-10-05_pre-baseline.xer` and its siblings. Storage is free; the un-deletable mistake is not. When you receive an XER from someone else, **File > Import** offers to bring it in as a new project or update an existing one - choose *new* unless you know exactly what you are doing, because import-as-update merges by ID and can quietly overwrite your work with theirs.

Two preference dialogs, one map

Because the distinction saves real confusion, fix the map in memory now. **Edit > User Preferences** is *yours*: date and unit display, currency display, assistance and wizard behaviour - per login, cosmetic, harmless to experiment with, and the first place to look when your P6 merely *looks* different from a colleague's. **Admin > Admin Preferences** is *everyone's*: time-period conversions, ID lengths, code lengths, earned-value defaults - per database, structural, and capable of changing calculated results, which is why on enterprise systems it is locked to administrators and why Part 4 sends you there deliberately for exactly one setting. When a schedule behaves strangely, the diagnostic order is always: user preferences (am I *seeing* it oddly?), then admin time periods and calendars (is it *storing* oddly?), then the schedule log (is it *calculating* oddly?). Three layers, three dialogs, ninety seconds - and the vast majority of "P6 is broken" reports die at layer one.

Part 3 - Understanding the P6 Interface

The Activities window is where you will spend ninety percent of your P6 life. Learn its five regions once, properly, and every later part of this book gets easier.

Anatomy of the Activities window

Open any project and choose the Activities window. However cluttered or sparse your screen looks right now, it is built from the same five regions, numbered in the figure below. **(1) The menus and toolbars** across the top - note that almost everything in them is also on the right-click menu, which is faster. **(2) The activity table** on the left: a spreadsheet-like grid where each row is an activity and the columns are whatever you choose to display. **(3) The Gantt chart** on the right: the same activities drawn as bars against a timescale. Table and Gantt are two views of one list - select a row in one and it is selected in the other. **(4) The Activity Details pane** across the bottom: a tabbed inspector showing everything about the selected activity - its dates, relationships, resources, codes and notes. If you cannot see it, choose **View > Show on Bottom > Details**. **(5) The command bar** on the right edge, with buttons for adding and deleting activities and assignments.

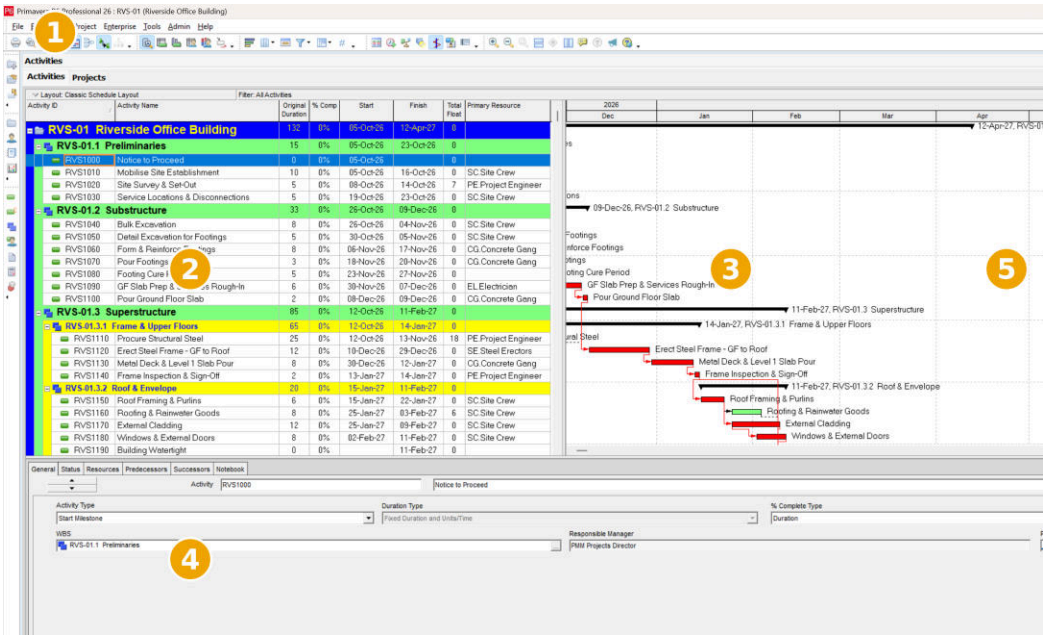


Figure 3.1 *The five regions of the Activities window: (1) toolbars, (2) activity table, (3) Gantt chart, (4) Activity Details, (5) command bar.*

The proportions between these regions are draggable - the splitter between table and Gantt, and the horizontal splitter above the Details pane, are among the most-used pixels in the application. A planner entering data drags the table wide; a planner

reviewing logic drags the Gantt wide. There is no correct arrangement, only the correct arrangement for what you are doing this minute.

EPS and OBS: the two hierarchies behind everything

Before layouts, two pieces of vocabulary, because every dialog from here on assumes you know them. The **EPS - Enterprise Project Structure** - is the hierarchy that projects live in: a filing cabinet, with drawers for divisions or regions or clients, and projects filed inside. The **OBS - Organisational Breakdown Structure** - is the hierarchy of who is responsible: a management tree, from which every EPS node and project is assigned a responsible manager. The EPS answers "where does this project sit?"; the OBS answers "who answers for it?". On enterprise systems the OBS also drives security - your login's OBS access determines which projects you can even see. On a standalone installation you can keep the OBS minimal, but it must exist, because P6 will not create a project without a responsible manager.

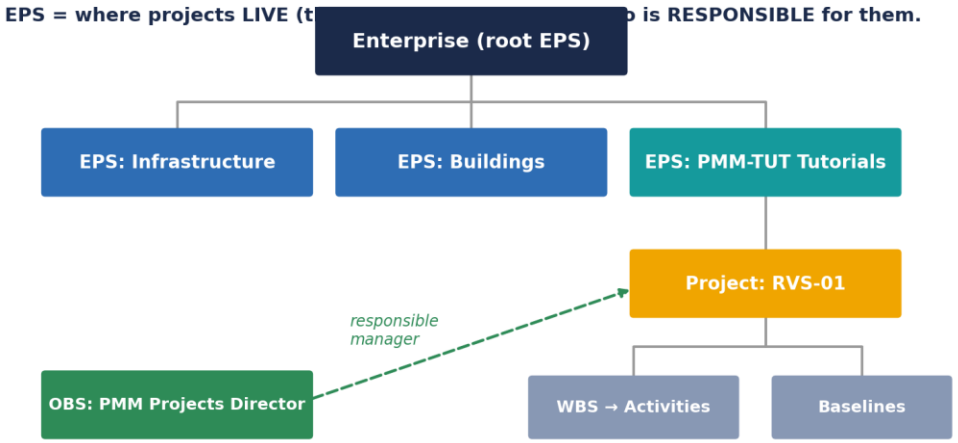


Figure 3.2 *EPS is where projects live; OBS is who is responsible for them. Our tutorial project sits under its own EPS node.*

Layouts: the concept that confuses every beginner

Here is the moment that bewilders almost every new P6 user, usually within the first hour: the screen suddenly looks different - columns changed, colours changed, activities grouped some other way - and nothing seems to explain why. The answer is nearly always a **layout**. A layout is a saved arrangement of everything visual: which columns show, how activities are grouped and sorted, what the bars look like, which filters are applied, what is in the bottom pane. Layouts are how one planner's P6 can look like a cockpit while another's looks like a shopping list - same data, different lens.

The crucial mental shift: **the layout is not the schedule.** Applying a filter that hides two hundred activities deletes nothing; grouping by responsibility instead of WBS

moves nothing. Once that clicks, layouts stop being frightening and become your reporting engine - by Part 13 you will keep one layout for data entry, one for logic review, and one formatted for printing.

Step 1. Choose **View > Layout > Open**. The dialog lists Global layouts (visible to everyone), Project layouts, and User layouts (yours alone). Select the built-in **Classic WBS Layout** and click Apply - a safe, conventional starting point that groups activities under their WBS bands.

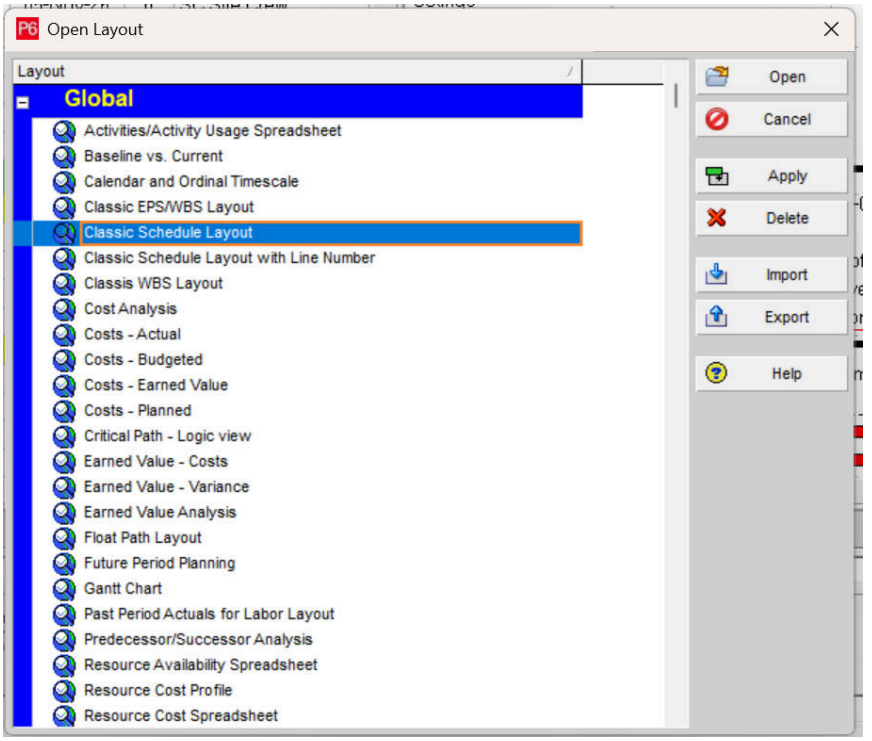


Figure 3.3 *The Open Layout dialog - global, project and user layouts.*

Choosing your columns

The default column set is rarely what you want. Right-click any column heading and choose **Columns** (or **View > Columns**) to open the two-pane chooser: every available field on the left, your displayed columns on the right, with arrows to move and reorder. For building the Riverside project we want a lean, honest set: **Activity ID, Activity Name, Original Duration, Start, Finish,** and **Total Float**. Resist the urge to add twenty columns - every column you display is a column you must horizontally scroll past for the rest of the session. Columns are cheap to add later, precisely because the layout is not the schedule.

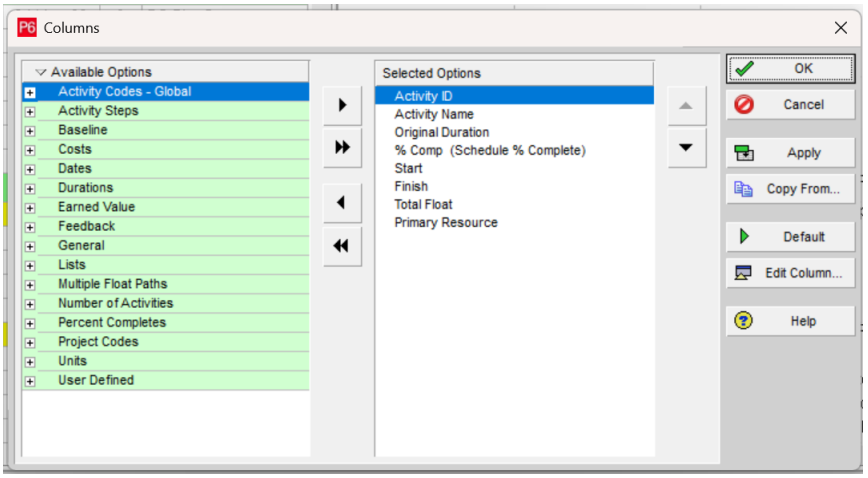


Figure 3.4 *The Columns dialog - available fields on the left, displayed columns on the right.*

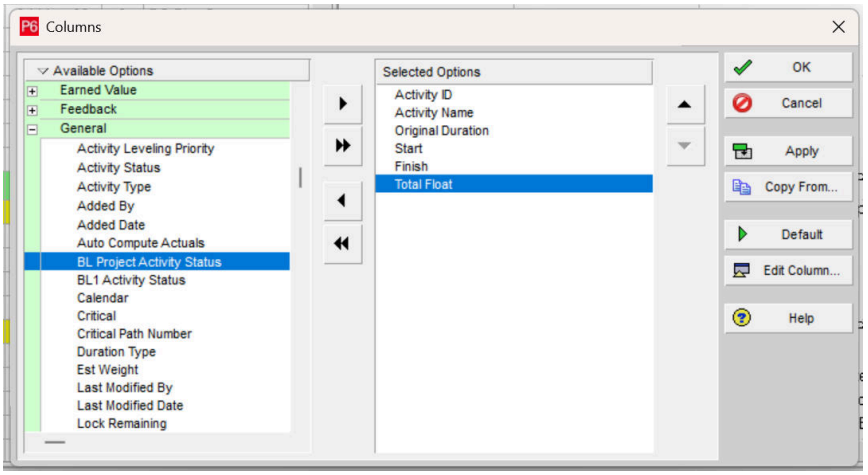


Figure 3.5 *The lean six-column set we will build Riverside with.*

Save your layout - and name it like you mean it

Having arranged the window, protect the arrangement: **View > Layout > Save As**, name it **PMM Tutorial Layout**, and make it available to Current User. From now on, whatever chaos a stray click causes, **View > Layout > Open** brings your world back. Professionals accumulate a small library of purposeful layouts - and they name them properly. A database with forty layouts called “Layout1” through “Copy of Layout7 final FINAL” is a real thing that exists in the world; do not add to it.

END OF FREE SAMPLE

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